

McMaster University Campus Plan 2023–2033

A vision for the future development of the university's physical campus and locations over the next decade and beyond

McMaster University Campus Plan

Prepared for:

McMaster University

Prepared by:

Architecture, Urban Design

BDP Quadrangle

Infrastructure and Sustainability

RWDI

Ecology, Hydrogeology and Stormwater

MTE Consultants

Transportation

LEA Consulting

BDP.
Quadrangle



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Land Acknowledgement

McMaster University recognizes and acknowledges that it is located on the traditional territories of the Mississauga and Haudenosaunee nations, and within the lands protected by the Dish With One Spoon wampum agreement.



A MESSAGE FROM THE PRESIDENT AND VICE-CHANCELLOR

When we embarked on this important planning initiative, we saw the McMaster University Campus Plan as more than a blueprint for the development of our campus. We saw it as an expression of McMaster's vision.

We imagined places and spaces that would be ideal for creating impact, fostering ambition and inspiring transformation through excellence, inclusion and community. We envisioned ways to help transform our campus into a living laboratory for advancing human and societal health and well-being.

McMaster's new Campus Plan reflects our collective goals and provides a pathway to help us realize these bold aspirations.

Over the past year, McMaster engaged with students, faculty, staff, partners and community members to gather feedback on what should be included in the Campus Plan. This consultation helped the focus the plan around five themes including re-

imagining key entrances to campus; safe and sustainable transportation; the importance of broader sustainability advancements; more housing options and green spaces; and the creation of spaces to innovate and collaborate.

Much of what we heard from our community is echoed in existing university strategy and is aligned with key institutional priorities. The Campus Plan provides opportunities to engage our community and offers design ideas that prioritize functionality, sustainability, accessibility and inclusion, while supporting the creation of an attractive campus environment that promotes innovative learning, teaching, research and community engagement.

The plan provides a framework for designing and refurbishing buildings to deliver contemporary research, teaching, learning and administrative spaces that facilitate our teaching and research excellence, and support the recruitment of high-calibre faculty, staff and students. The plan outlines opportunities to promote densification and envisions more housing options for students, faculty and staff on campus, nearby campus and along key transit routes.

This innovative plan reinforces McMaster's Sustainability Strategy by reducing energy consumption and carbon emissions at our locations, with the goal of becoming a net zero carbon campus. As an important part of our commitment to Reconciliation, and in keeping with a Two Row Wampum approach, the University endeavours to engage in a responsible and collaborative land stewardship process. The plan includes ways McMaster can protect its ecologically sensitive lands, better address the climate and biodiversity emergency, and promote sustainable, active transportation.

This consultation process offered our community a way to explore and prioritize opportunities to re-imagine our campus. But the plan is dynamic and will need to adapt to our ever-changing university, new technologies and funding opportunities.

By consciously shaping the buildings, outdoor spaces and infrastructure of our campus and locations over the next decade in ways that align with McMaster's vision and community voices, we are helping to bring our collective vision to life and shape the experience our faculty, staff and students well into the future.

1.0

INTRODUCTION

1.0 Introduction

1.1 The McMaster University Campus Plan

In early 2022, McMaster University commissioned a consultant team led by the multi-disciplinary design practice BDP Quadrangle to develop the new Campus Plan. The BDP Quadrangle team was supported by RWDI (infrastructure and sustainability), LEA (transportation) and MTE Consultants (ecology and stormwater). This plan provides a framework for the physical development of the university's campus and other locations over the next ten years.

A steering committee composed of university stakeholders from administrative, academic and student areas, and four working groups advising on key areas of the plan guided the project team throughout the development process. A list of these groups and their members can be found in Appendix A.

This plan is supported by a series of supporting strategies including:

- Indigeneity, Accessibility, Equity, Diversity and Inclusion
- Academic Organization
- Public Spaces and Landscape
- Transportation and Movement
- Ecology and Stormwater Management
- Energy and Sustainability

The Campus Plan outlines a long-term strategic vision and direction for the future development of McMaster University. It establishes a framework for future growth and development, but is not a blueprint and therefore does not provide detailed designs for individual buildings or a rigid schedule for delivery. Future outcomes will need to remain agile to meet growth, need and financial contexts.



1.2 The Purpose of the Campus Plan

The Campus Plan develops a new long-term vision for McMaster’s campus and locations that aligns with the university’s strategic priorities and seeks to develop plans for places and spaces that provide living, learning and community opportunities for its students, faculty and staff. The Campus Plan will act as a flexible framework for future development and will evolve and change over time.

The purpose of the Campus Plan is to:

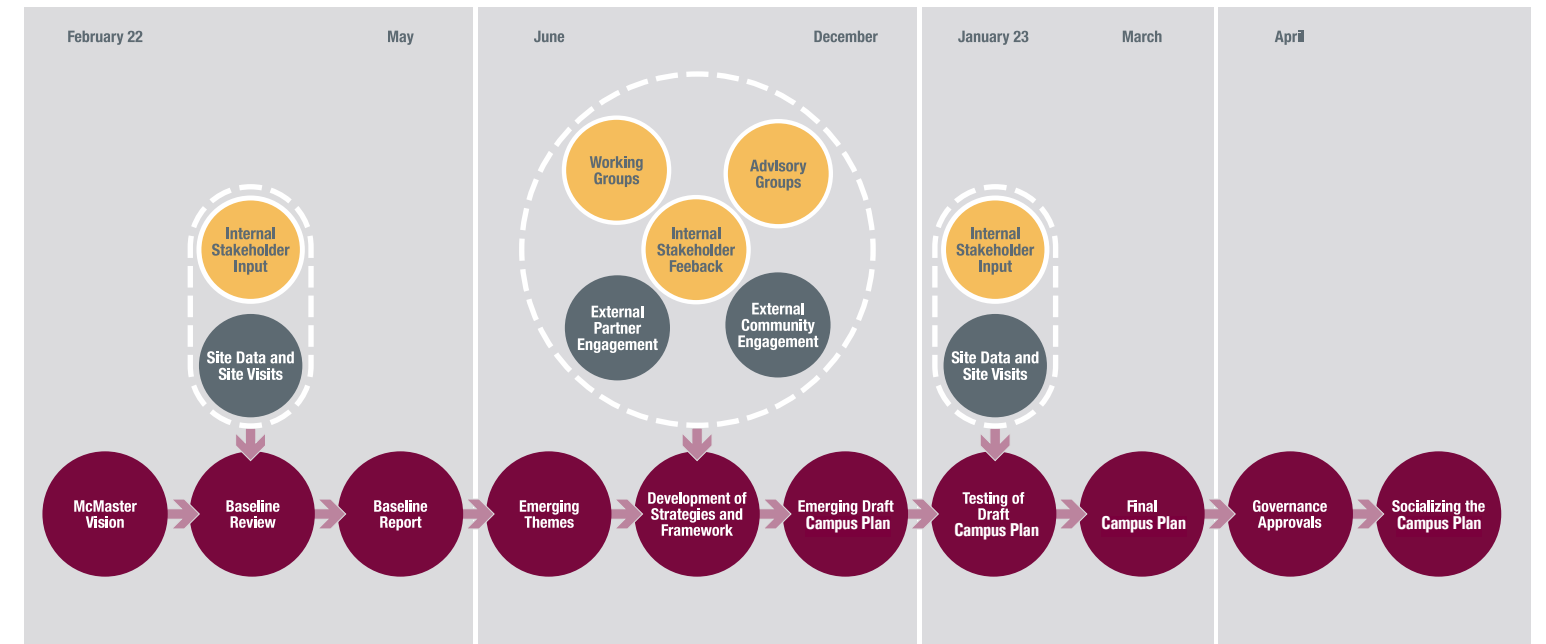
- Provide a vision for how the future development of the university’s physical campus and locations can be an enabler of [McMaster’s Institutional Priorities and Strategic Framework](#) and advance human and societal health and well-being.
- Provide a framework that will help shape the university’s buildings, infrastructure, outdoor spaces, natural land and the experience of being at McMaster, creating living, learning and research opportunities.
- Support the university’s response to the climate and biodiversity emergency and the delivery of its new [Sustainability Strategy](#) and [Net Zero Carbon Roadmap](#).
- Enhance how the university’s campus and locations are reflective of and responsive to diversity in our community.
- Re-envision the university’s campus and locations from a fresh perspective and capture new opportunities that may develop over the next post-COVID decade.

1.3 The Campus Plan Development Process

The development of the Campus Plan took place over a fifteen-month period, with work starting in early 2022. The Campus Plan has been delivered in four key stages:

- **Stage 1:** Initial Consultation and Information Gathering
- **Stage 2:** Community Engagement and Development of Plan Framework
- **Stage 3:** Testing and Preparation of Final Plan
- **Stage 4:** Approvals and Launch

Input and feedback from the steering committee, working groups, university stakeholders, external partners and the neighbouring communities was sought throughout the process and has informed the development of the final plan. Section 1.7 provides further details of the engagement process which has helped shape the Campus Plan.



Development Process

Spring 2022

Steering Committee, Baseline Review and Internal Engagement

The Campus Plan development process started with the creation of a steering committee composed of stakeholders from administrative, academic and student areas that guided and advised the project team throughout the development process.

A comprehensive review of the university's existing physical estate was undertaken, including setting and adjacencies, satellite locations, naturalized areas, size and space composition, condition of building stock, capital projects underway, utility infrastructure and transportation options.

Extensive internal engagement began with the university community and over 50 stakeholder groups from administrative, academic and student areas, through a blend of virtual consultations, in-person pop-up events and an online survey to provide input into the plan.

The Campus Plan vision and emerging objectives were developed, which are strongly aligned with the university's institutional priorities and strategic framework.

Summer 2022

External Engagement and Supporting Strategies

Working groups composed of stakeholders from both academic and administrative areas and external subject matter experts from the consultant teams were created to develop a series of supporting strategies to enhance the deliverability of the plan.

Emerging objectives were shared externally for feedback from key partners, including the City of Hamilton, City of Burlington, Hamilton Conservation Authority, Royal Botanical Gardens, Niagara Escarpment Commission, Hamilton Health Sciences, Mohawk College and St. Joseph's Healthcare Hamilton to build a unified vision and ensure that the plan is realistic and feasible.

Fall 2022

Community Engagement, Draft Framework and Testing

The draft framework was reviewed with internal leadership groups through a mix of in-person presentations and workshops.

Emerging objectives were shared externally for feedback from the public and neighbouring communities to help shape the framework of the plan.

The Campus Plan objectives were refined and design moves were developed based on all engagement to date. Together with the supporting strategies, these envisioned the physical transformation of the university's campus and locations.

Winter 2023

Additional Engagement, Advisory Groups and Draft Campus Plan

University community members and the public were invited to provide feedback on the refined principles and directions of the emerging Campus Plan through both an online survey and a full day open house in the McMaster University Student Centre.

Advisory Groups composed of internal subject matter experts were formed to provide guidance on additional engagement and insights into the emerging Campus Plan through lenses of equity, diversity, inclusion and Indigenous Reconciliation (EDI-IR) and accessibility.

A draft Campus Plan was completed based on collected feedback and is distributed to the Steering Committee, President and Vice-Presidents (PVP), Provost Council Deans, University Planning Committee (UPC) and Planning and Resources Committee (PRC) for final review ahead of university governance.

Spring-Fall 2023

Governance Approvals and Plan Launch

The Campus Plan is submitted for formal approval by McMaster University leadership, the Senate and the Board of Governors.

The Campus Plan will be publicly posted and shared with the internal community and key external stakeholders.

2023–2033

Implementation

Progress of the Campus Plan vision is supported by implementation strategies. These can include strategies for Sustainability, Teaching and Learning, Housing, Parking and Transportation, etc.

For the Campus Plan to be successful, new infrastructure and renewal projects will need to be vetted and evaluated on their ability to deliver or advance the objectives laid out in the Campus Plan.

Leadership and governance groups will play a key role to ensure that, as the university evolves, it does so in a way that helps the future vision of the university come to life.

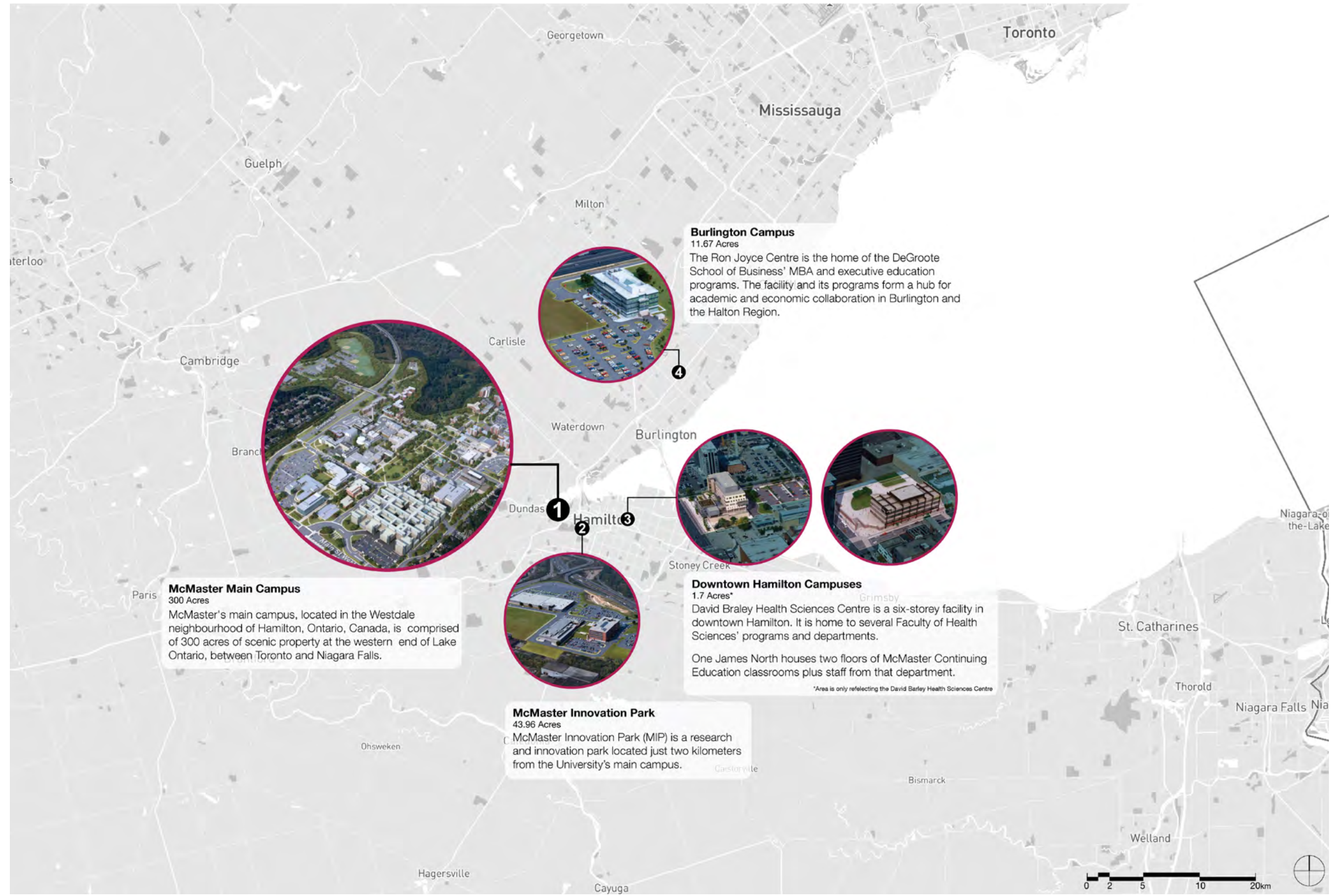
1.4 Overview of McMaster

McMaster University is recognized as one of Canada's most research-intensive universities and is consistently ranked among the top universities in the world. McMaster University has gained an international reputation for research and the innovative educational programming offered by each of its six Faculties, including the DeGroote School of Business and the Faculties of Engineering, Health Sciences, Humanities, Science and Social Sciences.

McMaster's main campus is located 4 kilometres west of Downtown Hamilton and occupies over 300 acres of land bordered by the Cootes Paradise on the north and the neighbourhoods of Westdale, Ainslie Wood and University Gardens.

In addition to the main campus, which is home to most university activities, McMaster operates out of several satellite locations and facilities including the Downtown Hamilton Campus, Burlington Campus and a number of health care and clinical facilities in Southern Ontario.

McMaster continues to draw an increasing number of students into its programs each year. Total student population, measured in full-time equivalents (FTE), is approximately 35,000. There are currently just under 1,000 full-time instructional faculty and over 6,637 staff employees as of July 1, 2022 (excludes clinical faculty and temporary casual staff working at the university).



Regional map showing the campus and locations throughout Hamilton and Burlington

1.5 Size and Shape

A key deliverable of the Campus Plan has been to develop a spatial strategy that can support current and future student populations.

Between the 2019/20 and 2021/22 academic years, there was a significant growth in the number of students enrolled at McMaster. University space and infrastructure now needs to expand to support this increased population and be designed to support evolving teaching and research pedagogies.

For the purpose of this plan, population will be measured in full-time equivalent (FTE) as opposed to headcount, as FTE gives a more accurate description of contact or program hours at the university, (i.e. 1 part-time graduate student is equivalent to 0.3 FTE). The university's current student FTE is approximately 35,000.

It is difficult to predict the rate of growth over a long period of time, therefore the spatial strategy must be flexible enough to accommodate a range of growth scenarios. The amount of future development which will be required and delivered will also be dependent on other factors including hybrid and blended working and learning strategies, space utilization rates and availability of funding.

The scenarios presented herein do not represent a prediction of student population growth, rather they provide an estimated range of potential space needs should growth occur and a roadmap to ensure that any future development is cohesive and builds towards the collective Campus Plan vision.

Within the Campus Plan, the baseline growth scenario, which illustrates the spatial needs for the current overall student population, is referred to as rightsizing.

Two further scenarios are then considered:

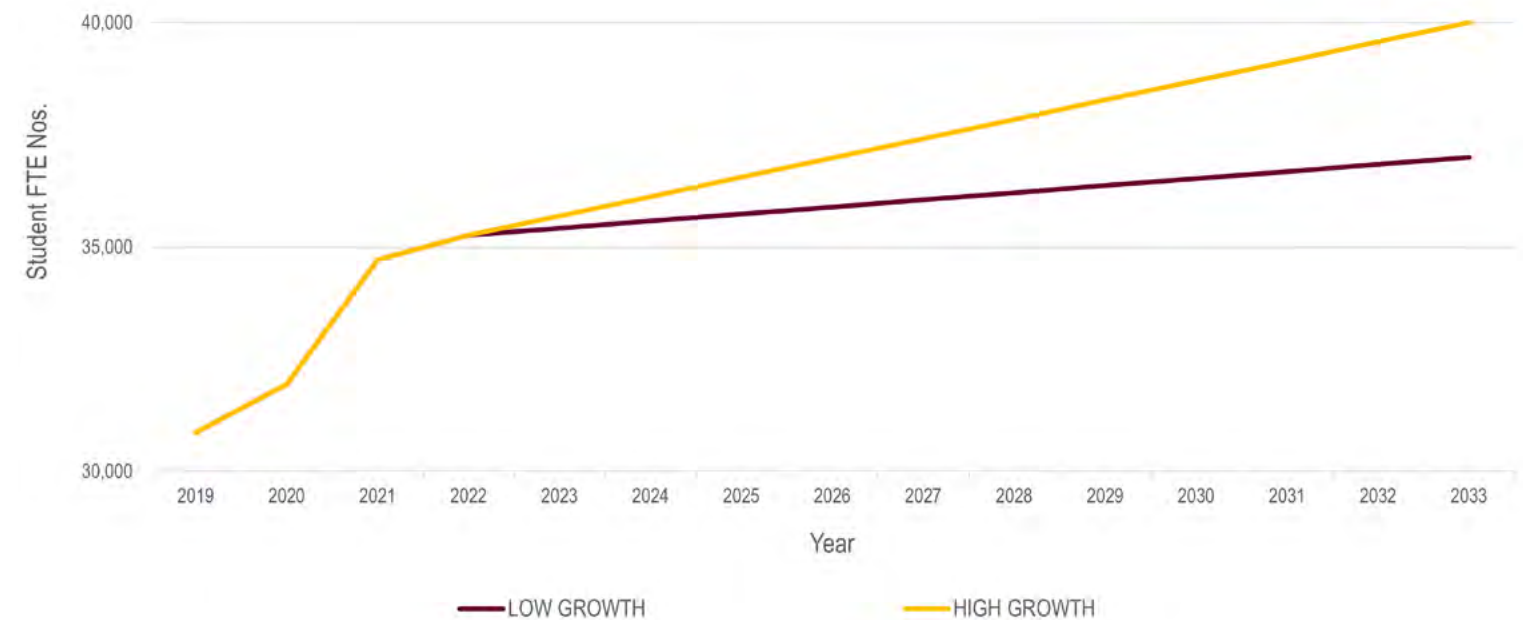
Low: Expanding student numbers to 37,000 (FTE)

High: Expanding student numbers to 40,000 (FTE)

The scenarios do not show deep retrofit or refurbishment of existing buildings, although the plan does strongly encourage pursuit of these opportunities where feasible as a sustainable alternative to adding new infrastructure. It should also be noted that some of the spatial targets related to specific space types, such as housing, will not be able to be accommodated solely within the university's main campus. As of 2019/20, the university's total estate, excluding residences, parking structures, and non-university facilities (such as the McMaster Children's Hospital and Mohawk College), totalled 504,365 net assignable square meters (NASM), comprising the following space categories:

- Classroom Facilities
- Teaching Laboratories and Research Laboratories
- Offices (Academic and Administrative)
- Library Facilities (excluding Study Spaces)
- Study Spaces and Hospitality Seating Areas (excluding food prep and retail areas)
- Assembly and Exhibition Facilities
- Athletic and Recreation Facilities
- Student Services
- Health Science Clinical Facilities
- Non-Assignable Areas (such as circulation, building utility, storage and 'back of house' spaces, but excluding parking structures)

Growth Scenario	Growth in FTEs	Change from 2022
Low	1,783	5%
High	4,870	14%



A Size and Shape study was undertaken to help predict the potential future space requirements as the university grows. The study explores current space provision against the current student population by benchmarking this against comparable Ontario institutions. Feedback received from key stakeholders was also incorporated. The Size and Shape study makes a recommendation on what the ideal space provision should be for current student numbers (rightsizing) and then explores how space would need to increase for the different growth scenarios. The study also tests the impact on space by embedding new ways of working and learning and compares a traditional campus (a campus that supports mainly in-person learning and working), with a hybrid campus model (which blends in-person and virtual learning and working). The hybrid campus model results in reduced requirements for certain academic spaces per student FTE and certain administrative spaces per staff FTE.

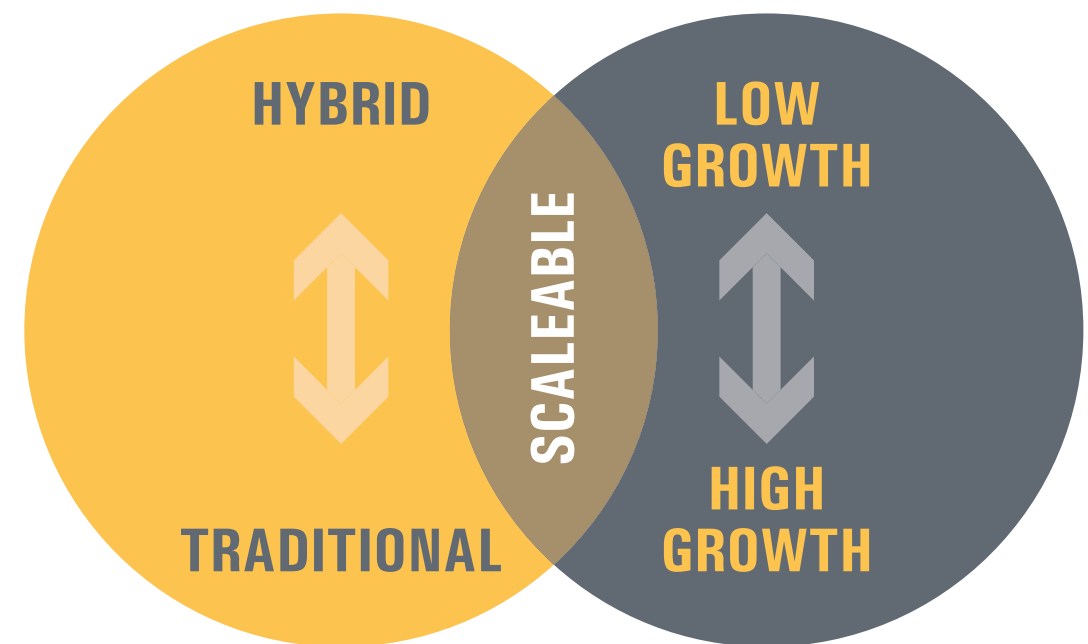
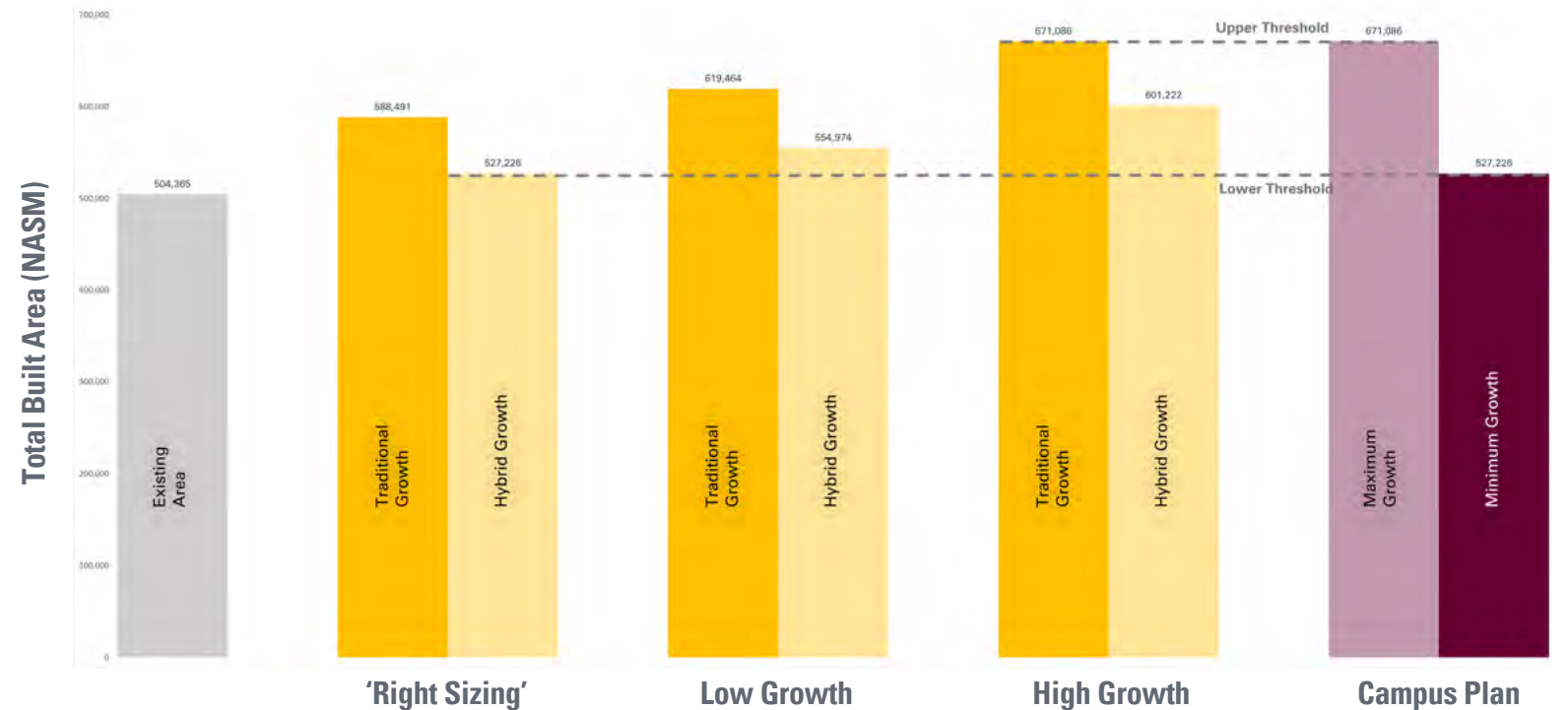
The lower threshold represents the space needed to accommodate the current university population (Rightsizing) in a hybrid setting, whereas the upper threshold represents the space needed for a high growth scenario in a traditional setting. This range provides the necessary information for the Campus Plan to demonstrate how growth can be accommodated in a cohesive and phased way, ensuring that the university is future-proofed to deliver whatever level of growth may occur up to the upper threshold.

The Size and Shape study created a dynamic space model that can be refined in coming years as new information regarding enrolment growth, new operation strategies and committed capital projects emerge. By continually recalibrating this model using up to date data, the range between the upper and lower threshold will be reduced and spatial predictions will become more accurate.

The graph opposite demonstrates the potential future space outcomes corresponding to the various growth scenarios.

Consideration has also been given to the possibility of growth beyond high growth scenario, although this is unlikely to transpire over the course of this planning cycle.

Section 4 of the Campus Plan details how each growth scenario could be accommodated.



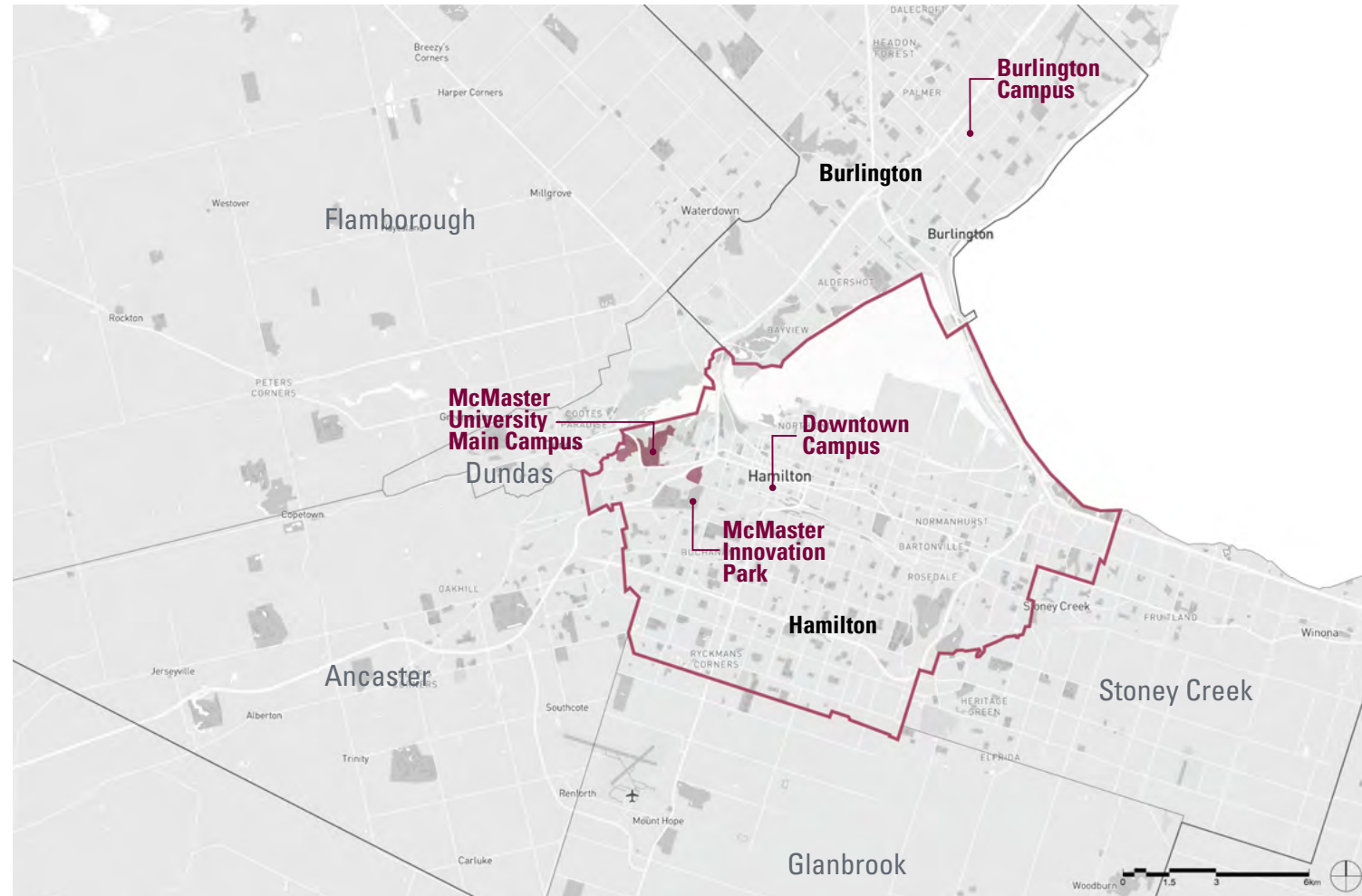
1.6 The University Today

McMaster University's main campus is located within the City of Hamilton's west end, part of the Greater Toronto and Hamilton Area. Its satellite locations are also found in the Southern Ontario Golden Horseshoe, one of North America's fastest growing economic regions. McMaster is recognized as a Hamilton-Niagara top employer and has a \$9.2 billion annual economic impact, which includes more than 8,000 faculty and staff who are employed directly by the university. There are more than 200,000 McMaster graduates in 139 different countries around the world.

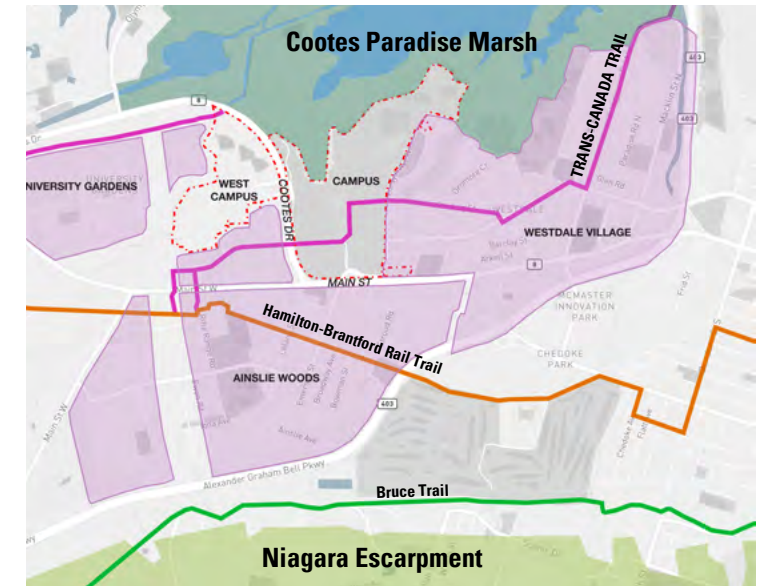
The university is surrounded by the residential neighbourhoods of Westdale, Ainslie Wood and University Gardens. A significant portion of the McMaster's student population currently live in shared housing, originally built as single-family homes within these neighbourhoods, rather than in purpose-built student housing.

The university is connected to downtown Hamilton by Main Street West, which is zoned for a range of commercial and residential uses. South of Main Street West and 1.5 kilometres east of the main campus lies the McMaster Innovation Park and the West Hamilton Innovation District. There are plans currently underway to develop a light rail transit (LRT) system running along this corridor.

The Campus Plan does not address the McMaster Innovation Park property to the east of the main campus, as it is governed by the McMaster Innovation Park Master Plan.



Map of campus and locations



Map showing campus in context

1.6.1 CURRENT CAMPUS ORGANIZATION

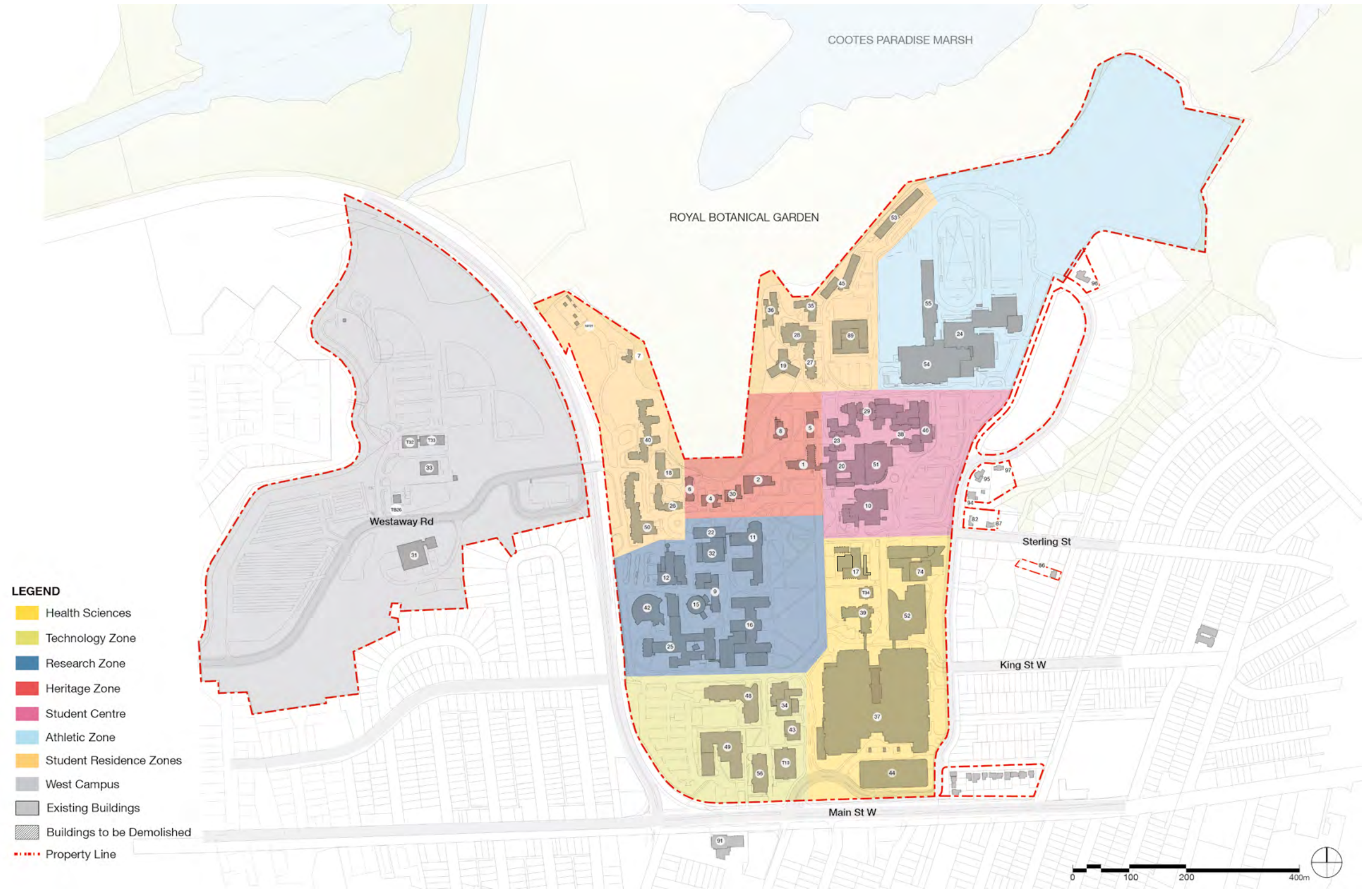
The main campus adheres to a relatively clear structure in terms of the location of various uses and facilities, as follows:

- Health Sciences are clustered to the south.
- Science and Engineering faculties are to the southwest.
- Arts, Humanities, Social Science and Business Faculties are to the northeast.
- Administration is focused to the north of the green mall.
- Student Life facilities are clustered around Sterling Street.
- Housing is clustered in two distinct quads along the north and northwest edges of campus
- Athletics and Recreation are located to the far northeast.

While these are not clearly demarcated zones, the general logical arrangement of academic uses outlined above has several benefits in terms of efficiency, synergy, legibility and identity. The Campus Plan has sought to integrate and reinforce this general spatial structure.

The rapid expansion of student numbers over the past few years has placed significant pressure on facilities within the university, including libraries, independent and group learning areas and student life facilities.

A review of the current campus facilities composition demonstrates a need to increase and protect natural collision spaces such as interdisciplinary common spaces, shared learning spaces and study areas.



A map showing the current campus organization

1.6.2 LOCAL PLANNING AND DEVELOPMENT CONTEXT

The Urban Hamilton Official Plan, effective from 2013, applies to lands in the urban areas of Hamilton and provides overall strategic direction for development in the city. The plan provides a long-term vision for the physical development of the city over a thirty-year cycle. The framework for the official plan is centred on the following principles:

- Compact and healthy urban communities that provide opportunities to live, work, play and learn.
- A strong rural community protected by firm urban boundaries.
- Environmental systems – land, air and water – that are protected and enhanced.
- Balanced transportation networks that offer choice so people can walk, cycle, take transit or drive and recognize the importance of goods movement to the local economy.
- Reducing Greenhouse Gas (GHG) emissions and adapting to the impacts of a changing climate.
- A growing, strong, prosperous and diverse economy.
- A wide range and healthy supply of housing options for current and future residents.
- Planning for a city that is equitable and inclusive and which meets the evolving needs of Hamilton’s diverse population.
- Financial stability.
- Strategic and wise use of infrastructure services and existing built environment.

Chapter E, Section 6 of the Urban Hamilton Official Plan outlines the goal to support and partner with major institutions, including McMaster University and encourage the development of institutional campuses as important community resources and recognized focal points in the urban fabric. This policy also seeks to ensure the integration and harmonious relationship between institutional areas and adjacent land use designations, particularly from a transportation and urban design perspective.

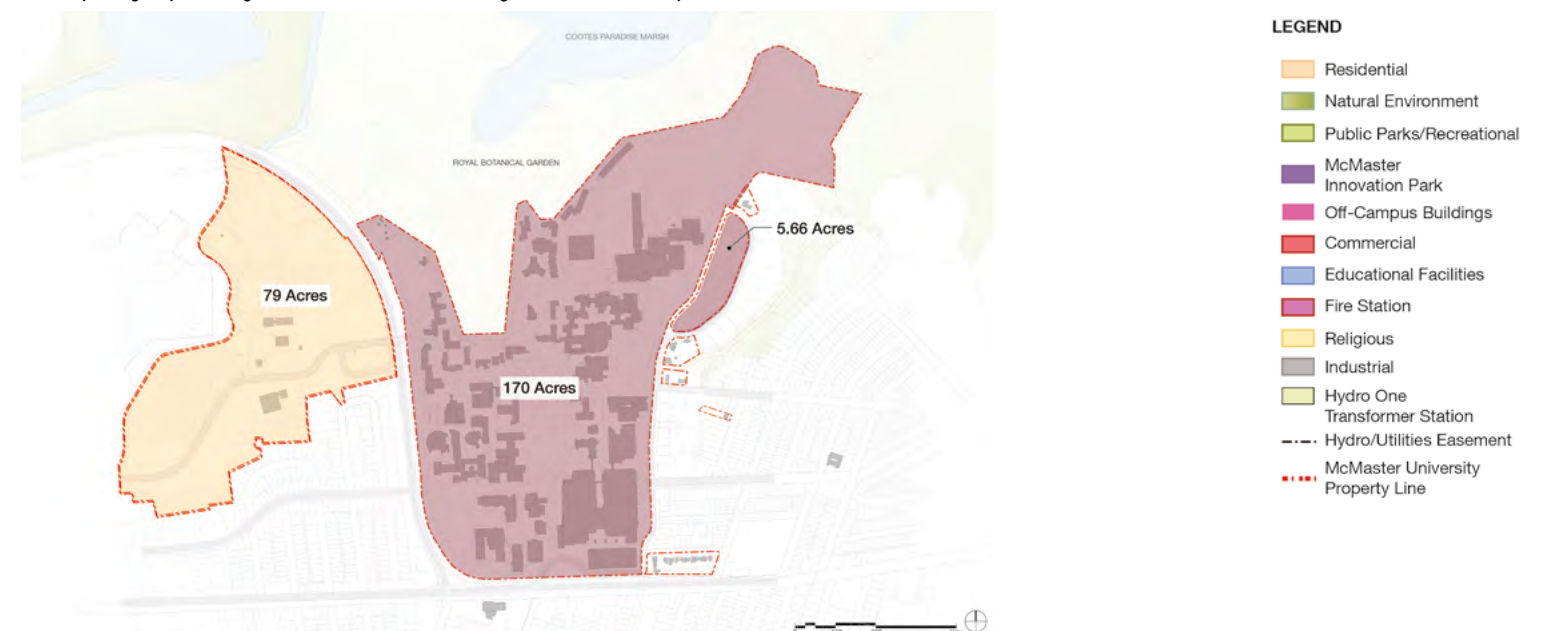
The City of Hamilton sets zoning boundaries and by-laws, which determine permitted land uses within different zones of the municipality. Zoning by-laws regulate the size, location and appearance of development permitted in a certain zone, as well as regulating assets such as parking requirements. McMaster’s main campus falls under Zoning Code I3 (Major Institutional) which is governed by parent By-Law 05-200 and By-Law 07-101.

Additionally, there are other regulatory bodies that guide the development of areas within or adjacent to ecologically significant areas, including Hamilton Conservation Authority (HCA) and the Niagara Escarpment Commission (NEC).

The Campus Plan takes into consideration existing legislation and policies, along with comments and guidance received during external engagement with the local authorities having jurisdiction, including the City of Burlington in relation to the McMaster Burlington Campus.



A local planning map showing different land uses surrounding McMaster University



A diagram showing McMaster University overall acreage

1.6.3 HOUSING MARKET AND LOCAL PRESSURES

A key issue that emerged from the baseline review and consultations was related to housing supply in Hamilton, particularly the availability and affordability of housing for students, faculty and staff. In 2022, research conducted by the insurance provider PolicyAdvisor revealed that the city ranked as the third-most expensive city in Canada in terms of cost of living versus income, and a study by Oxford Economics showed that Hamilton was the fifth-least affordable city in North America in terms of cost of housing alone.

Based on data collected by the Canadian Senior Housing Officers (Jan 2023), McMaster has capacity to provide bed spaces for around 11% of its students, which is significantly lower than the 15% average across the other universities included in the survey. Currently, all beds are allocated to first-year students. The university is constructing Lincoln Alexander Hall, a new undergraduate residence that will add an additional 1,366 beds in order to advance the aim to provide guaranteed residence to all first-year students, (target is two-thirds of first-year headcount based on enrollment trends).

This shortage of housing within the city and the shortfall of purpose-built student accommodation represents an ongoing and growing challenge for the university. This issue has resulted in a significant number of students living in retrofitted rental houses, primarily in the surrounding neighbourhoods of Westdale, Ainslie Wood and University Gardens, placing pressures on these communities. It has become an increasingly expensive reality for the students who are able to secure leases within these neighbourhoods and leaves many more looking for accommodation further afield from campus.

This creates a domino effect, impacting the university's transportation strategy. Cost-prohibitive and limited housing options within Hamilton, are factors in many students, faculty and staff needing to live outside the city. This results in long commutes by personal vehicle (most of which are still fossil-fueled reliant) to reach the university. The lack of sustainable transit options are also factors that contribute to the car being the transportation mode of choice. This further increases existing pressures on demand for parking spaces on campus. At times, these factors can create challenges with community members in the surrounding neighbourhoods.

In turn, this also presents a challenge in terms of the university's net zero carbon emissions goals for campus, its sustainability objectives, and the recruitment and retention of students, faculty and staff, particularly at more junior levels.

1.6.4 PLANNED TRANSIT INFRASTRUCTURE IMPROVEMENTS

McMaster's main campus is currently serviced by both municipal and regional public transportation, which provide vital links for students, faculty and staff both within Hamilton and the wider Greater Toronto Hamilton Area (GTHA). The Hamilton Street Railway (HSR) municipal transit service operates regular bus services to and from the university's main campus with good east-west connectivity and provides decent access to the Hamilton Mountain districts via connecting transfers. GO Transit operated by Metrolinx, an agency of the Government of Ontario, operate regional bus and train services within the GTHA and select Southern Ontario regions.

Planning and detailed design is underway between the City of Hamilton and Metrolinx to create the Hamilton light rail transit (LRT) network, a 14-kilometre light rail transit service running between McMaster University and Eastgate Square that effectively connects the McMaster's main campus to McMaster Innovation Park (MIP), downtown Hamilton and the city's east end along the Main Street / King Street corridor.

The introduction of the LRT will connect key areas within the city and create a multi-modal corridor, fundamentally altering the way that residents and commuters will travel across the city.

1.6.5 IMPACT OF COVID-19

In response to the COVID-19 pandemic McMaster moved quickly to virtual teaching, learning and working models. Subsequently, the university has navigated the constantly shifting landscape of the pandemic, transitioning back to in-person activities while maintaining some online and hybrid learning and working elements.

The move towards a hybrid approach to teaching and learning presents an opportunity for the university to grow in an innovative and sustainable way, allowing for more creative and efficient use of the university's physical infrastructure. This needs to be balanced with an appreciation for the fundamental role that human interaction plays in the university and campus life, ensuring that enhanced spaces for people to meet and dwell are provided.

There was a significant increase in undergraduate student enrolment over course of the pandemic. In the short term, it is now important that the university's physical campus develops to accommodate this growth in student numbers. Section 1.5 illustrates these spatial requirements in more detail.

1.6.6 BUILDING STOCK

The campus is relatively low in density when compared to other Canadian urban campuses, with potential for increased density both in the heart of the campus and along Main Street West and Cootes Drive. While most buildings on the main campus are modest in height, there are some taller buildings, particularly in the northern portions of the campus, including the Peter George Centre for Living and Learning (PGCLL), Brandon Hall and the Arts Quad towers (CNH, TSH and KTH). There is the opportunity to increase density and introduce well-designed taller buildings in certain zones on the main campus.

