



Exceptional Densification and Resulting Mode Shifts in the US and Canada

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Viewpoint

Death to Single-Family Zoning ... and New Life to the Missing Middle

Jake Wegmann

ABSTRACT

Planners in the United States and Canada should stop defending single-family zoning, the single most harmful widely used practice in planning. In the century since first adoption, it has exacerbated both inequality and climate change. Land use regulations that make a singly occupied, detached house on a large parcel the only allowable option should be replaced, wherever they exist, with new rules that allow medium-density, or “Missing Middle,” housing to be built by right. These changes should be applied broadly at the scale of an entire city or, best of all, a state, rather than piecemeal. Encouraging recent events in Minneapolis (MN), Oregon, and elsewhere show that single-family zoning is being seriously challenged for the first time, but more progress is needed.

Keywords: climate crisis, Missing Middle housing, single-family detached housing, single-family zoning, wealth inequality

If asked to identify the two central challenges of our time, many Northern American¹ planners would rank the climate crisis and wealth inequality at the top. Most would acknowledge the need to shift toward smaller housing units placed closer together, allowing less driving and energy and water consumption (Newman, 2014). Equally essential is interrupting the hoarding of opportunities in the wealthiest and Whitest of neighborhoods (Lens & Monkkonen, 2016). In this Viewpoint, I make a straightforward argument: For members of the planning profession to make headway against the climate and inequality crises, they must cease defending the indefensible concept of single-family zoning.

For those who recognize the urgency of shifting toward more compact urbanization patterns, current trends—especially in the United States—are mostly discouraging. One bright spot has been the rise of smart growth and new urbanism in the last few decades, which have spurred real, though by no means universally adopted, innovation in greenfield development (Talen & Ellis, 2002). However, the picture in already built-up areas is profoundly different. Although U.S. urban cores are growing wealthier vis-à-vis their regions (Edlund, Machado, & Sviatschi, 2015), from 2000 to 2010 their populations dropped (Landis, 2017). According to one nationwide study, 41% of tracts developed by 1950 increased in density by at least 0.5 units per acre during the 1950s; the equivalent share for 2000 to 2010 was just 11% (Romem, 2016). At a time when drastic

changes to land use patterns are needed, and fast, too many trend lines are moving in the wrong direction.

This is all unsurprising given that vast swathes of land are essentially off limits to densification. Most Northern Americans reside in municipalities where the preponderance of land is zoned exclusively for single-family detached housing. For instance, only 30% of municipalities in greater Boston (MA) zone less than 80% of their land for single-family housing (Fair Housing Center of Greater Boston, n.d.). Even in transit-rich Toronto (Canada), the so-called Yellow Belt, or area zoned for single-family detached housing, comprises 60% of the city's residential land and 38% of its total land (Gee, 2017).

Given these realities, I propose a simple litmus test for the planning profession: Does a zoning category or other type of regulation prohibit everything but a single-family detached house on a large lot? If so, it should be contested. My argument is that there is no defensible rationale grounded in health, safety, or public welfare for effectively mandating a 3,000-ft² house with one unit while prohibiting three 1,000-ft² units within the same building envelope.

This litmus test naturally raises the question of what ought to replace what has been repealed. On this point I am agnostic. There are many different possibilities, such as the outright elimination of use-based zoning, or the use of form-based or performance zoning. In some cases, overlays may be valuable for protecting historic



Figure 1. A side-by-side duplex (left) and small apartment building (right) in Shorewood (WI) are examples of “Missing Middle” housing. Source: Sightline Institute Missing Middle Homes Photo Bank.

properties. Some policymakers may prefer to adopt density bonuses, so that redevelopment of a single-family property at a higher density would yield one or more income-restricted units in its place. There is another set of debates to be had about whether commercial uses should be allowed into residential-only zones. Regardless of the specifics, single-family zoning should be replaced with regulations that allow some form of low-rise, middle-density housing—or “Missing Middle” (Parolek, n.d.)—to be built as of right (Figure 1).

