

MEMORANDUM

TO: Amy Twigge-Molecey, Pauline Lambton, Lisa Bornstein
FROM: Cristina Batalla, Kennedy Magee, Kamryn Martinez-Hawa
DATE: 28 November 2024
SUBJECT: Submission of 2049 Plan for Western Hochelaga

In response to your request for a redevelopment plan, we propose “Western Hochelaga 2049: A Healthy, Resilient Community” – a comprehensive plan guiding the neighbourhood’s sustainable development over the next 30 years. This plan capitalizes on strengths and addresses opportunities for improvement identified during the discovery phase from September to October 2024.

Western Hochelaga faces key challenges, including food security, vulnerability to flooding and heat islands, scarce green spaces, and inefficient active mobility infrastructure. The proposed plan addresses these challenges by leveraging the neighbourhood’s strong community engagement, emerging economic opportunities, and the potential to transform underutilized lots into vibrant spaces.

By 2049, Western Hochelaga will be a socially and physically healthy neighbourhood powered by vibrant communities, inclusive mobility, and innovative solutions to environmental challenges. To achieve this vision, we outline three main goals:

1. **Healthy Communities:** Cultivate resource-rich places that foster social interactions and mutual aid, especially for vulnerable persons.
2. **Healthy Environments:** Design a built environment that prioritizes environmental harmony and long-term climate solutions.
3. **Healthy Movement:** Create a safe, inclusive, and connected active mobility network that links key destinations and ensures access for all residents.

Specifically, we propose public investment in two cross-cutting interventions: (1) the development of a **Green Multipurpose Community Hub** which will significantly transform an underutilized industrial lot into a haven for neighbourhood solidarity; and (2) the policy implementation of the **Facteur de Résilience Climatique (FRC) program** mandates the inclusion of climate-resilient features in all construction developments, fostering sustainable urban growth and enhancing resilience to environmental challenges.

We welcome your questions and feedback on the attached local plan and look forward to discussing steps forward.

Thank you for your consideration.

Western Hochelaga 2049: A Healthy, Resilient Community

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Report - Phase III

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Planning Studio 1

URBP 622

28 November 2024

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1 Introduction

This local plan for Western Hochelaga, located in the Mercier-Hochelaga–Maisonneuve Borough, provides a long-term vision for the area, guiding its development over the next 30 years. More specifically, Western Hochelaga is bounded by the Saint Lawrence River to the south, the Canadian Pacific Railway to the west, rue Rachel to the north, and rue Davidson to the east. This plan builds on the discovery phase (September to October 2024), which identified the neighbourhood's social, economic, transportation and environmental strengths and areas of opportunity.

Western Hochelaga stands out as a neighbourhood with significant development potential. It is evident in its culture of community engagement and a robust network of social groups, such as La table de quartier Hochelaga-Maisonneuve (LTQHM), anchored on decades of grassroots organizing. Complementing this is the strategic work of the Société de développement commercial Hochelaga-Maisonneuve, which is advancing bold economic initiatives to support local enterprises and encourage the growth of light industrial activities and creative commercial ventures along rue Ontario and rue Sainte-Catherine. The neighbourhood also benefits significantly from city-wide developments promoting active mobility, complemented by its proximity to public transit (metro and bus), which facilitates quicker travel to downtown Montréal and other boroughs. Notably, BIXI usage in Western Hochelaga exceeds the Montréal average, reflecting a strong preference for sustainable transportation to access various destinations and services. Furthermore, Western Hochelaga contains numerous pockets of vacant or underutilized land (in terms of floor-to-area ratio), predominantly around rue Sainte-Catherine Est and the CP rail corridor. A proposed land use policy change in the draft Plan d'urbanisme et de mobilité 2050 presents promising opportunities for mixed-use, higher-intensity zoning.

However, the history of deindustrialization in the 1950s coupled with the impacts of gentrification, have contributed to the social and material inequality experienced by residents of the area today. Its overall population is increasing (1.7% between 2016 to 2021) yet life expectancy at birth is ten years below the Montréal CMA average (83 years old). The overall quality of life, health, and well-being are likely to be affected by the lack of access to nutritious food sources, vulnerability to flooding and heat island effects, and inadequate mobility infrastructure, such as unsafe crossing for active mobility.

Recent public consultations for the Plan de développement d'une communauté nourricière revealed residents' strong desire for an increased local supply of affordable and specialized foods, and collective gardening spaces (Figure 4). Our analysis in earlier phases revealed that the neighbourhood's built environment is categorized by a lack of vegetation and green space, along with high-tension zones that disrupt residential areas. While the neighbourhood benefits from the Préfontaine Metro, connections to it are often incomplete, leaving the southern and northern

portions isolated due to physical distance and topography. This challenging topography, marked by a steep ridge running east-west between rue Hochelaga and rue Sherbrooke, further hinders mobility. This ridge exacerbates access issues to fresh food, as both large grocery stores are situated above it. Additionally, the active mobility infrastructure only protects cyclists in specific corridors, lacking continuous bicycle lanes throughout the neighbourhood.

These challenges occur within the context of a global need to address the climate crisis, which demands significant attention to long-term sustainable development. Based on these challenges and the opportunities presented by the neighbourhood, the proposed local plan presents an ambitious vision for the next 30 years of Western Hochelaga (Figure 1):

“In 2049, Western Hochelaga is a socially and physically healthy neighbourhood powered by vibrant communities, inclusive mobility, and innovative solutions to environmental challenges.”

The following sections will focus on the goals and objectives for each of the three key pillars of the vision: Healthy Communities, Healthy Environment, and Healthy Movement. Each pillar includes specific actions designed to address the priorities within these areas, such as increasing food security, reducing environmental risks, and enhancing active mobility infrastructure. Overall, the vision for Western Hochelaga consists of seven objectives and 20 actions formulated to achieve the objectives (Figure 2). The plan also outlines the general feasibility of the proposed actions, including projected timelines, estimated costs, and political feasibility.

2 Goals, Objectives, and Interventions

The 30-year vision for Western-Hochelaga is designed around the inevitable intersections of public health, sustainability, and enhanced social networks and infrastructure – and is founded on the role of strong neighbourhood ecologies in creating livable cities (Figure 2). In 30 years, Western Hochelaga will be a healthy and sustainable neighbourhood modelled by the implementation of the following goals. Cross-cutting interventions, which will be discussed later, touch on multiple goals and further integrate these themes into the fabric of the neighbourhood’s development.

2.1 Goal: Healthy Communities - Cultivate resource-rich places that foster mutual aid and social interactions

This goal seeks to build a vibrant community that prioritizes care, creativity, and connection. Residents will have access to cooperatives, markets, and community gardens that provide sustenance and foster social interactions, serving as hubs for strengthening ties and mutual support (Figure 3).

