Canada Lands Company
Société immobilière du Canada

Public Services and Procurement Canada
Services publics et Approvisionnement Canada

FOTENN

Confederation Heights Master Plan

Stage 5 - Master Plan Report

March 2026

Prepared for Canada Lands Company and Public Services and Procurement Canada
Prepared by Fotenn Planning + Design

CONFEDERATION HEIGHTS
Realize the potential

BUTTES DE LA CONFÉDÉRATION
Réaliser le potentiel

Indigenous Land Acknowledgment

We recognize that the City of Ottawa is located on the traditional and unceded territory of the Algonquin Anishinabe People who have lived on this land for millennia. We extend our respect to all First Nations, Inuit and Métis peoples for their valuable past and present contributions to this land. We also recognize and respect the cultural diversity that First Nations, Inuit and Métis people bring to the City of Ottawa.

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01 Introduction

1.1 Purpose of the Plan

Confederation Heights offers a generational city building opportunity. This document, the Confederation Heights Master Plan, sets out the strategy to achieve the transformation of Confederation Heights from a Federal Employment Node into a vibrant mixed-use community, as set out in the project vision.

In 2021, CLC and PSPC began working together to find innovative ways to address underutilized federal sites, such as Confederation Heights, transforming them into mixed-use, transit-oriented communities integrated into the broader urban context. Part of this work included PSPC determining its future at Confederation Heights as part of the federal governments' portfolio reduction strategy.

Led by CLC in collaboration with PSPC, this Master Plan is the culmination of years of work by the consultant team led by Fotenn Planning + Design (Fotenn), as well as by stakeholders, City of Ottawa staff, the National Capital Commission (NCC), our Public Advisory Committee, Technical Advisory Committee and the broader public, and many others.

The Confederation Heights Master Plan has been informed by a robust and transparent public engagement process, with public feedback informing every stage of the development of the Master Plan. The development of the Master Plan was supported by six (6) Public Advisory Committee (PAC) meetings, representing a structured way for community organizations and individuals to share their opinions and perspectives, study issues, and develop recommendations. Since 2021, there have been five (5) public engagement meetings for the broader public, in addition to a series of virtual activities and online surveys. The stages of public engagement included:

- Public Engagement #1 (November 2021): These initial engagements allowed participants to express their views and identify opportunities and constraints in the redevelopment of the lands before any work took place, beyond an assessment the site today.
- Public Engagement #2 (June 2022): The Vision and Guiding Principles were presented for feedback and the project team held discussions on mobility and connectivity, complete communities, energy and sustainability, greenspace and nature, and heritage.
- Public Engagement #3 (November 2023): Three (3) Concept Options were presented, entitled: Gateway to the Capital, Recreational District and Intensify and Urbanize. Each offered different alternatives to envision the site for future redevelopment. Feedback was sought through a series of discussions on connectivity and mobility, heritage, character and density, land use, open spaces and sustainability.
- Public Engagement #4 (June 2025): The Draft Master Plan was presented for feedback, with a series of facilitated conversations on four (4) elements: the master plan, parks and open spaces, active transportation, and heritage.
- Public Engagement #5 (January 2026): The Final Draft Master Plan was presented, and the public was asked to evaluate how well it achieved the Vision and Guiding Principles.

As We Heard It Reports for each stage of engagement are available on the Confederation Heights Project Website.

CLC continues to engage Indigenous communities and organizations through a parallel process on the redevelopment of Confederation Heights. This includes exploring opportunities for Indigenous commemoration and recognition of the Algonquin culture and historical relationship to the land at Confederation Heights.

The **Confederation Heights Master Plan** document serves multiple functions:

- Acts as a shared and tangible articulation of the vision for Confederation Heights;
- Describes the systems that will support the future community;
- Identifies projects, actions, standards and targets that are required for these systems;
- Informs the policies of, and support the interpretation and application of the Secondary Confederation Heights offers a generational city building opportunity. This document, the Confederation Heights Master Plan, sets out the strategy to achieve the transformation of Confederation Heights from a Federal Employment Node into a vibrant mixed-use community, as set out in the project vision.

Section 1.0 of the Master Plan sets out the basis of the Master Plan.

Section 2.0 – Community Structure - explains the infrastructure, frameworks, big moves and approaches that are required to realize the Master Plan. The intent of Section 2.0 is to describe existing and desired conditions, demonstrate the logic of the Master Plan, and serve as inspiration.

The approaches and systems outlined in Section 2.0 of the plan are highly integrated, but are grouped around key themes which are broken out as separate subsections:

- Mobility
- Heritage and Design
- Greenspace
- Land Use
- Energy
- Servicing

Accessibility, wayfinding, environmental sustainability, climate resilience and social equity are central to the logic of the plan, but are integrated throughout and do not have separate sections. Instead, they are flagged throughout with the following symbols:

Resilience *Sustainability* *Accessibility*

Realization of the Plan is addressed in **Section 3.0** of the Master Plan, which is broken down into two parts. The first part addresses phasing and the major undertakings required to realize each phase. Part two contains guidelines to be used in the design and implementation of design, development and infrastructure projects.

1.2 Vision and Guiding Principles

1.1.1 Vision

The Master Plan establishes a vision for the site, which is expected to transition over the next 25 years from a former federal employment hub into a mixed-use, sustainable community with a continued federal government employment presence.

The area's history and context, including proximity to the Rideau River, NCC parkland, and planned public transit and roadway infrastructure, will shape the Master Plan and inform aspects such as:

- land uses
- mobility (pedestrian circulation, accessibility and wayfinding)
- transportation (active transportation, transit and vehicular connections)
- parks and open space
- heritage
- sustainability
- building height
- densities
- site design
- market and affordable housing

The Master Plan vision was developed by the project team through a series of stakeholder workshops and public engagement sessions that identified emerging themes. To provide further guidance for the development of a Master Plan, a set of seven guiding principles were established to support the project vision.

The following set of seven guiding principles support the project vision and have informed each stage of Master Plan development. These will continue to guide the redevelopment of Confederation Heights through all planning, design and implementation phases.

VISION

Confederation Heights will become a vibrant place to live, work and play, rooted in its natural and recreational assets. The design will integrate a mix of uses and public spaces to create a complete, climate resilient and well-connected community that serves as an important gateway to Canada's Capital

Create Connections
Realize the potential of public transit and other transportation options to enable safe and accessible travel by foot, wheels, or transit through and into the site.

Enrich Access to Nature and Recreation
Promote and protect natural assets, including Vincent Massey and Hog's Back parks, by improving access to greenspace, recreation, and enhancing Confederation Heights' ecology.

Celebrate Culture and Heritage of the Site
Recognize and celebrate the heritage and long history of the site, including honouring the Algonquin Anishinabe, to foster a culture rooted in a distinct sense of place.

Ensure Climate Resiliency
Develop a climate resilient community through the implementation of sustainability ideals and measurable initiatives.

Develop a Complete Community
Transform the site into a vibrant mixed-use community where existing federal employment and regional recreational uses will be complemented by a range of new uses that will make Confederation Heights a place to live, work and play.

Design with People in Mind
Use design to transform Confederation Heights from a vehicle-focused site to a place that prioritizes the needs and well-being of people.

Be an Inclusive and Accessible Space for Everyone
Ensure that spaces and amenities are welcoming, safe and accessible, and prioritize affordability for a diverse population.

Create Connections

Realize the potential of public transit and other transportation options to enable safe and accessible travel by foot, wheels, or transit through and into the site.

The strategies supporting this Guiding Principle are:

A. Provide equitable and easy access to transit to and from parcels, parks and adjacent communities.
B. Recognize transit stations as core organizing elements of the Master Plan.
C. Connect different areas of the Study Area with each other and with the adjacent neighbourhoods and destinations with clear, direct, accessible and safe active transportation links.
D. Prioritize walking, rolling, cycling and transit infrastructure, and de-prioritize vehicles and parking to improve health and reduce dependency on private automobiles.
E. Ensure flexibility to accommodate micro-mobility and new and emerging transportation modes.
F. Remove and overcome existing physical barriers to connectivity within the Study Area and between the Study Area and surrounding communities.
G. Develop a site-wide circulation network that aligns with City of Ottawa and NCC's standards.
H. Ensure safety, security and legibility through design and wayfinding.
I. Design public spaces, connections and facilities for year-round use by all community users.
J. Establish a transportation modal-split that enables the area's transformation from a vehicle-dominated, suburban model to a model built on active transportation and the urban environment that will support it.

Enrich Access to Nature and Recreation

Promote and protect natural assets, including Vincent Massey and Hog's Back parks, by improving access to greenspace, recreation, and enhancing Confederation Heights' ecology.

The strategies supporting this Guiding Principle are:

A. Provide access to surrounding green spaces and accessible waterways, where appropriate.
B. Create accessible links to and through the Study Area that are maintained to allow for year-round recreational uses, including recreational connections to Capital Parks and nearby municipal parks.
C. Preserve and enhance the existing ecosystems, wildlife habitat and natural environment.
D. Integrate Indigenous peoples' expertise in land stewardship.
E. Promote the planting of native species to increase biodiversity and naturalization.
F. Provide enough spaces for tree planting to enhance the canopy coverage across the site and meet the NCC's Forest Strategy and the City of Ottawa's Urban Forest Management Plan.
G. Design stormwater infrastructure as an amenity and integrate nature-based solutions that take into consideration the sensitivity of Sawmill Creek.
H. Incorporate bird-friendly design guidelines throughout the Master Plan development.
I. Ensure enough public indoor and outdoor recreational facilities provide the infrastructure required to support a regional recreational node within Ottawa.
J. Integrate and build upon existing recreation, sport, and wellness assets to create experiences that add value to lives and the community.
K. Create an area that promotes activity and regular year-round use by offering a variety of sport and recreation opportunities and infrastructure.

Celebrate Culture and Heritage of the Site

Recognize and celebrate the heritage and long history of the site, including honouring the Algonquin Anishinabe, to foster a culture rooted in a distinct sense of place.

The strategies supporting this Guiding Principle are:

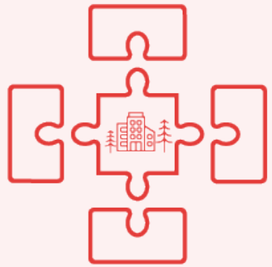
A. Engage the Algonquin Anishinabe in the master planning process and incorporate Algonquin Anishinabe culture, language and placemaking into the design of spaces and buildings.
B. Take advantage of and enhance the views of Confederation Heights from Airport Parkway to complement the southern Capital Arrival Route into Ottawa.
C. Generate new human-scaled views that frame and enhance the experience of key heritage features, buildings and landscapes.
D. Celebrate existing Federal Modernist typologies (Estates and Campus) and identify where new buildings, features and public spaces can be added to complement them, creating a unique sense of place and cohesiveness.
E. Design new buildings with architectural design excellence that relates to and complements the modernist legacy of the site, whilst being true to the contemporary scene.
F. Create spaces that can support festivals, sports activities, public art and local artists and performers.
G. Enhance heritage and cultural landscapes through strategic and innovative planning and design.

Ensure Climate Resiliency

Develop a climate resilient community through the implementation of sustainability ideals and measurable initiatives.

The strategies supporting this Guiding Principle are:

A. Ensure that the Master Plan can achieve or exceed municipal and federal emission reduction targets at full build out.
B. Reduce emissions associated with transportation through a mix of land uses and densities that support sustainable transportation.
C. Leverage existing buildings for reuse potential (i.e. embedded resources and waste diversion).
D. Practice conservation, stewardship and expansion of naturalized areas to serve as carbon sinks, increase ecosystem resilience and provide ecosystem services.
E. Achieve sustainable design excellence, including energy efficient building envelopes and design approaches.
F. Reduce embodied carbon and seek to use sustainable construction materials and techniques.
G. Include infrastructure for socio-economic resilience (e.g. gathering spaces, shared resources, respite centres).
H. Use climate and energy modeling to guide strategies for resilience and energy efficiency.
I. Plan infrastructure to enable low-carbon operations (e.g. District Energy/ESAP, grid capacity for electrification, microgrids, load balancing, storage and renewables generation).
J. Validate success through a third-party sustainability framework(s).
K. Design buildings, infrastructure and public spaces to address climate resilience, ecological function, health, well-being and fiscal responsibility.
L. Create a site-wide stormwater management plan that uses a treatment train approach, and prioritizes the implementation of green infrastructure and low-impact development.

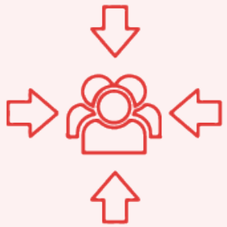


Develop a Complete Community

Transform the site into a vibrant mixed-use community where existing federal employment and regional recreational uses will be complemented by a range of new uses that will make Confederation Heights a place to live, work and play.

The strategies supporting this Guiding Principle are:

A. Establish an overall concentration of people and jobs over the Study Area to achieve the density needed to form an activity hub at all times of the day and throughout the year, and to support higher-order public transit.
B. Establish implementation scenarios and identify triggers for future phases of development, and enable interim uses to allow flexibility during the build out of the Master Plan.
C. Apply appropriate zoning and other minimum requirements to allow flexibility to respond to market conditions.
D. Allow for a mix of uses to include a range of housing types, shops, services, local access to food, schools and day care facilities, employment, greenspaces, parks and pathways in support of walkable neighbourhoods.
E. Attract and support new local businesses and provide opportunities for services that support communities such as health services, day cares, wellness, and fitness.
F. Integrate existing and planned community uses (e.g. recreational/sports centres, fitness and wellness facilities, new schools, cultural institutions).
G. Prioritize cooperation with approval authorities, fellow landowners, Indigenous partners, and other stakeholders to achieve the objectives of the Master Plan during the implementation stages.



Design with People in Mind

Use design to transform Confederation Heights from a vehicle-focused site to a place that prioritizes the needs and well-being of people.

The strategies supporting this Guiding Principle are:

A. Enable the transformation of existing road infrastructure into complete streetscapes that contribute to neighbourhood character and sense of place, and create new streets as complete streets.
B. Foster a distinct neighbourhood identity building upon the strong Federal Modernist typologies.
C. Create active frontages with a variety of at-grade uses, including residential units with street-facing entrances and commercial uses.
D. Create a hierarchy of public spaces, with linkages between urban plazas, gathering places, parks, greenspaces and the natural environment.
E. Layer a fine-grained urban fabric with a high pedestrian porosity onto the existing structure of the site.
F. Consider social and physical human diversity and design for all.
G. Create healthy indoor and outdoor places.
H. Aim for high quality, adaptable and durable architecture that will be built to last beyond standard building life cycles.
I. Consider year-round comfort, operations and maintenance requirements in the design: waste and snow removal, deliveries, etc.
J. Use innovative solutions to guarantee federal security requirements of certain buildings while still providing urban design excellence and state-of-the-art public realm experience.

Be an Inclusive and Accessible Space for Everyone

Ensure that spaces and amenities are welcoming, safe and accessible, and prioritize affordability for a diverse population.

The strategies supporting this Guiding Principle are:

A. Adopt a proactive public engagement strategy that actively listens to and implements feedback from stakeholder groups and residents.
B. Partner with Indigenous communities and organizations to enable Indigenous approaches to design, access to land and business and development opportunities.
C. Establish a definition and targets for affordable housing that are appropriate for the site and that are flexible to meet the current and future needs.
D. Provide opportunities for accessible and socially-oriented commercial and community uses.
E. Adopt urban design guidelines that enable a public realm that is safe, inviting, and easy to navigate at all times of day and in all seasons of the year.
F. Supply a range of housing types, tenures, pricing, and sizes to accommodate people through all stages of their lives, allowing for people to age in place.
G. Use Universal Design as a fundamental condition of good design, recognizing that Universal Accessibility is required to achieve equity, diversity, and inclusion.
H. Provide for Universally Accessible and visitable housing .
I. Create inclusive, Universally Accessible, and engaging spaces that encourage people to interact.
J. Consider how diverse groups of people and individuals may experience Confederation Heights, to address systemic inequalities.
K. Evaluate existing buildings for accessibility improvements, adaptive reuse and creative design for flexible and multi-functional spaces and buildings.

The Total Study Area is approximately 188 hectares in size, including Parks and the Sawmill Creek corridor in addition to the 112 hectare Intervention Area. The net development area is approximately 56 hectares which includes all development blocks. T

1.3 Study Area

The 112-hectare Intervention Area, shown in Figure 1, establishes the area where the Master Plan will drive significant change and transformation. A larger, 188-hectare Study Area includes Capital Parks and the Sawmill Creek corridor, recognizing the influence these lands have on Confederation Heights, and the opportunites for integration. Within the Intervention Area, the team has estimated a net intervention area of 56 hectares. he assumptions made in calculating these figures are noted in the paragraphs below.

Figure 1: Study Area with Land Ownership. Source: Fotenn / Google Earth

Total Study Area: ~188ha

The total CHMP Study Area equates to roughly 188 hectares of land. It includes Parks, City of Ottawa Rights-of-way, a segment of the Sawmill Creek Corridor, and several parcels owned by PSCP, the NCC, Canada Post and Health Canada. Please refer to the property ownership in Figure 1 for additional information.

Total Gross Intervention Area: ~112ha

The CHMP establishes an Intervention Area within the Study Area, where major transformation is anticipated. Areas outside this boundary may see minor changes to enhance access and rehabilitate features. The following assumptions were considered to establish the Gross Land Area for the Intervention Area. Assumptions exclude:

- Existing arterial ROWs (Heron Rd, Riverside Dr, Data Centre Rd and Bronson Ave) - protected right-of-way width
- Capital Parks (Hog's Back Park and Vincent Massey Park)
- Sawmill Creek Corridor
- Via Rail Corridor

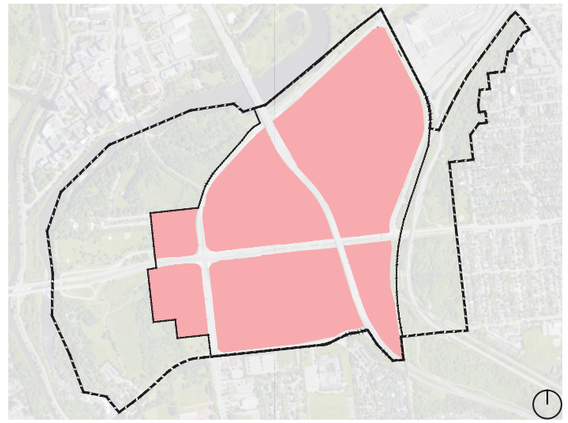


Figure 2: Areas used for Gross Intervention Area calculations. Source: Fotenn

Estimate Net Intervention Area: ~56ha

To estimate a total Net Intervention Are, the CHMP team used the following logic for calculations:

1. Subtract actual identified developable blocks (as per concept plans) from the Total Gross Area assumption to generate a rough estimate of lands to be dedicated to future new public or private streets.

2. Deduct lands that are to remain within the Federal portfolio, that are environmentally sensitive, parkland dedication, and that are intended for open space or stormwater retention facilities

Existing Conditions within the Study Area are described in Section 2 below.

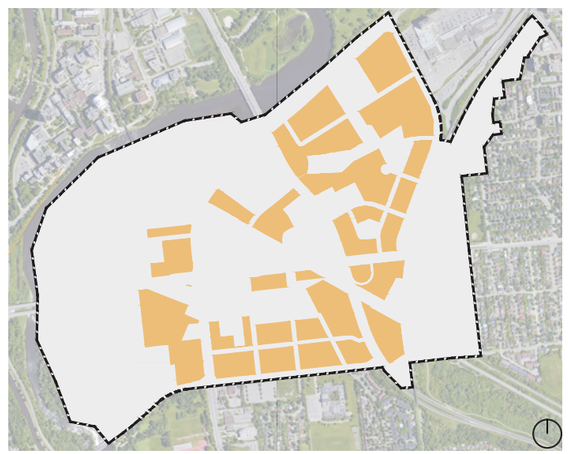


Figure 3: Areas used for Net Intervention Area calculations. Source: Fotenn

1.4 Policy and Regulatory Context

1.4.1 National Capital Commission Policy Framework

Lands remaining in the federal inventory will continue to be subject to the plans and policies under the National Capital Act. These lands include Capital Parks, Health Canada, and the Sir Leonard Tilley Parcel. The plans and policies of the NCC have informed the Master Plan in the following ways:

- The **Plan for Canada's Capital, 2017-2067** is a 50-year blueprint for the evolution of federal lands in the NCR to carry forward the legacy of historic plans and capital building projects. Confederation Heights is identified as a Federal Employment Site and as a Milestone Project. Key policy directions include:
  - The renewal of the Federal Employment Site with the addition of other non-federal residential, retail and office uses.
  - Collaboration with the municipality, PSPC and the NCC to ensure that federal sites become better integrated with their context and closely linked to the urban fabric. Redevelopment with a mixed-use, compact development model is possible on many sites.
  - Future intensification will provide for a more integrated mix of uses.
  - Given Confederation Heights location at the confluence of the Airport Parkway Capital Arrival route and the Riverside Drive Scenic Entry, as well as adjacency to the Rideau River, Confederation Heights requires visual excellence.
  - Proportionate security measures.
  - Integration of Indigenous Representation.
  - Improved access to waterways and shorelines and increase the capacity of active transportation routes along the rivers.
  - Divestiture of some surplus lands to help achieve regional intensification objectives.
  - Bringing to life of Heritage buildings with new uses, including well-integrated accessibility upgrades.
  - Achievement of energy efficiency and accessibility objectives in retrofitted and redeveloped buildings.
- The **Capital Urban Lands Plan** applies to federal lands that are located within the Greenbelt. Multiple land use designations apply to the Study Area, including Major Federal Employment Area, Other Federal Facility, Valued Natural Habitat and Capital Park.
  - The *Major Federal Employment Area* designation supports the efficient use of federal land holdings by consolidating federal functions at major federal employment areas while supporting the integration of major federal employment areas into their urban context.
  - The *Other Federal Facility* designation applies to the RA Centre and the portion of the Sawmill Creek lands south of Heron Road. Disposal is permitted where lands are declared surplus.
  - Vincent Massey Park and Hog's Back Park, as *Capital Parks*, are parks of significance that serve as stages for major events and activities.
  - A portion of Vincent Massey Park, north of the Trillium Line, is identified as *Valued Natural Habitat.* This designation contains policies to protect and restore ecosystem health.
- The **NCC Sustainable Development Strategy (2018)** identifies 36 actions which have informed the Confederation Heights Master Plan.
- The **Capital Pathway Strategic Plan (2020)** sets out a strategic plan to build on and improve active mobility connectivity through the improvement of the Capital Pathway network.

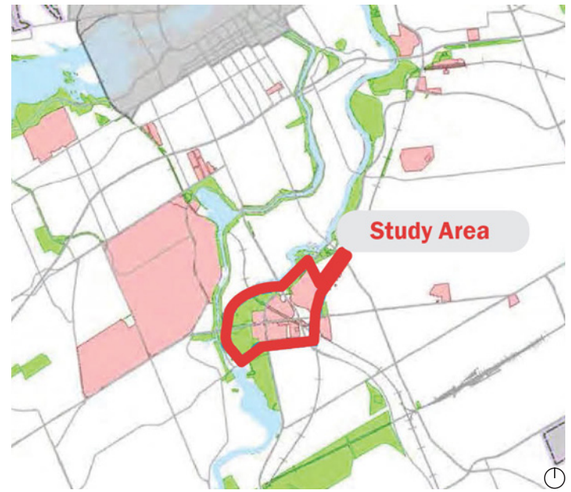


Figure 4: Extract from Capital Urban Lands Plan showing nearby federal properties

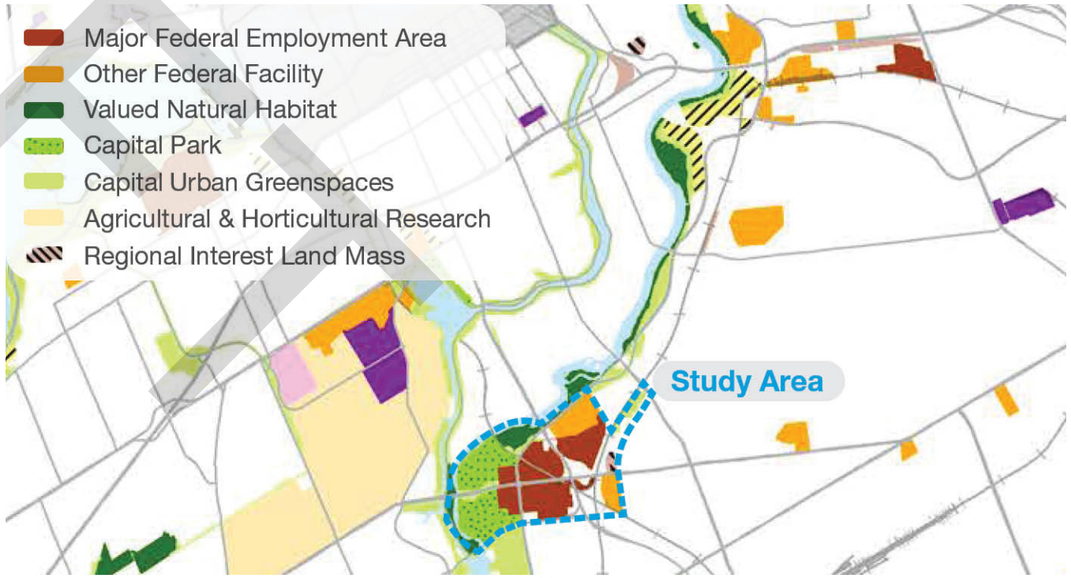


Figure 5: Extract from CULP Land Use Designations Source: NCC CULP

1.4.2 City of Ottawa Official Plan

The Official Plan for the City of Ottawa was approved November 4, 2022. The Plan provides a framework for development in the City until 2046, when it is expected that the City's population will surpass 1.4 million people. The Official Plan directs how the City will accommodate this growth over time and sets out the policies to guide the development and growth of the City.

1.4.2.1 Strategic Directions

The Official Plan envisions a livable and resilient city guided by the "Five Big Moves." These strategic directions, set out Section 2 of the Official Plan, inform the City's approach to growth and development. These are:

- Big Policy Move 1: Achieve, by the end of the planning period, more growth by intensification than by greenfield development
- Big Policy Move 2: By 2046, the majority of trips in the city will be made by sustainable transportation.
- Big Policy Move 3: Improve our sophistication in urban and community design and put this knowledge to the service of good urbanism at all scales, from the largest to the very small.
- Big Policy Move 4: Embed environmental, climate and health resiliency and energy into the framework of our planning policies.
- Big Policy Move 5: Embed economic development into the framework of our planning policies.

1.4.2.2 Transect and Designation Policies

Schedule A of the Official Plan divides the city into six transects, each representing a different gradation in the type and evolution of built environment and planned function of the lands. Confederation Heights is located within the Inner Urban Transect.

Within each urban transect, land use designations apply to all lands, creating a policy framework which sets out a hierarchy of urban functions based on a system of nodes and corridors. Confederation Heights as a whole is designated as a Hub, while the lands abutting Bronson Avenue are designated Mainstreet Corridor, and the lands abutting Riverside Drive and Heron Road are designated Minor Corridor.

Secondary Plan policies may specify different extents for designations, and set out different policies relating to built form, urban design and land use, among other considerations. As part of the Secondary Plan, the Mainstreet Corridor designation is anticipated to be removed from Bronson Avenue and Brookfield Road is to be added as a Minor Corridor.

The Inner Urban Transect policies seek to enhance or establish an urban pattern of built form, site design and mix of uses and to Prioritize walking, cycling and transit within, and to and from, the Inner Urban Transect.

The planned function of Hubs is to concentrate a diversity of functions, a higher density of development,

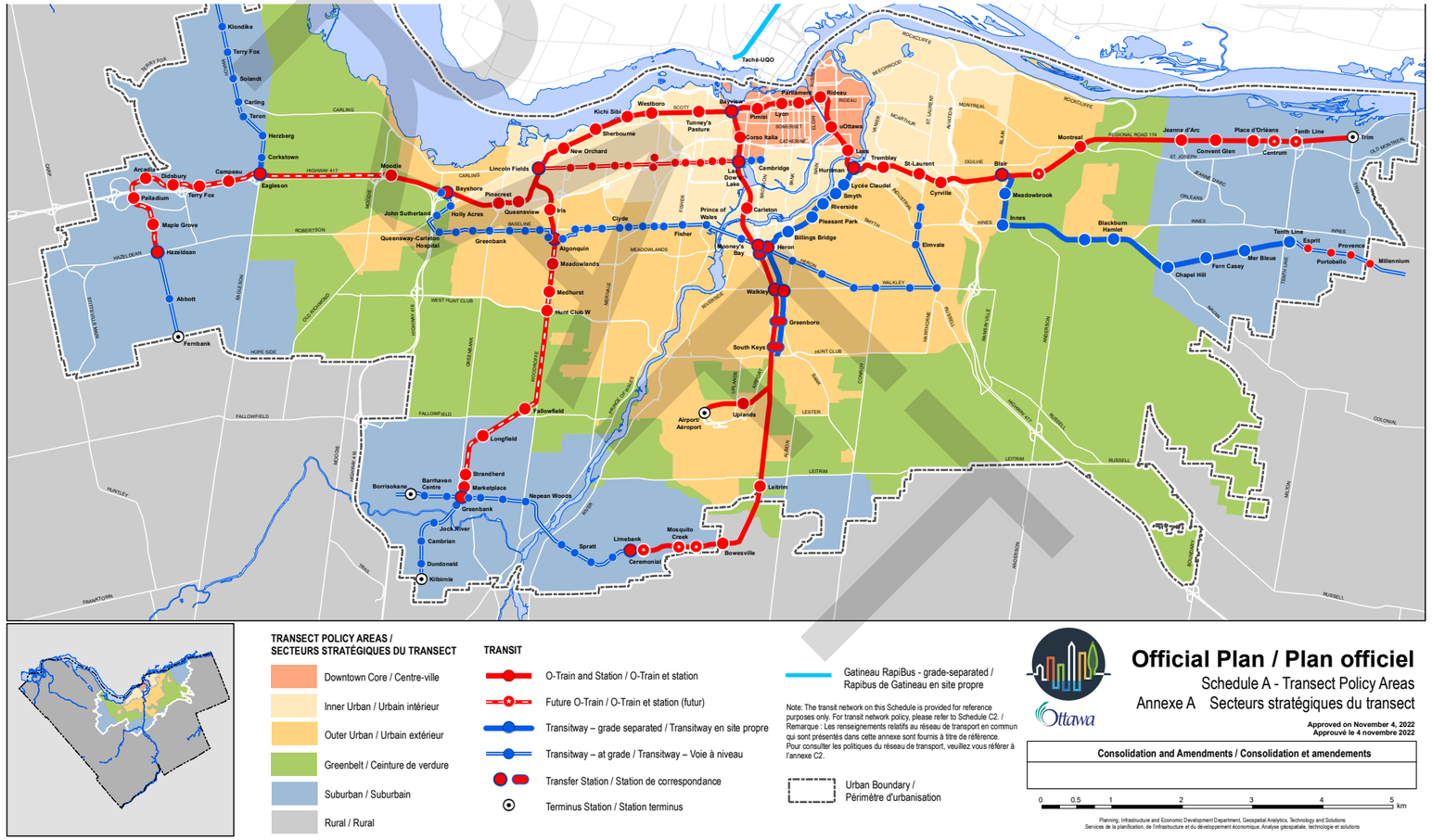


Figure 6: Schedule A of the City of Ottawa Official Plan

a greater degree of mixed uses and a higher level of public transit connectivity than the areas abutting and surrounding the Hub.

