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# Infill Design Project Report: Medium-Density Residential Development

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October 10, 2005



## Issues & Staff Recommendations



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*\*The majority of the work on this report was undertaken in 2004 and a discussion draft of the report, without appendices, was released on December 22, 2004. The current report includes minor edits to the previous draft, together with the complete appendices.*

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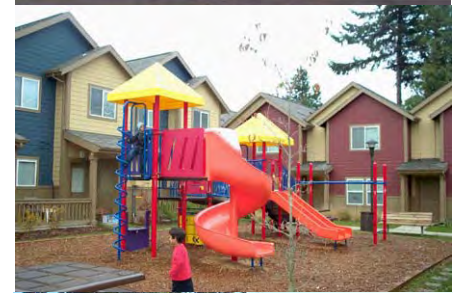


C H A P T E R

1

# Introduction and Project Summary

- Project Focus
- Why this Project?
- Public Input and Project Research
- Project Approach and Considerations
- Summary of Issues
- Summary of Staff Recommendations



## **Design Principles for Multidwelling Infill Development**

*Based on design guidance from the Comprehensive Plan, Community Design Guidelines, Zoning Code, and other City documents. Included to help clarify the principles are bulleted statements, listed below the basic principles, that indicate potential ways of implementing the principles.*

### **1. Contribute to a Pedestrian-Oriented Environment**

- Use architectural features (such as façade articulation, window and entrance details, and porches or balconies) that provide a human-scaled level of detail
- Avoid large areas of blank wall
- Minimize the prominence of parking facilities
- Provide strong connections between main entrances and sidewalks

### **2. Respect Context and Enhance Community Character**

*(note: while the continuation of existing community character may be a priority in established neighborhood areas, contribution to a desired future character may be more important than compatibility in areas where change is expected and desired, such as in mixed-use centers)*

- Arrange building volumes and use setback patterns in ways that reflect neighborhood patterns or that contribute to its desired character
- Consider utilizing architectural features (such as window patterns, entry treatments, roof forms, building details, etc.) and landscaping that acknowledge the surrounding context and neighborhood
- Use site design that responds to natural features of the site and its surroundings
- Minimize solar access impacts on adjacent properties

### **3. Consider Security and Privacy**

- Orient windows and entrances to the public realm to provide opportunities for “eyes on the street” and community interaction
- Minimize impacts on the privacy of neighboring properties

### **4. Provide Usable Open Space**

- Maximize the amenity value of unbuilt areas, providing usable open space when possible
- Make usable open space, not surface parking, the central focus of larger projects

### **5. Design for Sustainability**

- Use durable building materials
- Use energy-efficient building design and technologies
- Minimize stormwater runoff



The objective of the Infill Design Project is to foster medium-density infill development that contributes to meeting City design objectives, such as those calling for design that is pedestrian oriented and serves as a positive contribution to neighborhood context. Other key considerations of the project are implementation of City objectives calling for housing diversity and for accommodating new housing near transit facilities and centers. The project seeks to achieve a balance between goals for providing additional housing opportunities in established neighborhoods with community concerns for reinforcing cherished aspects of community character. Particularly in areas where City policies call for growth to be concentrated, such as mixed-use centers and transit corridors, the City's design objectives recognize that change is inevitable, even desirable; but that new development should help create desirable and attractive places.

The purpose of this document is (1) to report on issues related to the design of multidwelling and rowhouse development in the medium-density zones, and (2) to present Planning Bureau staff recommendations on implementation strategies to pursue in order to help improve the design of future development. The report provides information on development trends, community concerns, contextual issues and potential solutions related to the design of medium-density infill development. This information is intended to serve as background to staff's recommended implementation strategies, as well as to serve as a resource for City decision makers.

## Project Focus

The project's primary focus is the design of development in the low- and medium-density multidwelling zones, particularly the R2 and R1 zones, which constitute the majority (89 percent) of the City's multidwelling-zoned land area. Development in these zones typically consists of rowhouses, plexes, and low-rise apartment projects (2 to 4 stories). The emphasis of the project is on development on small infill sites in established neighborhood areas outside the Central City and other mixed use centers.

The Infill Design Project is not a re-examination of the City's design objectives, which have been developed through many years of planning efforts and public involvement. Rather, its intention is to find ways of better achieving these objectives. The City's design objectives, as they pertain to multidwelling infill development, are summarized on the facing page (see Appendix B for a

compilation of design-related policies and directives from the *Comprehensive Plan* and other City documents). This project does not address the appropriateness of where multidwelling zoning is mapped or the required densities. Instead, the project considers the question of, given the location and required densities of the multidwelling zones, how can the design of new infill development be improved? Also note that, while encouraging sustainable design that minimizes environmental impacts has become an important City policy objective, the extent to which development is incorporating sustainable design strategies is not a primary focus of this report. This is due to limited project resources and because sustainable design is already a focus of the City's Office of Sustainable Development.

## Why this Project?

In recent years, Portland has experienced a substantial amount of infill development in neighborhood areas with multidwelling zoning, most of which is located along transit corridors or at the edges of mixed-use centers. This infill development is helping to realize macro-level design goals calling for higher-density development to be concentrated near transit facilities. However, the design of individual projects is frequently not contributing to the community's design objectives and aspirations. Reasons for the Infill Design Project's particular focus on rowhouse and multidwelling development in the low- and medium-density multidwelling zones (referred to in this report as "medium-density" development and zones) include:

- Past design-related projects have focused on single-dwelling development (e.g., the Base Zone Design Standards Project) and on specific 2040 mixed-used centers (such as Gateway, Hollywood, and St. Johns), but there has been no focus on design in the medium-density zones.
- The majority of apartment and rowhouse building permits in recent years have been for projects in the medium-density zones (from 1997-2004, 66 percent of all apartment and rowhouse permits were for projects in these zones). Also, more residential *units* have been built in recent years in the medium-density multidwelling zones than in either the commercial or employment zones. This is despite the fact that the latter two types of zones predominate in areas such as the River District where the larger, high-density projects are located.
- The medium-density zones will likely continue to be the location of a large proportion of the City's multidwelling and rowhouse construction, as these zones constitute the majority of Portland's multidwelling-zoned land area and include considerable amounts of vacant or underdeveloped land.

## Public Input and Project Research

Staff work on this report was based on information and guidance from a wide-range of sources. The Infill Design Advisory Group, which met monthly from April of 2004 through early 2005, played a particularly important role in identifying issues and considering potential solutions. This group consists of 24 community members, including developers, builders, architects, Realtors, representatives from City regulatory agencies, as well as representatives from each of the city's seven neighborhood coalition areas. Three public open houses were held in different parts of the city in the Spring of 2004 to solicit initial public input (these events featured a design preferences survey, which was used to help inform the project). Project research included analysis of over 75 recent infill projects, which involved interviews with project developers and designers; as well as a review of implementation strategies used in other cities, analysis of GIS data, and review of neighborhood plans and other City policy documents. Work on this report was also informed by a Portland State

University research project, undertaken in conjunction with the Infill Design Project, which focused on development and design issues in an area of Outer East Portland.

## Project Approach and Considerations

This report proposes a multifaceted approach to improving the design of infill development. The range of implementation strategies places an emphasis on non-regulatory, collaborative approaches. While the central objective of the Infill Design Project is to improve the design of medium-density infill development so that the community’s design objectives can be better met, the following also serve as guiding project considerations:

- Find ways of encouraging *desirable* development, rather than simply regulating against “bad” design.
- Minimize regulatory complexity.
- Think broadly about potential implementation strategies, relying on regulatory approaches only when there are no other realistic strategies.
- Consider impacts on other issues and priorities, such as environmental sustainability, construction costs, and livability for the residents of new housing. Whenever possible, pursue strategies that can meet multiple community objectives.
- Identify and promote additional housing types that hold potential to serve as positive contributions to neighborhoods, including owner-occupied alternatives to rowhouses.
- Focus on basic design principles and patterns, not on architectural style.
- Solutions should be supportive of Portland’s *Comprehensive Plan* and adopted neighborhood plans.

## Summary of Issues

The following is a summary of topics that emerged as key infill design issues:

**Compatibility and desired community character.** Most neighborhood plans call for infill development in established residential areas to be “compatible” with existing neighborhood character. However, little guidance is provided as to what aspects of neighborhood character are especially important to continue in new higher-density development that might provide some measure of compatibility with surrounding lower-density housing. Compounding the confusion about compatibility is that some areas, such as mixed-use centers and main streets, are intended to be places where growth and change is concentrated and where a desired future character may be more important than compatibility with existing development.

**Patterns in inner neighborhoods versus outer east neighborhoods.** Differences in lot and block patterns between inner neighborhoods and outer neighborhoods require different housing types, site configurations and design approaches. Medium-density housing types common in inner neighborhoods, such as street-oriented apartment buildings and rowhouses, are often not practical on Outer East Portland’s characteristically narrow, deep lots. A challenge for Outer East is to identify higher-density housing types appropriate to the area’s lot configurations that can contribute to a future transit- and pedestrian-oriented urban environment.

**Street frontages dominated by vehicle facilities.** The street frontages of new rowhouse and multidwelling projects are often dominated by vehicle facilities, such as driveways, garages, and

parking areas. The impacts of this include interruption of neighborhood patterns, such as landscaped setbacks and street-oriented facades, as well as the loss of on-street parking. Most medium-density multidwelling development is not subject to limitations on front parking, while City driveway-width requirements sometimes dictate that large portions of small infill sites be devoted to vehicle circulation space.

**Scale contrasts.** Contrast in scale between existing development and new, higher-density development is often a key community concern, particularly in areas where detached houses predominate. While there are numerous ways of minimizing scale contrasts, relatively few infill projects use such strategies. Instead, neighborhood residents frequently perceive infill projects as monolithic masses interrupting the fine-grain pattern of surrounding neighborhoods.

**Additional housing diversity.** The rowhouse type provides many advantages and serves as Portland's most common form of medium-density, owner-occupied housing. However, there has been criticism that Portland has been over-reliant on the rowhouse for infill housing and that additional types of housing should be encouraged to promote housing diversity. Community members have expressed interest in cluster housing, such as cottage clusters and courtyard townhouses, as alternative housing types. A need has also been identified for additional forms of owner-occupied housing appropriate for small sites in the R1 zone, where density requirements often make rowhouse development impractical.

**Competing City priorities.** An issue of particular concern to developers is that the City's various regulations sometimes work at cross-purposes, and that this can be particularly debilitating for higher-density infill development on small sites. An example of this are Office of Transportation requirements for wide driveways, which conflict with other City objectives for minimization of impervious surfaces and for design that minimizes the prominence of vehicle areas. Developers indicate that reducing regulatory conflicts between various City bureaus will be key to facilitating well-designed development on small sites.

## Summary of Staff Recommendations

In the past, the City of Portland has tended to rely primarily on design review and regulatory standards as strategies to implement its design objectives; which, while often effective, add complexity and cost to the development process. For the Infill Design Project, staff is recommending an approach that places greater emphasis on a wide range of non-regulatory implementation strategies. As part of this approach, staff proposes that *Zoning Code* amendments be processed as part of an upcoming iteration of the Regulatory Improvement Workplan to allow Infill Design Project staff to focus on near-term implementation of non-regulatory strategies.

The four primary thrusts of the proposed implementation strategies are to:

1. **Educate and foster dialogue about design.** Pursue strategies that increase developers', designers', and the general public's awareness of infill design strategies. Also, foster dialogue about design among a wide range of community stakeholders. Recommended implementation strategies include:
  - Creation of a "Portland Infill Design Guide," consisting of: (1) a collection of housing prototypes highlighting design solutions and alternative housing configurations for typical infill situations, (2) a guide to various strategies for addressing problematic infill design issues (e.g., illustrating ways of ameliorating scale contrasts, minimizing the prominence of vehicle areas, reducing privacy impacts, managing stormwater, etc.), and (3) case studies highlighting exemplary infill projects from Portland and elsewhere.
  - Establishment of a neighborhood contact requirement for new construction in the multidwelling zones, triggered by a project size threshold, in order to encourage dialogue

between neighborhood residents and developers and to provide opportunities for community input regarding the design of large projects.

- Investigate the possibility of holding workshops for builders and the public on infill design strategies (Bureau of Development Services implementation).
2. **Remove barriers to desirable design and development.** As much as possible, make desirable development the “easy thing to do.” Recommended implementation strategies include:
    - Regulatory changes to minimize the amount of site area that must be used for driveways and other impervious surfaces (will require consultation with the Office of Transportation on potential amendments to Title 17 driveway width requirements).
    - *Zoning Code* amendments to facilitate rear parking arrangements and to provide additional flexibility in the design of outdoor spaces, pedestrian areas, and setbacks along busy streets.
    - Investigate the feasibility, in partnership with implementing bureaus, of a range of strategies intended to facilitate desirable infill development. These include: expedited permit processing or reduced fees for projects meeting specified design criteria; reducing regulatory barriers to the use of existing alleys; and City participation in providing sidewalks in areas zoned for multidwelling development.
  3. **Adopt a limited number of regulatory design standards** to bring conformance with the community’s most fundamental design principles and to provide greater consistency in how multidwelling development is regulated. Recommended implementation strategies include *Zoning Code* amendments to:
    - Limit the amount of property frontage that can be used for vehicle areas, possibly by extending the 50 percent limitation that already applies to transit streets.
    - Require street-facing windows for all multidwelling development (this requirement currently applies to development in multidwelling zones, but not to multidwelling development in commercial zones).
  4. **Facilitate a wider range of housing types and configurations** that hold potential for meeting the community’s design objectives. Recommended implementation strategies include *Zoning Code* amendments that would:
    - Adjust common green requirements and other regulations to facilitate courtyard-oriented housing arrangements on small sites that can serve as alternatives to rowhouses.
    - Facilitate duplex development in higher-density zones.
    - Provide greater flexibility for attached house arrangements.
    - Create a new “shared street courtyard housing” provision, that would allow residential lots in higher-density zones to front onto a courtyard-like “shared street,” designed for both vehicles and pedestrians and characterized by paving blocks and traffic-calming features (similar to the Dutch *woonerf* concept). This would facilitate homeownership opportunities and additional housing types on small sites zoned for higher-density development.

# INTRODUCTION AND PROJECT SUMMARY

C H A P T E R

2

# Project Background

- Progression from Past Projects
- Development Trends
- Policy and Design Considerations
- What is Multidwelling Development?



## PROJECT BACKGROUND



The Infill Design Project’s focus on medium-density development addresses a category of housing that has become a significant component of Portland’s new housing production. While not as high profile as the large-scale projects typical in Central City areas such as the Pearl District, medium-density infill projects in neighborhoods outside the Central City hold potential to become important parts of the architectural mosaic that makes up the built environment of neighborhoods. Because of their location within established neighborhoods, medium-density infill projects, such as fourplexes and rowhouses, impact community character in ways out of proportion to their size and have often been at the heart of community controversy regarding growth and change.

This chapter provides background information clarifying the rationale for the Infill Design Project’s focus on the low- and medium-density multidwelling zones. It also includes a housing typology describing the different forms of housing that the City classifies as “multidwelling development,” as well as other housing types commonly built in the multidwelling zones.

There are several reasons for the project’s focus on rowhouse and multidwelling development in the low- and medium-density multidwelling zones. These include: progression from past infill design projects, development trends, and the lack of City strategies to foster quality design in such development. The reasons for the project’s focus are discussed further below.

## Progression from Past Projects

In 1997, the Planning Commission initiated a project to develop objective design standards that would apply to housing occurring outside of situations where design review was required. Subsequent work by a Planning Commission subcommittee and Planning Bureau staff resulted in draft regulations called the Interim Design Regulations for Infill Development. The goal of this work was to identify a small subset of design standards, drawn from the much more extensive Community Design Standards that then applied only in areas with design review, that could apply more broadly throughout the city. Subsequently, the scope of the project was further narrowed and split into phases based on public input. “Phase 1” was adopted as the Base Zone Design Standards project in 1999 and resulted in zoning standards that regulate the design of single-dwelling development in all zones, in particular restricting the ability of houses to rely on garage-forward designs.

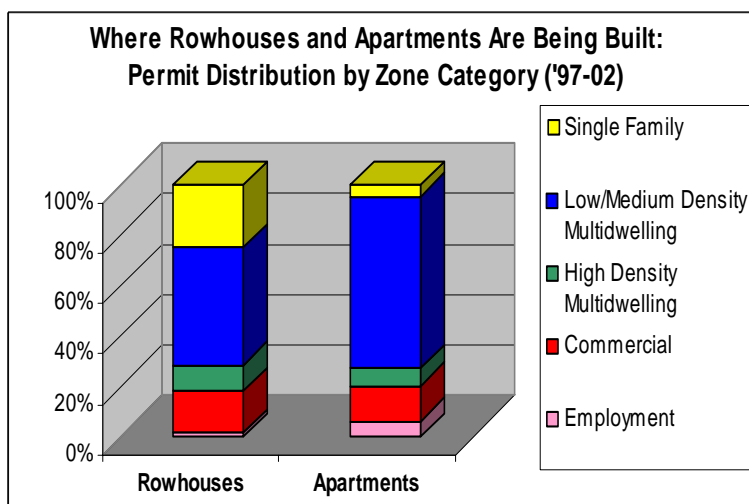
The intention was that a subsequent phase (“Phase 1.a”) would refine base zone standards for the design of rowhouses, and that “Phase 2” would develop base zone standards for higher-density residential projects. In January 2000, the Planning Commission reported to the City Council on preliminary findings related to the design of housing on small lots, and regulatory approaches that could be taken to intervene in their design. While the City Council did not approve a specific work program to address the findings, many of the findings were ultimately incorporated into the work program of the Land Division Code Rewrite project. As part of the rewrite of the Land Division Code, the City adopted new standards for the design of detached and attached houses on newly-created narrow lots in single-dwelling residential zones (most notably, these standards placed additional limitations on front garages and driveways). However, the Land Division Code Rewrite project did not adopt standards for the design of housing on existing narrow lots or on any lots within the multidwelling residential and commercial zones.

The Infill Design Project has been envisioned as the project that would take up where the Base Zone Design Standards and Land Division Code Rewrite projects left off, completing phases 1 and 2 of the original Design Regulations for Infill Development Project. The current project’s focus on medium-density development will thus address design issues not completed by these previous projects.

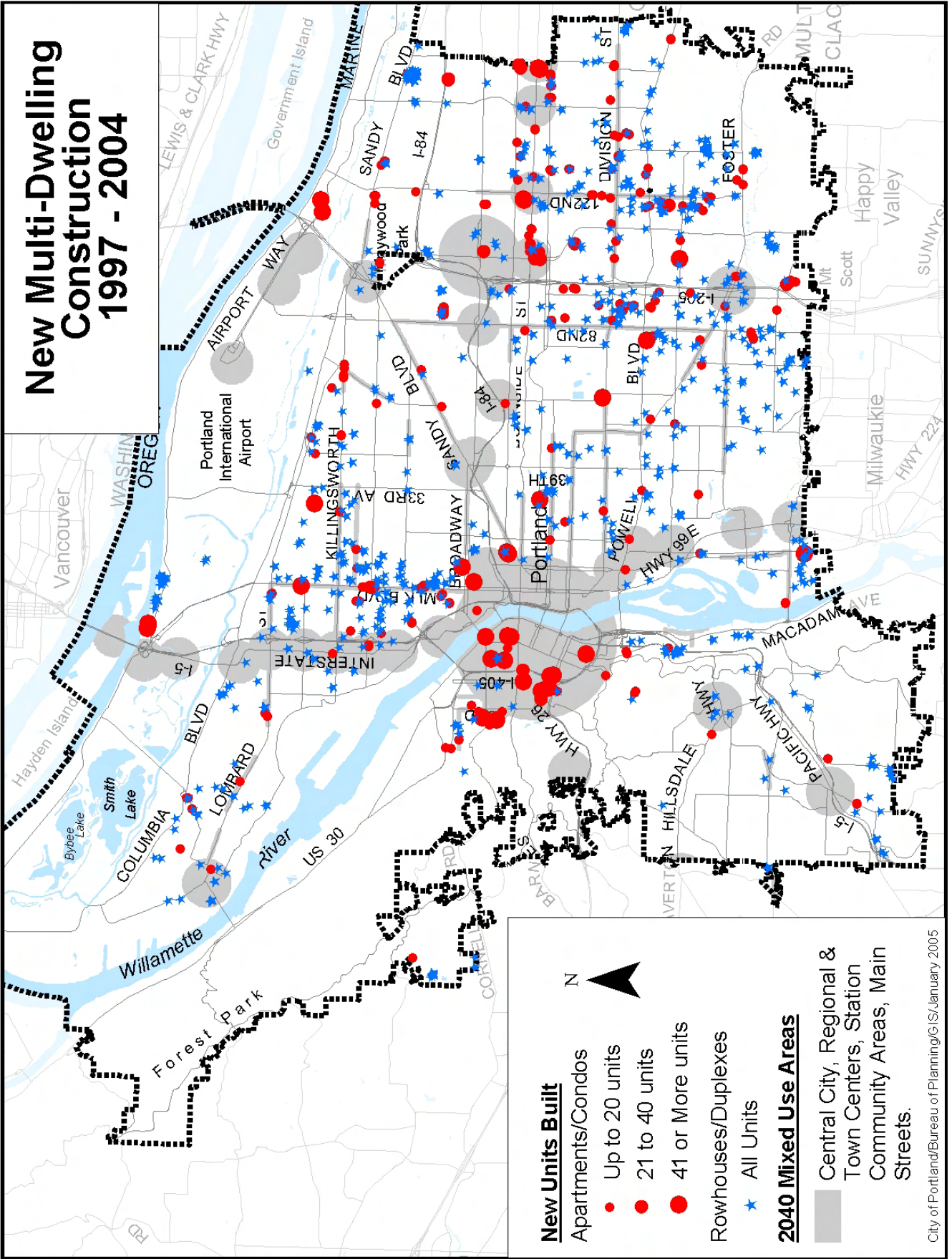
## Development Trends

**Current Trends.** The majority of apartment and rowhouse projects are being built in the low- and medium-density multidwelling zones, particularly in the R2 and R1 zones. While larger residential developments are being concentrated in the high-density multidwelling, commercial and employment zones in the Central City (particularly in the River District), more total housing units are being produced by numerous small infill projects in the low- and medium-density multidwelling zones in neighborhoods outside the Central City. Neighborhood areas that have had particularly large concentrations of infill development include Outer East Portland and Inner North and Northeast Portland (see Map 1 for citywide distribution of multidwelling building permits). Summary data (permit data is for 1997-2004):

- 66 percent of apartment and rowhouse permits (within the multidwelling, commercial and employment zones) have been for development in the low-/medium-density multidwelling zones.
- Distribution of new housing units, by zone category: low/medium density multidwelling zones = 6288 units; high-density multidwelling zones = 3151 units; commercial zones = 3719 units; employment zones = 3347 units.
- 90 percent of apartment building permits have been for relatively small buildings of fewer than 20 units.

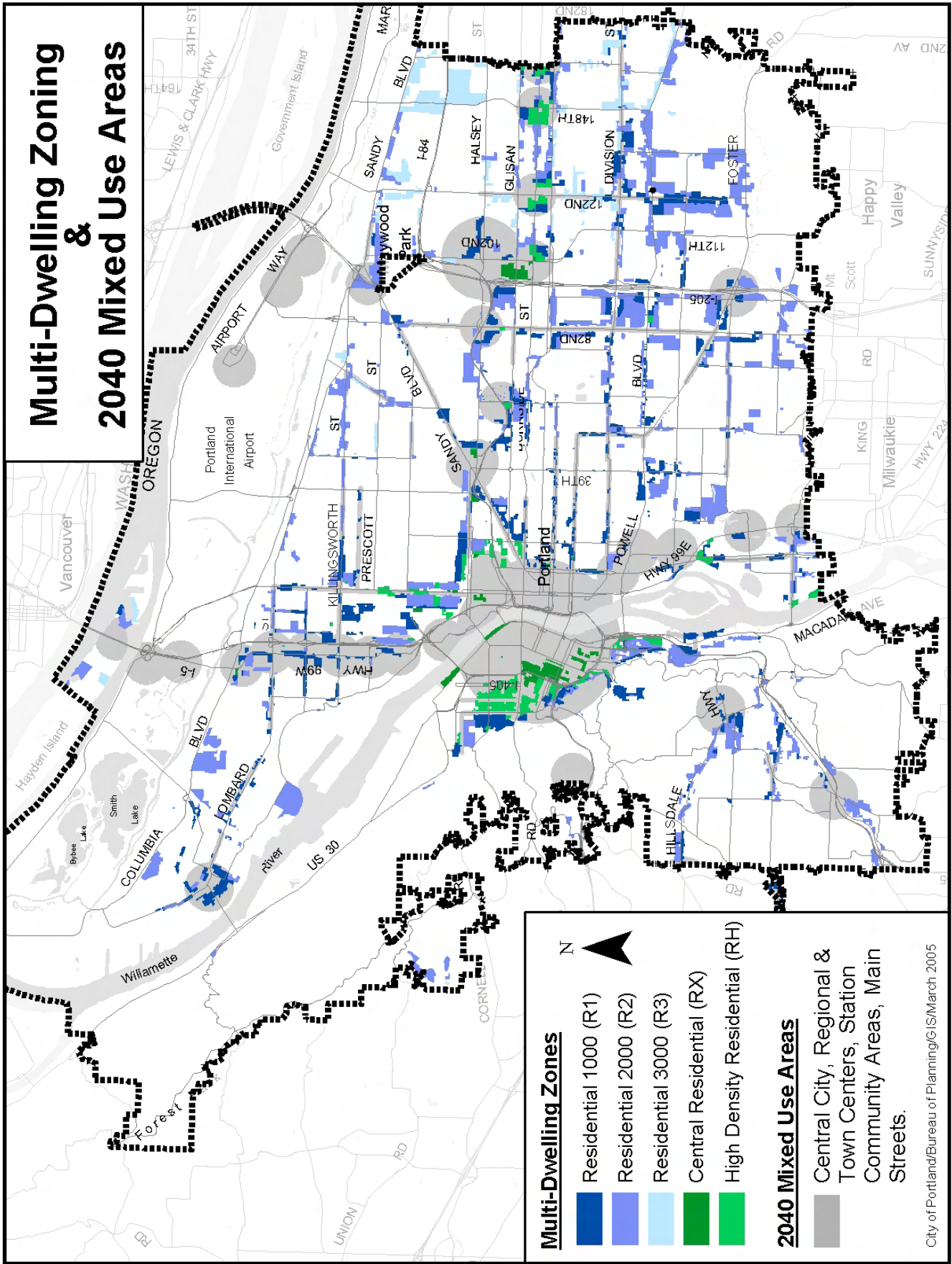


Map 1



Map 2

# Multi-Dwelling Zoning & 2040 Mixed Use Areas

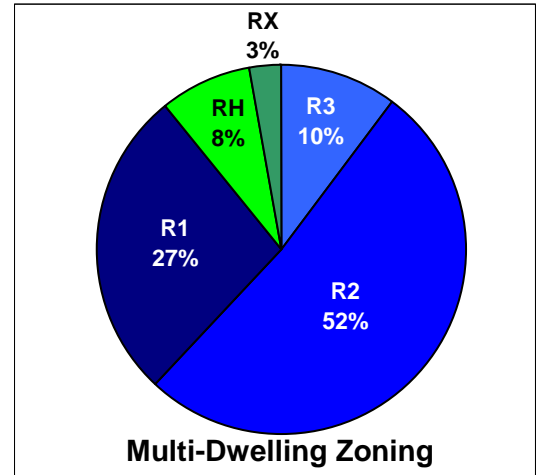


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**Future Potential.** The low- and medium-density zones will likely continue to be the location of a large proportion of the City’s apartment and rowhouse construction, as these zones constitute the majority of the City’s multidwelling zoned land area and include considerable amounts of vacant and underdeveloped land. Summary data:

- 89 percent of the City’s multidwelling zoned land is in the low/medium-density zones.
- Current zoning provides capacity for up to 70,000 additional housing units in the low/medium density multidwelling zones.
- 95 percent of vacant land (400 acres) in the multidwelling zones is in the low/medium density zones.
- Over 1100 acres of land in the low/medium density multidwelling zones is underdeveloped (building value less than 50 percent of property value).
- Estimates derived from Metro’s “Metroscope” analysis of residential capacity indicate potential for 9000 additional residential units within the low/medium density zones over the next 20 years.

(See *Appendix A* for more detailed data related to multidwelling zones and development trends.)



## Policy and Design Considerations

The low- and medium-density multidwelling zones are key to implementing City and regional goals for concentrating development in and around 2040 mixed-use areas, as these zones provide a large proportion of these areas’ residential zoning and housing capacity. While the low- and medium-density multidwelling zones are frequently located in areas at the interface between the cores of mixed-use centers and the surrounding neighborhoods (and where community concerns about change are often most acute), few design controls apply in these areas or to medium-density development along main streets and transit corridors. These zones also implement *Comprehensive Plan* policies calling for transit-supportive, higher-density development to be concentrated along transit corridors and near station areas (see Map 2, showing proximity of the low- and medium-density zones to 2040 mixed-use areas and corridors). Summary data:

- 2,368 acres of the low/medium density multidwelling zones are within 2040 mixed-use areas (i.e., centers, light rail station areas and main streets), and most of the remaining 5,094 acres of these zones are near the 2040 mixed-use areas or are adjacent to transit streets.
- While the core areas of mixed-use centers are often subject to design review and design-related standards have recently been applied extensively to single-dwelling zones, few design controls apply to areas where the majority of multidwelling development is occurring. For example, most areas in the low/medium density multidwelling zones have no limitations on front parking areas, resulting in many apartment projects with parking-dominated street frontages, particularly in Outer East Portland. In commercially-zoned areas designated as main streets, apartment projects can, and are, being built with no street-facing windows or doors.

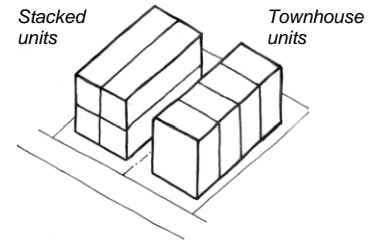
As indicated above, the Infill Design Project’s focus on the design of development in the low- and medium-density multidwelling zones allows attention to be paid to a segment of Portland’s residential development that will likely remain a significant proportion of such development and that is currently subject to only minimal design controls.

## What is Multidwelling Development?

The following summarizes the terminology that will be used in the rest of this report in reference to the different housing types that constitute “multidwelling development” or that are being built in the multidwelling zones. Portland classifies a wide range of residential development types that feature more than one dwelling unit on a shared lot as “multidwellings.” Multidwelling development includes:

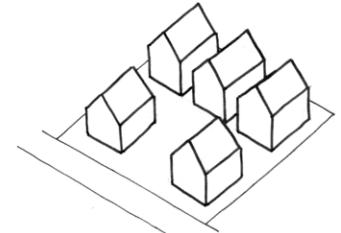
### **Plexes** (most commonly triplexes and fourplexes)

Often have a house-like form, can be in stacked-unit (“flats”) or townhouse configurations.



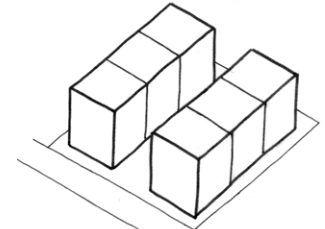
### **Cottage Clusters**

Detached houses on a shared lot, often oriented around a common open space.



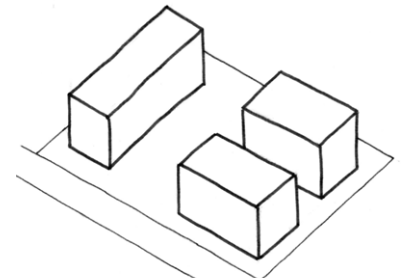
### **Courtyard Townhouses**

Units similar to rowhouses, but feature a shared driveway and are often oriented around common open space, rather than to the street.



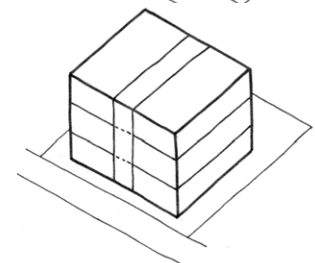
### **Apartment Complexes**

Clusters of low-rise apartment buildings. Only possible on larger sites.



### **Block Apartment Buildings**

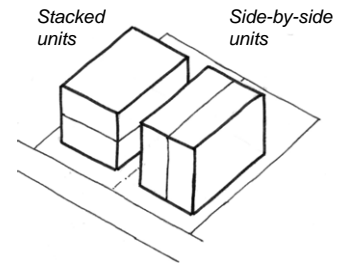
Multi-story apartment buildings with a shared main entrance and with stacked units accessed by interior corridors.



*Other housing types, not classified as “multidwelling” housing, but commonly built in the multidwelling zones include:*

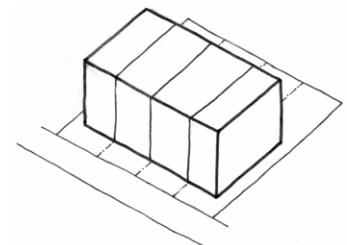
**Duplexes**

A two-unit structure on a shared lot. Two attached units on separate lots are classified as rowhouses.



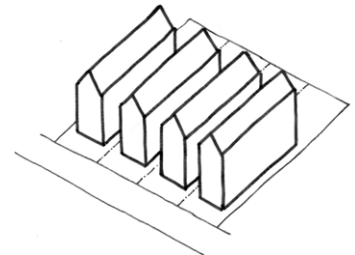
**Rowhouses** (also “attached houses”)

Attached units, each on a separate lot, and each with its own entry from a public street.



**Narrow Lot Houses**

Detached houses on narrow lots, with density similar to that of rowhouses (narrow lot houses are not a focus of the Infill Design Project, as their design has been the subject of the Bureau of Development Services’ “Living Smart” project and design competition).



## PROJECT BACKGROUND

C H A P T E R

3

# Issues and Opportunities

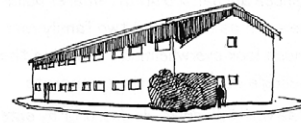
- Design Guidance from Neighborhood Plans
- What Is Being Built?
- Contextual Issues
- Area Specific Patterns and Issues
  - Inner Neighborhoods
  - Outer East Portland
  - Southwest Portland
- Key Infill Design Issues
  - Issue 1: Street Frontages
  - Issue 2: Scale Contrasts
  - Issue 3: Housing Diversity
  - Issue 4: Regulatory Responsiveness



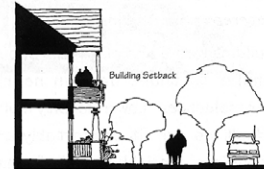
**Multi-unit buildings especially should contribute to the street.**

**STREETSCAPE**

- Provide an interesting building wall facing the street.
- Plant street trees & planting strips.
- Plant more generous landscaping in setbacks than required
- Use a variety of landscaping materials, including flowering plants.



NO LAYERS, NO INDIVIDUAL ENTRIES



Private Dwellings Usable Outdoor Space Pedestrian Corridor Public Street



FCD Design

An active building edge with windows, entries and balconies contributes to this streetscape.

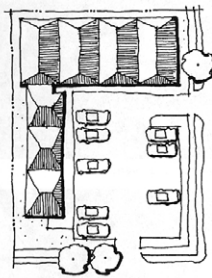
The wider the planting strip, the larger the type of tree that will thrive and the better the

The use of a fence or a change in level can be combined with landscaping to help distinguish between public and

**Parking lots and garages should not dominate the streetscape.**

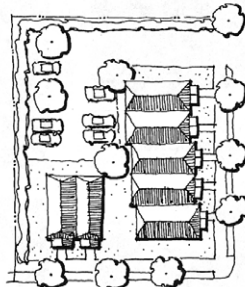
**PARKING**

- A narrow curb cut makes less of a visual impact on the street.
- Integrating landscaping into the parking area softens the effect of the expanse of paving.
- Group buildings around shared open space with a common access path to the parking in the back.
- Taller buildings, as opposed to bigger "footprints," preserve open space and allow more room for parking.



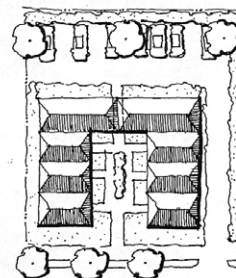
**BAD**

Avoid locating parking between the building and the street, especially at intersections.



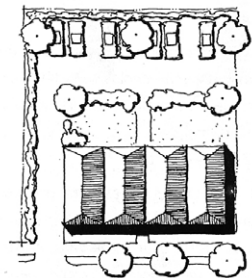
**MUCH BETTER**

Locate parking so that it isn't the dominant visual element: Buildings at the street edges.



**EXCELLENT**

Parking area should be visible from some dwelling units for casual surveillance.



**EXCELLENT**

Stacked units accommodate both parking and useable outdoor space on the site.

Pages from "Building Blocks for Outer Southeast Neighborhoods" (1996), intended to convey the community's vision for how multidwelling development can be designed to be a positive addition to neighborhood character.



New multidwelling development has not always contributed to meeting the community's vision.

## Comprehensive Plan Goal 12. Urban Design

### 12.6 Preserve Neighborhoods

Preserve and support the qualities of individual neighborhoods that help to make them attractive places. Encourage neighborhoods to express their design values in neighborhood and community planning projects. Seek ways to respect and strengthen neighborhood values in new development projects that implement this Comprehensive Plan.

#### Objectives:

- A. Encourage new developments to respond to the positive qualities of the place where they are to be built and to enhance that place through their development...
- B. Respect the fabric of established neighborhoods when undertaking infill development projects.
- C. While accommodating increased density build on the attractive qualities that distinguish the area. Add new building types to established areas with care and respect for the context that past generations of builders have provided.

Comprehensive Plan Goal 12.6 highlights the importance of neighborhood context when considering the impact of infill development on the built environment of neighborhoods. Perceptions that new development is not serving as a positive contribution to the desired character of neighborhoods tend to be central to community concerns about the design of infill development. Very often, new development is seen as not continuing character-defining neighborhood patterns or as being “out-of-scale” with the neighborhood. This chapter will summarize issues related to the impact of new infill development, discuss factors shaping their design, and will present examples of recent projects that highlight potential solutions to common infill design problems. After a general summary of community design expectations and common contextual issues related to infill development, subsequent sections provide a more detailed focus on area-specific issues, followed by a focus on issues and opportunities related to four key topics: street frontages dominated by vehicle facilities, scale contrasts, housing diversity, and regulatory responsiveness.

## Design Guidance from Neighborhood Plans

Virtually all neighborhood and community plans outside the Central City call for new infill development in established residential areas to be “compatible” with existing community character (see Appendix C for a compilation of relevant objectives from adopted neighborhood plans). The vagueness of the term “compatible,” and differing understandings of what this means, is often at the heart of community controversy regarding the design of infill development. This is particularly so in regard to multidwelling and rowhouse infill projects, which are usually larger in scale than existing single-family houses. A common public understanding is that compatibility means that infill development should be of similar scale to nearby houses. Replication of existing scale, however, is usually not possible with higher-density development, given the need to fit a greater number of units on a site. With higher-density development, a more realistic approach to achieving some measure of compatibility is that the design of infill projects should reflect, but not mimic, key character-giving traits of the surrounding neighborhood. Most plans, however, do not explicitly identify the community’s character giving traits or provide any guidance as to what future community character new development should help contribute toward. Also note that not all neighborhoods have adopted plans, significantly limiting their ability to convey their design aspirations.

A few neighborhood plans, including those for the Buckman, Centennial, Concordia, Creston Kenilworth, Hazelwood and Portsmouth neighborhoods, include more specific guidance in the form of voluntary design guidelines. Guidance regarding positive aspects of community character are also highlighted by two publications sponsored by the Bureau of Planning: *The 10 Essentials for North/Northeast Portland Housing* (1991), oriented to the Albina Community Plan area; and *Building Blocks for Outer Southeast Neighborhoods* (1996), applicable to the Outer Southeast Community Plan area. Feedback from neighborhood activists, as well as from developers, indicates that few private-sector developers utilize these voluntary guidelines, or are even aware of them. The guidance provided by these documents regarding infill design generally supports the principles outlined on Page 2 of this report.

Plans for inner neighborhoods generally call for new development to be integrated with the character of older (Pre-World War II) structures. Neighborhoods such as Buckman and Creston-Kenilworth that have significant amounts of infill apartment development from the 1960s through 1970s (described in these plans as “motel style”), call for these structures to be modified over time to be better integrated with the character of the neighborhoods’ pre-World War II architecture. Community plans for outer neighborhoods, such as those in Southwest and Outer East Portland, tend to place a greater emphasis on trees and other natural features, rather than architecture, as character-defining elements of the community.

## What is being built?

The R2 zone is intended for residential development with densities between one unit per 2500 square feet of site area and one unit per 2000 square feet of site area (17 to 22 units per acre). Infill housing types typically consist of rowhouses (which are especially prevalent in close-in neighborhoods), plexes, and small apartment projects (typically 2 to 3 stories). Until minimum density standards were established in 2002, detached houses on separate lots were also one of the most common infill housing types in the R2 zone. Detached houses may again become common as an infill type due to recent *Zoning Code* amendments that now allow detached houses on small lots in the R2 zone at densities similar to those of rowhouses.

The R1 zone is intended for residential development with densities between one unit per 1450 square feet of site area and one unit per 1000 square feet of site area (30 to 43 units per acre). In the R1 zone, infill housing types typically consist of plexes and low-rise apartments (up to 4 stories), and, to some extent, rowhouses. The latter have become less prevalent in the R1 zone than in the R2 zone, as R1 minimum density requirements (as amended in 2002) now make rowhouse projects impractical except on corner locations and on large sites.

In an analysis of multidwelling projects built outside the Central City between 1997 and 2002, the majority of projects (57 percent) were found to be stand-alone plexes (primarily 3 to 4 units) on separate lots. Clusters of apartment buildings or townhouses were also common, constituting 28 percent of multidwelling projects. Stand-alone apartment buildings were 11 percent of new projects, while mixed-use (residential/commercial) projects were only 3 percent of multidwelling projects. These figures do not include rowhouses, of which over 1000 units were built between 1997 and 2002, and which constitute the primary owner-occupied medium density housing type in neighborhoods outside the Central City. Recently, increasing numbers of housing projects featuring multiple detached houses built on the same lot have been built, both as rental units and as owner-occupied condominiums. (See the “Housing Diversity” discussion, beginning on page 52, for more on housing types and associated issues.)

## Contextual Issues

The following is a summary of common context-related infill design issues. More detailed discussion related to these issues is included in the “Area Specific Issues” section that follows, and in subsequent sections focusing on street frontage, scale contrasts, and housing diversity.

**Existing housing.** Most neighborhood areas zoned for medium-density development still have detached houses as the predominant building type. The predominance of detached houses defines much of the challenge of designing compatible higher-density infill development in ways that reflect neighborhood scale and patterns. Related to this, the *Zoning Code* purpose statement for the R2 zone, the predominant medium-density residential zone, states that this zone is intended for housing types that are “compatible with adjacent houses.” Regarding the higher density R1 zone, the *Comprehensive Plan* states that “The scale of development is intended to reflect the allowed densities while being compatible with nearby single-dwelling areas.” Achieving this compatibility is a key challenge of the Infill Design Project.

**Height and scale contrasts.** Many areas zoned for multidwelling development, especially outside the inner-most neighborhoods, are characterized by one and one-and-a-half story houses. New development is often two or three stories and is frequently perceived by neighbors as “towering” over older houses. The comparatively large size of medium-density infill development is due both to (1) the need to fit a greater number of housing units into a relatively small amount of site area – thus the need to stack living space on multiple floors, and (2) contemporary preferences for larger housing units. Many pre-World War II multidwelling housing types, such as courtyard apartments, were often one-story structures, but these usually consisted of small studio or one-bedroom units of 600 square feet or less. Scale differences between existing lower-density existing housing and higher-density infill housing are thus a key issue.

**Neighborhood patterns.** Basic neighborhood patterns, such as houses on 50’-wide lots in inner neighborhoods, and the predominance of trees and other vegetation in outer neighborhoods, are often key character-giving elements that define the “feel” of neighborhoods. While it is possible to use site design and arrange building volumes in ways that allow higher-density development to reflect established neighborhood patterns, these design strategies are usually not used in new rowhouse and multidwelling development, which often appear as interruptions to the fine-grain patterns of surrounding neighborhoods. Another neighborhood pattern issue is that builders often use the same housing types on main streets and major arterials as they do for residential side streets, when the desired character for these streets differs (e.g., main streets are intended to have a more urban environment defined by a relatively continuous streetwall of buildings, while residential streets have a more fine-grained and greener character defined by smaller building masses and landscaping).

**Interruption of neighborhood landscaped setback patterns by vehicle facilities.** Most neighborhood residential streets in Portland are characterized by landscaped setbacks between the fronts of buildings and sidewalks. This front setback landscaping provides residential streets with a clearly-identifiable character that serves as a counterpoint to the “hardscape” of commercial main streets. New rowhouse and multidwelling development is often characterized by front garages and setbacks dominated by paved driveways. This interrupts the character-defining landscaped setbacks of neighborhoods and limits opportunities for trees and other vegetation that would otherwise help integrate new development with the surrounding community.

**Privacy impacts.** New development is often not designed to minimize negative impacts on the privacy of neighboring properties. Because most infill projects use “off-the-shelf” building plans that are not designed for the specific site, balconies and windows are often situated in ways that compromise the privacy of adjacent properties, even when opportunities exist for relatively minor adjustments to the design of windows and balconies that can minimize privacy impacts.

Other context related issues include concerns about impacts to the solar access of adjacent properties and concerns that the design of infill projects often does not take advantage of the natural attributes of their sites, such as solar orientation, unbuilt areas, and the amenity value of existing trees. Architects relate that a basic problem is that most medium-density projects are not designed by architects and thus do not benefit from architects' expertise in providing site-specific solutions to the complex issues related to the built environment and context. Many neighborhood activists would like greater opportunities to provide input regarding the design of higher-density infill development, in large part due to concerns about site-specific issues.

Other frequently-cited infill design issues include:

- **Lack of usable outdoor space.** Multidwelling projects often do not include usable outdoor space, other than small patios or balconies. Unbuilt areas are often dominated by surface parking and driveways, with other open areas frequently only in the form of unusable slivers of landscaping. The lack of usable open space and play areas is exacerbated in Outer East neighborhoods by the relatively large numbers of families with children living in apartments and by the scarcity of conveniently-located public parks. While earlier examples of multidwelling projects were often oriented around a shared open space or courtyard, more recent development is frequently oriented around surface parking lots. Some community members also cite the valuable role of shared open space in cultivating a sense of community.
- **Loss of existing trees.** Tree preservation is not required for multidwelling development. Some developers clear a site of trees before applying for building permits, which prevents City staff or community members from suggesting strategies that might allow trees to be preserved.
- **Poor quality details.** This final category relates to community concerns about more detailed aspects of new multidwelling projects. Common concerns are that multidwelling projects often use materials, such as T1-11 or vinyl siding, that do not present the appearance of durability, or lack façade details and articulation that can provide more visual interest and human scale.



*“The devil’s in the details.” Contrasting images, of similarly-configured apartment developments, highlighting the difference that details such as façade articulation, materials, window treatments, roof forms, and trim can make. A challenge is finding ways to achieve quality design in ways that are affordable.*

# Area Specific Patterns and Issues

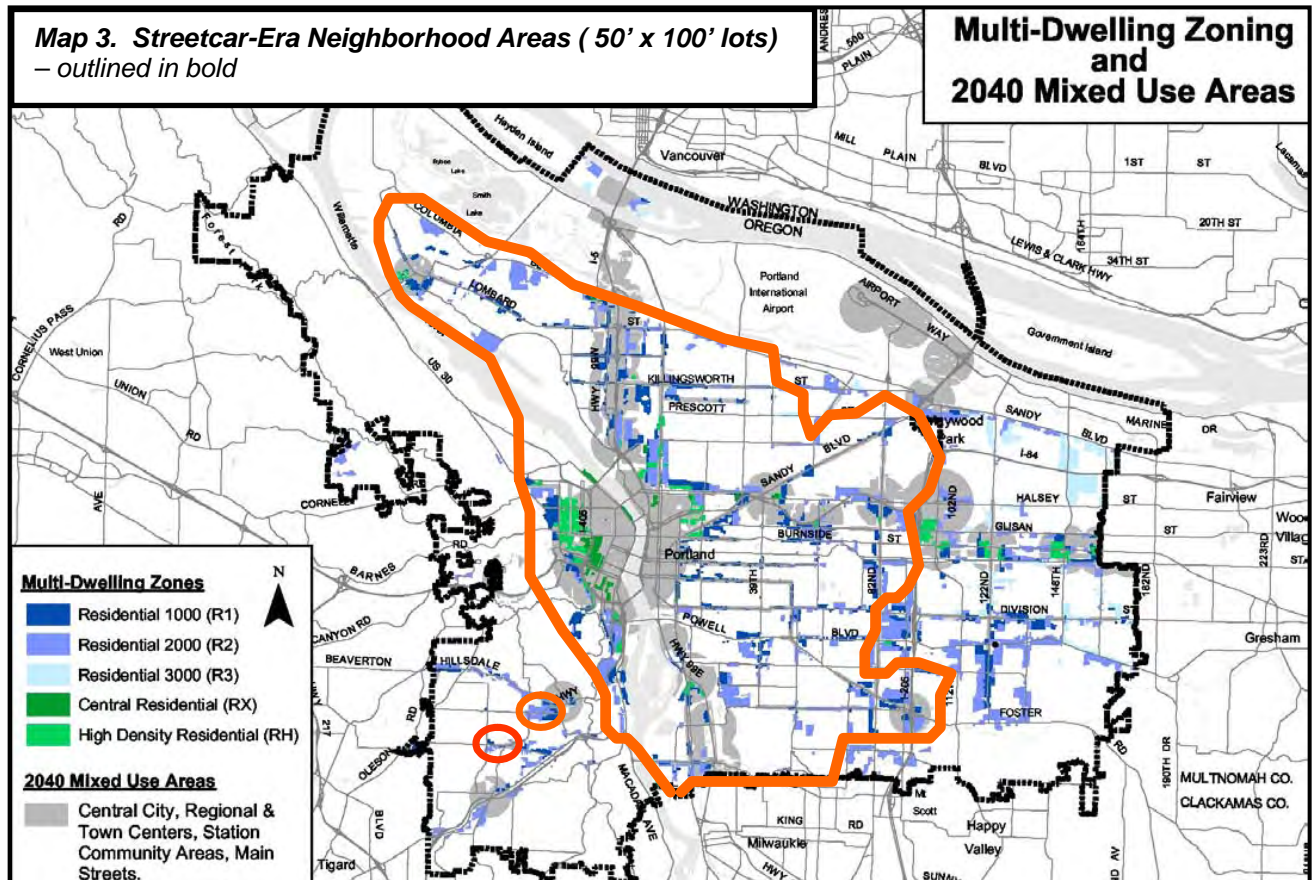
## Inner Neighborhoods

Close-in neighborhoods, whether in the southeast, northeast, north, northwest, or southwest areas of Portland share a common platting pattern that dates from their Streetcar Era origins (see area outlined in Map 3, below). Most of the lots in these neighborhoods are approximately 50' wide by 100' deep. Infill opportunity sites are usually in increments of these dimensions, with 5000 square foot and 10,000 square foot sites being especially common. While the small size of infill opportunity sites facilitate continuation of neighborhoods' fine-grain development patterns, they also present significant design challenges for higher-density development, particularly regarding the need to fit multiple housing units together with vehicle facilities on sites as small as 50' wide.



The inner neighborhood pattern: houses on 50'-wide lots, with landscaped setbacks and planting strips.

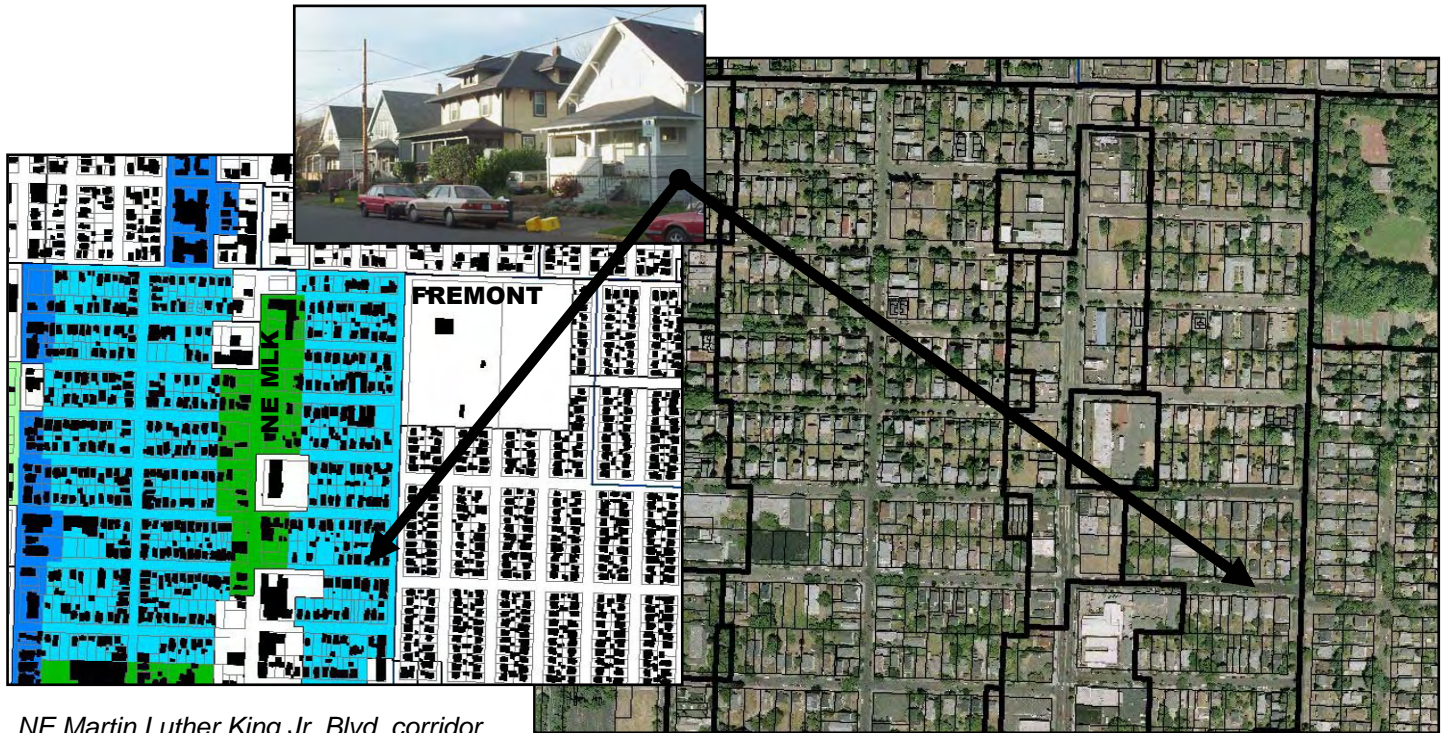
Detached houses remain the predominant building type in most areas zoned R2 and R1, even in the Northwest District, Portland's highest-density neighborhood. An issue regarding infill rowhouse projects is that their combined facades often present a continuous street wall that interrupts the established development pattern defined by houses on 50'-wide lots. In the older, most central neighborhoods, the existing housing stock includes many 2- to 2½-story Victorian-era and early-twentieth century houses, whose relatively large size facilitates the integration of higher-density infill development. Integrating higher-density development has proven more difficult in other neighborhoods, where, successively, low-lying 1- to 1½-story bungalows, Cape Cods, and ranch houses are increasingly common further out from the inner-most neighborhoods (see "Scale Contrasts" discussion, page 47).



### Examples of Inner Neighborhood Contexts

*Note: Light shading on maps indicates R2 zoning, while darker shading indicates R1 zoning.*

The following maps and aerial views highlight how the R2 and R1 multidwelling zones are overlaid over neighborhood areas where detached houses on 50'-wide lots predominate. The existing urban fabric within these multidwelling-zoned areas is therefore often a seamless continuation of patterns found within surrounding areas zoned for single-dwelling development.



NE Martin Luther King Jr. Blvd. corridor



NE Killingsworth area, east of MLK

These additional maps highlight how multidwelling zoning is often located along transit corridors or adjacent to mixed-use centers and transit stations. Lot patterns and existing housing in these multidwelling-zoned areas nevertheless continue the fine-grain development patterns established by the 50'-wide lots of the surrounding neighborhoods. Also note that multidwelling zoning along transit corridors is often only one lot deep. As a result, the rear portions of multidwelling-zoned lots often abut lots with lower-density, single-dwelling zoning; which can bring contrasts in building scale that are often a contentious neighborhood issue.

