

November 2024

Making the Case for the Middle

The Potential of Middle Housing Production in Alberta

This project is made possible through a grant from the Alberta Real Estate Foundation.

Canadian Urban Institute / Institut Urbain du Canada

m ddl

Alberta Real Estate Foundation

Land Acknowledgement

The head office of the Canadian Urban Institute is located in Toronto, the traditional territory of many nations, including the Mississaugas of the Credit, the Anishinaabe, the Chippewa, the Haudenosaunee and the Wendat peoples, and is now home to many diverse First Nations, Inuit, and Métis peoples from across Turtle Island. Toronto is covered by Treaty 13, signed with the Mississauga's of the Credit, and the Williams Treaty, signed with multiple Anishinaabe Nations. This place continues to be home to many Indigenous peoples from across Turtle Island and we are grateful to have the opportunity to work on this land. Further, CUI is cognizant that many urban planning practices reinforced racist and exclusionary practices of colonialism. The work of city-building today must include confronting the legacies of the past and search for new approaches that centre around equity and inclusion, making cities for and with everyone.

We also acknowledge that what became known as the Province of Alberta in 1905, is also the traditional and ancestral home to many Indigenous Peoples and for that we are honoured to have shared this land with them since Treaties 6, 7, and 8 were entered into. Alberta is also the historical Northwest Métis Homeland – which includes five Territories. We acknowledge the many First Nations, Métis and Inuit who have lived in and cared for these lands for generations[1].

About

Funder Recognition: Alberta Real Estate Foundation

The Alberta Real Estate Foundation invests in real estate policy, research, practices, and education that strengthen Alberta's communities. The Foundation's revenues come from the interest earned on public money deposited in real estate brokers' pooled trust accounts. Learn more at www.aref.ab.ca.

Canadian Urban Institute

CUI is Canada's Urban Institute. We are a national platform where policy makers, urban professionals, civic and business leaders, community activists, and academics can learn, share, and collaborate with one another from coast to coast to coast. Our mission is to support vibrant, equitable, livable, and resilient cities in Canada through research, engagement, and storytelling.

mddl

mddl (pronounced "middle") aims to address a crucial issue in Canada's housing delivery system: the fragmented and siloed approach that has historically hindered the system-level changes essential to resolving the housing crisis. As a CMHC Level Up Stage 5 Housing Supply Challenge Semi-Finalist, our mission—alongside strategic partners—is to build capacity across all levels and work strategically to reduce barriers and deliver middle housing.

Acknowledgements

This report was prepared by the Canadian Urban Institute with support from mddl and input from the City of Calgary. This project is made possible through a grant from the Alberta Real Estate Foundation. CUI thanks mddl, the City of Calgary, and the Alberta Real Estate Foundation and all who supported and contributed to this project.

Canadian Urban Institute

Jennifer Barrett
Managing Director, Programs, Planning, and Policy

Leandro Gabriel Santos
Senior Planner, Project Manager

Toma Beit-Arie
Research Planner, Project Lead

Berta Kaisr
Research Planner

Shavtai Pinchas
Research Planner

Julia Bissonette
Research Planner Intern

Emily Wassmansdorf
Communications Manager

mddl

Darlene Jehn
President

Alkarim Devani
CEO

Claire Askey
Planning & Communications Strategist

Jasneet Pritam
Project Coordinator

Thanakrit Gonggraikij
Planning & Communications Strategist

Table of Contents

Executive Summary 6

Introduction 7

Project Objectives 8

Guiding Research Questions 8

Section 1: Literature Review: Key Findings, Gaps and Opportunities 9

1.1 Research Summary 9

Gaps In The Literature And Opportunities For Future Research 13

Section 2: What We Heard 14

Section 3: Case Studies: Middle Housing Production Solutions 18

3.1 Edmonton's 2018 Infill Roadmap: Purposeful Policy To Promote Middle Housing 18

3.2 Calgary's Blanket Rezoning: A Success In Public Engagement 21

3.3 Airdrie's Success with Housing Accelerator Fund (HAF) Funding 23

3.4 Gentle Density to Increase Middle Housing Production:
A Case Study of The School of Cities' "Missing Little" 25

Section 4: Solutions for Middle Housing Production in Alberta 27

Conclusion 29

Appendix 31

Literature Review 31

Introduction 31

Yellowbelts: Visualizing Exclusionary Zoning In Canadian Cities 32

Various Conceptions Of The Middle Housing Range In Alberta 33

Origins of 'Missing Middle Housing' 33

Improving Housing Access In Established Neighbourhoods 34

Beyond rezoning: next steps to scale middle housing production 35

Building Code Requirement: The Second Egress 35

Municipal-Level Housing Reforms in Alberta 36

Overcoming Neighbourhood Opposition 40

Enabling Citizen Development 40

Gaps and Opportunities for Future Research 42

Conclusion 42

Executive Summary

Alberta faces a pressing housing crisis, necessitating innovative solutions to address the shortage of housing. According to a 2022 Canada Mortgage and Housing Corporation (CMHC) report, the province needs an additional 20,000 housing units by 2030 to restore affordability levels last seen in 2003-2004.

This report explores the potential of *middle housing*[2] in alleviating Alberta's housing challenges. The study involved a comprehensive literature review, engagement with individuals involved in middle housing development, and analyses of successful case studies relevant to Alberta's context.

This work produced a number of key findings that influence and inform the potential for increased middle housing production in Alberta:

- ***Middle housing as a solution***: Scaling up middle housing production could be a crucial solution to Alberta's housing crisis. It has the potential to address both current and future housing challenges by diversifying options in *low-density neighbourhoods*[3], thus increasing housing stock availability and improving affordability.
- ***Actions beyond re-zoning***: Eliminating *exclusionary zoning*[4] is a vital first step, but municipalities also face significant challenges that may require additional actions or interventions. These include streamlining approval processes, implementing supportive municipal policies, adapting design, and working with other levels of government to revise building codes to support middle housing development.
- ***Importance of effective public engagement***: As seen in the City of Calgary's rezoning process, effective communication and public engagement are essential to build support for middle housing initiatives and address residents' concerns about density and other impacts.
- ***The potential of citizen-development***: Converting existing detached and semi-detached houses into triplexes or fourplexes, particularly by individual citizen developers, is identified as one of the most opportune ways to expand middle housing.
- ***Opportunities for building innovation***: Discussions with individuals involved in middle housing development reveal that, despite broad support for this type of housing, financial barriers remain a significant obstacle to the feasibility of small-scale projects. These discussions highlighted the potential for combining enabling zoning reform, fast-track programs such as pre-approved designs, and modular and off-site construction methods to improve the financial feasibility of projects and support economies of scale.

Middle housing generally refers to a range of housing types, including duplexes, triplexes, fourplexes, courtyard apartments, and live/work housing types.

Introduction

Could middle housing be part of the solution to Alberta's housing crisis?

In June 2022, Canada Mortgage and Housing Corporation (CMHC) published *Canada's Housing Supply Shortages: Estimating what is needed to solve Canada's housing crisis by 2030*. To achieve the level of affordability in Alberta last seen in 2003-2004[5], housing production in the province must see an additional 20,000 units, above the business-as-usual scenario, by 2030[6].

It is the Canadian Urban Institute's (CUI) and mddl's shared assumption that scaling up middle housing production in Alberta's municipalities represent a significant piece of the solution to the province's housing challenges.

The term "Missing Middle Housing" was originally coined in 2010 by Daniel Parolek, capturing a range of housing types between single-detached homes and mid-rise apartments, including duplexes, triplexes, fourplexes, courtyard apartments, bungalow, courts, townhouses, multiplexes, and live/work units[7]. Although the definition of 'Missing Middle Housing' varies across industries and municipalities, it generally refers to a range of housing types that have been largely absent from North American cities because they were previously illegal to build in most neighbourhoods. For the purpose of this project, the definition of middle housing types includes duplexes, triplexes, fourplexes, courtyard apartments, and live/work housing types - forms that generally have at-grade entry and no elevator core (Figure 1).

Middle Housing In Alberta:
A Preliminary Discovery Exercise

To determine the potential of middle housing, CUI conducted a literature review exploring the existing body of knowledge around middle housing challenges in Canada and the United States and ongoing solutions currently being implemented. This was followed by engagement and discussions with individuals involved in middle housing production in Alberta and a case study analysis of successful middle housing developments relevant to an Albertan context. Through this work, we have identified gaps in understanding of middle housing production in Alberta that warrant further exploration.

This report is one part of a larger mddl-led program to democratize knowledge and enable the delivery of middle housing. The intention of the program is to support from the top down and the bottom up to empower and mobilize individuals and industry to further explore, build upon, and pursue middle housing development projects while encouraging municipalities to evaluate policies in support of private-led middle housing solutions in Alberta and across Canada.

It is important to note that awareness and initiatives to support middle housing in Canadian cities are relatively new. The findings and solutions identified within this report serve as guideposts for other municipalities to consider and adapt to their local contexts.

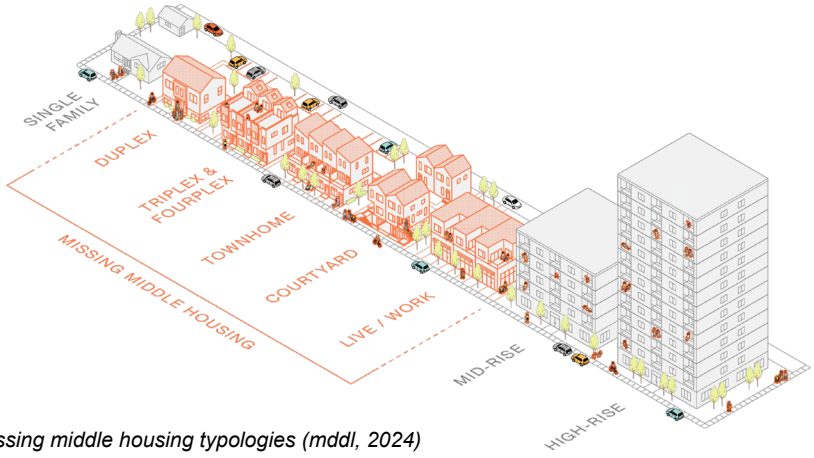


Figure 1: Missing middle housing typologies (mddl, 2024)

Project Objectives

1. Review the existing body of literature exploring middle housing challenges and solutions.
2. Identify key gaps in understanding around how to scale up middle housing production.
3. Highlight four case studies of middle housing production solutions from a municipal perspective.
4. Disseminate findings to interested individuals, industry organizations, municipalities, and other interested parties in support of scaling up middle housing production in Alberta.

Guiding Research Questions

1. Does increased middle housing production in established neighbourhoods improve housing access?
2. What are the current conditions for middle housing production in Alberta?
3. What are the major barriers from the policy and regulatory, market, and technical perspectives?
4. What are the enabling conditions for the successful implementation of middle housing solutions in Alberta?
5. Are there high-level examples elsewhere in Canada and the United States of middle housing solutions implemented that can be applied to the Alberta context?

Section 1: Literature Review: Key Findings, Gaps and Opportunities

The goal of this literature review is to scan the existing body of knowledge of middle housing challenges and past solutions and identify key gaps in understanding. The summary of the literature review presented here highlights the key findings with an emphasis on knowledge gaps identified and opportunities for future research, engagement, and planning (A complete literature review can be found in the Appendix).

1.1 Research Summary

The literature review produced several pertinent findings informing the development of middle housing in Alberta:

1. Middle Housing Development Can Be A Solution To Current Housing Challenges

The literature consistently identifies middle housing development as a crucial strategy for addressing the pressing housing affordability and supply challenges in Canadian cities[8]. By diversifying housing options, particularly in established single-detached, or single family, neighbourhoods, middle housing can significantly increase both the housing stock and the affordability of the housing within a municipality or a specific area[9].

2. Importance Of Upzoning As A Key *First* Step, Not A Final Step

The existing research highlights the need for municipalities to eliminate exclusionary zoning, or exclusively single detached zoning, to pave the way for legalizing middle housing development[10]. Responding to these insights regarding the potential of middle housing, several municipalities in Alberta have already undertaken substantial measures to support middle housing development.

In Edmonton, for example, zoning bylaw amendments enacted in 2019 introduced greater flexibility across five zones, facilitating "Multi-unit Housing" as-of-right[11]. Further revisions in 2023 allowed for three-storey buildings with up to eight units city-wide. The revised zoning bylaw came into effect January 1, 2024, and signifies the most significant city-wide upzoning seen in any major Canadian city to date.