The Corridor designation permits a mix of residential and non-residential uses that integrate with a dense, mixed-use urban environment that includes commercial and service uses on the ground floor of all types of buildings (residential, institutional, office) to contribute towards 15-minute neighbourhoods.

Transect and Designation Policies applying to Confederation Heights include:

- The permitted building height in Hubs in the Inner Urban Transect is maximum 40 storeys (Policy 5.2.3(1)). Minimum heights are three storeys within 300 metres/400 metres walking distance of a Transit Station, and two storeys otherwise (Policy 6.1.2 (4)). Buildings of over 40 storeys in height may be permitted by a Secondary Plan (Policy 5.2.3).
- Hub height policies prevail over Corridor heights. For reference, minor corridors are permitted a minimum of two and a maximum of six storeys (Policy 5.2.3(3)).
- In the Inner Urban Transect, the City encourages mid-20th century tower-in-the-park sites to infill underused lands on their sites so as to connect with and frame the surrounding streets, increase housing choice and integrate existing towers with the physical and social fabric of abutting neighbourhoods, including the extension of a high-quality public pedestrian network (Policy 5.2.1 (2)).
- The Inner Urban Transect will continue to develop as a mixed-use environment, where Hubs and a network of Mainstreets and Minor Corridors provide residents with a full range of services within a walking distance from home, in order to support the growth of 15-minute neighbourhoods; and existing and new cultural assets are supported (Policy 5.2.1 (4)).
- The transportation network for the Inner Urban Transect is to prioritize walking cycling and transit (Policy 5.2.2 (2)), and surface parking within 300 metre radius or 400 metres walking distance of a rapid transit station, shall be limited to a very small amount of short-term spaces which shall not be located between the building and the sidewalk; outside of this radius, surface parking is only permitted as an accessory use, and must be hidden from view of the public realm (Policy 5.2.2 (3)).
- Auto-oriented uses (Policy 6.1.1 (4) (a)) and uses likely to cause nuisance due to dust, odour, fumes, etc. are prohibited (Policy 6.1.1 (3) (h)).
- In Hubs, the highest density should be directed closest to the transit station or stop so that transit is the most accessible means of mobility to the greatest number of people, and large employment, commercial or institutional uses are encouraged to locate close to the transit station (Policy 6.1.1. (3) (a)).
- Within Hubs, buildings shall edge, define, address and enhance the public realm through building placement, entrances, fenestration, signage and building facade design, and parking, loading and servicing shall be located to minimize their impact on the public realm (Policy 6.1.1. (3) (f)).

Figure 8: Extract from Schedule C1 of the City of Ottawa Official Plan, showing location of rapid transit stations.

Confederation Heights Study Area

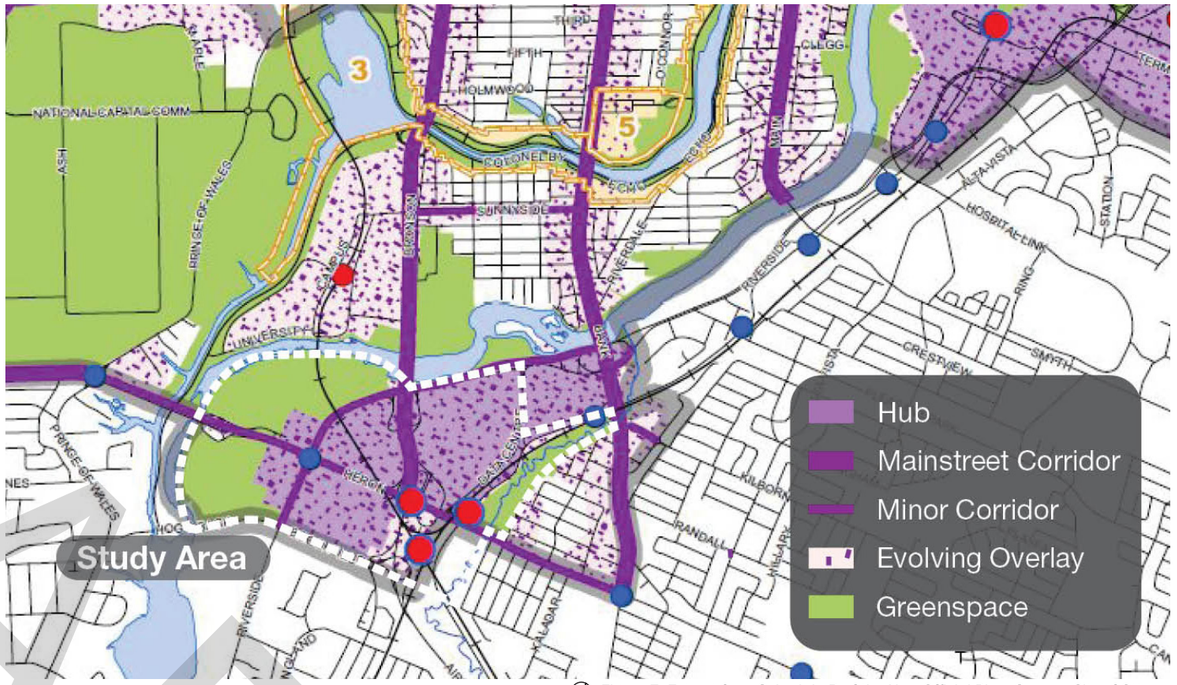


Figure 7: Extract from Schedule B of the New Official Plan. Source: City of Ottawa

- The Corridor designation permits a mix of residential and non-residential uses that integrate with a dense, mixed-use urban environment that includes commercial and service uses on the ground floor of all types of buildings (residential, institutional, office) to contribute towards 15-minute neighbourhoods (Policy 6.2.1 (3)).
- For both Hubs and Corridors, development shall ensure appropriate transitions in height, use of land, site design and development character through the site to abutting designations, and development may be required to provide public mid-block pedestrian connections to nearby streets or abutting designations (Policy 6.1.2 (2) (a)).

1.4.2.3 City-wide Policies

Section 4 of the Official Plan addresses City-wide policies, including Mobility, Housing, Large Institutions, Parks, Cultural Heritage, Urban Design, Servicing, Natural Heritage and School Facilities. The following Urban Design policies have shaped the Confederation Heights Master Plan:

- Confederation Heights is a Tier 3 Design Priority Area (DPA). DPAs are identified to promote design excellence through the development review process, and with respect to capital projects in the public realm (Policy 4.6.1 (1)).
- Development and capital projects within DPAs shall consider four season comfort, enjoyment, pedestrian amenities, beauty and interest (Policy 4.6.1 (5)).

- High-impact city building projects are encouraged to locate in DPAs to help define Ottawa's international image, advance tourism and contribute to the long-term competitiveness of the city's economy (Policy 4.6.1 (6)).
- Development and capital projects abutting Scenic Routes shall conserve a desirable context by protecting view opportunities to natural and cultural heritage features, preserving and restoring landscaping, orienting buildings towards the Scenic Route and providing direct pedestrian access, where appropriate, and managing lighting spill-over (Policy 4.6.2 (4)).
- Where Scenic Routes are also Scenic Capital Entry Routes, development and capital projects shall a) enhance the opportunity for views and vistas towards national symbols, cultural landscapes and other features of the Capital; and b) Contribute to the image of Ottawa as the Capital city by providing landscape and aesthetic improvements, including buildings that enhance the urban character (Policy 4.6.2 (5)).

Figure 9: Active modes of transportation and transit. Sources: bikeottawa.ca (top), ottawainsights.ca (bottom).

- Privately Owned Publicly Accessible Spaces (POPS), which offer publicly accessible amenity that contributes positively to the public realm, will be designed to fit into their context, animate the streetscape, take advantage of views, highlight heritage elements, provide a comfortable microclimate, respond to the needs of the community, read as publicly-accessible, feel comfortable, and bring nature into the built environment. (Policy 4.6.3 (2)).
- Space on streets may be reallocated from vehicular use in favour of pedestrians, to provide a wide range of elements that promote liveability through pedestrian safety, community interaction, greenery, creative and cultural expression and opportunities for rest and play (Policy 4.6.3 (3)).
- The City will explore partnerships with development proponents, and other groups to enhance the public realm through means such as the coordination and development of capital improvements in conjunction with development on adjacent properties as well as the maintenance, management and stewardship of public spaces (Policy 4.6.3 (4)).
- Hubs should include comprehensive wayfinding initiatives to provide informative signage and maps at strategic locations including areas in front of significant buildings, transit stations and major intersections (Policy 4.6.3 (5)).
- Opportunities to commemorate the culture, history and interests of the Algonquin Anishinabe Host Nation, Urban First Nations, Inuit and Métis peoples will be explored (Policy 4.6.3 (9)).
- High-rise 41+ buildings shall be designed to respond to context and transect area policies, and should complement the surrounding skyline, with consideration for both day and night visual impacts, mitigate microclimate impacts on the public realm, include publicly accessible or commercial interior spaces, and be designed where possible, to include or allow for a grocery store. (Policy 4.6.6 (11)).

Section 4.8 of the City's Official Plan provides policy direction on Natural Heritage, Greenspace and the Urban Forest. The natural heritage system overlaps with a connected greenspace network of natural and semi-natural areas, open spaces and pathways within the public realm. Many parks lie within and complement the greenspace network but have their own policies and zoning to support their function. The main policy objectives are to protect the City's natural environment, provide residents with equitable access to an urban forest canopy and provide residents with equitable access to an inclusive Urban Greenspace network.

- The City will improve the long-term integrity and connectivity of the Natural Heritage System through land use planning, development processes, acquisition and conservation of land and support for voluntary, private land conservation and stewardship.
- Provide residents with equitable access to an urban forest canopy, including by setting a target of 40 percent urban forest canopy coverage, with equity as a guiding principle.
- Intensification and development shall preserve mature trees and provide space for tree planting with adequate soil volumes (Policy 4.8.2 (3)).
- Trees are considered part of good infrastructure design, good urban design, good park design, active transportation and transit connections (Policy 4.8.2 (4)).
- Provide access to one public greenspace with active/passive recreation within a 5-minute safe walking distance, two public greenspaces within a 10-minute distance, and a publicly owned natural area within a 15-minute trip by transit (Policy 4.8.3 (2)).

Figure 10: Woodlot. Source: PSPC/ CLC

Section 4.5 of the City's Official Plan provides policy direction on Cultural Heritage and Archaeology. Specific to Confederation Heights, there is interest in preserving and celebrating cultural heritage resources. Cultural heritage resources include: built heritage resources such as listed and designated properties, cultural heritage landscapes, archaeological resources, artifacts, monuments and other types of sites that are of cultural value to a community.

- Potential cultural heritage landscapes will be identified and evaluated to determine their significance and cultural heritage values, including in partnership with the NCC. Significant cultural heritage landscapes will be included on the City's Heritage Register and/or designated under either Part IV or Part V of the Ontario Heritage Act (Policy 4.5.1 (6)).
- The City may identify areas value where heritage designation may not be appropriate but that may benefit from design guidelines, interpretive programming or other tools that will assist in the conservation and understanding of these areas (Policy 4.5.1 (13)).
- The City shall enhance the surroundings of publicly- and privately-owned built heritage resources when undertaking its capital works and maintenance projects. This may be achieved through such means as street improvements, tree planting, underground wiring, and the provision of street furniture, lighting, signage and other streetscape or landscape components, consistent with the heritage character of the area, with reasonable limitations based on the context and scope of work involved. (Policy 4.5.3 (6)).
- The City shall conserve sites of archaeological value. Where the City's Archaeological Resource Potential Mapping Study indicates archaeological potential, an archaeological assessment will be required (Policy 4.5.4 (1)).
- The City shall promote equity and inclusivity by recognizing, protecting and honouring sites of cultural heritage value associated with the diverse historical experiences, and prioritizing the identification of underrepresented historic places (Policy 4.5.1 (11)).
- Development including or adjacent to buildings that are designated as Federal Heritage Buildings shall have regard for their cultural heritage value, and the City may require demonstration that development does not adversely impact these resources (Policy 4.5.2 (4)).

The City of Ottawa's Official Plan contains policy direction for energy and climate change in Section 2.2.3, that have been integrated into the planning for Confederation Heights. The City has eight objectives with respect to climate mitigation and adaptation are contained in the Climate Change Master Plan:

- Plan a compact and connected City, supporting reductions in both transportation and building emissions, which together make up 90% of Ottawa's total operational emissions.
- Apply sustainable and resilient site and building design as part of development, with a target of net zero emissions homes by 2030.
- Prioritize a shift to energy efficient transportation modes.
- Enable the use of local renewable energy sources.
- Reduce the urban heat island effect and help protect the vulnerable from extreme heat.
- Build resilience to future flood risks and increased stormwater runoff, including by restricting development in floodplains, designing stormwater management to be resilient to future climate conditions, and use Low Impact Development features where feasible.
- Protect, and enhance tree canopy and protect wetlands and other natural areas and use nature-based solutions.
- Enable sustainable local food production in the form of community gardens and local food infrastructure.

Figure 11: LID measure at Sunnyside Ave. Source: waterbucket.ca

1.4.2.4 Secondary Plans

Section 12 of the Official Plan addresses Local Plans, including Secondary Plans and Area-Specific Policies. Secondary Plans "establish local development policies to guide growth and development in defined areas of a city where major physical changes are expected and desired. Secondary plans are initiated and undertaken by the City in consultation with local residents, property owners, businesses, other levels of government and other interested parties. A secondary plan is a statutory policy document approved under the Planning Act."

Section 12.1 sets out the policies directing Secondary Plan preparation and content, including the following:

- Policy 4: Where a secondary plan impacts multiple landowners, the City shall require a landowner's agreement. The City may require cost sharing as a condition of development. The landowners agreement shall include how parks, stormwater facilities and any other infrastructure or facilities will be located and cost shared, identification of natural heritage features and the natural heritage system, how development and density are to be distributed, as well as how the costs of studies and plans will be divided.
- Policy 8: Second`ary plans will be prepared in accordance with the structure outlined in Annex 4, with specific terms of reference will be developed for each plan.
- Policy 9: Where there is a conflict or inconsistency between the policies or maps of this Plan and a policy or map of a secondary plan or area-specific policy, the policy or map of the secondary plan or area-specific policy will prevail.
- Policy 10: Up-to-date flood hazard limits and regulation limits, as identified in consultation with the appropriate conservation authority in land designation mapping for the subject area, shall be used in the development of the secondary plan or area-specific policy.
- Policy 11: Clusters of cultural assets as may be identified by the City must be considered and protected in the development of Secondary Plans and Area Specific Plans.

Annex 4 of the Official Plan sets out the required framework and content for Secondary Plans. They must include the following:

- Plan Context
- Existing Conditions
- Vision, Objectives and Targets
- Constraints and Opportunities
- Key Plan Components
  - Land use plan
  - Growth management strategy, aligned with Official Plan objectives
  - Population, dwelling and employment projections, including integration with City's transportation network model
  - Key elements for services, amenities and pedestrian infrastructure supporting 15-minute neighbourhoods
  - Planned mobility network.
  - Development plan, including sustainable design
  - Landscape concept including urban forest canopy consistent with the City's targets.

1.4.2.5 Area Specific Policies for Confederation Heights

Volume 2c of the City's Official Plan contains Area Specific Policies for Confederation Heights. These are proposed to be superseded by the Confederation Heights Secondary Plan.

1.4.3 Comprehensive Zoning By-law (2008-250) and the New Zoning By-law 2026-50

Multiple zones apply to the Study Area under both Zoning By-law 2008-250 and the new Zoning By-law 2026-50. Zoning By-law 2026-50 is not in force and effect as of the date of publication of this version of the Master Plan. It was approved by Council on January 28, 2026, with enactment anticipated for March 2026. Unappealed portions of the by-law are anticipated to be brought into effect in September 2026 (backdated to the date of enactment).

The Zoning by-law comparative table (Table 1) identifies the parent zones that apply to lands within the Intervention Area:

By-law 2008-250	By-law 2026-50
Mixed-Use Centre (MC)	Hub 2 (H2)
Parks and Open Space (O1)	Greenspace (GRN)
Major Community Facility (L2)	Recreation Subzone 2 (REC2)

Table 1: Zoning by-law comparative table. Source: Fotenn

The zones in By-law 2026-50 are the appropriate successor zones to those in 2008-250.

Figure 12: Zoning By-law. Source 2008-250: City of Ottawa / Fotenn

Figure 13: New Zoning By-law 2026-50: City of Ottawa / Fotenn

Hub 2

Three Hub zones in By-law 2026-50 implement the Hub designation. H2 is intended for Hubs throughout the City, and serves to replace the MC zone. The purpose of H2 is to permit a broad range of uses and promote an urban form in mixed-used nodes throughout the city. Lands in this zone will accommodate a mid- to high-density built environment and mixed-use neighbourhoods that provide a full range of services to residents.

Generally, Floor Space Index (FSI) requirements are removed and permitted building height ranges from 3 storeys to 40 storeys, subject to reductions for proximity to Neighbourhood (N1-N4) zones.

The following provisions apply in the H2 zone:

- Minimum 4 m ground floor height for mid- and high-rise buildings,
- Minimum 40% glazing for facades within 4.5 metres of a front or exterior side yard,
- Minimum active entrance requirements,
- Enhanced landscaping requirement for front and exterior side yards,
- Minimum 11 metre height,
- Maximum building height of 132 metres, except within 25 metres of a lot line abutting an N1-N4 zones (not applicable in Confederation Heights),
- Minimum 1.5 metre front and exterior side yard setback for any part of the building above 15 metres,
- Minimum 30 metres front and exterior side yard setback for any part of the building above 30 metres, and
- No other minimum setbacks apply to lands within Confederation Heights.

A very wide range of residential and non-residential uses are permitted in this zone.

Greenspace

The purpose of the Greenspace Zone is to ensure that lots remain primarily greenspace and permit conditional uses that contribute to parks.

This zoning applies only to lands within the Bronson Avenue right of way, adjacent to the RA Centre. Rezoning these lands will be required to permit development on City lands in conformity with the Master Plan.

Open Space Facility

The Open Space Facility Zone permits only "environmental preserve and education area" as a use. It is intended to provide zone for lands in the Open Space sub-designation in the Official Plan.

Within the Confederation Heights Intervention Area, this zone applies to lands fronting Riverside Drive adjacent to the RA Centre, which are designated Hub, as well as a parcel at the northwest corner of Riverside Drive and Hog's Back/Brookfield, which is proposed to be redesignated to Hub.

Rezoning these will be required to implement the Confederation Heights Secondary Plan and Master Plan.

Recreation Subzone 2

The majority of the current RA Centre lands are zoned Recreation Subzone 2. The purpose of the Recreation Zone is to permit a range of principal recreation uses in the Urban and Rural Transects as identified in the Official Plan. The zone introduces the opportunity for co-location of housing in community centre, library, and recreational and athletic facility buildings.

Site Specific Schedules and Exceptions

Multiple Mixed Use Centre/Hub-zoned properties within Confederation Heights are currently subject to FSI caps, site-specific height limits, exceptions and schedules. The site-specific exceptions and schedules of Zoning By-law 2028-250 are carried forward into Zoning By-law 2026-50, with the intent that staff will review update the exceptions in the coming year to bring them into conformity with the new Official Plan, including the Confederation Heights Secondary Plan.

- FSI caps of 2.0 are applied to City-owned lands adjacent to Bronson Avenue,
- A maximum building height of 40 metres is applied through a height suffix, and minimum building heights of four storeys is applied via Exception 2179 to the lands owned by PSPC,
- Height and setback schedules are applied to the Canada Post campus, and
- Holding zones are applied to the portions of the Canada Post campus excluding the CPC Headquarters Building, requiring comprehensive servicing, engineering, market and transportation studies prior to development.

The height limits, schedules and exceptions were intended to implement the former Confederation Heights Secondary Plan, and must be replaced to implement the Confederation Heights Master Plan.

Figure 14: Precedent image illustrating a highly transparent and accessible storefront. Source: cyclevancouver.com

1.5 Master Plan Targets

The CHMP Concept Options have been developed with reference to the vision and guiding principles, which set a bold vision for the future of Confederation Heights. While not all aspects of the vision are readily quantifiable, some quantitative targets for the CHMP have been established and/or pulled from the applicable legislative, policy and regulatory frameworks to guide development of the Master Plan. The intent of the minimum targets and estimates in Section 1.5 is to ensure achievement of the following:

- A critical mass of residents and employees to support transit and public infrastructure, a full range of services and amenities, and a vibrant community character;
- An appropriate ratio, range and mix of affordable housing, to achieve the CHMP's equity objectives; and
- A climate-resilient and climate-responsible development consistent with Canada's adoption of the Paris Agreement, which requires net-zero emissions by 2050.

The planning process has identified specific targets for the Confederation Heights redevelopment. The Quantitative Targets Summary table (Table 2) sets out quantitative targets for the project.

1.5.1 Affordable Housing

To support the vision and guiding principles of the Confederation Heights Master Plan, a minimum commitment of 20% affordable housing will be integrated throughout the phases of development to support a fully inclusive and equitable community.

Affordability is highly dependent on a housing provider's funding and resources, the product being offered, the clientele being served, among other factors. Partnerships and funding programs to support private, public, and non-profit sectors will be explored, where possible, to exceed the minimum commitment of 20% affordable units.

Category	Target	Notes
Minimum Density	300 people and jobs per gross hectare	Based on estimated unit yields and non-residential GFA. Exceeds the Official Plan Hub Target is 200 people and jobs per gross hectare, to better support the vision of the Master Plan and the goals of the Official Plan.
	150 dwellings per net hectare	Based on Official Plan target
Large Dwellings	At least 10% of units are 3+ bedrooms	Based on Official Plan target
Affordable Housing	20% of units	Based on the current commitment from Canada Lands Company.
Accessibility	XX% visitable housing	CHMP team recommendation
	XX% barrier-free units	CHMP team recommendation
Parkland	14.4 hectares of parkland	Parkland dedication details in table included in Section 2.3.1.
Operational Climate Emissions	Zero Carbon Community	Based on Canada Lands Company commitment to meet corporate targets as recommended in the Sustainability Charter.
Canopy Cover	40% target canopy cover	Based on Official Plan city-wide target
Mode share	Base target: 80% AM, 70% PM sustainable mode shares Extended target: 90% AM, 75% PM sustainable shares	Based on CHMP team recommendation. Details in table included in Section 2.1.2

Table 2: Quantative Targets Summary Table. Source: Fotenn

02

Community Structure

The Master Plan demonstrates the structures and systems that will support the redevelopment of Confederation Heights into a complete, climate resilient and well-connected community. These systems are interrelated and build upon each other. Section 2 should be read in conjunction with the Confederation Heights Master Plan Concept, shown in Figure 15, and in large format in Appendix [XX}

Figure 15: Confederation Heights Master Plan Concept. Source: Fotenn and Google Earth

2.1 Mobility

2.1.1 Existing Conditions

Confederation Heights is shaped by existing linear transportation, including:

- The Beachburg subdivision which serves the VIA inter-city rail line;
- The existing Trillium LRT, with a station at the heart of Confederation Heights (currently "Mooney's Bay Station");
- The existing Transitway Bus Rapid Transit (BRT) Line, with a stop at Heron Station;
- The planned and partially funded Baseline/ Heron BRT, which will have a stop at Riverside Drive and Heron Road, and a second adjacent to Mooney's Bay Station;
- A strong cycling and active transportation network consisting multi-use paths (MUPS) and on-street infrastructure, which connects around but generally not through Confederation Heights; and
- Three wide arterial roads with City-wide function – the Airport Parkway/Bronson, Heron Road and Riverside Drive.

This is a strength and an opportunity, but also a major constraint, as these routes create barriers to mobility within the site. Early in the planning process it became clear that resolving the barriers created by the transportation system and enabling very high sustainable mode shares would be imperative to the success of the Master Plan.

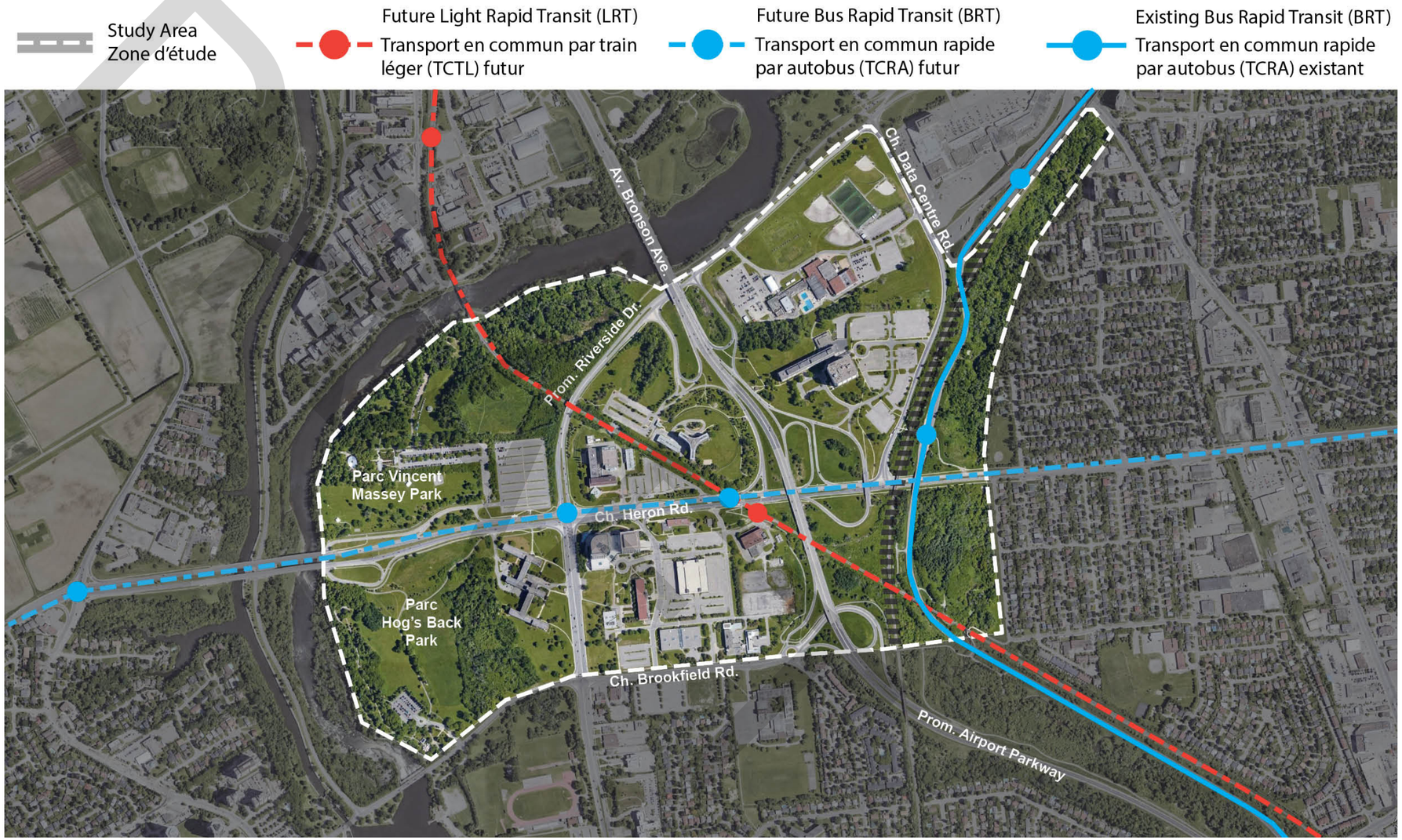
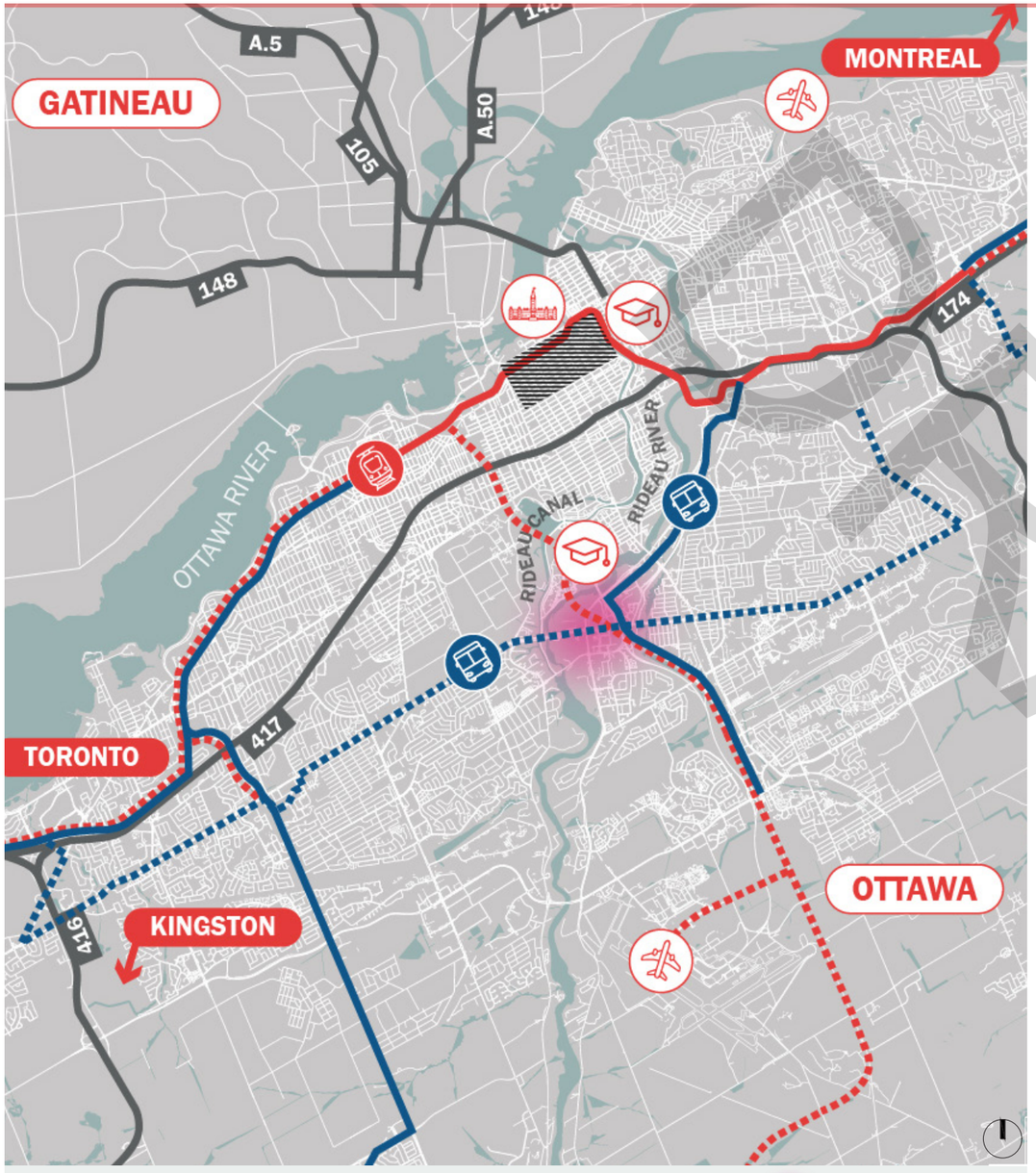
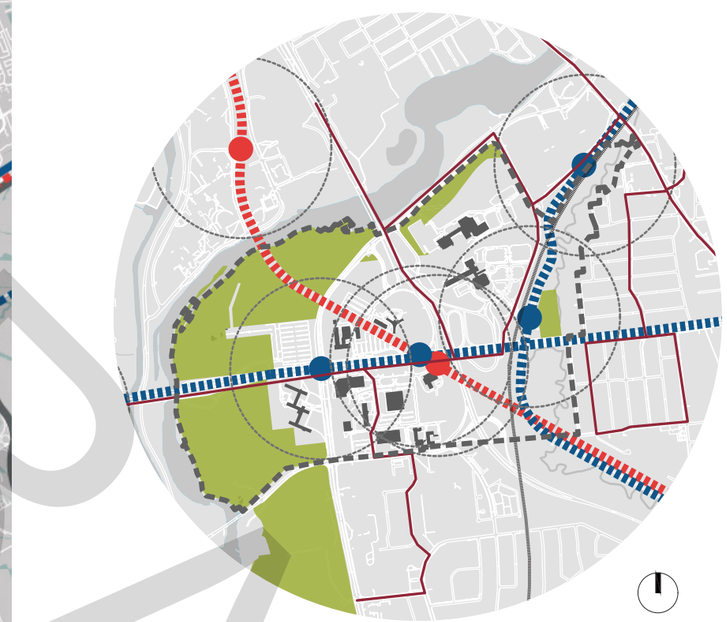


Figure 16: Existing and Planned Rapid Transit map. Source: Fotenn / Google Earth



Regional Context Map

- Bus Rapid Transit (BRT)
- Light Rail Transit (LRT)
- Future Bus Rapid Transit (BRT)
- Future Light Rail Transit (LRT)
- Parliament of Canada
- University
- Airport
- Subject Site
- Central Business District
- Highway



Transit

- NCC Lands
- Existing Local Bus Route (2022)
- Bus Rapid Transit
- Light Rail Transit
- Study Area
- 400m radius from Transit Station

The Study Area is served by the Trillium Line, which runs through a rail cut and is currently operational as a Light Rail Transit (LRT). The LRT station is centrally located within the Study Area at the intersection with Heron Road. The Study Area is also currently served by the existing Transitway BRT line running parallel to Sawmill Creek. A new BRT line along Heron Road has been planned and designed.

