

# Charting the Path to Office Conversions in Canadian Cities

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A National Housing Strategy  
Demonstrations Initiative

March 2024



Canadian Institut  
Urban Urbain du  
Institute Canada

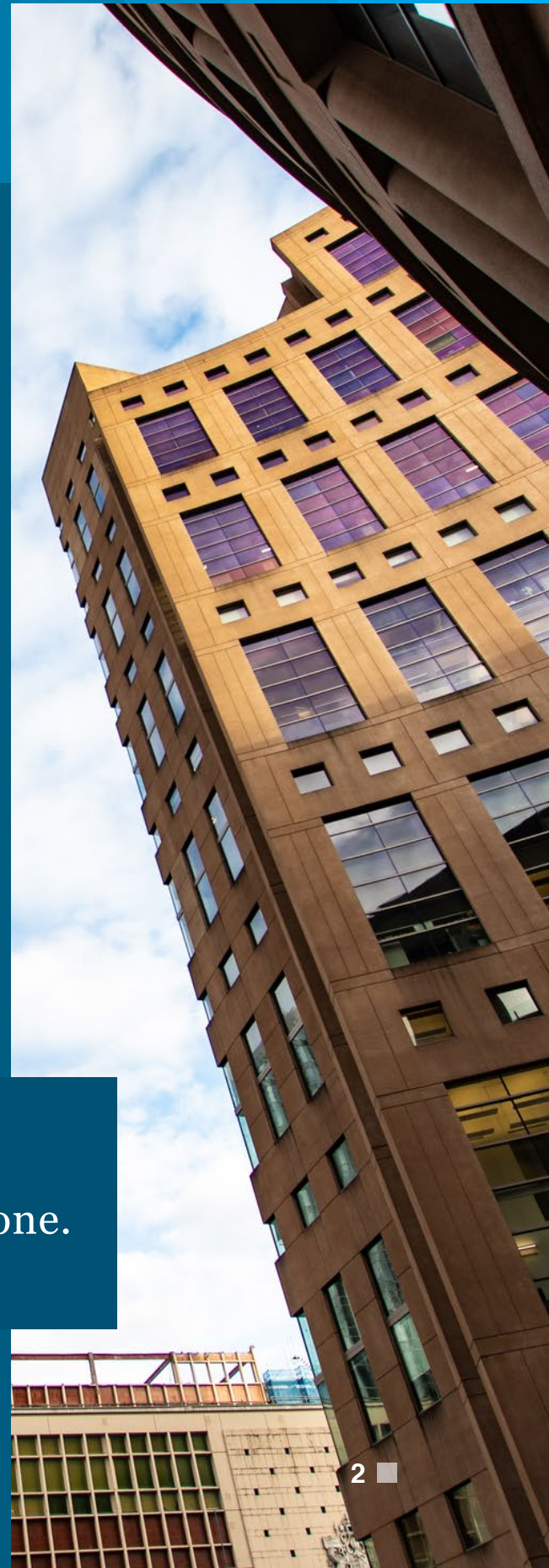


Canadian Urban Institute  
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## About the Canadian Urban Institute

CUI is Canada's Urban Institute. We are the national platform that houses the best in Canadian city-building – where policymakers, urban professionals, civic and business leaders, community activists, and academics can learn, share, and collaborate with one another from coast to coast to coast. We have three decades of experience working with the city-building community on all aspects of placemaking. We have both knowledge and practical experience in project management, working with planners, governments, regulators, engineers, architects, and designers to strengthen the built environment.

Urbanism is for everyone,  
and urbanism must include everyone.





## Land Acknowledgement

CUI acknowledges the Indigenous Peoples of all the lands that we are on today and acknowledges the importance of the lands, which we each call home. We do this to reaffirm our commitment and responsibility in improving relationships between nations and to improving our own understanding of local Indigenous peoples and their cultures. From coast to coast to coast, we acknowledge the ancestral and unceded territory of all the Inuit, Métis, and First Nations people that call this land home. We continually seek ways to reflect and acknowledge the harms and mistakes of the past and to consider how we can collectively move forward in a spirit of reconciliation and collaboration.

# Acknowledgements

## CUI Staff

**Jennifer Barrett**  
Managing Director,  
Programs, Policy and  
Planning

**Leandro Gabriel Santos** Research  
Planner

**Shavtai Pinchas**  
Research Planner

**Berta Kaisr** Research  
Planner

**Emily Wassmansdorf**  
Communications  
Manager

**Maria Alonso Novo**  
Architecture Intern

## Production Support

**Kevin Yip** Graphic  
Design

**Ferruccio Sardella**  
Graphic Design

## CMHC

**Gracen Johnson,**  
Senior Specialist,  
Innovation & Research

## Halifax

Halifax Regional  
Municipality: **Kate  
Greene, Kasia Tota,  
Kevin Boutillier, Peter  
Duncan, Sergio Grbac,  
Byungjun Kang, Eric  
Lucic, Jill MacLellan,  
Erin McIntyre, Brandon  
Umpherville**

**Joe Nickerson, Josh  
Foster** Sidewalk Real  
Estate Development

**Sam Austin, Waye  
Mason** Regional Council

**Nicole Babineau**  
Fathom Studio

**Jarrod Baboushkin**  
Nova Scotia Department  
of Municipal Affairs and  
Housing

**Jeffrey Biggar**  
Dalhousie University

**Jenna Calderone,  
Simon Wilbee** Starfish  
Properties

**Steven Dejonckheere**  
Slate Asset  
Management

**Jeff Garber, Leanne  
Hachey, Dawson  
Patterson, Mona Power**  
Government of Nova  
Scotia

**Kevin Hopper** United  
Way Halifax

**Paul Jacob** Halifax  
Partnership

**Louis Lawen** Dixel  
Developments

**Elliot MacNeil** Bruno  
Group

**Paul McKinnon,  
Jonathon Goldson**  
Downtown Halifax  
Business Commission

**Tim Rissesco**  
Downtown Dartmouth  
Business Commission

**Sue Uteck, Scott  
Mackendrick** Spring  
Garden Area Business  
Association

## Ottawa

City of Ottawa:

**Alexandre LeBlanc,**  
**Reed Adams, Basma**  
**Alkhatib, Janice**  
**Ashworth, Meredith**  
**Berriman, John Buck,**  
**Mary Dickinson,**  
**Sheilagh Doherty,**  
**Melanie Gervais,**  
**Colette Gorni, Marie**  
**Hanchet, Terri**  
**Hunt, Susan Johns,**  
**Parvesh Kumar,**  
**Margot Linker, Kelby**  
**Lodoen Unseth, John**  
**Lunney, Jeff McEwen,**  
**Kersten Nitsche,**  
**Erin O'Connell, Tess**  
**Peterman, Lauren**  
**Reeves, Stream**  
**Shen, Jack Smith,**  
**Derek Unrau, Adrian**  
**van Wyk, Cindy**  
**VanBuskirk, M Masha**  
**Wakula, Geraldine**  
**Wildman, David Wise**

## Regina

City of Regina: **Kim**

**Sare, Amarpreet**  
**Guliani, Chad**  
**Bosgoed, Brajesh**  
**Dev, Jason Harris,**  
**Emmaline Hill, Nazmul**  
**Khan, Theresa Kuntz,**  
**Erin Mason, Laura**  
**Pfeifer, Michael Silva,**  
**Hong Yoon**

**Judith Veresuk** Regina  
Downtown Business  
Improvement District

**Edward Archibald,**  
**Doug Dolan** Arwel  
Living

**Mike Barber** ICR

**Michael Beatch**  
Ackerman and Co

**Susanne Bell** Regina  
Housing Authority

**Jeff Dudar** Government  
of Saskatchewan

**Gerry Fischer** REAL  
District

**Anna Gardikiotis** R & A  
Group of Companies

**Leasa Gibbons**  
Regina's Warehouse  
District Business  
Improvement District

**Rylan Graham**  
University of Northern  
British Columbia

**Mike Hogan** Cushman  
& Wakefield

**Ross Keith, Dan Torrie**  
Nicor Realty Group

**Michael Kelsey** Colliers

**Steve Klippenstein**  
Captive Audience

**Judith Langen**  
Namerind Housing

**Kelsey Longmoore** Kilo  
Lima Code

**Aaron McDougall**  
Harvard Developments

**John McGinn** JMA  
Architecture Ltd.

**Andrea Nylen** Studio-en

**Reid Pedersen** Mertz  
Holdings Inc.

**Lana Phillips** Housing  
Development - Ministry  
of Social Services

**Jonathan Pradinuk**  
Scatliff+Miller+Murray

**Shelley Sayer** Ranch  
Ehrlo Society

**Alton Tangedal** Alton  
Tangedal Architect

**Alan Wallace** Wallace  
Insights

**Brandon Webber**  
Emigrant Partners Inc.

**James Youck** P3  
Architecture

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# Executive summary

In April 2023, CUI published *The Case for Conversions*, the culmination of a National Housing Strategy Solutions Labs funded by the Canadian Mortgage and Housing Corporation. This report, *Charting the Path to Office Conversions in Canadian Cities*, a National Housing Strategy Demonstrations Initiative, builds on CUI's work on downtown recovery in response to the impacts of COVID-19 and continues initiatives to evaluate underutilized assets in Canadian downtowns. The purpose of exploring the conversion of commercial buildings was to understand the opportunity that vacant and underutilized office space presents for making downtown districts across Canada more vibrant, equitable, and sustainable.

Our work in *The Case for Conversions* report revealed several key findings that influenced the approach to this demonstration project.

First, it is evident that not all buildings or markets are suitable for conversions. Building design can be highly specialized and unique. That said, offices constructed during certain time periods generally feature similar characteristics that prohibit or lend themselves to residential conversion. Understanding, at a high level, the feasibility of converting different office building typologies is key to targeting and scaling up opportunities.

Second, markets – both in terms of housing demand and office vacancy – are a determining factor. In strong housing markets, conversions are more likely to occur even without incentives. In weak housing markets, they are less likely. This demonstration project also revealed that other factors play a significant role in whether a conversion will happen. Namely, the vibrancy and livability of a downtown (commercial) core to support and attract residents is a key factor in the viability of conversions. In addition, the expertise




of the development community and their willingness to consider a conversion in lieu of new development contributes to an ecosystem where conversions are more likely to happen.

This demonstration project further refined our knowledge of what makes an office conversion possible from a building, regulatory, and market perspective. This project analyzes three case study cities: Halifax Regional Municipality (HRM), City of Ottawa, and the City of Regina – all of which feature unique contexts to unpack.

In the case of HRM, permissive land use has been instrumental in the conversion process. In addition, public and private investment in downtown to create a diverse, mixed-use neighbourhood, coupled with a small nimble development firm has made Halifax a ‘capital of conversions’ compared to many other cities in Canada. Downtown Halifax and downtown Dartmouth feature precedents highlighting the opportunities and challenges of conversions.

In Ottawa, the prevalence of buildings constructed in the mid-20th century, often referred to as ‘brutalist’, offers a portfolio of buildings requiring upgrades and renovation. This building stock, along with the intention of the federal government, and other private and public sector organizations, to reduce their building portfolio leaves buildings in the downtown core in need of a new use or users. Conversions in Ottawa that happened prior to and during COVID-19 were not without challenges, including the regulatory environment which required costly upgrades and permissions to advance. However, over the course of 2023, the City of Ottawa undertook an interdepartmental approach to regulatory review that will help remove barriers that are within the purview of the municipality.





For Regina, as may be true for other mid-sized cities, the potential for conversion of office space – despite housing indices and office vacancies that would support them – is hampered by the financial feasibility of conversions in a relatively low-cost housing context. While internal processes and regulatory barriers can be removed, conversions will largely be determined by financial factors coupled with the need for increased investment in downtown to support housing creation and the amenities needed to support new residents.

For each case study city, CUI has created a description of the engagement process for learning, a roadmap that illustrates the steps to their current states, and templates for workshop processes supporting action in cities with similar contexts.

As was demonstrated in CUI’s earlier research, office conversions offer the potential to play a key role in the revitalization of Canada’s downtowns, creating more complete communities by increasing housing, adding new uses, and bringing more people to the core. The hope is that continued research, engagement, and the highlighting of solutions will advance the discussion and trigger more conversions to happen across Canada.

This work is supported by several resources:

1. *The Case for Conversions Guidebook* overviewing learnings from the Solutions Lab
2. Office Building Assessment Framework to determine the conversions compatibility of individual buildings
3. A photo essay exploring two in-progress conversions in HRM
4. Conversion Cost Assessment Template providing a pro forma comparing the cost of conversion to a comparable new build

# 1.0 Project Description

The Canadian Urban (CUI) in partnership with stakeholders and six municipalities, completed a National Housing Strategy Solutions Labs funded by CMHC.

This work, *Charting the Path to Office Conversions in Canadian Cities*, funded by CMHC through the NHS Demonstrations Initiative, builds upon the work of CUI's Solutions Lab. The duration of this demonstration project spanned over 5 phases. Phases 1 and 2 included the dissemination of findings to a diversity of interested parties, including building owners, developers, and the public sector, to raise awareness around the opportunities for and barriers to office conversions in Canadian downtowns. Briefings were provided to a variety of stakeholders from April to June 2023.

For phases 3 to 5, CUI partnered with the Halifax Regional Municipality (HRM), the City of Ottawa, and the City of Regina to explore the opportunities and barriers in each city, providing lessons for other municipalities and stakeholders seeking to convert underutilized office space to residential units.



## Project Timeline: April 2023 – March 2024

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### Goals

1. Develop interested parties' basic understanding on the opportunities for office-to-residential conversions.
2. Facilitate meetings/briefings with interested parties in case example cities.
3. Identification of office buildings for conversions.
4. Facilitate capacity-building workshops with stakeholders to refine findings.
5. Create a set of takeaway documents including a summary of findings and workshop process for replication in other locations.

## 2.0 Key Findings

The key findings of CUI's NHS Demonstrations Initiative are as follows:

- Every building is a different undertaking. However, there are certain building characteristics that lend themselves to conversion, including floor area, floor plate, availability of natural light, and flexibility of planning policies and regulations. The building tours in HRM revealed that conversions, while more complex than new development, can yield different and unusual units that preserve older building stock.
- CUI's work has informed municipal policy in Ottawa to better align regulation (e.g., zoning) with opportunities for office-to-residential conversion. This work can be universally applied across municipalities.
- The removal of parking minimums is a significant benefit to the financial viability of conversion projects. Though, if parking is feasible, it's sometimes preferable based on context and can be beneficial from a marketing perspective.
- Recognizing the challenges and complexities involved in conversion projects, more permissive and less restrictive policies and regulations are needed at the municipal, provincial, and federal level to enable conversions at scale.
- For financial feasibility, different markets will require different interventions. For example, soft office markets and strong housing markets are better suited to conversions and may not require incentives while other markets, such as soft housing and soft office markets, may require more robust public investment. Affordable units will always require a public investment to keep units below market rate.
- Financial incentives may allow for more design flexibility, allowing developers the ability to determine how to make a project viable.
- In cases where office-to-residential conversions are not happening despite a permissive planning regime, there are still efforts that municipalities can undertake to “prime the pump” for conversions. This was revealed in the Regina case study where a workshop that engaged staff from a variety of departments helped create a collective effort to understand the approval process from a regulatory perspective. For those in a similar situation, a next step could be to create a guidance document that helps unify the steps and processes for an office conversion project approval.

# 3.0 Building a Supportive Toolkit

## 3.1 Framework for consideration

Every municipality in Canada looking to support office-to-residential conversions will have its own unique blend of factors. We invite municipalities and other actors to choose, adapt, and reorient elements responsive to their own unique contexts.

For each context, the following factors should be considered:

- Planning policy and regulatory regime
- Local market for downtown residential growth
- Office building inventory and level of underutilization
- Local development industry interests, experience, specialization, and capacity
- Level of political will

[Section 4.0](#) features demonstrations for each case study city capturing considerations of the most pertinent factors for their unique contexts. To further elaborate, each is accompanied by a roadmap that provides a timeline to date on how each municipality has enabled conversions, directly or indirectly, through policy and regulatory initiatives. Workshop templates are also provided so other municipalities may emulate or adapt approaches to engagement.

These demonstrations are not meant to be prescriptive. Rather, they are meant to offer models for advancing conversions based on context. Resources created herein can provide a “mix and match” approach to advancing conversions based on the opportunities and barriers for a building or district context.

Find our full list of resources and tools in [Section 5.0](#).

Please reference *The Case for Conversions Guidebook* in [Appendix A](#) for more information and direction based on the findings of the Solutions Lab.

## Roadmaps

The roadmaps accompanying each demonstration provide an overview of key events and initiatives either enabling or propelling support for office-to-residential conversions. These are meant to provide more context on the evolution of conversions policies and regulations in Halifax, Ottawa, and Regina.



## Workshop templates

Based on our work, it became evident that a single workshop template could not be applied to all municipalities looking to advance conversions. Therefore, CUI has created four possible workshop processes based on each of the four scenarios described in [Section 4.0](#) of this report.

**The following questions can be used to frame the workshop approach:**

- What is the current downtown office stock and how much of it is currently unleased (vacancy rate)? Is it above the healthy threshold of 10 percent?
- What is the rental vacancy rate? Is it below the healthy threshold of 3 percent signaling unmet housing demand?
- Is the vacant (unleased or underutilized) office stock concentrated in particular areas or districts? How suitable are these areas for residential intensification, in their current form or planned?
- Do provincial directions and/or municipal policies support office conversions?
- How permissive are in-force regulations (e.g., zoning by-laws) related to the rehabilitation of office buildings, change in use to residential and supporting uses, amenity requirements, and additions to existing structures?
- Can the performance standards of existing office buildings be carried forward through a change of use to residential or mixed-use where the built form isn't changing?

- What types of changes to an existing office building will trigger Building Code requirements? Are there alternative compliance standards or workarounds?
- Is there an existing inventory of downtown office buildings that can be leveraged to identify conversion candidates? Is the data available to create one?
- Who pays for servicing residential intensification if existing service capacity is surpassed by proposed conversion developments?
- Does the local development industry have the specialized knowledge required for adaptive reuse projects and addressing the risks associated with them?
- Can the viability of conversion projects be improved through regulatory and approvals streamlining, or will they require financial incentives?
- Is there political will to make office conversions a priority? This includes considering changes to municipal policies, regulations, and/or financial incentives.

Answering these questions will help to identify needs, opportunities, barriers, and low-hanging fruit that will require varying efforts to undertake in support of conversions.





## **4.0 Demonstrations**

As we learned in *The Case for Conversions*, supporting office conversions does not lend itself to a one-size-fits-all approach.

Focusing on Halifax, Ottawa, and Regina, the following demonstrations reveal how each municipality has supported office conversions to date. For this work, CUI focused on municipal initiatives and responses in support of office conversions by looking at policy, regulation, project management, and engagement methods. Each demonstration is an exhibit of CUI's research, engagement, and workshop findings.

Office-to-residential conversions are a priority in all three municipalities, evidenced by the inclusion of conversions as an Action Plan initiative in their Housing Accelerator Fund applications.