Similarly, Calgary recently approved city-wide rezoning in May 2024, expanding permissions to legalize the construction of middle housing types beyond single-detached housing, including semi-detached, rowhouses, and townhouses in both new and established areas[12]. This Council decision was made at the end of the City's largest and longest public hearing in its history.

These zoning reforms in Alberta's two largest municipalities mark significant steps towards accommodating middle housing development. However, despite these important regulatory changes, there are persistent challenges to middle housing development that emphasizes the need for further intervention beyond upzoning[13].

Small-scale developers in the United States, for example, face obstacles such as restrictive design requirements, unclear subdivision and utility regulations, and complex approval processes[14]. These barriers complicate the feasibility of middle housing projects and emphasize the need for streamlined approvals and supportive municipal policies and regulations that extend beyond just permitting middle housing types.

Additionally, stringent building codes in Canada, particularly the requirement for multiple egresses in multi-unit residential buildings, pose significant financial and logistical challenges to small-scale developers in Canada and may hinder middle housing development despite zoning approvals[15].

Performance Standards To Review As Part Of A Wider And More Enabling Upzoning Reform: Lessons From Small-Scale Developers In The United States

To effectively support a broader upzoning reform process, changes to performance standards and regulations should be considered to address barriers and support the effective development of middle housing:

Design Flexibility:

Flexible design requirements: Allow more units on smaller lots through adaptable design guidelines. Baseline standards for small-scale projects: Establish maximum allowable setbacks, minimum Floor Area Ratio (FAR), and flexible zoning requirements in performance standards and land use regulations.

Approval Processes:

Clear and efficient approval process: Streamline the development approvals process. This could include using pre-approved designs from modular construction companies to speed up approvals and improve economies of scale.

Subdivision and Utility Rules:

Clarity on subdivision and utility rules: Simplify subdivision processes, utility rules and regulations to avoid complications and confusion in the development process to better support middle housing development.

Project Size and Feasibility:

Consider larger projects: Review lot and unit limits and consider permitting slightly larger projects to enhance feasibility, such as up to six homes on corner lots.

Adapted from: Garcia et al. (2022).

3. Neighbourhood Opposition And Public Engagement:

In Alberta, as in many other parts of North America, neighbourhood opposition significantly affects housing initiatives, especially those involving middle housing. Public resistance, spurred by concerns over density, traffic, and neighbourhood character, often complicates or delays rezoning efforts.

However, the literature highlighted the importance of language to build public support for middle housing, reframing how middle housing initiatives are portrayed and discussed. For instance, a switch from the negative of “eliminating single-family zoning” to the more optimistic “legalizing modest home choices like duplexes and triplexes” has proven effective in shifting public perception and easing opposition[16].

Shifting the portrayal of middle housing initiatives helps to gain the buy-in of those who would typically oppose middle housing developments. Using the above tactics, Oregon was successful in overcoming neighbourhood opposition, where duplexes, triplexes, and fourplexes have been legalized. The Oregon case emphasizes the importance of coalition-building and strategic messaging to increase public support for middle housing[17]. In this case, a coalition in support of the legislation included influential state politicians, and key organization such as Habitat for Humanity, the American Association of Retired Persons (AARP), the local National Association for the Advancement of Colored People (NAACP) chapter, Portland Public Schools, and other stakeholders. Together, they helped to build the case that middle housing makes it easier to age in place, helps fight climate change, and helps to reduce school segregation.

Figure 2: Missing Middle Re-frames in the context of the state of Oregon's legislature re-legalizing middle housing state-wide.

AVOID: REPEATING SCARE TACTICS; JARGON; AND MISLEADING, UNFAMILIAR, OR INACCURATE WORDING.	**ADOPT:** CONCRETE EXAMPLES; EVERYDAY LANGUAGE; AND A FOCUS ON BENEFITS TO COMMUNITIES.
AVOID SAYING THIS…	**SAY THIS INSTEAD…**
Single-family	Single-detached
Supply bill, density bill (legislation)	Workforce housing bill, missing middle housing bill
Get rid of single-family zoning	Lift bans that prevent modest home choices like duplexes and backyard cottages
Bold, dramatic, transform	Low-impact; a return to modest homes; protecting mixed-income neighbourhoods
New housing types, legalize	Re-legalize familiar, modest home choices like duplexes and triplexes
Units	Homes; choices for renters; plenty of homes, all shapes, and sizes

Source: Anderson, M, & Fahey, A. (2019)

4. Municipal Initiatives For Middle Housing Production In Alberta:

A key finding from the literature review is the widespread adoption of municipal initiatives across Alberta aimed at promoting middle housing production. In larger cities like Edmonton and Calgary, significant zoning changes have been implemented to facilitate middle housing. Smaller municipalities in Alberta are also actively participating in increasing middle housing through initiatives supported by the federal Housing Accelerator Fund (HAF).

This includes Airdrie, Westlock, Bow Island, Smoky Lake, and Duchess who have utilized HAF funding to streamline development processes, incentivize medium-density housing, and update zoning regulations to accommodate middle housing[18]. These developments in both large and small municipalities underscore an important effort in Alberta to address housing affordability and diversity through middle housing production.

5. The Potential Of Citizen Development And Existing Conversions To Increase Middle Housing Production:

The literature review also emphasized the potential of citizen development and the importance of supporting individual homeowners to boost middle housing production[19]. Specifically, converting existing detached and semi-detached houses into triplexes or fourplexes city-wide was identified by the Urban Land Institute as a cost-effective and efficient method for middle housing development. For homeowners who already own the land and have paid off their mortgage, lower renovation costs and a simpler development process leads to the fastest delivery of additional units at the lowest achievable rents.

This finding is significant, especially when compared to new house-form construction, which can be more expensive, energy consuming, and time consuming. This finding underscores the potential of individual homeowner development to substantially increase overall middle housing production. However, this finding needs to be explored further within specific municipal and regional market contexts to identify its potential in Alberta.



Gaps In The Literature And Opportunities For Future Research

This literature review exposed several key gaps in the current understanding of middle housing, particularly as it relates to the development of middle housing in Alberta's cities and smaller municipalities. These gaps present a significant opportunity for future research, engagement, and planning to better support scaling up middle housing production in Alberta.

1. Long Term Impacts Of Middle Housing Initiatives In Alberta

The review of initiatives already underway in Calgary, Edmonton, and the smaller Albertan municipalities highlights the many housing strategies and tools being deployed across the province. However, due to the recent time horizons, limited research has been conducted evaluating the long-term impacts of these initiatives and their success in increasing the supply of middle housing and improving housing affordability broadly. A valuable next step would be for researchers, academics, and municipalities to conduct longitudinal studies measuring the impact of municipal housing initiatives on middle housing production and equity-deserving groups' access to established neighbourhoods across a wide range of neighbourhoods varying in size and built form patterns. These longitudinal studies can then be used to help evaluate the success and efficacy of various policy and regulatory changes and programs in advancing housing development in Alberta's municipalities.

To better understand the longer-term impacts of middle housing initiatives in Alberta and evaluate the success of specific middle housing policies, a case study analysis of the City of Edmonton's 2018 Infill Roadmap is presented in Section 3.

2. Market Dynamics Of Middle Housing Production In Alberta

The literature review identified a glaring lack of understanding in the market dynamics—such as land value, supply and demand, interest rates, and labour and material shortages—that affect middle housing production in major cities compared to smaller municipalities such as mid-sized cities, towns, villages, and rural areas. These relationships between market dynamics related to middle housing production and Alberta's municipalities needs further research and investigation with the involvement of partners across the province.

3. Overcoming Neighbourhood Opposition In An Albertan Context

This literature review presents important findings on the ways neighbourhood opposition can significantly impact and potentially hinder middle housing developments. Additionally, the literature review highlighted important findings from successful public engagements and policy developments in the United States. However, limited literature and findings exist that evaluate the specific Albertan context and the ways successful public consultation and engagement can help support middle housing production and overall densification efforts more broadly. This is an important gap in current understanding of middle housing in Alberta because each locality and municipality will face various and nuanced differences in the ways residents of that area experience and view middle housing developments or proposals.

In response to this gap, a case study exploration of Calgary's successful rezoning provides a better understanding of the City's engagement process and key lessons that can be learned from and applied by other Albertan municipalities to help overcome neighbourhood opposition to rezoning or middle housing. This case study is presented in Section 3.

Section 2: What We Heard

To better understand the nuances of middle housing production in Alberta, mddl hosted podcasts with a diverse group of individuals with varying backgrounds and expertise in housing production, development, and management in Alberta.

These conversations focused on middle housing delivery in Alberta, examining the participants' experiences, as well as the challenges, barriers, and solutions related to middle housing within an Albertan context. To maintain a nuanced and comprehensive understanding of middle housing production in Alberta, conversations were conducted with a diversity of actors involved in, and with knowledge of, middle housing in Alberta. These actors included municipalities and municipal employees, industry professionals, homeowners, non-profits, and developers.

These conversations led to important key findings, themes, sector-specific insights, barriers, suggestions, and overall emphasized the need for innovative approaches and supportive planning policies and enabling zoning regulations to address the shortage of housing and promote increased middle housing production. While initiati ves such as Calgary's city-wide upzoning offer a promising model, significant barriers such as financial constraints, zoning restrictions, and community resistance persist. The conversations with local actors highlighted that collaborative efforts, education, and infrastructure investments are essential to overcoming these challenges and increasing affordable housing supply through the increased production of middle housing.

Figure 3 presents a key summary of the conversations, including the key findings, key themes, sector-specific insights, key barriers, and key solutions discussed across all conversations. It is important to note that these findings do not represent best-practice from a comprehensive analysis and engagement process, but rather a summary of what we heard from the local actors.

Figure 3: Summary table of key findings from conversations with local actors

Key Findings	**Support and need for rezoning:** • The podcast interviewees generally expressed overall support for city-wide upzoning in Calgary to address the shortage of housing choices, particularly affordable options. Rezoning can create more opportunities for attainable housing and help overcome restrictive laws that limit housing diversity.
	Financial barriers and innovation: • High development costs and financial barriers, especially for smaller developers, highlight the need for incentives and support to make middle housing more viable. This also highlights the need for innovative building and construction techniques to scale up middle housing and make it more affordable.

Public and community concerns:

- Many of the interviewees are in favour of middle housing initiatives, there are concerns about potential impacts on property values and community resistance due to fears about density. Effective engagement and discussion among all interested parties are crucial to address these concerns and foster support.

Amenities and complete communities:

- The discussions generally showed support for middle housing to be considered in proximity to amenities. This points towards the need for more complete communities.

Collaboration and engagement:

- Interviewees emphasized th e need for engagement and discussion among all actors involved and interested.

Sector Insights

Municipal sector:

- The municipal sector emphasized the need for regulatory changes to support increased middle housing development.

Industry professionals:

- Industry professionals focused on the need for innovative construction solutions to help make middle housing development more feasible and scale up production. Some examples that were discussed include: office-to-residential conversions and new construction materials.

Homeowners:

- Homeowners largely shared mixed reactions regarding middle housing and emphasized the uncertainty they feel regarding middle housing development.

Non-Profits:

- The non-profit sector primarily focused on and emphasized the lack of financial incentives that hamper affordable housing development and middle housing development.

Developers:

- The development community highlighted challenges and barriers to new development, including the shortage of skilled trade workers. But expressed support for innovative methods that can enable more affordable housing.

Key Barriers

Municipal sector:

- Zoning makes it difficult to build diverse housing types, including affordable housing. Zoning in Calgary was historically restrictive, but improvements may come with the recent city-wide upzoning.

Public opposition:

- Communities sometimes fear and oppose change that can occur from rezoning, such as added density, and the perceived impact this may have on their home value.

Financial barriers:

- Development is expensive, and this hinders private citizen development due to the risk of project failure. The high cost of development is also a barrier to smaller scale developments (such as middle housing) because it is more difficult to make these types of projects financially feasible.
- The cost of land prevents the average citizen from participating in middle housing development.
- The cost of homes prevents many residents from buying a home (with the potential for citizen-development) and instead must continue renting.

Educational barriers:

- Lack of education for citizen developers results in development seeming like a daunting and risky task.

Neighbourhood character:

- The discussions highlighted a concern some residents have with the look and feel of their neighbourhood and the ways increased density and middle housing may impact this look and feel.

Labour barriers:

- Shortage of skilled trade workers is a barrier to middle housing development.