Grading issues, accessibility barriers and poor legibility/ wayfinding to and from the transit stations disincentivize transit use.

Pedestrian and Cycling Network

- NCC Lands
- Study Area
- National Pathway System (NCC owned)
- Cycle Track/Lane (City owned)
- Multi-use Path (City owned)
- Path/Sidewalk (Crown Lands)
- Path/Sidewalk (City owned)

The site is well served by a variety of paths and sidewalk systems under several jurisdictions, including the NCC pathways along the Rideau River. Though there several options for both pedestrian exclusive sidewalks and paths and multi-use paths, these are irregular in size and standards, and most importantly do not connect together in a legible and easy to navigate network. Often paths are connected through vast parking lots or are interrupted by major vehicular avenues.

2.1.2 Envisioned Outcome

Efficient use of existing and planned higher-order transit supports a vibrant, dense, complete community. Direct, enjoyable and safe active transportation connections support transit use and provide additional ways to connect to destinations in the larger City. Car trips are a minority of trips, and residents and visitors carpool often. Enabled by a new mobility network, investments in better infrastructure, and City-wide investment in transit, Confederation Heights consistently exceeds the "recommended target" mode shares and frequently approaches the "extended target" mode shares listed below:

Mode	Recommended Target		Extended Target	
	AM	PM	AM	PM
Auto Driver	20%	30%	10%	25%
Auto Passenger	5%	10%	5%	5%
Transit	60%	40%	60%	45%
Cycling	5%	5%	10%	10%
Walking	10%	15%	15%	15%

Table 3: Proposed Mode Shares. Source: CGH

Moving across and into/out of the planning area feels efficient and enjoyable. Everyone living in, working in and visiting Confederation Heights can get where they need, across income levels and regardless of ability.

2.1.3 Key Moves

In keeping with the guiding principle **Create Connections**, and to achieve the progressive modal share targets, Section 2.1.3 demonstrates the big moves and supporting strategies will transform mobility and unlock the potential on the site.

2.1.3.1 New Community Connectors: the Arches and the Line

The Master Plan introduces three new community connectors: the Outer Arch, the Inner Arch, and the Line. as demonstrated in Figure 17.

Figure 17: Existing and Planned Rapid Transit map. Source: Fotenn / Google Earth

The Arches

The Arches are two parallel routes which connect from Brookfield Road to Data Centre Road, paralleling the Rideau River and Riverside Drive.

The Inner Arch

The Inner Arch is a pedestrian-priority connection that connects the neighbourhood south of Brookfield School and Road, Confederation Heights LRT Station, 1500 Bronson, 875 Heron blocks and the Heron Transitway. A two-block segment immediately north of Brookfield Road and the segment between Bronson Avenue and Data Centre Road will be local streets, while the rest will be active transportation only. The pedestrian/cycle bridge over Bronson Avenue connects the Inner Arch and fills a critical gap in the active transportation network.

The Arch

The Arch is made up of a new collector road connecting Brookfield Road to Bronson Avenue. At Bronson, a signalized intersection will grant a safe active transportation crossing to a dedicated cycle path/ sidewalk along the northern edge of the 875 Heron property to Data Centre Road.

Active Frontages along The Arches

The Arches Conceptual Diagram

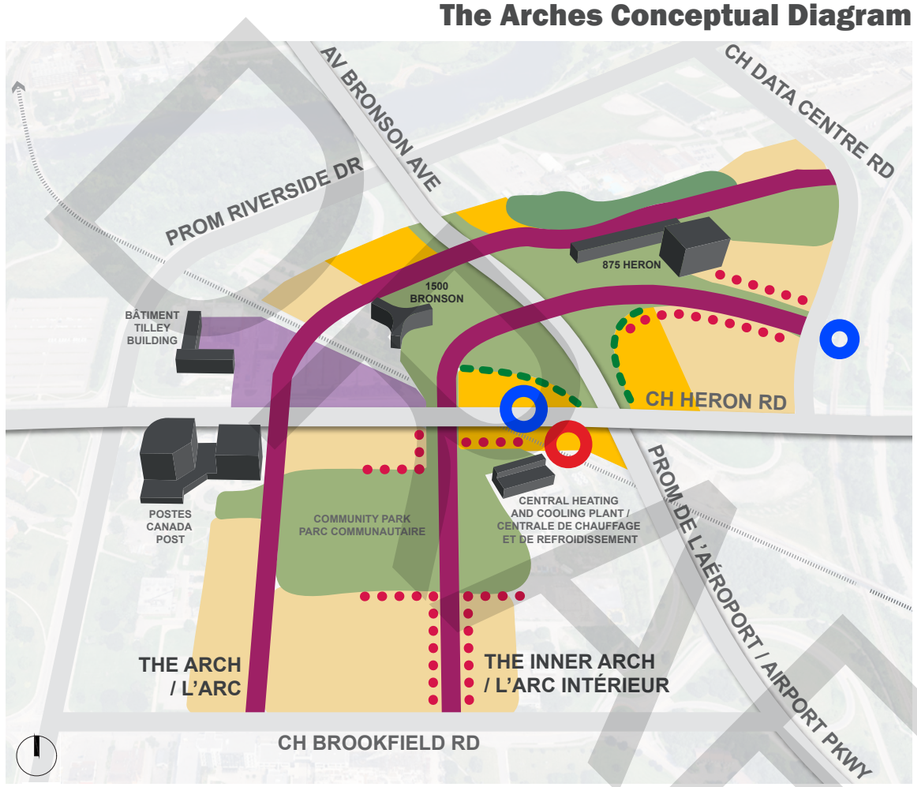


Figure 18: The Arches Conceptual diagram. Source: Fotenn / Google Earth

LEGENDE | *LÉGENDE*

- Future Development
  Aménagement futur
- Future Development (Special Design Area)
  Aménagement futur (Zone de conception spéciale)
- Federal Employment
  Pôle d'emploi fédéral
- Green Buffer / Setback
  Marge de recul vert
- Parks and Open Spaces
  Parcs et espaces ouverts
- Active Frontage - Commercial
  Façade active - commerciale
- Active Frontage
  Façade active
- Light Rail Transit (LRT) Station
  Transport en commun par train léger (TCTL)
- Bus Rapit Transit (BRT) Station
  Transport en commun rapide par autobus (TCRA)
- Transit Node (LRT + BRT)
  Pôle de transport en commun (TCTL + TCRA)

Conceptual Cross Section

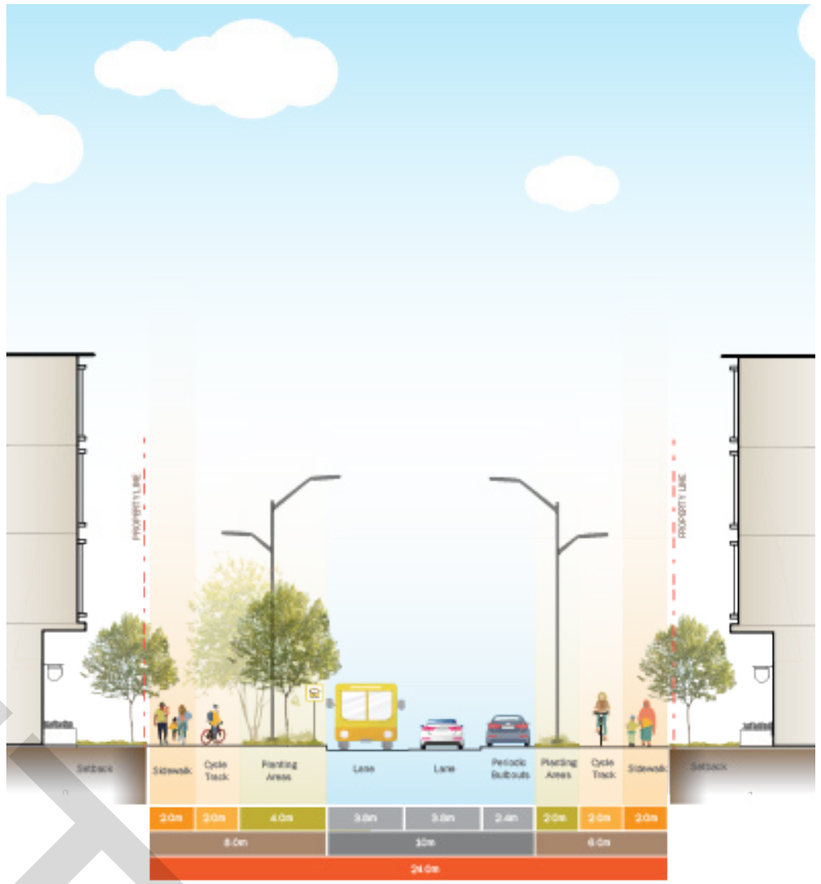
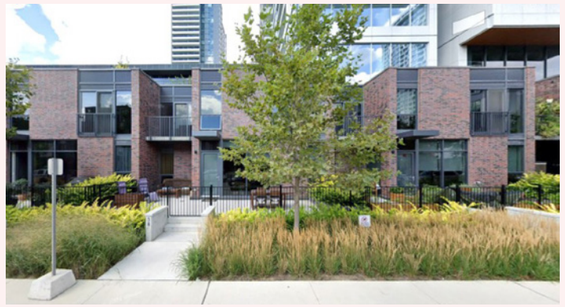


Figure 19: The Arch Conceptual Cross Section. Source: Fotenn

The Line

The Line is a major active transportation corridor running along the LRT corridor. It realizes the potential of the recently opened Rideau River Pedestrian Bridge, providing continuous pedestrian and cycle connections between Carleton University, Confederation Heights LRT Station, and the Sawmill Creek and Airport Parkway pathways. The 10-metre wide right-of-way protection for the Line includes room for sidewalks, a separated cycle track, and substantial landscaping including tree plantings and areas for respite/art.

Active Frontages along The Line



Pedestrian Bridge Over the LRT Line

The Line Conceptual Diagram

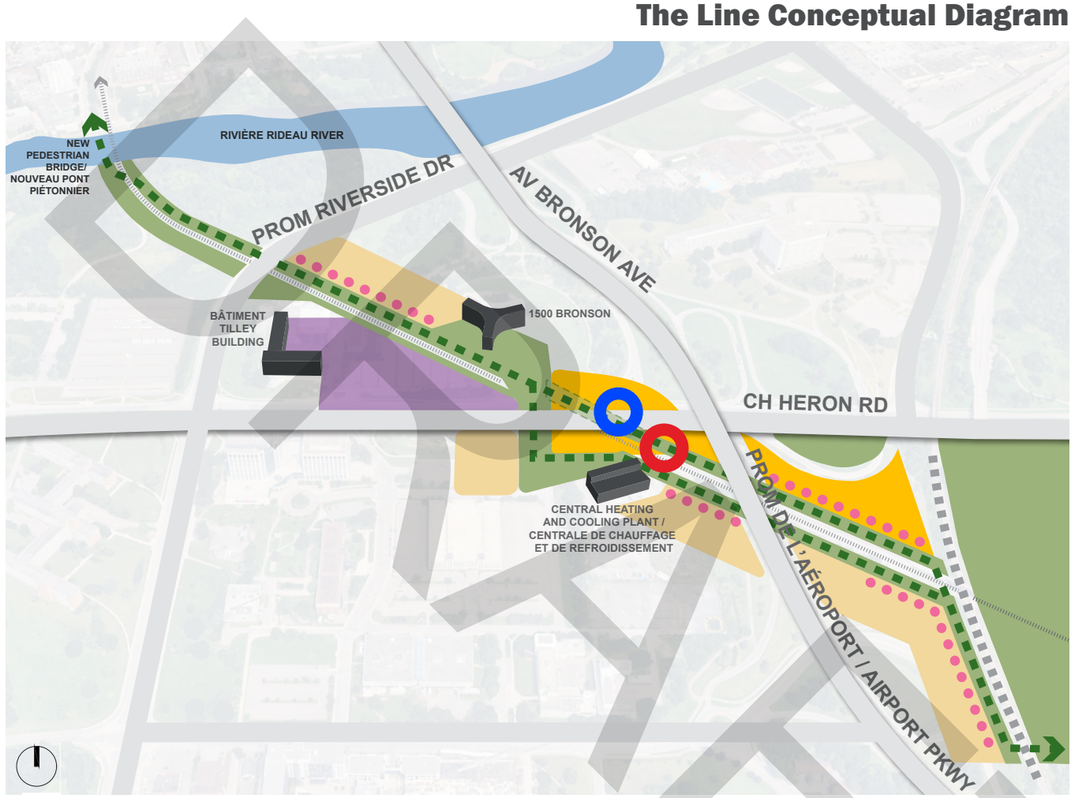


Figure 20: The Line Conceptual diagram. Source: Fotenn / Google Earth

LEGENDE | *LÉGENDE*

- Future Development
  Aménagement futur
- Future Development (Special Design Area)
  Aménagement futur (Zone de conception spéciale)
- Federal Employment
  Pôle d'emploi fédéral
- Green Buffer / Setback
  Marge de recul vert
- Parks and Open Spaces
  Parcs et espaces ouverts
- Active Frontage - Commercial
  Façade active - commerciale
- Active Frontage
  Façade active
- Transit Node (LRT + BRT)
  Pôle de transport en commun (TCTL + TCRA)

Conceptual Cross Section

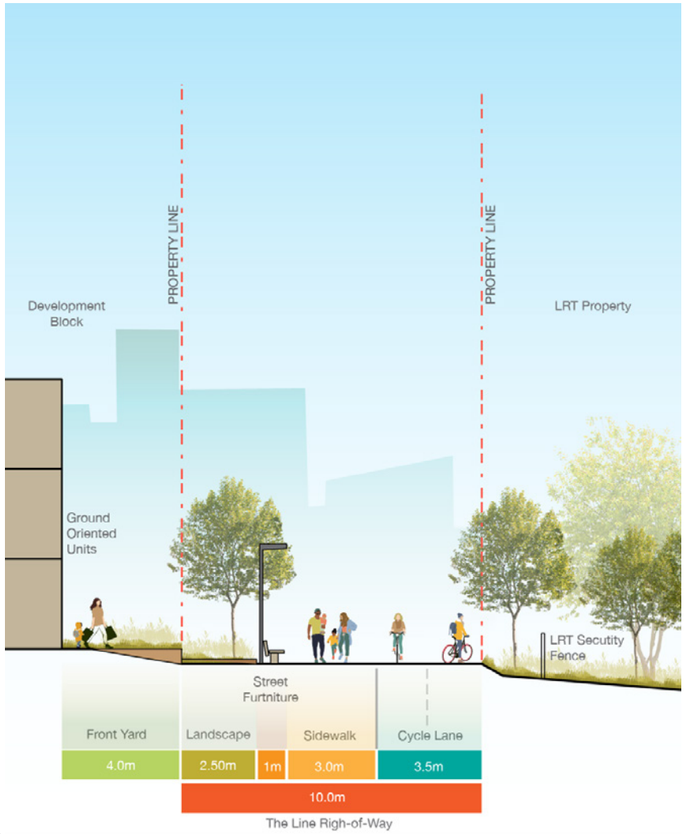


Figure 21: The Line Conceptual cross section. Source: Fotenn

The **Heritage Greenway**, discussed further below, will also offer continuous active transportation connections across Confederation Heights.

Together, these community connector strategies (The Arches, The Line and The Heritage Greenway) will:

- Provide missing pedestrian and cycle links across the site, including to and between transit stations.
- Provide active transportation connections to the existing pathways (e.g. the Airport Parkway multiuse pathway, the National Capital Commission's pathways and the Carleton University pedestrian bridge over the Rideau River) integrating the regional active transportation commuting network.
- Add granularity and structure to the large blocks created by the arterial roads, breaking them down into a finer block pattern.
- Respect the logic and topography of the site, helping make a non-rectilinear site more legible.
- Accommodate movements which are currently provided by ramps, allowing for the future removal of the Bronson Avenue on- and off-ramps, unlocking development potential.

Figure 22: Photo-realistic render of the demonstration plan illustrating the intersection of The Arch and The Line. Source: Fotenn and Cicada

2.1.3.2 Road Network and Ramps Rationalization

The new community connectors, intersections signalization and proposed local streets accommodate all the vehicular movements which are currently served by Bronson Avenue's on- and off-ramps. The existing ramps occupy significant space and are hostile barriers to non-auto mobility and a comfortable pedestrian environment. Removal and rationalization of these ramps, as demonstrated Figure 23, eliminates many barriers to movement and creates new development opportunities on City land.

While the majority of ramps are proposed to be removed, the southbound Bronson to westbound Heron ramp is proposed to be retained, with an improved intersection at Heron Road per the approved Baseline-Heron BRT plans. This ramp accommodates a high volume of traffic and will allow local buses to connect west to the future BRT stop as well as east along Heron Road.

The eastbound Heron to northbound Bronson ramp, which currently loops over Heron Road in a space-extensive geometry, is proposed to be reconfigured into a simpler loop which will accommodate similar traffic volumes in a much more space-efficient manner, which directs through-traffic away from proposed neighbourhoods.

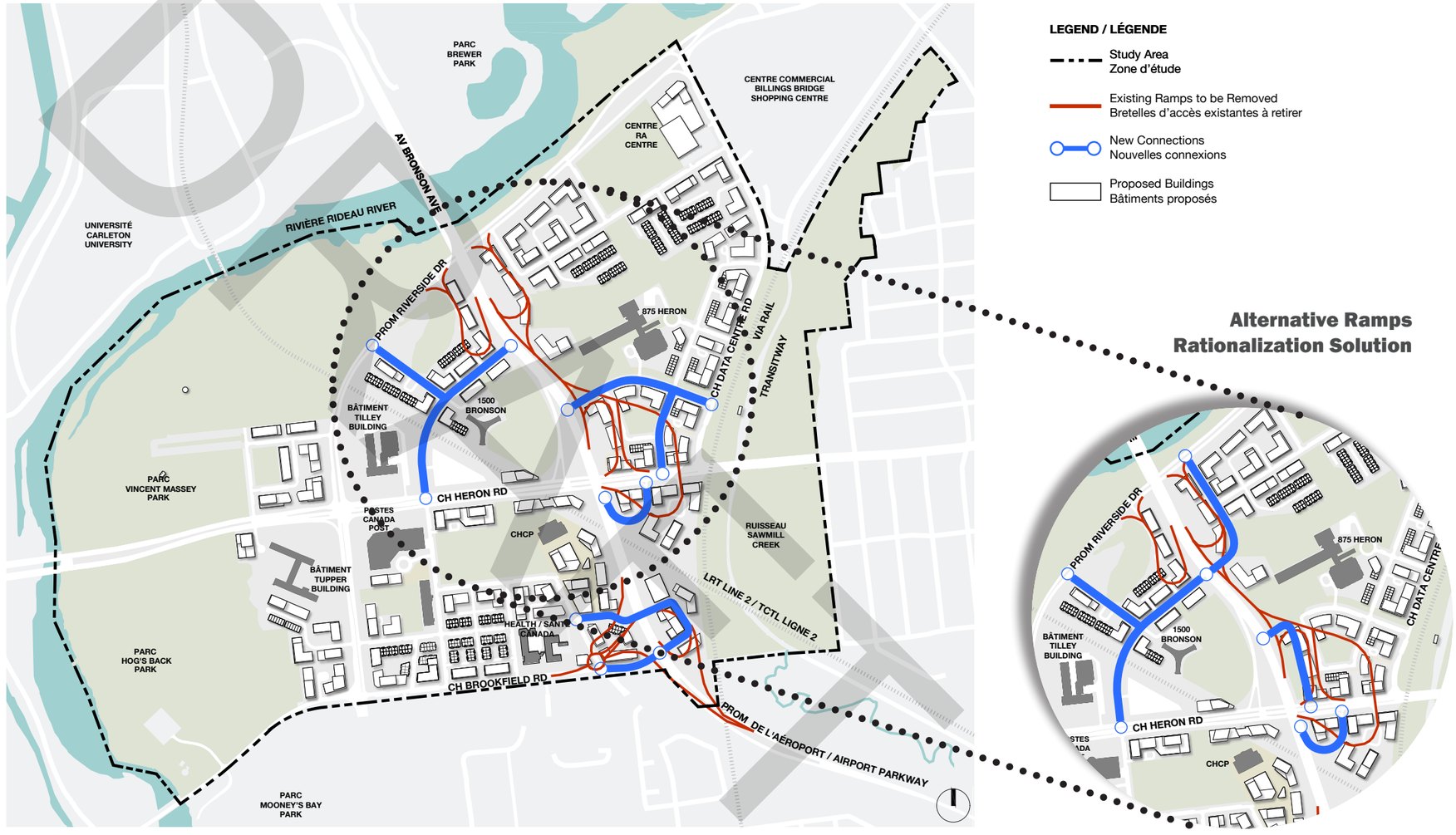


Figure 23: Ramps rationalization diagram. Source: Fotenn

Ultimate Road Network

Figure 24: Proposed Road Network. Source Fotenn

Arterial Roads Connections and Vehicular Movements

The proposed road network and ramps network will maintain all key vehicular movements between arterial roads. This will support transit access and efficient traffic flow through and away from the neighbourhoods.

Bronson Avenue/Airport Parkway to Heron Road

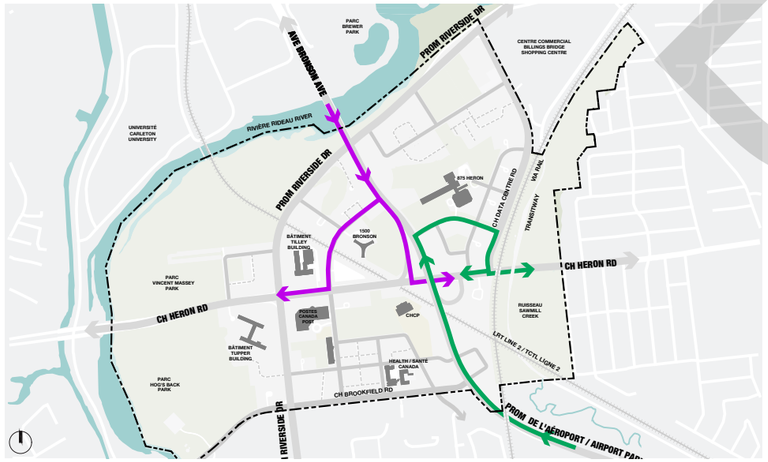


Figure 25: Vehicular movements digram. Source: Fotenn

- From Bronson Avenue to Heron Road
- From Airport Parkway to Heron Road

Bronson Avenue/Airport Parkway to Riverside Drive

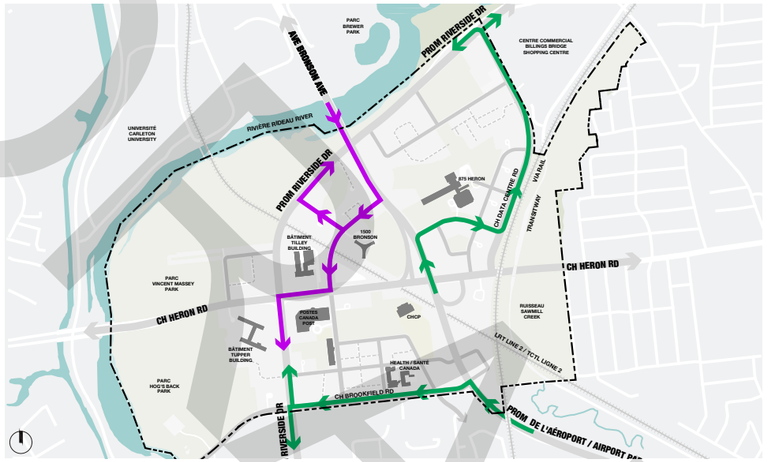


Figure 26: Vehicular movements digram. Source: Fotenn

- From Bronson Avenue to Riverside Drive
- From Airport Parkway to Riverside Drive

Riverside Drive to Heron Road

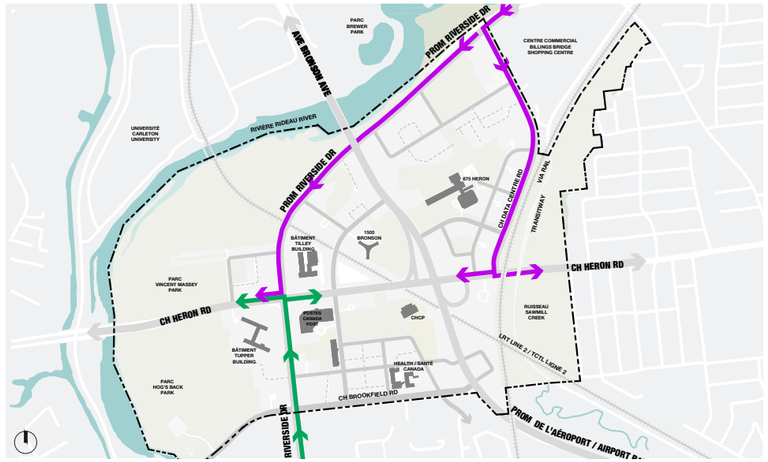


Figure 27: Vehicular movements digram. Source: Fotenn

- From North of Riverside Drive to Heron Road
- From South of Riverside Drive to Heron Road

Heron Road to Bronson Avenue/Airport Parkway

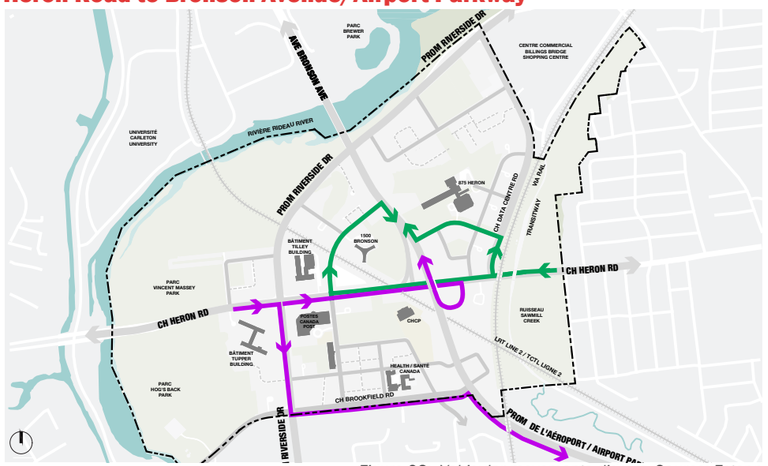


Figure 28: Vehicular movements digram. Source: Fotenn

- From West of Heron Road to Bronson Avenue / Airport Parkway
- From East of Heron Road to Bronson Avenue / Airport Parkway

Riverside Drive to Bronson Avenue/Airport Parkway

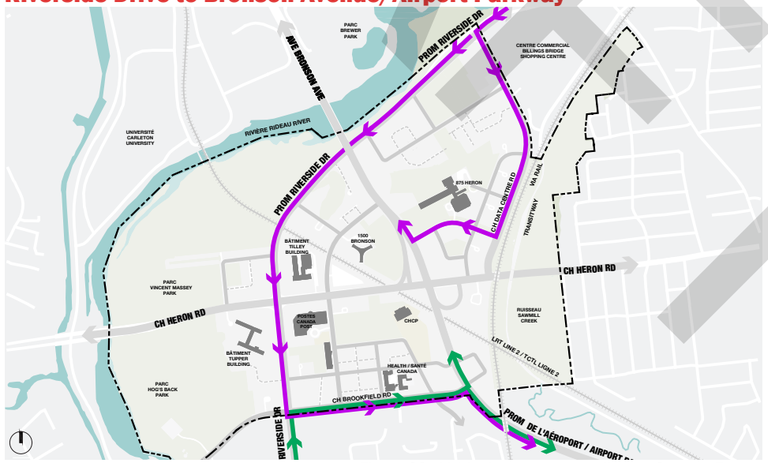


Figure 29: Vehicular movements digram. Source: Fotenn

- From North of Riverside Drive to Bronson Avenue / Airport Parkway
- From South of Riverside Drive to Bronson Avenue / Airport Parkway

Heron Road to Riverside Drive

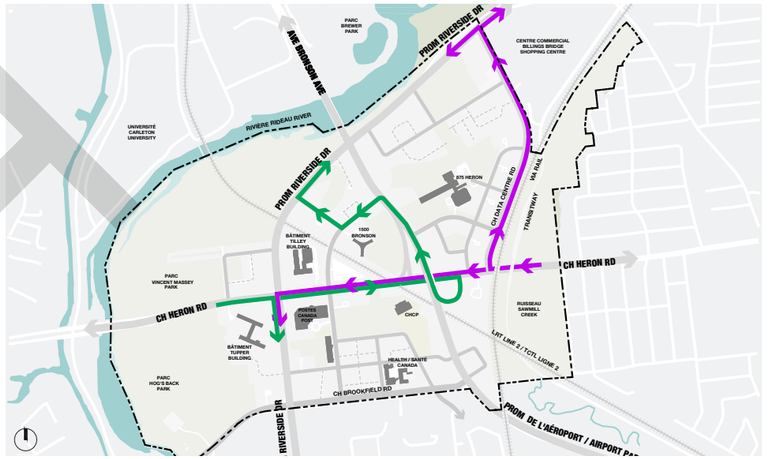


Figure 30: Vehicular movements digram. Source: Fotenn

- From East of Heron Road to Riverside Drive
- From West of Heron Road to Riverside Drive

Figure 31: Bronson Ave and ramps. Source: CLC

2.1.3.3 Transit Node

The key moves noted above improve access and increase available space to and around the existing and planned transit stations, allowing for additional interventions to turn Confederation Heights into a true Transit Oriented Development (TOD) centred around a Transit Node.