Findings from this work places each case study city in a scenario for advancing office conversions and offers one hypothetical scenario:

- 1. Halifax: Demonstrating successful precedents**
- 2. Ottawa: Breaking down municipal silos**
- 3. Regina: Priming the pump**
- 4. Hypothetical example: Targeting district-level opportunities**

The purpose of this work is to identify replicable approaches. Each case study scenario is accompanied by a roadmap and a high-level workshop template that can be adapted by a variety of actors to fit within their own scenario and responsive to their local context.





## 4.1 Halifax: Demonstrating successful precedents

Several office-to residential conversions have taken place in Halifax Regional Municipality (HRM) without financial incentives. This trend is primarily driven by the office and residential real estate market trends in Halifax. The city's high office vacancy rates and high housing demand make office-to-residential conversions an appealing option for building owners and developers.

Due to the inherent unpredictability of conversion projects, seasoned developers may be hesitant to engage in them, compared to more conventional development projects they are accustomed to. Despite this complexity, market conditions in Halifax have created opportunities for nimble developers to pursue conversion projects, carving out a niche in adaptive reuse.

[Sidewalk RED](#) is a smaller developer, vertically integrated with in-house expertise covering phases from planning to construction, with an ability to adapt to unforeseen challenges and manage the risks encountered in conversion projects. They have undertaken multiple projects in Halifax and Dartmouth, including the Centennial Building (now Agency Art Lofts) and The Shuffle.

Conversions in HRM benefitted from the policy and regulatory regime already in place. HRM's policy and zoning by-laws were already sufficiently permissive, enabling office-to-residential conversion projects to occur as-of-right. Thus, streamlining the planning approvals process for Agency Art Lofts and The Shuffle. Additionally, the absence of minimum parking requirements played a significant role in making these projects feasible.

CUI partnered with Sidewalk RED to organize building tours of conversion projects currently underway. Attendees represented a range of stakeholders including individuals from planning, housing, economic development, business improvement areas, and post-secondary education. In addition, representatives from HRM, Government of Nova Scotia, and CMHC were also present.

A photo essay of the building tours can be found in [Appendix C](#).



A follow-up online workshop was held with attendees of the building tours, along with a representative of Sidewalk RED, to discuss observations and key insights gathered during the tour. The insights included:

- Financial incentives would benefit conversion projects as they support more financial flexibility, allowing developers the room to figure out how to make a project viable.
- Most larger developers operate on a financial model that can be difficult to adapt to office-to-residential conversion.
- The removal of parking minimums in downtown Halifax contributed significantly to the financial viability of conversion projects. Though if parking can be added feasibly, that is often preferable from a marketing perspective.
- Recognizing the challenges and complexities involved in conversion projects, there is a need for more permissive and less restrictive policies and regulations.

■ Figure 1: Halifax Regional Municipality Roadmap

Timeline

## Roadmap: Halifax Regional Municipality

○ 2020

- COVID-19 pandemic shutdown begins.
- Downtown office vacancy rate increases to 20.0% by the end of the year (Colliers, Q4 2020).

○ 2021-2022

- *Regional Centre Plan*, Downtown Halifax Secondary Plan and land use by-laws updated to permit residential as-of-right and eliminate residential vehicular parking minimums in Downtown Halifax.
- Sidewalk RED acquires 1660 Hollis Ave, Halifax and 65 King Street, Dartmouth.

Catalytic

○ 2022

- CUI engages HRM and stakeholders for NHS Solutions Lab.

○ 2023

- HRM's HAF Action Plan identifies encouraging conversion of under-utilized non-residential buildings to residential.
- CUI engages HRM and stakeholders for NHS Demonstrations Initiative beginning in April.
- Sidewalk RED leads building tours of ongoing conversions projects with multi-sectoral attendance in September.
- CUI hosts peer-to-peer learning session in September with municipal staff from HRM, Ottawa, and Regina.
- CUI hosts virtual workshop exploring key takeaways from the tours in October.

Catalytic

○ Next Steps  
2024-2025

- HRM's Chief Administrative Officer will expedite changes to Regional Centre Plan Area to exempt office conversions from amenity space and unit mix requirements, and development permits where the built form is not changing.
- HRM will identify and select a few conversion candidate projects for a pilot program to assess the viability of a long-term financial incentive program.

Catalytic



## Workshop: Exploring successful conversions

- **Context:**

A number of successful office-to-residential conversion projects have happened in recent years. This is providing a more balanced market for housing and office space and the municipality wishes to further support such projects.

- **Workshop goal:**

To build on conversion precedents and understand elements of success.

- **Audience/attendees/stakeholders:**

City staff, developers and building owners of recent conversions, provincial, federal housing program representatives.

- **Format:**

Building tour(s)

- **Intended outcomes:**

To identify the building characteristics, context (surrounding uses), and policy environment enabling the conversion of buildings.

- **Further considerations:**

Every building is different, therefore, there will be a number of learnings from each and more complexity with each building that is added. The learnings will most likely be the commonalities of all projects (e.g., not having to provide parking made the conversion feasible both financially as well as technically).

## 4.2 Ottawa: Breaking down municipal silos

Using *The Case for Conversions* as a foundation, the City of Ottawa conducted an internal review of policies and regulations impacting office-to-residential conversion applications city-wide.

According to the Project Manager, direction from City Council setting the mandate to prioritize streamlining of office-to-residential conversions was fundamental to focus staff efforts on a collective cross-departmental project. Additionally, buy-in from departmental senior leaders was crucial in clarifying the boundaries of the work and empowering the Project Manager to coordinate staff to form a cross-departmental working group.

The Project Manager developed a process to “horizontally” integrate the “vertical” subject matter expertise of multiple staff across the municipal administration. The horizontal integration was achieved through a Sponsors Group, composed of the senior leaders (Directors and Managers) from across the City, while the vertical integration was achieved through the formation of a Working Group composed of “subject matter experts” nominated by the sponsors. These working groups are overviewed below in Figure 2 and Figure 3 and provide an example of how a municipality can break down silos for a cross-administrative, singular purpose.

The Project Manager engaged with over a hundred individuals representing CMHC, industry, and municipal staff. They also convened an Industry Focus Group, including developers who had completed recent conversions or planned to do so over the next three years, in alignment with the federal Housing Accelerator Fund program timeline, to refine the findings of the Working Group.

The recommendations of the Working Group were presented to industry for feedback, then were revised to be presented and approved by the Sponsors Group, and then were presented to the Planning and Housing Committee on November 1, 2023 and approved by Council on November 8, 2023 with one modification: a two-year cash-in-lieu of parkland reduction pilot specific to Ward 14 (Somerset Ward), which was carried by City Council.

See the full staff recommendations, and the minutes of the Council meeting [here](#).

## The six staff recommendations to support office-to-residential conversions:

1

Waiving the Planning Application Fee for applications, supported by staff, requiring a combined Official Plan Amendment (OPA) and Zoning By-law Amendment (ZBLA).

2

Providing flexibility in Zoning By-law 2008-250 by allowing the existing portion of a building to carry forward the performance standards of when it was built, and by increasing the ways in which the amenity space requirement can be met on site.

3

Reduced documentation requirements for Site Plan Control.

4

Engaging the Government of Ontario to re-examine the exemption requirement for a Record of Site Condition to support office-to-residential conversions.

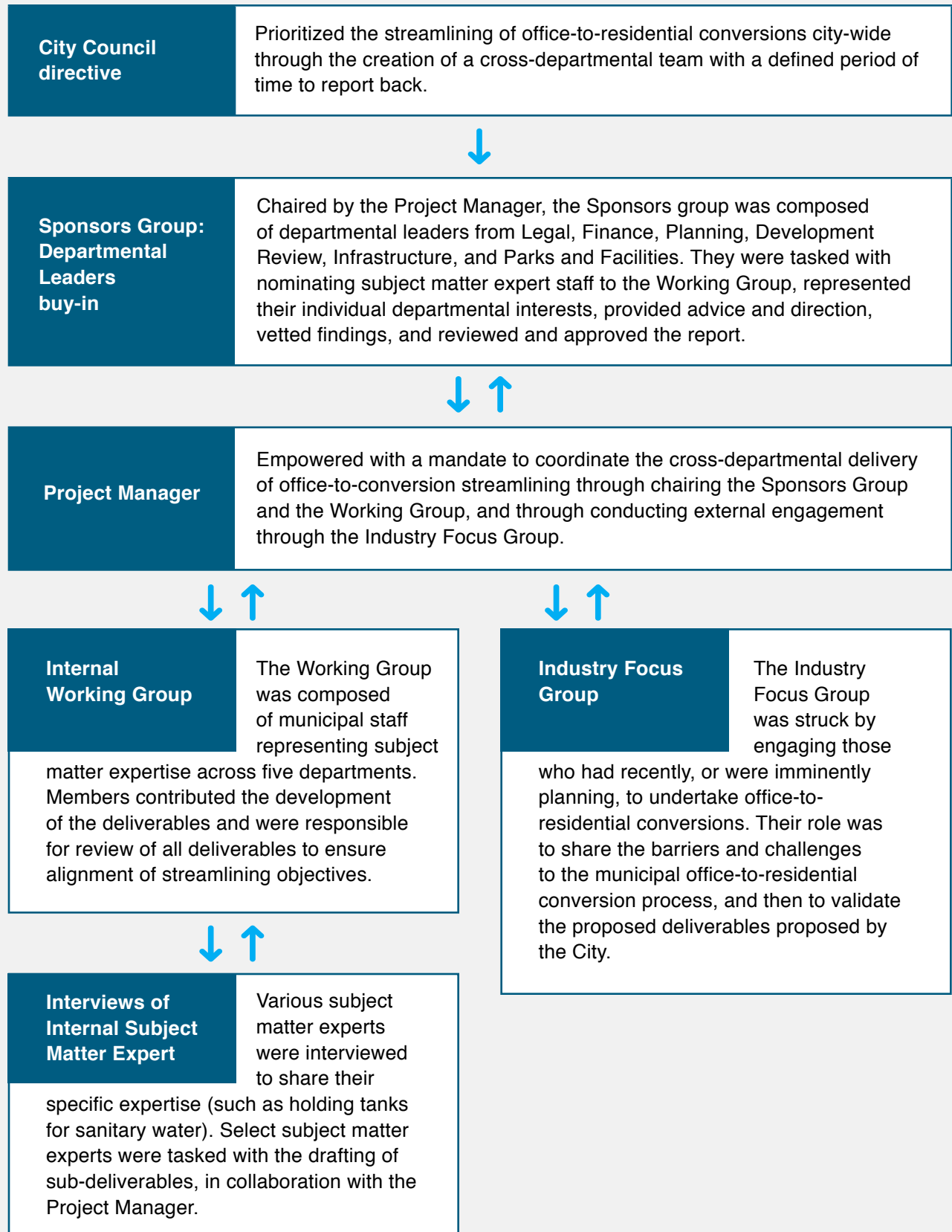
5

Exploring options for site servicing via holding tanks for sanitary water through the Sewer Design Guidelines review.

6

An update on financial mechanism to incentivize office-to-residential conversions.

■ Figure 2: Ottawa’s office-to-residential conversions working group formation





■ Figure 3: Working group subject matter expertise by department

Department	Community and Social Services	Finance and Corporate Services	Infrastructure and Water Services	Planning, Real Estate and Economic Development	Recreation, Cultural and Facility Services
Subject Matter Expertise	Affordable housing	Finance Legal Property tax (residential and commercial)	Asset management Water and sanitary water	Building Code Community Improvement Plans (CIPs) Economic development Heritage Inspections Planning (zoning and development review) Real estate Right of Way (ROW) Urban design	Parks and recreation



■ Figure 4: City of Ottawa Roadmap

Timeline

## Roadmap: City of Ottawa

○ 2019

- CLV Developments submits application for site plan approval and variances to convert 473 Albert St.

○ 2020

- COVID-19 pandemic shutdown begins.

○ 2022

- New *City of Ottawa Official Plan* takes effect: new downtown land use designations supporting more mixed and residential uses.
- CUI engages City of Ottawa and stakeholders for NHS Solutions Lab.

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○ 2023

- Ottawa's HAF Action Plan identifies creating a streamlined process for office-to-residential conversions.
- City Council directs staff to explore supporting office-to-residential conversions City-wide. Staff uses *The Case for Conversions* as a foundational research document.
- CUI engages City of Ottawa and stakeholders for NHS Demonstrations Initiative beginning in April.
- City's office-to-residential conversions interdepartmental Sponsors and Working Groups formed in May. Internal and external interviews and meetings commence.
- City conducts Industry Focus Group session in June to identify barriers and challenges and comment on the proposed draft work plan.
- CUI hosts peer-to-peer learning session in September: Working Group project manager presents preliminary findings to municipal staff from HRM and Regina.
- City conducts Industry Focus Group session in September to validate deliverables. Staff refine, address, and incorporate feedback.
- Downtown office vacancy rate peaks at 12.3% (Colliers, Q3 2023)

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- Cross-departmental team recommendations presented to Planning and Housing Committee in November. Recommendations approved by City Council with one modification: two-year cash-in-lieu of parkland reduction pilot for Ward 14.

Catalytic

○ Next Steps  
**2024**  
→

- City to engage industry stakeholders to assess the potential impact of further financial incentives on the feasibility of conversions.



## Workshop: Taking a multi-pronged approach

### ■ **Context:**

Market conditions support office-to-residential conversions but examples are few and far between. The municipality is looking to advance more conversions to create more vibrancy and housing in the downtown core by leveraging underutilized office space.

### ■ **Workshop goal:**

Work with stakeholders to identify barriers to office conversions at the municipal level.

### ■ **Audience/attendees/stakeholders:**

City staff from a range of departments capturing those who would 'touch' a conversions application, industry representatives.

### ■ **Formats:**

In-person engagement (both internal and external), focus groups.

### ■ **Intended outcomes:**

Identify pinch points in the approvals process including:

- Policies and regulations (land use, zoning)
- Studies (transportation, environmental, shading) typically required for new development
- Fees and charges (application fees, development charges, etc.)

### ■ **Further considerations:**

Sometimes the most effective discussions can happen in a more informal setting such as a breakfast meet-and-greet to build relationships and establish expertise on the topic.

## 4.3 Regina: Priming the pump

Despite Regina's high downtown market office vacancy rate (16.7% as of Q4 2023<sup>1</sup>), the downtown has not seen an office-to-residential conversion since the 2000s and is experiencing very little intensification in the core of the city.

The question of how to support conversions in Regina often led CUI's research to wider considerations for downtown revitalization. Since growth targets were established in the 2013 *Design Regina: Official Community Plan*, the City of Regina has been unable to make progress on adding 5,000 new residents to the downtown core through intensification. As of 2021, only 74 residents have been added to the downtown.<sup>2</sup>

A 2022 study by Rylan Graham and Pierre Filion explored the barriers to core area intensification in Regina through interviews with key informants involved in planning and development in the city. The barriers identified by informants are relevant to both new construction and office conversions.<sup>3</sup>

Despite the identified barriers, downtown Regina has a great foundation to build upon, such as its grid street network, high quality civic and cultural amenities, opportunities for missing middle housing in surrounding core neighbourhoods, and proximity to amenity rich Wascana Centre (a large park) to the south. There are also several key actors advocating for downtown revitalization, such as the Regina Downtown Business Improvement District.

For other mid-sized Canadian cities facing the same barriers, exploring conversions provides an opportunity to identify systems improvements that facilitate more horizontal collaboration and break down silos by pulling in staff from different departments and teams that typically consider elements of development applications separately.

CUI also identified an opportunity to consider the downtown in the context of the surrounding core neighbourhoods. This came about as there have been several successful missing middle developments that reveal a latent demand for living in the city centre area despite the prevailing perception that downtown is not ready for residential intensification.

To make up for the absence of a recent conversion precedent in Regina, CUI identified a test case building. Using high-level drawings to test a hypothetical office-

to-residential conversion of a portion of the building, CUI coordinated a building tour followed by a mock pre-consultation workshop with the building owner and staff from the City of Regina’s Planning and Development Services department. Staff represented the following branches: City Planning, City Revitalization, Building Inspections and Standards, and Servicing Infrastructure and Approval. One outcome of this exercise was bringing together members of these teams that do not often sit at the same table to problem solve.

The findings of the multidisciplinary workshop revealed that the planning policy and regulatory regime for downtown is generally already in place to support office conversions. No concerns from a municipal regulatory perspective were brought up in the discussion around converting a portion of the test case building. While there would be specific Building Code requirements triggered in the shift to residential use, such as updating internal fire safety and sound reduction systems, they are not insurmountable with enough resources.

Despite permissive regulations, the project is currently not proceeding. This indicates that there are larger, more complex factors at play that are outside of specific planning, zoning, or servicing requirements, namely market conditions that prohibit adaptive reuse as the income from rents of the converted residential units would not cover the cost of conversion.

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<sup>1</sup>Colliers. (2024, January). Regina Office Market Report Q4 2023. <https://www.collierscanada.com/en-ca/research/regina-office-market-report-2023-q4>

<sup>2</sup>Ackerman, J. (2021, September 22). 957 years needed to meet downtown density targets at current rate: Regina mayor. Leaderpost. <https://leaderpost.com/news/local-news/city-hall/957-years-needed-to-meet-downtown-density-targets-at-current-rate-regina-mayor>

<sup>3</sup>Graham, R., and Fillion, P. (2024, January). Intensification in the city centre: Barriers to implementation in Regina, Saskatchewan. *Canadian Geographies*. <https://doi.org/10.1111/cag.12895>. The following are identified as barriers to intensification: 1) Soft market demand: demand for downtown living is limited due to preference for spacious, low-density, suburban living, and there is less incentive to downsize in central neighbourhoods as housing prices are relatively affordable and commute times are shorter; 2) Lack of residential services and amenities: the city centre has limited amenities (such as a grocery store) and fails to provide a pedestrian environment; 3) Developer specialization: there is a lack of developers who specialize in core area intensification, such as high-density multi-family or mixed-use development; 4) Development economics: core area intensification is challenged by high construction costs, and the added risks of development in an urban context where sale/rent does not command a premium price.

■ Figure 5: City of Regina Roadmap

Timeline

## Roadmap: City of Regina

○ 1990s  
-2000s

- Regina sees several office-to-residential conversions downtown, leveraging inexpensive building stock and higher order government funding for building rehabilitation.

○ 2013

- *Design Regina: Official Community Plan* sets target of 5,000 new residents downtown.

Catalytic

○ 2020

- COVID-19 pandemic shutdown begins.  
Downtown office vacancy rate increases to 14.5% by the end of the year (Colliers, Q4 2020).

○ 2021

- Only 74 new residents added to the downtown since 2013.

○ 2022

- City's Catalyst Committee is launched to consider projects with the potential to attract people and businesses to the city centre.
- Regina conducts a review of financial incentives with a focus on residential intensification.
- CUI engages City of Regina and stakeholders for NHS Solutions Lab.

○ 2023

- City's new Intensification and Revitalization Incentives Policies take effect in January. Could apply to downtown conversions.

- Regina's HAF Action Plan identifies encouraging conversion of non-residential buildings to residential.

Catalytic

- CUI engages City of Regina and stakeholders for NHS Demonstrations Initiative beginning in April.

- CUI hosts peer-to-peer learning session in September with municipal staff from HRM, Ottawa, and Regina.

- CUI identifies conversion candidate.