What we heard: Suggestions to address key barriers

Collaboration and engagement:

- Increase collaboration between different actors involved in middle housing development (e.g., developers, citizens, municipality) and meaningfully engage the community to drive change in housing development.
- Increase discussions and engagement with those concerned about middle housing to help address their fears and misconceptions.
- Incorporate renters in conversations about their community to help reduce renter stigma and diversify the conversation informing policymaking.

Rezoning and regulatory processes:

- Reduce or eliminate barriers such as parking minimums and restrictive massing to facilitate development. This can help reduce costs, improve the balance of a pro forma, and increase livable floor area, making it easier to build below-market-rate housing (with appropriate housing policies).
- Fast track approvals to accelerate and encourage middle housing development.

Education:

- Raise awareness about middle housing benefits and address individual and community concerns realistically.

Infrastructure investment:

- Invest in infrastructure to accommodate increased density.

Leverage underutilized land:

- Identify underutilized land and plan for the development of suitable sites to minimize displacement of existing residents.

Housing affordability and diversity:

- Add density and a greater diversity of housing types to provide more options for individuals and households of varying sizes and lifestyles.
- Create an affordability task force with a multi-jurisdictional team and expert support to develop new policy which supports affordable housing and middle housing development.
- Create a City of Calgary Land Fund

Section 3: Case Studies: Middle Housing Production Solutions

To further promote the development of middle housing in Alberta, CUI conducted four case studies highlighting successful and ongoing implementations of middle housing solutions. These studies were carefully selected to identify best practices or promising initiatives directly applicable to Alberta's provincial and municipal planning contexts.

The four case studies each highlight a different aspect of best practice in middle housing development. The Edmonton case study focuses on its Infill Roadmap, demonstrating effective policy implementation to increase infill development. In Calgary, the case study explores the engagement process supporting its newly approved upzoning, offering insights into overcoming resident opposition and structuring engagement plans for blanket rezoning in other Albertan municipalities. Airdrie's case study illustrates how a smaller municipality intends to utilize federal funding to address housing challenges. Lastly, the case study on "Missing Little" exemplifies evidence-based practices in small-scale redevelopment applicable to municipalities of varying sizes across Alberta. Individually, each case study provides a unique example, collectively offering a comprehensive overview of successful middle housing solutions across different scales and strategies.

3.1 Edmonton's 2018 Infill Roadmap: Purposeful Policy To Promote Middle Housing

Overview

In 2018, Edmonton established the Infill Roadmap to support infill development in Edmonton[20]. Unlike the first Roadmap developed in 2014, the 2018 Roadmap focuses on medium and high-scale infill and laneway housing and development. The Infill Roadmap serves as a key example of targeted policy to increase infill development, promote gentle densification, and support overall middle housing development.

The roadmap includes twenty-five actions that address emerging needs, reduce the cost of infill development, create a diverse and inclusive mix of housing options, support laneway housing, align city investment with infill, and provide clarity on the infill process. The Infill Roadmap goes through five stages (or stops along the "road") and each stage has several actions associated with it. Together this provides the "roadmap" for the development of infill housing in Edmonton:

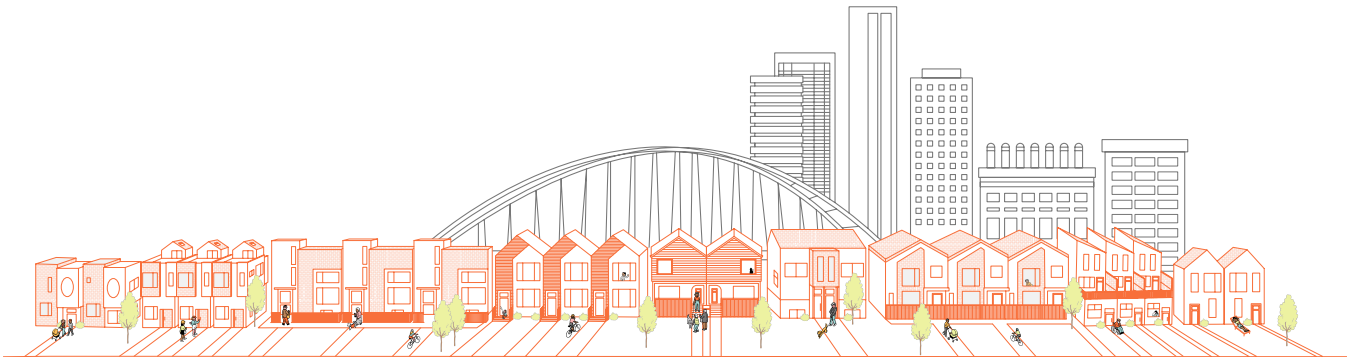


Figure 4: Overview of Edmonton's Infill Roadmap's five stages and associated actions.

Stage 1: Knowledge	Action 1: Prioritize infill at key nodes and corridors Action 2: Review infrastructure capacity Action 3: Investigate opportunities for tiny homes Action 4: Re-examine collective housing regulations
Stage 2: Collaboration	Action 5: Partner to pilot innovative housing Action 6: Improve housing affordability Action 7: Address land assembly and mixed-use Action 8: Pilot alley enhancements
Stage 3: Advocacy	Action 9: Better inform residents Action 10: Incentivize accessible laneway homes Action 11: Create optimal infill map Action 12: Reduce barriers to use of Low Impact Development
Stage 4: Process	Action 13: Monitor and address construction issues Action 14: Improve permitting process timelines and consistency Action 15: Review, update, or retire plans and policies Action 16: Develop infrastructure cost sharing system Action 17: Improve lot grading
Stage 5: Rules	Action 18: Improve medium scale zones Action 19: Simplify low scale zones Action 20: Reduce parking requirements Action 21: Increase opportunities for semi-detached housing Action 22: Create opportunities for small apartment buildings Action 23: Create opportunities for more suites on a property Action 24: Remove zoning barriers for medium scale Action 25: Integrate urban design into Zoning Bylaw[21]

Implementation And Development Process: How Edmonton Developed The Infill Roadmap

The 2018 Infill Roadmap was created through the Evolving Infill 2.0 initiative that followed up on the first Infill Roadmap (2014) and shifted the focus towards missing middle housing and development. The Evolving Infill project that produced the Infill Roadmap was a result of extensive public engagement over a 20-month period. The twenty-five actions were developed through in-depth engagement with a wide variety of key actors - citizens, public institutions, businesses, and community organizations. Between 2016-2018, approximately 3,300 residents of Edmonton provided feedback which helped guide the work on the Roadmap. These engagements took the form of working group sessions, engagement public workshops, and engagement conversation fairs.

Additionally, over this two-year policy development period, three technical reports were prepared to complement the information gathered during the stakeholder and community consultations. These technical reports provide a deeper level of understanding and knowledge on a specific set of infill topics that then informed the development of the Actions. The three technical reports are:

1. Edmonton's Urban Neighbourhood Evolution report[22]
2. Municipal Tools Review report
3. Market Housing and Affordability Study report[23]

Edmonton's implementation and development process for the Infill Roadmap thus reflects a thorough process of community engagement and strategic planning. Through extensive and targeted public engagement and technical reports, the City was able to develop a comprehensive Infill Roadmap to guide future infill development.

Evaluation Of The 2018 Roadmap: Was It Successful?

Given the limited time since its implementation, a thorough evaluation of the Infill Roadmap's success is premature. However, an assessment of the program's effectiveness in conducting its key actions has already been completed.

As of 2022, 22 of the 25 Actions were successfully completed and implemented, and the remaining three were completed through the existing Zoning Bylaw Renewal Initiative and the City Planning Framework Project. As a result, a 2022 Report to Council deemed the 2018 Infill Roadmap successful in promoting and increasing infill housing.

Since the introduction of Edmonton's 2014 Infill Roadmap, there has been a notable increase in infill housing as a proportion of overall city growth. This trend accelerated notably between 2018 and 2020 following the implementation of the 2018 Infill Roadmap[24]. Currently, infill homes in Edmonton's core and mature areas constitute twenty-five percent of new housing since 2010[25]. In 2023, the redeveloping area saw 2,931 new housing units approved, representing about thirty percent of the city's total new units[26]. Notably, 62 percent of these new infill dwellings were apartments or mixed-use developments. Other housing types contributing to diversity include secondary suites, row housing, and semi-detached units, with significant contributions from row housing and apartments considered as "Missing Middle" housing types[27].

Key Takeaway

Edmonton's 2018 Infill Roadmap has proven successful in promoting medium and high-scale infill housing, enhancing housing diversity, and promoting middle housing development. With 22 of its 25 actions completed by 2022, the roadmap has increased infill housing in core and mature areas and can serve as a guide for other Albertan municipalities interested in increasing infill housing.

3.2 Calgary's Blanket Rezoning: A Success In Public Engagement

Overview

In May of 2024, after the longest public hearing in Calgary's history, the city approved blanket rezoning for the entire city as part of the City of Calgary's Housing Strategy[28], which includes actions recommended by the Housing and Affordability Task Force.

The recommendations that passed included:

- Rezone to R-CG[29] as base district in established area
- Rezone to R-G[30] as base district in developing area
- Rezone to H-GO[31] in approved Local Area Plans (LAPs)
- Make Rowhouse a discretionary use in R-CG
- Make Contextual Single-Detached dwelling a permitted use in R-CG

The Task Force that created this plan was formed in 2022 with the sponsorship of Councillors Courtney Walcott, Gian-Carlo Carra, and Kourtney Penner who together stressed the urgency of the housing crisis in Calgary. In *Home is Here – The City of Calgary's Housing Strategy 2024–2030*, experts highlighted how the 2023 Housing Needs Assessment found that 84,600 households needed affordable housing options. The report highlighted that although the percentage of households requiring affordable housing has remained steady at 17-18 percent over the past three decades, the actual number of these households has doubled. It is now projected to reach nearly 100,100 households by 2026.

Following the report's release and multiple days of public participation and debate, the Housing Strategy, which included 98 recommendations, was approved in September 2023 with some actions pending budget and consultation review. In the subsequent months, an intensive information and education program took place, and the findings were presented to Council in April 2024 in the form of a *What We Heard Report*[32]. This garnered significant public engagement–over 1,050 residents participated in information sessions, 465 individuals participated in online webinars, and 4,959 comments from 3,930 participants were provided on the City Engage Portal. Despite the eventual success of this rezoning plan, 70 percent of the initial feedback opposed or appeared concerned with the proposed zoning amendment.

Despite the high percentage of concern, the Task Force presented adequate solutions for opposing arguments and after multi-day hearings, the city-wide rezoning officially passed. Understanding how the City of Calgary transformed initial opposition into eventual policy success provides valuable insights into engagement strategies that other municipalities can adopt.

Key Takeaways

CUI engaged an expert on the Task Force and the City of Calgary's engagement team who shared useful lessons and recommendations for future rezoning projects. This produced four key lessons:

- **Importance of equity-based engagement**: During public consultations, often those who show up are the ones with the time, energy and resources to do so. The goal of engagement should always be to gather a comprehensive range of opinions across the spectrum, with emphasis on inclusivity for historically marginalized groups.

  In the case of the City's engagement process, many of the people who came out to the consultation sessions fit into the category of those who have time and energy and who are worried and/or opposed to the changes. The people who would be most affected by these changes may have been less represented. To adapt to this missing piece of their work, the engagement team focused on gathering a more comprehensive list of concerns and developing solutions that directly addressed these concerns in hopes of creating more equity in the future.

- **Interpersonal connection**: It was emphasized that during public engagements, establishing interpersonal connections and relating to participants are crucial for ensuring progress. The objective is not merely to influence opinions, but to foster mutual learning in a respectful environment. Such interactions can be facilitated through smaller group discussions, where individuals feel safe and can connect on a personal level rather than solely in a professional or formal capacity.

  During the public engagement discussions in Calgary, some participants were concerned with the changes occurring in their neighbourhood. To address this, the engagement team set up multiple tables, each staffed with a planner and facilitator, where the public could go to ask their questions without needing to voice them to a full room. The team was clear that they were there to listen, answer questions, provide information, correct misinformation, and that even if after all of this people left still in opposition to the proposal, it would not be something they would be begrudged for. This understanding and context setting allowed for a greater diversity of participants in the engagement process and created a more comfortable space for all.

- **Data-driven approach:** One of the keys to having meaningful and productive conversations during engagement sessions and Council meetings, especially when met with opposition, is to have extensive research and comprehensive data to be able to pull during a critical argument.