I am under no illusion that eliminating single-family zoning will be easy. I readily acknowledge many planning practitioners are in no position to openly contest such policies in the communities where they work, whatever their personal beliefs. Dismantling the most inequitable and environmentally destructive practice in Northern American planning will face pitched opposition from across the ideological spectrum. It will likely take decades, although dramatic recent events in Minneapolis (MN), which in December 2018 adopted a comprehensive plan establishing three units on a residential lot as the citywide minimum, suggest real change is possible.²

As I discuss in the conclusion, other citywide and even statewide proposals are advancing at the time of writing (June 2019) that were all but unthinkable just a decade ago. In any case, we have no choice but to begin, wherever and however we can.

The rest of this Viewpoint unfolds as follows: Following a statement of caveats to my argument, I briefly recount environmental and social harms of single-family-dominated urbanization documented in the planning literature. The heart of this Viewpoint is my response to eight arguments commonly marshaled in defense of the status quo. I close with a brief overview of several coalescing movements now seriously challenging single-family zoning.

Caveats

Before I make the case for my proposal, several caveats are in order. I am not advocating dismantling existing single-family detached houses or halting their production. I personally reside in one, as do most Northern Americans. I simply argue for removing requirements,

where they exist, that impose the twin conditions that 1) *only* detached single-family houses can be built and 2) they must occupy sizable land parcels (such as 5,750 ft² in central Austin [TX], for example). Even once this repeal happens, such houses will persist in large numbers. In many, perhaps most, neighborhoods, economic conditions will not justify denser housing types.

I use “single-family zoning” as shorthand for regulations that impose the twin conditions described above. Attached townhouses and small-lot detached forms such as cottage courts represent far more land-efficient uses than exist on most residential streets today and would represent a dramatic improvement over the status quo. I also hasten to note that use-based zoning is not the only type of regulation impeding Missing Middle housing: Height limits, setbacks, minimum lot sizes, and others do so as well. So do some nonzoning regulations, such as stormwater detention requirements that apply to small multiunit structures but not to single-family houses with the exact same footprint. Also, private regulations can be a barrier (McKenzie, 1996). Planners must do their best to deal with these impediments where they exist. Finally, I note some cities, as big as New York (NY) and as small as Cudahy (CA), have so little existing large-lot single-family detached housing that my arguments here are not relevant. But they are very few.

The Harms of Single-Family Zoning

The harms caused by single-family zoning are too extensive to adequately summarize here, but I hazard a synopsis organized by the two themes of climate crisis and inequality. First, low-density urbanization patterns, and by implication single-family zoning, have been consistently linked with high rates of automobile use and emissions (Ewing, Bartholomew, Winkelman, Walters, & Chen, 2007). An extensive meta-analysis suggests proximity of a housing unit to a region’s central business district is the most potent factor in reducing its occupants’ driving (Stevens, 2017). Yet cases like Austin’s, where houses zoned for single family with minimum lot sizes of 5,750 ft² can be found three-quarters of a mile from city hall, exist in large cities nationwide. According to another study, the greatest reductions in carbon emissions would arise from the conversion of low-density neighborhoods to medium density, rather than from medium to high (Gately, Hutyra, & Wing, 2015).

Careful historical research concludes that a leading motivation for the original development of single-family zoning in the United States was racial and class exclusion (Hirt, 2013). Because such zoning first arose during World War I and was given the force of law nationwide by the U.S. Supreme Court in 1926, remarkably little has changed (Hirt, 2013). Single-family zoning persists as perhaps the most potent link in a “chain of exclusion” of

people of color and low incomes (Pendall, 2000). A regulation that, in effect, mandates a high minimum consumption level of land and living space guarantees that in sought-after city neighborhoods in hot-market cities, and in exclusionary suburbs everywhere, new market-rate housing will never serve the middle class, much less the poor. The type of housing that in most urban and close-in suburban locations minimizes development costs by combining the efficient use of land of multifamily housing with the low per-square-foot construction costs of single-family housing (Ellis, 2004)—the Missing Middle—on parcels that require little to no lot assembly or environmental cleanup has almost nowhere to go.