The existing Mooney's Bay LRT station, and the future BRT station on Heron Road are proposed to be connected and integrated via development and public realm improvements into a Confederation Heights Station. The integration of these stations will occur in phases, with the potential for an ultimate phase (following twinning of the Trillium LRT) that creates a truly integrated transit station entirely behind faregates. The diagram below illustrates the existing and future rapid transit lines and the potential location for the Transit Node.

Future Development Integrated with Transit Station

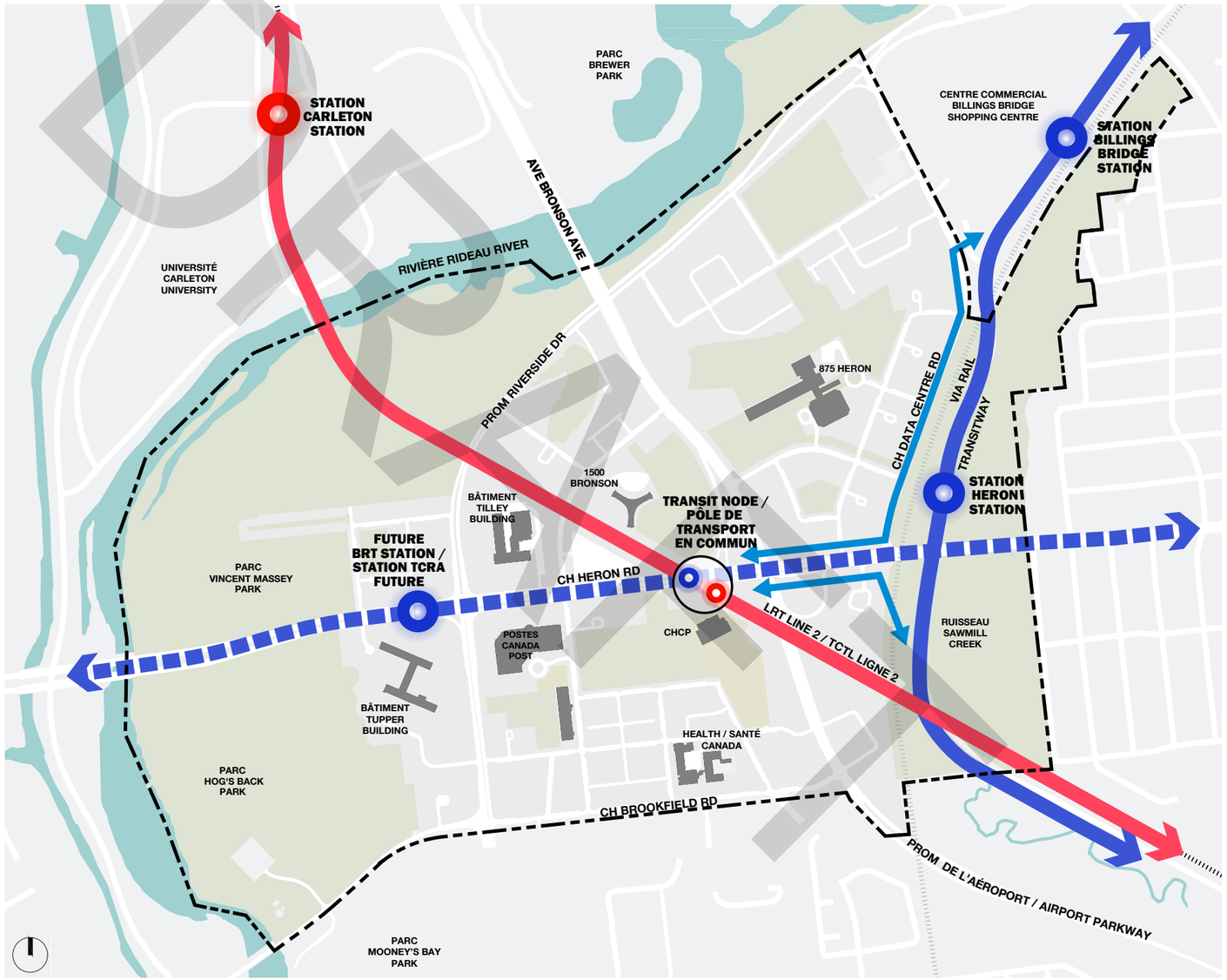


Figure 32: Bronson Ave and ramps. Source: CLC

Key components of the Confederation Heights Station Node include:

- Upgrades to the LRT station to improve capacity;
- A Transit Plaza at the level of the LRT station;
- A development block that integrates elevator and escalator connections between the grade of Heron and the Transit Station;
- The highest building height permissions, to create natural wayfinding towards the station; and
- An improved, accessible outdoor route between the BRT station on Heron and the LRT station.
- Improved active transportation connections will provide better access to Heron Station and the future BRT station at Riverside Drive and Heron Road.

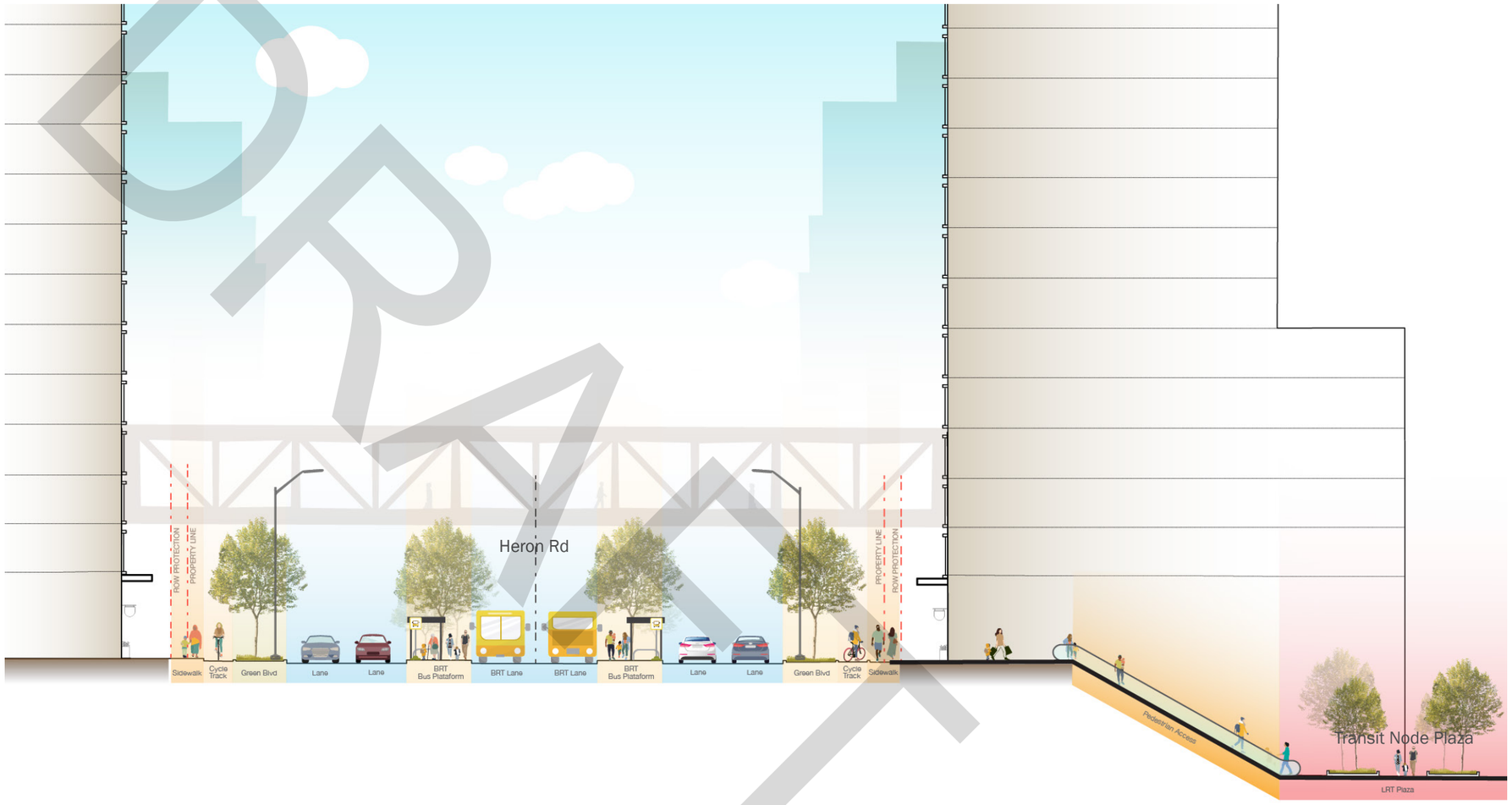


Figure 33: Conceptual cross section of Heron Rd illustrating potential pedestrian connections through future development buildings. Source: Fotenn

Figure 34: Conceptual rendered image of the Transit Node Plaza. Source: Cicada and Fotenn

The existing north-south transitway along Sawmill Creek which includes Heron BRT Station is not currently planned to be integrated with the other two lines in the City's Transportation Master Plan. The Master Plan protects for future bus connections between the Heron BRT and Transitway by:

1. Retaining the SB Bronson to Heron ramp, which will allow local busses to connect west to the future BRT stop as well as east along Heron Road.

2. Accommodating for space in the Data Centre right of way, at Heron, to accommodate a northbound transit-priority lane.

3. Protecting for the potential of a transit-only ramp connecting between Heron Road (eastbound) and the Transitway (bidirectional).

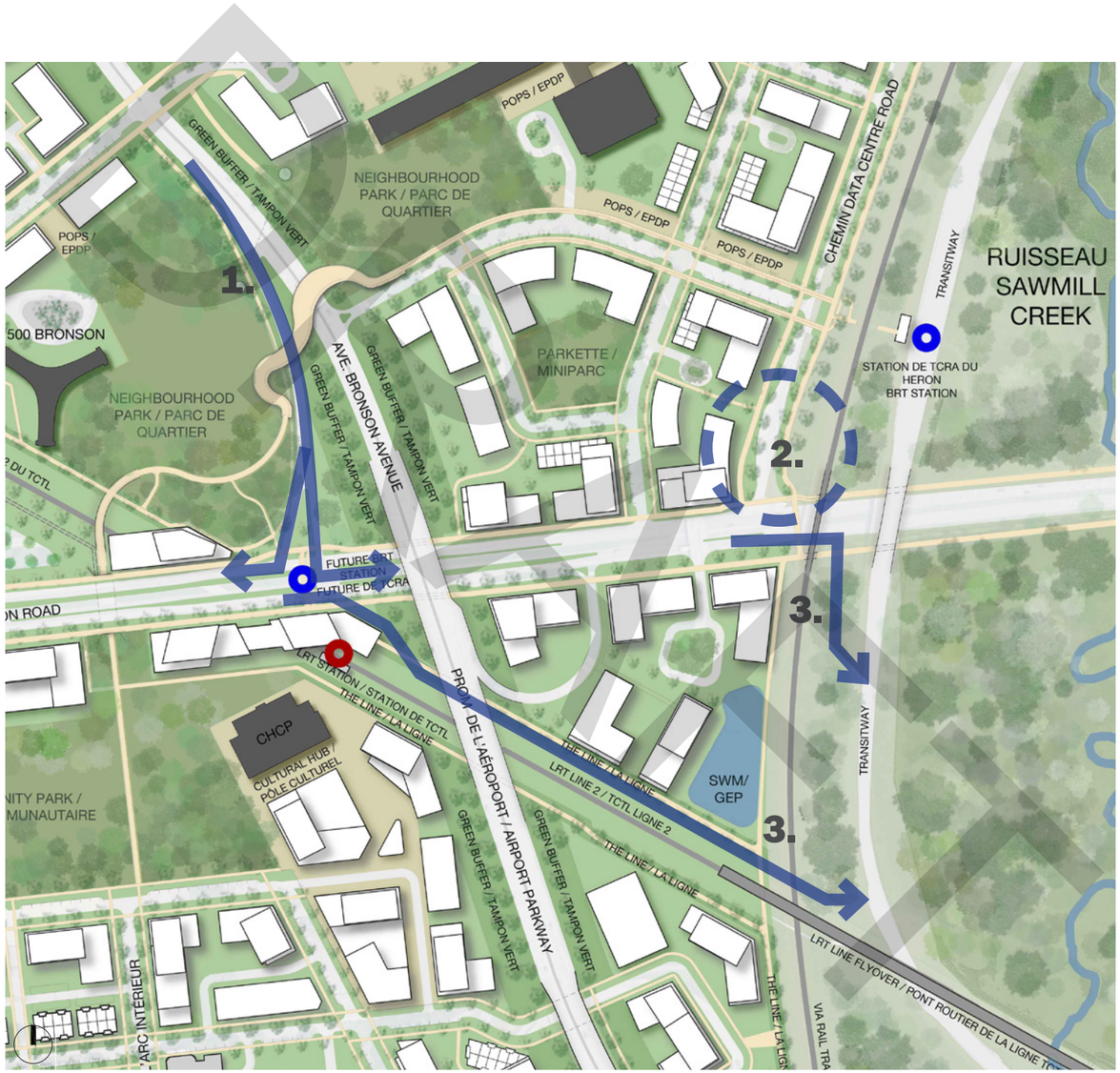


Figure 35: Diagram illustrating protected future transit connections. Source: Fotenn

2.1.3.4 Fine Grained Network

The Arches and the Line provide the basic framework for new, people-focused structure for movement to and through Confederation Heights. These will be enhanced by connections to local streets, pathways, and mid-block connections to create a barrier-free fine-grained active transportation network, as shown in the figure below.

All new streets (collector, local and private) in Confederation Heights will be based on **slow streets** or **complete street** principles, with room for pedestrians, cyclists, vehicles and green infrastructure. Conceptual cross-sections for each of the existing municipal roads show how these public rights of ways can be rebalanced as complete streets that support pedestrians, cyclists, transit users and vehicles

Complete Streets

Accessible for all ages and abilities: design to be usable and comfortable for all including seniors, and people with disabilities.

Comfort and convenience: safe, easy to navigate and continuous sidewalks, paths, bikeways, benches, and shade.

Multimodal access: safe use by pedestrians, cyclists, motorists, and public transit riders.

Community building: Includes plazas, landscaping, street trees, and seating to encourage social interaction and placemaking.

Active Transportation Network

This street network will be complemented by a series of active transportation path and mid-block connections through future developments that will bring the majority of the site within a 15-minute. The proposed **active transportation network** is demonstrated in Figure 36

LEGEND / LÉGENDE

- Study Area
  Zone d'étude
- Proposed One-Way Bikeway + Sidewalk
  Voie cyclable à sens unique + trottoir proposé
- Proposed Two-Way Bikeway + Sidewalk
  Voie cyclable à double sens + trottoir proposé
- Proposed Major Multi-use Pathway
  Sentier polyvalent majeur proposé
- Existing Major Multi-use Pathway
  Sentier polyvalent majeur existant
- Existing Minor Multi-use Pathway
  Sentier polyvalent mineur existant
- Proposed Sidewalks
  Trottoirs proposés
- Bus Rapid Transit Station (BRT)
  Station de transport en commun rapide par autobus (TCRA)
- Light Rail Transit Station (LRT)
  Station de transport en commun par train léger (TCTL)
- Potential Mid Block Connection
  Connexion potentielle en milieu d'îlot
- Major At-Grade Active Transportation Crossing

Ultimate Active Transportation Network Diagram

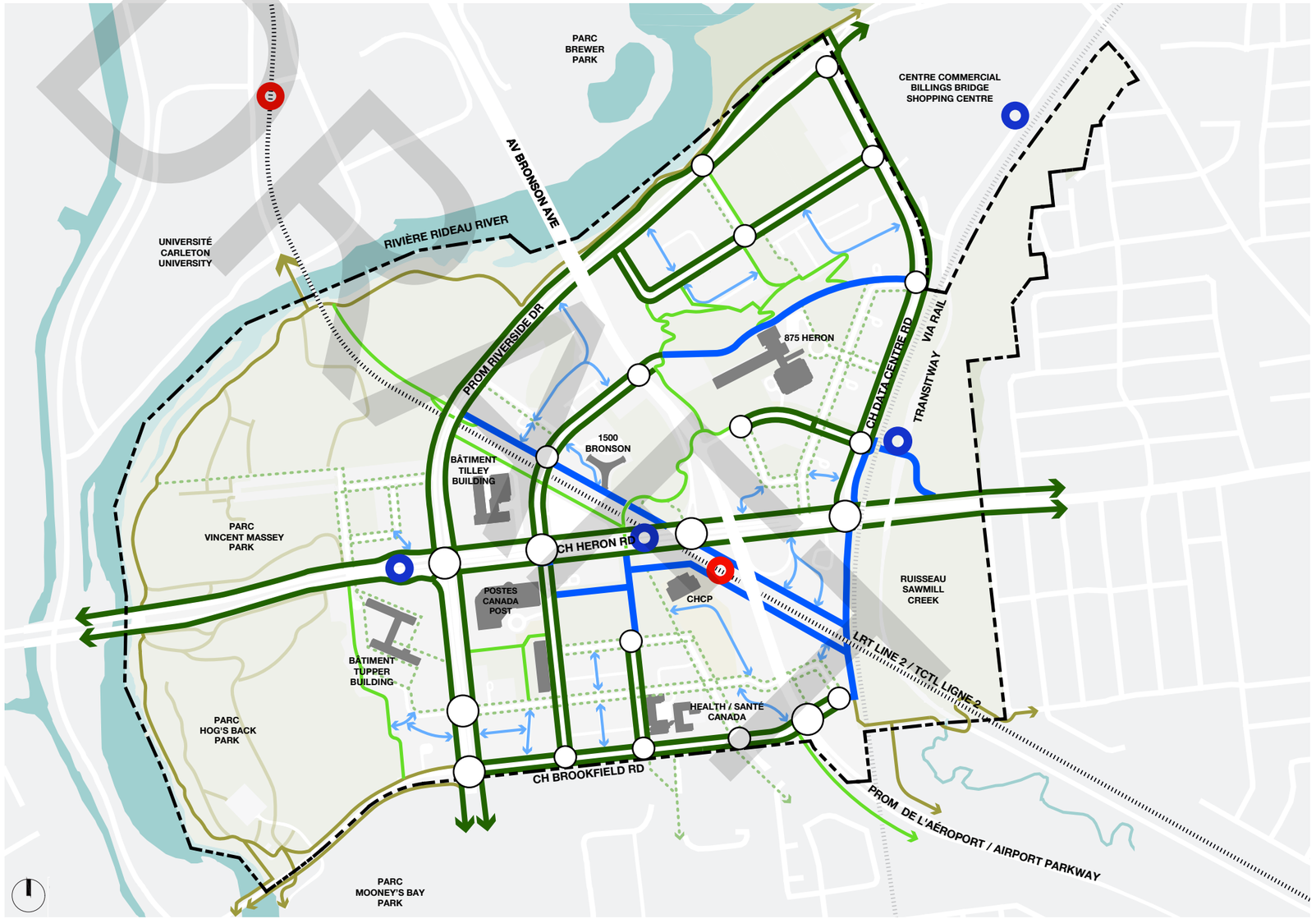
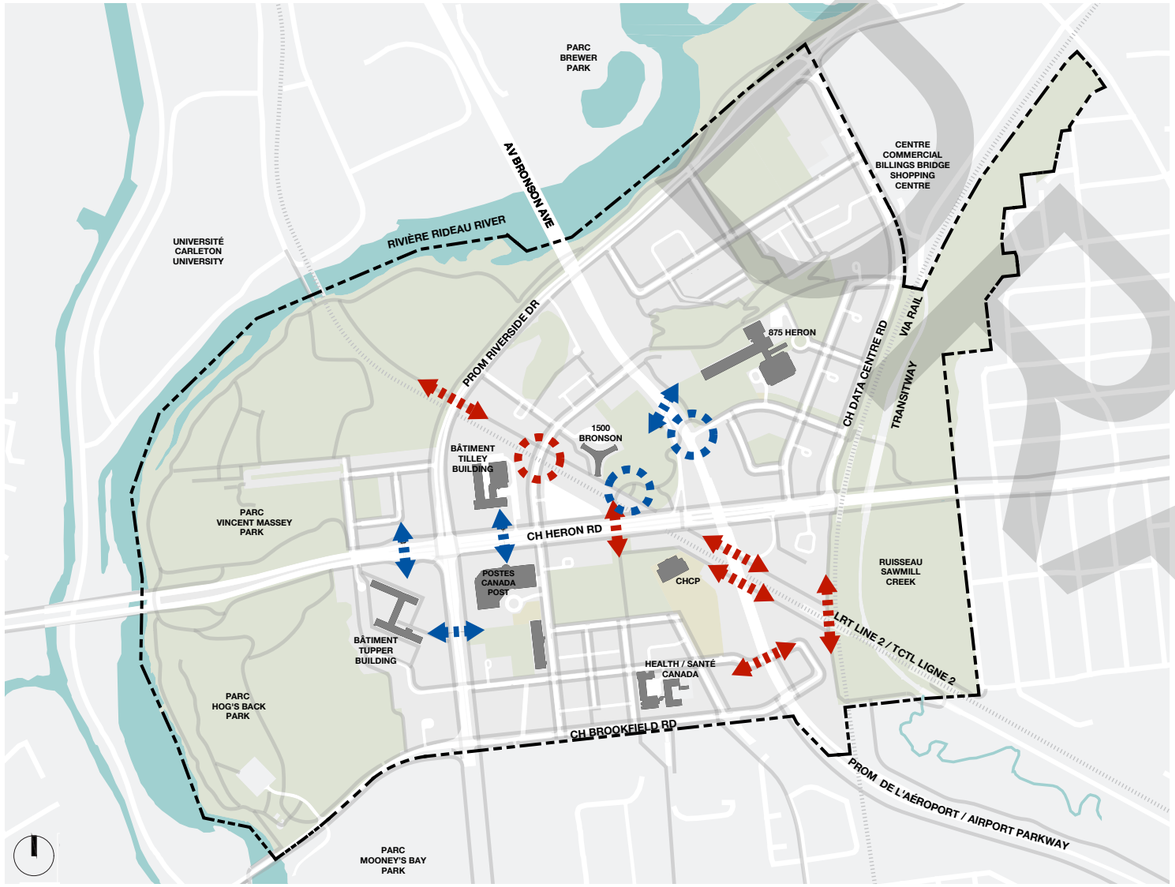


Figure 36: Active transportation diagram. Source: Fotenn

Active Transportation Tunnels, Underpasses and Bridges

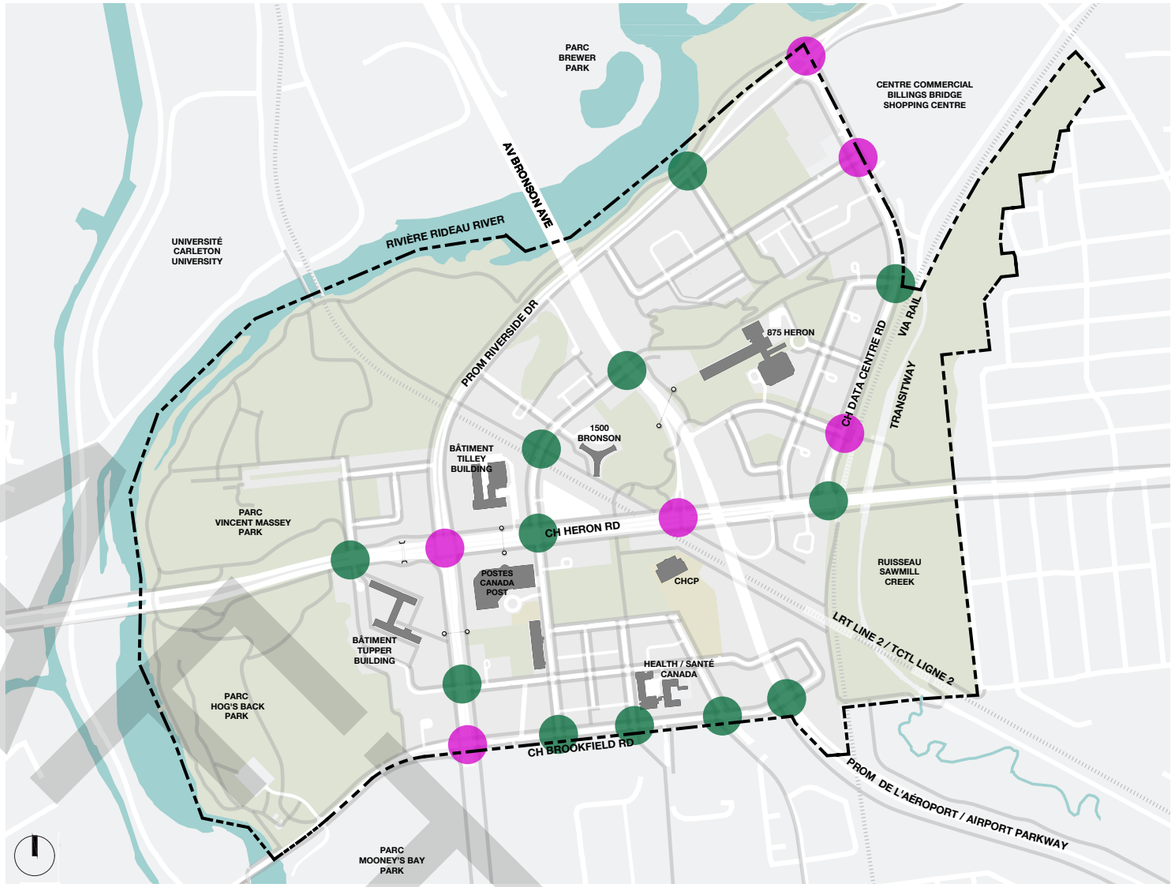


LEGEND / LÉGENDE

- Study Area
  Zone d'étude
- Improvements to the existing pedestrian tunnels
  Améliorations aux tunnels piétonniers existants
- Proposed Barrier-free Pedestrian Underpass
  Passage piétonnier accessible proposé
- Proposed Active Transportation Bridge
  Passerelle de transport actif proposée
- Proposed Vehicular and Active Transportation Bridge
  Pont proposé pour les véhicules et le transport actif

Figure 37: Active Transportation tunnels, underpasses and bridges diagram. Source: Fotenn

At-grade Active Transportation Crossings Diagram



LEGEND / LÉGENDE

- Study Area
  Zone d'étude
- Existing Active Transportation Crossing
  Traversée de transport actif existante
- Proposed Active Transportation Crossing
  Traversée de transport actif proposée

Figure 38: At-grade active transportation crossings diagram. Source: Fotenn

2.1.4 Mobility Design Directions

The following design directions should be integrated into future studies, plans, infrastructure investments and development applications, as appropriate:

Wayfinding Strategy

- Develop a wayfinding strategy to ensure easy access to civic / public spaces, parks and pathways.

New Streets

- Integrate electric vehicle charging into streetside parking spaces.
- Design speeds for safe pedestrian and bicycle travel by ensuring 100% of the length of all new local streets are designed for a target speed of no more than 30 km/h.
- Minimum sidewalk widths shall be 2 metres, with wider sidewalks encouraged for active frontage streets.

New Active Transportation Infrastructure

- Design new public and onsite active transportation infrastructure in line with the Confederation Heights Design Guidelines.
- Provide separated cycle and pedestrian infrastructure for main routes and where high volumes are anticipated.
- Design active transportation infrastructure using the principles of Universal Design.

Transit Infrastructure

- Work with the OC Transpo to confirm that all new and existing bus stops will have transit approved shelters that are covered, at least partially enclosed to buffer wind and rain, have seating and illumination, and have signage that displays live schedules.
- Provide wayfinding to identify travel to all public transit stations with guidelines to be developed addressing sign location, scale, style and AODA compliance.

- Bike parking should be provided for different bike types, such as cargo bikes, as well as adapted cycles such as recumbent bicycles, handcycles and adult tricycles.
- Provide space for micromobility parking and shared micromobility in proximity to transit stations and major community amenity areas.

On-Site Features

For all new development, adhere to the following parking priorities:

- Do not build any off-street parking lots.
- Where parking can not be accommodated underground, new parking must be located in structured parking.
- Where structured parking cannot be accommodated, locate parking at the side or rear.
- Provide limited surface short-term visitor and accessible parking in larger developments.
- Accessible and limited mobility parking shall exceed municipal requirements and be located convenient to building entrances.
- 10% of the parking for each building shall be designated for carpool and/or carshare vehicles.
- Where pick-up/drop-off demand is high, provide designated pick-up/drop-off facilities close to the entrance, designed to minimize impact on the pedestrian realm.
- Bicycle parking as per the new zoning by-law.
- Minimize driveway crossings of sidewalks to less than 10% of block length.
- Provide EV charging infrastructure, including backup power, as a part of new development.
- Provide mid-block connections where shown in the Active Transportation Plan, as well as where mid-block connections will enhance resident access.

Figure 41: Precedent image. Source: Tesla.ca

Figure 40: Precedent image. Source: archdaily.com

Figure 39: Precedent image. Source: Alkeebali

2.2 Heritage and Design

2.2.1 Existing Conditions

Confederation Heights has a unique cultural heritage landscape, formed by the mid-century development of a federal employment site on a height of land between two waterbodies – the Rideau River and Sawmill Creek.

Careful observation of Confederation Heights reveals traces of older heritage on the site, including geological remnants of the Champlain Sea; Indigenous archaeological sites along the Rideau River (also called the Pasapskedjinawong Zibi) used through time immemorial for travel; remnants of early infrastructure projects such as the quarry in Hog's Back Park used for the building of the Rideau Canal; and the alignment of major transportation corridors, inspired by the Greber Plan.