Mock pre-consultation in December establishes an example for staff to work collaboratively on conversions approval process.



## Workshop: Improving and advancing internal processes

- **Context:**

Market conditions are not conducive to office-to-residential conversions despite existing permissive policy and financial incentives. The municipality is looking to advance conversions either through a pilot project or internal process improvements in preparation of potential conversions.

- **Workshop goal:**

To find areas within municipal authority to establish the enabling conditions for conversions to happen.

- **Audience/attendees/stakeholders:**

City staff, building owners, business associations, community organizations.

- **Format:**

Internal interdepartmental workshops to understand areas of collaboration and process improvements that would support conversions; using a building as a prototype to test and refine a process.

- **Intended outcomes:**

Process improvements to support office conversions.

- **Further considerations:**

The absence of office conversions, despite policy and financial support, often signals a larger issue around housing demand in core areas and the experience of developers in adaptive reuse and intensification projects. Alongside of the internal process improvements, City staff can be working to advance intensification targets through policy or financial mechanisms by working with building owners.



## 4.4 Hypothetical Scenario - Targeting district-level opportunities

For aspiring municipalities aiming to extend the life of downtown buildings by transforming underutilized office stock into much needed housing supply, the resources listed in [Section 5.0](#) provide a suite of tools to identify the scale of the opportunity and options to support office-to-residential conversions.

This hypothetical scenario assumes that the downtown office vacancy rate is above the healthy threshold of 10 percent and there is a significant pressure to increase housing supply. In this hypothetical scenario, the following steps could be taken

1. Identify office buildings to compile an inventory.
2. Assess individual buildings' compatibility for office conversions.
3. Evaluate the surrounding services, amenities, and infrastructure supportive of residential intensification.
4. Delineate a district capturing the greatest concentration of vacant office buildings supported by existing or planned services, amenities, and infrastructure.
5. Assess and implement special area policies and incentives such as Tax Increment Financing, Community Improvement Plans, capital incentives, etc., dependent on local market conditions.
6. Create a time limited program benchmarked to a healthy office vacancy rate of 10 percent.

A consideration of the steps must be tempered by regulatory review of provincial planning direction, local policies, and regulations such as zoning by-laws and Building Code requirements.



## Workshop: Identifying geographically concentrated opportunities

### ■ **Context:**

A municipality is interested in advancing office-to-residential conversions to bring vibrancy and support adaptive reuse of underutilized buildings. To test some options, there is a desire to focus on strategic areas or sites to pilot municipal interventions.

### ■ **Workshop goal:**

Identify a method of selecting certain buildings or geographic areas for conversion.

### ■ **Audience/attendees/stakeholders:**

City staff, building owners, developers, other city builders/advocates such as BIAs.

### ■ **Format:**

A data-driven presentation and workshop to understand areas of greatest opportunity considering: a) areas of office vacancy; b) areas with supporting infrastructure, services, and amenities to support residential uses; c) concentration of buildings with potential for conversion to create a catalytic effect. A presentation of information is followed by a discussion of municipal levers to support a targeted approach to office conversions such as an overlay zone or site-specific incentives.

### ■ **Intended outcomes:**

A specific area of the commercial core is identified with potential policy or financial tools to support conversion projects.

### ■ **Further considerations:**

Key to the targeted approach is finding a supportive context for residential uses, which may vary within a downtown core.





## 5.0 Resources

Based on the work of the Solutions Lab and Demonstrations Initiative, CUI has created a series of resources that will aid municipalities, building owners, and developers to determine whether office-to-residential conversions are desirable and/or feasible.

Resources:

- CUI’s original 2023 NHS Solutions Lab report: ***The Case for Conversions*** (found [here](#))
- ***The Case for Conversions Guidebook*** ([Appendix A](#)) which includes a suite of tools:
  - Market Analysis – to determine your city’s market scenario and level of opportunity
  - Regulatory Review – to determine policy and regulatory alignment and identify opportunities to address barriers to conversions
  - Technical Analysis – to characterize the advantages and disadvantage to converting specific office buildings based on five typologies, and Building Code requirements
- **Office Building Assessment Framework (OBAF)** ([Appendix B](#))
- **Halifax Building Tours: A Photo Essay** ([Appendix C](#))
- **Conversions Cost Assessment Template (CCAT)** ([Appendix D](#))

# Appendices

# Appendix A: THE CASE FOR **CONVERSIONS** Guidebook

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Based on the findings of CUI's 2022-2023  
National Housing Strategy Solutions Lab

March 2024





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# Guidebook Introduction

In April 2023, CUI published *The Case for Conversions*, the culmination of a National Housing Strategy Solutions Lab funded by the Canadian Mortgage and Housing Corporation (CMHC).

The *Case for Conversions Guidebook* is a compilation of three briefing documents circulated to interested parties in six Canadian cities: Halifax, Moncton, Ottawa, Winnipeg, Regina, and Victoria. This Guidebook provides a summary of our findings from the Solutions Lab and serves as a collection of resources to support office-to-residential conversions across the country.

**The purpose of this document is to supplement *Charting a Path to Office Conversions in Canadian Cities*, a National Housing Strategy Demonstrations Initiative funded by CMHC.**

# Evaluation Guidebook

## Roadmap of Tools



### 1. Market Analysis

- Find out which market scenario your city belongs in
- Evaluate which strategies make sense in your context
- References to relevant international case studies



### 2. Regulatory Review

- Review existing planning policy and regulatory environment
- Consider initiatives to remove barriers to conversion



### 3. Technical Analysis

For office-to-residential building candidates, consider:

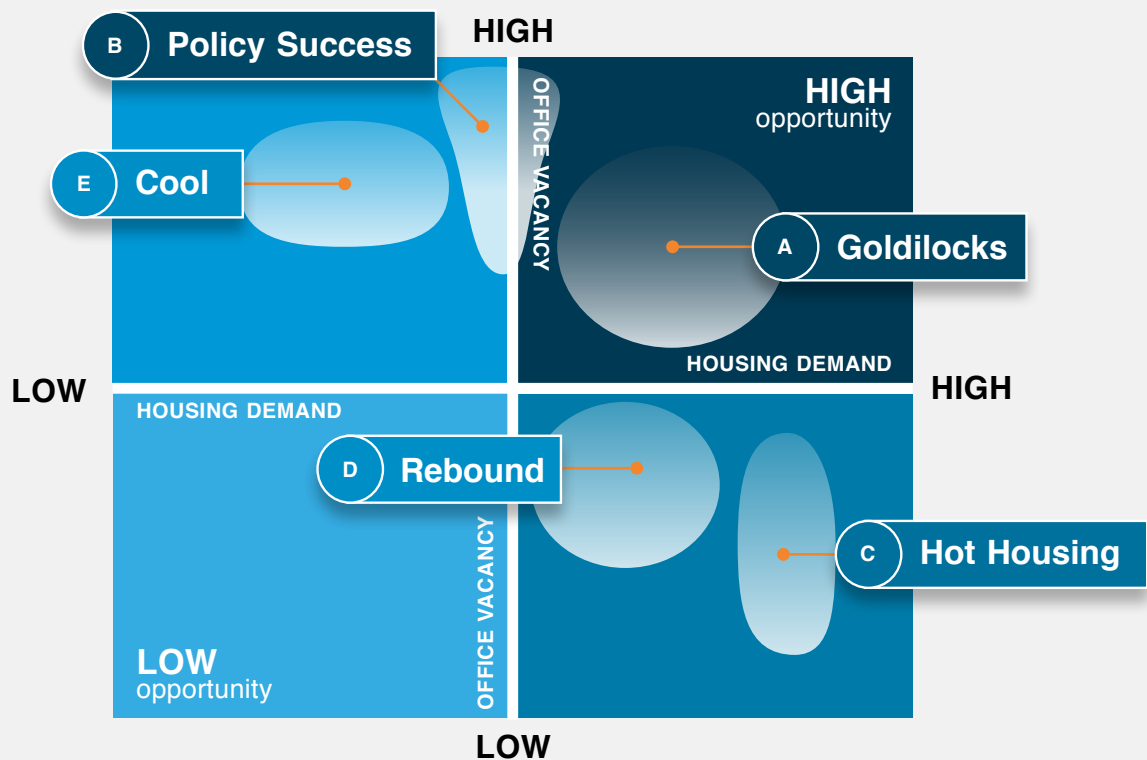
- Developing a building inventory for further evaluation
- Building typology advantages and disadvantages
- Technical building characteristics with graphic examples
- Building Code requirements

# Market Analysis

Office conversion policies should be designed based on the conditions of the local office and housing markets. CUI has developed a quadrant analysis framework to evaluate different market scenarios to help municipalities identify their market scenario and tailor their policies.

Based on housing demand, as indicated by city-wide rental vacancy rates, and downtown office vacancy rates, five market scenarios are illustrated in the matrix below. The following section includes a flowchart quiz to help cities determine which scenario they belong to as well as a breakdown of each scenario. Explanations for each scenario include a list of strategies to consider and a relevant international case study to reference. These market scenarios are meant to direct policy to best fit the municipality's specific context.

The following scenarios are not exhaustive nor static, and cities changing over time may move along either axis, eliciting the need to shift to different sets of strategies. For this reason, any financial tools implemented should be temporary and include thresholds to clarify when they are to be applied.



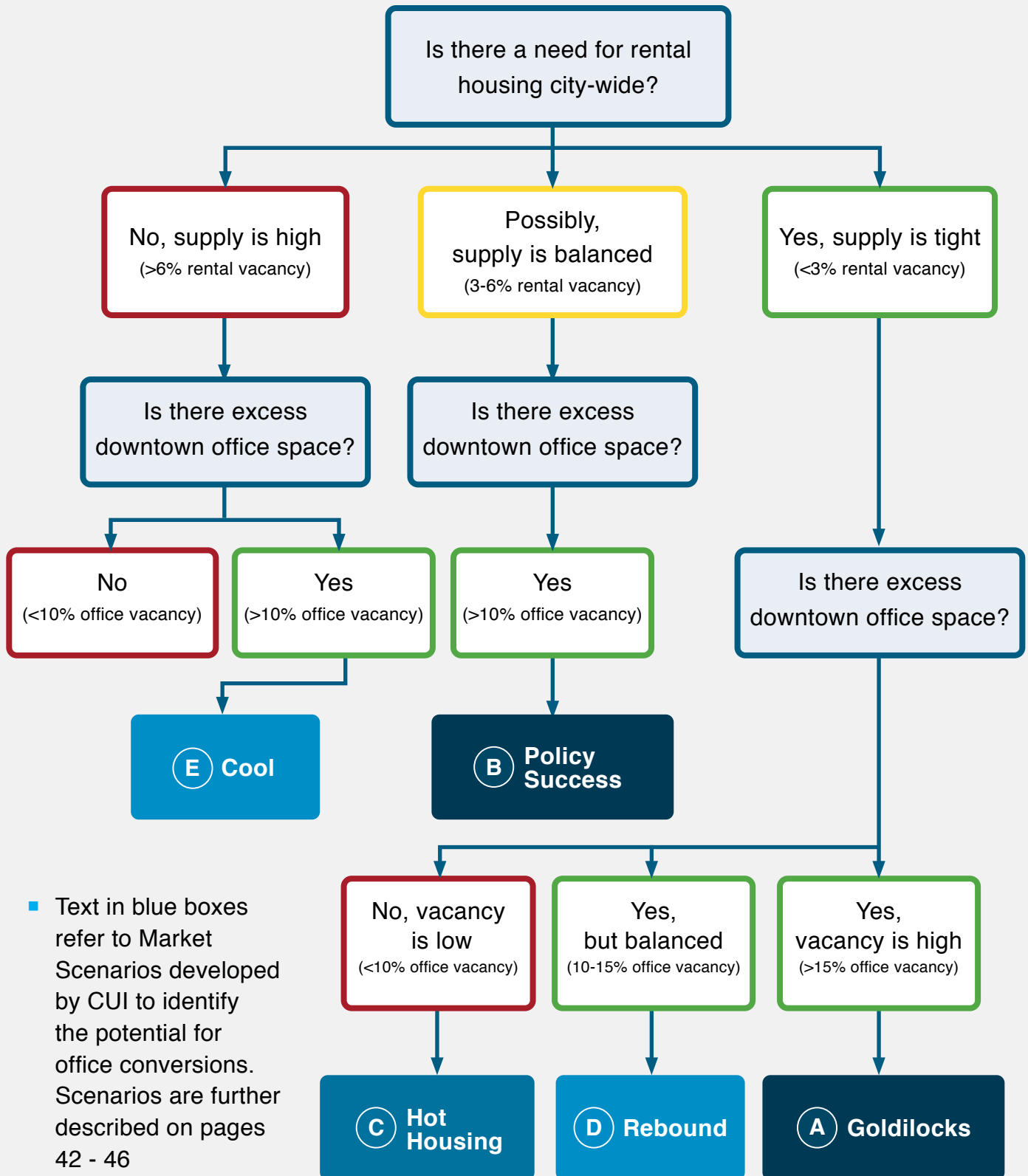
# Scenarios

## Scenarios Overview





# Flowchart Quiz



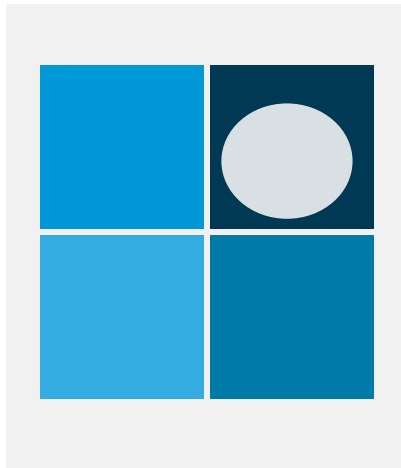
- Text in blue boxes refer to Market Scenarios developed by CUI to identify the potential for office conversions. Scenarios are further described on pages 42 - 46

# A

## Goldilocks

High office supply, high housing demand

Policy and program options suitable for this scenario include:



- Information sharing to educate developers and building owners about the feasibility, opportunities, and benefits of conversions
- Streamlining planning processes to reduce costly application and approvals timelines
- Permissive downtown zoning to remove regulatory barriers
- “Revenue neutral” financial assistance such as tax abatement and non-interest or low-interest loans.

Due to the Goldilocks Scenario being the one with the highest opportunity, recommended policies prioritize low-cost strategies focused on raising awareness and removing regulatory barriers. The Rotterdam Covenant: Tackling Office Vacancy serves as an example of the impact these strategies can have when employed city-wide.

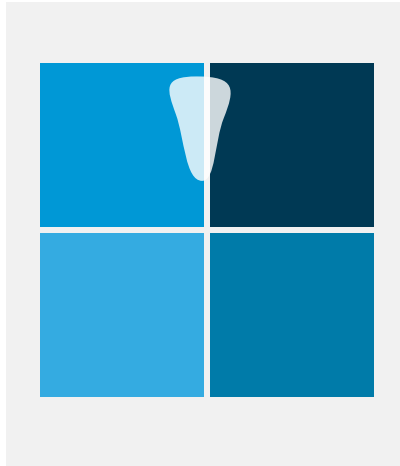
The Covenant established a mutual agreement around office conversions that lasted from 2011 to 2014 between the City of Rotterdam, developers, and building owners. With the City as the Covenant’s knowledge centre, the initiative included a “transformation team” to facilitate dialogue and cooperation, established standards for conversions, a streamlined land use plan, and various online and printed information materials. The Covenant was non-binding and based on the “best efforts obligations concept” which means there were no hard targets nor penalties involved if the targets were not met.

## B

# Policy Success

High office supply, balanced housing market

Policy and program options suitable for this scenario include:



- Financial incentives for conversions
- Funding or donations to non-profit housing providers to create affordable housing
- Targeted as-of-right zoning downtown to facilitate conversions
- Investments in infrastructure and amenities to promote downtown living

The Policy Success Scenario explores high office vacancies and the need for downtown revitalization. Within the Canadian context, we have seen this in the case of Calgary. The City of Calgary was facing issues of downtown office vacancy years before the pandemic due to declines in the oil and natural gas sectors.

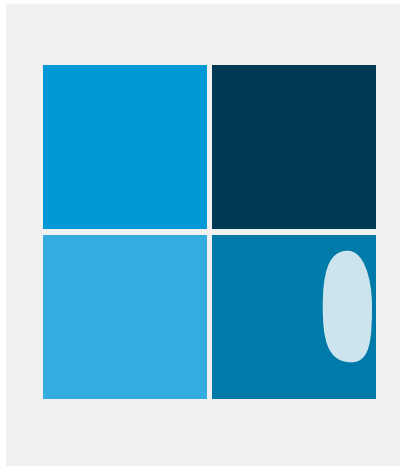
The Downtown Calgary Development Incentive Program is a \$100 million investment by the City of Calgary to help building owners and/or developers reduce the cost of conversions at \$75 per square foot of converted space, subsidizing the cost of construction. As of July 2022, the City had approved funding for five projects that will convert approximately 675,000 square feet of office space into 707 residential units. Some of these units are affordable.



## Hot Housing

Moderate to low office vacancy, very high housing demand

Policy and program options suitable for this scenario include:



- Creating a stop-gap method to prevent overcorrection through an office policy or permitting conversions in cases of residential and commercial mixed-use
- Establishing standards for residential unit size and quality and/or guidelines for specific housing types that could be achieved through conversions
- Establishing office vacancy thresholds that would trigger moratoriums on conversions to prevent loss of office space in tight markets

In the Hot Housing Scenario, very high housing demand coupled with a deregulated policy environment for office conversions risks the creation of poor-quality housing while removing office space that may be needed in the future. This overcorrected scenario was seen in the case of London, UK.

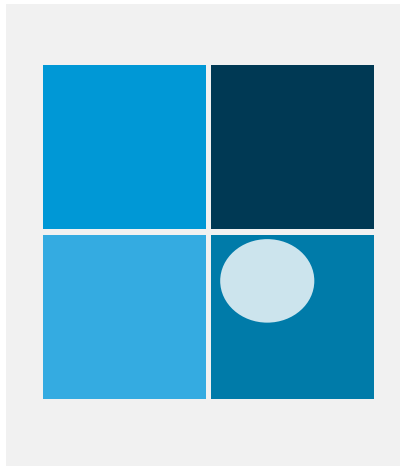
The Permitted Development Rights (PDR) in the UK allowed conversion projects to bypass the normal planning process by providing “prior approval” notification that outlines the projects’ details and their possible impacts. However, the PDR led to the creation of poor quality of housing, loss of office space needed in the local economy, and local economic pressure driven by increase in office rents. Therefore, experts suggest that conversions must go through local planning process and that municipalities must establish minimum standards for office vacancy, and space and quality requirements for residential units produced through office conversions.



## Rebound

Average office supply, high/specific housing demand

Policy and program options suitable for this scenario include:



- Financial incentives to reduce conversion costs
- Implement policies for intensification through land use flexibility
- Eliminate zoning obstacles such as single use zones and parking minimums, and allow conversions as-of-right if there's no change to gross floor area
- Streamline planning process to reduce costly application and planning timelines
- Targeted conversion of specific building types

The Rebound Scenario sees office vacancy stabilizing with a higher-than-average return to office rate, but pockets of high office vacancy still exist. Older office space remains underutilized and in need of renovation. This is the case in Washington DC, where the municipality is offering tax breaks for office-to-residential conversions.

