

# ZONING PRACTICE

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## PRACTICE INFILL HOUSING



# 4

# Standards for Contextual Infill Development

By Thomas P. Smith

Cities suffering housing shortages, a lack of housing choice, and a scarcity of affordable housing options are now examining existing neighborhoods to identify infill opportunities. The most difficult locations to promote infill development are in existing single-family zones. The promise of single-family zoning is often low density, peace and quiet, and a lack of congestion. Despite these expectations, many cities are looking at infill options such as accessory dwelling units, duplexes, cottages, town homes, and small apartment buildings in single-family neighborhoods. Ensuring that these new building types are consistent with the existing context has been a challenge.

A number of cities and their planning departments have initiated plans and zoning code revisions designed to expand housing choice within existing neighborhoods. Many of these code revisions focus on expanding housing options in single-family zones—a controversial idea. In September 2018, the Vancouver, British Columbia, city council approved a portion of the city's *Making Room Plan* that called for duplexes in all existing single-family zones. On December 19, 2018, the city council changed the zoning law allowing duplexes as a permitted use in the RS (single-family) zone on a trial basis for one year. In Minneapolis, the city council adopted the *2040 Comprehensive Plan* in December 2018, calling for a zoning change to allow duplexes and triplexes in single-family zoning districts. Some existing home owners and neighborhood organizations have promised to fight this change.

Planners need to look for opportunities to allow more intensive development of existing properties. In some cases, this will mean opening up single-family zoning districts to accessory dwellings, duplexes, triplexes, and other forms of housing. In others, it will mean making it easier to build apartments, town houses, and courtyard homes within multifamily or commercial zones, or reducing lot size requirements in order to reduce land costs. Generally, it will mean creating zoning incentives such as added building height, reduced parking requirements, and more

flexible density regulations to help stimulate housing development.

This issue of *Zoning Practice* focuses on communities that have adopted or are in the process of adopting infill housing standards to ensure that such development “fits” with the character of existing low-density neighborhoods.

## EXPANDING OPTIONS IN SINGLE-FAMILY DISTRICTS

It is no secret that home owners tend to resist adding density to single-family zones. Many home owners in high-growth single-family neighborhoods attribute the skyrocketing values of their homes to restrictive single-family zoning. Despite this, cities across the United States are trying to expand contextually appropriate forms of new housing to meet local demand.

### Portland, Oregon—Proposed Zoning for Small-Scale Infill

Portland is pursuing an aggressive effort to expand housing choice in most of its single-family zoning districts. The city planning department has proposed an “Additional Housing Options Overlay Zone” that applies to more than 95 percent of the city's R5, R7, and R 2.5 districts. These districts make up

the vast majority of single-family zoning districts in Portland. Within the overlay the city is proposing to allow more accessory dwelling units, duplexes, triplexes, and fourplexes in order to increase the supply of housing. The major goal is not only to allow more multifamily housing, but also to control the building scale and height so that these buildings are contextual with neighboring single-family homes. In addition, the planning department is proposing to allow small clusters of cottage homes on larger lots within single-family districts.

The proposed ordinance calls for allowing multiple dwellings per lot, but with tight limits on floor area and building heights. The overlay would permit the following housing types: a house with an internal and a detached accessory dwelling unit; a duplex; a duplex with a detached accessory dwelling unit; a triplex; and a fourplex. It is interesting to note that the city planning staff's original proposal did not recommend including fourplexes in single-family zones. Additionally, triplexes were only suggested for corner lots.

Under the current proposal, the size of duplexes, triplexes, and fourplexes would be guided by the size limitations in the table on page 3. Table 1 makes it clear that the sizes of



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A historic duplex in Portland, Oregon. The city's “residential infill project” seeks to allow duplexes and other forms at a size and scale similar to older and smaller single-family homes.

**TABLE 1. PERMISSIBLE FARs FOR PORTLAND, OREGON'S PROPOSED ADDITIONAL HOUSING OPTIONS OVERLAY ZONE**

# of Units	Allowed Housing Type	R7-FAR		R5-FAR		R2.5-FAR	
		Base	With Bonus	Base	With Bonus	Base	With Bonus
1	House	0.4	NA	0.5	NA	0.7	NA
2	Duplex or House + ADU	0.5	0.6	0.6	0.7	0.8	0.9
3	Triplex, Duplex +ADU, or House + 2 ADUs	0.6	0.7	0.7	0.8	0.9	1.0
4	Fourplex						
Current allowed FAR (based on setbacks, height, and building coverage)		1.1		1.35		1.75	

new multiunit buildings would be substantially smaller than the current code allows for single-family homes. Even single-family homes would be downsized under the proposed revisions.