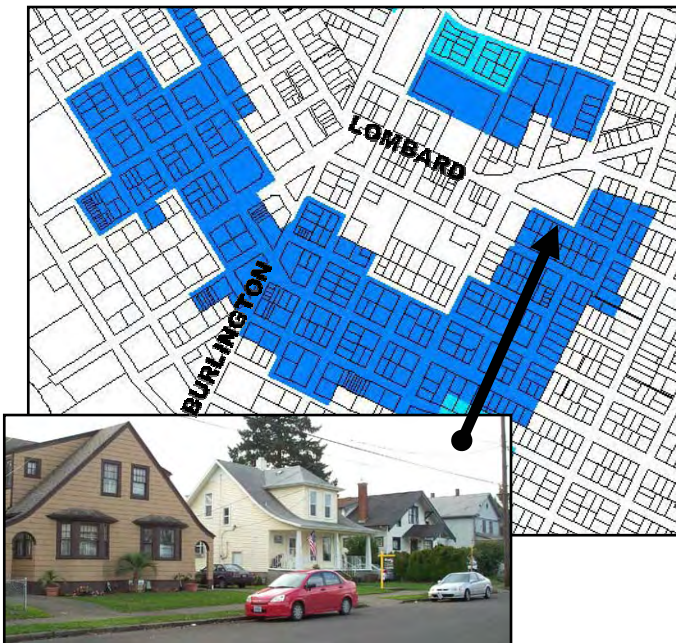


Corridors in North and Northeast Portland

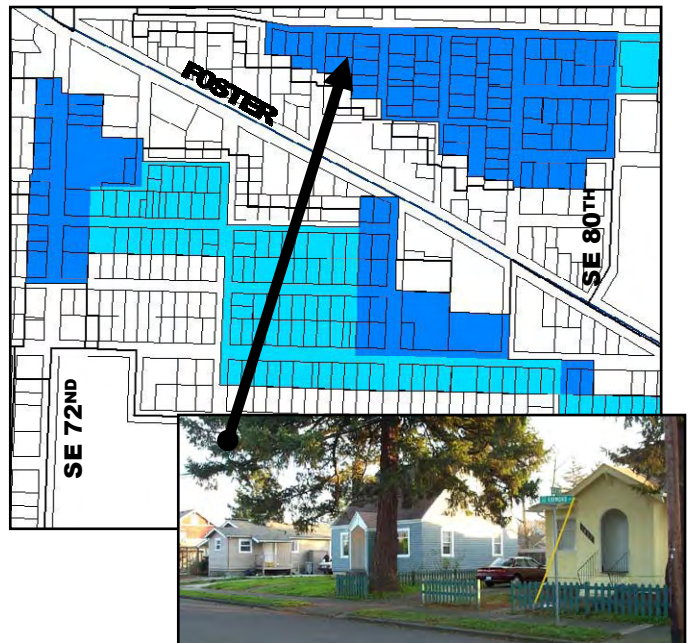


60<sup>th</sup> Avenue light rail station area

St. Johns town center

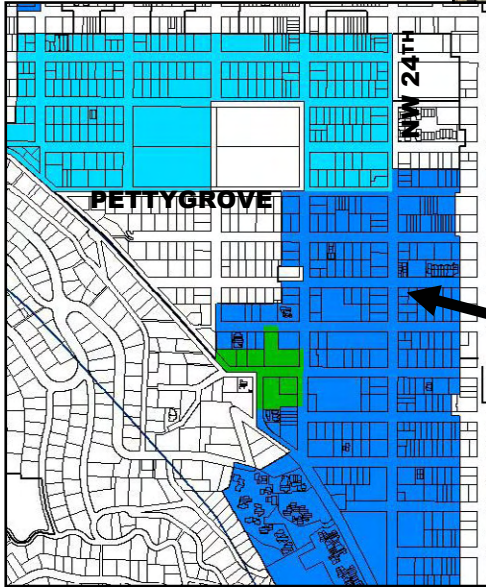


SE Foster corridor



ISSUES AND OPPORTUNITIES

*R2 and R1 zoned areas in the Northwest District, Portland's highest-density neighborhood. Even here, the pattern established by the original platting of 50'-wide lots predominates.*

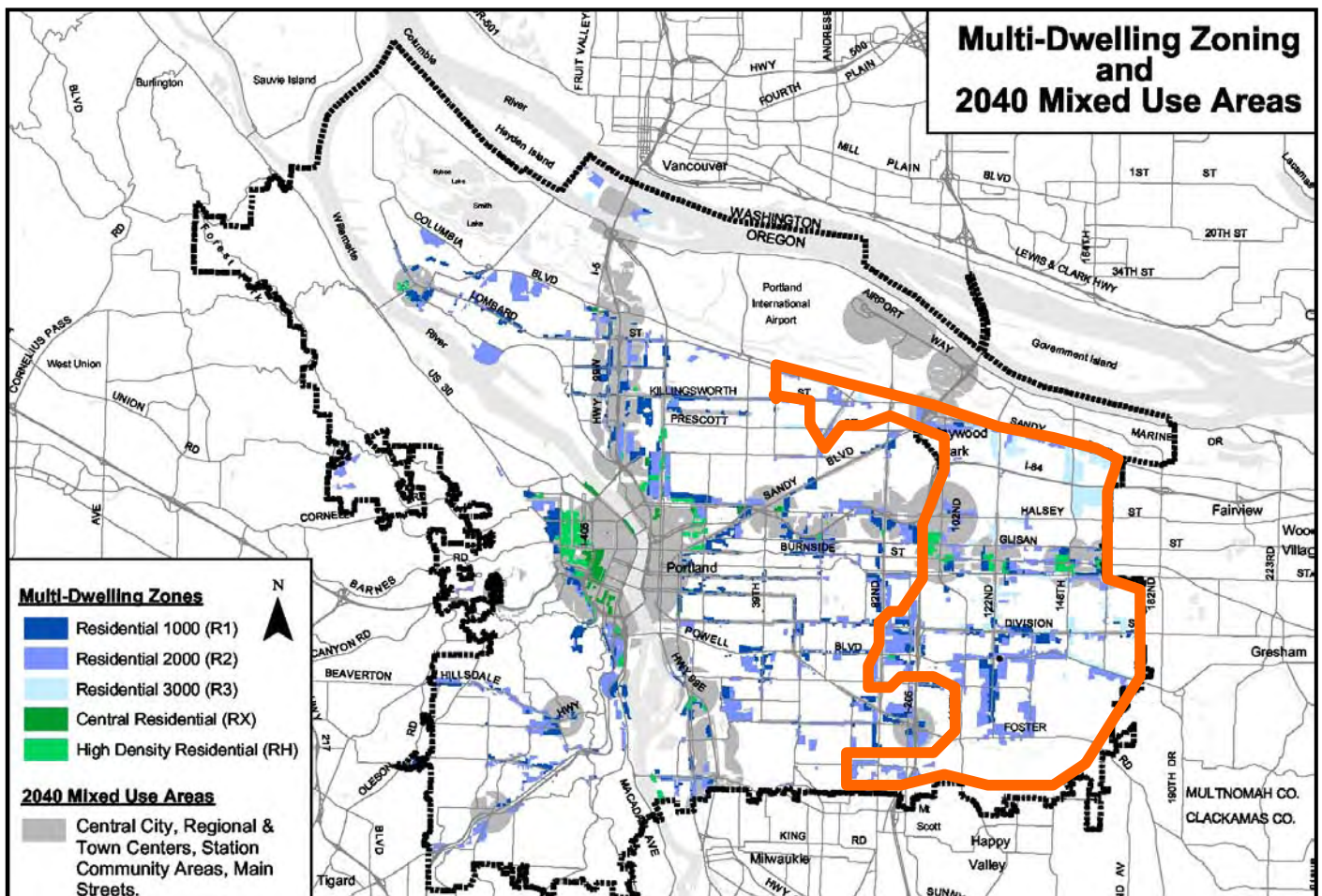


*The Johns Landing area of Southwest Portland, showing the contrast between rowhouse infill projects and the established neighborhood pattern.*



## Outer East Portland

The outer east areas of Portland (generally located east of I-205) are characterized by lot and block patterns very different from those found in the inner neighborhoods. In Outer East Portland, multidwelling-zoned lots are typically far deeper than the 100' deep lots common in the inner neighborhoods. Lots in Outer East are often 200' to 300' feet deep, but only 70' to 90' wide (Map 4, below, outlines in red areas where narrow, deep lots predominate). Higher-density housing configurations common in inner neighborhoods are often not possible on typical Outer East sites. The strong street orientation facilitated by the inner neighborhoods' relatively shallow lots is difficult to replicate on Outer East's narrow, deep lots, where often only a small proportion of units can be oriented to the street. A challenge for Outer East areas is to identify higher-density housing types appropriate to the area's lot configurations that can contribute to a future transit- and pedestrian-oriented urban environment. This challenge is compounded by the fact that multidwelling zoning in Outer East tends to be located along multi-lane arterial streets, where post-World War II development has tended to be auto-oriented in form, with few precedents for creation of a more transit- and pedestrian-oriented future. An additional issue in Outer East is that existing densities are typically far lower than allowed densities (in some multidwelling-zoned areas, single houses on half-acre lots are common), presenting challenges to achieving compatibility with higher-density infill development. This is further complicated by the predominance of one-story bungalows, Cape Cods, and ranch houses.



Map 4. Outer East Areas Characterized by Narrow, Deep Lots – outlined in bold (applies primarily to areas with multidwelling zoning)

## Outer East Portland

These images highlight how higher density development has been transforming the SE 122<sup>nd</sup> Avenue corridor (south of Powell Boulevard), which has large concentrations of R1 and R2 zoning. Until recently, this area was largely semi-rural in character.

### **Rural identity, urban future**

*Windmill lawn ornament along SE 122<sup>nd</sup> Avenue, with new apartment buildings in background.*



*Left image: houses on 90'-wide by 220'-deep lots along SE 122<sup>nd</sup> Avenue, where R1 zoning is intended to lead to a more urban future with transit-supportive densities. Each lot is zoned for 14 to 20 units. SE 122<sup>nd</sup> is a multi-lane arterial with transit service, but lacks sidewalks. Inset image is an early 20<sup>th</sup>-century house, also in the R1 zone along 122<sup>nd</sup> Avenue, on a lot zoned for 8 units.*



*Recent multidwelling development along SE 122<sup>nd</sup> Avenue. While they provide transit-supportive density, their design falls short of community objectives for design that contributes to a pedestrian-oriented environment. A challenge in Outer East Portland is to find ways to cultivate infill development that, while clearly a departure from the area's semi-rural character, can serve as a positive contribution to the character of the community.*



**R2-zoned area in the Powellhurst-Gilbert neighborhood (recent infill projects outlined in red)**

The above images highlight some of the challenges unique to Outer East Portland. The pictured area (between SE 82<sup>nd</sup> and I-205, between SE Division and SE Powell in the Powellhurst-Gilbert neighborhood) is located within one of the largest areas in Portland zoned for medium-density development. Properties here are typically 95' wide by 180' deep. Narrow, deep sites such as this do not lend themselves to owner-occupied housing types requiring street-fronting lots. A site of similar width in the R2 zone in an inner neighborhood typically results in four to five rowhouses. In contrast, sites such as this in Outer East must have 7 to 8 units in order to meet minimum density requirements, which is not possible with conventional street-oriented rowhouses. As a result, recent development in this area has tended to consist of rental plexes (in the aerial image, recently-developed sites are outlined in bold). A recently-adopted *Zoning Code* provision that provides an opportunity for owner-occupied housing configurations for such sites is the “common green” provision, which allows lots to be created that front onto a pedestrian access tract, instead of the usual requirement for street frontage (*see Issue 3 discussion*). However, because it is a new provision, few developers are aware of the opportunities provided by this configuration.

Another key challenge for such areas is how to achieve some measure of compatibility with existing houses, given that infill projects with 7 to 8 units are necessarily of very different scale than the existing small cottages on nearly half-acre lots that characterize the area. A concern raised by staff of the East Portland Neighborhood Office is that, because of the great contrast between existing and allowed densities, the medium-density multidwelling zones in Outer East are serving as “redevelopment” zones, rather than as “infill” zones. They indicate that, in contrast to close-in neighborhoods, where development in the R2 zone has typically been on vacant sites (because of the relatively small difference in existing versus allowed densities, largely leaving existing housing and established neighborhood character intact); such zoning in Outer East is leading to widespread redevelopment that appears likely to eventually leave little of these areas’ original character.

ISSUES AND OPPORTUNITIES

The images, below, highlight the still semi-rural character of some areas in Outer East that are zoned for multidwelling development and the lack of complete public facilities, such as sidewalks. The existing low densities make continuation of existing neighborhood character a challenge. The great contrast between existing and allowed densities suggests that a desire *future* character, rather than existing neighborhood character, would be a more useful guide for such areas. However, City planning documents lack clear guidance as to what a desired future character might be for such areas that reflects the zoned densities and typical lot configurations.



**Views of R2-zoned area in the Powellhust-Gilbert neighborhood.** The site with the bungalow, in the lower-right image, is zoned to allow 16 units.



**Views of R1 and RH -zoned areas in the 148<sup>th</sup> Avenue light rail station community.** Lots, currently occupied primarily by single houses, are typically 70' wide by 300' deep and are zoned for 21 units or more units.



**Examples of Outer East apartment developments**, with typical barracks-like massing (similar to the inset image from Building Blocks for Outer Southeast Neighborhoods intended to highlight what should be avoided in the design of multidwelling projects). The narrow, deep lots of Outer East Portland tend to lend themselves to such arrangements.

**Other Outer East Issues**

- Substandard street infrastructure.** The existing street infrastructure, which often lacks sidewalks or is characterized by a very auto-oriented environment of multiple traffic lanes and few crosswalks, does not encourage developers to place a premium on pedestrian-oriented design in which buildings are oriented to the street. Some developers have indicated that creating an attractive street environment, or at least one that has basic elements such as sidewalks and street trees, could serve as a catalyst that would encourage developers to use design that acknowledges the amenity value of public streets. In addition, some neighbors relate that they find the lack of sidewalks acceptable as long as streets primarily serve single-family homes, but feel that higher-density infill development creates a need for a comprehensive sidewalk system due to increased traffic and greater numbers of pedestrians. While sidewalk improvements are usually required at the property frontages of new development, some neighbors do not feel that the resulting pattern of scattered sidewalk improvements is acceptable because this does not create a continuous system. Similar issues regarding substandard streets are significant neighborhood concerns in Southwest Portland.



*Unimproved street in the Powellhurst Gilbert neighborhood. Right side is zoned R1, left side is zoned R2.*

- Required density and market demand.** Many multidwelling infill projects in Outer East do not meet the City’s density goals. Some developers relate that the housing market in Outer East does not support the required densities. They indicate that the housing products desired by buyers and renters, such as townhouse units and detached houses, are often not practical at the required densities, especially those of the R1 and RH zones. Developers frequently retain an existing house on a site in order to avoid minimum density requirements. An increasingly



Townhouse infill, in the backyard of a pre-existing house. Neighborhood perspectives on such configurations are mixed. Some see it as preserving the existing neighborhood streetscape. Others feel it represents a missed opportunity, in not contributing to a more urbane environment, while compromising the privacy of neighboring properties' backyards.



Infill project with 7 detached houses on a 100'-wide by 400'-deep lot, whose R2 zoning is intended for 16 to 20 units.

popular housing form is multiple detached houses on a single lot, either condominiums or rentals. These detached house clusters are more feasible at densities (some cite 1 unit per 3000 square feet) somewhat lower than what is required in the R2 and R1 zones. The narrow and deep dimensions of the area's lots compound the challenge of meeting the City's density goals. The City originally assumed new higher-density development would primarily involve aggregated lots, which would better accommodate the intended densities. Parcelized ownership patterns, however, have meant that infill opportunity sites often consist only of single lots.

- **Low-income households.** Many private-sector developers of multidwelling projects in Outer East indicate that their target market is lower-income families who desire relatively affordable new housing. Some of these developers relate that many of the new tenants are families from close-in North and Northeast Portland neighborhoods who could no longer afford the rising rents in those areas. Some community members feel that this trend, combined with the large amount of multidwelling zoning in Outer East, may result in a concentration of poverty in this part of the city.
- **Families and large unit size.** Some Outer East developers indicate that the area has a glut of 1- and 2- bedroom apartments. Because of this, and in response to the many families seeking new housing, new rental apartment projects often include units with greater numbers of bedrooms. The correspondingly larger unit size accentuates the scale contrasts between new multidwelling infill development and existing houses.
- **Long-term viability.** Some community members are concerned about the long-term viability of projects that are built with materials such as T1-11 or vinyl siding, have no substantial open space amenities, and do not contribute to a desirable neighborhood character. Some ask, "While a selling point now is that they are new housing, what happens when they are deteriorating 20 years from now and have nothing else going for them? What happens to the neighborhood?" Some in Outer East are concerned about the potential for a

future similar to Gresham's nearby Rockwood neighborhood, whose concentration of poor-quality apartments has resulted in corresponding concentrations of poverty and crime.

- **Loss of trees.** A character-defining aspect of Outer East are the groves of trees, often native Douglas Fir, on the area's large lots. Community members are concerned about the practice of some developers of clearing sites of trees in preparation for development, sometimes in advance of obtaining building permits. The City's tree preservation requirements do not apply to multidwelling projects that do not involve land divisions.

For additional perspective on Outer East issues, see also the *Outer Southeast Livable Infill Project* report (Appendix I), undertaken by a Portland State University workshop group, which helped inform this section of the *Infill Design Project Report*.

## Southwest Portland

Streetcar-Era neighborhood areas in Southwest Portland (see Map 3), such as Corbett-Terwilliger-Lair Hill and (to a lesser extent) the Hillsdale town center and Multnomah Village, share lot patterns and contexts in common with other inner neighborhoods, as described previously. Outside these areas, Southwest Portland has relatively little multidwelling zoning, most of which is located along the Beaverton-Hillsdale Highway and along Barbur Boulevard. These corridors, which are characterized by relatively large lots of irregular size, have experienced relatively little infill development in recent years. Sloped sites and environmental zones in some of these areas bring unique topographical challenges to multidwelling development, but greater regulatory flexibility is provided for sites in environmental zones by exemptions to the minimum density requirements that normally apply to multidwelling zones. As in some Outer East areas, a salient issue in Southwest Portland is that some areas zoned for medium-density development lack improved streets and sidewalks.

## Area Specific Issues – General

A general recommendation by Infill Design Advisory Group members was that the City needs to better convey to developers, as well as to the general public, a hierarchy of design principles for centers, main streets, and residential side streets. Currently, few builders have much awareness of the community’s aspirations for these types of places, or how they are intended to differ from each other. Also, advisory group members suggest that the City needs to help counteract the prevalent “one-size-fits-all” approach to infill design by emphasizing how design responses should differ for infill projects in Streetcar-Era neighborhoods with urban street grids, versus design on curvilinear streets in Southwest Portland and in other areas where a greener neighborhood character predominates and is valued (one suggestion was development of a street and urban area typology, identifying what building types and design responses are appropriate for each).

**The following pages discuss infill design issues that are a key focus of the Infill Design Project. They provide background for the staff recommendations outlined in Chapter 4.**

- |                 |   |
|-----------------|---|
| <b>Issue 1:</b> | <b>Street Frontages Dominated by Vehicle Facilities</b> |
| <b>Issue 2:</b> | <b>Scale Contrasts</b>                                  |
| <b>Issue 3:</b> | <b>Housing Diversity</b>                                |
| <b>Issue 4:</b> | <b>Regulatory Responsiveness</b>                        |



Above: Most neighborhood residential areas are characterized by landscaped setbacks, such as this R1-zoned street in North Portland.

Below: Recent rowhouse, plex, and apartment projects with frontages dominated by vehicle facilities.



### Issue 1: Street Frontages Dominated by Vehicle Facilities

A key issue regarding the design of infill development is that the street frontages of new rowhouse and multidwelling projects are often dominated by vehicle facilities, such as driveways, garages, and parking areas. The impacts of such facilities are wide ranging. Street frontage dominated by vehicle facilities can:

- Interrupt neighborhood patterns, such as landscaped setbacks and street-oriented facades;
- Cause the loss of on-street parking;
- Prevent opportunities for street trees; and
- When garages occupy building frontage, this can compromise neighborhood security by limiting the ability of residents to view the street (the “eyes-on-the-street” concept of passive surveillance).

Other impacts of vehicle facilities are related to the large proportion of site area, particularly on small sites, sometimes devoted to driveways and other vehicle areas. Impacts of this include:

- Increased stormwater runoff;
- Contribution to urban heat island effects; and
- Inefficient use of site area, as the driveways of small multidwelling projects only serve their intended purpose for a few minutes of each day when cars pass over them. Some have suggested that site area now typically devoted to driveways needs to be used for additional purposes, such as including additional building area or decks above driveways, or by designing driveways to be multifunctional, perhaps even as additional recreation space for residents.

### Reasons

**Auto Age infill in Streetcar Era neighborhoods.** Designing the vehicle facilities of new medium-density infill housing to be visually unobtrusive and to respect neighborhood patterns are challenging because of two basic reasons:

1. The existing Streetcar-Era housing that defines the character of many neighborhoods typically include only minimal parking facilities, often in the form of small garages at the rear of properties, or has no off-street parking at all. In contrast, parking facilities and garages figure prominently in new housing because of today’s high rates of automobile ownership and builders’ perceptions of demand for off-street parking and garages (which are also valued for the storage space that basements once provided).
2. While adjacent properties with detached houses may each provide parking for only a single household’s vehicles, a medium-density infill development must accommodate parking for multiple households.

It can be especially problematic to locate parking in ways that are visually unobtrusive on the small 50’-wide sites

that are common in inner neighborhoods, particularly in the R1 zone, where three to five units are required for new development on such sites. Fitting parking onto small sites zoned for higher-density development often results in plexes similar to those illustrated on the previous page. Not surprisingly, architects relate that the most difficult aspect of designing infill development for small sites is how to fit in the parking. As one architect put it, “parking is 80 percent of the design problem.”

**Builders.** It is usually possible to minimize the prominence of parking by locating it toward the rear of sites. However, from the perspective of many builders, the front is the most rational place to locate parking. Reasons include the following:

- Locating parking in the front can preserve rear yard area as private outdoor space (for rowhouses, builders indicate that buyer demand for private backyard space, rather than cost, is the main reason they do not use rear parking arrangements more often);
- Rear parking access for rowhouses complicates property arrangements and ownership issues, since this requires an access easement (or, for larger projects, a separate tract) and creates a common property element with attendant maintenance complications (in contrast, the more typical rowhouse arrangement with front garages, each with its own driveway, avoids the need for an access easement, simplifying property arrangements).
- Front parking minimizes the amount of driveway paving and attendant costs, compared to rear parking arrangements.
- For apartment complexes, locating surface parking at the front and center of the site minimizes the distance residents need to walk between their cars and their units.
- Small infill sites often leave little room to locate driveways alongside buildings to access rear parking.
- Even when alleys exist, alley access is often not practical because alleys are often not improved and the costs of improving them to City standards can be prohibitive.

Many builders, especially those building in Outer East, indicate that ample off-street parking (more than one space per unit) is one of the most highly prized amenities for residents. Some builders indicate that they sacrifice potential open space, and sometimes even additional units, because of this demand for parking. In close-in neighborhoods, however, some builders are finding that projects with little or no off-street parking, are proving financially successful. They credit this to convenient transit service and to a niche of buyers who are attracted to the pedestrian-friendly nature of close-in neighborhoods. Developers and designers also give credit to the City’s recent relaxation of parking requirements for providing new opportunities for projects that are not auto-centric in their design.

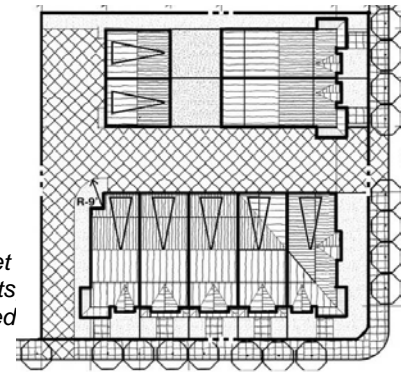
**Regulations.** Several *Zoning Code* development standards discourage front parking configurations. Among these are standards preventing detached and attached houses, as well as duplexes, from having garages that extend in front of living areas and that limit the amount of garage frontage. Front parking is also limited for multidwelling development along transit streets and in pedestrian districts. For multidwelling projects that do not directly front transit streets and are not in pedestrian districts, however, there are no limits on front parking. This allows the common garage- and parking-dominated triplexes shown on the previous page. While these projects are not located directly on transit streets, they are located in multidwelling-zoned areas near transit facilities that are intended to become transit- and pedestrian-oriented places.



*Triplex designed to meet transit street requirements, with parking at rear*

Despite the emphasis of many *Zoning Code* development standards on limiting the prominence of vehicle areas, other City regulations have the unintended effect of encouraging prominent vehicle facilities. Land division requirements for alley tracts for rowhouses with rear parking, in combination with minimum lot size requirements and building coverage limits, sometime require

multiple code adjustments (particularly at higher densities), unintentionally favoring rowhouses with front garages. Developers and designers have identified Title 17 (*Public Improvements*) driveway requirements as resulting in overly-wide driveway widths for small multidwelling projects, which also makes it difficult to provide driveway access to rear parking.



*Rear-accessed rowhouses at R1 densities fail to meet minimum lot requirements and building coverage limits due to site area devoted to alley tract. Front-accessed rowhouses have no such regulatory hurdles.*

**Related Issue: Rowhouses – Tradeoffs between Rear Parking and Open Space**

The following highlights tradeoffs between front and rear parking arrangements for rowhouses. Note that a lot depth of 120’ is typically needed to provide space for a rear driveway, detached garage, and backyard. The 100’-deep lots typical in Portland tend to preclude anything but a residual backyard (no more than 10’ deep) when a rear driveway and garages are included.



**Rowhouses with Rear Parking**

**Positives**

- Good relationship to the street
- Preserves on-street parking
- Maximizes potential for front landscaping (and continuation of neighborhood landscaped setback patterns)
- Allows ground floor living space and good entrance arrangements (no need for tall stairways or narrow entrance corridors)
- Facilitates two-story height (no need to stack living spaces above garages)

**Negatives**

- Little opportunity for usable rear yard space
- Greater amount of paved area required for rear driveway
- Somewhat more expensive (one developer of a four-unit project cited an additional cost of \$4000, compared to a front parking arrangement).

**Rowhouses with Front Parking**

**Positives**

- Allows private backyards and a greater proportion of site area can be landscaped
- Less impervious surface, compared to rear parking configuration

**Negatives**

- Compromised relationship to the street, with ground level dominated by garage doors
- Loss of on-street parking
- Front setbacks dominated by driveway paving
- Interrupts neighborhood patterns of landscaped setbacks
- Stacking living space above garages sometimes results in taller building height, bringing scale contrasts with surrounding houses and greater impacts to the privacy of neighbors.

*A lot depth of 120’ allows for rear parking as well as backyard space, as shown in this example in Outer East Portland. The resulting larger lot sizes however, fail to meet R2 minimum density requirements.*



**Related Issue: Driveway Standards (Title 17)**

Designers and developers relate that Title 17 driveway standards sometime function at cross-purposes to City goals for minimizing the prominence of vehicle facilities. The primary issue is that Title 17 requires a minimum driveway width of 20' for all multidwelling projects on sites wider than 50' (only 10' is required for sites less than 50' wide). This same 20' dimension, intended to allow for pass-by traffic, applies to a fourplex as well as to a 200-unit project, despite their very different traffic generation characteristics (note that small apartment projects are also subject to the same standards as convenience stores and supermarkets, as these are all classified as "Commercial" projects). Designers and developers relate that these standards unnecessarily complicate development on small sites. They suggest that small apartment projects should not be designed around the rare occurrence of cars needing to pass each other (note that the two 10' travel lanes required for a fourplex are wider than the 9' lanes found on SE Hawthorne Boulevard).



*8 unit project along Powell Boulevard with minimum required 20'-wide driveway*

While a 20'-wide driveway occupies relatively little of the total frontage on a large site, the same driveway width on a small site (such as the 60'-wide lots common in some areas in Outer East) results in a large portion of street frontage devoted to driveway area, counter to City objectives for pedestrian-oriented design. Other issues related to these driveway standards and the resulting predominance of paved driveway area include:

- Loss of opportunities for landscaping that could provide better contextual response to context (some community members characterize the typical results as "barracks-on-asphalt");
- Loss of site area that could be used for usable outdoor space or for additional street-oriented building area;
- Disincentive to rear parking arrangements, because of the amount of pavement and site area needed to provide driveway access; and
- Environmental impacts that run counter to City objectives calling for minimization of stormwater impacts and urban heat island effects.



***Infill project in the R1 zone in the Gateway Plan District. This six-unit project does not exceed the minimum required driveway width of 20'. In conjunction with the required 5'-wide walkway and surface parking, this nevertheless results in most of the site being devoted to impervious surfaces.***



Developers indicate that they would build narrower driveways if City standards clearly allowed this. While Title 17 allows applicants to petition for narrower driveway widths than are normally required, many developers indicate that they do not take advantage of this because of the uncertain outcome.

In conjunction with the Infill Design Project, Office of Transportation staff are currently considering the possibility of amending Title 17 to differentiate small multidwelling projects from other Commercial projects. One possibility discussed is the application of a minimum driveway width of 10' for multidwelling projects with no more than 10 parking spaces, when access is from streets with low traffic volumes.

To provide additional perspective, the following is a summary of narrow driveway standards in other cities as they apply to multidwelling development:

**Seattle:** 10' minimum driveway width for multidwelling projects (also, Seattle generally allows only one driveway per site in multidwelling zones. Rowhouses must be served either from an existing alley or from a shared driveway. This prevents the multiple garage and curb cut arrangement common in Portland.). Examples:



10.5' driveway serving 4 townhouse units



11' driveway serving 4 townhouse units

*Note: Townhouse clusters (shown above), typically featuring 4 units on sites 50-60 feet wide, have become a common infill housing type in Seattle (with 1000 to 1500 such units being built yearly). They feature two units facing the street and two units behind, with driveway access to garages that open onto a central auto court. The narrow driveway widths allow the driveways to be visually unobtrusive and allow for more efficient use of the limited site area.*



10.5' driveway serving 8 townhouse units



14' driveway, to basement parking, serving 12 townhouse units

## Driveway Standards in Other Western Cities

**Los Angeles:** 10’ minimum driveway width for up to 24 parking spaces

**Pasadena:** 8’ minimum driveway width for up to 9 parking spaces  
10’ minimum driveway width for up to 25 parking spaces

**Red Bluff (CA):** 15’ minimum driveway width

**Berkeley:** 20’ maximum width (no minimum width specified)

**Honolulu:** 12’ minimum driveway width

**Anchorage:** 14’ minimum driveway width

**Boulder:** 10’ minimum driveway width

Also note that the following reference, *Parking Spaces: A Design, Implementation and Use Manual for Architects, Planners, and Engineers* (1999), recommends a maximum width of 12’ for residential driveways serving 2 to 10 cars.

**Seattle duplex cluster with “shared driveway”** – another Seattle example that provides lessons for Portland. Features a 12’-wide driveway providing access to six units for both cars and pedestrians. Shared use of space minimizes amount of impervious surface and makes efficient use of limited site area, while paving blocks signal that it is intend for pedestrians as well as cars. For this configuration to be allowed in Portland, Title 17 driveway width requirements would need to be reduced and the Zoning Code would need to be amended to allow alternatives to grade-separated walkways.



## Issue 1: Street Frontages Solutions

The following are examples of recent infill projects that illustrate alternative strategies for minimizing the prominence of vehicle facilities.



*Rowhouses with rear-accessed parking, highlighting how this allows for continuation of the surrounding neighborhood's pattern of landscaped setbacks.*

*Rowhouses with clearly contemporary design, whose preservation of landscaped setbacks (afforded by rear parking) achieves a more meaningful contextual response than is provided by the rowhouses in the inset image, despite the latter's more traditional gabled roofs.*



*This paired rowhouse project, with only 50 feet of street frontage, illustrates that rear parking can be achieved on even the smallest sites. Note, however, that this results in most of the backyard being paved. The designer of these rowhouses indicated that it was somewhat more expensive to do rear parking, but that it did not significantly impact the affordability of the project.*

*Paired rowhouses with parking pads. This configuration allows avoidance of the impacts of street-facing garage doors, while preserving backyard space, leaving room for a sizable landscaped front setback, and reducing construction costs.*



*Some designers note that current City requirements for rowhouse driveways to be paired result in design that has pavement as the central design feature (as in upper image to left), and that this prevents configurations in which landscaping is central (as in lower image to left). PDOT staff, however, indicate that they are flexible about the paired driveway requirements, often allowing separated driveways if a parking space is preserved between the driveways.*



*Wider rowhouses, such as these 25'-wide examples, allow preservation of some on-street parking, additional landscaping, and ground-level living space. A drawback is that the greater width complicates achievement of minimum density requirements.*



*Rowhouse driveways with only treads paved, allowing greater preservation of front landscaping than is typical with front-accessed parking.*



*Paired rowhouses with no parking, allowing preservation of on-street parking, backyard space, and optimizing contextual compatibility. While most builders insist that home buyers demand off-street parking, other builders are finding a market niche for well designed projects with no parking.*



*Triplex with front garages (5000 sq.ft. lot)*

*Left: Triplex (on a 5000 sq.ft. lot in the R1 zone), built to a standardized plan, whose rear parking arrangement was required by Zoning Code standards. This illustrates how, even on small sites, builders are finding solutions that accommodate parking in ways that preserve neighborhood patterns, while allowing housing that is affordable to moderate income households. Note contrast with triplex, pictured above, which highlights the very different impacts on neighborhood context resulting from their parking arrangements.*

*Fourplex with no parking (on a 5000 sq.ft. site in the R1 zone). This example illustrates one way of solving the dilemma of how to accommodate density on small sites: by taking advantage of recently-adopted Zoning Code provisions which allow projects in areas with frequent transit service to include no parking. The resulting fourplex form is reminiscent of the house-like plexes that were a common type of multidwelling housing in Streetcar Era Portland. This project was by a private-sector homebuilder, who reported that the project was financially successful, despite the lack of parking.*



*Fourplex with partially-excavated basement parking. This arrangement both limits impacts on street frontage and provides the opportunity for backyard space. Few developers, however, use basement parking for small projects, citing high costs. This project's developer indicated that this configuration was not expensive to do (with total construction costs in 1997 of \$45-50 per square foot), but that most other builders are not familiar with cost-effective techniques for constructing partially-excavated basement parking.*

**Larger Multidwelling Infill Development – Contrasting Approaches.** Two projects on similarly-sized sites and with similar numbers of housing units and parking spaces, but with contrasting design approaches:



Courtyard view



**Example 1: Center/Front Parking**

- Street frontage dominated by parking, which serves as the central design feature
- Visual prominence of surface parking contrary to community goals for pedestrian- and transit-oriented development along transit streets
- Little usable open space

**Example 2: Side/Rear Parking**

- Building provides strong street presence
- Parking located at periphery, with some tucked under building, minimizing its visual prominence
- Usable shared open space sheltered from busy street and serves as the project's central focus

*Note that Example 1 met Zoning Code development standards, applicable to transit streets and intended to foster transit- and pedestrian-friendly design, that require 50 percent of building frontages to be located close to the street. That Example 1 is nevertheless quite auto-centric in design suggests the limitations of the current development standards in ensuring implementation of City goals for transit- and pedestrian-oriented design.*

## Issue 1: Street Frontages

### Future Direction – Staff Comments

*Overall approach: Balance the need to accommodate parking with community goals for pedestrian-friendly design and preservation of neighborhood patterns.*

- **Driveway and Alley Requirements.** Planning Bureau staff will continue working with Office of Transportation (PDOT) staff on the possibility of amending Title 17 requirements to allow narrower driveway widths for small multidwelling projects. Reducing Title 17 requirements will remove a barrier to more pedestrian-oriented design. Staff will also continue discussions with PDOT on finding ways to facilitate the use of existing alleys to provide vehicle access to new infill development. Also, amend the *Zoning Code* to provide the option of a “shared driveway” arrangement, perhaps with a requirement for paving blocks, as an alternative to requirements for raised walkways adjacent to driveways.
- **Rowhouse Parking.** Staff recognizes that backyard space is a valued amenity and that rear driveways may result in increased impervious surface area. Because of this, rather than creating regulations requiring rowhouses to have rear-accessed parking, staff is recommending an approach that focuses on making it easier to include rear parking for rowhouse projects and on encouraging housing types that can serve as alternatives to rowhouses.
- **Multidwelling Parking.** Development standards applicable to transit streets prevent parking from occupying more than 50 percent of setback area between buildings and the street in order to cultivate a more transit- and pedestrian-friendly street frontage. Because most areas with multidwelling zoning are located near transit facilities and are intended to be transit oriented, staff recommends that transit street limitations on front parking apply to all multidwelling development. This parking limitation would prevent configurations, such as those shown on page 36, where most of the front setback is devoted to vehicle areas, and would provide greater consistency in how multidwelling parking is regulated.
- **Education.** Recognizing that there are a wide range of strategies that can minimize the prominence of vehicle facilities whose possibilities cannot be conveyed through regulatory standards alone, staff recommends that education and outreach be a key implementation approach. Through guidebooks and public workshops, the possibilities of various parking configurations can be conveyed to developers and to the general public. Case studies of recent infill projects will be used to highlight the feasibility of alternative approaches, helping to overcome concerns about the financial and regulatory feasibility of unfamiliar strategies.
- **Incentives.** Planning Bureau staff, together with the staff of regulatory agencies, will explore the possibility of providing incentives to encourage parking configurations that meet the City’s design objectives. Possibilities include expedited permit processing or reduced fees for projects that utilize specified parking configurations. Another idea to be explored is the possibility of reduced stormwater SDCs when sand-set pavers or other pervious materials are used for vehicle areas (sand-set pavers also provide the advantage of signaling that the surface is intended for pedestrians as well as for automobiles, providing both environmental and design benefits).

## Issue 2: Scale Contrasts

Contrast in scale between existing development and new, higher-density development is often a key community concern. This contrast tends to be less severe in inner neighborhoods, which often include a mix of large Streetcar Era houses and plexes. It is more of a factor in neighborhoods located further out from the Central City that are characterized by relatively small detached houses. Scale contrast between old and new buildings, however, is not always something that should be avoided. Some areas, such as mixed-use centers and main streets, are intended to be places where growth and change are concentrated and where a desired future character may be a more important consideration than compatibility with existing development. Scale contrasts are of greater concern in established neighborhood residential areas that are not intended to be places of great change and where the desired neighborhood character corresponds to the *existing* character of the built environment.

In other cities, such as San Francisco and Chicago, where older neighborhoods of three-story rowhouses or townhouses are common, transition from single-family densities to mid-range densities, typically through conversion of townhouses into apartment flats or through infill development, has relatively little impact on the predominant scale of neighborhoods. This graceful transition to higher density is harder to achieve in many Portland neighborhoods where low-lying bungalows, Cape Cods and ranch houses predominate. Small-scale houses such as these do not lend themselves to conversion to triplexes and fourplexes, and new higher-density housing tends to be of significantly larger scale. It is not surprising, therefore, that higher density infill development brings with it significant change to the predominant scale of many Portland neighborhoods.

### Reasons

**Large unit size and greater density.** The relatively low-scale of many Streetcar Era multidwelling structures, such as courtyard apartment buildings, is often due to the small size of their units, which were typically studios and 1-bedroom apartments of approximately 600 square feet<sup>1</sup>. In contrast, contemporary rowhouse and multidwelling housing units are often 1,000 to 2,000 square feet in size. The square footage of each unit is often comparable, and sometimes larger, than the size of nearby detached houses. When multiple units of this size are located on a site, the resulting development is therefore often significantly larger than nearby older houses. Key reasons



*Chicago residential street. Some of these three-story buildings are single-family houses, while others are three stacked flats, or even six unit apartments. The same building form accommodates a wide range of densities, with no difference in impact to neighborhood patterns (this is aided by the presence of rear alleys, which spares street frontage from the need to accommodate additional parking).*



*Two infill plex projects flanked by pre-existing houses, in Inner Northeast Portland. The relatively tall pre-existing houses of some inner neighborhoods allow additional density to be accommodated with little scale contrast, similarly to the Chicago example.*



*Infill project showing the scale contrast with existing housing typical in many parts of Portland.*



*Scale contrast in Outer East Portland*

<sup>1</sup> Peter Keyes. *Historic Streetcar Apartments in Portland, Oregon* (unpublished paper).

for the relatively large size of contemporary rowhouse and multidwelling units include:

- The size of owner-occupied rowhouse units has been subject to the same national trends in buyer preferences that have resulted in increasingly larger house sizes; and
- Apartment units frequently have 2-3 bedrooms (and sometimes more). In Outer East areas, many apartment developers indicate that their target market includes low-income families. A Portland State University study of housing along the SE 122<sup>nd</sup> Avenue corridor found that household sizes in new apartment developments were actually larger than those of nearby single-family houses. These trends appear to be different than those in central neighborhoods, such as the River District and the Northwest District, where relatively few households with children are occupying new apartment and condominium units.

Breaking up the mass of relatively large multidwelling or rowhouse structures into components that reflect the scale of nearby existing houses is one way of ameliorating scale contrasts (see “Solutions” below). Few projects, however, utilize such design strategies because of: (1) the greater costs of articulating façade walls compared to constructing building walls with few interruptions, and (2) most builders do not consider the scale of nearby structures, often using “off-the-shelf” building plans, and only rarely using the services of architects to create context-specific design solutions.

**Regulations.** *Zoning Code* development standards for the multidwelling zones, such as allowed building heights, are not responsive to context or to differing neighborhood areas. For example, the R2 height allowance of 40 feet applies citywide, regardless of whether a project is set in an inner neighborhood where 2½-story houses predominate or an Outer East neighborhood where a building site may be surrounded by one-story houses. The Community Design Standards (which serve as a standards-based alternative to discretionary design review in areas subject to design review) originally included provisions that based allowed building height and façade size on that of adjacent structures. These context-sensitive provisions, however, were subsequently removed from the *Zoning Code* because they were difficult to administer and were time-consuming for applicants.

Another regulatory issue concerns the close juxtaposition of medium-density multidwelling zoning and lower-density single-dwelling zoning. For example, R1 zoning is frequently located along transit streets, mapped in narrow bands often only a single lot deep. R1 zoning often abuts properties with single-dwelling zoning, such as R5 (and R7 in Outer East), that are intended to be preserved for single-family housing. In these situations, the 45’ height allowance in the R1 zone can lead to great contrasts in building height with abutting single-dwelling zoned properties and also frequently involves privacy impacts due to upper-story balconies overlooking backyards.



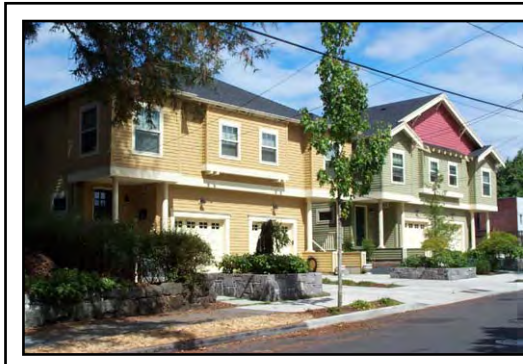
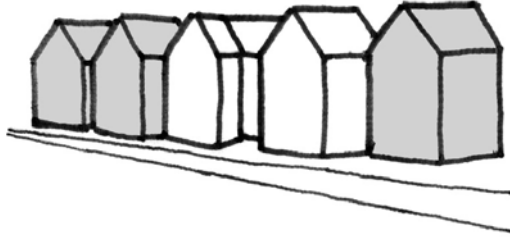
*Rowhouse project that acknowledges neither the scale of surrounding houses nor the neighborhood pattern defined by houses on 50’ wide lots.*

## Issue 2: Scale Contrasts Solutions

The following images highlight some of the diverse ways of ameliorating scale contrasts between new higher-density development and lower-scale houses. The variety of potential approaches, it should be noted, makes it difficult to craft regulations that foresee and accommodate the wide variety of desirable strategies.

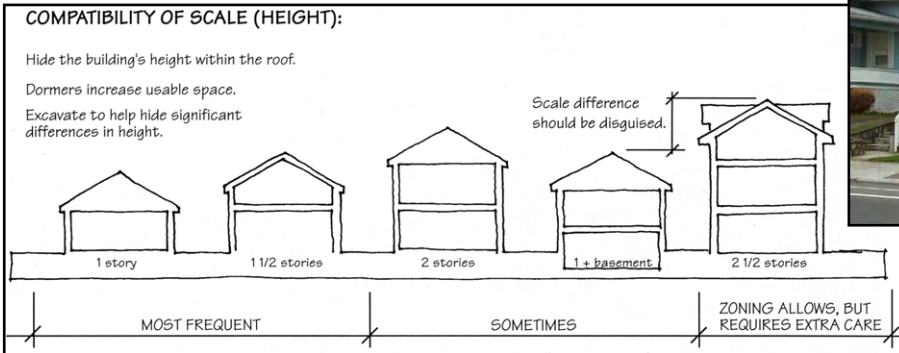
**Approaches that allow higher-density to reflect neighborhood scale:**

*Dividing building massing into smaller volumes that continue neighborhood patterns*



*Instead of an uninterrupted wall of four units, these rowhouses are divided into pairs with massing that is similar to the large detached houses of the surrounding neighborhood.*

*Setting back the upper stories of taller structures or accommodating them within dormers*



From *Building Blocks for Outer Southeast Neighborhoods* (1996)

*The effectiveness of the above approach, combined with partially excavated basement parking, is highlighted by these contrasting images:*



*Left image: three-level rowhouses with no design treatment relieving their height and verticality.*

*Right image: three-level rowhouses with top floor accommodated within dormers and featuring excavated basement parking.*

**Other Examples:**



*Four-level rowhouses whose height is broken up by porches, recessed balconies, and by partially excavated parking.*



*Three-story fourplex, with top floor set back.*

*Examples of rowhouses with massing reflective of neighborhood patterns defined by houses on 50-wide lots.*



*4-unit rowhouse project in Ladd's Addition (pre-existing house visible at right)*



*2-unit rowhouse project in North Portland.*



*Apartment project in Outer East Portland, with façade divided into "house-like" building volumes.*

*Recent infill projects in Outer East, with design features providing a horizontal emphasis reflective of the area's characteristic low-lying housing.*



## Issue 2: Scale Contrasts

### Future Direction – Staff Comments

*Overall approach: Increase awareness of strategies for designing higher-density infill development in ways that reflect established neighborhood scale and patterns.*

As noted previously, the very context-specific nature of established development patterns and scale renders the “one size fits all” approach of citywide regulatory design standards an insufficient tool. This could be rectified by development standards that base allowed height and façade dimensions on those of adjacent structures, but this would add considerably to the complexity of plan reviews and to the submittal material required of applicants, as well as present a potential barrier to meeting the densities required in multidwelling zones. Limiting building scale through such regulations would also stifle the ability of the medium-density zones to accommodate change over time (particularly in the R1 zone, which is intended to foster a more urban scale of development). Instead, staff recommends an approach that focuses on the following:

- **Education.** Increase awareness within the development community and among the general public of various ways of ameliorating scale contrasts between new higher-density development and the surrounding neighborhood’s established scale and patterns. Also, as part of a future Planning Bureau work program, increase awareness of what areas of the city are intended for change, such as mixed use centers, and what areas are intended to have their existing character continued.
- **Additional housing types.** Facilitate the development of alternative housing types, such as cluster housing, that hold potential to respond successfully to typical neighborhood contexts (see the next section, Issue 3: Housing Diversity). An advantage of cluster housing configurations, such as cottage clusters and courtyard townhouses, is that they avoid the wall-like effect often presented by rowhouses.



### Issue 3: Housing Diversity

Rowhouses are the predominant type of medium-density, owner-occupied housing being built in Portland neighborhoods. While the rowhouse type provides many advantages and is a versatile form that provides needed ownership housing, there has been criticism that Portland has been over-reliant on the rowhouse as a medium-density housing type and that additional types of owner-occupied housing should be encouraged to promote housing diversity. In a report issued in January of 2000 that examined rowhouse design issues, a Planning Commission subcommittee recommended that, instead of focusing solely on refining rowhouse design standards, the Planning Bureau should identify and promote housing types that can serve as alternatives to rowhouses. The Infill Design Project is, in part, a response to this recommendation. Potential alternative housing



*Rowhouses typical of infill in the 1980s and 1990s.*

types include cluster housing, such as cottage clusters and courtyard townhouses, oriented around shared open space. The public has also expressed interest in alternative housing types, in part due to concerns that the predominance of rowhouses as an infill housing type is resulting in a “cookie-cutter” approach to infill development. In a public design preference survey administered as part of the Infill Design Project, three out of the top four most highly rated projects were cluster housing projects (see Appendix G). Besides providing additional housing diversity, advantages of cluster housing include: fewer street-facing garages and curb cuts, opportunities for shared open space larger than can be provided for individual units, and

building forms that reflect typical neighborhood patterns. Also, cottage cluster housing provides opportunities for single-level living arrangements suitable for elderly or mobility-impaired residents, for whom the multiple floor levels and stairways typical of rowhouses can be significant barriers.

Other issues related to the need for greater housing diversity include the following:

- Developers indicate that required R1 densities make it difficult to develop owner-occupied housing on small R1-zoned sites. Such sites, particularly those ranging in size from 5000 to 10,000 square feet, require too great a density and lack the needed amount of street frontage for rowhouses to be practical, but do not allow enough units for most developers to consider them feasible for development as condominiums. For example, paired rowhouses are the typical medium-density ownership housing type on the 5000 square foot sites common in Streetcar Era neighborhoods, but such sites in the R1 zone require a minimum of three units, which is not possible to achieve in the form of rowhouses at mid-block locations.
- Additional medium-density housing types are needed for Outer East Portland, where the typically narrow and deep lot configurations are often not practical for conventional street-facing rowhouses (see previous discussion on Outer East Portland issues).

### Reasons

Over the past two decades, rowhouses have been popular among builders as an owner-occupied housing type for many reasons, including the following:

- Perhaps the primary reason is that rowhouses lend themselves well to being developed as fee-simple arrangements, with each unit on its own lot.<sup>1</sup> Portland requires that all lots have street

<sup>1</sup> The term “fee simple” is used loosely in this report to refer to arrangements in which each unit is located on its own lot, to differentiate them from condominium arrangements, in which multiple individually-owned units are located on commonly-owned land. Not all fee-simple arrangements referenced in this project meet more strictly-defined definitions of this term, as they may include easements and common elements, or other shared ownerships and obligations.

frontage, which is often not possible with cluster housing arrangements in which some units are located around courtyards and other locations removed from the street. Conventional rowhouses, in contrast, are by definition a street-oriented housing type. Placing housing units on separate lots allows avoidance of many of the liability issues and legal complexities associated with condominium development;

- Most developers believe that buyers prefer to own the land beneath their housing units;
- Rowhouses are a medium-density housing type that buyers feel particularly comfortable with, as they continue familiar patterns of houses with integrated garages, front doors, and private backyard space;
- Side-by-side unit configurations, such as rowhouses, make sound-buffering easier to achieve between units as compared to stacked units; and
- The versatility of this housing type allows for the same unit plans to be used on a variety of site sizes, by adding or subtracting the number of attached units.



**Cluster housing** – 1920’s courtyard apartment building. The landscaped emphasis provided by the courtyard and the house-like form of end units provide a good contextual fit with nearby houses.

### Alternative housing types

Two primary medium-density alternatives to rowhouses are: (1) **various forms of cluster housing**, such as cottage clusters and courtyard townhouses; and (2) **stacked unit configurations**, such as plexes with housing units stacked on top of one another. Both of these general housing types have precedents in multidwelling housing built in Portland during the Streetcar Era, such as courtyard apartments and house-like plexes, which are seen by many community members as positive contributions to neighborhood character. A third medium-density alternative are narrow lot detached houses (also known as “skinny houses”), which are not a focus of the Infill Design Project.



**Stacked units** – Early 20<sup>th</sup>-century fourplex, with similar massing and appearance to nearby detached houses.

Barriers and opportunities related to alternative housing types are discussed in general terms below, followed by a discussion of issues specific to particular housing types (in the “Solutions” section).

**Barriers: home ownership opportunities.** A general issue that has limited the ability of cluster housing and stacked unit configurations from serving as alternatives to rowhouses has been that they have not been possible to develop as fee simple arrangements, with each unit on its own lot. These housing types have only been possible as rental apartments or as condominiums. As mentioned previously, many developers avoid developing small-scale infill projects as

condominiums because of legal complexities and because of the high liability insurance rates associated with condominium projects, which add considerably to project costs. Architects have related that the key to encouraging more alternative housing types to be built will be to find ways of allowing them to be built as fee-simple arrangements.

**Barriers: Zoning Code regulations.** Analysis of *Zoning Code* standards, together with input from architects and developers, indicate that *Zoning Code* regulations are not a major barrier to the development of alternative housing types when they are built as rental apartments or condominiums. The primary barrier *Zoning Code* regulations present is to the development of cluster housing projects as fee simple arrangements, largely due to requirements that all lots have street frontage. The “common green” land division provision, adopted as part of the Land Division Code Rewrite Project in 2001, presents new opportunities for cluster housing arrangements. The common green provision allows lots to front onto a landscaped pedestrian tract, instead of onto a conventional street, which permits courtyard housing arrangements to be developed with fee simple lots, instead of as condominiums. Regulations identified as barriers to alternative housing configurations, including the common green provision, are discussed in reference to particular housing types in the “Solutions” section that follows.

### Future Opportunities: Condominiums

While the preceding discussion has referred to some of the problems and disincentives associated with condominium arrangements, condominiums do provide many advantages that may result in their becoming a greater component of owner-occupied, medium-density infill development in the future. Issues and opportunities related to condominium arrangements include the following:

- Condominiums allow a greater variety of design approaches than do fee-simple rowhouses, as they provide more flexibility in locating housing units on a site and the ability to cluster parking spaces (such as in shared basement parking or concentrated in one area of the site, allowing street frontage to be preserved for more active uses).
- Some developers and designers have indicated that a key to getting more innovative infill housing is to change Oregon condominium law, such as by reducing the period of liability for construction defects to make condominiums more attractive to developers. Another issue developers have identified is that Oregon laws governing condominiums do not seem to be oriented to detached dwelling units. For example, some developers have related that current requirements that homeowners associations carry insurance for structures assume that units are part of a larger building, when individual homeowner insurance would be a preferable arrangement in the case of condominium units that are detached houses.
- A growing minority of developers and designers believe that condominiums present many advantages to fee-simple arrangements, and that greater awareness among developers of these advantages will lead to increasing numbers of medium-density condominium projects. Among the advantages and opportunities of condominiums some developers cite are:
  - Avoidance of the year-long process required for land divisions;
  - More design flexibility;
  - Avoidance of having to meet expensive construction standards needed for streets (streets within condominium projects are classified as “driveways”);
  - Increased homebuyer acceptance of condominium arrangements; and
  - Opportunities to limit liability risks and expenses usually associated with condominiums through design, such as by using side-by-side units rather than stacked units (which minimizes liability issues related to sound barriers and other impacts). Utilizing detached houses limits liability risk even further, with no shared walls and thus fewer common elements.

### Issue 3: Housing Diversity Solutions – Cluster Housing

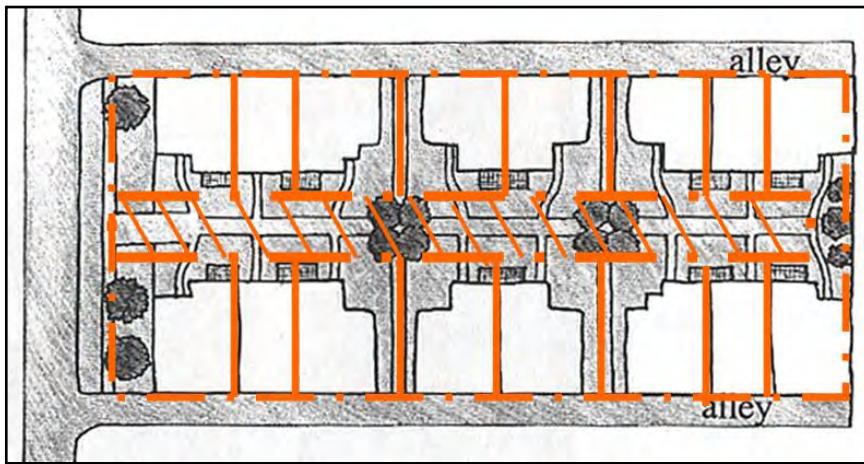
Illustrative of some of the opportunities provided by cluster housing is this five-unit project, Marysville Commons, developed by ROSE Community Development Corporation. This infill project was originally envisioned as a rowhouse-type project, but was changed to a cluster housing configuration in response to neighborhood input. During a design charette, neighbors (in the Foster-Powell neighborhood) related that they did not want rowhouses, preferring housing more similar in character to the detached houses predominant in the area. Response from neighbors since the project was completed has been mostly positive (a typical comment was, “I like what you did, it’s much better than what I thought would be built”).



*Examples of cluster housing oriented around landscaped courtyards, which “common green” provisions are intended to facilitate as owner-occupied housing. The first two examples were among the top three most highly rated projects in a recent design preferences survey. The cottage cluster project at left, “Hastings Green” (developed as condominiums), had all units sold before project completion, suggesting that market demand exists for such housing.*

#### Common Green Cluster Housing

*Zoning Code* “common green” provisions allow residential lots to be oriented to a pedestrian access tract, or common green, instead of the usual requirement for lots to front onto a conventional street. The common green provision allows cluster housing units to be developed on fee-simple lots, which many developers prefer to condominium arrangements. This facilitates owner-occupied housing configurations similar to the courtyard apartments built in Portland during the Streetcar Era. Code modeling indicates that common green configurations are possible on sites in the R2 zone as small as 10,000 square feet, making them a realistic medium-density alternative to rowhouses. The common green provision may be a particularly useful tool for facilitating owner-occupied housing in Outer East Portland, where conventional rowhouses are often not practical on the area’s typically large, but narrow and deep sites, which have relatively little street frontage. Greater utilization of common green configurations may be facilitated by increasing awareness within the development community of the common green concept and by highlighting how common greens can be used on small infill sites.



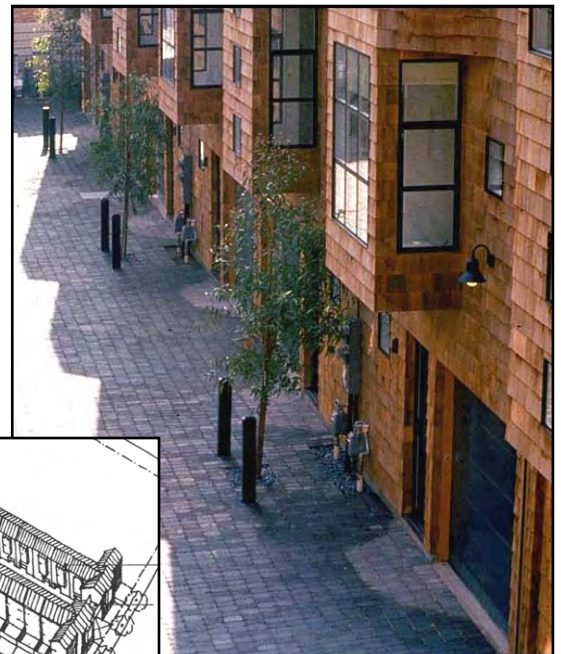
**Common green concept.** Lots are oriented to a landscaped pedestrian-access tract, with parking accessed by rear alleys.

**Common greens: regulatory barriers.** Staff has found only a few significant regulatory barriers to greater utilization of common green configurations. Identified regulatory barriers include the following:

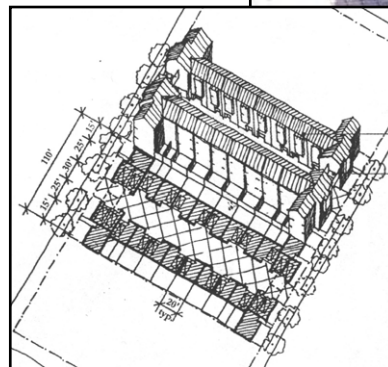
- R2 front setback requirements, which require buildings to be set back at least 10 feet from the common green, are an impediment to utilizing common greens on small sites. These setback requirements prevent common green housing from serving as alternatives to rowhouses on the small sites typical of infill development.
- Common greens result in somewhat reduced development potential, which could serve as a disincentive to some builders, as the common green tract area is subtracted from density calculations. Note, however, that this reduced density can also serve as an opportunity, as it facilitates courtyard housing arrangements that can be difficult to achieve at higher densities.
- Building coverage limits are calculated on a per lot basis (rather than for the project as a whole), meaning that open space provided by common greens is not counted and each lot within a common green project must provide as much unbuilt land area as a conventional rowhouse lot, despite the additional open space provided by the common green.