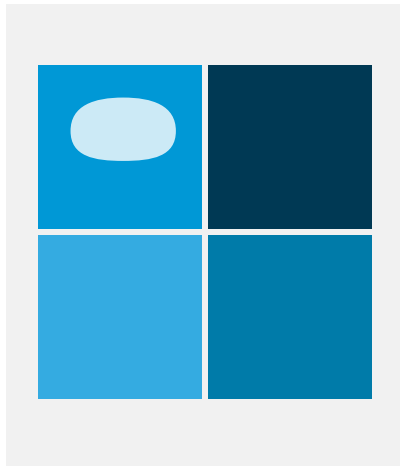
The DC Tax Abatement Program for Housing Downtown is meant to stimulate new residential housing development in specified areas of Washington DC. The program makes commercial property owners eligible for a 20-year real property tax abatement, provided they fulfill certain conditions. Conversion projects will need to add a minimum of 10 residential units with a minimum of 15% established or revamped as affordable housing. The affordable units must be planned and managed in compliance with the Inclusionary Zoning Program's rules. This program was recently launched so there is no data on its impact.



## Cool

High office supply, low/specific housing demand

Policy and program options suitable for this scenario include:



- Targeted financial incentives to support affordable housing
- Allow mixed-used buildings to make downtown more attractive and adaptable
- Create overlay plans or policy zones to encourage conversions in areas with the highest concentrations of vacant office space or certain building types
- Invest in downtown amenities and anchor uses to attract residential interest

Even with high office vacancy, a low demand for housing creates a Cool Scenario. Despite overall low housing demand, the need to develop specific types of social and affordable housing persists. An example of this scenario can be seen in Buffalo, NY.

The City of Buffalo's Green Code is a form-based code that allows for mixed-use buildings in the city. Some of the key elements of the Green Code include eliminating minimum parking requirements, increasing the maximum height of buildings to increase density, removing barriers to affordable housing, and removing regulatory barriers to adaptive reuse of vacant buildings and land.

# Regulatory Overview

The following section overviews the different layers of policy and regulation that a municipality should consider when supporting office conversions. This work is based on previous policy and zoning by-law reviews of six Canadian cities across six provinces, identifying common themes across planning policy and regulatory environments that either support or hinder office conversions.

## Municipal Plans and Policies



### Official Plan:

An Official (Community) Plan can create the right conditions for office conversions by including policies that align with downtown intensification, mixed-use, transit-oriented development, and downtown amenities. To encourage office conversions, an Official Plan should consider:

- Investments in infrastructure and amenities, to improve the vibrancy and attractiveness of neighborhoods
- Eliminating development permit requirements for office conversions to streamline office conversion applications
- A strategy for transit-oriented development leverage underutilized office space for housing around existing or planned higher order transit investments
- Reducing parking requirements



### Municipal Office Policy:

A comprehensive Office Policy ensures a balanced office market and helps meet the demand for residential units through office conversions. An Office Policy should consider:

- A study and evaluation of the office space market to understand the scale of opportunity and demand of firms with stop-gap measures to prevent overcorrection

- A suite of information tools to help building owners understand opportunities for and how to undertake office conversions
- Alignment with the municipality’s planning objectives and strategy
- Tenant relocation strategy for partially occupied buildings
- Disincentives for building owners who continue keeping their property vacant
- A threshold for office vacancy where conversions would cease



### **Downtown Plan:**

Secondary to an Official Plan, downtown (neighborhood) plans provide more detailed land use that can facilitate or stall office conversions. A Downtown Plan should consider the following:

- Investments in recreational centers and public spaces to facilitate community gathering
- Investments in the revitalization of underutilized and vacant buildings
- Implementation of mixed-use zoning to support a diversity of uses in downtown
- Increasing investments in access to public transportation, biking, and pedestrian infrastructure to make downtown more accessible, convenient, and attractive for potential residents







### **Zoning By-law:**

Permissive zoning can support conversions by allowing a change of use without zoning amendments and by limiting approval challenges intended for new development:

- Eliminating parking minimums for office conversion projects to reduce costs
- Streamline planning approvals process
- Creating a mixed-use zone that enables vertical mixing of uses
- Allow for conversions as-of-right in certain locations when building volume is unchanged



### **Municipal Housing Plan:**

Housing plans with key housing targets and clear livability standards can encourage office conversions by including:

- Affordable housing incentives for non-profit developers
- Establishing design and livability standards for housing created through conversions
- Flexibility to address the adaptive reuse challenges encountered when working with an existing floor plate



### **Heritage Plan:**

A heritage strategy preserving designated heritage office buildings or those with heritage characteristics can facilitate office conversion through:

- Incentives such as grants or tax incentive to reduce costs for seismic upgrades or other structural issues
- Incentives for the preservation, replacement, and restoration of exterior and interior characteristics of heritage buildings
- Financial incentives for adaptive reuse of heritage buildings

## Other Policy Mechanisms



### Climate Plan:

A Climate Plan, including provincial and federal climate plans, can support office conversions by linking building retention and retrofit with greenhouse gas emission reduction targets as well as:

- Implementing pollution levy on demolition and redevelopment
- Providing climate incentives for office conversions to reward avoided emissions
- Providing incentives for building retrofits to support office conversions that reduce operational and maintenance costs
- Promoting the environmental benefits of adaptive reuse including a tool to estimate GHG savings through embodied carbon in the existing building and increased performance through a building conversion



### Provincial Plans, Acts, and Policies:

Policies at the provincial level can also support conversions through various financial and non-financial incentives, such as:

- Enabling office conversion projects to access provincial housing incentives such as investments for rental units and affordable housing
- Revising the provincial Building Code to make it more flexible in ways that reduce the building code requirements for office conversions, such as alternative compliance standards
- Ensuring that conversions are supported by provincial Planning Acts and Statements of Provincial Interest.

# Technical Analysis

The following three steps outline a process to identify the quantity and quality of office buildings with the potential to be converted to residential.

## Building Inventory



### 1. Working Group

Create process to bring together building owners and city staff.

Establish a **go-to municipal conversions team** to help a building owner navigate process for building conversion including **potential for affordable housing** or to address other housing needs.

Find ways to **bring together commercial and residential building owners and developers** including universities and non-profit housing providers to benefit from each other's knowledge.



### 2. Determine Threshold

Create city-specific thresholds for first round of developing a building inventory based on the previous policy overview and:

- Delineate focus areas within the City for targeted incentives
- Prioritize buildings built between 1860 - 2000s
- Prioritize buildings with over 30% vacancy
- Request floorplans from building owners to evaluate buildings' potentials



### 3. Evaluating Potential

Review CUI's **five building typologies** and **building characteristics** to understand potential of buildings for conversions in chosen buildings.

Heritage



Challenging



Brutalist



Steel Frame

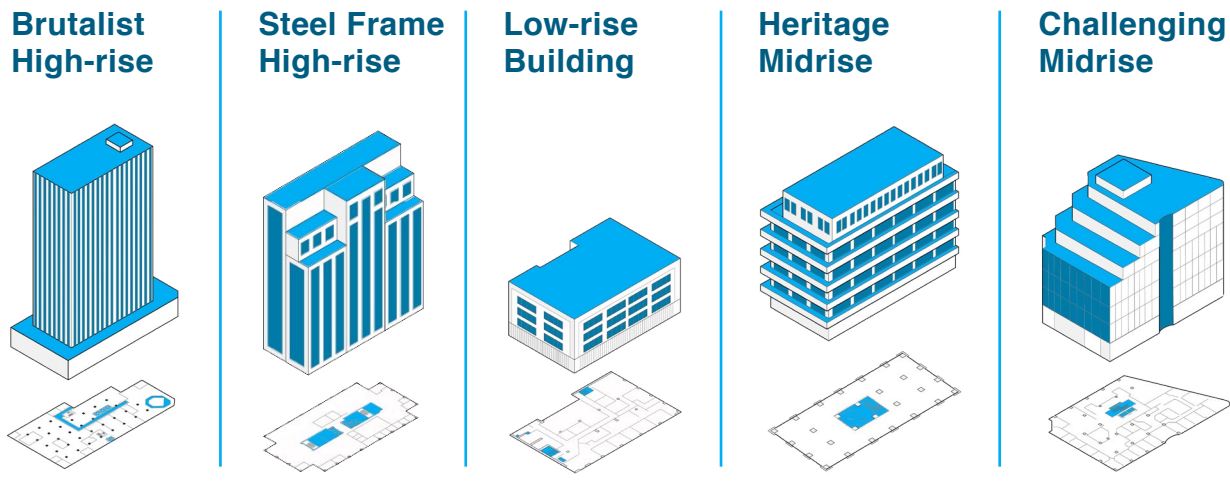


Low-rise



# Building Typologies

Once certain buildings are identified, this section provides the technical analysis of characteristics to consider when assessing a building. Five Building Typologies were developed to help illustrate general case studies by categorizing the buildings by height, age, and material. These typologies are organized left to right starting from the highest potential with the least economic risk.

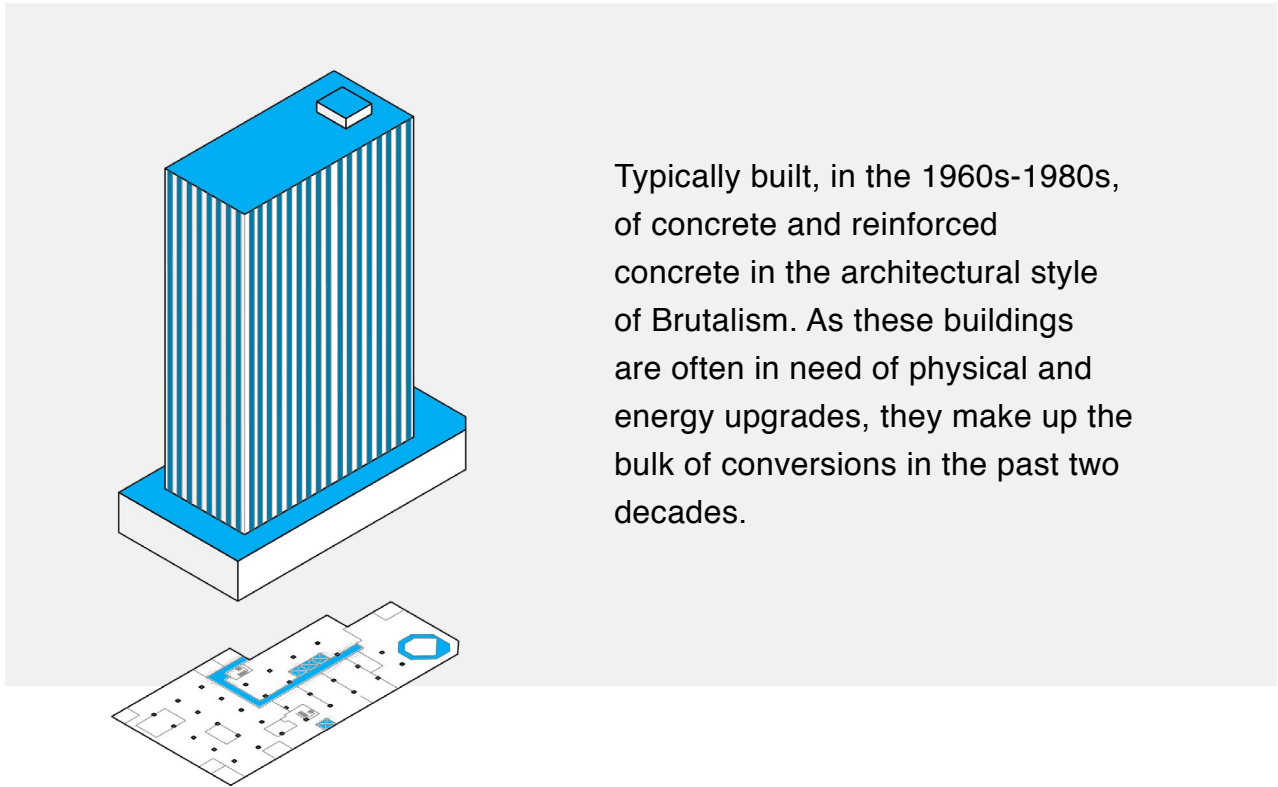


Furthermore, using a modeling technique developed by Gensler Architecture and Design, office buildings were reviewed qualitatively by considering various property characteristics. The following characteristics are classified top to bottom starting from the highest financial impact.

- **Floor Plate**  
Window to core distances between 24 to 50 ft, with 40 ft being ideal. One elevator per 100 units.
- **Building Form**  
Rectangular floorplates most desirable.
- **Servicing**  
Existence of a loading area, parking (requirements vary depending on context), and a centralised mechanical room.
- **Site Context**  
Walk and transit scores as well as impact of surrounding properties such as shadowing, view corridors, and direct natural light.
- **Envelope**  
Buildings with curtain wall systems are less desirable than those with punched, operable windows

All typologies and characteristics are expanded on in the following pages:

## Typologies: Brutalist High-rise



Typically built, in the 1960s-1980s, of concrete and reinforced concrete in the architectural style of Brutalism. As these buildings are often in need of physical and energy upgrades, they make up the bulk of conversions in the past two decades.

### Challenges:

- ✗ These mid-century buildings used the technologies of the time to create austere concrete structures with few operable windows and smaller window-to-wall ratios than earlier heritage buildings.
- ✗ Their internal structural columns obstruct interior layout
- ✗ They tend to be large in floor plate since they did not require natural light for interior spaces.

### Advantages:

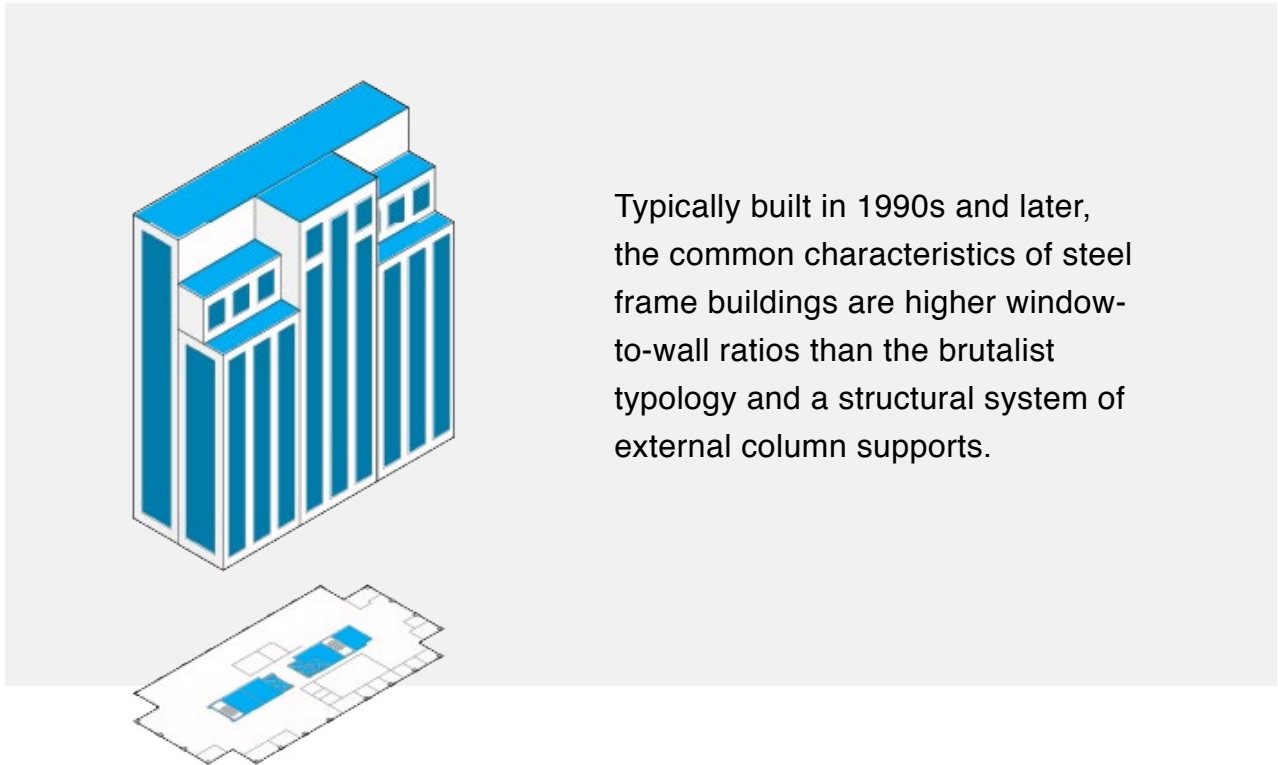
- ✓ Most have a rectangular floorplate, ideal for residential planning
- ✓ The 'podium and tower' format of buildings of this era lend themselves to conversions with natural light on four sides.
- ✓ Necessary physical and energy upgrades provide an opportunity to modernize utilities for better energy performance
- ✓ Reusing concrete material will have a big impact in terms of embodied carbon

## Case Study: Centennial Building – 1660 Hollis Street, Halifax, Nova Scotia

The 14-storey Centennial Building at 1660 Hollis Street was built in the 1970s and was one of Halifax’s first high-rise buildings. When acquired by Sidewalk Real Estate Development, the office tower was nearly 40 percent vacant having lost its tenants to newly built Class A office buildings. The mixed-use adaptive reuse project, branded Agency Art Lofts, will introduce 100 new residential units to downtown Halifax, coming in one, two, and three-bedroom configurations with tall ceilings, and will feature 75,000 square feet of retail and maintained office space. Thirty-eight out of the 100 units will be subsidized by the province of Nova Scotia as part of a \$1.9 million deal to rent those units for the first 20 years at 20 percent below the average rate reported by CMHC.



## Typologies: Steel Frame High-rise



Typically built in 1990s and later, the common characteristics of steel frame buildings are higher window-to-wall ratios than the brutalist typology and a structural system of external column supports.