Under the plan, lot size requirements for triplexes or fourplexes in existing single-family districts would increase: The R7 district lot size would increase from a minimum of 4,200 square feet to 5,000 square feet; the R5 district lot size would increase from a minimum of 3,000 square feet to 4,500 square feet; and the R2 district lot size would increase from a minimum of 1,600 square feet to 3,200 square feet.

Table 1 shows that the number of units permitted is increased but the total floor area permitted is actually reduced when compared with the current floor area ratios for single-family homes. Bonus floor area is allowed for projects that include qualifying affordable units and for existing homes that add units without altering the existing home's front facade.

In March 2019, the Portland Planning and Sustainability Commission voted 5-4 in favor of advancing the infill zoning amendment to the city council. The close vote is largely attributed to lingering concerns over displacement, especially in lower income and minority neighborhoods where the lower cost of land may reward teardowns of existing homes in favor of new three- and four-unit buildings.

**Seattle's Proposal for Expanding Urban Villages**

Seattle's city council recently approved a broad upzoning of commercial and multifamily districts citywide, as well as the incorporation of some single-family districts

into designated "urban village" areas. In exchange for taller and denser buildings, developers are required to include a certain level of "affordable housing" in their projects, or to pay the city a fee to fund construction elsewhere. Previously, allowances to exceed the base zoning were confined to the downtown and surrounding districts.

The most controversial aspect of the rezoning is the expansion of nine of the city's 27 urban village districts. Urban village districts are residential areas close to public transit centers and neighborhood services. The areas where the "urban village" boundaries have recently been expanded are all currently zoned for single-family homes. In effect, this meant a rezoning of about six percent of the city's single-family zoned area. Of the six percent, about two-thirds were bumped up to a zoning classification labeled "Residential Small Lot" where the new rules allow cottages or duplexes. About one third of the area was changed to a low-rise zone classification that allows town houses and small-scale apartment buildings.

Development in the upzoned areas would trigger the city's Mandatory Housing Affordability requirements, which require any new commercial and multifamily development to contribute to affordable housing. It follows a state-approved mechanism to enforce affordability requirements, requiring developers to either build new affordable units on-site or contribute to an affordable housing fund that can be used throughout the city. The housing created or funded would be affordable to a household at 60 percent of the area median income, which for a family of four is about \$57,000 per year.

Representatives of neighborhood organizations legally challenged the proposed

changes. In assessing these challenges, the city's hearing officer took 19 days of testimony (over a period of more than two months) that focused on whether the city's assessment for the environmental impact of the proposed ordinance changes was sufficient.

In November 2018, the hearing officer concluded that the city planning staff's assessment was sufficient, with a minor recommendation for added consideration of impacts on historically significant buildings. Seattle Mayor Jenny Durkan said the "ruling is a step forward for more affordable housing in Seattle" and that her administration will "move quickly to do the minor work required so we can begin to build these much needed affordable homes."

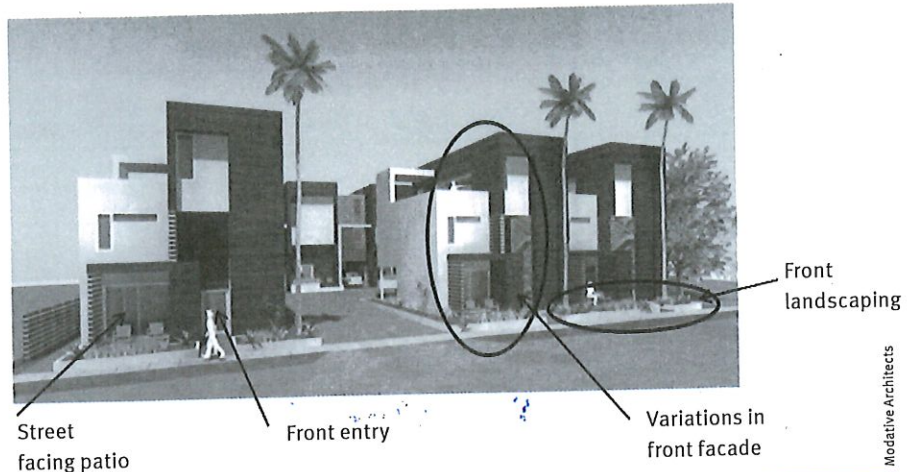
On March 18, 2019, the city council voted unanimously to approve the measure. The Seattle planning department has estimated that with the new legislation implementing the "mandatory housing affordability" requirements the city should "generate at least 6,000 new rent-restricted homes for low-income people over the next decade."