  The Task Force conducted extensive data collection and analysis to ensure there was a fault-free argument for densifying Calgary and to allow for more multi-plexes and missing middle housing in the region. The data from the information sessions were also used to illustrate the point that the arguments against rezoning had solid and well thought out solutions.

- **Political play:** Councillors serve as public servants aiming to equitably represent their constituents. Therefore, it is important to facilitate their work and decision-making process as much as possible. This involves preparing a thorough engagement plan, presenting well-researched solutions and counterarguments, and identifying how proposed plans align with their platforms and agendas.

  During Calgary's successful engagement process, it was identified that what resonated most with Calgary Councillors was presenting actions and recommendations that they had previously explored, with a reframed narrative, or presenting data that was irrefutable, compelling them to decide and support the rezoning.

3.3 Airdrie's Success with Housing Accelerator Fund (HAF) Funding

Overview

The City of Airdrie has experienced immense population growth over the last decade. This growth has led to increasing concerns and challenges surrounding housing access and affordability. In response, the City of Airdrie secured HAF funding to fast-track more than 900 homes over three years. The City's Action Plan commits to permitting four units as-of-right and medium-density homes, such as townhouses and multiplexes, across the city. The City will also encourage more secondary suites by reducing parking restrictions and lot sizes, streamline development approval processes, increase residential areas along major transit routes, and accelerate downtown core development[33].

The City of Airdrie's path towards increased housing development and supply, through its successful procurement of HAF funding, serves as an example of a smaller municipality leveraging existing higher order of government funding streams to increase middle housing supply to address identified housing challenges.

Local Context and Housing Challenges

In 2024, the City of Airdrie conducted a Housing Needs Assessment (HNA) – a forecasting exercise to help identify a community's current and future housing needs. The HNA identifies Airdrie's current housing landscape, its challenges, and areas for potential improvement and investment in Airdrie.

The HNA found that Airdrie faces a pressing need for housing diversity and affordability, with over 2,000 homes required to meet current demand. The city's median income of $110,000 in 2021 falls short of enabling homeownership, as the typical home price had risen to $515,600 by August 2023, necessitating an income of at least $127,723, a 16 percent increase above the median, to afford a home. Renting is also challenging, with Airdrie's median rent of $1,335 exceeding regional averages since 2014, requiring a household income of $53,400 annually to maintain affordability. Only 1.6 percent of rental units are 3-bedrooms or larger, significantly limiting options for lower-income renter households. Airdrie's predominantly single-detached housing stock (over 65 percent) underscores the urgent need for diversification to enhance housing accessibility and inclusivity[34].

Importantly, Airdrie's housing affordability challenges are exacerbated by rapid population growth as the population increased from approximately 61,842 residents in 2016 to over 80,649 by 2023[35].

Leveraging Federal Funding

In response to these identified challenges, Airdrie submitted a successful bid for $24.8 million under the Housing Accelerator Fund (HAF)[36]. This HAF funding represents the largest grant the City has received from any level of government. The HAF funding is part of a broader federal initiative worth over $4 billion, designed to incentivize municipalities to adopt development-friendly policies.

Airdrie's allocation will be distributed in installments and will help address the critical housing shortages identified in the 2024 Housing Needs Assessment[37]. The City's commitment includes streamlining zoning regulations to permit medium-density housing such as townhouses and multiplexes.

More specifically, the HAF funding will be used to directly achieve Airdrie's Action Plan to bolster housing affordability, supply, and diversity. The City of Airdrie has committed that the Action Plan, supported by the HAF funding, will help achieve over 900 permitted housing units by 2027, including missing middle and transit-oriented housing. Additionally, when projecting the same rates of increase over the next ten years, the Action Plan initiatives, bolstered by the HAF funding, will result in an additional 6,348 permits more than the business as usual scenario.

Airdrie's Action Plan

To achieve the over 900 additional units by 2027 with the HAF funding, Airdrie developed seven proposed Actions related to land-use or bylaw changes that will help accelerate middle housing growth:

1. Improve zoning efficiency and flexibility in established areas and new communities to allow for increased density.
2. Permit secondary suites to enhance housing options.
3. Enhance efficiency in the development approval process and provide incentives for missing middle housing.
4. Prioritize intensification along primary transit corridors.
5. Accelerate incentives for residential development in downtown areas.
6. Expedite projects associated with the province's community revitalization levy.
7. Expand below-market affordable housing options[38].

Key Takeaways

Airdrie's proactive approach to leveraging federal funding through the HAF exemplifies a commitment to addressing pressing housing challenges amidst rapid population growth and rising unaffordability. By embracing medium-density and transit-oriented developments, streamlining regulatory frameworks, and prioritizing downtown revitalization, Airdrie aims to enhance housing affordability and inclusivity by increasing and diversifying supply. This case example not only supports sustainable urban growth but also sets a precedent for other smaller and mid-sized municipalities grappling with similar housing affordability issues across Alberta.



Terra Townhomes in Airdrie

Terra Townhomes (n.d.). Intelligence House. Retrieved November 1, 2024, from https://www.intelligencehouse.ca/projects/terra-townhomes/

3.4 Gentle Density to Increase Middle Housing Production: A Case Study of The School of Cities' "Missing Little"

"Missing Little": An Introduction

At the lower end of the "Missing Middle" spectrum is an opportunity to insert density within the existing fabric of single-detached housing stock rather than developing middle density housing. This strategy is called "Missing Little" housing, a term coined by Professor Michael Piper of the University of Toronto[39]. The Missing Little initiative is a collaboration between the University of Toronto School of Cities and City Building TMU (Toronto Metropolitan University).

The approach focuses on gentle density and cost-effective renovations to increase the housing stock without significantly altering the character of neighbourhoods. Adding gentle density in this form can include converting a basement or a garage into a livable space, building a garden suite or a laneway house, or subdividing a single-detached home into a multiplex.

Given the predominance of single-detached housing across Canadian cities, Missing Little strategies present a unique opportunity to increase housing units significantly and cost-efficiently in existing neighbourhoods. By optimizing land use in this way, it is estimated that 200,000 new affordable and gentle density units can be built in Canada's largest cities by 2030[40].



Example of a Laneway suite

Seaton Village Laneway Suite (2024). Lanescape Architecture inc.. Retrieved November 1, 2024, from https://lanescape.ca/projects/seaton-village-laneway-suite/

"Missing Little" Typologies

There are several different Missing Little typologies, or types of Missing Little housing. This diversity of housing typologies highlights the flexibility of Missing Little development strategies and their potential within various regulatory systems and different existing building types. In general, there are four different types[41]:

1. **Secondary suites**: Secondary suites are self-contained living spaces designed for one or more individuals to live independently as a separate household within a dwelling. These units include private kitchens and washrooms exclusively for their occupants and can be created through garage conversions, basement suites, or building additions.

2. **Backyard or rear-yard suites:** These suites, such as laneway suites and garden suites, are located in the rear portions of properties. Laneway suites in Toronto must be adjacent to a laneway, whereas garden suites (also known as accessory dwelling units) are permitted throughout the city without such adjacency requirements (subject to performance standards dependent on the size of the backyard).

3. **Multiplex conversion**: This involves converting a single-detached home into a multiplex, which accommodates two-, three-, or four- units within a single building. This approach maintains the low-rise scale of the surrounding neighbourhood while increasing housing density.

4. **Multi-tenant (rooming) conversion**: Known as rooming houses, this housing type allows four or more individuals to rent rooms within a single dwelling, sharing common kitchen and/or washroom facilities. Rooming houses can be established by converting apartment buildings or single-detached homes.

Opportunity for Missing Little Development in Alberta

There are numerous benefits to Missing Little in broader middle housing initiatives. For one, the various Missing Little typologies benefit and meet the needs of diverse groups including older adults, newcomers, students, young professionals, and families. At the same time, the Missing Little concept enables homeowners to maintain or establish meaningful social connections through multi-generational living, generate extra income, and contribute towards their own mortgage payments.

Beyond these benefits, smaller scale interventions add gentle density to single-detached homes which can lead to more cost-effective renovations and middle density development rather than entire rebuilds. Given recent rezonings in Calgary and Edmonton, and the general prevalence of single-detached housing even within Alberta's major urban areas, Missing Little strategies may present a key (and cost effective) strategy to increase middle housing development.

To effectively implement Missing Little in the Albertan context, it is important to consider the following key factors[42]:

1. **Scale and impact**: Scaling up renovation projects on existing homes is critical to maximize the potential of Missing Little initiatives in Alberta and to increase the impact on overall housing supply, choice, and affordability.
2. **Policy and program design**: Designing effective programs and policies is crucial for delivering affordable housing units through Missing Little renovations. This includes reducing construction costs, developing pre-approved plans for adding units such as secondary suites and backyard homes, and establishing administrative and resource one-stop-shops for homeowners.
3. **Community engagement and equity**: Ensuring equity and inclusivity in Missing Little initiatives involves engaging citizen developers and considering diverse homeowner and renter needs and benefits. This approach supports both community integration and policymaking that supports equitable access to housing.
4. **Challenges and solutions**: Challenges such as zoning restrictions and the need for systematization still impact Missing Little initiatives. Solutions may include standardized renovation plans, educating homeowners about renovation benefits, and exploring alternative housing ownership models like co-housing and shared ownership.

Section 4: Solutions for Middle Housing Production in Alberta

The literature review, interviews with local actors, and case studies of successful and promising middle housing initiatives have identified key barriers to middle housing production in Alberta. This comprehensive analysis aims to highlight best practices in response to identified barriers, thereby contributing to enabling the broad development of middle housing in Alberta. The identified solutions offer specific strategies that municipalities may use to address these barriers effectively.

4.1 Barriers and Solutions for Middle Housing Development

Figure 5 summarizes the identified barriers and solutions applicable to the Alberta planning context based on the findings of this literature review, interviews, and case studies, combined with insights from CUI's completed and ongoing projects.

Figure 5: Barriers and Solutions in Alberta

Barrier	Barrier Type	Solution and Considerations
Geographically uneven distribution of housing options legal within a municipality	• Policy and regulation • Equity	City-wide rezoning to allow gentle densification through permitting middle housing types as-of-right in all residential areas. For example, Calgary's blanket rezoning and the Missing Little strategy (pg. 30).
Performance standards that impede the envelope required to make middle housing construction financially feasible	• Policy and regulation • Market • Technical	Comprehensive review and amendments to performance standards in zoning by-laws and updated design guidelines for small-scale housing. It is important to consider parking requirements, density height restrictions, and other performance standards that impact massing and project feasibility.
High land value costs	• Market	Financial incentives in the form of grants, density bonuses, or tax breaks to support desired development that would not occur otherwise. For example, Edmonton's 2018 Infill Roadmap (pg. 22)
Carrying costs	• Market	Streamlined approval processes to reduce planning and development timelines and improve financial feasibility. It is important to consider as-of-right zoning, pre-approved designs, and fast-track programs. For example, Airdrie's Housing Accelerator Fund program (pg. 28)

Figure 5: Barriers and Solutions in Alberta

Barrier	Barrier Type	Solution and Considerations
Construction costs	• Market	Create an affordability task force with a multi-jurisdictional team and expert support to develop new policy which supports affordable housing and middle housing development. This taskforce can evaluate incentives, technologies, and policies to help reduce construction costs.
Labour and material shortages	• Market	Incentives for people to get into the skilled-trades. This may include training programs to provide incentives or funding to get more people trained in needed trades.
Lack of knowledge or expertise of homeowners to intensify their own properties	• Market • Technical	Easily accessible and digestible information resources guiding citizen developers
Lack of amenities that contribute to quality of life beyond providing housing	• Policy and regulation	Expand permissions for local retail, services, and opportunities for social connection within established neighbourhoods
Community opposition	• Public perception • Equity	Reframe language and key messaging to highlight the benefits of middle housing. It is important to consider that a lack of clear communication can lead to misunderstandings of potential benefits. For example, Calgary's Blanket Rezoning provides an example of successful engagement with community opposition (pg. 25)
Lack of civic participation opportunities for equity-deserving groups	• Equity	Implement meaningful engagement processes through co-design of policies and programs, providing opportunities for equity-deserving groups' input. It is important consider the importance of expanding the forms and formats for engagement to increase accessibility (e.g., online and asynchronous options).
Building Code requirements	• Technical	Engage the federal government for changes to support middle housing production, e.g., eliminate the requirement for a second egress for apartment buildings and review sprinkler requirements.
Lack of infrastructure support for density and transportation due to potential for increased traffic from increased density	• Technical	Investment in infrastructure and identify areas of the city with infrastructure excess that could accommodate more intensification of housing.