Disputing Common Arguments for Single-Family Zoning

The best explanation for the dominance of single-family zoning may be inertia. Nevertheless, any attempt to undo it will have to counter arguments in its favor, some of them echoing those used a century ago (Vale, 2007) and some of them contemporary. I briefly address some of the most common ones here.

Single-Family Zoning Reflects Consumer Preferences

Even 2 decades ago, surveys revealed sometimes contradictory desires among Americans for an ideal housing unit and neighborhood, though with a strong lean toward low-density living (Myers & Gearin, 2001). There is at least some evidence of a shift in attitudes since then. For example, surveyed metro Houston (TX) residents preferring a “smaller home in a more urbanized area, within walking distance of shops and restaurants” to “a single-family home with a big yard where you would need to drive everywhere you go” rose from 40% to 50% from 2008 to 2016 (Klineberg, 2017, p. 13). Levine (2010) convincingly argues that a substantial portion of suburban sprawl development is attributable to a lack of alternatives available to homeseekers who would prefer something different but cannot find it. The word “missing” appears in the phrase “Missing Middle” for good reason.

Single-Family Housing Is the Most Appropriate Housing Form for Raising Children

Large-lot single-family detached housing is often justified as the sine qua non of family-friendly living (Perin, 1977). Yet, according to my recent research, 35% of households with children in Greater Philadelphia (PA) are in row houses (Wegmann, 2020). “Ground-oriented

medium-density,” or Missing Middle, housing can offer most or all of the characteristics sought by most Northern American families with children, such as entrances accessed directly from the street, modest yard space, and a lack of elevators (Metro Vancouver, 2014).

Single-Family Zoning Is Needed to Ensure that Residents’ Neighborhoods Are Stable and Their Investments in Their Homes Protected

Housing affordability and housing as wealth building for owner-occupants are inherently opposed goals (Hertz, 2018). Policy in Northern America has extravagantly emphasized the latter, likely exacerbating wealth inequality (Rognlie, 2015). Although it is entirely justifiable for homeowners—but surely also tenants—to expect that a lead smelter will not be allowed across the street, nor perhaps a 20-story or even 5-story apartment building, it is difficult to understand what policy objective underlies prohibiting row houses other than the exclusion of those who earn less. Is it too much to ask that 1- to 3-story, medium-density housing—the predominant settlement pattern throughout human history almost everywhere worldwide until a century ago—be the default rather than a large house carrying a high de facto price of admission to a community?

New “Missing Middle” Housing Is Too Expensive to Help the Poor

In 2013, a small Austin builder used a regulatory loophole (later closed) to develop six family-sized units on adjacent lots rather than the two single-family houses otherwise permissible under zoning. He was able to sell the resulting units in 2016 for upwards of \$200,000 less than the area average of more than \$670,000 (Lim, 2016). Without question, prices in the mid-\$400,000s are much too high for low-income households; however, they are within reach of many middle-income families in Austin. Surely part of the solution to widespread unaffordability is to allow market-rate development to produce more housing affordable to middle-income households, thus freeing scarce subsidies for those who most need them. In addition, via some combination of a density bonus policy, city subsidies, or the involvement of a nonprofit, some or all of the units produced on upzoned land formerly reserved for large-lot single-family could be offered feasibly at below-market rates. This may allow for socioeconomic and racial integration in a high-income, predominantly White neighborhood of a sort seldom achieved by tax credit-subsidized multifamily developments (Reina, Wegmann, & Guerra, 2019). By contrast, making a large-lot single-family

house affordable to a low-income household there would require prohibitively high subsidies.

Upzoning Disadvantaged Single-Family Neighborhoods Could Lead to Gentrification and Displacement

When single-family zoning is lifted in disadvantaged areas ripe for investment, even as wealthier areas remain unaffected, residents rightly suspect their neighborhoods are being targeted unfairly. The best response is to raise the minimum allowable level of housing density across an entire city or even state. Such an action, though undoubtedly controversial, in some ways is easier to advocate because it constitutes a simple, uniform, and fair standard applied to all. One likely outcome in a hot-market context would be to shift development toward areas with higher rents and house prices, thus taking pressure off of gentrification hot spots.