**FINDING THE "MISSING MIDDLE" IN SINGLE-FAMILY AND MULTIFAMILY ZONES**

The concept of "missing middle housing" (developed by Dan Parolek of the consulting firm Opticos Design) refers to a range of multiunit or clustered housing types compatible in scale with low-density neighborhoods that are designed to help meet the demand for more affordable housing types.

Cities in Oregon and Washington have been particularly active in adopting ordinances promoting many of the "missing middle" housing types. Most of these communities adopted zoning amendments that allowed town houses, small apartment

buildings, courtyard buildings, and attached and detached cottages in both multifamily districts and in lower-density town house districts. Spokane, Washington, adopted an infill development code in 2012 and is considering a series of amendments that provide greater flexibility in lot sizes and lot area requirements, building heights, and parking regulations to make it easier to build infill housing. Bellingham, Washington, adopted an infill development ordinance for cottages, carriage houses, town houses, duplexes, shared courtyard housing, and garden courtyard housing. However, nearly all of this development is subject to some form of discretionary or design review.



Modative Architects

🕒 **Fay Avenue Arts District dwellings include seven homes on seven lots. Front units include entryways, patios, and landscaping consistent with city requirements.**

**Olympia, Washington's Missing Middle Ordinance**

In November 2018, the Olympia city council adopted a broad set of amendments to its unified development code designed to promote a greater diversity of housing types consistent with the low-density, low-scale character of the community. The city's effort focused on expanding housing options consistent with the concept of the "missing middle" housing types.

Many of these housing forms were previously addressed in the Olympia development ordinance but had not been built because of limitations and restrictions. The new ordinance is intended to create some incentives for new housing and to clarify and simplify the locations and procedures for building courtyard housing, triplexes, and fourplexes.

The amendment provides some incentives for building different housing types. For example, in the case of detached accessory dwelling units, the new ordinance allows greater building height (from 16 feet to 24 feet) and removes the existing requirement that the principal home be owner-occupied. The new ordinance also waives parking requirements for an accessory dwelling unit if the existing home currently has two parking spaces.

In establishing the parking reduction, the city recognized that on-street parking is available and that some of the missing middle housing forms need less parking than the city typically requires. Only one parking space per unit is required for cottage homes, courtyard apartments, duplexes,

town homes, triplexes, and fourplexes when on-street parking is available. The city anticipates that the one-space-per-unit standard will apply to most cases, since on-street parking is not restricted in most of Olympia's neighborhoods.

The ordinance amendments require courtyard apartments, triplexes, and fourplexes to be located in areas mapped as "high density corridor transition areas," and the city's development code provides a map of areas where the residential infill standards apply.

In residential districts, most of the "missing middle housing" types are subject to design review, with the remainder subject to the city's "infill residential development standards." The city's design review board criteria are detailed in Chapter 18.175 of the unified development code. The criteria for neighborhood scale and character address building orientation and entries, building modulation and articulation, windows, and garage design.

**REDUCING LOT SIZE REQUIREMENTS**

Land is an important component of housing costs. The National Association of Homebuilders' most recent construction cost survey (conducted in September 2017) shows that, on average, 21.5 percent of the cost of a new home was associated with the cost of a finished lot (Ford 2017). The term "finished lot" refers to a lot that has access to required

utilities, access to improved roadways, and that the lot meets all local subdivision and zoning requirements for a developable lot.

In high-growth communities the cost of land often exceeds national averages. By reducing lot size requirements, local governments can reduce the costs of building homes in these areas.

**Los Angeles Promotes Small-Lot Subdivisions**

Los Angeles has considerable experience with infill housing through the administration of its small-lot subdivision ordinance. The small-lot subdivision ordinance was first adopted in 2005 and was comprehensively updated in September 2016 with final urban design standards adopted in March 2018.