Pre-1819
Archeological excavations have identified an indigenous campsite containing several artifacts such as decorated pottery and a small bone awl approximately 1,500 years old.

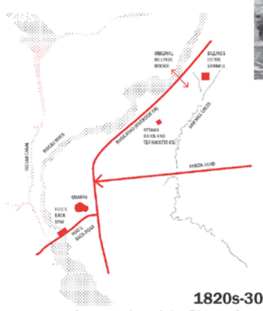
Since Time Immemorial
Confederation Heights is part of the ancestral territory of the Algonquin Nation.

1819
Braddish Billings, one of the early settlers in the area, builds a log cabin close to what is now the corner of Bank St and Riverside Dr.

1820s-30s
Construction of the Rideau Canal.

River Rd first appears in maps. Its alignment has been largely maintained and is currently known as Riverside Dr.

Heron Rd is laid out as a concession road of the Gloucester Township.



1823
Billings builds a Sawmill in a creek that ran through his property. This creek remains known as Sawmill Creek and runs along the eastern edge of the study area.

1820s
Hog's Back Dam was constructed to create a route to the Ottawa River that would avoid difficult bedrock excavations. Hogs Back Rd is laid out to service the dam and canal.

Currently it serves as a NCC scenic road.

1831
Original Billings Bridge is built by the family to connect Prescott St (now Bank St) to the north side of the Rideau River. A small village starts to establish, bringing new local businesses to the area.

1880s-1920s
Implementation of railway line spurs across the site to connect Ottawa to the St Lawrence River and Napanee. Today these lines are still used, one serves the Via Rail Ottawa Train Station and the other was decommissioned to the City in the 1960s and converted to the O-Train in 2001.

1903
Lands near the Hog's Back Falls were identified as having potential for public parks.

1915 - The Bennett Plan
Called for a bridge to extend Heron Rd for urban expansion.

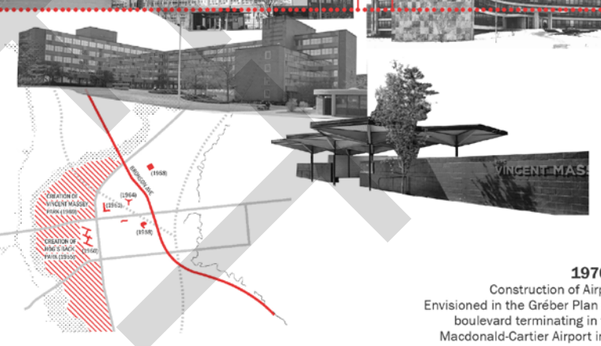
Recommended large parcels of lands along the Rideau River should become federal parkland. It is thanks to this Plan that we today have Vincent Massey and Hog's Back Parks.

1950s-60s - The Gréber Plan
Implementation of the Gréber Plan for the National Capital proposes Confederation Heights as a federal employment node.

1955
Hog's Back Park is implemented as a recreation and scenic park. Festival-style refreshment stand and washrooms were built in the modernist style and are now Recognized Federal Heritage Buildings.

1960
Completion of the Sir Charles Tupper Building, now a Recognized Federal Heritage Building.

1961
Inauguration of the Sir Leonard Tilley Building Designed by Jean-Serge LaFort. The original wings of this building are a Recognized Federal Heritage Building.



1970s - 2000s
Construction of Airport Parkway Envisioned in the Gréber Plan as a straight boulevard terminating in the Ottawa's Macdonald-Cartier Airport in the 1950s.

Built in 1970s, the suburban context had already taken form and a traditional approach to scenic parkways was preferred following Sawmill Creek.

1964
Construction of the former CBC Building (1500 Bronson Ave) Designed by David Gordon McKinstry it is the only Classified Federal Heritage Building on Campus.

1969
The original picnic area of Hog's Back Park is divided to create Vincent Massey Park after the expansion of Heron Rd and Bridge.

1990
Construction of the Canada Post Corporation Headquarters building.

2020 - 2021
Insurance building is demolished.

Contruction of LRT.

Diagram based on Confederation Heights Site Evolution Report, 2019 – PSPC

Today's cultural landscape is formed by the mid-century development of a federal employment site on these lands. Federal employment sites evolved during the modernist period resulting in identifiable layout typologies.

Key Modernist Buildings

1500 Bronson

Figure 44: 1500 Bronson. Source: CLC

Sir Charles Tupper Building

Figure 43: Sir Charles Tupper Building. Source: CLC

875 Heron

Figure 45: 875 Heron. Source: CLC

Sir Leonard Tilley Building

Figure 46: Sir Leonard Tilley Building. Source: CLC

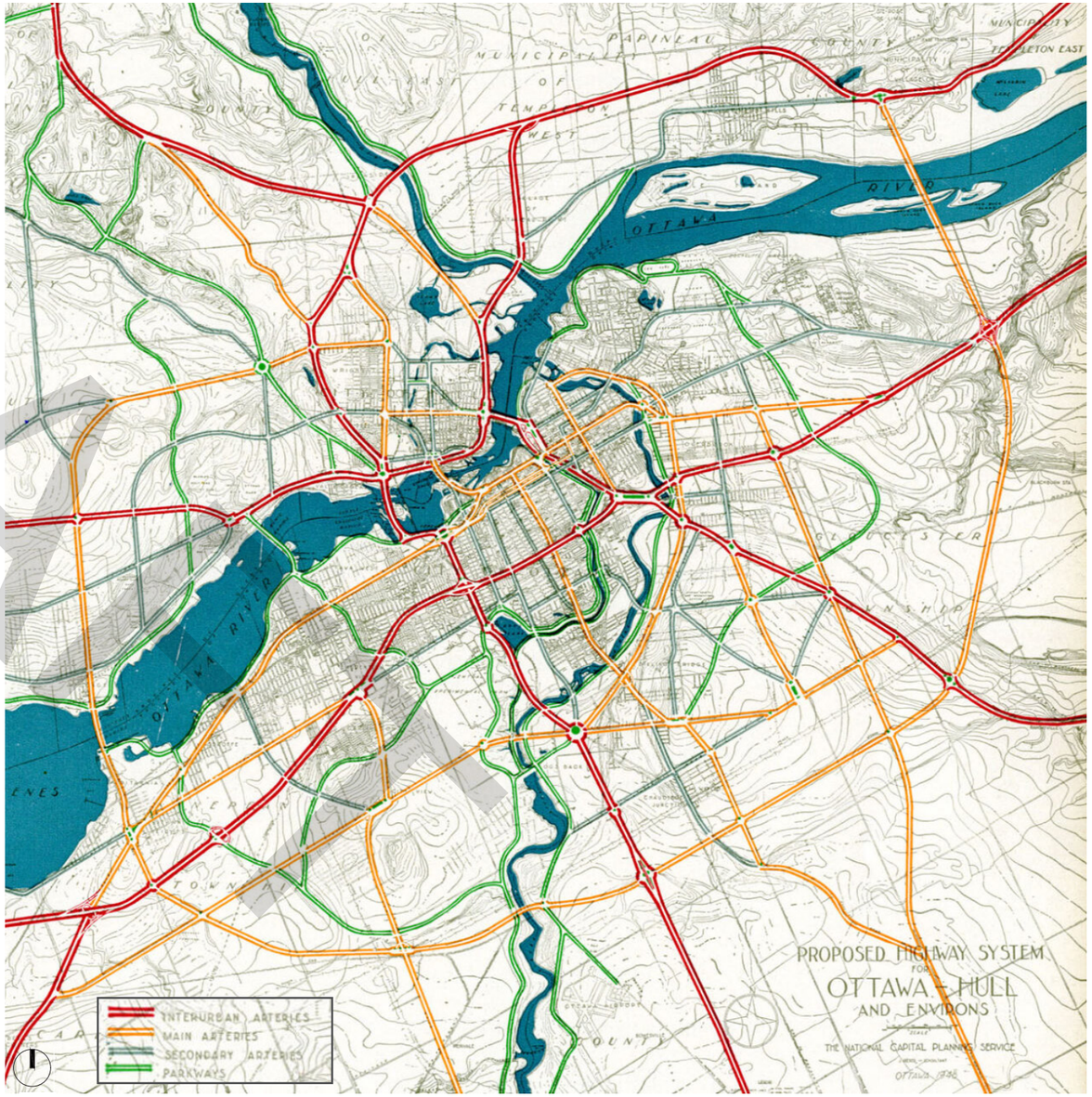


Figure 42: Greber Plan for the Capital. Source: NCC

Federal Modernist Typologies

The **Corporate Campus** typology is typically characterized by flat terrains with building organized around central courtyards in a grid-like street network. These courtyards often contain civic plazas and modernist landscapes that function as gathering spaces.

The **Corporate Estates** typology is characterised by imposing and often sculptural buildings with coursing entry driveways through scenic, undulating pastoral landscapes. Encompassing pastoral landscape enhanced views and vistas to other buildings on site. Surface parking lots were strategically located to be invisible to passing motorists and executive offices.

Figure 47: Precedent of a Corporate Campus typology. Source: ERA

Figure 48: 1500 Bronson - Corporate Estate typology . Source: CLC

Both of these typologies are represented in Confederation Heights, as shown in Figure 49. The 1500 Bronson, 875 Heron, RA Centre and Tupper Building properties show characteristics of the Corporate Estates typologies, with sculptural buildings being set on rolling pastoral landscapes. The original site designs of the Sir Leonard Tilley Building, Canada Post, Health Canada and Central Heating and Cooling Plant (CHCP) properties are more consistent with the Corporate Campus typology. Buildings were organized by internal courtyards and regular grids.

The Modernist design intent was to reinforce capital/ civic scale, with a focus on buildings as sculptural elements in the landscape. In the current context, buildings set in landscape often means large setbacks, which can be harder to reconcile with contemporary planning objectives for density close to transit, buildings that frame streets, and human-scale public realm.

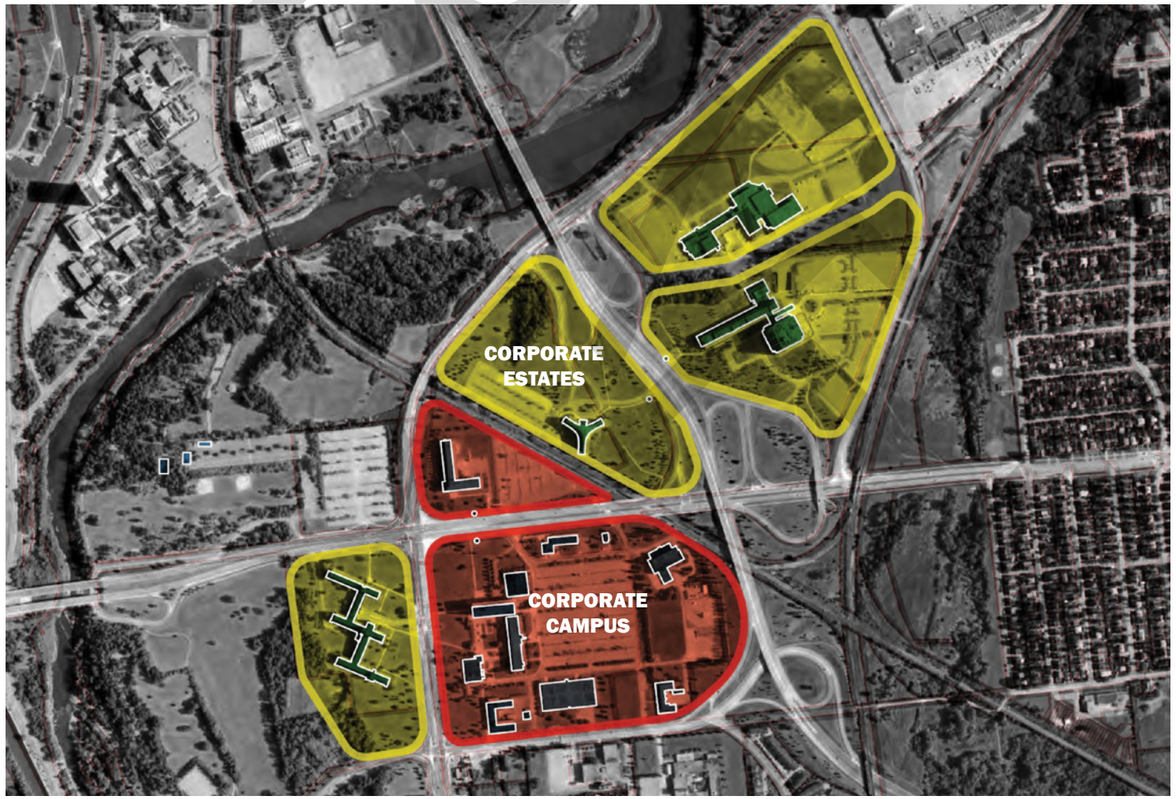


Figure 49: Confederation Heights modernist typologies location map. Source: ERA and Google

The transformation of a single-use site, designed around the automobile, into a high-density, transit-oriented, multi-functional district requires extensive physical change at the scale of the overall landscape as well as at the scale of individual lots and buildings. From a heritage planning perspective, the Master Plan is an exercise in managing change, finding a balance between the site's character-defining attributes and contemporary requirements, as reflected in the guiding principles developed for the site.

2.2.2 Envisioned Outcome

The Master Plan takes a dynamic, transformative approach to protecting, celebrating and enhancing the heritage attributes and character of the site. Informed by the **Celebrate Culture and Heritage** guiding principle, the heritage strategy is closely integrated into the overall design strategy for Confederation Heights. Notwithstanding the transformative change facilitated by the Master Plan, Confederation Heights maintains a distinct sense of place, rooted in its topography, landscape and the aspirations of the Federal Modernist typologies.

2.2.3 Key Moves

The site geomorphology, historic circulation patterns and the Federal Modernist typologies (Estates and Campus) have informed the key moves in Section 2.2.3.

2.2.3.1 Heritage Circulation Corridors

The three major arterial roads cutting through Confederation Heights also shape the heritage experience of the site. The intent of the Master Plan is to enable change that enhances the desirable heritage and design characteristics of these roadways.

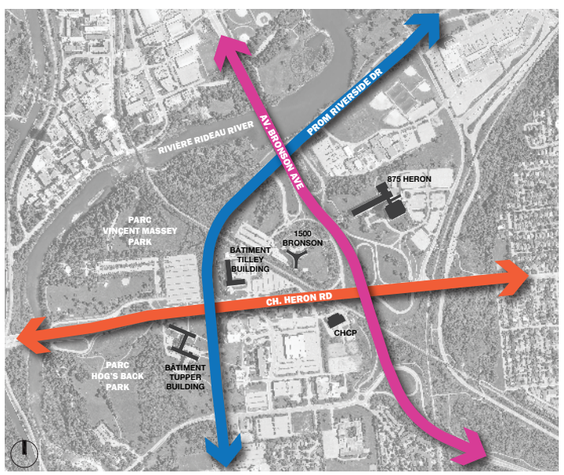


Figure 50: Heritage Circulation Corridors Diagram. Source: Fotenn and Google

LEGEND / LÉGENDE

Prom Riverside Dr
Scenic Route | Le Promenade Paranomique

Av Bronson Avenue
Capital Arrival Route | La route de la porte de la capitale

Ch Heron Road
Urban Arterial | L'artère urbaine

Capital Arrival Route Circulation Corridor
Bronson Avenue / Airport Parkway

Bronson Avenue/Airport Parkway is the most significant heritage circulation corridor, serving as the Capital Arrival Route to the downtown from the Ottawa International Airport. It is recognized as a Capital Arrival Route in NCC planning documents, and a Scenic Capital Entry Route in the Official Plan. The scenic, landscape and gateway characteristics of the Capital Arrival Route are protected and enhanced by the following decisions:

- Maintain the relationship between 1500 Bronson and 875 Heron to function as a "gateway" for travellers arriving from the south.
- Retain and frame views from Bronson Avenue to Ottawa's downtown, and maintain the visual primacy of 1500 Bronson, by limiting building heights south of 1500 Bronson.
- Reinforcing and improving the parkway character of Bronson Avenue by:
- Removing on/off ramps which broke up the modernist pastoral forecourts of the heritage buildings
- Using the Greenway, including municipal parks, to retain and enhance the sense of landscape continuity.
- Protecting the green, parkway character of Bronson Avenue through a 15-metre landscaped buffer.
- Maintaining a visual sense of openness by restricting building heights to moderate high-rise within 25 metres of the green buffers.
- Setting design guidelines for new buildings abutting the Capital Arrival Route that emphasize high-quality design and architectural excellence that contributes to and enhance the arrival experience.
- Establish strategic locations for potential buildings to promote a sense of arrival, place making and contribute to a distinct skyline.

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Future Development
Aménagement futur

Future Development (Special Design Area)
Aménagement futur (Zone de conception spéciale)

Federal Employment
Pôle d'emploi fédéral

Green Buffer / Setback
Marge de recul vert

Parks and Open Spaces
Parcs et espaces ouverts

Active Frontage - Commercial
Façade active - commerciale

Active Frontage
Façade active

Transit Node (LRT + BRT)
Pôle de transport en commun (TCTL + TCRA)

Capital Arrival Route Conceptual Diagram

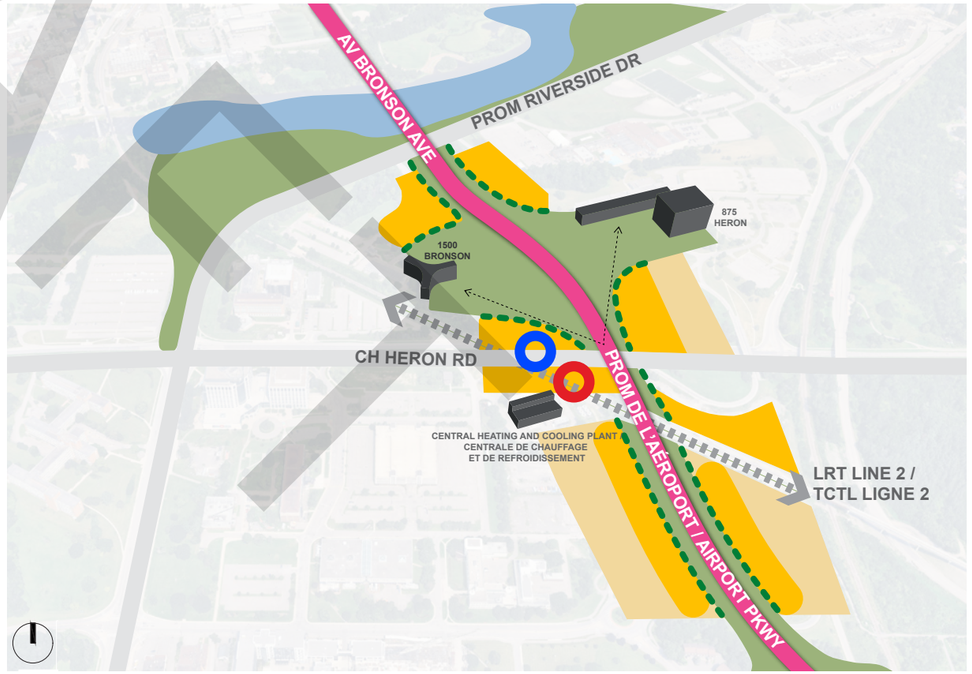

Figure 51: Capital Arrival Route / Bronson Avenue-Airport Parkway Conceptual Circulation Corridor diagram: Fotenn and Google

Figure 52: Conceptual rendered image of the Capital Arrival Route looking north. Source: Cicada and Fotenn

The Scenic Route Circulation Corridor

Riverside Drive

Riverside Drive is a scenic parkway in NCC planning documents as well as a Scenic Capital Entry Route in the City of Ottawa Official Plan, characterized by its curvilinear relationship to the Rideau River, significant naturalized landscapes, and deep setbacks to Confederation Heights buildings. The scenic experience of Riverside is currently marred by wide pavement widths, locations with front-yard parking lots, and large areas of undifferentiated turf. The following decisions in the Master Plan will rehabilitate the scenic character of Riverside Drive:

- Maintaining generous landscaped setbacks of 15 meters to preserve the parkway character and existing trees along the Riverside Drive.
- Create opportunities for larger areas of improved landscapes, including the proposed municipal park on the RA Centre lands, the retained woodlot and stormwater management facility (SWM) on the 1500 Bronson parcel, and the retained forecourts of the Tupper Building.
- Setting design guidelines for new buildings abutting Riverside Drive to respond to the natural landscapes and sloping topography.
- Establish height controls for new buildings on lands abutting Riverside Drive in proximity to the Rideau River to reinforce a built form that responds to the scale of the natural landscape.
- Establish strategic locations for potential buildings to promote a sense of arrival to Confederation Heights, place making and contribute to a distinct skyline.

Scenic Route Conceptual Diagram

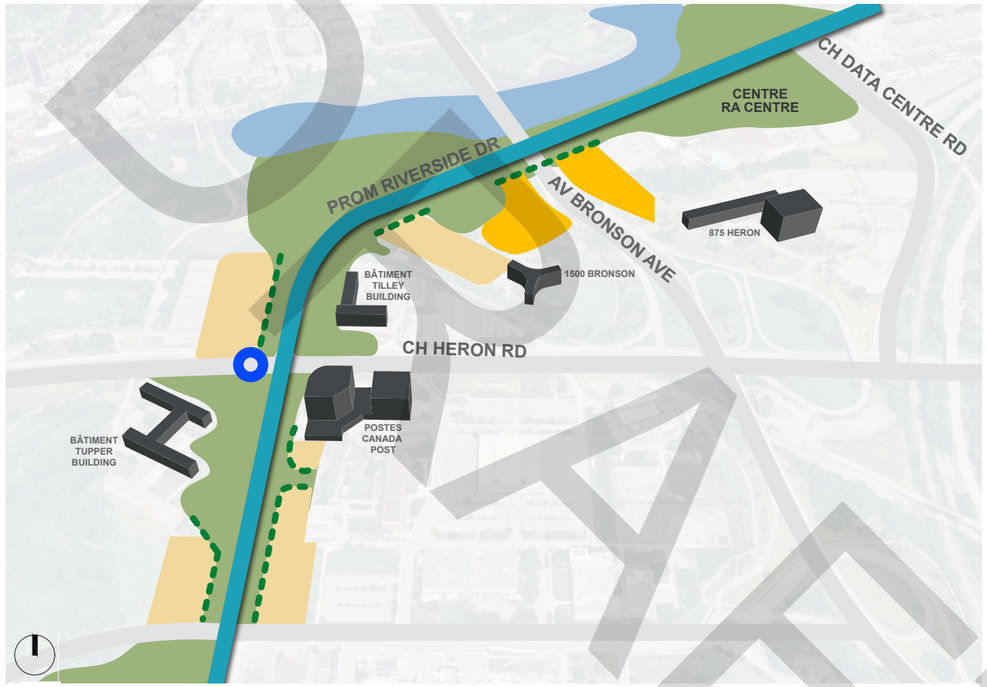

Figure 53: The Scenic Route / Riverside Drive Conceptual Circulation Corridor diagram: Fotenn and Google

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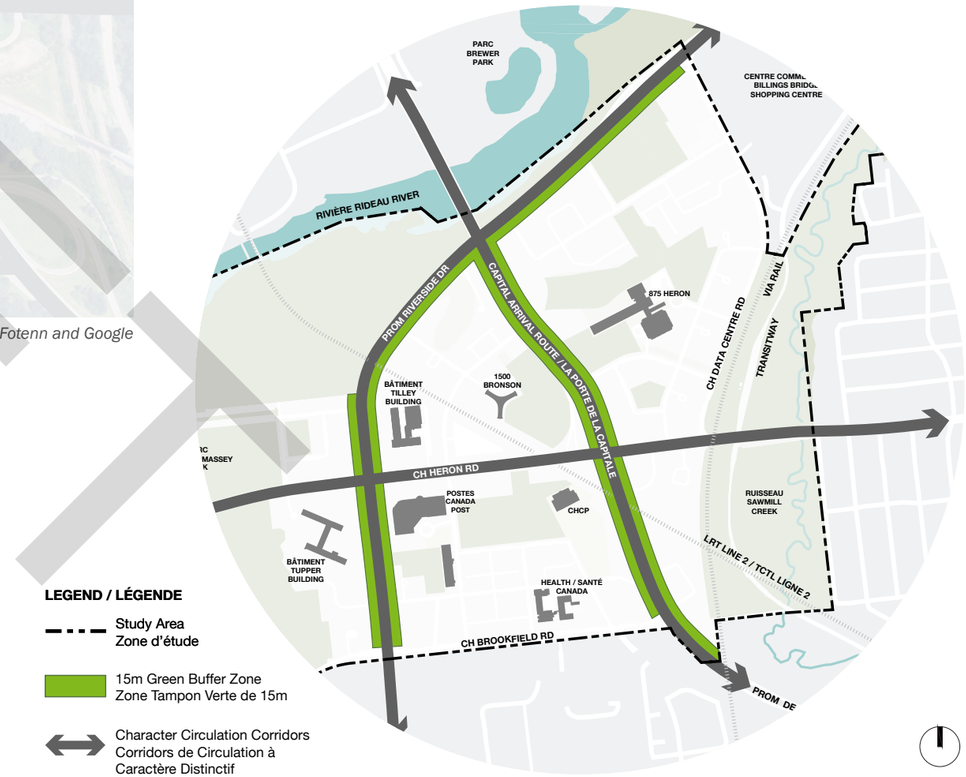
- Future Development
  Aménagement futur
- Future Development (Special Design Area)
  Aménagement futur (Zone de conception spéciale)
- Federal Employment
  Pôle d'emploi fédéral
- Green Buffer / Setback
  Marge de recul vert
- Parks and Open Spaces
  Parcs et espaces ouverts
- Bus Rapit Transit (BRT) Station
  Transport en commun rapide par autobus (TCRA)

Green Buffer Diagram Along Riverside Drive and the Capital Arrival Route



LEGEND / LÉGENDE

- Study Area
  Zone d'étude
- 15m Green Buffer Zone
  Zone Tampon Verte de 15m
- Character Circulation Corridors
  Corridors de Circulation à Caractère Distinctif

The Urban Arterial Route Circulation Corridor

Heron Road

Heron Road was designed as a suburban connector, and currently operates as an urban arterial (designated Minor Corridor), rather than as a scenic parkway. It runs orthogonally through Confederation Heights, and provides frontage for the Tupper Building, Sir Leonard Tilley Building, Canada Post Headquarters and Central Heating and Cooling Plant. Together, these features provide the framework for a civic boulevard character. This character is compromised by several large parking lots fronting Heron along the north side, the extensive on/and-off ramps which occupy much of the frontage, high traffic speeds, wide pavement widths with minimal active transportation infrastructure, narrow sidewalks with minimal boulevard landscaping, and inconsistent landscaping. The Master Plan seeks to reinforce the civic boulevard character of Heron Road, particularly between Riverside Drive and the eastern edge of Confederation Heights, by:

- Integrating the Baseline/Heron BRT design which introduces higher-order transit, widened sidewalks and creates cycle-tracks, creating a more comfortable pedestrian environment.
- Setting buildings close to the street to frame the street, and encouraging mixed-use active frontages to support transit users and future residents.
- Providing continuous tree planting along the right of way to increase the urban tree canopy, enhance the streetscape, and provide shade for pedestrians.
- Promoting tree planting and street furniture between buildings' active frontages and sidewalks where it cannot be accommodated within the public right-of-way, to create a more comfortable pedestrian environment.
- A building height strategy that locates some of the highest heights along Heron Road, with maximum podium heights that are proportional to and frame the street.

Urban Arterial Route Conceptual Diagram

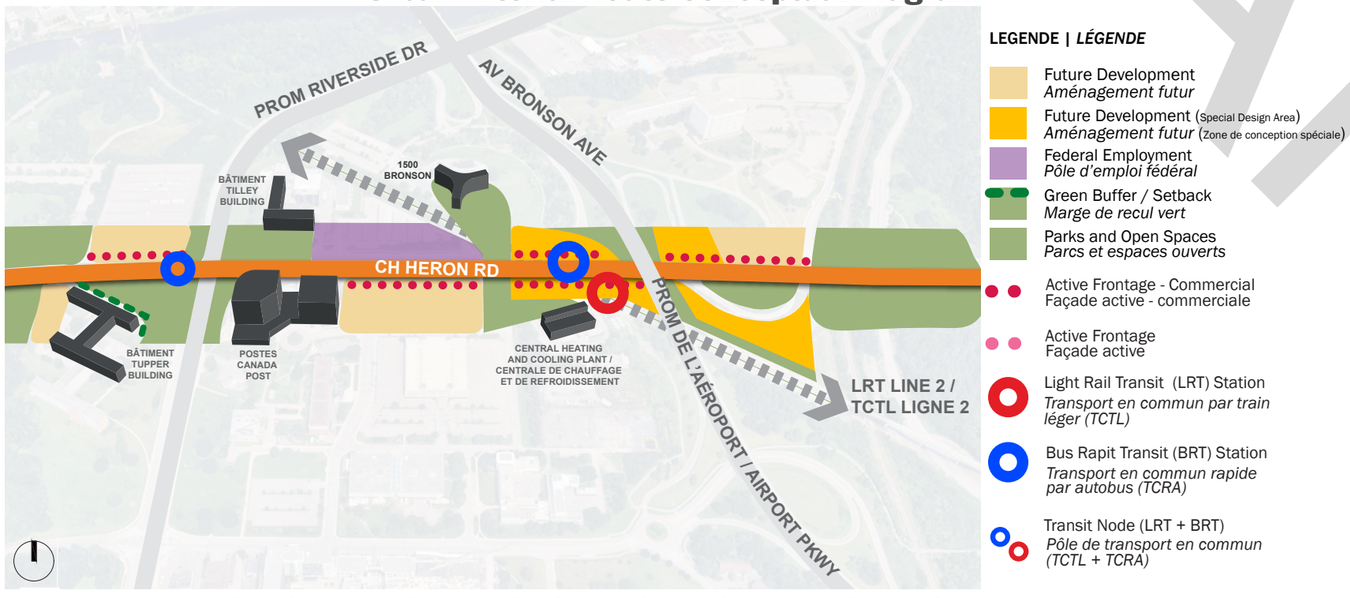


Figure 54: Urban Arterial Route / Heron Road Conceptual Circulation Corridor diagram: Fotenn and Google

Figure 55: Conceptual render of a BRT Line in US. Source: LinkUS

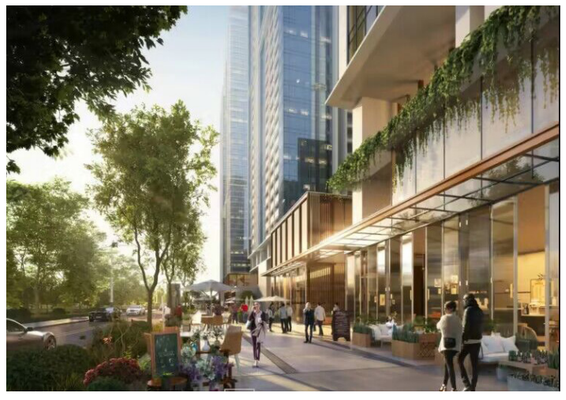


Figure 56: Active Frontages and landscaping animating the public reaim. Source: Jingcai Plus

Figure 57: Sidewalks, bikelanes and tree planting. Source: BAK Studio

2.2.3.2 Heritage Character Areas

Combined, the site geomorphology, historic circulation patterns and the Federal Modernist typologies (Estates and Campus) are recognized in three “Heritage Character Areas”, which, together with the Heritage Circulation Corridors and Heritage Greenway, provide a heritage framework for the Master Plan. The “community districts” approach, discussed further below, is based on this heritage framework.