Eliminating Single-Family Zoning Will Make On-Street Parking Difficult

This is not an inevitability. Municipalities could continue off-street parking requirements, or they could eliminate them while actively managing on-street parking (Shoup, 2018), or developers may decide to include off-street parking to create marketable Missing Middle units. In any case, the expectation that every homeowner must always have an open parking space directly in front of her house surely ought to rank far down the list of pressing societal concerns. Most residential blocks in Northern America have multiple vacant curbside parking spaces available at all hours and have enough excess capacity to absorb years’ worth of increased demand from the conversion or replacement of single-family houses. For those that do not, numerous options are available. For instance, a residential permit parking system can allot one on-street parking pass per residential unit to each incumbent homeowner at a low cost, with sharply increased rates for their extra cars or those belonging to incoming residents.

Upzoning Single-Family Areas Will Strain Infrastructure, Such as Stormwater Drainage and Open Space

Due to smaller household sizes, mature single-family neighborhoods even in booming cities such as Seattle (WA) often have lower populations than they did half a century ago (Seattle Planning Commission, 2018). Allowing them to grow will help build support for updating infrastructure that is often badly in need of replacement or upgrading. Although increased

impervious cover in a localized area poses real issues, the alternative of outward suburbanization is a much worse outcome for stormwater runoff when viewed regionally (Bosch, Lohani, Dymond, Kibler, & Stephenson, 2003). Many approaches to reducing runoff are available, some of them as simple as allowing three stories instead of two. Low-impact development techniques can be part of the solution at the neighborhood scale while simultaneously tackling the challenge of inserting pocket parks, landscaped swales, and other forms of green space into built-up areas (U.S. Environmental Protection Agency, 2016). These solutions cost money, but adding dwellings to thinly populated streets generating relatively little in property taxes can help produce the needed revenue. This could occur through development levies collected for nearby open space purchase and utility upgrades or via a policy of directing a portion of increases in property tax collections to such improvements.

Eliminating Single-Family Zoning Is a One-Size-Fits-All Solution, and Is Unnecessary in Weak Market Areas

The U.S. federal government's strenuous efforts to promote single-family homeownership date at least as far back as the 1920s, laying the groundwork for heavily-handedly embedding requirements for adopting single-family zoning in new subdivisions into mortgage products such as Federal Housing Administration loans in the 1930s (Vale, 2007). A case could be made that these efforts constituted the most far-reaching case in U.S. planning history to date of a one-size-fits-all solution imposed from above. Although single-family zoning likely causes the greatest distortions in hot-market cities, it also excludes the poor and even middle class from wealthy suburbs that exist in every sizable metro. Further, there would be many benefits, even in weak housing markets, from allowing the legal partitioning of large houses into multiple units.

Countermovements

Notwithstanding the weight of a century of single-family zoning in Northern America, change is afoot. Although Minneapolis represents the most dramatic case—the first time a zoned city has acted to make three separable units on a lot the citywide minimum—it is not the only one.³ Portland (OR) is currently considering regulatory changes that would, in a reversal of the norm, encourage the replacement of existing single-family houses with several small units while discouraging mansions (Redden, 2018). Vancouver (Canada) recently made duplex zoning the citywide minimum (Larsen, 2018). A much earlier reform occurred in 1998

in Houston, which famously lacks zoning but by no means lacks stringent land use regulations. The city slashed its minimum residential lot size from 5,000 ft² to 1,400 ft² in a large central swath (Kapur, 2004). Anecdotally, this has resulted in a burst of townhouse-style redevelopment on formerly single-family parcels, an outcome that deserves far more research. A markedly different approach is under way in Austin, which is on the verge of approving an “Affordability Unlocked” ordinance. This is a substantial density bonus that applies citywide, including in single-family zoned areas, but requires that 50% of the resulting units be set aside at below-market rates, thus all but restricting its use to public entities and nonprofits.