The city's ordinance allowed for the creation of detached town homes on land zoned for commercial and multifamily housing. Most of the projects look like town house projects, but the units are not attached—they do not have shared sidewalls. The small-lot ordinance eliminated side-yard setbacks, reduced other front and rear-yard requirements, and substantially reduced minimum lot area requirements. Home buyers may benefit from small-lot subdivisions because they avoid the home owner association fees common to town house developments.

The small-lot ordinance created incentives for infill residential development in areas zoned for multifamily and commercial

uses to spur more fee-simple housing production. Small-lot subdivisions are an attractive alternative in Los Angeles. An August 2016 staff report noted that since the city adopted the ordinance, approximately 331 small-lot subdivision projects had been approved, yielding a total of 3,412 homes.

In 2016, the city amended the ordinance to extend the small-lot subdivision option to owners of existing cottage home developments, allowing these homes to be sold to individual owners. This option for older cottage homes should encourage their preservation and rehabilitation. The city has a significant number of small clusters of cottages, and these homes are often the most affordable homes in many existing single-family neighborhoods.

However, the ordinance and the design of small-lot homes were sharply criticized by neighbors and neighborhood organizations concerned about density, scale, massing, and the lack of compliance with the city's advisory *Small Lot Design Standards: An Illustrated Guide*. To address these concerns, the department of city planning made a wide variety of changes to the code requiring more attention to design details, especially when small-lot homes are built next to more traditional housing types. In particular, the March 2018 amendments translate portions of the city's *Small Lot Design Guidelines* into new mandatory design standards. The 2018 amendment establishes a code-required process whereby projects must be reviewed and a determination of compliance must be made. Adoption of the design standards was necessary in order to make the small-lot subdivision approval process more straightforward and reduce the number of appeals and disputes that arose in the subdivision approval process.

The city's *Small Lot Design Standards* addresses building design, pedestrian connectivity and access, landscaping, mixed use small lots, and bungalow courts and existing structures. Notably, it includes design standards governing the appearance and orientation of primary entrances to protect the public realm and views from the street; the appearance, massing, and clustering of buildings to avoid visual monotony; and the articulation of upper-story facades and orientation of rooftop decks to protect privacy and provide adequate light and air.

### Denver Addresses 'Slot Homes'

In 2010, Denver adopted a form-based code that created new opportunities for infill housing within the city's existing neighborhoods. For example, the new code allowed more mixed use development and permitted new housing types. While these changes were generally well received, some applicants found loopholes and used creative ordinance interpretations to build housing forms that city residents and neighborhood organizations felt violated the purpose and intent of the ordinance.

"Slot homes" are one of the more problematic new housing forms identified by the city. They are a particularly aggressive form of infill housing where developers maximize the amount of development on small lots by building a multiunit residential structure consisting of attached dwelling units arranged side-by-side and primarily perpendicular to the street. Numerous slot homes were built without the benefit of design review or design guidelines or standards.

Developers found that they could use form-based criteria for "general building forms," "shopfront building forms," "garden court building forms," and "apartment building forms" to build slot homes. For example, developers were able to successfully apply for the "garden court building form" where the garden court was simply a driveway or narrow pedestrian walkway between the two rows of town homes.

Generally, developers built slot homes in low-intensity mixed use, multiunit, and row house zones. These zones, however, are characterized by a mix of housing types with many single-family homes and small apartment buildings. None of the zones are considered high-density districts, and the row house zone is typically described as low density.

Denver neighborhood organizations reacted strongly to the presence of

noncontextual slot homes. The planning department's Slot Home Task Force took testimony on slot homes in all the neighborhoods where these homes had been constructed. Generally, the task force found that neighbors identified the following problems:

