CASE-IN-POINT | 2025

Building the Gap

Lessons Learned from Edmonton's 2018 Infill Roadmap

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1.0 INTRODUCTION

Many cities across the country struggle with housing shortages, unaffordability, and a lack of housing options. Many individuals and families may not be able to afford a single detached home but do not want to live in a small apartment. "Missing Middle" housing refers to the housing forms in between a single detached home and a high-rise apartment building and has thought to be generally missing from Canadian cities. The city of Edmonton created the Infill Roadmap in 2018 to take action and plan for more housing as the city is expected to grow by 1 million residents over the coming years. The Infill Roadmap laid the groundwork for policy and zoning changes to allow the city to reach their goal of drastically increasing the percentage of infill development.

Figure 1: Winning design of the 2019 'Missing Middle Design competition'

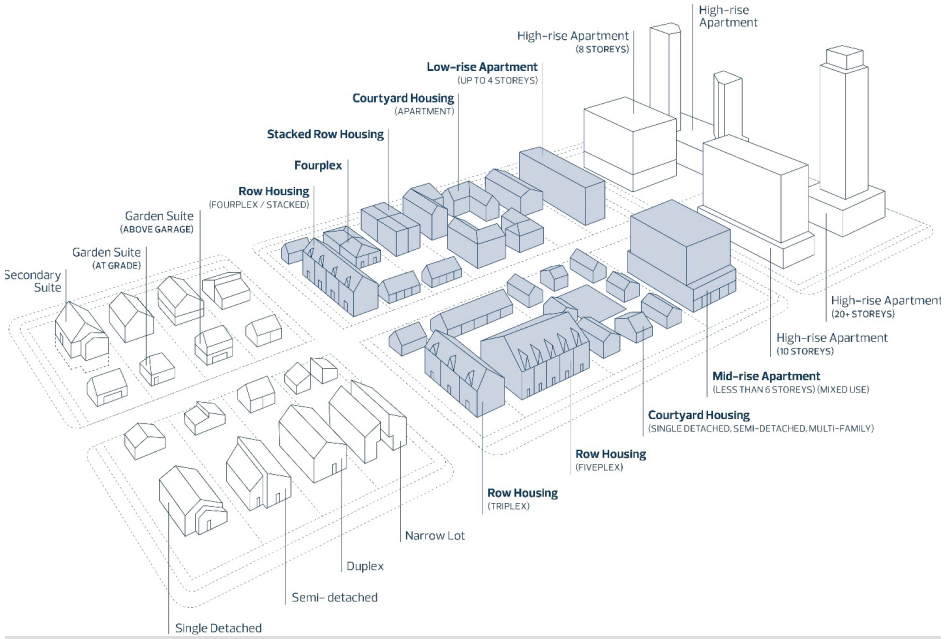

Figure 2: "Missing Middle" housing types. Source: City of Edmonton.

> **"Missing middle housing forms include triplex homes, fourplexes, row-houses, stacked row-houses, low rise (four storeys or less) and mid rise (up to six storeys) apartments"**
>
> **Infill Roadmap 2018**

1.1 Missing Middle in Canada

Throughout the late 19th and early 20th centuries, missing middle housing forms were common in Canada's largest cities. After this and ramping up to the 1970's, there were market and policy shifts that changed the dynamic and availability of these types of housing.

- First, there was an increase in exclusionary zoning that dissuaded 'illegal' secondary suites and, in some places, banned them altogether.

- There were also cultural shifts and a push to convert multiplex units to single detached homes.
- Furthermore, the gentrification of urban cores and suburbs pushed lower-income earners out of these areas and either into high-rise apartments or outside of the city.

For a few decades, medium-density housing was mostly pushed out of cities, until recently with an increase in new planning activism (Whitzman, Ashtari, & Perwani, 2024).

1.2 Why Missing Middle?

In recent years, new planning concepts have emerged around the topic of development such as infill in mature neighbourhoods, transit-oriented development, 15-minute cities, and complete communities. These concepts centre around a diversity of housing options for residents. Planning for complete communities or transit-oriented development ensures that residents have all the amenities they need within walking distance of where they live while accommodating diverse needs (WSP, 2023). Offering missing middle housing in these communities ensures that a neighbourhood is able to cater to all types of residents. Middle housing is great for young families or individuals, it allows older adults to age in place, and overall creates a more lively community (Whitzman, Ashtari, & Perwani, 2024).