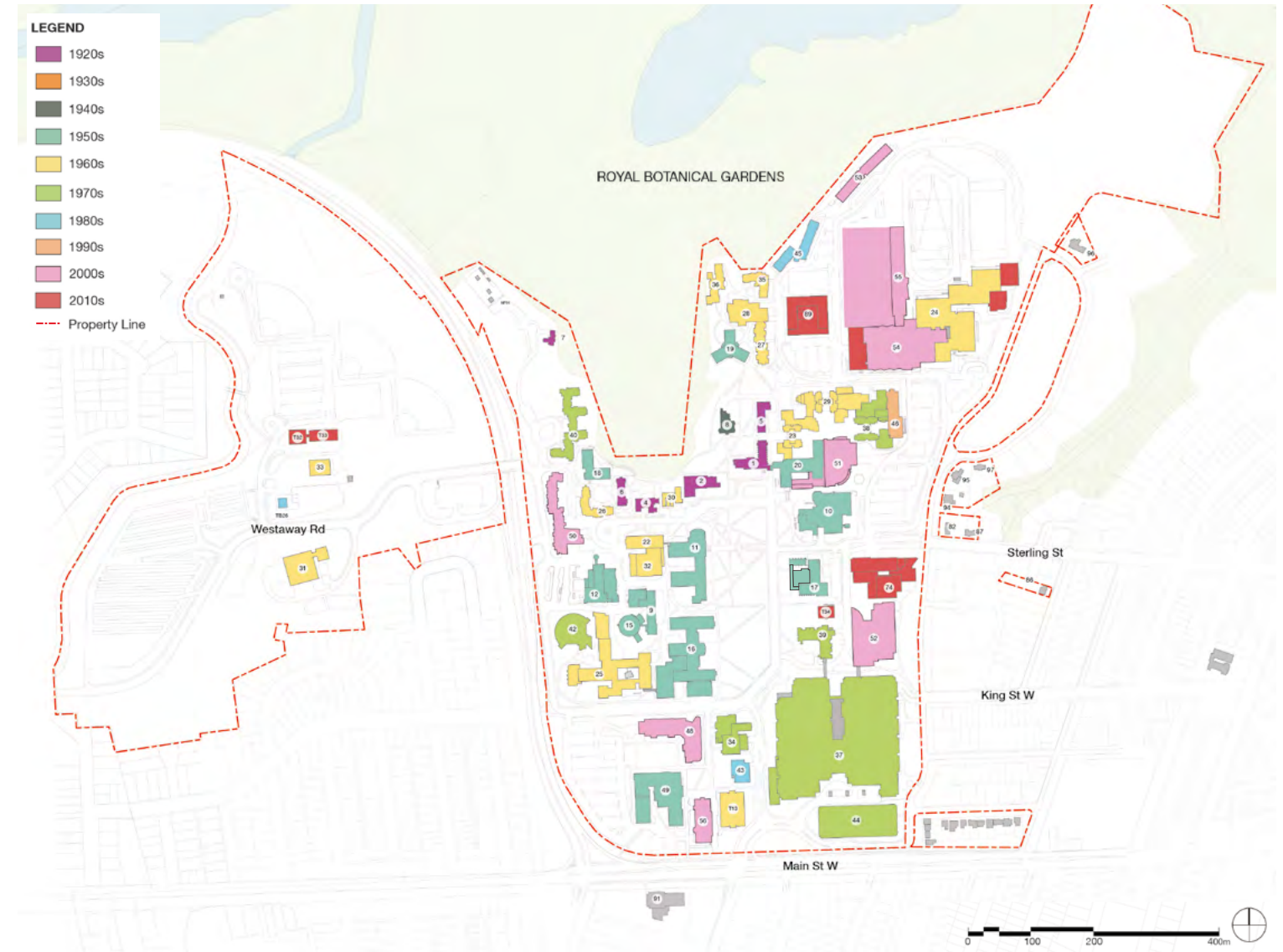
The main campus comprises a mix of buildings dating from the late 1920s to present. There is a historic core of gothic brick and stone buildings, namely University Hall, Hamilton Hall, the Refectory, Edwards Hall, Wallingford Hall and Alumni Memorial Hall. These form part of the historic core of the university, which is designated under the Ontario Heritage Act. The character and setting of these buildings should continue to be maintained and protected.

Newer buildings include the McMaster University Student Centre (MUSC), PGCLL and the David Braley Athletic Centre (DBAC), which all act as key student hubs in the northern half of campus and are the focus of student activity within the main campus.

Residence buildings are clustered in two distinct quads along the north and northwest edges of campus, creating an important sense of community in these areas. The introduction of new residences on campus should focus on the north of the campus, or along Main Street West where the new Lincoln Alexander Hall residence will be located. Other housing options could be located nearby to campus and along transit routes.

LEGEND

- | | |
|---|---|
| 1 University Hall | 43 Communications Research Laboratory |
| 2 Hamilton Hall | 44 Health Sciences Complex |
| 4 Refectory | 45 Hedden Hall |
| 5 Edwards Hall | 46 DeGroot School of Business |
| 6 Wallingford Hall | 48 Institute for Applied Health Sciences Building |
| 7 Alumni House | 49 Information Technology Building |
| 8 Alumni Memorial Hall | 50 Mary E. Keyes Residence |
| 9 Nuclear Reserach Building | 51 McMaster University Student Centre |
| Mills Memorial Library Building | 52 Michael G. DeGroot Centre for Learning and Discovery |
| 10 McMaster Museum of Art (Alvin A. Lee Building) | 53 Les Prince Hall |
| 11 Burke Science Building | 54 David Braley Athletic Centre |
| 12 E.T. Clarke Centre | 55 Ron Joyce Stadium |
| 15 Nuclear Reactor | 56 Engineering Technology Building |
| 16 John Hodgins Engineering Building | 73 St.Pauls Anglican Church |
| 17 Divinity College | 74 L.R. Wilson Hall |
| 18 Moulton Hall | 82 Bertrand Russel Archives and Research Centre |
| 19 Whidden Hall | 83 David Braley Health Sciences Centre |
| 20 Gilmour Hall | 85 One James North |
| 22 General Sciences Building | 86 47 Whitton Road |
| 23 Chester New Hall | 87 182 Sterling Street |
| 24 Ivor Wynne Centre | 89 Peter George Centre for Living and Learning |
| 25 A.N. Bourns Science Building | 91 Canadian Martyres CES Testing/Exam Centre (Licensed Space) |
| 26 Matthews Hall | 94 96 Forsyth Avenue North |
| 27 McKay Hall | 95 106 Forsyth Avenue North |
| 28 Commons Building | 96 132 Mayfair Crescent |
| 29 Togo Salmon Hall | 97 8 Mayfair Crescent |
| 30 Biology Greenhouse | T13 Prelim Laboratory |
| 31 Campus Services Building | TB26 Temporary Building, Multi-Use |
| 32 Tandem Accelerator | T32 Temporary Portables, Offices |
| 33 Applied Dynamics Laboratory | T33 Temporary Portables, McMaster Children's Centre |
| 34 Psychology Building | T34 Temporary Lecture Theatre |
| 35 WoodStock Hall | |
| 36 Brandon Hall | |
| 37 Health Sciences Centre | |
| 38 Kenneth Taylor Hall | |
| 39 Life Sciences Building | |
| 40 Bates Residence | |
| 42 H.G. Thode Library of Science | |



A map showing various ages of buildings on campus

1.6.7 GATEWAYS TO THE UNIVERSITY

There are three main gateways to the university, highlighted on the plan opposite.

South Gateway:

The principal entrance to the campus is on Main Street West and is shared with the Health Sciences Centre. This entry point is heavily dominated by vehicular traffic, including emergency vehicles, logistics and service vehicles, municipal buses and private cars. With the planned arrival of the LRT along Main Street West and the potential for new development along in this area, there is an opportunity to transform the Main Street West entrance to create a welcoming public face for the university that prioritizes active and sustainable modes of travel.

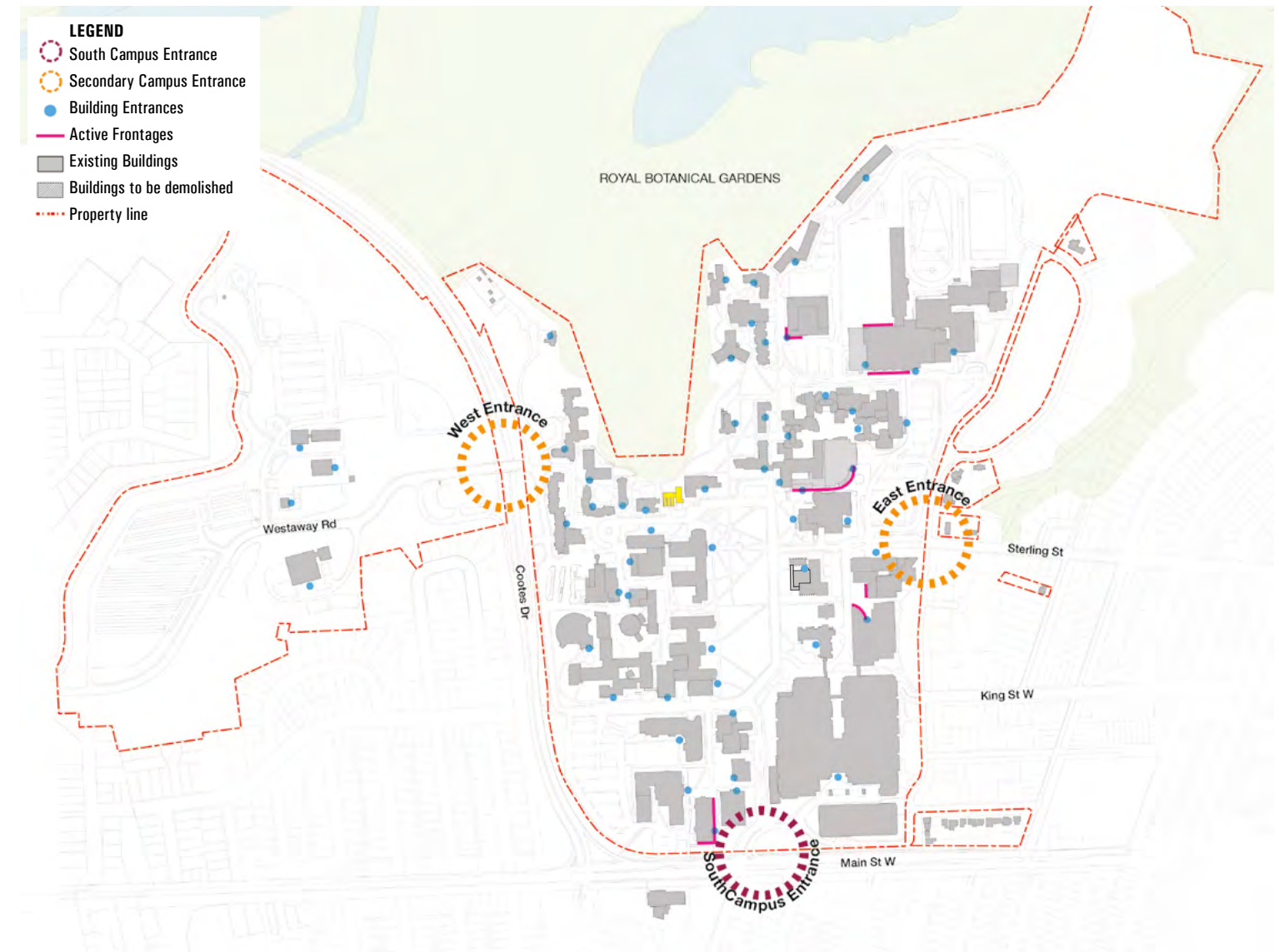
East Gateway:

The Sterling Street entrance is well-used but lacks any key gateway features. This entry point is also dominated by vehicles, including bus traffic. A clear frequently used path for pedestrians runs from the Sterling and Forsyth intersection northwest to MUSC. This path crosses a network of interior roads and a large surface parking lot. There is an opportunity to transform the Sterling Street entrance to create a welcoming and green public square that provides an appropriate setting for some of the university's key buildings and services.

West Gateway:

The west entrance is accessed at Cootes Drive from two off-ramps either side of the highway, providing access to both the main campus and west campus. There is less scope for fundamental change to this entrance, as it is primarily a vehicular entrance. However, there is potential to improve pedestrian safety and the overall character of this gateway through traffic calming measures on Cootes Drive near Westaway Road and also further south where there is a busy signalized pedestrian crosswalk from Sanders Boulevard onto College Crescent. There will also be significant planning around College Crescent as the City of Hamilton moves forward with the LRT project.

The Campus Plan aims to create a more welcoming and inviting campus that creates a sense of place and arrival for the university community, encouraging use by everyone through the transformation of its gateways, which is outlined in later sections of the plan.



Map of campus entrances and active frontages

1.6.8 PUBLIC REALM

At the heart of the campus is the central green mall, an extensive lawn with a network of footpaths providing links between different buildings within the campus. The green mall is a key feature of the campus which has been maintained throughout university's history at this site. It provides an attractive setting for University Hall, the original administrative centre for the university and its iconic archway. In addition to the central green, there are several smaller lawns dispersed between the buildings.

Many public spaces within the campus are dominated by paved areas designed to support vehicular movement; wide two-way arteries, a network of service roads, on-street parking and several surface parking lots occupy large areas of campus.

In recent years, new street furniture and outdoor seating have been introduced across the campus which have proven popular with the university community and contribute towards the creation of a vibrant and welcoming environment.

The southern and western edges of the university are bounded by two major roads (Main Street West and Cootes Drive). These busy routes detract from the amenity of the campus and act as major barriers between the university and surrounding neighbourhoods.



Map of existing campus public realm and green spaces

- Legend**
- Woodland/Natural Environment
 - Active Green Space
 - Informal Open Green Space
 - The Mall
 - Sports Fields
 - Hardscape
 - Trails
 - Existing Buildings
 - Property Line

1.6.9 CLIMATE EMERGENCY

McMaster University has a responsibility to respond to the climate emergency. In support of this aim, the university has committed to the McMaster Sustainability Strategy 2022-26 which identifies four strategic drivers to build a culture of sustainability and create a more self-sustaining campus. These are:

- Strategic Driver 1: A Culture Focused on Sustainability
- Strategic Driver 2: Teaching, Learning and Research
- Strategic Driver 3: Self-Sustaining Campus and Sites
- Strategic Driver 4: Operational Excellence

In addition to the Sustainability Strategy, in 2020 the university published its Net Zero Carbon Roadmap, which found that baseline carbon emissions amounted to 40,400 tons annually and proposed a plan whereby emissions are reduced by 75% by 2030 and by 90% by 2050. McMaster has engaged the services of an external consultant to investigate ways to accelerate this strategy. The Campus Plan has considered how new technology and associated physical infrastructure to reduce carbon emission can be accommodated within the campus.

1.6.10 INDIGENOUS SETTING, ECOLOGY AND STORMWATER

The main campus is located on the traditional territories of the Mississauga and Haudenosaunee nations. This land is part of the territory within the Dish with One Spoon Wampum Belt Covenant, an agreement between the Iroquois Confederacy and the Ojibwe and allied nations to peaceably share and care for the resources around the Great Lakes.

The campus is also a site of ecological significance. It sits within the Spencer Creek Watershed, whose tributaries flow into Cootes Paradise, a marshland sanctuary at the westernmost edge of Lake Ontario and bordering the campus to the north. This protected marshland is a critical habitat for rare flora and fauna, migratory birds and fish spawning. The west campus is located within a natural corridor linking Cootes Paradise and Dundas Valley, environmentally sensitive areas forming part of the Cootes to Escarpment EcoPark System and the UNESCO Niagara Escarpment Biosphere Reserve. This corridor is also home to McMaster Forest, a 115-acre plot of natural land purchased by the university in the 1960s and, since 2015, officially designated as an area of environmentally significant natural land to be used for ecologically sensitive teaching, research and recreation purposes. Surrounding these university sites are several natural trails including most notably the Bruce Trail and the Hamilton-Brantford Rail Trail, which follows a section of the old Toronto, Hamilton and Buffalo Railway (TH&B) route.

Most of McMaster's west campus is located within the floodplain. Stormwater and drainage from the main campus is discharged into the Cootes Paradise ravine via multiple stormwater outfalls as well as overland flow routes. Stormwater and drainage from the west campus is also discharged into Cootes Paradise via Coldwater Creek and flows from Hamilton drain into the ravine via a storm sewer traversing McMaster's main campus. As a result, significant erosion and water quality issues have been identified within the Cootes Paradise ravine.

1.6.11 ONGOING INITIATIVES, COMMITTED DEVELOPMENTS AND THE CAPITAL PLAN

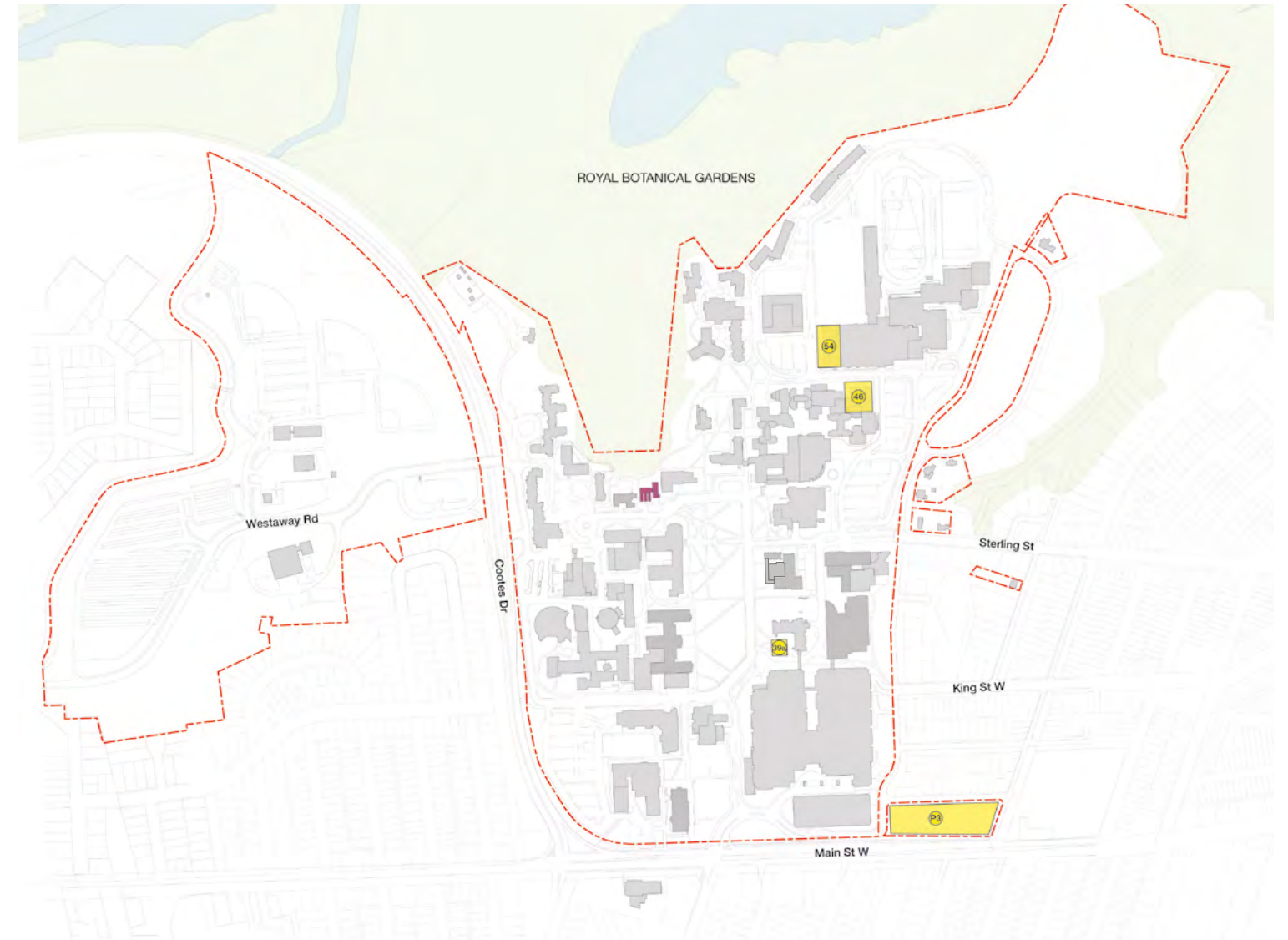
There are a number of ongoing initiatives and committed developments which have been built into the Campus Plan. Prominent ongoing projects include:

- **Student Activity and Fitness Expansion (SAFE)** – significant expansions to the east side of the Ivor Wynne Centre and the west side of the David Brayley Athletic Centre, which include a high-performance training centre, a turf gym, dance studio facilities, an expansion to the Pulse gym and a student hub.
- **McLean Centre for Collaborative Discovery (MCCD)** – a new 10-storey building supporting learning space for students within the DeGroot School of Business.
- **Greenhouse and LSB Deep Renovation (Phase 1)** – a modern and expanded replacement to the university’s existing greenhouse, relocated to the front of the Life Science Building, fronting onto the green mall and includes a phased deep retrofit of the Life Sciences Building.
- **Lincoln Alexander Hall Residence** – a new undergraduate student residence on Main Street West, providing living accommodations for 1,366 students. This is being developed in partnership as a P3 project.
- **10 Bay Graduate Residence** – a new graduate residence in Downtown Hamilton, providing furnished apartments to approximately 600 graduate students and their loved ones. This is being developed in partnership as a P3 project.

In addition to ongoing projects, there are several proposed projects outlined in the Capital Plan* that would have a significant impact to the physical character of the university’s main campus or other locations if they are implemented:

- **Central Animal Facility (CAF) Renovation** – located in the MUMC building, the facility is in need of a complete renovation in order to meet accreditation requirements by the Canadian Council on Animal Care.
- **Wilson College of Leadership and Civic Engagement** – a new civic leadership college with the goal to develop outstanding young leaders who understand the myriad challenges facing our world and who will be committed to strengthening our societies.
- **Bates Retrofit** – a multi-phase project calls for major upgrades to nearly all building systems at Bates Residence and includes interior finish replacements and suite re-arrangements.
- **Hamilton LRT Transit Hub (Phase 1)** – an integration of the proposed LRT network, including a multi-storey parking structure integrate with a municipal (HSR) and regional (GO) transit hub.
- **McMaster’s Bridge to Impact** – a new development providing space for the Faculty of Engineering to support a re-imagined curriculum with increased integration and experiential learning.
- **Life Sciences Building Deep Renovation (Phases 2-4)** – a revitalization of the building envelope, systems and infrastructure, expanding on the Phase 1 work that will be completed alongside the construction of the new LSB Greenhouse.

Inclusion of these projects in the Capital Plan does not mean projects have received final approvals.



Map of ongoing initiatives and committed developments on campus



Map of downtown Hamilton development

Legend

- Active Projects - Buildings
- 54 Athletics and Recreation - Student Activity & Fitness Expansions (SAFE)
- 46 McLean Center for Collaborative Discovery (MCCD)
- P3 Lincoln Alexander Hall - Undergraduate Student Residence on Main Street West
- 39a LSB Greenhouse
- 10B 10 Bay Graduate Residence
- Existing Buildings
- Buildings to be Demolished
- Property Line

1.7 Stakeholder and Community Engagement

Engagement has been an integral part of the Campus Plan development process.

McMaster engaged with senior leadership, over 50 internal stakeholder groups, students, faculty, staff, external partners, local municipalities and the public through a blend of virtual consultations, presentations, working and advisory groups, in-person charettes, workshops, public meetings and online surveys to help create a collective vision for the future development of the university's physical campus and locations.

The process and outcomes of both community and stakeholder engagement throughout the Campus Plan development process is summarized below.

For a detailed breakdown of feedback received, please refer to Appendix B: Stakeholder and Community Engagement.



Engagement with student community and university leadership group



1.7.1 INTERNAL ENGAGEMENT

Campus Plan Steering Committee and Working Groups

The Campus Plan Steering Committee was central to this process throughout. This group comprised a broad range of university leaders, faculty members, administrators, staff and student representatives. The role of the Steering Committee was to provide direction to the team in all aspects of the Campus Plan. A series of meetings, including an in-person design charette, were held with the Steering Committee throughout the duration of the Campus Plan stages.

During stage one, the Steering Committee provided insights into the university campus and helped guide the team to connect the institution's priorities into the Campus Plan's six strategic objectives and guide the internal and external engagement program.

In stage two, the committee was consulted to develop the ten transformational design moves that form the Campus Plan. Stage two included an in-person charette which shaped and refined the design moves. The moves were vetted through the technical lenses of transportation and movement, sustainability and energy, and ecology and stormwater management and presented back to the committee for comment. Stage three saw a further development of the Campus Plan which was reviewed and commented upon by the Committee.

At the culmination of each stage of the Campus Plan process, a program of more formal presentations and discussions have been held with senior leadership groups across the university, providing the opportunity for review and comment in advance of the project moving forward to the next phase of its development.

To explore specific thematic issues of relevance to the Campus Plan in greater depth, three individual working groups were established:

- **Transportation and Movement Working Group:** Thematic meetings addressed the concepts of a holistic green travel strategy, considering active transportation, integration of transit and managing car parking.
- **Energy and Sustainability Working Group:** Discussions with this working group considered a strategy for sustainable buildings, energy generation, climate resilience and adaptation and benchmarks. The discussions were focused on the delivery of the university's Net Zero Carbon Roadmap and the university's Sustainability Strategy 2022-2026 for overall direction, considering ways that the Campus Plan could help deliver and accelerate these existing strategies.
- **Ecology and Stormwater Management Working Group:** The focus of discussion with this group included enhancing biodiversity within the campus and on adjoining lands and the removal of invasive species, creating buffer zones around the margins of the campus to help protect and enhance adjoining habitats, opportunities to reduce the impact of stormwater runoff to nearby water courses and carbon sequestration initiatives.

Internal engagement with over 50 university stakeholder groups



Internal Stakeholder Consultation

Throughout the course of the project, the consultant team has also met with representatives from broad range of individual faculties, departments and groups across the university. This engagement started with an immersion week in March 2022 and has been continued through extensive follow up around specific issues or proposals as required.

Internal Community Consultation

In February and April 2022, an online survey was distributed to the McMaster internal community, including students, faculty and staff. The electronic survey was available for two weeks and closed on April 5, 2022. The launch of the survey aligned with key consultation events, such as the on-site pop-ups and the intensive consultation with internal groups which included McMaster University leadership, collective engagement of the student body, staff and faculty, and academic and administrative groups.

The intent of the survey was to facilitate a broad outreach to the McMaster University community to understand general impressions about the campuses and to understand existing gaps and areas of opportunity. The survey included questions on respondent demographics and three open ended questions which include:

- What do you like about your campus?
- What don't you like about your campus?
- What would make it better?

Key themes which arose from the consultation related to:

- **Access to Nature and Biophilic Design:** Respondents had an overwhelming appreciation for green spaces and access to nature, with a strong

desire to maintain the existing green spaces and support for the creation of additional green space.

- **Buildings:** Though there was an appreciation for the architectural character of the buildings including the historical nature of some buildings, there was a prevailing theme to improve the existing stock of the buildings from its usability, access to natural light (windows), functionality, sustainability, accessibility and improvement to technology.
- **Use of Location:** This term was referenced across all three opened ended questions. Feedback suggests that some respondents appreciate the layout and ability to get between buildings while some respondents felt that this was a challenge and should be further considered.
- **Transportation:** Many respondents indicated difficulty accessing their buildings on campus either because parking was limited, or public transit drop off points were located too far from their intended destination.

Feedback from this initial consultation informed the development of the Campus Plan Strategic Objectives.

In January 2023, the key principles underpinning the final Campus Plan were presented to the university's community. An online survey was answered by 1,072 people, including students, faculty, alumni, staff and members of the local community.

The survey demonstrated overarching support for the principles behind the Campus Plan, with several important themes emerging from the survey responses. The development of more housing on campus, nearby and walkable to campus, and along key transit routes, as well as the provision of safe, accessible, and sustainable transportation and sustainability goals were highlighted as key priorities for the university community.



1.7.2 EXTERNAL ENGAGEMENT

Key Stakeholders and Local Partnerships

Extensive engagement has also taken place with a broad range of external stakeholders with an interest in the future development of McMaster University. These include the President's Advisory Committee on Community Relations, city authorities, public transport companies and operators, conservation bodies and related academic and healthcare institutions.

The inputs, advice and guidance of each of these groups has been extremely valuable in shaping the Campus Plan.

External Community Consultation

Community consultation focused on Westdale, Ainslie Wood and University Gardens was undertaken during September and October of 2022, including an in-person consultation event and an online survey.

The consultation sought feedback on five themes which were being explored through the emerging Campus Plan options:

1. Provide more housing options on campus and nearby.
2. Create a connected and accessible university.
3. Enhance our natural environment.
4. Reduce our carbon footprint.
5. A brighter future (an open question inquiring about what improvements the respondent would like to see on campus).

Findings from the consultation demonstrated broad support for the key themes of the emerging Campus Plan, in particular:

- The desire to see more student and housing developed on campus, nearby and walkable to campus and along key transit routes.
- Support for improved public transportation connectivity, pedestrian and cycle facilities and improved parking.
- Improving the quality of public realm design and architecture within and around the campus.
- Promoting sustainable design, including low-carbon buildings, sustainable travel and clean energy generation.

The outcome of these consultations was used to shape the development of the emerging Campus Plan.

70+ hours of engagement with external partners and community





2.0

CAMPUS PLAN VISION AND OBJECTIVES

Campus Plan Vision and Objectives

2.1 Introduction

McMaster University has a global reputation for excellence in teaching, learning and research. Our physical campus and locations should support our overall vision:

Impact, ambition and transformation through excellence, inclusion and community: Advancing human and societal health and well-being.

2.2 The Campus Plan Vision

The Campus Plan will make a significant contribution to delivering on the university's overall vision and establishes a new vision for the future of the university's physical campus and locations, as follows:

Our campus and locations will reflect our global standing in research and teaching, build upon our current sense of place, culture and community and transform the learning, living and working experience to provide a healthy, inclusive and sustainable eco-system that is engaged with Indigenous, local, national and global communities.



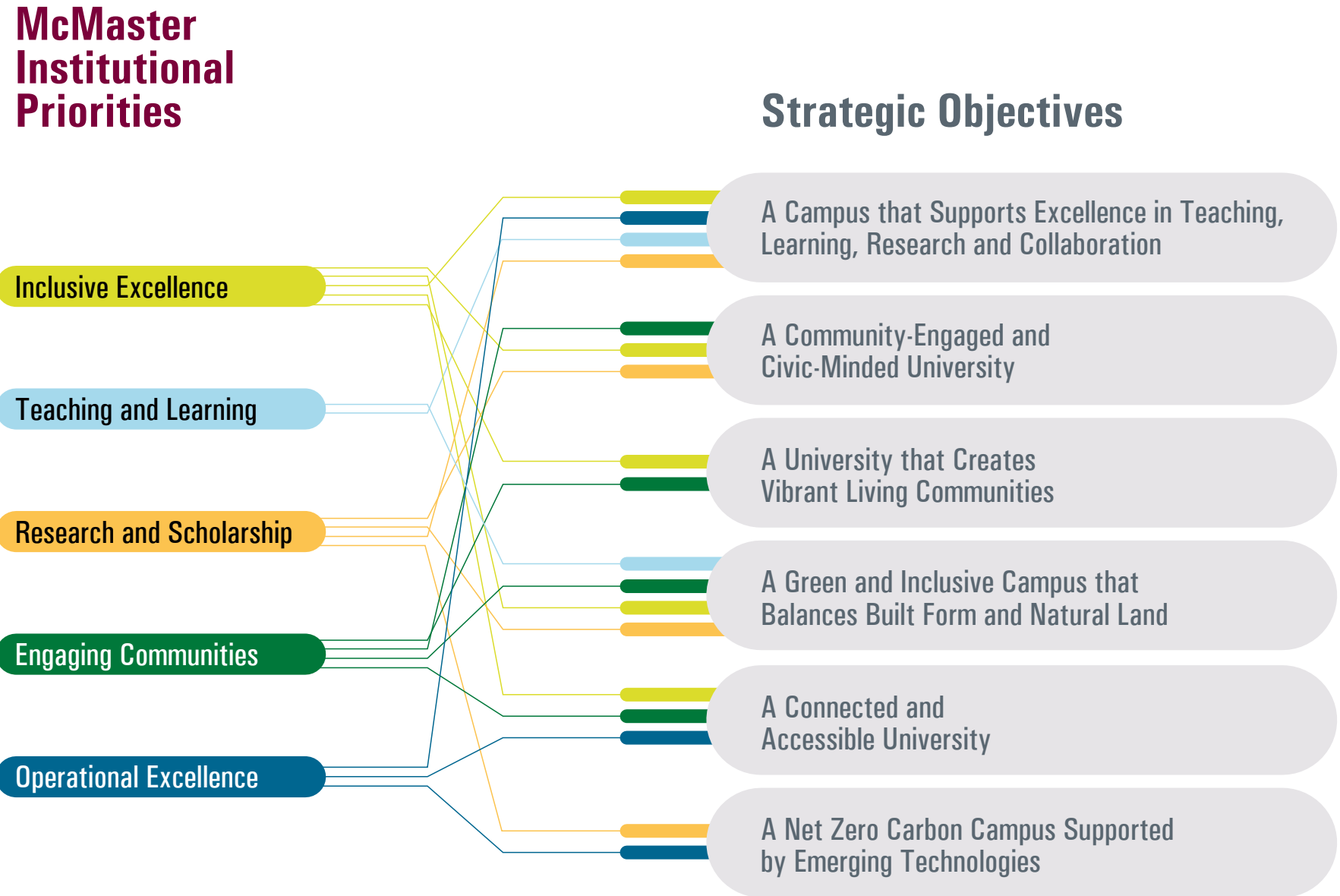
An aerial rendering showing the Campus Plan proposed developments

2.3 The University Campus Plan Strategic Objectives

The Campus Plan Strategic Objectives are the foundation of the plan and establish the overarching principles that guided its development. These objectives were developed in response to McMaster's Institutional Priorities, as well as discussions with the university's leadership groups, steering committee, working groups and advisory groups and the findings from community engagement.

The diagram opposite illustrates how each Strategic Objective supports the delivery of McMaster's Institutional Priorities.

The following pages set out the six Campus Plan Strategic Objectives in detail. Each objective is supported by a set of aims, against which the progress and success of the Campus Plan will be measured.



OBJECTIVE 1:

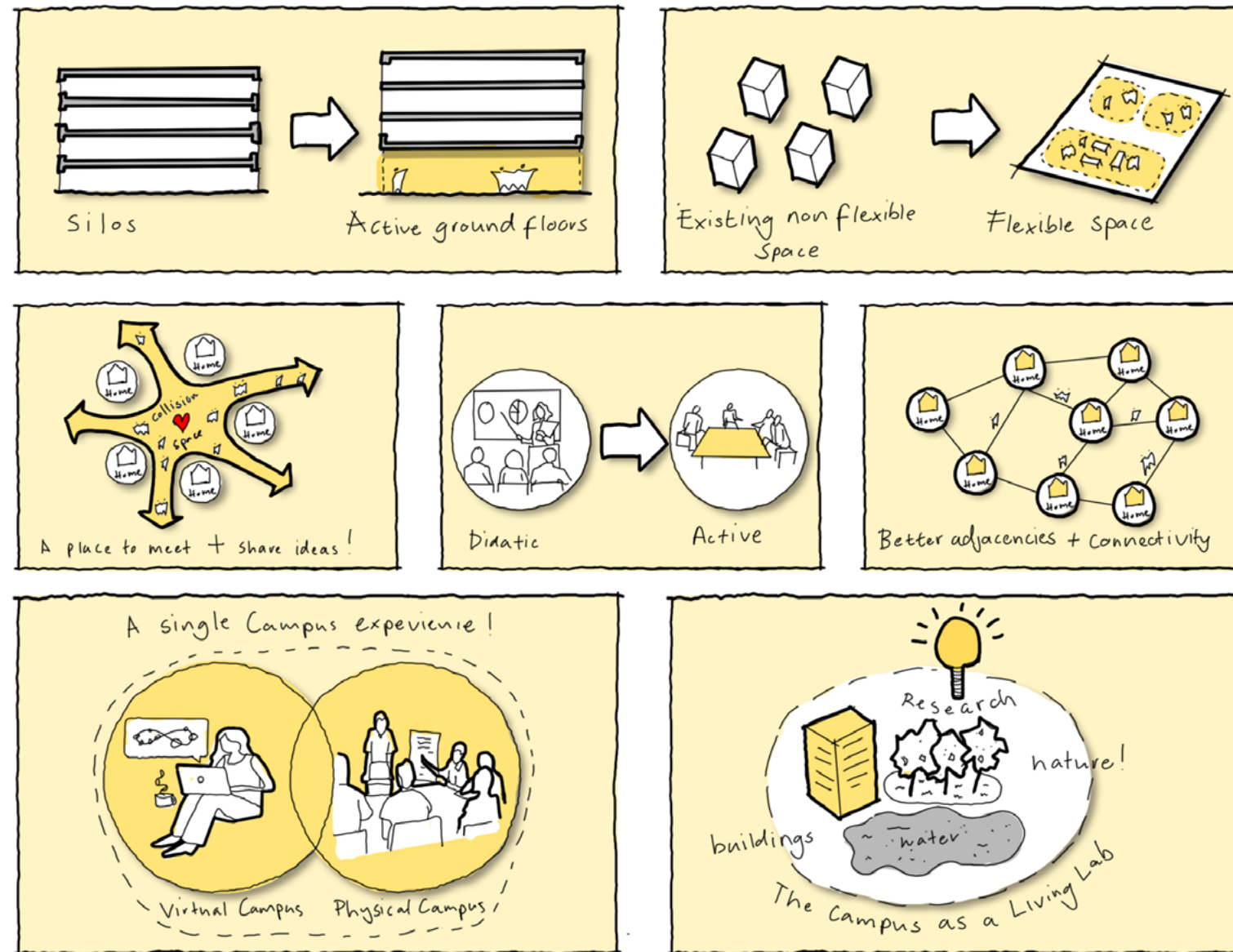
A CAMPUS THAT SUPPORTS EXCELLENCE IN TEACHING, LEARNING, RESEARCH AND COLLABORATION

The university's physical campus and locations should support its global reputation as a centre for innovative teaching, learning, research and collaboration, advancing human and societal health and well-being.

The Campus Plan shows how the university's spaces and places can be developed, refurbished and renewed to ensure that they can meet its future requirements. This includes establishing a flexible framework for the development of new buildings, as well as guidance for how existing buildings and spaces could be transformed to meet changing requirements in terms of learning, research and working in a post-COVID world.

The Campus Plan considers opportunities to transform the university's spaces and places, including the promotion of greater access and transparency of the ground floors of existing and new buildings to make them more welcoming and permeable, remodelling of cellular office and lab spaces to create more collaborative and inclusive environments, the integration of new collision spaces and provision of new and enhanced environments for teaching, collaborative learning, private study and student activities.

The Campus Plan also considers ways in which McMaster's places and spaces, including its surrounding natural habitats, can become a living laboratory to develop, test and conduct research in a real-world environment.



A series of sketches and ideas illustrating how the campus can support excellence in teaching, learning, research and collaboration

Aims:

- Ensure McMaster's places and spaces support the university's interdisciplinary excellence and reduce the silos and zoning of uses across the campus by creating outward facing, active ground floors that can be used by everyone.
- Challenge the use of space and address current space constraints by embedding new ways of working and providing new flexible space to allow the university to grow as and when required.
- Increase and protect informal natural collision spaces for collaboration and create spaces that provide a sense of belonging for students, faculty and staff.
- Ensure formal spaces are fit for purpose through renewal and strategic new facilities that support excellence in teaching and research, focused on active pedagogies and human interaction.
- Ensure new physical and virtual spaces are universally accessible: designed to be supportive, barrier-free, mental health positive, and adherent to policies relating to health, safety, accessibility and inclusion.
- Enhance academic adjacencies through the creation a network of connected, collaborative and organized spaces that support interdisciplinary working, knowledge sharing, efficiency and multi-use of space.
- Ensure the campus can support a seamless experience between physical and virtual teaching and learning.
- Develop the whole campus as a living laboratory, creating a place to test and showcase research excellence and embed active learning.

OBJECTIVE 2:

A COMMUNITY-ENGAGED AND CIVIC-MINDED UNIVERSITY

The university should be engaged with the communities it serves, providing an attractive and welcoming environment for all. It should integrate with the surrounding communities of Westdale, Ainslie Wood and University Gardens, the wider city and Indigenous communities, enhancing opportunities for all.

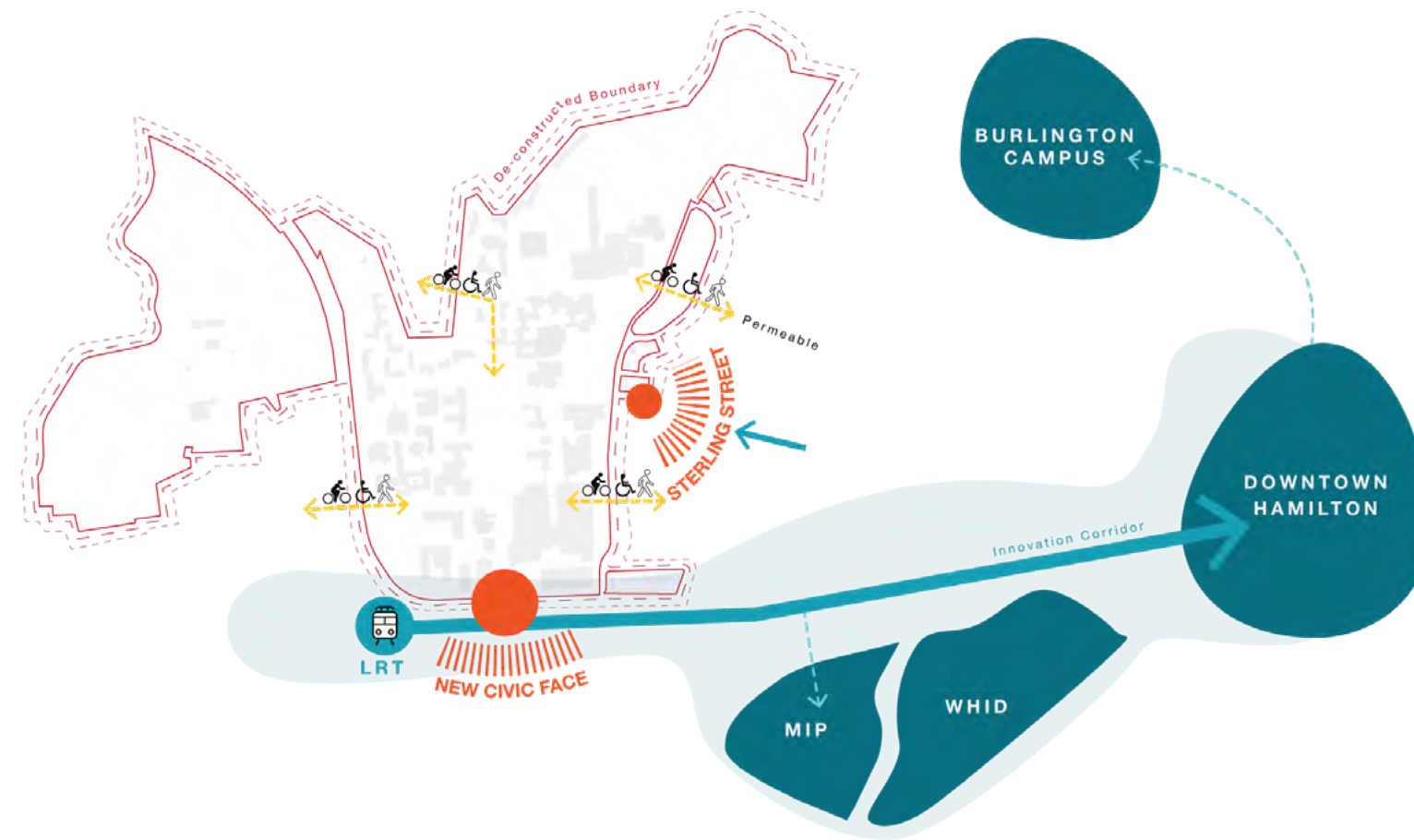
In 2017, McMaster became the second Canadian university to join the Age-Friendly University (AFU) global network. In the same year, McMaster also signed to the Okanagan Charter, committing to support the inclusion of health and well-being in the university's strategic planning processes. Our built environment and public spaces should be designed to support health and well-being as well as the [ten guiding principles of an age-friendly university](#), ensuring that McMaster is a healthy, welcoming and inclusive space for people of all ages.

Creating welcoming gateways to the campus provides the opportunity to integrate the fabric of the campus and adjoining neighbourhoods, creating connections that invite the wider community into McMaster.

By taking a planned approach to the development of new residential accommodation along the Main Street corridor, the number of students living in retrofitted family homes can be reduced, while also allowing the university to significantly extend its housing options to students, graduates, faculty and staff.

Integrating increased residential offerings with research facilities along the corridor (including the McMaster Innovation Park) will promote a vibrant and sustainable mixed-use environment, capitalize on future regional transportation investments such as the incoming light rail transit (LRT) network and reduce the proportion of the university's community who need to drive to campus.

McMaster University: Campus Plan



Conceptual diagram illustrating a community engaged and civic minded university

Aims:

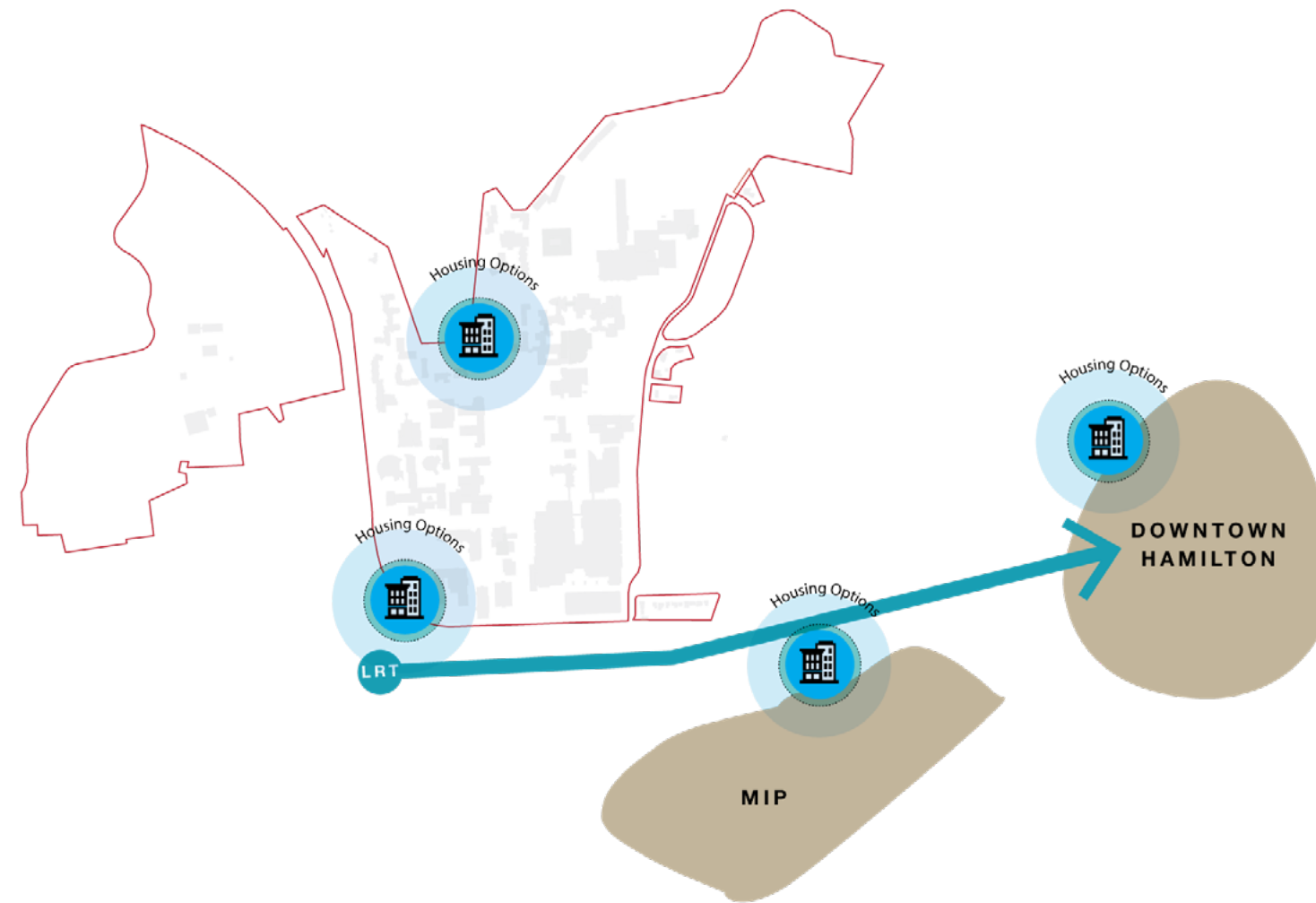
- Create an inviting campus which welcomes and supports communities, businesses and the City of Hamilton.
- Promote the Main Street corridor as a place for innovation, supporting the pathway from research, pre-incubation and incubation to established business.
- Enhance the sense of arrival from both Main Street West and Sterling Street and create a new civic face on Main Street West through the new LRT station.
- Enhance community engagement by creating an outward facing, permeable campus that enables connectivity and encourages use by all.
- Engage with Indigenous communities through the Campus Plan development process, to ensure the Campus Plan recognizes and embeds contemporary relevance of Indigenous cultures and knowledge.

OBJECTIVE 3:

A UNIVERSITY THAT CREATES VIBRANT LIVING COMMUNITIES

The university should embrace opportunities to provide more housing options for students, faculty and staff.

The Campus Plan considers ways that the university can provide more housing options in order to create vibrant, mixed-used, inclusive living communities and support a holistic and sustainable living and learning environment for its students. Housing opportunities should also be considered for faculty and staff.



Conceptual diagram illustrating varied housing options

Aims:

- Develop new housing in clustered locations on the main campus, reinforcing a sense of community amongst students. Consider inclusive housing opportunities for Indigenous communities and equity-deserving groups.
- Create more shared living and learning spaces that combine housing with academic programming and other supporting amenities, like the Peter George Centre for Living and Learning (PGCLL).
- Embrace opportunities for new housing and services nearby to campus that provide walkable access to the campus, like the Lincoln Alexander Hall residence.
- Develop new university housing along key transit routes that provide easy access to the campus via sustainable transit options, like the 10 Bay Graduate Residence.

OBJECTIVE 4:

A GREEN AND INCLUSIVE CAMPUS THAT BALANCES BUILT FORM AND NATURAL LAND

The university is surrounded by rich, diverse and unique ecological and natural biomes that should be protected and enhanced. To be good stewards, McMaster must consider the balance between intensifying the built environment, creating sustainable infrastructure and strengthening its natural spaces and surrounds while supporting the university's research and academic missions.

The Campus Plan considers ways that the university can better integrate within its natural surroundings. This includes the naturalization of portions of the university's west campus to enhance the link between the campus and the unique eco-systems that surround it. The Campus Plan also explores opportunities to improve the quality and inclusivity of the public realm across the campus and increase biodiversity through enhanced blue and green infrastructure throughout, creating an environment that supports the health and well-being of students, faculty, staff and visitors.



A conceptual image illustrating a green and inclusive campus that balances built form and natural land

Aims:

- Encourage densification, intensification and renewal of the heart of the main campus through strategic new build and refurbishment of existing buildings and infrastructure.
- Protect and enhance the blue and green infrastructure across campus and prioritize naturalization of portions of the west campus in a phased and deliverable way.
- Green the campus through the creation of high quality, mixed-use outdoor spaces that are welcoming to students, staff and the wider community, promote health and well-being and maximize opportunities for teaching, research and social activities.
- Create legible, accessible routes through campus, prioritizing public realm for pedestrians by removing vehicles.
- Adopt a regenerative design approach where we give back more than we take by creating climate resilient landscapes.
- Enhance the relationship between the campus and surrounding natural assets, promoting greater stewardship of surrounding lands.