### Shared Street Courtyard Housing

“Shared street courtyard housing” is an additional housing type that could serve as an alternative to rowhouses and provide additional owner-occupied housing opportunities, although the *Zoning Code* currently does not currently allow this housing type. This concept involves rowhouse-type units on lots fronting onto a privately-owned “shared street,” designed to accommodate both cars and pedestrians in the same area. To clearly indicate that the street is meant for pedestrians as well as cars, the shared street is surfaced with paving blocks or similar treatments. A shared street provision may provide additional development opportunities for small sites, such as those common in the R1 zone, which currently present barriers to development of owner-occupied housing.



Courtesy Salomon E.T.C.



**Shared street concept** – similar in form to the Fulton Grove Townhouses (San Francisco), shown here.

**Shared streets – Portland precedents:** The following images are of condominium projects that include features similar to what would be allowed by the shared street concept, such as circulation space designed for both cars and pedestrians.



River Place Condominiums



Townhouse cluster with central driveway, Southwest Portland. General configuration is similar to what would be facilitated by the shared street concept. In contrast to typical rowhouse projects, curb cuts are minimized and end units reflect the massing of detached houses.



Jake's Run townhouses, Northwest Portland



**Shared streets – Dutch precedents (“woonerfs”):** Special paving and other features provide traffic calming and a pedestrian-friendly environment, with little or no grade-separated sidewalk areas. Woonerfs have become a standard street type in rowhouse neighborhoods in the Netherlands, particularly for residential streets that are not intended to be through ways for automobile traffic.

### Issues Addressed by the Shared Street Concept

- Provides additional homeownership opportunities for small sites zoned for higher density development. Such sites are often too small for condominium arrangements to be feasible, but are subject to density requirements and have site constraints that make rowhouses and common green arrangements impractical.
- Diversifies the range of potential housing types, allowing fee-simple cluster housing configurations that would otherwise require condominium arrangements.
- Preserves on-street parking and allows a more pedestrian-friendly street frontage by allowing a single curb cut, rather than the multiple curb cuts common with rowhouses.
- By providing an alternative to the usual requirements for roadway plus sidewalks, allows for less impervious surface, thus contributing to minimizing stormwater impacts and urban heat island effects.
- If sand-set pavers are used to meet requirements for paving blocks, could provide additional opportunities for stormwater management by serving as a semi-pervious surface.
- Provides for a larger pedestrian-oriented area (the entire street) than a conventional street with sidewalk arrangements, particularly since rowhouse-type projects at R1 and higher densities typically have sidewalks interrupted by frequent driveways.
- Allows for efficient use of limited site area.

### Shared Streets – Regulatory Barriers

New *Zoning Code* provisions, and accompanying private street standards, would need to be created to allow shared street cluster housing to be built. Currently, streets are required to have grade-separated sidewalks, which results in right-of-way widths not practical on small infill sites zoned for higher-density development. Because of the Office of Transportation’s interpretation of Americans with Disabilities Act requirements, it may not be possible to develop shared streets as public streets. Staff thus anticipates that shared streets would only be possible as private street tracts, and that their use would be limited by a site size or housing unit threshold to ensure shared streets are only used for small projects with low traffic volumes.

### Other Cluster Housing Types



House cluster in Southwest (R2 zone)



House cluster in Outer East (R2 zone)

**Detached house clusters.** Not all cluster housing configurations feature shared open space as a central design feature. A development configuration that is being built with increasing frequency in medium density zones, especially in Outer East Portland, are clusters of detached houses on shared lots, facing onto “street-like” driveways. Builders of this type of housing, which is being built as both condominiums and as rentals, indicate that it appeals to homebuyers and renters who would otherwise avoid multidwelling housing (indeed, their design is calculated to provide the visual effect of a conventional housing subdivision with “streets” and fenced yards). Other reasons developers provide for why they are building this form of housing include the following:

- Avoids the land division process, which can take a year or more to be completed;
- Many buyers prefer detached houses to rowhouses;
- Some rental property owners relate that detached houses have lower maintenance costs than apartments, because the residents of detached rental houses have a stronger sense of “ownership”

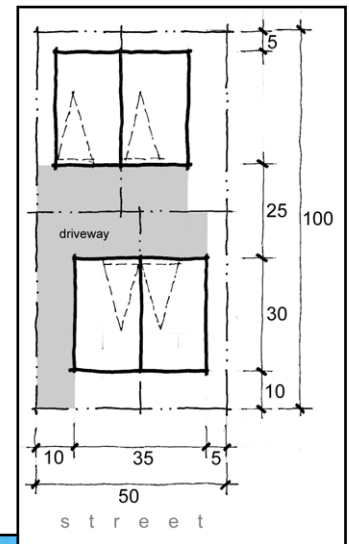
of their units compared to the residents of plex or apartment units, and therefore tend to keep better care of them;

- Detached houses are easier to rent and command higher rents than apartment units;
- Developers relate that neighbors in Outer East are more accepting of this type of development than other multidwelling types, because the use of detached houses avoids the negative connotations often associated with apartment buildings and plexes; and
- While developers relate that this form of housing can be difficult to build at the densities required in the medium-density zones, the use of detached houses facilitates the avoidance of minimum-density requirements as they are relatively easy to add onto a site with a pre-existing house. This is because the *Zoning Code* allows additional housing units to be added to a site with existing housing without triggering minimum density requirements, which otherwise apply with land divisions or in the case of new construction on a vacant site. In situations in which preservation of an existing house is not feasible as part of the desired development configuration, some builders will avoid minimum density requirements by initially keeping the existing house, then building a new house that fits into the desired site plan, followed by demolition of the pre-existing house (the first new house then becomes the “existing development”), after which the rest of the new houses are constructed.



House cluster built behind a pre-existing house

**Townhouse clusters.** A housing type that has become one of the most common forms of owner-occupied infill housing in Seattle are clusters of townhouses on separate lots. On a typical infill site of approximately 5000 square feet, this configuration accommodates four townhouses, with two units fronting onto the street and two other units toward the rear of the site. The two rear units’ lots have no street frontage, but are accessed by an easement. The shared driveway arrangement minimizes the visual prominence of parking facilities, compared to the rowhouses with front garages typical in Portland.



Seattle townhouse clusters

While this housing type would appear to present a market-proven solution to the puzzle of creating owner-occupied housing on small sites in the R1 zone, such a configuration cannot be approved through Portland’s current regulations. The primary reason for this is that lots are required to have street frontage (note that common greens are considered to be a type of private street), partially to accommodate Water Bureau requirements for the location of water lines. The limited scope of the Infill Design Project precludes a reconsideration of this street frontage requirement, as it is a fundamental aspect of how the City treats land divisions in all zones. Even as condominiums, however, similar townhouse clusters are not possible in Portland because of *Zoning Code* requirements for driveway setbacks and separate walkways that would leave insufficient frontage for two street-facing townhouse units.



### Cluster Housing – Regulatory Barriers

Barriers that *Zoning Code* regulations may present to cluster housing in general, other than those already noted in relation to specific cluster housing types, include the following:

- Lack of provisions allowing for shared outdoor space, such as courtyards, to meet multidwelling outdoor space requirements (which for ground-level units must be provided separately for each unit).
- Requirements for 5’ walkways connecting buildings to streets complicates the design of cluster housing configurations on small sites (some architects indicate a narrower dimension would suffice).
- Some designers and developers indicate that cottage cluster projects work most successfully at densities no greater than approximately one unit per 3000 square feet of site area. Portland zoning, however, does not provide much allowance for development at this density, as:
  - It falls below the minimum density requirements of the R2 zone;
  - While the R2.5 zone would allow this density, it does not allow cottage clusters (which are classified in the *Zoning Code* as “multidwelling development”); and
  - While the R3 zone does accommodate this density and housing type, it is located in only a few areas in Outer East Portland (the R3 zone is a remnant of Multnomah County zoning).



*Three-unit house cluster (condominiums) on a 5000 square foot lot in the Montavilla neighborhood, highlighting how such housing can be accommodated at even R1 densities on small sites (albeit, with no private yard space). Their market success indicates that Portland may be ready for a wider range of infill housing types than has been thought feasible up to now.*

### Issue 3: Housing Diversity Solutions – Stacked Unit Housing Types

Triplexes and fourplexes are a common medium-density housing type in Portland. Most of these consist of two-story townhouse type units. While plexes with stacked units (“flats”) were frequently built in Portland during the Streetcar Era and remain a common housing type in other cities, they are currently an uncommon infill housing type in Portland. Plexes with stacked flats, however, can provide several advantages compared to rowhouses and townhouses, particularly on small sites where higher densities are called for, including the following:

- Accommodation of open floor plans with no stairways within each unit;
- Greater access to light compared to many townhouse configurations;
- Potential street frontage for most units;
- Additional opportunities for site area to be preserved as outdoor space;
- Ability to continue neighborhood patterns defined by housing on small lots, similar to the house-like character of Streetcar Era plexes; and
- Accommodation of relatively high densities on small sites. This last point is perhaps this housing type’s greatest advantage, as they are often the only multidwelling housing type possible on the very small sites sometimes found in close-in neighborhoods (with one project built on a site smaller than 1600 square feet). They thus serve as potential solutions to the puzzle of meeting R1 and RH density requirements on typical 5000 square foot sites.



Courtesy Vallaster & Cori Architects.

*Triplex in Northwest on a 1590 sq.ft. site (82 units/acre). Note that, although the density of this project is double what is allowed in the R1 zone, its small scale continues the fine-grain pattern of its neighborhood, avoiding the appearance of overwhelming scale often associated with high density housing.*

The *Zoning Code* presents few barriers to stacked-flat development. Their relative scarcity as medium-density infill housing is due to most developers’ preference for side-by-side townhouse units or rowhouses rather than stacked units. Reasons for this include the following:

- It is easier to buffer sound between walls than between floors;
- Perceptions that buyers and renters prefer direct access to ground-level outdoor space;
- Fair Housing Amendments Act requirements are triggered in buildings with four or more units when they include single-level units. In these situations, some of the units must be handicapped accessible, which adds to development costs (note, however, that some architects relate that there are ways to meet these requirements that add little to project costs). These accessibility requirements do not apply when buildings only have two-story units, as is the case with townhouses and rowhouses;
- The building code requires two exit stairways for stacked units higher up than two stories. The expense of including two stairways in a small project is often cost-prohibitive, effectively preventing the three-level triplexes common in cities such as Boston (“triple deckers”) and Chicago (“three flats”).

A key reason for the scarcity of stacked-flat plexes as an owner-occupied housing type, however, is that stacked units must be condominiums if they are to be owner-occupied. If required densities allow rowhouses, most developers will choose rowhouses over stacked condominium units. Housing trends in other West Coast cities suggest that higher density, stacked-flat condominiums on small sites will only become common when housing costs rise significantly, placing a greater premium on maximizing the number of units on a given site (which helps overcome the relatively high per-unit costs of stacked housing). In Portland, stacked-flat housing types are most practical in the R1 and higher density zones, when density requirements and site configurations preclude rowhouses.

The following examples illustrate some of the opportunities provided by plexes and other stacked unit housing types. Site size and project density are indicated for some projects to highlight the ability of these housing types to be built on small infill sites. Note that stacked-unit plexes are most common in the Northwest District, facilitated by the relatively high property values of that area. More widespread development of these housing types may occur as property values continue to rise in other parts of Portland and as more developers become aware of their market viability. A regulatory barrier to these small-lot housing types, however, is that minimum lot size requirements for duplexes (4000 sq.ft.) and multidwelling development (10,000 sq.ft. in the R1 zone) prevent new lots from being created to accommodate them. For instance, 4000 sq.ft. is required for a new duplex lot in the R1 zone, but this does not allow for the minimum required density to be met. A stacked duplex on a smaller lot (similar to those illustrated below) would meet density requirements, but would fall short of the lot size requirement.



*Fourplex in Northwest  
(3133 sq.ft. site, 56 units/acre)*



*Fiveplex (condominiums) in Northwest  
(5000 sq.ft. site, 44 units/acre)*



*Duplex in Southeast  
(1450 sq.ft. site, 60 units/acre)*



*Duplex in Northwest  
(2670 sq.ft. site, 33 units/acre)*



*Recent plex infill project (condominiums) in Irvington, adjacent to Streetcar Era plexes. These are townhouse units, not stacked units, but illustrate how the plex type can continue established neighborhood patterns. Despite including no off street parking, this project proved financially successful.*

*Three-unit project in Seattle. A hybrid form of owner-occupied housing, it consists of a two story owner-occupied unit over two studio apartments (essentially a house with two ADUs). This could serve as a solution for 5000 sq.ft. lots in the R1 zone, where many builders feel the only feasible option are rental plexes.*



### Issue 3: Housing Diversity Additional Issues

**Additional allowances for mixed-use development.** Much of Portland’s medium-density zoning, particularly the R1 zone, is located along major streets, often with multiple lanes of traffic that can negatively impact the livability of ground-level units adjacent to these streets. One solution that has been suggested by Infill Design Advisory Group members is that residential development in higher-density zones along major streets should be allowed to include limited amounts of ground-floor commercial space or live-work units. In addition to serving as one way to buffer residential units from traffic impacts, this could provide more destinations for residents to walk to along corridors with little commercial zoning. While this solution may have merit, it involves significant policy issues that are beyond the scope of this project, which is not intended to address the allowed uses of the multidwelling zones.



*Live-work rowhouses in Northwest.*

**Potential opportunities provided by accessory dwelling units (ADUs) in the multidwelling zones.** Currently, ADUs are excluded from residential density calculations. Allowing ADUs to count toward meeting minimum density requirements in the multidwelling zones, however, could provide additional solutions for accommodating density on small sites. In conjunction with rowhouses, ADUs could serve to facilitate owner-occupied housing in the R1 zone, increase the range of potential medium-density housing configurations, and facilitate a mix of owner-occupied and rental housing. In the R2 zone, allowing ADUs to help meet minimum density requirements would permit rowhouses to be developed on lots deep enough to accommodate rear parking and backyards (current density requirements often prevent such configurations).



*Rowhouses, in Ladd’s Addition, which met R1 zone density requirements by including ADUs over rear garages. Neighbors considered it an ideal project for the site, given the zoning. More recent Zoning Code amendments, which exclude ADUs from density calculations, now prevent this configuration.*

**Definition of “attached houses.”** Some developers and architects indicate that the *Zoning Code’s* definition of rowhouses and other attached houses as being connected along at least 50 percent of building length prevents some desirable housing configurations from being built. They relate that this requirement sometimes prevents spaces from being created between units which could provide valuable opportunities for outdoor space or allow building volumes to be divided in ways that reflect neighborhood patterns.



*Attached houses (joined at garage in above image) in Northeast that fail to meet the 50% attachment requirement. The small area of attachment, however, allows them to reflect the surrounding neighborhood’s pattern of detached houses.*



### Issue 3: Housing Diversity Future Direction – Staff Comments

*Overall approach: Reduce regulatory barriers to alternative housing types and configurations that hold potential to meet the community’s design objectives. Increase awareness of alternative housing types, and highlight their financial feasibility to the development community.*

Some architects and developers have related that a key reason for the lack of diversity in housing types and configurations is that Portland’s development community is conservative and risk averse, and are thus very reluctant to try unfamiliar approaches. In recent years, however, there has been a small but growing number of infill projects reflective of a wide range of alternative housing types and configurations. That most of these projects have been financially successful suggests that alternative housing types may be on the cusp of broader market acceptance. The City’s role, besides amending regulations to facilitate innovative housing types, may also prove useful by increasing the development community’s awareness of the viability and success of innovative projects.

- **Education.** A key, overarching strategy that staff recommends is to increase awareness among developers and the general public about innovative housing types. This will be achieved through the creation of a collection of housing prototypes, highlighting various housing types and configurations that can meet the communities design objectives; through publicizing successful examples that have been built in Portland and elsewhere; and by highlighting new regulatory tools that facilitate these housing types. Education and outreach can also be used as a tool to increase awareness of advantages provided by condominium arrangements, including opportunities for greater design flexibility and for additional housing configurations.
- **“Facilitative” regulatory changes:**
  - **Common greens.** Amend the *Zoning Code* to facilitate the development of common green configurations on small sites to provide opportunities for courtyard housing that can serve as owner-occupied alternatives to rowhouses.
  - **Shared street courtyard housing.** Amend the *Zoning Code* to allow lots in higher-density zones to front onto a “shared street,” designed for both cars and pedestrians, as a more urban alternative to the common green. This would facilitate homeownership opportunities, and additional housing types, on small sites zoned for higher-density development.
  - **Cottage clusters and courtyard townhouses.** Encourage the creation of courtyards by amending the *Zoning Code* to allow the provision of shared open space as an alternative to private outdoor space. Reduce walkway width requirements to facilitate cluster housing configurations on small sites.
  - **Duplexes.** Reduce minimum lot sizes for duplexes to facilitate their serving as a higher-density infill housing type.
  - **Attached houses.** Provide additional design flexibility and more opportunities for the use of attached housing by allowing accessory dwelling units to count toward meeting minimum density requirements and by reducing the current 50 percent attachment requirement.

## Issue 4: Regulatory Responsiveness

This section discusses aspects of the City’s regulatory requirements and processes that are sometimes not responsive to market-driven opportunities for improved infill design. Staff acknowledges that whether or not the City’s infill design strategies are successful will ultimately depend on those who design and build new housing. This section therefore highlights feedback received from designers and developers in order to identify barriers and opportunities related to the interplay between City regulations, development considerations, and the design of infill development.

**Developers and quality design.** Some developers relate that the City too often assumes an adversarial relationship with developers regarding design issues and has not done enough to explore collaborative approaches to achieving the community’s design objectives. These developers indicate that the City should do more to capitalize on appealing to the self interest of developers; for example, by emphasizing how quality design provides monetary awards and by highlighting cost-effective ways of incorporating desirable design features. Some developers in close-in neighborhoods indicate that design that reflects the character of the surrounding neighborhood is used as a selling point. They relate that buyers are seeking these areas partially because they are attracted to these neighborhoods’ architectural character and want their housing to reflect this character (there seems to be less of this dynamic in Outer East areas, where developers indicate that prospective residents are primarily interested in interior amenities and off-street parking).

### **City density requirements not responsive to market demands and site constraints.**

Some developers and designers relate that the City’s minimum density requirements sometime result in compromised project design, or preclude development that they feel would best meet market demands and site constraints. This is particularly so in Outer East Portland, where many developers indicate that the minimum densities required by the City in the multidwelling zones, in combination with site constraints brought by the area’s often disproportionately deep lots, sometime do not facilitate the types of medium-density housing for which there is the most market demand, such as larger townhouse units or clusters of detached houses. In order to build the types of housing they feel meet market demand, some developers in Outer East avoid minimum density requirements by preserving an existing house on the project site (the *Zoning Code* allows additional housing units to be added to existing housing, without triggering minimum density requirements, if no land division is involved). This often results in compromised site planning, in which preservation of an existing house sometimes precludes consideration of site plans that would provide more unified site design. Instead of being oriented to the street and contributing to a more urban and pedestrian-oriented streetscape, new higher-density housing is frequently built behind pre-existing houses on what had been backyards, where privacy impacts on adjacent properties are greatest. Therefore, an unintended consequence of minimum density requirements, in areas where developers feel these densities are not supported by the market, is that sometimes neither the City’s density goals nor its design objectives are met.



“Backyard” infill in Outer East

A related issue concerns the R1 zone, which some developers characterize as requiring too great a density for conventional rowhouses, but as not allowing enough density (or associated economies of scale) for multidwelling configurations featuring housing units over lower-level structured parking to be financially realistic. As a result, apartment buildings surrounded by surface parking areas are a common development type in the R1 zone, particularly in Outer East Portland. Staff analysis of several multidwelling projects featuring courtyards and other shared open space, built prior to the City’s increasing of R1 minimum density requirements in 2002, found that many would not now meet current minimum density requirements.

Some developers and designers relate that it is easier to design residential projects for sites with commercial zoning than for sites with multidwelling zoning, particularly because the commercial zones do not have minimum and maximum density requirements. The lack of density requirements in commercial zones allows a wide range of housing types and unit densities to be built, facilitating greater responsiveness to market conditions and site constraints and providing considerable design flexibility.

**Competing City priorities.** Developers and designers relate that the City’s various regulations (e.g., *Zoning Code* standards, various Bureau of Development Services reviews, and transportation and stormwater management requirements) sometime seem to work at cross-purposes, and that this dynamic can be particularly debilitating for higher-density infill development on small sites. They indicate that reducing regulatory conflicts between City bureaus will be key to facilitating development on small infill sites because of the limited site area in which to locate required elements. Examples of conflicts include:

- The City’s driveway dimensional requirements (in Title 17), intended to facilitate vehicle access, sometime result in small infill sites dominated by impervious surfaces, counter to other City objectives for minimization of stormwater impacts and for context-sensitive design (see page 39).
- Finding ways to fit the required stormwater management facilities for higher-density projects on small sites can be particularly difficult because of the limited site area. Compounding this are BDS plumbing requirements which, for example, call for stormwater infiltration trenches to be located 10’ from buildings and 5’ from property lines. Finding space for such dimensions on small higher-density infill sites is often very problematic, typically resulting in the need for a code appeal.
- The City no longer requires off-street parking for residential development near transit. However, when certain narrow-lot provisions are used during the land division process, the code still requires that sites be configured to accommodate off-street parking. While the intent of these requirements is to prevent frontages from being dominated by garages and driveways, no allowance is provided for projects to meet the code’s intent by providing *no* off-street parking.

**Additional comments by developers and designers.** The following is a listing of additional issues, as described by developers and designers, regarding barriers and opportunities related to the City’s role in fostering better-designed infill development. This listing is grouped first by those items that primarily relate to the City’s regulations and processes, followed by items related to how developers approach design.

#### **Regulations and regulatory processes:**

- There are many “grey area” situations in interpreting regulations when City planners have the opportunity to make judgment calls to allow features that result in better design. Too often, however, they do not seem to understand development or design and rarely use their discretion to accommodate better design. A key way to improve the design of projects is to have more planners who are experienced with development and design and who are empowered to use their discretion in positive ways and to help applicants with problem solving.
- The City’s various regulations present a cumulative complexity that deters some potential developers. For projects that do go forward, the design process can become a puzzle aimed at maneuvering through regulations rather than at designing what is best. Complicating this is that it is hard to keep up with *Zoning Code* changes. Recent code changes should be marked (such as by margin symbols), as they are in the building code.
- Regulatory design standards prevent “bad” design, but they can also impede innovative design that could serve as a positive contribution to the community.

- Additional prescriptive design standards would be acceptable only if code adjustments were made easier (with reduced fees and approval timelines). Regulatory standards are formulated in response to theoretical “typical” situations, but actual projects often have site-specific situations that the regulations do not anticipate.
- The Community Design Standards (CDS), applicable in areas with design review, force too much of a traditional style by requiring features such as pitched roofs or cornices and prohibiting certain building materials. The CDS may be appropriate for conservation districts in Albina, for which the standards were originally created, but they discourage creative design in centers and other areas where they also now apply. The City needs to reconsider the suitability of the CDS for areas outside Albina, such as Outer East and mixed-use centers. Standards requiring a roof pitch of at least 6/12 result in roofs that are steeper than anything existing in many Outer East areas, which are often dominated by ranch houses with low pitched roofs. Some good recent mixed-use projects, built in areas not subject to the CDS, include features such as shallow pitched roofs and metal siding, which are not allowed by the CDS.
- Stormwater management requirements have made the design and approval process much more complex, especially for builders of small projects who tend not to use technical consultants.

#### **Developers’ approaches to design:**

- Most builders are not trained in design. As a result, few are aware of basic design strategies that could improve their projects. The City should consider hosting seminars for builders highlighting infill design “best practices.”
- Better standardized building plans are needed. Since builders tend to use standardized plans and will likely continue to do so, a challenge is to get them to use well-designed plans that are appropriate for common neighborhood infill situations, instead of the contextually-inappropriate plans that are too often used. There is also a need to highlight ways of adapting standardized building plans to respond to context.
- A barrier to better medium-density infill design is that it is difficult for builders to make the leap from building single-family housing to multifamily construction, not only because of unfamiliarity with building code requirements, but also because of the more complex site design typically needed for multifamily projects.
- Lenders play an important role in shaping development. One builder related that a lender recommended against the high-quality building materials proposed for a project, recommending instead that cheaper materials (in this case, vinyl siding) be used because the lender did not believe that the housing prices in the project’s surrounding neighborhood warranted investment in quality materials. Lenders prefer development types and design features that have proven themselves financially.
- It is difficult to get builders to be sensitive to community concerns unless a public review process is required. A problem with public input, and a key reason why many builders seek to avoid land use reviews that require a public review process, is that very often the feedback builders receive is not constructive (e.g., neighbors often object to project densities, even when only the minimum required density is proposed, and sometimes are opposed to any development whatsoever).

#### **Issue 4: Regulatory Responsiveness Future Direction – Staff Comments**

*Overall approach: Foster a collaborative approach to improving the design of infill development.*

Staff would like to pursue a range of implementation strategies whose success will be dependent on a collaborative approach involving developers, as well as others in the broader community. For example, staff has placed a premium on finding solutions that both meet the community's design objectives and that make sense from the perspective of developers. Recommended implementation strategies that reflect this collaborative approach include the following:

- Creation of a collection of housing prototypes highlighting development configurations that meet the City's design objectives, are realistic from a market perspective, and that meet regulatory requirements. The housing prototypes would be part of a larger document (and/or website feature) that would also highlight various ways of approaching difficult infill design problems and that would present case studies of exemplary projects to provide information on infill design techniques and costs. All these approaches are intended to foster a collaborative approach to finding solutions to infill design problems.
- A design awards program which would acknowledge exemplary work by developers and designers.
- Workshops could serve as an opportunity for City staff, designers, and developers to share their knowledge of successful infill design strategies and techniques.
- Staff is recommending consideration of possible incentives, such as expedited permit processing or reduced permit fees, for projects that voluntarily meet specific design criteria.
- Most recommended regulatory changes are "facilitative" in nature, intended to provide additional options by reducing barriers to alternative housing configurations and providing greater regulatory flexibility.
- Staff also recommends an examination of various City regulations to find ways of reducing regulatory conflicts that may be unnecessarily hindering desirable development.
- While outside the scope of this project, staff recommends that a future Planning Bureau project consider the possibility of providing greater regulatory flexibility in meeting minimum density requirements.

C H A P T E R

4

# Implementation Strategies:

# Staff Recommendations



This chapter summarizes potential implementation strategies for improving the design of infill development and presents staff recommendations as to what strategies should be pursued as part of the Infill Design Project. The staff recommendations are preceded by discussion of the possibilities and problems associated with three general implementation approaches: regulatory design standards, design review, and non-regulatory approaches.

As mentioned previously in this report, the City of Portland has in the past tended to rely primarily on design review and regulatory standards as implementation strategies; which, while often effective, add complexity and cost to the development process. For the Infill Design Project, staff is recommending an approach that places greater emphasis on consideration of a wide range of non-regulatory implementation strategies. As part of this approach, staff proposes that *Zoning Code* amendments be processed as part of an upcoming iteration of the Regulatory Improvement Workplan to allow Infill Design Project staff to focus on near-term implementation of non-regulatory strategies.

To provide background on the potential range of implementation strategies, the following table summarizes some of the factors that shape the design of infill development, as well as potential opportunities for City involvement.

### Opportunities for City Influence on Design

Factors	Potential City Roles
<p><b>Regulations:</b> Besides the <i>Zoning Code</i> and design review, a wide range of other regulations shape design, including building codes, stormwater management regulations, and transportation and other infrastructure requirements.</p>	<p>While <i>Zoning Code</i> development standards and design review are the regulatory strategies most readily associated with City efforts to guide design, the many other regulations the City administers also play important roles in shaping the design of new development.</p>
<p><b>Potential design options:</b> Potential design options may include a wide range of housing types, building materials, construction techniques, and architectural approaches. The range of potential design options actually considered by developers, however, is limited to those options of which developers have knowledge.</p>	<p>Through outreach and education, the City can increase developers' awareness of the range of potential design options (this has been a goal of past design competitions and demonstration projects). Highlighting cost-effective techniques for achieving these design options can further encourage their consideration by developers.</p>
<p><b>Costs:</b> The costs associated with different housing types, design features, and construction techniques play a critical role in determining their feasibility. Note that some costs are impacted by regulatory requirements, many of which the City controls.</p>	<p>Grants, tax incentives, reduced fees, expedited permit processing, regulatory changes, and publicly-subsidized infrastructure improvements can be targeted to encourage particular design outcomes by reducing associated costs.</p>
<p><b>Market demand:</b> Market demand, as shaped by shifting demographics and consumer preferences, ultimately determines the feasibility of any housing product. Evolving market demand can bring the emergence of market niches for innovative housing types and design.</p>	<p>The City can influence consumer demand by increasing public awareness of the possibilities and benefits of design approaches. An example of this is the Office of Sustainable Development's promotion of sustainable housing design.</p>
<p><b>Developer willingness:</b> In order to minimize financial risk, developers tend to focus on housing types and design features they have personally found to be profitable. As a result, there is often considerable lag time between when innovative housing first achieves market success and when it becomes more broadly built.</p>	<p>By publicizing the regulatory feasibility and market success of projects with innovative design, the City can help reduce developer resistance by addressing concerns about risk. Public investments, such as street improvements and parks, have also been used to inspire developer investment in quality design.</p>

## Discussion of Alternative Implementation Approaches

### Alternative 1: Regulatory Design Standards

Regulatory design standards, in the form of *Zoning Code* development standards, provide the advantage of regulatory certainty – both in terms of providing community members certainty that new development must comply with them, as well as providing applicants with predictability as to what can be approved. Examples of basic regulatory design standards include requirements in commercial zones for ground floor windows and for buildings to be located close to sidewalks. These regulations ensure that new development will continue the established characteristics of main street areas, or contribute to a more pedestrian- and transit-oriented built environment in areas where this is desired. A more comprehensive example of regulatory design standards are the Community Design Standards (*Zoning Code*, Chapter 33.218), which apply as a regulatory standards alternative to design review in most areas outside the Central City and historic districts that are subject to the Design Overlay Zone. The Community Design Standards call for features, such as porches, pitched roofs, and window trim, that are intended to ensure that infill development reflects the established architectural character of neighborhoods and provides a visually-rich, pedestrian-friendly street frontage.

While regulatory design standards have proven to be valuable tools for ensuring that the design of new development contributes to meeting some of the community’s most basic design objectives, these standards have not been without shortcomings. Problems related to regulatory design standards, particularly in relation to the Infill Design Project’s focus on multidwelling development, include the following:

- Citywide regulatory design standards have been criticized as a “one-size-fits-all” approach that cannot ensure that infill development responds to the varying characteristics of different parts of the city. For example, the Community Design Standards were originally created to reinforce the established architectural character of the Albina area and do not respond as well to the very different characteristics of other areas, such as Outer East Portland and Southwest Portland, where these standards now apply. An alternative approach is to create different sets of regulatory design standards for different areas of the city. This latter approach, however, is beyond the scope and resources of the Infill Design Project. The Bureau of Planning’s Regulatory Rethink Project may be an opportunity to consider the possibility of area-specific design standards as part of a comprehensive re-evaluation of the *Zoning Code*.
- Regulatory design standards are often not effective at addressing context-specific issues, such as contrasts in building scale between new and existing development. In its original form, the Community Design Standards did include context-based provisions, such as limitations on building height and front façade area based on those of adjacent structures. These provisions, however, were later eliminated because City staff found them to be difficult and time consuming to administer and because developers (including non-profit community development corporations) cited the costs of having to inventory the dimensions of area structures and of producing contextual site plans for each project.
- Regulatory design standards appear to be effective at preventing the “worst of the worst,” but do not ensure design that community members consider to be *desirable*.



*Apartment building approved through the Community Design Standards. While it includes the requisite front porch, pitched roof, and front windows, feedback from community members suggests that its design falls short of serving as a positive contribution to the community.*

- It is difficult to translate the nuances of good design into code. For example, well-designed window treatments are about placement and proportion as well as amount of window coverage. Also, it is difficult to prescribe how to achieve a successful sequence of transitions between public streets and the interiors of residential units.
- The great diversity of housing types and site arrangements that comprise multidwelling development outside the Central City make the application of design standards focusing solely on the interface with the public realm problematic. In many multidwelling projects, particularly in Outer East areas, only a small portion (if any) of the development is oriented to a public street. Of greater prominence in the design of multidwelling development, compared to detached and attached housing development, are broader site design issues, such as the arrangement and utilization of open space, and the relationship of the project to adjacent properties.



*“Façade composition, window proportions and arrangements make a big difference. Both examples have front porches, entrances, windows, and no front parking, but it is understandable why they were rated so differently. Execution, the details of how you do things, make a big difference.”*  
*(comments by an advisory group member on two triplex projects that share basic façade features, but which the public rated very differently in a design preferences survey)*

### Alternative 2: Design Review

Discretionary design review is one of the primary strategies that Portland and other cities use to guide the design of new development. In the Puget Sound region, most larger cities, including Seattle, Olympia, and Everett, require design review for most multifamily development. More locally, most multifamily projects in both Gresham and Beaverton are subject to design review. In Portland, design review is restricted to geographically-targeted areas, such as the Central City, other mixed-use centers, and historic districts. The majority of multidwelling zoning, however, is in areas where design review does not apply.

Design review, because it allows site-specific consideration of projects, could be quite effective at addressing the many site- and context-specific issues related to the design of infill development that are not easily addressed by regulatory standards. Design review can also facilitate constructive dialogue between the City, applicants, and community members. Indeed, one of the primary reasons why community activists seek design review is to provide a means for community input (multidwelling development, regardless of scale, is otherwise allowed by right, with no requirement for community input or notification).

Extending design review is not being proposed as part of the Infill Design Project for several reasons, including the following:

- City staffing is not available to support a greatly expanded application of design review;
- Design review adds considerably to the time and costs that applicants must bear for development approvals; and
- State law requires that jurisdictions provide the option of regulatory design standards as an alternative to discretionary design review (except for Portland’s Central City and in historic districts), which means that extending the Design Overlay Zone does not necessarily provide the advantages of a discretionary design review process.

### Alternative 3: Non-Regulatory Approaches

A wide range of possible implementation approaches fall under this alternative, such as incentives, public investments, education and outreach. Specific strategies that have been identified as possibilities include: guidebooks and other publications, “prototype plans” highlighting approvable housing configurations, workshops, design competitions, demonstration projects, expedited permit processing, reduced fees, grant programs, and public investments in infrastructure supportive of good design.

Advantages of non-regulatory approaches include:

- Provides potential for transcending the limitations of regulatory design standards by allowing the nuances of design strategies to be addressed;
- Facilitates a cooperative approach (as one designer noted, “good design does not happen through force of regulations, it happens when developers *want* good design”);
- Avoids additional regulatory complexity;
- Limits costs to developers; and
- Accommodates flexible responses to a constantly changing marketplace, facilitating the creation of housing reflective of changing consumer preferences, shifting land and housing prices, and emerging market niches. Illustrative of such opportunities is the City’s recent removal of minimum parking requirements (for residential projects located near transit), which has allowed for the emergence of a niche market for well-designed housing without off-street parking, enabling avoidance of the design impacts associated with providing parking for higher-density projects on small infill sites.

The most basic disadvantage with non-regulatory approaches is that they do not provide certainty of outcome. In contrast to the certainty of regulations, these approaches depend on voluntary action on the part of developers (note that discussions with developers in Outer East, where the contrast between the community’s design objectives and what is actually being built is perhaps most acute, indicate that they are mostly satisfied with the success of their projects and see no reason to change their approach to design). Another issue regarding non-regulatory approaches is that some of these strategies would require ongoing commitment of Planning Bureau staff time, while others would require ongoing commitment by other bureaus. In contrast, Planning Bureau staff commitment to a regulations-based approach ends once *Zoning Code* amendments are adopted, after which the adopted regulations continue to shape development.

## Preferred Approach: Staff Recommendations

Staff recommends an approach that includes an emphasis on non-regulatory strategies, but also combines elements from the regulatory and design review alternatives. For example, while a key near-term product will be the creation of a “Portland Design Guide,” intended to increase awareness of desirable design strategies and innovative housing configurations, staff also recommends consideration of a limited number of regulatory amendments to facilitate desirable infill design, as well as consideration of a neighborhood contact requirement for multidwelling development to foster the opportunities for community input that are an advantage of design review. The four primary thrusts of the proposed implementation strategies are to:

1. **Educate and foster dialogue about design.** Pursue strategies that increase developers’, designers’, and the general public’s awareness of infill design strategies. Also, foster dialogue about design among a wide range of community stakeholders.
2. **Remove barriers to desirable design and development.** As much as possible, make desirable development the “easy thing to do.”
3. **Adopt a limited number of regulatory design standards** to bring conformance with the most fundamental design principles and to provide greater consistency in how multidwelling development is regulated. Staff proposes that existing standards which limit the amount of front parking and require street-facing windows (currently applicable to most, but not all, multidwelling development) be extended to apply to all multidwelling development.
4. **Facilitate a wider range of housing types and configurations** that hold potential for meeting the community’s design objectives.

The specific strategies that constitute the four components of this implementation approach are described below. Many of these strategies would require implementation by other City bureaus (noted in parentheses), rather than the Planning Bureau, and their feasibility will need to be determined by the relevant bureaus. The inclusion of these implementation strategies in this report is intended only as a starting point for further discussion, not as an indication that other bureaus have agreed to their implementation.

Staff proposes that the recommended *Zoning Code* amendments included among these strategies be taken through the legislative approval process as part of the Regulatory Improvement Workplan. This is a significant departure from past Planning Bureau infill design projects, which have tended to focus on *Zoning Code* amendments, and will allow project staff to concentrate instead on implementing non-regulatory strategies. Note that the recommended *Zoning Code* amendments in this report are conceptual only. Specific code language will be developed as part of the Regulatory Improvement Workplan, which staff anticipates will begin the legislative approval process in the Summer of 2005.

### I. Educate and foster dialogue about design

The strategies listed below are at the core of the non-regulatory implementation focus recommended by Planning Bureau staff. Included among these strategies are several that would need to be implemented by the Bureau of Development Services (BDS). This reflects the fact that BDS, rather than the Planning Bureau (“Planning”), is responsible for the current planning functions that provide the best opportunities for ongoing outreach to developers.

## A. Near-term implementation

1. **Creation of a “Portland Infill Design Guide,”** which will serve as a resource for developers, designers, City staff, and the general public. Because of community interest, staff has already initiated work on the housing prototypes component of the guide, which staff anticipates will be completed in the Summer of 2005. This guide will consist of the following components:
  - a. A collection of **housing prototypes**, suitable for common infill site configurations, that meet City regulations and design objectives and that are feasible from a market perspective. The prototypes will serve as models for future development and as a “path of least resistance” incentive for developers by providing the advantage of regulatory certainty in illustrating approvable configurations. They will also highlight ways of meeting difficult design objectives, such as balancing parking needs with pedestrian-friendly design, and could help broaden the range of housing types being built in Portland by presenting innovative configurations. One prototype, for instance, will highlight how cluster housing oriented around a common green can be configured on a small infill site, as an alternative to rowhouses. The prototypes will be based on site configurations common in different parts of the city, such as the Streetcar Era neighborhoods and Outer East, and will thus provide a variety of area-specific solutions. Staff anticipates that the collection of housing prototypes will be added to over time to expand the range of solutions.
  - b. A **design strategies guide**, highlighting a variety of infill design strategies (such as various ways of ameliorating scale contrasts, minimizing the prominence of vehicle areas, reducing privacy impacts, managing stormwater impacts, etc.) that are difficult to achieve through regulations alone.
  - c. Presentation of **case studies**, highlighting exemplary infill projects from Portland and elsewhere, and including information on construction costs and techniques. The case studies will help increase awareness of the viability of innovative housing types and configurations.
2. **Wider dissemination of existing infill design guidebooks** (such as *The 10 Essentials of North/Northeast Portland Housing* and *Building Blocks for Outer Southeast Neighborhoods*).
3. **Design awards program for small-scale residential infill development.** This could serve as a positive incentive by acknowledging exemplary work by builders and designers and would serve to highlight design that can serve as models for future development. Implementation of a design awards program will require further consideration, as it could be administered by Planning, BDS, the Office of Neighborhood Involvement, the various neighborhood coalitions, the local chapter of the American Institute of Architects, or some combination of these.
4. **Establish a neighborhood contact requirement** for new construction in the multidwelling zones, triggered by a project size threshold. This would address a salient concern of neighborhood associations that they often have no opportunity for input regarding even large-scale multidwelling projects.

## B. Potential future work program (*requires resources not currently available*)

1. **Design competitions**, to cultivate innovative solutions to infill design problems. A design competition focused on medium density infill development could build on the interest generated by the City’s “Living Smart” competition for narrow house designs. Such competitions could focus on particular infill situations that have proven problematic, such as housing with three to five units on a 5000 sq.ft. lot in the R1 zone, or courtyard housing possibilities on a 10,000 sq.ft. site in the R2 zone.

2. **Demonstration projects.** Could involve using existing exemplary projects, or Planning’s involvement in the development of new projects, to foster awareness of design strategies and alternative housing types.

**C. Investigate feasibility with the Bureau of Development Services (BDS):**

1. **Encourage builders to contact neighborhood associations early in the development process,** such as by including neighborhood/ONI/coalition contact information as part of permit packets and other information disseminated by BDS. **(BDS)**
2. **Training/workshops for builders and the public on infill design strategies and techniques.** **(BDS/Planning)**
3. **Reduced land use procedure fees** if an applicant provides letters from abutting neighbors and the neighborhood association stating their support for an adjustment. This would encourage early communication with neighbors and neighborhood associations and be an incentive for cooperative problem solving. An alternative possibility may be to base land use review fees on the amount of staff time spent on the review in order to encourage early resolution of issues. **(BDS)**
4. **Provision of basic design consultation services by City staff** to provide suggestions regarding site design and to help find solutions for difficult sites. **(BDS)**
5. **Allow/encourage proposals to voluntarily go through design review,** providing regulatory flexibility and “bundling” of adjustments as an incentive. This is called for in Comprehensive Plan Goal 12 (Objective 12.7G), but has not been implemented. Voluntary design review would provide an additional opportunity for public input and bring greater attention to design issues than is the case with other types of land use review. A potential problem, however, is that BDS indicates that applicant fees do not entirely cover the costs of design review. Any expansion of design review would therefore be a further burden on BDS’s limited resources.

**II. Remove barriers to desirable design and development**

This category includes a variety of strategies, including code amendments, targeted incentives, and possible public investments, intended to facilitate desirable infill design. They include *Zoning Code* amendments that would allow for more efficient use of the limited site area typical of infill projects, with particular emphasis on regulatory changes that would allow less area to be devoted to vehicle areas and other impervious surfaces. They also include recommendations for consideration of changes to the regulatory practices of other bureaus, together with suggestions for potential incentives to encourage desirable design features. Staff has also included within this category the idea of targeting City investments in street infrastructure in areas zoned for multidwelling development to encourage pedestrian-oriented design in areas that currently lack sidewalks.

**A. Zoning Code amendments**

1. **Provide the option of a “shared driveway” arrangement,** perhaps with a requirement for paving blocks, as an alternative to requirements for raised walkways adjacent to private driveways. This would facilitate driveways designed to accommodate both pedestrians and automobiles and would minimize impervious surface area.
2. **Allow the driveways of small multidwelling projects to be located closer to property lines than the 5’ currently required,** perhaps in conjunction with a requirement for a site-obscuring fence. This will facilitate the ability to provide access to



*Shared driveway in Seattle*

rear parking on small sites, facilitate more street-oriented building frontage, and make more efficient use of site area.

3. **Change the definition of “driveway”** so that its width is not dependent on PDOT’s curb cut width requirements. This would allow for narrower driveway dimensions in situations in which additional space is not needed for vehicle maneuvering or fire equipment access.
4. **Facilitate housing with rear alleys and other shared access arrangements**, by amending lot size and building coverage requirements to reduce barriers to the creation of shared access tracts. These amendments would facilitate alternatives to housing projects with multiple front garages.
5. **Allow rear decks to exceed lot coverage limits for rowhouses with rear-accessed parking.** This would allow more efficient use of space otherwise used only for vehicle maneuvering and remove a disincentive to rear-accessed parking arrangements (ground-level patios, common with rowhouses with front garages, do not count against lot coverage requirements).
6. **Reduce walkway width requirements for interiors of projects.** The current requirement of 5’ is excessive for private walks and complicates the design of cluster housing configurations on small sites.
7. **Drop requirement that required outdoor space for each unit be screened from each other by material that is totally site obscuring.**
8. **Allow a maximum front setback of 20 feet for purely residential development along transit streets**, to allow more buffering from busy streets. Current maximum setback is 10 feet, which fosters the desired pattern of sidewalk-oriented storefronts for commercial development, but exacerbates traffic and privacy impacts for ground-level residential units. Also, the minimum and maximum transit street setbacks in the R2 zone are currently both 10’, which provides little design flexibility.



*Rowhouses with rear decks*



*Outdoor space screening requirements lead to walled balconies (upper image), while preventing the more open arrangements typical of cottage clusters (lower image).*

**B. Investigate feasibility with other bureaus** *(implementing agency in parentheses)*

1. **Expedited permit processing or reduced permitting fees** for projects that voluntarily meet specific design criteria. Developers have identified this strategy as having great potential for improving the design of infill projects, since it appeals to the self-interest of developers. Initial conversations with BDS, however, suggest this strategy is particularly problematic and may not be feasible. **(BDS)**
2. **Reduce driveway width requirements for small multidwelling projects.** Current Title 17 requirements for 20’-wide driveways for multidwelling projects complicate projects on small sites and result in large portions of sites devoted to impervious surface. **(PDOT)**
3. **Consider the possibility of reducing requirements for improvements to existing alleys** to minimize costs and to encourage more builders to use existing alleys, or consider strategies to help finance alley improvements. **(PDOT)**
4. In specific areas zoned for multidwelling development, **examine possibilities for City funding to improve deficient streets** (lacking sidewalks, etc.) in order to provide the

infrastructure framework needed to support pedestrian-oriented infill development and neighborhoods. *(Note: only possible in long-term, as much additional consideration of this idea is needed.)* **(PDOT)**

5. In specific areas with oversized blocks that are zoned for multidwelling development (such as in Outer East), **examine possibilities for City involvement in building or financing alleys to facilitate pedestrian-oriented street frontages, or in creating additional streets to enhance street system connectivity.** This would address problems related to lot and block patterns in Outer East, where much of the street frontage of the area’s typically narrow lots must now be devoted to vehicle access, leaving little room for street-oriented buildings. *(Note: only possible in long-term, as much additional consideration of this idea is needed)* **(PDOT)**
6. **Reduce stormwater system development charges (SDCs)** when sand-set paving blocks or other pervious surfaces are used for driveways. This could provide the dual benefit of reducing stormwater impacts while providing a pedestrian-friendly design feature. **(BES)**
7. **Creation of stormwater management system prototypes for small urban infill sites,** where constrained site area makes the design of such systems especially problematic. Could also involve the use of right-of-way area. Currently, BES’s stormwater management manual often clashes with plumbing code requirements, especially on small infill sites. **(BES/BDS/PDOT)**
8. **Investigate the possibility of creating a grant program to provide funding for design services for multidwelling projects outside urban renewal areas.** Related to this, create a clearinghouse for design-related grants. **(PDC/Planning)**

### III. Adopt a limited number of regulatory design standards

Besides the “facilitative” *Zoning Code* amendments described above, staff recommends two more restrictive *Zoning Code* amendments. These are intended to ensure adherence to fundamental design principles calling for multidwelling development that contributes to a transit- and pedestrian-oriented environment, and to bring greater consistency in how the design of multidwelling development is regulated.

1. **For multidwelling projects, limit the amount of property frontage that can be used for vehicle areas.** One possibility is to extend the applicability of the transit street limitation of 50 percent to all multidwelling development. Development standards applicable to transit streets prevent parking from occupying more than 50 percent of setback area between buildings and the street in order to cultivate a more transit- and pedestrian-friendly street frontage. Because most areas with multidwelling zoning are located near transit facilities and are intended to be transit oriented, staff recommends that transit street limitations on front parking apply to all multidwelling development. This parking limitation would prevent configurations where the entire front setback is devoted to vehicle areas.
2. **Require street-facing windows for all multidwelling development.** Currently an 8 percent window coverage requirement applies to development in multidwelling zones, but there is no window requirement for multidwelling development in commercial zones. Also, consider expanding the required window coverage to 15 percent, which would bring consistency with the window coverage standards that apply to detached houses, rowhouses, and duplexes.



*Triplex with driveway occupying most of the street frontage.*



*Triplex built to standardized plans designed to conform to transit street limits on front parking.*

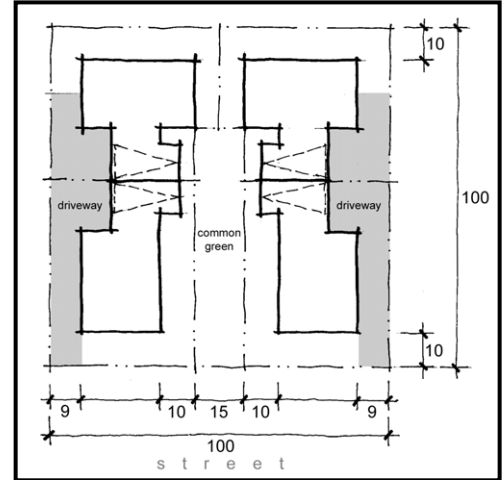


*Apartment building on a commercially-zoned main street. Meets transit street setbacks and front parking limits, which are intended to foster transit- and pedestrian-oriented design, but the lack of windows works against this intent.*

#### IV. Facilitate a wider range of housing types and configurations

These strategies, which consist of amendments to the *Zoning Code*, are intended to reduce regulatory barriers to alternative housing types and configurations that hold potential to meet the community's design objectives. They facilitate cluster housing arrangements such as common greens and other housing oriented to shared courtyards, provide for a new form of cluster housing oriented to a shared street, allow additional opportunities for duplexes on small lots, and expand the range of owner-occupied housing possible on small sites zoned for higher-density housing (see the Chapter 3, Housing Diversity for more detailed discussion).

- 1. Reduce front setback requirement for structures fronting onto a common green to allow this provision to be used on small sites.** Currently, front setback requirements for lots fronting onto common greens are the same as setbacks on public street frontage. In the R2 zone, common green configurations could serve as alternatives to rowhouses, but are effectively precluded because of requirements for 10' setbacks from the common green, which results in insufficient space for buildings. Code modeling indicates that reducing setbacks on common greens to 5' would allow common greens to be possible on sites with as little as 100' of frontage. This would facilitate the development of fee-simple cottage clusters and courtyard townhouses on small sites.
- 2. Allow space required for individual outdoor areas to be combined into a larger shared area.** This would facilitate courtyard housing arrangements by allowing shared open space to serve as an alternative to private outdoor space.
- 3. Create a land division provision to allow lots in higher-density zones to front onto a "shared street,"** designed for both vehicles and pedestrians, as a more urban alternative to the common green. This would facilitate homeownership opportunities and additional housing types on small sites zoned for higher-density development.
- 4. Reduce minimum lot size requirements for duplexes.** Duplexes on small lots provide opportunities for accommodating density in a form that maintains fine-grain neighborhood patterns. However, minimum lot sizes for duplexes conflict with minimum density standards in the R1 zone, precluding new duplex lots from being created. Reducing minimum lot sizes for duplexes would thus expand their possibilities as infill housing solutions.
- 5. Allow accessory dwelling units (ADUs) to count toward minimum density requirements in the multidwelling zones.** This would provide additional owner-occupied housing possibilities for the R1 zone by increasing the ability of rowhouses, in conjunction with ADUs, to meet minimum density requirements. In contrast to the approach taken in the *St. Johns/Lombard Plan*, which reduced minimum density requirements for small R1 sites to accommodate rowhouses, this code amendment would not result in a reduction in housing unit density. It would also increase the range of medium-density housing configurations and facilitate a mix of owner-occupied and rental housing.



Code modeling of a common green configuration on a 10,000 sq. ft. site.



Housing on a shared street

Courtesy Vallaster & Cori Architects

6. **Change definition of “attached house,”** currently defined as attached along at least 50 percent of each dwelling, to allow additional housing configurations. Consider changing the percentage requirement to 25 percent.

## Strategies Requiring Implementation by Non-City Organizations

While considering potential implementation strategies that the City could pursue, Infill Design Advisory Group members also raised ideas for strategies that could be implemented by outside organizations, such as the local chapters of the Home Builders Association (HBA) and the American Institute of Architects (AIA). These ideas included the following:

1. Encourage joint HBA/AIA efforts, such as co-sponsored workshops on infill design strategies and techniques. Another suggestion involved the idea of a joint program to increase builders’ awareness of the benefits of architectural services, especially in finding solutions to the challenges of higher-density development on small infill sites, and to help link up builders and architects.
2. Encourage the AIA to develop a program to educate architects about undertaking design/develop projects. Facilitating more design/develop projects by architects could lead to creative infill development solutions, as this provides architects greater control over the design of projects and more creative leeway. This could build on the success of pioneering design/develop projects by architects in Portland, which have resulted in some of the city’s most innovative small mixed-use projects.

## Items for Future Consideration

The following are ideas that were identified during work on the Infill Design Project as meriting consideration, but which are beyond the scope of this project and would need to be the focus of future Planning Bureau work programs:

1. **A focus on design and development issues along main streets and corridors, particularly regarding residential and mixed-use development.** Main streets, together with mixed-use centers, are intended to be the focus of more intense development. Unlike the centers, however, most main street areas do not have design review and have not been the focus of area-specific planning. Recent increases in development activity along main streets, such as new mixed use projects on the Hawthorne, Belmont, and Alberta main streets, provide an opportunity to evaluate issues and opportunities related to infill development in these areas. Also, challenges related to creating livable multidwelling housing along major streets with high traffic volumes remain to be addressed; as well as consideration of allowances for additional uses in multidwelling-zoned areas on major streets.
2. **A focus on Outer East Portland development and design issues,** perhaps as an evaluation of the Outer Southeast Community Plan, including consideration of:
  - **Creating a vision for the future of growth areas outside of mixed-use centers.** A key need identified by the Infill Design Advisory Group is a clarified vision for areas outside the Gateway Plan District where significant change is expected and occurring (such as the SE 122<sup>nd</sup> Avenue corridor, the 148<sup>th</sup> Avenue light rail station area, and the Powellhurst-Gilbert neighborhood west of I-205). A potential focus is the 82<sup>nd</sup> Avenue/1-205 corridor, where a future light rail line together with the existence of large amounts of commercial and multidwelling zoning provides many opportunities for growth. One area within this corridor that particularly merits attention is concentrated around SE Division Street from 82<sup>nd</sup> Avenue to I-205 (extending southward to SE

- Powell Boulevard), which has been experiencing much recent development and appears to be poised for significant future growth. At the western end of this area is the new Portland Community College campus, while a future light rail station will anchor its eastern end. In between, this area has been the location of several recent commercial projects (two designated main streets intersect at SE Division and SE 82<sup>nd</sup>) and it includes large amounts of multidwelling zoning (among the largest concentrations of such zoning in Portland), where large lots with small houses are being redeveloped with higher-density housing, including several condominium projects.
- **Coordination with the Parks Bureau to explore possibilities for locating new park facilities in areas with large amounts of multidwelling zoning.** Locating parks in areas with concentrations of multidwelling development would help address issues related to the many families in Outer East Portland living in apartment buildings, which frequently provide little outdoor space suitable as play areas.
  - **Explore possibilities for designing major streets to be supportive of adjacent multidwelling zoning.** An issue in Outer East Portland is that much of the area’s multidwelling zoning is located along major streets with multiple lanes of traffic that can compromise the livability of adjacent residential units. When opportunities exist for improvements to major streets in areas with multidwelling zoning, consider placing a priority on features such as wide planting strips, on-street parking, and landscaped medians that can help buffer residential units from traffic and provide a greener, more residential emphasis.
3. **Clarify design expectations for different parts of Portland.** City design-related policies and regulatory approval criteria call for new development to contribute to the “desired character” of neighborhoods. In many parts of the city, however, little guidance exists on what constitutes this desired character, resulting in uncertainty as to whether it corresponds to the character of the *existing* built environment or whether a desired *future* character is the goal. Possible approaches include:
    - Creation of a hierarchy of design principles highlighting how design approaches should differ between areas intended to be places of changes, such as mixed-use centers and main streets, and areas intended to be places of relative stability, such as neighborhood residential areas.
    - Creation of voluntary design guidelines for parts of Portland that do not already have them (such guidelines presently exist for Inner North/Northeast, inner parts of Outer Southeast Portland, and as part of some neighborhood plans). These guidelines would help clarify what constitutes desired community character in different parts of the city.
  4. **Examine opportunities to foster tree preservation in multidwelling development.** In many parts of Portland, existing trees are cherished aspects of community character. However, while tree preservation requirements apply to the development of detached and attached houses, no such requirements apply to multidwelling development.
  5. **Consideration of the possibility of allowing lots to be created without any street frontage,** perhaps as part of a re-evaluation of the Land Division Code Rewrite. Such allowances have facilitated a wide variety of fee-simple, owner-occupied housing types to be created in Seattle and in cities in California, and could be particularly useful in providing solutions to development on small sites in Portland. This, however, would be a significant departure from how land divisions have been regulated in Portland and raises issues regarding the provision of utilities infrastructure.
  6. **Explore possibilities for changing state law to facilitate a streamlined land division timeline.** The lengthy approval process for land divisions (often a year-long process) has

been identified as presenting a barrier to providing owner-occupied housing on fee-simple lots. City staff in charge of reviewing land division proposals indicate that it would be possible to significantly reduce the amount of time needed to process land divisions if not for certain state rules, particularly those requiring final plat reviews to be treated as separate land use decisions. Developers indicate that reducing the time required to approve land divisions would help reduce the cost of new owner-occupied housing.

7. **Re-evaluation of the Community Design Standards**, which were originally created for the Albina Community Plan area but now apply citywide to areas subject to design review. A criticism of the Community Design Standards is that they are not responsive to areas, such as neighborhoods in Southwest and Outer East Portland, as well as mixed use-centers, whose existing built environment and desired character are very different from Albina.
8. **Reconsideration of minimum density requirements**, to allow greater design flexibility and responsiveness to site constraints and market demands.
9. **Review of Zoning Code requirements for the R2.5 zone.** Because it is a single-dwelling zone, the R2.5 zone was not a focus of the Infill Design Project, although it allows similar densities to the R2 zone. Preliminary analysis indicates that some R2.5 zone requirements have the unintended effect of encouraging design that interrupts typical neighborhood patterns and that prevent alternative housing types, such as cottage clusters and common green arrangements, that might otherwise be appropriate in this zone.