Infill housing also has environmental implications as well. Urban sprawl is a major contributor to climate change. When cities expand outward with new suburbs and growth, residents become car dependent and increase the amount of travel time, releasing more emissions. Expanding outward also means that cities are required to provide and build more infrastructure for services like water and sewer, which can be costly. Infill housing intensifies existing communities and uses infrastructure already in place. Medium density housing also has lower embodied emissions per bedroom than single detached dwellings. Infill housing, TOD and complete communities encourage the use of active transportation and public transit over personal vehicle use as communities are built close to transit or within walking distance of services (Whitzman, Ashtari, & Perwani, 2024)

Missing Middle reforms must be integrated into long-term "roadmaps," preferably with affordability, nonmarket, and locational sub-targets (who needs what housing where and at what cost)

p. 4 Enabling the Missing Middle

With this in mind, many growing cities across Canada have begun to take matters into their own hands and create policies to incentivise infill housing as well as diversifying the types of housing being built. For more than a decade, Edmonton has been engaging with residents and implementing policies to help shape and incentivise infill housing within this growing city with the Infill Roadmap 2014, and Infill Roadmap 2018.

Figure 3: Example of "Missing Middle" housing. Source: National Association of Home Builders.

2.0 BACKGROUND & CONTEXT

Before diving into the facts of Edmonton's 2018 Infill Roadmap, it is important to discuss what led to this action plan. The 2014 Infill Roadmap and the Evolving Infill Project started the discussion around infill within the city of Edmonton. The next section will briefly outline these projects to give context before discussing the 2018 Infill Roadmap.

2.1 Infill Roadmap 2014

In 2010, the city of Edmonton adopted a new municipal development plan entitled "The Way We Grow." One policy of the plan was to ensure that 25% of the city's new growth would be infill in core areas. After the adoption of the municipal development plan, the city council asked the planning administration how they would deliver on this particular goal. In response to this, the staff came up with the Infill Roadmap 2014 (J. Syvixay, personal communication, February 12th, 2025).

To begin, the city of Edmonton created a team in charge of community engagement. The team, the *Evolving Infill Project*, discussed and workshopped what strategies residents wanted

Figure 4: Narrow Lot home in Edmonton

to see regarding infill in their neighbourhoods. Between November 2013 and June 2014, over 1000 Edmontonians took part in this discussion, which ultimately helped form the action items within the 2014 Infil Roadmap (The City of Edmonton, 2014). The engagement focused on asking residents "how should we address infill?" rather than asking "do you want to see infill?" (J. Syvixay, personal communication, February 12th, 2025). This engagement strategy allowed for a solutions-oriented approach while carefully curating the discussion around infill housing.

The focus of the 2014 Infill Roadmap was on gentle density. Action items within the document focused on unobtrusive types of housing, such as the addition of secondary suites, garage suites and narrow-lot housing. There was also a focus on construction practices, outlining what time construction could start and end and educational videos outlining rights for residents with these new policy changes. One of the main policy changes resulted from action 15, which allowed for the subdivision of properties in RF1 (single detached residential zoning) into narrower lots that are half the average width of other lots (The City of Edmonton, 2014). This allowed for more single detached dwellings to be built in mature neighbourhoods, with the intention of them being more affordable.

2.2 Outcomes

The outcomes of the 2014 Infill Roadmap resulted in an increase in subdivisions in mature neighbourhoods and

Figure 5: Infill housing under construction in the city of Edmonton.

more construction of narrow lot housing. The city of Edmonton reached its goal and 25% of new growth within the city was infill housing. To ensure compliance of the new infill policies, the city of Edmonton employed two compliance officers (*Infill peace officers*) to monitor and respond to complaints about new construction. With good engagement processes, infill peace officers, and educational materials, Edmonton residents were generally in favour of new infill policies and construction. Unfortunately, many of the new narrow lot infill housing was unaffordable. Individuals were paying close to $700k for a narrow lot single detached dwelling when narrow lot homes were intended to provide a more affordable option for residents. With some of these new challenges in mind, the administration team created the new and improved 2018 Infill Roadmap

3.0 FACTS OF THE CASE

In April 2017, the *Evolving Infill Project 2.0* began holding engagement sessions with residents once again about infill in existing mature neighbourhoods. The first round of engagement occurred between April 2017 to June 2017, and the second round of engagement started in January 2018 and concluded in April 2018 (The City of Edmonton, 2018). Overall, approximately 3300 Edmontonians provided feedback either through in-person events or online surveys. Once again, the feedback received during engagement sessions helped to form the action items included within the 2018 Infill Roadmap (The City of Edmonton, 2022).

