



# FEASIBILITY STUDY ON THE CONVERSION OF PARKING GARAGES INTO AFFORDABLE HOUSING

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Atira Women's Resource Society is dedicated to supporting women and children affected by violence by offering safe and supportive housing and by delivering education and advocacy aimed at ending all forms of gendered violence.



# EXECUTIVE SUMMARY

## Introduction

The City of Vancouver has identified the current housing affordability crisis as the most significant challenge facing the City today.<sup>1</sup> The City must apply a creative and innovative lens to look everywhere and anywhere to find opportunities to build more housing to meet our housing targets. The City's recent adoption of the Climate Emergency Action Plan (CEAP) presents a timely opportunity for the City to reimagine its existing parking assets and rethink the role of parking lots and parking garages in our cities.<sup>2</sup> In a city like Vancouver that faces significant challenges in housing and homelessness, replacing underutilized parking garages with affordable housing could be a viable way to meet both sustainability goals and address the affordable housing shortage. Starting with the feasibility of such a transformation at the EasyPark Lot 4 location at 107 East Cordova Street, this study presents the challenges and opportunities identified by key informants to compile pertinent information to consider for a possible future conversion.

## Methodology



### PHASE 1

#### Information Gathering

- Review literature around innovative housing solutions repurposing existing infrastructure into affordable housing.
- Identify case studies of parking garage conversions that could serve as applicable examples.
- Conduct a site analysis and parking occupancy counts of the 107 East Cordova Street parking garage.



### PHASE 2

#### Key Informant Interviews

- Identify and contact relevant key informants that would provide valuable insights regarding the challenges, technical issues, and requirements involved in the conversion.
- Conduct semi-structured interviews with urban planners, architects, designers, other industry experts, and women-serving agencies.



### PHASE 3

#### Coding & Recommendations

- Examine and code qualitative data obtained through the interviews to assign and group them by theme.
- Distill and present the key insights from the key informant interviews.
- Develop broad recommendations for developing housing from converted parking garages.

## Summary

**Literature Review:** Research showed that the introduction of car-sharing options and increased transit ridership has significantly reduced vehicle ownership and parking demand at the city scale.<sup>3</sup> The 2018 Regional Parking Study found that rental residential buildings in Vancouver have a 44% oversupply of parking.<sup>4</sup> Additionally, the CEAP's specific actions to support Transportation 2040's target of achieving two-thirds of all trips in Vancouver made on foot, bike or transit by 2030 will further support this decreasing trend for parking demand.<sup>2</sup> The literature also illustrated that parking garage conversions have great potential for conversion into affordable housing as they are generally underutilized and dispersed throughout the city.<sup>5</sup> Specifically, prefabricated modular homes that could be "plugged" into the existing parking structures were discussed as having significant potential for retrofitting these structures.<sup>6</sup>

**Case Study Analysis:** Case study examples, both globally and locally, highlighted inventive ways to retrofit or convert parking assets or other existing infrastructure for other more pressing uses. In Paris, Chicago, Los Angeles, and Evanston, underground parking conversions were successfully completed into an organic mushroom farm, a logistics and fulfillment centre, a shared commercial kitchen, and a collaborative space for students and faculty respectively.<sup>7-10</sup> The unprecedented Broadway Autopark development in Wichita, Kansas is the only known successful retrofit of an existing above-ground parking garage into permanent below-market housing.<sup>11</sup> A similar project proposed in San Francisco that was nixed after facing much opposition

provides insights into challenges that can arise in the conversion process.<sup>12,13</sup> Finally, local examples of innovative projects, including the ongoing surface parking lot conversion into supportive housing for women and children in the District of North Vancouver, a childcare centre addition on the rooftop of the Gastown Parkades, as well as both a fire hall and library branch mixed-use housing development were highlighted.<sup>14-18</sup>

**Site Analysis:** The site analysis revealed the challenges of retrofitting the EasyPark Lot 4 six-storey structure - particularly its sloping floors and low ceiling height. While this research was unable to obtain official parking utilization data from EasyPark, parking occupancy counts were conducted in order to gain some insights into the parking demand for this site. The utilization rates of the eight occupancy counts conducted ranged from 4.5% to 12% with an average rate of 9.8%. However, the study acknowledges that, due to the COVID-19 pandemic, the utilization rates calculated are not representative of baseline parking demand.