### Challenges:

- ✗ Tend to be large in floor plate since they did not require natural light for interior spaces
- ✗ Glazed curtain walls often mean the façade would have to be replaced to install operable windows or build balconies

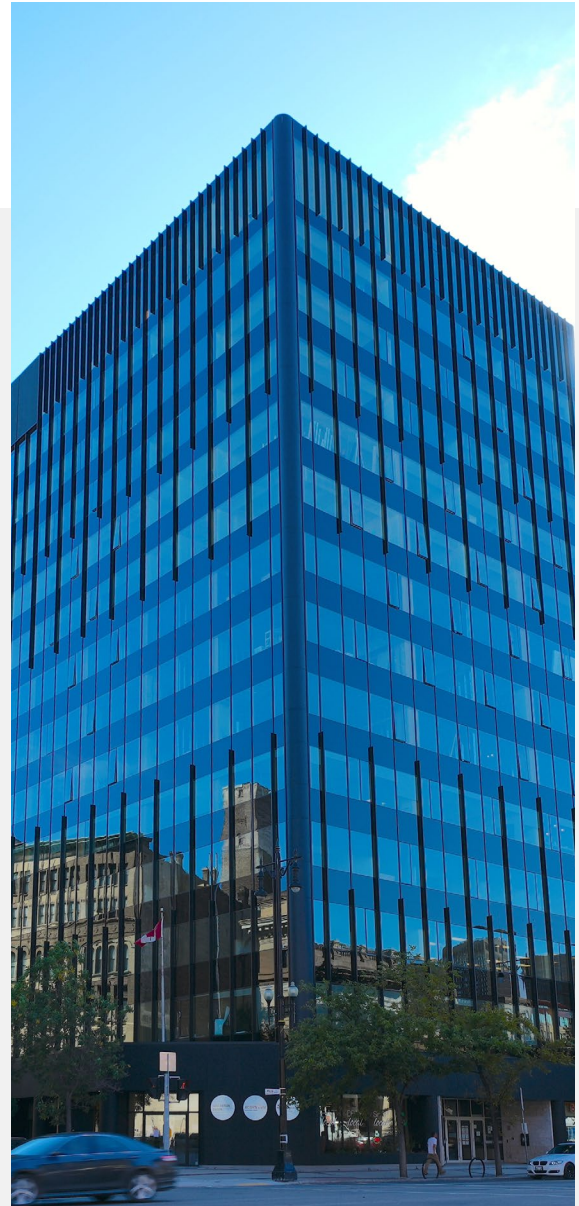
### Advantages:

- ✓ These buildings do not have interior columns that interrupt the space, allowing for flexible unit configurations
- ✓ High window-to-wall ratio
- ✓ Tend to be newer buildings so utilities and materials will be of higher quality and easier to bring up to code

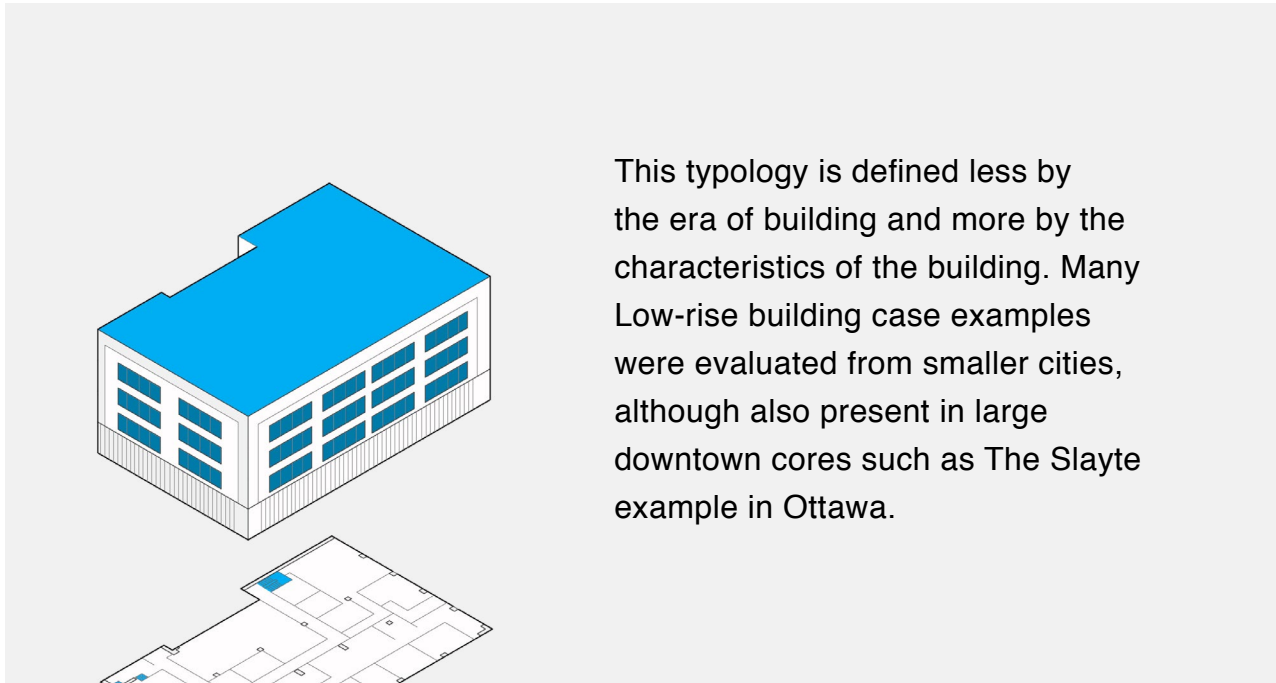


## Case Study: 433 Main Street, Winnipeg, Manitoba

Located in Winnipeg's Exchange District, a heritage area undergoing significant revitalization, 433 Main Street was converted from a ten-storey office building to mixed-use residential by Alston Properties. The project was completed in 2022. This adaptive reuse features 80 residential units made up of one and two-bedroom units marketed as luxury apartments. The only engineering component substituted out was the mechanical system. The building features three high speed elevators, a fitness center, penthouse lounge, in-suite laundry, and outdoor parking.



## Typologies: Low-rise Building



This typology is defined less by the era of building and more by the characteristics of the building. Many Low-rise building case examples were evaluated from smaller cities, although also present in large downtown cores such as The Slayte example in Ottawa.

### Challenges:

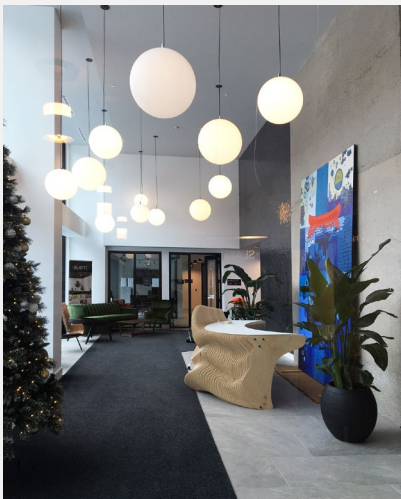
- ✗ Tend to have lower window-to-wall ratios than other typologies
- ✗ Tend to be squat with large floor plates thus requiring more area for circulation (i.e., hallways, elevators, stairs).

### Advantages:

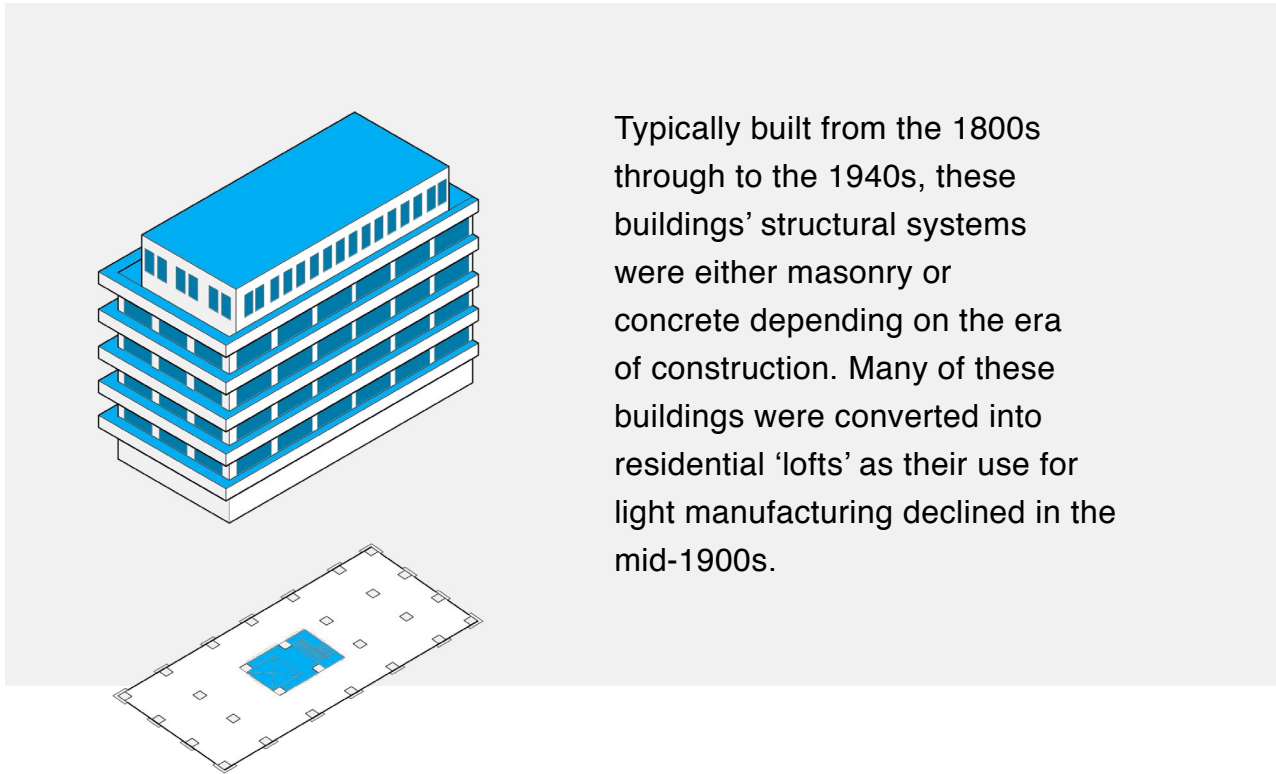
- ✓ When the size of the floor plate is manageable, interior space can be utilized for common amenities
- ✓ Rectangular floor plates are ideal for residential conversion
- ✓ Operable windows are often already in place
- ✓ This typology is prolific in downtowns across Canada so there is a large supply available
- ✓ Reusing concrete material will have a big impact in terms of embodied carbon

## Case Study: The Slayte - 473 Albert Street, Ottawa, Ontario

The Slayte, at 473 Albert Street, is an eleven-storey former office building located at the western edge of Ottawa's downtown core. The conversion to residential and commercial mixed-use was carried out by CLV Group Developments, starting in 2019 and completed in 2022. The building features 158 residential units, 6,700 square feet of indoor amenities, and 7,500 square feet of exterior rooftop amenities. The residential unit mix includes studio, one-bedroom plus den, and two-bedroom configurations. The façade was altered slightly to include Juliet balconies to introduce a more residential feel while maintaining the existing structure. High quality amenities include a business centre, gym, and rooftop patio and party lounge.



## Typologies: Heritage Mid-rise



Typically built from the 1800s through to the 1940s, these buildings' structural systems were either masonry or concrete depending on the era of construction. Many of these buildings were converted into residential 'lofts' as their use for light manufacturing declined in the mid-1900s.

### Challenges:

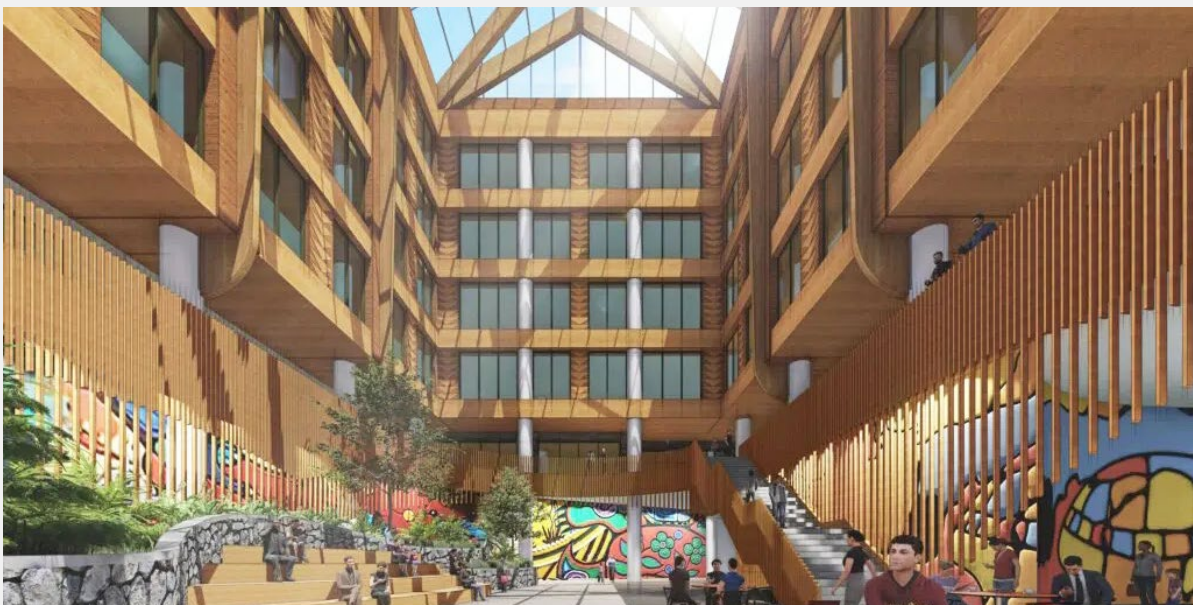
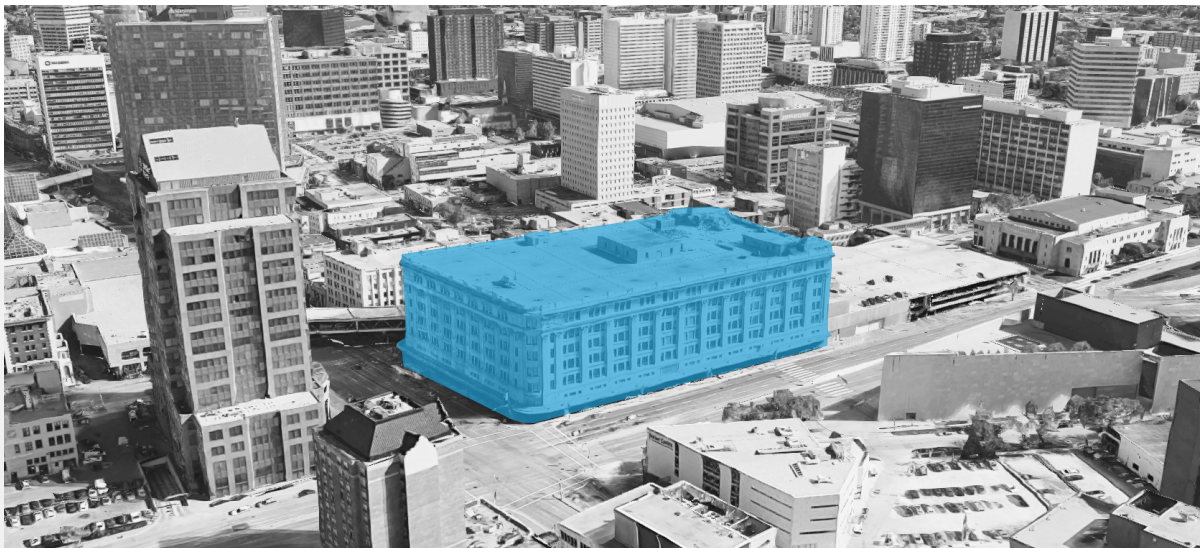
- ✗ Interior columns that provide structure interrupt the design of interior spaces
- ✗ Larger floor plates and challenges of servicing due to differences in Building Code requirements of the time

### Advantages:

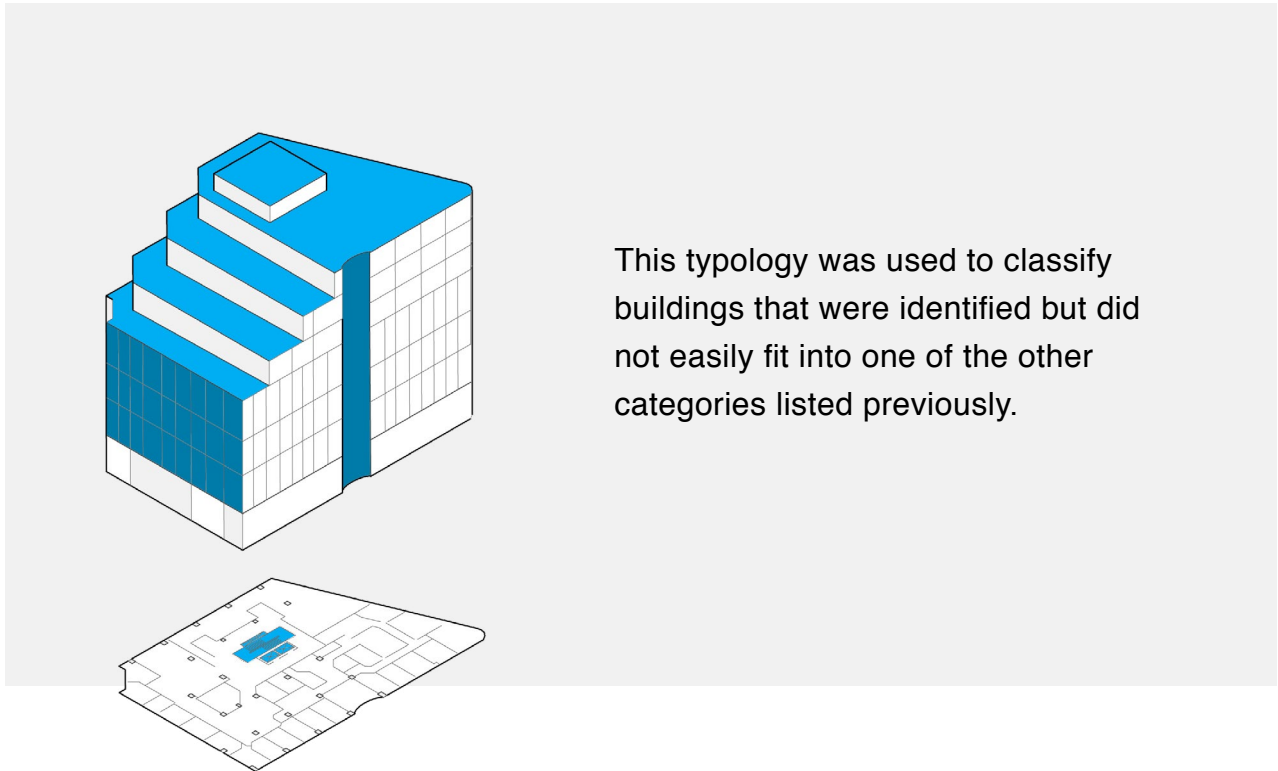
- ✓ Needing to have an abundance of natural light, these buildings typically have high window-to-wall ratios and high ceilings
- ✓ Historic characteristics, and location of heritage buildings lend themselves to housing in core areas of the city
- ✓ With many having heritage designations, demolition is not possible and adaptive reuse must be considered with resources often made available.
- ✓ Heritage buildings have unique architectural qualities that will make them attractive to residents

## Case Study: Wehwehneh Bahgahkinahgoohn - 450 Portage Avenue, Winnipeg, Manitoba

The iconic six-storey Hudson's Bay Company (HBC) heritage building in downtown Winnipeg was transferred, in exchange for elk skin and beaver pelts, to the Southern Chiefs' Organization (SCO) in a high-profile act of reconciliation. The First Nations-led, environmentally conscious, adaptive reuse of the former department store is called Wehwehneh Bahgahkinahgoohn, meaning 'it is visible'. Once complete, the century-old limestone building will feature a variety of culturally appropriate commercial, institutional, and residential uses.



## Typologies: Challenging Mid-rise



This typology was used to classify buildings that were identified but did not easily fit into one of the other categories listed previously.

### Challenges:

- ✗ Irregular floorplates make it harder for residential conversion. Interior column structure, which often follows the irregular shape, leaves odd corners.
- ✗ Glazed curtain walls often mean the façade would have to be replaced to install operable windows or build balconies.