# Appendices

**Appendix A:** Development Data

**Appendix B:** Portland Design Policies and Directives

**Appendix C:** Design Guidance from Adopted Neighborhood Plans

**Appendix D:** Past Infill Design Efforts

**Appendix E:** Multidwelling Design – Historic Trends

**Appendix F:** Design Strategies in Other Cities

**Appendix G:** Design Preferences Survey and Questionnaire Results

**Appendix H:** Summary Project Information

**Appendix I:** Outer Southeast Livable Infill Project Report



## APPENDICES

# Appendix A | Development Data

The following is a compilation of data related to recent medium-density residential development activity in Portland, including information on the quantity and location of such development, the medium-density zones’ share of Portland’s housing production, and future development potential. Recent data indicate that multifamily units constitute the majority of new housing units and that the medium-density residential zones (particularly R2 and R1), primarily located outside higher-density centers and other mixed use areas, have been the location of a high proportion of the new apartment and rowhouse projects. While Central City areas, such as the Pearl District, have been the location of the greatest concentration of new housing production, a larger total number of housing units are being produced in neighborhood districts outside the Central City, particularly in areas east of 82<sup>nd</sup> Avenue.

Note that building permit data included here is for new construction only. Also note that data on “apartments” includes both rental and condominium units.

**Table A1. Summary of Residential Development from 1997 through Sept. 2004**

*Summary: The majority of apartment building (64%) and rowhouse (67%) permits have been for areas outside 2040 mixed-use areas. Also note that, while detached houses constitute the majority of permits for new construction, apartment and rowhouse construction accounts for twice as many housing units as do detached houses.*

Housing Type	City Totals		2040 Mixed-Use Areas*	
	Permits	Units	Permits	Units
SFR (detached houses)	7442	7493	501	506
Duplexes	519	1031	113	223
Rowhouses	1712	1772	570	588
Apartments	984	13,990	356	9295
ADUs	144	147	21	21
<b>Total</b>	<b>10,801</b>	<b>24,433</b>	<b>1561</b>	<b>10,633</b>

Source: BDS building permit data and BOP 2040 analysis mapping

\*Includes the Central City, town and regional centers, station community areas, and main streets, as mapped for Planning Bureau analysis related to the Region 2040 Growth Concept.

**Table A2. Apartment Permits from 1997 – Sept. 2004, Classified by Housing Units**

*Summary: The majority (90%) of apartment building permits, both inside and outside 2040 mixed-use areas, have been for relatively small buildings of no more than 20 units. Buildings with no more than 5 units have been the most frequently built size of apartment building.*

Number of Units	City Totals	2040 Mixed-Use Areas
Up to 5 units	560	152
6-20 units	321	125
21-40 units	32	23
>40 units	71	56

Source: BDS building permit data and BOP 2040 analysis mapping

**Table A3. Building Permit Data 1997 – Sept. 2004: By Year, Zone, and Housing Type**  
(See page A-3)

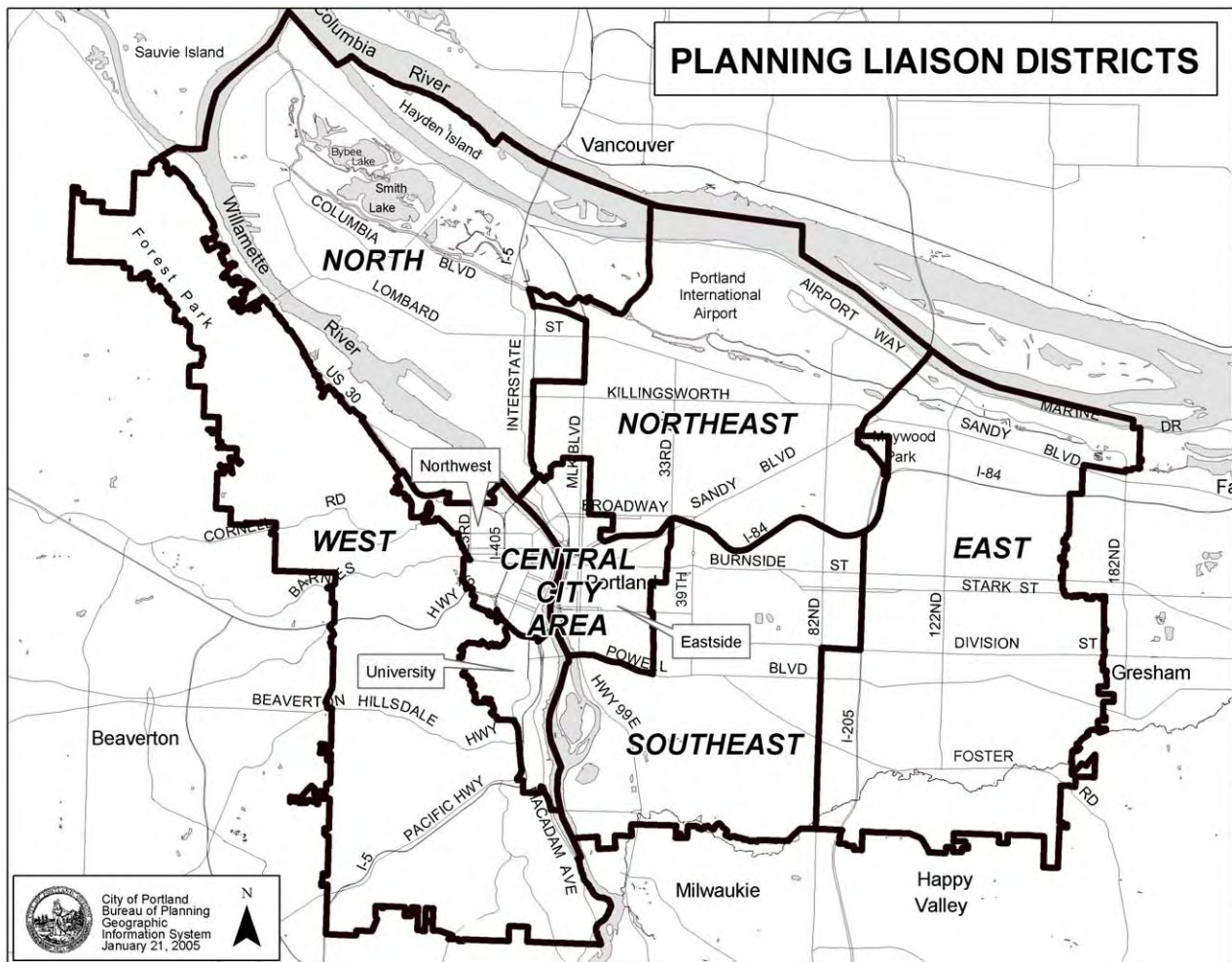
Summary: Within zones intended for multifamily development, the majority of apartment and rowhouse permits (66% of each category) have been for development in the low- and medium-density multidwelling zones (R3, R2, and R1). Also, more housing units have been constructed in the low- and medium-density multidwelling zones (6288 units) than in the high density multidwelling (3151 units), commercial (3719 units), or employment zones (3347 units); although larger apartment developments (as indicated by higher per-permit unit counts) are being concentrated in the latter three types of zones. Also note that more residential units are being produced in the commercial and employment zones than in the high-density multidwelling zones.

**Table A4. Building Permit Data 1997 – Sept. 2004: By Planning Liaison District**  
(See page A-4)

Summary: While the Central City has been the location of the largest concentration of new residential units (particularly the Northwest subarea where the Pearl District is located), a far greater number of building permits (for smaller projects) have been issued for other areas of Portland. The East Portland district, located east of 82<sup>nd</sup> Avenue, has experienced more building permit activity for new apartment and rowhouse construction than any other district and has produced nearly as many residential units as the Central City's Northwest subarea. In the East Portland district, the R2 zone has produced more residential units than any other zone where multidwelling development is allowed. (Note: this table focuses on those types of zones where multidwelling development is common. It does not include data on development in the single-dwelling zones, which are a significant focus of residential infill development in areas outside the Central City.)

**Map A1. Planning Liaison Districts**

The district data in tables A4 and A6 coincide with the district boundaries indicated on this map.



**Table A3. Building Permit Data 1997 – Sept. 2004: By Year, Zone, and Housing Type**  
*(Excludes single-dwelling zones)*

	1997	1998	1999	2000	2001	2002	2003	2004	Permits	Units
<b>R3</b>										
SFR	8	8	7	1	10	31	7	22	94	95
Duplex	6	1	17	9	3	8	12	2	58	114
Rowhouse	0	0	18	2	25	13	13	4	75	76
Apartments	3	2	6	8	3	3	2	4	31	170
<b>R2</b>										
SFR	87	45	33	115	122	146	139	96	783	796
Duplex	43	16	19	14	19	29	23	16	179	358
Rowhouse	53	65	56	61	78	45	54	31	443	453
Apartments	49	51	14	16	42	46	82	76	376	2290
<b>R1</b>										
SFR	5	16	8	5	3	6	28	9	80	82
Duplex	15	13	2	10	5	3	29	9	86	167
Rowhouse	32	35	30	13	18	69	92	14	303	317
Apartments	26	27	17	10	27	52	17	22	198	1370
<b>RH</b>										
SFR	2	0	1	1	0	1	0	1	6	6
Duplex	0	1	0	3	1	2	0	0	7	14
Rowhouse	68	14	22	0	3	6	3	0	116	123
Apartments	13	31	2	3	0	8	4	12	73	1110
<b>RX</b>										
SFR	0	0	0	0	0	0	0	0	0	0
Duplex	0	0	0	0	0	0	0	0	0	0
Rowhouse	0	0	0	0	0	0	0	0	0	0
Apartments	2	2	1	1	2	2	5	9	24	1898
<b>Commercial Zones</b>										
SFR	10	15	3	2	17	32	52	66	197	196
Duplex	15	10	1	2	0	0	2	5	35	70
Rowhouse	69	74	4	27	11	25	29	28	267	269
Apartments	24	21	10	14	3	11	16	44	143	3184
<b>Employment Zones</b>										
SFR	3	5	1	0	2	1	2	2	16	16
Duplex	3	1	11	0	0	1	2	1	19	38
Rowhouse	8	0	17	0	0	0	4	15	44	44
Apartments	7	6	28	3	1	3	16	10	74	3249

Source: BDS building permit data

**Table A4. Building Permit Data 1997 – Sept. 2004: By Planning Liaison District**

Housing Type	CC East		CC NW		CC Univ.		North		Northeast		Southeast		East		West-NW		West-SW	
	Permits	Units	Permits	Units	Permits	Units	Permits	Units	Permits	Units	Permits	Units	Permits	Units	Permits	Units	Permits	Units
<b>R3</b>																		
SFR	0	0	0	0	0	0	3	3	8	8	0	0	83	84	0	0	0	0
Duplex	0	0	0	0	0	0	0	0	0	0	0	0	58	114	0	0	0	0
Rowhouse	0	0	0	0	0	0	0	0	0	0	0	0	75	76	0	0	0	0
Apartments	0	0	0	0	0	0	0	0	2	9	0	0	29	161	0	0	0	0
<b>R2</b>																		
SFR	12	13	2	2	3	3	141	141	54	54	82	82	337	339	133	142	19	20
Duplex	4	8	0	0	3	6	8	16	16	32	34	68	112	224	1	2	1	2
Rowhouse	18	18	0	0	134	134	42	42	36	36	66	66	127	137	7	7	13	13
Apartments	9	31	0	0	10	63	62	241	36	192	8	173	192	1196	44	334	15	60
<b>R1</b>																		
SFR	1	1	0	0	0	0	6	6	10	10	27	29	36	36	0	0	0	0
Duplex	1	2	0	0	0	0	9	18	9	18	13	24	52	101	0	0	2	4
Rowhouse	0	0	12	13	2	2	68	76	31	33	60	61	114	116	0	0	16	16
Apartments	4	17	8	153	7	45	15	91	19	156	26	148	111	731	2	5	6	24
<b>RH</b>																		
SFR	0	0	1	1	4	4	0	0	0	0	0	0	1	1	0	0	0	0
Duplex	1	2	3	6	0	0	0	0	0	0	0	0	3	6	0	0	0	0
Rowhouse	69	69	0	0	3	3	0	0	15	17	0	0	29	34	0	0	0	0
Apartments	4	7	2	115	0	0	0	0	4	41	1	2	62	945	0	0	0	0
<b>RX</b>																		
SFR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Duplex	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rowhouse	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apartments	1	185	18	1578	0	0	0	0	0	0	0	0	5	135	0	0	0	0
<b>Commercial Zones</b>																		
SFR	0	0	0	0	3	3	119	118	2	2	44	44	19	19	1	1	9	9
Duplex	2	4	1	2	0	0	1	2	0	0	3	6	27	54	0	0	1	2
Rowhouse	7	7	36	36	8	8	78	79	16	16	80	81	33	33	0	0	9	9
Apartments	6	204	29	1206	0	0	11	421	13	305	25	305	55	732	3	10	1	1
<b>Employment Zones</b>																		
SFR	0	0	0	0	0	0	3	3	3	3	2	2	4	4	0	0	0	0
Duplex	0	0	2	4	0	0	2	4	11	22	2	4	2	4	0	0	0	0
Rowhouse	8	8	10	10	0	0	19	19	0	0	7	7	0	0	0	0	0	0
Apartments	8	303	29	2561	0	0	5	11	27	142	0	0	5	232	0	0	0	0
<b>SUMMARY</b>																		
Rowhouse	102	102	58	59	147	147	207	216	98	102	213	215	378	396	7	7	38	38
Apartments	32	747	86	5613	17	108	93	764	101	845	60	628	459	4132	49	349	22	85
<b>TOTAL</b>	155	879	153	5687	177	271	592	1291	312	1096	480	1102	1571	5514	191	501	92	160

Source: BDS building permit data

Note on the following five tables: These tables provide perspectives on possibilities for future development in the multidwelling zones. No reliable estimates are available on the number of additional residential units that can be realistically expected in each zone or on precisely where future infill development is likely to occur. In lieu of such figures, the following tables draw on various sources to provide a very generalized sense of remaining development potential in the multidwelling zones. They do not include information on commercial and employment zones because of the particular difficulty of assessing residential development potential in zones that do not require such development.

**Table A5. Multidwelling Zones Land Area (acres)**

Summary: The majority of land in multidwelling zoning (89%) is in the low- and medium-density multidwelling zones (R3, R2, and R1), and the majority of multidwelling zoning is located outside 2040 mixed-use areas (62%).

Zone	In 2040 Mixed Use Areas	Outside 2040 Mixed-Use Areas	Total
R3	73 ( 8%)	792 (92%)	865
R2	1193 (28%)	3095 (72%)	4288
R1	1137 (49%)	1206 (51%)	2343
RH	475 (78%)	135 (22%)	610
RX	297 (98%)	6 ( 2%)	303
<b>total acres</b>	<b>3141 (38%)</b>	<b>5232 (62%)</b>	<b>8409</b>

Source: BOP 2040 analysis mapping and Metro RLIS

**Table A6. Multidwelling Zones Land Area (acres), by Planning Liaison District**

Summary: The low- and medium-density multidwelling zones constitute the predominant multidwelling zoning in areas outside the core of the Central City. Note that the East Portland district includes more land area with multidwelling zoning than any other district, which suggests that East Portland will continue to be the location of a significant proportion of Portland's multidwelling development.

ZONE	CC East	CC NW	CC Univ.	North	North-east	South-east	East	West - NW	West-SW	City Total
R3	0	0	0	49	40	0	777	0	0	866
R2	164	54	157	575	507	937	1480	59	354	4287
R1	177	103	147	398	295	543	509	20	150	2342
RH	75	203	47	1	57	74	142	1	10	610
RX	20	212	0	4	14	0	54	0	0	304
<b>total acres</b>	<b>436</b>	<b>572</b>	<b>351</b>	<b>1027</b>	<b>913</b>	<b>1554</b>	<b>2962</b>	<b>80</b>	<b>514</b>	<b>8409</b>
<b>Percent of city total</b>	<b>5%</b>	<b>7%</b>	<b>4%</b>	<b>12%</b>	<b>11%</b>	<b>18%</b>	<b>35%</b>	<b>1%</b>	<b>6%</b>	<b>100%</b>

Source: Metro RLIS

**Table A7. Improvements-to-Total Property Value for Parcels in Multidwelling Zones**

Summary: A large amount of land area (1109 acres) in the low- and medium-density multidwelling zones is composed of parcels on which the value of improvements is less than half the total property value, which suggests there may be much remaining development/redevelopment potential.

Zone	Parcels w/ improvement value less than 50% of total property value		
	Number	% of all parcels in zone	Total Acres
R3	371	20%	112
R2	2928	23%	652
R1	1739	23%	345
RH	538	30%	144
RX	228	58%	77

Source: Multnomah County Assessment & Taxation. Does not include parcels with incomplete property value data.

**Table A8. Existing Residential Units and Potential Capacity in Multidwelling Zones**

Summary: While available data on numbers of existing residential units is incomplete, there appears to be a considerable gap between existing and potential residential units in the multidwelling zones. This gap suggests that there remains much additional development/redevelopment potential in the multidwelling zones, especially in the R2 and R1 zones.

Zone	Net Acres <sup>1</sup>	Existing Units <sup>2</sup>	Maximum Potential Units <sup>3</sup>	Difference (existing vs. potential units)
R3	695	4,800	9,100	4,300
R2	3263	32,400	64,000	31,600
R1	1527	23,600	59,900	36,300
RH	435	13,200	23,500	10,300

<sup>1</sup>Excludes right-of-way

<sup>2</sup>From Multnomah County Assessment & Taxation records. Unit count is likely incomplete, as some multidwelling tax lot data does not indicate number of units. The RX zone is omitted due to incomplete information.

<sup>3</sup>Calculated at 90% of maximum allowed density in R3, R2, and R1 zones (methodology used in Albina and Outer Southeast community plans). Figure for RH assumes 60 units per acre (methodology used in Albina Community Plan).

**Table A9. Vacant & Redevelopable Land – Various Information**

Summary:

- The majority (95%) of vacant land in the multidwelling zones is in the low- and medium-density zones (R3, R2, R1); the 400 vacant acres in these zones appear to provide ample opportunity for continued residential development.
- Moreover, much recent development has been on sites that were not vacant (with less than a quarter of development in the R1 zone having been on vacant sites), suggesting that estimates of development potential must not be limited to vacant land.
- Estimates derived from Metro’s Metroscope analysis of residential capacity also indicate considerable development potential remains in the low- and medium-density multidwelling zones.

Zone	Vacant Land (acres) <sup>1</sup>	% of '97-'03 building permits for development on vacant land <sup>2</sup>	Metroscope 2025 Refill Capacity Estimates <sup>3</sup>	
			Refill Acres	Refill Units
R3	100	56%	64	740
R2	221	34%	271	4730
R1	78	21%	98	3430
RH	17	37%	86	4110
RX	5	0%	22	2650

<sup>1</sup>From Metro RLIS (2003 data). Note: this vacant lands inventory only includes parcels of a half acre or more in size and does not capture the small infill opportunity sites common in Portland (such as 5,000 sq.ft. sites in the R2 zone where paired rowhouse projects are a common infill development type).

<sup>2</sup>Percentage of building permits issued from 1997 through 2003 for sites identified as vacant in 1996 (source: BDS building permit data and Metro RLIS vacant lands data).

<sup>3</sup>Derived from Metro’s “Metroscope” modeling of residential development potential (2002). Number of refill units was calculated at 80% of the zoned capacity of potential refill areas, except for the RX zone, for which trending information was utilized.

## Appendix B | Portland Design Policies and Directives

The following is a compilation of City policies and directives that provide guidance regarding the design of residential infill development. To clarify the emphasis of these policies and directives, they are grouped by theme. Fonts from their source documents are generally used to highlight their origins.

### *Grouped by Theme*

#### **Community character**

##### **Comprehensive Plan**

#### **4.1 Housing Availability. ...Objectives:**

- F.** Encourage housing design that supports the conservation, enhancement, and continued vitality of areas of the city with special scenic, historic, architectural or cultural value.

#### **4.14 Neighborhood Stability ...Objectives:**

- B.** Promote housing opportunities that build a sense of community, civic involvement and neighborhood pride.

#### **12.1 Portland's Character**

Enhance and extend Portland's attractive identity. Build on design elements, features and themes identified with the City. Recognize and extend the use of City themes that establish a basis of a shared identity reinforcing the individual's sense of participation in a larger community.

##### **Objectives:**

- B.** Preserve and enhance the character of Portland's neighborhoods. Encourage the development of attractive and unique characteristics which aid each neighborhood in developing its individual identity.....
- E.** Integrate into private and public development projects appropriate thematic design elements that reinforce Portland's desired identity....

#### **12.2 Enhancing Variety**

Promote the development of areas of special identity and urban character. Portland is a city built from the aggregation of formerly independent settlements. The City's residential, commercial and industrial areas should have attractive identities that enhance the urbanity of the City.

**Objectives:**

- A.** Promote the use of strong design features located in distinct areas of the City that help to define the area's character. Developers should consider the character enhancing role of color and light.
- B.** Enhance the residential scale of Portland's neighborhoods while accommodating the growth allowed by the City's Comprehensive Plan. Encourage the development of a distinct and attractive urban identity in each of Portland's neighborhoods. As each new community plan is created, give consideration to how it links to and coordinates with urban design elements of adjacent areas.

**12.6 Preserve Neighborhoods**

Preserve and support the qualities of individual neighborhoods that help to make them attractive places. Encourage neighborhoods to express their design values in neighborhood and community planning projects. Seek ways to respect and strengthen neighborhood values in new development projects that implement this Comprehensive Plan.

**Objectives:**

- A.** Encourage new developments to respond to the positive qualities of the place where they are to be built and to enhance that place through their development. Developers should consider the character enhancing role played by the use of color and light.

**12.8 Community Planning**

When community and/or neighborhood plans are developed include consideration of urban design issues as a part of them. Use consideration of urban design issues to help establish, preserve and enhance the identity and character of each community plan's study area.

**Community Design Guidelines****Portland Personality Guidelines**

**P1: Community Plan Area Character.** Enhance the sense of place and identity by incorporating site and building design features that respond to the area's desired characteristics and traditions.

**P2: Historic and Conservation Districts.** Enhance the identity of historic and conservation districts by incorporating site and building design features that reinforce the area's historic significance. Near historic and conservation districts, use such features to reinforce and complement the historic areas.

**P3: Gateways.** Develop or strengthen the transitional role of gateways identified in adopted community and neighborhood plans.

**Zoning Code****33.218.010 Purpose**

Design review and historic design review ensure that development conserves and enhances the recognized special design values of a site or area, and promote the conservation, enhancement, and continued vitality of special areas of the City....

The purpose of these standards is to:

- A.** Ensure that new development enhances the character and livability of Portland’s neighborhoods;
- B.** Ensure that increased density in established neighborhoods makes a positive contribution to the area's character;
- C.** Ensure the historic integrity of conservation landmarks and the compatibility of new development in conservation districts....

**33.420.010 Purpose**

The Design Overlay Zone promotes the conservation, enhancement, and continued vitality of areas of the City with special scenic, architectural, or cultural value. This is achieved through the creation of design districts and applying the Design Overlay Zone as part of community planning projects, development of design guidelines for each district, and by requiring design review or compliance with the Community Design Standards. In addition, design review or compliance with the Community Design Standards ensures that certain types of infill development will be compatible with the neighborhood and enhance the area.

**The 10 Essentials for North/Northeast Portland Housing**

*Principles outlined below are intended to encourage development and renovations that respect and continue the architectural traditions of North and Northeast Portland.*

**The 10 Essentials for North/Northeast Portland Housing:**

1. Every house needs a useable front porch
2. The frontyard is the house’s “contribution” to the street
3. Build at the existing lot grade
4. Landscaping is not a secondary thing
5. Use affordable siding materials in ways that fit the neighborhood
6. Make roof pitches similar to those of neighboring houses
7. Every house should get at least one dormer
8. Repetitive vertical windows
9. Trim and details give house warmth and character
10. Create density at least one or two living spaces at a time

## **Building Blocks for Outer Southeast Neighborhoods**

*Most of the principles outlined below are intended to encourage development and renovations that respect and enhance the desired architectural character of Outer Southeast Portland.*

### **Multi-Unit Dwelling Design Recommendations:**

- a. Multi-unit buildings especially should contribute to the street:
  - provide an interesting building wall facing the street;
  - plant street trees and planting strips;
  - plant more generous landscaping in setbacks than required.
- b. Use appropriate scale and detail:
  - use building forms and materials similar to nearby single-family house forms;
  - add character and interest with the use of porches, dormers, gables, trim, color and horizontal siding;
  - vary the size and form of dormers, porches, roof lines, etc.;
  - break down large facades horizontally and vertically into smaller units.
- c. Both common and individual entries should be prominent.
- d. Multi-unit dwellings can provide “eyes on the street” for security:
  - design buildings with “eyes on the street” and clearly bounded shared open space;
  - provide adequate lighting for security – lighting should be scaled for pedestrians.
- e. Parking lots and garages should not dominate the streetscape:
  - avoid locating parking between the building and the street;
  - locate parking so that it isn’t the dominant visual element,
  - parking area should be visible from some dwelling units for casual surveillance,
  - stacked units accommodate both parking and useable outdoor space on the site.
- f. Create private and common “outdoor rooms”:
  - common outdoor space should be easily reached but still have a sense of enclosure;
  - reinforce physical and visual connections between each private dwelling and common outdoor space;
  - shared open space needs a “positive” shape to be usable;
  - spacing between building should be at least 20 feet for a one story building or the enclosed space will feel too narrow;
  - use landscaping in common areas to increase privacy;
  - minimum balcony and patio space should be at least 6’ by 10’;
  - provide every unit with its own special outdoor space;
  - Buildings with 4 or more units should incorporate at least 1,000 sq.ft. of shared, positive open space.
- g. Let every building celebrate its own, specific site:
  - Take advantage of the site’s location on the block;
  - Create or accentuate landmarks and view corridors.

## Compatibility and neighborhood context

### Comprehensive Plan

#### 10.4 Comprehensive Plan Map

- (8) Townhouse Multi-Dwelling  
This designation ... permits a mixture of housing types of a single-dwelling character including multi-dwelling structures which also have this character.... The allowed scale of development is similar to that for attached single-dwelling housing. The corresponding zone is R3.
- (9) Low Density Multi-Dwelling  
This designation continues a common development pattern for low density multi-dwelling mixed with single-dwelling housing types.... The corresponding zone is R2.
- (10) Medium Density Multi-Dwelling  
This designation continues a common development pattern for medium density apartments.... The scale of the development is intended to reflect the allowed densities while being compatible with nearby single-dwelling areas. The corresponding zone is R1.

#### 12.6 Preserve Neighborhoods

Preserve and support the qualities of individual neighborhoods that help to make them attractive places. Encourage neighborhoods to express their design values in neighborhood and community planning projects. Seek ways to respect and strengthen neighborhood values in new development projects that implement this Comprehensive Plan.

##### **Objectives:**

- A.** Encourage new developments to respond to the positive qualities of the place where they are to be built and to enhance that place through their development. Developers should consider the character enhancing role played by the use of color and light.
- B.** Respect the fabric of established neighborhoods when undertaking infill development projects.
- C.** While accommodating increased density build on the attractive qualities that distinguish the area. Add new building types to established area with care and respect for the context that past generations of builders have provided.

#### 12.7 Design Quality. ...Objectives:

- F.** Establish development standards that foster compatible design solutions in areas not subject to design review. Identify and establish standards aimed at improving how development projects fit into the community-

## 12.8 Community Planning

When community and/or neighborhood plans are developed include consideration of urban design issues as a part of them. Use consideration of urban design issues to help establish, preserve and enhance the identity and character of each community plan's study area.

### Objectives:

- E.** Use the creation of new design districts-and zoning standards to reduce the likelihood of conflicts between new and existing developments. Address problems that emerge when new infill development is at greater density than existing development.
- F.** Support the development of voluntary, or suggested, design guidelines and distribute them to those considering development projects. Use these guidelines to foster the growth of consistent development patterns that reinforce the desired character of Portland's neighborhoods and the City as a whole.

## Community Design Guidelines

### Project Design Guidelines

**D7. Blending into the Neighborhood.** Reduce the impact of new development on established neighborhoods by incorporating elements of nearby, quality buildings such as building details, massing, proportion, and materials.

## Zoning Code

### 33.120.030 Characteristics Of The Zones

- A. R3 zone.** The R3 zone is a low density multi-dwelling zone..... The major type of new development will be townhouses and small multi-dwelling residences. This development is compatible with low and medium density single-dwelling development...
- B. R2 zone.** The R2 zone is a low density multi-dwelling zone.... The major types of new development will be duplexes, townhouses, rowhouses and garden apartments. These housing types are intended to be compatible with adjacent houses....

### 33.120.215 Height

- A. Purpose.** The height standards serve several purposes:
  - They promote a reasonable building scale and relationship of one residence to another; ... and
  - They reflect the general building scale of multi-dwelling development in the City's neighborhoods.

### 33.120.220 Setbacks

- A. Purpose.** The building setback regulations serve several purposes:

- ...They reflect the general building scale and placement of multi-dwelling development in the City's neighborhoods;
- They promote a reasonable physical relationship between residences;
- They promote options for privacy for neighboring properties;
- They require larger front setbacks than side and rear setbacks to promote open, visually pleasing front yards; and
- They provide adequate flexibility to site a building so that it may be compatible with the neighborhood, fit the topography of the site, allow for required outdoor areas, and allow for architectural diversity...

**33.120.225 Building Coverage**

- A. Purpose.** The building coverage standards, along with the height and setback standards, limit the overall bulk of structures. They assure that larger buildings will not have a footprint that overwhelms adjacent development. The standards help define the character of the different zones by determining how built-up a neighborhood appears.

**33.120.230 Building Length** *(Applies only to R2 and R1 zones)*

- A. Purpose.** The maximum building length standard, along with the height and setback standard, limits the amount of bulk that can be placed close to the street. The standard assures that long building walls close to streets will be broken up into separate buildings. This will provide a feeling of transition from lower density development and help create the desired character of development in these zones.

**33.120.270 Alternative Development Options**

- A. Purpose.** The alternative development options provide increased variety in development while maintaining the residential neighborhood character....

**33.218.010 Purpose**

Design review and historic design review ensure that development conserves and enhances the recognized special design values of a site or area, and promote the conservation, enhancement, and continued vitality of special areas of the City.

The Community Design Standards provide an alternative process to design review and historic design review for some proposals....

The purpose of these standards is to:

- A.** Ensure that new development enhances the character and livability of Portland's neighborhoods;
- B.** Ensure that increased density in established neighborhoods makes a positive contribution to the area's character;
- C.** Ensure the historic integrity of conservation landmarks and the compatibility of new development in conservation districts;
- D.** Enhance the character and environment for pedestrians in areas designated as design zones;

- E. Offer developers the opportunity to comply with specific objective standards as a more timely, cost effective, and more certain alternative to the design review and historic design review process.

### **33.420.010 Purpose**

The Design Overlay Zone promotes the conservation, enhancement, and continued vitality of areas of the City with special scenic, architectural, or cultural value.... In addition, design review or compliance with the Community Design Standards ensures that certain types of infill development will be compatible with the neighborhood and enhance the area.

### **The 10 Essentials for North/Northeast Portland Housing**

*Principles outlined below are intended to encourage development and renovations that are compatible with the established neighborhoods of North and Northeast Portland.*

#### **The 10 Essentials for North/Northeast Portland Housing:**

1. Every house needs a useable front porch
2. The frontyard is the house's "contribution" to the street
3. Build at the existing lot grade
4. Landscaping is not a secondary thing
5. Use affordable siding materials in ways that fit the neighborhood
6. Make roof pitches similar to those of neighboring houses
7. Every house should get at least one dormer
8. Repetitive vertical windows
9. Trim and details give house warmth and character
10. Create density at least one or two living spaces at a time

### **Building Blocks for Outer Southeast Neighborhoods**

#### **Multi-Unit Dwelling Design Recommendations:**

- b. Use appropriate scale and detail:
  - use building forms and materials similar to nearby single-family house forms;
  - ...break down large facades horizontally and vertically into smaller units.

## **Infill Design Quality and Innovation**

### **Comprehensive Plan**

#### **4.1 Housing Availability. ...Objectives:**

- E. Encourage the efficient use of infrastructure by focusing well-designed new and redeveloped housing on vacant, infill, or under-developed land.

**4.14 Neighborhood Stability ...Objectives:**

- K.** Enhance the quality of the design of new infill residential development.

**12.1 Portland’s Character ...Objectives:**

- F.** Encourage innovative design solutions in private development projects that add diversity and depth to Portland’s character. New development is an opportunity to add to Portland’s character giving themes.

**12.7 Design Quality**

Enhance Portland’s appearance and character through development of public and private projects that are models of innovation and leadership in the design of the built environment. Encourage the design of the built environment to meet standards of excellence while fostering the creativity of architects and designers. Establish design review in areas that are important to Portland’s identity, setting, history and to the enhancement of its character.

**Objectives:**

- E.** Foster innovative design solutions that meet the guidelines of design acceptability....

**Pedestrian- and transit-oriented environment**

**Comprehensive Plan**

**2.12 Transit Corridors**

...Require development along transit routes to relate to the transit line and pedestrians and to provide on-site pedestrian connections.

**2.17 Transit Stations and Transit Centers**

...Establish minimum residential densities on residentially-zoned lands within one-half mile of light rail transit stations and one-quarter mile of transit centers that support the use of transit. The design and mix of land uses surrounding light rail transit stations and transit centers should emphasize a pedestrian- and bicycle-oriented environment and support transit use.

**2.18 Transit-Supportive Density**

Through the community planning process, establish average minimum residential densities of 15 units per acre within one-quarter mile of existing and planned transit streets, Main Streets, town centers, and transit centers. Establish average minimum residential densities of 25 units per acre within one-half mile of light rail stations and regional centers. Establish minimum floor area ratios for non-residential development at light rail centers of 0.5:1. Where these densities are not realistic or desirable due to existing, well-established development patterns or environmental constraints, use other methods to increase densities such as encouraging infill through accessory units in single-family zones or increased density on long-vacant lots.

**2.19 Infill and Redevelopment**

Encourage infill and redevelopment as a way to implement the Livable City growth principles and accommodate expected increases in population and employment. Encourage infill and redevelopment in the Central City, at transit stations, along Main Streets, and as neighborhood infill in existing residential, commercial and industrial areas.

**4.3 Sustainable Housing**

Encourage housing that supports sustainable development patterns by promoting the efficient use of land, conservation of natural resources, easy access to public transit and other efficient modes of transportation, easy access to services and parks, resource efficient design and construction, and the use of renewable energy resources.

**Objectives:**

- C. Encourage the development of housing at transit-supportive densities near transit streets, especially where parks or schools are present, to ensure that the benefits of the public’s investment in those facilities are available to as many households as possible.

**6.19 Transit-Oriented Development**

Reinforce the link between transit and land use by encouraging transit-oriented development and supporting increased residential and employment densities along transit streets, at existing and planned light rail stations, and at other major activity centers.

**Objectives:**

- B. Focus medium-density and high-density development, including institutions, in transit-oriented developments along transit lines.
- C. Require commercial and multifamily development to orient to and provide pedestrian and bicycle connections to transit streets and, for major developments, provide transit facilities on a site or adjacent to a transit stop.

**7.4 Energy Efficiency through Land Use Regulations**

The City shall promote residential, commercial, industrial, and transportation energy efficiency and the use of renewable resources.

**Objectives:**

- C. Promote medium to high density residential near proposed transit stations and medium density residential development along major transit routes.

**10.4 Comprehensive Plan Map**

- (12) Central Residential  
This designation allows the highest density and most intensely developed multi-

dwelling structures.... Development will generally be oriented to pedestrians....  
The corresponding zone is RX....

**12.1 Portland’s Character. ...Objectives:**

- A. Give form to the City and extend the intimate and human scale that typifies Portland....

**12.4 Provide for Pedestrians**

Portland is experienced most intimately by pedestrians. ...Provide for a pleasant, rich and diverse experience for pedestrians....

**Objectives:**

- B. Enhance the environment occupied by Portland’s pedestrians. Seek to enrich these places with designs that express the pleasure and hold the pleasant surprises of urban living.
- C. ... provide convenient connections from sidewalks to parks, developments, and attractions; and ensure that the pedestrian circulation system is safe and accessible to children, seniors and the disabled (including the blind).

**Community Design Guidelines**

**Pedestrian Emphasis Guidelines**

**E1: The Pedestrian Network.** Create an efficient, pleasant, and safe network of sidewalks and paths for pedestrians that link destination points and nearby residential areas while visually and physically buffering pedestrians from vehicle areas.

**E2. Stopping Places.** New large scale projects should provide comfortable places along pedestrian circulation routes where people may stop, visit, meet, and rest.

**E3. The Sidewalk Level of Buildings.** Create a sense of enclosure and visual interest to buildings along sidewalks and pedestrian areas by incorporating small scale building design features, creating effective gathering places, and differentiating street level faces.

**E4. Corners That Build Active Intersections.** Create intersections that are active, unified, and have a clear identity through careful scaling detail and location of buildings, outdoor areas and entrances.

**E5. Light, Wind, and Rain.** Enhance the comfort of pedestrians by locating and designing buildings and outdoor areas to control the adverse effects of sun, shadow, glare, reflection, wind, and rain.

**Zoning Code**

**33.120.030 Characteristics Of The Zones**

- B. **R2 zone.** The R2 zone is a low density multi-dwelling zone.... Generally, R2 zoning will be applied near Major City Traffic Streets, Neighborhood Collector and District Collector streets, and local streets adjacent to commercial areas and transit streets.

- C. R1 zone.** The R1 zone is a medium density multi-dwelling zone.... Generally, R1 zoning will be applied near Neighborhood Collector and District Collector streets, and local streets adjacent to commercial areas and transit streets.
- D. RH zone.** The RH zone is a high density multi-dwelling zone.... Generally, RH zones will be well served by transit facilities or be near areas with supportive commercial services.
- E. RX zone.** The RX zone is a high density multi-dwelling zone which allows the highest density of dwelling units of the residential zones.... Generally, RX zones will be located near the center of the city where transit is readily available and where commercial and employment opportunities are nearby....

**33.120.220 Setbacks**

- A. Purpose.** The building setback regulations serve several purposes:
  - ... Setback requirements along transit streets create an environment that is inviting to pedestrians and transit users.

**33.120.232 Street-Facing Facades**

- A. Purpose.** These standards:
  - ... Provide a more pleasant pedestrian environment by preventing large expanses of blank facades along streets.

**33.120.255 Pedestrian Standards**

- A. Purpose.** The pedestrian standards encourage a safe, attractive, and usable pedestrian circulation system in all developments. They ensure a direct pedestrian connection between the street and buildings on the site, and between buildings and other activities within the site. In addition, they provide for connections between adjacent sites, where feasible.

**33.120.280 Accessory Structures**

- E. Special standards for garages.**
  1. Purpose. These standards:
    - ... Provide for a more pleasant pedestrian environment by preventing garages and vehicle areas from dominating the views of the neighborhood from the sidewalk; ...

**COMMUNITY DESIGN STANDARDS**

**33.218.010 Purpose**

...The purpose of these standards is to:

- D.** Enhance the character and environment for pedestrians in areas designated as design zones;...

**PARKING AND LOADING****33.266.130 Development Standards for All Other Uses**

- A. Purpose.** The development standards promote vehicle areas which are safe and attractive for motorists and pedestrians. Vehicle area locations are restricted in some zones to promote the desired character of those zones. Together with the transit street building setback standards in the base zone chapters, the vehicle area restrictions for sites on transit streets and in Pedestrian Districts:
- Provide a pedestrian access that is protected from auto traffic; and
  - Create an environment that is inviting to pedestrians and transit users...

**Building Blocks for Outer Southeast Neighborhoods****Multi-Unit Dwelling Design Recommendations:**

- a. Multi-unit buildings especially should contribute to the street:
- provide an interesting building wall facing the street;
  - plant street trees and planting strips;
  - plant more generous landscaping in setbacks than required...

**Parking facilities****Comprehensive Plan****6.26 On-Street Parking Management ...Objectives:**

- B.** Maintain existing on-street parking in older neighborhoods and commercial areas where off-street parking is inadequate, except where parking removal is necessary to accommodate alternatives to the automobile.

**6.27 Off-Street Parking**

Regulate off-street parking to promote good urban form and the vitality of commercial and employment areas.

**Objectives:**

- B.** Encourage the redevelopment of surface parking lots into transit-supportive uses or development or to include facilities for alternatives to the automobile.
- C.** Limit the development of new parking spaces to achieve land use, transportation, and environmental objectives.

**Community Design Guidelines****Project Design Guidelines...**

- D4. Parking Areas and Garages.** Integrate parking in a manner that is attractive and complementary to the site and its surroundings. Locate parking in a manner that minimizes

impacts on the community and its pedestrians. Design parking garage exteriors to visually respect and integrate with adjacent buildings and environment.

## **Zoning Code**

### **33.120.280 Accessory Structures**

#### **E. Special standards for garages.**

1. Purpose. These standards:
  - Together with the window and main entrance standards, ensure that there is a physical and visual connection between the living area of the residence and the street;
  - Ensure that the location and amount of the living area of the residence, as seen from the street, is more prominent than the garage;
  - Prevent garages from obscuring the main entrance from the street and ensure that the main entrance for pedestrians, rather than automobiles, is the prominent entrance;
  - Provide for a more pleasant pedestrian environment by preventing garages and vehicle areas from dominating the views of the neighborhood from the sidewalk; and
  - Enhance public safety by preventing garages from blocking views of the street from inside the residence.

## **CHAPTER 33.266 PARKING AND LOADING**

### **33.266.130 Development Standards for All Other Uses**

- A. Purpose.** The development standards promote vehicle areas which are safe and attractive for motorists and pedestrians. Vehicle area locations are restricted in some zones to promote the desired character of those zones. Together with the transit street building setback standards in the base zone chapters, the vehicle area restrictions for sites on transit streets and in Pedestrian Districts:
- Provide a pedestrian access that is protected from auto traffic; and
  - Create an environment that is inviting to pedestrians and transit users.

The parking area layout standards are intended to promote safe circulation within the parking area, provide for the effective management of stormwater runoff from vehicle areas, and provide for convenient entry and exit of vehicles. The setback and landscaping standards:

- Improve and soften the appearance of parking areas;
- Reduce the visual impact of parking areas from sidewalks, streets, and especially from adjacent residential zones;
- Direct traffic in parking areas;
- Shade and cool parking areas;
- Reduce the amount and rate of stormwater runoff from vehicle areas;
- Reduce pollution and temperature of stormwater runoff from vehicle areas; and
- Decrease airborne and waterborne pollution.

## **Building Blocks for Outer Southeast Neighborhoods**

### **Multi-Unit Dwelling Design Recommendations:**

- f. Parking lots and garages should not dominate the streetscape:
- avoid locating parking between the building and the street;
  - locate parking so that it isn't the dominant visual element,
  - parking area should be visible from some dwelling units for casual surveillance,
  - stacked units accommodate both parking and useable outdoor space on the site.

## **Connections to the public realm and “eyes on the street”**

### **Community Design Guidelines**

#### **Project Design Guidelines**

**D2. Main Entrances.** Make the main entrances to houses and buildings prominent, interesting, pedestrian accessible, and transit-oriented.

**D5. Crime Prevention.** Use site design and building orientation to reduce the likelihood of crime through the design and placement of windows, entries, active ground level uses, and outdoor areas.

### **Zoning Code**

#### **33.120.231 Main Entrances**

**A. Purpose.** The main entrance standards:

- Together with the window and garage standards, ensure that there is a physical and visual connection between the living area of the residence and the street;
- Enhance public safety for residents and visitors and provide opportunities for community interaction;
- Ensure that the pedestrian entrance is visible or clearly identifiable from the street by its orientation or articulation; and
- Ensure that pedestrians can easily find the main entrance, and so establish how to enter the residence.

#### **33.120.232 Street-Facing Facades**

**A. Purpose.** These standards:

- Together with the main entrance and garage standards, ensure that there is a visual connection between the living area of the residence and the street;
- Enhance public safety by allowing people to survey their neighborhood from inside their residences; and
- Provide a more pleasant pedestrian environment by preventing large expanses of blank facades along streets.

#### **33.120.280 Accessory Structures**

**E. Special standards for garages.**

1. Purpose. These standards:

- Together with the window and main entrance standards, ensure that there is a physical and visual connection between the living area of the residence and the street;
- Ensure that the location and amount of the living area of the residence, as seen from the street, is more prominent than the garage;
- Prevent garages from obscuring the main entrance from the street and ensure that the main entrance for pedestrians, rather than automobiles, is the prominent entrance;
- Provide for a more pleasant pedestrian environment by preventing garages and vehicle areas from dominating the views of the neighborhood from the sidewalk; and
- Enhance public safety by preventing garages from blocking views of the street from inside the residence.

### **33.120.285 Fences**

- A. Purpose.** The fence standards promote the positive benefits of fences without negatively impacting the community or endangering public or vehicle safety. Fences can create a sense of privacy, protect children and pets, provide separation from busy streets, and enhance the appearance of property by providing attractive landscape materials. The negative effects of fences can include the creation of street walls that inhibit police and community surveillance, decrease the sense of community, hinder emergency access, lessen solar access, hinder the safe movement of pedestrians and vehicles, and create an unattractive appearance. These standards are intended to promote the positive aspects of fences and to limit the negative ones.

## **Building Blocks for Outer Southeast Neighborhoods**

### **Multi-Unit Dwelling Design Recommendations:**

- c. Both common and individual entries should be prominent.
- d. Multi-unit dwellings can provide “eyes on the street” for security:
- design buildings with “eyes on the street” and clearly bounded shared open space;
  - provide adequate lighting for security – lighting should be scaled for pedestrians.

## **Landscaping and Open Space**

### **Community Design Guidelines**

#### **Project Design Guidelines**

**D1. Outdoor Areas.** When sites are not fully built on, place buildings to create sizable, usable outdoor areas. Design these areas to be accessible, pleasant, and safe. Connect outdoor areas to the circulation system used by pedestrians.

**D3. Landscape Features.** Enhance site and building design through appropriate placement, scale, and variety of landscape features.

## Zoning Code

### **33.120.235 Landscaped Areas**

- A. Purpose.** The standards for landscaped areas are intended to enhance the overall appearance of residential developments and institutional campuses in multi-dwelling zones. The landscaping improves the residential character of the area, breaks up large expanses of paved areas and structures, provides privacy to the residents, and provides separation from streets. It also helps in reducing stormwater run-off by providing a permeable surface.

### **33.120.240 Required Outdoor Areas** *(Applies to R3, R2 and R1 zones)*

- A. Purpose.** The required outdoor areas standards assure opportunities for outdoor relaxation or recreation. The standards work with the building coverage and minimum landscaped areas standards to assure that some of the land not covered by buildings is of adequate size, shape, and location to be usable for outdoor recreation or relaxation. Required outdoor areas are an important aspect in addressing the livability of a residential property by providing outdoor living opportunities, some options for outdoor privacy, and a healthy environment.

### **33.120.270 Alternative Development Options**

- A. Purpose.** The alternative development options provide increased variety in development while maintaining the residential neighborhood character. The options are intended to:

- ...Promote better site layout and opportunities for private recreational areas;

### **33.120.285 Fences**

- A. Purpose.** The fence standards promote the positive benefits of fences without negatively impacting the community or endangering public or vehicle safety. Fences can create a sense of privacy, protect children and pets, provide separation from busy streets, and enhance the appearance of property by providing attractive landscape materials....

### **33.266.130 Development Standards for All Other Uses**

- A. Purpose.** The development standards promote vehicle areas which are safe and attractive for motorists and pedestrians.... The setback and landscaping standards:
- Improve and soften the appearance of parking areas;
  - Reduce the visual impact of parking areas from sidewalks, streets, and especially from adjacent residential zones;
  - Direct traffic in parking areas;
  - Shade and cool parking areas;
  - Reduce the amount and rate of stormwater runoff from vehicle areas;
  - Reduce pollution and temperature of stormwater runoff from vehicle areas; and
  - Decrease airborne and waterborne pollution.

## The 10 Essentials for North/Northeast Portland Housing

2. The frontyard is the house's "contribution" to the street

4. Landscaping is not a secondary thing

## **Building Blocks for Outer Southeast Neighborhoods**

### **Multi-Unit Dwelling Design Recommendations:**

- a. Multi-unit buildings especially should contribute to the street:
  - provide an interesting building wall facing the street;
  - plant street trees and planting strips;
  - plant more generous landscaping in setbacks than required.
- f. Create private and common “outdoor rooms”:
  - ...use landscaping in common areas to increase privacy;

## **Housing diversity**

### **Comprehensive Plan**

#### **2.9 Residential Neighborhoods**

Allow for a range of housing types to accommodate increased population growth while improving and protecting the city's residential neighborhoods.

### **GOAL 4. Housing**

Enhance Portland’s vitality as a community at the center of the region’s housing market by providing housing of different types, tenures, density, sizes, costs, and locations that accommodate the needs, preferences, and financial capabilities of current and future households.

#### **4.7 Balanced Communities**

Strive for livable mixed-income neighborhoods throughout Portland that collectively reflect the diversity of housing types, tenures (rental and ownership) and income levels of the region.

#### **Objectives:**

- B.** Maintain income diversity within neighborhoods by 1) allowing a mix of housing types and tenures, including houses, houses on smaller lots, small houses, duplexes, attached housing, accessory dwelling units, multi-dwelling housing, and mixed-use developments; and 2) ensure that income diversity is maintained over the long-term.
- C.** Promote the development of mixed-income housing that may include a mix of housing types.
- J.** Expand multi-dwelling and rental housing opportunities in neighborhoods with homeownership rates higher than the regional average.

#### **4.10 Housing Diversity**

Promote creation of a range of housing types, prices, and rents to 1) create culturally and economically diverse neighborhoods; and 2) allow those whose

housing needs change to find housing that meets their needs within their existing community.

**Objectives:**

- C. Accommodate a variety of housing types that are attractive and affordable to potential homebuyers at all income levels.
- D. Encourage the production of a range of housing types for the elderly and people with disabilities, including but not limited to independent living, assisted living, and skilled nursing care facilities.
- E. Support opportunities for renter households by providing a range of housing types, sizes, and rent levels throughout the city.

**4.12 Housing Continuum**

Ensure that a range of housing from temporary shelters, to transitional, and to permanent housing for renters and owners is available....

**Objectives:**

- D. Stimulate production of a variety of housing types that are affordable and responsive to the needs of very low, low, moderate, and middle-income households.

**4.13 Humble Housing**

Ensure that there are opportunities for development of small homes with basic amenities to ensure housing opportunities for low-income households, members of protected classes, households with children, and households supportive of reduced resource consumption.

**Objectives:**

- A. Ensure that regulations facilitate the option of development of small homes.
- B. Reduce barriers to the development and finance of small homes.

**4.14 Neighborhood Stability**

Stabilize neighborhoods by promoting: 1) a variety of homeownership and rental housing options; 2) security of housing tenure; and 3) opportunities for community interaction.

**Objectives:**

- H. Enable people who are elderly to remain in their own neighborhoods as their needs change by supporting shared housing, accessory dwellings, smaller homes, adult foster homes, and other assisted residential living arrangements.

## Zoning Code

### **33.120.270 Alternative Development Options**

- A. Purpose.** The alternative development options provide increased variety in development while maintaining the residential neighborhood character. The options are intended to:
- Encourage development which is more sensitive to the environment, especially in hilly areas;
  - Encourage the preservation of open and natural areas;
  - Promote better site layout and opportunities for private recreational areas;
  - Promote more opportunities for affordable housing; and
  - Allow more energy-efficient development.

## **Function for residents and privacy**

### Comprehensive Plan

#### **4.6 Housing Quality...Objectives:**

- A.** Promote housing that provides air quality, access to sunlight, and is well protected from noise and weather.

#### **4.9 Fair Housing. ...Objectives:**

- D.** Ensure the development of housing accessible to people with physical limitations, and the adaptation of existing homes to improve accessibility for people with disabilities.

#### **4.10 Housing Diversity. ...Objectives:**

- D.** Encourage the production of a range of housing types for the elderly and people with disabilities, including but not limited to independent living, assisted living, and skilled nursing care facilities.

#### **4.14 Neighborhood Stability. ...Objectives:**

- H.** Enable people who are elderly to remain in their own neighborhoods as their needs change by supporting shared housing, accessory dwellings, smaller homes, adult foster homes, and other assisted residential living arrangements.
- I.** Allow the city's housing to be adapted to enable households to remain in the same home or neighborhood through all their different life cycles.

## Zoning Code

### **33.120.215 Height**

- A. Purpose.** The height standards serve several purposes:

- ...They promote options for privacy for neighboring properties....

### **33.120.220 Setbacks**

**A. Purpose.** The building setback regulations serve several purposes:

- They maintain light, air, separation for fire protection, and access for fire fighting...
- They promote options for privacy for neighboring properties....

## **Sustainability and environment**

### **Comprehensive Plan**

#### **4.3 Sustainable Housing**

Encourage housing that supports sustainable development patterns by promoting the efficient use of land, conservation of natural resources, easy access to public transit and other efficient modes of transportation, easy access to services and parks, resource efficient design and construction, and the use of renewable energy resources.

#### **Objectives:**

- C.** Encourage the development of housing at transit-supportive densities near transit streets, especially where parks or schools are present, to ensure that the benefits of the public’s investment in those facilities are available to as many households as possible.
- D.** Foster flexibility in the division of land and the siting of buildings, and other improvements to reduce new development’s impacts on environmentally sensitive areas.
- E.** Use resource efficient technologies and materials in housing construction that increase the useful life of new and existing housing.

#### **4.11 Housing Affordability. Objectives:**

- C.** Encourage the development and use of housing construction technologies that streamline the housing construction process, reduce development costs and environmental impacts, and produce sound and durable housing.

#### **7.3 Energy Efficiency in Residential Buildings**

The City shall encourage energy efficiency in existing residences.... The City also shall promote energy efficient new housing by enforcing the energy saving standards in the state building code.

#### **7.4 Energy Efficiency through Land Use Regulations**

The City shall promote residential, commercial, industrial, and transportation energy efficiency and the use of renewable resources.

**Objectives:**

- D.** Reduce energy consumed for space heating residential buildings by promoting the construction and renovation of attached single and multifamily dwelling units.
- F.** Investigate the potential for energy savings from solar access standards for commercial buildings and multifamily housing.

**12.1 Portland's Character. ...Objectives:**

- C.** Enhance the sense Portlanders have that they are living close to nature.... Design new development to enhance the natural environment that is so much a part of Portland's character.

**Community Design Guidelines**

**D8. Interest, Quality, and Composition.** All parts of a building should be interesting to view, of long lasting quality, and designed to form a cohesive composition.

**Zoning Code****33.120.235 Landscaped Areas**

- A. Purpose.** The standards for landscaped areas are intended to enhance the overall appearance of residential developments and institutional campuses in multi-dwelling zones. The landscaping improves the residential character of the area, breaks up large expanses of paved areas and structures, provides privacy to the residents, and provides separation from streets. It also helps in reducing stormwater run-off by providing a permeable surface.

**33.120.270 Alternative Development Options**

- A. Purpose.** The alternative development options provide increased variety in development while maintaining the residential neighborhood character. The options are intended to:
  - Encourage development which is more sensitive to the environment, especially in hilly areas;
  - Encourage the preservation of open and natural areas....

**33.266.130 Development Standards for All Other Uses**

- A. Purpose.** The development standards promote vehicle areas which are safe and attractive for motorists and pedestrians.... The setback and landscaping standards:
  - ...Shade and cool parking areas;
  - Reduce the amount and rate of stormwater runoff from vehicle areas;
  - Reduce pollution and temperature of stormwater runoff from vehicle areas; and
  - Decrease airborne and waterborne pollution.

## Materials and Construction Quality

### Comprehensive Plan

#### **4.6 Housing Quality**

Encourage the development of housing that exceeds minimum construction standards.

##### **4.11 Housing Affordability. ...Objectives:**

- C. Encourage the development and use of housing construction technologies that streamline the housing construction process, reduce development costs and environmental impacts, and produce sound and durable housing.

##### **12.1 Portland's Character. ...Objectives:**

- I. Encourage the use of materials and a quality of finish work which reinforce the sense of this City as one that is built for beauty and to last. Reflect this desire in both public and private development projects.



## Appendix C | Design Guidance from Adopted Neighborhood Plans

The following is a compilation of policies and other design guidance from adopted neighborhood and area plans, outside the Central City Plan District, that are particularly relevant to the design of medium-density residential infill development. Neighborhood plan text that has been adopted by ordinance and serves as City policy is shown in quotations. Text shown in *italics* is not adopted City policy, but highlights neighborhood plan content that clarifies community design aspirations.