- 2.1.1 Foster community resilience through collaborative systems of mutual aid, improved access to nutritious and affordable food, and increased accessibility in green spaces and outdoor recreational facilities.
- 2.1.1.1 **Provide grant funding or institute a contribution agreement (i.e., “Community Food Sustainability Fund”) to non-profit organizations** such as La mission de la Cuisine collective Hochelaga-Maisonneuve and Carrefour Solidaire. They promote food security for vulnerable populations through collective kitchens, agricultural farms, and the sale of affordable produce in their respective local markets and cooperatives.
- 2.1.1.2 **Implement a network of community gardens so that no resident is farther than 500 metres to one.** These community gardens will not be limited to patches of land, as demonstrated by the pioneering work of Lufa Farms on greenhouse technology and urban rooftop farms. The success of the Rosemont-La Petite-Patrie urban farming projects (Figure 4) is a model, which was made functional through the establishment of a unique governance body for urban agriculture that fosters citizen participation. Recognizing that such an extensive network requires time and resources, the first phase will focus on four targeted areas: Parc Saint-Émile, Square Dézéry, the lot adjacent to 2415 rue Darling, and the lot behind the Maxi and Canadian Tire (Figure 3). These sites will serve as demonstration projects, showcasing the benefit of accessible community gardens for growing food and fostering community ties. Over time, citizens will take the lead in identifying the most strategic locations for more urban farming spaces as needed.
- 2.1.1.3 **Revitalize parks with new, disability-inclusive amenities** to encourage active lifestyles. The borough will invest in fitness facilities (outdoor gym, jogging tracks, yoga zones, climbing walls), multi-sports courts, and recreation spaces (playgrounds, picnic areas, amphitheatres, water play zones, gazebos, and pavilions), and supporting infrastructure (benches, lighting, restrooms, water stations). Examples can already be seen in many Montréal parks, such as Parcs Raymond-Préfontaine, Jarry, Jean-Drepeau, La Fontaine, etc. (Figure 4)
- 2.1.1.4 **Work in collaboration with local volunteers, community organizations, and the recreations department to program functional placemaking activities.** Drawing inspiration from Beaconsfield’s *Handy Seniors: Community Repair Days*, “Repair and Share”, these events will provide residents with opportunities to bring items such as clothing, electronics, and household goods for free repair (Figure 4). These events will serve as a model for promoting sustainability, reducing waste, and fostering mutual aid within the community.

- 2.1.1.5 **Develop a Vulnerable Person Registry**, likewise, modelled by the municipalities of Beaconsfield and Kirkland, a confidential database for reference of emergency response and public safety departments, to identify and assist individuals who require immediate support. This covers those who are new to the country, the elderly, single parents, people with cognitive impairments, mental or physical disabilities, and those with loss of autonomy. Social workers will contact vulnerable persons at least twice a year and in case of emergency (heat wave, storm, prolonged power outage, etc.).

2.2 Goal: Healthy Environment - Develop a built environment that prioritizes environmental harmony and long-term climate solutions

The second goal seeks to ensure that Western Hochelaga becomes a neighbourhood resistant to the threats of climate change, through sustainable urban design and climate-adaptive strategies. Residents will thrive in a built environment that prioritizes long-term climate solutions (Figure 3).

2.2.1 Enhance the neighbourhood's resilience to flooding.

2.2.1.1 Install bioretention and retention basins throughout Western Hochelaga (Figure 4).

The first phase will focus on targeted flood-prone regions such as the Ruelle Verte and areas between rue Rouen and rue Ontario. These basins will manage stormwater, reduce runoff, and prevent localized flooding during heavy rains.

2.2.1.2 Design new and retrofit existing parks to act as multifunctional spaces capable of retaining stormwater during extreme weather events. Inspired by projects like Parc des Macadames in the Plateau-Mont-Royal, which successfully integrates flood management with recreational spaces (Figure 4).

2.2.1.3 Encourage the use of porous pavement for parking lots, pedestrian walkways, and local streets throughout Western Hochelaga, particularly during street resurfacing and redevelopment projects. Inspired by projects such as the resurfacing of La Roue de Montréal, this approach is well-suited for enhancing water infiltration, reducing surface runoff, and contributing to a more resilient urban landscape (Figure 4).

2.2.2 Reduce the impact of urban heat islands.

2.2.2.1 Implement large-scale planting initiatives that will increase canopy cover in the Hochelaga district from 17% to 40%. Priority will be given to all sites already identified in the Plan maître de plantation, particularly those with high heat islands such as the industrial regions and main arterials (Figure 4). New studies will be conducted to

identify additional opportunities for planting in underutilized spaces and in impermeable spaces, ensuring sufficient coverage to meet the 40% target.

2.2.2.2 Increase the standard for roofing from 56 to require a minimum Solar Reflectance Index (SRI) of 78, aligning with the stricter requirements of the Sud-Ouest Borough (Figure 4). This higher SRI will reflect more solar radiation, lowering surface temperatures and decreasing cooling demands in buildings.

2.2.2.3 Explore the possibility of incorporating rooftop detention basins as a permitted type of roof for new developments and major renovations. Rooftop detention basins temporarily store rainwater, reducing the volume and speed of runoff entering the borough's stormwater infrastructure. A similar project done in Mississauga demonstrates how these systems can serve as an effective stormwater management solution (Figure 4).

2.3 Goal: Healthy Movement - Create a safe, inclusive, and connected active mobility network in Hochelaga that supports sustainable transportation and links key destinations, ensuring secure access for all residents.

The third goal seeks to ensure that Western-Hochelaga has a dense and interconnected active transportation network that provides safe and accessible journeys for all users through adding to the bicycle and pedestrian network, adding safety features to intersections, adding to the public transportation network, and adding lighting to poorly lit corridors.

2.3.1 Develop an efficient and accessible active transportation infrastructure.

2.3.1.1 Create a new north-south mobility corridor to provide residents with easy active mobility access from one end of Western Hochelaga to the other without needing to engage with neighbourhood streets (Figure 3). This would be similar to the path seen alongside the Canadian Pacific railway, which is parallel to rue des Carrières (Figure 4). The path will mostly follow the rail line and will utilize space created through the purchase of unutilized CP railway land while providing strategic connections to streets like rue Ontario, rue Hochelaga, rue Sherbrooke, and rue Rouen.

2.3.1.2 Install protected and separated bike lanes on streets with high potential to increase connectivity, beginning with rue Hochelaga, rue Moreau, rue Rouen, rue Sherbrooke, rue Ontario, rue Dezery and rue Sainte-Catherine (Figure 3). After these initial lanes are completed, the borough will work to continually increase the network until every neighbourhood street has bicycle infrastructure.