### Advantages:

- ✓ Newer construction and services, as well as staggered floor plates offer opportunities to accommodate outdoor amenity space and may lend themselves to conversions on a case-by-case basis.
- ✓ Opportunity for creativity.

## Specific Characteristics

Building typologies are meant to provide guidance on overall advantages and challenges to take into account when first considering a building. Nonetheless, each building is unique, and the following characteristics aim to give guidance on the more specific aspects of a single building.

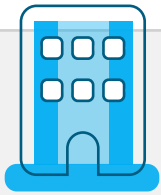
The following characteristics are:



**Floor Plate**



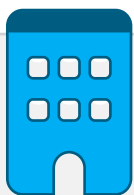
**Building Form**



**Servicing**



**Site Context**



**Envelope**

## Characteristics: Floor Plate

**Consider: window-to-core distance; existing number of elevators.**

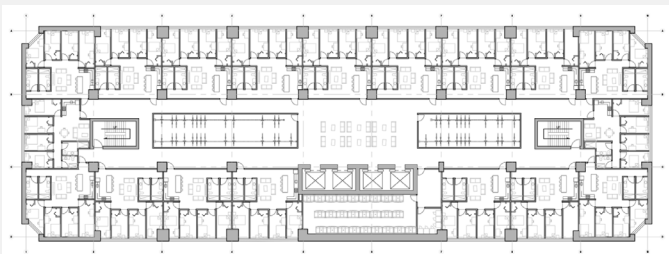
The ideal window to core distance is 40 feet but buildings can be organized within the range of 24-50 feet. Regarding elevators, residential buildings require one elevator per 100 units, which often already exists since offices are subject to higher requirements for elevators.

*Illustrated floorplans were developed by students and have not been checked for Building Code compliance.*



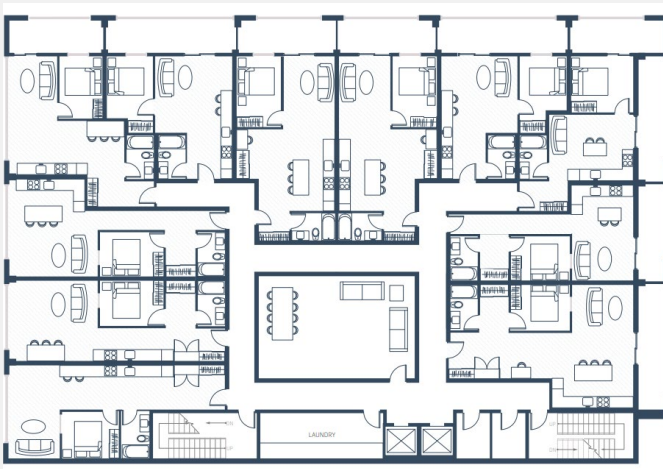
Thinner floor plates allow all units to have better access to natural light.

*Graphic from University of Calgary Students:  
Abira Mirza + Teegan Heinrichs  
Proposed Floorplans*



Floor plate is bigger than ideal, with common storage and shared utilities placed behind elevator core.

*Graphic from University of Calgary Students:  
Amélie Boucher-Duplain + Connor Glass  
Proposed Floorplans*



Large floor plates leave “left over space” near the core which can serve as common amenities to be enjoyed by the building’s community.

The two elevators shown in the floorplan, with this specific room distribution, could serve up to 18 floors (200 units).

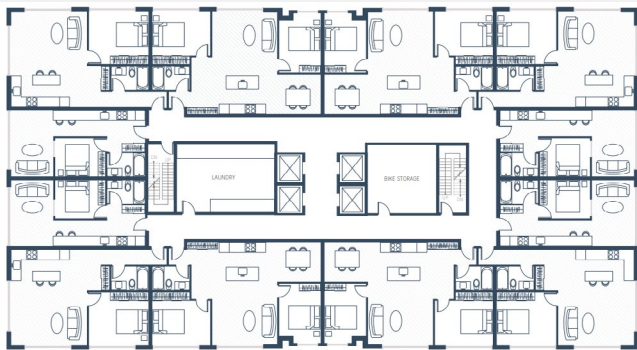
*Graphic from University of Calgary Students:  
Louise Barraza + Samara Schneider  
Proposed Floorplans*



# Characteristics: Building Form

## Consider: shape of the building

Rectangular floorplates are preferable to ease the residential configuration across all floors of the building. For this reason, buildings with irregular floorplates will score lowest.



Rectangular floorplates make residential unit planning easier, organizing units around the central service core.

*Graphic from University of Calgary Students:  
Louise Barraza + Samara Schneider  
Proposed Floorplans*



Irregular shapes encourage different unit mixes to accommodate existing geometries. In this case, accommodating units up to three-bedrooms to take advantage of the large window-to-core spaces on the left side of the floorplan.

*Graphic from University of Calgary Students:  
Abira Mirza + Teegan Heinrichs  
Proposed Floorplans*



This floorplan illustrates how an interior set of columns can impact an irregular building floorplate.

Furthermore, in the case of this building, the floorplate changes across floors which makes design more complex, encouraging creative solutions.

*Graphic from University of Calgary Students:  
Abira Mirza + Teegan Heinrichs  
Proposed Floorplans*

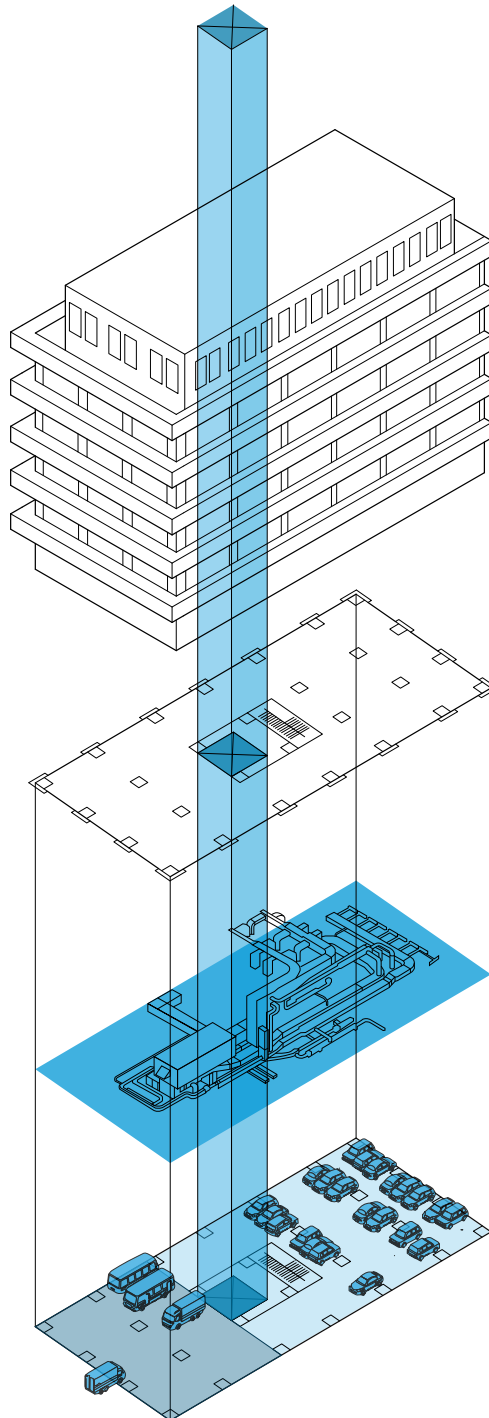
## Characteristics: Servicing

**Consider: loading; parking; structure; MEP (Mechanical, Electrical and Plumbing)**

The potential for conversions is aided by having a loading area, adequate parking, and a central mechanical room. Ensuring a building has good quality servicing equipment will greatly reduce the economic impact of a conversion since the infrastructure will also serve the residential use.

Although downtown buildings tend to score low due to their lack of parking, we must note that some cities such as Halifax are changing their parking minimums for downtown properties. Furthermore, offsite parking or visitor parking are also options

A loading dock provides the opportunity for large vehicles to deliver goods or take out trash. Loading docks tend to already exist in most commercial buildings and make the process of construction easier.



The mechanical room of a building will be proportional to the building size. Larger high-rises will need multiple rooms (about 1 every 10 floors) to distribute the necessary utilities.

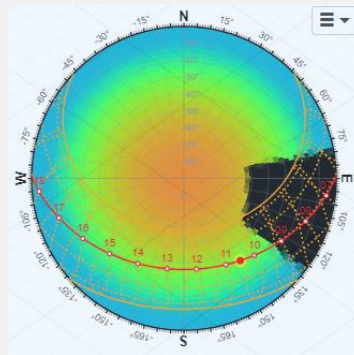
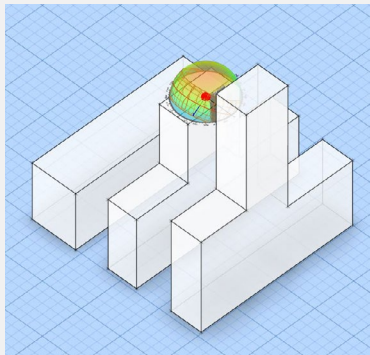
Parking spaces are sometimes required for residents.

## Characteristics: Site Context

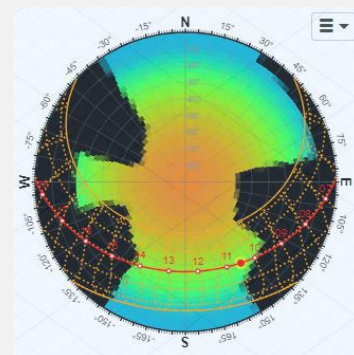
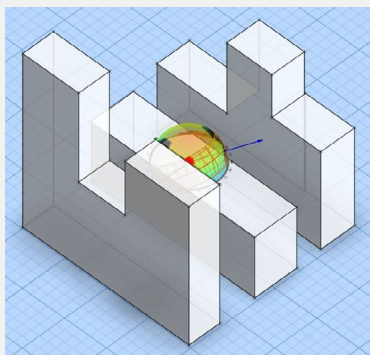
**Consider: walkability; transit access; natural light; view obstruction; south facing windows**

The Walk Score (<https://www.walkscore.com/>) is used in combination with the relationship with surrounding properties. Amenity access, no overshadowing, clear views, and access to southern light will score highest in this category.

The following graphics were developed using the Andrew Marsh Dynamic Overshadowing App. The two models of buildings illustrate a podium tower and a mid-rise surrounded by taller buildings, each with their accompanying shading mask. A shading mask is a map of which parts of the sky dome are visible from a particular point, and which are obstructed by opaque objects in and around a site.



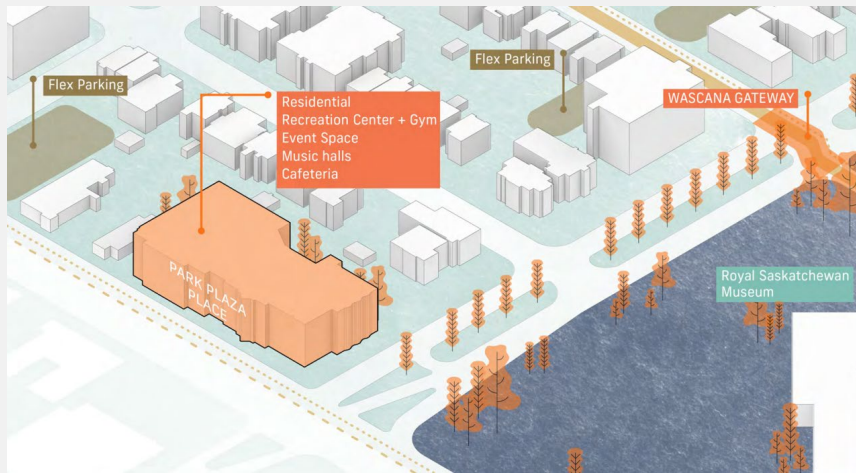
Podium tower example, illustrating an almost unobstructed sky view even with a taller tower standing next to it.



Midrise building surrounded by taller buildings on both sides will be restricted in terms of access to light.

These graphics aim to illustrate the importance of the surrounding context around a building, rather than just the building's height.

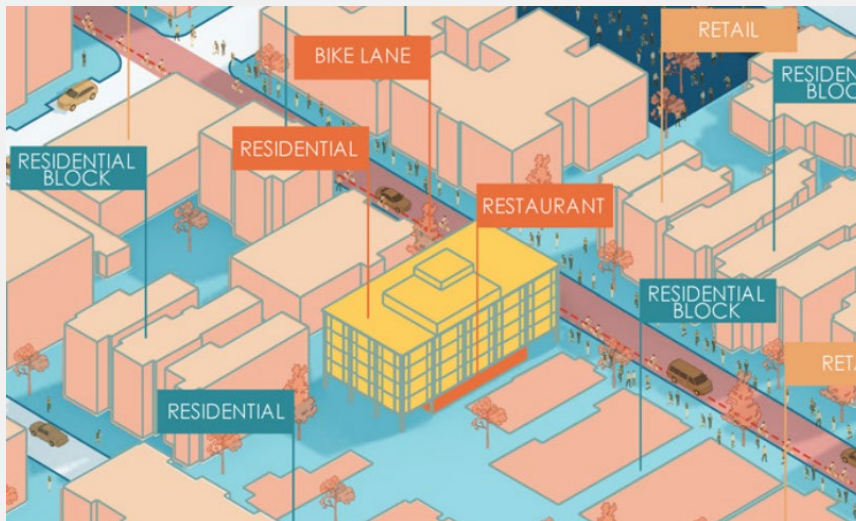
The drawings below were produced by the University of Calgary students to illustrate how they evaluated buildings in relation to their surrounding context.



*Programmatic Analysis Graphic from University of Calgary Students:  
Louise Barraza + Samara Schneider*

### Low Score

Among the buildings evaluated by Gensler, this example in Regina got a low score due to the lack of access to downtown amenities and public transit. Context aims to draw attention towards the needs of residents living in downtown.



*Programmatic Analysis Graphic from University of Calgary Students:  
Amélie Boucher-Duplain + Connor Glass*

### High Score

This example in Ottawa earned a high score in the category of Context. As illustrated in the diagrams developed by University of Calgary students, this Ottawa building is surrounded by retail, restaurants, and other residential homes.

## Characteristics: Adjacencies Worksheet

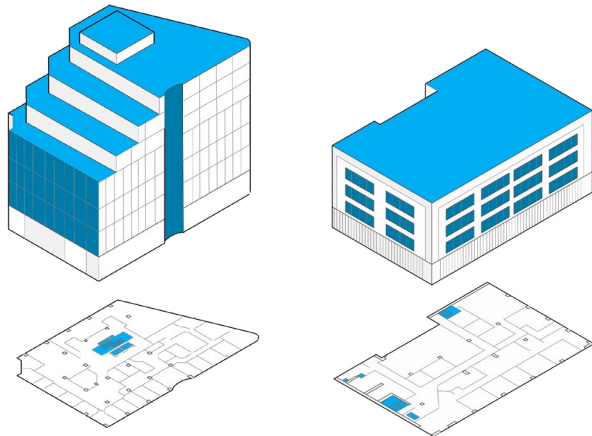
Residential buildings require certain amenities and functions to be located within walking distance for the convenience of residents living within them. The following is a non-exhaustive list of assets a municipality should map around a building to assess how its surroundings support residential intensification.

Transportation	Amenities within Walking Distance	Civic and Social Services
<ul style="list-style-type: none"><li>■ Public Transit</li><li>■ Bike Lanes and Facilities</li><li>■ Pedestrianized Infrastructure</li></ul>	<ul style="list-style-type: none"><li>■ Grocery Stores</li><li>■ Entertainment</li><li>■ Green Spaces</li><li>■ Communal Spaces</li><li>■ Parking Space</li></ul>	<ul style="list-style-type: none"><li>■ Libraries</li><li>■ Elementary, Secondary, and Post-Secondary Education</li><li>■ Community Centres</li><li>■ Child Care</li><li>■ Healthcare</li><li>■ Social Services</li></ul>

## Characteristics: Building Envelope

Consider: existing window-to-wall ratio; ease of window replacement

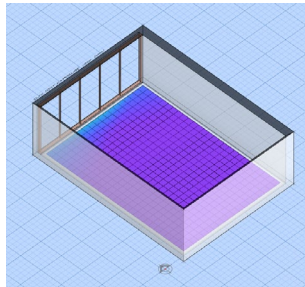
Façade replacement can increase the cost of projects making them no longer viable. Therefore, punched operable windows will score highest with minimum façade replacement being the ideal option.



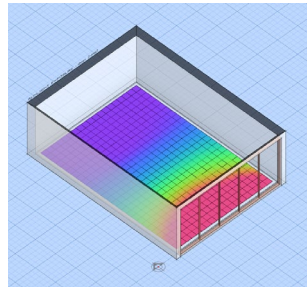
While uninterrupted curtain windows allow lots of light in, meeting building code requirements would likely mean the whole façade would have to be rebuilt in the process of retrofit. When buildings have operable windows in all bedrooms, aspects of the façade can be maintained, making the project more economically feasible.

The drawings below, taken from the Andrew Marsh Daylighting App illustrate the effect different window-to-wall ratios (WWR) can have on a room.

*A: North facing windows*

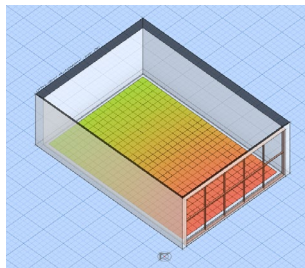


*B: South facing windows*

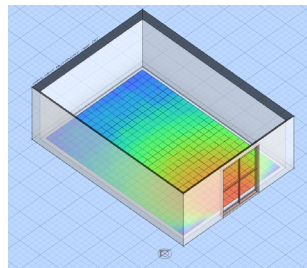


South facing windows are preferred in buildings because they receive the largest amount of sunlight in the winter and least in the summer. This characteristic helps warm the rooms in the winter and cool them in the summer, maximizing the amount of useful yearly sunlight exposure.