### **Albina Community Plan** (1993)

- “Protect and improve the livability of the residential neighborhoods within the Albina Community. Direct new development to those areas that have experienced or are experiencing a loss of housing. Ensure the compatibility of new development with nearby housing. ...Promote increases in residential density without creating economic pressure for the clearance of sound housing.” (Policy Area I: Land Use – Policy B: Policy B: Livable Neighborhoods)
- “Review new infill development to ensure that it reinforces the neighborhood’s positive characteristics.” (Policy Area I: Land Use – Policy B: Policy B: Livable Neighborhoods, Objective 3)
- “Improve the physical appearance of Albina. Enhance the desirable and distinctive characteristics of the Albina Community and its individual residential, commercial and employment districts. ...Create a safe and pleasant environment for pedestrians. Strengthen the pattern of green that exists throughout the Albina Community.” (Policy IX: Community Image and Character – Policy B: Urban Design)
- “Protect and enhance Albina’s historic and cultural characteristics and encourage compatible, quality development.” (Policy IX: Community Image and Character – Policy B: Urban Design, Objective 8)

### **Arbor Lodge Neighborhood Plan** (1993)

- “Maintain the single dwelling residential character of Arbor Lodge while allowing for the development of multi-dwellings in appropriate areas.” (Policy 2: Housing)
- “Encourage infill developments in the neighborhood that are attractive and compatible with the surrounding area.” (Policy 2: Housing, Objective 3)
- “Provide a variety of housing types for neighborhood residents with different incomes, needs and physical abilities.” (Policy 2: Housing, Objective 5)

### **Boise Neighborhood Plan** (1993)

- “Provide good quality housing in Boise at affordable prices and rents through new construction and the rehabilitation of existing housing. New construction and rehabilitation of existing housing should be in keeping with the character of the neighborhood.” (Policy II: Housing)
- “Allow development of alternative housing types in Boise.” (Policy II: Housing, Objective 5)

- “...Encourage compatible infill development of vacant land by improving the image of the neighborhood and marketing development opportunities in Boise.” (Policy III: Neighborhood Maintenance and Image)
- “Encourage development of new residential and commercial uses on vacant land in Boise. Ensure that these are compatible in scale and design with the neighborhood.” (Policy III: Neighborhood Maintenance and Image, Objective 3)

**Brentwood-Darlington Neighborhood Plan** (1992)

- “Support multifamily development only where services are available and adequate...when the following conditions are met: a. sanitary sewer services are available, b. adjacent streets are paved, c. transit service is available within ¼ mile, and d. the site review criteria of this plan and other applicable code requirements are met.” (Policy 4: Housing, Objective 3) *Site review criteria includes guidelines calling for preservation of trees, preservation of solar access, consideration of privacy, etc.)*

**Bridgeton Neighborhood Plan** (1997)

- “Ensure that all new development enhances the river, natural and village character of Bridgeton.” (Policy 1B: Neighborhood Design, Objective 1)
- “Encourage a mix of housing types that are compatible with Bridgeton’s casual lifestyle.” (Policy 1B: Neighborhood Design, Objective 2)
- “Promote a streetscape that reflects and enhances Bridgeton’s sense of community on the water and on the land.” (Policy 1B: Neighborhood Design, Objective 3)
- “Ensure that all new harborside developments open directly onto the promenade for public accessibility.” (Policy 1B: Neighborhood Design, Objective 4)
- “Encourage developers to meet the voluntary neighborhood design guidelines....” (Policy 1B: Neighborhood Design, Objective 5) The plan’s implementing action items include: *“Encourage developers to include representatives of the neighborhood association early in their development design process” (H11); “Work with developers and builders to ensure design, lighting and landscaping which is in character with the neighborhood and which integrates in a cohesive manner with the neighborhood, the multi-use character of the street, and the river” (H13); and “Encourage a variety of building designs which are also in character with the neighborhood. This could be achieved through the use of different paint, sidings, plantings, window and door treatment, eaves, and lighting” (H14).*

**Brooklyn Neighborhood Plan** (1991)

- “Work with community development corporations to develop and build on vacant land in a way complementary to neighborhood goals.” (Policy 4: Housing, Objective 4.4[5]) *The Housing Policy introduction states: “the character of infill development, which the neighborhood supports, should be compatible with the character of the neighborhood.”*
- “Strongly encourage developers to accommodate a variety of family sizes when building multifamily housing.” (Policy 4: Housing, Objective 4.4[6])

**Buckman Neighborhood Plan** (1991)

- “Maintain and improve the quality and urban character of Buckman’s physical environment and attract compatible development.” (Policy 1: Urban Design and Livability)

- “Encourage new development and renovation of existing structures to meet Buckman commercial and residential architectural guidelines.” (Policy 1: Urban Design and Livability, Objective 1.5)
- “Work with developers early in the design process to comment on their plans...” (Policy 1: Urban Design and Livability, Objective 1.6[A])
- “Work with realtors and developers to attract development compatible with the neighborhood.” (Policy 1: Urban Design and Livability, Objective 1.6[B])
- “Use the design review process in the CEID to encourage development that is compatible with the surrounding area and encourage voluntary design review in the rest of the neighborhood.” (Policy 1: Urban Design and Livability, Objective 1.11) *The plan states that: “The (Buckman design) guidelines are intended to maintain and enhance those desirable qualities which make Buckman a unique historic neighborhood: the tree-lined streets and the variety of late 19<sup>th</sup> and early 20<sup>th</sup> century building styles.... The guidelines are intended to ensure maximum compatibility of new buildings with historic buildings, not to build “new old buildings” or be exact duplicates of older styles.”*

#### **Centennial Neighborhood Plan (1996)**

- “Enhance Centennial’s livability by protecting, maintaining and improving the quality and suburban character of the physical environment.” (Policy 2: Community Design and Livability”)
- “Encourage development projects to meet the voluntary design guidelines included in this plan for the Centennial Neighborhood.” (Policy 2: Community Design and Livability, Objective 1). *The voluntary design guidelines for multi-family development place priorities on providing shared outdoor recreation areas, minimizing the prominence of parking, limiting privacy impacts on adjacent single-family areas, and encourage builders to limit building height to respond to the neighborhood’s predominantly single-family character.*
- “Support planning, design, and site development that enhances livability, provides connectivity, and reduces traffic impacts.” (Policy 2: Community Design and Livability, Objective 3).
- “Encourage development to be compatible with the character of the neighborhood.” (Policy 2: Community Design and Livability, Objective 5).
- “Enhance and preserve the established residential character of Centennial.” (Policy 4: Housing, Objective 2).

#### **Concordia Neighborhood Plan (1993)**

- “Encourage rehabilitation and infill construction consistent with the character and architecture of the neighborhood.” (Policy 2: Housing, Objective 10)
- “Reinforce the identity and character of the Concordia Neighborhood. Use design features in building rehabilitation and new construction which enhance neighborhood attractiveness and livability. Design streetscapes and site layouts to promote safety and encourage pedestrian use of the streets.” (Policy 7: Design).
- “Support the use of the Ten Essentials (*for North/Northeast Portland Housing*) design guidelines to promote compatible residential rehabilitation and design.” (Policy 7: Design, Objective 2). *Prologue to the plan’s voluntary design guidelines states: “New construction and the alteration of existing buildings should be thoughtfully designed to respect adjacent historic development, be compatible with the existing building’s form and pattern, and provide an overall*

*standard of quality. ...Where changes in scale and form are unavoidable, the use of shared design elements from surrounding buildings can ensure that new development is compatible with the surrounding area."*

- "Encourage the revitalization of the NE Alberta and NE 42<sup>nd</sup> Avenue project areas. Support new construction and development which is compatible with existing neighborhood architecture and styles." (Policy 7: Design, Objective 3)

**Corbett, Terwilliger, and Lair Hill Policy Plan (1977)**

- "Preserve the existing residential neighborhoods (Lair Hill, Corbett and Terwilliger) by maintaining the existing dwellings and stimulating compatible housing development and supporting services." (Plan Policy)

**Creston Kenilworth Neighborhood Plan (1998)**

- "Promote development that is pedestrian-friendly, has human scale and contributes in its design and form to the livability of the neighborhood." (Policy 4A: Land Use, Urban Design and Historic Preservation)
- "Step down new larger development built along the corridors to the scale of the existing adjacent buildings in the established residential areas." (Policy 4A: Land Use, Urban Design and Historic Preservation, Objective 4.3)
- "Promote good design in areas where intense commercial and multifamily development will occur, especially along the SE Powell, SE Foster, SE Thirty-ninth, SE Fifty-second and SE Holgate corridors." (Policy 4A: Land Use, Urban Design and Historic Preservation, Objective 4.12)
- "Encourage developers to follow the design themes in Creston Kenilworth's urban design concept and be consistent with the voluntary design guidelines." (Policy 4A: Land Use, Urban Design and Historic Preservation, Objective 4.13) *The voluntary design guidelines "are intended to ensure maximum compatibility of new buildings with the existing," with a focus on continue architectural features of Streetcar-Era buildings, such as building siting, foundation height, roof forms, exterior siding material, front façade elements, etc. Regarding existing mid-20<sup>th</sup> century apartment buildings, the design guidelines state: "Apartment structures built in the 50s and 60s, often referred to as motel style, are common in Creston Kenilworth. These structures can be adopted to better integrate with the neighborhood's character through parking lot and landscaping redesign, window trim addition, and modification of architectural details."*
- "Encourage a diversity of housing types that serve a range of income levels and types of households." (Policy 5C: Housing)
- "Encourage developers, realtors and contractors to build a variety of housing types such as accessory dwelling units, co-housing, duplexes, rowhouses and mixed-use buildings." (Policy 5: Housing, Objective 5.3)
- "Encourage new housing and remodels to be well-designed and friendly to pedestrians." (Policy 5: Housing, Objective 5.4)

**Cully Neighborhood Plan (1992)**

- "Maintain and improve the quality and historic character of the neighborhood's existing physical environment while attracting compatible development." (Policy 2B: Urban Design and Historic Preservation)

**Cully/Parkrose Community Plan** (1986 -*Cully portion of plan superseded by Cully Neighborhood Plan*)

- “Attached residential and multifamily residential zones must meet the following: (1) Have direct access to an arterial or collector street; (2) Avoid routing of through traffic on local neighborhood streets; (3) Have public transit available or planned to be available within one-quarter mile of the site; and (4) Be designed to be compatible with existing residential uses by the use of design features such as buffering, landscaping, screening, and building orientation.” (Policy 4: Housing Location, Section A) *The plan’s design guidelines include calls for the use of landscaping as a key design feature, new development in scale with the existing community, and preservation of natural features.*

**Eliot Neighborhood Plan** (1993)

- “Require new development in the neighborhood to be compatible with the area’s historic character.” (Policy 1: Historic Conservation and Urban Design, Objective B)
- “Develop housing in the neighborhood that is designed to complement Eliot’s historic character.” (Policy 1: Historic Conservation and Urban Design, Objective D)
- “Ensure that new multidwelling housing in Eliot is designed to respect existing single-dwelling residential patterns.” (Policy 3: Housing, Objective E)
- “Ensure that new housing in Eliot is designed to capitalize on, complement and emphasize the neighborhood’s historic character.” (Policy 3: Housing, Objective F)
- “Rehabilitate historic buildings and promote creation of historically compatible housing in Eliot.” (Policy 3: Housing, Objective I)

**Foster-Powell Neighborhood Plan** (1996)

- “Ensure an adequate supply of housing at a variety of prices and rents by promoting new home ownership opportunities, improvement of the existing housing stock, responsible rental property ownership, and the development of compatible infill housing.” (Policy 4: Housing)
- “Encourage the construction of new infill housing that is compatible with the neighborhood. Require design review or conformance to compatibility guidelines for development not currently allowed in existing residential zones.” (Policy 4: Housing, Objective 3)

**Hazelwood Community Plan** (1986)

- “Promote the development of a variety of housing types.” (Policy 5: Housing, Objective 1)
- “Assure that all new developments – single and multi-family housing, commercial and business – are planned and constructed to minimize adverse impact on the community and neighborhood, including traffic and traffic patterns.” (Policy 6: Community Design and Livability, Objective 1)
- “Encourage development projects to meet the voluntary design guidelines included in Appendix C of this plan for the Hazelwood Neighborhood.” (Policy 6: Community Design and Livability, Objective 2) *The voluntary design guidelines call for multi-family projects to be set back from sidewalks, use landscaping for screening and for aesthetics, use building materials that blend with those of nearby owner-occupied housing, provide open space and recreation areas, and include adequate on site parking.*

**Hillsdale Town Center Plan** (1997)

- “Enhance Hillsdale’s character and livability as an attractive urban village by fostering urban design excellence.” (Policy 4: Urban Design) *Implementing “Actions” include: “Create voluntary design guidelines for design elements not addressed in the Community Design Guidelines and Community Design Standards. Provide examples of the desired attributes of single family and multidwelling housing” (UD2); “Design residential developments to respect the scale, visual quality, privacy, security needs, and character of existing neighborhoods” (UD11); and “Encourage projects which function well, use suitable materials, and whose scale is appropriate and compatible” (UD12).*

**Hollywood and Sandy Plan** (2000)

- “Ensure that new commercial and mixed-use development along Sandy Boulevard and Broadway, and along the edges of the Hollywood District, step down and relate to the scale and character of the adjacent established residential areas.” (Policy 1: Land Use, Urban Design and Historic Preservation, Objective 8)
- “Encourage new development that fosters a pedestrian-friendly and attractive environment particularly along the Enhanced Pedestrian Streets of Sandy between 37<sup>th</sup> and 47<sup>th</sup> Avenues, and 42<sup>nd</sup> Avenue from Tillamook to the Hollywood Transit Center.” (Policy 1: Land Use, Urban Design and Historic Preservation, Objective 11)

**Hosford-Abernethy Neighborhood Action Plan** (1988)

- “Protect and improve existing housing while providing the opportunity of new housing for people of all ages and income levels.” (Policy 2: Housing)
- “Promote the opportunity for owner occupancy of single-family homes and cooperative or condominium ownership of multifamily dwellings.” (Policy 2: Housing, Objective 2.6)

**Humboldt Neighborhood Plan** (1993)

- “Maintain a link between Humboldt’s historic past and the present through the preservation of its historic development patterns and structures and through the promotion of architectural compatibility and excellence.” (Policy 5: Urban Design and Historic Preservation)
- “Require new buildings to respect and respond to the special architectural qualities of the Humboldt Neighborhood and the City of Portland.” (Policy 5: Urban Design and Historic Preservation, Objective 4)

**Irvington Neighborhood Plan** (1993)

- “Ensure that new residential construction is architecturally compatible with the neighborhood’s historic character.” (Policy II: Historic and Neighborhood Preservation, Objective 3)
- “Provide diversity in the type and density of housing within the neighborhood in order to ensure and adequate supply of safe, attractive housing at a variety of prices and rents.” (Policy III: Housing)
- “Encourage the replacement of unsound structures with infill development which is in keeping with the character of surrounding properties.” (Policy III: Housing, Objective 8)

**Kenton Neighborhood Plan** (1993/2001)

- “Ensure that new residential and commercial development is compatible with Kenton’s historic character.” (Policy 6: Historic and Natural Resources, Objective 4)

**Kerns Neighborhood Action Plan** (1987)

- “Provide a quality urban environment with compatible residential, commercial and retail uses and service amenities.” (Policy 9: Neighborhood Commercial Areas)
- “Encourage new development which provides a mixture of residential and commercial uses and is compatible with the surrounding area.” (Policy 9: Neighborhood Commercial Areas, Objective 9.2)

**King Neighborhood Plan** (1993)

- “Promote building designs that ensure crime prevention through environmental design and protect streets, open spaces, and architectural integrity of the neighborhood.” (Policy I: Urban Design, Objective 2)
- “Encourage developers to consider and conform to design standards for new developments in the King Neighborhood.” (Policy I: Urban Design, Objective 4)  
*Action chart cites “The 10 Essentials for North/Northeast Portland Housing” for this guidance.*
- “Encourage visual vitality by allowing a variety of housing types where compatibility of scale, bulk and design can be assured.” (Policy II: Housing, Objective 1)
- “Encourage development of alternative housing types that promote efficient land use.” (Policy II: Housing, Objective 2)

**Lents Neighborhood Plan** (1996)

- “Encourage a sense of community pride in Lents by maintaining, restoring and rehabilitating existing homes and taking advantage of opportunities to build a variety of new housing.” (Policy 6: Housing)
- “Recreate small-town historic Lents neighborhood.” (Policy 7: Neighborhood Livability, Objective 5). *Implementing Action Item L10 states “Try to ensure that the scale of new development is compatible with the surrounding residential and commercial areas.”*

**Mill Park Neighborhood Plan** (1996)

- “Preserve the character of the existing housing stock in Mill Park while emphasizing the continued development of single-dwelling housing in areas where they currently exist.” (Policy 5: Housing)
- “Encourage developers to build new housing that is compatible in size and design with the current housing stock in the immediate surroundings.” (Policy 5: Housing, Objective 2).

**Montavilla Neighborhood Plan** (1996)

- “Preserve and improve Montavilla’s existing housing stock and build new housing for people of all ages, income levels and physical abilities.” (Policy 1: Housing and Neighborhood Livability)

- “Encourage developers to construct new buildings that are compatible with nearby buildings in the neighborhood.” (Policy 2: Historic Preservation and Urban Design, Objective 4)
- “Encourage Montavilla residents and the Montavilla Neighborhood Association to provide voluntary design review and technical support for new developments and renovations in the neighborhood.” (Policy 2: Historic Preservation and Urban Design, Objective 5)
- “Encourage ‘Main Street’ type developments along portions of NE Glisan, SE Division, 82<sup>nd</sup> and SE Stark as a means of accommodating more people and businesses along transit streets.” (Policy 3: Transportation, Objective 12).

#### **Mt. Scott-Arleta Neighborhood Plan (1996)**

- “Encourage development projects and alterations to respect the bulk, form, setbacks, and detailing of surrounding buildings.” (Policy 1: Urban Design, Objective 3)
- “Improve Mt. Scott Arleta’s supply of housing by protecting existing homes and encouraging the construction of a variety of attached housing types on infill lots. New housing should blend into the neighborhood and meet the needs of residents of various ages, income levels, and backgrounds.” (Policy 2: Housing and Livability)
- “Encourage the dispersion of many small-scale attached housing (i.e., rowhouses, multiplexes, courtyard housing, etc.) throughout the neighborhood, rather than large apartment complexes in a few places.” (Policy 2: Housing and Livability, Objective 1)
- “Encourage infill housing to be similar to the height, bulk and setback of adjacent homes. Advocate for front porches on all houses to enhance public safety. Porches should be emphasized and garages should not dominate the house.” (Policy 2: Housing and Livability, Objective 5)

#### **Northwest District Plan (2003)**

- “Retain the district’s existing housing stock and mix of types and tenures. Promote new housing opportunities that reflect the existing diversity of housing and support a population diverse in income, age, and household size.” (Policy 5: Housing)
- “Respect the urban design principles and architectural qualities that define the district’s human-scaled, pedestrian-oriented character.” (Policy 7: Urban Design)
- “Integrate new development with the existing urban fabric by acknowledging the scale, proportions, orientation, quality of construction and other architectural and site design elements of the building’s immediate area.” (Policy 7, Urban Design Objective A)
- “Preserve and enhance the distinct character of different parts of the Northwest District (Policy 7, Urban Design Objective C) *The implementing “Desired Characteristics and Traditions” statement for the Nob Hill Residential Areas, which have multidwelling zoning, call for new development to “utilize design elements that distinguish the residential side streets from the more intensely hard-scaped main streets, with street frontages divided into distinct components that continue the established fine-grain urban pattern. Development should also acknowledge the scale, proportions, and street orientation of existing Pre-World War II structures and continue the areas’ diverse range of building typologies.”*
- “Foster a continuous frontage of buildings and active uses along main streets and the Portland Streetcar line.” (Policy 7, Urban Design Objective E)

- “Encourage new development on main streets and the Portland Streetcar line to include additions to the public realm, such as additional sidewalk width, a public square, or other open space.” (Policy 7, Urban Design Objective F)
- “Encourage building designs that consider solar access impacts on streets and other public spaces.” (Policy 7, Urban Design Objective G)
- “Discourage the creation of new vehicle areas between the fronts of residential buildings and streets.” (Policy 7, Urban Design Objective I)

#### **Outer Southeast Community Plan (1996)**

- “Promote construction of attached housing designed to be owner-occupied to accommodate smaller households.” (Housing Policy, Objective 4)
- “Foster a sense of place and identity for the Outer Southeast Community Plan area by reinforcing existing character-giving elements and encouraging the emergence of new ones as envisioned in the Vision Plan.” (Urban Design Policy) *Implementing Action Item UD5 calls for Planning Bureau involvement in a project to “Publish and distribute a handbook of development prototypes for compatible infill residential projects, contemporary main streets, village squares, gateways, and pedestrian districts. Seek resources to include sites from outer southeast in the proposed handbook.”*
- “Promote ‘main street’ development on portions of Foster Road, Glisan Street, and Woodstock Boulevard, on Division and Stark Streets, and 82<sup>nd</sup> and 122<sup>nd</sup> Avenues. Locate Buildings with entrances off the sidewalk. Encourage sidewalk cafes, display windows, benches, street trees, awnings, small scale signs that are directed to the pedestrians, and on-street parking.” (Urban Design Policy, Objective 4) This objective refers to the plan’s “Vision Plan Map,” regarding which the plan states: *“The Vision Plan Map recognizes that, generally, most outer southeast streets are auto-oriented corridors. ...This Vision Plan Map envisions a transition to a more pedestrian-friendly environment by widening sidewalks and adding street trees. Some of these streets will be a new kind of ‘Main Street’ with buildings placed next to the sidewalk with ground floor windows and entrances facing the street.”*
- “Apply CPTED principles to both public and private development projects. Encourage land use arrangements and street patterns that provide more eyes on the street. Encourage site layouts and building designs that encourage proprietary attitudes and natural surveillance over shared and public spaces.” (Public Safety Policy) *Public Safety Policy Objective 2 lists potential ways of achieving this policy, including locating windows in building walls that abut sidewalks, placing porches or balconies to overlook streets, setting back garages, and building new streets to provide better emergency vehicle access.*
- “Encourage compatible infill at densities which support transit on vacant lots in established residential areas.” (Subarea Policy I: Traditional Urban Neighborhoods, Objective 4).
- “Provide a pleasant and diverse pedestrian experience by providing connecting walkways within a structure to adjacent sidewalk areas.” (Subarea Policy IV: Gateway Regional Center, Objective 3)
- “Create a sidewalk environment which is safe, convenient, and attractive. Enliven the environment, creating vitality and interest, with building walls with windows and display windows.” (Subarea Policy IV: Gateway Regional Center, Objective 5)
- “Discourage surface parking lots.” (Subarea Policy IV: Gateway Regional Center, Objective 6)

- “Improve the pedestrian orientation of buildings and streets around light rail stations.” (Subarea Policy V: MAX LRT Corridor, Objective 2)
- “Promote new streets that form a network that accommodates an efficient development pattern, regular lot patterns, multi-modal capability, and multiple access for emergency vehicles.” (Subarea Policy VII: Mixed-Era Neighborhoods, Objective 4)
- “Use alternative street standards to achieve connectivity where standard city streets are not possible due to lot configuration, existing development, etc.” (Subarea Policy VII: Mixed-Era Neighborhoods, Objective 5)

**Piedmont Neighborhood Plan** (1993)

- “Encourage new residential developments to be consistent with the existing character of the neighborhood.” (Policy 1: Housing, Objective 4)
- “Require new development in and adjacent to the Piedmont Historic Design Zone to be compatible with the area’s historic character.” (Policy 3: Historic Preservation, Objective 3)

**Pleasant Valley Neighborhood Plan** (1996)

- “Retain and reinforce the open space characteristics and identity of the neighborhood.” (Policy 4: Housing and Neighborhood Livability, Objective 1)
- “Assure a wide variety of housing types, while retaining the character of Pleasant Valley.” (Policy 4: Housing and Neighborhood Livability, Objective 2)

**Portsmouth Neighborhood Plan** (2002)

- “Improve Portsmouth neighborhood’s appearance by maintaining property, keeping the neighborhood clean, and planting more green and landscaped areas. Encourage new development to be compatible with the existing character of the neighborhood.” (Policy 4B: Neighborhood Livability – Neighborhood Appearance)
- “Encourage developers to construct buildings that are compatible with the neighborhood’s voluntary design guidelines.” (Policy 4: Neighborhood Livability, Objective 5) *Implementing Action Item NL15 calls for “Building Blocks for Outer Southeast Neighborhoods” to serve as the voluntary design guidelines.*
- “Encourage buildings and landscaping along Lombard Street that create a safe, pleasant environment for pedestrians.” (Policy 6: Business Growth and Development, Objective 3)
- “Provide a variety of housing types for neighborhood residents with different incomes, needs, desires, and physical abilities.” (Policy 8: Housing, Objective 1)
- “Encourage ‘visitability’ to residential buildings. (Homes that have a ground floor living area, dining area, and bathroom accessible to people with disabilities.)” (Policy 8: Housing, Objective 8).

**Powellhurst-Gilbert Neighborhood Plan** (1996)

- “Encourage infill residential development while assuring compatibility with the surrounding area.” (Goal C)
- “Assure that the new housing which is developed is both livable and a good neighbor to existing development.” (Goal D)

- “Improve the neighborhood and encourage and allow for diversity in the type and density of housing within the neighborhood.” (Policy 4: Housing and Neighborhood Livability)
- “Encourage the replacement of unsound structures with higher density infill development which is in keeping with the character of surrounding properties.” (Policy 4: Housing and Neighborhood Livability, Objective 3)
- “Use design elements such as landscaping, screening and building orientation to ensure good design of new development and cohesive commercial areas.” (Policy 5: Historic Preservation and Urban Design, Objective 5)

#### **Richmond Neighborhood Plan** (1994)

- “Accommodate anticipated population growth through ‘main street’ development (mixed residential/commercial uses along major transit streets) or other construction methods that retain or enhance existing neighborhood character.” (Policy 4: Housing, Objective 4.4)

#### **Sabin Neighborhood Plan** (1993)

- “Foster the preservation and development of affordable, quality housing that is compatible with the existing single-family character and socio-economic diversity of the Sabin Neighborhood. Enhance a sense of pride and commitment to the community.” (Policy 1: Housing)
- “Allow housing densities compatible with Sabin’s existing community character. Establish development standards that reflect this character.” (Policy 1: Housing)

#### **St. Johns/Lombard Plan** (2004)

- “Accommodate growth and change in a manner that fosters the area’s sense of place as a small town and main street within the city. Take advantage of its unique setting near the Willamette River, and support development of vital commercial areas.” (Policy 1: Land Use and Placemaking)
- “Strengthen the identity of the St. Johns and Lombard Street areas through development and community activities that integrate and build on the area’s distinctive history and architecture.” (Policy 2: History and Identity) *Adopted design review provisions call for infill development in residential areas to reflect features of Streetcar Era houses, continue front setback patterns, provide a pedestrian orientation, and to locate parking toward the rear of buildings. These provisions also call for development in downtown St. Johns to respond to its small-town character and pedestrian-friendly environment, while development in hillside residential areas should acknowledge and celebrate the hillside topography.*
- “Provide for a broad range of well-designed and compatible housing to accommodate local and regional housing needs, and to support development of vital town center and main street commercial areas.” (Policy 5: Housing)

#### **Sellwood-Moreland Neighborhood Plan** (1998)

- “Respect the character of Sellwood-Moreland by sensitively integrating new development with the historic elements of the community.” (Policy 1: Historic Preservation, Objective 3)

- “Preserve the predominantly pedestrian scale and design of the neighborhood’s residential areas, emphasizing the street as an important public open space element.” (Policy XI: Residential Areas)
- “Ensure a mix of housing units to serve the needed range of types, sizes and income levels that will accommodate a socially and economically diverse neighborhood population.” (Policy XI: Residential Areas, Objective 1)

**South Tabor Neighborhood Plan (1996)**

- “Preserve and improve existing housing while providing opportunities for new housing attractive to long-term, responsible residents.” (Policy 1: Housing)
- “Encourage the construction and possible conversion of a variety of housing types.” (Policy 1: Housing, Objective 2)
- “Encourage owner occupancy.” (Policy 1: Housing, Objective 4)
- “Encourage site and design review to promote functional, safe and attractive developments which are compatible with surrounding development and uses and with the natural environment.” (Policy 7: Urban Design, Historic Preservation, and Neighborhood Livability, Objective 2) *Implementing Action Item U10 calls for the residential projects to be oriented to the street with garages that are not prominent, include front porches and front yards, feature building height that preserves solar access and privacy for surrounding dwellings, be visually compatibility with existing housing, and provide greenspace for tenants.*

**Southwest Community Plan (2000)**

- “Enhance Southwest Portland’s sense of place as a community and a collection of distinct neighborhoods. Accommodate Southwest Portland’s share of regional growth while protecting the environment in all areas. Encourage the realization of compact, transit and pedestrian-friendly, mixed-use centers while responding to the need for a range of housing types and prices. Outside of the mixed-use areas, allow infill housing opportunities which increase neighborhood diversity, stability and home ownership while limiting redevelopment.” (Land Use and Urban Form Policy)
- “Ensure compatibility of new development with Southwest Portland’s positive qualities.” (Land Use and Urban Form Policy, Community-wide Objective 1)
- “Encourage innovative designs in public and private development that are in harmony with the natural character of Southwest Portland.” (Land Use and Urban Form Policy, Community-wide Objective 2)
- “Ensure that development and redevelopment occurring outside of mixed-use areas respects the scale and desired neighborhood character identified in individual neighborhood plans.” (Land Use and Urban Form Policy, Community-wide Objective 6)
- “Encourage development within main streets and town centers that enhances commercial vitality and the desired characteristics of these areas.” (Land Use and Urban Form Policy, Mixed-Use Areas Objective 3)
- “Encourage employment and housing growth in Southwest Portland’s town centers, main streets, and at designated areas along corridors, while effectively managing stormwater runoff and protecting creeks and waterways.” (Land Use and Urban Form Policy, Mixed-Use Areas Objective 4)

- “Enhance the environment for pedestrians in Southwest Portland’s town centers, main streets, and transit corridors.” (Land Use and Urban Form Policy, Mixed-Use Areas Objective 8)
- “Within the boundaries of town centers, create transitions along the edges that respect the planned density, design, scale and character of the contiguous neighborhoods.” (Land Use and Urban Form Policy, Town Center Objective 2)
- “Respect the planned density, design, scale and character of the contiguous neighborhood when increasing residential and employment density within main streets.” (Land Use and Urban Form Policy, Main Streets Objective 1)
- “Provide a variety of affordable housing choices adequate to meet the needs of current and future Southwest residents. Regard the existing housing stock as one resource to meet this need. Encourage development of housing types that will increase home ownership opportunities for Southwest residents.” (Housing Policy)
- “Provide for diversity of size, type, and affordability of housing to meet the needs of young adults, small and large families, empty nesters, the elderly, and others.” (Housing Policy, Objective 2)
- “Increase opportunity for building more detached single family housing by reducing minimum lot sizes and encouraging the construction of smaller size houses.” (Housing Policy, Objective 3)
- “Encourage public and private developers to vary the affordability, type and size of units in new housing developments to foster the development of inclusive communities.” (Housing Policy, Objective 5)
- “Increase the supply of affordable rental housing of all types for families. This includes units with three or more bedrooms.” (Housing Policy, Objective 7)
- “Encourage site layouts and building designs that encourage proprietary attitudes and natural surveillance of shared and public spaces.” (Public Safety Policy, Objective 7)
- “Protect and enhance Southwest Portland’s environment and natural resources on a watershed by watershed basis. Integrate stormwater management into land use planning and development in a way that prevents net degradation of water quality, aquatic, streamside and riparian habitats and ecosystems, and plant and animal habitats throughout the stream corridor.” (Watershed Policy)

**Sullivan’s Gulch Neighborhood Action Plan (1987)**

- “Support new residential or mixed residential and commercial development between NE15th and 16<sup>th</sup> that are oriented toward the neighborhood and sensitive to neighborhood character in terms of scale and style.” (Policy 2: West End, Objective 2A)
- “Encourage and support high-density residential development that is compatible with surrounding land uses on the blocks between NE 16<sup>th</sup> and 17<sup>th</sup>.” (Policy 2: West End, Objective 2B)
- “Maintain a mixture of housing types and opportunities which are in keeping with the neighborhood character.” (Policy 3: Neighborhood Core-West, Objective 3A)
- “Preserve the qualities which contribute to the overall character of this area which include the age, style, uniform setbacks, narrow tree-lined streets and landscaping.” (Policy 4: Neighborhood Core-East, Objective 4A)
- “Encourage redevelopment east of NE 28<sup>th</sup> which is compatible with the nearby residential areas and will not cause significant detriment to them.” (Policy 5: East End)

- “Maintain and preserve the existing housing stock while providing opportunities for additional density through internal conversions and development of vacant and underdeveloped sites. Provide housing for a diverse population close to the Central City.” (Policy 7: Housing)
- “Encourage a variety of sound, well-maintained housing at all price and rental levels suitable to the needs of a variety of households such as the elderly, both large and small families and young single persons.” (Policy 7: Housing, Objective 7A)
- “Increase opportunities for owner occupancy of existing multifamily housing through cooperative or condominium ownership and in new rowhouse developments.” (Policy 7: Housing, Objective 7D)

#### **Sunnyside Neighborhood Plan (1999)**

- “Preserve the intrinsic character of the neighborhood.” (Policy 4: Land Use, Objective 1) *Relevant implementing action items include: “Advocate for redevelopment of auto-oriented buildings into designs compatible with pedestrians” (LU5), “Support appropriately scaled and compatibly designed in-fill multifamily development through communications with review bodies” (LU6), Promote building projects with designs that support the pedestrian nature of the streetscape and the use of transit and bicycles” (LU7), “Create a booklet of desirable and undesirable development styles, including landscaping, which can be shared with planners and developers, to encourage creative, diverse and compatible development” (LU8), and “Advocate for the City to add design review to all multi-family and commercial zones” (LU9). The plan’s voluntary design guidelines encourage pedestrian-friendly design, front porches, preservation of privacy, locating parking at rear, and compatibility with nearby residences.*
- “Encourage a mix of housing types, including quality, affordable and attractive single and multifamily housing and accessory rentals, to serve a diverse population.” (Policy 4: Land Use, Objective 2)
- “Work with the City of Portland and other agencies to ensure that regulations are effective, reasonable and support the maintenance and expansion of the character of the neighborhood as expressed in the adopted neighborhood vision and policies.” (Policy 4: Land Use, Objective 4)
- “Discourage drive-through developments, garages in front of houses, and commercial intrusions into the residential areas in Sunnyside.” (Policy 4: Land Use, Objective 5)

#### **Wilkes Community and Rockwood Corridor Plan (1987)**

- “Encourage new single-family and multifamily development scaled and designed to be a part of the community and protect the privacy of adjoining properties.” (Plan Objective F)
- “Use design features such as landscaping, screening, and building orientation to ensure compatibility of new attached single-family and multifamily residential developments with surrounding existing residential developments.” (Policy 12: New Residential Development)
- “Use Community and Site Design Guidelines of this plan as a guide in land use and land division reviews and site review.” (Policy 13: Design Guidelines) *The plan’s design guidelines include calls for preservation of wooded areas, preservation of residential privacy, good pedestrian connections, joint use of driveways and other vehicle areas to reduce paved area, landscaped buffers between areas zoned for multi-dwelling and single-dwelling development.*

- “Require new medium density multifamily residential zone development to comply with the following locational requirements: (1) Have direct access to an arterial or collector; (2) Avoid routing of through traffic on local neighborhood streets; (3) Have public transit available or planned to be available within one-quarter mile of the site; and (4) Use design features such as landscaping, screening, and building orientation to ensure compatibility with surrounding residential developments.” (Policy 21: Housing Location, Section A)
- “Require new low density multifamily, townhouse, and attached residential zone developments to comply with the following locational requirements: (1) Have direct access to major city traffic street or district or neighborhood collector streets, or local service streets where traffic volume capacities will not be exceeded; and (2) Use design features such as landscaping, screening, and building orientation to ensure compatibility with surrounding residential developments.” (Policy 21: Housing Location, Section C)

#### **Woodlawn Neighborhood Plan (1993)**

- “Promote the construction of residential housing that will accommodate people of varying income levels and physical abilities.” (Policy 4: Housing, Objective B)
- “Encourage construction of a variety of housing types in the neighborhood including mixed commercial/residential development.” (Policy 4: Housing, Objective C)
- “Promote compatible infill development in residential areas throughout the neighborhood.” (Policy 4: Housing, Objective D)

#### **Woodstock Neighborhood Plan (1995)**

- “Enhance Woodstock’s character while attracting development that preserves and improves and enhances neighborhood livability.” (Policy 14: Urban Design)
- “Encourage new construction and remodeling to contribute to an attractive and engaging streetscape by ensuring that ample land is reserved for planting strips when rights-of-way are improved.” (Policy 14: Urban Design, Objective 14.2)
- “Encourage new development to be attractive and compatible with the surrounding neighborhood.” (Policy 14: Urban Design, Objective 14.7)
- “Establish voluntary residential design guidelines and market these guidelines in a Woodstock development brochure. Promote their use by developers, designers, builders and homeowners. Develop guidelines to address the issues of compatible development between commercial and neighborhood residential areas.” (Policy 14: Urban Design, Objective 14.8)
- “Improve and add to the supply of housing in the Woodstock Neighborhood. Ensure a mix of housing types to serve Woodstock’s diverse population and a variety of household types.” (Policy 16: Housing a Diverse Community)
- “Support the siting and construction of housing designed to meet the needs and income levels of young adults, one and two person households, families, physically and socially challenged, and senior housing.” (Policy 16: Housing a Diverse Community, Objective 16.1)
- “Reinforce home ownership by encouraging the development of affordable housing that is compatible with the character and design of neighboring homes.” (Policy 16: Housing a Diverse Community, Objective 16.4)

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- “Encourage infill housing designs that create a pedestrian friendly streetscape.” (Policy 17: Character of Infill Housing)
- “Discourage the use of designs in residential neighborhoods where garages are the dominant feature in the front yard.” (Policy 17: Character of Infill Housing, Objective 17.1)
- “Where alleys exist, encourage designs and lot development patterns where garages are accessed through the alleys.” (Policy 17: Character of Infill Housing, Objective 17.2)
- “Support building projects with designs that consider the pedestrian environment of the streetscape and the use of transit. Look for incentives to encourage builders to construct housing of this type in Woodstock.” (Policy 17: Character of Infill Housing, Objective 17.3)

## Appendix D | Past Infill Design Efforts

Since the early 1990s, the Bureau of Planning and other City agencies have undertaken multiple projects to study issues related to infill design and development or to create new design-related regulations. Past efforts have also included design competitions and the publication of guidebooks intended to highlight neighborhood-responsive design. These past projects include those summarized below.

### Incentives and Studies

#### **The 10 Essentials for North/Northeast Portland Housing: Guidelines for Renovations and New Construction (1991)**

Authored by the Portland Chapter of the AIA and sponsored by the Planning Bureau, this booklet provides guidance on designing context-sensitive infill development and renovation in Portland's Albina district.

#### **New House Designs for North/Northeast Portland: Entries in the Essential Housing Competition (1991)**

The Bureau of Planning cooperated with the AIA to publish winners of a design competition for infill housing for North/Northeast Portland. It was hoped that the winning entries, which were constructed on two infill sites in the Albina district, together with the other designs included in this document would serve as examples of good infill design that would serve to improve the design quality of future infill development.

#### **Martin Luther King Jr. Blvd.: Site Planning Study (1991)**

This PDC-commissioned study, though specific to Martin Luther King Jr. Boulevard, provides an analysis of multidwelling and commercial zone development standards from the perspective of developers and market preferences. It also illustrates and discusses various development types and configurations allowed by the multidwelling and commercial zones.

#### **Infill Development: Market Trends and Prototypes (1993)**

This report analyzed market trends and their implications for the feasibility of various infill housing types.

#### **Picture This...: The Results of a Visual Preferences Survey (1993)**

This document reports the results of a visual preferences survey sponsored by the City of Portland and other Portland area jurisdictions. It reports on participants' preferences regarding building and street design in transit station areas, main streets, and neighborhoods.

#### **Growing Better: A Report to the Planning Commission on Phase I of the Livable City Project (1993)**

Summarized development trends, reported on pilot projects to test development scenarios, and presented four concepts for how growth should be accommodated, including a focus on development in the central city, transit stations and main streets, and on neighborhood infill. The report emphasized the importance having infill development be compatible with local neighborhoods in scale, use, and design; and emphasized the importance of ensuring the

attractiveness of areas proposed for more intense development. The report recommended City involvement in demonstration projects of higher-density development, private/public partnerships, and reconsideration of development standards.

#### **City Life Housing Design Competition (1994)**

Winning designs for rowhouses, attached courtyard homes, and a duplex were built as a demonstration project in the Brooklyn neighborhood. A goal of the competition was to highlight well-designed infill development that could inspire quality development elsewhere in Portland.

#### **Housing Alternatives for Our Neighborhoods (1994)**

This guidebook highlighted well-designed examples of medium-density infill housing types, including rowhouses, stacked-unit multiplex housing, courtyard housing, and mixed-use housing.

#### **Building Blocks for Outer Southeast Neighborhoods (1996)**

Authored by Portland Community Design and sponsored by the Planning Bureau, this guidebook highlights ways of integrating new houses, multidwelling and commercial development into Outer Southeast neighborhoods in ways that can serve as positive contributions to community character.

### **Regulations**

#### **Community Design Standards and Community Design Guidelines project (1997)**

This project analyzed the effectiveness of the previously adopted “Supplemental Compatibility Standards” and rewrote those standards to function on a broader citywide level.

#### **Base Zone Design Standards project (1999)**

This project addressed the design of detached houses, rowhouses, and duplexes. The project incorporated regulations into the base zone provisions of the zoning code that apply to single-dwelling and duplex development in all zones. The provisions, intended to foster street frontages that are pedestrian-oriented and continue neighborhood patterns, prevent garages from extending forward from residences, limit the proportion of front facades that may be occupied by garages, and require front doors.

#### **Hollywood and Sandy Plan (2000)**

This project addressed revitalization and redevelopment of the Hollywood Town Center and Sandy Main Street. The project resulted in the creation of new overlay zones for Main Street Nodes and Corridors. These overlay zones allow higher density development on Sandy Boulevard, while requiring a step-down transition to adjacent single-dwelling zones. The provisions are only applicable within the Hollywood Plan District, but were intended to form the basis of future regulations for infill along other main streets.

**Land Division Code Rewrite project (2001)**

This project primarily focused on creating new regulations for the configuration of lots and streets in new subdivisions. The project created a new “Planned Development” process that allows developers additional lot configuration flexibility in exchange for reviewing some aspects of building design at the land division phase. New “narrow lot design standards” were created that apply to residential development on newly-created narrow lots in the single-dwelling zones.

**ADU Monitoring (2001)**

This monitoring project examined whether accessory dwelling units being built under the provisions of the base zones and the “a” overlay zone are achieving city policy goals, including goals related to design. In 1998, the City liberalized the regulations for accessory dwelling units in the base zones, and this project was intended to monitor the outcome of that work.

**Living Smart Project (2004)**

This project was undertaken by the Bureau of Development Services to improve the design of detached houses on 25'-wide lots. The project's centerpiece was a design competition to foster innovative solutions to the challenges of designing houses on such narrow lots. An intended outcome is to provide some of the winning designs as “pre-approved” plans for use on 25'-wide lots. The Living Smart Project was preceded by Zoning Code changes that expanded the ability to develop small lot detached houses in multidwelling zones and that established design standards for development on existing narrow lots in single-dwelling zones that do not meet current lot and density requirements.



## Appendix E | Multidwelling Design: Historic Trends

To provide historic context, this section presents a brief overview of past trends in the design of multidwelling structures in Portland, focusing on neighborhoods outside the Central City.

### The Streetcar Era

During the first half of the 20<sup>th</sup> century, residential development in Portland expanded rapidly with the extension of streetcar routes, especially on the eastside of the city. Residential development during the Streetcar Era included a diverse range of multidwelling housing types, which continue to contribute to the character of Portland’s older neighborhoods. Professor Peter Keyes of the University of Oregon’s Department of Architecture has studied Portland apartment buildings of the Streetcar Era and divides them into the following typology.



**Quadplexes.** Four-unit, two-story buildings of stacked flats, often of similar massing and architectural style to nearby detached houses.



**Rowhouses.** Buildings of attached units, where each unit has its own entry from a public street. Note: Portland Streetcar Era rowhouses were typically only a single story, with small units (typically no larger than 600 sq.ft.) more akin to apartment units of the same era than to the multistory rowhouses typical of the East Coast and contemporary Portland.



**Courtyard housing.** Buildings of attached units oriented around a common courtyard, usually landscaped, extending from a public street.



**Block apartment buildings.** Multistory apartment buildings with a common front door and central interior circulation provided by double-loaded corridors.



**Split-block apartment buildings.** Multistory apartment buildings where the building mass is split by a narrow court, providing access to a main entrance and allowing two building wings of double-loaded corridors.



**Mixed-use buildings.** Buildings, usually in block form, with residential units above commercial space.

During the Streetcar Era, larger multidwelling structures, such as block and split-block apartment buildings, as well as mixed-use buildings, were typically built along or near the streetcar lines or in neighborhoods close to downtown. These structures' multistory facades, minimal or non-existent setbacks and landscaping, as well as their general lack of parking facilities, contributed to a distinctly urban streetscape. Their contribution to the city's architectural character is especially apparent in the Northwest District.

Multidwelling structures further removed from the streetcar lines and downtown, in areas where detached houses predominated, tended to reflect the form and landscaping of the detached houses. Examples include quadplexes that appear similar to large houses, as well as courtyard apartments whose courtyards continue the landscaped emphasis of the surrounding neighborhood and whose street-fronting end units reflect the scale of nearby detached houses.

### The Automobile Age

During the post-World War II period, the form and orientation of multidwelling structures reflected the increasing importance of the automobile and its need for storage. For example, by the 1940s and 1950s, courtyard apartments on corner sites would often have an entire area of block frontage lined with garages, although the central courtyards were still landscaped. Later, and continuing to the present, new apartment buildings typically devoted their central "courtyards" to surface parking.

By the 1960s and 1970s, other multidwelling building types likewise devoted much of their frontage to automobile parking areas. Three- and four-unit plexes often had most of their front setbacks designed for surface parking, with few or no street-facing windows. During the 1970s, larger, often L-shaped apartment buildings, characterized by front surface parking and sometimes windowless façade areas close to the sidewalk, were built in large numbers in close-in neighborhoods, such as Buckman. Their prominent surface parking areas provided a poor relationship to the public realm and contrasted sharply with the front yard landscaping and street-oriented facades of nearby pre-war detached houses.



### Recent Developments

The 1980s saw the rise in popularity of rowhouses. This was made possible by the resurgent popularity of close-in urban living, demographic changes such as smaller household sizes, and Zoning Code changes, including the creation of the R2.5 zone which facilitated the construction of rowhouses. By the late 1990s, more permits were being issued for rowhouses than all other multidwelling housing types combined (note, however, that the Zoning code classifies rowhouses as "attached houses," rather than as multidwelling structures). These contemporary rowhouses are two or three stories in height, typically with the ground floor frontage occupied by garage doors. While rowhouses contribute to the

city's diversity of housing types and have proven quite marketable, the garage- and driveway-dominated frontage of rowhouse developments often detract from the landscaped character of established neighborhoods and interrupt the pedestrian environment and active uses of commercial streets.

Other recent trends have followed from the annexation into the city in the 1980s and 1990s of large areas of mid-Multnomah County east of the I-205 freeway. In contrast to the typically 200-foot deep blocks and 100-foot deep parcels that characterize Portland's Streetcar Era neighborhoods, much deeper blocks and larger parcels are common in these "Outer East" additions to the city. This has resulted in site configurations and development types that differ considerably from those found in Portland's older neighborhoods. For example, a common development type in Outer East are apartment complexes in which the majority of buildings within a cluster of apartment buildings have no orientation to a public street and are often surrounded by surface parking areas (in contrast, Streetcar Era apartment buildings were typically built on relatively small, separate parcels and oriented to the street). Another trend in Outer East Portland resulting from block and parcel configurations is the development of apartment buildings on flag lots or set behind existing detached houses, resulting in apartment developments with no orientation to public streets, disrupting the traditional relationship of the "public realm" orientation of street-facing facades and the "private realm" of back yards and block interiors.



## Appendix F | Design Strategies in Other Cities

### Summary

As part of the Infill Design Project, project staff contacted other North American cities to learn about the range of strategies used to foster quality design in new multifamily development. Fifty-nine cities were surveyed during the course of this research effort. As of the writing of this report, 17 cities responded to an electronic survey (conducted via e-mail) and 3 cities were surveyed by telephone, for a total of 20 survey responses. Also, information on the design strategies of additional cities was obtained through a review of city websites.

The following summarizes the responses from the twenty surveyed cities with regard to the presence of design controls.

- 12 indicated that they have design review for multifamily development projects.
- 2 indicated that they have design standards in their land use code specific to multifamily development projects, but no design review.
- 2 indicated that they have administrative site plan review for multifamily development projects.
- 1 indicated that it utilizes form-based design districts to control design.
- 1 indicated that all multifamily development projects are built with discretionary permits that require significant stakeholder input into design.
- 2 indicated that they have no design controls specific to multifamily development projects.

The following summarizes the responses from the eighteen cities that indicated they had some form of design controls in place.

- 10 indicated that their design controls applied to all multifamily development projects regardless of size or location.
- 5 indicated that their design controls applied to some or most multifamily development projects, with project location and/or size determining design control applicability.
- 3 did not indicate the extent of their design controls with regard to multifamily development projects.

The following summarizes the non-regulatory approaches to design that the 20 cities reported.

- Eugene and Indianapolis have design awards programs. Gresham used to have a design awards program.
- Pasadena used to publish a schematic guidebook but discontinued it due to extensive duplication of the same designs.

- Olympia has a number of development incentives such as reduced permitting fees and expedited permitting that is limited to projects in its CBD.
- Santa Rosa and St. Paul have design assistance programs, but St. Paul’s program is limited to projects in certain areas of the city.
- The State of Washington authorized a 10-year property tax exemption for multifamily housing development that has been in effect since 1995.

**Methodology**

Brief, unstructured telephone interviews were completed with three Californian cities between June 9 – June 10, 2004, after which it was decided to send a brief written survey via e-mail to various cities. Electronic surveys were sent between June 17, 2004 and June 22, 2004, to a number of cities in the United States and Canada, with an emphasis on West Coast cities. The criteria for inclusion in this research effort were very loose, and, in general, larger rather than smaller cities were chosen for inclusion. A complete list of cities surveyed is included at the end of this appendix.

In addition to calling and e-mailing various cities for information, a cursory review of each city’s website was conducted in an effort to located relevant published information.

**Survey Results**

Number of Cities Surveyed by E-mail:	61
Number of Cities Surveyed by Phone:	3
Gross Number of Cities Surveyed:	64
Total Number of Failed E-mails:	5
<hr/>	
<b>Net Number of Cities Surveyed:</b>	<b>59</b>

17 cities responded to the electronic survey and 3 cities were surveyed by telephone, for a total of 20 survey responses. A summary of these responses is included below. In each case, regulatory approaches are summarized first, followed by non-regulatory approaches, if any.

**Beaverton OR.** “Beaverton has a Design Review requirement for all attached housing located any where in the City. The level of design review varies depending on the amount of units. For example, if a proposal consists of 20 or more units, the requirement would involve a Type 3 public hearing review. If there were 10 units, the requirement would be a Type 2 administrative review. The City is currently reviewing a new design review program which will make design review of housing projects clear and objective as mandated by State Statute.” *Note: Subsequent to administration of this survey, Beaverton adopted code changes which provide a regulations-based design standards option for smaller projects, with a discretionary Type 3 process limited to larger projects (those larger than 30,000 sq.ft. in residential zones).*

**Boise ID.** “The Design Review process is required for all areas of the city that have a ‘D’ overlay. Virtually all multifamily, commercial, and office zones have Design Review, and some medium residential density zones have Design Review. Both site and building design are reviewed in Design Review. There are three Findings in Design Review, with several considerations in each Finding. Finding 11-7-3.1 addresses site design, which also covers landscape design, 11-7-3.2 addresses building design, and 11-7-3.3 addresses goals and policies of the Comprehensive Plan, special districts (such as the downtown) and Design Review guidelines.”

“Finding 11-7-3.2 has a specific consideration that must be met for multifamily building design. The following is the language from that finding: Multiple family building (any building containing more than 2 residential units) must be designed to include features which add to the visual and aesthetic appearance of the structure and help prevent a sterile, box-like appearance. Such features may include the use of brick or stone, roof or facade modulation, planter boxes, bay windows, balconies, porches, etc. The commission or committee must make a finding that specific design features have been added to enhance the physical appearance of such multiple-family residential structures.”

**Boston MA.** “Virtually all new housing development of any scale in Boston requires variances from the zoning code in order to be of sufficient density to be economically viable. The Zoning Board of Appeals routinely requires design review by the Boston Redevelopment Authority as a condition of granting such variances. Consequently, virtually all housing development is subject to design review by the City.

“In addition to this process, Article 80 of the Boston Zoning Code requires considerable community input into all development of any magnitude. Much of what happens in this process is community-generated input into design issues.”

The link to Article 80 is as follows:

<http://www.cityofboston.gov/bra/PDF/Documents/A%20Citizens%20Guide%20to%20Article%2080.pdf>

“Generally it is only the smaller scale ‘as-of-right’ housing developments that do not require variances that do not have design controls. In some cases, that has resulted in new development that is not in keeping with the architectural character of the neighborhood. We are now looking into regulatory mechanisms that could put more design controls on even as-of-right development.

“Publicly-assisted affordable housing development is also subject to rigorous design review and community input. The resultant development designs are usually of extremely high quality. Indeed, when community residents complain about design issues, it is most often about why private market-rate development is not as well designed as affordable housing development.”

Boston has a comprehensive housing strategy, entitled Leading the Way II, that attempts to address its housing deficit. Most of this document’s content is not relevant to this project; however, pages 42-43 outline a Small Contractors Initiative program that falls under the heading of a non-regulatory design strategy.

Link: [http://www.ci.boston.ma.us/dnd/pdfs/LTW\\_2\\_to\\_print.pdf](http://www.ci.boston.ma.us/dnd/pdfs/LTW_2_to_print.pdf)

**Boulder CO.** “The City of Boulder does not have specific design controls for multifamily housing. We do require site plan review, including architectural design character, for sites that exceed certain size thresholds. These thresholds vary depending on the zone category. The threshold of required review is typically 2 acres of land or 20 dwelling units for medium and high density residential zones. The review criteria are generic for all zones, but emphasize compatible, contextual design that is pedestrian-oriented. These general objectives may be refined by the underlying zone category. For instance, our mixed use and main street zones require minimal front setbacks or build-to lines, orientation of building openings to the street, and so on.

“In addition, projects that are not over the threshold of mandatory review may still go through review at the option of the developer to achieve variations from certain standards. Most frequently, developers wish to exceed our 35-foot height limit, which is only possible through site review.

“Finally, some infill-oriented zones require site review when a certain density is proposed. For example, the High Density - Redeveloping (HR-X) zone allows by-right development at densities up to one dwelling unit per 1600 square feet of on-site open space - a rather low density. Exceeding that density is only possible through site review.

“In practice, we find that most projects that have more than four units go through the site review process. We then use that process to negotiate improvements to architectural character.

“We employ a residential growth management system that requires "allocations" for each new dwelling unit, and the number of allocations available each year is based on a 1% annual growth in the total number of units in the community. This equals approximately 400 allocations available each year. However, certain kinds of dwelling units, such as units in mixed-use projects or affordable units in excess of our minimum requirements, are exempt from the growth management system. This is a significant incentive for most developers. In that past year, more exempt units have been approved than those subject to the growth management system. Again, most of the dwelling units are approved through a site review process, whether mandatory or optional, and we use the process to negotiate design improvements.”

**Denver CO.** “At this time we do not have specific design or development guidelines, nor incentives intended just for multifamily development, unless the property is located in a design review or landmark district. However, it is not uncommon for the more intense residential developments to be subject to some type of site plan review such as Planned Unit Developments or Planned Building Groups. In those cases we are looking at design elements as part of the review.”

Denver has a new department director who is interested in form based zoning. It is unclear at this time if Denver will pursue such a change in their zoning.

**Eugene OR.** Eugene is in the process of reviewing their multifamily design standards and incentive programs. They have new multifamily design standards in their Land Use Code, Section 9.5500, which can be viewed online at <http://www.ci.eugene.or.us/Cityreco/Citycode/Chapter9/c9.4000-5850.htm#9.5500>.

They “recently secured a TGM grant to study infill design standards using one of [their] neighborhoods as a test case,” which has yet to commence. They have also been undertaking a study that is looking at the effects of infill and mixed-use developments on the city’s older neighborhoods.

The Downtown Merchants Association (<http://www.downtowneugene.com/>) recently instituted an awards program in an effort to encourage well-designed projects.

**Everett WA.** “The City of Everett does regulate design of multiple family housing and row housing under its multiple family design guidelines, which apply city-wide, with the exception of 2 neighborhoods in which historic overlay zone guidelines apply. Our multiple family design guidelines apply to any multiple family, single family attached (townhouse), or mixed use project.” They are prescriptive and fairly detailed, and are used by Planning Department staff to determine if projects are in compliance.

“The only non-regulatory measure we use is a tax exemption that applies to any development with more than 20 dwellings in an area surrounding our downtown core. This exemption was authorized by State law, and defers for 10 years the property taxes for the value of improvements for the residential portions of such a building.”

**Federal Way WA.** “Multifamily developments are typically reviewed through a Process II, Site Plan Review, or a Process III (if SEPA is triggered), Project Approval. Both are administrative reviews, and both include review of the site and building design. This kind of review is required in both commercial and residential zones where multifamily is allowed, regardless of the size of the project.” Federal Way has Community Design Guidelines for mixed-uses in commercial zones and multifamily uses in residential zones. They are prescriptive but not very detailed.

Non-regulatory incentives are limited to the city center. “The City Council can approve a 10-year property tax exemption for any residential component of a new development in the city center. Additionally, the City is currently working on an EIS for the city center which, when complete, will streamline environmental review of all city center projects, including multifamily. We expect that the EIS will be complete later this year.”

**Gresham OR.** Gresham has prescriptive design review standards for all multifamily projects, but “some would find them too minimalistic.” A new Land Use Task Force will be examining this issue in the near future. They have an architectural review board that only reviews projects built in specific areas, such as in downtown Gresham.

Gresham has a tax exemption program for multifamily projects, which has been utilized by six developments to date. It is due to expire in 2006 but could be renewed. They used to have a design award program that was awarded by the Planning Commission, but this program was terminated a few years ago.

**Indianapolis IN.** Design review is required only in downtown and historic districts. However, if a project is requesting a zoning reclassification, “evaluation of site plan design and elevations is frequently required.”

The Department of Metropolitan Development sponsors an annual “Monumental Affairs” award that honors well-designed projects.

**Long Beach CA.** Long Beach has design standards in their development code, but they currently do not have a design review process. They are mostly built-out and just beginning the process of discussing infill issues, with the hope of incorporating more regulatory design controls into their development process in the future.

**Louisville KY.** Louisville is divided into form districts and utilizes a form-based development code to control the design of all development. Link to Power Point presentation on form based zoning:  
[http://www.loukymetro.org/Department/PlanDesign/pdf/APA\\_Powerpoint.pdf](http://www.loukymetro.org/Department/PlanDesign/pdf/APA_Powerpoint.pdf)

**Olympia WA.** “Multifamily design review is required for all multifamily projects throughout the entire city.” Pre-submission conferences are offered to all projects regardless of location and “are an opportunity for a proponent of a development to present a preliminary plan (anything from ‘back of the envelope idea/concept’ to a fairly detailed plan) to the Site Plan Review Committee for discussion. The committee is comprised of the building official, fire marshal, engineer, planner, SEPA official (and others as appropriate).”

Olympia offers the 10-year property tax exemption program for multifamily housing that was authorized by the State of Washington. Other non-regulatory incentives are limited to the downtown area and include expedited permitting and lower development charges and impact fees.

**Pasadena CA.** Pasadena requires all projects in the CBD and all 3+ unit multifamily development projects to go through design review. However, their zoning code and development standards are so prescriptive in mandating a particular multifamily building typology (courtyard housing) that the design review process generally only addresses such design issues as landscaping, materials, finishes, etc.