OBJECTIVE 5:

A CONNECTED AND ACCESSIBLE UNIVERSITY

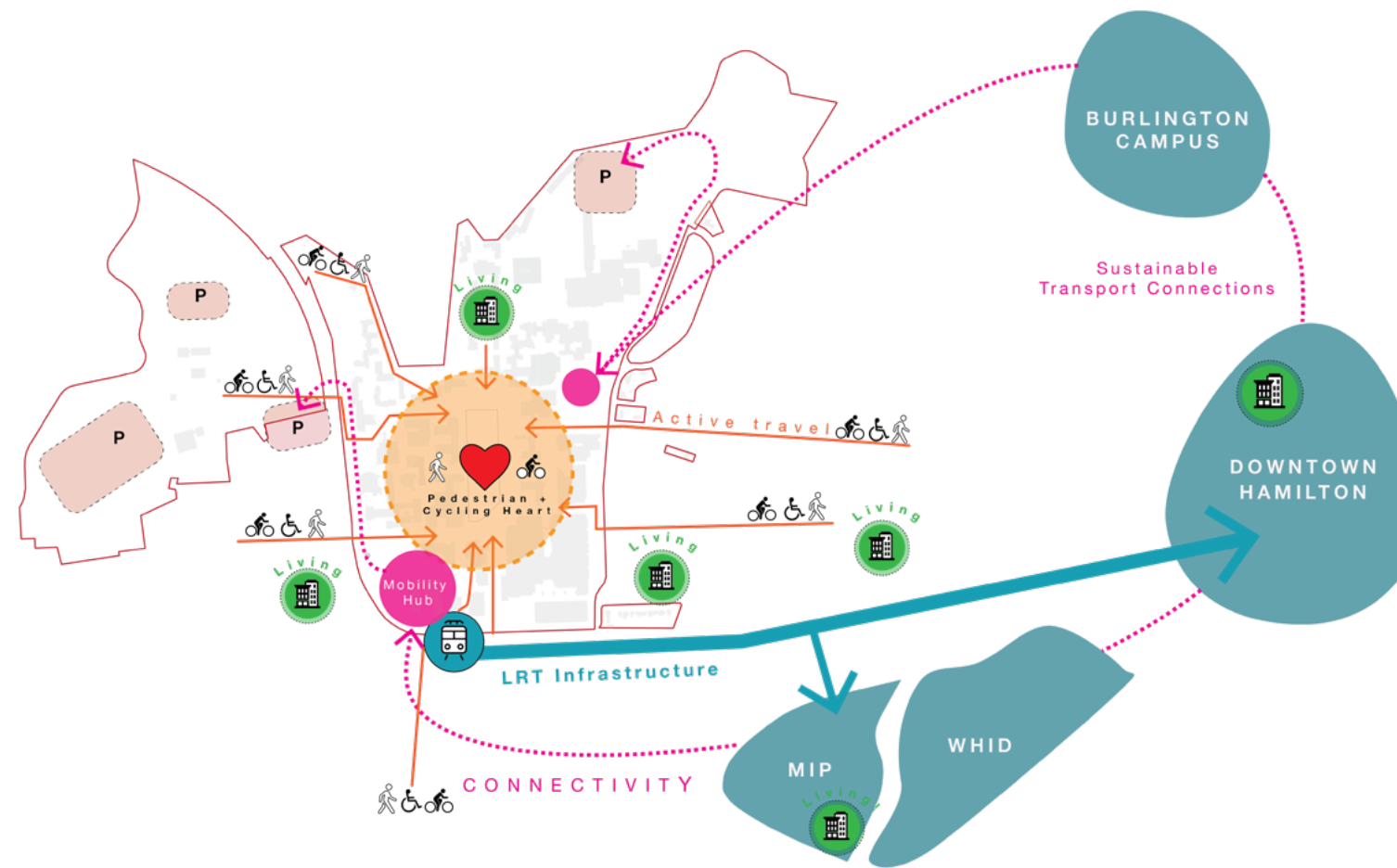
The university should encourage a shift towards more sustainable means of transportation and create a greater sense of connectivity and accessibility between its sites and the surrounding communities. This will play an important role in reducing the carbon footprint of the university and paving the way towards a more sustainable future.

The Campus Plan builds upon the foundations of municipal and regional transit services and promotes a new approach to the integration of pedestrian, cycling and mass transit links to the university's campus and locations.

It is recognized that this will require time and co-ordinated activity across a range of areas, not least through close collaboration with the City of Hamilton to establish and maintain good quality, sustainable travel infrastructure to the campus, including the delivery of the LRT link between the main campus and downtown Hamilton. Alongside this, McMaster should identify complementary transit solutions to enhance connectivity between the main campus and other campus locations, including the consideration of a low-emission fleet.

The Campus Plan considers the replacement of surface parking lots with new, sensitively located and well-designed multi-modal parking structures which will reduce the dominance of surface parking, provide required parking and create new sites for development and public realm, enabling the creation of a more people-focused campus environment.

Where new parking structures are considered for development, future transport demands should be carefully assessed and priority should be given to the provision of spaces for those with restricted mobility and also spaces dedicated for use by electric vehicles.



A conceptual image illustrating a connected and accessible university

Aims:

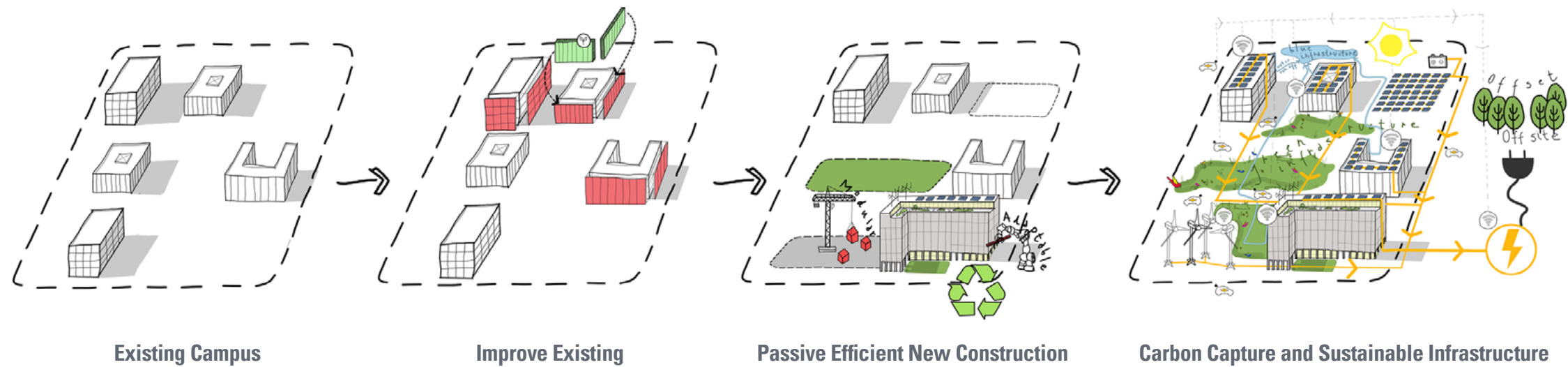
- Create a greater sense of connectivity between campuses, surrounding communities, businesses and Hamilton as a whole. Opportunities could include satellite campuses such as Burlington or specific communities such as Six Nations of the Grand River.
- Leverage the opportunities provided by the new LRT infrastructure.
- Develop an approach to housing that encourages more people to live on campus, nearby to campus and along key public transit routes.
- Encourage healthy lifestyles through enhanced active travel (walking and cycling) routes and infrastructure to and within the university campus.
- Reduce the dominance of surface parking lots by consolidating car parking provision and exploring opportunities for limiting parking in prominent locations.
- Explore opportunities for micro-transit and last mile connections, making the campus more accessible for people with a range of mobility needs.
- Support a modal shift away from carbon emitting modes and support behavioural change through promoting sustainable transportation which may include electric vehicles.
- Ensure that the university's physical campus and locations create and maintain a culture of accessibility and disability inclusion.

OBJECTIVE 6:

A NET ZERO CARBON CAMPUS SUPPORTED BY EMERGING TECHNOLOGIES

The university should strive to be a leader in the transition to net zero carbon emissions, embracing new technology and opportunities to be a living laboratory for sustainability.

This could be supported through zero and low-carbon energy generation, increased building energy efficiency in both new and refurbished buildings and carbon sequestration through the natural environment.



A series of sketches illustrating ways that the campus can transition towards a net zero carbon future

Aims:

- Support the McMaster Sustainability Strategy to achieve net zero carbon emissions on campus.
- Explore and challenge the use of space to ensure the campus is an optimal spatial envelope to reduce operational carbon.
- Address the limitations of aging building stock and infrastructure (suitability, condition, and energy efficiency) through restoration, renewal, and adaptive reuse.
- Set high design standards and environmental performance targets for new build and refurbishment projects.
- De-carbonize building operations through greater electrification and the incorporation of current and emerging technology, geothermal heat pumps etc.
- Utilize smart technology to improve the operational efficiency and effectiveness of the university estate and enhance the campus experience for all.
- Explore additional opportunities for innovative, low carbon energy generation.
- Carbon sequestration through the natural environment.



St. MASTER UNIVERSITY IS WORKING
TOWARDS A SMOKE FREE ENVIRONMENT
PLEASE SMOKE ONLY IN DESIGNATED AREAS

3.0

CAMPUS PLAN

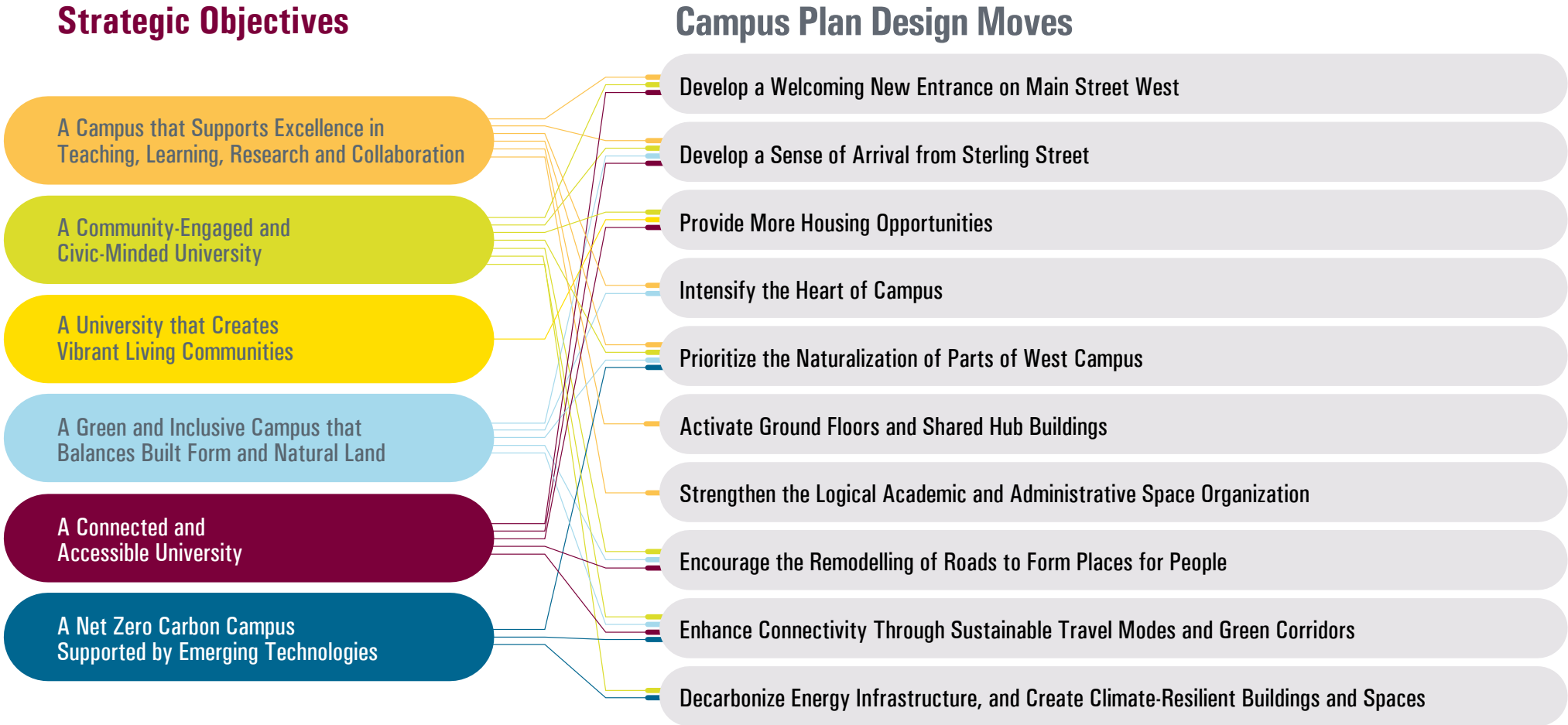
Campus Plan

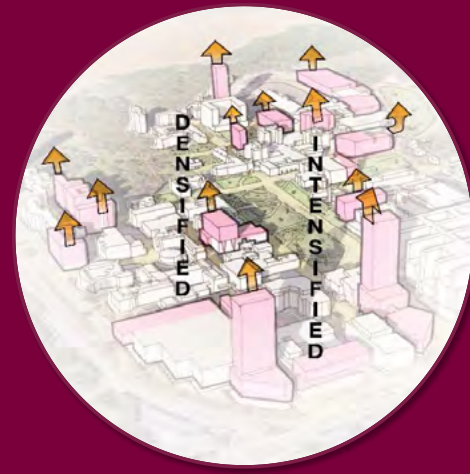
3.1 Introduction

This section of the plan outlines the overall Campus Plan strategy. This includes a series of key Design Moves which will help transform the campus, detailed proposals for specific areas within the campus, and thematic supporting strategies relating to public realm and landscape, transportation and movement, ecology and stormwater management, energy and sustainability, equity, diversity, inclusion and Indigenous Reconciliation (EDI-IR) and accessibility.

3.2 Design Moves

The Campus Plan Objectives can be delivered through a series of ten complementary Design Moves which together with the supporting strategies, provide a framework for the physical transformation of the university's campus and locations. The sequencing of the Design Moves will be determined by funding and other opportunities that will arise over time.





Develop a Welcoming New Entrance on Main Street West

Develop a Sense of Arrival from Sterling Street

Provide More Housing Opportunities

Intensify the Heart of the Campus

Prioritize the Naturalization of Parts of West Campus

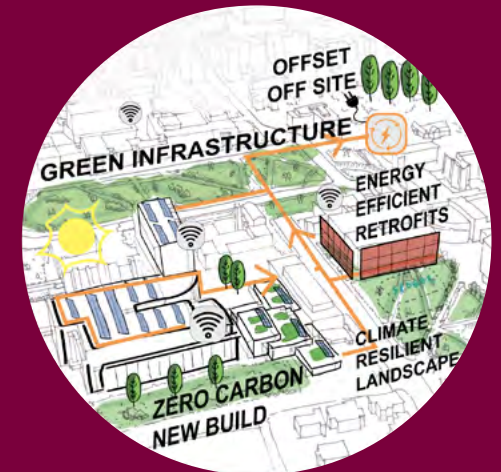
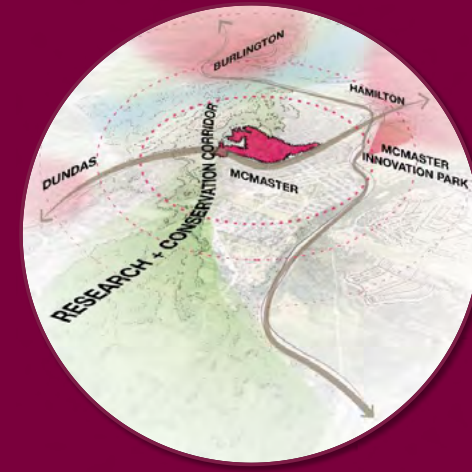
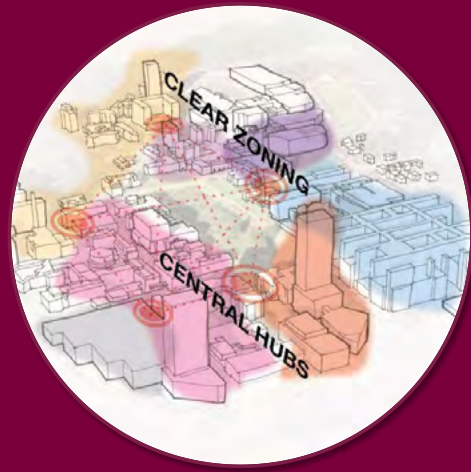
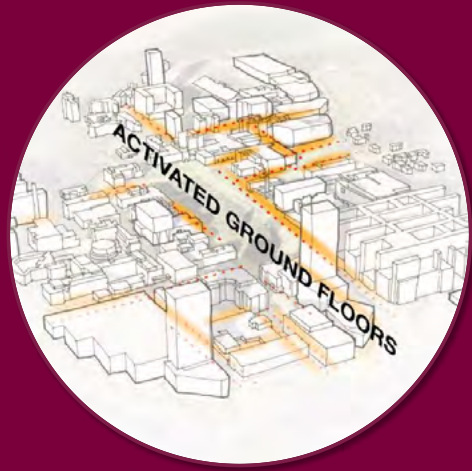
By leveraging the planned light rail transit (LRT) stop and enhanced transit infrastructure near the university’s southwest corner, the reimagining of the university’s presence along Main Street West can provide a vibrant, outward-facing and welcoming new gateway to the university that prioritizes pedestrian safety through traffic calming and limiting vehicular access to the edges of campus wherever possible. This creates new opportunities for green plaza spaces and iconic buildings to welcome students, staff and the surrounding community.

Currently dominated by sprawling surface parking lots and service roads, the re-imagining of the entrance to the university at Sterling Street can provide an attractive new green square. A welcoming arrival point from the Westdale neighbourhood will include a clear route through to the McMaster University Student Centre (MUSC) and a proposed new academic building to the north. This will also create opportunities to improve the setting and entrance to the existing Museum of Art and Mills Memorial Library, facing out onto the square to activate the space. Existing surface parking could potentially be provided within a consolidated parking structure.

To help meet a growing housing demand, three approaches to increase the supply of housing for students, faculty, Indigenous communities and equity-deserving groups should be considered: mixed-use residences on campus, new university housing nearby and walkable to campus and housing options along key transit routes.

Increased density at the heart of the campus will create a more walkable, compact and sustainable university, creating opportunities to enhance the character of the central campus green mall and improve other outdoor spaces.

Leveraging the university’s west campus location nestled within an existing fauna corridor linking Cootes Paradise Sanctuary to the Dundas Valley Conservation Area, the naturalization of key portions of the west campus provides opportunities for ecological stewardship, creating a living laboratory for research and learning and forming a conservation and research corridor for McMaster. This will be further complemented by enhancements to other blue and green infrastructure across the university’s campus and locations.



Activate Ground Floors and Create Shared Hub Buildings

Strengthen the Logical Academic and Administrative Space Organization

Encourage the Remodelling of Roads to Form Places for People

Enhance Connectivity Through Sustainable Travel Modes and Green Corridors

Decarbonize Energy Infrastructure and Create Climate-Resilient Buildings and Spaces

The university has a global reputation for interdisciplinary and collaborative research and teaching, which should be supported and enhanced by its physical campus and locations. Creating a network of student hub buildings and shared teaching facilities, alongside the remodelling, where possible, of ground levels in existing buildings to create open and inviting spaces, would provide opportunities for academic showcasing and the creation of a vibrant, collaborative atmosphere.

The university should reinforce a logical distribution of space use across the campus, with clear zones identifying where individual Faculties, administrative groups and student services would cluster. The approach strikes a balance between maintaining the integrity and identity of individual Faculties, while promoting inter-Faculty collaboration and collision.

The campus should provide a safe and accessible environment for pedestrians and cyclists. The university should seek to further pedestrianize the heart of the campus through the introduction of high-quality public green spaces, creating places for people. This should be balanced and could include enhancing accessible mobility within the campus, paratransit services, and the ongoing logistical needs of the institution required for the seamless operation of university activities.

The university should encourage increased connectivity through sustainable travel modes and green corridors by welcoming new transit infrastructure and enhanced active travel links, providing better connections between the university and surrounding areas.

The Campus Plan aligns with the university's [Sustainability Strategy](#) and [Net Zero Carbon Roadmap](#), ensuring that campus reflects the university's commitment to be a leader in reducing carbon emissions by harnessing new and emerging technologies to support its net zero targets and becoming a living laboratory for research and learning. The university should seek to create a climate resilient campus that mitigates and adapts to climate change through the design of buildings and open spaces, adoption of new technologies, to reduce the university's carbon footprint and high performance standards for new developments and renovations to reduce emissions.

3.3 The Campus Plan: Adapting in a Dynamic World

The following pages set out the detail of the Campus Plan and its proposals. It is important to note here that the Campus Plan is primarily a roadmap to help guide the cohesive development of the university's campus and locations towards a collective vision. The plan provides an estimation of campus capacity and is a guide to ensure that new infrastructure and renewal projects are implemented in ways that move the university towards this collective vision.

If there is less growth over the next decade than indicated within the Size and Shape study, then some of the capital developments shown may not be required. The amount of future development will also be dependent on other factors including hybrid work and learning strategies, space utilization rates and availability of funding.

At the core of the university's mission, and therefore at the core of the Campus Plan, is the pursuit of excellence in teaching, learning, and research and it is vital that the university's physical campus and locations support this aim.

The Campus Plan shows a denser and revitalized campus, that provides a vibrant and welcoming environment for students, faculty, staff and the local community. New and refurbished buildings will activate public spaces and provide world-class facilities to support the university's academic mission. The campus will embrace its outstanding natural surroundings, with enhanced blue and green infrastructure and the naturalization of key portions of west campus.

The removal of most vehicles from the heart of the campus and the pedestrianization of internal streets and spaces to form places for people, alongside the integration of key transit infrastructure, will have a transformational impact on the overall feel of the campus and encourage a shift towards more sustainable transportation.

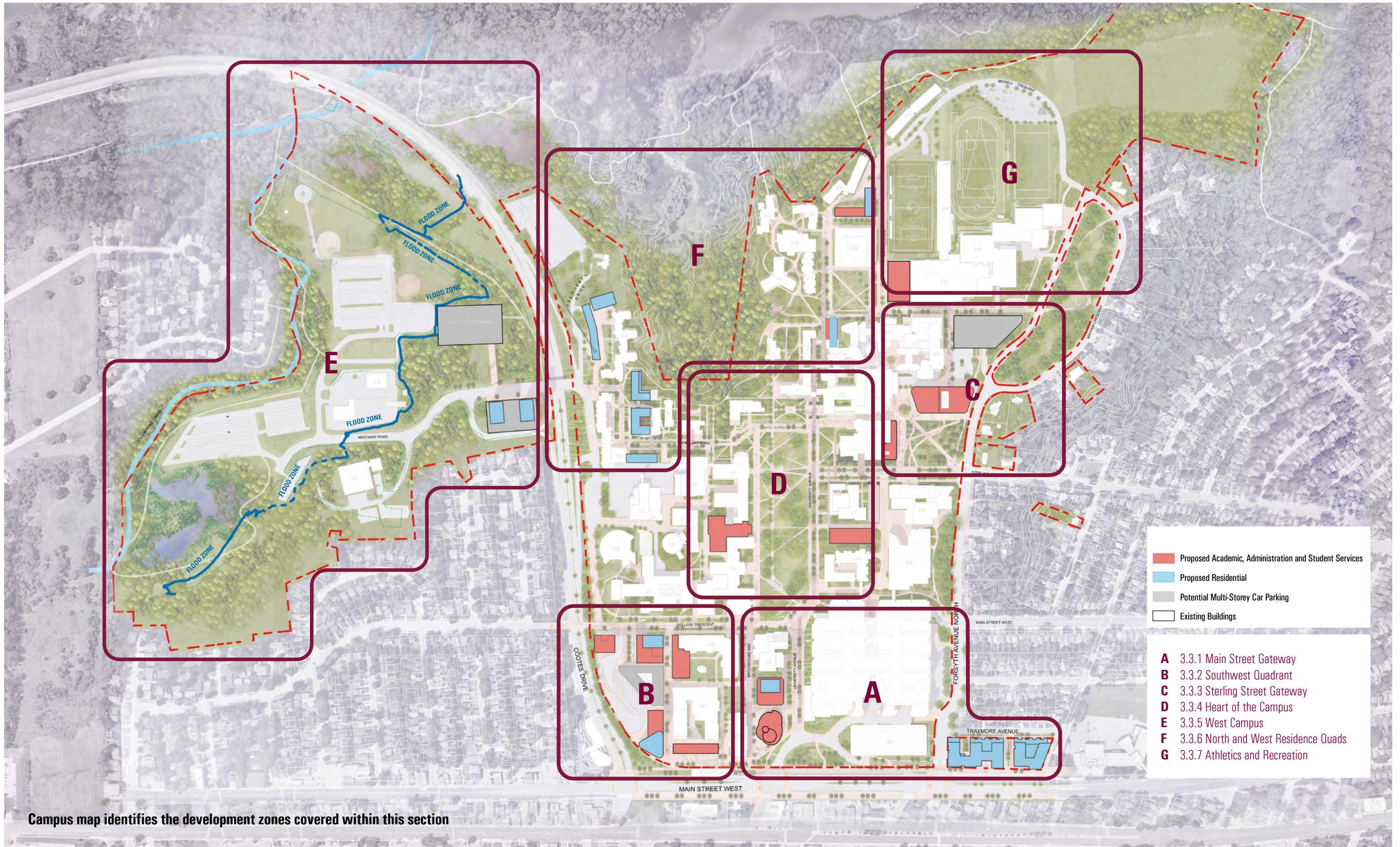
The Campus Plan divides the main campus into a series of development zones, which are illustrated on the plan opposite. Detailed descriptions of each of these zones, as well as the downtown Hamilton and Burlington campuses, and how the places and spaces within them can be transformed by the Campus Plan vision, are set out over the following pages.

Plot Code #	GBA		No. of beds	Description
	square meters	square feet		
Academic				
A-1	8,380	90,200	n/a	Arrival building
A-2	7,875	84,750	n/a	Gateway building
A-3	5,928	63,800	n/a	Institute of Applied Health Sciences building extension
A-4	6,174	66,450	n/a	Academic building
A-5	977	10,500	n/a	Life Sciences greenhouse extension
A-6	10,905	117,400	n/a	Bridge to Impact academic building
A-7	10,900	117,350	n/a	Academic building
A-8	3,044	32,750	n/a	Library and Museum extension
A-9	19,164	206,300	n/a	Academic building
A-10	17,650	190,000	n/a	McLean Centre for Collaborative Discovery
Total Academic	90,997	979,500		
Academic/Residential				
AR-1	27,041	291,050	377	Mixed-use academic and residential building
AR-2	28,350	305,150	413	Mixed-use academic and residential building
AR-3	29,275	315,100	413	Mixed-use academic and residential building
AR-4	5,055	54,400	120	Wilson College of Leadership and Civic Engagement
AR-5	11,218	120,750	268	Mixed-use living and learning building
AR-6	20,100	216,350	118	Student residence with mixed-use at grade
AR-7	4,470	48,100	180	Mary E. Keyes residence extension
AR-10	91,255	982,250	818	Downtown Campus buildings (100 Main St W, 10 and 22 Bay St S)
Total Academic/Residential	216,764	2,333,150	2707	
Residential				
R-1	57,109	614,700	1366	Lincoln Alexander Hall residence
R-2	9,240	99,450	137	Student residence
R-3	15,464	166,450	475	Student residence
Total Residential	81,813	880,600	1978	
Parking/Residential				
PR-1	50,025	538,450	460	Residential building on top of multi-storey car park
Transport/Parking/Service				
TP-1	14,000	150,700	n/a	Transit hub and multi-storey car park
P-1	33,089	356,150	n/a	Multi-storey car park facility and bus stop
SP-1	32,000	344,450	n/a	Multi-storey car park and central logistics at grade
Total Parking	79,089	851,300		

- Legend**
- Proposed Development
 - Existing Buildings
 - Property Line



SCALE 1:1250



Campus map identifies the development zones covered within this section

- Proposed Academic, Administration and Student Services
- Proposed Residential
- Potential Multi-Storey Car Parking
- Existing Buildings



Aerial view of the main university campus

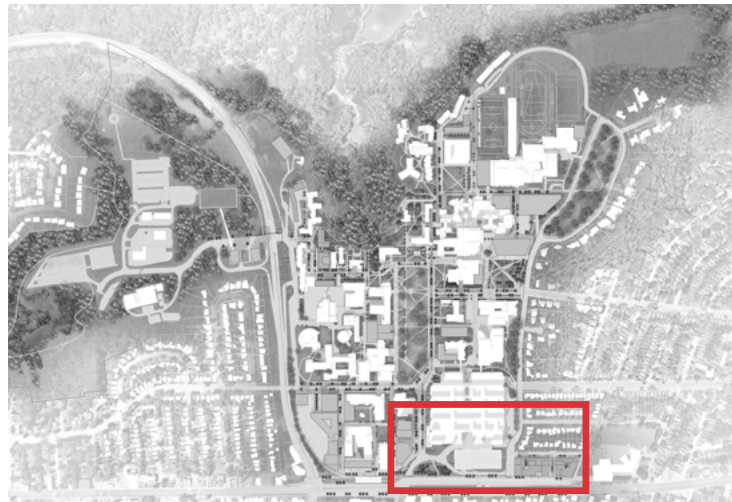
3.3.1 MAIN STREET WEST GATEWAY

Objectives

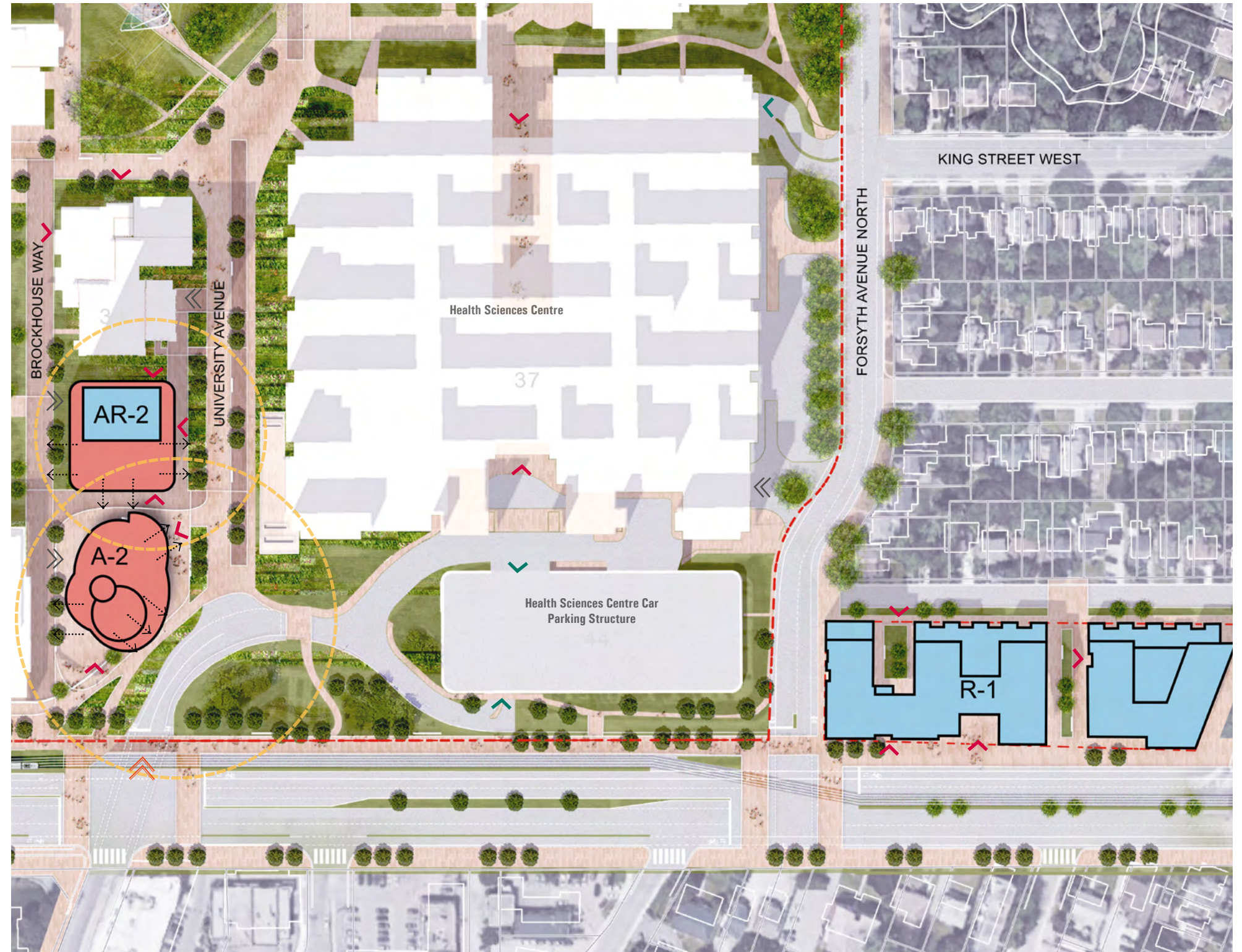
The Campus Plan envisions the creation of a new gateway to McMaster from Main Street West. It provides the opportunity to deliver a new iconic signature building within a green outdoor public space that would enhance the current sense of arrival to the university.

Context

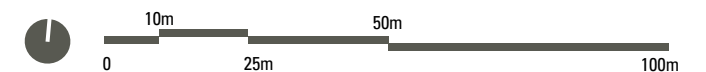
The Main Street Gateway is situated at the southern edge of the campus near the intersection of University Avenue and Main Street West. The area is currently dominated by vehicular movements and road infrastructure providing access to the university's main campus and the McMaster Children's Hospital (Hamilton Health Sciences). This context will change significantly over the course of the next ten years, with the planned arrival of the light rail transit (LRT) service acting as a catalyst to reconsider the streetscape along this key frontage to the university and improve conditions for all users, including pedestrians and cyclists.



- Legend**
- Academic, Administration and Student Services
 - Residential
 - Active Indoor/Outdoor Zone
 - Activated Facades
 - Vehicle Access
 - Pedestrian Access
 - Servicing
 - University Access
Main St W Access



Development zone plan



Development Proposals

The Campus Plan considers how new university development can contribute towards, and be effectively integrated within, a new gateway to McMaster from Main Street West.

It proposes a new signature gateway building (A-2) as an instantly recognizable icon for the university and could be the first impression of the university for visitors. Opportunity for mixed-use academic and residential space (AR-2) is proposed to the north of A-2, which could potentially provide hotel or visitor accommodation alongside teaching and conferencing facilities.

On the eastern side of Forsyth Avenue South, the new Lincoln Alexander Hall residence (R-1) will provide accommodation for around 1,300 students, bringing life and activity to the southern edge of the university.

Transportation

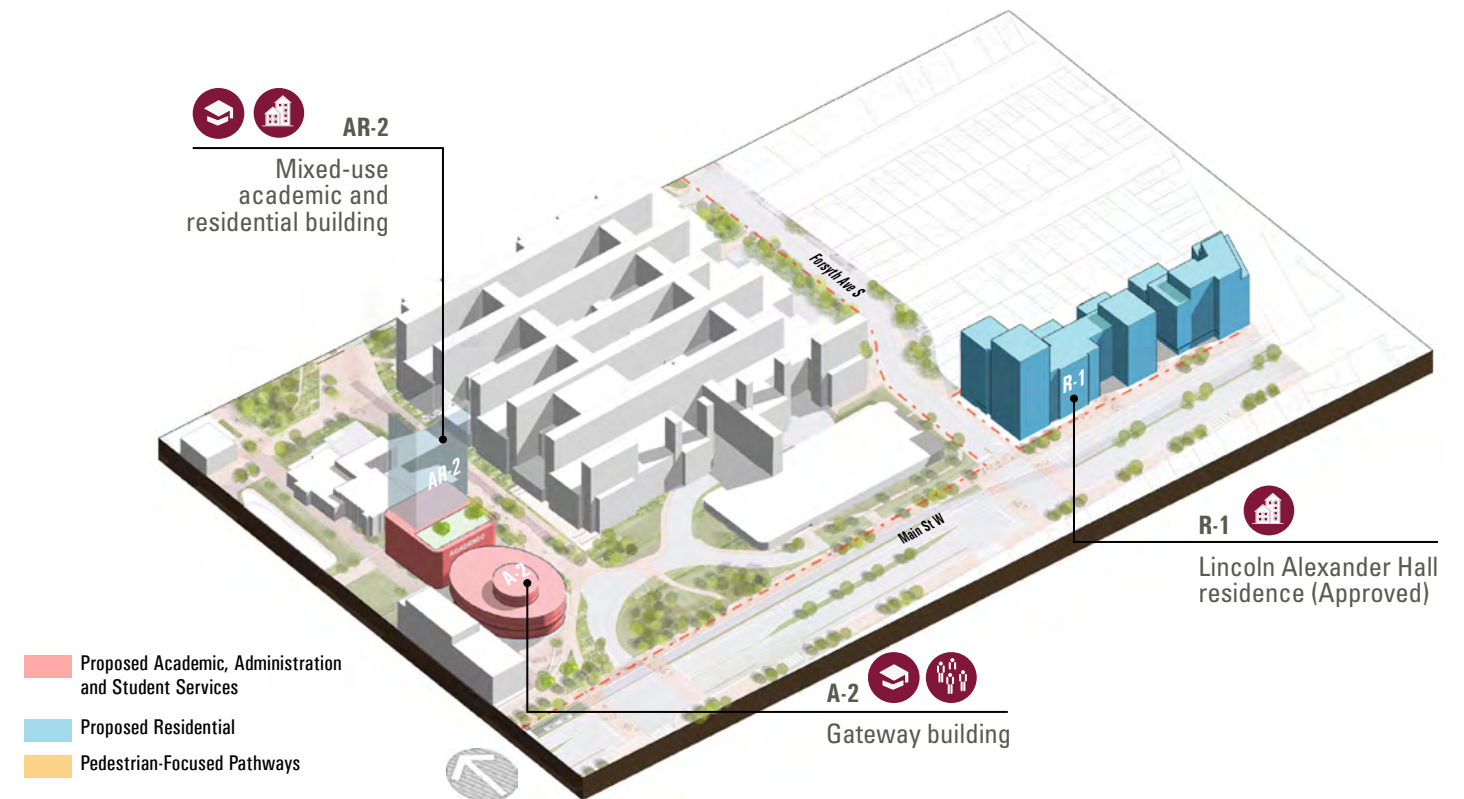
By capitalizing on the planned arrival of the LRT along Main Street West, there is the opportunity reduce the dominance of road infrastructure at this key entrance, prioritizing those arriving by transit and active travel modes. To support this, the Campus Plan proposes upgrades to pedestrian and cycle crossings across Main Street West, enhancing the link between the campus and its surrounding areas, particularly through to Ainslie Wood via Emerson Street.

While the aim is to reduce vehicular traffic through the Main Street West entrance, the plan recognizes the importance of the McMaster Children's Hospital and

protects the operating aspects of the hospital. The Main and Emerson entrance will continue to serve as the primary access for accident & emergency (A&E) vehicles and visitors, as well as one of two entry/exit points to the hospital's underground parking areas.

The Campus Plan proposes the opening-up of Forsyth Avenue South to create an intersection with Main Street West, reducing the need for vehicle access to University Avenue. As noted in the Transportation and Movement Strategy section of this plan, opening up this junction is critical to removing vehicles from the heart of the campus. The current University Avenue access to the hospital will be maintained for emergency vehicles, patient pick-up and drop-off and short-stay visitor parking. Access to the car parking facility to the south of the Health Sciences Centre from Forsyth Avenue South will be closed off (although underground parking access is maintained both at University Avenue and King Street West) and replaced with landscaping. This will simplify vehicle movements at the Main and Forsyth junction and allow access to the main hospital receiving bay from Main Street West onto Forsyth directly, instead of from University Avenue.

The intersection of Forsyth Avenue South and Main Street West is proposed as a signalized crossing to regulate vehicular traffic and ensure the safety of pedestrians, creating a vital pedestrian link between the new Lincoln Alexander Hall residence and the campus. Alongside this, improved pedestrian walkways and cycleways heading north up Forsyth Avenue South towards Sterling Street are proposed.



Lincoln Alexander Hall residence by Diamond Schmitt | Source: McMaster University

Block AR-2	Gross Building Area	
	square meters	square feet
Residential		
Typical floor plate area	750	8,050
Floor 8-28 (21 Levels)	15,750	169,550
Academic		
Typical floor plate area	1,800	19,400
Floor 2-7 (6 Levels)	12,600	135,650
Ground Floor	1,800	19,400
Total (Low Range)	30,150	324,550

Block A-2	Gross Building Area	
	square meters	square feet
Typical floor plate area	1,750	18,850
Floor 2-5 (4 Levels)	7,000	75,350
Ground Floor	1,750.0	18,850.0
Total	8,750	94,200

Block R-1	Gross Building Area	
	square meters	square feet
Typical floor plate area	3,800	40,900
Floor 2-15 (14 Levels)	53,200	572,650
Ground Floor	3,800	40,900.0
Total	57,000	613,550

Note: All calculations are preliminary and only include new build area.

Public Realm and Landscape

A remodelled pedestrian-focused and naturalized streetscape is proposed along the Main Street West frontage, integrating pedestrian walkways and cycleways within an improved public realm setting.

There is the opportunity to create a new public space in front of the new signature gateway building (A-2), made possible by a redesign of University Avenue that reduces the width of the roadway creating space for enhanced greening and planting in this space.

Additional landscaping is also proposed along Main Street West to reduce the prominence of the Health Sciences Centre parking facility (Parking Lot 44) on the overall streetscape. This would extend east across Forsyth Avenue South, enhancing the new pedestrian connection through to the new Lincoln Alexander Hall residence.



Student Innovation Center, Iowa State University by KieranTimberlake | Peter Aaron | Source: ArchDaily.com



Berklee College of Music by William Rawn Associates | Bruce T. Martin Photography | Source: ArchDaily.com

Artist's concept of a new entrance to the university from Main Street West



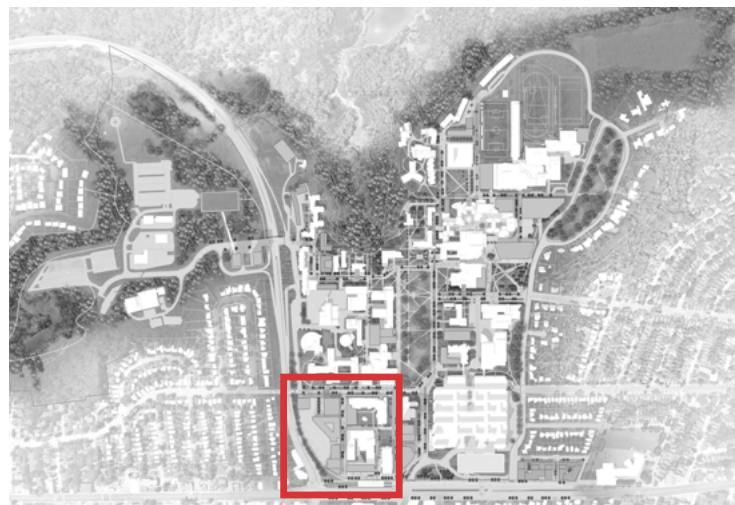
3.3.2 SOUTHWEST QUADRANT

Objectives

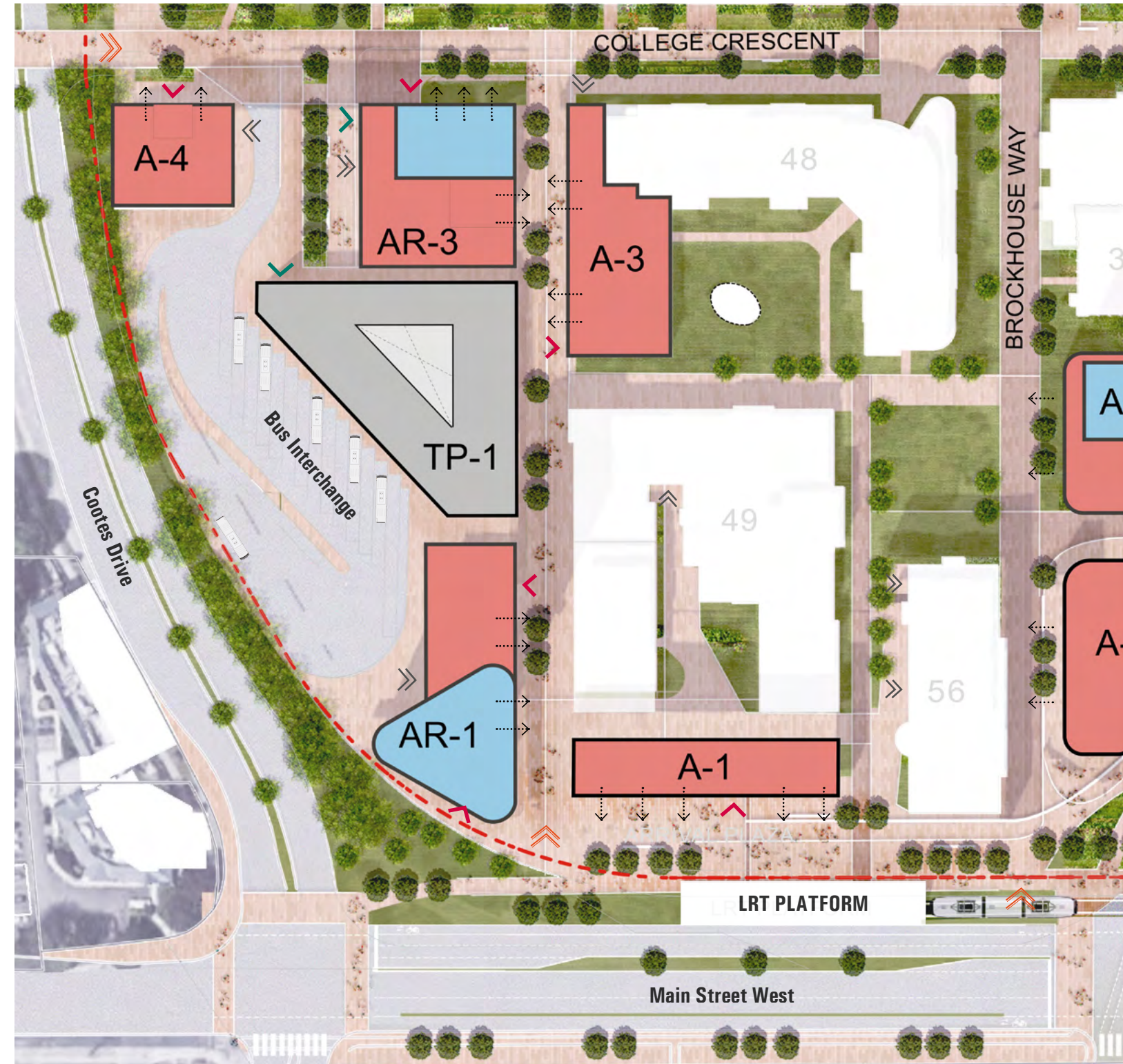
The Campus Plan envisions a new cluster of activity in the Southwest Quadrant of the main campus. It provides the opportunity to locate new and enhanced transit infrastructure alongside mixed-use academic and residential space, creating a new arrival point onto campus along Main Street West, encouraging students, staff and visitors to adopt sustainable modes of transportation in an integrated, easy-to-use hub.

Context

The Southwest Quadrant is situated at the intersection of Cootes Drive and Main Street West and is currently dominated by a large surface parking lot (Parking Lot I), which serves members of the university community. The university currently lacks presence on Main Street, and apart from the Engineering Technology Building (ETB), all buildings are set back from the street edge and separated by car parking spaces and service routes. The area is dominated by vehicular traffic accessing the main university campus from entrances on Cootes Drive and Main Street West. There is scope for significant change in this area over the next ten years, which will leverage the opportunity of the planned arrival of the LRT service along Main Street West and provide the associated infrastructure to support a modal shift towards more sustainable transportation.



- Legend**
- Academic, Administration and Student Services
 - Residential
 - Activated Facades
 - Vehicle Access
 - Pedestrian Access
 - Servicing
 - University Access
Main St W Access



Development zone plan

Development Proposals

The Campus Plan proposes the development of a new multi-modal transit hub (TP-1), which will be anchored by the new LRT connections and include municipal and regional bus transfers, secure bicycle storage and showers, car parking spaces and other amenities. Surface level car parking, which currently occupies a large portion of the site, will be replaced by a multi storey facility which will sit above the bus terminal. The design of this structure should be adaptable for other future uses such as living and learning.



Cookville GO Station by WalterFedy, Design Architects, NORR | Doublespace Photography | Source: NORR.com

A new arrival building fronting on to Main Street West (A-1) will provide a focal point for those arriving at the campus by LRT. The building steps back to create a new arrival plaza and over sails above to provide a civic presence in addition to shelter. The ground floor of this building would be open and inviting, spilling out onto the new arrival plaza, integrating the proposed new LRT stop within the public realm.

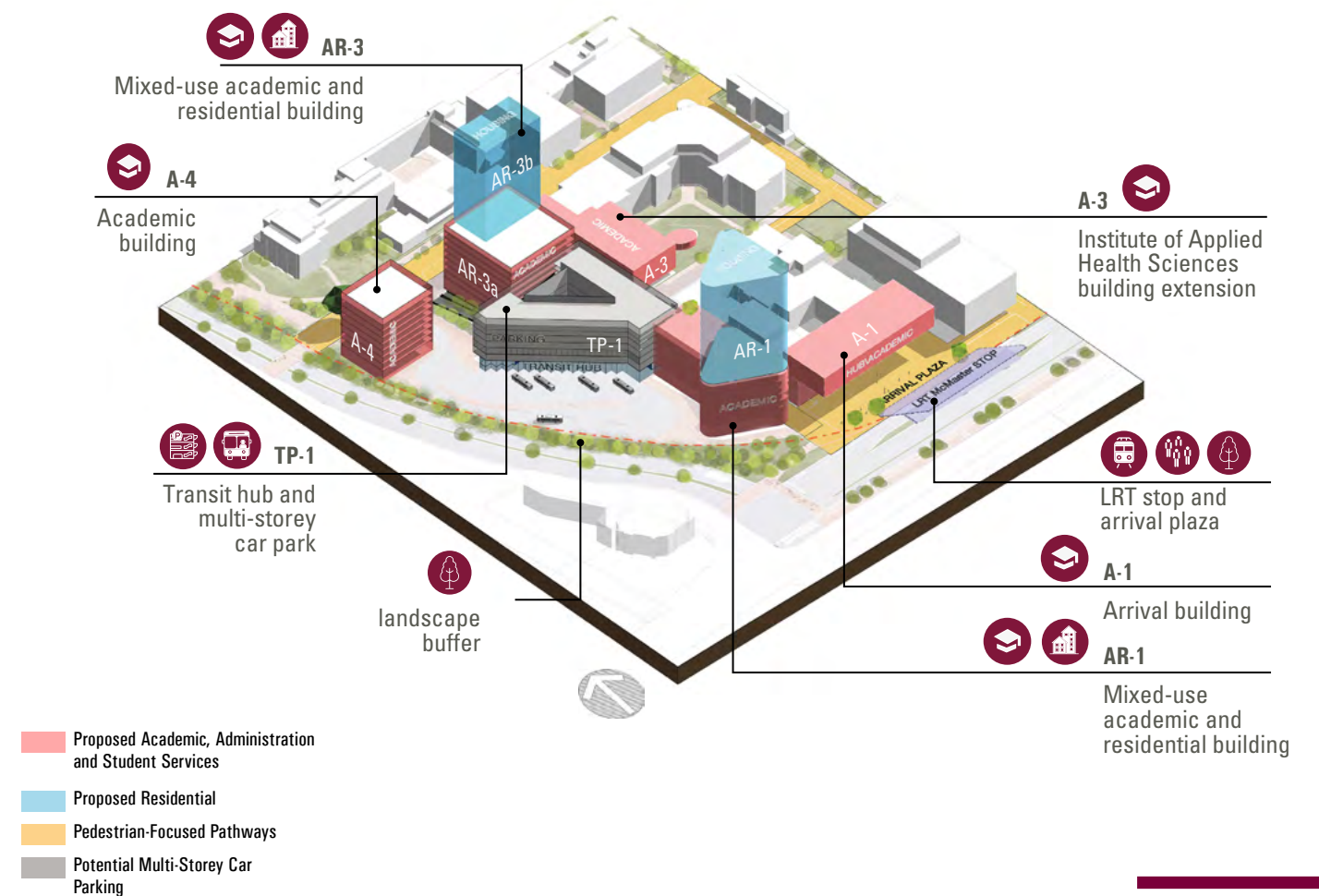


Peckham Library by Will Alsop | Source: ArchDaily.com

Also fronting on to Main Street West, the Campus Plan proposes the development of a new mixed-use academic and residential building at the corner of Main Street West and Cootes Drive (AR-1), which will be complemented by new development along College Crescent to the north of the transit hub in the form of a new academic building at the corner of College Crescent and Cootes Drive (A-4) and a new mixed-use academic and residential building (AR-3).