- 2.3.1.3 **Collaborate with local non-profits and the STM to draw on the newly created database of vulnerable users (action 2.1.1.5) to offer “last mile” transportation assistance for vulnerable users** trying to get to the metro or other essential destinations. This will provide a similar service to what is provided through the STM’s paratransit program (Figure 4) but will be expanded to include non-transit destinations.
- 2.3.1.4 **Collaborate with the ARTM and STM to support the creation of a new high-frequency tram line** running along rue Dezery from rue Sainte-Catherine to avenue Mont Royal before continuing along boulevard Saint-Michel to the Saint-Michel metro then returning along the same route (Figure 3). The tramway would follow a similar concept to the proposed ARTM tramway in eastern Montréal and would align with the goal of developing a tram network in Montréal as laid out in the 2008 Transportation Plan (Figure 4).
- 2.3.1.5 **Install a weather-resistant moving sidewalk on rue Préfontaine** to address the difficulty navigating the steep hill between rue Hochelaga and rue Sherbrooke, drawing inspiration from the magic carpet lifts used at ski resorts (Figure 3). These systems are specifically designed to operate in winter, with bristle brushes for continuous cleaning, and optional skirting to manage snow accumulation beneath the conveyor (Figure 4). Regular maintenance and overnight coverings will ensure reliability and safety, providing an accessible, year-round solution for residents.
- 2.3.2 **Build safe and secure active transportation infrastructure for all users.**
- 2.3.2.1 **Explore the possibility of working with stakeholders to update the pedestrian charter** to include infrastructure elements that promote safety for pedestrians and cyclists. The proposed elements to be included in new intersections will be crossing indicators/signals with audible signals for the hearing challenged, bollards on intersection-facing curbs, raised crosswalks, and bumped-out curbs on streets with on-street parking. This initiative will start with intersections at which there has been a pedestrian death or serious injury from a vehicle collision in the last ten years: rue Moreau and rue Ontario, rue Davidson and rue Sainte-Catherine, rue Darling and rue Ontario, rue Dezery and rue Hochelaga, rue Darling and rue Sherbrooke, rue Sherbrooke and Place de Lery, and rue Hochelaga between rue Moreau and the rail corridor.¹ The borough will also explore updating the pedestrian charter to require speed bumps, or other speed mitigation tactics on small residential streets.
- 2.3.2.2 **Add lighting in dark, potentially dangerous corridors**, starting with the Hochelaga overpass and the rue Notre Dame path. The borough will work actively with the SPVM to identify potentially dangerous areas that could be made safer with better lighting.

3 Major Interventions

This section outlines key interventions designed to promote a healthier, more sustainable, and connected Western Hochelaga. It includes the development of a Green Multipurpose Hub and the expansion of green construction requirements, addressing both environmental and social challenges. These initiatives aim to foster community resilience, enhance sustainability, and create spaces that meet the needs of residents while supporting long-term goals for the neighbourhood.

3.1 Design Intervention: Green Multipurpose Community Hub

The community hub intervention crosses all three of our goals and is represented in a multitude of our objectives. This project will see the creation of a multi-purpose community hub adjacent to a linear park that will create space for community autonomy and urban agriculture; will help provide a physical link in the neighbourhood; and will help address pressing environmental concerns (Figure 5).

Building Expropriation and Contaminated Land Treatment

To begin, the borough will need to undergo public consultations to gather opinions from the public. During this process, the borough will gather feedback on what residents would like to see happen with the land and how it could be used to best serve the needs of the community. To begin the implementation of this community hub, the borough will utilize the Québec Expropriation Act to acquire the property at 1950 rue Moreau (Figure 4). This law allows for the expropriation for the establishment of public amenities such as parks, community facilities, and services that benefit the greater good, under which this project would fall. The city will also purchase the unused portion of the old CP rail switching yard to facilitate the creation of the linear park and the bioretention basins therein. Due to the many years of heavy rail use, the CP site likely has contaminated soil which will need to be remediated before green spaces and community gardens can be installed. To support these efforts, the borough will utilize the city of Montréal's *Contaminated Land Rehabilitation Subsidy* which provides financial assistance for the development of contaminated lands. A notable example is Parc Frédéric-Back, which represents the bold transformation of a former limestone quarry and landfill site into a thriving urban park, showcasing the potential for such land reclamation projects (Figure 4).

Structured partnership and Community-Led Development

Following the public consultations and site acquisition processes, the borough will collaborate with the City of Montréal to initiate the transformation of the industrial lot located along rue Moreau between rue Adam and rue Ontario East into a vibrant community hub. While partial

ownership of the site will remain with the city, a structured partnership agreement will be established with a coalition of community and nonprofit organizations. This structured partnership model is inspired by successful initiatives such as Batiment 7 and collaborations under the Montréal en commun program, which highlight the benefits of shared governance and collaboration between public and community entities (Figure 4). Through this agreement, community organizations will be tasked with (1) renovating the existing building, (2) creating programs to utilize the space, and (3) will have the option to secure small-scale commercial tenants to generate operational revenue. The partnership agreement will establish clear mandates and funding mechanisms to ensure alignment with local goals, such as enhancing food security and fostering social connection.

Community Hub Development

The imagined community hub provides essential resources, promotes social connection, and acts as a beacon for environmental sustainability. Its success will rely on a structured partnership between the borough, nonprofits, and community organizations to ensure collaborative governance, shared responsibility, and alignment with the community's needs.

First, urban agriculture facilities will play a key role in enhancing local food security. In partnership with community organizations and nonprofits, the borough will support the creation of both outdoor community gardens and indoor vertical farming systems. The collaborative partnerships will lead the design and management of these facilities. This confluence of indoor and outdoor agriculture will help the community produce fresh produce year-round instead of being limited to the small existing community gardens only available in the warmer months. Drawing inspiration from established systems such as Lufa Farms, the vertical farming systems could utilize soil-free methods such as hydroponics, aeroponics, or aquaponics to create closed-loop systems (Figure 4). These systems are ideal for common high-yield produce such as leafy greens (lettuce, kale, spinach), herbs (basil, mint, cilantro, parsley), microgreens, berries, tomatoes, and other fruits and vegetables. Ideally, the hub would include a small greenhouse for those looking to participate in traditional agricultural methods through the colder months (Figure 6). To support the distribution of the produce grown at the hub, a market space will be designated where members of the community can purchase fresh produce year-round at a reasonable price. Based on the newly created database of vulnerable persons (action 2.1.1.5) (e.g., low-income, single-parent, immunocompromised), non-profits will have the opportunity to provide free or low-cost produce according to the needs of residents.

Second, the borough will promote the use of the building space to foster community connection through mutual aid systems. Inspired by the model of Batiment 7, the borough will encourage and support social programs such as knowledge and skills sharing, creative outlets, and access to

affordable food products. Similar to Batiment 7, the borough will support nonprofits who hope to create educational workshop centres and repair space for bicycles which would help support the goal of increasing active mobility. Support will also be given to other organizations who want to utilize the space for public good. Possible features of the space include (but are not limited to) general repair shops (e.g. textile shops), wood/metal working shops, art and other creative spaces, ceramic studios, performing arts spaces, and space for local entrepreneurs to develop their new enterprises. The hub would ideally provide co-working spaces for local residents and open space for larger community events. Due to the large size of the building, there would be room for the borough to work with nonprofits to develop facilities for sports, games, and fitness through the creation of an indoor gym space. Part of the exterior of the space will be made available to traditional small-scale commercial tenants such as locally-owned cafes, bars, or bakeries (Figure 7). Finally, the borough will encourage nonprofits to create a collective kitchen and grocery cooperative that would be closely connected to the agricultural facilities. These would help address food insecurity and encourage active participation by all members of the community.