**Interview Analysis:** Fourteen interviews with diverse key informants were conducted and analyzed for key themes and insights. First, the interviews confirmed that housing is a priority for the Downtown Eastside, that dignified self-contained housing is needed, and that women are particularly underserved and vulnerable. While other civic buildings such as libraries or fire halls were seen as having limited potential for retrofitting into housing due to their lack of density and long lease terms, hotel and office conversions were the most popular candidates outside of parking garages with limitations. Numerous challenges, technical issues, and requirements that were identified throughout the interviews can be grouped into the following four general themes: safety concerns relating to residential use, structural attributes that limit the possibility of a retrofit, process challenges facing adaptive reuse projects, and loss of parking supply. Ultimately, it was identified that the sloping floors, ceiling height, and lack of seismic upgrades would likely make a permanent retrofit infeasible for this site. Some key informants were interested in exploring an interim solution with prefabricated modular housing, pointing to the urgency of the housing crisis and the unique opportunity to better maximize this underutilized site while awaiting more permanent housing as an immediate benefit. However, the majority of those interviewed were in strong support of a demolition and new build scenario citing higher density and quality of the potential redevelopment as the best use of this site.

## Recommendations

There are many societal needs, including but not limited to housing, that City-owned sites face pressure to fulfill. The following four recommendations were developed to support the prioritization of this site for redevelopment into affordable housing:

**1) Build a Case:** Building a clear rationale for prioritizing this site for redevelopment, will be a critical step forward in convincing the City of Vancouver to consider this site. It is important to highlight the aspects that do make this an attractive candidate including providing transitional housing in the DTES resulting in the displacement of fewer people and the project would face less neighbourhood pushback which can typically delay social housing projects.

**2) Replace the Necessary Parking:** In order to address staff and community concerns regarding the loss of parking, any proposal to redevelop this site would require an interim agreement to provide replacement parking for the stalls that are required by the site's legal agreements with adjacent sites. There are several other public parking assets in the vicinity of this site that are likely also underutilized that could have the capacity to fulfill these agreements while a new housing project is constructed. In the long-term, the necessary parking reflecting a small proportion of the existing stalls could be provided on-site underground in the new development.

**3) Advocate:** To garner support it is important to focus on generating a positive narrative about providing housing for underserved and vulnerable women. An anti-parking narrative or an approach that frames it as a parking issue is unlikely to gain support from stakeholders. Instead, it is important to amplify the housing challenges felt by the women and families involved and humanize the housing crisis.

**4) Collaborate:** Collaborating with the relevant stakeholders, including the Salvation Army and the Downtown Eastside Women's Center, will be crucial. It would be prudent to engage with the Hastings Crossing BIA and other identified groups that could have possible concerns to determine how the redevelopment could address those concerns. Finally, in acknowledging that the City is faced with many competing priorities and services to provide, there is a need to establish partnerships between different levels of government and organizations that could contribute funding to the project.

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# APPENDIX A - INTERVIEW GUIDE FOR KEY INFORMANTS

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## FEASIBILITY STUDY ON THE CONVERSION OF PARKING GARAGES INTO AFFORDABLE HOUSING

In partnership with Atira Women's  
Resource Society

The study has three main components: 1) **literature review** of innovative housing solutions repurposing existing infrastructure; 2) **case studies** of parking garage conversions; and 3) **interviews** with key informants and a **focus group** with women affected by housing shortages. The lessons and recommendations synthesized from this project will help determine the concrete possibilities of developing housing from converted parking garages as a model.

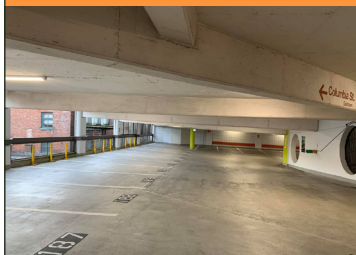
*In a city like Vancouver that faces significant challenges in housing and homelessness, replacing parking garages with housing could be a viable way to support the City's sustainability goals while simultaneously addressing the affordable housing shortage.*



### 107 EAST CORDOVA ST

The site is **City-owned** and is listed as part of the City's Property Endowment Fund. The 376-stall parking garage is currently under an ongoing lease with EasyPark (Parking Corporation of Vancouver). While the terms of the lease and estimated parking revenue are currently unknown, site visits and parking occupancy counts over the past several years have indicated a low occupancy rate. The sloping floors and low ceiling height present structural and design challenges for a retrofit conversion.