The Eastern edge of these buildings and the transit hub will activate and articulate a new north-south pedestrian route from Main Street West through to College Crescent and into the heart of the campus.

The Campus Plan also shows an extension to the existing Institute of Applied Health Sciences building (A-3), as proposed in the Mohawk College Master Plan to be implemented jointly with the university, creating additional academic space as well as a defined green courtyard.



Transportation

The proposed infrastructure developments at the Southwest Quadrant play an important role in the overall transportation and movement strategy underpinning the Campus Plan which is detailed later in the plan. The consolidation of transit services and car parking will make the Southwest Quadrant the main arrival point for those travelling to the campus by transit and other vehicles and active travel will be encouraged through the provision of new cycle storage and associated amenities.

The Campus Plan proposes a key change to the way that vehicles access the campus from Cootes Drive and College Crescent, providing more direct access to car parking facilities and restricting student, staff and visitor vehicle access from entering the inner campus. To achieve this, the Campus Plan shows an extension to College Crescent on its east-west axis, creating a new signalized intersection between Cootes Drive and College Crescent, where the existing pedestrian crossing is located. This will facilitate vehicular access to the transit hub but restrict access further into the campus therefore allowing the redesign of interior roads to make the campus a pedestrian-first environment. Access to the inner campus for paratransit services and smaller logistics vehicles will be maintained.

Public Realm and Landscape

Linked to the proposals for a new gateway to McMaster from Main Street West, the public realm in this area should ensure that new transit infrastructure is integrated within a remodelled pedestrian-focused and naturalized streetscape. Key to this will be the creation of a new green plaza between the proposed LRT stop and the new arrival building (A-1) providing a welcoming pedestrian environment at this key gateway to the university.

The Campus Plan also reinforces and creates new pedestrian linkages into the campus, prioritizing the pedestrianization of key internal roads, including College Crescent. Enhanced pedestrian walkways will link the new green plaza to the transit hub, which will be a key connection for those accessing new university facilities in the Southwest Quadrant or multiple modes of transportation.

A dense landscape buffer of trees and scrubs is proposed along the Cootes Drive, screening the new development at the Southwest Quadrant from the surrounding residential neighbourhoods. This will also contribute to enhancing the character of Cootes Drive, capitalizing on the surrounding natural assets to transform the character of the western edge of the campus.



Student Residence Hall, Massachusetts College of Art and Design by ADD Inc. | Peter Vanderwarker | Source: ArchDaily.com

Block A-1	Gross Building Area	
	square meters	square feet
Typical floor plate area	550	5,900
	1,100	11,850
Floor 5-7 (3 Levels)	3,300	35,500
Floor 2-4 (3 Levels)	2,200	23,700
Ground Floor	550	5,900
Total	6,050	65,100

Block AR-1	Gross Building Area	
	square meters	square feet
Residential (Low range)		
Typical floor plate area	750	8,050
Floor 8-20 (13 Levels)	9,750	104,950
Residential (high range)		
Floor 8-21 (20 Levels)	15,000	161,450
Academic		
Typical floor plate area	1,913	20,600
Floor 2-7 (6 Levels)	13,391	144,150
Ground Floor	1,913	20,600
Total (Low Range)	25,054	269,700
Total (High Range)	30,304	326,200

Block A-4	Gross Building Area	
	square meters	square feet
Typical floor plate area	900	9,688
Floor 2-7 (6 Levels)	5,400	58,125
Ground Floor	900.0	9,688
Total	6,300	77,500

Block AR-3	Gross Building Area	
	square meters	square feet
Residential		
Typical floor plate area	650	7,000
Level 8-23 (16 Levels)	10,400	111,950
Academic		
Typical floor plate area	1,850	19,900
Floor 2-7 (6 Levels)	11,100	119,500
Ground Floor	1,665	17,900
Total	23,165	249,350

Block A-3	Gross Building Area	
	square meters	square feet
Typical floor plate area	1,482	15,950
Floor 2-4 (3 Levels)	4,446	47,850
Ground Floor	1,482.0	15,950
Total	5,928	63,800

Block TP-1	Gross Building Area	
	square meters	square feet
Parking		
Typical floor plate area	2,800	30,150
Level 2-9 (8 Levels)	22,400	241,100
Bus Interchange		
Ground Floor	2,800	30,150
Total	25,200	271,250

Note: All calculations are preliminary and only include new build area.

Artist's concept of new transit infrastructure integrated with the Southwest Quadrant



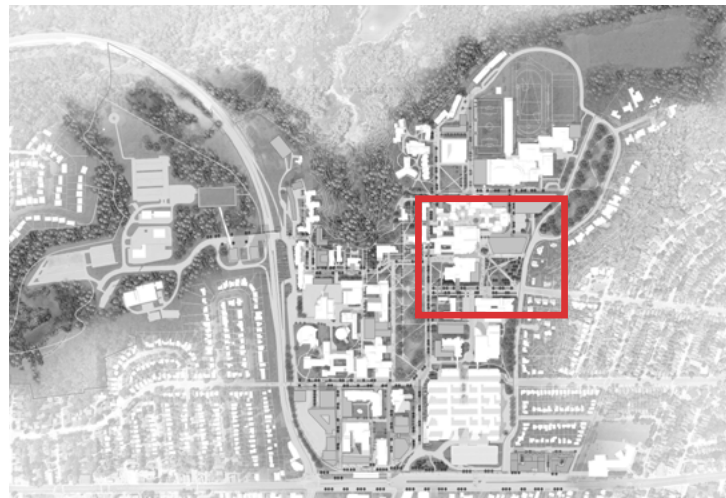
3.3.3 STERLING STREET GATEWAY

Objectives

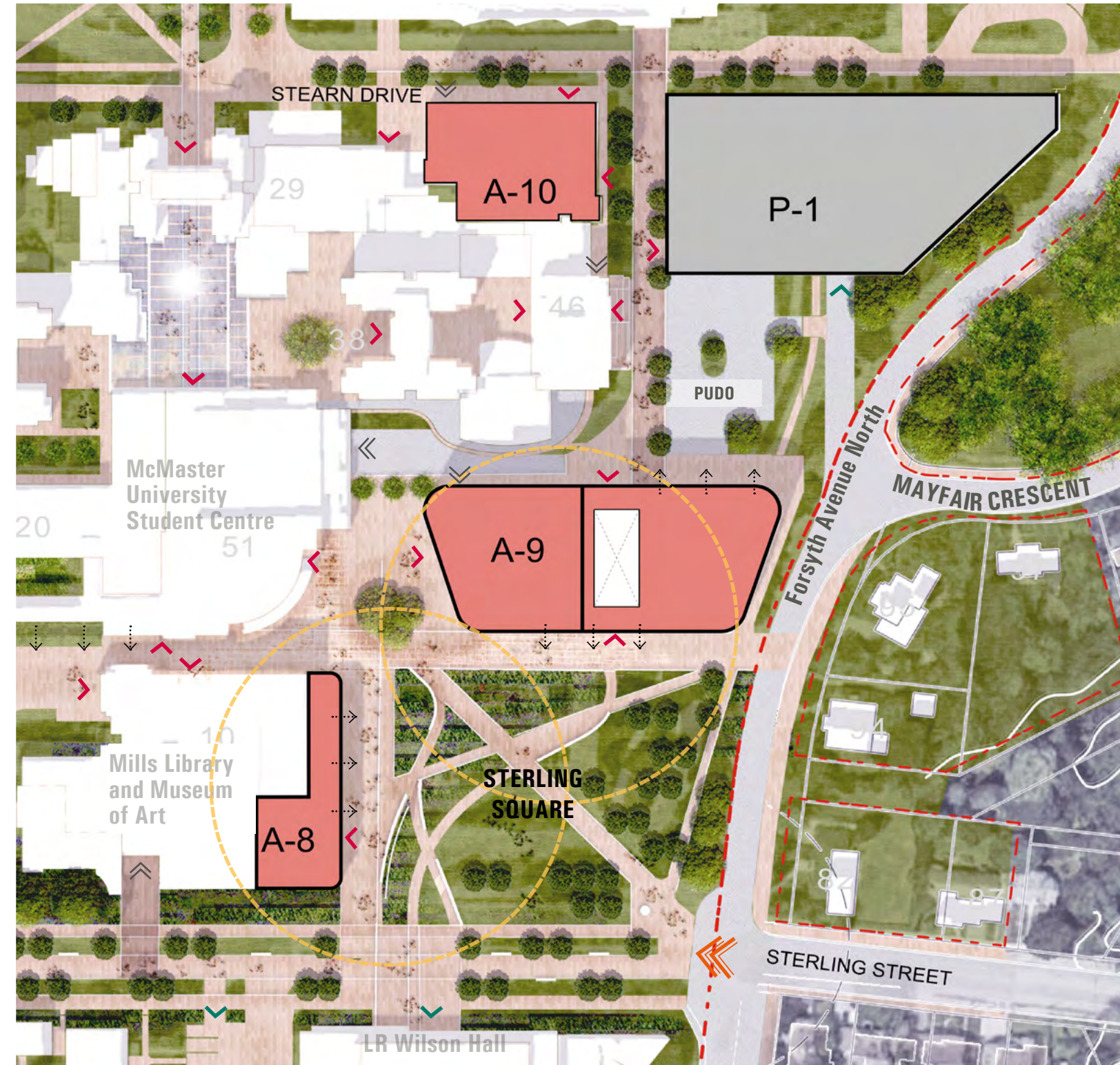
The Campus Plan vision for the Sterling Street gateway is to create a welcoming arrival point to the university from the Westdale neighbourhood. This will provide an attractive green square, creating opportunities for new academic buildings or additions facing out onto the square such as potential future expansion of the Mills Memorial Library and the McMaster Museum of Art. A cluster of civic activity in this area creates a focal point for the wider community engaging with facilities and opportunities at McMaster, which should be accessible to people of all ages.

Context

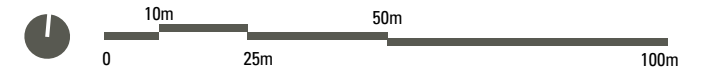
The Sterling Street Gateway is located next to one of the main entry points of the university at the intersection of Forsyth Avenue North and Sterling Street and is currently dominated by vehicle movement and large areas of surface parking (Parking Lots B, C and D). However, this is also an important pedestrian gateway to the university for those arriving by municipal transit and active travel modes; there is a clear desire line through from Sterling Street to the McMaster University Student Centre (MUSC) but this currently requires the crossing of several internal roads and parking spaces.



- Legend**
- Academic, Administration and Student Services
 - Active Indoor/Outdoor Zone
 - Activated Facades
 - Vehicle Access
 - Pedestrian Access
 - Servicing
 - University Access
Main St W Access



Development zone plan



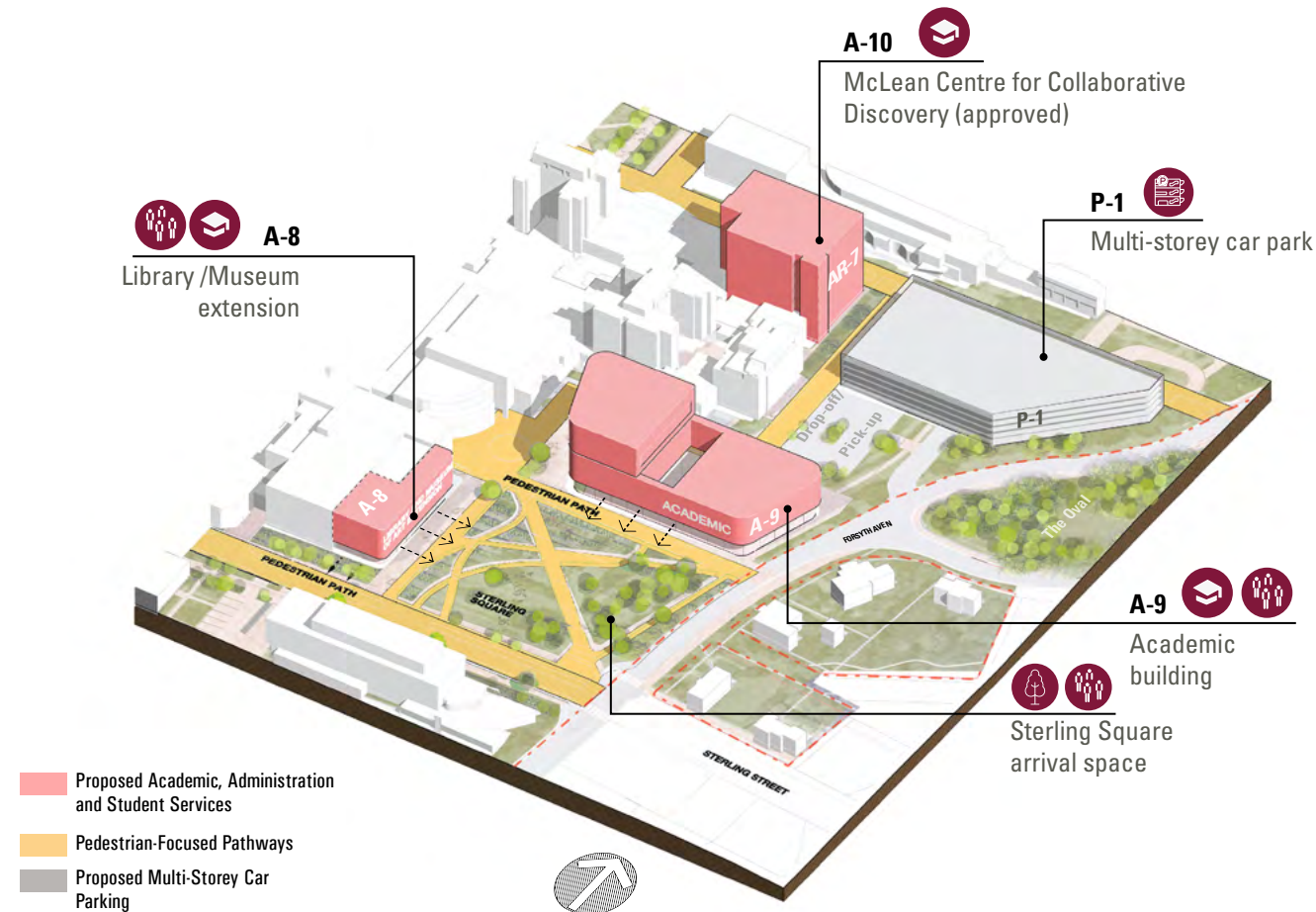
Development Proposals

The consolidation of surface parking provision will open up space at the Sterling Street gateway, enabling the development of an attractive and welcoming green entrance space to the university. The Campus Plan identifies a development site for a potential new multi-storey car parking facility and bus stop (P-1) where Parking Lots C and D are currently located, making way for a new green square at the Sterling Street gateway.

To the north of the new green square, the Campus Plan proposes the development of a new academic building (A-9) with a transparent and activated ground floor that animates the surrounding public space. The design of this building will be sensitive to the surrounding context and consider the setting of two and three-storey houses on Forsyth Avenue South. The addition of new academic space in this area could also enable the deep retrofit of buildings within the Arts Quad, including Chester New Hall (CNH), Togo Salmon Hall (TSH) and Kenneth Taylor Hall (KTH) by providing decant space to accommodate teaching and learning.

The McLean Centre for Collaborative Discovery (A-10) is currently in construction and will reorient the DeGroote School of Business to Stearn Drive. A landscaped pedestrian walkway will link the McLean Centre for Collaborative Discovery to the potential new car parking facility.

As part of a long-term strategy, the Mills Memorial Library and Museum of Art could potentially be extended (A-8) towards the new green square, providing more study spaces and creating an active frontage to animate the surrounding public space; this extension eastwards will help define the new green square and align with the eastern façade of MUSC to the north. It is recognized that current proposals to renovate the entrance to the Mills Memorial Library and Museum of Art are being considered by the university.



Block A-9	Gross Building Area	
	square meters	square feet
Typical floor plate area	3,760	40,450
Floor 6-7 (3 Levels)	5,640	60,700
Floor 2-5 (4 Levels)	15,040	161,900
Ground Floor	3,384.0	36,450
Total	24,064	259,000

Block A-8	Gross Building Area	
	square meters	square feet
Typical floor plate area	940	10,100
Floor 2 (1 Level)	940	10,100
Ground Floor	846.0	9,100
Total	1,786	19,200

Block P-1	Gross Building Area	
	square meters	square feet
Typical floor plate area	4,727	50,900
Floor 2-5 (4 Levels)	18,908	203,500
Ground Floor	4,727.0	50,900
Total	23,635	254,400

584 car stalls (117 car stalls/floor)

Block A-10	Gross Building Area	
	square meters	square feet
Typical floor plate area	1,550	16,700
Floor 5-10 (5 Levels)	7,750	83,400
Floor 2-4 (3 Levels)	5,700	61,350
Ground Floor	2,050.0	22,050
Total	15,500	166,850

Note: All calculations are preliminary and only include new build area.

Transportation

The removal of surface car parking in this area will greatly simplify vehicular movements and reduce conflict with pedestrians utilizing the Sterling Street gateway. Most of the traffic arriving at the university would travel up Forsyth Avenue North to the new multi-storey car parking facility (P-1) or to other car parking facilities in the north of the campus. The university's inter-campus shuttle system drop-off and pick-up function is located between the new academic building (A-9) and the location of a potential new multi-storey car parking facility (P-1).

Vehicles entering the campus on Sterling Street would be limited to cars with permits and visitors to park at the L.R. Wilson Hall underground car parking facility or permit holders and visitors using the McMaster Divinity College parking area. Access to the inner campus for paratransit services, accessible car parking and smaller logistics vehicles will be maintained. The current operations of the McMaster Divinity College will remain the same and are not altered by the Campus Plan.

The removal of vehicles from in front of MUSC, the Mills Memorial Library and Museum of Art and other academic buildings will also facilitate improvements to the public realm in the heart of the campus.

Public Realm and Landscape

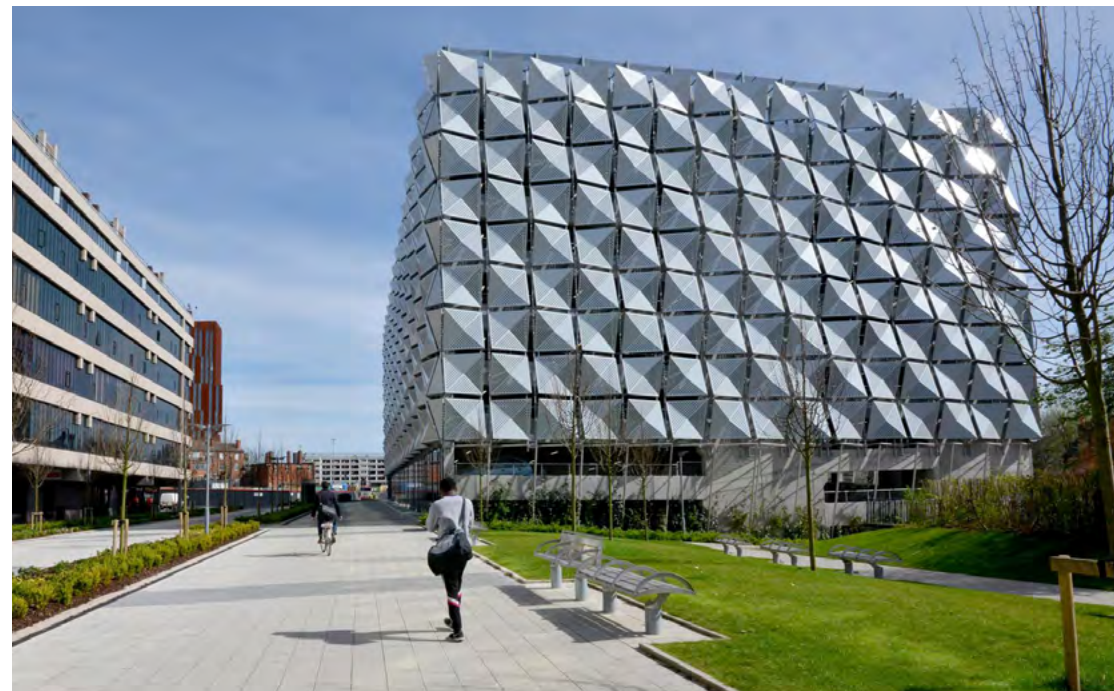
The creation of a generous green space at this gateway to the university is central to the Campus Plan vision. New green spaces appreciate the rich ecological setting of the campus while providing an active space for students, staff and the neighbouring communities. The green will provide a direct, attractive pedestrian route from the junction of Sterling and Forsyth Avenue North to MUSC, act as an outdoor social space and provide an attractive setting for planned new academic buildings.

The new green square is envisioned as a pedestrian-focused recreational space, where artistic and natural elements can coexist to create an engaging and welcoming environment. Existing mature trees will be preserved along Forsyth Avenue North and new greening and planting, as well as

spaces to sit, socialize and study, will be incorporated into the space. A set of wide steps and a raised landscaped space is proposed outside of the library and museum extension creating a possible event space and outdoor informal seating on campus.



The Technology and Innovation Centre, University of Strathclyde by BDP | David Barbour | Source: ArchDaily.com



Leeds University Car Park by CJCT | Source: Tobermore.co



McLean Centre for Collaborative Discovery by Sweeny&Co | Source: SweenyandCo.com

Artist's concept of a new Sterling Street gateway looking towards the McMaster University Student Centre



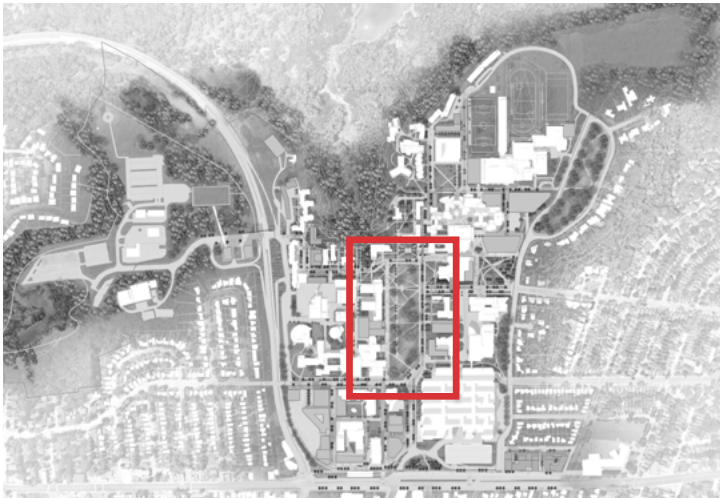
3.3.4 HEART OF THE CAMPUS

Objectives

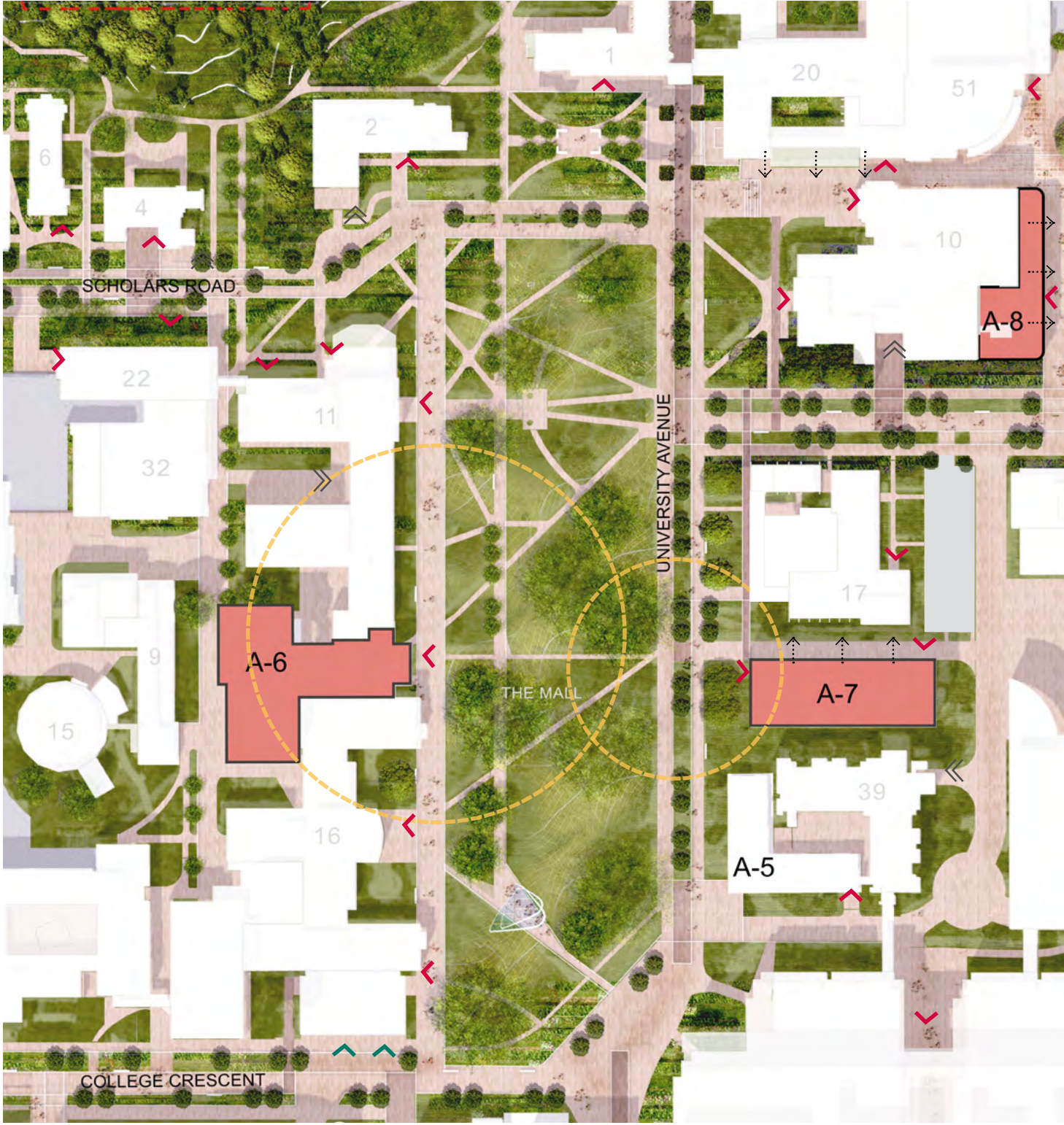
The vision for the heart of the campus includes opportunities for densification and remodelling existing building ground levels to create open and inviting spaces. This will help create a more walkable, compact, and sustainable campus, with opportunities to enhance the character of the green mall and improve other outdoor spaces.

Context

The heart of the campus contains some of the university's most iconic and historic buildings, including University Hall, which sits north of the green mall. The university's green mall is a key feature of the campus that will be maintained, but the surrounding area is dominated by wide, paved roadways. Existing buildings in the heart of the campus are inward-facing and do not animate the surrounding spaces.



- Legend**
- Academic, Administration and Student services
 - Active Indoor/Outdoor Zone
 - ⋯→ Activated Facades
 - Vehicle Access
 - Pedestrian Access
 - Servicing
 - University Access Main St W Access



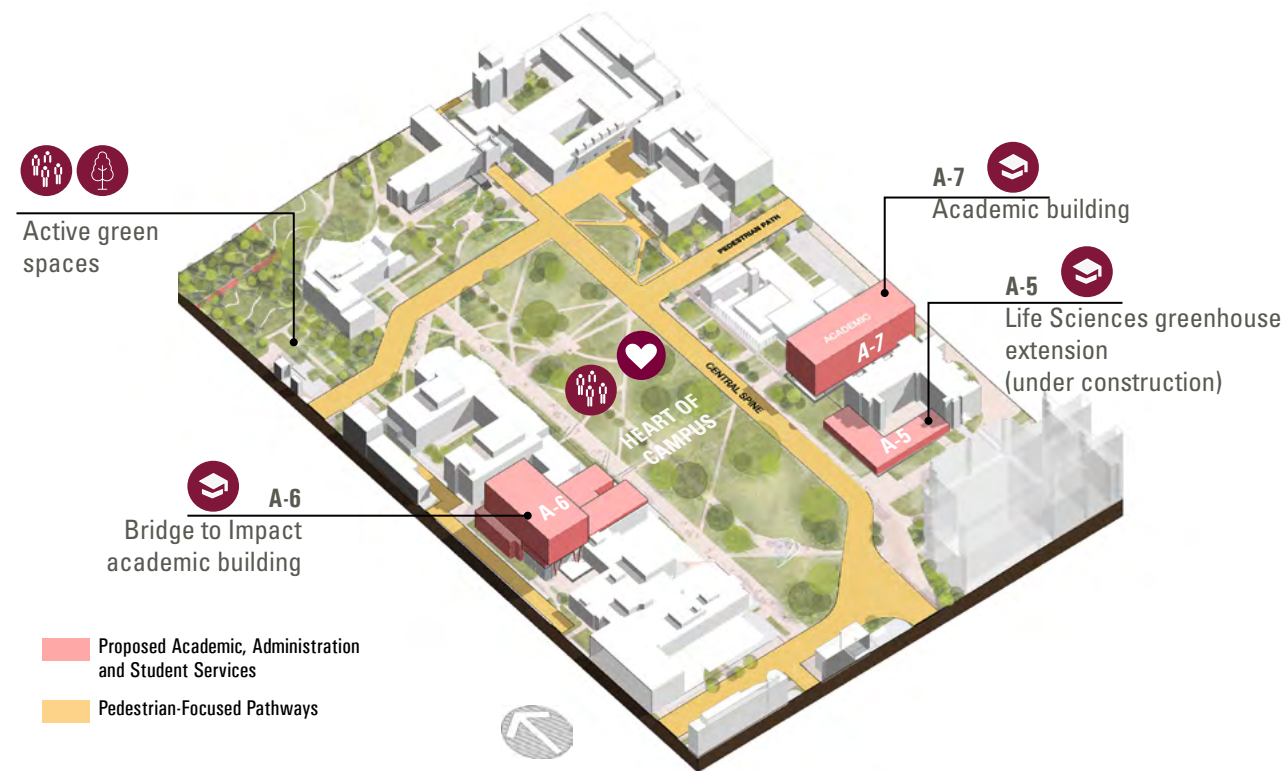
Development zone plan

Development Proposals

The green mall is well-defined by existing buildings along its western edge, however there is the opportunity to increase density with strategic in-fill development (A-6) between the John Hodgins Engineering Building and the Burke Science Building to create an informal study and collision space for students.

Along the eastern edge of the green mall, there is scope for new development which will help to define and animate this space. A greenhouse extension to the Life Sciences building (A-5) is currently under construction.

To the north of the Life Sciences Building, a new academic building is proposed (A-7) which will replace existing temporary structures and increase the level of activity and density in this area.



Block A-5	Gross Building Area	
	square meters	square feet
Typical floor plate area	977	10,500
Ground Floor	977.0	10,500
Total	977	10,500

Block A-6	Gross Building Area	
	square meters	square feet
Typical floor plate area	1,179	12,700
Floor 2-9 (8 Levels)	9,435	101,550
Ground Floor	1,470	15,800.0
Total	10,905	117,400

Block A-7	Gross Building Area	
	square meters	square feet
Typical floor plate area	1,600	17,200
Floor 2-7 (6 Levels)	9,600	103,350
Ground Floor	1,000.0	10,750.0
Total	10,600	114,100

Note: All calculations are preliminary and only include new build area.

Transportation

The Campus Plan proposals for both the Main Street West and Sterling Street have shown how vehicle access to the inner campus will be restricted, except for paratransit services, accessible parking, smaller logistics vehicles, and access to existing parking facilities at the McMaster Divinity College and L.R. Wilson Hall, enabling the pedestrianization of the heart of the campus and enhancing accessibility.

This will create a pedestrianized environment in the heart of the campus, supported by the public realm improvements and enhancements to key internal routes. It is envisaged that movement within the campus could be supported by an on-demand micro-transit service.

Public Realm and Landscape

The green mall will be enhanced with new planting and additional spaces to sit, study and socialize through the introduction of new street furniture and covered spaces. Enhanced outdoor areas will support the health and well-being of the university community and ensure that the campus is welcoming and accessible for all. Stormwater discharge from hard surfaces and buildings could be collected through the introduction of sustainable drainage systems as part of the overarching landscape strategy for the university campus.

The pedestrianization of University Avenue, College Crescent and Scholars Road will capitalize on existing planting and be supported through the resurfacing of tarmacked roadways and integration of new street furniture and green infrastructure.



Life Science Building and Greenhouse rendering, McMaster University by Moriyama & Teshima Architects



McMaster Bridge to Impact proposal, McMaster University by Montgomery Sisam Architects | Source: McMaster University



Health Sciences Building, Carleton University by Montgomery Sisam Architects | Shai Gil | Source: ArchDaily.com

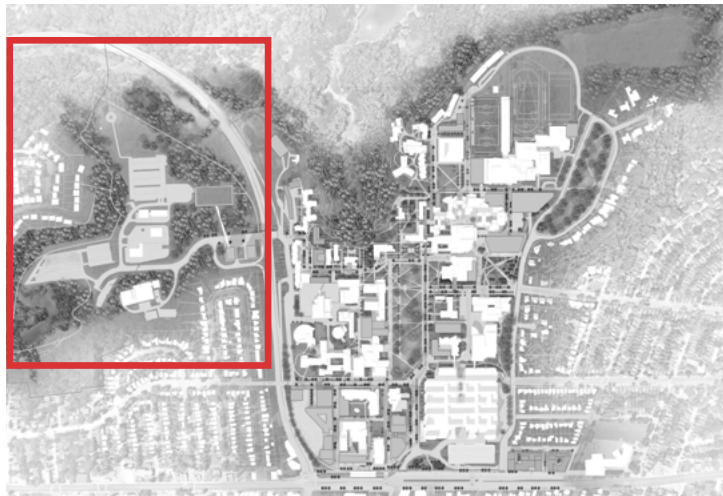
3.3.5 WEST CAMPUS

Objectives

The vision for west campus is inspired by a component of the Watershed Trust West Campus Redesign Initiative, aimed at safeguarding this biologically rich habitat. Opportunities exist to reclaim a portion of Parking Lot M to create a naturalized wetland for research, active learning and recreation. This will enhance the link between the campus and the unique biodiverse ecosystems that surround it, creating an environment that supports the physical and mental health and well-being of students, faculty, staff and visitors.

Context

The university's west campus is nestled within an existing natural corridor linking Cootes Paradise and the Dundas Valley conservation areas. It is bounded by Cootes Drive to the north and east, by University Gardens to the west, and by Ainslie Wood North to the south. West campus feels disconnected from main campus due to the topography and the single access point via the Westaway Road bridge, which crosses Cootes Drive.



A large portion of the land on the west campus is currently dedicated to surface car parking (Parking Lots K, M, N and P), however other uses include the Campus Services Building, Applied Dynamics Laboratory, McMaster Parking Services and three baseball diamonds. In the lowest part of the site there is a helipad that serves the McMaster University Medical Centre, which places constraints on the heights of any new development in this area. There is also a city-owned pump house that requires vehicular access for servicing.

The topographic survey of the west campus indicates that a large portion of this area sits below the 100-year floodplain, placing limits of the type of development that will be appropriate in this area. New uses within this area must be reviewed by the Hamilton Conservation Authority (HCA).



- Legend**
- Potential Multi-Storey Car Park
 - Residential
 - Vehicle Access
 - Pedestrian Access
 - Servicing
 - University Access West Campus

Development zone plan



Development Proposals

The Campus Plan limits development in west campus due to its dislocation from main campus and the floodplain restrictions. Proposed development is kept to the higher parts of the site on either side of Westaway Road. The Campus Plan identifies potential locations for the development of two new mixed-use multi-storey car parking facilities (SP-1 and PR-1) located along Cootes Drive, either side of Westaway Road.

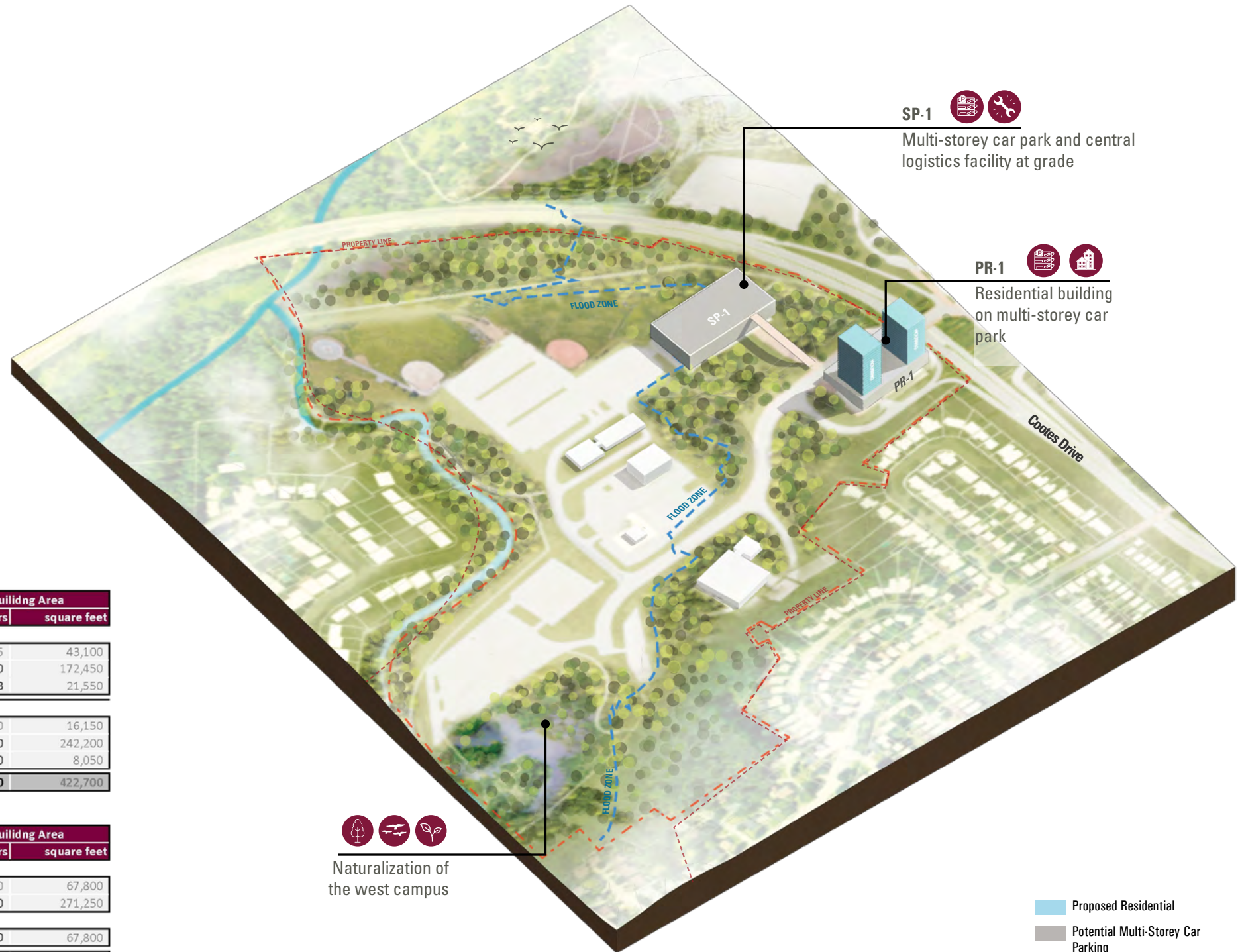
SP-1, located north of Westaway Road adjacent to Parking Lot P on the site of one of the existing baseball diamonds, combines a proposed new central logistics facility on the ground floor with car parking spaces on its upper levels. The height of this structure will not exceed that of the Westaway Road bridge, therefore minimizing its visual impact.

PR-1, located south of Westaway Road on the site of the existing Parking Lot K, combines two new residence buildings above a multi-storey parking facility. The deck on top of the multi-storey car parking facility provides the opportunity to create a landscaped amenity space for residents.

Block PR-1	Gross Building Area	
	square meters	square feet
Parking (505 car spaces)		
Typical floor plate area	4,005	43,100
Floor 2-5 (4 Levels)	16,020	172,450
Ground Floor	2,003	21,550
Residential (2 Towers)		
Typical floor plate area	1,500	16,150
Floors 6-20 (15 Levels)	22,500	242,200
Ground Floor	750	8,050
Total	39,270	422,700

Block SP-1	Gross Building Area	
	square meters	square feet
Parking (665 car spaces)		
Typical floor plate area	6,300	67,800
Level 2-5 (4 Levels)	25,200	271,250
Central Service		
Ground Floor	6,300	67,800
Total	31,500	339,050

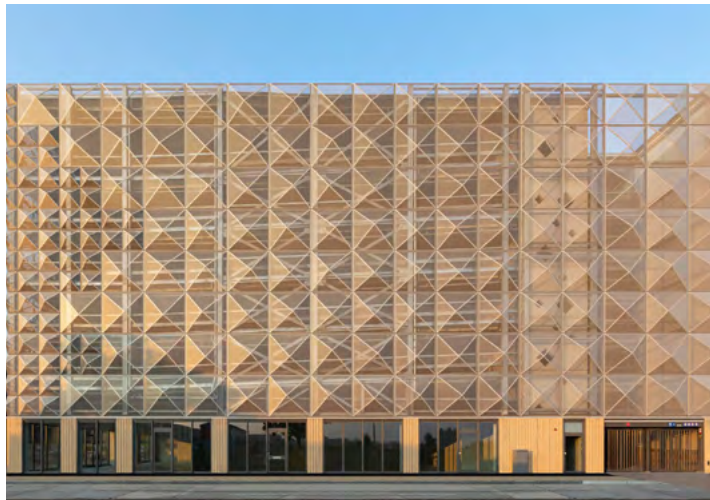
Note:
All calculations are preliminary and only include new build area.



Transportation

The Campus Plan does not propose any changes to vehicular access arrangements onto the west campus, however the location of potential new multi-storey parking facilities will provide more convenient access than surface car parking on Lot M and reduce the need for shuttle facilities.

The aspiration to centralize logistics and delivery on main campus envisions a new centralized logistics facility as an important feature of the overarching Campus Plan transportation and movement strategy. A centralized hub for service deliveries will reduce the number and size of logistics and service vehicles requiring access to the main campus. A fleet of smaller electric vehicles will then dispatch items within the campus. Larger-scale deliveries onto the main campus will be limited to avoid peak hours.



Community Car Park A1 by XVW architectuur | Isabelle Nabuurs | Source: ArchDaily.com

Public Realm and Landscape

The Campus Plan proposes the naturalization of portions of the west campus, to be achieved by the reclamation of some land currently occupied by surface level car parking at Parking Lot M. This creates the opportunity for an expanded green buffer to Cold Water Creek, and in turn ensures that the campus is better integrated with its outstanding natural surroundings, whilst also providing the opportunity to create a living laboratory environment for teaching, learning and research. The natural wetlands will provide a fantastic amenity space for students, staff, faculty and community to use and will support well-being. Parking demand, at least in the shorter term, may require that these parking space be accommodated elsewhere on campus.

The naturalization process will offer opportunities to support our commitment to Indigenous Reconciliation and collaborative land stewardship, prioritize the integration of Indigenous species across the west campus, increasing biodiversity through the planting of native flora and fauna. There will also be significant benefits in terms of flood management and mitigation, with naturalized areas providing opportunities for groundwater recharge.



Mohawk College Hoop Dance | Photo: Tom Arban



Bentley Bay Condos by Arquitectonica

Artist's concept of naturalization of the West Campus



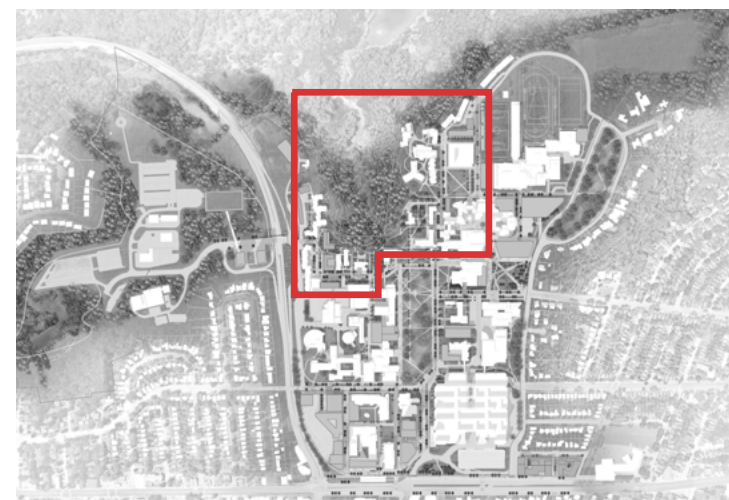
3.3.6 NORTH AND WEST RESIDENCE QUADS

Objectives

The vision for the North and West Residence Quads includes opportunities for new mixed-use living and learning buildings as well as the renewal of existing residence buildings, reinforcing a vibrant sense of community on the campus and providing more housing options for students.

Context

The north and west portions of the main campus are home to several undergraduate residences, including the Peter George Centre for Living and Learning (PGCLL). These residences are situated at a key interface between the university's main campus and the Royal Botanical Gardens (RBG) lands to the north, which should be protected and enhanced. There is an opportunity to densify housing in this area of the campus to meet the university's needs.



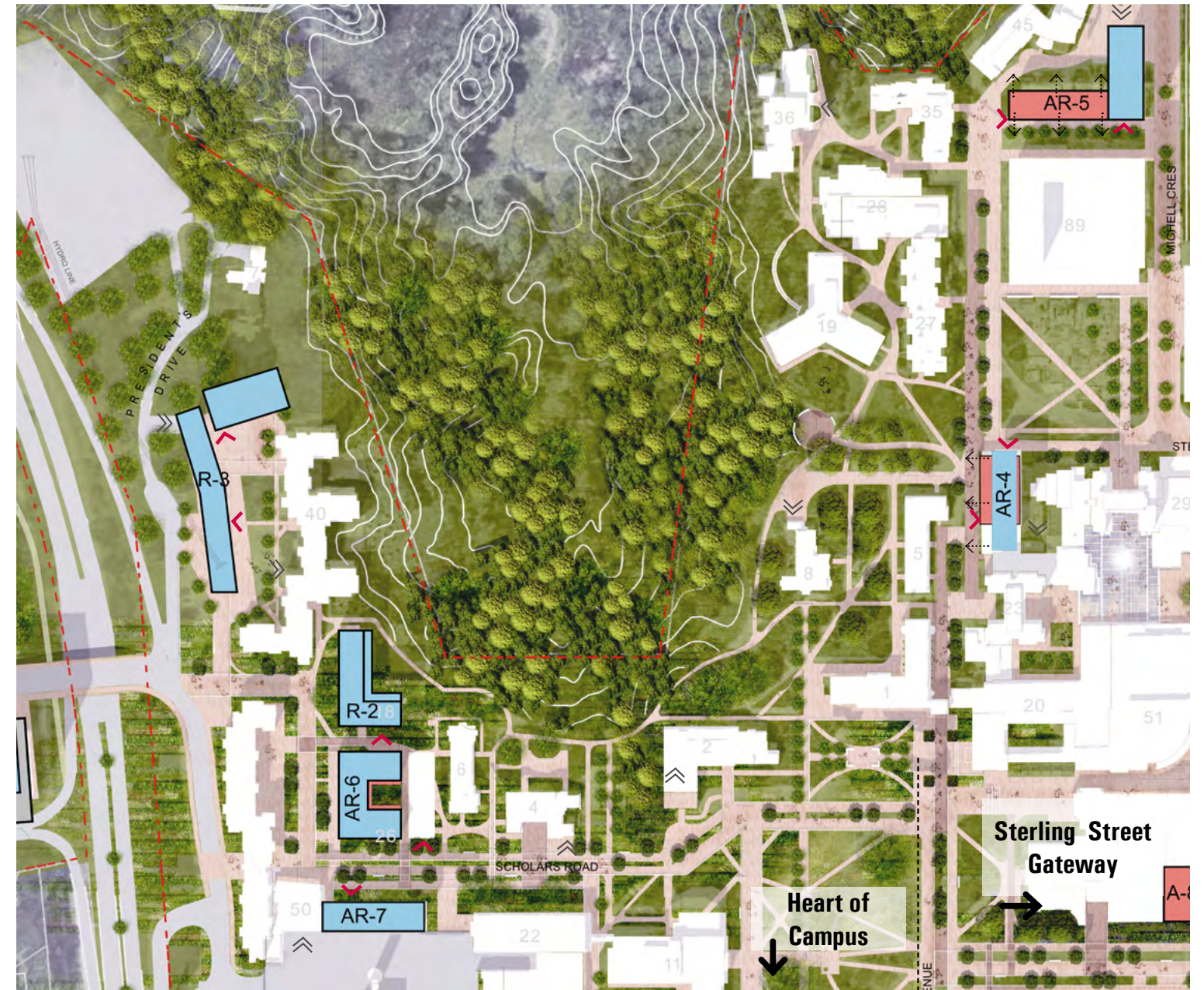
McMaster University: Campus Plan

Development Proposals

In the West Quad, a new residence building (R-3) is proposed on President's Drive adjacent to the existing Bates Residence and an addition to the Mary E. Keyes Residence building is proposed as a new living and learning space (AR-7) which will also serve as a visual buffer between West Quad and the E. T. Clarke Centre.

The Campus Plan proposes the demolition and reconstruction of Moulton Hall (R-2) and Matthews Hall (AR-6) providing increased provision of student accommodation in buildings that are fit for purpose. It is recognized that the decision to rebuild these facilities will require careful consideration of their current condition and suitability for alternative avenues of renewal.

R-2 provides opportunity for increased residential provision, whereas AR-6 is proposed as a mixed-use academic and residence building like the PGCLL, combining living and learning with a new student hub, shared teaching spaces and study areas fronting onto Scholars Road.