Conclusion

This project aimed to assess whether middle housing could help address Alberta's housing crisis and if scaling up middle housing production in Alberta's municipalities could significantly contribute to solving the province's housing challenges.

The first phase of this project—a literature review—confirmed that increasing middle housing development presents a crucial solution to both current and future housing needs in Alberta. This literature review also presents significant findings regarding the benefits of and solutions for increasing middle housing production. It highlights that there is a lack of academic literature exploring middle housing solutions in Canada, and Alberta specifically. Despite this gap, Canadian planners and government regulators have recognized the need for more diverse housing forms and the potential of middle housing solutions. By diversifying housing options in low-density neighbourhoods, middle housing can substantially increase and diversify housing stock. However, while eliminating exclusionary zoning is a critical first step, municipalities still face significant challenges. Addressing these challenges may require further interventions, such as streamlined approval processes, supportive municipal policies, further enabling zoning reform, and more flexible design and building code requirements. Additionally, effective communication and public engagement are essential for building public and community support for middle housing initiatives.

The review also noted that while municipalities like Calgary and Edmonton have made strides in city-wide upzoning, and smaller municipalities have leveraged the federal Housing Accelerator Fund, converting existing detached and semi-detached houses into triplexes or fourplexes through individual citizen development is an opportune method for broadly expanding middle housing. However, it is recommended that this approach should be evaluated further.

Local actor engagement provided further nuanced insights regarding the potential for middle housing development in Alberta, and highlighted challenges and opportunities as experienced by individuals involved in the production and development of middle housing in Alberta. This engagement emphasized the need for new and innovative approaches to middle housing development, along with enabling zoning policies, to boost production in Alberta. Beyond rezoning, the discussions highlighted financial barriers to both citizen-led and broader middle housing development. However, they also identified collaboration and a focus on housing affordability as key strategies to overcome these challenges.

The four case studies of successful middle housing initiatives including Edmonton's Infill Roadmap, Calgary's upzoning engagement process, Airdrie's use of HAF funding, and the potential for small-scale redevelopment known as "Missing Little" offer a comprehensive overview of effective middle housing solutions across various strategies and scales.

Together, the literature review, local actor engagement, and case studies presented in this report underscore the potential of middle housing to address Alberta's housing challenges and meet the needs of current and future residents alike.

As a result, to further advance middle housing in Alberta, it is recommended to:

1. **Evaluate the long-term impacts of middle housing:** Researchers, academics, and municipalities should undertake longitudinal studies to evaluate the long-term impacts of municipal housing initiatives on middle housing production and the accessibility of established neighborhoods for equity-deserving groups. This will help assess the effectiveness of various policies and programs.
2. **Investigate market dynamics:** Further research is needed to understand the market dynamics affecting middle housing production, including factors such as land value, supply and demand, interest rates, and labor and material shortages. Collaborative efforts with partners across Alberta can enhance this understanding.
3. **Explore the potential of fast-track programs and modular construction:** Further research is needed on the possibility of fast-track programs featuring pre-approved designs to streamline the approval process for middle housing projects, reducing carrying costs, and improving project feasibility. Additionally, it is recommended that future research also evaluate the potential of modular and off-site construction methods to further enhance the financial feasibility of small-scale projects.



Appendix

Literature Review

Introduction

CUI undertook a literature review to understand the existing body of knowledge of middle housing challenges and past solutions to serve as the foundation of mddl's larger program and to identify key gaps in understanding. The references included have been curated for their applicability to Alberta's planning context.

Is middle housing a solution to Alberta's housing crisis?

In June 2022, Canada Mortgage and Housing Corporation (CMHC) published *Canada's Housing Supply Shortages: Estimating what is needed to solve Canada's housing crisis by 2030*. To achieve the level of affordability in Alberta last seen in 2003-2004 – the target set at housing costs limited to 30 per cent of after-tax income – housing production in the province must see an additional 20,000 units, above the business-as-usual scenario, by 2030[43]

It is the Canadian Urban Institute (CUI) and mddl's assumption that scaling up middle housing production in Alberta's municipalities represent a significant piece of the solution to the province's housing crisis. The goal of this literature review, as part of mddl's Alberta-Specific Discovery, scans the existing body of knowledge of middle housing challenges and past solutions, and identifies key gaps in understanding.

Middle housing, often referred to as the "Missing Middle", represents a range of housing forms between single-detached, or "single family", housing and high-rise apartments. These ends of the housing typology spectrum are the most common forms found in Canada.

See **Figure A1** for mddl's conception of the middle housing range, which includes duplexes, triplexes, fourplexes, courtyard apartments, and live/work housing types, and does not include mid-rises.

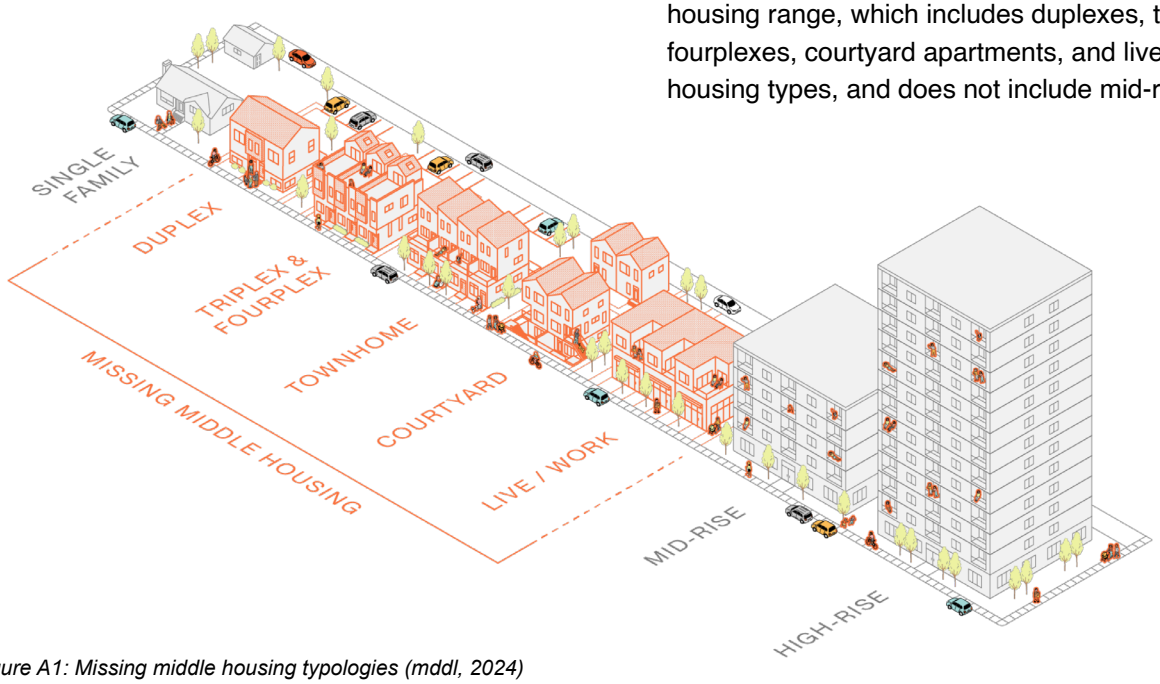


Figure A1: Missing middle housing typologies (mddl, 2024)

Yellowbelts: Visualizing Exclusionary Zoning In Canadian Cities

Middle housing as-of-right: a possible antidote to continued exclusionary outcomes

Traditional urban planning and engagement practices in Canadian cities have historically privileged vocal minorities of property-owning residents, pushing vulnerable groups to the margins of society resulting in de-facto geographical segregation. Van der Poorten and Miller (2017) found that, "practices of neighbourhood governance [in Calgary] have worked in tandem with zoning controls to discipline and/or exclude 'unwelcome' neighbours, producing a distinct geography of unauthorized secondary suites concentrated in low-income and immigrant-oriented neighbourhoods"[44].

Zeebuyth & Moore (2024) describe how promoting greater middle housing development in the United States would accelerate the country's transition to more affordable and sustainable housing, thereby improving housing access. Single-detached zoning constrains the development of smaller and more affordable homes and helps to drive suburban sprawl. Single detached housing can only accommodate one household per lot significantly limiting the supply of homes in an area, increases housing prices and ultimately reducing housing access[45].

Wegmann (2020) calls on Canadian planners to stop defending the concept of single-detached zoning, also known as exclusionary zoning, which is "the single most harmful widely used practice in planning."[46] He argues that this defense must cease if the planning profession is to make any progress towards addressing the climate and equality crises.

Yellowbelts in Alberta

Indeed, there has been a shift in Canadian planning practice and housing policy stemming from the popularization of the term 'Yellowbelt', conceptualized by urban planner Gil Meslin in 2016, that describes large swaths of land designated as 'Neighbourhoods' in the City of Toronto's Official Plan[47]. While areas designated as Neighbourhoods – before recent city-wide upzoning – included several residential zones and by-laws, the primary zone within the identified Yellowbelt permitted only single-detached residential housing.

Allen (2022) from the School of Cities conducted a spatial analysis of Calgary to quantify the area that exclusively permitted single detached housing—amounting to 62.3% of the land zoned for residential development, as depicted in yellow in **Figure A2**—before its recent city-wide upzoning.

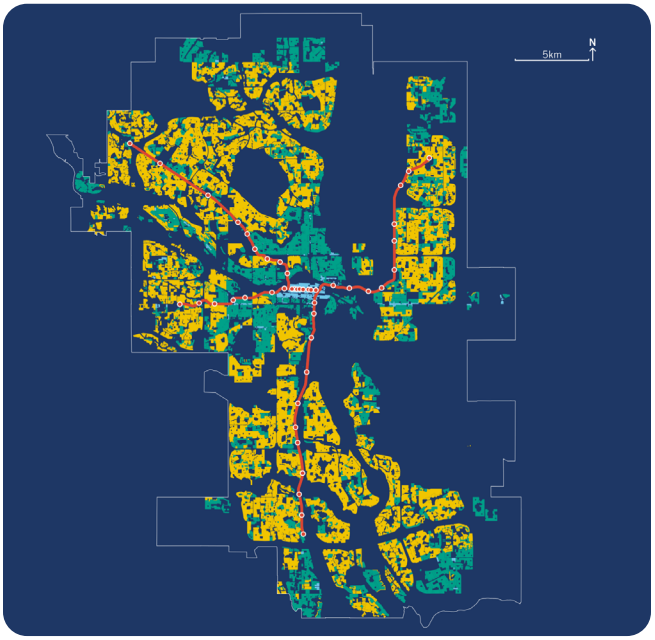


Figure A2: Map of Calgary's Yellowbelt (Allen, 2022)

Allen (2022) conducted a similar analysis in Edmonton, finding that only 20.7 per cent[48] of the residential area, concentrated at the outskirts, permitted only single detached housing, seen in **Figure A3**. This visualization is reflective of limited upzoning in 2019 which occurred prior to the analysis. If this map was updated today, there would no longer be a Yellowbelt.

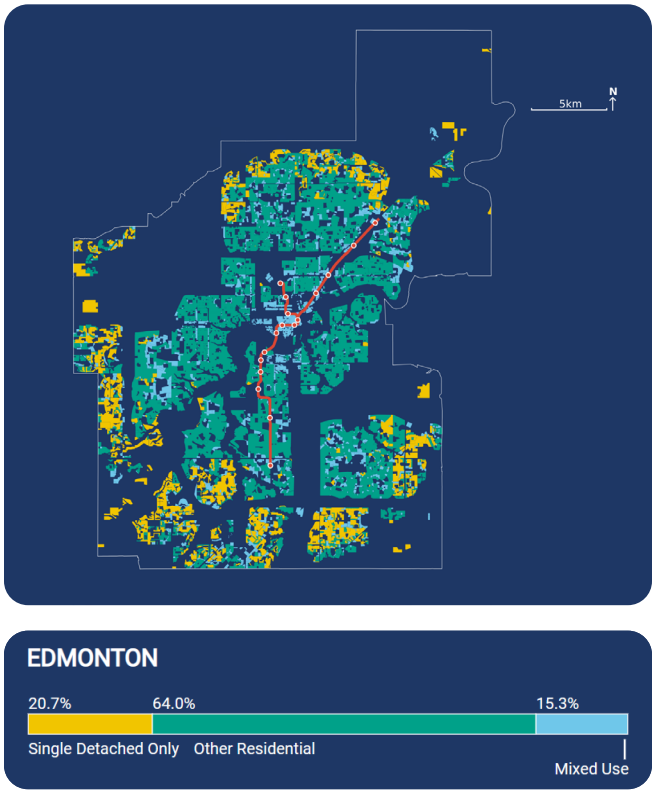


Figure A3: Map of Edmonton's Yellowbelt (Allen, 2022)

Comparing the Yellowbelt maps of Calgary and Edmonton in **Figure A2** and **Figure A3** respectively, the geographic scale of the opportunity to produce more housing becomes evident, facilitated by city-wide rezoning to permit middle housing types as-of-right.