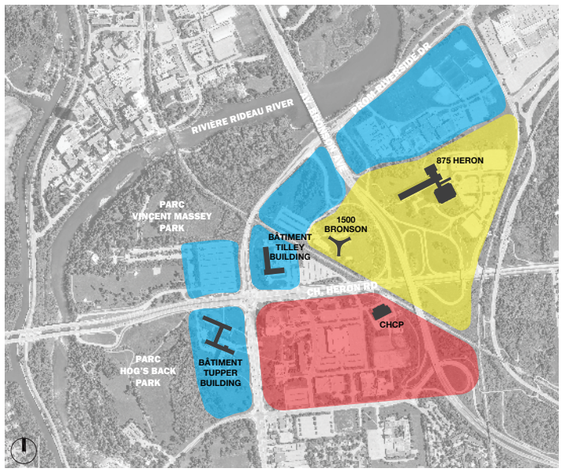


Figure 58: Heritage Character Areas diagram. Source: Fotenn and Google

LEGEND / LÉGENDE

- Riverside Character Area
- Heritage Gateway Character Area
- Central Campus Character Area

Riverside Character Area

This character area recognizes the:

- Park-like setting with built form and curvilinear circulation that responds to the natural sloping topography.
- Presence of ecological features, including the 1500 Bronson ravine, the edge of the 875 Heron woodlot/bluff, and adjacency to the Rideau River).
- Primary elevations and generous setbacks that prioritize the visual interface from Riverside Drive.
- Landscape that reinforces the scenic parkway experience of Riverside Drive with framed views, including pastoral foreground and picturesque background.

In line with the heritage analysis, the Master Plan proposes to enhance and reinforce these attributes:

- Riverside Drive is reinforced as a scenic parkway by maintaining generous landscaped setbacks.
- The Outer Arch frames part of the Riverside District, enhancing the landscape setting with curvilinear circulation that responds to the natural topography.
- Design guidelines encourage built form to be oriented to the natural landscape.
- The building height strategy, as well as the location of the greenway, protect and frames existing views to the riverside and of downtown Ottawa.
- Physical connections to the Rideau River are enhanced.
- The heritage strategy for the master plan envisions adaptive reuse, appropriately integrating new development, ensuring a flexible commemoration for the Tupper Building.

Figure 59: Precedent image. Source: Greystone Village

Figure 60: Precedent image. Source: Greystone Village

Figure 61: Precedent image. Source: Frank and Frieda

Heritage Gateway Character Area

This character area recognizes the following attributes:

- Estate-like setting with built form that responds to the prominent gateway location through design centrally set within a pastoral landscape with sweeping vistas and coursing entry drives through a scenic landscape.
- Generous setbacks that prioritize scenic views from Airport Parkway / Bronson Avenue.
- Anchored by 1500 Bronson Road and 875 Heron Road as landmarks visible from many vantage points, owing to the prominent location and being located at the crest of the scarp landscape.
- Reinforces scenic Capital Arrival Route and Gateway experience of Bronson Avenue with framed views, including pastoral foreground with parking hidden from view from key scenic drives.

These attributes are reinforced and enhanced through the Master Plan:

- 1500 Bronson is protected and retained, with strong policy support for adaptive reuse.
- A flexible approach is applied to 875 Heron. Adaptive reuse, including modifications to allow the building to serve new functions and communities, is preferred. If retention is not feasible, full redevelopment shall reflect and respect the Confederation Heights heritage approach.
- The Greenway incorporates the landscapes between these two buildings, to cconserve the relationship between 1500 Bronson Avenue and 875 Heron Road and their expansive pastoral forecourts.
- Wide, 15-metre landscaped buffers are provided on both sides of the Capital Arrival Route, and building heights within 25 metres of the green buffer are limited to modest high-rise heights.
- Design guidelines emphasize architectural excellence and a landscape-first approach for the buildings facing the Capital Arrival Route.
- Building heights in the Riverside District west of Bronson Avenue are lower, to maintain the visual primacy and dynamic views of 1500 Bronson from the Airport Parkway northbound.

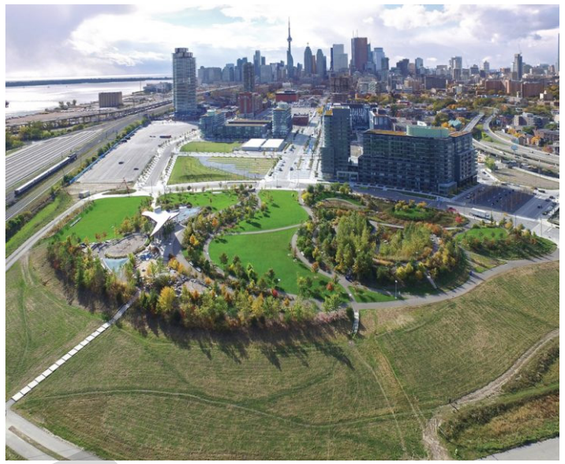


Figure 65: Precedent image. Source: Canary District

Figure 62: Precedent image. Source: Alta Area

Figure 63: Precedent image. Source: Alta Area MP

Figure 64: Precedent image. Source: Alta Area MP

Central Campus Character Area

This character area recognizes the following attributes:

- Campus-like setting with rectilinear built form and circulation that responds to the flat terrain and urban grid.
- Built form framing individual courtyards and shared central amenity spaces.
- Primary elevations fronting Riverside Drive, Heron Road, and Brookfield Road.
- Generous setbacks with pastoral landscape along Riverside Drive that reinforces the scenic parkway experience.
- Reduced setbacks along Heron Road and Brookfield Road that reinforces the urban grid.
- Landscape that reinforces the urban campus character through a central hardscaped plaza and rectilinear pedestrian pathways connecting the different facilities

These attributes are reinforced and enhanced through the Master Plan:

- The Master Plan establishes an urban centre and concentrates development on the flat terrain of Central Campus area.
- The introduced street and park pattern reinforce its rectilinear, street-oriented urban character.
- A street-oriented built form with shallow setbacks reinforces the rectilinear, urban street grid along Heron Road, Brookfield Roads and new streets.
- Introduce the LRT Plaza and a series of privately-owned public spaces to complement the open spaces network and enhance the area's civic character.

Figure 67: Precedent image. Source: Regent Park

Figure 66: Precedent image. Source: Regent Park

Figure 69: Precedent image. Source: Regent Park

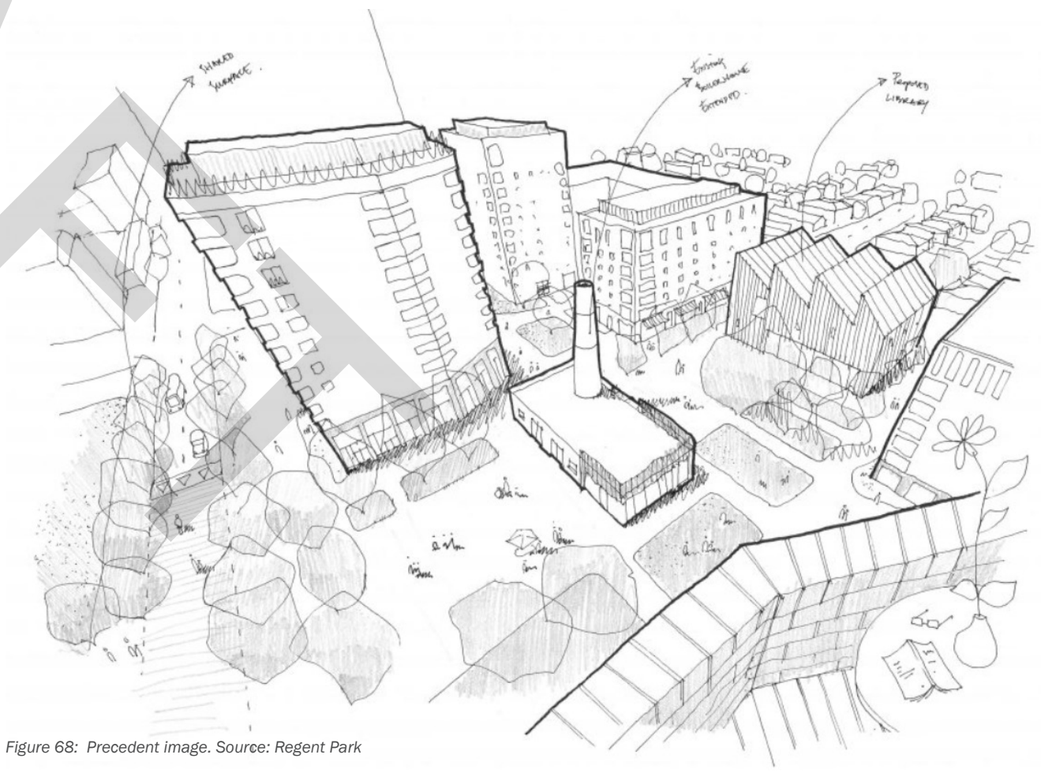


Figure 68: Precedent image. Source: Regent Park

2.2.4.1 The Heritage Greenway

The generous, open character, rolling topography and relationship of buildings to landscape form an essential part of the character and heritage value of Confederation Heights. The Heritage Greenway is a key move to conserve and enhance these essential elements, while enabling transformation and substantial intensification of the site. It is a system of parks and open spaces flowing through the site, which maintains a sense of landscape continuity and provides a new way for pedestrians to permeate and experience Confederation Heights and its unique heritage features.

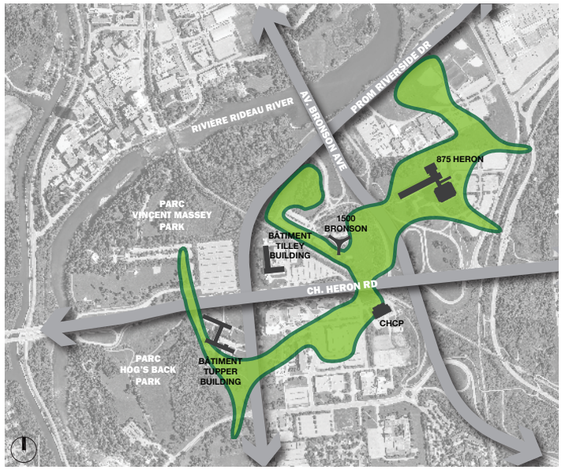


Figure 70: The Heritage Greenway diagram. Source: Fotenn and Google

The Heritage Greenway presents a “landscape first” approach to planning and design, leveraging the green network to showcase the historic precinct structure. It integrates several heritage and modernist buildings and their associated cultural landscapes, while incorporating new active and passive recreational uses to ensure vibrancy and access to public recreation opportunities.

This strategy is seamlessly integrated with the open spaces and mobility systems, and further discussion of the function and design of the Greenway is in Section 2.3.3.1.

2.2.4 District Framework and Design Direction

Based on the heritage framework described above, the planning area has been subdivided into seven community districts as illustrated in Figure 71. These districts are described further in Section 3.8.

Figure 71: District Framework. Source: Fotenn and Google

2.2.4.2 Riverside District

Figure 72: Conceptual plan of the Riverside District. Source: Fotenn

The Riverside District is characterized by the natural geomorphology of the site in proximity to the Rideau River and it will be influenced by the Riverside Character Area and the Riverside Circulation Corridor recommendations and guidelines. The Riverside District is:

- Physically located at a lower grade and at water level;
- Contains natural sensitive ecological features such as the Rideau River, wooded lots, a ravine, storm water management features;
- Anchored by the RA Centre; and,
- Functions as a backdrop 1500 Bronson Building.

Future development at Riverside District should consider the following design directions:

- Be sensitive to topography and natural features.
- Set generous setbacks that prioritize the visual interface from Riverside Drive.
- Maximize views to natural features while protecting views to the water and Ottawa's central area.
- Building heights generally lower compared to the other districts in response to natural features and view sheds.
- Density and high-rise developments to be explored in proximity to the Billings Bridge BRT station, near the Bronson Avenue frontage to respond to Capital Arrival Route and to complement uses at the RA Centre.

Figure 73: Precedent image. Source: Greystone Village

Figure 74: Precedent image. Source: Frank and Frieda

2.2.4.3 Bronson District

Figure 75: Conceptual plan of the Bronson District. Source: Fotenn

The Bronson District is located at the centre of Confederation Heights, with a strong presence of modernist buildings and landscapes, and it is influenced by the Heritage Gateway Character Area and the Capital Arrival Route Circulation Corridor recommendations and guidelines. Key attributes of Bronson District include:

- Anchored by the two major federal Heritage Buildings: 1500 Bronson and 875 Heron;
- Modernist Corporate Estate typology with sculptural buildings on a pastoral/picturesque landscape;
- Gateway to the Community as a Capital Arrival Route; and
- Views to downtown Ottawa and Gatineau Hills.

Future development and infrastructure improvements at Bronson District should:

- Preserve viewshed at the highest grade of the Bronson Overpass.
- Preserve open space around heritage buildings while providing active uses for the open space as parks.
- Preserve views between two heritage buildings.
- Development should take a landscape-first approach, responding/adapting to topography and existing context/buildings.
- Developments and the potential sculptural pedestrian bridge over Bronson Avenue as part of The Arch route should contribute to the arrival experience through design excellence.

Figure 76: 1500 Bronson. Source: CLC

Figure 77: Rendered imaged of the Bronson District. Source: Cicada and Fotenn

2.2.4.4 Brookfield District

Figure 78: Conceptual plan of the Brookfield District. Source: Fotenn

The Brookfield District is characterized by its flat terrain in proximity to a stablished low/mid-rise community to the south and will be influenced by the Central Campus Character Area and by three different Character Circulation Corridors (Heron Road, Riverside Drive and the Capital Arrival Route) recommendations and guidelines. Key attributes of Brookfield District include:

- Campus Typology characterized by orthogonal urban grid and organized by the existing driveway grid patterns and connections to surrounding areas;
- Rectangular buildings conforming large central courtyards;
- Anchored by the Transit Node, the Central Heating and Cooling Plant building, the new community park and the Cultural and Entertainment Hub;
- Anchored by the The Inner Arch and The Arch corridors; and,
- Constrained by three major arterial roads (Riverside Drive, Heron Road and the Airport Parkway).

Development and public infrastructure should:

- Transition heights and densities from Heron (High-rise and transit-oriented) to Brookfield (low to mid-rise).
- Use buildings to frame the street with active frontage and pedestrian scale podiums (4-6 storeys).
- Frame the public realm including parks, privately-owned open spaces, courtyards and amenities.
- Create a “village core” as a continuation of the existing Brookfield community, merging into the existing urban fabric and centred on the newly activated and pedestrian-friendly Brookfield Road.
- Foster a “Culture and Entertainment Hub”, by bringing high density development with at-grade urban uses and an intense concentration of cultural and entertainment uses.

Figure 79: Precedent image. Source: Zibi

Figure 80: Precedent image. Source: Zibi

2.2.4.5 Sawmill District

Figure 81: Conceptual plan of the Sawmill District. Source: Fotenn

The Sawmill District is located adjacent to the Sawmill Creek Conservation Area, and it is planned for greater densities supported by its proximity to existing and future rapid transit stations. The district will be influenced by the Heritage Gateway Character Area and the Heron Road and Capital Arrival Route Circulation Corridors recommendations and guidelines. Key attributes of Sawmill District include:

- Anchored by rapid transit lines including the existing transitway and the future BRT line on Heron Road and the Transit Node;
- Located in higher grounds provides breathtaking views to downtown Ottawa;
- Functions as backdrop to the modernist 875 Heron building/landscapes; and
- Anchored by The Inner Arch and The Arch corridors.

Future development and buildings at Sawmill District should:

- Consider higher densities and 30+ storey buildings supported in proximity to the rapid transit network.
- Consider appropriate transitions to surrounding areas and less sensitivity to change.
- Moderate high-rise buildings are expected with podium heights limited to six storeys to frame the street.
- Isolated “buildings in a park” structures could complement and bring additional densities near 875 Heron while providing stunning views to Downtown Ottawa.

- Animate the public realm with active frontages (residential, non-residential or amenities).
- Promote pedestrian permeability and connections through development blocks to facilitate access to the rapid transit stations.

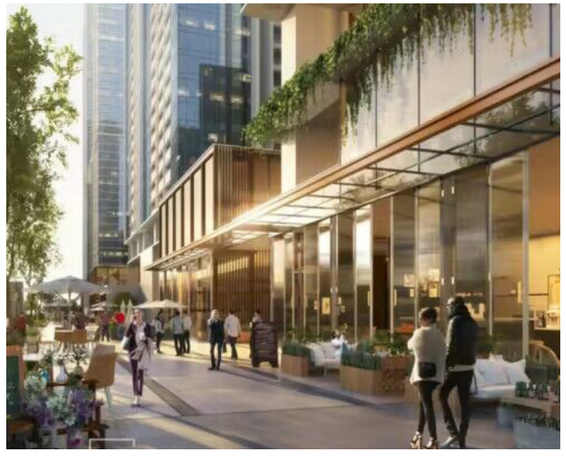


Figure 82: Precedent image. Source: Jingcai Plus

Figure 83: Precedent image. Source: Perkins&Will

2.2.4.6 Vincent Massey District

Figure 84: Conceptual plan of the Tupper District. Source: Fotenn

The Vincent Massey District is located adjacent to the federal Vincent Massey and Hog's Back Parks, and it will be influenced by the Riverside Character Area and the Riverside Circulation Corridor recommendations and guidelines. Key attributes of Vincent Massey District include:

- Anchored by the Tupper building as a modernist Corporate Estate typology with a sculptural built form on a pastoral/picturesque landscape;
- Presence of a future BRT line crossing through the district with a future station at Heron Road and Riverside Drive; and,
- Proximity to the federal parks (Vincent Massey and Hog's Back Park).

Future development at Vincent Massey District should:

- Maintain a sense of open space around heritage buildings while providing active uses such as privately-owned open spaces, parkettes and recreational areas.
- Enhance dynamic views of the Scenic Route and the 15-metre green buffer along Riverside Dr including through landscaped and naturalized features.
- Respond and adapt to topography and existing context, landscapes and buildings.
- Activate the public realm in proximity to the future BRT stations including retail and services at grade.
- Promote pedestrian permeability and connections through development blocks to facilitate access to the future BRT station and the federal parks.

Figure 85: Sir Charles Tupper Building. Source: CLC

Figure 86: Precedent image. Source: SLA Architects

2.2.4.7 Federal District

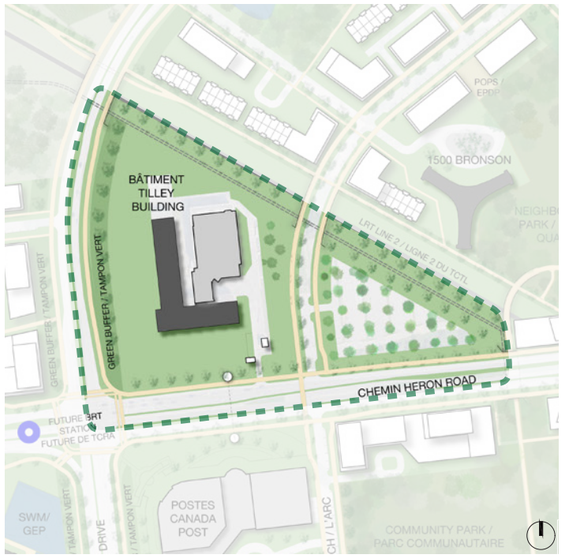


Figure 91: Conceptual plan of the Federal District. Source: Fotenn

The Federal District is mostly characterized by the Federal Government presence and employment uses. The district will be influenced by the Riverside Character Area and by the Heron Rd and Riverside Character Circulation Corridors recommendations and guidelines. Key attributes of Federal District include:

- Anchored by the modernist Sir Leonard Tilley building;
- Anchored by the future BRT line and stations.
- Close proximity to the Transit Node; and
- Functions as a backdrop to the modernist 1500 Bronson building.

Future development at the Federal District should:

- Be sensitive to the open space around the Tilley Building and its modernist landscapes.
- Preserve the wide and landscaped views of the Riverside Drive Corridor and the 15-metre green buffer along Riverside Drive.
- Preserve and promote the federal employment presence (intensification and ancillary uses in support of employment uses).
- Screen surface parking areas from the public realm view with landscaping and potential new built form along Heron Road.
- The Line and the Arch shall be designed to meet federal needs given the use of the building, including security considerations.

Figure 88: Tilley Building. Source: CLC

Figure 87: Conceptual BRT line in United States. Source: LinkUS

2.2.4.8 Open Spaces District

Figure 92: Conceptual plan of the Open Spaces District. Source: Fotenn

The Open Spaces District is characterized by major open spaces including two federal parks (Vincent Massey and Hog's Back Parks) and the Sawmill Creek Corridor. The Federal Parks are managed by the National Capital Commission (NCC) under their urban parks' portfolio, and the commission has the primary authority over land use planning, design upgrades, maintenance and operations.

The Sawmill Creek is a natural heritage system that serves municipal functions including storm water conveyence that is split under multiple jurisdictions.

Master Plan recommendations:

- Removal of the on/off-ramps providing access to Vincent Massey Park to reduce paved areas and improve the active mobility connections.
- Collaboration of different federal and municipal authorities to promote active mobility connections and additional access through future development blocks abutting the federal parks.
- Consolidation of the Sawmill Creek Corridor ownership to facilitate stewardship.
- Improve existing paths and connections along the Sawmill Creek area.

Figure 89: Hog's Back Park. Source: ncc-ccn.gc.ca

Figure 90: Vincent Massey Park. Source: ncc-ccn.gc.ca

Figure 93: Confederation Heights Drone Photo. Source: CLC

2.3 Greenspace System

2.3.1 Existing Conditions

Confederation Heights is characterized by a wealth of parks and open spaces. These parks and open spaces have a diversity of vocations, sizes and characteristics that support the distinctive character of the study area. These include modernist cultural landscapes – large-scale pastoral landscapes that frame the Study Area's heritage buildings and smaller-scale plazas and courtyard spaces intended for the use of federal employees. Confederation Heights also contains patches of ecologically sensitive landscape – the Sawmill Creek corridor, Capital Parks along the Rideau River, and three wooded areas within the Intervention Area. Finally active and passive recreational assets include the Capital Parks along the Rideau River (Hogs Back and Vincent Massey Park), which are beloved spaces for passive recreation. It also includes outdoor sports facilities at the RA Centre, and is close to other recreation spaces outside of Confederation Heights (including Mooney's Bay, Brewer Park, Heron Park, Brookfield High School, the Rideau Canoe Club which operates on Mooney's Bay, and several other City parks).

Figure 94: Rideau River near Hog's Back Falls. Source: Fotenn

2.3.2 Envisioned Outcome

The landscape is integral to the cultural heritage of the site, and provides important habitat, ecosystem services and access to nature for site users. As shaped by the **Enrich Access to Nature and Recreation** guiding principle, and in alignment with the Mobility and Design approaches, the Master Plan proposes a Heritage Greenway.

The Heritage Greenway serves a major heritage and mobility function, and is also the core structural element of the open space network. It provides a linear connection between municipal parks, plazas, stormwater ponds, and wooded lots across Confederation Heights, and is complemented by peripheral parkettes and stormwater ponds, ensuring accessible, inclusive and convenient access to recreational and greenspace to new residents.

2.3.3 Key Moves

The following section describes the Heritage Greenway key move and supporting greenspace, public realm and recreation strategies.

2.3.3.1 The Heritage Greenway

The **Heritage Greenway** is the envisioned as the "soul" of the future community, integrating heritage landscapes, habitat, and recreational assets. The heritage greenway connects the modernist buildings, all three Heritage Character Areas, all three Heritage Circulation Corridors, all Districts and the Community Connectors.

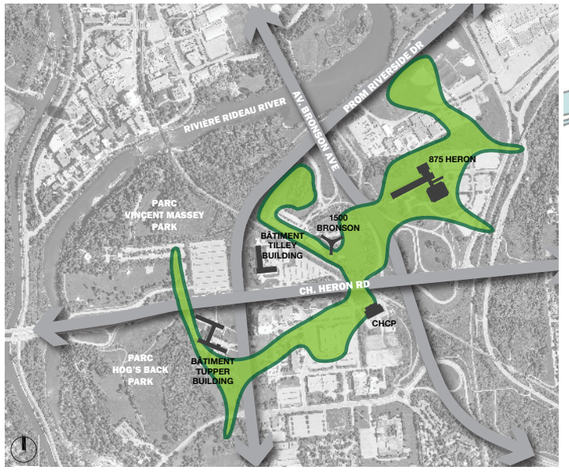
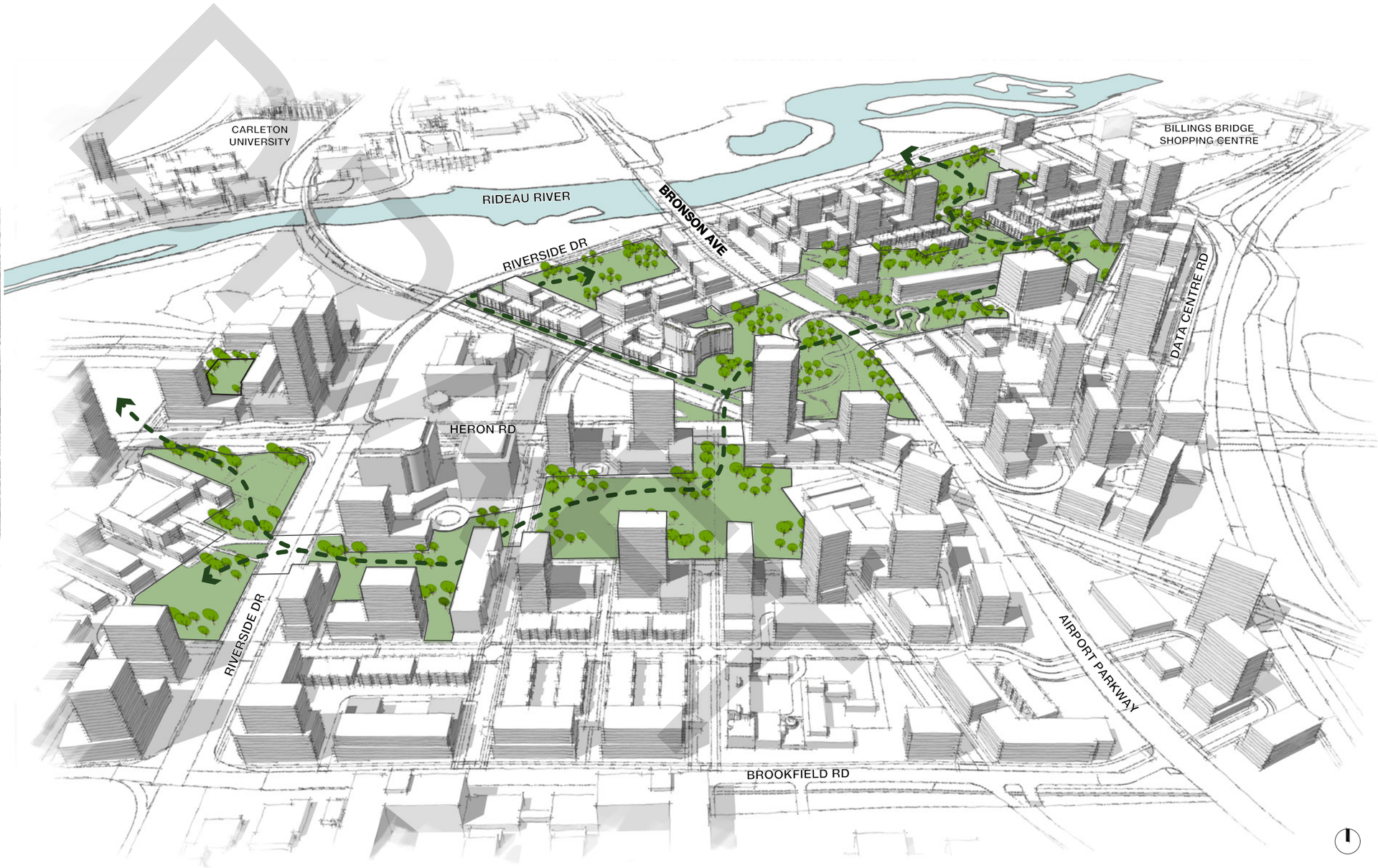


Figure 95: The Heritage Greenway conceptual diagram. Source: Fotenn and Google



The **Heritage Greenway** is composed of multiple components. The largest contribution to the greenway by area are eight of the nine municipal parks. Green infrastructure is integrated into the Greenway, which connects Sawmill Creek and Rideau River Corridors. The Bluff Woodlot, between 875 Heron and the RA Centre, forms part of the spine of the Greenway, while the Riverside Ravine and Tupper Woodlots are connected to the periphery of the Greenway. The new RA Centre and Tupper Stormwater Management Ponds are integrated into the Greenway. The outdoor space of the RA Centre connects into the larger system. Finally, POPS and street vegetation round out and extend the Greenway.