- Legend**
- Academic, Administration and Student Services
 - Residential
 - Vehicle Access
 - Pedestrian Access
 - Servicing



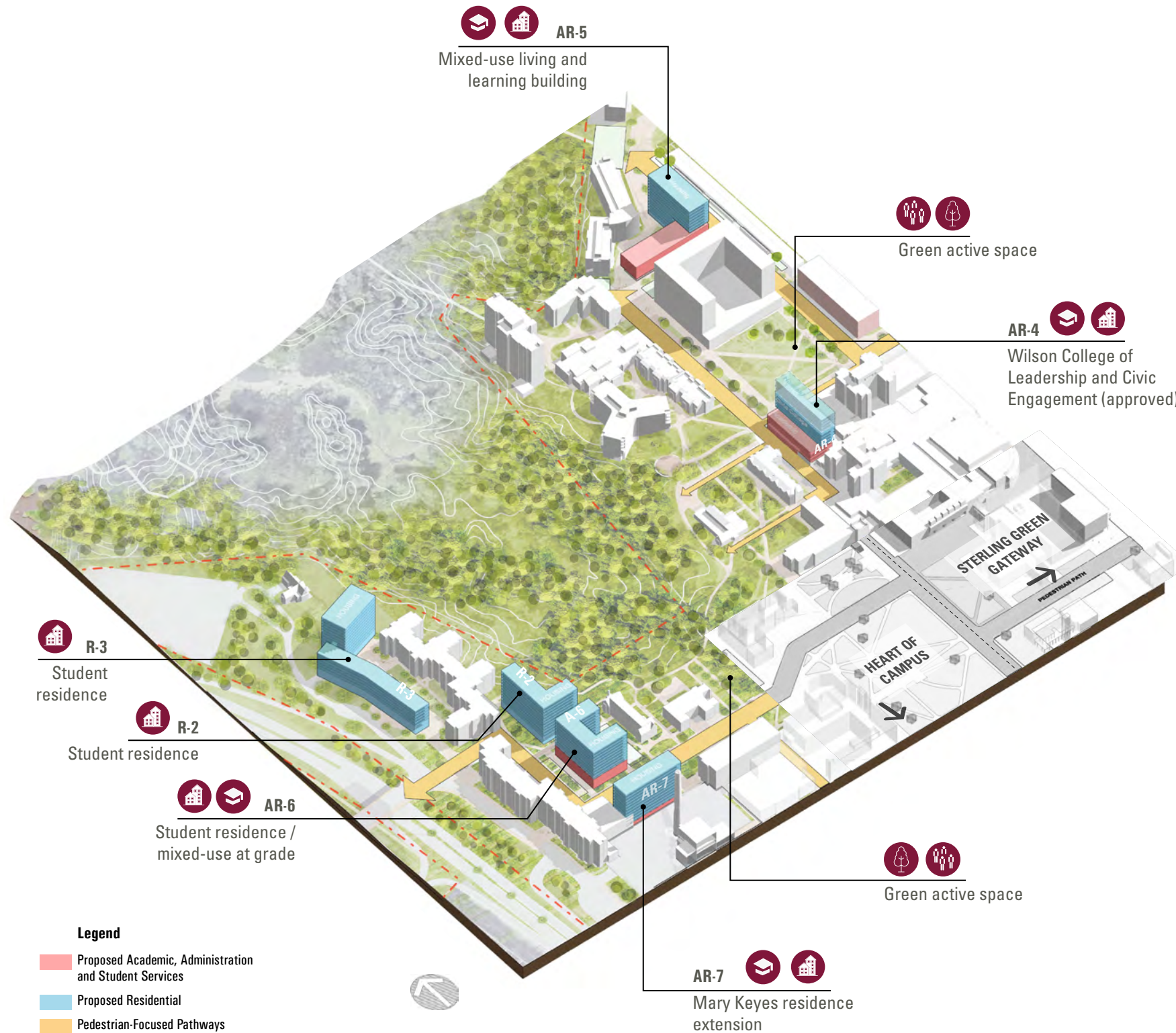
In the North Quad, between Chester New Hall and Togo Salmon Hall, the new Wilson College of Leadership and Civic Engagement (AR-4) will provide home to the leadership college, with housing provision situated above academic spaces.

The Campus Plan also proposes a new mixed-use living and learning building (AR-5) immediately north of the PGCLL on the site of the existing Parking Lot G. This will provide new academic space that faces the PGCLL and complements existing facilities in this area, as well as additional housing provision to add to cluster of residence halls in the North Quad.

Any new buildings in the North Quad should be designed in a way that responds positively to the local context and outstanding natural surroundings. Views to the Niagara Escarpment from lower elevations, such as from the McQueston Bridge should be preserved and any new development would require the completion of a viewshed impact study in alignment with the aspirations of the Niagara Escarpment Commission (NEC).

Consideration should also be given to the visual impact of new development on the setting of the group of historic academic buildings clustered around the north of the green mall when viewed from the south, particularly along University Avenue.

Consideration should be given to include housing for Indigenous students and equity-deserving groups.



Block AR-4	Gross Building Area	
	square meters	square feet
Residential		
Typical floor plate area	600	6,450
Level 4-8 (5 Levels)	3,000	32,300
Academic		
Typical floor plate area	900	9,700
Floor 2-3 (2 Levels)	1,800	19,400
Ground Floor	685.0	7,350
Total	5,485	59,050

Block AR-5	Gross Building Area	
	square meters	square feet
Residential		
Typical floor plate area	770	8,300
Floor 2-12 (11 Levels)	8,470	91,150
Ground Floor	770	8,300
Academic		
Typical floor plate area	900	9,700
Floor 2-4 (3 Levels)	2,700	29,050
Ground Floor	900	9,700
Total	12,840	138,200

Block AR-6	Gross Building Area	
	square meters	square feet
Residential		
Typical floor plate area	936	10,100
Floor 3-10 (8 Levels)	7,488	80,600
Academic		
Typical floor plate area	1,020	11,000
Floor 2 (1 Level)	1,020	11,000
Ground Floor	1,020	11,000
Total	9,528	102,550

Block AR-7	Gross Building Area	
	square meters	square feet
Residential		
Typical floor plate area	700	7,550
Floor 3-10 (8 Levels)	5,600	60,300
Academic		
Typical floor plate area	600	6,450
Floor 2 (1 Level)	600	6,450
Ground Floor	600	6,450
Total	6,800	73,200

Block R-2	Gross Building Area	
	square meters	square feet
Residential		
Typical floor plate area	770	8,300
Floor 2-12 (11 Levels)	8,470	91,150
Ground Floor	770	8,300.0
Total	9,240	99,450

Block R-3	Gross Building Area	
	square meters	square feet
Residential (Low rise component - 6 Storeys)		
Typical floor plate area	1,100	11,850
Floor 2-6 (5 Levels)	5,500	59,200
Ground Floor	1,100	11,850.0
Residential (Tower component - 12 Storeys)		
Typical floor plate area	750	8,050
Floor 2-12 (11 Levels)	8,250	88,800
Ground Floor	750	8,050
Total	15,600	167,900

Note: All calculations are preliminary and only include new build area.

Transportation

Vehicle movements in the West Quad are currently restricted, with access to Scholars Road reserved for paratransit services and logistics vehicles only. This is in line with the overarching strategy to remove vehicles from the heart of the campus and will be reinforced as part of the Campus Plan. With the removal of Parking Lot G in the North Quad, vehicle access to this area of campus will also be restricted, with no access beyond the Stadium Underground Parking except for paratransit services and smaller logistics vehicles.

The Campus Plan also proposes the creation of a new service zone around the E. T. Clarke Centre, which will be secure with access for logistics vehicles only.

Public Realm and Landscape

The recharacterization of Scholars Road will help create an attractive and welcoming environment for pedestrians in this area. This will be achieved through the resurfacing of tarmacked roadways and integration of new street furniture and green infrastructure.

The Campus Plan enhances permeability between the campus and Cootes Paradise, ensuring the rich ecological asset is visible and accessible from the heart of campus. This is achieved through partial demolition in addition to the considered footprint and massing of the new buildings.

The North and West Residence Quads will also be a focus for improvements to the interface between the main campus and natural lands to the north, ensuring that McMaster is an active partner in the protection and enhancement of its outstanding natural surroundings. Guidance and proposals relating to the stewardship and protection of surrounding natural lands are detailed within the Public Realm and Landscape and Ecology and Stormwater Management Strategies.

The removal of vehicles from the heart of the campus, allows Parking Lot G to be transformed into a student-centred active green space, supporting the objective of enhancing green infrastructure on main campus.



New College Student Residence, University of Toronto by Saucier + Perrotte | Marc Cramer | Source: ArchDaily.com



North Residential Commons, University of Chicago by Studio Gang | Tom Harris Photography | Source: ArchDaily.com

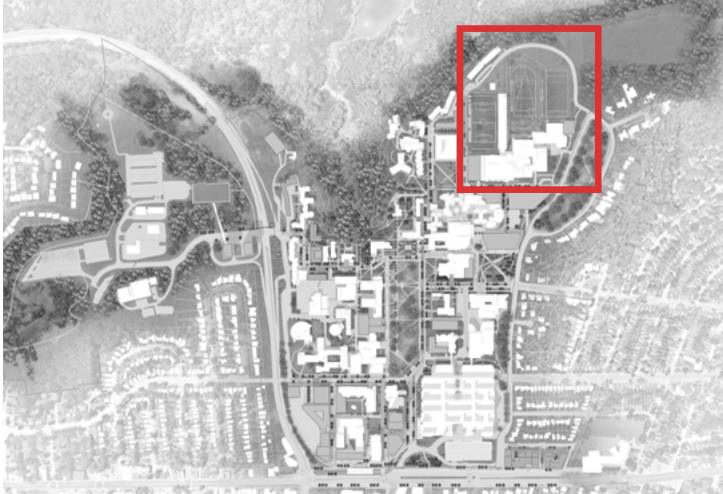
3.3.7 ATHLETICS AND RECREATION

Objectives

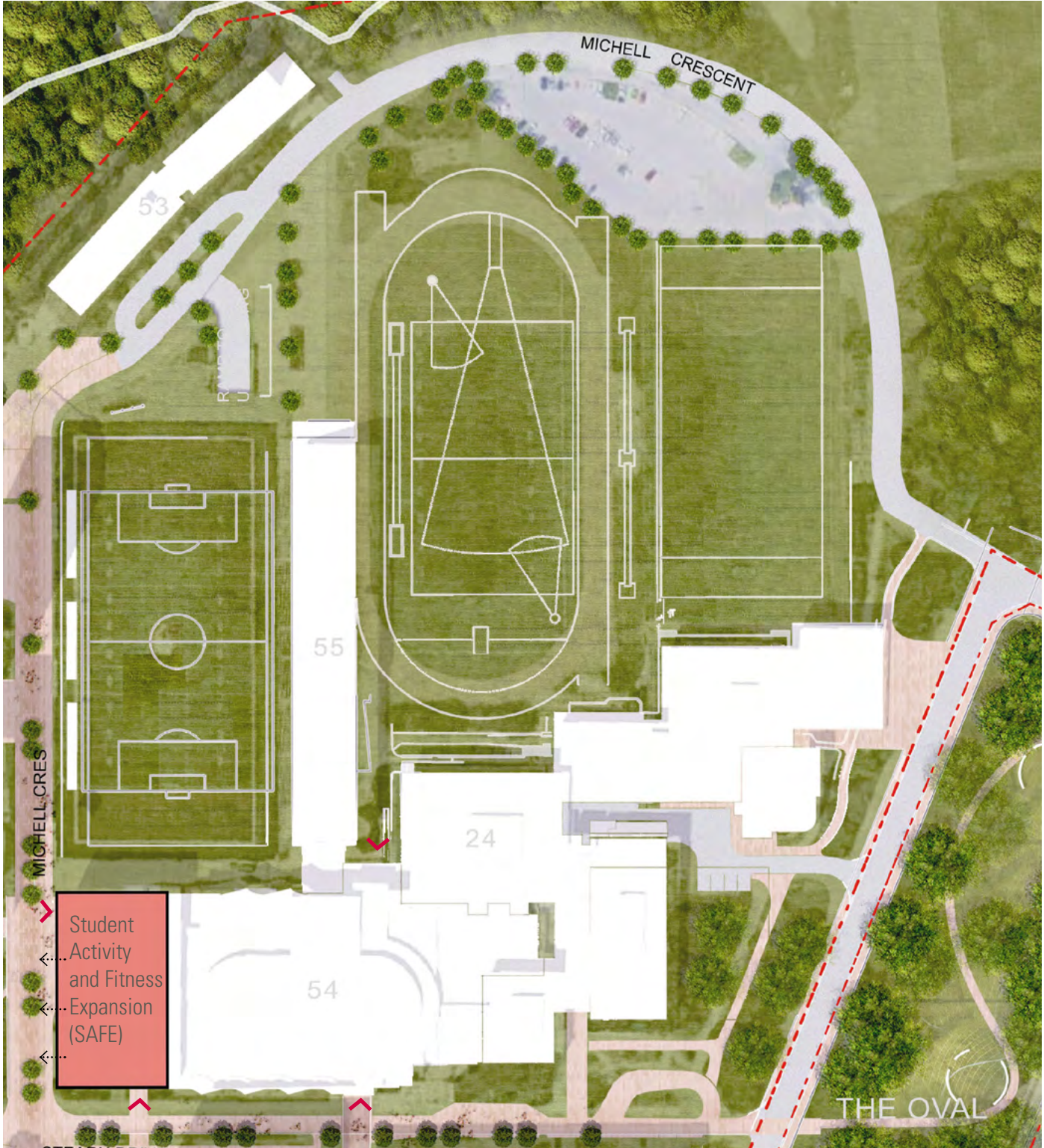
McMaster’s athletics and recreation facilities sit at the northernmost area of the university’s main campus, providing services and facilities that support the health and well-being of students, faculty, staff and members of the local community. There have been extensive improvements to the facilities in this area in recent years, and therefore the Campus Plan proposes to focus on enhancements to the public realm and landscape, promoting better integration of the university’s campus within its natural surroundings.

Context

The Athletics and Recreation area is home to the David Braley Athletic Centre, Ron Joyce Stadium, Ivor Wynne Centre, and Mona Campbell Outdoor Track, providing a range of athletics and recreational facilities for students, staff and members of the local community to enjoy. Informal recreational activities also take place on 10-Acre Field, which lies to the northeast of the athletics and recreation facilities. There is a significant amount of underground car parking beneath the stadium, as well as some surface parking at Parking Lot H. Immediately north of Parking Lot H, there is an area of temporary surface parking on gravel, which sits at the boundary of the main campus and Cootes Paradise ravine to the north.



- Legend**
- Academic, Administration and Student Services
 - Vehicle Access
 - Pedestrian Access
 - Servicing



Development zone plan

Development Proposals

The university is currently undertaking a program of expansion and improvements to the Athletics and Recreation facilities on the campus through the Student Activity and Fitness Expansion (SAFE) project which will provide a new 10,000 square foot facility including a high-performance weight room, turf field, expansion to the Pulse gym, dance studios and a student hub.

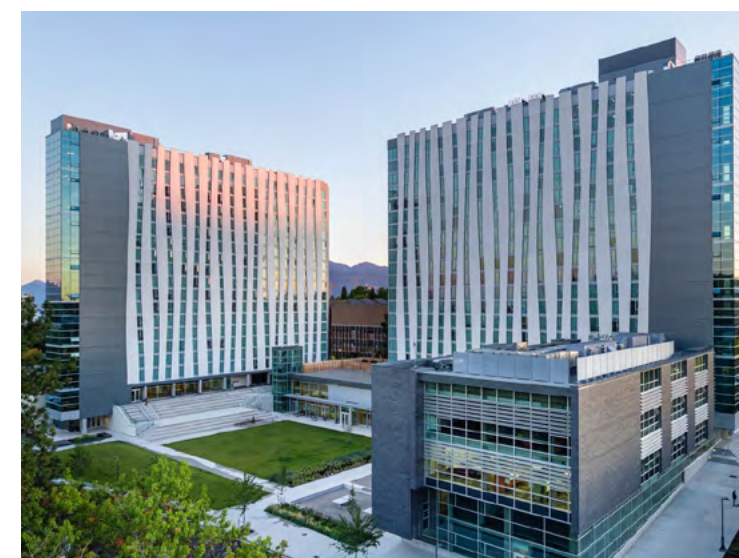
Transportation

Vehicle access to the Stadium Underground Parking and Parking Lot H will be maintained through the Campus Plan, however, it is proposed that access to these zones of parking will be around the periphery of the campus (via Forsyth Avenue North and Michell Crescent instead of Stearn Drive), supporting the objective of removing vehicles from the heart of the campus. In addition, as detailed in the proposals for a reimagined Sterling Street gateway, a potential new multi-storey parking facility and bus stop will be developed to the south of the athletics and recreation zone. This facility will be particularly valuable for access to events held during evenings, weekends, and outside of term time, providing additional parking and transit options for those travelling to the university.

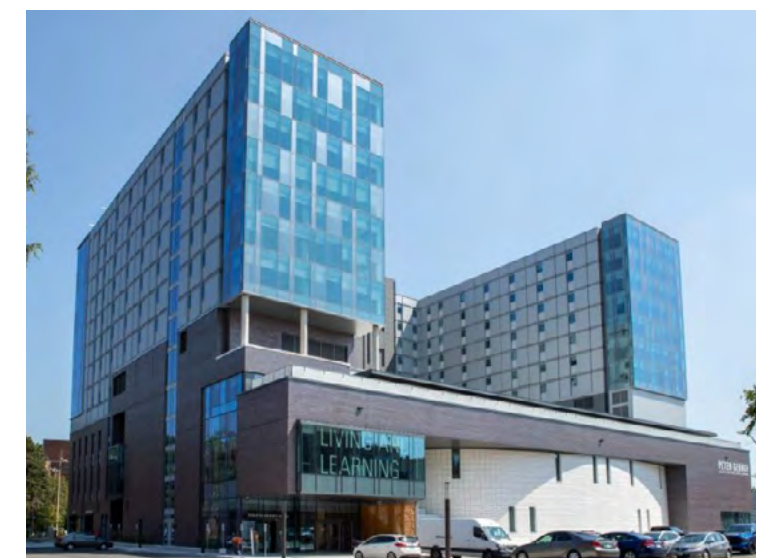
Public Realm and Landscape

The Campus Plan proposes the removal of temporary gravel surface parking to make way for re-naturalization along the top of the south bank of the ravine, using native non-invasive species to protect the neighbouring natural areas of Cootes Paradise to the north. Other opportunities to improve green and blue infrastructure in this area, such as increased planting on the Oval, should also be considered.

There are also opportunities to promote greater stewardship of surrounding natural lands through clearer marking of trail heads and new signage to educate trail users on appropriate use of trails and the habitat restoration efforts underway within the marshlands that are owned and managed by the Royal Botanical Gardens, forming part of the UNESCO Niagara Escarpment Biosphere Reserve and the heart of the Cootes to Escarpment Eco-Park System.



Orchard Commons Student Residence, University of British Columbia by Perkins + Will | Source: UBC.ca



Peter George Center for Living and Learning, McMaster University by Diamond Schmitt Architects | Georgia Kirkos | Source: McMaster.ca

3.3.8 DOWNTOWN HAMILTON CAMPUS LOCATIONS

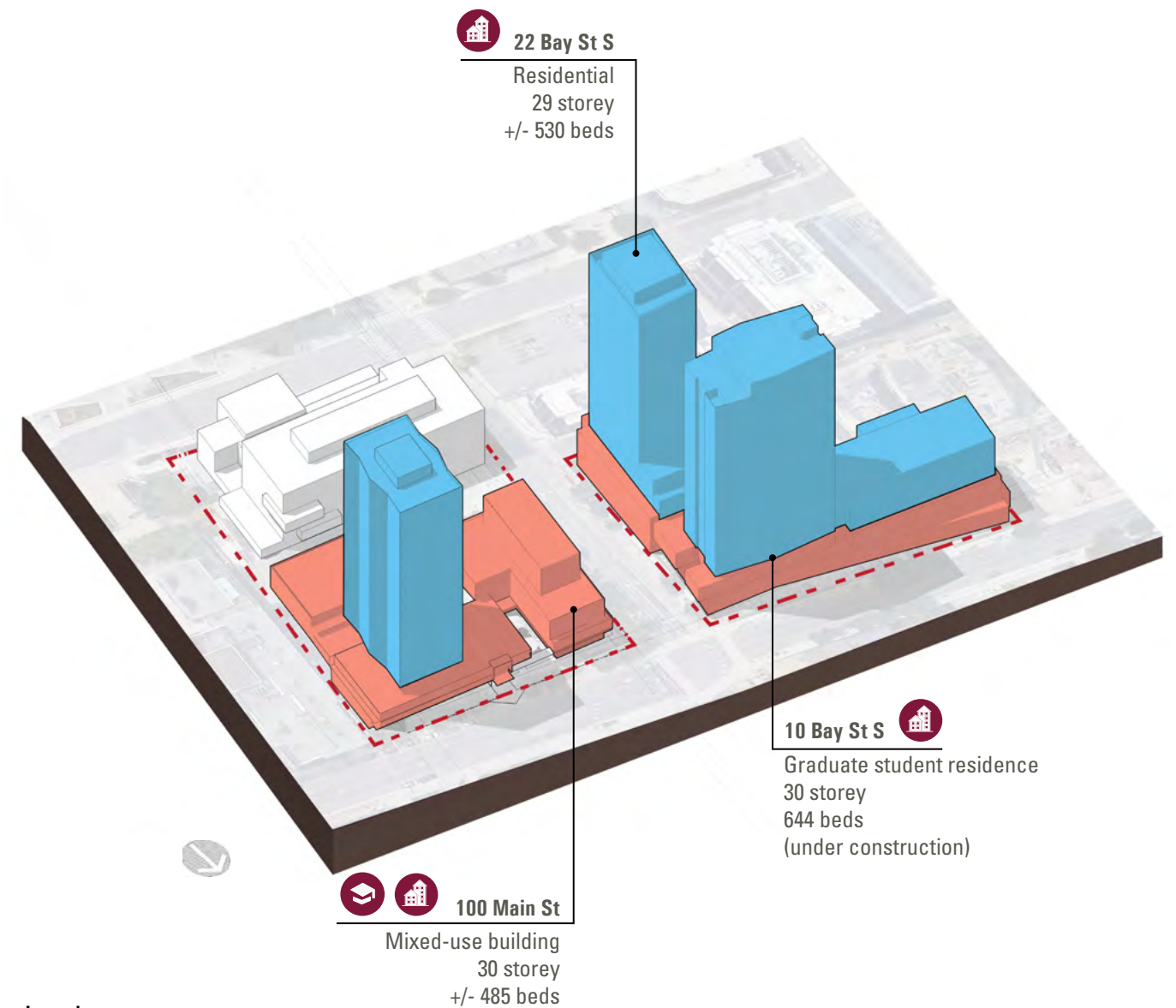
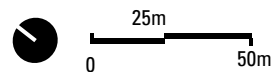
Objectives

The vision for McMaster's Downtown Hamilton Campus locations is for growth that complements development on the university's main campus and reinforces McMaster's important role and presence within Hamilton. Development in downtown Hamilton is a key aspect of the university's strategy to provide more housing options and will supplement the additional supply which is proposed on and near main campus.

Context

McMaster's Downtown Hamilton Campus locations are home to the McMaster Centre for Continuous Education (CCE), University Advancement, and Financial Services at 1 James Street North, and the Faculty of Health Sciences and a number of external partners at the David Braley Health Sciences Centre at 100 Main Street West. In addition to these facilities, the university has opened a new graduate residence located on the southwest corner of King Street West and Bay Street South: the 10 Bay Graduate Residence, which houses 600-plus graduate students and their family members in a 30-storey building.

McMaster owns two potential development sites in downtown Hamilton at 22 Bay Street South and 100 Main Street West. These are located between the 10 Bay Graduate Residence and the David Braley Health Sciences Centre. Located in the heart of downtown Hamilton and along key transit routes with access to the university's main campus, these sites have significant development potential for a variety of uses.



Legend
■ Proposed Academic / Mixed-Use
■ Proposed Residential

Development Proposals

22 Bay Street South, which is owned in partnership and would be developed as a Public-Private Partnership (P3), could accommodate a mixed-use residential tower similar in height and scale to other new development in this area, including the 10 Bay Graduate Residence. 100 Main Street West is a larger plot, which could accommodate one or two mixed-use residential towers of a similar height.

New university housing in downtown Hamilton could accommodate graduate students, faculty, staff, Indigenous

communities and equity deserving groups, complementing the 10 Bay Graduate Residence, but may also be appropriate for upper-year undergraduate accommodation.

Non-residential uses on these sites could include commercial, leisure, or potentially academic use. Although the primary location for new academic facilities is on the main campus, development at downtown Hamilton may be considered appropriate for uses linked to the adjacent David Braley Health Sciences Centre or other academic uses that require high levels of public access.

Transportation

McMaster’s Downtown Hamilton Campus is located along key transit routes, connecting its facilities to the main university campus and other locations within Hamilton. The sites are within walking distance of the HSR MacNab Street Bus Terminal, as well as the planned LRT network.

Public Realm and Landscape

The proposed new development at 22 Bay Street South and 100 Main Street West should capitalize on opportunities to integrate with the new 10 Bay Graduate Residence and David Braley Health Sciences Centre, creating a new pedestrian-focused civic space which will act as an amenity area for residents and the wider community alike.



Artist’s concept of McMaster University Downtown Campus locations

3.3.9 BURLINGTON CAMPUS

Objectives

Development at McMaster's Burlington campus should support the ongoing success of the DeGroot School of Business, providing complementary facilities and public realm improvements to enhance the experience of those teaching and learning at this location.

Context

McMaster's Burlington Campus is located adjacent to the Queen Elizabeth Way (QEW) in the city of Burlington and is surrounded by a range of largely industrial and commercial premises. The Burlington Campus is home to the Ron Joyce Centre, part of the DeGroot School of Business, offering MBA and executive education programs. There is a small portion of developable land adjacent to the Ron Joyce Centre, which could complement existing facilities on the site.

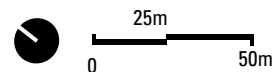
Development Proposals

Situated next to a major highway, the range of new uses that would be appropriate on the Burlington Campus must be carefully considered.

Due to its location, which is remote from the main campus, the site should only be considered for complementary Faculty of Business programming, interdisciplinary programming joined to the Faculty of Business, or for hotel / short-stay development along with related amenities like food & beverage, leisure and workspace. The university could also look at opportunities to work with the City of Burlington to review zoning laws, creating opportunities to diversify the potential uses at the Burlington Campus and consider complementary uses such as student accommodation.

Opportunities for new development at the Burlington Campus include the potential for a developer-led hotel and leisure scheme, which could serve students, faculty, staff, Indigenous communities and equity-deserving groups at the DeGroot School of Business, alongside the general public and other local businesses in the area, as well as business-led partnerships in mixed-use spaces,

providing opportunities for students to work directly with emerging businesses in start-up and incubator spaces. This could complement existing business partnerships at MIP, providing opportunities for interdisciplinary work between the Faculties of Business, Science and Engineering across a range of areas such as in cleantech.



Transportation

Given its location, access to the Burlington Campus is mainly by private vehicle. A shuttle service provides a link to the university's main campus.

Public Realm and Landscape

In recognition of the remote nature of the Burlington Campus, consideration should be given to creating some outdoor amenity space between the existing DeGroot School of Business and any new development. Efforts to enhance and naturalize the stormwater creek to the rear of lot should also be considered to improve the natural quality of the area and create a positive feature on the site.



Artist's concept of McMaster University's Burlington Campus

3.4 Supporting Strategies

Six thematic strategies have been developed to support the delivery of the Campus Plan vision, providing technical guidance for the development of future projects. These strategies are:

- Indigeneity, Accessibility, and Equity, Diversity and Inclusion
- Academic Organization
- Public Realm and Landscape
- Transportation and Movement
- Ecology and Stormwater Management
- Energy and Sustainability



Indigenous House, University of Toronto Scarborough by Brook McIlroy | Source: UTSC.ca

3.4.1 INDIGENEITY, ACCESSIBILITY, AND EQUITY, DIVERSITY AND INCLUSION (EDIA)

Indigenous Community Consultation and Recommendations.

As we look to the future growth and development of our campus, it is important to reflect on the university's relationship and responsibility to the land. How can we, as we grow, look to honour the values set out in the Dish With One Spoon treaty to peaceably share and care for the resources around the Great Lakes?

Indigenous subject matter experts from within the university community, Indigenous community leaders from the Indigenous Education Council, and Joint Indigenous Advisory Committee Group (JIACG) were consulted to provide guidance and insights into the Campus Plan.

Key recommendations from the Indigenous consultation sessions include:

- Provide options for land-based learning on campus through consultation with instructors and design of teaching spaces to support this process.
- Planning of capital infrastructure projects must consider priorities such as climate change, food security, water security, contamination and sustainability.
- Make connections between language and the land: provide opportunities for students, staff and visitors to understand the cultural significance of the land and learn about native ecology through design of landscape and natural spaces, signage and self-guided tours in Indigenous languages.
- West Campus naturalization to uphold our commitment to Indigenous Reconciliation and collaborative land stewardship
- Consider provision of housing to support Indigenous students and communities.

- Consider mobility off-campus to support those that may not have access to public transit and consider on-site mobility to support Indigenous Elders.
- Ensure the integration of Indigeneity within future projects by having Indigenous representation with the proposed Design Review Panel (refer to 5.1).

Equity, Diversity, Inclusion and Accessibility Consultation and Recommendations.

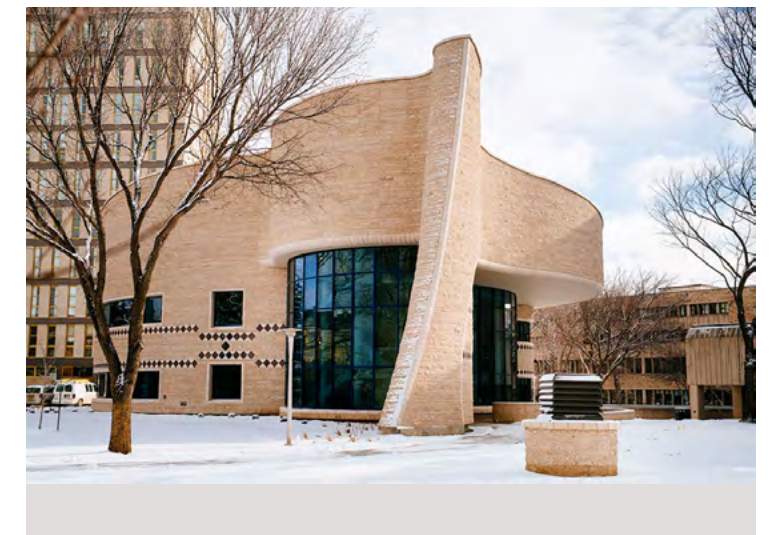
The university is committed to equity, diversity, inclusion, and accessibility and has teams that are responsible for related policies and advancing these important areas. The Campus Plan endeavours to enhance how McMaster's campus and locations are reflective of and responsive to diversity in its community. An advisory group was formed to discuss how the Campus Plan can promote equity, diversity, inclusion and accessibility.

Key recommendations from the EDI and Accessibility Advisory Group include:

- Recognizing that a large portion of the university workforce belongs to an ageing population and considerations for ease of accessibility to and from, as well as within campus should be top of mind.
- Creating an inclusive environment that supports people of all backgrounds and ages to access the university's resources and facilities, with a focus on societal health and well-being.
- Planning for outwards-facing services and community spaces should be located nearer to the edges of campus and accessible to transit and parking, especially considering the size and complexity of navigating campus.
- As students adapt to hybrid teaching and learning strategies, there is an increased need for private spaces on site that can include study space, meeting

space, prayer and reflection space and consultation space.

- Physical space changes and aspects that could contribute to a more equitable and supportive first-year experience should be identified and implemented.
- Continuous change management should be a part of ongoing initiatives to improve equity, diversity, inclusion and accessibility standards in the built environment on campus and across the university's other locations.
- In addition to the Campus Plan recommendations, a Barrier-Free Design Standards Committee, comprised of internal subject matter experts from across the university community, is underway and is developing new accessibility guideline recommendations for future capital projects.



Gordon Oakes Red Bear Student Centre, University of Saskatchewan by Douglas Cardinal Architect

3.4.2 ACADEMIC ORGANIZATION

Introduction

The Campus Plan is built upon an overarching framework which promotes a balance of logical academic organization alongside the creation of more shared hub space for interdisciplinary collaboration and research. This supports the co-location of faculties in clusters across the campus, linked together by shared student learning hubs and facilities.

Although interdisciplinary collaboration is strong at McMaster, the existing physical estate poses several challenges which limit opportunities for academic collision:

- Academic campus planning is generally structured around ‘silo-ed’ disciplines.
- Buildings are inward looking, impenetrable and are not welcoming to other disciplines on campus.
- Lack of showcase and visibility into the teaching and research from the outside world.
- Existing buildings generally consist of rooms and corridors, with limited collision space for spontaneous meetings, collaboration or places for staff and students to dwell.

The Campus Plan seeks to provide a rational framework within which decisions can be taken regarding the location of future uses and facilities across the campus. It recognizes that the foundation for enhanced interdisciplinary collaboration is strong disciplines; it therefore seeks to provide the right balance between providing discipline identity whilst providing shared spaces for collaboration and interdisciplinary interaction. This balance is achieved through the following measures:

- Creating shared hub buildings.
- Creating active ground floors.
- Creating discipline identity.

- Proposed Development 
- Current Building 
- Proposed Hubs 
- Active Indoor/Outdoor Influence Zone 
- Active Green Space 
- Activated Facade 



Map of proposed hubs and collision spaces on campus

Creating Shared Hub Buildings

The Campus Plan proposes the integration of several new, highly utilized shared hub buildings to support learning and collaboration across different faculties. These buildings are not department owned and may contain generic teaching space, central teaching labs, self-directed learning and student services. A current example of a shared hub building on campus is the Peter George Centre for Living and Learning (PGCLL). Shared hub buildings will be strategically placed in accessible areas of the campus; the Campus Plan proposes one or two hubs within the new Southwest Quadrant to activate this new campus destination.

This strategy supports the growth of individual faculties by either relocating some teaching space (classroom and labs) from existing buildings into new shared hub buildings allowing the expansion of specific departmental activities within the footprint of the existing buildings, or by designing new shared hub buildings to focus and support growth of interdisciplinary research clusters, by relocating research space from existing buildings and allowing expansion of other departmental functions within the existing building footprint.

Creating Active Ground Floors

In addition to creating shared hub buildings, the Campus Plan capitalizes on opportunities to create active ground floors within both new and existing buildings. Activation will be delivered at key moments across the campus by embedding the following measures:

- Creating shared social and study spaces that contribute to a vibrant and collaborative atmosphere where academic collision can occur in a natural way.
- Ensuring the design of both new buildings and the adaptation of existing buildings will allow this energy and activity to flow from inside to outside and activate the external spaces between buildings.

It is recognized that for existing buildings, most current ground floor rooms will remain unaltered and new study and social spaces will be focused around main entrances. In limited cases, some current activities may need to be relocated to allow for these study and social spaces, but appropriate new space will be found.



University of Strathclyde Learning and Teaching Building by BDP | Source: bdp.com



City, University of London main entrance transformation by NBBJ | Source: nbbj.com



University of Birmingham Collaborative Teaching Laboratory by Sheppard Robson | Nick Hufton | Source: architecture.com



University of Birmingham Learning and Teaching Building by BDP | Source: bdp.com

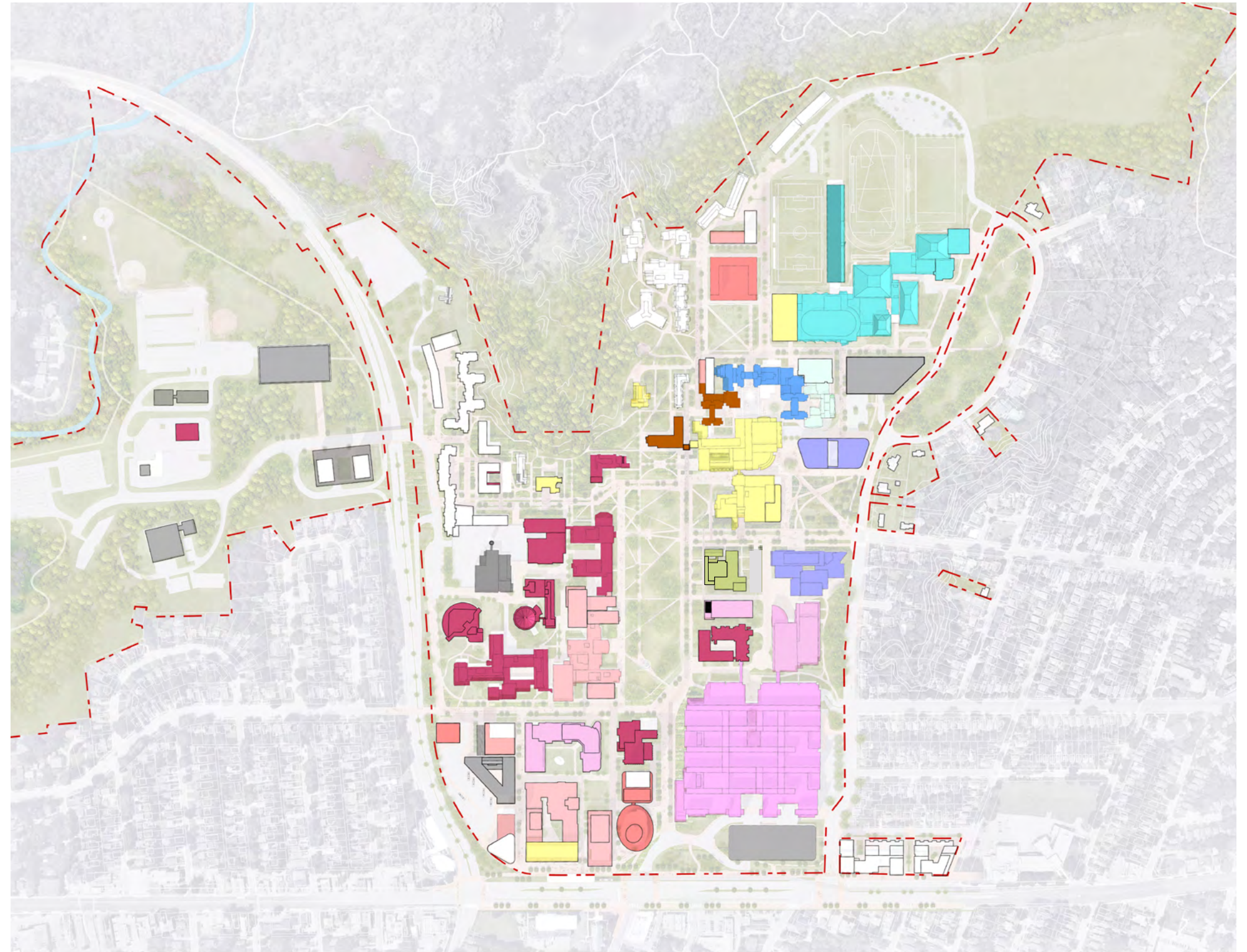
Creating Discipline Identity

While the Campus Plan promotes an increase in shared and inter-disciplinary space, it also recognizes the need for discipline identity and for students and staff to have a sense of belonging within the campus. Discipline identity is created by embedding the following measures:

- Providing identity within the upper floors of buildings, creating a series of academic clusters.
- Ensuring the academic uses and any new development fit into a logical academic spatial structure. The Campus Plan builds upon the current academic organisation but ensures growth space can be provided within each faculty cluster.

The strategy adopted ensures the Campus Plan has a strong academic overlay which is robust yet flexible to adapt to changing circumstances in the future. The Campus Plan will enhance opportunities for interdisciplinary collaboration, whilst bringing added benefits of shared space which can drive operational efficiencies. More fundamentally, the academic overlay humanizes the campus, brings people together and activates both buildings and external spaces creating a convivial holistic McMaster campus experience.

- Central Shared Teaching
- Student Life
- Athletics and Recreation
- Administration
- Housing
- Support / Facility Management / Parking
- Science
- Health Sciences
- Engineering
- Business
- Social Science & Humanities



Map of academic structure on campus

3.4.3 PUBLIC SPACES AND LANDSCAPE

Introduction

Section 1 of this plan highlighted the outstanding natural landscape within which McMaster's main campus is situated. Despite its remarkable surroundings, the campus is generally inward-looking and the main campus has limited high-quality green spaces, and is characterized by closely mown lawns, large areas of surface car parking lots and poor biodiversity.

A large, landscaped green mall is located at the heart of the campus, and is a much loved and well-used feature of the university, however the surrounding public realm is characterized by wide roadways and paved surfaces.

There is an opportunity to take far greater advantage of McMaster's outstanding natural surroundings, transforming the character of the campus to create a green and sustainable landscape, forming inviting spaces for people to meet, sit and socialize. This would not only enhance the overall look and feel of the campus, but also transform its ecological value and create areas which can function as a living laboratory, providing new learning and research opportunities.

The Public Realm and Landscape Strategy provides guidance on how the university can seize this opportunity as the university develops. The strategy upholds our commitment to Indigenous Reconciliation and collaborative land stewardship, particularly on West Campus.



Proposed landscape Campus Plan

Reclaiming Surface Parking Lots and Creating New Spaces

The Campus Plan proposes the creation and enhancement of new and existing green spaces at key locations within the university, creating a network of high-quality mixed-use outdoor spaces that are welcoming to students, staff and the wider community, maximizing opportunities for teaching, research and social activities.

The creation of new green spaces will be enabled by the consolidation of existing car parking provision into potential new multi-storey car parking facilities at strategic locations on campus, therefore freeing up space on campus for greening and naturalization. These parking structures should be designed such that there is built-in flexibility to change the use to other uses in the future as parking needs evolve and change and prioritize facilities for users with impaired mobility and use by electric vehicles.

Key new green spaces proposed through the Campus Plan include:

- The Sterling Street gateway – a new public green space at the entrance to the university from Sterling Street, providing an attractive setting for the Mills Memorial Library and Museum of Art, as well as a clear pedestrian route through from the Sterling Street to the McMaster University Student Centre.
- The Main Street West gateway – a new green plaza at the university’s frontage onto Main Street West, alongside enhanced greening and planting to transform the wider streetscape.
- Green square to the south of the Peter George Centre for Living and Learning – a new green space, creating an attractive public realm setting for this key building.
- Green space adjacent to the Cootes Paradise ravine - Following the demolition of the existing greenhouses, a new green space is proposed which will link Scholars Road with the ravine to the north.
- West campus – naturalization of a portion of the west campus through the elimination of parts of Parking Lot M, strengthening the green corridor linking Cootes Paradise and Dundas Valley, and providing enhanced opportunities for teaching, learning and research.

New and existing spaces should incorporate seating areas and covered spaces, providing places for people to sit, study and socialize with protection from rain or other weather conditions. All new external spaces should be an extension of the indoor learning environment with a rich blend of uses for all.

Enhancing Gateways

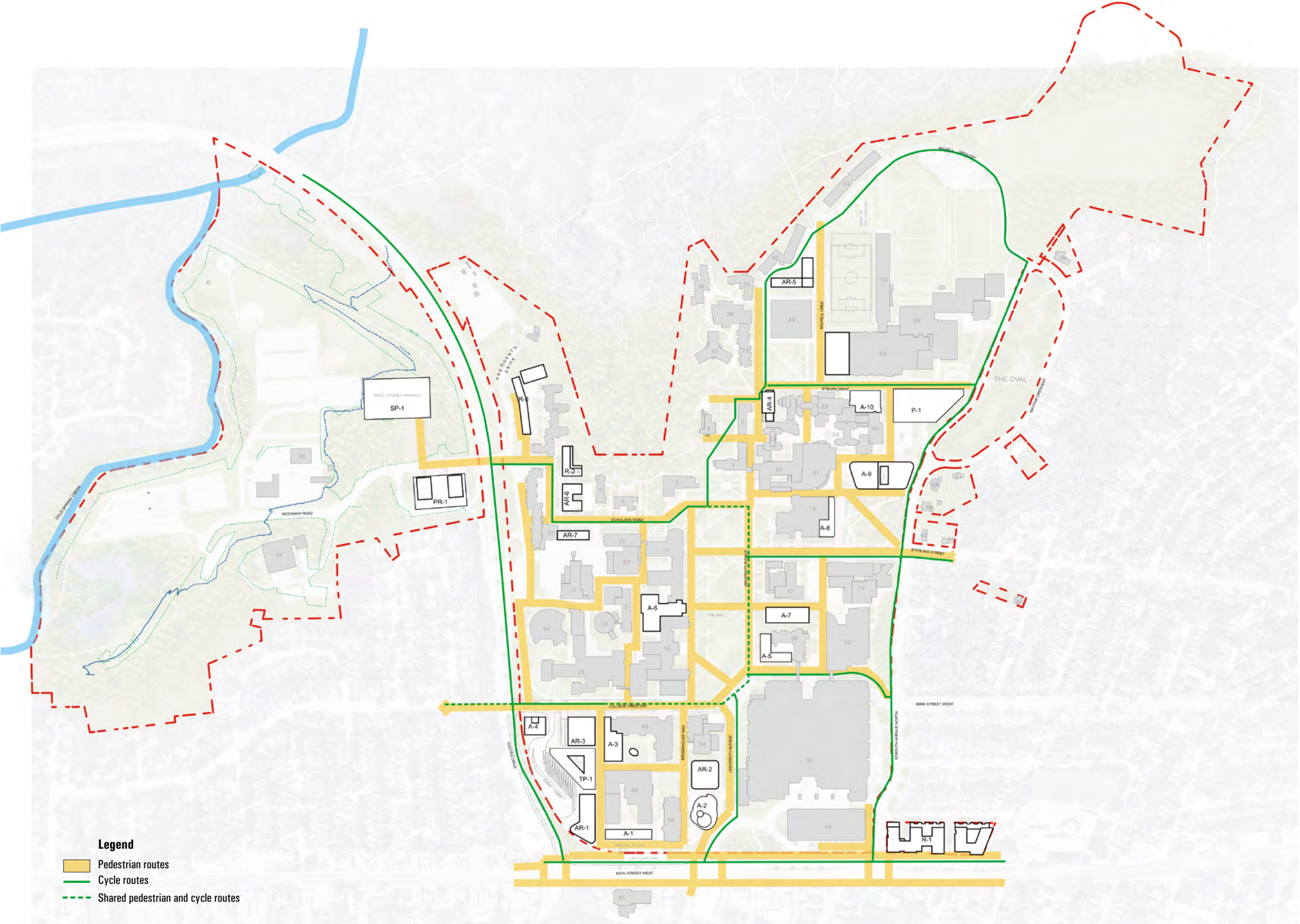
The Campus Plan emphasizes the importance of creating memorable and distinctive gateways to the university and proposes reimagined gateways at Main Street West and Sterling Street. Gateways to the university should be attractive and welcoming to pedestrians and cyclists, as well as those arriving by transit and conflict between pedestrians and road vehicles should be minimized.

The proposals for Main Street West and Sterling Street seek to reduce the dominance of vehicular movement, creating open and engaging areas of public realm as key arrival points to the university. On Main Street West, the creation of a green welcome plaza will transform the character of this street from a busy urban road to a civic street.

Pedestrianization and Remodelling of Roads

An important element of the Public Realm and Landscape Strategy is the remodelling and pedestrianization of internal roads. The Transportation and Movement Strategy recommends the removal of vehicles from heart of the campus, except for smaller logistics vehicles, paratransit services and emergency vehicles. This allows for the pedestrianization of the campus and the remodelling of key internal roads, such as University Avenue, College Crescent and Scholars Road.

Internal roads should be resurfaced to create shared surfaces that prioritize pedestrians and cyclists, incorporating enhanced planting, lighting, wayfinding and new street furniture to form legible pedestrian routes through the campus, creating an interconnected network of streets and spaces. It also provides an opportunity to replace impermeable streets with soft landscaping areas as part of a sustainable drainage strategy.



Internal pedestrian and cycle routes



After

College Crescent



After

Scholars Road



After

University Avenue

Reclaiming roads from vehicular dominant to pedestrian priority. Series of before-and-after photos showing the existing roads condition compared to the Campus Plan proposed prioritized pedestrian pathways

Green Corridors - Planting and Greening

The Campus Plan proposes a series of new green corridors, extending the natural landscape from Cootes Paradise through a series of biodiversity corridors from north to south. Through partial demolition and planting design, the interface between the main campus and the Cootes Paradise ravine will provide opportunities for greater permeability and visibility into the ecologically rich zone to the north. New planting and greening should prioritize native non-invasive species and respond to the varied characteristics of the different spaces and activities throughout the campus.

Significant additional tree planting and landscaping should also be considered along Cootes Drive, reinforcing the landscape connection with Cootes Paradise to the north, providing a visual buffer between the campus and Cootes Drive and acting as a visual screen to the proposed transit hub.

Existing green spaces, such as the green mall and the oval, should be enhanced through new planting and greening, maximizing biodiversity and improving the amenity value of these important university spaces.

Biodiversity

Approximately 5,000 trees grow on McMaster's campus, not including woodlands, however many of these trees and other plants are non-native. Challenges of this ornamental landscape include the risk of non-native, invasive species moving into natural areas, as well as landscape waste being pushed into valley lands. All new planting and greening should promote biodiversity on the campus, conserving and improving native habitats and species and creating an environment within which they can thrive.

Stewardship of Surrounding Natural Lands

The university shares responsibility for the protection of adjacent natural areas, including Cootes Paradise, the Dundas Valley and Coldwater Creek. To enhance the relationship between the campus and surrounding natural assets, McMaster should promote greater stewardship of surrounding lands and coordinating with stakeholders through the President's Advisory Committee on Natural Lands and Indigenous engagement. The university should seek to work closely with the Royal Botanical Gardens (RBG) to implement strategies, such as a Plant Management Plan.

A campus-wide Plant Management Plan in conjunction with RBG would direct, control and manage plant species selection, invasive species and species at risk. The Campus Plan also proposes clearer marking of trail heads and new signage to educate trail users on appropriate use of trails and the habitat restoration efforts underway within the marshlands that are owned and managed by the RBG, forming part of the UNESCO Niagara Escarpment Biosphere Reserve and the heart of the Cootes to Escarpment Eco-Park System.

Learning and Research

The Public Realm and Landscape Strategy outlines several measures which could contribute towards the creation of a green and inclusive university, that balances built form with natural land. This would have wide-ranging benefits, such as improving the well-being of students, faculty and staff, supporting biodiversity and providing enhanced opportunities for learning and research.

The naturalization of portions of West Campus provides the opportunity to create a living laboratory for research and innovation, supporting McMaster's role as a centre for excellence in teaching, learning, research and collaboration. Similarly, the creation of new green spaces and public realm throughout the campus will enable university activity to spill out from active ground floors into shared open spaces, generating an atmosphere of activity and collaboration.