*C: 90% WWR*



*D: 30% WWR*



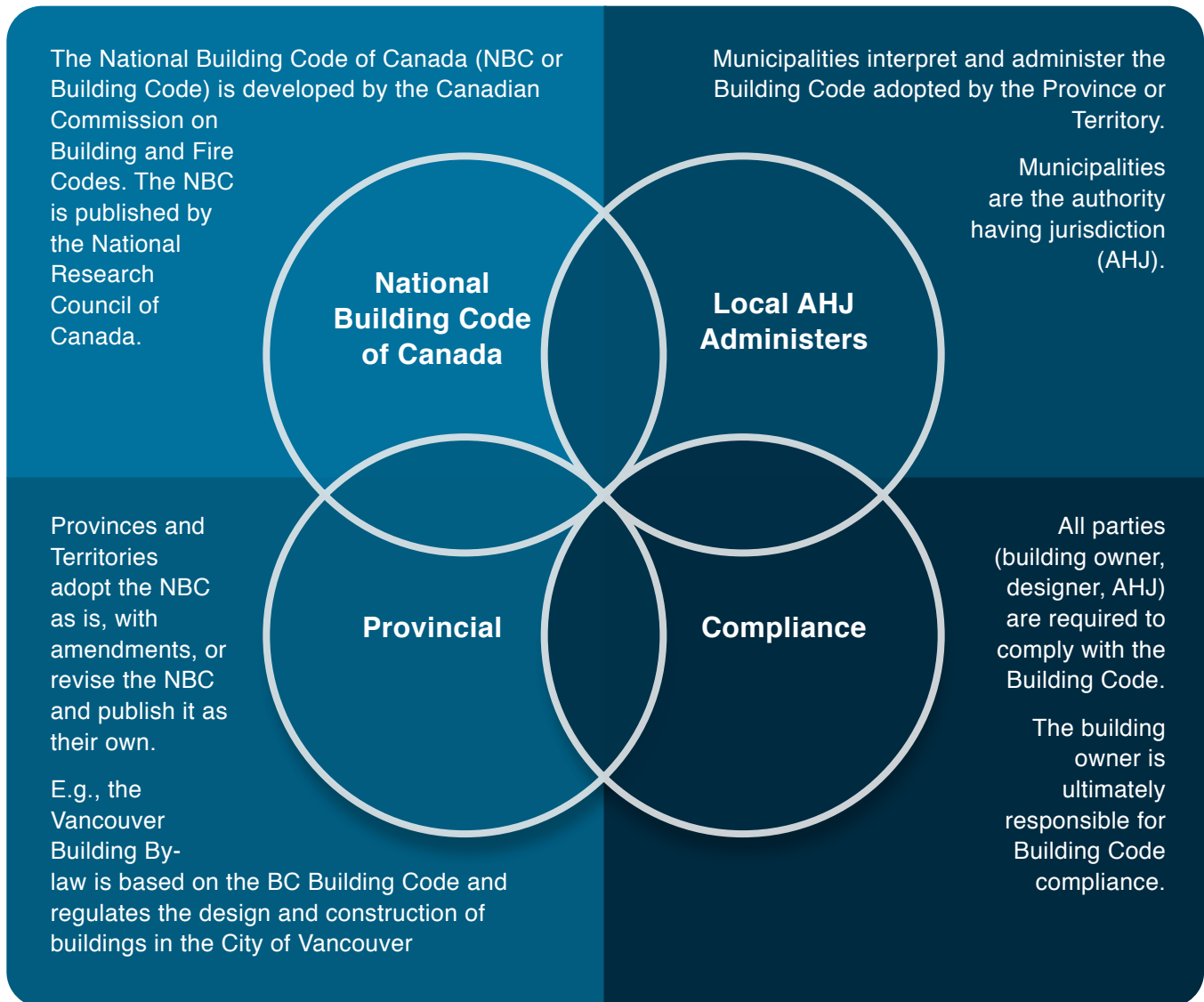
In regard to daily exposure to light, a larger WWR is preferred so the least amount of artificial lighting can be used. Nonetheless, WWR should be considered in combination with the need for operable windows in all legal bedrooms.

# Building Code

## Process Overview

This Building Code section was developed by Kilo Lima Code under the leadership of Kelsey Longmore. The purpose of the next section is to provide a high-level summary of the potential challenges of conforming to the current edition of the Building Code when considering converting an existing office building to a residential use. A change in major occupancy (in this case from office to residential) requires the application of current requirements.

The following figure illustrates the code enactment and adoption process in Canada.



The Building Code is not written in a linear order and must be read holistically by a specialist to ensure the correct requirements are considered and applied. The building classifications for all uses in the building need to be considered. It is possible that a change in major occupancy from office use will not be permitted through an acceptable solution, however there is typically an opportunity for alternative solutions. The building classification will change when the major occupancy changes from office to residential, and if the building contains other uses (i.e., coffee shop, retail, assisted living, etc.).

Although the NBC does not provide guidance for change in major occupancy and existing buildings, recommendations are available from the Vancouver Building By-law (VBBL), the Ontario Building Code (OBC), and the Quebec Construction Code (QCC). The Canadian Commission on Building and Fire Codes released Final Report - Alterations to Existing Buildings in April 2020. The Joint Task Group (JTG) who developed the report “recommends a concept very comparable to the concepts used in Ontario’s building code (Ontario Building Code Part 11) and Quebec’s building code (Quebec Construction Code Part 10) on existing buildings.” Additionally, “the JTG also reviewed the Bylaw 10908 of the City of Vancouver and the International Code Council codes in more detail.”

The following sections will illustrate an overview of Fire and Safety requirements and Miscellaneous requirements to raise awareness on the scope and complexity of building code considerations.

## **Fire and Safety Considerations**

Residential uses require a higher level of fire protection and life safety than most other uses as occupants may be sleeping or have impaired judgment and are unable to respond to an emergency as if they were awake and alert. Additionally, an office use has one of the most relaxed set of requirements as occupants are typically aware of their surroundings and are able to respond quickly.

Following are some potential upgrades to anticipate.



### Façade

Some building materials may not meet current requirements with respect to flammability (e.g: foamed plastics in exteriors)

### Exit stairwell fire separations

The exit is one of the most important passive fire protection elements. Residential buildings need two points of egress

### Operable windows

Operable windows are required in all bedrooms

### Firestopping

At all floor penetrations, as well as gaps between floor slabs and exterior wall systems

### Structural fire protection

may include: floor, roof, and/or load bearing element fire resistance ratings



### Sprinklers

Any buildings five-storeys or more will require the installation of a sprinkler system and/or upgrades will be required for the new use and floor plan



### Fire alarm system

Redesign is required to include smoke alarms in suites, smoke detection in public corridors, increased audibility, etc.



### Smoke & fire dampers

Required throughout the heating, ventilation, and air conditioning (HVAC) systems


## Miscellaneous Considerations

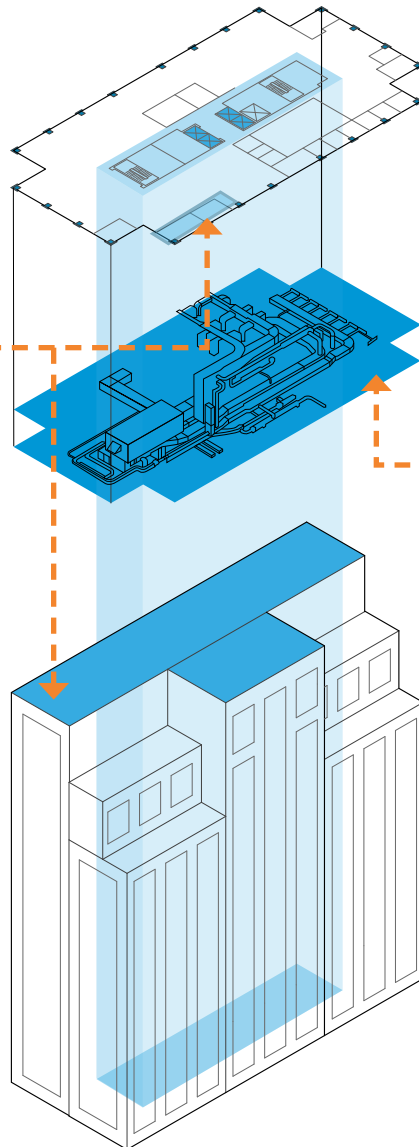
As previously noted, some provisions for residential use are more restrictive than office use. However, others are not. When there is no increase in requirements between the two (residential and office) based on current Building Code, the authority having jurisdiction may allow an existing conforming condition to remain.

Due to many buildings having existing non-conforming conditions, it is recommended that a full building compliance assessment be completed early on, and not solely focusing on additional requirements for residential use. Although there are many potential upgrades, the intent is not to discourage conversion, but to provide awareness to developers and owners so they can ensure they have qualified professionals on their team.

**NBC, Division B, Section 3.8:**  
A change in major occupancy requires all current accessibility requirements to be addressed for all areas other than within suites.


**NBC, Division B, Part 5: Environmental Separation**  
Sound transmission ratings are required between each residential suite and the rest of the building.  
Wind, rain and snow loads require assessment.

  
**NFC, Division B**  
Fire safety plans, including inspection, testing and maintenance.

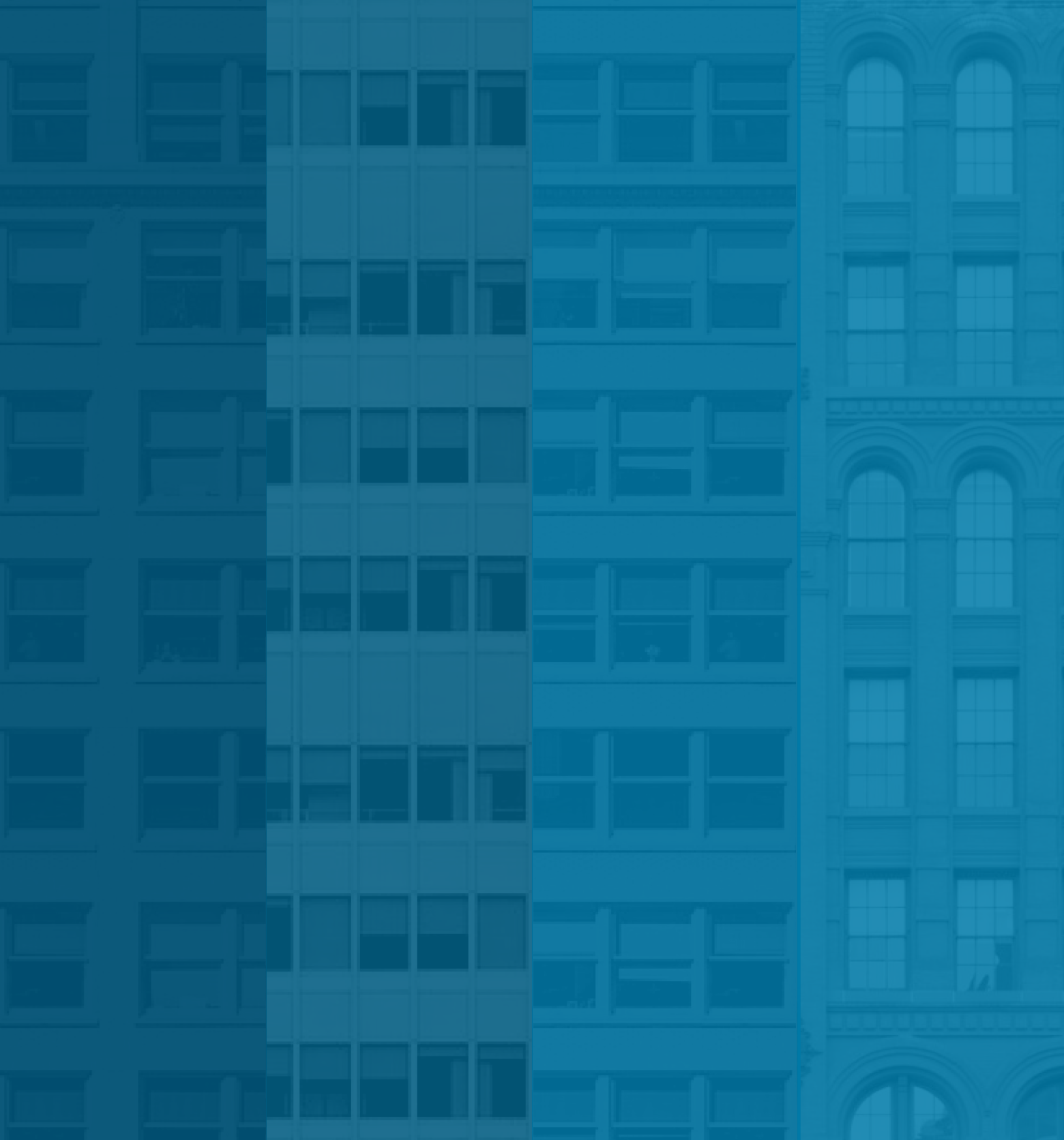


**NBC, Division B, Part 4: Structural Design**  
Structural upgrades may be required due to increase in loading in public corridors, increased seismic requirements, and addition of balconies and stairs within suites.

**NBC, Division B, Part 6: Heating, Ventilating and Air Conditioning (HVAC)**  
Many existing buildings do not meet current Building Code for HVAC requirements. Air quality is extremely important for residential uses and is likely to require upgrades.

  
**NPC - National Plumbing Code**  
Materials used will need assessment to comply with the current code.

Recommendation	Challenge being addressed
<p>Advocate for clear and concise guidelines/advisories on responsibilities, developed and issued by the federal government.</p>	<p>Confusion and frustration due to unclear responsibilities of various stakeholder groups (owners, design teams, authorities having jurisdiction (AHJs), etc) in applying the Building Code to existing buildings.</p>
<p>Develop a Canada-wide online platform to efficiently find all current and relevant information to support office to residential conversions.</p>	<p>Provincial/territorial/municipal interpretations, best practice guides, and incentive programs are difficult to find.</p>
<p>Develop guidelines for Building Code upgrades to existing and heritage buildings.</p>	<p>Considerable inconsistency in Building Code requirements across Canada for existing and heritage buildings.</p>
<p>Develop quality Building Code education and tools.</p>	<p>Lack of education and tools tailored to various stakeholder groups (owners, design teams, AHJs, etc.) for the Building Code and referenced standards involved in the life cycle of a building (building design, construction, operation, rehabilitation, etc.).</p>
<p>Develop an office to residential conversion toolkit. This toolkit should be tested and evaluated through case studies and updated as needed.</p>	<p>Stakeholder groups may be unclear as to next steps after reading this document.</p>



**Gensler**



**Turner**

# Appendix B: Office Building Assessment Framework

## Introduction

As part of *Charting the Path to Office Conversions in Canadian Cities*, a National Housing Strategy Demonstrations Initiative, CUI reached out to participants from Halifax, Ottawa, and Regina to collect information regarding existing office building inventories, if available, and to solicit suggestions for office building candidates. Building inventories were compiled for each case study city, geographically confined to delineated downtown policy areas. To determine which office buildings were suitable for residential conversions, it became evident that an assessment framework was necessary.

To support municipalities, building owners, and developers in the identification of ideal candidates for office-to-residential conversions, CUI created the Building Inventory Assessment Framework (OBAF). Every office building has its own unique combination of opportunities and constraints. The OBAF provides criteria through which to assess the conversion compatibility of individual office building candidates.

Refer to [The Case for Conversions Guidebook](#) for supplementary material to support your own assessments.

## Methodology

The Office Building Assessment Framework (OBAF) builds upon research and engagement findings from CUI's 2023 National Housing Strategy Solutions Lab, which explored the barriers and opportunities for office conversions in Canadian downtowns, including technical building considerations.

The OBAF outlines how different characteristics of a building, and its surrounding context, impact its conversion compatibility. Each criterion (listed in Figure 1 by category) is accompanied by brief text explaining its significance, including suitable and unsuitable characteristics for office-to-residential conversion viability.

■ Figure 1: Office Building Assessment Framework criteria

Building Form and Floorplate	Servicing	Building Envelope	Site Context
<ul style="list-style-type: none"> <li>■ Building shape and typology</li> <li>■ Floorplate size</li> <li>■ Floorplate shape</li> <li>■ Structural observations</li> </ul>	<ul style="list-style-type: none"> <li>■ Structure and foundation</li> <li>■ Mechanical</li> <li>■ Electrical</li> <li>■ Plumbing</li> <li>■ Fire</li> </ul>	<ul style="list-style-type: none"> <li>■ Windows</li> <li>■ Insulation</li> <li>■ Exterior wall</li> <li>■ Roofing</li> </ul>	<ul style="list-style-type: none"> <li>■ Walkability and transit scores</li> <li>■ Natural light and view obstruction</li> <li>■ Opportunity for on-site amenities</li> <li>■ Incompatible building uses and/or nearby land uses</li> </ul>

To test and refine this methodology, CUI utilized the office building inventory identified through engagement with Halifax Regional Municipality. We applied the initial iteration of the OBAF to assess the inventory on a building-by-building basis. Preliminary findings helped to refine the framework. In testing the OBAF, CUI conducted desk research to find information regarding each criterion. Building owners will have access to technical specifications not readily available to the public.

The intention of this framework is to identify suitable buildings and may warrant further, more detailed investigation to determine more conclusively how feasible it is for office-to-residential conversion.

# Office Building Assessment Framework (OBAF)



## Building Form and Floor Plate

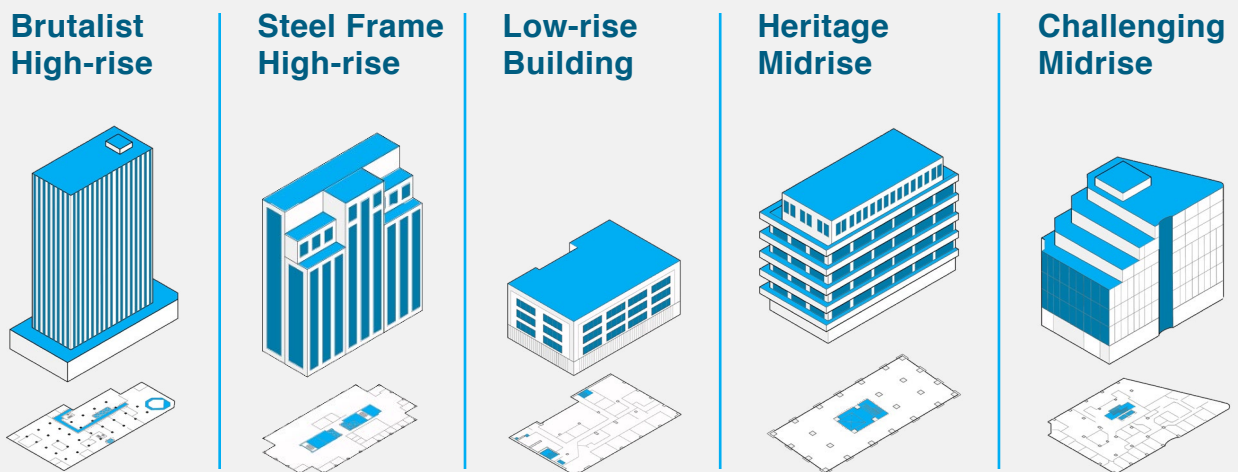
### Building shape and typology

Rectangular buildings with rectangular floor plates are most desirable for conversion.

Irregularly shaped buildings, such as those with many step backs and irregular floor plate shapes, may require creative design solutions to be made compatible for conversion. If the building is irregularly shaped, it needs to be determined whether it is possible to develop an adaptive reuse design which makes conversion feasible. There may be opportunities to take advantage of irregularly shaped buildings to create amenity spaces, balconies, greenspaces, and attractive design solutions.

Refer to [The Case for Conversions Guidebook](#) for the advantages and challenges associated with converting different building typologies in Figure 2.

■ Figure 2: Five Building Typologies



### Floorplate size

Window to core distance between 24 and 50 feet is considered compatible, with 40 feet considered ideal.

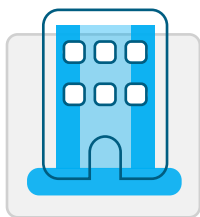
Floor plates that are too large will make it difficult to provide adequate natural light and ventilation to residential units and maintain a high floor plate efficiency. Floor plates that are too small may result in difficulties creating adequately sized units, sufficient unit yield, and amenity space.