Pasadena used to produce a multifamily schematic guidebook. They discontinued this publication after finding that designers were duplicating the plans too closely, resulting in too many developments that looked exactly alike. They continue to struggle with this issue due to the fact that so many developers use the same handful of architects over and over again. Unofficially they have tried to encourage the use of different architects when they can.

**Salem OR.** “Design requirements apply to all development at the point of three or more units on a property. All such proposals are required to complete a pre-application conference. If the project proceeds with 90 days of the conference, \$100 of the pre-application fee is applied to other land use actions. The requirements apply within all zone districts with the exception of the Central Business District. An interpretation was recently

made that the standards/guidelines will not be applied to mixed-use developments where the residential units are above a commercial/office project.”

Similar to Portland, the Salem design process gives the applicant the option of selecting one of two design review processes. One is a discretionary design review process that relies on design guidelines and involves the Design Review Board. The other is an administrative design review process that utilizes objective design standards and is reviewed by development services staff for compliance at the same time that the project is being reviewed for building and development code compliance.

Salem’s design guidelines and standards are both prescriptive and detailed.

Link: [http://www.cityofsalem.net/~cityplan/Design\\_Handbook&cover2003.pdf](http://www.cityofsalem.net/~cityplan/Design_Handbook&cover2003.pdf)

They have also undertaken a Residential Lot Size Study.

Link: <http://www.cityofsalem.net/~cityplan/rlss/lotsize.htm>

**San Diego CA.** "For all practical purposes the City of San Diego is ‘built out’. We have Mexico on the south side, the Pacific Ocean on the west, mountains on the East, and Camp Pendleton Marine Base on the North. New construction is very limited and extremely expensive. Most new multifamily projects are huge, 300 to 1500 units, and are done by discretionary permits. We have discretionary ‘in-fill’ permits where existing units are demolished to create better use of space. Because discretionary permits require active participation of all share-holders, designs are a series of compromises.”

**San Jose CA.** San Jose requires preliminary review and design review for all multifamily housing projects. They have suggestive not prescriptive design guidelines that inform the design review process.

Link: [http://www.ci.san-jose.ca.us/planning/sjplan/pdf/dg\\_residential.pdf](http://www.ci.san-jose.ca.us/planning/sjplan/pdf/dg_residential.pdf)

**Santa Rosa CA.** “New multifamily projects as well as exterior changes to all existing multifamily buildings require design review. This is either conducted by the Design Review Board, the Zoning Administrator, or staff, depending on the size or complexity of the application. The Design Review Board contains seven members; all are design professionals, including 5 architects, 2 landscape architects and 1 interior designer. Each board member is appointed by one of the seven elected Council members.

“The Design Guidelines are the city’s preferences and establish the ‘path of least resistance’ for design review. Some of the guidelines are more prescriptive than others. However, we attempt to retain the concept of a guideline so as to give designers the flexibility to show us how their design will accomplish a particular goal or policy, even when it does not adhere to the guideline. If we start implementing a guideline as if it is prescriptive, or if we find that a particular guideline is always implemented a certain way, we move that over to the zoning and adopt it as a standard.”

Santa Rosa offers “a free application called concept review before the Design Review Board. This process is very informal and results in peer review by our Design Review Board. All multifamily and in fact all projects, except single family residential, are eligible for concept design review. Concept design review allows the designer to try out initial ideas and get

feedback in the form of peer review. On controversial applications, the public will also attend the meeting and give its feedback. In many cases, Board members will make suggestions that assist in ultimately producing a better project.”

**St. Paul MN.** “The City of Saint Paul, MN does not have rigid design controls, but we do have design review. If public funds are involved in the development or City/HRA land is sold for the development, then we can exercise as much non regulatory design review that is appropriate for the site as a condition to financing or land sale. Oftentimes an RFP for development proposals will outline design objectives, and proposals are evaluated based on these objectives. Neighborhood organizations and residents often influence design--the City gives them ample opportunities to comment on development proposals. Our land use and housing policy plans also emphasize new urbanism and traditional designs in new development. It is important that small infill developments are compatible to the neighborhood and adjacent properties.”

“And, as part of a recent large effort to create design review of development primarily in the downtown area and along the Mississippi River, a design center was created to provide advice and review of design for all development.”

**Yakima WA.** Multifamily housing developments larger than four units are very limited in Yakima. No mention of design guidelines or a design review process was included in their response.

## Website Research Results

**Nanaimo BC.** “In January 1993, the City of Nanaimo was awarded an Affordability and Choice Today (A.C.T.) grant to develop design guidelines and promotional materials to encourage low density multiple-family housing in the City of Nanaimo’s established single family neighbourhoods and new subdivisions.

“In July 1993, the City of Nanaimo adopted a series of housing policy documents (City Spaces Consulting Ltd.). The principle goal of the housing policy was to encourage the development of a range of housing choices with respect to type, size, density and cost. Subsequent to the adoption of the housing policies, the City received funding from the Federal Affordability and Choice Today (A.C.T.) Program for a design and regulatory reform project.

“The federal Affordability and Choice Today (A.C.T.) Program is designed to improve housing affordability, choice and quality through regulatory reform at the Municipal level. A.C.T. is an initiative jointly funded by four key players in the housing sector: the Federation of Canadian Municipalities (F.C.M.), the Canadian Home Builders’ Association (C.H.B.A.), and Canadian Housing and Renewal Association (C.H.R.A.) and the Canada Mortgage and Housing Corporation (C.M.H.C.).”

Nanaimo’s “Innovative Housing for Neighbourhoods: Triplex and Quadruplex Infill Design Guidelines” Link:

[http://www.nanaimo.ca/uploadedfiles/Site\\_Structure/Development\\_Services/Planning\\_and\\_Development/Current\\_Planning/Tri4plexInfillDesignGuidelines.pdf](http://www.nanaimo.ca/uploadedfiles/Site_Structure/Development_Services/Planning_and_Development/Current_Planning/Tri4plexInfillDesignGuidelines.pdf)

Nanaimo's Design Advisory Panel also awards annual design awards.

**Toronto ON.** The Toronto Urban Design Infill Townhouses Guidelines are prescriptive and detailed.

Link: <http://www.city.toronto.on.ca/planning/infilltownhousing.htm>

**Mesa AZ.** “The Mesa City Council recently adopted a new mechanism for reviewing projects on so-called “by-passed” properties, known as a Development Incentive Permit (DIP). The Council adopted this new process in response to concerns that the recently adopted revisions to the Design Guidelines and Site Development Standards (Chapters 14 and 15 of the Zoning Ordinance) would make smaller properties economically non-viable. Many of the boundaries of these smaller properties were created at a time when smaller dimensional requirements were in place. Creating this new process allowed by-passed parcels affected by the revised standards to be individually assessed as to how the standards affect the property.”

Link: <http://www.ci.mesa.az.us/planning/pdf/DIP%20Guidelines.pdf>

**Sacramento CA.** “The City Council adopted the Infill Fee Reduction Program to reduce development and impact fees for small residential projects in target neighborhoods.

“The City of Sacramento recognizes that there are considerable financial challenges involved with constructing small residential infill projects in many of the City’s older neighborhoods. This is due to infrastructure costs, irregular lot sizes, inability to benefit from economies of scale, and lower sales and rental prices than some newer areas of the city.

“Qualified projects may receive up to \$5,000 per housing unit in assistance, to be applied toward payment of development and impact fees. Funding for this program is determined annually and allocated on a first-come, first-served.” Qualifying projects must be four or few units in size.

Link: [http://www.cityofsacramento.org/planning/longrange/Infill/Brochure-Infill\\_Fee\\_Reduc.pdf](http://www.cityofsacramento.org/planning/longrange/Infill/Brochure-Infill_Fee_Reduc.pdf)

**State of Washington.** State legislation passed in 1995 authorized a property tax exemption to encourage the development of additional multifamily housing in urban centers. This program is designed to make housing projects more appealing to investors by freeing up capital and reducing operating costs. The law allows other financing sources, such as the Washington State Housing Trust Fund and the Washington State Low-Income Housing Tax Credits, to be used with this program. All projects must meet the requirements of the building permit process.

Senate Bill 5387 authorized cities with populations of more than 150,000 to provide a property tax exemption for ten years to those who rehabilitate, convert, or build new

housing units in designated urban areas. This legislation supplements the Growth Management Act of 1990, which encouraged redevelopment of urban areas, but did not provide any incentives.

## Cities Surveyed

Electronic Surveys were sent to the following cities:

California: Berkeley  
Concord  
Fremont  
Fresno  
Hayward  
Los Angeles  
Oakland<sup>1</sup>  
Sacramento  
San Diego  
San Francisco  
Santa Monica  
Santa Rosa

Oregon: Beaverton  
Eugene  
Gresham  
Hillsboro  
Salem

Washington: Bellevue  
Bellingham  
Everett  
Federal Way  
Kent  
Olympia  
Spokane  
Tacoma  
Vancouver  
Yakima

Arizona: Glendale  
Mesa  
Phoenix  
Scottsdale  
Tucson<sup>1</sup>

Colorado: Boulder

Colorado Springs  
Denver  
Fort Collins  
Pueblo

**Other Cities**

US Cities: Baltimore MD  
Boise ID  
Boston MA  
Buffalo NY  
Cincinnati OH  
Cleveland OH  
Columbus OH  
Dayton OH  
Detroit MI  
Indianapolis IN  
Lincoln NE  
Louisville KY  
Milwaukee WI  
Philadelphia PA  
Pittsburg PA  
Richmond VA  
Salt Lake City UT  
St Louis MO  
St Paul MN

Canada: Calgary AB  
Nanaimo BC  
Ottawa ON  
Vancouver BC  
Victoria BC

**The following cities were surveyed by telephone:**

California: Long Beach  
Pasadena  
San Jose



*Note: Page Numbers are those of original document*

# Open Infill Design Houses



## Design Preferences Survey & Design Issues and Priorities Questionnaire

# Results



CITY OF PORTLAND, OREGON  
BUREAU OF  
**Planning**

July 16, 2004

The Bureau of Planning  
is committed to providing  
equal access to information and hearings.  
If you need special accommodation,  
please call  
503-823-7700  
(TTY 503-823-6868).

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E-Mail: [bcunningham@ci.portland.or.us](mailto:bcunningham@ci.portland.or.us)

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## INTRODUCTION

In March and April of 2004, the Portland Planning Bureau held a series of three open house events in different parts of the city to inform the public about the Infill Design Project and to invite public input and participation. The Infill Design Project's objective is to improve the design of multifamily and rowhouse development in neighborhoods outside Portland's downtown. During these open house events, the public was invited to participate in a "Design Preferences Survey" and to provide responses to a "Design Issues and Priorities Questionnaire." Over 100 open house participants provided their feedback. This document summarizes the results from the survey and questionnaire.

The **Design Preferences Survey** was based on 36 images of recent multifamily and rowhouse projects presented on four display boards (see pages 5-8). Participants were asked to rate the images, based on the extent to which they would consider the design of the pictured housing to be a positive or negative addition to the character of multidwelling-zoned areas in their neighborhood (see survey form on page 15). The intent of this survey was to determine if participants considered any particular medium-density housing types or design characteristics to be more desirable than others. The results will be used to help identify desirable design features and housing types that should be encouraged in future development.

The **Design Issues and Priorities Questionnaire** was presented in conjunction with a series of display boards that highlighted various issues related to infill design and the trade-offs between sometimes competing priorities. This questionnaire was intended to invite responses that went beyond the Design Preferences Survey's focus on street frontage design issues. The questionnaire asked for community members to indicate their priorities regarding issues such as pedestrian-friendly design, vehicle parking, usable open space, minimization of privacy impacts, housing affordability, and environmental impacts (see form on page 29).

Participant's responses generally indicated preferences for pedestrian-friendly street frontages (street-facing windows, façade articulation, visually subordinated parking facilities, etc.), compatible building scale, environmentally sensitive design, and the provision of usable open space. Respondents favored cluster housing projects, such as cottage clusters and courtyard townhouses, over the more frequently built rowhouse form of housing. Respondents were asked to identify their neighborhood to determine if design preferences and priorities varied in different parts of the cities. For the most part, however, responses did not vary significantly across different parts of the city.

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### **Infill Design Open House Events – Locations and Dates**

#### **Inner Eastside Open House**

Southeast Uplift Building, 3534 SE Main Street  
Saturday, March 27, 2004

#### **Westside Open House**

Northwest Cultural Center, 1819 NW Everett Street  
Monday, March 29, 2004

#### **Outer East Open House**

East Portland Community Center, 740 SE 106<sup>th</sup> Avenue  
Thursday, April 8, 2004

DESIGN PREFERENCES SURVEY

Design Preferences Survey Results — Top Rated Images (numbered by rank from top)



Design Preferences Survey Results — Most Negatively Rated Images (numbered by rank from bottom)

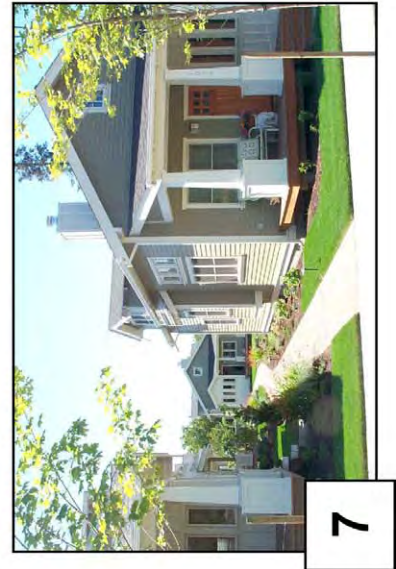


## Design Preferences Survey Results Summary Observations

*(Image numbers refer to images as displayed on pages 5 - 8)*

- Common features of top-ranked housing projects include visually subordinated parking, façade articulation (bays, porches, etc.), front windows, landscaping and a fairly high degree of architectural trim and details.
- In contrast, the most negatively-rated images often featured visually prominent parking or garages, little façade articulation, blank walls, setbacks dominated by paving instead of landscaping, and relatively little architectural trim and details.
- Cluster housing (cottage clusters and courtyard townhouses) were among the top-rated projects (3 out of the top 4 projects), outscoring any rowhouse projects. The top-rated image was a cottage cluster project (Image 7), a housing type rarely built in Portland.
- Preferences were largely consistent among different parts of the city.
- Many of the more negatively rated images were of higher-density projects on small sites (often in the R1 zone, which requires 3 units on 5000 sq.ft. sites), in which situations it is difficult to locate parking in visually subordinated ways (Images 19-26). While the most highly rated of these had no front parking (Image 23) and those with prominent garages fared poorly (Images 19 & 24), some with front surface parking (Images 20 & 22) fared better than others without front parking.
- Pedestrian-friendly features required by regulatory design standards, such as front entries and porches, windows, and no front parking, did not prevent some projects (Images 21 and 28) from being among the most negatively-rated images.
- A “skinny house” project with no front garages (Image 2) was one of the most highly rated images and fared much better than other narrow houses with front garages, despite similar levels of architectural trim (Images 8 & 16).
- Paired rowhouses designed to reflect the massing and character of a detached house (such as Images 4, 5, 9 & 11) tended to be rated relatively well.
- The two most negatively-rated rowhouse projects received these ratings despite including features, such as low entrances (Image 6) and no front garages (Image 15) called for by some design standards. Conversely, some front garage rowhouses received relatively positive ratings (Images 1, 4 & 11).
- Of two three-level rowhouse examples, the project which includes design strategies that reduced its apparent height, such as a third level within dormers and partially-excavated basement garages (Image 11), fared much better than the other example (Image 10).
- Of paired rowhouses with parking pads, the example with separated driveways and pads (Image 5) was rated significantly more positively than the example with a paired driveway (Image 3). The separated driveway configuration allows landscaping to be the central design feature, but is currently discouraged by City regulations.
- The two projects with contemporary architectural design (Images 18 and 31) received overall positive ratings. Unlike most other images, however, ratings of these projects was deeply divided, with both receiving large numbers of both positive and negative ratings.

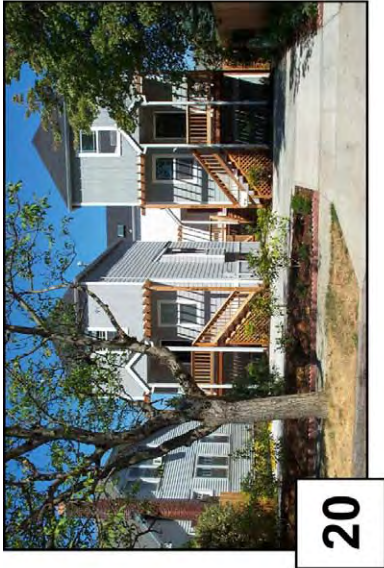
Design Preferences Survey Images — By Image Number (as presented on survey display board)



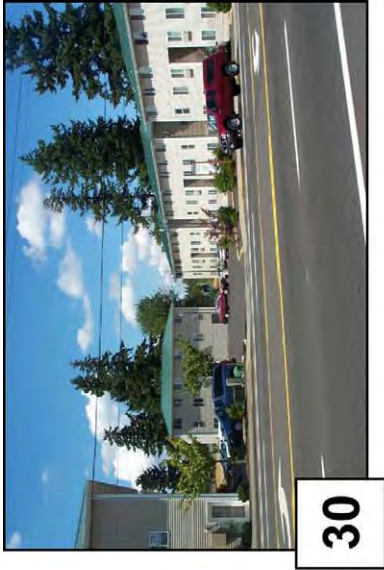
Design Preferences Survey Images — By Image Number (as presented on survey display board)



Design Preferences Survey Images — By Image Number (as presented on survey display board)



Design Preferences Survey Images — By Image Number (as presented on survey display board)



## Design Preferences Survey Results

Compiled Responses: Citywide and by Geographic Area\* (Scored and Ranked)

Score calculations:	Very Positive	= 2
	Somewhat Positive	= 1
	Neutral	= 0
	Somewhat Negative	= -1
	Very Negative	= -2

Citywide (102 respondents)

Image	Very Negative	Somewhat Negative	Neutral	Somewhat Positive	Very Positive	Average Score	Rank fr/top	Rank fr/bottom
1	6	30	24	35	6	0.0		
2	8	11	12	37	33	0.8	7	
3	7	24	37	25	8	0.0		
4	4	14	34	35	13	0.4		
5	3	8	19	42	29	0.9	6	
6	65	24	6	5	1	-1.5		8
7	4	7	6	27	57	1.2	1	
8	30	34	18	17	3	-0.7		
9	5	9	26	36	25	0.7	10	
10	47	30	10	7	5	-1.1		
11	6	21	25	25	22	0.4		
12	7	15	32	34	11	0.3		
13	8	28	21	32	11	0.1		
14	3	9	20	45	22	0.7	8	
15	49	27	12	4	5	-1.1		10
16	38	34	16	9	3	-1.0		
17	2	4	17	44	33	1.0	3	
18	14	15	18	20	33	0.4		
19	79	18	1	1	0	-1.8		4
20	11	22	24	35	8	0.1		
21	49	34	7	6	1	-1.3		9
22	4	19	23	39	15	0.4		
23	3	10	28	33	25	0.7	9	
24	84	11	2	2	0	-1.8		3
25	64	22	8	3	1	-1.5		6
26	16	32	24	23	5	-0.3		
27	4	7	19	39	31	0.9	4	
28	71	20	5	1	0	-1.7		5
29	1	5	11	41	40	1.2	2	
30	64	18	12	3	0	-1.5		7
31	10	15	23	28	24	0.4		
32	88	7	4	0	0	-1.8		1
33	7	13	17	44	18	0.5		
34	86	9	2	1	1	-1.8		2
35	5	10	16	33	36	0.9	5	
36	24	30	25	15	4	-0.6		

\*Respondents were asked to identify their neighborhood. 34 respondents did not indicate their neighborhood and were not included in the area specific tabulations.

INFILL DESIGN PROJECT REPORT

DESIGN PREFERENCES SURVEY

Inner Southeast (33 respondents)

Image	Very Negative	Somewhat Negative	Neutral	Somewhat Positive	Very Positive	Average Score	Rank fr/top	Rank fr/bottom
1	3	7	11	10	2	0.0		
2	6	3	3	12	8	0.4		
3	1	5	11	12	3	0.3		
4	3	3	8	14	5	0.5		
5	1	4	6	12	9	0.8	7	
6	20	8	1	2	1	-1.4		8
7	1	3	1	8	19	1.3	1	
8	12	10	6	4	1	-0.8		
9	3	4	5	13	7	0.5	9	
10	15	9	3	3	1	-1.1		
11	1	7	8	9	6	0.4		
12	2	6	10	10	4	0.3		
13	2	9	5	13	3	0.2		
14	1	3	3	15	9	0.9	3	
15	18	7	4	1	1	-1.3		9
16	14	7	7	3	1	-0.9		
17	2	2	5	13	10	0.8	6	
18	3	6	6	7	10	0.5	10	
19	26	4	1	1	0	-1.7		5
20	5	7	10	10	1	-0.2		
21	11	17	1	2	0	-1.2		10
22	1	8	6	13	5	0.4		
23	1	3	9	12	7	0.7	8	
24	27	3	2	0	0	-1.8		3
25	21	8	1	2	0	-1.5		6
26	2	13	7	9	2	-0.1		
27	0	3	7	15	8	0.8	5	
28	26	4	1	0	0	-1.8		4
29	0	1	5	15	11	1.1	2	
30	18	10	3	0	0	-1.5		7
31	2	6	9	10	6	0.4		
32	29	1	2	0	0	-1.8		1
33	3	7	7	8	7	0.3		
34	28	2	1	0	1	-1.8		2
35	1	5	4	10	13	0.9	4	
36	8	12	7	5	0	-0.7		

North/Northeast (21 respondents)

Image	Very Negative	Somewhat Negative	Neutral	Somewhat Positive	Very Positive	Average Score	Rank fr/top	Rank fr/bottom
1	1	10	2	6	1	-0.2		
2	1	3	2	9	6	0.8	9	
3	4	4	8	4	1	-0.3		
4	0	4	9	5	3	0.3		
5	0	2	2	11	6	1.0	3	
6	16	3	1	1	0	-1.6		6
7	1	2	3	5	10	1.0	2	
8	10	4	2	4	1	-0.9		
9	1	2	3	7	8	0.9	6	
10	10	7	1	0	2	-1.2		10
11	1	4	8	3	4	0.3		
12	0	2	7	9	1	0.5		
13	2	6	5	6	1	-0.1		
14	0	2	8	8	2	0.5		
15	10	4	2	0	2	-1.1		
16	3	10	4	3	0	-0.7		
17	0	2	2	11	5	1.0	5	
18	5	4	3	2	6	0.0		
19	17	3	0	0	0	-1.9		3
20	2	5	3	8	2	0.2		
21	12	7	1	0	0	-1.6		7
22	0	2	4	9	5	0.9	8	
23	1	1	4	7	7	0.9	7	
24	18	2	0	0	0	-1.9		2
25	14	3	1	0	1	-1.5		8
26	5	5	5	5	0	-0.5		
27	1	0	7	7	5	0.8	10	
28	15	4	1	0	0	-1.7		5
29	0	1	3	7	9	1.2	1	
30	14	2	4	0	0	-1.5		9
31	4	1	5	4	6	0.4		
32	19	1	0	0	0	-2.0		1
33	2	2	4	9	3	0.5		
34	18	1	0	1	0	-1.8		4
35	2	3	0	4	11	1.0	4	
36	6	6	5	1	1	-0.8		

INFILL DESIGN PROJECT REPORT

DESIGN PREFERENCES SURVEY

Outer East (13 respondents)

Image	Very Negative	Somewhat Negative	Neutral	Somewhat Positive	Very Positive	Average Score	Rank fr/top	Rank fr/bottom
1	0	2	5	6	0	0.3		
2	0	1	4	6	2	0.7	7	
3	0	3	6	4	0	0.1		
4	0	1	7	3	2	0.5	10	
5	1	1	2	7	2	0.6	8	
6	7	5	1	0	0	-1.5		
7	1	0	0	3	9	1.5	1	
8	1	5	4	3	0	-0.3		
9	1	0	5	5	2	0.5	9	
10	8	2	2	1	0	-1.3		
11	0	1	3	5	4	0.9	4	
12	2	3	4	2	2	-0.1		
13	1	3	4	4	1	0.1		
14	1	2	3	6	1	0.3		
15	7	6	0	0	0	-1.5		10
16	9	3	1	0	0	-1.6		7
17	0	0	5	4	4	0.9	5	
18	3	1	4	4	1	-0.1		
19	9	4	0	0	0	-1.7		5
20	4	3	1	5	0	-0.5		
21	9	2	2	0	0	-1.5		8
22	1	2	4	4	2	0.3		
23	1	2	4	4	2	0.3		
24	10	2	0	1	0	-1.6		6
25	8	4	1	0	0	-1.5		9
26	4	2	4	3	0	-0.5		
27	2	2	1	5	3	0.4		
28	10	2	1	0	0	-1.7		3
29	0	2	0	7	4	1.0	2	
30	10	2	1	0	0	-1.7		4
31	2	2	5	3	1	-0.1		
32	11	1	1	0	0	-1.8		2
33	0	0	2	9	2	1.0	3	
34	11	2	0	0	0	-1.8		1
35	0	0	6	4	3	0.8	6	
36	2	4	3	3	1	-0.2		

Westside (6 respondents)

Image	Very Negative	Somewhat Negative	Neutral	Somewhat Positive	Very Positive	Average Score	Rank fr/top	Rank fr/bottom
1	1	1	0	3	1	0.3		
2	0	0	1	3	2	1.2	7	
3	1	2	1	0	2	0.0		
4	0	0	1	4	1	1.0		
5	0	0	2	2	2	1.0	10	
6	4	2	0	0	0	-1.7		4
7	0	0	0	3	3	1.5	4	
8	1	2	2	1	0	-0.5		
9	0	0	3	3	0	0.5		
10	2	3	0	1	0	-1.0		
11	1	2	0	0	3	0.3		
12	0	1	1	2	2	0.8		
13	0	1	1	1	3	1.0	8	
14	0	0	0	2	4	1.7	1	
15	3	0	2	1	0	-0.8		
16	3	3	0	0	0	-1.5		9
17	0	0	0	2	4	1.7	2	
18	2	0	0	0	4	0.7		
19	4	2	0	0	0	-1.7		5
20	0	1	3	0	2	0.5		
21	3	1	0	1	0	-1.2		10
22	0	2	1	3	0	0.2		
23	0	0	2	3	1	0.8		
24	5	1	0	0	0	-1.8		2
25	4	2	0	0	0	-1.7		6
26	1	1	2	1	1	0.0		
27	0	0	1	1	4	1.5	5	
28	4	2	0	0	0	-1.7		7
29	0	0	0	2	4	1.7	3	
30	5	0	1	0	0	-1.7		8
31	0	1	1	2	2	0.8		
32	6	0	0	0	0	-2.0		1
33	0	1	0	3	2	1.0	9	
34	5	1	0	0	0	-1.8		3
35	0	0	1	2	3	1.3	6	
36	1	0	2	3	0	0.2		

Your neighborhood: \_\_\_\_\_



**Infill Design**

**Design Preferences Survey**

For each numbered image on the survey display boards, please use this form to indicate the extent to which you would consider the design of the pictured housing to be a **negative** or **positive** addition to the character of multidwelling-zoned areas in your neighborhood.

Your responses will help planning staff identify what housing types and design features are considered desirable by community members and should be encouraged. At the top of this form, be sure to indicate the name of your neighborhood, so staff can learn whether or not design preferences vary in different parts of the city.

Image Number	Very Negative	Somewhat Negative	Neutral	Somewhat Positive	Very Positive
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Image Number	Very Negative	Somewhat Negative	Neutral	Somewhat Positive	Very Positive
19	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Design Issues and Priorities Questionnaire Compiled Responses

(see page 29 for questionnaire form)

**General observations:** Respondent’s top priorities tended to be for windows oriented to the street, pedestrian-friendly street frontages, compatible building scale and patterns, minimizing environmental impacts, and providing usable open space. Providing adequate off-street parking and minimizing privacy impacts tended not to be top priorities, except in Outer East, where respondents placed a high priority on providing off-street parking.

<b>Citywide</b> (91 respondents)	<b>Not Important</b>	<b>Somewhat Important</b>	<b>Very Important</b>
1. Pedestrian-friendly street frontages	3	16	70
2. Adequate off-street parking	17	45	29
3. Compatible building scale and patterns	6	24	60
4. Architectural features	7	33	51
5. Orienting windows to the street	3	16	71
6. Minimizing impacts on privacy	5	58	27
7. Usable open space	6	31	54
8. Minimize environmental impacts	5	30	55
9. Low construction cost / affordable housing	8	45	34

<p><b>Top Priorities:</b></p> <ol style="list-style-type: none"> <li>1. Orienting windows to the street</li> <li>2. Pedestrian-friendly street frontages</li> <li>3. Compatible building scale and patterns</li> <li>4. Minimize environmental impacts</li> </ol>
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<b>Inner Southeast</b> (26 respondents)	<b>Not Important</b>	<b>Somewhat Important</b>	<b>Very Important</b>
1. Pedestrian-friendly street frontages	0	5	21
2. Adequate off-street parking	5	15	7
3. Compatible building scale and patterns	2	7	16
4. Architectural features	4	9	13
5. Orienting windows to the street	1	3	22
6. Minimizing impacts on privacy	3	16	6
7. Usable open space	1	8	17
8. Minimize environmental impacts	1	6	19
9. Low construction cost / affordable housing	2	13	9

<p><b>Top Priorities:</b></p> <ol style="list-style-type: none"> <li>1. Orienting windows to the street</li> <li>2. Pedestrian-friendly street frontages</li> <li>3. Minimize environmental impacts</li> <li>4. Usable open space</li> </ol>
--

<b>Inner North / Northeast</b> (91 respondents)	<b>Not Important</b>	<b>Somewhat Important</b>	<b>Very Important</b>
1. Pedestrian-friendly street frontages	1		15
2. Adequate off-street parking	5	8	5
3. Compatible building scale and patterns	2	7	10
4. Architectural features	2	7	9
5. Orienting windows to the street		4	14
6. Minimizing impacts on privacy	1	12	5
7. Usable open space	2	8	8
8. Minimize environmental impacts	2	5	11
9. Low construction cost / affordable housing	1	8	8

- Top Priorities:**
1. Pedestrian-friendly street frontages
  2. Orienting windows to the street
  3. Minimize environmental impacts
  4. Compatible building scale and patterns

<b>Outer East</b> (9 respondents)	<b>Not Important</b>	<b>Somewhat Important</b>	<b>Very Important</b>
1. Pedestrian-friendly street frontages	1	3	5
2. Adequate off-street parking	1	2	6
3. Compatible building scale and patterns	1		8
4. Architectural features		2	7
5. Orienting windows to the street		4	5
6. Minimizing impacts on privacy		5	4
7. Usable open space		4	5
8. Minimize environmental impacts	1	1	7
9. Low construction cost / affordable housing	2	7	

- Top Priorities:**
1. Compatible building scale and patterns
  2. Architectural features
  3. Minimize environmental impacts
  4. Adequate off-street parking

<b>Westside</b> (4 respondents)	<b>Not Important</b>	<b>Somewhat Important</b>	<b>Very Important</b>
1. Pedestrian-friendly street frontages			4
2. Adequate off-street parking		3	1
3. Compatible building scale and patterns		1	3
4. Architectural features		3	1
5. Orienting windows to the street			3
6. Minimizing impacts on privacy		1	3
7. Usable open space			4
8. Minimize environmental impacts		1	3
9. Low construction cost / affordable housing		2	2

- Top Priorities:**
1. Pedestrian-friendly street frontages & Usable open space
  2. Compatible building scale and patterns & Minimize impacts on privacy & Minimize environmental impacts

## Comments written in answer area of questionnaire form:

### 1. Pedestrian-friendly street frontages

- “More important is creation of small sub-communities (i.e., orient units in a development toward one another.”
- “I need you to define this. Too subjective”

### 2. Provision of adequate off-street parking

- “One Car – One Unit”
- “Depends on increase in development density”
- “Depends on transit & nearby services”
- “For what income groups? – Not important for low income stuff. Very important for higher end stuff.”

### 3. Compatible building scale and continuation of neighborhood building patterns

- “May need to begin breaking/transitioning (e.g., along transit routes)”
- “Style. Patterns/siting”
- “Most Important”
- “With what is there today, or what is envisioned for the area? Historic district?”

### 4. Including architectural features (roof forms, porches, trim, etc.) common in the neighborhood

- “OK to modernize”
- “Creative, interesting forms like A-frames or geodesic domes that are not prevalent in the area but provide interest should not be discouraged.”
- “Adding detail adds quality – ‘affordable’ and ‘cheap’ are not synonymous”

### 5. Orienting windows to the street for “eyes on the street” and connection to the community

- “Policing/Neighborhood Watch”
- “‘Connection to the community’ – definition?”

### 6. Minimizing impacts on the privacy of neighboring properties

- “Not important if light & air access are unaffected”
- “Very important”

### 7. Providing usable open space

- “Seniors & children who ‘live in’ the neighborhood 24/7”
- “Depends on other nearby opportunities”
- “Public open space – very important; private open space not as important”

### 8. Minimization of environmental impacts, such as by limiting impervious surfaces

## 9. Keeping construction costs low to facilitate affordable housing

- “Starting w/homeless restrooms, showers, laundry”
- “As 1 component in each area – no variety exists”
- “The question is how to address #1-8 and keep costs down!”
- “Depends”
- “Allow for range”
- “Most important”
- “We have enough”
- “More important; allow diversity in types of housing - ?, duplexes on corners, etc.”
- “I question your premise”

## “Other design-related issues that you consider to be important:” Comments

I belong to a group of people hoping to establish a co-housing community in close-in southeast Portland. Your design examples give us a great deal of hope! What I really want to see is more developments similar to Hasting Green that will make “housing development” communities where children can grow up safely, knowing their neighbors. It’s also important that somehow aesthetics be highly valued and that sustainability be paramount. Where neighbors stick around crime rates decrease and local resources (e.g., schools) are strengthened. Encourage development that is adequate for all phases of life, for folks with physical disabilities, etc. Making rental communities available is also important for low-income residents.

- 
1. Providing usable outdoor living space for each dwelling unit (fences garden, deck, terrace, front porch, porte-cochere usable for living space when not occupied by vehicle. (Open space should be usable for living beyond simply being a setback buffer)
  2. Provide for modest density bonus for 2 adjacent lots, one on a corner. Corner lots provide more options for site development and more chance to “tame” garages or carports. Interior lots tend to become visually dominated by driveways and garages.
  3. Visual quality goals should be built into new regulations for multi-family (medium/high density development) such as listed on opposite side of this sheet.
  4. Whenever possible, alleys or service cul-de-sacs should be inserted into older low-density subdivisions slated for higher density.
  5. Even within 500 ft of light rail or transit some off-street parking should be required. If only one space per unit.
  6. Garages should be required to remain available for vehicle parking, not converted to “mini-storages”

Retired architect and Planner (AICP), not registered in Oregon. I designed and built a 4-unit complex at R-3 density on a lot of 85’ X 180’ in Calif. That preserved the neighborhood scale, provided generous fenced yards for each unit, 8 off-street covered spaces, and affordable rents. It can be done.

- 
1. Street-facing window requirements should specify no “screening” allowed in front of windows as was proposed at 44<sup>th</sup>/Division and approved by staff. Need to allow “burglar bars,” but nothing with a wider cross-section, or closer spacing. Specify minimum spacing.
  2. Buildings with eaves should be required to have at least 2’ projection of eaves.
  3. Require entrances facing street, and directly visible from street (in a line perpendicular to the front lot line) – Facing or at 45° – must be directly visible.
  4. Number of entrances facing street: one central – cannot be to one side – entrance (a gate) or each unit within 10’ of street needs entrance on street? Option of one or other.

5. Do not allow garage doors in front, projecting beyond the front door (similar to single-family requirements). (Or beyond the closest entry door.)
6. Require trim at corners and at windows, on buildings with wood siding. Project at least ¾”
7. On brick, stone, or stucco, facades require projecting cornices.
8. Require porch, min 4’ deep, over each unit entry.
9. On any façade, no more than two stories of height before it’s broken up by an architectural element.

(Drawing)

10. Require windows facing street, on all types (residential and commercial) in all zones (residential or commercial).
11. Require windows on sidewalks (facing adjacent properties) as well (at a lower rate than front).”

Infill sites that absentee landlords or negligent landlords won't sell or redevelop. 1327 SE Oak Street has been a very ugly “vacant” parking lot for over 30 years & John Bastasch is just sitting there, lingering w/rusty cars. We’d like to see the property put to better use. (Oak Street Rowhouses resident)

Good development – Hasting Place (PUD) between SE 70<sup>th</sup>/SE 21<sup>st</sup> Ave between SE Windsor Ct & SE Taggart (SE Clinton in the middle). Patrick Jackson – JDA Architects & Planners, Inc., 813 SW Alder St., Ste 600, 97205, 505-228-5426. [www.hastingsgreen.com](http://www.hastingsgreen.com)

Hawthorne Place – SE Hawthorne & SE 35<sup>th</sup> Ave. – nice “village” look – pedestrian-friendly.

Review/revise – visual preference survey (TriMet), we don’t want row houses exclusively everywhere (e.g., 3 story duplexes/triplexes next to 1 story houses, apts)! Looks too much like sky scrapers in neighborhoods – see SE 77<sup>th</sup> & SE Division St further west on SE Division St in the 44<sup>th</sup> Ave (?) area. This is bad development. Also tearing down garages to existing houses and not replacing them! Every home needs a garage.

Other bad development: Snout-nosed garages – prominent garages. Too much

Concrete/asphalt – less grass, poor landscaping/too much landscaping to hide houses

Older properties usurping city easements – e.g., SE 71<sup>st</sup> & SE Clinton St. . Look at the bushes! Also on dirt sections – unimproved street along SE Woodward in STNA where the chainlink fence has a street sign inside it as if the homeowner owns the street sign! (We noticed this during Clinton/Woodward bikeway projects)

Fence heights 3 ½’ vs. 6’ – not enforced.

INFILL DESIGN PROJECT REPORT

DESIGN ISSUES AND PRIORITIES QUESTIONNAIRE

Property line disputes: “adverse possession” not restricted by count/city, only courts! Such “corrections” should be recorded at county & court.

Require all developers to go to NA/BA mtgs for any new development they plan even if they don't require a Type I, Type II, Type III land use hearing, even if the zoning allows the development.

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Keep porches at same level as those of surrounding houses (avoid “SUV” houses with raised porches)

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Community gathering spaces  
Open group spaces/pocket parks  
Benches, kiosks

---

Fewer curb cuts  
More color  
More vitality  
More trees  
Visible doors & porches, if appropriate  
South-facing windows

Common greens (semi-public, not gated)

Materials = key (but \$ is problem)

---

Colors – variety in row houses  
Textures – of roofs & siding, but also of windows (I really react negatively to the “flat” kind. They look so “cheesy.” Need to have some sill depth, etc.) & trims; need variety, but within area's common range.

---

Affordable housing is very important

How come infill housing often looks like ugly boxes? Why can't we have smaller houses that are affordable and look like nicer, older houses? I don't understand design very well but I've always wondered this.

---

Making affordable housing truly affordable! \$300,000 is NOT affordable housing. So, creating affordable, low-cost solutions that accommodates #1-8.

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Plantings to provide a “green fence” between infill development and existing neighbors.

---

Property owners / rental unit distribution

---

Opportunities for other sustainable bldg. practices  
 Clear entry-sidewalk relationships (related to Item #1)  
 Full development of public/semi-public—semi-private space, continuum at entries (related to Item #1)  
 Clear, concise land use & building code [?] reflective of design opportunities, constraints, & code purpose

---

A street to front door design that clearly indicates how a visitor unfamiliar to home should approach.

Elevations/volumes that illustrate what kind of spaces the home(s) provide. (i.e., larger window indicates a living space, small a sleeping space – this lets folks know it’s ok to approach towards a definitely not private space)

---

Wheelchair livability  
 Housing for 0 – 30% income families & individuals

---

I know this is unpopular, but I don’t believe that infill in pre-WWII neighborhoods should have to ape traditional architectural vernaculars. I’d prefer giving architects the flexibility to meet community values (ped orientations, previous surfaces, etc.) with new design.

---

Lack of designs for my R-10 corner duplex lot – 1 entrance faces on street; other faces another street. Also, ADU (attached or not) for new builds.

I’ve been looking for a year. No luck on internet. I’ve called everyone in Metro phone book

---

Outdoor greenspace if apartment family oriented.

Also worried too many multi-storied buildings will leave out the elderly.

Do not have multi-dwelling apartments with inner stair areas where if you have a creepy neighbor you can’t avoid them. (either enclosed or open staircase)

Support viewed narrow style house & viewed area located under 2 stories on lot that the rear had a downhill incline. Supports would not support this structure during an earthquake. Should only be on level lots or require stronger supports.

No large growing trees are being planted – only ornamentals.

---

Side streets in my neighborhood have very spotty sidewalks. Most of the new projects in my part of my neighborhood have included sidewalks at the street edge of their property, but long stretches of my neighborhood’s back streets (and even Division and Powell itself) have “pedestrian scale” homes or storefronts but lack actual sidewalks. This is a relatively acceptable situation when the place remains a neighborhood of single family homes with green front yards. Single family homes generate little enough traffic and need for streetside parking that pedestrians and cars can share the street calmly. Once multi-family dwellings such as

## INFILL DESIGN PROJECT REPORT

### DESIGN ISSUES AND PRIORITIES QUESTIONNAIRE

duplexes and apartment complexes are added, not to mention businesses with little parking, traffic increases and streetside parking increases, both of which make it more difficult for pedestrians to safely traverse the neighborhood. Some pedestrian issues could be helped by installing comprehensive sidewalks throughout the neighborhood, but this could complicate traffic/parking issues by actually serving to remove some of the space currently utilized for street parking.

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No large blank walls – should be interesting

More landscaping

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Cars parking across sidewalks in front of garage doors

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Community meeting/gathering space

Community lookout posts/towers

Vehicle-free residential areas

Community delivery terminal (for delivery of bulky/heavy items) – (common truckloading port)

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Like cottage type development very much

Use of more landscaping and less paving for parking, do not allow large expanses of barkdust – require grass or ground cover that is green

Want individual units like duplexes or small houses instead of large rectangular apartment houses

If single-family neighborhood is rezoned to R2 or R3 require multi-family units to fit into neighborhood in size, scale, and design

Common green is very attractive

Privacy issues very important especially if 2 or 3 stories in 1 story house areas

Loss of trees is a problem

Out of scale bothers neighbors

Need place for children to play

Having book of “acceptable” (by all city departments/bureaus) plans

WAY WAY WAY too complicated regs for builders or plans approval. Stuff to keep informed and design accordingly.

It gets very costly to resubmit, redraw, refigure costs

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Affordability

Affordable family housing in Central City – rowhouse, duplex, or 4-plex or apt. house

Common public space – find ways to be creative with small spaces – assists tremendously with density.

---

Other environmental considerations besides minimizing impervious surfaces

- working w/climate/site
  - solar orientation
  - nature vegetation
  - water/energy conservation strategies
  - materials/resource efficiency
- 

Use practical design guidelines & contours to mitigate difficulties & restrictions of zoning & bldg. code ideas

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Mixed income

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Creating neighborhoods that meet people’s needs – allowing for public shared space (parks, benches, gardens) and access to commercial centers.

---

Thank you for doing this open house!

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Grouping/massing units to minimize impact on neighborhood, but not going to split-lot ugly all face the same direction, same orientation, same cheap, same skinny, same same same, ugly

---

Fit to the neighborhood

---

Near schools, shopping, transit, etc.

As density increases so do the needs for infrastructure & nearby goods & services & amenities

---

Minimize/eliminate garage as first thing you see

Minimize/eliminate paving as much as possible

Green elements incorporated

Common spaces for residents & neighboring community

Interesting design features

---

Need to help community members learn to articulate what design features/elements they like and don't like.

Need plan books of good design available for small-scale developers (current design project for small lots may do this).

---

Relationships – Residential uses/spaces closer to street sidewalk should be raised up – up to a minimum of 4' at street-facing property line.

More examples are needed of housing (medium-higher density) projects that are not stylistically "Portland-y":

- RM Schindler (LA)

- Irving Gill (LA)

- Vandkunsten (Denmark)

- H. Hertzberger (Holland)

- Swedish and Japanese prefab housing examples



Your neighborhood: \_\_\_\_\_



# Infill Design

## Design Issues and Priorities

### Questionnaire

**Please rate the priority you place on the following issues related to the design of infill development:**

1. Pedestrian-friendly street frontages

                                             
 Not Important      Somewhat Important      Very Important

2. Provision of adequate off-street parking

                                             
 Not Important      Somewhat Important      Very Important

3. Compatible building scale and continuation of neighborhood building patterns

                                             
 Not Important      Somewhat Important      Very Important

4. Including architectural features (roof forms, porches, trim, etc.) common in the neighborhood

                                             
 Not Important      Somewhat Important      Very Important

5. Orienting windows to the street for “eyes on the street” and connection to the community

                                             
 Not Important      Somewhat Important      Very Important

6. Minimizing impacts on the privacy of neighboring properties

                                             
 Not Important      Somewhat Important      Very Important

7. Providing usable open space

                                             
 Not Important      Somewhat Important      Very Important

8. Minimization of environmental impacts, such as by limiting impervious surfaces

                                             
 Not Important      Somewhat Important      Very Important

9. Keeping construction costs low to facilitate affordable housing

                                             
 Not Important      Somewhat Important      Very Important

*Continued on other side*

**Other design-related issues that you consider to be important:**

Please send responses to:

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Portland, OR 97201

e-mail: [bcunningham@ci.portland.or.us](mailto:bcunningham@ci.portland.or.us)

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fax: (503) 823-5884

## Other Written Comments from the Open House Events

### General Comments

- Garage doors can be camouflaged and made more attractive
- Alleys are play space for older kids
- Basement garages off alleys allow the usual neighborhood front landscaping with rowhouses
- Front porches with seating space encourage “community”
- Floor plans? Light? Everything (*on the display boards*) is exterior info. Interior info?
- Please no more shotgun plans
- Where are houses 1000 sq. foot or larger and costing less than 100K – affordable housing for families?
- Let’s reduce code requirements for off-street parking.
- Yes! (*to above*)
- Landscaping can make a unit look much better – duh! But that would affect Preferences Survey answers too.
- I would like to see housing styles that reflect traditional Portland craftsmanship and find a way to highlight the natural environment in the NW using recycled, refurbished and natural materials.
- The buildings that are most attractive are the ones that also feel accessible.
- I would like to see housing that is affordable and livable for families with gross incomes of 30-60K.
- I would love to see a change in the number of unrelated adults that may occupy a building.
- I would love to see an “open space” development plan – to recognize the value of open space as a valuable asset other than a place to build another house.
- “Common Greens” concept which still allows individual lot ownership would be excellent.
- ADUs should still be counted in meeting minimum density requirements.
- Design is important, but it cannot fix problems caused by excessive upzoning. If the city insists on jamming 7 units into a 17,000 SF lot, you will wreck the neighborhood. Design won’t help.
- Need more ADU designs and corner duplexes that meet stringent requirements of garage depths from front/doors and window requirements. Help! I have been looking for designs for 1 yr. Internet sites have been a bust. What about help with some design comps for this?
- Couldn’t do attached houses that were attached along less than 50% of depth of units. This restriction unnecessarily limits potential design approaches.
- Need to allow more types of pervious driveway surfaces. City requirements for concrete or asphalt prevent possibilities such as brick pavers or plastic interlocking rings.

**Responses to “Identify positive and negative examples of recent multidwelling and rowhouse development, especially in and around your neighborhood”:**

- Madison & 37<sup>th</sup> looks good
- 
- Hastings Place/Greens – PUD – positive!
  - Image #34 on SE Division St. – negative – back is to street & another around 44<sup>th</sup> & SE Division St. (3 story rowhouse, duplex), SE 77<sup>th</sup> & SE Division St. – 3 story duplex/triplex – negative.
  - Rowhouses are now too many & too cookie cutter.
- 
- NE Failing /9<sup>th</sup> – Duplex I like.
  - NE/N Cook & Vancouver has a number of “mother-in-law” unit projects that I love. Mixing ownership with an element of rental seems the best way to control the upkeep standards of rentals and resolution of issues.
  - Can an individual get Section 8 funding permitted for a mother-in-law unit?
  - I hate most of the duplex projects in my neighborhood.
- 
- I live at ... SE 109<sup>th</sup> Ave. (*south of Division*). The infill that impacts me most, of perhaps 4 recent infills along my street, is the flag lot next door. The new pair of duplexes ...are oriented perpendicular to surrounding pre-existing single family dwellings. This means their front doors and bedroom windows look into my kitchen and overlook both my front and back yards. An average of 7 people reside in each 3 bedroom unit. With a huge driveway along their front doors and additional parking between the buildings, there is little greenspace, so instead of a tire swing and a 60 year old cherry tree all those children play in that driveway (among approximately 16 cars) and in my driveway as well as in 109<sup>th</sup> Ave.
  - A lot can be done with façade. The duplexes (*near my house*) as well as the new Foxstar apartment complex on the corner of 109<sup>th</sup> and Division are all beige. There are dark purple (which I like) and light green (which I loathe, but notice) rowhouses along Division between 122<sup>nd</sup> & 145<sup>th</sup> that seem less cookie-cutter just due to color.
- 
- Positive – approximate location 105<sup>th</sup> & Market – duplex type rowhouse, blends with existing houses & attracted owners who keep them maintained.
  - Other positive, Cherrywood complexes buildings that are under 4 stories.
  - Negative – apartments 4 stories & taller overshadow everything else.
  - Also, apartments that are cheap like Rockwood’s – attract crime.

OTHER WRITTEN COMMENTS

**Responses to “What character-defining features of your neighborhood do you especially want to see continued in new infill development in areas zoned for multidwelling development? Or, is there a desire *future* character for these areas, different than what currently exists, that you would like to see new development help create?”:**

- More Craftsman style, big overhangs = energy savings & lower weathering = lower maintenance cost. Usable porches. (Richmond neighborhood)
- 
- Why not revisit the old walk-up plexes people used to call boarding houses? Why not revisit Victorian styles? Revisit Visual Preferences Survey for Tri-Met’s Railvolution. (*South Tabor neighborhood*)
- 
- I would like to see more stipends afforded toward converting very large historic homes into multifamily projects. There is too much ease in tear-downs in my neighborhood due to poor foundations. (*King/Irvington neighborhood*)
  - What about very small sites with a new larger home on it? This does not guarantee more density, but it does increase the possibilities for affordable housing for families.
  - If a full flight of stairs is req’d to get to front door – break it up, plant it in a solid base (not suspended in air).
- 
- Discourage the alienating feel of so many single family neighborhoods where we drive up to our homes, go in the front door, hang out in our fenced backyards, etc. Encourage people to tear down fences, etc., and by all means encourage new development which fosters community (like Hastings Green does). (*Belmont/Sunnyside neighborhood*)
- 
- One, perhaps beyond the scope of this study, is that in existing neighborhoods where there is a pattern of one single family dwelling (of a certain size) on a lot of a certain size, open land of that size within the neighborhood should be zoned for one single family dwelling of the typical size of houses on adjoining properties, not for multi-family dwellings. The pair of duplexes built next door to me caused three 60 year old fruit trees to be razed, which would not have been necessary (or desirable) if a single-family home had been the zone’s preferred infill project. (*Powellhurst-Gilbert neighborhood*)
- 
- Landscaping with grass, not just shrubbery, balconies or decks, patios, etc., so people aren’t confined indoors. Please – less vinyl siding. It doesn’t absorb sound and deflects it into the neighborhood. It also tends to make buildings look cloned. (*Hazelwood neighborhood*)

# Appendix H | Summary Project Information

This appendix is a compilation of summary information on recent medium-density residential projects that include features that contribute to meeting the community’s design objectives. These projects serve to illustrate how built projects have used design strategies that achieve objectives such as minimization of the prominence of parking, contribution toward pedestrian-friendly street frontages, response to established neighborhood patterns, or that serve as examples of innovative housing types and configurations. The selection of examples is intended to reflect a range of construction costs.

Some of these projects (along with others not included here) will be used as case studies, intended to highlight various infill design strategies and their financial viability, as part of an anticipated “Infill Design Guide.” More detailed project information, including information on construction costs and techniques, will be provided as part of this future document.

Most project information included in this appendix comes from Bureau of Development Services building permit records. The accuracy of some of this information has not been verified with project developers, owners, or designers.

Projects are organized first by housing type, secondarily by configuration, and then (somewhat loosely) by density:

Rowhouses.....	Page H-2
Duplexes.....	Page H-14
Plexes .....	Page H-15
Cluster Housing.....	Page H-22
Courtyard Townhouses.....	Page H-26
Apartment Buildings.....	Page H-28

## Rowhouse Example 1

### Basic Information

Housing type: Rowhouses, rear garages  
 Neighborhood: Russell  
 Address: 1529-1549 NE 132<sup>nd</sup> Avenue  
 Zoning: R3  
 Site size: 18,270 SF  
 Units: 6  
 Density: 1 unit per 3,045 SF (14 units/acre)  
 Parking: 12 spaces (in rear garages detached from primary structure)  
 Size of units: 1257-1471 SF (3 bdrms)  
 Year completed: 2000  
 Developer: Status Corp.  
 Designers: Design Headquarters



### Comments

An uncommon (in Portland) example of a rowhouse project that includes both rear parking and rear yards, a combination facilitated by the 120' depth of the site. The resulting lot sizes, however, fail to meet the minimum density requirements of the R2 zone, which is the multidwelling zone where the largest amount of rowhouse development occurs. Rooflines and porches provide a horizontal emphasis that responds more successfully to the ranch houses and other low-lying houses that predominate in the surrounding neighborhood than would the more typical rowhouse arrangement of multiple front gables.

## Rowhouse Example 2

### Basic Information

Housing type: Rowhouses, rear parking  
 Neighborhood: Boise  
 Address: 4102-4120 N Mississippi St.  
 Zoning: CSd  
 Site size: 9985 SF  
 Units: 4  
 Density: 1 unit per 2496 SF (18 units/acre)  
 Parking: 4 spaces (parking pads accessed from alley)  
 Size of units: 1312 SF (3 bdrms)  
 Year completed: 2001  
 Developer: Portland Habitat for Humanity  
 Designers: FWL Architects



### Comments

Rowhouses on 100'-deep lots with parking accessed from pre-existing alley, which allowed for both rear yards and rear parking pads.

### Rowhouse Example 3

#### Basic Information

Housing type: Rowhouses, rear parking  
 Neighborhood: Brooklyn  
 Address: 3904-3932 SE 16<sup>th</sup> Ave. (“City Life”)  
 Zoning: R2  
 Site size: 14,101 SF  
 Units: 6  
 Density: 1 unit per 2350 SF (19 units/acre)  
 Parking: 6 spaces (along rear alley)  
 Size of units: 1231 SF (3 bdrms)  
 Year completed: 1995  
 Developer: REACH Community Development  
 Designers: Roderick Ashley and Andrew Feinberg



#### Comments

Winners of the 1994 “City Life” design competition, these rowhouses provide private outdoor space between each unit, but fail to meet the current 50% attachment requirement. Parallel parking on the one-way alley allows additional rear-yard space.

### Rowhouse Example 4

#### Basic Information

Housing type: Rowhouses, rear garages  
 Neighborhood: Powellhurst-Gilbert  
 Address: SE Steele St. & SE 136<sup>th</sup> Ave.  
 (“Stark Street Town Homes”)  
 Zoning: R2a  
 Site size: 105,340 SF (incl. 22,610 SF street area)  
 Units: 36 (34 rowhouses, 2 ADUs)  
 Density: 1 unit per 2298 SF (19 units/acre)  
 Parking: 2 spaces per unit (1 garage, 1 surface)  
 Size of units: 1162-1822 SF (3 bdrms)  
 Year completed: 2000  
 Developer: Housing Alternatives  
 Designers: Delvin L. Mace, Architect & Planner



#### Comments

Configuration of this rowhouse project allows both rear parking and a rear outdoor area by utilizing single-width rear garages, leaving a small unbuilt space to the rear of each lot. Most of these spaces, however, are paved to provide additional parking; only a minority are landscaped.

## Rowhouse Example 5

### Basic Information

Housing type: Rowhouses, rear garages  
 Neighborhood: Corbett-Terwilliger-Lair Hill  
 Address: 6130-6160 SW Virginia St.  
 ("Walker Rowhouses")  
 Zoning: CGd  
 Site size: 13,631 SF  
 Units: 6  
 Density: 1 unit per 2272 SF (19 units/acre)  
 Parking: 12  
 Size of units: 1334-1658 SF (2 bdrms)  
 Year completed: 1993  
 Developer: Urban Homes  
 Designers: Cornerstone Architecture & Planning

### Comments

The only rowhouse project built during Southwest Portland's late-1980s/early-1990s rowhouse building boom to feature rear parking. Also one of Portland's few rowhouse projects built on a 100'-deep site to include both rear garages and rear yards (albeit, only 10' deep).



## Rowhouse Example 6

### Basic Information

Housing type: Rowhouses, rear garages  
 Neighborhood: Creston-Kenilworth  
 Address: 3714-3832 SE 33<sup>rd</sup> Pl.  
 Zoning: R2  
 Site size: 26,748 SF  
 Units: 13  
 Density: 1 unit per 2058 SF (21 units/acre)  
 Parking: 13  
 Size of units: 1102-1112 SF (2 bdrms)  
 Year completed: 1998  
 Developer: Donald Pollock/Northland Homes  
 Designers: Rowell Engineering & Design

### Comments

Site depth of 120' (unusual in close-in neighborhoods) allowed both rear-accessed garages and rear yards.



## Rowhouse Example 7

### Basic Information

Housing type: Rowhouses, rear garages  
 Neighborhood: Sullivan's Gulch  
 Address: 1626-1630 NE Halsey St.  
 Zoning: RH  
 Site size: 4350 SF  
 Units: 2  
 Density: 1 unit per 2175 SF (20 units/acre)  
 Parking: 2 (rear garages)  
 Size of units: 1905-2020 SF (2 bdrms)  
 Year completed: 2000  
 Developer: Marvin Wakefield and Tim and Susan Brown  
 Designers: Colab Architecture

### Comments

Part of a larger project that also includes Rowhouse Example 8. For both, rear parking allows landscaped front setbacks that continue established neighborhood patterns.



## Rowhouse Example 8

### Basic Information

Housing type: Rowhouses, rear garages  
 Neighborhood: Sullivan's Gulch  
 Address: 1409-1427 NE 17<sup>th</sup> Ave.  
 Zoning: RH  
 Site size: 6440  
 Units: 4  
 Density: 1 unit per 1610 SF (27 units/acre)  
 Parking: 4 (rear garages)  
 Size of units: 1782-2057 SF (2 bdrms)  
 Year completed: 1998  
 Developer: Marvin Wakefield and Tim and Susan Brown  
 Designers: Colab Architecture

### Comments

Rowhouses with contemporary design, whose landscaped front setbacks and lack of front garages result in street frontages that continue the green, landscaped character of the surrounding neighborhood.