Third, the borough will create new green spaces around the building. These new green spaces will serve a myriad of functions. They will (1) reduce the impact of heat islands, (2) act as a carbon sink for the neighbourhood, (3) act as a destination for the new active mobility corridor, (4) encourage residents to spend time outdoors, and (5) mitigate the effects of large flooding events. The green spaces will take the form of an urban park that will surround the building and run adjacent to rue Moreau, spanning towards the boundaries of the in-use CP rail lines. The park will feature a mixture of trees, shrubs, grass, and permeable surfaces, allowing for a significant reduction in surface temperature. A key element of the design will be the creation of multiple bioretention basins that will act as sponges for excess water in flooding events. These basins will be connected to a network of similar basins that will funnel excess water to the southwestern portion of the site, where it can be absorbed by additional green spaces. This approach draws inspiration from projects like Evergreen Brick Works, which incorporate stormwater management features to mitigate flooding, sequester carbon, improve soil quality, and provide habitats for wildlife (Figure 4). These green spaces will also be directly integrated into the active mobility corridor, serving as a key destination for pedestrians and cyclists. This will create a seamless link between transportation, recreation, and daily living, inviting users to engage with the environment actively. The park will include amenities such as a disability-inclusive children's playground, inspired by Parc Saint-Joseph in Rivière-des-Prairies-Pointe-aux-Trembles. Additionally, the space will feature a network of pathways, seating areas, and open grass spaces for informal sports and recreational activities.

3.2 Policy Intervention: Expansion of Green Construction Requirements

The policy aligns with the goals of creating healthy communities and healthy environments by incorporating green building standards as a key objective. A supporting action involves the

implementation of a *Facteur de Résilience Climatique* (FRC) program, requiring developments to incorporate climate-resilient features, supporting sustainability and resilience.

Program Features

The action focuses on establishing an FRC program, setting clear requirements for improving resilience in urban development. This program is designed to address critical challenges posed by climate change such as urban flooding and the urban heat island effect. More specifically, the FRC is defined as an indicator expressing the ratio between climate-resilient surfaces such as landscaped areas and permeable surfaces and the total lot surface area. This program will establish a minimum threshold that developers must meet before obtaining a construction or renovation permit. This threshold will vary based on factors such as the building's coverage ratio, the intended use of the building, and whether the project involves new construction or expansion.

The Sud-Ouest Borough has successfully implemented an FRC program, and its outcomes serve as guiding examples for Western Hochelaga (Figure 4). Implementing this FRC program will address the pressing environmental challenges within Western Hochelaga such as flooding and urban heat islands, along with the expected densification within the neighbourhood. Traditional development practices have prioritized impermeable surfaces, exacerbating stormwater runoff and putting pressure on the borough's stormwater infrastructure. The FRC program ensures that developments contribute to environmental sustainability by incorporating strategies like permeable surfaces, vegetative planting, and green infrastructure. This program will provide a structured framework for enhancing urban resilience and creating healthier, more sustainable neighbourhoods.

The FRC will establish specific requirements for integrating climate-resilient features into developments (Figure 9). First, it prioritizes permeable and semi-permeable surfaces to replace sealed areas. These include permeable paving systems, jointed blocks, and vegetated pavements, all of which facilitate water infiltration and reduce pressure on stormwater infrastructure. Second, vegetation is a critical component of the FRC. Developers are required to include a diverse mix of trees, shrubs, and plants, with an emphasis on preserving and planting large canopy trees. The inclusion of urban orchards and edible landscaping is also encouraged, offering opportunities for food resilience and community engagement, as highlighted in the Montreal Urban Agriculture Plan, which favors the integration of private orchards (Figure 4). Additionally, the program encourages integrating green roofs, including extensive systems for low-maintenance vegetation and intensive systems for deeper soils and diverse plantings. Other elements of the program include vegetated walls, which maximize the use of vertical space to enhance biodiversity and reduce heat islands. Measures such as bioretention systems, including rain gardens and infiltration trenches, will also be implemented to manage stormwater effectively. Finally, urban agriculture initiatives, such as community allotments and raised planters, will promote local food production and

encourage social connections among residents.

Program Implementation

To implement the FRC program effectively, a phased and collaborative approach is necessary. The first step involves city-led integration, where all civic buildings will adopt FRC standards. This includes retrofitting municipal properties with permeable pavements, rain gardens, and green roofs to showcase the benefits of the program. This aligns with the PUM orientation 9 goal to improve the environmental performance and resilience of buildings, land, and public infrastructure. Pilot projects around Western Hochelaga will help assess the feasibility of FRC measures across various property types, identifying potential barriers and refining the program before broader adoption. Once these initial steps are complete, FRC compliance will be mandatory for all new developments and major renovations. Developers will be required to submit plans demonstrating how their projects meet FRC thresholds to obtain building permits, ensuring that resiliency measures are integrated.

For public adoption, a dedicated green fund will be established to finance these projects, and external funding options that support ecological transitions will be explored. To support the private adoption, the borough will provide permits at a reduced cost and explore additional measures to offset the upfront costs of FRC compliance. This is particularly crucial for smaller property owners or those undertaking significant renovations. Alongside financial support, the borough will offer technical assistance, resources, and educational outreach to ensure that property owners and developers understand the program's requirements and benefits. These efforts aim to make compliance more accessible while encouraging widespread participation.

The responsibility for implementing the FRC program is shared among several stakeholders. The borough plays a central role in developing and enforcing FRC regulations, integrating the program into zoning bylaws, and ensuring compliance for public projects. Private landowners and developers are responsible for incorporating FRC measures into their plans, particularly for new constructions and renovations. Community organizations and local environmental groups will play a supportive role, fostering public awareness and promoting urban agriculture initiatives.

The FRC program is a transformative initiative that embeds resilience into urban development practices. By requiring measurable contributions to environmental sustainability, it addresses flooding risks, reduces heat islands, and enhances urban biodiversity. It also ensures that densification occurs without sacrificing ecological functions or community well-being. Over time, the FRC requirements will foster a healthier, more sustainable neighbourhood, equipping Western Hochelaga to adapt to the challenges of climate change and urban growth.

1. General Feasibility

The prospect of transforming the underutilized lots that have been selected for the physical intervention is already forged in the 2050 PUM, supported by Québec and Montréal policies (such as the Québec Expropriation Act and Montréal Contaminated Land Rehabilitation Subsidy), yet this may be threatened by future plans to pursue investments in strengthening industrial port activities (as mentioned in the discovery phase of the reports). While this may be economically advantageous, it stands in tension with the need to make the neighbourhood more livable and climate-resilient.

In terms of social acceptability, the success of the proposed interventions relies on the commitment of the borough to fulfill the long-standing demands and needs of the strong citizen base in Mercier-Hochelaga-Maisonneuve that were identified in the discovery phase. These priorities align directly with the proposed interventions, including the creation of a green multipurpose community hub and the implementation of green construction requirements, which aim to meet these community needs. Multiple community groups and non-profit organizations are likely to engage in the necessary public participation processes but must be empowered to co-design and co-implement the projects and programs.