Entire states have either enacted or are contemplating once unthinkable measures. Legislation in California streamlining accessory dwelling units⁴ has resulted in dramatic increases in production and retroactive legalizations, above all in Los Angeles (Elmendorf, 2018; Mukhija, 2014). Oregon's far-reaching proposed House Bill 2001 would allow duplexes in all zones that currently allow single-family houses in cities of 10,000 people or more and denser housing still in cities of 25,000 or more (Miller, 2019).

The aforementioned citywide and statewide reforms are not occurring in a vacuum. Single-family zoning and related land use restrictions are now under attack from a variety of countermovements. Strong Towns advocates for incremental, small-lot development with a view to minimizing long-term infrastructural replacement costs, with a sensibility grounded in civil engineering. The Incremental Development Alliance, in an implicit critique of the massive scale at which redevelopment usually takes place, seeks to encourage a new generation of entrepreneurs to take on small infill developments, such as the replacement of a single-family house with a fourplex. And a nationwide, pro-housing, YIMBY (Yes In My Backyard) movement has arisen from seemingly nowhere in just several years, although not without real internal tensions concerning the respective roles of market-rate versus subsidized housing development.

With civil engineers, entrepreneurs, and activists now all questioning the primacy of single-family zoning, it is time for a forthright critique to come directly from the planning profession, particularly given how much it would overlap with the APA's adopted six-point agenda for inclusive prosperity (APA, n.d.-b). For decades planners have been at the forefront of lambasting the most destructive consequences of single-family zoning, from automobile dependence to racial segregation. I would argue, however, that they have mostly been oddly reluctant to engage in a full-throated denunciation with the same clarity as, for instance, Donald Shoup (2018), and a new generation of “Shoupistas” has attacked the

very concept of mandating off-street parking. Is it because acquiescing to single-family zoning has been the cost of allowing high-density infill development in a few small pockets? Is it because incorporating public input is so ingrained that planners shy away from questioning local preferences for single-family zoning, even when they result in a grotesque hoarding of opportunity? Regardless, we are now more than a century into leaving largely unchallenged a policy that uses governmental powers to shield the more privileged from sharing their surroundings with the less advantaged. Enough.

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NOTES

1. "Northern America," though likely unfamiliar to many readers, is a useful term in this context because it refers to the portion of the North American continent that includes the United States and Canada but excludes Mexico and the countries of Central America and the Caribbean. My arguments in this Viewpoint apply to the United States and Canada but not to the other nations of North America.
2. As of this writing, Minneapolis has not yet updated its citywide zoning ordinance to match its newly passed comprehensive plan. However, under Minnesota state law, comprehensive plans prevail over zoning (Bertolet, 2018). Thus, even if they are as-yet incomplete, Minneapolis's actions can be regarded as highly consequential and unprecedented among large Northern American cities.
3. A partial exception is Vancouver, which for years before its citywide rezoning in the fall of 2018 already allowed a detached "laneway" or alley house to coexist with a single-family house and "secondary suite," or basement apartment (Larsen, 2018).
4. For a definition of and repository of information on accessory dwelling units, refer to the website for the Research KnowledgeBase on the topic, maintained by the APA (n.d.-a). Recently, the APA has partnered with the American Association of Retired Persons to promote accessory dwelling units (APA, 2018).

REFERENCES

American Planning Association [APA]. (n.d.-a). Accessory dwelling units. *KnowledgeBase Collection*. Retrieved from <https://www.planning.org/knowledgebase/accessorydwellings>

American Planning Association [APA]. (n.d.-b). Action agenda. Retrieved from <https://www.planning.org/home/action/>

American Planning Association [APA]. (2018). APA and AARP collaborate to advance housing solutions [Blog post]. Retrieved from <https://www.planning.org/blog/blogpost/9159338/>

Bertolet, D. (2018, December 10). Minneapolis takes big step toward legalizing triplexes on all single-family lots. *Sightline*

Institute. Retrieved from <https://www.sightline.org/2018/12/10/minneapolis-single-family-zoning-housing/>

Bosch, D. J., Lohani, V. K., Dymond, R. L., Kibler, D. F., & Stephenson, K. (2003). Hydrological and fiscal impacts of residential development: Virginia case study. *Journal of Water Resources Planning and Management*, 129(2), 107–114. doi:10.1061/(ASCE)0733-9496(2003)129:2(107)

Edlund, L., Machado, C., & Sviatschi, M. M. (2015). *Bright minds, big rent: Gentrification and the rising returns to skill* (National Bureau of Economic Research, w21729). Retrieved from <https://www.nber.org/papers/w21729>

Ellis, J. (2004). Explaining residential density. *Places*, 16(2), 34–43.