## Rowhouse Example 9

### Basic Information

Housing type: Rowhouses, rear garages  
 Neighborhood: Pearl District  
 Address: NW Irving & NW 11<sup>th</sup>/12<sup>th</sup>  
 Zoning: EXd  
 Site size: 22,000 SF  
 Units: 14  
 Density: 1 unit per 1571 SF (28 units/acre)  
 Parking:  
 Size of units: 845-2296 SF (2 bdrms)  
 Year completed: 1996  
 Developer: Urban Homes  
 Designers: MCM Architects

### Comments

This project shares a newly-created mid-block alley with Rowhouse Example 10, allowing rear-accessed parking and small, private courtyards (located between the residences and their garages).



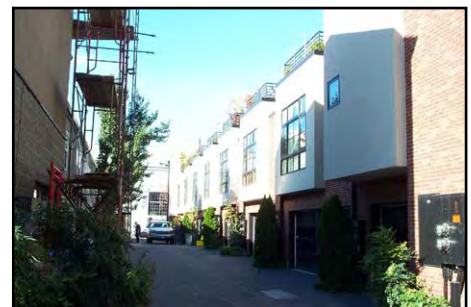
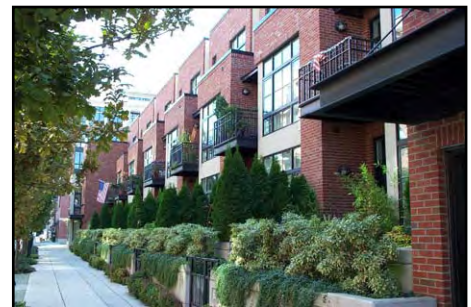
## Rowhouse Example 10

### Basic Information

Housing type: Rowhouses, rear garages  
 Neighborhood: Pearl District  
 Address: NW Johnson & NW 11<sup>th</sup>/12<sup>th</sup>  
 (“Johnson Street Townhouses”)  
 Zoning: EXd  
 Site size: 19,000 SF  
 Units: 13  
 Density: 1 unit per 1462 SF (30 units/acre)  
 Parking: 14 (rear garages)  
 Size of units: 1750-2840 SF  
 Year completed: 2000  
 Developer: Hoyt Street Properties  
 Designers: Mithun Partners

### Comments

Units are raised above street level and set back behind landscaped terraces, providing privacy in a high-density urban environment. Units feature private courtyard spaces that provide natural light and an outdoor amenity.



## Rowhouse Example 11

### Basic Information

Housing type: Rowhouses and ADUs,  
rear garages  
Neighborhood: Hosford-Abernethy  
(Ladd's Addition Historic District)  
Address: 1822-1836 SE 12<sup>th</sup> Ave.  
Zoning: R1  
Site size: 10,148 SF  
Units: 4 rowhouses and 2 ADUs  
Density: 1 unit per 1691 SF (26 units/acre)  
Parking: 6 spaces (alley garages, detached from primary structures)  
Size of units: 1566 SF ( 2 bdrms), 725 SF ADUs  
Year completed: 1996  
Developer: Nanette Watson  
Designers: Winn Architecture

### Comments

This project's massing (gables shared between two units, instead of the more usual arrangement of separate gables) reflects house forms of the surrounding neighborhood. Met R1 zone density requirements by including ADUs over rear garages (this is not currently allowed).



## Rowhouse Example 12

### Basic Information

Housing type: Rowhouses and ADUs,  
rear garages  
Neighborhood: Northwest District  
Address: 1928-1974 NW Overton St. ("Overton Townhomes")  
Zoning: EXd  
Site size: 26,000 SF  
Units: 12 rowhouses and 2 ADUs  
Density: 1 unit per 1875 SF (23 units/acre)  
Parking: 24 spaces (in attached rear garages)  
Size of units: Rowhouses 2024-2251 SF  
ADUs 484 SF  
Year completed: 2003  
Developer: M. K. Development Company  
Designers: Barry R. Smith, Architect

### Comments

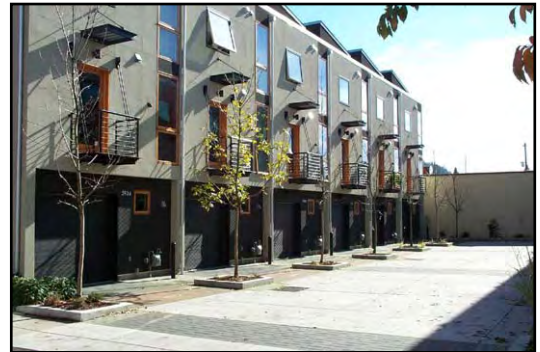
These are technically condominium townhouses, not rowhouses, since all the units are on a shared lot. End units feature "ADUs" (or bonus space) above rear garages.



## Rowhouse Example 13

### Basic Information

Housing type: Rowhouses, rear parking (?)  
 Neighborhood: Center  
 Address: 5910-5954 NE Hoyt St.  
 (“Center Commons Town Homes”)  
 Zoning: RH  
 Site size: 33,240 (portion of larger project)  
 Units: 26  
 Density: 1 unit per 1278 SF (34 units/acre)  
 Parking: 26 spaces (rear garages)  
 Size of units: 1505 – 1567 SF (2 bedrooms)  
 Year completed: 2001  
 Developer: Innovative Housing  
 Designers: Otak Architects



### Comments

Rowhouses with contemporary design, whose rear parking allows for a more pedestrian-friendly street frontage. Trees located between the rear garages help relieve the hardscape of the rear alley.

## Rowhouse Example 14

### Basic Information

Housing type: Rowhouses, rear garages  
 Neighborhood: Beaumont-Wilshire  
 Address: 4602-4642 NE Fremont St.  
 (“Alameda Row”)  
 Zoning: R2h  
 Site size: 7000 SF (portion of larger project)  
 Units: 4  
 Density: 1 unit per 1750 SF (25 units/acre)  
 Parking: 8 spaces (in attached rear garages)  
 Size of units: 1308-1318 SF (2 bdrms)  
 Year completed: 2002  
 Developer: GPB Development  
 Designers: Merrick Architecture & Planning



### Comments

Impervious surface was minimized by limiting width of the rear alley to just 12’ and including landscaping between garages. Cantilevered rear balconies made vertical use of space otherwise used only for vehicle maneuvering, but required code adjustments as lot coverage limits were exceeded.

## Rowhouse Example 15

### Basic Information

Housing type: Rowhouse, rear parking  
 Neighborhood: Montavilla  
 Address: 360-364 NE 78<sup>th</sup> Ave.  
 Zoning: R2.5  
 Site size: 5000 SF  
 Units: 2  
 Density: 1 unit per 2500 SF (17 units/acre)  
 Parking: 4 (rear surface parking?)  
 Size of units: 2260 SF (3 bdrms)  
 Year completed: 2001  
 Developer: John Skoro / A & J Quality Construction  
 Designers: Scott Benthin & Associates



### Comments

This project, on a site with less than 50' of street frontage, indicates that rear parking is possible on even very small sites.



## Rowhouse Example 16

### Basic Information

Housing type: Rowhouses, rear surface parking and shared common area  
 Neighborhood: King  
 Address: NE Killingsworth & Mallory  
 Zoning: R1ah  
 Site size: 8300 SF  
 Units: 5  
 Density: 1 unit per 1660 SF (26 units/acre)  
 Parking: 5 spaces (rear surface parking)  
 Size of units: 974-1184 SF  
 Year completed: 2001  
 Developer: Habitat for Humanity  
 Designers: Fletcher Farr Ayotte



### Comments

Surface parking and a shared outdoor area are provided in a commonly-held tract, an unusual arrangement for a rowhouse project. Results in a space- and cost-efficient parking configuration.

## Rowhouse Example 17

### Basic Information

Housing type: Rowhouses, side parking pads  
 Neighborhood: King  
 Address: 3544-3548 NE 6<sup>th</sup> Ave.  
 also 4205-4209 NE 6<sup>th</sup> Ave.  
 Zoning: R2.5a  
 Site size: 5000 SF  
 Units: 2  
 Density: 1 unit per 2500 SF (17 units/acre)  
 Parking: 4 spaces (parking pads)  
 Size of units: 1332 SF  
 Year completed: 1999  
 Developer: Sabin CDC  
 Designers: Portland Community Design



4205-4209 NE 6<sup>th</sup> Avenue:



### Comments

The form of these paired rowhouses reflects the surrounding neighborhood pattern of houses on 50'-wide lots. Instead of separate gables for each unit, the units share the same side-gabled roof, similar in form to the "house-like" duplex bungalows built in Portland in the early 20<sup>th</sup> century. The use of parking pads provides off-street parking at minimal cost, while avoiding the visual impacts associated with garage doors and allowing backyards (which are not possible in conjunction with rear parking on small sites). Locating the parking pads toward the sides allows the landscaped front yards to be the central visual focus. This arrangement, however, is no longer permitted in the R2.5 zone, where these projects were built.

## Rowhouse Example 18

### Basic Information

Housing type: Rowhouses, side parking pad  
 Neighborhood: Eliot  
 Address: 601-609 NE Graham St.  
 Zoning: R2a  
 Site size: 5375 SF  
 Units: 2  
 Density: 1 unit per 2688 SF (16 units/acre)  
 Parking: Side parking pad for 1 unit  
 Size of units: 1452 SF (3 bdrms)  
 Year completed: 1999  
 Developer: Anne Galisky  
 Designers: James Kaczmarowski



### Comments

Paired rowhouses whose form is similar to a single house, accommodating greater density while allowing a seamless continuation of existing neighborhood patterns.

## Rowhouse Example 19

### Basic Information

Housing type: Rowhouses, front garages  
 Neighborhood: Center  
 Address: 307-317 NE 56<sup>th</sup> Ave.  
 Zoning: R2  
 Site size: 6000 SF  
 Units: 3  
 Density: 1 unit per 2000 SF(22 units/acre)  
 Parking: 3 (front garages)  
 Size of units: 1304 SF  
 Year completed: 1997  
 Developer: NOHZ Group  
     – DUBCO Investments/Cambridge Classic Homes  
 Designers: J. E. Krause, Architect



### Comments

The prominence of front garages is minimized in this project by their being recessed between living spaces and by providing relatively wide frontages for each unit, allowing the garages to not occupy the majority of the ground level of each unit. The recessed garages also highlight the individuality of each unit.

## Rowhouse Example 20

### Basic Information

Housing type: Rowhouses, front garages  
 Neighborhood: Eliot  
 Address: NE Knott & NE Russell streets, 500 block  
     ("Knott Street Townhomes")  
 Zoning: RH  
 Site size: 75,630 SF  
 Units: 42  
 Density: 1 unit per 1801 SF (24 units/acre)  
 Parking: 1 space each (attached front garages)  
 Size of units: 1199-1338 SF( 2-3 bdrms)  
 Year completed: 1999  
 Developer: L & W Development  
 Designers: Robert S. Leeb, Architects & Planners



### Comments

Wider rowhouses, such as these 25'-wide examples, allow preservation of some on-street parking, front landscaping, and ground-level living space. Higher density was achieved with relatively shallow lots and the use of a mid-block "woonerf"-type street, which allowed additional lots to be created at the center of the site.

## Rowhouse Example 21

### Basic Information

Housing type: Rowhouses, front garages  
Neighborhood: Humboldt  
Address: 4910-4914 N. Williams Street  
Zoning: R1a  
Site size: 5426  
Units: 2  
Density: 1 unit per 2713 SF (16 units/acre)  
Parking: 2 (attached front garages)  
Size of units: 1700 SF  
Year completed: 1999  
Developer: Northeast CDC  
Designers: Giuliette & Associates



### Comments

This project avoids the “towering” appearance typical of three-level rowhouses by strategies such as partially-excavated basement parking, upper-level living space accommodated within dormers, and roof forms and porches emphasizing the horizontal. Reflects the form of nearby bungalows.

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## Rowhouse Example 22

### Basic Information

Housing type: Rowhouses, grouped front garages  
Neighborhood: Richmond  
Address: 3823-3827 SE Woodward St.  
Zoning: R2.5  
Site size: 5002 SF  
Units: 2  
Density: 1 unit per 2501 SF (17 units/acre)  
Parking: 2 (attached front garages)  
Size of units: 1984 – 2060 SF (3 bdrms)  
Year completed: 2003  
Developer: George A. Zifcak & Co.  
Designers: Barry R. Smith, Architect



### Comments

Prominence of front driveway is minimized by narrowing its width near the sidewalk, which also allowed additional landscaping and tree preservation. This “neck-down” approach is now required for rowhouse development in the R2.5 zone, but not in the multidwelling zones.

## Rowhouse Example 23

### Basic Information

Housing type: Rowhouses, front garages  
 Neighborhood: Powellhurst-Gilbert  
 Address: 12003-12007 SE Schiller St.  
 Zoning: R2a  
 Site size: 4575 SF  
 Units: 2  
 Density: 1 unit per 2288 SF (19 units/acre)  
 Parking: 2 (front garages)  
 Size of units: 1321 SF (2 bdrms)  
 Year completed: 1999  
 Developer: Comer Development Co.  
 Designers: Hochhauser/Blatter Architecture & Planning



### Comments

Illustrates how driveways with only treads paved can minimize impervious surface area and allow continuation of the patterns of landscaped front yards characteristic of most residential neighborhoods.

## Rowhouse Example 24

### Basic Information

Housing type: Rowhouses, front garages  
 Neighborhood: Hosford-Abernethy  
 Address: 2746-2760 SE 26<sup>th</sup> Ave.  
 Zoning: R2.5  
 Site size: 8534 SF  
 Units: 4  
 Density: 1 unit per 2133 SF (20 units/acre)  
 Parking: 8 spaces (tandem front-accessed garages)  
 Size of units: 2240 SF (? bdrms)  
 Year completed: 1996  
 Developer: Waxman & Associates, Inc.  
 Designers: Loren Waxman



### Comments

Excavated garages, porches, trellises, rooflines, and recessed balconies break-up the scale of these four-level rowhouses, allowing a better contextual response to the adjacent smaller houses.

## Duplex Example 1

### Basic Information

Housing type: Stacked duplex  
Neighborhood: Northwest District  
Address: 46 NW 22<sup>nd</sup> Place  
Zoning: RH  
Site size: 2670 SF  
Units: 2  
Density: 1 unit per 1335 SF (33 units/acre)  
Parking: 2 (basement garage)  
Size of units: 853 – 890 SF  
Year completed: 2003  
Developer: West Portland Construction,  
Harry C. Murphy, and Suzann Baricevic  
Designers: Alan Mascord Design Associates



### Comments

Stacked-unit duplex reflects the form of nearby houses and a similar scale is maintained through the use of partially-excavated basement parking (instead of the more usual arrangement of at-grade parking).

## Duplex Example 2

### Basic Information

Housing type: Stacked duplex  
Neighborhood: Sunnyside  
Address: 914 SE 33<sup>rd</sup> Ave.  
Zoning: CS  
Site size: 2498 SF (33' wide x 75' deep)  
Units: 2  
Density: 1 unit per 1249 SF (35 units/acre)  
Parking: None  
Size of units: 2 bdrms  
Year completed: 2004  
Developer: Chris Nichols & Colleen Traut  
Designers:



### Comments

Stacked-unit duplex continues the pattern of nearby detached houses and is very similar in form to the many early-20<sup>th</sup> century duplexes found in the surrounding neighborhood. This project would meet the density requirements of the R1 zone, but fails to meet minimum lot size requirements (it is located in a Commercial zone).

## Duplex Example 3

### Basic Information

Housing type: Stacked duplex  
 Neighborhood: Buckman  
 Address: 1428 SE 26<sup>th</sup> Ave.  
 Zoning: CS  
 Site size: 1450 SF  
 Units: 2  
 Density: 1 unit per 725 SF (60 units/acre)  
 Parking: None  
 Size of units: 913 & 1202 SF (1 & 2 bdrms)  
 Year completed: 2004  
 Developer: Jeffrey McCaffrey  
 Designers: Matt Loosemore



### Comments

This stacked-unit duplex accommodates high density in a small package reflective of neighborhood patterns, while displaying a mix of traditional and contemporary architectural features. Does not, however, meet multidwelling zone minimum lot size requirements (located in a Commercial zone).

## Plex Example 1

### Basic Information

Housing type: Back-to-back townhouse fourplex  
 Neighborhood: Eliot (Eliot Conservation District)  
 Address: 145 NE Sacramento Street  
 Zoning: R2a  
 Site size: 7500 SF  
 Units: 4  
 Density: 1 unit per 1875 SF (23 units/acre)  
 Parking: 11 spaces (2.75 per unit)  
 Size of units: 1368 SF (3 bdrms)  
 Year completed: 1997  
 Developer: William Reed / WCR Company  
 Designers: Michael Dowd



### Comments

Partially-excavated basement parking limits impacts on street frontage, minimizes building scale, and provides opportunities for backyard space. Project developer indicated that this configuration was not expensive (total construction costs in 1997 of \$45-50 per sq.ft.), but felt that such arrangements are avoided by most other builders due to their lack of familiarity with cost-effective construction techniques for excavated basement parking.

## Plex Example 2

### Basic Information

Housing type: Townhouse three-plex  
Neighborhood: Powellhurst-Gilbert  
Address: 11833 SE Powell Blvd.  
Zoning: R2a  
Site size: 7358 SF  
Units: 3  
Density: 1 unit per 2453 SF (18 units acre)  
Parking: 3 (surface, rear)  
Size of units: 576-600 SF (3 bdrm units)  
Year completed: 1994  
Developer: Caffall Construction  
Designers: Studio 5 Building Design



### Comments

Rear parking allows pedestrian-scaled, house-like building frontage. The rear parking arrangement was mandated by front vehicle area limitations that apply to transit streets.

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## Plex Example 3

### Basic Information

Housing type: Townhouse three-plex  
(rear unit over garages)  
Neighborhood: Woodlawn  
Address: 6545 NE Grand Avenue  
Zoning: R1adh  
Site size: 5000 SF  
Units: 3  
Density: 1 unit per 1667 SF (26 units/acre)  
Parking: 3 spaces (tuck under, rear)  
Size of units: 2 bdrms  
Year completed: 2004  
Developer: Roy & Helmeta Davy  
Designers: Bruinier & Associates



### Comments

With three units, this project illustrates that R1 density requirements can be met on small sites while accommodating off-street parking (located beneath rear unit) and reflecting neighborhood street frontage patterns.

## Plex Example 4

### Basic Information

Housing type: Townhouse three-plex  
 Neighborhood: Richmond  
 Address: 1512 SE 50<sup>th</sup> Ave.  
 Zoning: R1  
 Site size: 5000 SF  
 Units: 3  
 Density: 1 unit per 1667 SF (26 units/acre)  
 Parking: 3 spaces (surface, rear)  
 Size of units: 920 SF (2 bdrms)  
 Year completed: 2003  
 Developer: Ostercraft, Inc.  
 Designers: Ostercraft, Inc.



### Comments

Triplex with rear surface parking on a small, 5000 sq.ft. site.

## Plex Example 5

### Basic Information

Housing type: Semi-stacked three-plex  
 Neighborhood: Humboldt  
 Address: 814 N Webster Street  
 Zoning: R1a  
 Site size: 5000 SF  
 Units: 3  
 Density: 1 unit per 1667 SF (26 units/acre)  
 Parking: 2 (front surface parking)  
 Size of units: 1070-1380 sq. ft.  
 Year completed: 2001  
 Developer: Sabin CDC  
 Designers: Portland Community Design



### Comments

Triplex with front parking pad on a 5000 sq.ft. site. Building scale broken up into distinct volumes similar in scale to nearby houses.

## Plex Example 6

### Basic Information

Housing type: Stacked (?) four-plex  
Neighborhood: Humboldt  
Address: 4921 NE Cleveland  
Zoning: R1a  
Site size: 5775 SF  
Units: 4  
Density: 1 unit per 1444 SF (30 units/acre)  
Parking: 2 (front parking pad)  
Size of units: 1035 SF (2 bdrms)  
Year completed: 2000  
Developer: Housing Our Families  
Designers: Portland Community Design



### Comments

Fourplex whose form is similar to the “foursquare” fourplexes commonly built in Portland during the early 20<sup>th</sup> century, which were designed to blend into neighborhoods of detached houses.

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## Plex Example 7

### Basic Information

Housing type: Back-to-back townhouse four-plex  
Neighborhood: Madison South  
Address: NE Russell & Knott, between NE 84<sup>th</sup> & 86<sup>th</sup>  
 (“Madison Place”)  
Zoning: EG2h  
Site size: Building lots typically 5400 SF  
Units: 3-4 units on each lot  
Density: up to 1 unit per 1350 SF (32 units/acre)  
Parking: 4 (attached rear garages)  
Size of units: (2 bdrms)  
Year completed: 2000  
Developer: Pacific Western Homes  
Designers: Pacific Western Homes



### Comments

Part of a full-block project of triplexes and fourplexes with garages accessed from a rear alley. On small infill sites, a similar configuration to this plex would only be possible at corner locations.

## Plex Example 8

### Basic Information

Housing type: Stacked four-plex  
 Neighborhood: Overlook  
 Address: 1740 N Killingsworth St.  
 Zoning: R1  
 Site size: 5000 SF  
 Units: 4  
 Density: 1 unit per 1250 SF (35 units/acre)  
 Parking: None  
 Size of units: 1000 SF  
 Year completed: 2002  
 Developer: LHC Enterprises  
 Designers: Skyline Homes & Design



### Comments

House-like fourplex whose front porches, windows and doors provide human-scale and a strong street orientation. The problem of where to locate off-street parking was solved by including no off-street parking. The builder indicated that City requirements for a 20'-wide driveway (because of its access from a busy street) thwarted plans to include a driveway and rear parking. Despite the lack of parking, the builder indicates that the project was financially successful.

## Plex Example 9

### Basic Information

Housing type: Stacked seven-plex  
 Neighborhood: Corbett-Terwilliger-Lair Hill  
 Address: 3401-3417 SW 1<sup>st</sup> Ave.  
 Zoning: R2  
 Site size: 7403 SF  
 Units: 7  
 Density: 1 unit per 1058 SF (41 units/acre)  
 Parking: 6 (rear surface and tuck under)  
 Size of units:  
 Year completed: 1997  
 Developer: Andre Cozzetto  
 Designers: Vallaster & Corl Architects



### Comments

Illustrates how a corner site can be used to advantage by wrapping the corner with dwelling units – providing a strong orientation to the street and the corner – and locating parking at rear. Units are stacked, but building is divided vertically, reflecting the scale of the neighborhood's Victorian houses.

## Plex Example 10

### Basic Information

Housing type: Stacked five-plex (condominium)  
Neighborhood: Northwest District  
Address: 1974 NW Lovejoy Street  
Zoning: RH  
Site size: 5000 SF  
Units: 5  
Density: 1 unit per 1000 SF (44 units/acre)  
Parking: 4 spaces (surface, rear)  
Size of units: 809-1434 SF (1-3 bdrms)  
Year completed: 1996  
Developer: Urbano Development  
Designers: Donald Genasci & Associates



### Comments

Five units were accommodated on a 5000 sq.ft. site, together with 4 parking spaces at rear of site, while providing a strong street orientation.

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## Plex Example 11

### Basic Information

Housing type: Stacked four-plex  
Neighborhood: Northwest District  
Address: 2173 NW Everett Street  
("The Scanlan Apartments")  
Zoning: RH  
Site size: 3,133 SF  
Units: 4  
Density: 1 unit per 783 SF (56 units/acre)  
Parking: 4 spaces (basement garage)  
Size of units:  
Year completed: 1995  
Developer: Kathleen Tamble  
Designers: Donald Genasci & Associates



### Comments

Four units and structured parking were accommodated on a site just over 3000 sq.ft. Third level is stepped back, minimizing the scale contrast with the adjacent cottage.

## Plex Example 12

### Basic Information

Housing type: Stacked triplex  
 Neighborhood: Northwest District  
 Address: 2533 NW Thurman St.  
 Zoning: CS  
 Site size: 1590 SF  
 Units: 3  
 Density: 1 unit per 530 SF (82 units/acre)  
 Parking: None  
 Size of units: 1 bdrms and studio  
 Year completed: 1997  
 Developer: Tom Saunders  
 Designers: Vallaster & Corl Architects



### Comments

High density (twice that allowed in the R1 zone) is accommodated here in a small-scale structure. Features two stacked units, with third unit located to rear to avoid costs associated with building code requirements for two stairways, which would be needed for three stacked flats. This project was only possible on such a small site because of its location in a Commercial zone, where no minimum side setbacks apply.

## Plex Example 13

### Basic Information

Housing type: Four townhouse units (condominiums)  
 over three ground-level studio apartments  
 Neighborhood: Hosford-Abernethy  
 Address: 2021 SE Clinton St.  
 Zoning: CN1  
 Site size: 4000 SF  
 Units: 7  
 Density: 1 unit per 571 SF (76 units/acre)  
 Parking: None  
 Size of units: 900 SF townhouses  
 Year completed: 2004  
 Developer: Robert Ross  
 Designers: Kevin Burgee



### Comments

Seven units were accommodated on a site only 4000 sq.ft., made possible by not including any off-street parking. A hybrid of housing tenures, it includes four condominium townhouses (which were quickly sold above asking price) over three rental studio apartments. Went against conventional wisdom of many builders, who tend to believe that only rental apartments are practical at higher densities on small sites in neighborhoods outside Downtown or Northwest Portland and who maintain that ownership housing must include off-street parking to be market feasible.

## Cluster Housing Example 1

### Basic Information

Housing type: Cottage cluster (condominiums)  
with landscaped courtyard  
Neighborhood: South Tabor  
Address: SE Clinton between SE 70<sup>th</sup> & 71st  
Zoning: R5  
Site size: 30,592 SF  
Units: 10  
Density: 1 unit per 3,059 SF (14 units/acre)  
Parking: 10 spaces (garage structure)  
Size of units: 1134-1253 SF (1-2 bdrms)  
Year completed: 2003  
Developer: Hastings Green LLC  
Designers: JDA Architects & Planners



### Comments

Portland's first "cottage cluster" infill project, oriented around shared open space. Sold as condominiums, the second phase of cottages were all sold before project completion. This suggests there is buyer interest in this type of housing. In other cities, similar housing has appealed to older homebuyers, as they facilitate a greater level of accessibility than possible in multilevel rowhouses.

## Cluster Housing 2

### Basic Information

Housing type: Cottage cluster (condominiums)  
with landscaped courtyard  
Neighborhood: Forest Park  
Address: NW Edgewood & NW Miller  
Zoning: R2  
Site size: 99,500 SF (minus unbuilt environmental  
overlay zone areas)  
Units: 33  
Density: 1 unit per 3015 SF (14 units/acre)  
Parking: 2 per unit (attached rear garages)  
Size of units: 1355-1587 SF  
Year completed: 2001  
Developer: Edgewood LLC  
Designers: Patrick Schmitt, Designer



### Comments

Cottage cluster project with shared open space in Forest Heights. The landscaped courtyard provides a place-defining element not provided by typical rowhouse projects.

## Cluster Housing Example 3

### Basic Information

Housing type: Duplexes oriented to central courtyard with green space and driveway

Neighborhood:

Address: 4414 NE Killingsworth St.

Zoning: R2h

Site size: 36,286 SF

Units: 14

Density: 1 unit per 2592 SF (17 units/acre)

Parking: 14 spaces (surface)

Size of units: (2-4 bedrooms)

Year completed: 2004

Developer: Habitat for Humanity

Designers: Ankrom Moisan Architects

### Comments

Duplexes surround a courtyard with a central green and a circular drive with parallel parking, an arrangement which accommodates vehicle access and parking while minimizing its visual prominence.



## Cluster Housing Example 4

### Basic Information

Housing type: Duplex and detached house

Neighborhood:

Address: 8008-8010 SW 45<sup>th</sup> Ave.

Zoning: R2

Site size: 7069 SF

Units: 3

Density: 1 unit per 2356 SF (18 units/acre)

Parking:

Size of units: 1153-1182 SF (2-3 bedrooms)

Year completed:

Developer: The Housing Authority of Portland

Designers: Iselin Architects

### Comments

By having the driveway pass under the front building, this project solves the problem of how to simultaneously have street-oriented building frontage and accommodate vehicle access on a narrow site.



## Cluster Housing Example 5

### Basic Information

Housing type: Duplexes with landscaped courtyard  
 Neighborhood: Powellhurst-Gilbert  
 Address: 2627-2647 SE 125<sup>th</sup> Ave.  
 ("Ivon Court Duplexes")

Zoning: R1a  
 Site size: 13,985 SF  
 Units: 8  
 Density: 1 unit per 1748 SF (25 units/acre)  
 Parking: 4 spaces (surface)  
 Size of units: (3-4 bedrooms)  
 Year completed: 1999  
 Developer: Human Solutions  
 Designers: Church & Merrill Architects

### Comments

Duplexes, house-like in form, are oriented around shared open space with a play area. Little off-street parking is provided, but corner site provides many on-street parking opportunities.



## Cluster Housing Example 6

### Basic Information

Housing type: Detached houses (condominiums)  
 Neighborhood: Montavilla  
 Address: 8009-8017 SE Morrison St.

Zoning: R1  
 Site size: 5243 SF  
 Units: 3  
 Density: 1 unit per 1747 SF (25 units/acre)  
 Parking: 3 spaces (front surface)  
 Size of units: 1401-1431 SF (2 bedrooms)  
 Year completed: 2003  
 Developer: LHC Enterprises  
 Designers: Studio 5 Building Design

### Comments

Project consists of three detached houses on a 5000 sq.ft. lot. Illustrates how cluster housing is possible on even the smallest infill sites. Building height of these three-level houses was minimized by using partially-excavated basement living space.



## Cluster Housing Example 7

### Basic Information

Housing type: Rowhouses and townhouses  
 Neighborhood:  
 Address: 430-440 NE Fargo St. ("Fargo Court")  
 Zoning: RH  
 Site size: 6251 SF  
 Units: 4  
 Density: 1 unit per 1563 SF (27 units/acre)  
 Parking: 4 spaces (surface)  
 Size of units: (3-4 bedrooms)  
 Year completed: 2000  
 Developer: Franciscan Enterprise  
 Designers: Portland Community Design

### Comments

House-like form of paired rowhouses at front reflect neighborhood patterns, while two townhouses at rear provide additional density.



## Cluster Housing Example 8

### Basic Information

Housing type: Duplex and detached houses  
 Neighborhood: Foster-Powell & Brentwood-Darlington  
 Address: Two similar projects:  
 ("Marysville Commons" & "Woodmere Commons")  
 7704-7716 SE Raymond Street  
 8002-8010 SE Duke Street  
 Zoning: R1a  
 Site size: 7500 SF & 7138 SF  
 Units: 5 (Marysville) and 4 (Woodmere)  
 Density: 1 unit per 1500 SF (29 units/acre)  
 Parking: 3 spaces (surface)  
 Size of units: (2-3 bedrooms)  
 Year completed: 2003  
 Developer: Rose CDC  
 Designers: The Wasserberger Design Group  
 Architects

### Comments

The design of these projects was shaped by input from neighbors, who desired buildings more similar in form to the surrounding houses, rather than the rowhouse-type buildings originally planned. Surface parking areas are surfaced with paving blocks, providing a courtyard-like appearance.



## Courtyard Townhouses Example 1

### Basic Information

Housing type: Two-story attached townhouses (condominium ownership) oriented to landscaped courtyard  
 Neighborhood: Brentwood/Darlington (Outer SE)  
 Address: 8024 SE Cooper Street  
 Zoning: R2.5a  
 Site size: 27,000 SF  
 Units: 12  
 Density: 1 unit per 2250 SF (19 units/acre)  
 Parking: 15 spaces (1.25 per unit)  
 Size of units: 745-925 SF (2-3 bdrms)  
 Year completed: 2000  
 Developer: ROSE Community Development Corp.  
 Designers: Portland Community Design

### Comments

Landscaped courtyard and house-like forms of the individual units respond to the character of the surrounding residential neighborhood, where detached houses predominate.



## Courtyard Townhouses Example 2

### Basic Information

Housing type: Townhouses oriented around landscaped courtyard, rear parking  
 Neighborhood: Brooklyn  
 Address: 3810-3846 SE 16<sup>th</sup> Ave. ("City Life Courtyard Housing")  
 Zoning: R2  
 Site size: 20,000 SF  
 Units: 10  
 Density: 1 unit per 2000 SF (22 units/acre)  
 Parking: 11 (parallel spaces along alley)  
 Size of units: 1000-1200 SF  
 Year completed: 1995  
 Developer: Reach CDC  
 Designers: Robertson, Merryman, Barnes Architects

### Comments

Winner of the 1994 "City Life" design competition for courtyard housing, this project is a precursor to more recent "common green" allowances for housing lots oriented to a landscaped courtyard. Off-street parking is provided by parallel parking along the rear alley, which makes efficient use of limited site area.



## Courtyard Townhouses Example 3

### Basic Information

Housing type: Townhouses on separate lots,  
central pedestrian way/courtyard, rear garages  
Neighborhood: Sunnyside  
Address: SE Alder & SE Morrison, at SE 34<sup>th</sup> Ave.  
("Belmont Dairy Rowhouses")  
Zoning: CS  
Site size: 36,700 SF (incl. alley and ped. tracts)  
Units: 30  
Density: 1 unit per 1223 SF (36 units/acre)  
Parking: 30 spaces (rear garages)  
Size of units: 1300-1700 SF  
Year completed: 1999  
Developer: Alder Street Holdings /  
Shiels Oblatz Johnson  
Designers: GBD Architects

### Comments

Another precursor to common green housing arrangements, a central courtyard provides pedestrian access to rowhouses lacking street frontage. Rear alleys provide access to most of the garages, allowing street frontage to be preserved for on-street parking. Also, access tracts along west side of project feature special paving and provide access for both vehicles and pedestrians, similar to the "shared street" concept.



## Courtyard Townhouses Example 4

### Basic Information

Housing type: Townhouses (condominiums)  
clustered around autocourt  
Neighborhood: Multnomah  
Address: 7832-7876 SW 31<sup>st</sup> Ave.  
("Multnomah Village Townhomes")  
Zoning: R1  
Site size: 18,018 SF  
Units: 12  
Density: 1 unit per 1502 SF (29 units/acre)  
Parking: 24 (enclosed garages)  
Size of units: 1428-1546 SF  
Year completed: 2003  
Developer: COHO Partners  
Designers: Barry R. Smith, Architect

### Comments

Form and orientation of the end units provide a house-like appearance along the street, while the central autocourt accommodates a relatively high-density of townhouse units and associated parking. The single vehicle access point and curb cut minimizes adverse impacts on the streetscape.



## Courtyard Townhouses Example 5

### Basic Information

Housing type: Townhouses and carriage houses  
(over garages) with shared court  
 Neighborhood: Northwest District  
 Address: 2527-2531 NW Westover Rd.  
 ("Jake's Run")  
 Zoning: R1  
 Site size: 6720 SF  
 Units: 6 (3 townhouses, 2 carriage houses)  
 Density: 1 unit per 1344 SF (32 units/acre)  
 Parking:  
 Size of units: 844-2548 SF  
 Year completed: 2000  
 Developer: Rural Homes, Inc.  
 Designers: Fletcher Farr Ayotte



### Comments

The central courtyard, surfaced with paving blocks, provides access for both pedestrians and vehicles, serving as a precursor to the shared street concept. The single access point allows for a pedestrian-friendly street frontage lined by residences, instead of garage doors.

## Apartments Example 1

### Basic Information

Housing type: Townhouse duplex and stacked  
sixplex  
 Neighborhood: Hazelwood  
 Address: 41-45 NE 127<sup>th</sup> Ave.  
 Zoning: R1d  
 Site size: 13,775  
 Units: 8  
 Density: 1 unit per 1722 SF (25 units/acre)  
 Parking: 8 spaces (surface)  
 Size of units: 872-1041 SF (2-3 bedrooms)  
 Year completed: 2001  
 Developer: Portland Community Reinvestment Initiatives  
 Designers: Portland Community Design



### Comments

Details, such as façade articulation, porches, and window treatments, provide a human scale and pedestrian-friendly street frontage.

## Apartments Example 2

### Basic Information

Housing type: 5 townhouse units, 1 flat  
 Neighborhood: Overlook  
 Address: 2705-2717 N. Killingsworth St.  
 ("Buka's Place")  
 Zoning: CN1/R1  
 Site size: 10,660  
 Units: 6 (plus 1 pre-existing house)  
 Density: 1 unit per 1523 SF (29 units/acre)  
 Parking: 4 spaces (tuck under)  
 Size of units: 2-3 bedrooms  
 Year completed: 2003  
 Developer: UBA Building Services  
 Designers: Salmon Street Design

### Comments

L-shaped building wraps around an existing detached house. Building forms and details respond to the surrounding context of early-20<sup>th</sup> century homes.



## Apartments Example 3

### Basic Information

Housing type: Stacked flats and townhouses,  
 central courtyard  
 Neighborhood: Glenfair (East Corridor Plan District)  
 Address: 211-293 SE 160<sup>th</sup> Ave. ("Sequoia Square")  
 Zoning: R1d  
 Site size: 80,999 SF  
 Units: 54  
 Density: 1 unit per 1500 SF (29 units/acre)  
 Parking: 57 spaces (surface)  
 Size of units: 822-2179 SF (2-5 bedrooms)  
 Year completed: 2001  
 Developer: Housing Authority of Portland  
 Designers: Carleton & Hart Architecture

### Comments

Oriented around a central courtyard with a play area, the buildings of this project are divided into house-like forms that reflect the scale of the surrounding neighborhood's detached houses.



## Apartments Example 4

### Basic Information

Housing type: Stacked townhouses and flats  
Neighborhood: Northwest District  
Address: 2327 NW Northrup St. ("Northrup Commons")  
Zoning: R1  
Site size: 20,000 SF  
Units: 19  
Density: 1 unit per 1053 SF (41 units/acre)  
Parking: 68 spaces (basement garage)  
Size of units: 898-2972 SF  
Year completed: 2000  
Developer: Northrup Commons LLC  
Designers: Sienna Architecture Co.

### Comments

Stacked townhouse units over structured parking make efficient use of limited site area, while façade articulation reflects patterns of the surrounding neighborhood.



## Apartments Example 5

### Basic Information

Housing type: Stacked flats and townhouses  
around central courtyard  
Neighborhood: Mill Park  
Address: 10918-10930 SE Stark St. ("Park Vista")  
Zoning: R1a  
Site size: 60,824 SF  
Units: 59  
Density: 1 unit per 1031 SF (42 units/acre)  
Parking: 69 spaces (surface and tuck under)  
Size of units: 350-1474 SF (studios, 1-4  
bedrooms)  
Year completed: 2001  
Developer: Human Solutions  
Designers: William Wilson Architects

### Comments

Strong street orientation contributes to an urban streetscape, while a central courtyard/play area is provided that is sheltered from the busy street. The non-profit developer of this project indicates that it has been very popular with families. Tuck-under parking allows efficient use of site area at significantly less cost than full structured parking.



## Apartments Example 6

### Basic Information

Housing type: Stacked flats and townhouses  
 Neighborhood: Mill Park  
 Address: 12044 SE Lincoln St. ("Lincoln Woods")  
 Zoning: R1a  
 Site size: 29,355  
 Units: 30  
 Density: 1 unit per 979 SF (44 units/acre)  
 Parking: 35 spaces (rear surface)  
 Size of units: 720-930 SF (2 bedrooms)  
 Year completed: 2001  
 Developer: Jay Woodworth  
 Designers: Barry R. Smith, Architect



### Comments

In contrast to many apartment projects along major streets in Outer East Portland, which often feature prominent surface parking lots, this project focuses its buildings along the street frontage, creating a strong street presence. Living spaces are raised above grade, providing needed separation from street traffic. Two-story townhouses provide a step-down in scale to the adjacent neighborhood.

## Apartments Example 7

### Basic Information

Housing type: Stacked flats  
 Neighborhood: Corbett-Terwilliger-Lair Hill  
 Address: 3535 SW Corbett St. ("La Stella Apartments")  
 Zoning: CS/R2  
 Site size: 23,000  
 Units: 28  
 Density: 1 unit per 821 SF (53 units/acre)  
 Parking: 15 spaces (rear surface)  
 Size of units: (studios, 1-2 bedrooms)  
 Year completed: 2003  
 Developer: SOPO Properties  
 Designers: Fletcher Farr Ayotte



### Comments

Human-scaled details and quality materials serve as a positive contribution to the street. Of this project, a neighbor commented, "I think it's out-of-scale with the neighborhood, but its design make's up for it."

## Apartments Example 8

### Basic Information

Housing type: Stacked flats  
Neighborhood: Northwest District  
Address: 2537 NW Thurman St.  
("Thurman Street Condominiums")  
Zoning: CS  
Site size: 6144 SF  
Units: 12  
Density: 1 unit per 512 SF (85 units/acre)  
Parking: 12 spaces (basement garage)  
Size of units: 747-1017 SF  
Year completed: 2001  
Developer: MacNaughton Partners  
Designers: Robert S. Leeb Architects & Planners



### Comments

Excavated basement parking allows off-street parking to be accommodated as part of high-density housing on a small site. Building form reflects the surrounding neighborhood's tradition of block-type apartment buildings (known locally as "brickers").

---

## Apartments Example 9

### Basic Information

Housing type: Special needs housing, stacked units  
Neighborhood:  
Address: 2730 SE 92<sup>nd</sup> Ave. ("Clinton Ridge")  
Zoning: R2a  
Site size: 14,500 SF  
Units: 29  
Density: 1 unit per 500 SF (87 units/acre)  
Parking: 6 spaces (basement garage)  
Size of units:  
Year completed: 2003  
Developer: Rose CDC  
Designers: William Wilson Architects



### Comments

Provides a strong-street presence and is an example of the type of urban-scale, transit-supportive development that is intended along transit corridors.

## Apartments Example 10

### Basic Information

Housing type: Stacked flats around central courtyard

Neighborhood:

Address: 430 NE 16<sup>th</sup> Ave. (“Buckman Heights”)

Zoning: EXd

Site size: 54,364 SF

Units: 144

Density: 1 unit per 377 SF (116 units/acre)

Parking: Tuck-under and surface parking

Size of units: 443-808 SF (studios, 1-2 bedrooms)

Year completed: 1998

Developer: Prendergast and Associates, Inc.

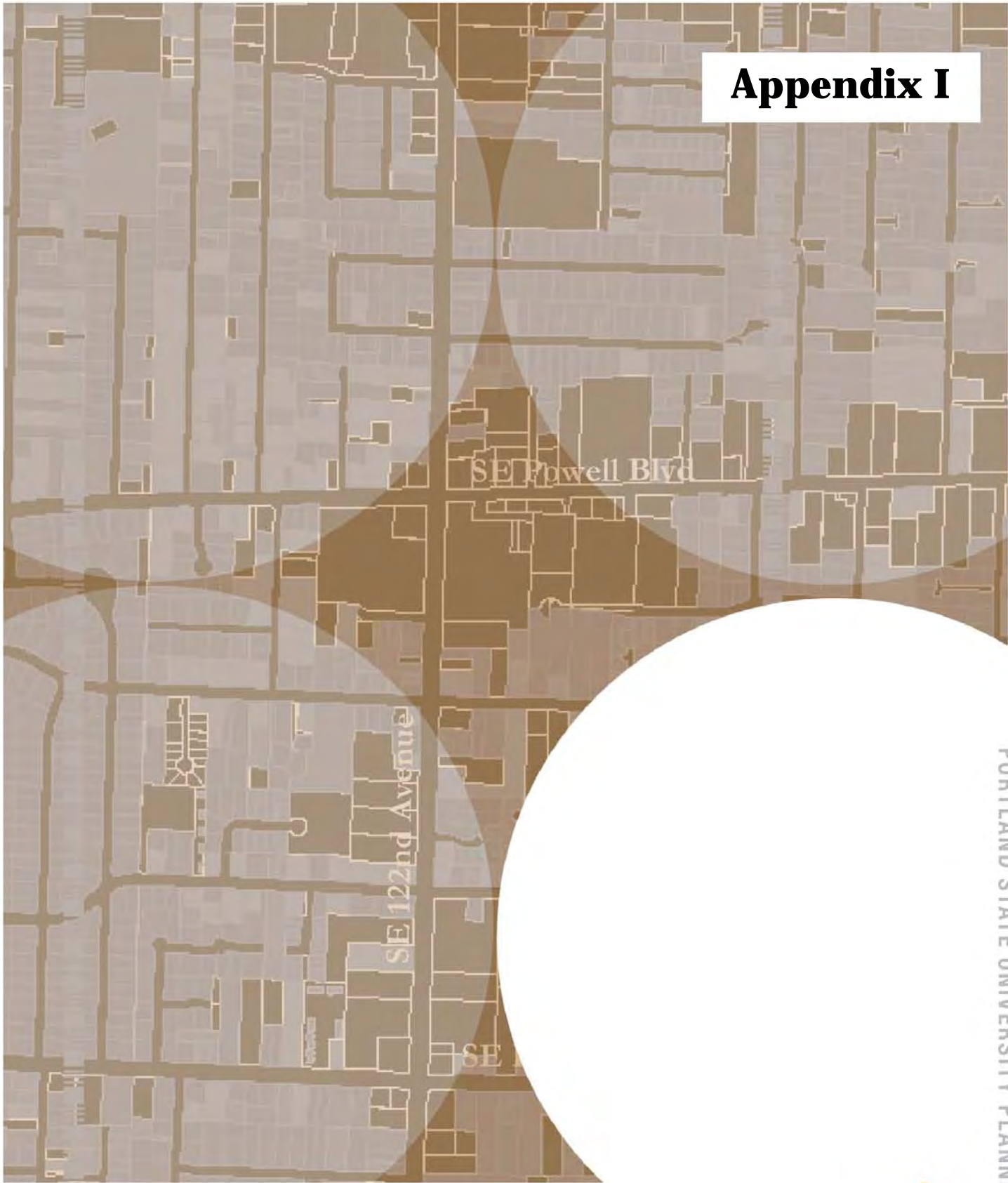
Designers: William Wilson Architects, PC

### Comments

Courtyard includes features designed to manage stormwater. This project illustrates how courtyards can simultaneously serve an environmental role, function as an amenity for residents, and provide a unifying, central design focus.







# Appendix I

PORTLAND STATE UNIVERSITY PLANNING WORKSHOP



## OUTER SOUTHEAST LIVABLE INFILL PROJECT



## About the LIV-IN Project Team

The LIV-IN Project team is composed of six students enrolled in the Planning Workshop. Planning Workshop, the capstone course for Portland State University's Master of Urban and Regional Planning program, provides graduate students with professional planning experience. Student teams develop consulting contracts with clients for planning services that address local and regional issues and the students' personal and professional interests. The Workshop provides experience in planning for constructive social and environmental change, while considering the planner's ethical responsibility to serve the public interest.

Staff at the City of Portland, Bureau of Planning, first proposed the subject matter of the LIV-IN Project; the team formed around this request for assistance. The team members include: Debbie Collard, Kristine dos Remedios, Krista Hornaday, Harper Kalin, Ying Lin and Kris Sorensen.



June 2004

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## East Portland Neighborhood Coalition

Richard Bixby  
Land Use Committee

## Powellhurst-Gilbert Neighborhood Association

Glenn Taylor  
Frank Boel

## Midway Business Association

Baskin Robbins	Precision Cuts
David Edwards Insurance	Safeway
Day Chiropractic	The Pizza Barron
Head's Up Hair	Van Kirks Florist
Labor Ready, Inc.	Wells Fargo
Powell Valley Water Association	

## Architects & Designers

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Elijah Elder  
Lauren Schmitt  
Steve Witter

## Developers & Community Development Corporations

## Residents of Powellhurst-Gilbert Neighborhood

## Students and Faculty of the School of Urban Studies and Planning

Deborah Howe  
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# Project Summary

## The Project

Infill development presents challenges to metropolitan regions throughout the United States. The “filling in” of vacant or underutilized parcels of land in developed areas is the direct consequence of urbanization, a process caused by population growth and market demand, and shaped by public policy. In instances where infill occurs in residential areas, it can be perceived as detracting from the existing neighborhood character, displeasing those who live nearby. Multi-family infill development – infill structures intended to house more than one household – tend to evoke an even stronger reaction than single-family infill development when placed in established neighborhoods.

Design is one tool that can lessen the impact that infill development has on the surrounding area. It includes elements of the private realm, such as interior design and layout; elements of the public realm, such as streets and sidewalks; and the relationship of the building to its surroundings, which includes massing, scale and architectural elements. Thus, these three elements of urban design – (1) private realm function, (2) public realm interface, and (3) contextual relationships – are useful criteria by which to evaluate infill developments.

The City of Portland, Oregon has experienced unprecedented population growth in the last decade, much of which has been accommodated through infill development. Not all infill development has contributed to meeting design goals, prompting the City’s Bureau of Planning to launch the Infill Design Project in 2003. The Infill Design Project aims to improve the design of multi-dwelling and rowhouse development outside the Central City. This study supports the Infill Design Project by studying the design of new, multi-family infill development in a section of Outer Southeast Portland, Oregon. Through public outreach, this study identifies community design preferences and analyzes whether these preferences are being met in the private realm, the public realm and contextually. The study further identifies reasons for the current state of multi-family infill development and provides recommendations to improve design quality of multi-family infill.

## Findings

- There are a number of factors that complicate the study of design of new multi-family developments in the selected study area. These include: the prevalence of infill issues not related to design, the transitioning neighborhood demographics, the importance of housing affordability to residents, and an irregular land development pattern.
- In the private realm, new multi-family infill development works well. The majority of the infill occupants surveyed in this study had positive perceptions of the developments.
- It is in the public realm and contextually that the developments require

improvements. The overall look of the developments' exterior, including the size and bulk of the buildings, was frequently criticized. The majority of people surveyed responded that the buildings did not relate well to the surrounding neighborhood.

- Discussions with developers and architects revealed that the consumer market for multi-family infill developments stresses the internal design over the external appearance. There has been little incentive for developers to focus on the building's outward façade and relationship to the neighborhood.
- Portland Zoning Code does not currently support all the favored community design preferences.

## Recommendations

This study recommends four approaches to improve the design quality of multi-family infill in the selected study area. These recommendations, summarized below, require action by the City of Portland, developers, and residents of the Powellhurst-Gilbert neighborhood.

### RECOMMENDATION #1: TAKE A COMPREHENSIVE APPROACH TO PLANNING AND DESIGN

- Plan the infrastructure necessary for good urban design
- Revive a community vision
- Use public investment to implement infrastructure

### RECOMMENDATION #2: DEFINE THE TRANSITION BETWEEN PUBLIC AND PRIVATE SPACE

- Public and semi-public space should be publicly provided
- Encourage developers to delineate semi-private and private space

### RECOMMENDATION #3: PROVIDE EXPEDITED AND LOWER-COST PERMITTING TO ENCOURAGE AMENITIES

- Expedited and lower cost permitting are more appropriate bonuses for design amenities currently offered as density bonuses in the Portland Zoning Code

### RECOMMENDATION #4: MAINTAIN MATURE TREES

- Multi-dwelling structures should be required to meet tree preservation standards similar to other development types in the R1, R2 and R3 zones

# Why Study Multi-Family Infill Development?

## What is Multi-family Infill Development?

Urban living is on the rise in the United States<sup>1</sup>. One driving force behind this trend is changes in household composition. The 2000 census reported that the vast majority of households are no longer nuclear families. Singles, young couples and retirees are driving market demand for a variety of housing options, with an increasing preference for higher-density housing near jobs, transit and entertainment.<sup>2</sup> Typically, this higher density housing is in multi-family structures, which provide more living units than traditional single-family homes. Multi-family housing options include apartments, plexes, condominiums, townhouses and rowhouses. They generally provide smaller units with little or no exterior maintenance requirements of the occupant. Condominiums, townhouses and rowhouses provide the opportunity for home ownership. Because these housing units are generally smaller and less land is required for their development, they may also provide a more affordable housing option. When located near existing shopping and transit services, multifamily housing can provide a convenient, carefree lifestyle.

Developers have been quick to accommodate the demand for multifamily housing. Frequently, they take advantage of existing infrastructure by building housing on undeveloped or underutilized land in established urban areas. This “filling in” of vacant parcels, also known as infill development, changes the landscape of existing neighborhoods. The impact infill has on neighborhoods can be both positive and negative. On one hand, infill provides housing near job centers, shopping and public transit. It increases the property tax base and provides for efficient use of land and public infrastructure. Infill can also enhance neighborhoods by revitalizing shopping areas and cultural districts. On the other hand, infill may not be well received by neighbors. It may result in loss of open space and natural features valued by the community.

## What does multi-family development look like?



<sup>1</sup> World Resources Institute, *Facts about Urbanization in the United States*, <http://www.wri.org/wri/enved/suscomfacts.html> (May 30, 2004)

<sup>2</sup> Northeast Midwest Institute Congress for New Urbanism, *Strategies for Successful Infill Development*, 2001, <http://www.nemw.org/infillbook.htm> (May 30, 2004)

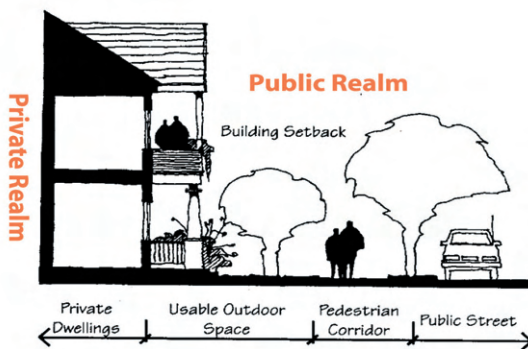
## What is Design?

Attention to design can lessen the negative impact of multi-family infill development. Important elements for the design of multifamily infill can be grouped into three categories: (1) those that are internal, called private realm elements, (2) those that are external, called public realm elements, and (3) contextual elements, those that define the relationship of buildings to adjacent properties and the surrounding neighborhood.

Elements of the private realm include such things as unit layout, exposure to natural light, number of bedrooms and bathrooms, the availability of storage, and garages.

Public realm elements include architectural design (including the placement of entryways and windows), building color, placement of components of the development (such as parking, open space, recreational amenities and pathways), and landscaping.

Elements that define the contextual relationship of buildings to adjacent properties and the surrounding neighborhood include building height and bulk, building setbacks, the location of windows, and the amount of landscaping.

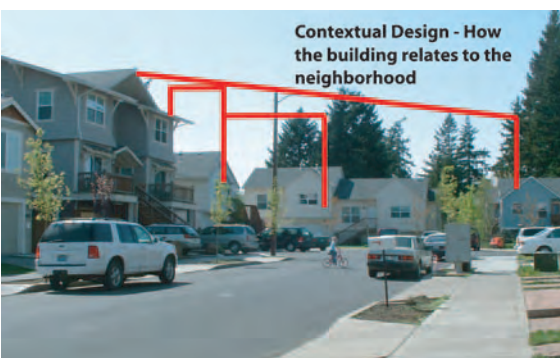


## Multifamily Infill Design in Portland, Oregon

Multi-family infill development is a timely issue in Portland, Oregon. Growing in population by 27% between 1990 and 2000, the Portland metropolitan region managed to capture most of this growth within urban areas.<sup>3</sup> Growth management tools, such as the regional urban growth boundary and the Metro 2040 Growth Concept, which stress build-out of urbanized land, are partially responsible for this success. Infill development is a critical component of these plans. For example, Metro's 2002 Residential Land Needs Analysis, estimated infill and redevelopment to account for 26% to 29% of all residential development in the region.<sup>4</sup> In order to achieve these policy standards, infill development must provide more dwelling units than traditional single-family homes. Multi-family structures are typically the answer.

Being the largest city in the metropolitan region, much of the burden of managing multi-family infill development falls on the City of Portland. Through zoning regulations and development standards in Portland City Code, Chapter 33 Planning and Zoning (Zoning Code) the City attempts to: (1) encourage efficient use of land and public infrastructure; (2) promote positive relationships between new development and existing structures; (3) preserve desired features, such as trees and open spaces; (4) protect public health and safety; and (5) improve the pedestrian experiences and access to public transportation. These regulations include topics such as density requirements, building coverage, setbacks from lot lines, and landscaping. However, design is largely unregulated. Design guidelines apply only in specific districts of the City. In all other sections, the only control over the appearance of multi-family infill developments is the development standards of the Zoning Code. These standards do not always adequately accomplish good design.

*Illustration of public and private realms*  
Source: Image adapted from *Building Blocks for Outer Southeast Neighborhoods* (1996)



<sup>3</sup> Northwest Environmental Watch, *Sprawl and Smart Growth in Metropolitan Portland*, 2002, <http://www.northwestwatch.org/press/portlandgrowth.pdf> (May 30, 2004)

<sup>4</sup> Metro, *2002-2022 Urban Growth Report: A Residential Land Needs Analysis*, December 2002, <http://www.metro-region.org/article.cfm?ArticleID=7596> (May 30, 2004)

## About this Project

### Portland Bureau of Planning's Infill Design Project

In 2003, the Portland Bureau of Planning launched the Infill Design Project, a study intended to improve the design of multi-dwelling and rowhouse developments outside the Central City and in other areas where design standards do not apply. Headed by Bill Cunningham, City Planner, the project specifically focuses on new multi-dwelling development in R1, R2 and R3 zones. The goal of the project is to identify non-regulatory strategies for encouraging good development, rather than simply regulating against bad development. Potential products include a case studies document, which highlights exemplary development and/or a plan book of infill housing types that are marketable, meet community design goals and fulfill regulatory requirements.

### The LIV-IN Project

The Outer Southeast Livable Infill Project, known as the LIV-IN Project, supplements the City of Portland's Infill Design Project. Undertaken by six Portland State University graduate students during the spring of 2004, the LIV-IN Project evaluates the design of new multi-family developments in a study area located in Outer Southeast Portland.<sup>5</sup> By focusing the study of infill design to a single neighborhood, the project was able to solicit input from infill occupants and those living in the surrounding community, as well as developers and architects of infill projects. This public involvement helped to clarify community design priorities and expose why infill is being built the way it is. This report presents these findings, along with recommendations to improve multi-family infill design.

### Study Area

The study area of the LIV-IN Project covers approximately one square mile in the heart of the Powellhurst-Gilbert neighborhood in Outer Southeast Portland. As shown in MAP 1, it is bounded by SE 115<sup>th</sup> Ave. on the western edge, SE 129<sup>th</sup> Ave. on the eastern edge, Division St. to the north and Ramona St. to the south. Ramona St. is just north of the Springwater Corridor, a regional recreational trail that links the study area neighborhoods to Portland and to Gresham. SE 122<sup>nd</sup> Ave., a major north south arterial, runs through the center of the study area. Major east west arterials include Division St., Holgate Blvd., and Powell Blvd.