In terms of financial feasibility, land acquisition and building expropriation require the largest budgetary allotments of all the actions. The borough must carefully assess various financial instruments (e.g., city grants, property taxes, or sale of other borough assets).

The overall feasibility of the major physical and policy interventions have been broken down for better comprehension. Moreover, the feasibility of various actions presented in this plan are also displayed, however, the feasibility of all actions are presented in Figure 10 to 12 in the Appendix.

Major physical intervention: Community hub					
Action	Timeline	Costs	Primary Actor	Key Actors	Political feasibility
Building expropriation	Medium	\$\$\$	Mercier-Hochelaga-Maisonneuve borough	Courrier Plus, City of Montréal, Mercier-Hochelaga-Maisonneuve borough	Medium
Acquiring CP land	Medium	\$\$\$	Mercier-Hochelaga-	Canadian Pacific Railway, Mercier-Hochelaga-	Medium

			Maisonneuve borough	Maisonneuve borough, City of Montréal	
Community engagement/c consultations	Short	\$	Mercier-Hochelaga-Maisonneuve borough	Mercier-Hochelaga-Maisonneuve borough, City of Montréal	High
Creation of linear park with bioretention basins	Medium	\$\$	Mercier-Hochelaga-Maisonneuve borough	Mercier-Hochelaga-Maisonneuve Borough, City of Montréal, and environmental experts	Medium
Work in collaboration with nonprofits to renovate building and create community hub	Long	\$\$\$	Mercier-Hochelaga-Maisonneuve Borough	Mercier-Hochelaga-Maisonneuve borough, City of Montréal, nonprofits	Medium

Major policy intervention: green building requirements					
Action	Timeline	Costs	Primary Actor	Key Actors	Political feasibility
Implement FRC requirements	Medium-Long	\$\$ - \$\$\$	Mercier-Hochelaga-Maisonneuve borough	Mercier-Hochelaga-Maisonneuve borough, City of Montréal, developers, architects, Private landowners, local residents, developers,	Medium

				community organizations, and local environmental groups	
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Goal 1: Healthy Communities					
Action	Timeline	Costs	Primary Actor	Key Actors	Political Feasibility
Institute a <i>Community Food Sustainability Fund</i> to support non-profit operations for food security	Short-Medium	\$\$	Mercier-Hochelaga-Maisonneuve Borough	Mercier-Hochelaga-Maisonneuve Borough, Non-profit organizations (LCCHM, Carrefour Solidaire)	Medium
Community gardens in four pilot locations	Short-Medium	\$	Mercier-Hochelaga-Maisonneuve Borough	Mercier-Hochelaga-Maisonneuve Borough, Lufa Farms	High

Goal 2: Healthy Environment					
Action	Timeline	Costs	Primary Actor	Key Actors	Political Feasibility
Install bioretention and retention basins	Medium-Long	\$\$	Mercier-Hochelaga-Maisonneuve Borough	Mercier-Hochelaga-Maisonneuve Borough, City of Montréal, and environmental	Medium

				experts	
Retrofit existing parks and require new parks to be able to retain water	Medium - Long	\$\$	Mercier-Hochelaga-Maisonneuve Borough	Mercier-Hochelaga-Maisonneuve Borough, parks and recreation department, environmental experts, and local residents	High

Goal 3: Healthy Movement					
Action	Timeline	Costs	Primary Actor	Key Actors	Political feasibility
North-south mobility corridor	Medium	\$\$	Mercier-Hochelaga-Maisonneuve Borough	Mercier-Hochelaga-Maisonneuve borough, City of Montréal, Canadian Pacific Railway, Lallemand Inc., local residents, Ville-Marie Kia, Location Legare, Lumen Inc.	Medium
Creation of protected bike lanes on critical streets	Short	\$	Mercier-Hochelaga-Maisonneuve Borough	Mercier-Hochelaga-Maisonneuve borough, City of Montréal	High

References

1. City of Montréal. (n.d.). *Collisions with death or serious injury*. Montréal.
https://experience.arcgis.com/experience/8a963898cd9b4bbaad8663164588db3e/page/COLLISIONS/?data_id=dataSource_14-18979a0b82c-layer-7%3A19