The Heritage Greenway Conceptual Plan

LEGENDE | *LÉGENDE*

- Future Development
  Aménagement futur
- Future Development (Special Design Area)
  Aménagement futur (Zone de conception spéciale)
- Federal Employment
  Pôle d'emploi fédéral
- Green Buffer / Setback
  Marge de recul vert
- Parks and Open Spaces
  Parcs et espaces ouverts
- Active Frontage - Commercial
  Façade active - commerciale
- Active Frontage
  Façade active
- Light Rail Transit (LRT) Station
  Transport en commun par train léger (TCTL)
- Bus Rapit Transit (BRT) Station
  Transport en commun rapide par autobus (TCRA)
- Transit Node (LRT + BRT)
  Pôle de transport en commun (TCTL + TCRA)

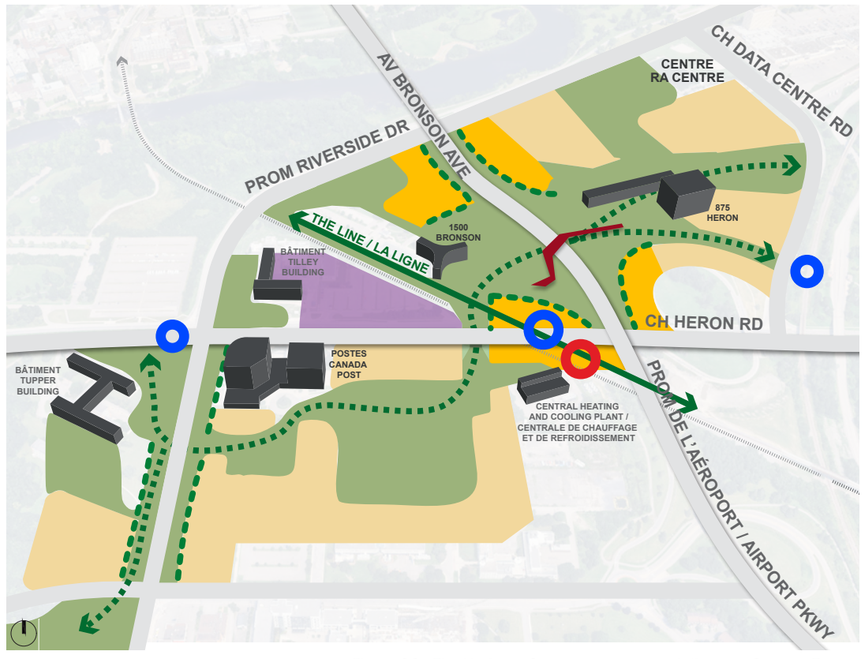


Figure 96: The Heritage Greenway conceptual diagram. Source: Fotenn

Figure 97: The Heritage Greenway. Source: Fotenn

The Heritage Greenway integrates and overlaps many functions, including active recreation, passive recreation, ecological services, heritage celebration, active transportation, cultural and commemoration. Some of the core themes for the greenway are discussed below.

Recreation and Community Activation

The Heritage Greenway provides opportunities for recreational, social, spiritual services and potential for community stewardship. Municipal parks and the RA Centre provide for traditional active recreational opportunities, while the continuous active transportation connections through the Greenway, the POPS, stormwater management infrastructure and municipal parks, create opportunities for passive recreation. Through engagement events, members of the public expressed a strong appetite for a wider range of activities in parks and greenspace, including food forests, naturalization, performance space, community gardens, pop-up commercial uses, as well as improved accessibility. Providing a diversity of connected greenspaces will support a wide range of activities for a connected, healthy, and resilient community.

Some of the specific opportunities for recreational and cultural activation in the Greenway could potentially include:

- Pop-up uses (e.g. cafes, markets) at the LRT plaza and underpass under Heron Road.
- Interactive features such as water features and public art.
- A range of recreational opportunities for a diverse population.
- The LRT plaza and Parks 4 and 5 provide an opportunity community gatherings, events, and larger festivals.

Design Excellence

The expectation for the Heritage Greenway and overall greenspace system is for design excellence. The design approach should reflect and enhance the heritage and attributes of Confederation Heights, including:

- Honouring and enhancing the modernist landscapes;
- Reflecting the topography and natural landscape of Confederation Heights with landscape approaches that are “rooted in nature” – as called for by members of the public; and
- Maintaining opportunities for commemoration in the design and programming of parks, including Indigenous engagement.

Ecological Services and Climate Resiliency

Ecological Services and Climate Resilience are a core function of the Heritage Greenway and the greenspace system beyond the Greenway. The Confederation Heights Master Plan recognizes, integrates and enhances the value of ecosystem services across the study area.

The urban forest in Confederation Heights mitigates the urban heat island effect, manages stormwater, increases human wellbeing, and provides urban habitat. The Confederation Heights Master Plan was designed to maximize opportunities for tree preservation by maintaining existing woodlots, locating parks in areas with significant existing trees, and where possible, aligning streets and blocks to allow the potential for tree preservation. The Master Plan has also been designed to exceed the City of Ottawa’s 40% canopy cover target (Appendix XX) assuming:

- XX% coverage on retained woodlots (X% of site area)
- XX% coverage on average on Municipal Parks (X% of site area)
- XX% coverage on street blocks (X% of site area)
- A minimum target of XX% coverage on development blocks (X% of site area)

The stormwater management system has been designed to maximize environmental services, within the constraints of soil conditions by:

- Including stormwater management ponds as urban recreational and greenspace assets, within the Heritage Greenway;
- Proposing a surface conveyance between stormwater management ponds and the Rideau River, which can act as a habitat feature; and

Pre-development/early phase planting of trees within identified areas of the Heritage Greenway will allow for tree growth prior to full community build-out, bringing significant benefits with respect to urban heat island mitigation, stormwater management benefits, urban habitat, and visual appeal.

Significant increases in population in proximity to urban naturalized areas will increase demands for access to nature, as well as increasing opportunities for stewardship (e.g. community association project to manage invasive species, tree planting). Early planting of trees in the greenway system presents an opportunity to maximize the ecological benefits of trees.

To support the long-term stewardship of the retained woodlots and Sawmill Creek are recommended to be consolidated in ownership by the City. Each development parcel creates and commits to implementing a long-term (at least 10-year) management plan for existing or recently restored on-site native habitats and creates a guaranteed funding source for management. The plan must include biological objectives consistent with habitat conservation, and should meet the requirements of LEED ND v4 (Long-term Conservation Management of Habitat or Wetlands and Water Bodies, as amended).

Four-Season City

Four-Season city life will be enhanced by the Greenway system, through the provision of park facilities that offer year round access to nature and recreation opportunities, as well as comfort in summer (canopy cover, water features, site furnishings) and winter (thermal comfort through site design), and winter activation (lighting, outdoor ice rink, toboggan hills, winter market space). The Greenway also offers access to regional winter trail systems, such as the Rideau River Eastern Pathway Ski Trail.

Finally, extension of a high-quality active transportation network and high resident population supports extension of the City’s winter-maintained cycle network to Confederation Heights, improving winter accessibility and mobility.

Accessibility and Active Mobility

Accessible, Active Mobility will be enhanced through the Greenway, which offers alternate, direct and barrier-free active mobility connections to future development parcels, Transit Stations and Rideau River. This network, which leverages the Greenway, contributes not only to daily mobility but also access to nature. Accessibility design considerations are to be integrated into the design of public spaces and transportation linkages.

Access to public washrooms has been identified as a key factor increasing the useability and accessibility of the Greenway System and opportunities to provide will be explored through the implementation stage.

2.3.3.2 Municipal Parks

The municipal parks strategy in the Confederation Heights Master Plan is supported by the Guiding Principle of Enriching Access to Nature and Recreation. It strives to minimise potential strain on existing capital parks due to increased population in the area, by providing new opportunities for recreation and access to outdoor amenities. The strategy is also supported by other Guiding Principles such as Developing a Complete Community, Designing with People in Mind, and Being an Inclusive and Accessible Space for Everyone, and is aligned with the City of Ottawa's approaches and best practices for park development.

The proposed Municipal Parks within Confederation Heights are also an integral part of the continuous open space network and overall green infrastructure of the community, connecting residents to passive and active recreational amenities and facilitating movement across the site.

Parkland dedication is determined through the proposed land uses and future density of the study area per the requirements of the City of Ottawa Parkland Dedication By-Law. In Confederation Heights, the parkland dedication has been distributed across the site through 9 proposed parks, including one Community Park, three Neighbourhood Parks, and five Parkettes.

Figure 98: The Heritage Greenway. Source: Fotenn

Parks Summary Table

#	Classification	Area
01	Parkette	0.47 Ha
02	Parkette	0.40 Ha
03	Parkette	0.84 Ha
04	Community Park	3.20 Ha
05	Neighbourhhod Park	2.64 Ha
06	Neighbourhhod Park	0.40 Ha
07	Parkette	1.37 Ha
08	Parkette	0.97 Ha
09	Neighbourhhod Park	2.03 Ha
	Total:	**12.3 Ha**

Table 4: Parkland dedication areas. Source: Fotenn

LEGEND / LÉGENDE

- Study Area / Zone d'étude
- Municipal Park / Parc municipal
- Green way / Sentier vert
- (1) Parkette / Miniparc
- (2) Neighbourhood Park / Parc de quartier
- (3) Community Park / Parc communautaire

Figure 99: Conceptual rendered image of the Community Park in the Brookfield District. Source: Cicada and Fotenn

Area Parks Plan

The Area Parks Plan (APP) [Appendix XX] for Confederation Heights has been completed concurrently and as an adjunct to the Confederation Heights Master Plan document. The APP explores and makes recommendations for an appropriate distribution of parks and park amenities, in consideration of proposed land use, as well as connectivity of open space and pedestrian movement throughout the Confederation Heights area. It seeks to balance the size distribution, physical characteristics, and development budgets for parkland with an appropriate program of facilities. It is intended as a blueprint to provide direction for the development of municipal parks within the Confederation Heights community, and is to be read in conjunction with the Master Plan.

The parkland area calculation methodology is provided in the Area Parks Plan in the Appendix XX.

Additional Considerations for Parkland

- Access points to the Municipal Parks should be prominent and intuitive for ease of navigation and to reinforce connectivity of the continuous open space network.
- Enable connectivity through the Parks and to the surrounding context by linking to pedestrian pathways and transit networks. Attention should be given to key moves within the Master Plan such as the Arches and the Line, and the Heritage Greenway, and the role of the parks to strengthen these connections.
- Provide opportunities for Indigenous commemoration within selected parks to promote Indigenous engagement.
- Consider how the parks can contribute to four-season city life. Each park should incorporate a variety of elements that activate the park in different seasons and encourage residents to engage with the parks and open spaces throughout the year.
- The parks are to be designed for inclusivity. Accessibility and age-inclusivity are to be considered to allow for equitable access to nature and recreation.
- Groupings of mature trees and vegetation exist on many of the proposed park sites, and should be preserved and integrated into the design of parks where possible.
- Community-led uses of public parks, such as ecosystem stewardship, food forests, and community gardens, should be supported.

2.3.4 Greenspace System Design Directions

2.3.4.1 Rights-of-Ways

- Street tree planting should be located where trees will have the opportunity to grow to maturity. Ensure appropriate soil volume is available and prioritize continuous trenches when possible to ensure long-term health and viability. Aligned with the project Sustainability Charter, aim for tree spacing of generally no more than 8 metres along at least 60% of block length, but prioritize tree health and mature canopy above strict spacing requirements.
- Alternatives to lawn planting should be prioritized in support of a climate resilient community.
- Provide shade from trees or permanent structures over at least 40% of the total length of existing and planned sidewalks within or bordering the project, using estimated crown diameter.
- Aligned with the Sustainability Charter, include recycling containers on every mixed-use block.

2.3.4.2 Site Landscaping

Yards abutting public realm:

- Landscape design adjacent to public space or Rights of Way should be consistent with or complimentary to the landscaping of the public realm.
- Plant materials should be placed to enable clear views and visual connectivity of public spaces.
- Yards shall be designed to provide a functional and visually engaging transition between public and private space.

Bird Friendly Design:

- See-through design traps such as uninterrupted transparent corners, see-through corridors and glass railings must be mitigated through the use of permanent markers, fritting or other collision deterrents with ≤50mm horizontal and vertical spacing.
- Design shall minimize risk of window collisions through multiple measures, recognizing that bird-friendly glazing for the first 12 metres above grade (or the height of the adjacent mature tree canopy) is best practice.
- A birdsafe evaluation should be undertaken early in building design.
- All exterior fixtures must be Dark Sky compliant and must be controlled by motion detectors or timers to reduce or extinguish non-essential lights between 11 pm and 6 am. In addition, meet the requirements of LEED ND v4 (Light Pollution Reduction, as amended) related to exterior lighting for residential areas; exterior lighting for circulation network; uplight and light trespass requirements in exterior lighting.
- Eliminate, or where not feasible, minimize design traps including cables, grates and courtyards surrounded by glazing.

Additional Directions:

- Prioritize the protection of healthy mature trees. A Tree Conservation Report prepared by a certified arborist is strongly encouraged prior to conceptual design. Removals of healthy, non-invasive trees on development sites shall be compensated within the Confederation Heights intervention area at a rate of 1:1 for trees <30 cm diameter at breast height (DBH), 1.5:1 for trees 30-50 cm DBH, and 2:1 for trees >50 cm DBH. Tree removals will also be subject to the Tree Conservation By-law.
- Tree Planting:
  - Provide adequate soil volumes, with reference to City of Ottawa Tree Planting guidelines. Volume requirements can be reduced where trees are in a continuous trench. The use of technical solutions such as soil cells is encouraged to meet minimum volume requirements.
  - Tree species must be native to Eastern Ontario, or, where rationalized, "near-native" species. Trees should be sourced from relatively local suppliers (i.e. trees stock must be from sources providing specimens adapted to local climate).
  - Landscape design should lead to an overall increase in urban forest cover across the broader site.
  - Tree species, planting locations and planting details will consider marine clay soil restrictions where required, balancing impacts to foundation design and infrastructure with the lifetime benefits provided by urban forests.
- Reduce the urban heat island effect and increase resident comfort with the following strategies:
  - Aim for at least 50% of the non-roof site paving to be shaded.
  - Use the existing plant material or install plants that provide shade within 10 years of planting.
  - Provide shade with structures covered by energy generation systems (e.g. photovoltaic panels) and/or which have a three-year aged solar reflectance (SR) value of at least 0.28 or equivalent and/or which are vegetated.
  - Use paving materials with a three-year aged solar reflectance (SR) value of at least 0.28. If three-year aged value information is not available, Use materials with an initial SR of at least 0.33 at installation.
  - Use an open-grid pavement system (at least 50% unbound).
- Each development parcel shall aim to soft landscape at least 10% of the area of the parcel with soft landscaping, to contribute to habitat and ecosystem services. Locate these areas, where possible, adjacent to the Greenway. Where adjacent to woodlot and stormwater management features, these should be designed to extend these features.
- Do not use potable water for landscaping. No hose bibs permitted that are directly connected to a potable water supply.
- Use native plants to maximize the habitat benefits and other ecosystem services provided by the landscaping, following these guidelines:
  - Remove invasive species prior to development, and introduce no new invasive species;
  - Seek to provide at least 75% of the leaf cover of the landscaping as native species, preferably local subspecies, with a variety of native flowering species to provide bloom throughout the growing season for native pollinator;

Adapted, non-native, non-invasive species may be used in challenging locations where native species may not thrive;

- Use alternatives to traditional turf lawns, where feasible. This may include integrating ground covers into sod mixes, or creating meadow habitat strips;
- An environmental Impact Statement will be required for all future development of areas including or adjacent to habitat. Vegetation removals are prohibited during breeding bird and breeding bat seasons; and
- The use of herbicides shall be limited to invasive species management.

2.3.4.3 Stormwater Management

Project proponents shall work with the City of Ottawa to maximize the recreational, aesthetic and ecological potential of the SWM Infrastructure. Facility design shall integrate the following:

- To protect the broader catchment area during all future development of Confederation Heights , an erosion and sediment control (ESC) plan will be required, with recommendations as per the EIS.
- The stormwater design will daylight SWM conveyance channels, where feasible.
- Detailed outlet channel designs must address slope stability and erosion considerations, particularly along the Sawmill Creek valley system.
- All SWM outlet channels (crossing riparian areas) will need to be designed following principles of natural channel design with the aim of providing improved fish, turtle, and anuran habitat.
- All new channels would be required to be subject to a minimum of a five-year biological and physical monitoring program to ensure channel stability and the ecological effectiveness of habitat improvements for the target species.
- Outlet channels for SWM and minor infrastructure to support public usage of natural space are supported but may be subject to Department of Fisheries and Oceans and Rideau Valley Conservation Authority review.
- Stormwater Ponds shall be naturalized and designed as recreational amenities.
- Low Impact Development shall be considered first in stormwater management design for public greenspaces and development parcels, as outlined in section 6.1.

2.3.4.4 Natural Areas

The protection and enhancement of Confederation Height's natural areas will be supported by implementation of the following directions:

- Through the land development process, ownership for the retained natural areas should be transferred to the City of Ottawa.
- A stewardship plan should be established for the retained natural areas and new surface stormwater management ponds, addressing invasive management and monitoring, climate risk, opportunities for community stewardship and edge impacts from adjacent roads and development (e.g. salt runoff).
- Where vegetation is removed from natural areas for construction of linear infrastructure, replanting and renaturalization, including invasive management, will be required.
- Where vegetation is removed from the perimeter natural areas as a result of development, an equivalent area shall be added to the natural area, and renaturalized following the principles of no net loss, and net biodiversity gain.
- The 1500 Bronson Woodlot contains a small permanent watercourse which is tributary to a two-hectare riparian swamp within Vincent Massey Park. As part of the stormwater design, explore opportunities to extend the woodlot through tree planting, and include minor natural channel design improvements, and invasive species management, to improve the potential for this feature to provide active fish habitat.
- The Rideau River segment has hard margins facing the RA Centre, and more naturalized abutting Hog's Back and Vincent Massey Parks supporting 40 fish species. Where possible, through collaboration with the NCC and City of Ottawa, support initiatives to improve the riverbank condition.
- Integrate retained woodlots into the emerging neighbourhood fabric through adjacency to new residential areas and publicly accessible park

Figure 100: Precedent image. Source: Old Ottawa South Enviro Crew

Figure 101: Precedent image. Source: Ekostaden Augustenborg

Figure 102: Precedent image. Source: Ducks Unlimited Native Plant Solutions

2.4 Land Use

2.4.1 Existing Conditions

Confederation Heights today is well-located in the City of Ottawa, within the Inner Urban Area, close to major institutions, existing commercial nodes, significant greenspace corridors and major arteries of the transit, cycling and roadway networks. It is located close to Carleton University, Billings Bridge, the Alta Vista neighbourhood, the Riverside Park community, and Old Ottawa South. These neighbourhoods have a diversity of housing and neighbourhood typologies, with significant commercial uses along Bank Street, at Carleton University, and in Riverside Park. There is a resident population of approximately 17,000 people in close proximity to Confederation Heights, as well as a large student and staff population of approximately 32,000 at Carleton, in addition to employees at businesses in the vicinity.

However, land use within Confederation Heights Intervention Area is limited to primarily Federal Employment parcels, many of which are vacant or underutilized. The RA Centre is a large anchor institution which provides a wide range of recreational and health services to the local area as well as the City and broader region.

2.4.2 Envisioned Outcome

In line with the overall Vision for Confederation Heights, the Master Plan enables a transformation of land use on Confederation Heights, accommodating upwards of 300 people and jobs per hectare. As guided by the Develop a Complete Community principle, residents are accommodated in a wide variety of medium- and high-density residential typologies, ranging from multiple-attached ground-oriented units to high-rise apartments. The new residential population, together with the existing surrounding communities, will support new commercial uses and community services crucial for a 15-minute community. In particular, access to food stores, schools/childcare and health services will be enhanced. The RA Centre will continue to be an anchor use as it evolves, complemented by a new cultural/entertainment node adjacent to the LRT station. The new vitality of Confederation Heights will also reinforce and support residents and businesses in the surrounding neighbourhoods.

These new land uses will be **Designed with People in Mind,** so that the new density will enhance vitality and liveability. Affordability and accessibility will be built into the residential and non-residential land uses, to make sure that Confederation Heights is an **Inclusive and Accessible Space for Everyone.**

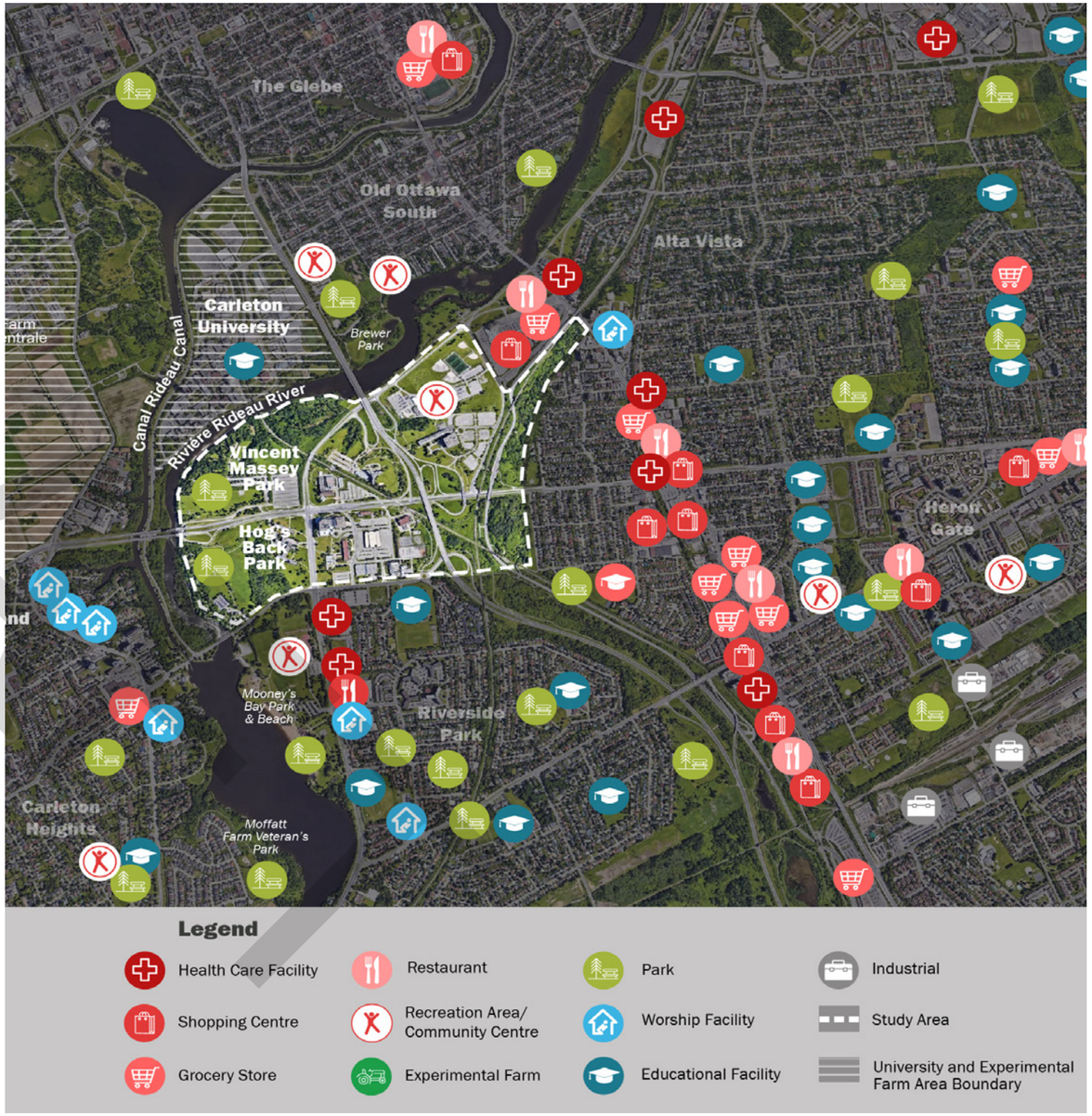


Figure 103: Local Amenities Map. Prepared by Fotenn over Google Earth imagery.

2.4.3 Key Moves

Section 2.4.3.1 describes the key moves underlying the Land Use structure.

2.4.3.1 Land Uses

The Master Plan sets out six distinct land use designations, three of which apply to blocks which are anticipated to see significant development over the Master Plan horizon.

LEGEND / LÉGENDE

- Study Area / Zone d'étude
- Mixed-use Residential / Résidentiel à usage mixte
- Mixed-use Cultural & Entertainment / Culture et divertissement à usage mixte
- Federal Employment / Pôle d'emploi fédéral
- Recreational / Récréation
- Open Spaces / Espaces ouverts
- Federal Parks / Parcs fédéraux
- Non-residential active frontage priority areas / Espaces prioritaires de façades actives non résidentielles
- Privately Owned Public Spaces (POPS) / Espaces publics du domaine privé (EPDP)

Figure 104: Land use diagram. Source: Fotenn

Mixed-use Residential

The majority of the development blocks in Confederation Heights are planned for Mixed-Use Residential, as shown in Figure 104. This is a permissive designation which permits a wide range of land uses, but which is anticipated to be developed predominately with residential uses. Non-residential uses should be integrated into mixed-use buildings in most cases. Permitted uses include:

- Dwelling units, excluding low-density typologies;
- Other residential uses intended to serve specific populations, such as Long Term Care Homes, retirement homes, shelters, assistive living, etc.;
- Community-serving institutional uses, such as schools, community centres, child care facilities, etc.;
- Retail and commercial service uses such as grocery stores, restaurants, small-scale retail, medical and health-related services;
- A wide range of uses for 1500 Bronson to support adaptive reuse, including entertainment ;
- Office uses, when integrated into a mixed-use building; and
- Other non-residential uses (e.g. bicycle repair shop, small-scale manufacturing workshop, indoor urban agriculture), subject to:
  - Being integrated into a mixed-use building,
  - Not requiring outdoor storage;
  - Not creating adverse impacts to residential uses with respect to noise, light, servicing/ loading, emissions, or increased chance of hazard/accident; and
  - Including an active frontage component (e.g. storefront) where abutting a municipal right of way, private street, POPS or other public realm.

Recreational

The RA Centre future location is designated Recreational. This designation supports the long-term growth and evolution of the RA Centre, and permits:

- Recreational uses;
- Entertainment uses;
- Community uses;
- Medical and health-related uses;
- As an ancillary use;
  - Residential uses;
  - Hotel uses;
  - Entertainment uses; and
  - Restaurant and commercial uses.

All frontages facing municipal streets and public parks should include active frontage components.

Mixed-Use Cultural and Entertainment

The Mixed-Use Cultural and Entertainment designation is intended to support the cultural and entertainment hub uses in proximity to the central heating and cooling plant building. This designation permits:

- Entertainment uses (e.g. performing arts spaces, nightclubs, assembly spaces);
- Institutional uses with a City-wide draw (e.g. museum, post-secondary institution);
- Residential uses, when located above the first floor and subject to design features to ensure compatibility with entertainment uses;
- District Energy functions, subject to design features to increase compatibility with entertainment/cultural uses

Federal Employment

The Federal Employment designation recognizes lands likely to remain within the federal portfolio through the horizon of the Master Plan. Lands which remain in the federal inventory are not formally subject to municipal land use plans and policies, and therefore this designation recognizes that these will remain federal employment uses and ancillary uses. Should these parcels leave the federal inventory, a redesignation to an appropriate development designation would be required.

Land uses adjacent to the Federal Employment designation should have regard for compatibility with federal uses (e.g. in relation to security).

Federal Parks

The Federal Parks designation recognizes Vincent Massey and Hog's Back Parks, which are Capital Parks anticipated to remain in NCC ownership, and which are therefore not subject to the municipal planning framework.

Open Spaces

The remaining lands are designated Open Spaces. This designation includes all municipal parks, natural heritage features, stormwater management areas, significant POPS and green buffers along scenic parkways. Permitted uses in this designation include:

- Park;
- Environmental education and stewardship;
- Urban agriculture;
- Farmers markets;
- Events and festivals;
- SWM and green infrastructure; and
- Similar and supporting uses.

Figure 105: Precedent image. Source: Hobin Architects

Figure 106: Precedent image. Source: Sahar Coston Hardy

Figure 107: Precedent image. Source: JKMM Architects

2.4.3.2 Height and Density

The proposed density at Confederation Heights ranges from low, mid and high-density development, with the latter being located in closer proximity to the transit stations (Mooney's Bay LRT, Heron BRT and future BRT station at the intersection of Heron Road and Riverside Drive. Lower densities are located in areas with environmental and heritage sensitivities (1500 Bronson and Tupper Building) and in areas requiring transition to existing surrounding areas (south of Brookfield Road). Medium densities provide adequate transition from high density development to human scaled lower density areas with adequate low to mid-rise buildings activating the streets.

The distribution of the densities is also informed by potential building heights to both protect views to natural features, heritage buildings, the Capital Arrival Route and views to downtown Ottawa and to create distinct and unique character areas within the larger planning area.

Minimum building heights shall generally be three storeys, with maximum building heights defined by the height schedule shown in Section 2.4.3.2. Low-density residential typologies, such as detached homes and semi-detached homes, are prohibited.

Landmark Towers shall be placed in strategic locations to frame arrival spaces, enhance place identity and contribute to a recognizable skyline.

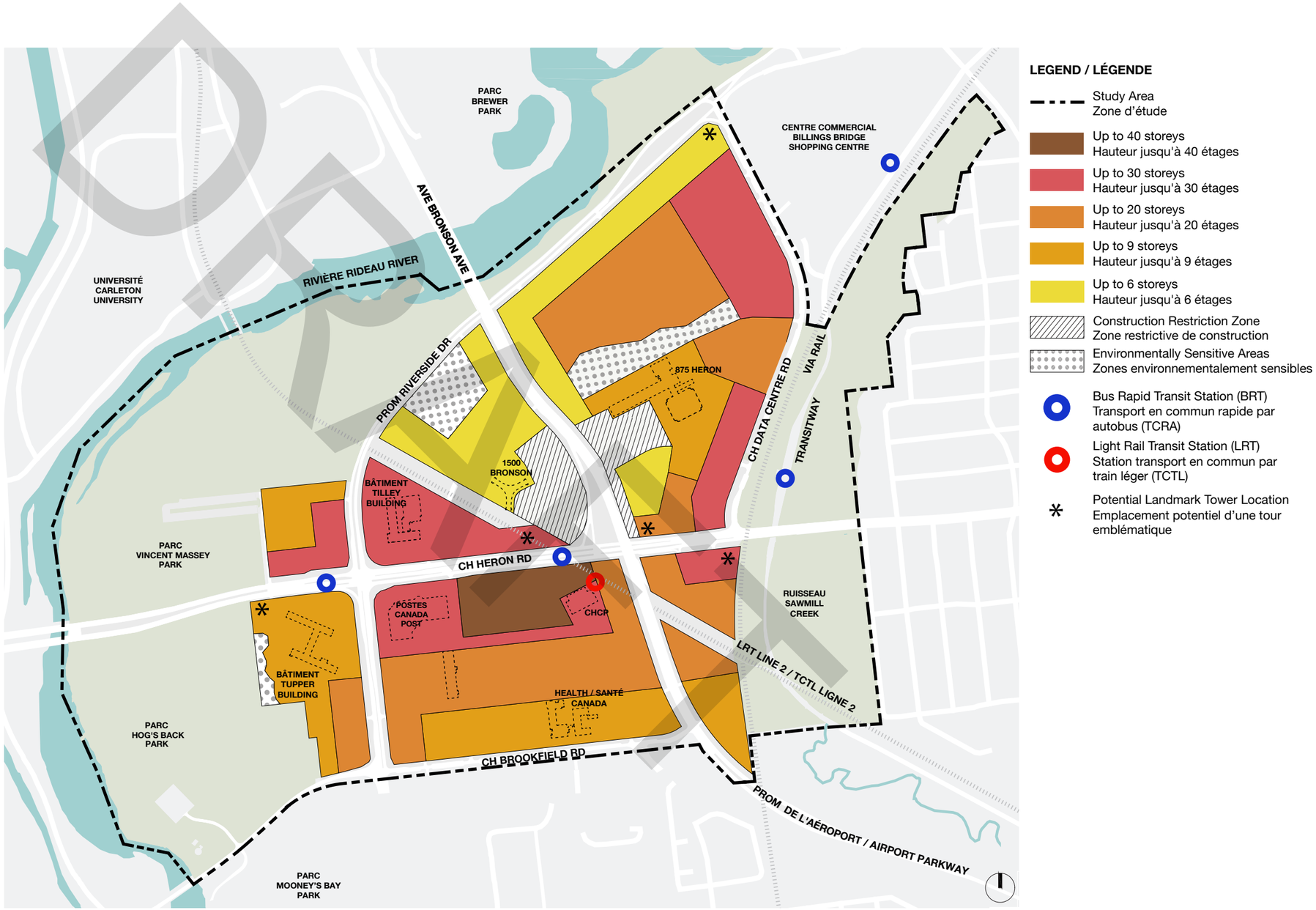


Figure 108: Building Heights diagram. Source: Fotenn

2.4.3.3 Community Uses and Co-location of Public Uses

Strategic co-location of public and public-facing uses is important to support the density, vibrancy and success of the master plan. Early engagement and partnership shall be facilitated as part of implementation of the Master Plan, to maximize the opportunities for successful co-location. Some high-priority opportunities for co-location include:

- Co-location of schools, childcare facilities and public health facilities with the RA Centre;
- Co-location of schools with the proposed municipal facility/potential library in Park 3
- Co-location of schools and childcare facilities with parks;
- Co-location of schools and childcare facilities within podiums and in an urban form; and
- Concentration of entertainment and arts-related uses around the LRT station.