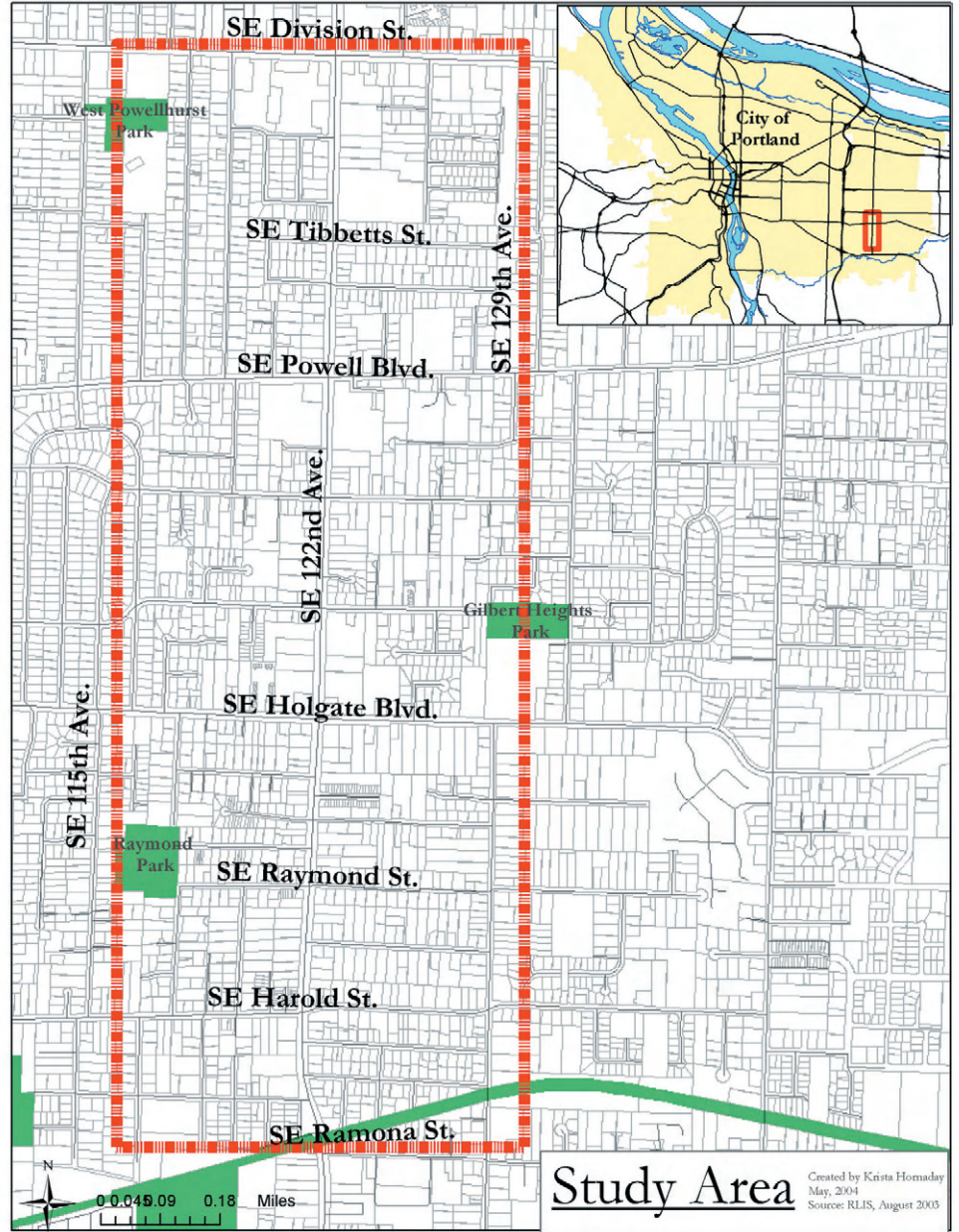
This study area was originally recommended by Bill Cunningham because of the large amount of multifamily infill occurring in the neighborhood, the concerns neighbors have voiced about the impacts of this type of development, and because there are no requirements pertaining to design in current plans or code provisions. Research showed that the study area also satisfied a number of criteria established by the LIV-IN Project team. These criteria included regional significance, appropriate zoning, future infill potential and a minimum of 30 recent multi-family developments.

<sup>5</sup> As defined in the Outer Southeast Community Plan, Bureau of Planning (1996)

### Project Comparison

Infill Design Project	LIV-IN Project
<b>WHO:</b> Bill Cunningham, City Planner, Portland Bureau of Planning	<b>WHO:</b> Six Portland State University graduate students
<b>WHAT:</b> Multi-dwelling and rowhouse development in the R1, R2, R3 zones	<b>WHAT:</b> Multi-dwelling and rowhouse development in R1 and R2 zones. There are no R3 zones in the study area.
<b>WHY:</b> To encourage design that meets design goals	<b>WHY:</b> To supplement to work of the Infill Design Project
<b>WHERE:</b> Portland, outside the Central City	<b>WHERE:</b> Along SE 122 <sup>nd</sup> Ave. between Division Street and Harold Street, 116 <sup>th</sup> and 127 <sup>th</sup>
<b>WHEN:</b> 2003-2004	<b>WHEN:</b> Spring 2004

Map 1



## Project Goals

The LIV-IN Project seeks to accomplish three goals:

1. Identify community design preferences. This goal involves answering the following research questions:
  - What types of developments does the neighborhood prefer?
  - What design elements are priorities and how do they rank in trade-offs?
  - What present or future character should infill design be sensitive to?
2. Determine why new multi-family infill development is or is not fulfilling community design preferences.
3. Provide recommendations to improve the quality of new multi-family infill development and to realize community design preferences.

## Data Collection

To achieve these goals, the study relied upon in-field observation, public involvement and research. These methods are briefly expanded upon below. For a complete description of the project methodology see Appendices.

## Inventory of New Multi-family Developments

- Geographic Information Systems (GIS) and Regional Land Information Systems (RLIS) permit data was used to identify multi-family and rowhouse structures constructed between 1998 and 2003. Field observation was used to confirm the location of these structures and their primary design features.

## Community Involvement

- Surveys were solicited from occupants and neighbors of recent infill to understand how well new development relates to the existing community, to understand who lives in the infill, and to identify potential opportunities for enhancing living environments for residents.
- A public workshop was conducted, which included a design preference survey, comment mapping exercises and discussion of urban design.
- Presentations and briefings were given at community meetings to obtain feedback on the scope and progress of the project.

## Developer and Architect Interviews

- Developers and architects of non-profit and market rate developments of varying size and density were interviewed.

## Urban Design Work Session

- Professionals from the fields of architecture, landscape architecture and urban design attended a work session to brainstorm ways to meet community design preferences within the constraints of the study area.

## Research

- The Portland Zoning Code, crime data from the Portland Police Bureau, United States 2000 Census data and literature were all consulted to improve understanding of issues confronting multi-family infill design.

### Community Involvement Summary

- 50 hours door-to-door survey work
- Over 500 surveys distributed to infill occupants and neighbors with flyer for Community Workshop
- Community Workshop (18 attendees)
- Four community meeting presentations



*Residents expressed what they liked and disliked about their neighborhood and infill at community workshop.*



*Workshop participants took part in a design preference survey to identify design characteristics that were positive or negative additions to their neighborhood.*

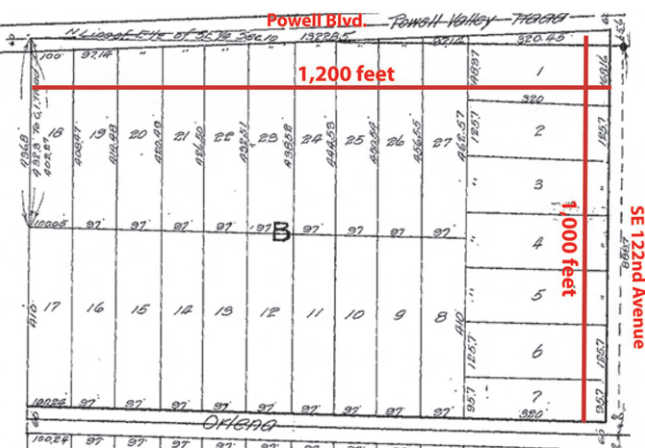
# Existing Condition Analysis

## Study Area History

Early settlers to the eastern part of Multnomah County were farmers. They made claims under the Donation Land Claim Act of 1850. This act granted 320 acres of land to a single man and 640 acres to a married couple if they had were able to prove that they had lived on the land and farmed it for a period of four years. Farmers moved their goods to market along a portion of the Oregon Trail, which is now Foster Road.

By the late 1800s an interurban rail line was operating along the Springwater Corridor. This transportation system transported people from the City's close-in neighborhoods to Estacada. Many communities, including the Powellhurst-Gilbert neighborhood, developed along this rail line and landowners began to divide larger tracts of land into smaller parcels.<sup>6</sup>

In 1909 the Greene-Whitcomb Company and Henry Everding created a subdivision called the Suburban Club Homes Tract. This subdivision straddled SE 122nd Ave. between what is now Powell and Holgate Blvd. It divided the land into six blocks with 27 lots in each block. Each lot was slightly less than one acre in size, with street frontage of approximately 100 feet, and depths of 320 to 410 feet. The result of this subdivision was creation of a street pattern of very large blocks (roughly 1200 feet by 1000 feet) with no interior streets. A review of Multnomah County survey records indicates that this subdivision was typical of other subdivisions created during this period. This plat and others like it created the framework for the connectivity issues facing the neighborhoods today.



The 1909 Suburban Homes Club Tract was platted with blocks over 1,200' by 1,000' with no interior streets.  
 Source: Multnomah County <http://gis.co.multnomah.or.us> (May 30, 2004)

The population grew slowly until the Post-War years of the 1940s when the availability of low cost housing loans fueled a period of rapid residential growth. This growth intensified the conversion of large tracts of farmland to smaller land for residential use. A similar period of rapid residential growth occurred in the 1960s and 1970s. Multnomah County planning efforts during this time included the Multnomah County Framework Plan, adopted in 1977 and community plans for specific neighborhoods that were adopted in the late 1970s and early 1980s. The Powellhurst Neighborhood Plan was adopted in 1979.

The Multnomah County Powellhurst Neighborhood Plan includes a land use map that shows the established single-family development pattern with future commercial development concentrated at major intersections and multifamily development located adjacent to these commercial centers and along well-traveled streets. At that time, the majority of the area was developed with single-family homes on large lots.

The City began to annex unincorporated areas of the county into the City in 1960 to provide for the orderly development of public sewer and water systems.

<sup>6</sup> City of Portland, Bureau of Planning, *Outer Southeast Community Plan*, March 1996

By 1994 all of the unincorporated areas of Multnomah County had been annexed either to Portland or to Gresham. The last major annexation occurred in 1994 with the annexation of outer southeast Portland into the City.<sup>7</sup>

The City underwent an extensive community planning process in conjunction with the annexation. The resulting Outer Southeast Community Plan and the Powellhurst-Gilbert Neighborhood Plan were adopted in 1996. The goals of these plans are to revitalize older neighborhoods and commercial strips, to plan for transportation infrastructure, and to prevent environmental degradation.

At annexation, existing Multnomah County zones were converted to similar City zones. In addition to this conversion, land adjacent to major arterials, SE 122nd Ave., Division St., Holgate Blvd. and Powell Blvd., were rezoned for multi-family development. This rezoning was done to encourage the development of higher density multifamily housing along streets served by public transit. Table 1 equates Multnomah County zones to City of Portland zones and compares potential housing unit densities.

Table 1 - Zoning Code Comparison

Multnomah County			City of Portland	
<u>Zone</u>	<u>Allowed Density</u> (units per acre)		<u>Zone</u>	<u>Allowed Density</u> (units per acre)
MR-4, MR = 3	7.2 to 16.1	<i>Converted to</i>	R2	21.8 to 32
HR-2, A-2	8.1 to 20.7		R2	21.8 to 32
HR-1, A1B	8.1 to 58		R1	43 to 65

Sources: Proposed Outer Southeast Community Plan, City of Portland, Bureau of Planning, February 26, 1995, page 2-6 Classification of Districts, (Adopted July 26, 1979). Handout received from Multnomah County Land Use and Transportation

## Current Zoning Classifications

Table 2 summarizes the amount of land in each classification set forth in the Zoning Code. The area is largely residential with 57 % of the land zoned for single-dwelling uses and 32 % of the land zoned for multi-dwelling development. The multi-dwelling zones present are R1 and R2.

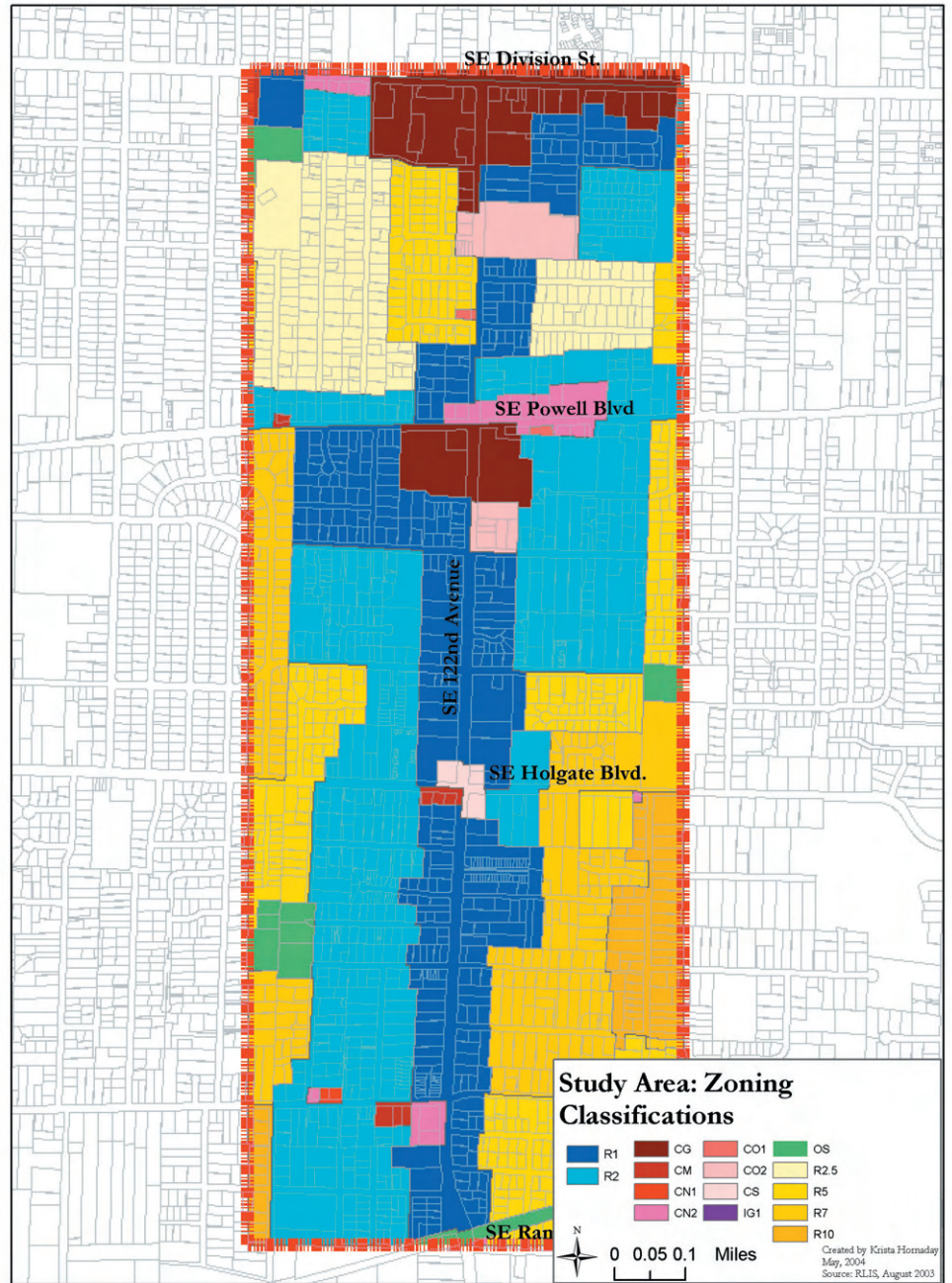
Table 2

Zoning Classification	% of Total
Single Family	57.5
Multi-dwelling	32.7
Commercial	4.5
Open Space	4.7
Industrial	0.4
Mixed Use	0.2
<b>Total</b>	<b>100</b>

Source: RLIS, August 2003

<sup>7</sup> City of Portland, Bureau of Planning, Annexation [http://www.planning.ci.portland.or.us/an\\_over.html](http://www.planning.ci.portland.or.us/an_over.html) (May 28, 2004)

Map 2



The R1 zone is a medium density multi-dwelling zone that is typically applied to land adjacent to transit streets and commercial areas. The average housing unit density is 43 units per acre, although density may be as high as 65 units in some instances. This zone is typically developed with apartments, duplexes, townhouses, and rowhouses. The R2 zone is a low-density multi-dwelling zone with housing unit densities ranging from 14.5 to 32 units per acre. Typical development types are the same as those in the R1 zone.

A summary of development standards applicable to the R1 and R2 zones, and a brief statement of the purpose for each standard are found in the Appendix.

## Platting and Irregular Lots

The long lots created by subdivisions such as the Suburban Club Homes Tract create difficulty for developers to fit all the desirable pieces of residential development (i.e. driveways, adequate parking, buildings large enough to accommodate spacious living units, landscaping, and private or shared space) on individual lots. This is due to limited street frontage and long, narrow sized lots that vary significantly from the standard lot configuration of inner Portland.

Options for further dividing these lots are also limited and have created additional connectivity problems from those in the original plat. They can be subdivided into many lots served by a cul-de-sac, or they can be partitioned with a “flag” to provide new lots with access to the street. Neither of these options work to enhance bicycle and pedestrian experiences or to promote connectivity and access to public transit.

## Transportation Infrastructure

Many smaller local streets are unpaved and have not been graded. They do not have curbs or sidewalks, and do not connect with other local streets, making them extremely difficult to navigate. Many survey respondents stated that traffic from new residents puts an increased strain on unimproved roads, thereby increasing already significant potholes. Lack of stop signs and pedestrian crossings cause safety concerns for residents, especially in light of the increased traffic associated with the infill developments.

The four main arterials: Division St., Powell Blvd., Holgate Blvd. and SE 122nd Ave. are developed with commercial uses. The Outer Southeast Community Plan Vision Map recognizes Division St. and SE 122nd Ave. as contemporary main streets. These streets differ from traditional main streets in several ways. Commercial development along contemporary main streets is spaced farther apart and located away from the street. Parking is typically located between the sidewalk and the front door of the businesses. These streets are auto oriented and unfriendly to pedestrians and bicyclists. This, in addition to the minimal street frontage of residential developments, creates problems in fulfilling future neighborhood livability goals.



*Irregular flag lots such as this one on Powell Blvd. Create unique design issues for developers. This development shows the high percentage of impervious surface often found on flag lots.*

## Housing Stock

Data from the US Census Bureau indicates that 62 percent of existing housing units are single-family structures, 60 are mobile homes, and the remaining 32 percent of units are in multi-family structures.<sup>8</sup> The largest portion of multi-family units is small multi-family structures with one to four housing units. Only three percent of the housing units are in very large multi-family structures with more than 50 units. Fifty eight (58) percent of units are owner occupied and 42 percent of the units are rented. These rates are comparable to tenure rates for the City as a whole (56 percent owner occupied, 44 percent rented).

The medium year of construction for all housing types is 1958. MAP 3 shows the age of housing structures classified as pre-WWII (1940 and before), post WWII (1940-1990) and recent developments (1990-present). This map illustrates the dispersal of housing age throughout, without concentrations of a particular era.

The single-family structures are predominantly small ranch houses on large lots. Geographic Information Systems (GIS) analysis confirms that there are a number of tax lots where the assessed value of improvements (structure) is less than the assessed value of the land. The areas that may be ripe for redevelopment are shown on MAP 4.



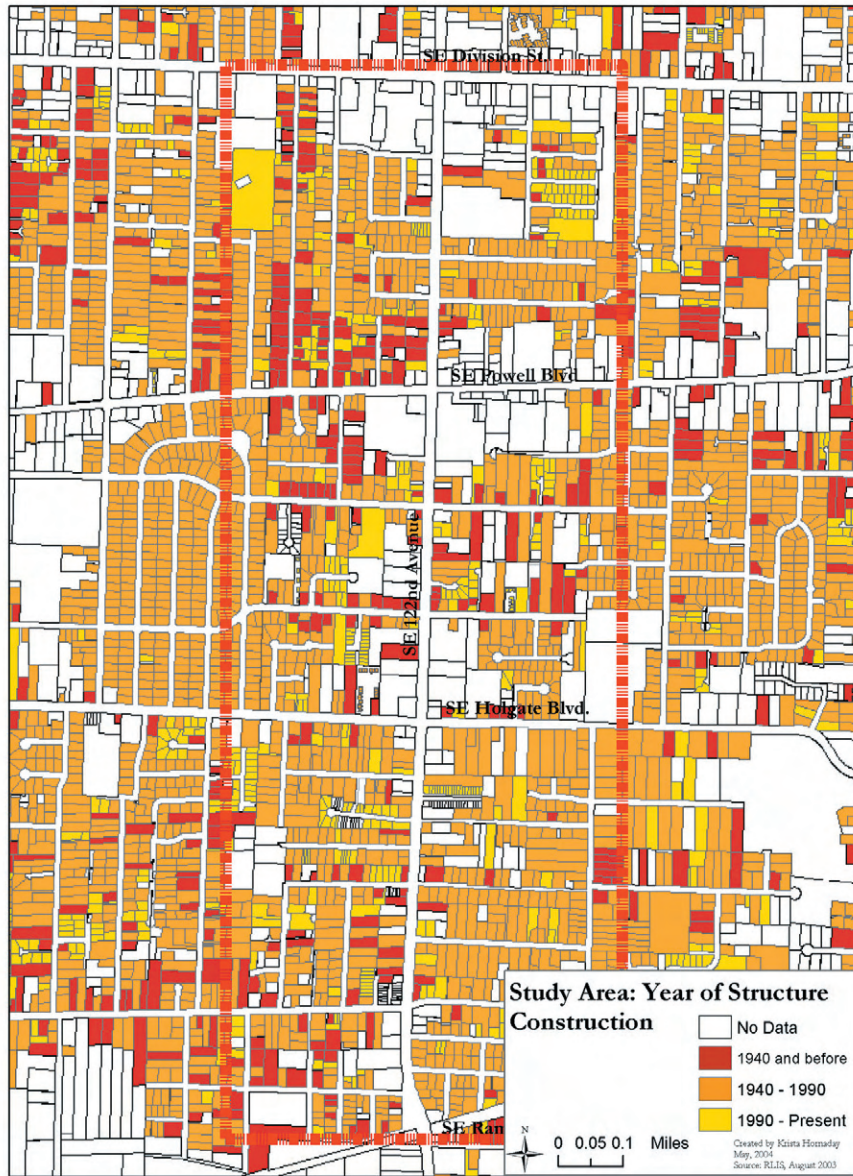
Post WWII residential development was primarily in the form of one story, ranch style homes such as this one.

Table 3 - Housing Units Classified by Size of Structure

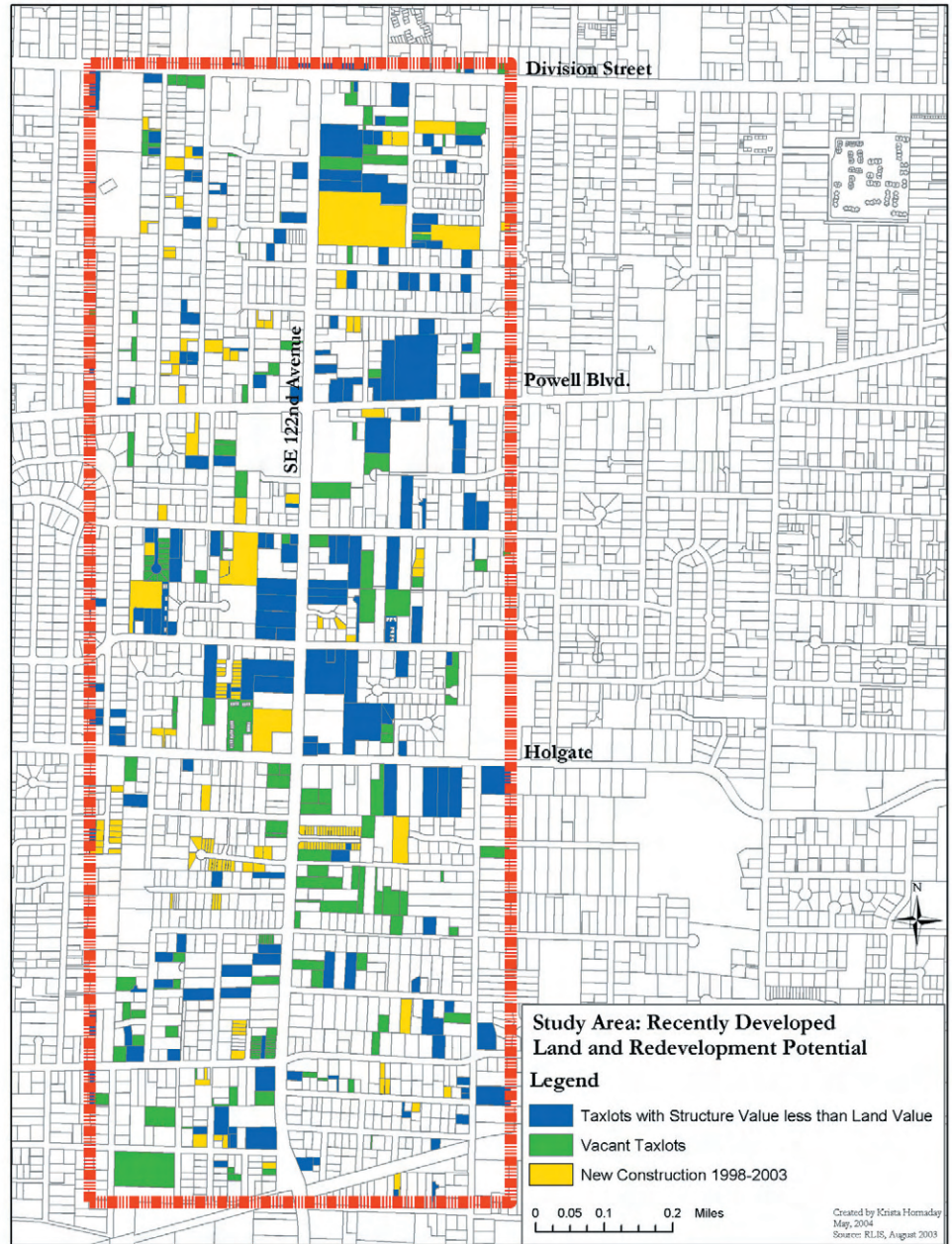
	Single-Family Structures	Mobile Homes	Multifamily			
			Small (1 to 4)	Medium (5 to 19)	Large (20 to 49)	Very Large (More than 50)
Number of Units	3,222	334	736	434	365	158
% of Total	62%	6%	14%	8%	7%	3%

Source: United States Census Bureau, 2000 SF-3

<sup>8</sup> U.S. Census Bureau, SF-3, <http://www.factfinder.census.gov> (May 30, 2004)



Map 3



Map 4

## Affordability

Both existing neighbors (51%) and infill occupants (54%) rated affordability as the number one reason they chose to live in the neighborhood. Data collected for the 2000 Census showed that while housing value is less in the study area than in the City as a whole (\$133,167 compared to a \$154,900), the median gross rent is comparable to that of the City (\$574 v. \$579).<sup>9</sup> New multi-family development rents collected as field data ranged from \$600-\$800 for 2-3 bedroom unit apartments.

Census data also indicates that the median household income in the study area is approximately 10% below that of the City as a whole. In addition, approximately 9% of households in the study area receive public assistance compared to 4% of households in the City.

The importance of affordability presents an interesting challenge in terms of design. In many situations, better design is more expensive which may increase the cost of housing, both rents and sales prices. Better design may also make the neighborhood appealing to higher-income people, which could potentially change the market. Thus, a challenge is to identify design alternatives that do not have a large impact on the price of housing.

## New Multi-family Infill

This study evaluated 31 multi-family developments, varying greatly in style, type and site design (see Appendix A). Of these, 52% are apartment units, 27% are rowhouse units, 15% are plexes (duplex, triplex and four plexes), 5% are cluster developments (plexes with common courtyard) and 2% of the units are condominium units. Housing unit density for these projects range from a high of 41 units per acre (Holgate Terrace Apartments) to a low of 10 units per acre (duplex at 2926 SE 125th Ave.). This is important to the neighborhood because many of the developments in the inventory are surrounded by single-family homes in low-density residential zones with housing unit densities in the range of 6.5 units per acre to 9 units per acre.

## Case Studies

The Holgate Terrace Apartments is the project with the highest housing unit density (41 units per acre). This apartment complex is located at SE 122nd Ave. and Holgate Blvd. and includes 72 units. No land use review process was required for the apartment complex as the project met the relevant development standards. The apartment building units overlook the parking lot that is located at the center of the complex. Landscaping is limited to planting strips in the parking lot and sidewalks as well as planting beds immediately adjacent to the buildings.

The largest rowhouse project is located on Long St., just east of SE 122<sup>nd</sup> Ave.

<sup>9</sup> U.S. Census Bureau, SF-3, <http://www.factfinder.census.gov> (May 30, 2004)

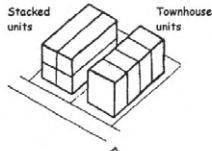
## Study Area Development Type Inventory

**Development type: Plexes**

Number of developments: 11 (35% of total)

Number units: 56 (15% of total)

Example plex density: 30 units per acre



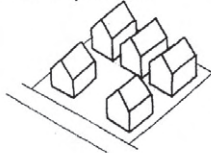
This development type includes duplex, tri-plex, four-plex, etc. with multiple units on one tax lot.

**Development type: Courtyard Cluster**

Number of developments: 2 (6% of total)

Number units: 17 (5% of total)

Example cluster density: 24 units per acre



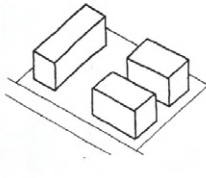
This development type includes developments with buildings arranged around a shared space or courtyard.

**Development type: Apartment Complex**

Number of developments: 6 (19% of total)

Number units: 193 (52% of total)

Example apt. density: 41 units per acre



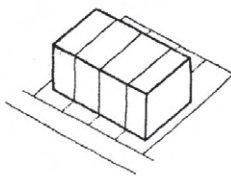
This development type includes clusters of buildings with multiple units.

**Development type: Rowhouse**

Number of developments: 12 (39% of total)

Number units: 106 (28% of total)

Example rowhouse density: 20 units per acre



This development type includes attached units, each with its own lot.

Housing unit density on this street is approximately 33 units per acre.

The rowhouses are surrounded by vacant land and additional multi-family development is expected on adjacent lots. Many of the units are owner occupied. Rental units are occupied by market rate renters and by renters that receive federal housing assistance. These rowhouse units offer individual enclosed garages, two bedrooms, two and one half bathrooms and a very small back yard.

A duplex at 2926 SE 125<sup>th</sup> Ave. is the least dense development in the study area, with a housing unit density of 10 units per acre. This duplex is located on a flag lot with a paved drive-way in the front and a small backyard. The surrounding area is developed with single-family homes and the landscaping is mature. Each unit has an enclosed single car garage.

## Population Transition and Creating a Future Vision

U.S. Census data indicates that the age of the residential population is changing.<sup>10</sup> The number of children under the age of 18 increased by 30% between 1990 and 2000 as did the number of individuals between the ages of 45 and 64 (40% increase) and the number of individuals over 65 (5% increase). These changes from 1990 to 2000 are different from the changes experienced by the City as a whole:

- Percentage increase in the number of children under the age of 18 is 30% compared to an increase of 17% for the City.
- Percentage increase in the number of individuals between the age of 45 to 64 is 40% compared to an increase of 63% for the City as a whole
- Percentage increase of individuals over the age of 65 is 6% compared to a decline of 3% for the City as a whole

In general this area has a higher concentration of children and those over 65 years of age than the City as a whole. This information is consistent with the survey demographic data collected, new infill occupants are younger in age with more children and the existing neighbors are aging, with a significant number over 65 years.

This difference in age between new and existing residents is accompanied by other critical differences including:

- Infill Neighbors
  - o Primarily homeowners (85%)
  - o Lived in their residence for a longer span of time than the infill occupants (68% had lived in the study area for greater than 5 years)
  - o Moved to the neighborhood because of the neighborhood character (43%)
  - o Perceive their neighborhood changing for the worse (68%) because of the growth in multifamily housing

<sup>10</sup> U.S. Census Bureau, SF-3, <http://www.factfinder.census.gov> (May 30, 2004)

- o Do not know residents of new multi-family infill adjacent to their home
- Infill Occupants
  - o Primarily renters (67%)
  - o Lived in the area one year or less (74%)
  - o Moved to the development because of the availability of homes (42%), proximity to family/friends (28%), and proximity to work (30%)
  - o Less likely than surveyed neighbors to identify neighborhood as an important reason for choosing the neighborhood (14%)

These differences between old and new residents, owners and renters, elderly and younger populations seemed to directly influence the perception of neighborhood change. Neighbors had chosen to live in the neighborhood of the past – suburban and private, while occupants of infill have chosen to live in the neighborhood of the present – higher density and growing.

Such a division in perception of the neighborhood and its direction make it difficult to identify unified design preferences. Additionally, the preferences expressed today may not be completely applicable in five, ten, or twenty, years from now as the area continues to change.

## Crime

When asked in an open-ended question to identify the biggest concerns about living in their neighborhood, survey respondents most often answered crime and drugs. Such comments indicated that neighbors directly associated a perceived increase in crime with the new multi-family infill.

An evaluation of crime statistics available from the City of Portland Bureau of Police found that although the total number of crimes in the Powellhurst-Gilbert neighborhood increased 10% from 1998-2003, the rate per 1000 population (96) remains below the City of Portland average (101).<sup>11</sup> The majority of crimes in the neighborhood involve burglary, car prowls, and larceny and motor vehicle theft.

To the extent that good design can prevent crime, this topic is relevant to the LIV-IN Project; however, further research needs to be done to prove whether these concerns are warranted and to investigate methods for reducing crime.

Through community involvement, interviews and work sessions, findings about design of multi-family infill development emerged. These findings fall into several categories: neighborhood issues, design preferences, developer perspectives and zoning code concerns.

<sup>11</sup> City of Portland, Bureau of Police, *Maps and Statistics* <http://portlandonline.com/police> (April 30, 2004)

# Findings

## Community infill issues beyond design:

- Crime and Safety
- Traffic
- Street Improvements
- Litter
- Schools

Table 4 - Design Features Considered "Very Important"

Design Features	%
Sense of Privacy	84
Storage Space	58
Nighttime lighting	51
Individual entry	49
Enclosed garage	49
Balconies/Porches/Patios	49
Daytime sunlight	42

## Comments on the private realm

- "I love almost everything about the development, inside and out. Needs more parking."
- "The dwelling looks nice on the outside and it is spacious on the inside."
- "It has a new modern look to it."
- "Very clean, upscale units."

## Neighborhood Issues

Perhaps the most notable finding to come out of this study is that there are important infrastructure and public service deficiencies in Outer Southeast Portland, which for many people are of a higher priority than design issues. Poor street connectivity and unimproved roads were frequently mentioned concerns. Crime, traffic, litter and school overcrowding were also mentioned repeatedly. For many survey participants, these issues were synonymous with new development and took precedence over design.

## Design Preferences

Design preferences fall easily into the private realm, public realm and contextual relationships. Two findings are important to mention prior to this discussion, however.

First, it should be noted that when discussing design preferences, participants were asked to focus on the area immediately surrounding their residences. Since very few of the new multi-family developments surveyed in this study were along SE 122nd and other main transit streets, the preferences reported in this documents are primarily for residential areas on side streets off SE 122nd Ave.. Discussions at the community workshop suggested that different preferences – for larger, more urban multi-family, structures - might exist along transit streets.

Secondly, it was found that significant sections of the study area lacked an adequate transition between the public and private realms. Many roads are unimproved, and even those that are improved lack curbs and sidewalks. Front porches and yards are absent on many of the new multi-family structures. This creates an uneasy feeling among residents and visitors to the neighborhood.

## Private Realm

Occupants of the new multi-family infill developments were the sole source of information on how the projects function internally. Through information collected during surveys and conversations at the public workshop, occupants indicated that they are happy overall with the interior design of their units.

- **Lighting is sufficient.** Occupants surveyed generally responded "yes" (83%) that their units receive enough sunlight. Nighttime lighting on the site was "sufficient" (79%).
- **Interior design is more important to occupants than issues of exterior appearance.** Occupants rated internal design elements as "very important" while external elements such as building features common to the neighborhood and windows facing streets were rated less important. The ranking of design features considered "very important" appears in Table X. Furthermore, occupants who attended the community workshop frequently described their development in terms of the internal elements such as number of bedrooms, appliance amenities, garage size, etc. They seemed satisfied with the size, configuration of their units, and on-site elements.

- **Developers focus resources on private realm.** Developers said that they focus resources on internal design and functionality, as opposed to external elements. They stated that they build to market demand and that new occupants are interested in unit amenities and parking. Developers indicated that rental and sales rates for new infill is high, providing incentive to build more of the same.

**Public Realm and Contextual Relationship**

Both occupants and neighbors of infill provided perspectives on the appearances of the buildings and their relationship to the neighborhood. There is an obvious divide among opinions; occupants generally rated their buildings positively, while neighbors generally rated them negatively.

- **Opinions on the overall look of the buildings are split.** As Table 5 shows neighbors predominately rated the developments as “poor” or “average”, while occupants rated them as “excellent” or “average.”

Table 5 - Rating of Overall Appearance

	Neighbors		Occupants	
	Count	Percent	Count	Percent
Poor	25	49.0%	5	11.6%
Average	18	35.3%	16	37.2%
Excellent	8	15.7%	22	51.2%
TOTAL	51	100.0%	43	100.0%

- **Opinions on the size of the buildings, relative to the neighborhood, are also mixed.** Table 6 demonstrates that the overwhelming number of occupants preferred the size of the buildings, while the neighbors found them to be too large.

Table 6 - Rating of Building Size

	Neighbors		Occupants	
	Count	Percent	Count	Percent
Too Large	32	60%	2	5%
Too Small	2	4%	4	9%
A Good Size	15	28%	34	79%
Not Important	2	4%	2	5%
No Answer	2	4%	1	2%
TOTAL	53	100.0%	43	100.0%

- **The height and bulk of new housing should reflect the low-lying architectural character of the neighborhood.** Survey participants commonly cited lack of privacy (windows overlooking patios/backyards), no space between buildings (shadowing) and lack of transition between single-family homes and taller/larger developments as problems

“[Developers] just need to put more landscaping to give privacy and add beauty to the neighborhood.”  
-Infill Neighbor, Bush Street

“The new three story development has windows that overlook our back patio, I won’t use our back area as much now; infringes on my privacy”.  
-Infill Neighbor near Boise Street

“They [developments] are cramming up close to houses and there is no room for landscaping or yards.”  
-Infill Neighbor, SE Powell Blvd.



*Streets with unimproved parking areas such as this create issues for on-street parking.*



*This duplex with a single-family looked was ranking as a positive addition to their neighborhood by design preference survey respondents.*



*Mature trees characterize the neighborhood as defined by area residents.*

with the new infill. When given the opportunity to expand upon this, people said that multi-family development over two stories and larger in bulk are seen as very negative additions to the neighborhood.

- **More parking is needed?** Parking is an important issue for community members; 63% of survey respondents answered that more parking is needed for new multi-family developments. However, based on discussions about parking at the community workshop, it appears that the neighborhood feels more on-site parking is needed because it is not acceptable to park on the street. People are uncomfortable with cars parked in front of their homes, a situation which may stem from a lack private-public realm transition on unimproved streets or the fact that many people do not know their neighbors or their cars.
- **Individual entrances and smaller building massing are desired to reflect the single-family character of the area.** Several design priorities relating to context sensitivity were highlighted in the survey and design preference survey. 49% of people said that multi-family developments with a single-family look would fit better with their neighborhood. A sense of individuality for housing units was one highly ranked way to achieve a single-family look (55% ranked as very important). A common opinion voiced at the community workshop was that buildings should be smaller in bulk and no taller than two stories high.
- **Trees are a unifying element of neighborhood character.** Mature trees were identified as an important feature of the neighborhood that residents would like to see preserved. Additionally, people suggested mature trees as a good way to screen the external appearance of new buildings. Residents expressed strong concern over the loss of mature tree canopy to make way for new development.
- **Open Space is desired on-site.** Shared open space for new infill was seen as a desirable element from the community perspective with 51% of occupants without a shared open space responding they would like to have one, and neighbors rating this element as "very important" (60%). Units gathered around a courtyard ranked well in the design preference survey, because of the obvious inclusion of open space. Neighbors prefer new infill to have an open space to fit with the trees/lawn character of the neighborhood as well allowing for space for children to play. Occupants would chose parking over shared open space if given a choice, but if they could have both, shared space would be beneficial to families with children.
- **Communication between developers and neighbors is lacking.** Lack of communication between developers and residents regarding public realm and context sensitive design leads to uncertainty by residents for

the future of their neighborhood. Community members expressed frustration with the lack of opportunity to share information for design improvements with developers and frequently suggested that more opportunities for discussion should exist.

## Developer Perspectives

Based on the identified community design preferences, seven architects, designers, and developers were asked why public realm and contextual elements were a lesser priority than private realm elements. These professionals have all designed projects specifically in the study area, ranging in size and scale, also varying from subsidized to market rate housing.

Five reasons surfaced as to why new multi-family infill developments are not fully meeting community design preferences.

- Existing developments are meeting market success.** Developments are frequently sold to buyers, whether homeowners or property management agencies, prior to or by completion of the project. Additionally, occupancy rates of the existing developments are high. One 28-unit apartment complex filled within 5 months of completion. These two realities suggest that what is being built in the study area is meeting market preferences, if not design preferences. There is little incentive among developers to change what they are building.
- There is no identifiable character or context to relate to in the study area.** There is consensus among developers that the area around SE 122<sup>nd</sup> Ave. has no real character to consider when building. When asked how they would characterize the area, interviewees responded, “non-descript,” “mish-mash,” “no character,” and “lacking.” One even said, “Drawing on what is there would be a big mistake.”
- Odd shaped lots complicate design trade-offs.** Developers confirmed that long lots and flag lots complicate site configurations. Most chose the configuration of their site because it was the only option that worked, given the need for access, parking, individual open space and the other requirements of the Zoning Code. They also said that given a decision between open space and parking, parking would win out every time. Most developers said they try to fit as many units and parking spaces as possible on site to maximize return and because parking is an important amenity for buyers.



### Speed of Change/Development

*Aerial photographs show the change in tree/ open space coverage from 1996 to 2000 due to new infill development.*

#### Community Design Preferences for Multi-Family Infill Development

- Larger multi-family units (e.g. 3 bedrooms, 2 bathrooms)
- Unit amenities, such as garages, appliances
- Lower lying multi-family structures of smaller bulk (plexes)
- Distinct appearance of units (individuality)
- Maintain mature trees on-site
- Landscape consistent with the neighborhood
- Usable open space
- Opportunity to discuss design with developers

“I like the fact that we have homes in stands of large trees most about my neighborhood and now all the [new developed] properties are clear cut of trees, some are 5 feet in diameter”.  
- Infill Neighbor

“I dislike unknown cars parked outside my house.”  
-Infill Neighbor



*Shared open space was found to be a desirable design element by both occupants and neighbors.*

- **Design is not a market priority.** One interviewee said, “75% of the reason for poorly designed infill in Outer Southeast is the result of developers trying to maximize their return... the other 25% is their unawareness of good design.” To developers the benefit of “better” design is lower vacancy rates and higher rents. But, “if you invest too much in design and your rents are too high, you will not turn the units over fast enough.” In other words, developers are attune to the price that residents of Outer Southeast Portland are willing to pay, and these rents do not support the costs of better design.
- **Amenity bonuses are not being utilized.** Chapter 33.120.265 of the Portland Zoning Code provides density bonuses to developers who provide the listed amenities. Many of the amenities encouraged are the same amenities that were repeatedly mentioned in design preferences. However, none of the developers reported using the bonuses. Primarily this was because the bonus of added density is only useful on larger lots. The long, narrow lots of Outer Southeast Portland are not favorable for higher-density. Developers pointed out they would be more likely to include amenities for cost-savings bonuses, such as expedited permitting.

An interesting divergence in opinions regarding design occurred between those developers who built market rate units and those who built subsidized housing. Perhaps due to greater cash flow, longer-term investments and socially minded missions, developers of subsidized housing, typically community development corporations, placed a higher priority on external design and its impact on the neighborhood. Generally, subsidized housing projects include outdoor play areas and private outdoor space, among other amenities. This mentality stood in stark contrast with market rate developers whose primary motivation was quick turn around sales.

### Code Concerns

Lastly, the Portland Zoning Code was reviewed to determine where the Code was falling short of community design preferences. Several areas of concern were identified:

- **Development standards are written for development on flat, regularly shaped lots.** One of the key problems with the existing development standards is that they are not entirely applicable to the irregular lots in Outer Southeast Portland.<sup>12</sup> The Code was written with the regular lots of Portland’s 200 foot by 200 foot square blocks in mind, not for flag lots, or long lots that lack street frontage. This creates an inherent shortcoming in the City’s ability to realize preferred design in the study area.
- **Lack of transition between medium density multi-dwelling zones and low-density single-dwelling zones.** In many parts of

“The developments that relate well to my neighborhood are the ones that have green space or courtyards in the interior”.  
-Infill Neighbor, SE 125th Ave.

“I am in favor of planned areas where one looks out on landscaping – rather than asphalt.”  
-Infill Occupant, Boise Street Condos

<sup>12</sup> City of Portland, Title 33 – Planning & Zoning, Chapter 33.120.010 B.

the study area, medium density R1 zones directly abut low-density single-family zones, such as R5 or R7. Minimum setbacks in the R1 zone vary from 5 to 14 feet, in essence allowing a 45-foot tall structure within immediate proximity to one-story ranch style homes.

- Standards are intended for structures with public street frontage.** Many of the requirements of the Zoning Code are based on street frontage. For instance, front entrances must be within 8 feet of the longest street facing wall and 8%-15% of the street-facing façade must be windows. In situations where the lot is accessed by a private drive or alley, this private street serves as the basis for street frontage. On the long lots in Outer Southeast, private drives are commonly used for access. The result is not a pedestrian-oriented streetscape, as intended by the Code, but rather a series of buildings oriented toward driveways and not streets.
- Tree preservation is not required for multi-family structures.** Chapter 33.120.237B of the Zoning Code states the tree preservation requirements for multi-family dwellings. However, multi-family structures, those buildings with three or more units in them, are exempt from this standard. The result is loss of mature trees, which were identified as a key to neighborhood identity and which could potentially screen the structure.

“I am upset that we were not told about the building of these units or given the opportunity to voice our objections”.  
-Infill Neighbor, Schiller Street

“No one seemed to make an effort to consult or even contact neighbors, not even adjacent property owners before building. There was no process made known to us to address play space for kids who might move in, preserving old trees on the property, or building design and orientation.  
-Infill Neighbor and Powellhurst-Gilbert Neighborhood Association Member

## Recommendations

As the third project goal suggests, this report is intended to inspire creative and proactive means to realize community design preferences for future multi-family infill. The following recommendations are put forth as a means to do so. Appreciating the complexity of the issues faced in Outer Southeast Portland, there is not one action that will comprehensively address these challenges, warranting a combination of actions to improve the livability of future multi-family infill development.

While many recommendations could be made to improve the quality of new multi-family infill development, the four recommendations discussed on the following pages were selected based upon their ability to accomplish the most significant change. It is recognized that some will be more difficult to implement than others, as they are dependent on the investment of a wider range of stakeholders and organizational change. In addition, the long and short-term feasibility varies for each.

Recommendations to improve the quality of multi-family infill development include:

- 1. Take a comprehensive approach to planning and design**
- 2. Define the transition between public and private space**
- 3. Use expedited and lower cost permitting to encourage amenities**
- 4. Maintain mature trees**

**RECOMMENDATION #1: TAKE A COMPREHENSIVE APPROACH TO PLANNING AND DESIGN**

As this study demonstrates, there are constraints to addressing the future of Outer Southeast Portland through site-by-site design. The site-by-site approach is only effective to the extent that each site implements the larger community vision.

- **Plan and implement the infrastructure necessary for good urban design.**

Outer Southeast Portland is currently missing the basic infrastructure necessary to support the principles of good design. Issues such as poor street connectivity, inadequate street frontage and irregular lots make it difficult for individual sites to contribute positively to the neighborhood.

Resolution of these infrastructure issues was addressed in the Outer Southeast Community Plan, completed by the Portland Bureau of Planning in 1996. This plan established urban design and transportation policy action items for the neighborhood, such as establishment of appropriate block standards, a road plan to reinforce the area's character and a design overlay zone to promote attractive pedestrian oriented developments. The urban design and transportation policy action items of the Outer Southeast Community Plan must be implemented in order to provide a sufficient canvas for future development.

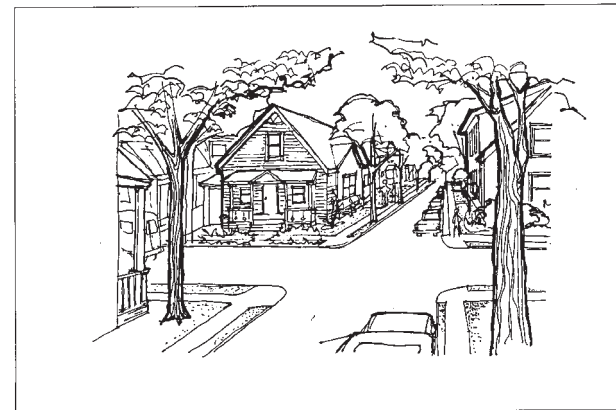
- **Revive the community vision.**

The main function of the Outer Southeast Community Plan was to create a comprehensive future vision for the area. This vision included dividing the large lots into smaller blocks with narrow streets, sidewalks and street trees. Under this vision, new buildings enhance the physical appearance of the neighborhoods and promote residential diversity. Commercial development occurs within walking distance and public transit is improved. To the extent that this vision is still relevant and applicable, it should be revived and serve as a unifying image for the community.

This study found evidence that the vision for residential areas on the side streets and the vision for SE 122nd Ave. may be different. This divide should be further explored, and if valid, incorporated into the existing community vision.

- **Use public investment to implement infrastructure.**

Some level of public funding should be used to implement the infrastructure needed in Outer Southeast Portland. This may include improving roads, enhancing streetscapes or purchasing open space. At the very least this public investment will provide the template for better urban design.



Large lots have been divided into smaller blocks with narrow streets, sidewalks, and street trees. This provides a cozy streetscape with safe walkways to stores and public transit. Courtesy of Southeast Uplift, Drawn by Cynthia Bankey, Architect

Source: *Building Blocks for Outer Southeast Neighborhoods* (1996)

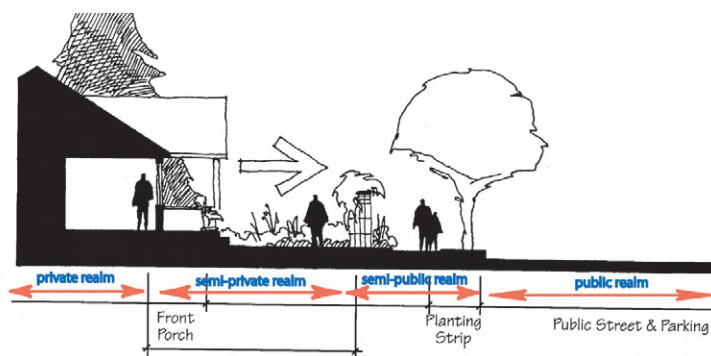
Considering that one of the key themes from the developer interviews was the lack of incentive to improve design quality, public investment may provide the catalyst needed to enhance private development. A sound public investment would signal design expectations to developers. It may also spark civic pride, inspiring the neighborhood to activate in response to undesirable development proposals.

With the proper infrastructure and a guiding vision in place, new proposals for multi-family infill development can then be evaluated based upon their individual ability to support the desired neighborhood vision. Aware and proud of this vision, the neighborhood will be in a better position to articulate to developers their preferences for new developments.

## **RECOMMENDATION #2: DEFINE THE TRANSITION BETWEEN PUBLIC AND PRIVATE SPACE**

As the findings suggest, large portions of the study area lack a clear transition between public and private space. This creates a sense of uneasiness. A clear transition between public and private space would help to alleviate this tension.

- Public and semi-public space should be publicly provided**  
 The provision of infrastructure through public funding, as suggested in Recommendation #1, would account for the distinction of public space. Improved streets with curbs, sidewalks, street trees and amenities such as lighting, trash receptacles and benches would not only enhance pedestrian circulation, they would signal to the user that they are in the public or semi-public realm. Furthermore, these enhancements would delineate where on-street parking is acceptable making this unused resource usable.
- Encourage developers to delineate semi-private and private space**  
 Continuing the transition from the public realm into the private realm, developers should be encouraged to add building design elements such as individual walkways, entryways and front porches to create a more welcoming transition into the semi-private and private realms. These design elements provide architectural detail, unit amenities highly-desired by occupants, and a sense of individuality, which was indicated as important by both occupants and neighbors. These design details may also reduce the surrounding neighbor's sense of the height and bulk of the new multi-family development, breaking up the building mass and adding interest.



Source: Adapted from the *Building Blocks for Outer Southeast Neighborhoods* (1996)



*Boise Street Condos provide a clear transition between the private and public environment with porches, front yards and sidewalks.*



*This development lack transition elements, the cars are parked directly in front of the entrance.*

Amenities that merit density bonuses in Chapter 33.120.265:

- Outdoor recreation facilities
- Children's play areas
- Three bedroom units
- Storage areas
- Sound insulation
- Crime Prevention
- Solar water heating
- Larger required outdoor areas

**RECOMMENDATION #3: PROVIDE EXPEDITED AND LOWER-COST PERMITTING TO ENCOURAGE AMENITIES**

Many of the design amenities ranking high among community design preferences are currently encouraged in Chapter 33.120.265 of the Portland Zoning Code. However, in exchange for these amenities, Chapter 33.120.265 grants developers density bonuses. Based on the conclusions of this study, density bonuses are an inappropriate incentive. Density bonuses are not favored by the community, nor are they utilized by developers.

- **Expedited and lower cost permitting are more appropriate bonuses**

Developers expressed that cost-saving incentives, such as providing lower-cost or expedited permitting, would be more widely used by developers and would be more likely to encourage the type of multi-family infill desired in Outer Southeast.

It is understood that lower-cost or expedited permitting may be a difficult incentive to provide for staffing reasons, but it is likely to be the most effective way to improve the livability of new multi-family infill developments.



*Children's play areas*

**RECOMMENDATION #4: MAINTAIN MATURE TREES**

Currently, multi-dwelling structures, or dwellings with three or more units, are exempt from the minimum tree preservation standards.<sup>13</sup> Undoubtedly, the intent of this exemption is to prevent trees from interfering with density goals. However, the effect of this exemption is poor screening of larger structures and loss of community character.

- **Multi-dwelling structures should be required to meet tree preservation standards similar to other development types in the R1, R2 and R3 zones.**

All other development in the multi-dwelling zones is required to meet the T1 standard of Chapter 33.248. These standards require developers to comply with one of three options: (1) preserving at least 2 inches of tree diameter per 1,000 square feet of site area or 3 inches of tree diameter on lots less than 3,000 square feet in size; (2) planting the foregoing tree diameters; (3) making a payment to the tree fund. Such standards or similar standards should be applied to future multi-dwelling developments, with an emphasis on preserving existing mature trees or planting larger, more developed trees to replace lost vegetation.

Action on this issue is important, as mature trees were cited as a symbol of neighborhood identity, which is perceived as threatened by new multi-family infill developments. It was also recognized that larger, more mature landscaping could help to ease the transition from higher-density zones into the surrounding single-family neighborhood and mitigate the height and bulk of new multi-family developments, a major concern of neighbors.



*Large trees and front yards characterize existing residences.*



*Mature trees on multi-family sites such as this one help soften the residential transition and contribute to neighborhood character.*

<sup>13</sup> Portland Zoning Code, Chapter 33.120.237 B exempts multi-family structures from meeting the T1 standard of Chapter 33.248. However, it should be noted that if a site is subject to a land division then other tree preservation standards might apply.

## Lessons Learned

Multi-family infill development challenges metropolitan regions around the United States. Market demand and public policy propel these projects forward, while neighborhood opposition pushes them back. Design has been suggested as one tool to resolve this push and pull relationship.

The LIV-IN Project has investigated the potential for design to resolve infill issues in a study area in Outer Southeast Portland. At the conclusion of the project, three lessons stand starkly apparent—

**1. Change is challenging.** Outer Southeast Portland is in a period of transition from a suburban past to an urban future. This change is apparent in the zoning – the area is zoned for the density that the City envisions for 2040, creating transition issues in the meantime. It also shows up in the demographic profile, which is split between an aging generation and a recent influx of young couples and families. The pervasiveness of change in the neighborhood creates a sense of uncertainty, which some resent and others shy away from. The consequence is a loss of community cohesion, which sadly is the one thing the neighborhood needs to hold onto most.

**2. Good design does not just happen. Advocacy is required.** Certainly the City has a responsibility to regulate and encourage good design. Developers also have an ethical obligation to build structures that enhance the livability of the community. However, the future of multi-family infill design in Outer Southeast Portland is in the hands of the neighborhood. If the neighborhood wants to have control over the type of developments that are occurring, they must take an active role. This means strengthening the function of the Land Use Chair to monitor development activities, promoting neighborhood documents such as Building Blocks for Outer Southeast Neighborhoods, and initiating proactive discussions with developers about project design.

**3. The benefits of design have limits.** On some level, urban design can improve the appearance of a neighborhood. It can create attractive streetscapes and appealing facades. However, design cannot inherently create unity among a divided community, it does not always bring safety to areas of crime and it may not incite pride in places of neglect. These problems require human solutions, which stand separate from design. They require some indefinite balance of economic development, political will and social wellbeing, which reside in a community's heart, not on its face.

“The character of the neighborhood is in transition, changing from what it was.”  
-Infill Neighbor, SE Powell Blvd.

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