2. Appendix

Figure 1. Concept diagram for borough plan

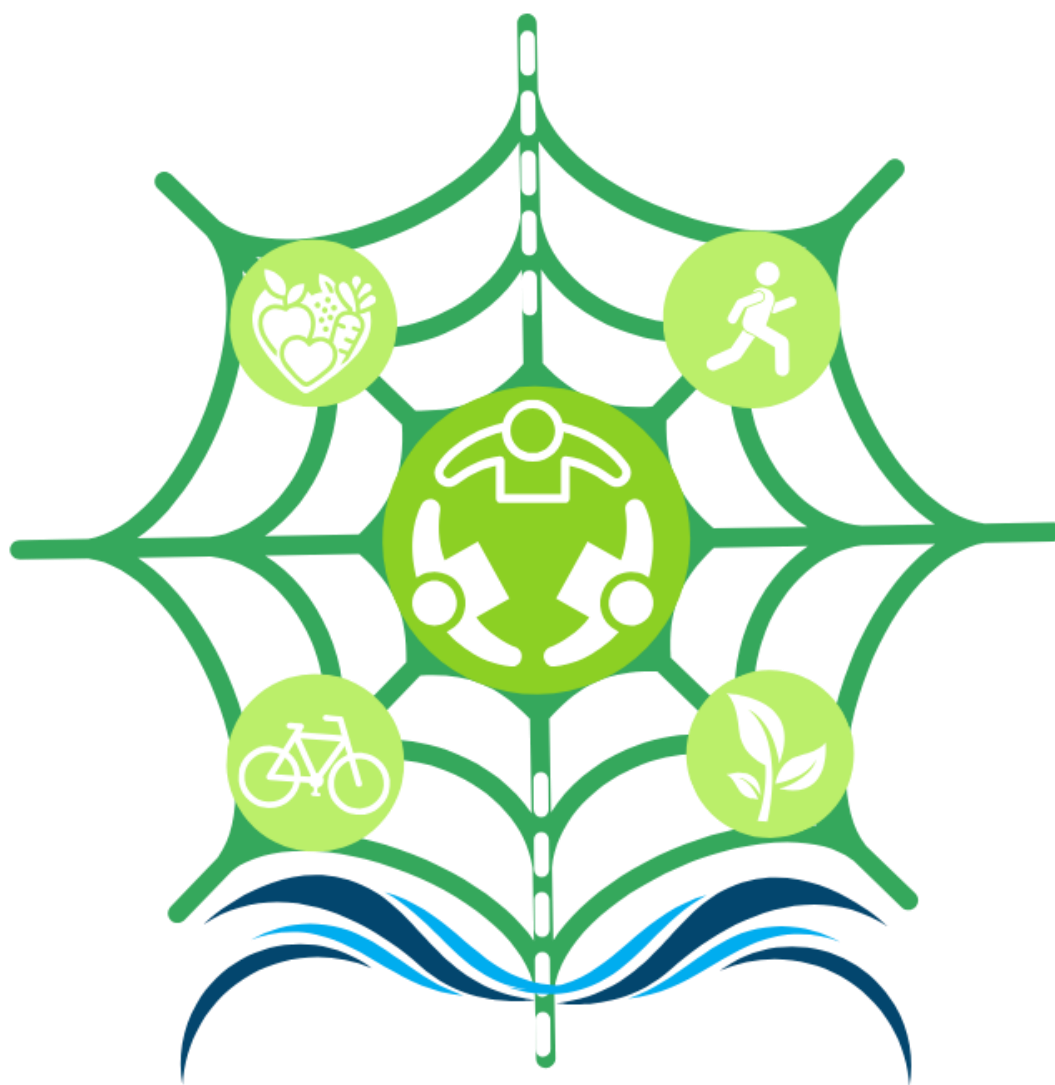


Figure 2. Flow chart illustrating the vision, goals, objectives, and actions

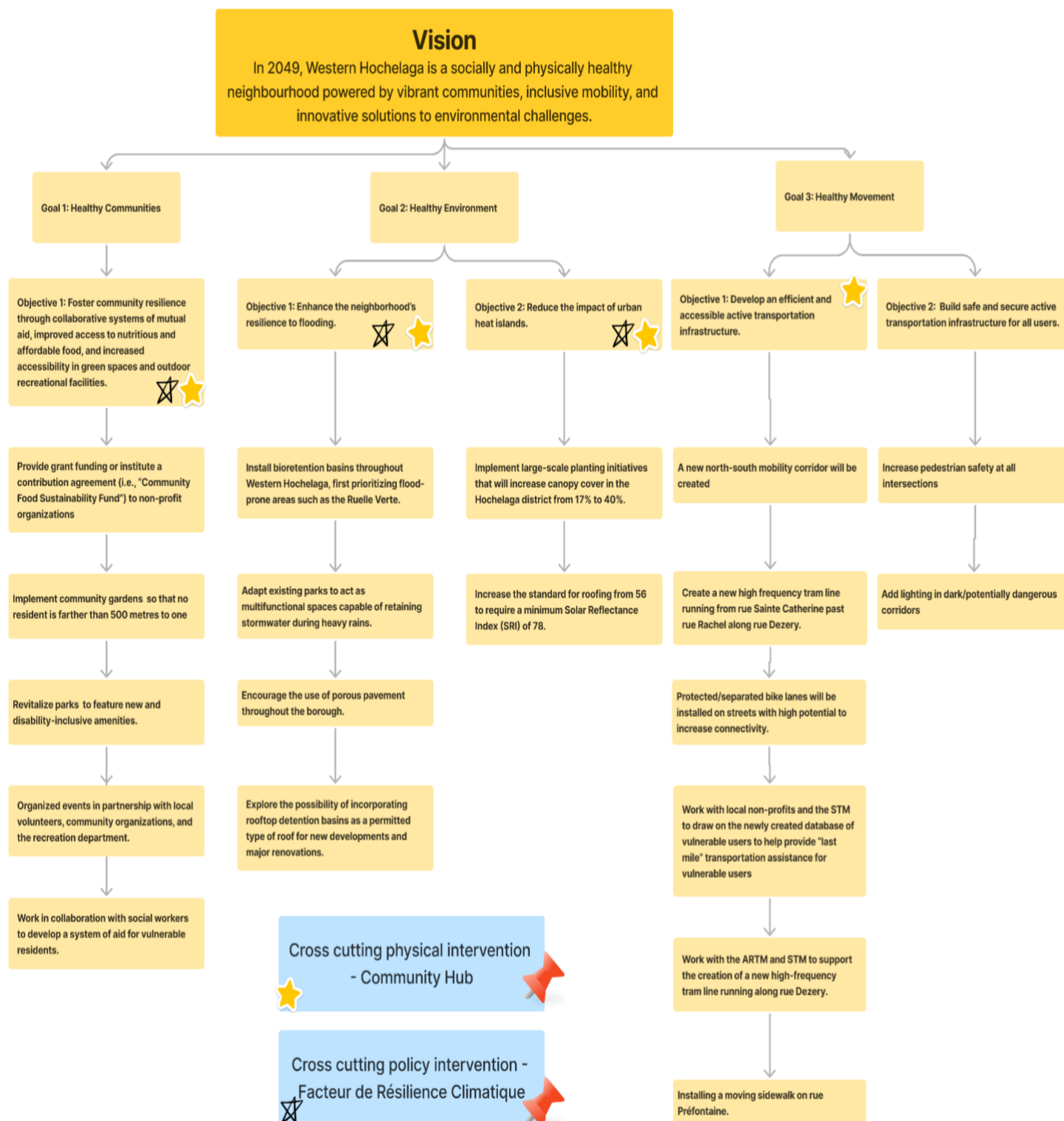


Figure 3. Master plan map for Western-Hochelaga (will rework and make legend bigger)



Figure 4. Referenced context examples of policies/interventions in Montréal or other cities

Project	Where	Source
MHM Plan de développement d'une communauté nourricière (PDCN) - Bilan des activités consultatives de la phase 1	Montréal	https://www.realisonsmtl.ca/pdcn_mhm/news_feed/bilan-des-activites-consultatives-de-la-phase-1
La mission de la Cuisine collective Hochelaga-Maisonneuve	Montréal	https://lacchm.com/fr/accueil
Carrefour Solidaire	Montréal	https://carrefoursolidaire.org/en/about-us/our-story/
Rosemont-La Petite-Patrie urban farm	Montréal	https://projetMontréal.org/en/news/rosemont-la-petite-patrie-soutient-linnovation-en-agriculture-urbaine
Lufa Farms	Montréal	https://emsig.lufa.com/en/about
Park Amenities	Parc Raymond-Préfontaine	https://projetMontréal.org/nouvelles/nouveau-planchodrome-au-parc-raymond-Préfontaine
	Parc Jean-Drapeau	https://www.parcjeandrapeau.com/
	Parc Jarry	https://Montréal.ca/lieux/parc-jarry
Beaconsfield's Handy Seniors: Community Repair Days	Beaconsfield, QC	https://www.beaconsfield.ca/en/events/community-events/handy-seniors-community-repair-days-2024-11-16