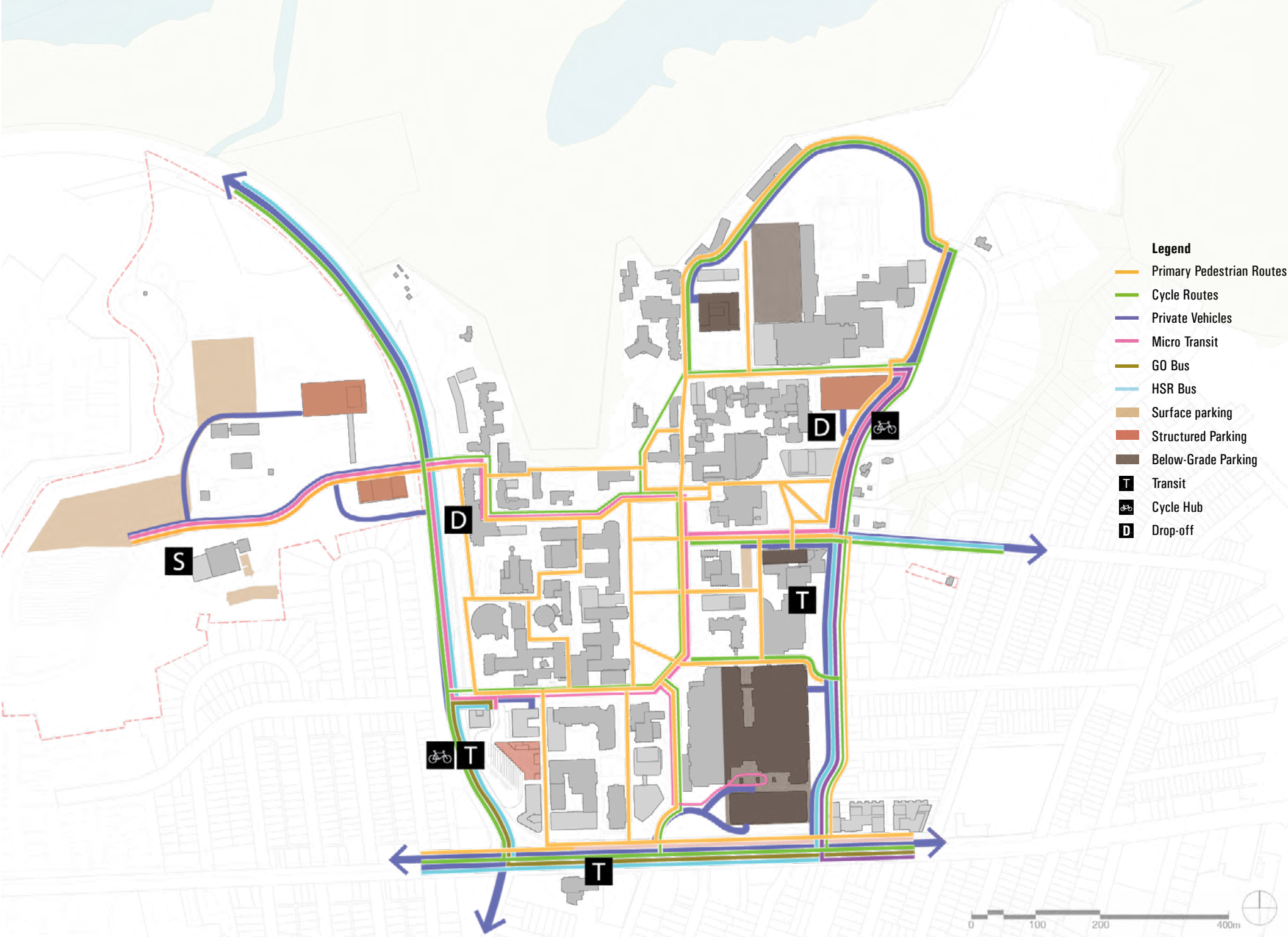
3.4.4 TRANSPORTATION AND MOVEMENT

Introduction

Transportation has been a key consideration throughout the development of the Campus Plan and a robust strategy for future transportation and movement is vital to supporting the sustainable growth of the university over the next ten years and beyond.

At its core, the Transportation and Movement Strategy seeks to promote a modal shift away from carbon-emitting modes of transportation by promoting sustainable commute options, with a specific focus on the following priorities:

- Removing vehicle traffic from the heart of the campus and creating infrastructure and facilities which support safe and convenient walking and cycling, encouraging active travel and promoting a range of health and sustainability benefits.
- Managing the supply of parking on campus in a way which promotes a modal shift to sustainable travel modes (including electric vehicles) as the university grows in future.
- Integrating and supporting transit infrastructure including bus and light rail transit (LRT).
- Reducing the need to travel to campus by car by creating opportunities to live on campus, close to campus, or along key transit routes.
- Establishing a Green Travel Plan which will support the university’s drive towards sustainability.



Composite circulation diagram

A Vehicle Free Heart of the Campus that Supports Safe Walking and Cycling

To achieve the vision of creating a pedestrian-oriented heart of campus, a strategy has been developed which limits vehicle movements within the campus and restricts traffic to the periphery wherever possible.

This will allow several key roads within the university to be converted into shared surfaces for pedestrians and cyclists. These roads include:

- University Avenue
- Scholars Road
- College Crescent

Vehicle access to these routes will be restricted, except for paratransit services, accessible parking, smaller logistics vehicles and emergency vehicles. The existing vehicular operations and car parking for McMaster Divinity College would be maintained.

A series of illustrations have been included within the Public Realm and Landscape Strategy which illustrate how these new shared surfaces could look, and how enhanced landscaping, seating and sustainable drainage could transform the appearance and character of the heart of the university.

Improved Access for Pedestrians and Cyclists

In partnership with the City of Hamilton, McMaster will seek to create improved pedestrian and bicycle crossing facilities at key gateways to the campus, including:

- Sterling Street / Forsyth Avenue North
- Forsyth Avenue South / Main Street West
- Main Street West / University Avenue
- Cootes Drive / College Crescent

The delivery of these upgraded crossings would be coordinated with wider road infrastructure and transit investment, such as the proposed LRT stop or adjacent Campus Plan development projects, such as those proposed at the Main Street West and Sterling Street gateways.

Cycling on Campus

With regards to the bicycle movement on campus, key north-south and east-west routes have been identified within and around the campus to provide connectivity. These routes include:

North-south routes:

- Cootes Drive
- University Avenue
- Forsyth Avenue

East-west routes:

- Main Street West
- College Crescent
- Scholars Road / Stearn Drive

Secure storage, showering and changing facilities are proposed within the proposed transit hub in the Southwest Quadrant and the new multi-storey car parking facility at the Sterling Street gateway. These facilities will be supplemented with additional secure bicycle storage facilities across the campus. It is recognized that seasonal changes are interconnected with modal choice. Improvements to the cycling infrastructure and amenities on campus will make cycling a more viable modal choice during shoulder seasons and, for some users, also through the winter months.

Integrating New Transit Infrastructure

Planned investment in the planned new LRT stop on Main Street West, as well as a new transit hub in the Southwest Quadrant, will greatly improve the transit options available to those accessing the main campus.

The Campus Plan has carefully considered how this new infrastructure could be configured to create safe and convenient routes to access the campus, allow easy transfer between buses and LRT, and integrate the planned infrastructure with proposed academic and residential development on Main Street West.

This includes proposals for a new green plaza adjacent to the proposed LRT stop, and the development of a clear, direct pedestrian route between the LRT stop and the transit hub.

The transit hub will be developed on the site of the existing Parking Lot I and will replace the existing GO Bus terminal and will serve both Metrolinx (regional) and HSR (municipal) bus services. The vision for the transit hub includes provisions for municipal and regional bus transfers, secure bicycle storage and showers, car parking spaces and other amenities. The final location and design of the proposed transit hub will be determined in consultation with Metrolinx and the City of Hamilton.

The transit hub will be accessed via a new signalized intersection at Cootes Drive and College Crescent, where the existing signalized pedestrian crossing is located. A transit priority lane will be provided for buses exiting the transit hub.

The existing north-south area of College Crescent parallel to Cootes Drive between the existing GO Bus Station and

the east-west part of College Crescent will be removed and replaced with a paved surface for pedestrian use.

Opening up the vehicular link between Main Street West and Forsyth Street is critical to the delivery of the overall transport vision behind the Campus Plan. There are clearly very significant benefits to remodelling this junction in parallel with planned investment in the new LRT system, and it is envisaged that McMaster will work closely with the City of Hamilton, Metrolinx and other transport stakeholders to transform this key corridor and gateway to the university.

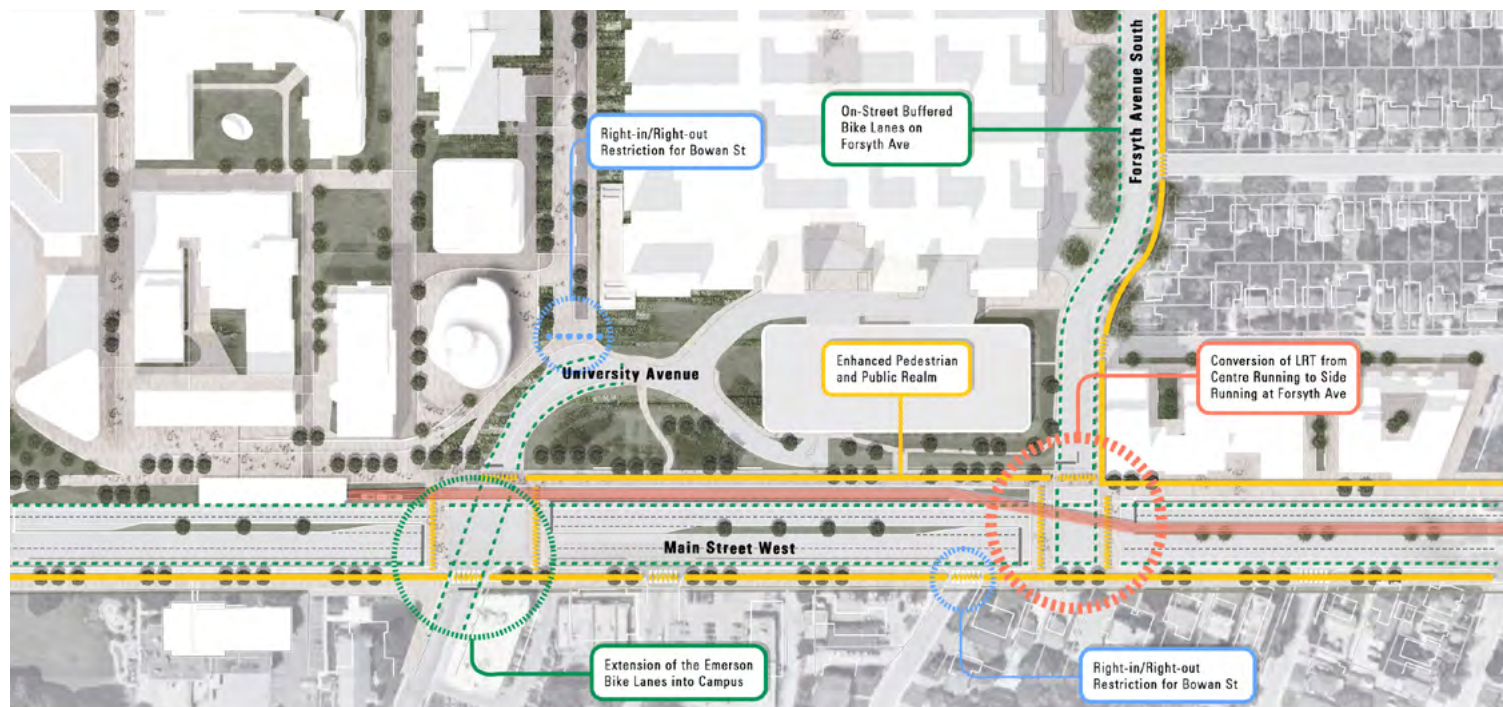
Relocating HSR Buses Away from the Heart of Campus

To transform the public realm and encourage pedestrian movement, the Campus Plan proposes the removal of buses

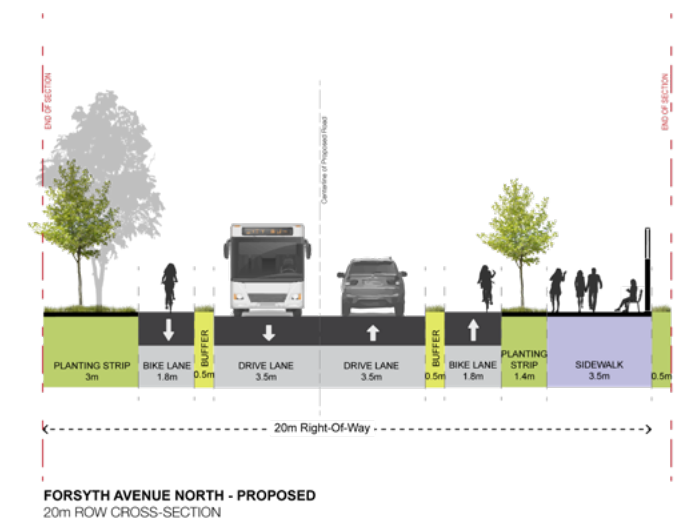
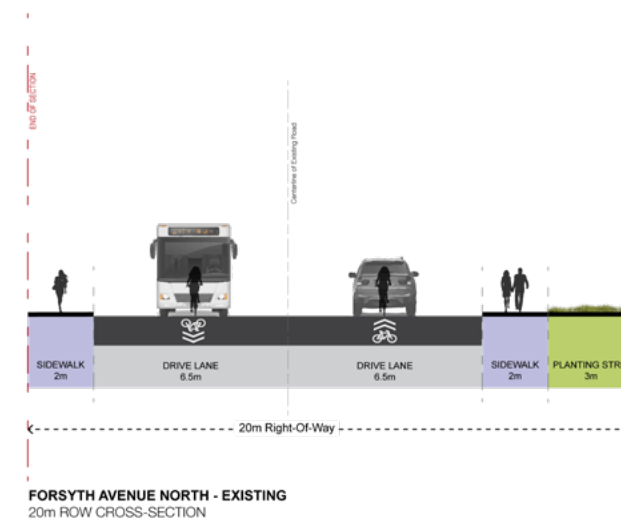
from the heart of the campus, providing an alternative route around the perimeter of the university along Cootes Drive, Main Street West, and Forsyth Avenue North and South. To enable this new routing, the Campus Plan proposes opening-up Forsyth Avenue South to create an intersection with Main Street West.

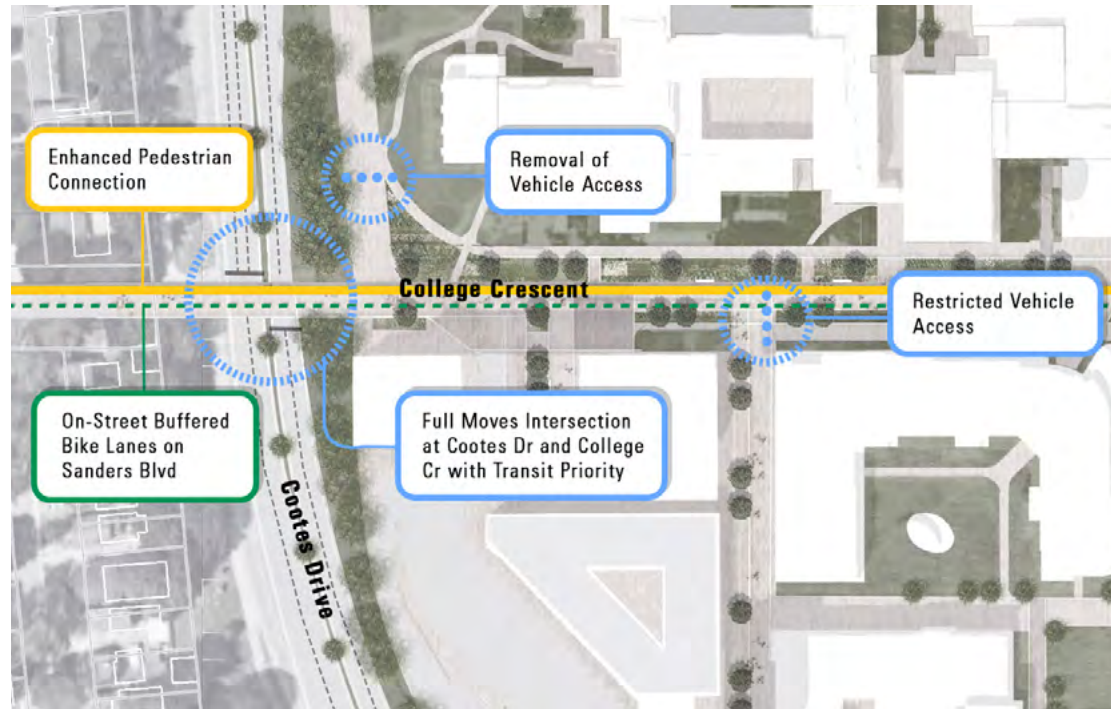
A bus stop is proposed at the intersection of Sterling Street and Forsyth Avenue North allowing passengers to board and alight at the north-eastern side of the campus.

A potential new multi-storey car parking facility and bus stop is also proposed at the new Sterling Street gateway, which will provide connections to the transit hub, west campus, McMaster Innovation Park (MIP), the Ron Joyce Centre on the Burlington Campus, as well as the wider HSR network.

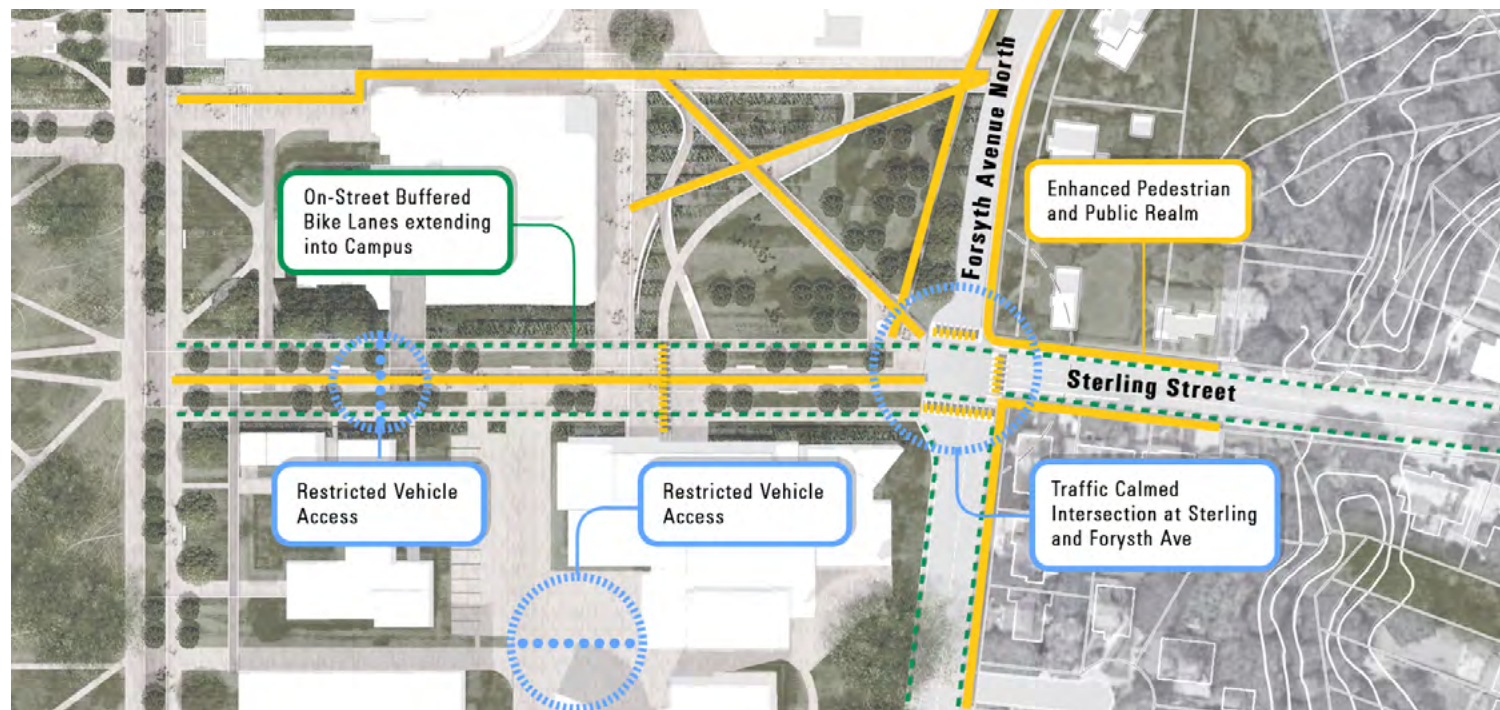


Proposed road layout at Main Street West





Proposed road layout at Cootes Drive / College Crescent



Proposed road layout at Sterling Street / Forsyth Avenue

Microtransit

With the removal of buses and other vehicles from the heart of the campus, it is recommended that the movement within the campus is supported by an intra-campus microtransit service, ensuring that the university provides an equitable user experience for people of all ages and mobility needs, and maintains key drop-off points within the campus, including the McMaster Children’s Hospital.

The Campus Plan proposes the replacement of the existing on-campus shuttle service with a fleet of smaller electric vehicles that could run along shared pedestrian and cycle routes across campus, increasing intra-campus accessibility. Initially, these may follow a defined route, connecting key transit nodes, car parking facilities, academic buildings, residences, and student life buildings, however, there could be future opportunities to capitalize on new on-demand microtransit technologies, providing a greater degree of autonomy and flexibility for users.

Pick-up and Drop-off (PUDO)

To facilitate pick-up and drop-off (PUDO) on campus, two PUDO areas are proposed for private vehicles and taxis. On the west side of campus, the existing PUDO in front of the Mary E. Keyes Residence will continue to be utilized. On the east side of campus, a PUDO area could be located near the proposed bus loop close to the athletic facilities on the northeast side of the campus.

As technology advances, these locations may also act as staging locations for automated / self-driving vehicles.

Reducing Service Vehicle Movements on Campus

A centralized logistics facility is proposed as an expansion to the existing Campus Services Building on the west campus. This will provide a centralized location for deliveries during the day which will then be distributed across campus by a fleet of smaller electric vehicles, reducing the need for large service and logistics vehicles to access the inner campus. Larger-scale deliveries onto the main campus will be limited to avoid peak hours.

Green Travel Plans: Supporting a Shift to Sustainable Travel Modes

In addition to the physical infrastructure measures highlighted through the Transportation and Movement Strategy, there are a range of complementary measures that the university can implement to encourage a move towards more sustainable travel options.

These include:

- Exploring, monitoring and reviewing all travel charges, subsidies and incentives which ensure that choosing sustainable travel options are economically advantageous to all students, faculty and staff.
- Encouraging car share clubs.
- Installing electric vehicle charging facilities.
- Publicity and promotion campaigns to encourage a shift to more sustainable modes of travel.
- Increasing the supply of housing options on campus, within walking or cycling distance, or along key public transit corridors connected to McMaster.

It is recommended that the university develops a Green Travel Plan which would set clear, measurable targets relating to shifting travel to sustainable modes. The plan would be reviewed and updated on an annual basis.

3.4.5 ECOLOGY AND STORMWATER MANAGEMENT

Introduction

McMaster's main campus is nestled amongst ecologically significant landscape features of local, provincial, national and international importance. Most notably these include Cootes Paradise (a large provincially significant Great Lakes shoreline marsh), the Dundas Valley (high-quality upland forest with stream systems and significant wildlife species), and the Niagara Escarpment UNESCO World Biosphere Reserve. Additional forest, meadow, swamp, and marshlands managed by the Hamilton Conservation Authority (HCA) and the Royal Botanical Gardens (RBG) also contribute to this diverse ecological system.

The campus can have both positive and negative impacts on these important natural heritage features. The Campus Plan provides an opportunity to better integrate the campus with the region's highly valued ecological areas, promote stewardship of the adjacent natural assets, and create green infrastructure within the campus for ecological, educational and community benefit.

To protect and enhance the ecological value of the campus and surrounding natural lands, the following approaches are recommended:

- Strengthen landscape level connections.
- Wetland creation and enhancement.
- On-campus naturalization and public education.
- Stormwater management (SWM), erosion and sediment control.

Each of these approaches contribute towards an overarching ambition to protect and enhance biodiversity on campus and in surrounding natural lands.



McMaster University in its ecological context | Source: firewiseconsulting.com

Strengthen Landscape Level Connections

The McMaster campus is surrounded by a rich and diverse array of ecological features, including Dundas Valley to the west and Cootes Paradise to the north, and is more widely linked to natural areas in the Niagara Escarpment. While each biome is comprised of its own significant features, an important aspect of all these areas is the interconnection of the overall natural heritage system.

Landscape connectivity refers to the extent to which a landscape allows movement of organisms and resources and is widely considered a vital part of biodiversity conservation efforts. Landscape connectivity can be improved through the creation and protection of natural corridors containing different habitats by encouraging land uses and vegetation that promote movement. Increased landscape connectivity can result in higher wildlife population numbers, better quality habitats, the retention of genetic diversity and increased resiliency to climate change impacts.

Research from the Cootes to Escarpment EcoPark System has created a movement probability map that identifies the Coldwater Creek corridor, which flows northeast of the McMaster Campus adjacent to Parking Lot M, as one of the key movement corridors in the broader landscape. This corridor includes the McMaster Forest, the McMaster-owned natural lands to either side of Osler Drive east of University Plaza, and the west campus, and makes up a large portion of the McMaster Research and Conservation Corridor.

The following recommendations should be implemented to strengthen landscape level connections:

Short-term recommendations:

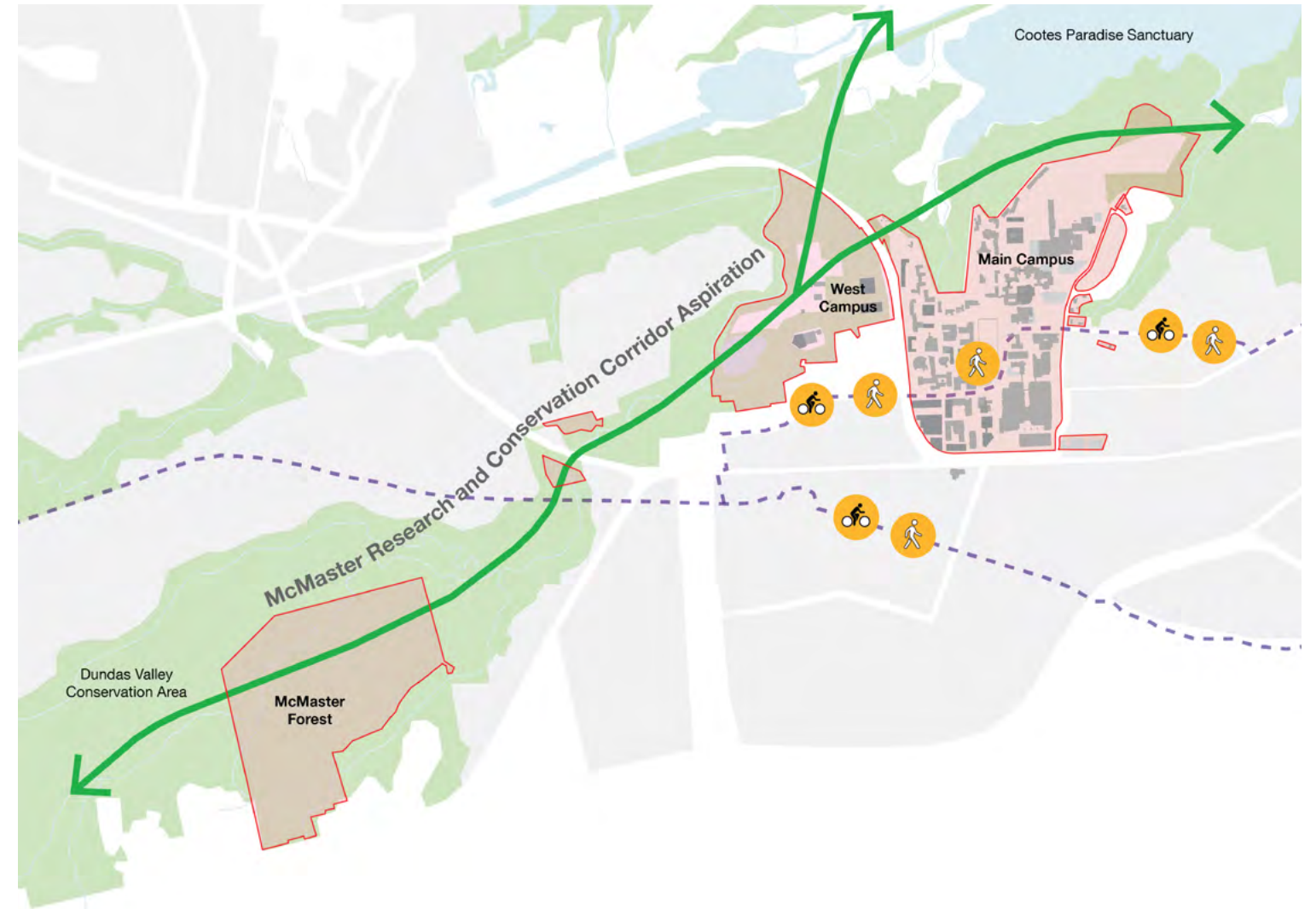
- Continue partnership in the Cootes to Escarpment EcoPark System.
- Protect existing naturalized spaces on campus from development.

Medium-term recommendations:

- Gradually replace surface parking lots with naturalized areas.
- Densify the heart of the campus to create additional green spaces.

Long-term recommendations:

- Ensure no net loss of green space.
- Create green corridors that bringing the natural landscape into the campus.



A diagram showing links between McMaster's campus and surrounding landscapes

Wetland Creation and Enhancement

The Campus Plan proposals for naturalization and wetland creation on west campus have been inspired by the Watershed Trust West Campus Redesign Initiative and McMaster's 'Designing Paradise' project. Potential benefits of this naturalization include carbon sequestration, stormwater management, wildlife habitat creation, net gain in biodiversity, protection of the important cold-water system in Coldwater Creek through floodplain naturalization and widening of the Coldwater Creek landscape connection corridor.

In addition to its ecological benefits, wetland creation on campus provides an opportunity for research, active learning, recreation and well-being.

The primary area suitable for naturalization and wetland creation from a logistical and ecologically beneficial perspective is part of Parking Lot M in the west campus. This area is in the floodplain of Coldwater Creek and has already undergone a transition from impervious paved surface to a more porous surface to facilitate infiltration. Technical studies of surface and groundwater seepage contribution to a future wetland are also underway and will inform the detailed design process. Naturalization of portions of Parking Lot M could act as the first step in adopting a regenerative design approach where McMaster aims to create climate resilient landscapes.

The following recommendations should be implemented to support wetland creation and enhancement:

Short-term recommendations:

- Complete technical studies and prepare a design concept for the naturalization of portions of Parking Lot M
- Consult with the HCA and RBG on design strategies to best integrate the project with the Cootes to Escarpment EcoPark System.

Medium-term recommendations:

- Provide year-round naturalized recreation and teaching spaces.
- Complete detailed design, establish partnerships and naturalization portions of Parking Lot M.

Long-term recommendations:

- Construct wetland and outdoor teaching spaces on the west campus.



Naturalization of portions of the west campus

On-Campus Naturalization and Public Education

Ecological improvement and stewardship should consider internal campus spaces as well as its outstanding natural surroundings. Despite its natural setting, the campus is generally inward-looking and does not integrate with its surrounding environment. Internal green spaces are largely open grass and there is a high prevalence of non-native and invasive plant species which have the potential to invade into the surrounding woodlands. The spread of invasive species is a contributing factor in the downward trend of native species richness on the south shore of Cootes Paradise.

The Campus Plan provides an opportunity to address McMaster's responsibility to combat the spread of invasive species and create more vibrant, ecologically minded spaces that spark interest in stewardship and rejuvenate the heart of the main campus. Furthermore, through continued partnership with RBG and student-led stewardship initiatives, the trail network connecting main campus and Cootes Paradise can be managed to reduce off-trail use and control the spread or establishment of invasive plant species along this network.

As gardens and open spaces on campus are rejuvenated, opportunity also exists to encourage the planting of native species, with recognition for the Indigenous significance of these species and their contribution to local ecology. The conversion of the existing manicured landscape into more naturalized landscape can be achieved in an aesthetic and educational manner, drawing on species that complement or highlight the surrounding natural landscape. Stormwater management strategies on campus can also be integrated with native planting design in the form of rain gardens or bioswales.

The following recommendations should be implemented to support on-campus naturalization and public education:

Short-term recommendations:

- Complete a comprehensive inventory of plants on campus to identify the locations and main concentration areas of non-native species.
- Continue to work with RBG to identify which non-native species are considered invasive and could spread and degrade native biodiversity and classify priority species for removal.
- Develop an Invasive Species Management Plan for McMaster lands to establish an approach for both removal and prevention of unwanted plant species on campus.
- Develop planting guidelines for on-campus gardens following the examples provided in *Grow Me Instead: A Guide for Southern Ontario 3rd Edition* by the Ontario Invasive Plant Council.

Medium-term recommendations:

- Foster education, stewardship and Indigenous recognition on campus through labelling of native species on campus with Latin, common and Indigenous language names and/or information.
- Design landscapes to encourage floral and faunal biodiversity, implementing varied planting strategies to include more native plants.
- Undertake restoration of areas adjacent to natural areas as these areas provide buffers from anthropogenic impacts (ex: litter, noise, light), boost interior wildlife habitat and enlarge existing habitat.
- Complete infill planting with native trees along Cootes Drive, on the east side of the Oval, south of Parking Lot I and along Main Street West.

- Develop a Landscape Standard to accompany the proposed Building Standard which will guide new development on campus. This guide could include reference to LEED design standards for landscapes, also known as the Sustainable Sites Initiative.

Long-Term Recommendations:

- Promote increased biodiversity on campus lands.
- Incorporate stormwater management (SWM) design elements into the campus that provide aesthetic landscaping features with ecological, educational and social value.

Stormwater Management (SWM), Erosion and Sediment Control

The Campus Plan provides an opportunity to minimize or eliminate the stormwater impacts on Cootes Paradise and surrounding natural environments and combat climate change through the implementation of a holistic and sustainable approach to stormwater management. As the university grows, significant opportunities exist for the implementation of low-impact development features both on-site and off-site, in collaboration with the HCA, RBG and the City of Hamilton.

The following recommendations should be implemented to support stormwater management, erosion and sediment control:

Short-term recommendations:

- Conduct a comprehensive survey of existing SWM facilities and storm systems.
- Complete campus wide geotechnical and hydrogeological investigations to confirm subsurface soil and hydrological conditions.
- Create a campus wide SWM model highlighting the existing conditions to allow for a holistic approach to identifying constraints, opportunities and problem areas for development with regards to SWM and erosion and sediment control.
- Engage with the City of Hamilton to consider collaborative SWM solutions that will mitigate impacts from both the university and the wider city.
- Implement more conservative SWM criteria for future development on the campus such as those seen in other municipalities and campuses.
- Control post-development peak flows up to the 100-year storm event to the pre-development 2-year storm event with a maximum pre-development runoff coefficient of 0.50.
- Provide 80% Total Suspended Solids removal rate via multi-faceted treatment train approaches.
- Retain storm water on-site, to the extent possible, to achieve the same level of annual volume of runoff as pre-development conditions or retain a minimum of the first 5mm of every rainfall event on-site, whichever is more stringent, through infiltration, evapotranspiration and rainwater re-use.
- Develop a campus-wide salt management plan to minimize the impact of salt on the Cootes Paradise ravine.

Medium-term recommendations:

- Work in partnership with the HCA and RBG to implement improvements to the existing storm water outlets (minor and major systems) to Cootes Paradise such as sponge buffer zones, plantings/swales, attenuation measures and infiltration measures to improve water quality and reduce erosion via runoff volume and flow reduction.
- Ensure all new development minimizes the number of new storm outfalls and design all new outfalls to minimize potential erosion.
- Minimize the impact of salt via dedicated snow storage locations with vegetated filter strips, best management practices (e.g., preventative salting via Direct Liquid Application) and implementation of greener alternatives such as modified salt, sand and organics.
- Implement low-impact development features on all new development to the extent possible such as rain gardens, permeable pavement, vegetated filter strips, bioswales, infiltration tanks/galleries, rainwater re-use cisterns, roof-top downspout disconnections to pervious areas to meet storm water quality control, erosion control and water balance criteria.
- Encourage the following features as part of all new developments: underground storm water tanks, flow control roof drains, and surface storage features (e.g., ponds, bioswales, rain gardens) to meet storm water quantity control criteria.
- Retrofit existing buildings with flow control roof drains and gradually replace impervious surfaces with permeable pavement, landscaping and green roofs where possible.
- Retrofit existing landscape gardens where possible to function as bioswales or raingardens to help meet or exceed SWM criteria.

Long-term recommendations:

- Ensure no net loss of green space on campus.
- Replacement of all impervious surfaces to the extent possible via the use of permeable pavement, landscaping and green roofs.
- Construction of wetland and outdoor teaching spaces on the west campus while considering the nearby City-owned pump station and sewage holding tank.
- Incorporate SWM design elements into the campus (e.g., wetlands and ponds) that provide aesthetic landscaping features with ecological, educational and social value.
- Continue to refine SWM criteria and salt management plans based on new technologies, best management practices and climate change considerations.

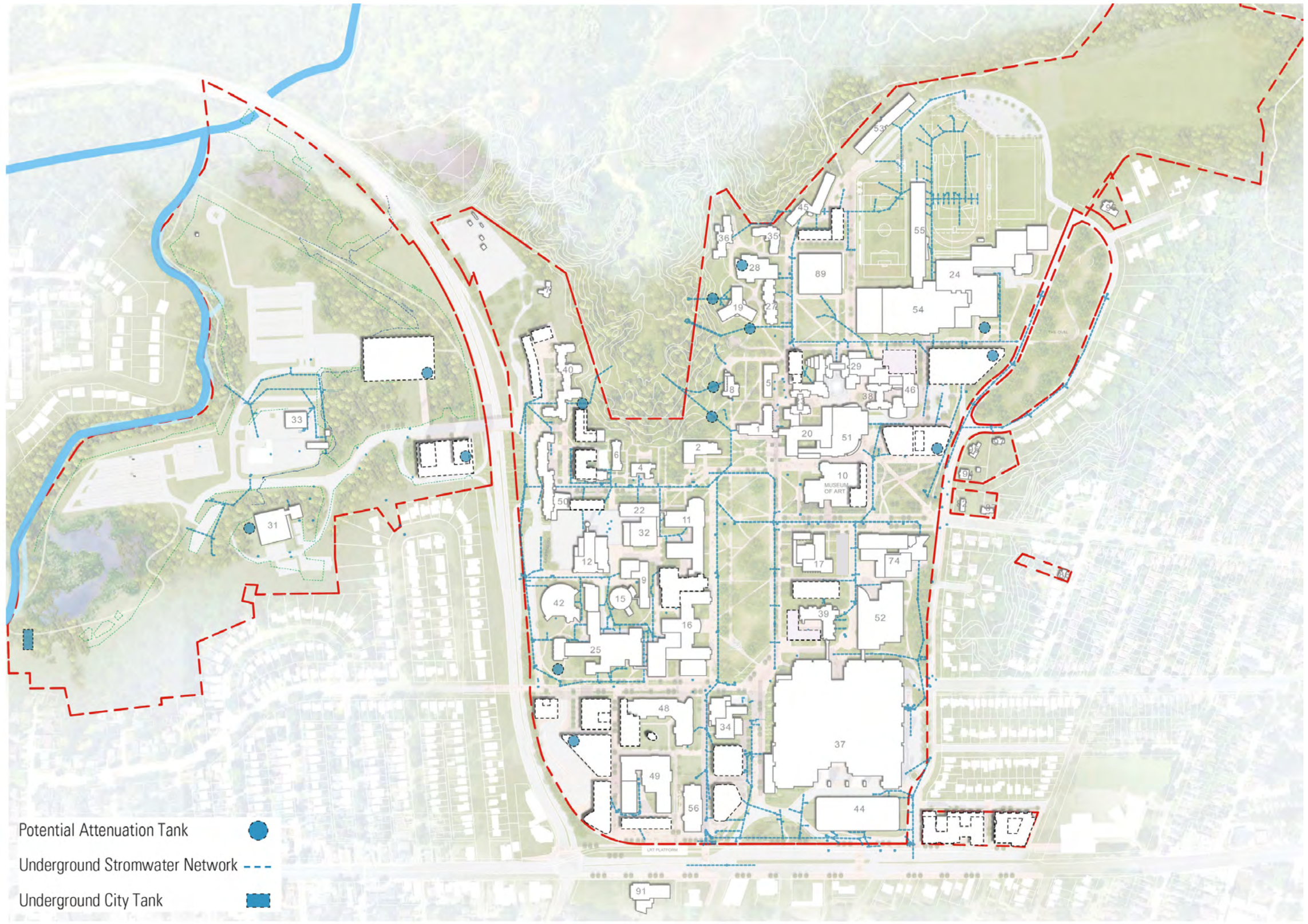


Diagram of the stormwater system with possible locations for water cisterns

3.4.6 ENERGY AND SUSTAINABILITY

Introduction

The Campus Plan aims to support McMaster's [Sustainability Strategy](#) accelerate its [Net Zero Carbon Roadmap](#), to meet its commitment to the UN General Assembly's 17 Sustainable Development Goals and to support the university's response to the climate and biodiversity emergency. The university has an Energy Management Plan, which is updated annually.

By outlining a framework for future development at the university, the Campus Plan enables the coordination of investment in technology infrastructure that future-proofs new development and allows the university to embrace and embed new and emerging technologies at the heart of its operations.

Decarbonization

The decarbonization of the campus is the subject of McMaster's Net Zero Carbon Roadmap which centers on energy conservation by using low energy systems, automated and monitored systems, high-efficiency buildings including renovations, on-site renewables and low-carbon energy generation and heat reclamation projects.

The plans below indicate locations for opportunities for future innovative and sustainable energy technology, such as photo-voltaic panel arrays and underground geothermal borehole fields.



Diagram showing possible locations for photovoltaic panel arrays



Diagram of potential areas for underground geothermal borehole fields

The university is currently investigating opportunities to expedite the net zero roadmap timeline and is looking to integrate new technologies such as carbon capture.

Sustainable, efficient, resilient growth

As the campus continues to grow, existing and new facilities must meet high standards for sustainability and energy performance. Reducing energy demand from campus buildings through new development and renovation and renewal of existing spaces is essential to facilitate growth in alignment with net zero carbon emissions objectives. Campus buildings and infrastructure can also address future climate risks by integrating resilient design measures that will improve the university's ability to adapt to a changing climate.

McMaster can approach this challenge with the development of performance standards for new construction projects, emphasizing the use of passive strategies and principles to reduce energy demand and enhance climate resilience. Passive strategies may be used in combination with efficient systems and equipment, and low carbon and renewable energy systems to facilitate the transition to net zero carbon emissions on campus.

Additional recommended strategies to support sustainable growth and campus development include:

- Implementing energy conservation measures throughout campus buildings.
- Prioritizing deep energy retrofits for existing buildings with the highest energy and carbon footprints.
- Aligning all new construction projects on campus with the Net Zero Carbon Roadmap.
- Expanding the use of building automation and self-monitoring analysis and reporting technology (SMART) systems to optimize energy use and building performance.
- Establishing objectives for the use of low-carbon building materials for renovations and new construction projects
- Encouraging design strategies that offer additional co-benefits beyond energy performance, such as water efficiency, enhanced air quality and thermal comfort, access to daylight and natural elements, biodiversity, heat island mitigation, flexibility, adaptability and improved acoustic performance.
- Conducting a campus-wide climate resilience assessment to understand specific climate-related hazards and risks and identify resilient design measures and strategies.
- Setting specific, modelled, energy and sustainability performance targets for renovations and new construction projects.

3.5 Design Standards

This section of the Campus Plan outlines a series of design standards to guide all new development and renovations. These standards will support and complement the development of a bespoke set of design standards, which is being undertaken by the university as a separate project, ensuring that the campus provides a unified and cohesive experience. Design standards should support the following key principles:

- Buildings and the public realm should provide a cohesive experience and demonstrate excellence in design. Buildings should be designed using a built-form and a palette of durable high-quality materials consistent with nearby campus buildings.
- New buildings and landscapes should strengthen the existing qualities and spatial structure of the campus in terms of approach to design, building massing and materials used. Buildings opening out onto public spaces should be configured to activate exterior spaces at grade. Landscaped spaces should be provided with ample opportunities for use for all seasons and provide for pedestrian safety and integrate transitions to either natural, public or private spaces.

It is recognized that these standards may be updated and develop throughout the Campus Plan period and should therefore be reviewed on a regular basis. Future buildings, renovations to existing buildings and other landscape and infrastructure projects should seek input from a proposed Design Review Panel. This will ensure that any future project will align with the principles of the Campus Plan, adhere to the design standards and include Indigenous engagement. (Refer to Section 5.1).

Design standards are presented under the following themes:

- Building Design
- Landscape Design
- Accessibility Standards
- Heritage Buildings and Landscapes
- Bird-Friendly Design

3.5.1 BUILDING DESIGN

Building design should follow all applicable laws and regulations including local zoning and planning directives, the Hamilton Green Development Standards and the current Ontario Building Code.

It is recommended that McMaster develop a detailed design and construction policy to ensure that all new build and renovation projects are aligned with the university's Sustainability Strategy and Net Zero Carbon Roadmap.

The following certification programs are recommended:

- Canada Green Building Council's (CaGBC) Zero Carbon Building (ZCB) standard for design and performance – This standard evaluates both the embodied carbon and ongoing operational carbon footprint of buildings.
- Leadership in Energy and Environmental Design (LEED) certification for new construction and renovations – All new buildings and renovations should achieve gold certification as a minimum.
- Passive House certification – This standard evaluates operational energy use, carbon emissions, residential amenity and indoor air quality and is of particular value in developing housing accommodation proposals.

3.5.2 LANDSCAPE DESIGN

The Public Realm and Landscape Strategy highlighted the potential methods and benefits of enhanced green infrastructure and landscape improvements across the campus.

To ensure that public realm and landscape proposals are aligned with best practice, it is recommended that the university is guided by the following documents and principles:

- Sustainable Sites third-party certification principles.
- The SuDS Manual for Stormwater Practices.
- The CanPlant website and other local resources on native plant selection.
- The City of Hamilton standards for streetscape along public rights-of-way, including requirements for cycle infrastructure.

3.5.3 ACCESSIBILITY STANDARDS

To ensure equitable access for all, all new buildings and renovation projects on campus must comply with the following:

- McMaster University Campus Accessibility Action Plan.
- All applicable barrier-free requirements of the Ontario Building Code (OBC).
- The Design of Public Spaces Standard (DOPS) as governed by the Accessibility for Ontarians with Disabilities Act.

The university is also in the process of developing Barrier Free Design Standards / Guidelines that will identify requirements for Barrier Free Design Standards / Guidelines.

3.5.4 HERITAGE BUILDINGS AND LANDSCAPES

The historic core of the main campus should be protected in line with City of Hamilton, provincial and federal guidelines relating to inventoried buildings and designated spaces.

Designated spaces are protected under the Ontario Heritage Act, as follows:

- The property owner must seek approval in the form of a Heritage Permit to make any alterations or changes that may impact the designated heritage attributes or reasons for designation. All heritage permits are reviewed by the City of Hamilton Permit Review Subcommittee.
- The property owner must seek the permission to demolish a designated structure.
- Owners of designated properties are responsible for the maintenance of any heritage property and its features in a safe and secure condition.

Inventoried buildings do not require specific approvals for alterations or changes however, they may not be demolished without providing prior notice to the City of Hamilton.

New development projects on or near the campus' historic core should be developed in line with the latest version of the Parks Canada's Standards and Guidelines for the Conservation of Historic Places in Canada.

3.5.5 BIRD-FRIENDLY DESIGN

McMaster's main campus is surrounded by diverse natural habitats, attracting migrating birds and other fauna. Hamilton is certified as a bird-friendly city by Nature Canada, defined as a city that includes:

- A Bird Team that oversees and leads local initiatives.
- The effective mitigation of major threats to birds.
- Active engaged community members that admire and monitor local bird populations.
- Progressive municipal policies that are created to protect urban bird populations.

All new development should adhere to municipal policies relating to the protection of birds.



4.0

**ACCOMMODATING
FUTURE GROWTH**

Accommodating Future Growth

4.1 Introduction

The Campus Plan has been developed as a flexible framework that is adaptable to different growth scenarios, ensuring that the university is well-placed to accommodate growth in student numbers as it occurs. This section of the plan illustrates the potential developments which could be required to accommodate different levels of growth in student numbers.

It is important to note that this is just an indication of the required space outcomes, rather than a prescriptive phasing strategy for the campus. Decisions regarding the phasing of development will be contingent on actual levels of growth, the availability of funding and donor opportunities. It should also be recognized that the projects illustrated within the Campus Plan are often intertwined and will therefore need to be reviewed on a project-by-project basis, based on the surrounding development context.

The existing campus area, excluding parking structures, non-university facilities (space that is used by third party users) and residential accommodation, equates to 504,365m². This is shown on the diagram opposite. The size of the built infrastructure has not grown since 2019/20, while the student population has grown significantly within this same period. This aligns with feedback from internal stakeholders around current challenges in space and benchmarking against other similar institutions.



Existing campus

4.2 Accommodating Future Growth to 2033

The following pages provide an indication of the additional space needed to accommodate various levels of student growth. These scenarios are based upon the Size and Shape model developed alongside the Campus Plan, which considers any space deficiencies or excesses identified when benchmarked against other similar institutions and substantiated through internal stakeholder feedback. The following scenarios are considered:

- **Rightsizing:** Following a rapid expansion of student numbers between 2019 and 2022, this scenario identifies the additional space required to meet the requirements of the current university population (35,000 FTE).
- **Low growth:** This scenario outlines the additional space required to accommodate a potential future growth in student numbers up to 37,000 FTE.
- **High growth:** The final scenario outlines the additional space required to accommodate a potential future growth in student numbers up to 40,000 FTE.

All growth scenarios in this section are based upon a traditional campus operation (i.e. substantially in-person learning and working in a way which was the norm pre-pandemic). Opportunities for further growth in FTE could be accommodated without any additional growth in space by exploring new ways of working and learning as illustrated in the Size and Shape hybrid campus model (which blends in person and online learning and working).

Alongside growth in academic space in line with student numbers, the university is seeking to significantly increase the housing options available to students, faculty and staff.

The aspiration is to provide purpose-built accommodation for:

- Two-thirds of first-year students (circa 5,000 to 6,000 beds).
- A quarter of returning students (circa 6,000 to 7,000 beds).
- A quarter of graduate students (circa 1,200 units).
- 5% of academics and staff (circa 800 units).

This is a significant change in both the range of groups being considered in the strategy and the current level of supply. It is recognized that this level of development cannot be delivered entirely on campus. The university will work with developers and landowners to identify opportunities for more housing options nearby and walkable to campus, and along key transit corridors connected to the university, including in downtown Hamilton.

The Campus Plan appreciates the time and complexity involved in delivering new accommodation on this scale, however, potential locations for on-campus housing have been identified and distributed across the three growth scenarios.