### Floor plate shape

Rectangular floor plate shape is considered the ideal shape for conversion. Irregular floor plate shapes may be more complex to convert. Floor plate compatibility must be assessed on an individual basis.

### Structural obstructions

Structural obstructions refer to internal structural components, such as columns and structural walls, which would impact the building floorplan, thus limiting potential unit layout configurations. If the building does possess interior structural components, it needs to be determined whether the obstructions can be incorporated into a residential floorplan layout.



### **Servicing**

#### Structure and foundation

Consider the structure of the building. Ideally, the structure is in good condition and is able to support the intended conversion without requiring significant reinforcement or repair to make the building safe for years to come.

### Mechanical

Elevator:

Ideally, the existing elevator(s) will be in good condition and meet requirements for intended conversion (including Building Code). If elevator(s) need to be replaced, determine whether the existing elevator structure can support appropriate elevator(s) for intended residential use. If not, consider the feasibility of upgrades and/or adding additional shafts if required.



Heating, ventilation, and air conditioning (HVAC):

It is most likely that the existing HVAC system will need to be replaced or heavily modified to support residential use. Ideally, the existing HVAC system and the building does not create any significant barriers to removing existing system and the ability to make necessary improvements, replacements, upgrades, and/or installation of new systems for residential use.

### Electrical

Consider if any major components of existing electrical systems can be reused when the building is converted, and the challenges associated with removing and replacing components of that system.

For office-to-residential conversions, most of the electrical system required to provide electricity to the residential units created will need to be purchased and installed new. It is unlikely that the existing electrical system, other than the feeder line, will be able to contribute much to the system required to support individual residential units.

### Plumbing

Consider if any major components of existing plumbing systems, such as the main pump, central stack, and main riser, can remain when the building is converted, and the challenges associated with removing and replacing components of that system.

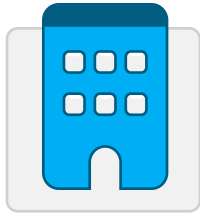
Similar to electrical systems, most of the plumbing system required will need to be purchased and installed to service individual residential units.

### Fire

Consider if emergency exits and stairwells meet the Building Code requirements triggered by a change in use to residential, and if the building allows for the construction of additional emergency exits, stairwells, or the alteration of existing stairwells.

If existing emergency exits and stairwells do not meet residential Building Code standards, consider how difficult it would be to meet those requirements.

Refer to the National Building Code of Canada.



## **Building Envelope**

### Windows

Consider how many sides of the building have windows. Three or more sides are preferable. However, if less than three sides of the building have windows, other factors must be considered such as the floor plate size and shape to determine if the building is compatible for conversion.

Buildings with glazed curtain walls will likely require the entire curtain wall to be replaced to convert it to housing. This must be considered in the cost to determine if it is feasible to convert such a building.

Consider if the sizes of existing windows are appropriate. If existing windows need to be replaced, consider whether the surrounding walls also need to be altered (i.e., due to replacement window frames and sizes).

If the windows for planned bedrooms are not operable, consider the cost of replacement.

### Insulation

Consider if existing insulation is sufficient for residential use and its state of repair.

### Exterior Wall

Consider the state of repair of exterior walls and the costs to alter, repair, or refurbish.

### Roofing

Consider the state of repair of the roof and the cost of refurbishing if necessary. If it can be used for amenity space, consider the cost of meeting Building Code requirements for weight load, sound, etc.



## Site Context

### Walkability and transit

While not directly related to the technical or financial feasibility of office conversions, walkability and transit access are key ingredients to support residents' quality of life. To support planning justifications for office-to-residential conversions, utilize [Walk Score](#) to determine the building's access to amenities, services, entertainment, and transit.

### Natural light and view obstruction

Consider the impact of the building's orientation and the impact of surrounding structures, shade, and views. South facing windows are beneficial as they provide ample natural light and passive solar gain to heat units in the winter. Ideally, nearby structures do not create significant shade on the building or obstruct views from inside the units.

### Opportunity for on-site amenities

Consider if the existing design of the building allows for the construction of amenities on-site for residents, such as a gym, lounge, rooftop patio, coworking space, etc. Also consider if the building allows for the construction of ground-oriented commercial space and amenities accessible to the public.

### Incompatible building uses, or nearby land uses

Consider the surrounding land uses to determine if there will be any conflicts in terms of residents' quality of life.

# Appendix C: Halifax Building Tours – A Photo Essay

As part of the research conducted for *Charting the Path to Office Conversions in Canadian Cities*, a National Housing Strategy Demonstrations Initiative, CUI collaborated with developer Sidewalk RED in Halifax to conduct building tours of in-progress conversion projects. Tours were conducted in September 2023.

The purpose of the tours was to gather information regarding the adaptive reuse and construction of conversion projects. This allowed CUI and participants to better understand the process and challenges encountered from a developer perspective.

Participants included local stakeholders representing planning, housing, economic development, business improvement areas, post-secondary education, and representation from Halifax Regional Municipality (HRM), Government of Nova Scotia, and CMHC.

Guided by representatives from Sidewalk RED, participants toured three buildings in Dartmouth and Halifax at different phases of conversion. The developer highlighted some of the major and unique challenges faced during the projects. They also provided building information and context, rationale behind design decisions, and building layouts. Open dialogue was encouraged throughout the tour as participants asked questions and generated discussions amongst themselves, and with Sidewalk RED representatives.

A follow-up virtual meeting was hosted by CUI with a Sidewalk RED representative and building tour participants. This provided an opportunity for further discussion to identify key takeaways from observations and insights.

Below is a photo essay summarizing CUI's observations and findings from tours of The Shuffle, located at 65 King Street in Dartmouth, and Agency Art Lofts (the former Centennial Building) located at 1660 Hollis Street in downtown Halifax.



■ Figure 1. Exterior view of The Shuffle building

## The Shuffle

Our tour began with The Shuffle building, located at 65 King Street, Dartmouth. This building was in the final stages of the conversion. Originally constructed in the 1970s, the seven-and-a-half storey building served as a hotel and office space prior to undergoing the current conversion. The conversion project will result in 81 residential units and ground floor retail space. The units range in size from 240 square foot micro-studios to 720 square foot two-bedroom units. The conversion project was done in phases, with the second phase adding an additional level and constructing the rooftop patio.

The necessary development applications for this project were submitted in January 2020, followed by three more throughout 2020. Approvals were received one to eleven months after each application was submitted. Most were approved within one to four months of application submission. The final application approval was received in September 2021.

■ Figure 2. Residential studio unit within The Shuffle conversion project



■ Figure 3. Copper piping carried over from the original structure in The Shuffle



While not an office-to-residential conversion, the inside look into the conversion of The Shuffle provides a sense of the challenges to be encountered during adaptive reuse and the creativity required to convert irregular floor plates.

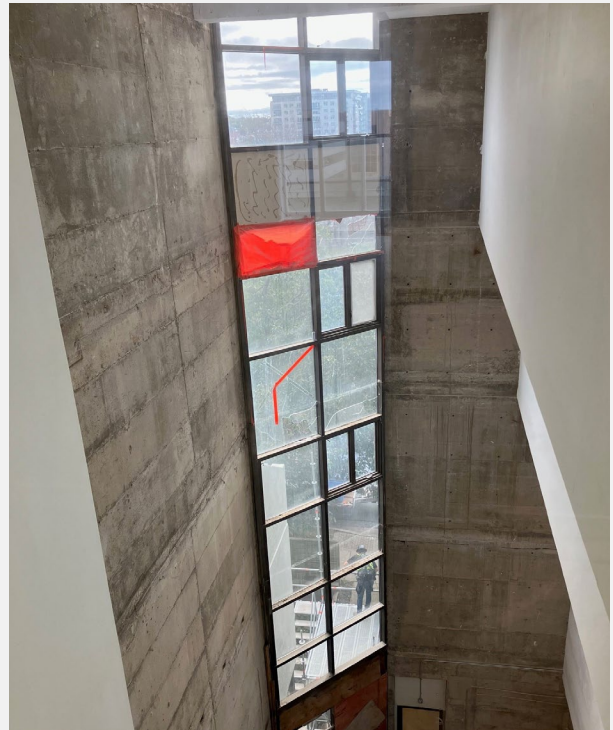
### **Built Form**

The Shuffle features an irregularly shaped floor plate rather than a simple rectangular floor plate shape, which is typically preferable for residential conversion. Additionally, the building has a vertical atrium, narrowing at the top floors thus further contributing to the irregularity of the floor plate. To accommodate the existing floor plates, the developer leveraged the existing hotel configuration.

### **Unique Building Elements**

Various components of the original building were preserved and integrated into the converted building as distinctive design elements. Examples of this includes areas of exposed concrete walls and piping, particularly the older copper piping, which can be seen in Figure 3. Additionally, the atrium, shown in Figure 4, was incorporated into the

■ Figure 4. Points of view from within The Shuffle’s atrium



overall design and layout serving as a central feature of the building, acting as a light well providing an abundance of natural light throughout the building’s interior.

Due to the building originally being built as a hotel, it already possessed certain characteristics ideal for residential use such as balconies for each unit and large, operable floor-to-ceiling windows. These features were carried over and incorporated into the residential conversion.

### **Construction Challenges**

Throughout the project, various challenges and unique obstacles were encountered which required the developer to devise innovative solutions. As already described, one challenge was The Shuffle’s irregular floor plate shapes and existing floorplans originally designed for hotel rooms. In response, residential units were designed to fit within the existing floorplan, resulting in the creation of a number of micro-studio units.

Another noteworthy aspect of this project was the construction process. Construction started at the top floor then working down to the ground floor. The developer noted that this streamlined the construction process and increased efficiency.

■ Figure 5. Stairwell in The Shuffle which only required minor alteration



The building's systems required extensive renovation, including replacing all of the electrical systems, insulation, and most plumbing. Less renovation and replacement of the existing plumbing system was required as opposed to if the building was previously an office, as the existing plumbing system supported the individual hotel units. Additionally, the elevator was replaced and extended to service the top two floors. The elevator shaft dimensions did not need to be altered beyond height, which can be a very difficult undertaking. Moreover, the stairwell did not require any major alterations other than adding appropriate railings which can be seen in Figure 5.

A significant unforeseen challenge involved the renovation of the underground parking garage. This renovation resulted in costs many times greater than the initial estimate. This is a testament to the unpredictability and unforeseen challenges that may be encountered when undertaking a conversion project.





■ Figure 6. Exterior view of The Centennial Building

## Agency Art Lofts (the former Centennial Building)

Agency Art Lofts, in Downtown Halifax at 1660 Hollis Street, was built in the mid-1970s. The 14-story Centennial Building served as an office building prior to the conversion project. The building had been experiencing high office vacancy rates, which were expected to further increase the following year as leases ended.

This office-to-residential conversion project will result in 141 new residential units, with 16 to 20 units per floor, except for the top two floors which contain penthouse units, as well as the ground-oriented levels which contain commercial and office space.

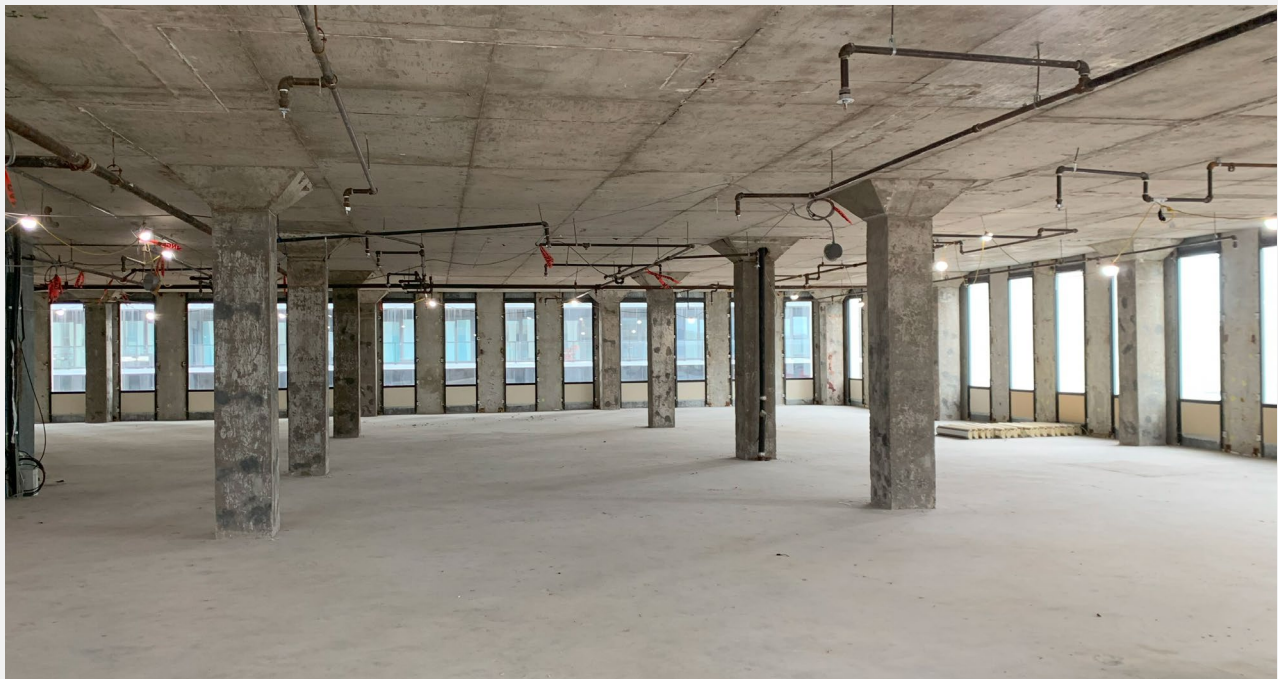
Building permit applications for the building conversion project were submitted on February 27, 2023. Applications were approved and the permits were issued four months later.

## **Built Form**

The Centennial Building is a brutalist high-rise building which has positive characteristics for residential conversion. This includes a rectangular floor plate of an appropriate width for residential use, allowing for adequate floor plate efficiency.

Also, the building was originally built as two separate adjacent buildings, constructed at different times. This helps with fire safety as it creates a fire separation wall within the current structure. This also allows for the separation of uses, as well as the separation of elevator access to the different uses (office vs. residential) within the building.

■ Figure 7. Interior view of a floor within the Centennial Building during the conversion construction process



■ Figure 8. Windows in the Centennial Building



### **Unique Building Elements**

Many of the building's original characteristics and elements are advantageous for residential conversion. For starters, the Centennial Building features high ceilings throughout with heights ranging from 14 to 18 feet.

Even features that may present some barriers have certain advantages. For example, the building has internal concrete columns as seen in Figure 7. This is typically considered undesirable for residential conversion as columns can obstruct unit configurations. Despite the constraint, the developers explained that an advantage of this building was the structural soundness of the existing concrete structure.

Also, the building's existing windows are non-operable meaning that some windows will need to be replaced to ensure each bedroom has an operable window to meet Building Code requirements. However, the advantage is that the building has an abundance of windows on all sides as shown in Figure 8.

## Construction Challenges

Conversion of the Centennial Building required the replacement of most of the existing electrical system, HVAC system, as well as the plumbing systems other than the central stack. This was done to support residential use while modernizing building systems. The developer explained that in some cases it can be more expensive to reuse building components rather than replacing them. That said, the central sprinkler system was reused in the conversion.

The building contains five existing elevators. The elevators are operational and do not need to be replaced or altered. The number of elevators and separation between two cores in the building provide the opportunity for dedicated elevators for office and residential uses. In the original construction, the elevators did not service the top (13th) floor. To resolve this issue, rather than extending the elevator (at a significant cost), the developer chose to design the penthouse units as two-storeys, adding interior staircases to each, as this was a more feasible option.

To reduce costs, rather than replacing all windows, the developer sought to retain many of the original windows, replacing only those to satisfy Building Code requirements and offering operable windows for livability and safety. Furthermore, the top floor units will have access to a wraparound deck built over the building podium allowing for outdoor space.

## The Value of Precedents

The building tours of Sidewalk RED's in-progress conversion projects provide a window into the variations between adaptive reuse projects. While conversions can be a significant undertaking when compared to new development, nimble approaches allow developers to devise innovative solutions, assessing then making use of a building's existing assets to prolong its life for a new era. Office-to-residential conversions provide opportunities to breath life into depreciating assets and support the infusion of new residents in downtown cores and support more complete communities.

# Appendix D: Conversions Cost Assessment Template

The Conversions Cost Assessment Template (CCAT) is a pro forma tool created by CUI under the Charting a Path to Office Conversions in Canadian Cities project, a National Housing Strategy Demonstrations Initiative.

While office-to-residential conversions can be a desirable means to leverage a depreciating asset, the ability to take on such a project will be dependent on its financial feasibility. Each office building candidate will also come with its own unique considerations and technical challenges to overcome.

The CCAT is a Microsoft Excel file designed to assist potential developers or building owners in conducting a preliminary assessment of the financial feasibility of an office-to-residential conversion project, specifically purpose-built rental. It also allows the user to compare costs for a conversion project versus the construction of a comparable new building.

As costs and complexity of any project will vary greatly, this tool is not meant to provide a definitive cost for a conversion but rather a tool to use alongside of a detailed pro forma completed by a skilled pro forma expert.

Download the tool [here](#).

## Charting the Path to Office Conversions in Canadian Cities

A National Housing Strategy  
Demonstrations Initiative

### Conversions Cost Assessment Template (CCAT)

## Methodology

The CCAT provides potential developers with the ability to compare the cost of converting an office building to purpose-built rental versus the construction of a comparable new building. Users are free to adapt values in the template as they see fit.

The template incorporates typical construction project pro forma elements, such as:

- Building data
- Revenue
- Costs
- Returns

Throughout the CCAT, the user is intended to input information regarding their project in cells highlighted in light blue. Once all cells are correctly filled, the spreadsheet then calculates total costs and revenues to provide a comprehensive overview of the total costs, expenses, revenue, profit, and returns for the conversion project.

Hard costs for construction are calculated as a percentage of construction costs for a new building. Users must input the percentages required for their office conversion project. Default new construction costs are provided.

As a preliminary financial feasibility assessment, certain aspects of the pro forma utilize assumed values for adaptability. Floor plate efficiency is to be filled out by the user, with a suggested value of 80 percent, as this is often considered a typical



apartment building floor plate efficiency. However, achieving such efficiency in an office-to-residential conversion may be challenging due to the existing building layout.

Similarly, vacancy rate and collection losses can be filled out by the user, with a 1.5 percent value suggested as this is the average rental vacancy rate of Canadian cities based on CMHC's 2024 Rental Market Report.<sup>4</sup> Users can change this value to better represent their local real estate market. Other assumed values include Operating Expenses, Management Fees, Capitalization Rate, Legal and Closing Fees among others. These values are provided to make the pro forma template more user friendly to achieve estimated results.

Hard costs for multi-family residential development were attained from the developer of a multi-unit residential development in Halifax. Hard costs were obtained in a 'per unit' format, then converted to per square foot using an average unit size of 750 square foot for the calculation.

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<sup>4</sup>Canada Mortgage and Housing Corporation. (2024). Rental Market Report. Housing Market Information. <https://www.cmhc-schl.gc.ca/blog/2024/canadas-rental-landscape-2023-show-record-low-vacancies-affordability-concerns>