Vulnerable Persons Registry	Beaconsfield, QC	https://www.beaconsfield.ca/storage/app/media/services/services-aux-citoyens/resgitre-des-personnes-vulnerables/feuillelet_perso_vulnerables_au2019_en.pdf
	Kirkland, QC	https://www.ville.kirkland.qc.ca/culture-and-recreation/resources-accessible-to-persons-with-disabilities/vulnerable-person-registry
Bioretention Projects	Montréal	https://wwf.ca/fr/biopolis-projects/jardin-de-pluie-bioretention-boulevard-decarie/
Parc des Macadames in the Plateau-Mont-Royal	Montréal	https://Montréal.ca/lieux/place-des-fleurs-de-macadam
La Roue de Montréal	Montréal	https://www.techo-bloc.com/assets/25/32/2532a2ae-aa91-435f-9b74-31adbba8c9da/tb2021_case_studies_la_grande_roue_en_web.pdf
Plan maître de plantation	Montréal	https://portail-m4s.s3.Montréal.ca/pdf/8340-1_plan_maitre_plantation_vf.pdf
SRI requirements	Montréal	https://Montréal.ca/demarches/renover-un-toit-plat-ou-faible-pente?arrondissement=MHM https://Montréal.ca/demarches/renover-un-toit-plat-ou-

		faible-pente?arrondissement=SO
Rooftop retention basins	Mississauga	https://cvc.ca/project/smart-blue-roof/
Bike path along parallel to rue des Carrières	Montréal	https://services.montreal.ca/cartes/pistes-cyclables
STM Paratransit program	Montréal	https://www.stm.info/en/paratransit/about-paratransit/what-paratransit
ARTM Tramway	Montréal	https://Montréalgazette.com/news/local-news/artm-proposes-tramway-project-for-eastern-Montréal-that-skips-direct-link-to-downtown
Central-Mid-Levels Escalator	N/A	http://www.magiccarpetlifts.com/winter-sports/faq/#6
Batiment 7	Montréal	https://ateliers.batiment7.org/
Expropriation	Quebec	https://www.legisquebec.gouv.qc.ca/en/document/cs/C-47.1?utm
Parc Frédéric-Back	Montréal	https://montreal.ca/articles/le-parc-frederic-back-une-metamorphose-unique-18997
Montréal en commun	Montréal	https://montreal.ca/en/articles/montreal-common-innovating-together-to-reimagine-city-15119#:~:text=Montr%C3%A9al%20in%20Common%20is%20a,the%20use%20of%20digital%20data.

Lufa Farms	Montréal	https://montreal.lufa.com/en/farms
Evergreen Brick Works	Toronto	https://www.evergreen.ca/evergreen-brick-works/visitor-info/about-us/about-us-sustainability/
Parc Saint-Joseph	Rivière-des-Prairies-Pointe-aux-Trembles	https://montreal.ca/articles/accessible-et-inclusif-decouvrez-le-parc-saint-joseph-de-rdp-pat-29213#:~:text=JF%20O%27Kane-,Accessible%20et%20inclusif%20%3A%20d%C3%A9couvrez%20le%20parc,%2DJoseph%20de%20RDP%2DPAT!&text=Situ%C3%A9%20le%20long%20du%20boulevard,e%20avant%2Dgardistes%20a%20Qu%C3%A9bec
FRC	Montréal	Annexe P: https://Montréal.ca/reglement-s-municipaux/recherche/60d7d1d9fd6531f67759daff https://portail-m4s.s3.Montreal.ca/pdf/38823_3354-2_brochure_vf_web_1.pdf
Montréal Urban Agriculture Plan	Montréal	https://portail-m4s.s3.montreal.ca/pdf/vdm_strategie_agriculture_urbaine_corrigee_2023.pdf
PUM	Montréal	https://mtl.ged.montreal.ca/constellio/?collection=mtlca&p

		ortal=REPDOCVDM#!displayDocument/00000091344
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Figure 5. Representation of features for Community Hub



Figure 6. Community hub overview render



Figure 7. Community hub up close render 1



Figure 8. Community hub up-close render 2



Figure 9. The different variables considered for the calculation of the Facteur de Résilience climatique for the Sud-Ouest Borough

TABLEAU A					
(1) Éléments de l'aménagement paysager	(2) Composantes	(3) Description	(4) Valeur (V)	(5) Superficie (m ²) ou Quantité (S)	(6) ARC Partiel
A. Perméabilité des surfaces en contact avec le sol	A.1. Surface scellée	La surface est imperméable à l'air et à l'eau et ne présente aucune croissance végétale.	0		0,00
	A.2. Surface partiellement scellée	La surface est perméable à l'air et à l'eau et ne présente aucune croissance végétale.	0,2		0,00
	A.3. Surface semi-scellée	La surface est perméable à l'air et à l'eau, permet l'infiltration d'eau et la croissance des plantes.	0,4		0,00
	A.4. Surface non scellée en pleine terre (gazon, terre)	La surface est perméable sans limite de profondeur et disponible pour la plantation.	1,5		0,00
	A.5. Ouvrage de biorétention	La surface est un aménagement paysager installé en dépression pour gérer le ruissellement des eaux pluviales. Son fond doit être perméable pour permettre une infiltration partielle ou complète.	1,5		0,00
B. Plantation	B.1. Arbre	B.1.1. Arbre à grand déploiement (autre que fruitier)	Superficie équivalente à 20m ² /arbre.	1	0,00
		B.1.2. Arbre à moyen déploiement (autre que fruitier)	Superficie équivalente à 15m ² /arbre.	1	0,00
		B.1.3. Arbre à petit déploiement (autre que fruitier)	Superficie équivalente à 10m ² /arbre.	1	0,00
		B.1.4. Arbre fruitier	Arbre produisant des fruits comestibles pour la consommation humaine. Superficie équivalente à 10 m ² /arbre.	1,1	0,00
		B.1.5. Arbre mature existant	Arbre existant ayant un DHP d'au moins 15 cm. Superficie équivalente à 20 m ² /arbre.	1,2	0,00
	B.2. arbuste, plante vivace et couvre-sol	B.2.1. Pailis	Pailis grossier (par exemple des copeaux de bois d'arboriculteur, de l'écorce grossière, du pailis de compost ou du pailis minéral), maintenu à une épaisseur minimale de 100 mm.	0,1	0,00
		B.2.2. Arbuste et plantes vivaces de petite taille, couvre sol ou pré-fleur	Hauteur inférieure à 600 mm à maturité, feuilles persistantes. Profondeur de terre d'au moins 300 mm.	0,2	0,00
		B.2.3. Arbuste et plante vivace de taille moyenne	Hauteur minimale de 600 mm et inférieure à 1500 mm à maturité. Profondeur de terre d'au moins 500 mm.	0,3	0,00
		B.2.4. Arbuste de grande taille	Hauteur minimale de 1500 et inférieure à 3000 mm à maturité. Superficie équivalent à 3,5 m ² /arbuste. Profondeur de terre d'au moins 800 mm.	0,4	0,00
	B.3. Agriculture urbaine	B.3.1. Plante comestible vivace	Plante comestible vivace pour la consommation humaine autre qu'un arbre fruitier. Profondeur de terre d'au moins 300 mm.	0,1	0,00
C. Végétalisation des bâtiments	C.1. Toit végétalisé	C.1.1. Toit végétalisé extensif	Toit végétalisé dont le substrat de croissance a une épaisseur minimale de 100 mm et inférieure à 150 mm.	0,4	0,00
		C.1.2. Toit végétalisé semi-intensif	Toit végétalisé dont le substrat de croissance a une épaisseur minimale de 150 mm et inférieure à 300 mm.	0,6	0,00
		C.1.3. Toit végétalisé intensif	Toit végétalisé dont le substrat de croissance a une épaisseur minimale de 300 mm et inférieure à 600 mm.	0,8	0,00
		C.1.4. Toit végétalisé super-intensif	Toit végétalisé dont le substrat de croissance a une épaisseur minimale de 600 mm et inférieure à 1000 mm.	1	0,00
		C.1.5. Toit végétalisé ultra-intensif	Toit végétalisé dont le substrat de croissance a une épaisseur minimale de 1000 mm.	1,2	0,00
	C.2. Structure verticale végétalisée	C.2.1. Mur végétalisé	Hauteur maximale de 10 mètres. Plantation en pleine terre.	0,5	0,00
		C.2.2. Clôture végétalisée	Hauteur maximale de 2,5 mètres. Plantation en pleine terre.	0,3	0,00
	C.3. Contenant de plantation	C.3.1. Contenant de faible profondeur	Contenant de plantation ayant un substrat de croissance d'une profondeur minimale de 400 mm et inférieure à 800 mm. Volume de terre minimal de 1 m ³ .	0,2	0,00
		C.3.2. Contenant de grande profondeur	Contenant de plantation ayant un substrat de croissance d'une profondeur minimale de 800 mm. Volume de terre minimal de 5 m ³ .	0,4	0,00