Elmendorf, C. S. (2018, October 3). *Beyond the double veto: Land use plans as preemptive intergovernmental contracts* (UC Davis Legal Studies Research Paper Series). Retrieved from <http://ssrn.com/abstract=3256857>

Ewing, R., Bartholomew, K., Winkelman, S., Walters, J., & Chen, D. (2007). *Growing cooler: The evidence on urban development and climate change*. Washington, DC: Urban Land Institute.

Fair Housing Center of Greater Boston. (n.d). *Historical shift from explicit to implicit policies affecting housing segregation in Eastern Massachusetts*. Retrieved from http://www.boston-fairhousing.org/timeline/1970s-present-Local-Land_use-Regulations-2.html

Gately, C. K., Hutyra, L. R., & Wing, I. S. (2015). Cities, traffic, and CO₂: A multidecadal assessment of trends, drivers, and scaling relationships. *Proceedings of the National Academy of Sciences*, 112(16), 4999–5004. doi:10.1073/pnas.1421723112

Gee, M. (2017, August 18). Toronto's missing middle: The city has lots of houses and towers, but not enough in between. *Globe and Mail*. Retrieved from <https://www.theglobeandmail.com/news/toronto/toronto-has-lots-of-houses-and-towers-but-not-enough-inbetween/article36030909/>

Hertz, D. K. (2018, October 30). Housing can't be both a good investment and affordable. *City Observatory*. Retrieved from http://cityobservatory.org/housing-cant-be-affordable_and_be-a-good-investment/

Hirt, S. (2013). Home, sweet home: American residential zoning. *Journal of Planning Education and Research*, 33(3), 292–309. doi:10.1177/0739456X13494242

Kapur, T. (2004). Land use regulation in Houston contradicts the city's free market reputation. *Environmental Law Reporter*, 34, 10045–10063. Retrieved from http://www.pszjlaw.com/media/publication/427_Kapur%20-%20ELR%20land%20use%20regulation.pdf

Klineberg, S. L. (2017, May). *The Kinder Houston area survey: Thirty-six years of measuring responses to a changing America*. Houston, TX: Kinder Institute for Urban Research, Rice University. Retrieved from <https://kinder.rice.edu/research/kinder-houston-area-survey-2017-results>

Landis, J. D. (2017). The end of sprawl? Not so fast. *Housing Policy Debate*, 27(5), 659–697. doi:10.1080/10511482.2017.1296014

Larsen, K. (2018, September 20). Vancouver's new duplex rules explained. *Canadian Broadcasting Corporation (CBC)*. Retrieved from <https://www.cbc.ca/news/canada/british-columbia/vancouver-s-new-duplex-rules-explained-1.4831741>

Lens, M. C., & Monkkonen, P. (2016). Do strict land use regulations make metropolitan areas more segregated by income? *Journal of the American Planning Association*, 82(1), 6–21. doi:10.1080/01944363.2015.1111163