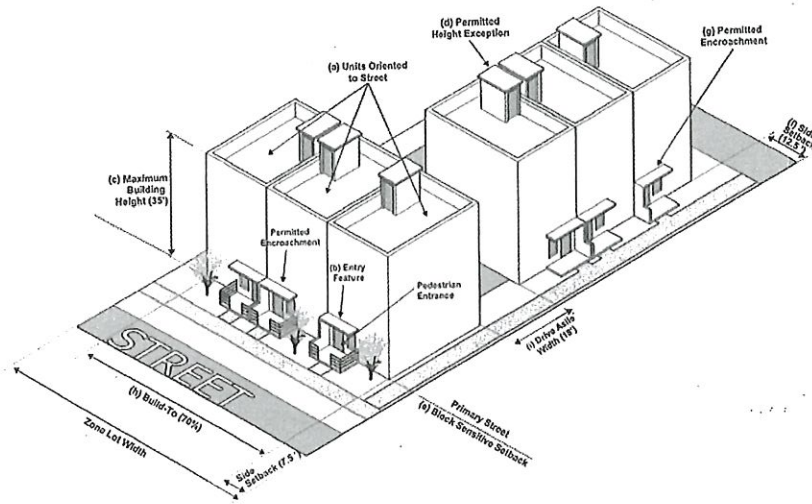
- Slot homes often orient their front doors, windows, and most active facade areas toward adjacent properties, leaving blank walls facing the street and sidewalk.
- Slot homes often incorporated driveways, parking areas, and garage doors that were clearly visible from the street.
- Some slot homes used exceptions and allowances to build roof decks and other roof enclosures that gave the building an appearance of being four stories in zoning districts where the limit had always been three stories.

In March 2018, the city adopted a comprehensive revision of the zoning ordinance for slot homes. It created a new "townhouse building form" and set of criteria for this form. It eliminated the option of zero front yard setbacks for residential projects in "mixed use" zones. It required that town houses face the street if these homes are located proximate to the street. In the higher intensity zoning classifications (mixed use zones and multiunit zones) town houses may be located behind the homes facing the street but in the lower intensity zone (row house zones) town homes



Christine G. H. Franck/STUDIO

- ➡ Many slot homes had no front doors and few windows facing the street, and many placed water and electrical meters adjacent to the sidewalk.



⊕ This illustration shows the “slot home” solution for multiunit zones or mixed use zones such as the residential/office zone. The town homes closest to the street face the street and the rear units face a pedestrian walkway that connects to the sidewalk. Front entrances include awnings, windows, and other details to make the development compatible with the street orientation of surrounding buildings.

may not be built behind the street-facing units. The new code defines and illustrates details that are required as part of the building frontage—porches, stoops, entryways, front steps, windows—and it allows these features as encroachments within front yards. The illustration above highlights a zone-specific “slot home” solution.

**Asheville, North Carolina, Reduces Lot Size Requirements**

In August and October of 2017, the Asheville city council adopted changes to the city’s unified development ordinance aimed at addressing the city’s housing supply gap and to provide more housing variety in a primarily single-family market.

Historically, Asheville’s zoning ordinance had allowed a more diverse range

of housing types. According to Vaidila Satvika, AICP, city planner with the Department of Planning and Urban Design, when Asheville neighborhoods were more pedestrian oriented and relied on the city’s streetcar system, “it had a greater mix of housing types including single-family homes, duplexes, and small apartment buildings.” As the city expanded, “the predominant housing type became single-family homes on large lots and the diversity of housing types was greatly diminished.”

In single-family and multifamily zoning districts, the planning department suggested reducing the minimum lot width and minimum lot size in order to encourage property owners to split their lots and create opportunities for infill homes. A city study found numerous neighborhoods where

single-family lot sizes were 30–300 percent larger than required by the city unified development ordinance. Table 2 highlights three Asheville neighborhoods where it appears there may be opportunities to subdivide existing lots in order to build more housing.

The city council reduced both the lot width requirements and the lot area requirements by 20 percent for all residential districts except for those covered by the city’s steep slope restrictions. For example, in the city’s RS-8 Single-Family District, the lot width requirement was reduced from 50 feet to 40 feet and the minimum lot area was reduced from 5,000 square feet to 4,000 square feet.

City surveys found that the reduction in lot area requirements would permit the subdivision of almost 10 percent of all single-family zoning lots in the city. This subdivision would create the opportunity to build more homes in existing neighborhoods.

The 2017 amendments also allowed for duplexes on any multifamily zoning lot. They also greatly reduced the minimum lot area requirements for each dwelling unit within a multifamily structure. In the previous code, each dwelling unit was subject to the district’s minimum lot area requirements. For example, in the RM-8 district, a developer was required to have 5,000 square feet of land for a single-family home, but 10,000 square feet for a duplex. Each unit in a structure triggered the minimum lot area requirement.