Figure 10. Feasibility table for Goal 1: Healthy Communities fill in these tables:

Goal 1: Healthy Communities					
Action	Timeline	Costs	Primary Actor	Key Actors	Political Feasibility
Institute a <i>Community Food Sustainability Fund</i> to support non-profit operations for food security	Short-Medium	\$\$	Mercier-Hochelaga-Maisonnette Borough	Mercier-Hochelaga-Maisonnette Borough, Non-profit organizations (LCCHM, Carrefour Solidaire)	Medium
Install	Short-Medium	\$	Mercier-	Mercier-	High

Community gardens in four pilot locations			Hochelaga-Maisonneuve Borough	Hochelaga-Maisonneuve Borough, Lufa Farms	
Revitalize parks to include fitness, sports, and recreation facilities	Short-Medium	\$\$	Mercier-Hochelaga-Maisonneuve Borough	Mercier-Hochelaga-Maisonneuve Borough, Parks and Recreation Department	High
Develop programs for knowledge and skills sharing and various community events to support local entrepreneurs hip and creative talents	Short	\$	Mercier-Hochelaga-Maisonneuve Borough	Mercier-Hochelaga-Maisonneuve Borough, La table de quartier Hochelaga-Maisonneuve, Société de développement commercial Hochelaga-Maisonneuve	High
Develop the Vulnerable Person Registry	Short	\$	Mercier-Hochelaga-Maisonneuve Borough	Mercier-Hochelaga-Maisonneuve Borough, Social Services Department, SPVM, Service de sécurité incendie, CLSC	High

Figure 11. Feasibility table for Goal 2: Healthy Environment

Goal 2: Healthy Environment					
Action	Timeline	Costs	Primary Actor	Key Actors	Political Feasibility
Install bioretention and retention basins	Medium-Long	\$\$	Mercier-Hochelaga-Maisonneuve Borough	Mercier-Hochelaga-Maisonneuve Borough, City of Montréal, and environmental experts	Medium
Retrofit existing parks and require new parks to be able to retain water	Medium - Long	\$\$	Mercier-Hochelaga-Maisonneuve Borough	Mercier-Hochelaga-Maisonneuve Borough, parks and recreation department, environmental experts, and local residents	High
Encourage use of porous pavement for parking lots, pedestrian walkways, and local streets.	Short-Medium	\$\$	Mercier-Hochelaga-Maisonneuve Borough	Mercier-Hochelaga-Maisonneuve Borough, City of Montréal, developers, business owners, and local residents	Medium
Large-scale	Short-	\$\$	Mercier-	Mercier-	High

planting initiatives	Medium		Hochelaga-Maisonneuve Borough	Hochelaga-Maisonneuve Borough, City of Montréal, urban forestry department, Le Service des Grands Parcs, du Mont-Royal et des Sports (SGPMRS), and community organizations	
Increase the standard for the solar reflectance index from 56 to 78	Short	\$	Mercier-Hochelaga-Maisonneuve Borough	Mercier-Hochelaga-Maisonneuve Borough	High
Explore the possibility of incorporating rooftop detention basins as a permitted type of roof.	Short	\$	Mercier-Hochelaga-Maisonneuve Borough	Mercier-Hochelaga-Maisonneuve Borough, City of Montréal, developers, building owners, and local residents	Medium

Figure 12. Feasibility table for Goal 3: Healthy Movement

Goal 3: Healthy Movement					
Action	Timeline	Costs	Primary Actor	Key Actors	Political feasibility
North-south mobility corridor	Medium	\$\$	Mercier-Hochelaga-Maisonneuve Borough	Mercier-Hochelaga-Maisonneuve borough, City of Montréal, Canadian Pacific Railway, Lallemant Inc., local residents, Ville-Marie Kia, Location Legare, Lumen Inc.	Medium
Creation of protected bike lanes on critical streets	Short	\$	Mercier-Hochelaga-Maisonneuve Borough	Mercier-Hochelaga-Maisonneuve borough, City of Montréal	High
Expansion of the protected bike lane network to include the majority of streets	Medium-long	\$\$	Mercier-Hochelaga-Maisonneuve Borough	Mercier-Hochelaga-Maisonneuve borough, City of Montréal	Medium
Support the creation of a “last mile” transportation service for	Medium	\$\$	Mercier-Hochelaga-Maisonneuve Borough	Mercier-Hochelaga-Maisonneuve borough, City of Montréal,	Medium

vulnerable users				local non-profits	
Create a new high-frequency tram line	Long	\$\$	ARTM	Mercier-Hochelaga-Maisonneuve borough, City of Montréal, STM, ARTM	Low
Install a moving sidewalk on rue Préfontaine	Long	\$\$	Mercier-Hochelaga-Maisonneuve Borough	Mercier-Hochelaga-Maisonneuve borough, City of Montréal	Low
Explore updating the pedestrian charter to include improved pedestrian safety measures at intersections being resurfaced	Medium	\$	Mercier-Hochelaga-Maisonneuve Borough	Mercier-Hochelaga-Maisonneuve borough, City of Montréal, local residents, local businesses, SPVM	Medium
Add lighting in dark corridors	Short	\$	Mercier-Hochelaga-Maisonneuve Borough	Mercier-Hochelaga-Maisonneuve borough, City of Montréal, SPVM	High
Add traffic calming measures such as chicanes as	Long	\$\$	Mercier-Hochelaga-Maisonneuve Borough	Mercier-Hochelaga-Maisonneuve borough, City of Montréal,	Medium

neighbourhood streets get resurfaced				local residents, local businesses	
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