> **How can we welcome more people and new homes into our older neighbourhoods?**
>
> **2018 Infill Roadmap**

3.1 Notable Action Items

The 2018 Infill Roadmap shifted the focus from the 2014 roadmap and sought to increase the density of infill housing by incorporating "missing middle" housing. Several action items helped to achieve some of these goals.

Action 20 – Reduce barriers to infill caused by parking requirements as part of the Comprehensive Parking Review

This action item started off by contributing to the review of parking requirements throughout the city and examining the way they contribute to the cost of new construction. This led to the removal of parking minimums across the city. Now developers have "open parking options" which means that it is up to the developer to decide how much parking they will provide. Forcing developers to provide parking increases the cost of housing units, which are then transferred to the buyer. Removing parking requirements increased affordability for new infill projects.

Action 21 – Pursue regulatory changes in RF1 and RF2 Zones that allow semi-detached housing to be permitted uses and to be located mid-block.

This action item allowed for multi-unit dwellings to be built in formally single detached only zones, essentially abolishing single detached only zoning within the city.

Action 22 – Create opportunities for small apartment buildings on smaller lots in medium scale zones.

This action item allowed for apartment buildings to be mid-block, they formally were only able to be on corner lots.

Action 23 – Create opportunities to include a mix of suites on a property.

The zoning by-law had previously only allowed for one secondary suite (either a basement suite, garage suite or garden suite) per lot. However, this action item allowed for each lot to have multiple secondary units (A lot could now have a secondary suite and a garage suite).

The city of Edmonton continued to educate residents and communicate about the changes created with the new incoming policies. One of the main messages provided was that with more density and more people living in a neighbourhood, more services would be provided (J. Syvixay, personal communication, February 12th, 2025). Other messaging focused on the benefit of allowing individuals to age in place and remain living in their neighbourhood for longer.

3.2 The Missing Middle Design Competition

Design competitions are a great way to provide the public with a sense of how communities can change and the types of housing choices that could be possible. In 2019, the city of Edmonton held a *Missing Middle Infill Design Competition*. The city had 30 proposals from various architecture teams all over the country as well as a few international submissions. (Whitzman, Ashtari, & Perwani, 2024). The competition intended to demonstrate how medium-density housing could be both economically feasible and designed well to be integrated into the city. Five lots were chosen and amalgamated in the Spruce Avenue neighbourhood in Edmonton, and the winning team would be able to build their design (Syvixay & Bohle, 2021).

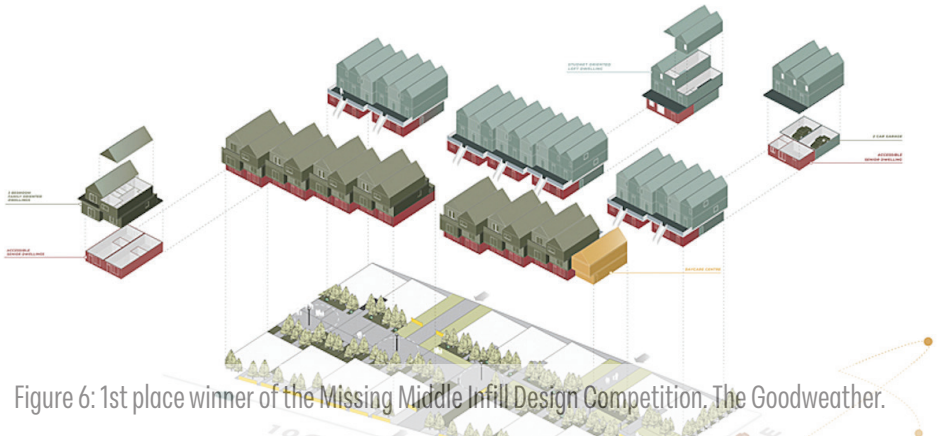

Figure 6: 1st place winner of the Missing Middle Infill Design Competition. The Goodweather.

Figure 7: 2nd place winner from Leckie Studio Architecture + Design Inc. Bricolage.

Figure 8: 3rd place of the competition from RedBrick Group of Companies and SPECTACLE.

Figure 9: The people's choice of the competition. Treehouse Community.

Figures 6, 7, 8, & 9 show the first, second and third place winners, along with the people's choice. The competition even won a CIP award for *Planning Excellence Merit: New and Emerging Planning Initiatives*.

Unfortunately, due to COVID-19 and rising construction costs, the winning architecture team was unable to build their design.

4.0 LESSONS LEARNED

There were many lessons and takeaways following the success of the 2018 Infill Roadmap.