*Can these underutilized parking garages better serve the City's needs and priorities?*



### SOCIAL HOUSING IS URGENTLY NEEDED

Limited senior government funding for new affordable housing supply has impacted Metro Vancouver's ability to meet estimated housing demand for very low-income households. Poor building and room conditions in many SRO buildings are compromising SRO tenants' liveability and health. The DTES Local Area Plan, adopted by Council in 2014, set a target to replace 5,000 SRO units with self-contained social housing over 30 years. Cities around the world have sought creative and inventive solutions to repurposing existing infrastructure into spaces that could fulfill housing targets.

### PARKING VACANCY EXPECTED TO ACCELERATE

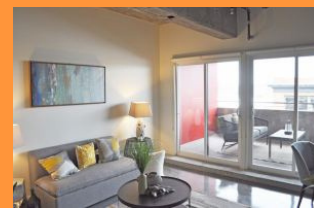
The recently adopted and seminal Climate Emergency Action Plan's Big Move 2 outlines six specific actions to support achieving two-thirds of all trips in Vancouver made on foot, bike, or transit by 2030. These actions, including the promotion of remote and flexible work options, expansion and improvement of the active transportation network, as well as the potential implementation of a congestion charge in the Metro Core will influence future travel patterns and decrease motor vehicles in Downtown Vancouver. Research on residential parking demand has shown that there is already an underutilization of Metro Vancouver's parking supply as is. Three major factors consistently correlated to a decrease in parking demand at a city-scale: 1) more renters than owners; 2) units in close proximity to TransLink's Frequent Transit Network; 3) high participation in carshare programs - all of which apply to the Downtown Eastside.

### CASE STUDIES

Cities and companies around the world have sought creative and inventive solutions for repurposing parking garages into spaces that could fulfill other urgent needs.

In Chicago, Los Angeles, and Evanston underutilized parking garages were retrofitted to serve other more pressing needs specific to their context - a logistics center, commercial kitchen, and innovation center respectively.

In Wichita, a 500-car multi-level parking garage sat vacant and neglected until Bokeh Development acquired the building in 2016. The open-air parking structure was transformed into an R-2 residential occupancy building with 44 one-bedroom apartments.



## APPENDIX B - INTERVIEW QUESTIONS

### Interview Questions:

1. In your opinion, what are the key challenges facing very low and low-income residents of the Downtown Eastside today?
2. If this project takes place, what kinds of units do you think should be prioritized? What kinds of units are missing from the current housing stock in the Downtown Eastside? Who should be prioritized in occupying these units?
3. Besides parking garages and lots, what are some other alternative viable options of existing infrastructure that could be retrofitted for housing?
4. What kinds of challenges do you anticipate in converting the EasyPark Lot 4 location into affordable housing?
5. What are some factors or recommendations that you believe could increase the viability or support for this type of project?
6. City council has just passed the Climate Action Emergency Plan, which includes the implementation of a city-wide permit parking program on all residential streets as well as a future implementation of a congestion charge in the Metro Core among other actions. How do you think these policies will change parking demand trends in Vancouver's downtown area?
7. Given the current existing structure and condition of the EasyPark Lot 4 location, do you believe this conversion would be a candidate for a retrofit or demolition?

### Prompts:

*The DTES Local Area Plan set a target to replace 5,000 SRO units with self-contained social housing over 30 years. What role do SROs play in the housing stock currently? What are some of their successes/limitations?*

*For example, hotel conversions (context of COVID-19). What are some of the limitations and challenges of hotel conversions? Commercial office space?*

*Political, financial, structural?*

*How do you see the role of parking changing in future? Should parking be a top priority for the City?*

*How do you feel about an interim solution - perhaps using prefabrication or modular housing?*

*\*Questions 6 and 7 were only asked to those in the industry expert category*