The new ordinance states that in multifamily zones, an added unit is allowed for each 1,000 square feet of land in excess of the minimum lot area. For example, in the RM-8 district the new ordinance allows a duplex on a 4,000-square-foot lot, a triplex on a 5,000-square-foot lot or a fourplex on a 6,000-square-foot lot.

Since the city’s previous code had been so restrictive, few multifamily structures had been built outside of the city’s downtown districts in several decades. In anticipation

**TABLE 2. COMPARISON OF PERMITTED LOT SIZE AND DENSITY VERSUS ACTUAL LOT SIZE AND DENSITY FOR THREE NEIGHBORHOODS IN ASHEVILLE, NORTH CAROLINA**

Neighborhood Name	Required Lot Size	Permitted Density	Actual Average Lot Size	Actual Density
Haw Creek (RS-4 zone)	10,000 sq. ft.	4 units/acre	30,000 sq. ft.	1.9 units/acre
Oak Forest (RS-4 zone)	10,000 sq. ft.	4 units/acre	27,000 sq. ft.	1.2 units/acre
Beverly Hills (RS-4 zone)	10,000 sq. ft.	4 units/acre	16,000 sq. ft.	2 units/acre

of more multifamily dwellings being constructed, the city council also adopted design standards to make new multifamily buildings compatible with existing neighborhoods. These standards include:

- The front (front door and front windows) must be oriented to face the primary access street.
- There should be no more than one ground level entrance per street facing facade.
- Front facades must have windows (at least two) and the window area must represent at least 15 percent of the total area of the building's front facade.
- There must be breaks (recesses or projections) in the horizontal plane of any front facade that exceeds a length of 50 feet.
- Roof lines must be varied, and flat roofs must use special cornice treatments or roof banding and some variation in the vertical elements of the roof.
- Parking must be located at the rear or side of the lot, no closer than the street facing facade of the structure.

- Structures must comply with the height limits of the zoning districts.

#### CONCLUSION

Most cities have opportunities for infill housing development. Many planning departments have good inventories of vacant properties, abandoned properties, and underused properties in existing residential and commercial districts. The critical step in promoting infill for these locations is an analysis of zoning tools that might encourage reuse and redevelopment.

Cities trying to encourage infill development in single-family zones have concluded that duplexes and small apartment buildings will only succeed if there are tight controls on floor-area ratios, building heights, and other bulk controls. Cities allowing building forms such as town houses, courtyard housing, and cottage homes have determined that these forms must provide some substantial orientation of the housing toward the street, that these housing forms cannot tower over the adjacent homes, that these forms

should respect the existing pattern of front-yard setbacks, and that these forms should not allow parking to dominate the home's appearance along the street front. With these considerations in mind, cities can help to ensure that higher density development in existing single-family neighborhoods is contextual, appropriate, and advances local housing goals.

#### ABOUT THE AUTHOR

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#### REFERENCES

- Asheville (North Carolina), City of. 2017. "Small-Scale Residential Infill." Available at <http://bit.ly/2T5O4wo>.
- Bellingham (Washington), City of. 2019. "Infill Housing." Available at <http://bit.ly/2FbX4Mo>.
- Denver, City of. 2018. "Slot Home Evaluation & Text Amendment." Available at <http://bit.ly/2J9vW4H>.
- Ford, Carmel. 2017. "Cost of Constructing a Home." Washington, D.C.: National Association of Home Builders. Available at <http://bit.ly/2T1ZnFG>.
- Los Angeles, City of. 2018. "Council File 16-1045: Small Lot Design Standards, Code Amendment, Proposed Ordinance." Available at <http://bit.ly/2T5SV0j>.
- Minneapolis, City of. 2018. "Access to Housing." In Minneapolis 2040. Available at <http://bit.ly/2T2aZIQ>.
- Olympia (Washington), City of. 2018. "Missing Middle Housing." Available at <http://bit.ly/2TCCx0n>.
- Portland (Oregon), City of. 2018. "Residential Infill Project." Available at <http://bit.ly/2TB8Qc9>.
- Seattle, City of. 2018. "Mandatory Housing Affordability." Available at <http://bit.ly/2u9D5HY>.
- Spokane (Washington), City of. 2012. "Infill Housing Zoning Code Update Project (2012)." Available at <http://bit.ly/2VZYn72>.
- Vancouver (British Columbia), City of. 2018. "Making Room Housing Project." Available at <http://bit.ly/2T2oWDy>.

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