Various Conceptions Of The Middle Housing Range In Alberta

Origins of 'Missing Middle Housing'

The term 'Missing Middle Housing' was originally coined in 2010 by Opticos principal Daniel Parolek, sparking a North American movement to diversify housing options at affordable prices in cities. The original concept captured the range of housing types between single-detached homes and mid-rise apartments, including duplexes, triplexes, fourplexes, courtyard apartments, bungalow courts, townhouses, multiplexes, and live/work[49].

Middle housing operationalized in Alberta's two largest cities

The City of Edmonton, Canada's municipal leader in housing reform, defines 'Missing Middle' as referring to "multi-unit housing that falls between single detached homes and tall apartment buildings"[50]. This definition includes triplexes, fourplexes, row housing, courtyard housing, tiny home communities, stacked row housing, walk-up apartments, low-rise (4-storey) apartments, and mid-rise (6-storey) apartments. These housing types are visualized in **Figure A4**. Unlike mddl's and Opticos' conceptions, Edmonton's includes mid-rise apartments.

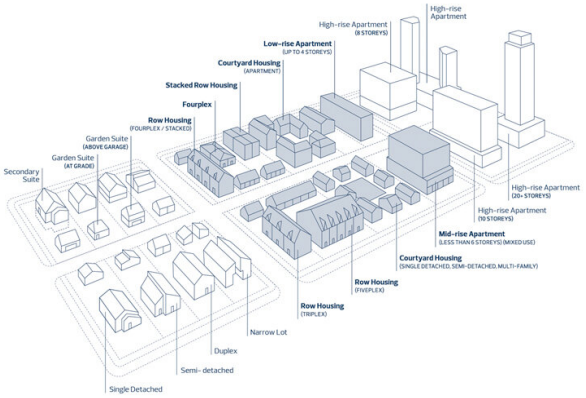


Figure A4: Missing Middle Infill Housing Diagram (City of Edmonton, n.d.)

The City of Calgary's Housing and Affordability Task Force defines 'Missing Middle' as referring to "a range of housing types between semi-detached homes to small apartment buildings…" and further elaborates that, "The lower-end … includes house-scale buildings with multiple units—compatible in scale and form with single-detached homes. The upper end … includes buildings with multiple units at a scale that is larger, but are still compatible with typical low-density form"[51].

Improving Housing Access In Established Neighbourhoods

Responding to criticisms of middle housing related to housing access

Zeebuyth and Moore (2024) argue that middle housing policies are the most politically feasible and viable path to transition from single-detached zoning and help advance housing affordability[52]. Responding to criticism that new missing middle housing is too expensive to help low-income households, Wegmann (2020) argues that 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 need them"[53].

Wegmann (2020) presents an example from Austin, Texas in 2013, where due to a regulatory loophole, a small builder was able to develop six family-sized multi-units on adjacent lots rather than the two single detached homes permitted. The builder was able to sell the units for up to $200,000 USD less than the area average of more than $670,000 USD[54]. While this price range is still unaffordable to low-income households, the example indicates that multi-unit development can be more attainable than comparable single-detached housing.

Wegmann (2020) suggests that with a combination of a density bonusing policy, municipal subsidies, or the involvement of a non-profit, "some or all of the units produced on upzoned land formerly reserved for large-lot singe family could be offered feasibly at below market rates"[55]. According to Reina, Wegmann, & Guerra (2019), this combination of initiatives may allow for socioeconomic and racial integration in a high-income, predominantly White neighbourhood in a manner rarely achieved by tax credit-subsidized multi-unit developments in the United States[56].

Responding to criticism that upzoning disadvantaged single-detached neighbourhoods could lead to gentrification and displacement, Wegmann (2020) suggests that the "best response" is city-wide rezoning to raise the minimum permitted level of residential density across an entire municipality, constituting a "simple, uniform, and fair standard applied to all." Further, he argues that in a hot market context, one likely outcome is that development would shift "towards areas with higher rents and house prices, thus taking the pressure off gentrification in hot spots"[57].

Upzoning And Other Housing Accelerator Fund Initiatives

Major city-wide rezoning

Prior to the upzoning of Yellowbelt areas in Edmonton, Calgary, and other major cities, most of the residential land in major Canadian cities were off limits to densification. Cities across the country have since opted to legalize 'gentle density' which is a scale of middle housing that fits within the character of established single detached neighbourhoods.

Edmonton

Edmonton City Council approved changes to its zoning by-law in August 2019 to introduce more flexibility to five different zones, permitting 'Multi-unit Housing' as of right. The City defines 'Multi-unit Housing' as "development that consists of three or more principal dwellings arranged in any configuration and in any number of buildings"[58].

Further revisions to the City of Edmonton's zoning by-law were approved by City Council in October 2023 impacting all residential areas in the municipality. According to Boothby (2023), writing for the *Edmonton Journal* in response to the decision, "Property owners in Edmonton will be able to build three-storey apartment buildings, townhouses, rowhouses or duplexes with up to eight units in any residential area city wide starting next year"[59]. The revised zoning by-law came into effect January 1, 2024, and represents the most significant city-wide upzoning seen in any major Canadian city to date.

Calgary

On May 14, 2024, Calgary City Council approved its own city-wide rezoning, with amendments, to change the low-density residential zoning across the city. In addition to single detached housing, low-density middle housing types, including semi-detached, rowhouses, and townhouses will be permitted in new and established areas of Calgary, effective August 6, 2024[60]. The decision was made at the end of the City's largest and longest public hearing in its history.

Beyond rezoning: next steps to scale middle housing production

Barriers to production: the American middle housing developer perspective

Garcia et al. (2022) reviews the barriers that middle housing developers face in American markets where some form of zoning reform has already taken place[61]. The seven key findings on barriers to middle housing development, identified by the developers, are as follows:

1. Changing zoning by itself is not enough to facilitate missing middle housing.
2. Design requirements must be flexible to allow for more units on smaller lots.
3. To catalyze missing middle, allowing duplexes and triplexes may not be enough.
4. Lack of clarity on subdivision and utility rules complicates the development process and impacts the choices that developers make.
5. A clear and efficient approval process with empowered staff and support from elected officials is key for scaling missing middle housing.
6. With limited access to institutional forms of debt and equity, missing middle developers must rely on local capital and fewer financial resources.
7. Missing middle housing presents an opportunity to open up the development industry to small builders, but cities need to be intentional in promoting their success[62].

Going beyond blanket upzoning

Responding to the barriers, Garcia et al. (2022) offers an approach that can aid in the implementation of middle housing solutions applicable to the Alberta context. The approach is adapted for the purposes of this literature review.

While eliminating exclusionary zoning is a vital first step, further amendments to performance standards and design guidelines are required to address requirements that can impede the building envelope needed to make multiple units on small parcels feasible.

Garcia et al. (2022) recommend that municipalities take a comprehensive look at how land use regulations impact middle housing project feasibility, such as existing height, setback, floor area ratio (FAR), easement, and other standards. Furthermore, municipalities should create baseline standards for small-scale projects, such as maximum allowed setbacks, minimum FAR, and flexibility on zoning requirements[63].

To cut down on uncertainty and time – key factors in controlling costs and successful delivery – municipalities should develop clear processes and procedures, including dedicated staff and pre-approved plans for missing middle typologies. Garcia et al. (2022) suggests that “pre-approved designs could be made in collaboration with off-site modular construction companies to list approximate price points, which creates security for small-scale developers”[64].

Where allowing one or two additional homes per lot is “simply not enough to create a meaningful amount of feasible projects,” municipalities should consider permitting slightly larger projects to enable greater feasibility, such as up to six homes on corner lots as was done in Portland, Oregon[65].

Building Code Requirement: The Second Egress

Challenges of Second Egress Building Code Requirements on Small Apartment Buildings in Canada

The development of middle housing in Alberta and across Canada, particularly small apartment buildings, face substantial challenges due to mandatory second egress requirements outlined in the National Building Code of Canada (2015). Across Canada, the National Building Code requires two means of egress, or exits, for any multi-unit residential building that exceeds two storeys[66]. This means that buildings three-storeys tall are subject to the same basic egress requirements as buildings of twenty-storeys tall.

According to Speckert (2023), this significantly impacts the layout and efficiency of small apartment buildings and creates a ritical barrier to the construction of middle and mid-rise housing[67].

For example, the 2010 Toronto Official Plan allowed for new building heights along the main transit corridors of the city to encourage densification and curb sprawl. However, even with the revised land use policies and zoning regulations, middle density buildings were still subject to the same approvals process, development charges, and Building Code requirements, such as a second egress, as high-rise buildings. These municipal processes and Building Code requirements made building middle housing significantly less cost-competitive or cost-effective to build[68].

Furthermore, Smith & Mendoza (2024) identified how Canadian building codes, similar to their American equivalents, impose stricter regulations around the number of egresses required in multi-family buildings compared to other countries around the world[69]. These more stringent egress requirements create a regulatory environment that hinders the expansion of mid-rise and 'middle' housing solutions.

Therefore, while intended to ensure safety and accessibility, current second egress requirements in Canada pose significant barriers to the development of 'middle' housing and small apartment buildings.

Addressing these challenges through targeted regulatory and building code adjustments could create a more feasible regulatory environment for the development of middle housing.

Municipal-Level Housing Reforms in Alberta

Enabling housing production in Alberta's major cities: Calgary and Edmonton
In response to the CMHC report, CBC News published an article written by Brian Labby which identifies a series of hurdles builders face in Calgary, including the long planning approvals process, labour and material shortages, rising interest rates, and neighbourhood opposition[72].

During 2022, Altus Group produced a *Municipal Benchmarking Study*, commissioned by the Canadian Home Builders' Association (CHBA), intended to help establish standards for municipalities to enable general (non-specific to middle) housing production. Twenty-one participating municipalities were assigned a score that combines their performance on "Planning Features", "Approvals Timelines", and "Government Charges"[73].

Calgary and Edmonton are included in CBHA's comparative study, which provides a glimpse at how Alberta's two large cities fare against the rest of Canada's major cities. The study also identifies what is working well in each and which areas need improvement. The most relevant findings to middle housing production are summarized in **Table 1**.

As seen in **Table 1**, Edmonton ranks first overall in the CBHA study, solidifying its position as the Canadian leader in housing systems reform. Calgary also ranks high at third overall.

Table A1: CBHC Municipal Benchmarking Study (2022) – Relevant key findings for middle housing production in Calgary and Edmonton

	Calgary[69]	Edmonton[70]
Overall rank	3rd	1st
Planning Features rank	5th	1st
Approvals Timelines rank	5th	6th
Government Charges rank	10th	6th
Estimated average approval timeline for development applications from complete application to planning approval	5.4 months	7.2 months
Working well	**Key Features Enabled** • Ability to appeal land use decisions and mandated timelines for appeal decisions. **Robust Information Sharing** • City provides detailed information on current development applications and extensive information to potential applications through its Residential Development Hub webpage.	**Many Beneficial Features** • Greatest number of identified features deemed as beneficial to encouraging housing supply, including ability to appeal land use decisions and mandated timelines for appeal decisions. **Extensive Amount of Information** • Several guides, checklists, and terms of references available to help builders in their application submissions, providing extensive amount of easily digestible information.