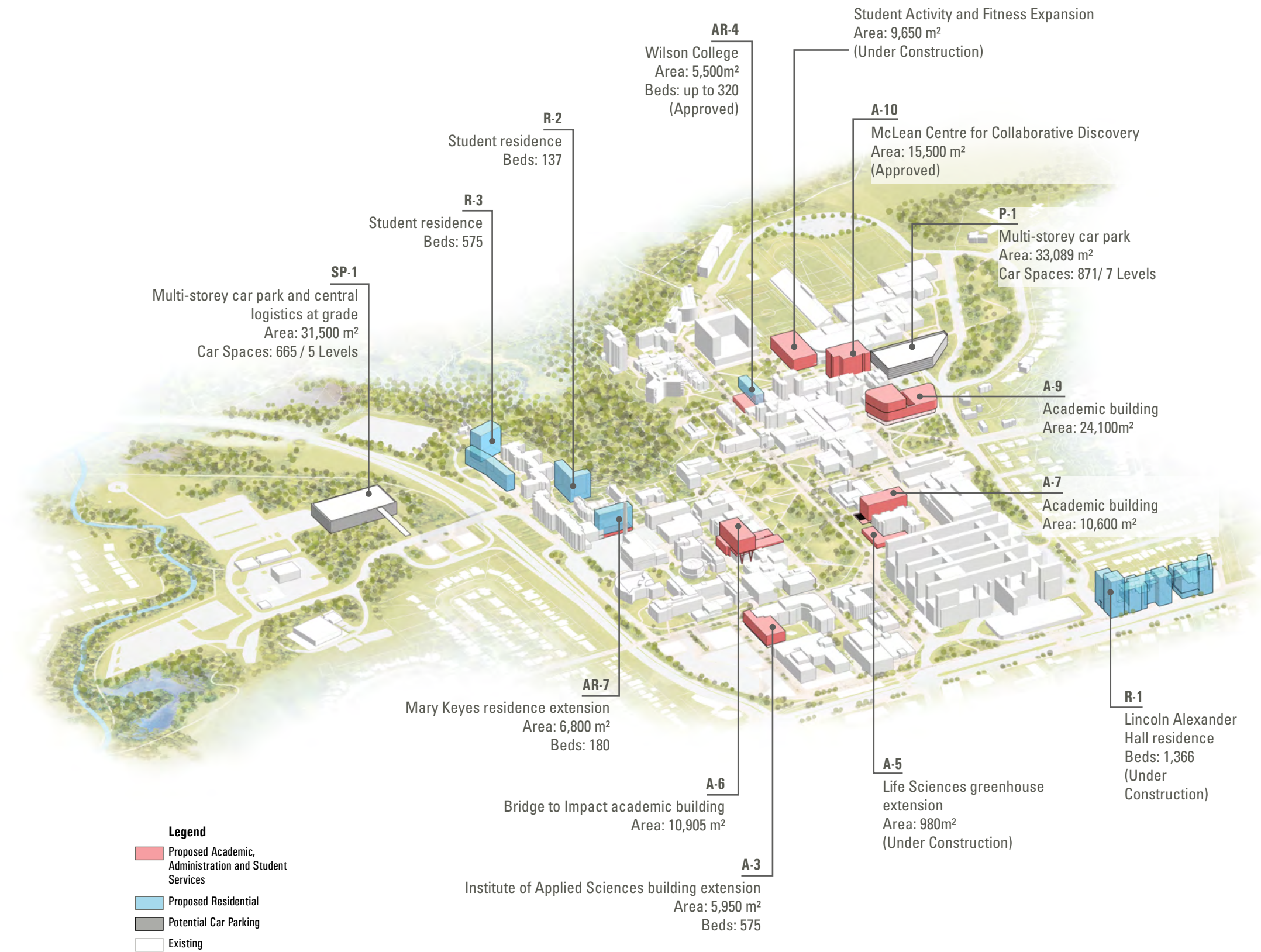
4.2.1 RIGHTSIZING TO ACCOMMODATE EXISTING STUDENT NUMBERS

As noted above, the university's student population has increased significantly between 2019/20 and 2021/22 academic terms and currently stands at just over 35,000 FTE.

The priority for the university is to accommodate this growth and ensure that the physical campus provides the necessary buildings and facilities to accommodate its current student population.

To achieve this, there is a need to provide an additional 85,000m² of academic accommodation, alongside additional housing options.

The diagram opposite illustrates the extent of development required to accommodate the current state and has been clustered around the Sterling Street gateway, infill development around the green mall and additional housing in the North and West Residence Quads and the Lincoln Alexander Hall Residence.

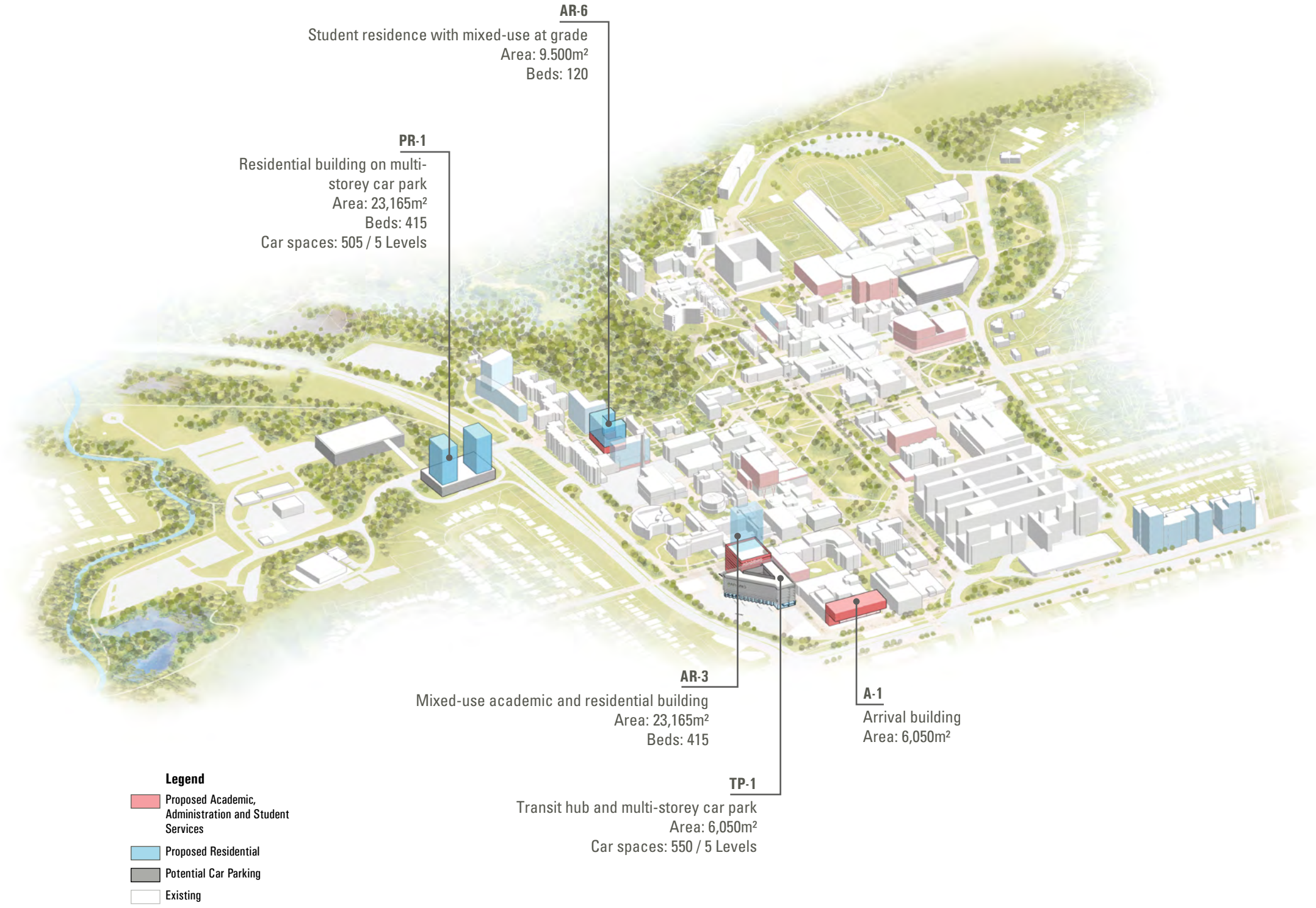


4.2.2 ACCOMMODATING LOW GROWTH IN STUDENT NUMBERS

The Low Growth scenario assumes a growth in the student population to around 37,000 (FTE).

To accommodate this growth in student numbers, the university would need to provide a further 30,000m² of academic accommodation, alongside additional housing options.

The diagram opposite illustrates the extent of development required to accommodate low growth in student numbers. This development is concentrated in the new Southwest Quadrant and additional housing in the West Residence Quad and on west campus.



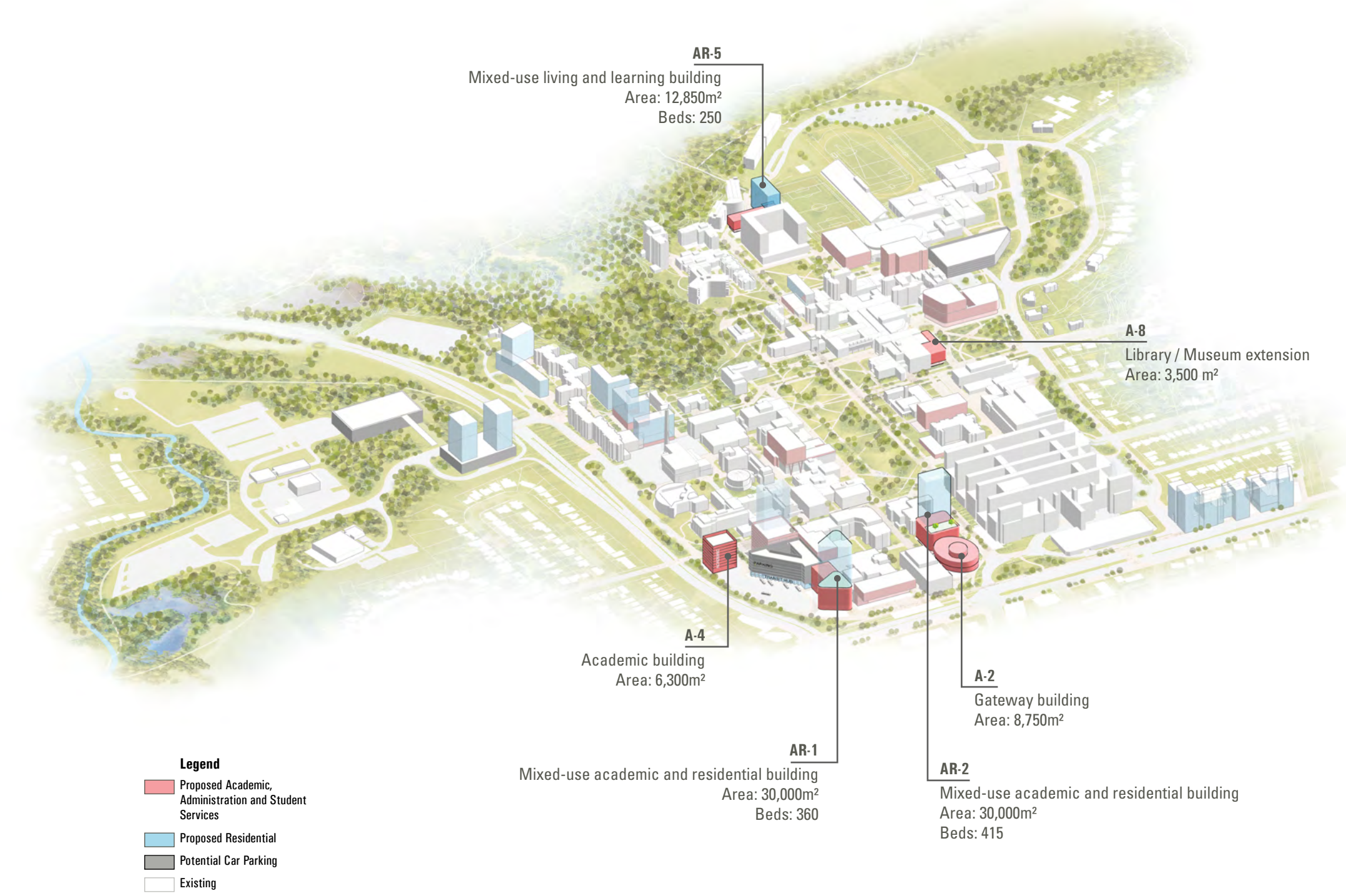
4.2.3 ACCOMMODATING HIGH GROWTH IN STUDENT NUMBERS

The High Growth scenario assumes a growth in the student population to around 40,000 (FTE).

To accommodate this growth in student numbers, the university would need to provide a further 50,000m² of academic accommodation, alongside additional housing options.

The diagram opposite illustrates the extent of development required to accommodate high growth in student numbers. This development completes Southwest Quadrant in addition to development north of the Peter George Centre for Living and Learning (PGCLL) and a future extension to the Mills Memorial Library and Museum of Art towards new green at the Sterling Street gateway.

This scenario represents the maximum amount of development considered reasonably viable within the Main Campus footprint.



4.3 Other Development Opportunities

The Size and Shape Study also considered the additional space requirements if student numbers were to expand beyond 40,000 FTE.

It is unlikely that the university would reach this level of growth in the next ten years, however, some consideration should be given to the future growth beyond the timeframe of the Campus Plan.

In its current form, this level of growth cannot be accommodated on the main campus and therefore other development opportunities will need to be considered to accommodate future growth.

Potential opportunities could include:

- Redevelopment, densification, or adaptation of existing buildings on campus to increase the supply of academic accommodation on campus.
- Development of additional facilities at a satellite campus or in downtown Hamilton.

4.4 Opportunities for Further Growth Without Increase in Campus Area

The recent global pandemic has accelerating thinking with regards to the delivery of teaching and research in universities. The direct link between growth in student FTEs and space provision could be challenged if new operational models are adopted. The scenarios illustrated above are based upon a traditional campus, however the university may wish to explore opportunities to increase growth in FTEs without increasing the spatial envelope of the physical estate. These opportunities could include:

Student Demographic:

- Explore the balance between demographic of students (undergraduate, graduate, and part-time students) as different students require different types and quantity of spaces.

Highly Utilized Spaces:

- Maximize multi-use space to increase utilization rates – reduce owned spaces and create more shared spaces.
- Explore timetable change to provide additional contact time in teaching spaces.
- Create flexible and agile spaces that can support numerous pedagogies – for example, flat floored flexible teaching spaces rather than fixed lecture theatres.

Pedagogic Changes:

- Blended Learning – increase the percentage of virtual learning.
- Enhanced Technology – utilize immersive learning experiences using artificial intelligence, such as virtual or augmented reality, to duplicate real-life scenarios and reduce the need for bespoke, underutilized specialist spaces.

Workplace:

- Hybrid Working – explore space savings and desk sharing where applicable.
- Challenge workplace space norms – move away from one space per staff member and inefficient cellular single occupancy offices.
- Challenge traditional boundaries of workplace to create a high utilized shared collaboration and workspaces for use by staff and students alike, driving efficiency and utilization.
- Rationalize workplace for researchers due to duplication of space within labs.



5.0

FUTURE DELIVERY AND NEXT STEPS

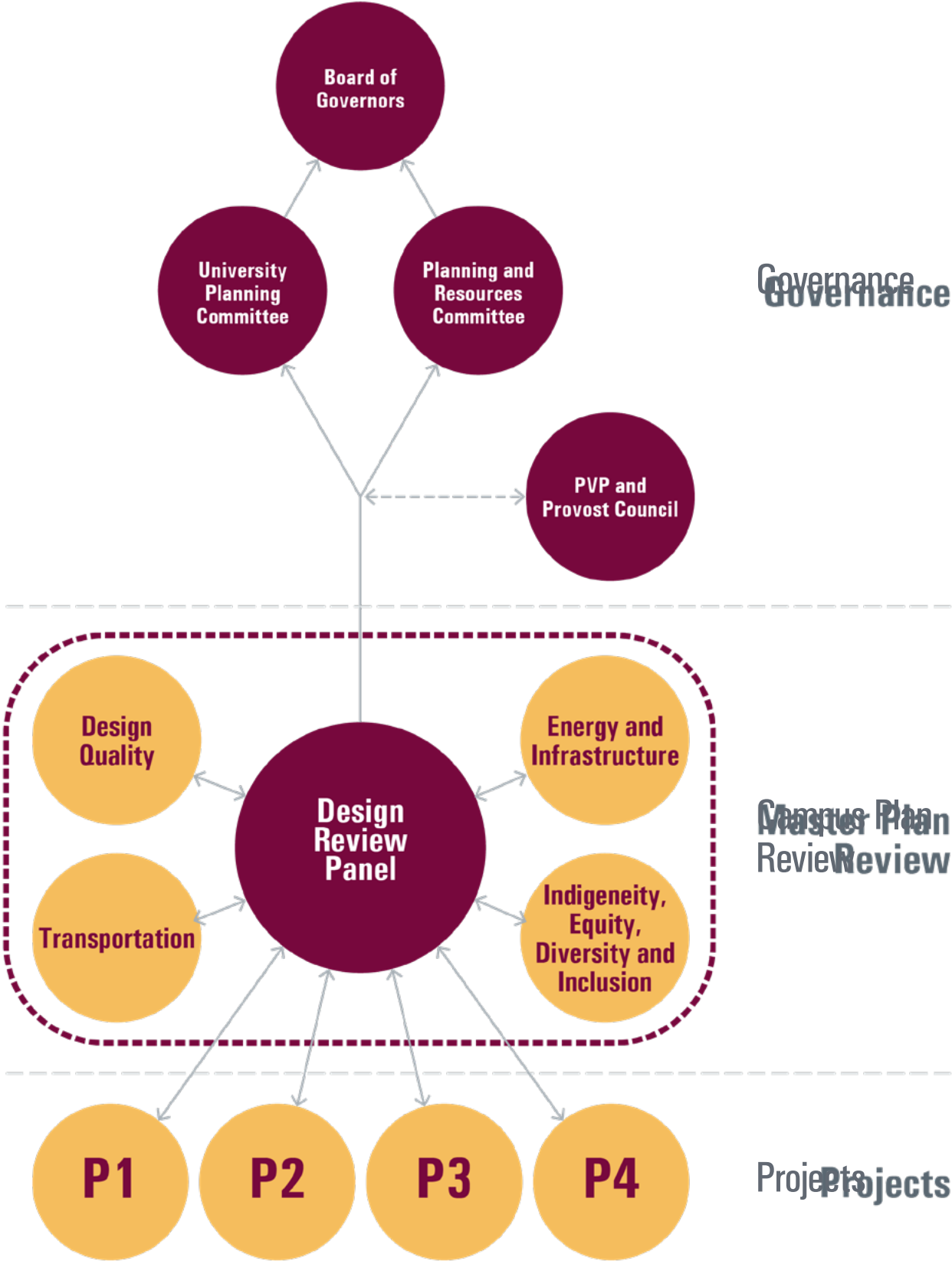
Future Delivery and Next Steps

5.1 Governance

Following formal endorsement and approvals, the Campus Plan should be embedded within the university's wider governance structure, ensuring that future development of the campus is informed and guided by the principles outlined in this document.

Many universities choose to create a centralized committee to oversee the implementation of the Campus Plan over its lifespan. McMaster should consider an appropriate governance structure to allow coordination of projects on campus and ensure new initiatives are aligned with the principles of the Campus Plan. The creation of a Design Review Panel at McMaster to review new capital projects under a more holistic strategy for campus would be considered a strength and allow coordination of design and implementation of the Campus Plan.

Once reviewed by the Design Review Panel, potential projects would be submitted to the University Planning committee (UPC) and the Planning and Resources Committee (PRC) for approval before final signoff from the Board of Governors. This approval process is done in accordance with the Signing Authority Policy.



5.2 Implementation Plan

The successful delivery of the Campus Plan should be supported by the development of a detailed implementation plan. Currently, the Campus Plan provides a flexible framework for growth over the next ten years, which requires development into a detailed phasing strategy.

Phasing

Section four of the Campus Plan provided an indication of the potential space outcomes needed to support various levels of growth in student numbers. Although this is not intended as a prescriptive phasing strategy for the campus, it provides guidance on the scale of growth required and could form the basis for the development of a detailed phasing strategy in the future. There are many interdependencies within the development of the Campus Plan and careful consideration should be given to a coordinated logistics and decant strategy that limits disruption to campus users. The final phasing strategy should ensure that when projects are delivered, they provide both additional facilities, and can also deliver key aspects of the Campus Plan vision including sustainability, landscape and low carbon infrastructure initiatives. The university must ensure that once each phase is complete the holistic campus works, without a reliance on future phases.

Costs and Funding

In conjunction with a phasing strategy, the implementation plan should consider the potential costs associated with each development project, therefore enabling the alignment of the phasing strategy to potential funding streams and year on year cash flows.

If the availability of future funding is unpredictable, the phasing strategy will serve as a vital tool for allocating funding as and when it becomes available.

Annual Capital Planning Process

The final part of the implementation plan is the annual capital planning process through the Capital Plan, which identifies and outlines in-progress, approved and prospective priority capital projects for the university.

Each of the components above should work in union to ensure a cohesive and successful implementation plan.

5.3 Working in Partnership

To deliver the aspirations of the Campus Plan, McMaster will work in partnership with a variety of local public agencies, as well as with the private sector.

In developing the Campus Plan, the consultant team has held a series of meetings and discussions with key stakeholders including the City of Hamilton, the City of Burlington, Metrolinx, the Hamilton Conservation Authority, the Royal Botanical Gardens and the Joint Indigenous Advisory Committee Group.

It is critical that this dialogue and cooperative working is maintained in relation to these projects, and consideration should be given to how the relevant stakeholder agencies are able to engage with the development and implementation of the overall Campus Plan.

In many instances, these stakeholders will also act in a regulatory capacity, granting permits and approvals to proposed development.

Once the Campus Plan has been approved by the university, it is recommended that formal consultation is undertaken with each of these agencies, with a view to the document being effectively embedded within local planning policy and potentially enabling the alignment of zoning regulations and codes where appropriate.

Each of these agencies will play a key role in delivering key projects such as:

- The planned new light rail transit (LRT) network and associated public realm and road infrastructure works along Main Street West.
- The new Bus Terminal at Main Street and Cootes Drive.
- Opening the proposed vehicular connection between Forsyth Street and Main Street and associated public realm works.
- Proposals to naturalize areas of the west campus and to integrate this with wider off-campus habitats.

It is critical that McMaster collaborate with the City of Hamilton and Metrolinx partners to develop plans for reimagining the gateway to the campus on Main Street West where the LRT will stop at the university, ensuring that the university fully integrates these proposals with potential development on Main Street West and in the Southwest Quadrant.

5.4 Further Studies

The Campus Plan sets the strategic direction for the development of the campus but does not provide detailed design guides for individual buildings or spaces. It is expected that further strategies will follow as necessary with respect to:

- Implementation Plan
- Architectural Design Guide (New Building and Refurbishment)
- Transportation and Parking Strategy
- Landscape, Biodiversity and Ecology Management Plan
- Public Realm Strategy (including Wayfinding)
- External Lighting Strategy
- Sustainable Urban Drainage Strategy

5.5 Monitoring and Review

The Campus Plan has been prepared to guide the future growth and development of McMaster over the next ten years. The Campus Plan will act as a framework for future development, rather than a rigid blueprint and will evolve and change over time.

It is recommended that the university undertake an annual Monitoring Review throughout the life of the Campus Plan. This review would consider:

- Progress in delivering individual projects and against the overall growth aspirations outlined in the Campus Plan.
- Progress with design development for planned future development.
- Changes in the university's demography and pressures on the campus.
- Feedback from the community on and off campus, which could be captured through online consultation like that undertaken to inform the Campus Plan.
- Consideration of any material changes which could trigger the requirement for either a partial or complete update of the Campus Plan.

A THANK YOU FROM THE ASSOCIATE VICE-PRESIDENT AND CHIEF FACILITIES OFFICER

McMaster University's Campus Plan is a vision for the future development of our campus and locations over the next decade, and a framework that will shape our buildings, outdoor spaces, infrastructure and the experience of being at McMaster. Many people from within the university and from outside of it, both in our community and globally, helped form our Campus Plan into a bold and innovative vision for the future of our sites.

The McMaster University Campus Plan is championed by university leaders and project sponsors Saher Fazilat, vice-president, operations and finance and Susan Tighe, provost and vice-president (academic). The plan was developed thanks to your guidance and promotion.

The Campus Plan project was guided by a Steering Committee of academic and administrative leaders, who encouraged McMaster to develop a plan that is responsive to the challenges in the world today and the strategic opportunities available to us in the future. This plan would not be possible without their dedicated time, expert advice and inclusive thought leadership. Working Group members also played an important role in developing the supporting strategies for the public landscape, ecology and stormwater management, transportation and movement, energy and sustainability, and equity, diversity, inclusion, and accessibility.

Many internal stakeholders were also consulted during the plan's development including faculty and administrative department leaders, and others who work in areas promoting sustainability and accessibility, and advancing equity, diversity and inclusion. Student associations, such as the Graduate Student Association and McMaster Students Union, also connected with the project team for input.

McMaster's team held multiple outreach touchpoints and plan to have continued engagement with the community, as well as many external groups to gather input about the plan. We would like to thank all of our external partners for participating including: Indigenous community leaders, Hamilton Conservation Authority, Royal Botanical Gardens, Niagara Escarpment Commission, Hamilton Health Sciences, St. Joseph's Healthcare Hamilton, Mohawk College, McMaster's President's Advisory Committee on Community Relations (PACCR), Metrolinx, the City of Hamilton, including former mayor Fred Eisenberger, councillor Maureen Wilson and municipal staff, as well the City of Burlington, including mayor Marianne Meed Ward and municipal staff.

We would like to express gratitude for the guidance shared by Indigenous community leaders both at McMaster and outside of the university, including members of the Indigenous Education Council. Ongoing consultation with Indigenous communities is being sought and this process will go beyond the Campus Plan.

To create the Campus Plan, McMaster partnered with BDP Quadrangle, a skilled team of architects, designers, engineers and urbanists with a track record in creating outstanding university environments around the globe. Their experts from Canada and the United Kingdom were asked to create a bold plan that aligned with our community's desires and the university's priorities. Thank you.

McMaster's Campus Plan approval process involves presentations to the Presidents and Vice-Presidents group, Provost Council, University Planning Committee, Planning and Resource Committee, the McMaster Senate, and the McMaster Board of Governors.

Consultation with our community was top of mind throughout the Campus Plan development process. Every one of our students, faculty, staff and community members who participated in telling us what was important to them and provided feedback on the plan's ideas made a valuable contribution. We hope you see your perspectives reflected in the plan's vision.

If you have any questions about the Campus Plan, please reach out by emailing planning@mcmaster.ca.



A

APPENDIX A **Acknowledgements**

APPENDIX A Campus Plan 2023-33

Acknowledgements

On behalf of the university planning team, we would like to thank all of the participants who contributed their expertise, insights and time over the last year. The successful development and launch of the Campus Plan could not have been accomplished without your support and guidance.

University Planning Team:

Michael Moore	Manager, Sustainability, Urban Design and Space Planning
Megan Bieksa	Manager, Communications
Jessica Achebe	Post Doctoral Fellow, Department of Civil Engineering
Lalita Goray	Director, Design and Construction
Debbie Martin	Assistant Vice-President and Chief Facilities Officer
Andrea Farquhar	Associate Vice-President, Communication, Marketing and Public Affairs
Saher Fazilat	Vice-President, Operations and Finance

Steering Committee:

Brian Baetz	Director, W Booth School of Engineering Practice and Technology, Faculty of Engineering
Savage Bear	Director, McMaster Indigenous Research Institute and Assistant Professor, Department of Sociology and Psychiatry and Behavioural Neurosciences
Kevin Beatty	Director, Housing and Conference Services
Shawn Burt	Director of Athletics and Recreation
Ken Cruikshank	Professor of History, Faculty of Humanities
Kim Dej	Vice-Provost, Teaching and Learning
Mark Ferguson	Research Associate, McMaster Institute for Transportation Logistics and Centre for Spatial Analysis, School of Earth, Environment & Society
Laura Harrington	Assistant Vice-President, Faculty of Health Sciences
Andy Knights	Associate Vice-President, Research
Clare Mitchell	Chief Operating Officer, Clinical Services, Faculty of Health Sciences
Saideh Razavi	Professor, Department of Civil Engineering, Chair in Heavy Construction, Director of McMaster Institute for Transportation & Logistics
Darren Scott	Professor, Geographic Information Science and Director, Transportation Research Lab (TransLAB)
Simranjeet Singh	President, McMaster Students Union
Caroline Seiler	President, Graduate Student Association
Sean Van Koughnett	Associate Vice-President, Students & Learning and Dean of Students

Working Groups

Transportation and Movement:

Anum Afzal	Administration Manager, Security & Parking Services
Wade Beitel	Director, Design and Construction, Facilities Services
Sarphina Chui	McMaster Student Union
Mark Ferguson	Senior Research Associate, McMaster Institute for Transportation and Logistics
John McGowan	McMaster Student Union
Bruce Newbold	Former Acting Director of McMaster Institute for Transportation & Logistics
Daren Scott	Professor in the School of Earth, Environment & Society
Sandra Singh	Supervisor, Parking
Simranjeet Singh	McMaster Student Union
Wayne Terryberry	Coordinator, Natural Lands & Outdoor Recreation

Stormwater Management and Ecology:

Lynn Armstrong	Administrator, McMaster Okanagan Office
Carlos Figueira	Director of Custodial, Grounds, Logistics and Mail Services
Noah Stegman	Coordinator, Natural Lands Restoration & Conservation
Wayne Terryberry	Coordinator, Natural Lands & Outdoor Recreation

Energy and Sustainability:

Alvin Baldovino	Assistant Director, Engineering Operations
Joe Emberson	Energy Manager
Peter Fortune	Project Manager, Facilities Services
Elliott Jeyaseelan	Facility Technology Administrator, Facility Services
George Vadakken	Assistant Director Project Planning, Facilities Services

Equity, Diversity, Inclusion and Accessibility (EDIA):

Kate Brown	Accessibility Program Manager, AccessMac Program, Equity and Inclusion Office
Andrew Crowell	Director, Spiritual Care and Learning Centre
Arlene Dosen	Executive Director and Assistant Dean of Student Success,
Allison Dubé	Project Manager, McMaster Institute for Research and Aging
Renata Hall	Manager, Inclusion and Anti-Racism Education
Casey Irvin	Communications Coordinator, McMaster Institute for Research and Aging
Lenore Lukasik-Foss	Representative for Anti-Sexual Violence
Nick Marquis	Learning-technologies-consultant
Faith Ogunkoya	Manager of Black Student Success
Anne Pottier	Director, Technology Support & Operations
Clare Warner	Senior Advisor, Equity, Inclusion and Anti-Racism

B

APPENDIX B **Consultation and** **Engagement**

APPENDIX B

Consultation and Engagement

Introduction

The involvement of the community and other key stakeholders has been an integral part of the Campus Plan process. Both internal and external engagement has been extensive throughout the process, and has included the establishment of working groups, building visits, workshops, presentations and pop-up events.

This section summarizes the process and outcomes of the various engagement activities undertaken to inform and support the development of the Campus Plan.

This is shown in two parts:

- Community Engagement (internal and external community)
- Stakeholder Engagement (internal and external stakeholders and working groups)

Community Engagement

The Campus Plan team engaged with both the internal university community and external local community members at key points in the process, as follows:

- **March / April 2022 - Stage 1:**
Initial online student survey and five on-site pop-up events, met with the President's Advisory Committee on Community Relations (PACCR).
- **September / October 2022 - Stage 2:**
External community consultation on the emerging Campus Plan themes, including an online survey and town hall event.
- **December 2022 / January 2023 - Stage 3:**
Follow-up community consultation on the key principles underpinning the Campus Plan, including an online survey and on-site pop-up event.

The process and outcomes of each of these events is outlined on the following pages.

Stage 1: Initial online student survey and on-site pop-up events

Date: March / April 2022

Methods: Online survey and on-site pop-up events

Purpose: Facilitate broad outreach to the McMaster University community to understand general impressions about the campuses and to understand existing gaps and areas of opportunity.

The survey included questions on respondent demographics and three open-ended questions, as follows:

1. What do you like about your campus?
2. What don't you like about your campus?
3. What would make it better?

Demographic Trends

- A total of 2,524 responses were received from students, faculty members and staff.
- The majority of respondents came from the Main Campus in Westdale.
- Across all campuses, students provided the greatest number of responses, followed by staff and faculty members.
- 81% of student respondents were undergraduate students (Domestic 1,212, International 96). The remaining 19% were graduate students and less than 1% were continuing education students.
- 89% of student respondents were domestic students.
- 96% of student respondents were full-time.
- The majority of respondents live off campus and commute from the Greater Hamilton-Toronto Area.
- Respondents were from a range of faculties of study and teaching. The faculty most represented was the Faculty of Science.
- Respondents identified being a member of the following equity deserving groups, listed in lowest to highest amount of responses received:
 - Indigenous community
 - An Older Adult or Senior
 - Disability Community
 - Religious Minority Community in Ontario
 - 2SLGBTQIA+ Community
 - Racialized Community
 - A Woman

Word Clouds

Word clouds were generated from responses to each open-ended question. The assumption is that the larger and bolder the word is within the word cloud, the greater amount of responses included that/those word(s), and that/those word(s) can be assumed as a leading response for the question.

Open Ended Questions:

1. **What do you like about your campus or location (related to buildings, outdoor spaces, infrastructure)?**
Largest and boldest words include:
 - a. Outdoor [space]
 - b. Green [space]
 - c. Building
2. **What don't you like about your campus or location (related to buildings, outdoor spaces, infrastructure)?**
Largest and boldest words include:
 - a. Space
 - b. Parking
 - c. Building
3. **What would make the campus or location better?**
 - a. Seating (more)
 - b. Parking
 - c. Building
 - d. Outdoor

Findings

The Final Survey Results were shared with the BDP Quadrangle / Human Space team on 17 May 2022. The Final Survey Results were shared in the following reports:

Dashboard Final Version which represents an overall summary between all campuses.

Campus Specific Final Version which represents information collected from each individual campus (Downtown, Healthcare locations, Ron Joyce Centre).

Summary of the Open-Ended Questions:

- What do you like about your campus?
- What don't you like about your campus?
- What would make the campus or location better?

Overall, themes for the top three responses between campuses demonstrated similar trends. Below includes the three open ended questions that are listed by the highest response rate and are associated with the most recurring comment within each section.

When asked , "What do you like about your campus?", the top responses included:

Top Responses	Response Rate	Most Recurring Comment Within Each Response
Outdoor Space	61%	Appreciation for the presence of greenery
Look of Buildings	30%	Nice Architecture
Use of Buildings	30%	Layouts - Easy to get around; Buildings are close to each other
Feeling of Location	13%	Good location
Transportation	5%	Easy transportation
Services	4%	Access to shops / food venues

When asked, "What don't you like about your campus?", the top responses included:

Top Responses	Response Rate	Most Recurring Comment Within Each Response
Buildings	28%	Old buildings that need updates and renovations
Transportation	24%	Access to parking
Use of Location	17%	Layout buildings - separated too far apart and difficult to find places
Outdoor Space	17%	Need for more plants, trees, outdoor spaces. Keeping and maintaining existing greenery
Services	13%	Not enough food options (variety, price, locations and / or schedule)
Feeling of Location	9%	Continuous construction
Maintenance	8%	HVAC issues
Technology	2%	Need for technology updates for rooms and buildings
Other Areas	< 1%	-
Sustainability	< 1%	-

When asked, "What would make the campus or location better?", the top responses included:

Top Responses	Response Rate	Most Recurring Comment Within Each Response
Use of Location	33%	Keep and create more green spaces inside and outside
Transportation	23%	More and better parking options
Outdoor Spaces	19%	Weather shelter to sit, eat, socialize and work. Covered for rain, snow and shade
Services	17%	More food options (variety, price, locations and/or schedule)
Maintenance	14%	Building renovations and updates
Buildings	8%	More windows and natural light and windows that can be opened
Accessibility	5%	Improve accessibility
New Buildings / Upgrades	5%	Organized and faster construction
Sustainability	3%	More compost, recycling and garbage bins
Feeling of Location	2%	-
Technology	2%	-
Other Areas	2%	-

Overall, the prevailing themes from respondents were:

- 1. Access to Nature and Biophilic Design:** Respondents had an overwhelming appreciation for green spaces and access to nature. A strong desire to maintain the existing green spaces and ensure that the provision of additional green spaces was highlighted. Respondents also indicated a desire for more green spaces within the buildings presenting an opportunity to engage in biophilic design. Where reference to nature was highlighted, with specific comments relating to the inclusion of green walls, views to nature and access to natural daylight within the interior environment.
- 2. Buildings:** Though there was an appreciation for the architectural character of the buildings including the historical nature of some building, there was a prevailing theme to improve the existing stock of the buildings from its usability, access to natural light (windows), functionality, sustainability, accessibility and improvement to technology.
- 3. Use of Location:** This term was referenced across all three opened ended questions. Feedback suggests that some respondents appreciate the layout and ability to get between buildings while some respondents felt that this was a challenge and should be further considered. Moving forward it appears that consideration for wayfinding within and between buildings should be a priority.
- 4. Transportation:** Access to parking was identified as a current gap and is a significant opportunity for improvement for respondents. This comment aligned with much of the feedback received during the Pop-Up Engagement sessions. Many respondents indicated difficulty accessing their buildings on campus either because parking was limited or public transit drop off points were located too far from their intended final destination.

Stage 2: External Community Consultation

Date: September / October 2022

Methods: Online survey and Town Hall event

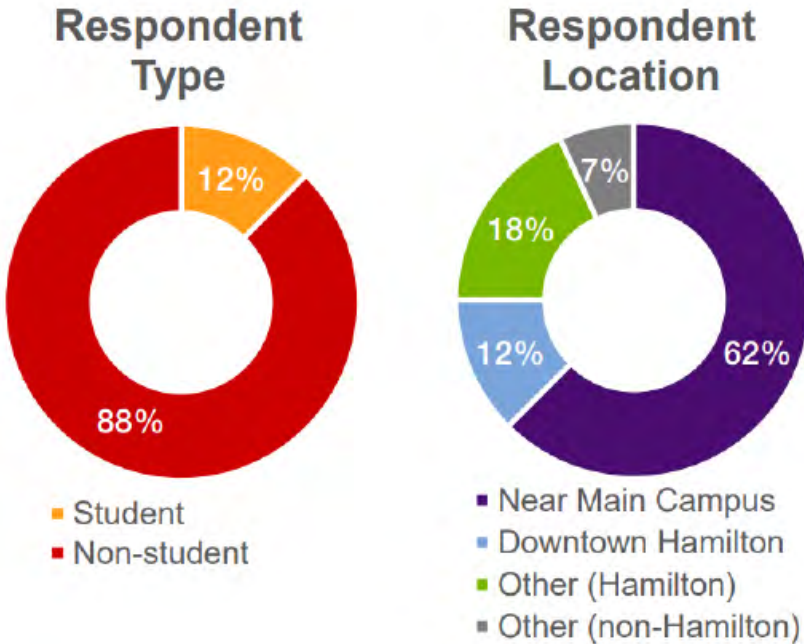
Purpose: To inform and seek feedback from the local community on five key themes emerging through the Campus Plan.

External engagement for the McMaster University Campus Plan consisted of an online survey and in-person Community Consultation. Both initiatives sought feedback on five themes identified through previous consultation within the University:

- Provide more housing options on campus and nearby;
- Create a connected and accessible university;
- Enhance our natural environment;
- Reduce our carbon footprint; and
- A brighter future.

The Community Consultation session and survey were announced via leaflets distributed to the surrounding neighbourhood and to the local councillor’s office. The online survey was open until October 5th, 2022. It was available on McMaster Facility Services’ Campus Plan page, shared on social media and promoted at pop-up events. The survey received 89 responses.

Most respondents were non-students and lived near Main Campus, followed by downtown and other Hamilton neighbourhoods. There was significant support for all themes. “Enhancing our natural environment” saw highest support overall. Note: that the “brighter future” theme was defined by engagement materials as including buildings, outdoor spaces, infrastructure, campus and locations, however no specific ideas were presented for feedback in this theme.



Do you agree with these ideas for...



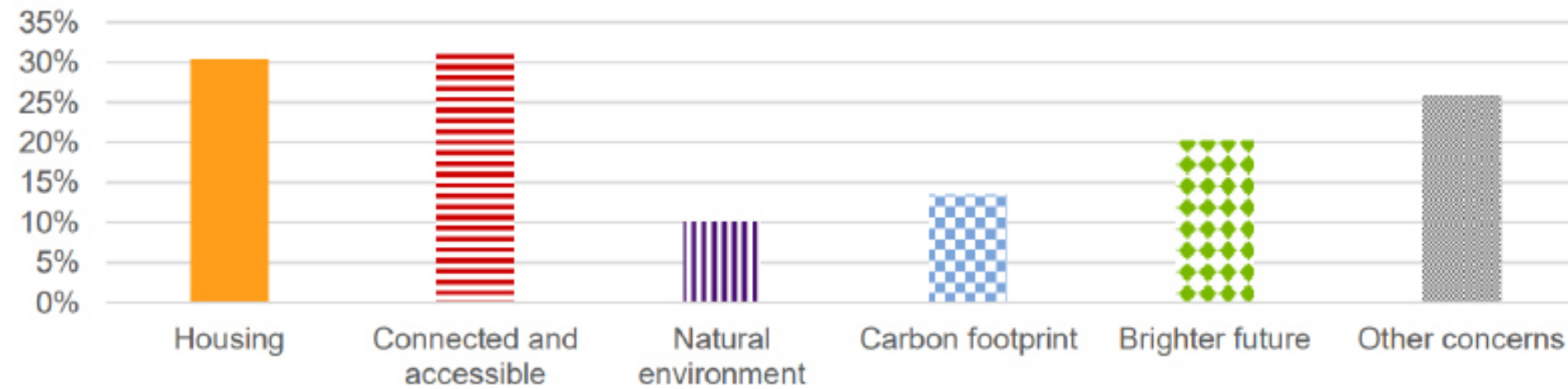
Summary of Survey

Most open-ended feedback fell within the five identified themes, from this point on described using the following scheme: housing (orange/solid); connected and accessible (red/horizontal lines); natural environment (purple/vertical lines); carbon footprint (blue/checkerboard); brighter future (green/diamonds); and other feedback (grey/dots).

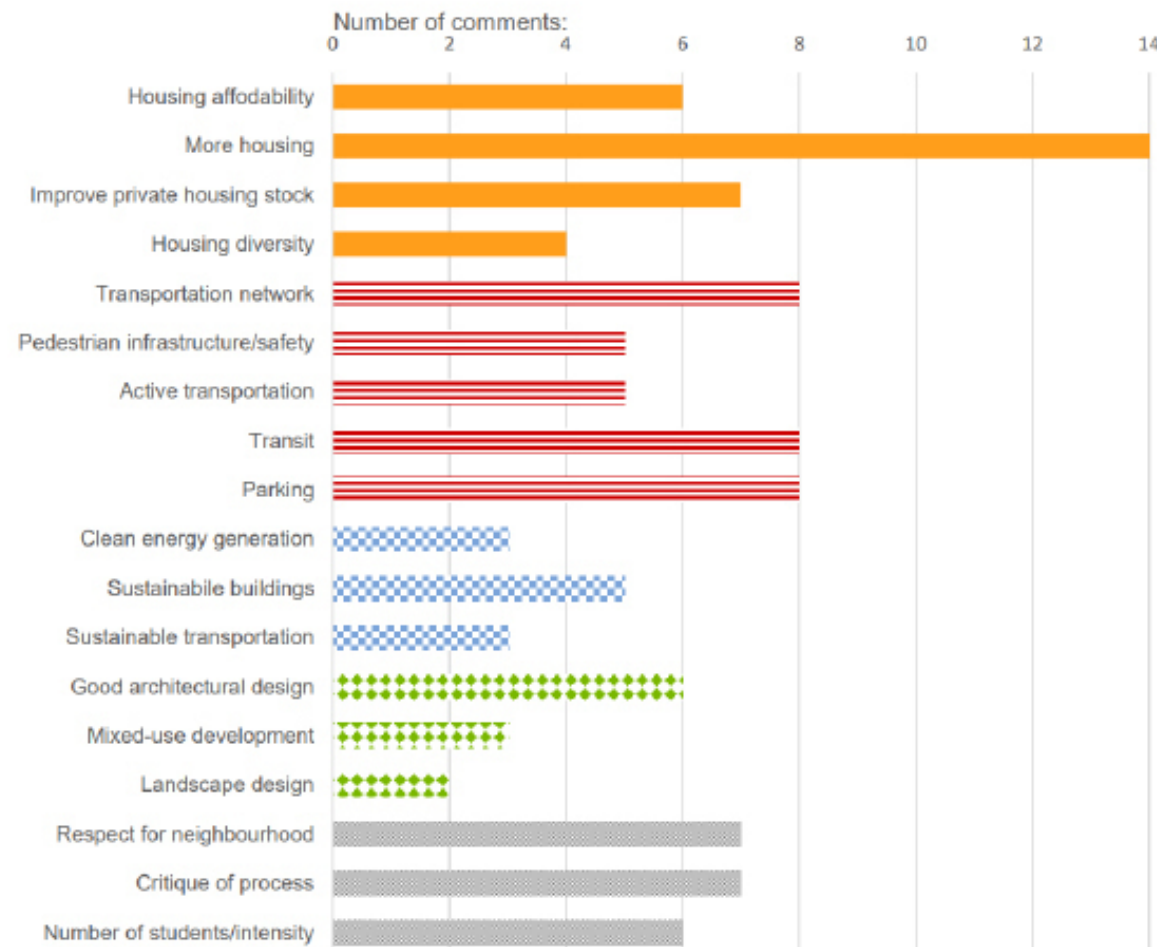
Other comments described desire for a general “respect for the neighbourhood” or frustration, most frequently with the impact of the university on the neighbourhood or the engagement process itself. Approx. 15% of comments included specific suggestions, mostly with respect to new facilities.

Several sub-topics emerged within these themes. The most common in each are listed opposite. Demand for more student housing was by far the most popular sentiment. Poorly maintained or regulated private housing was another frequent topic, pointing to a need for the university to deliver high quality housing options. Parking commentary was mixed, with calls for both increasing and reducing on-campus parking. Desire for integrated transit and active transportation options was also common, suggesting potential to reduce parking demand.

Comments by Theme in Survey



Common Sub-Themes in Survey



Town Hall Event

A Community Consultation was held from 6 p.m. to 8 p.m. on September 14th, 2022, at Westside Church (261 Whitney Avenue, Hamilton). The neighbourhoods surrounding the campus were provided with invitation leaflets at each doorway ahead of the session, and to the local Councillor's office. Open-ended comments were captured on sticky notes either by participants or facilitators who recorded participants' verbal remarks. Responses were prompted by printed boards which described each theme and listed ideas generated through prior consultation. A total of 64 sticky notes were collected and organized by theme. One participant submitted comments by email after the session which were incorporated for analysis.

The Community Consultation was marked by significant frustration from participants on issues, many of which were not directly related to the Campus Plan. Overall, people attending the consultation session asked that 'McMaster be a good neighbour'. This sentiment was stated explicitly but was also expressed as cynicism over the engagement process. Comments for more opportunities for input, more substantive engagement, and leadership participation, for example, each speak to a desire for a better relationship with the university.

Parking was the second most common topic. Support for parking infrastructure and questions about assumptions were common. Accessibility was the third most cited topic with all mentions being in favour of greater access.

Notes:

1. Open-ended questions often elicited thoughts in multiple themes or topics. Percentages may therefore total more than 100%.
2. Due to the nature of the Community Consultation event, participants were not limited in their number of comments.

Implications for the Campus Plan

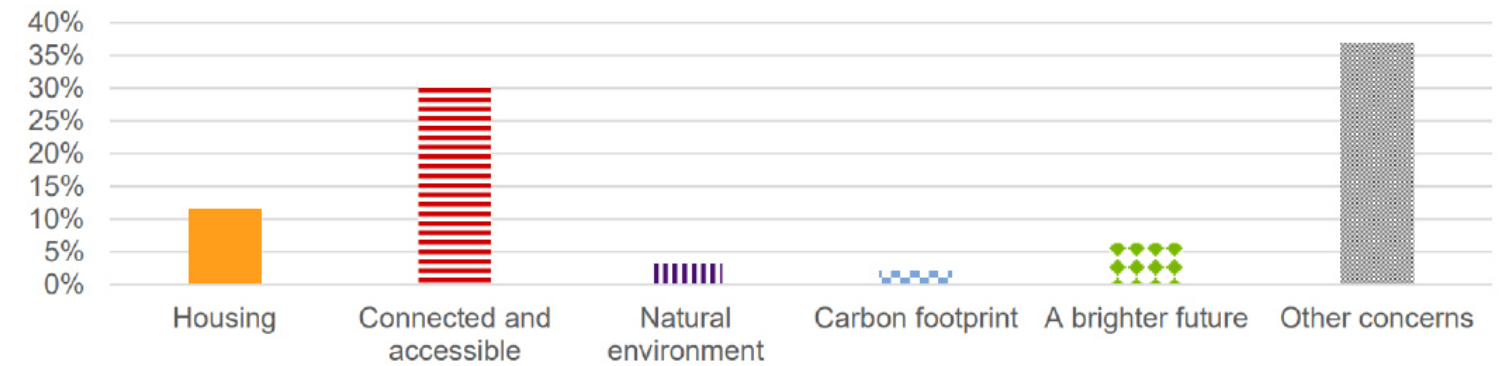
Summary of Implications for the Campus Plan:

- Overall response was in support of themes presented.
- Provide more high quality housing options for students to reduce the impact on the community.
- Ensure new developments incorporate mixed uses and sustainable design.
- Enhance connectivity, permeability and accessibility of the campus.
- Balance provision of parking. Many wanted to reduce the overflow of parking into the broader community.

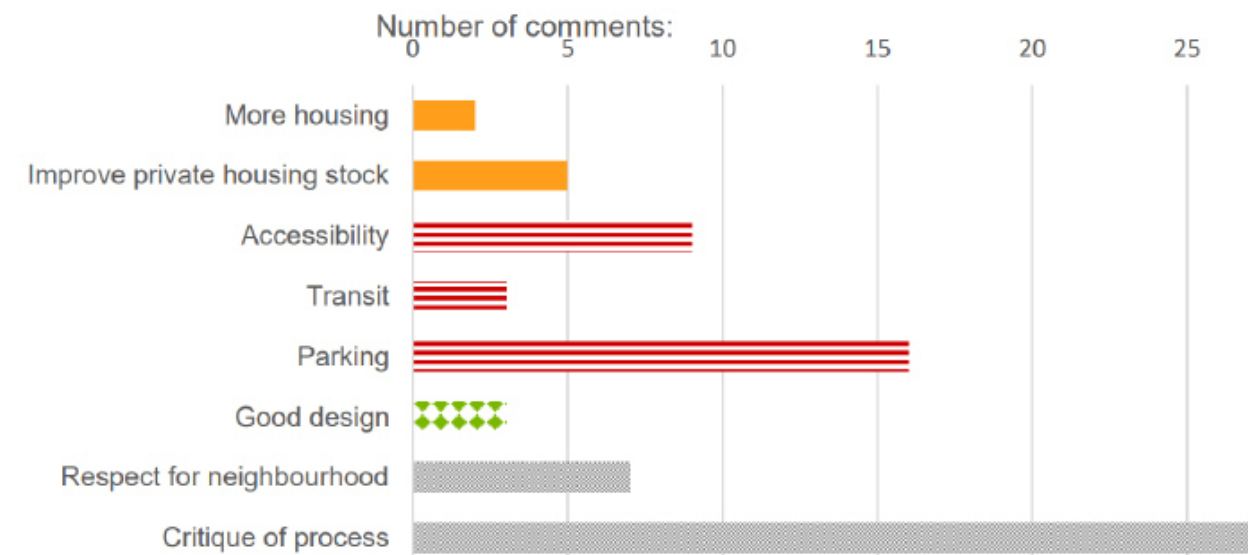
Summary of Specific Suggestions:

- New facilities: multi-purpose space for large gatherings and community events; tennis courts; hockey arena; showers for bike commuters; a new campus.
- Landscape features: outdoor study spaces; water features (e.g. duckpond); multi-use plaza in front of Burke Science building.
- University services: coordinated garbage collection; registry of private student accommodations; affordable groceries; lecture series focused on community.
- Architectural ideas: green roofs; green/living walls; distinctive style for new buildings; adaptive reuse of existing (church) buildings.