4.1 Extensive engagement with Edmontonians

The engagement strategy with the Evolving Infill Project was carefully curated to ensure that Edmontonians were on board with the shifting policies around infill housing. The shift in public perception did not happen overnight but was a result of 11 years of engagement in all different forms (J. Syvixay, personal communication, February 12th, 2025). With the 2018 Infill Roadmap, engagement occurred in two sections. Engagement first occurred to assist in the creation the draft and then again months later to review the 2018 Infill Roadmap draft, allowing residents to have input throughout the entire process. Three technical reports were produced by consultants to support the policies in the roadmap and were presented during engagement sessions. One report outlined the evolution of Edmonton's urban development, another provided a housing affordability study, and the third report provided background on municipal tools and programs that other cities were using to address infill (The City of Edmonton, 2018). These reports helped to provide a 3rd party opinion on the policies being proposed by the city.

4.2 Viability of Medium Density Dwellings

Infill redevelopment can be more expensive than greenfield development if there are costs associated with demolition. The Missing Middle Infill Design Competition was intended to show a completed and financially viable medium-density building. The winning design ended up not being viable and was never built. Most of the designs submitted for the competition had a profit margin of around 11%, even though developers usually aim for a profit margin between 15-20%. Because of the smaller scale, medium-density developments will not achieve the same profits as high-rise apartments (Syvixay & Bohle, 2021). Many of these financial factors, such as construction costs, are outside of a city's control, however, the actions in the 2018 Infill Roadmap worked to set up developers with more permissive policies and zoning to help with the viability of these projects. Architects and developers have creative solutions for "missing middle" housing, but for their designs to be viable, they need policy support from cities.

4.3 After the Infill Roadmap

At the 2022 Infill Roadmap update, 22 of the 25 action items had been completed, and the remaining three would be completed with the Zoning By-law Renewal initiative and the City Planning Framework project. In December of 2020, the city of Edmonton adopted a new municipal development plan called *The City Plan* which set a goal for 50% of new homes to be infill units. This new goal will build off of the success of the 2018 Infill Roadmap and incorporate even more policies and municipal tools to help achieve this infill goal (The City of Edmonton, 2022).

In 2022, 34% of all permits issued were for redevelopment of existing properties (i.e.:creation of additional dwelling units, duplexes, etc), a drastic increase from 19% of all building permits in 2015.
As far as infill development, 37% of all permits were single detached dwellings, while 32% were apartments and multiplexes. In 2005, the majority of permits were for single detached homes. The city of Edmonton used multiple municipal tools to

enable more medium-density infill housing through the 2018 Infill Roadmap, and ultimately proved to be a success that will push the city to reach even higher infill goals.

> **Edmonton will continue to listen, learn and lead from the perspective of diverse Edmontonians, the builder community and best practices learned from other stakeholders and municipalities.**
>
> **Council Report 2022**

5.0 FINAL THOUGHTS

The success of the 2018 Infill Roadmap was a product of a coordinated team effort of extensive engagement, resident education, a slow shift in development culture, and thoughtful policy changes. The city of Edmonton carefully curated this shift with good engagement and ensured residents were involved in the decisions to change infill policies. While the city cannot control all aspects of the housing market, city staff used the municipal policy tools to their advantage to incentivize medium-density infill housing with the 2018 Infill Roadmap.

The success of the 2018 Infill Roadmap provides an example to other cities that these policy changes and coordinated efforts can help shape and have a positive impact on the housing that is provided for residents.

REFERENCES

Syvixay, J., & Bohle, S. (2021). *Exploration 1: Missing Middle Math: Making 'Missing Middle' Housing Work.* Austin: Planning Forum: The University of Texas.

The City of Edmonton. (2014). *2014 Edmonton's Infill Roadmap. Edmonton:* The City of Edmonton.

The City of Edmonton. (2018). *Infill Roadmap 2018.* Edmonton: The City of Edmonton.

The City of Edmonton. (2018). *What we heard: Evolving infill stakeholder engagement results.* Edmonton: The City of Edmonton.

The City of Edmonton. (2022). *Council Report: Infill Roadmap Initiative - 2022 Update.* Edmonton: The City of Edmonton.

Whitzman, C., Ashtari, N., & Perwani, P. (2024). *Enabling the Missing Middle: Definitions, Evidence, Barriers, and Promising Practices.* Toronto: The School of Cities.

WSP. (2023, December 19). *Creating Complete Communities*. Retrieved from WSP - Insights: https://www.wsp.com/en-ca/insights/ca-creating-complete-communities

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