Private development shall also consider including publicly accessible spaces and community amenities within buildings such as community rooms and others.

2.4.3.4 Active Frontages

The intent of this Master Plan is that all development within the Mixed Use Residential, Recreational and Mixed Use Cultural/Entertainment designations shall have active frontages where facing municipal rights of way and the Heritage Greenway. Active frontages are also encouraged facing private streets and mid-block connections. For the purposes of this plan, Active Frontages should include:

- Direct entrances to ground floor uses, including to private residential units;
- Transparent glazing on the ground floor, which allows those inside the units to view the street;
- Accessible/barrier free entrances, wherever possible;
- A narrow transition between public and private space; and
- No blank facades.

Additionally, non-residential active frontages are prioritized in specific locations shown in Figure 104. In addition to the active features above, these should include:

- Active ground-floor uses that are generally accessible to the public and have high pedestrian volumes (e.g. cafes, gyms, small-scale retail, personal service businesses, co-working spaces, residential communal amenity that is accessible to the general public);
- Larger areas of transparent glazing that allow people in the public realm to look into the building;
- Accessible/barrier free entrances in all cases; and
- Where appropriate, enhanced entrance features integrating street furniture, canopies, patios and similar.

Figure 110: Precedent image. Source: Ginsun

Figure 109: Precedent image. Source: Cycle City

2.5 Energy

2.5.1 Existing Conditions

The Federal Employment site at Confederation Heights is served by a District Heating and Cooling System, which today, due to the reduction in federal office presence, is significantly underutilized. In 2020, a refurbishment of the system was undertaken, to convert it from steam to low-temperature hot water, significantly improving energy intensity. As part of this conversion, new gas-fired boilers and condensers were installed. The district energy system is managed by the Energy Services Acquisition Program (ESAP), a public-private partnership with a mandate to serve the federal government. Energy use of federal office buildings is governed in part by the Greening Government Strategy.

Because land uses on the subject property are not diverse and are dominated by office uses, energy use at Confederation Heights is not balanced across the 24 hours of the day.

Figure 111: Central Heating and Cooling Plant Building. Source: CLC

2.5.2 Envisioned Outcome

Confederation Heights is a net-zero community with respect to operational energy use. Residents, workers and visitors are comfortable in their spaces year-round, because all new buildings and major renovations meet high standards for energy efficiency, and sustainable solutions have been implemented to stabilize the grid and provide backup during outages. Design of energy systems takes advantage of onsite resources, where feasible, including onsite electricity generation and storage.

In construction, maintenance and disposal, lifecycle energy use is considered, with the goal of minimizing embodied carbon. The design, construction and operations of Confederation Heights facilitates less energy-intensive choices, and offers education about the energy systems we all rely on. In all of these ways, Confederation Heights will **Ensure Climate Resiliency**.

2.5.3 Key Moves

The Community Energy Plan (CEP) for Confederation Heights outlines target scenarios and strategies for consideration by developers, utility providers, and other partners. The Key Moves below are drawn from the CEP and other sources to set a strong framework for energy resiliency, financial sustainability, and climate responsibility. The CEP and this Master Plan are aligned with the City of Ottawa's Energy Evolution Strategy and Climate Change Master Plan.

A Flexible Zero Carbon scenario is recommended by the CEP, which requires buildings to demonstrate a zero operational carbon balance on an annual basis while meeting prescribed Thermal Energy Demand Intensity (TEDI) and Energy Use Intensity (EUI) requirements. The Flexible Approach allows multiple compliance pathways, to achieve zero carbon performance.

2.5.3.1 Explore District Energy

The ESAP-operated CHCP will continue to supply heating and cooling services to all federal buildings currently connected to its District Energy system. It may be possible to leverage this infrastructure to serve new development, conditional on multiple considerations:

- The federal government extending ESAP's mandate to allow connection to private projects;
- Fuel switching from natural gas to a lower-carbon source, to align with the carbon commitment;
- A business case that demonstrates that the heating and cooling services are financially feasible when compared to achieving energy objectives onsite or with smaller new district energy systems; and
- Collaboration with the City of Ottawa to locate energy distribution infrastructure within municipal rights-of-way.

As part of the implementation work, these considerations will be thoroughly evaluated through an Energy Systems Advisory study.

2.5.3.2 Distributed Energy Resources

Until recently, electricity has been generated at large power plants far from urban centres and transmitted over long distances. Close to end users, "step-down" transformers convert electricity from high voltages to lower voltages so that it can enter the distribution grid. New smaller-scale technologies, like solar panels and onsite battery storage, enable communities to produce and distribute their own electricity, increasing local control, lowering system costs and providing greater energy security. Connection of Distributed Energy Resources (DER) is managed by local utility companies – Hydro Ottawa in the case of Confederation Heights.

Through implementation, proponents will work with Hydro Ottawa and DER providers to maximize the potential for DERs including but not limited to:

- Energy generation technology, like solar panels, which produce electricity close to where it is used;
- In alignment with the Sustainability Charter, Confederation Heights seeks to generate at least 5% of the planning area's annual electricity demand.
- Energy efficiency technology, which lowers electricity demand while providing the same quality of service;
- Storage technology, like Battery Energy Storage Systems and vehicle-to-grid EV charging stations, which store energy during times of reduced demand, and discharge it at times of high demand; and
- Demand response technology, like smart thermostats and smart panels, which can help shift electricity use from peak demand periods to lower demand periods.

Figure 112: Precedent image of solar panels. Source: Groendak

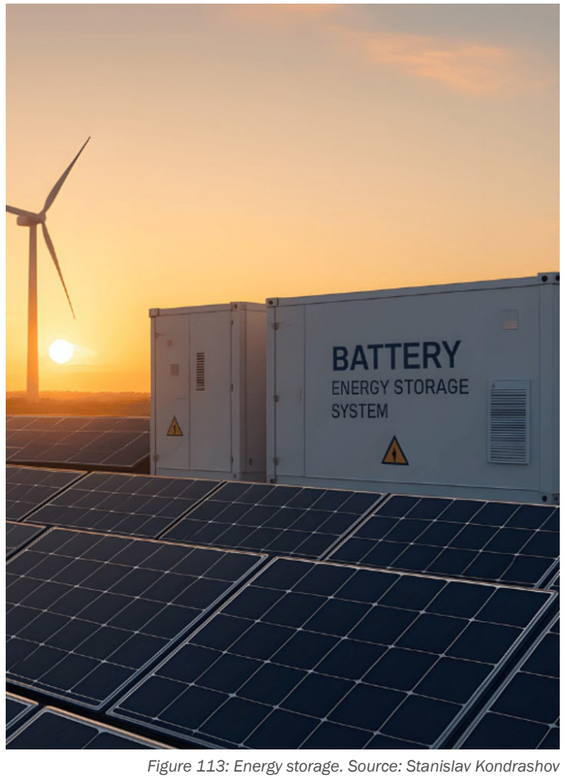


Figure 113: Energy storage. Source: Stanislav Kondrashov

2.5.3.3 Energy Efficient Building Requirements

The most efficient energy source is energy that is not used. This means that one of the most effective solutions to creating an energy efficient community is reducing the energy required to maintain a comfortable and functional building. Canada Lands will impose energy efficiency requirements on new buildings, based on corporate commitments and the project Sustainability Charter.

2.5.3.4 Embodied Carbon

Embodied carbon, the greenhouse gas emissions resulting from the extraction, production, transportation, and installation of building materials (as well as their end-of-life disposal), plays a significant role in the total carbon footprint of new development, exceeding the operational carbon for the first decades of a building's life.

Confederation Heights is developing its own embodied carbon targets drawing from other relevant resources from across the province, where applicable. The targets apply to upfront embodied carbon from life cycle stages A1 to A5, which typically represent 75% or more of a building's embodied emissions. Stage B (related to building use) and stage C (end of life) are not included below but may be considered in the future.

- A1: Raw Material Supply
- A2: Transport (of Raw Materials to Manufacturer)
- A3: Manufacturing
- A4: Transport (of manufactured goods to construction site)
- A5: Construction/installation processes

Building Type	Embodied Carbon Target
Towns (less than 10 units)	250 kgCO2e/m² (A1 to A5)
Low-Rise Residential (10 units or more and less than 4 storeys)	250 kgCO2e/m² (A1 to A5)
Mid to High-Rise Residential & Non-Residential development (greater than 4 storeys)	350 kgCO2e/m² (A1 to A5)

Table 5: Example Embodied Carbon Targets. Source: Urban Equation

All targets, including those for single family homes and townhomes, will be further evaluated as part of future development application processes.

Achievement of these embodied carbon targets can be supported by the following strategies:

- Recycle, reuse, or salvage nonhazardous construction, demolition, and renovation debris.
- Develop and implement a construction waste management plan that identifies the materials to be diverted from disposal and specifies whether the materials will be stored on site or commingled. Seek at least 90% diversion, in alignment with the Sustainability Charter.
- Use modular and prefabricated components.
- Use Mass Timber.
- Minimize parking. Below-grade and building-integrated parking structures are required to meet parking needs and urban design goals, but have have high levels of embodied carbon.
- Use other techniques to minimize amount of structural materials required (e.g post-tensioned slabs, lateral structural systems).
- Use insulation with lower Global Warming Potential.
- Use verified low-carbon concrete and steel, and locally sourced materials.

Figure 114: Sustainable solutions in architecture. Source: Miller Hull

Figure 115: Active mobility. Source: Toole Design

2.5.3.5 Climate Resiliency

As climate change progresses and weather events become more extreme and unpredictable, it will be critical for energy systems to be resilient to these changes. Annual energy use will shift under different climate conditions. Extreme weather events also require designs to carefully evaluate back-up power solutions for emergency (life safety) requirements in certain buildings. For higher-density buildings use types, i.e. multi-unit residential, the differences between emergency and back-up power uses are as follows:

	Emergency Power	Back-up Power
Purpose	Minimum life safety requirements (firefighter and evacuation)	Non-life-safety requirements for occupant wellbeing
Duration	2 hours – building code requirement	72 hours – based on federal emergency preparedness guidelines
Loads	Fire pumps, fire elevator, stair pressurization fans, alarm system	Water supply, minimal space heating, power to a common refuge area, domestic booster pumps, additional elevators

Table 6: Emergency vc. back-up power requirements. Source: Urban Equation

To address climate risks to the energy system, the following strategies are recommended:

- Use passive design strategies to assist in maintaining building temperature in the event of heating/cooling system failure.
- Design mechanical and electrical systems with consideration for future climate conditions.
- Floodproof critical infrastructure, particularly electrical infrastructure.
- If relevant, coordinate with the district energy provider to ensure systems are sized to meet future energy demands, and collaborate with district energy provider to develop a comprehensive climate adaptation plan.
- Provide back-up power, preferentially through DER rather than high-emissions sources.

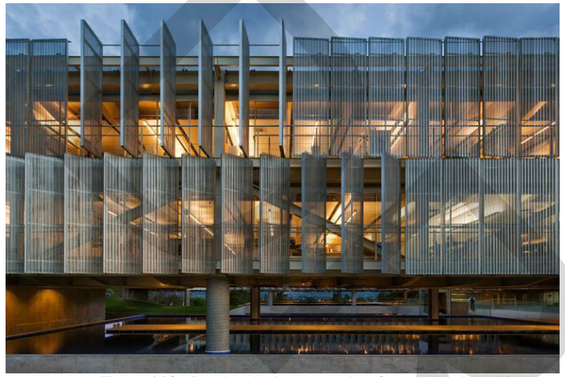


Figure 116: Passive design strategies. Source: Luciano Magrotto

Figure 117: Winter storm in Ottawa. Source: Stu Mills/CBC

Figure 118: Solar Panel/Shelter. Source: Spotlight Solar

2.5.3.6 Design Directions

New buildings should respond to the following design directions:

- Consistent with the City of Ottawa's target, conserve energy and improve the energy and emission performance of buildings with a target of net zero emission homes by 2030;
- Seek to provide at least 5% of projected annual electricity demand through building-integrated solar, if feasible;
- Explore the use of Battery Energy Storage systems to reduce peak demand and provide resiliency in the case of power outages;
- Use glazing strategically, recognizing that building energy performance is compromised when glazing exceeds 30% of the building envelope;
- Consider how solar exposure can be optimized through building design;
- Ensure high-quality building envelopes that minimize heat exchange and air leakage;
- Use high-efficiency HVAC and domestic hot water systems, and low-flow and energy efficient appliances and fixtures.
- Design buildings to withstand higher wind loading; and,
- Evaluate the possible increase in electrical demand due to increase in cooling demand and size the electrical equipment's accordingly. This includes conducting load forecasting that accounts for extreme weather scenarios, increased HVAC usage, electrification of systems (e.g., heating, transportation), and potential shifts in occupant behavior. Equipment such as transformers, switchgear, panel boards, and feeders should be selected not only to meet current loads but also to allow for safe and efficient operation under higher future demand.

Figure 119: Centre for Interactive Research on Sustainability - Vancouver, BC. Source: Perkins&Will

2.6 Servicing Infrastructure

As part of the Confederation Heights Master Plan, a Master Servicing Study (MSS) was prepared to evaluate how municipal infrastructure will support the development and densities being proposed in the study area. The MSS includes comprehensive strategies for water supply and distribution, sanitary sewers, stormwater management, utilities, grading and phasing considerations.

Figure 121: Existing conditions near the CHCP. Source: Fotenn

2.6.1 Existing Conditions

Confederation Heights is currently serviced by a private network of aging infrastructure primary located outside of ROWs.

2.6.1.1 Water Services

Water Services are provided through a network of private watermains owned and maintained by PSPC, which receives its primary supply from the City of Ottawa's municipal infrastructure. For service reliability and fire protection redundancy, several of the larger buildings are served by multiple connections. The private watermains are looped throughout the site to avoid the need for internal water pumping stations or dedicated storage facilities, relying instead on the hydraulic head provided by the City's regional pressure zone.

2.6.1.2 Waste Water Services

The existing waste water infrastructure is comprised of two primary systems, a North and a South system which are geographically and hydraulically divided by Heron Road. These networks collect and convey wastewater from across the site, generally following a west-to-east drainage pattern, before converging at a single discharge point at the eastern end of the site on Heron Road. This terminal outlet connects to the City of Ottawa Rideau River Collector in the vicinity of Sawmill Creek and Heron Road.

The majority of the site uses gravity conveyance, but the RA Centre utilizes a pumping station to discharge into the gravity network located south of 875 Heron and Annex E of the Sir Leonard Tilley Building which is serviced by a forcemain that discharges into the gravity system at the southwest loading dock area.

2.6.1.3 Stormwater Services

Existing stormwater services for Confederation Heights consist of a private network that relies on gravity to manage runoff. No quality or quantity controls are integrated into the system across the site.

The site drainage is divided into six distinct drainage zones which follow the natural topography of the site, conveying runoff through a network of mains towards four outlets in the Rideau River and three outlets in Sawmill Creek.

2.6.1.4 Existing Utilities

Utilities onsite include natural gas, electrical distribution, telecommunications, cable connections, and district energy infrastructure. The horizontal structure is well mapped, with additional vertical information required.

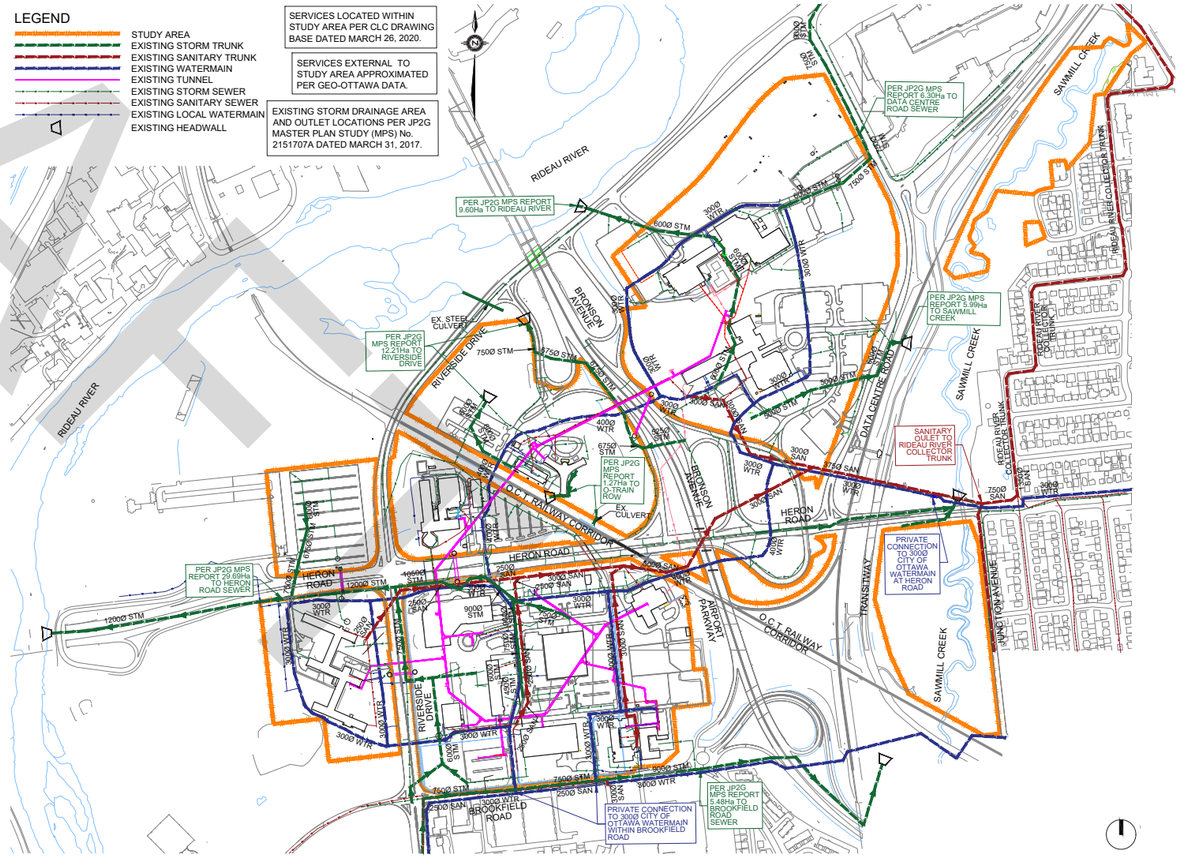


Figure 120: Existing Conditions Servicing Plan. Source: DSEL

2.6.2 Opportunities and Constraints

Based on the preliminary review of existing conditions and available background information, the redevelopment of Confederation Heights is anticipated to be subject to the following opportunities and constraints:

Municipal Servicing: There is an opportunity to develop Confederation Heights by connecting it to established municipal water, sanitary, and storm networks located along the development boundary. Leveraging these adjacent systems may facilitate the extension of municipal services into the site and allow for a phased expansion of the internal system with minimal off-site upgrades.

Retained Infrastructure: Existing federal buildings identified for retention are currently serviced by private networks, including tunnels that are part of the ESAP distribution network. These services appear to conflict with proposed development blocks and municipal corridors. Integrating these buildings will likely involve strategies to decommission private connections and reconnect to the new municipal infrastructure.

Abandoned Infrastructure: Historical data indicates the presence of various abandoned watermains throughout the site, remnants of incremental infrastructure upgrades performed over the last 15 years. These abandoned lines are generally located in close proximity to the active network. During the decommissioning and excavation phases of the redevelopment, these legacy pipes must be identified and managed to avoid conflicts with new deep utility corridors.

Topography and Drainage: Confederation Heights is situated on a topographical high point, creating a split drainage condition with terrain falling toward the north, east, and west. The design is anticipated to require separate drainage solutions to address the varying catchment directions rather than relying on a single centralized system.

Ecological Constraints: The site contains natural heritage features, including woodlands and wetlands, which present an opportunity for sensitive integration into the community design. These areas are anticipated to be managed as protected zones where site alteration may be restricted. Similarly, the Rideau River and Sawmill Creek are governed by regulatory floodplains and minimum setbacks that are expected to guide the placement of grading and servicing works.

Geotechnical Conditions: The presence of marine clay is a common condition within the region and is well understood. Considerations include:

- Grade raise restrictions, or alternative mitigation measures;
- Limited soil permeability across the site limiting the potential for full-infiltration LID measures;
- Impervious subsoils which are highly favorable for water retention style designs. Stormwater management ponds and basins are considered suitable for the site and will naturally retain water;
- Slope stability considerations for slopes along watercourses that are steeper than 5H:1V or exceeding 2.0 meters in height necessitate a detailed slope stability assessment;
- Loading capacity of the soil, which will likely result in recommendations for shallow foundations for low-rise buildings, and deeper foundation systems or specialized raft designs for taller buildings, here sensitive marine clay is present. These would be confirmed through site specific geotechnical investigations;
- Considerations for tree planting in proximity to foundations, to address potential for soil dewatering;
- There is generally a high groundwater table, with fluctuations seasonally, with rapid response to rainfall and observed rises in monitoring wells.

Transportation Corridors: The site is bisected by the O Train and VIA Rail lines, as well as arterial roads including Bronson Avenue, Heron Road and Riverside Drive. These physical boundaries are expected to necessitate coordination with governing authorities for crossing agreements.

Stormwater Management: The site conditions suggest that the infiltration potential islikely limited, favoring alternative strategies focused on filtration and detention solutions.

Receiving Capacity of Sawmill Creek: Sawmill Creek, an existing natural watercourse, serves as part of the municipal stormwater management network, conveying flows to the Rideau River. Urban development has created undesirable conditions in Sawmill Creek, particularly erosion and slope stability issues due to higher peak flows and increased volumes. The existing stormwater management system implements no quality or quantity controls on the flows to Sawmill Creek.

Figure 122: Sawmill Creek. Source: Fotenn

2.6.3 Proposed Water, Sanitary and Stormwater Servicing Systems

A range of servicing options were considered for Confederation Heights, including no changes, connections to existing services, and uprades to connect to municipal services. New water and sanitary municipal sewage networks, connected to the existing municipal system, were determined to be the only appropriate option for water and wastewater management.

Robust, efficient servicing infrastructure is a prerequisite to Develop a Complete Community. Through implementation, these system shall Ensure Climate Resiliency. The approach to stormwater management, by integrating stormwater management facilities into the Heritage Greenway and by emphasizing opportunities for LID, will Enrich Access to Nature and Recreation.

2.6.3.1 Water

Two configurations were evaluated, and a looped, redundant system using connections to the existing City watermains located on Heron Road and Brookfield Road was identified as the preferred approach.

The proposed water distribution network for Confederation Heights consists of a high capacity 300 mm diameter PVC looped system integrated with the City of Ottawa Pressure Zone 2W2C through six strategic boundary connections. This looped geometry is critical for ensuring multi directional flow, which provides essential redundancy for maintenance and emergency scenarios. Static pressures during low demand periods will require mandatory installation of building level Pressure Reducing Valves (PRVs) for all new structures to ensure internal plumbing is protected and pressures remain within the City's psi limit. To maintain water quality throughout the multistage build out, the infrastructure deployment will be strictly coordinated with occupancy rates.

2.6.3.2 Sanitary

The wastewater servicing strategy for Confederation Heights establishes a gravity-driven framework to transition the federal site into a municipally-integrated community. By leveraging site topography and the proximity of the Rideau River Collector, the plan achieves a gravity system, eliminating the need for internal sanitary pumping stations and reducing long-term operational risks. An alternative to service lands at lower elevations using a pump station that pumps wastewater back to the Heron outlet was considered but found to be a less favourable approach.

The system is divided into two primary sub-catchments to manage an ultimate peak flow of 295 L/s for a projected population of 29,690 and associated retail/commercial demands. The outlets at Heron Road and at Bank Street and Riverside Drive allow for a distribution of flow which optimized pipe diameters and provides manageable installation depths across the 87-hectare site.

As part of the Master Plan, several existing buildings within the development boundary will be retained and must be integrated into the new sanitary network. The phasing and design strategy will ensure that the existing sanitary services for these structures remain operational throughout construction. Where necessary, these services will be intercepted and redirected into the new gravity-fed trunks. The flow demands for these buildings have been accounted for in the total site peak flow calculations to ensure the proposed outlets at Heron Road and the Bank/Riverside intersection provide sufficient capacity for both new and existing infrastructure.

2.6.3.3 Stormwater

Several options for stormwater management were considered, and a combined approach that integrates LID Measures with End-of-Pipe Facilities was recommended as best meeting regulatory requirements and the "Ensure Climate Resiliency" and "Enrich Access to Nature and Recreation" guiding principles.

The SWM strategy has been designed in accordance with the Consolidated Linear Infrastructure Environmental Compliance Approval (CLI-ECA) for stormwater management infrastructure owned and operated by the City of Ottawa. Appendix A of the CLI-ECA outlines performance criteria for all development sites larger than 0.1 ha. These criteria address the following components:

- Water Balance: TBC BY WATER BUDGET
- Water Quality: 80% TSS removal for discharge to the Rideau River and Sawmill Creek (based on the 90th percentile rainfall event)
- Erosion Control: Threshold set by the magnitude of flow required to mobilize bed/bank material in the receiving watercourse, as assessed in accordance with Table A1 in Appendix A of CLI-ECA, and coordinated with City of Ottawa remedial work on Sawmill Creek.
- Water Quantity: Set by pre-development conditions
- Flood Control: Set by pre-development conditions.
- Construction Erosion and Sediment Control: managed through an Erosion and Sediment Control Plan in accordance with CSA W202 or TRCA 2019 ESC Guideline.

These requirements form the basis for developing the preferred stormwater management strategy for Confederation Heights. CLI-ECA sets out a control hierarchy for stormwater management for SWM in the public realm. The first step is considering retention, via infiltration, reuse and evapotranspiration. Increased tree canopy within municipal ROWs is anticipated to provide some evapotranspiration benefit. Infiltration and reuse within municipal ROWs are likely not feasible due to low permeability of soils and space constraints.

Filtration is the second step in the control hierarchy. A wide range of filtration technology, listed below, are generally considered feasible filtration measures within parks and municipal rights of way. High groundwater levels may limit the practicality of some of these measures.

The third step is conventional stormwater management, including stormwater management ponds. From a broader site design perspective, the locations of SWM ponds and conveyance infrastructure have been integrated, to the extent possible, into the Heritage Greenway, to maximize the aesthetic, environmental and recreational potential of this infrastructure. The inclusion of a daylighted stormwater channel in the Riverside District offers potential for habitat creation and public education.

Figure 123: Stormwater management solutions. Source: Gellerup Park

2.6.4 Climate Resiliency Recommendations for Servicing

To mitigate climate-related threats to planned servicing infrastructure, design and construction should be informed by the following guidelines and considerations:

- Encourage and work with the City of Ottawa to install all new infrastructure (e.g., traffic lights, street lights, water and wastewater pumps) to achieve a 15% annual energy reduction below an estimated baseline energy use for this infrastructure;
- Provide back-up power for all critical electrical equipment in all infrastructure elements;
- Support any efforts by the City of Ottawa to implement early warning systems for extreme events to help project personnel prepare for and respond to all hazards and repair critical elements;
- Utilize resilient materials for all infrastructure elements (e.g. corrosion resistant coatings, high-performance concrete, fiber reinforced polymers, modified asphalts);
- Review existing infrastructure and ensure both old and new infrastructure design is capable of handling future climate changes;
- Conduct a detailed evaluation of the impacts of climate change on shallow buried infrastructure and prepare a stormwater operation and maintenance program;
- Size main stormwater systems and the systems neighbouring the river for 350 years storm period.

Some of these recommendations will increase the cost and complexity of servicing infrastructure. Trade-offs should be carefully evaluated, considering the risk tolerance of the proponent, owners and approval authorities.

Low Impact Development and Green Infrastructure

Low Impact Development (LID) includes a variety of strategies and tools to manage stormwater in ways that reduce reliance on municipal stormwater systems and more closely mimic natural drainage processes. Adoption of LID in Ottawa has been slower than other Ontario municipalities, notwithstanding longstanding provincial direction to expand the use of green infrastructure. This relates partly to soil conditions in Ottawa, which typically are dominated by clay and have lower infiltration rates, but also significantly to process-related barriers.

Nevertheless, utilizing LID strategies in site design contributes to improved sustainability targets and are an integral component of achieving climate mitigation and adaptation objectives. LID also contributing to improved community aesthetics through landscaped features and increased green space. Confederation Heights represents an opportunity to advance adoption of LID in Ottawa. Therefore, opportunities for the implementation of LIDs should be considered throughout development parcels and public lands (parks, open space, road ROWs).

- Due to the presence of clay soils throughout the Confederation Heights area, the potential for infiltration is low. Use of LIDs that will reduce or slow stormwater runoff and improve water quality should be prioritized. Consider:
  - Stormwater Planters
  - Bioretention or rain gardens
  - Bioswales
  - Grass swales
  - Exfiltration trenches
  - Tree trenches/soil cells
  - Tree filters
  - Permeable pavement
  - Rainwater harvesting
  - Roof leader infiltration
  - Soakaways, infiltration trenches and chambers
  - Amended topsoils
  - Green or blue roofs
  - Vegetated walls and the overall increase of tree and vegetation planting.
- All LID measures shall be designed to achieve Municipal targets for capture, infiltration, filtration, and water quality standards.
- Where new streets are proposed, capture and control stormwater runoff to the maximum extent possible, from all contributing drainage areas using Green Infrastructure in accordance with the City of Toronto's Green Infrastructure Standards and specifications for the Right-of-Way.

Figure 126: Permeable paving. Source: Fotenn

Figure 127: Green roof. Source: Henning Larsen Architects

Figure 124: Bioswale. Source: Fotenn

Figure 125: Stormwater tree trecnhes in Mississauga, ON. Source: CVC