Table A1: CBHC Municipal Benchmarking Study (2022) – Relevant key findings for middle housing production in Calgary and Edmonton

	Calgary[70]	Edmonton[71]
Working well	**Approvals Timelines** • City continues to have strong approval timeline results. **Fairness in Municipal Charges** • City has one of the "fairest" ratios of charges imposed on low-rise development ($19/SF).	**Online Services** • City's online portal services have advanced functionally, making it possible to apply for pre-application meetings for rezoning, subdivisions, and development permits. • Various planning applications and building permits can be submitted online. **Planning Process** • City's website clearly lays out the planning process and planning applications by neighbourhood and ward, encouraging public engagement.
Needs improvement	**Online Services** • Applications for land use redesignations still require physical submission.	**More Terms of References Needed** • Not all documents potentially required in an application process have terms of references developed for them. **Increased Municipal Charges** • City's municipal charges for low-rise development increased at a rate faster than the study-wide average, while remaining below average in terms of charges per unit.

Middle housing initiatives in Alberta's smaller municipalities

The Housing Accelerator Fund (HAF) is a federal funding initiative to incentivize municipalities to implement administrative improvements, programs, and zoning changes to facilitate increased housing production over a three-year timeline. A scan of HAF Action Plans—municipal applications identifying fundable initiatives—for smaller municipalities in Alberta reveal a range of relevant initiatives being undertaken outside of Edmonton and Calgary. The examples below are non-exhaustive.

City of Airdrie

The City of Airdrie has secured HAF funding to fast track more than 900 homes over the three years. The City's Action Plan commits to permitting four units as-of-right and medium-density homes, such as townhouses and multiplexes, across the city. The City will also encourage more secondary suites by reducing parking restrictions and lot sizes, streamline development approval processes, increase residential areas along major transit routes, and accelerate downtown core development[74].

Town of Westlock

On January 1, 2023, Land Use Bylaw 2022-12 came into effect in the Town of Westlock providing clarity in the approvals process for property owners looking to incorporate secondary, garage, and garden suites on R1 zoned properties[75]. To further incentivize gentle density, the Town adopted a new Residential Development Grants Policy on April 22, 2024[76]. In combination with a new Residential Tax Incentive Bylaw, the Town created a new construction grant stream offering $15,000 per unit for the construction of up to four units per property in combination with a one-time tax cancellation of up to $5,000 per new unit in the year following occupancy. Another grant stream aimed at secondary, garage, and garden suites offers $10,000 per suite for new suites or existing non-permitted suites brought up to code. Both grant streams are fully funded by the HAF.

Another initiative includes streamlining housing development through pre-approved plans[77].

Town of Bow Island

With HAF funding, the Town of Bow Island intends to modernize its housing processes by updating its zoning to allow for as-of-right zoning, implementing e-permitting software to digitize the permitting process, and regulating secondary and garden suite development. The Town will also create an incentive program to encourage middle housing production and implement a Land Sale policy to disincentivize idle land[78].

Town of Smoky Lake

The Town of Smoky Lake intends to use HAF funding to establish guidelines for small and tiny dwelling neighbourhoods, introduce an affordable housing incentive program, and implement an e-permitting system for building and development applications. The Town also aims to expedite affordable housing development by simplifying the process for developers to acquire municipal land for creating affordable housing units[79].

The Town is also undergoing a Land Use Bylaw and Municipal Development Plan review with proposals to encourage 'fifteen-minute communities'[80] and further enable gentle density through permitting accessory units and garden suites[81].

Village of Duchess

Among its HAF Action Plan initiatives, the Village of Duchess intends to lower or remove development fees, offer tax breaks to developers, and adjust zoning by-laws to permit middle housing. The Village also intends to remove obstacles to increasing housing supply by opening development opportunities on unused municipal land and offering serviced land to affordable housing providers who meet the Village's criteria[82].

Overcoming Neighbourhood Opposition

Throughout CUI's past and ongoing research and engagement projects addressing increasing housing supply, a consistent thread can be drawn across what we've heard: the challenge of neighbourhood opposition. Recognizing the power imbalance property-owning residents wield versus renters and equity-deserving groups, the question of how to overcome neighbourhood opposition to intensification initiatives, even gentle density, is important. Anderson & Fahey (2019) draw lessons from Oregon state's successful attempt to legalize duplexes, triplexes, and fourplexes. A coalition in support of the legislation included influential state politicians, and key organization such as Habitat for Humanity, AARP, the local NAACP chapter, Portland Public Schools, and other stakeholders. Together, they helped to build and community the argument that middle housing makes it easier to age in place, helps fight climate change, and helps reduce school segregation[83].

Anderson & Fahey (2019) also highlight an approach to messaging that helped to spur public support for the legislation. They identify that people opposed "limiting single family zoning" but agreed that it was a mistake to make duplexes illegal. Rhetorical framing was useful to consider, as people did not want to hear that single family homes were being taken away but supported the addition of duplexes and triplexes[84].

Useful in informing initiatives in Alberta to promote greater housing choice and secure public support, Anderson & Fahey (2019) present language to reframe middle housing talking points, in **Table 2**. The language avoids the use of scare tactics, jargon, or misleading wording and instead uses concrete examples, everyday language, and a focus on the benefits middle housing can bring to communities[85]

Enabling Citizen Development

A Toronto-based financial comparison of middle housing projects

A 2020 report produced for the Urban Land Institute, titled *Missing Middle Housing: Development Costs and Affordability*, looks at the potential for expanding housing options in Toronto to generate new rental units in neighbourhoods. The report contains a financial feasibility analysis of several missing middle projects categorized into three types: existing conversions, new house-form buildings, and new low-rise apartment buildings.

Elgin et al. (2020) found that allowing homeowners to convert existing detached and semi-detached houses into triplexes or fourplexes, city-wide, was the "quickest and lowest cost approach". Assuming that the land was owned with the original mortgage paid off, "the lower renovation costs and relatively straightforward process" meant that new units were delivered fastest with the lowest achievable rents." The authors suggested that financial incentives such as property tax breaks may be necessary to stimulate uptake[86].

Compared to existing conversions, new house-form building construction was more expensive and time-intensive, with the scale of new development making it difficult to approach affordable rents. Both for-profit and non-profit developers would require "more intense use of the land in order to generate affordable rental units as part of a viable project." Elgin et al. (2020) suggests that reducing development costs and a more straightforward approvals process would further improve affordability"[87].

Of the three types, Elgin et al. (2020) found that low-rise apartment buildings up to four storeys were least likely to generate affordable rental units "without significant financial support". But larger projects are less likely to merit reduced municipal charges and may be less attractive to neighbours which could cause delays. The authors state higher development and carrying costs due to property assemblies, concrete construction, structured parking, and navigating the full approvals process.

It is worth noting that this analysis was completed before the City of Toronto ended exclusionary zoning city-wide and during a time when most middle housing projects would require minor variances, which would have increased the cost of delivering these types of projects.

Table A2: Missing Middle Re-frames

AVOID: REPEATING SCARE TACTICS; JARGON; AND MISLEADING, UNFAMILIAR, OR INACCURATE WORDING.	ADOPT: CONCRETE EXAMPLES; EVERYDAY LANGUAGE; AND A FOCUS ON BENEFITS TO COMMUNITIES.
AVOID SAYING THIS…	**SAY THIS INSTEAD…**
Single-family	Single-detached
Supply bill, density bill	Workforce housing bill, missing middle housing bill
Get rid of single-family zoning	Lift bans that prevent modest home choices like duplexes and backyard cottages
Bold, dramatic, transform	Low-impact; a return to modest homes; protecting mixed-income neighbourhoods
New housing types, legalize	Re-legalize familiar, modest home choices like duplexes and triplexes
Units	Homes; choices for renters; plenty of homes, all shapes, and sizes

Source: Anderson, M, & Fahey, A. (2019)



Gaps and Opportunities for Future Research

While there are many housing initiatives underway in municipalities across Alberta, the long-term impacts and success of these policy and regulatory changes have yet to be measured. CUI recommends that researchers and academics conduct longitudinal studies measuring the impact of municipal housing initiatives on middle housing production and equity-deserving groups' access to established neighbourhoods across a range of municipalities varying in size and built form patterns. These longitudinal studies can then be used to help evaluate the success and efficacy of various policy and regulatory changes to advancing housing development in Alberta's municipalities.

In addition, there is a glaring lack of understanding on market dynamics (i.e., land value, supply and demand, interest rates, and labour and materiel shortages) related to middle housing production between major cities and smaller municipalities (mid-sized cities, towns, villages, and rural areas). CUI recommends that these relationships between market dynamics related to middle housing production and Alberta's municipalities be further researched and investigated with the support of partners throughout the province.

Conclusion

This literature review presents significant findings regarding the benefits of and solutions for increasing middle housing production in the United States. It also underscores CUI and mddl's assumption that there is a lack of academic literature exploring middle housing solutions in Canada, and Alberta specifically. Despite a lack of academic literature, Canadian planners and government regulators have recognized the need for more diverse housing forms and the potential of middle housing solutions.

The municipal initiatives highlighted through the literature review reveal that middle housing production is increasingly becoming a priority across Alberta. Of all Canadian cities, Edmonton is solidifying its position as the country's leader in housing reform and represents best practices that can be emulated in other towns, cities, and villages



Sources

[1] Adapted from the Land Acknowledgement created by the Law Society of Alberta, https://www.lawsociety.ab.ca/about-us/key-initiatives/indigenous-initiatives/indigenous-land-acknowledgements/#:~:text=Alberta%20Land%20Acknowledgement&text=We%20acknowledge%20the%20many%20First,who%20have%20gone%20before%20us.w

[2] Middle housing refers to a range of housing types between single-detached homes and mid-rise apartments, including duplexes, triplexes, fourplexes, courtyard apartments, bungalow, courts, townhouses, multiplexes, and live/work units.

[3] Low-density neighbourhoods refers to neighbourhoods or areas that are occupied primarily by single-family homes or buildings with a small number of units.

[4] Exclusionary zoning is the use of zoning ordinances to exclude certain types of land uses from a given community or area.

[5] Housing affordability, as defined by CMHC, at housing costs limited to 30% of after-tax income.

[6] Canada Mortgage and Housing Corporation. (2022, June). Canada's Housing Supply Shortages: Estimating what is needed to solve Canada's housing crisis by 2030. Accessed May 21, 2024.

[7] Opticos. (n.d.). Missing Middle Housing. Webpage. Accessed June 5, 2024.

[8] Garcia, D., Alameldin, M., Metcalf, B., & Fulton, W. (2022, December 7). Unlocking the Potential of Missing Middle Housing. Terner Center for Housing Innovation, UC Berkeley.

Wegmann, J. (2020). Death to Single-Family Zoning … and New Life to the Missing Middle. Journal of the American Planning Association, 86(1), 113-119.

Zeebuyth, L., & Moore, M. (2024). Missing Middle Housing: Accelerating America's Transition from Single-Family Zoning. Natural Resources Journal, 64(1), 63.

[9] Wegmann, J. (2020). Death to Single-Family Zoning … and New Life to the Missing Middle. Journal of the American Planning Association, 86(1), 113-119.

Zeebuyth, L., & Moore, M. (2024). Missing Middle Housing: Accelerating America's Transition from Single-Family Zoning. Natural Resources Journal, 64(1), 63.

[10] Garcia, D., Alameldin, M., Metcalf, B., & Fulton, W. (2022, December 7). Unlocking the Potential of Missing Middle Housing. Terner Center for Housing Innovation, UC Berkeley.

Wegmann, J. (2020). Death to Single-Family Zoning … and New Life to the Missing Middle. Journal of the American Planning Association, 86(1), 113-119.

Zeebuyth, L., & Moore, M. (2024). Missing Middle Housing: Accelerating America's Transition from Single-Family Zoning. Natural Resources Journal, 64(1), 63.

[11] City of Edmonton. (2019). Missing Middle Zoning Review – Summary of Changes to Zoning Bylaw 12800 Approved by Edmonton City Council August 26, 2019.

[12] City of Calgary. (2024, May 14). City Council approves citywide rezoning with amendments in response to Calgary's housing crisis. Webpage. Accessed June 5, 2024.

[13] Garcia, D., Alameldin, M., Metcalf, B., & Fulton, W. (2022, December 7). Unlocking the Potential of Missing Middle Housing. Terner Center for Housing Innovation, UC Berkeley.

[14] Garcia et al. (2022). Ibid.

[15] Speckert, C. (2023). The Second Egress. Cellar Architectural Journal, 1(1), 10-25.

[16] Anderson, M, & Fahey, A. (2019, November 4). Lessons from Oregon's Missing Middle Success. Sightline Institute.

[17] Anderson, M, & Fahey, A. (2019, November 4). Ibid.

[18] Canada Mortgage and Housing Corporation. (2024, March 5). Helping build more homes, faster in Airdrie.