- Levine, J. (2010). *Zoned out: Regulation, markets, and choices in transportation and metropolitan land use*. New York, NY: Routledge.
- Lim, A. (2016, September 4). Should Austin block or welcome development of new homes on tiny lots? *Austin American Statesman*. Retrieved from <https://www.statesman.com/news/20160904/should-austin-block-or-welcome-development-of-new-homes-on-tiny-lots>
- McKenzie, E. (1996). *Privatopia: Homeowner associations and the rise of residential private government*. New Haven, CT: Yale University Press.
- Metro Vancouver. (2014, March 25). *Regional affordable housing strategy update* (discussion paper). Retrieved from http://www.metrovancouver.org/services/regional-planning/PlanningPublications/HOU_StrategyUpdate.pdf
- Miller, M. (2019, April 22). State lawmakers hash out housing legislation. *The Astorian* (Astoria, Oregon). Retrieved from https://www.dailyastorian.com/news/state-lawmakers-hash-out-housing-legislation/article_37395db2-654d-11e9-a721-53943a15709f.html
- Mukhija, V. (2014). Outlaw in-laws: Informal second units and the stealth reinvention of single-family housing. In V. Mukhija & A. Loukaitou-Sideris (Eds.), *The informal American city* (pp. 39–58). Cambridge, MA: MIT Press.
- Myers, D., & Gearin, E. (2001). Current preferences and future demand for denser residential environments. *Housing Policy Debate*, 12(4), 633–659. doi:10.1080/10511482.2001.9521422
- Newman, P. (2014). Density, the sustainability multiplier: Some myths and truths with application to Perth. *Sustainability*, 6(9), 6467–6487. doi:10.3390/su6096467
- Parolek, D. (n.d). *Missing middle housing: Responding to the demand for walkable urban living*. Retrieved from <http://missingmiddlehousing.com/dev/wp-content/uploads/2015/04/Missing-Middle-Housing-Responding-to-the-Demand-for-Walkable-Urban-Living-by-Daniel-Parolek.pdf>
- Pendall, R. (2000). Local land-use regulation and the chain of exclusion. *Journal of the American Planning Association*, 66(2), 125–142. doi:10.1080/01944360008976094
- Perin, C. (1977). *Everything in its place: Social order and land use in America*. Princeton, NJ: Princeton University Press.
- Redden, J. (2018, December 11). Report: Rezoning Portland will increase housing, lower rents. *Portland Tribune*. Retrieved from <https://www.opb.org/news/article/portland-oregon-rezoning-infill-report-housing/>
- Reina, V., Wegmann, J., & Guerra, E. (2019). Are location affordability and fair housing on a collision course? Race, transportation costs, and the siting of subsidized housing. *Cityscape*, 21(1), 125–142. Retrieved from <https://www.huduser.gov/portal/periodicals/cityscape/vol21num1/article5.html>
- Rognlie, M. (2015). *Deciphering the fall and rise in the net capital share: Accumulation or scarcity?* Washington, DC: Brookings Institution.
- Romem, I. (2016, September 14). Can U.S. cities compensate for curbing sprawl by growing denser? *BuildZoom*. Retrieved from <https://www.buildzoom.com/blog/can-cities-compensate-for-curbing-sprawl-by-growing-denser>
- Seattle Planning Commission. (2018). *Neighborhoods for all: Expanding housing opportunity in Seattle's single-family zones*. Retrieved from <https://www.seattle.gov/planningcommission/our-work/neighborhoods-for-all>
- Shoup, D. (Ed.). (2018). *Parking and the city*. London, UK: Taylor and Francis.
- Stevens, M. R. (2017). Does compact development make people drive less? *Journal of the American Planning Association*, 83(1), 7–18. doi:10.1080/01944363.2016.1240044
- Talen, E., & Ellis, C. (2002). Beyond relativism: Reclaiming the search for good city form. *Journal of Planning Education and Research*, 22(1), 36–49. doi:10.1177/0739456X0202200104
- U.S. Environmental Protection Agency. (2016, October). *Community solutions for stormwater management: A guide for voluntary long-term planning*. Retrieved from https://www.epa.gov/sites/production/files/2016-10/documents/draftlongterm-stormwaterguide_508.pdf
- Vale, L. (2007). The ideological origins of affordable homeownership efforts. In W. M. Rohe & H. L. Watson (Eds.), *Chasing the American dream: New perspectives on affordable homeownership* (pp. 15–40). Ithaca, NY: Cornell University Press.
- Wegmann, J. (2020). Is there room for children in booming Western cities? Empirical evidence from Austin, Denver, and Portland. *Cities*, 96(January), 102403. doi:10.1016/j.cities.2019.102403