[19] Elgin, A., Buitenhuis, A., MacMillan, D., Frolick, J., Kilbourn, J., Lee, J., Otchie, M., Bennett, O., & Maignan, S. (2020, September). Missing Middle Housing: Development Costs and Affordability. Urban Land Institute Curtner Urban Leaders Program 2020.

[20] Infill Roadmap 2018: Welcoming More People and New Homes into Edmonton's Older Neighbourhoods. (2018). City of Edmonton. https://www.edmonton.ca/public-files/assets/document?path=meetings/Attachment_1_Infill_Roadmap_2018.pdf

[21] Infill Roadmap 2018: Welcoming More People and New Homes into Edmonton's Older Neighbourhoods. (2018). City of Edmonton. https://www.edmonton.ca/public-files/assets/document?path=meetings/Attachment_1_Infill_Roadmap_2018.pdf

[22] Evolving Infill: Edmonton's Urban, Neighbourhood Evolution. (2018). City of Edmonton. https://www.edmonton.ca/public-files/assets/document?path=PDF/Copy_of_Attachment_5_-_CR_5636_-_Edmontons_Urban_Neighbourhood_Evolution.pdf

[23] Market Housing and Affordability Study: Evolving Infill. (2018). City of Edmonton. https://coe-opentext-edmonton.yellowdev.net/city_government/documents/PDF/Copy_of_Attachment_4_-_CR_5636_-_Market_Housing_and_Affordability_Study.pdf

[24] Urban Planning Committee. (2022, April 26). Infill Roadmap Initiative—2022 Update. UPE00854. https://pub-edmonton.escribemeetings.com/filestream.ashx?DocumentId=140691

[25] Urban Planning Committee. (2022, April 26). Infill Roadmap Initiative—2022 Update. UPE00854. https://pub-edmonton.escribemeetings.com/filestream.ashx?DocumentId=140691

[26] Redeveloping Area Infill—2023 Annual Report. (2023). [Annual Report]. City of Edmonton. https://www.edmonton.ca/sites/default/files/public-files/2023-Redeveloping-Area-Infill-Annual-Report.pdf?cb=1720042762

[27] Redeveloping Area Infill—2023 Annual Report. (2023). [Annual Report]. City of Edmonton. https://www.edmonton.ca/sites/default/files/public-files/2023-Redeveloping-Area-Infill-Annual-Report.pdf?cb=1720042762

[28] Home is Here: The City of Calgary's Housing Strategy 2024-2030. (2023). [Housing Strategy]. City of Calgary. https://www.calgary.ca/content/dam/www/csps/cns/documents/affordable-housing/calgary-housing-strategy-full.pdf

[29] Residential – Grade-Oriented Infill (R-CG) is a land use district/zone used in the developed areas. It allows for a variety of housing forms. This district has contextual rules that take into account the existing styles of homes around the redevelopment site. Source: What is being Proposed and Zoning Details. (n.d.). City of Calgary https://www.calgary.ca/planning/projects/rezoning-for-housing/about-rezoning.html?ivpg=2&

[30] Residential – Low Density Mixed Housing (R-G) is a land use district/zone that allows for a variety of housing forms. R-G parcels are located in areas of a neighbourhood appropriate for a range of low-density housing forms. This district is used in developing (greenfield) areas. Source: What is being Proposed and Zoning Details. (n.d.). City of Calgary https://www.calgary.ca/planning/projects/rezoning-for-housing/about-rezoning.html?ivpg=2&

[31] Housing Grade Oriented (H-GO) is a district that is appropriate in locations within a community, typically along streets with a focus on accommodating more pedestrians or streets that connect different parts of a community. This district adds the option of higher intensity redevelopment than that of R-CG, but still maintains direct ground level access for all homes.

Source: What is being Proposed and Zoning Details. (n.d.). City of Calgary https://www.calgary.ca/planning/projects/rezoning-for-housing/about-rezoning.html?ivpg=2&

[32] Rezoning for Housing: What we Heard Report (2024). City of Calgary. https://hdp-ca-prod-app-cgy-engage-files.s3.cacentral-1.amazonaws.com/8017/1319/6917/6.2-RezoningForHousing-WhatWeHeard-NoVerbatim.pdf

[33] Canada Mortgage and Housing Corporation. (2024, March 5). Helping build more homes, faster in Airdrie.

[34] 2024 City of Airdrie Housing Needs Assessment. (2024). [Housing Needs Assessment]. City of Airdrie. https://www.airdrie.ca/index.cfm?serviceID=2510

[35] Coulter, B. (2024, March 5). Airdrie gets $24.8M to build hundreds of homes. CBC News. https://www.cbc.ca/news/canada/calgary/airdrie-housing-accelerator-fund-development-1.7134853

[36] Coulter, B. (2024, March 5). Airdrie gets $24.8M to build hundreds of homes. CBC News. https://www.cbc.ca/news/canada/calgary/airdrie-housing-accelerator-fund-development-1.7134853

[37] Scheele, M. (2024, May 9). Airdrie looks at options to increase housing capacity—Airdrie News. Airdrie City View. https://www.airdriecityview.com/local-news/airdrie-working-on-options-to-increase-housing-capacity-8689761

[38] Summary of Airdrie's Proposed Actions for Enabling Housing Choice. (n.d.). City of Airdrie. https://pub-airdrie.escribemeetings.com/filestream.ashx?DocumentId=18325&utm_source=airdrie%20city%20view&utm_campaign=airdrie%20city%20view%3A%20outbound&utm_medium=referral

[39] Ashtari, N., Khan, A., Khan, F., Allen, J., & Al-Musa, A. (n.d.). Finding the Missing Little in Toronto, Affordable Missing Middle. Affordable Missing Middle. Retrieved July 22, 2024, from https://affordablemissingmiddle.ca/missing-little-toronto

[40] Ashtari, N., Khan, A., Khan, F., Allen, J., & Al-Musa, A. (n.d.). Finding the Missing Little in Toronto, Affordable Missing Middle. Affordable Missing Middle. Retrieved July 22, 2024, from https://affordablemissingmiddle.ca/missing-little-toronto

[41] Ashtari, N., Khan, A., Khan, F., Allen, J., & Al-Musa, A. (n.d.). Finding the Missing Little in Toronto, Affordable Missing Middle. Affordable Missing Middle. Retrieved July 22, 2024, from https://affordablemissingmiddle.ca/missing-little-toronto

[42] The key factors were identified from the ULI Toronto: TMU Missing Middle Webinar, held on February 14, 2024.

[43] Canada Mortgage and Housing Corporation. (2022, June). Canada's Housing Supply Shortages: Estimating what is needed to solve Canada's housing crisis by 2030. Accessed May 21, 2024.

[44] van der Poorten, K., & Miller, B. (2017). Secondary suites, second class citizens: The history and geography of Calgary's most controversial housing policy. Canadian Geographies, 61(4), 554-578.

[45] Zeebuyth, L., & Moore, M. (2024). Missing Middle Housing: Accelerating America's Transition from Single-Family Zoning. Natural Resources Journal, 64(1), 63.

[46] Wegmann, J. (2020). Death to Single-Family Zoning … and New Life to the Missing Middle. Journal of the American Planning Association, 86(1), 113-119.

[47] mapTO. (2017). The Yellowbelt. Webpage. Accessed June 5, 2024.

[48] Allen, J. (n.d.). The Yellowbelt in Canadian Cities 2022. Retrieved August 8, 2024, from https://schoolofcities.github.io/yellowbelt-canadian-cities-2022/

[49] Opticos. (n.d.). Missing Middle Housing. Webpage. Accessed June 5, 2024.

[50] City of Edmonton. (n.d.). 'Missing Middle' Housing. Webpage. Accessed June 5, 2024.

[51] City of Calgary. (n.d.). Housing and Affordability Task Force. Webpage. Accessed June 5, 2024.

[52] Zeebuyth, L., & Moore, M. (2024). Missing Middle Housing: Accelerating America's Transition from Single-Family Zoning. Natural Resources Journal, 64(1), 63.

[53] Wegmann, J. (2020). Death to Single-Family Zoning … and New Life to the Missing Middle. Journal of the American Planning Association, 86(1), 113-119.

[54] Lim, A. (2016, September 4). Should Austin block or welcome development of new homes on tiny lots? Austin American Statesman.

[55] Wegmann, J. (2020). Death to Single-Family Zoning … and New Life to the Missing Middle. Journal of the American Planning Association, 86(1), 113-119.

[56] 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.

[57] Wegmann, J. (2020). Death to Single-Family Zoning … and New Life to the Missing Middle. Journal of the American Planning Association, 86(1), 113-119.

[58] City of Edmonton. (2019). Missing Middle Zoning Review – Summary of Changes to Zoning Bylaw 12800 Approved by Edmonton City Council August 26, 2019.

[59] Boothby, Lauren. (2023, October 23). Edmonton passes density-boosting zoning bylaw allowing three-storey apartments and row housing citywide. Edmonton Journal. Accessed June 5, 2024.

[60] City of Calgary. (2024, May 14). City Council approves citywide rezoning with amendments in response to Calgary's

housing crisis. Webpage. Accessed June 5, 2024.

[61] Two roundtable discussions held in 2022 included developers from the American states of California, Texas, and Oklahoma, and specific cities such as Portland, Oregon, Minneapolis, Minnesota, Boston, Massachusetts, and South Bend, Indiana.

[62] Garcia, D., Alameldin, M., Metcalf, B., & Fulton, W. (2022, December 7). Unlocking the Potential of Missing Middle Housing. Terner Center for Housing Innovation, UC Berkeley.

[63] Garcia et al. (2022). Ibid.

[64] Garcia et al. (2022). Ibid.

[65] Garcia et al. (2022). Ibid.

[66] Speckert, C. (2023). The Second Egress. Cellar Architectural Journal, 1(1), 10-25.

[67] Speckert, C. (2023). Ibid.

[68] Speckert, C. (2023). Ibid.

[69] Smith, S., & Mendoza, E. (2024). Point Access Block Building Design Options for Building More Single-Stair Apartment Buildings in North America. Cityscape, 26(1), 431–447.

[70] Altus Group. (2022). Municipal Benchmarking Study – Calgary. Canadian Home Builders' Association. Accessed May 22, 2024.

[71] Altus Group. (2022). Municipal Benchmarking Study – Edmonton. Canadian Home Builders' Association. Accessed May 22, 2024.

[72] Labby, B. (2023, February 13). Alberta needs an extra 20,000 homes to maintain affordability, but how do we get there? CBC News. Webpage. Accessed May 21, 2024.

[73] Canadian Home Builders' Association. (n.d.). Municipal Benchmarking. Webpage. Accessed June 4, 2024.

[74] Canada Mortgage and Housing Corporation. (2024, March 5). Helping build more homes, faster in Airdrie.

[75] Town of Westlock. (n.d.). Land Use Bylaw Update. Webpage. Accessed June 18, 2024.

[76] Town of Westlock. (n.d.). Housing Accelerator Fund. Webpage. Accessed June 18, 2024.

[77] Canada Mortgage and Housing Corporation. (2024, February 19). Helping build more homes, faster in Alberta.

[78] Canada Mortgage and Housing Corporation. (2024, February 19). Helping build more homes, faster in Alberta

[79] Canada Mortgage and Housing Corporation. (2024, February 19). Ibid.

[80] Town of Smoky Lake. (n.d.). Land Use Bylaw and Municipal Development Plan Review. Accessed June 18, 2024.

[81] Town of Smoky Lake. (2024). Bylaw No.07-2024 of the Town of Smoky Lake in the Province of Alberta.

[82] Canada Mortgage and Housing Corporation. (2024, February 19). Ibid.

[83] Anderson, M, & Fahey, A. (2019, November 4). Lessons from Oregon's Missing Middle Success. Sightline Institute.

[84] Anderson, M, & Fahey, A. (2019, November 4). Ibid.

[85] Anderson, M, & Fahey, A. (2019, November 4). Ibid.

[86] Elgin, A., Buitenhuis, A., MacMillan, D., Frolick, J., Kilbourn, J., Lee, J., Otchie, M., Bennett, O., & Maignan, S. (2020, September). Missing Middle Housing: Development Costs and Affordability. Urban Land Institute Curtner Urban Leaders Program 2020.

[87] Elgin et al. (2020). Ibid.



This project is made possible through a grant
from the Alberta Real Estate Foundation.

Canadian Urban Institute | Institut Urbain du Canada

m ddl

Alberta Real Estate Foundation