Comments by Theme



Common Sub-Themes from Community Consultation



Stage 3: Follow-up University and Community Consultation

Date: December 2022 / January 2023

Methods: Online survey and on-site pop-up event.

Purpose: To inform and seek feedback from McMaster's community on the main ideas underpinning the emerging Campus Plan and to show how the emerging Campus Plan responds to the outcomes of previous engagement.

The follow-up community consultation consisted of an online survey, and an on-site pop-up event on the university's main campus. A series of consultation boards were developed which outlined the feedback received to date and how the main ideas responded to this feedback.

These ideas were grouped under the following themes:

- Re-imagining Key Entrances
- Safe, Accessible and Sustainable Transportation
- More Housing Options on Campus and Nearby
- Green Design and Natural Spaces
- Innovative Learning, Research and Collaborative Spaces

A pop-up event was held on the university's main campus on 11 January 2022. Members of the McMaster Facilities team and the BDPO consultant team were available at this event to answer any questions and discuss

Those attending the pop-up event were encouraged to provide their feedback through responding to the online survey by scanning the QR code provided on the consultation boards. The information shared at the pop-up event was also available online and both the consultation boards and survey were publicized on McMaster's social media channels.

The survey started with a series of demographic questions and then posed two or three questions per theme, asking respondents whether they liked the key ideas presented under each theme. Respondents were also asked to prioritize the five themes, by ranking them from most important to least important. Finally, an open-ended text box was provided for respondents to provide any other feedback or highlight any elements they believe were missing from the ideas presented.

Summary of Survey

A total of 1086 people responded to the online survey, of which 753 (69%) were students, 201 (18%) were members of staff, 72 (7%) were faculty members, 47 (4%) were members of the local community and 13 (1%) identified as alumni.

When asked where respondents lived whilst studying / working at McMaster, 44% reported that they lived off campus and commuted to campus, 32% reported that they lived off campus within walking distance and 17% reported that they lived on campus. 7% of respondents answered "other".

The vast majority of respondents (89%) reported that they either study or teach at the main campus in Westdale. 9% of respondents reported that they do not teach or study at McMaster. The remaining respondents were based either in downtown Hamilton, MIP, Ron Joyce Centre in Burlington, or an off-site healthcare location.

Respondents were also asked to identify if they belonged to one or more of a series of equity-deserving groups.

The full results of the survey are presented on the graphs over the following pages. These show strong support for the ideas presented, particularly with regard for Green Design and Natural Spaces, More Housing Options on Campus and Nearby, Innovative Learning, Research and Collaborative Spaces and Re-Imagining Key Entrances. Support was slightly more measured with regard to removing vehicles from the heart of the campus, which was reflected in the open-ended responses, many of which focused on issues surrounding parking demand.

A clear pattern emerged when respondents were asked to prioritize the themes, with Safe, Accessible and Sustainable Transportation and More Housing Options on Campus and Nearby emerging as the most important themes for respondents. Re-imagining Key Entrances emerged as the least important theme, however there was still strong support for this throughout.

When considering the rankings, there were key differences between the perceptions of students and those of faculty and staff. For students alone, More Housing Options on Campus and Nearby emerged as the most important theme, whereas faculty and staff placed the highest priority on Safe, Accessible and Sustainable Transportation. This is likely due to the fact that more students will be seeking to live nearby to the main campus, whereas faculty and staff are more likely to be commuting to the main campus from the surrounding areas.

In addition to the quantitative feedback received, 247 respondents left qualitative remarks at the end of the survey across a variety of topics and themes. These comments have been reviewed in detail and grouped together thematically. The majority of comments contained statements or suggestions as to matters that could or should be included within the Campus Plan.

Common themes emerging through qualitative feedback were as follows:

- Cycling Provision - Accessibility and safety of cycling should be prioritized.
- Day Care Provision - The McMaster Children's Centre should be maintained and enhanced.
- Food Services - More quality provision is required.
- Study Spaces - There is a need for more provision of study spaces, including areas for private focus and workspaces that accommodate hybrid working.
- Affordability - Consideration should be given to the overall costs associated with attending the university, including housing, tuition, books, parking, food and the availability of scholarships.
- Accessibility and Wellness - Accessibility and inclusivity should be at the heart of all proposals. Accessibility should consider both physical and mental health needs.
- Design - McMaster should prioritize high-quality architecture and iconic gateway elements.
- Recycling and Sustainability - The university should reconsider its waste management system, making it easier for people to recycle. McMaster should divest from fossil fuels and embrace the use of renewable energy and energy saving measures.
- Parking - More, convenient parking is required to meet the demand for parking on campus. The vision for parking must be balanced with the needs of the McMaster community and enhanced transit infrastructure must be in place before any parking is removed.
- Housing - There is a need for more student housing in convenient locations both on the campus and nearby.
- Additional Facilities - A number of additional facilities were recommended including, social spaces, religious spaces, conferencing and events facilities and sports facilities.
- Green Spaces - Outdoor spaces should take account of winter weather. Investment in green spaces will future proof the campus, addressing climate change and enhancing student experiences and research opportunities.
- Level of Growth - Growth needs to be measured and consider the carbon footprint of the university. Construction can be an eyesore and take a long time and therefore should be carefully considered.
- Access and Safety - Key entrances need to be made safer for pedestrians accessing the university. The relationship between pedestrians and traffic accessing the campus must be considered.
- Transit - Commutable access should be improved, ensuring that facilities are enhanced and suitable for all weather conditions. Proposals need to consider the wider transit networks in the city and how these provide for the university.
- Teaching and Research - Enhanced teaching and research facilities (e.g. new lab spaces, flexible teaching environments and new classrooms) are needed to support the university's academic mission.
- Entrances - The campus should have a welcoming entrance, however this should consider the variety of factors at play (e.g. traffic movement / pedestrianization)

Key Outcomes

Overall, the survey responses demonstrated support for the key principles and ideas at the heart of the Campus Plan and the detailed feedback was used to refine the framework and ensure that the final Campus Plan was reflective of the aspirations of students, faculty, staff and the wider community.

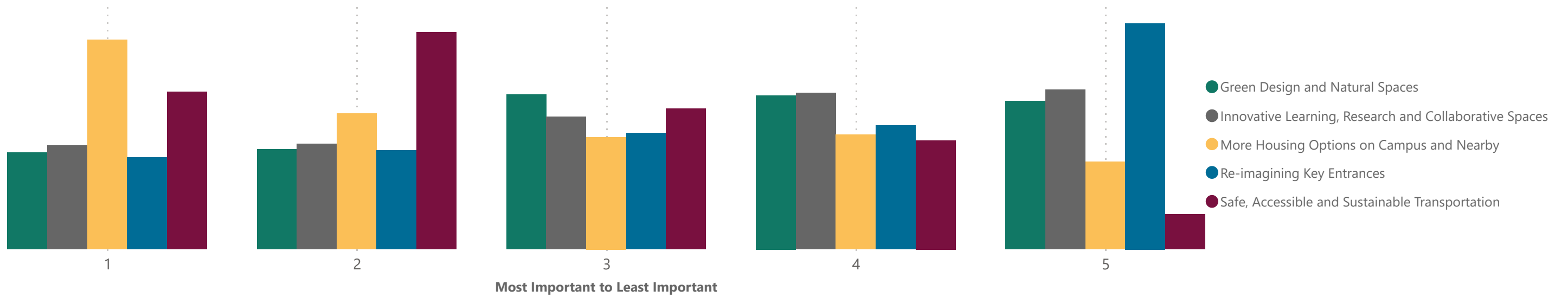
Of the range of comments emerging from the consultation exercise, issues relating to parking and housing were most strongly represented and have had an impact on the final Campus Plan output.

With regard to housing, following feedback from all three consultation events, it was clear that the provision of more housing options is of the utmost concern for members of the McMaster and local communities and therefore should be a key driver of the Campus Plan. The provision of more housing options has since been added as one of the key strategic objectives for the Campus Plan and a plan for providing additional housing both on the campus and nearby is integral to the overall Campus Plan framework.

In response to a significant number of comments regarding car parking supply and demand, the parking strategy which accompanies the Campus Plan has been refined to demonstrate that the Campus Plan proposals will not result in any loss in parking numbers and that the re-provision of parking spaces in consolidated structures will improve the availability of parking at convenient locations on the campus. The strategy recognizes that the shift towards less reliance on private vehicles for access to campus must be a gradual one.

Stakeholder Engagement

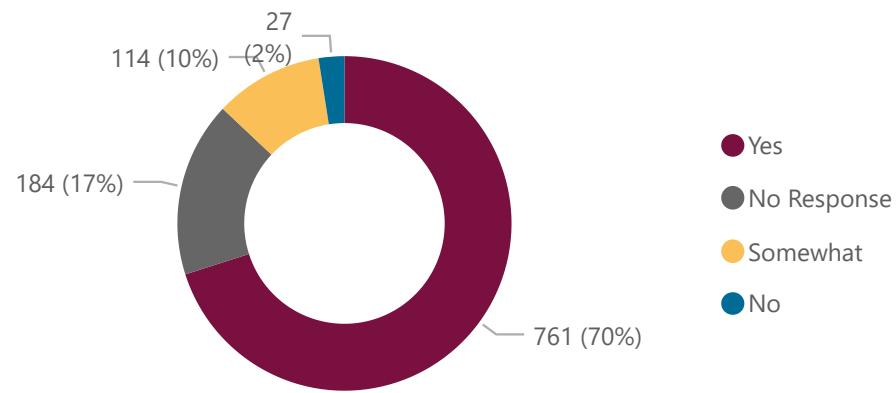
Which theme do you think we should prioritize first? Please place the following in order from most to least important (1 is most important, 5 is least important).



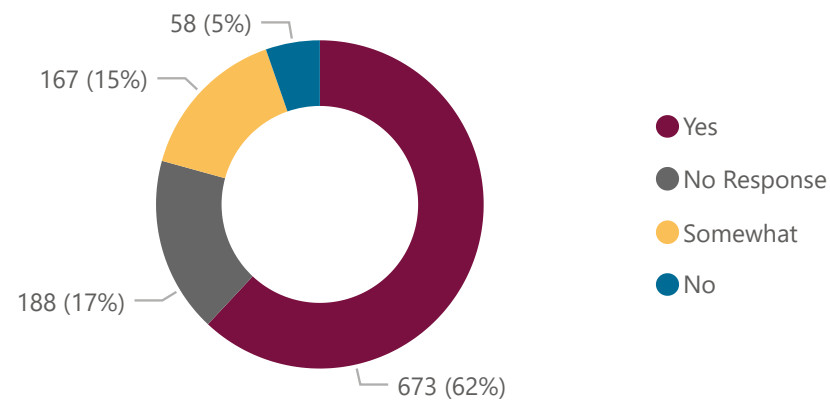
Most Important to Least Important

Green Design and Natural Spaces

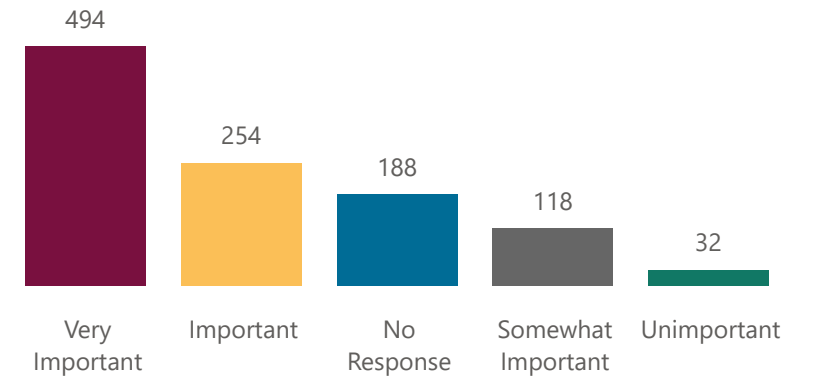
Do you like the idea of providing more green outdoor spaces on Main Campus?



Do you like the idea of naturalizing parts of West Campus?

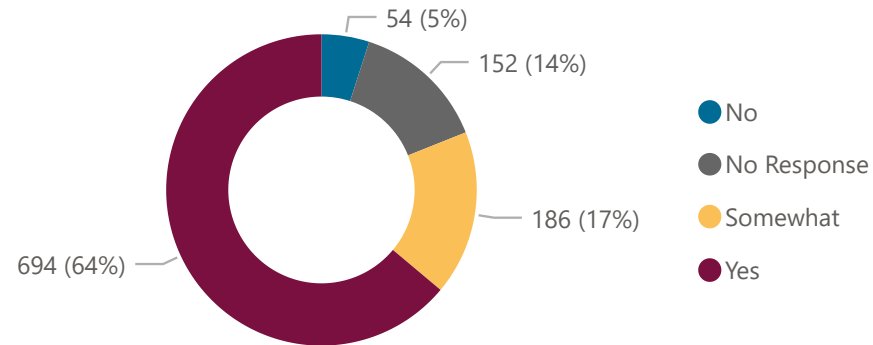


How important do you think it is that the Campus Plan aligns with McMaster's Net Zero Carbon Roadmap or Sustainability Strategy?

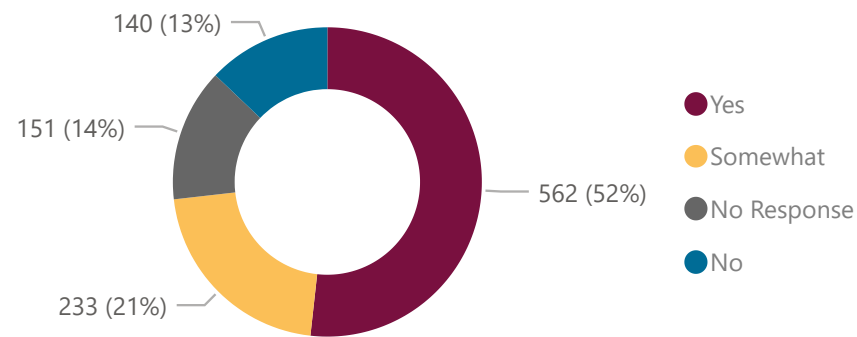


Safe, Accessible and Sustainable Transportation

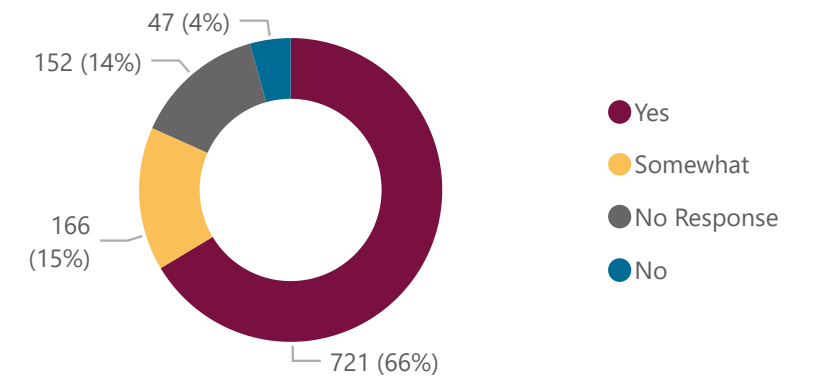
Do you like the idea of developing consolidated parking structures to make space for new uses, such as green spaces and buildings for student activities?



Do you like the idea of removing vehicles from the heart of campus, making it more pedestrian-friendly?

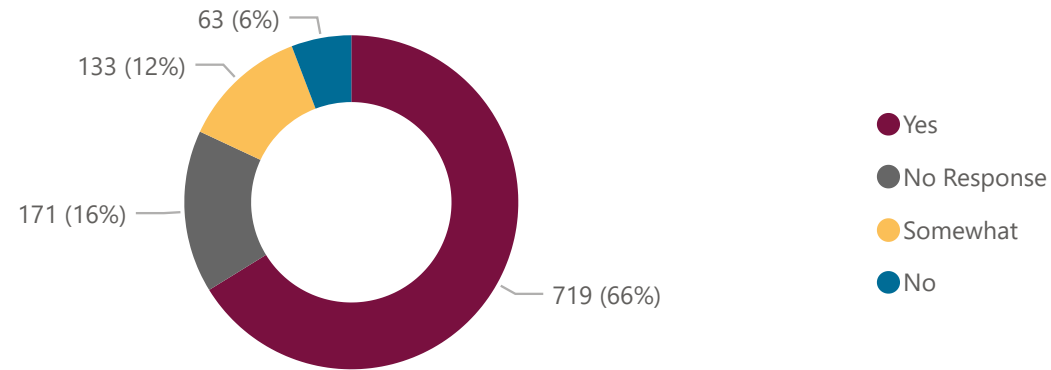


Do you think the campus should be designed to provide better access to transit?

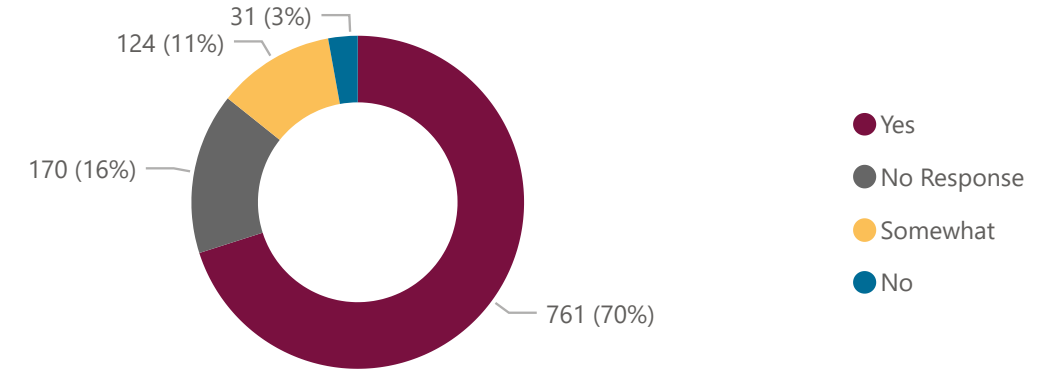


More Housing Options on Campus and Nearby

Do you like the idea of developing more higher-density mixed-use housing on campus like the Peter George Centre for Living and Learning?

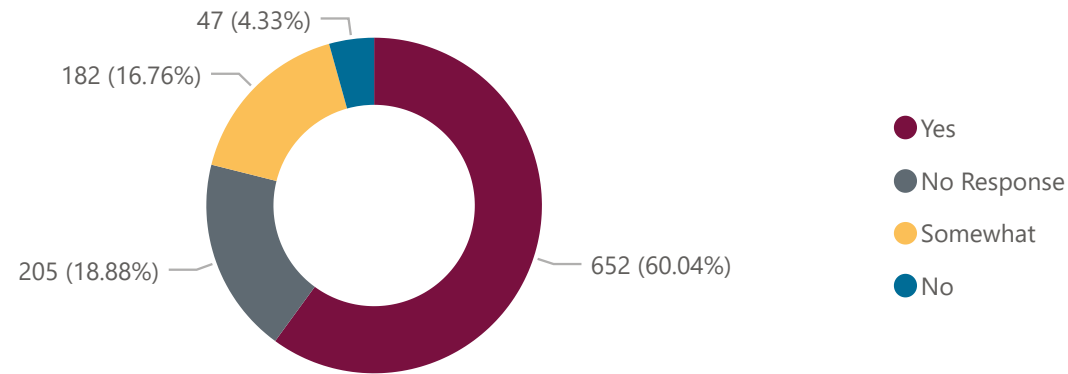


Do you support McMaster's strategy to build new housing on campus, near campus, and along key transit routes?

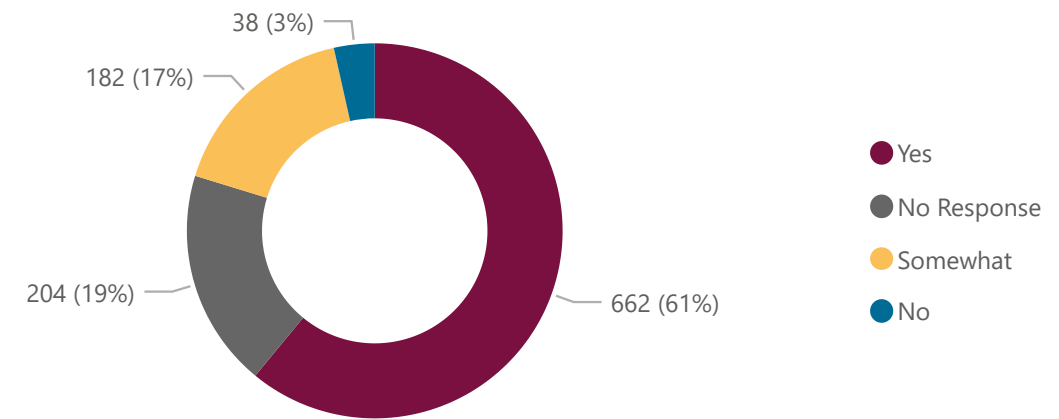


Innovative Learning, Research and Collaborative Spaces

Do you think McMaster would benefit from a network of spaces for spontaneous engagement and socializing across campus?

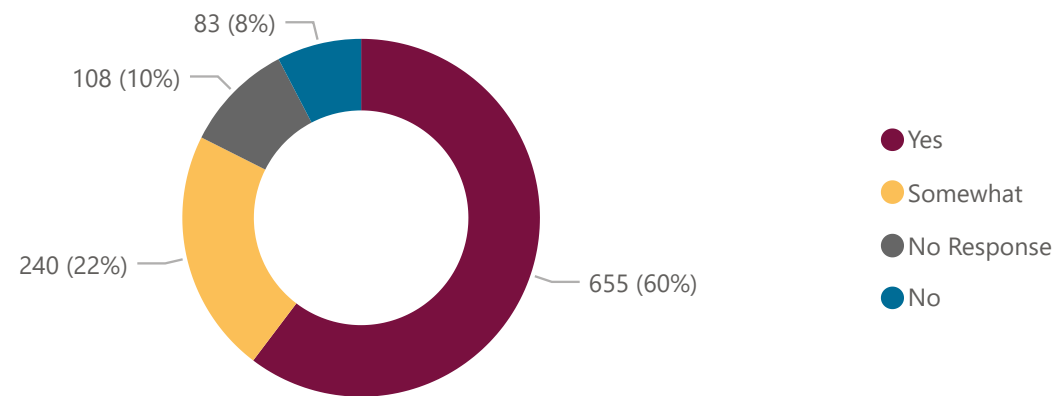


Do you like the idea of more shared teaching and learning buildings on campus?

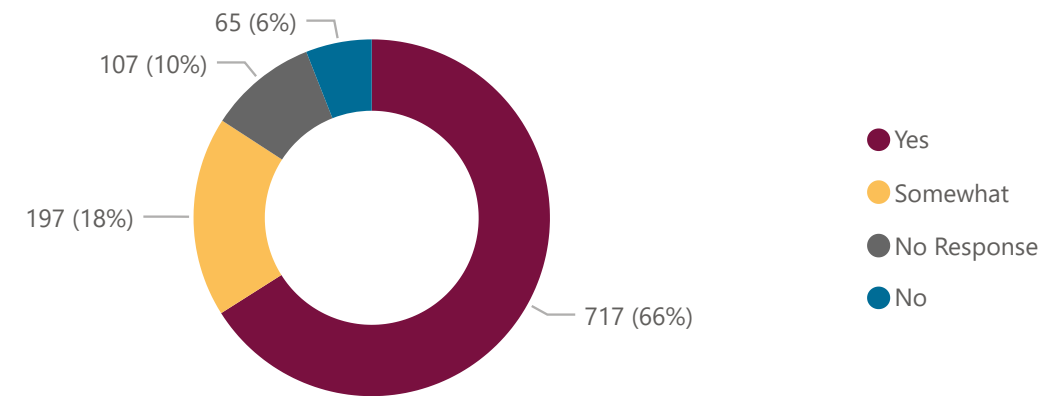


Re-imagining Key Entrances

Do you like the ideas for a re-imagined entrance on Sterling Street?



Do you like the ideas for a re-imagined entrance on Main Street West?



Throughout the course of the Campus Plan development, and particularly during the development of options and the emerging plan itself, there has been extensive engagement with a range of stakeholder organisations, both internal and external to the university.

A summary of the key activities and conclusions from this engagement is set out below.

Internal McMaster Engagement

Within the McMaster community, the Campus Plan team has held discussions, workshops and design charrettes with a broad spectrum of representatives and groups from across the university community.

Steering Committee

The Campus Plan Steering Committee comprised a broad range of university leaders, faculty members, administrators, staff and student representatives.

The role of the Steering Committee was to provide direction to the team in all aspects of the Campus Plan. A series of meetings, including an in-person design charrette, were held with the Steering Committee throughout the duration of the Campus Plan stages.

During stage one the Steering Committee provided insights into the university campus and helped guide the team to connect the institution's priorities into the Campus Plan's six strategic objectives and guide the internal and external engagement program.

In stage two, the committee was consulted to develop the ten transformational design moves that form the Campus Plan. Stage two included an in-person charrette which shaped and refined the design moves. The moves were vetted through the technical lenses of transportation and movement, sustainability and energy, and ecology and stormwater management and presented back to the committee for comment. Stage three saw a further development of the Campus Plan which was reviewed and commented upon by the Committee.

At the culmination of each stage of the Campus Plan process, a program of more formal presentations and discussions have been held with senior leadership groups across the university, providing the opportunity for review and comment in advance of the project moving forward to the next phase of its development.

Thematic Working Groups

In order to explore specific thematic issues of relevance to the Campus Plan in greater depth, three individual working groups were established, covering

- Transportation
- Energy and Sustainability
- Ecology and Stormwater Management

Key findings and outputs from these groups are summarised below.

Transportation and Movement Working Group

A series of meetings were held with the Transportation working group from April through September 2022.

Thematic meetings addressed the concepts of a holistic green travel strategy evaluating active transportation, integration of transit lines and managing parking.

The Transportation working group expressed support for the following initiatives:

- Enable active and sustainable transportation – provide amenities to cyclists for short to medium duration trips including connections to bike paths, secure bicycle storage solutions and changing/shower facilities. Provide charging stations for electric bicycles. Investigate possible Hamilton Bike Share reduce rate structure for students. Improve the pedestrian connections inside and outside campus edges. Inside campus, provide winter routes through buildings as buildings get renovated. Create a behaviour change now for students to make lasting changes.
- Remove vehicle traffic from the heart of the campus – limit car traffic to existing parking facilities, re-route transit buses to the campus perimeter and reduce truck movements on campus to create a safe place for pedestrians.
- Integrate and connect transit modes for easier access to campus – reduce barriers to transit with better connected transfers and better physical transit shelters.
- Manage the parking supply – concentrate parking facilities closer to campus to reclaim land for academic uses and naturalization of west campus. Look into smart parking management systems.
- Manage logistics - create a centralized logistics hub to reduce service trucks on west campus.
- Make last-mile connections – Use accessible smart micro-transit for a fully connected campus.

Energy and Sustainability Working Group

A series of meetings were held with the Energy and Sustainability working group from April through September 2022.

Thematic meetings addressed the concepts of a strategy for sustainable buildings, the campus energy strategy, climate resilience and adaptation and benchmarks. The discussions were predominantly relying on the university's Net Zero Carbon Roadmap and the university's Sustainability Strategy 2022-2026 for overall direction.

The working group expressed support for the following initiatives:

- Implement a low-carbon central energy infrastructure – many solutions are found in the Net Zero Carbon Roadmap, which are in development. These include a zoned campus geothermal thermal system, small modular reactor to generate electricity combined with an ice harvesting thermal loop, photo-voltaic array power generation and the limited use of peak-shaver units.
- Implement a strategy for sustainable buildings - Mitigate climate change through efficient passive measures – use energy use intensity targets to reduce loads.; Adapt existing and new buildings for their resiliency and passive survivability; Thrive by creating and improving buildings to support human health and wellness
- Prioritize passive measures to reduce energy use intensity and lower carbon emissions.
- Increase resiliency on campus - design for future climate conditions.
- Build healthy environments – monitor carbon dioxide in buildings and modulate ventilation rates, increase thermal comfort, daylighting, acoustic comfort and biophilia and locate amenities close to people spaces.
- Implement building automation systems (BAS) and SMART building systems.
- Develop building performance standards with guidance on using rating systems.

Ecology and Stormwater Management Working Group

A series of thematic meetings, including an in-person charette, were held with the Ecology and Stormwater Management working group from April through September 2022.

The working group expressed support for the following initiatives addressing ecology:

- Protect existing natural spaces on campus from development. Ensure that natural areas do not decrease with university growth.
- Prioritize natural surfaces - gradually replace parking areas with naturalized areas.
- Strengthen community – Enhance play spaces and add a community garden.
- Design to encourage fauna and biodiversity.
- Select native plants – avoid the use of invasive and species throughout the campus and other university locations.
- Create outdoor landscaped spaces – add plantings in naturalized groupings at the campus Mall and elsewhere to vary the current lawn and trees approach and provide amenity to students, faculty and staff. Provide year-round naturalized recreation and teaching spaces with shaded areas.
- Create a planted transition at the top of the escarpment hill – Install a planted strip along the top of the escarpment hill to mediate between the green lawns and natural hill conditions.
- Remediate temporary parking lots along the escarpment - relocate the gravel surface parking lot built to accommodate construction related vehicles away from sensitive ecological environments to other sites inside the campus.
- Naturalize Cootes Drive - Create a green planted buffer along Cootes Drive.

- Use vegetated walls - consider planted green walls at new buildings especially parking structures.
- Encourage carbon sequestration on campus – learn from the McMaster Forest to create opportunities for carbon sequestration on and off campus.
- Create and renovate escarpment trails – work with the Hamilton Conservation Authority, the Royal Botanical Gardens and others to create new trails and maintain existing ones. Where possible, make footpaths accessible to all.
- Seek third party certification for the campus - Investigate the feasibility for third-party certification of the campus, such as the Sustainable Sites program.

On the topic of stormwater practices on campus, the working group expressed support for the following initiatives:

- Document the campus stormwater system – commission a campus-wide survey of the stormwater system to understand strengths and weaknesses.
- Develop an integrated campus stormwater plan to reduce flood risks associated with climate change – incorporate low-impact development strategies to manage the flow and quality of water run-off as a campus, not project by project.
- Prioritize low-impact development strategies – maximize pervious surfaces to decrease surface run-off, maintain or increase the amount of vegetation on site, utilize catch basin and rainwater tanks where possible to control peak flow, use planted swales to increase water absorption into the soil.
- Naturalize portions of the west campus using a regenerative design approach – create an off-line constructed wetland and infiltration marsh replacing portions of parking lot M to create a new amenity, living laboratory and outdoor learning opportunity on campus.

External Stakeholder Consultation

Extensive engagement has also taken place with a broad range of external stakeholders with an interest in the future development of McMaster University. These include City of Hamilton, City of Burlington, public transit operators, the Hamilton Conservation Authority, the Royal Botanical Gardens and Mohawk College.

The input, advice and guidance of each of these groups has been extremely valuable in shaping the Campus Plan.

The Campus Plan team met on several occasions with City of Hamilton staff, local area councillors, Metrolinx representatives, HSR public transportation agency, Accessible Transit Services-DARTS.

Specific issues mentioned by the city representatives include:

Develop a shared vision for streets with the city

- Main Street West design and streetscape needs to be rethought to include traffic calming around the campus areas.
 - Cootes Drive and Forsyth need to become better integrated with the surrounding neighbourhoods. Create a signalized intersection at Forsyth and Main Street to allow for safe passage of students and re-urbanize the perimeter of campus.
 - Create a pedestrian campus with transportation uses at its perimeter.
- Connect the university to the city – the university attracts talent, but the city keeps them there. Consider at-grade retail at Main Street frontage.
- Address the housing crisis - the university needs to provide and manage its housing offer to lessen its impact on nearby neighbourhoods. Create on-campus, near campus and transit related housing.

- Preserve Cootes Paradise – manage stormwater and sewage spills, reduce parking at west campus. Densify parking where possible.
- Consider impact of high building on views to the escarpment.
- Create a unified and vibrant university presence at the downtown campus.
- Consider truck routes within the neighbourhoods.
- The university should coordinate Campus Plan efforts with Metrolinx track design when a consultant is engaged. The track offset should be coordinated with the opening of the Forsyth intersection.
- A low carbon energy centre would be welcome.

The Campus Plan team met with City of Burlington to discuss the Burlington campus location and its future development potential.

The Campus Plan team met on several occasions with representatives of the Hamilton Conservation Authority to discuss the Campus Plan process and initiatives. The team also met with HCA representatives at the west campus to discuss the proposals for housing, parking and a logistics facility. Specific issues mentioned by the HCA include:

- Encourage active use of trails - connect and maintain trails in and around the campus and identify connection points. The path and bridge at Coldwater Creek in west campus should be reinstated and maintained.
- Stormwater outflow points in the escarpment should be monitored and evaluated to avoid erosion.
- Create planted buffers at the escarpment – plant Indigenous shrub plantings at edges to mediate between mowed lawns and natural lands.
- Create planted buffers along surface parking at west campus.

- Manage invasive plant species – non-native and invasive species are propagating into the escarpment lands near campus.
- Restoration of west campus to a more naturalized state is encouraged.
- Connect the fauna and flora corridor – when Spencer Creek bridge is replaced, create a wider connection to allow for fauna to cross Cootes Drive safely.
- Keep development away from established escarpment hill slopes.
- Keep development in areas above the flood zone.

The Campus Plan team met on several occasions with representatives of the neighbouring Royal Botanical Gardens to discuss the goals and design moves for the campus. Specific issues mentioned by the RBG include:

- Stormwater management is a concern for the Cootes Paradise ecosystem – previous spills and overflow have caused erosion and sever effects. Water related projects on west campus that delay peak flow and improve water quality would be welcome.
- Manage invasive and non-native species – prevent their spread to Cootes Paradise.
- Create a wider list of available plants to correspond with the changing climate.
- Tell stories through land-based learning - take advantage of Indigenous knowledge.
- Manage intensification with buffer zones – create natural borders at the campus edges.
- Connect, manage and maintain pathways.
- Enable the wildlife corridor and reduce barriers to movement, including Cootes Drive.
- Discourage people from entering areas of natural regeneration.

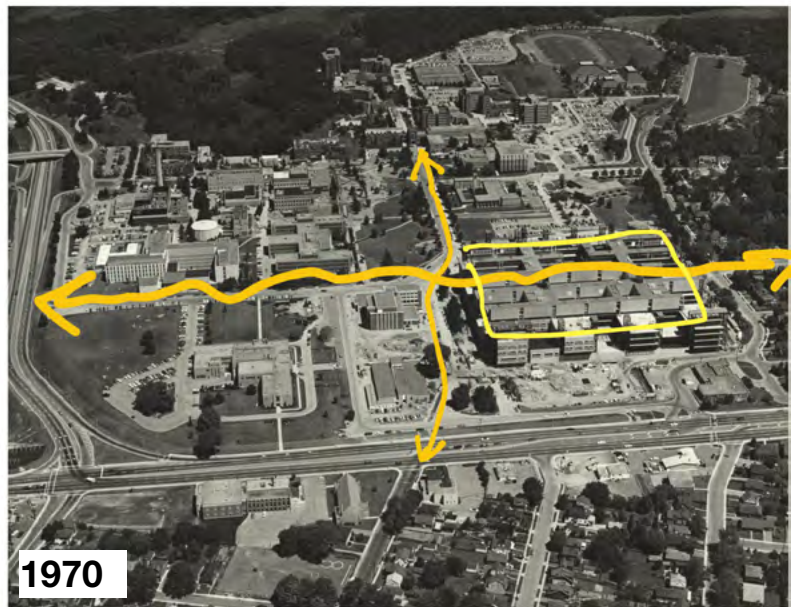
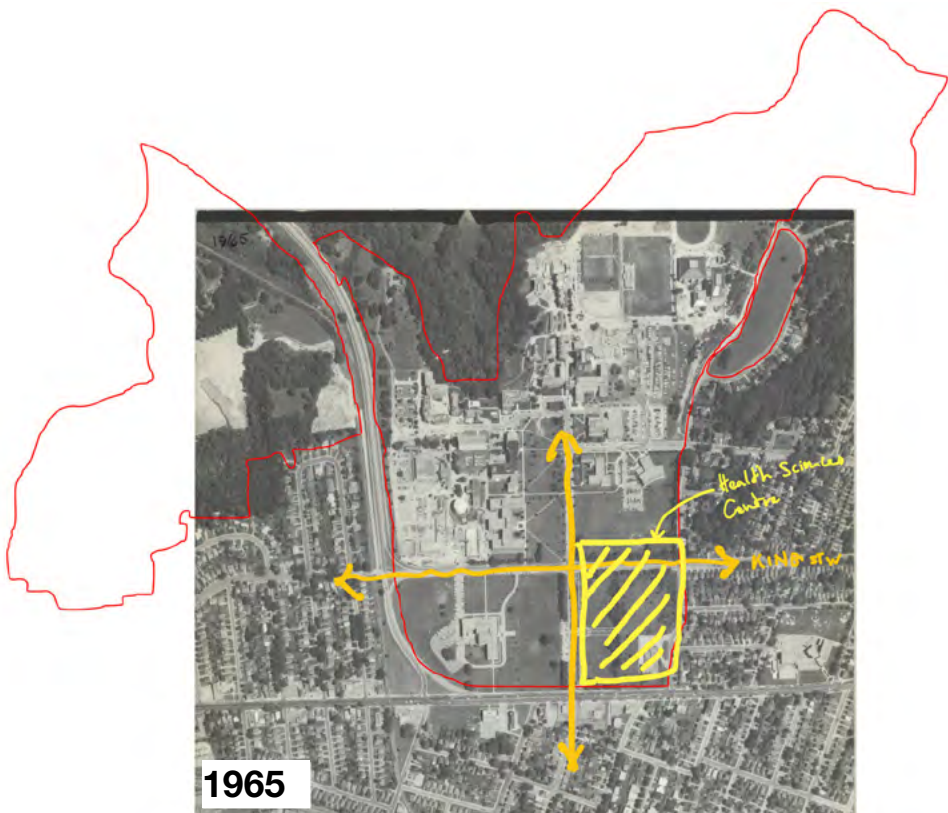
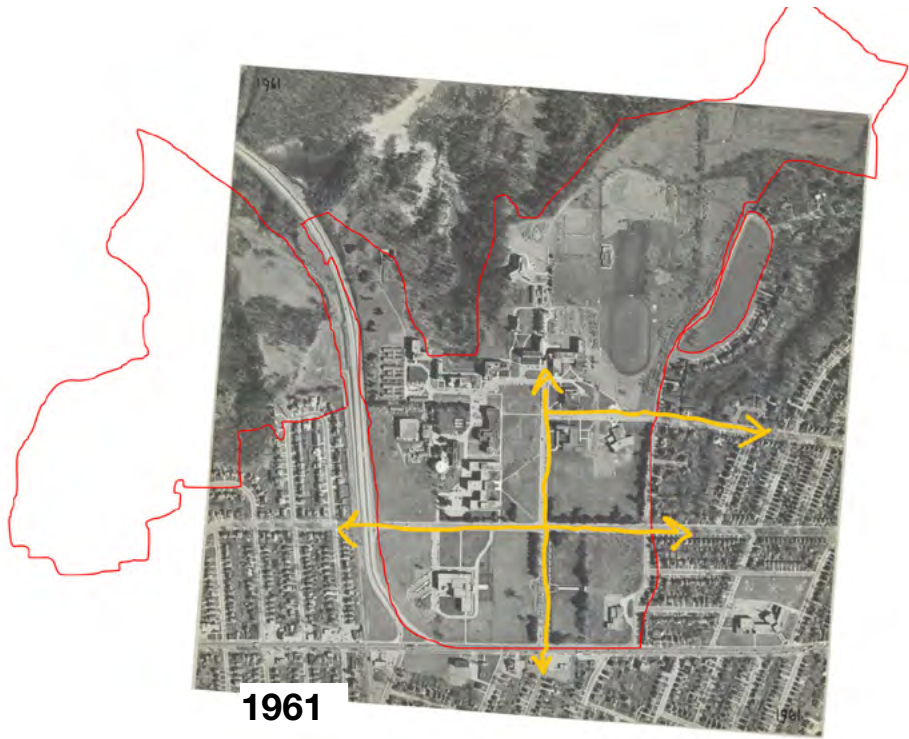
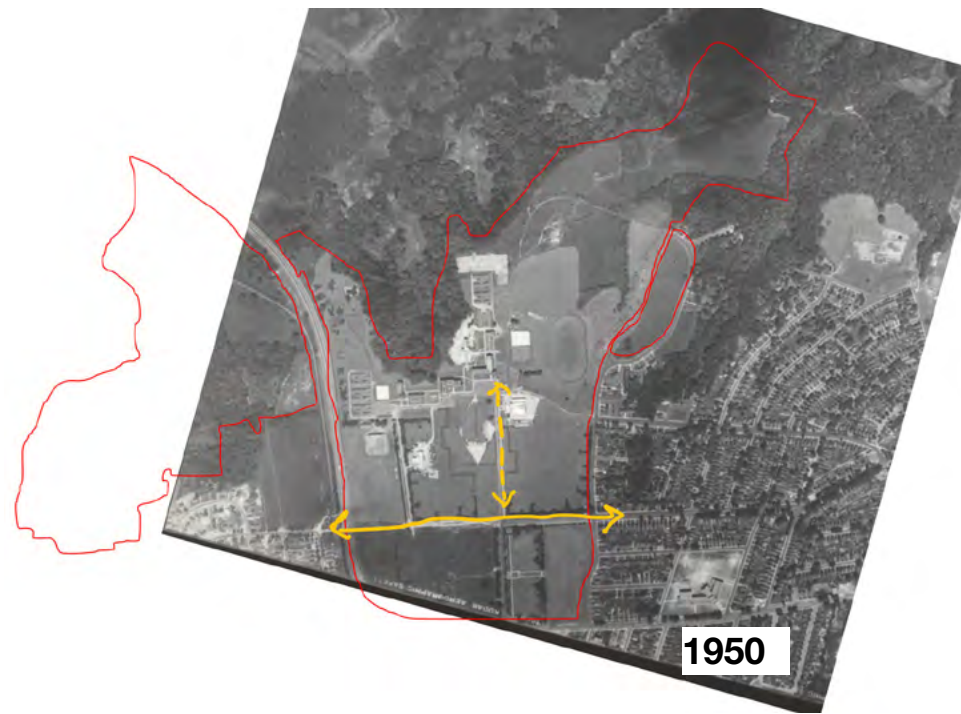
- Manage stormwater – develop a holistic stormwater plan using a multitude of solutions that use water and delay its release, improving quality.
- Enhance wayfinding for trails.
- Consider the visual effects of tall buildings on view corridors to the escarpment – see recommendations from the Niagara Escarpment Commission.
- Cut down on light pollution – use full cut-off exterior light fixtures.

The Campus Plan team met with representatives of Mohawk College in stage 2 to discuss the direction of the Campus Plan and its alignment with the college's own Master Plan. The discussion included the following:

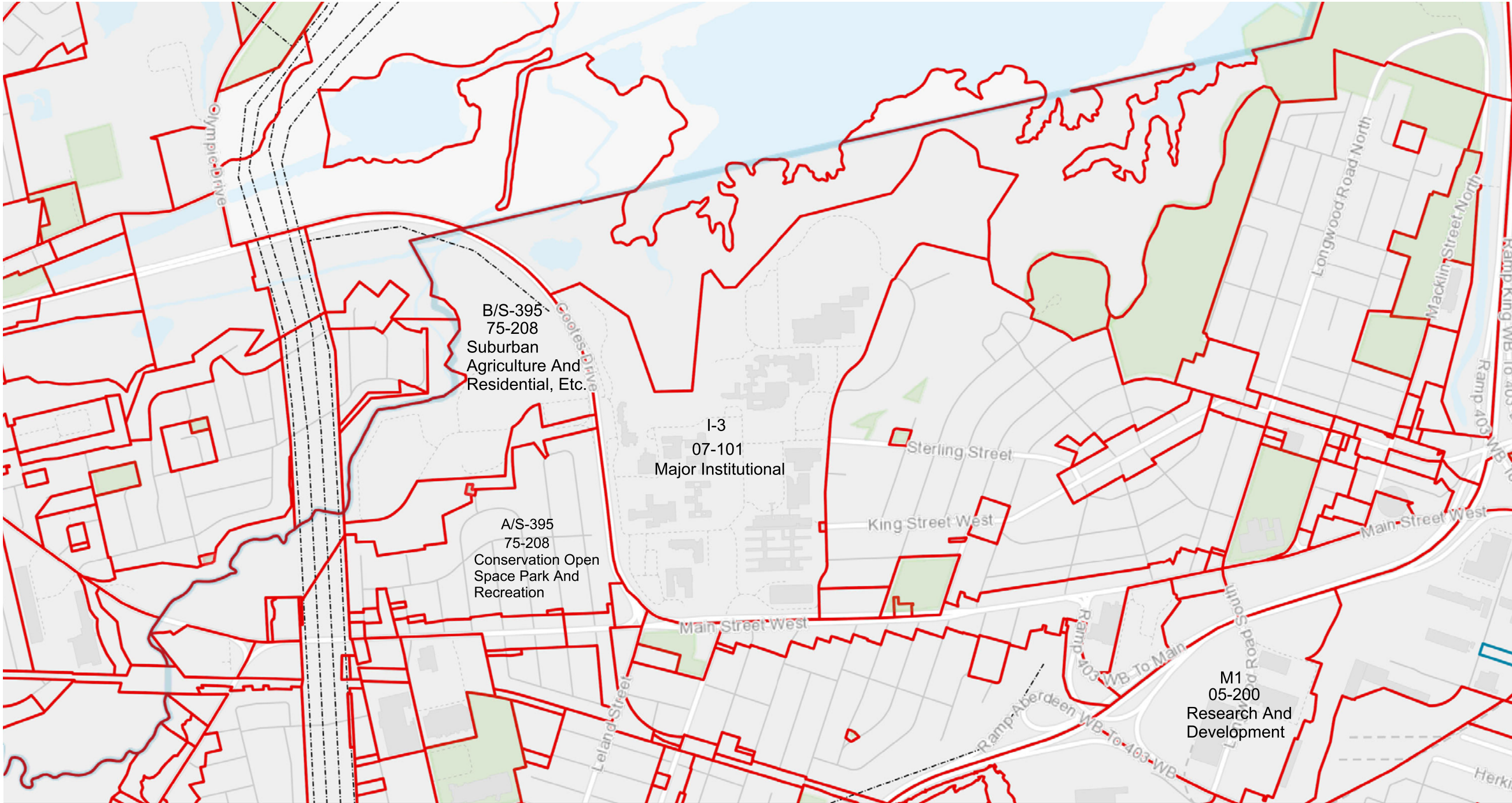
- The joint Health Sciences program is growing and will require an expansion. The Campus Plan should allow for an expansion of the existing building.
- The direction of the emerging Campus Plan largely aligns with Mohawk College's Master Plan.
- Students needs study rooms and amenity spaces.
- The south campus needs more social hubs and leisure activities.

C

APPENDIX C **Campus Analysis**

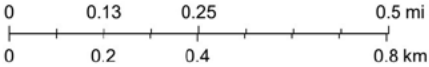


Upper Right: An aerial photograph date June 4 1950
 Upper Far Right: An aerial photograph from 1961
 Right: An aerial photograph from 1965
 Far Right: An aerial photograph from 1970
 Source: McMaster Digital Archive



- City Boundary
- Zoning Boundaries
- Council Approved - Zoning Boundaries

Above: Planning map
Local Planning Context map contains public sector Data made available under the City of Hamilton's Open Data Licence



McMaster University City-Wide Ownership

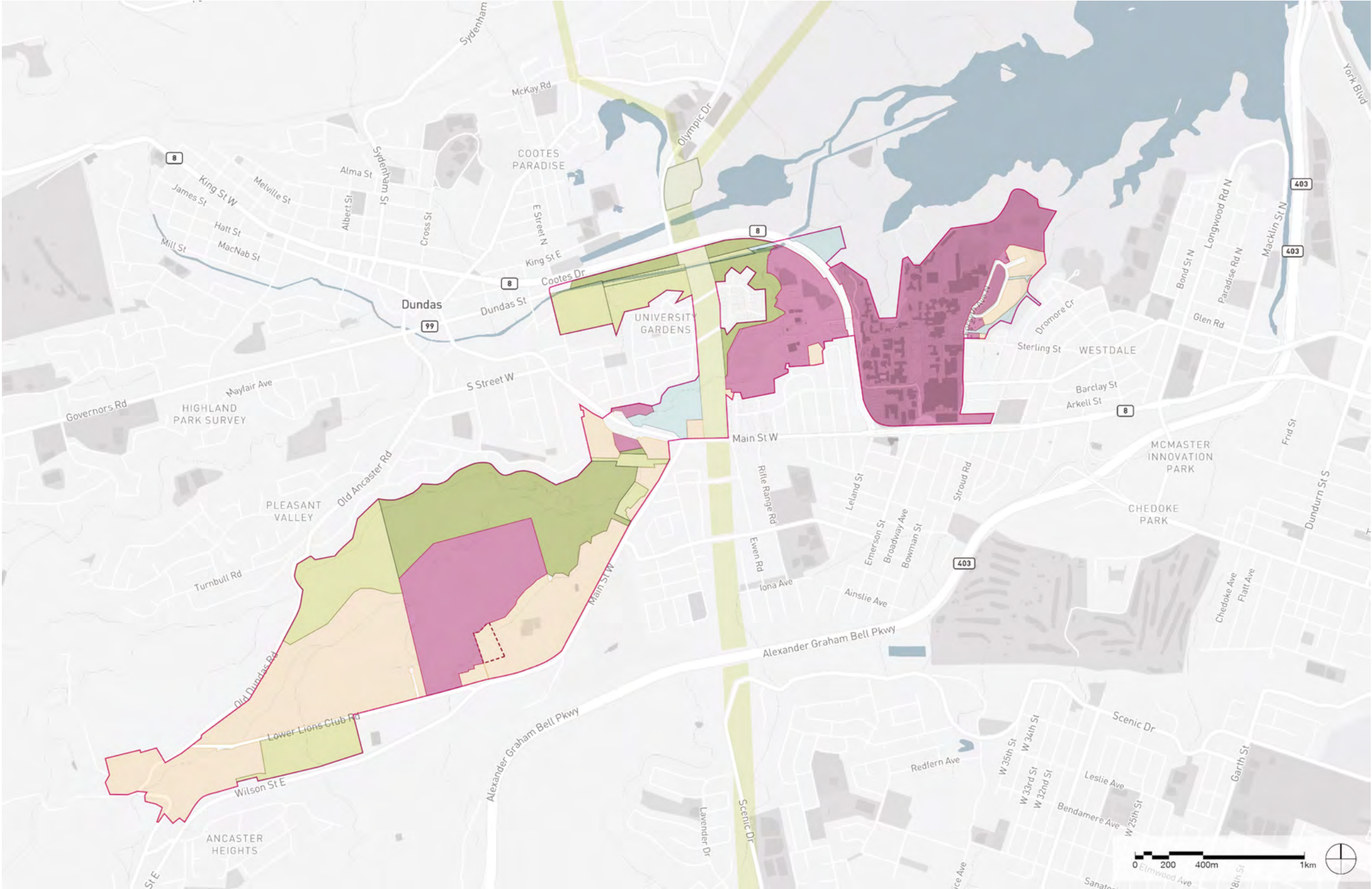


Above: Land Ownership map

- Properties Owned by McMaster University
- Properties Leased by McMaster University

Natural Lands Ownership

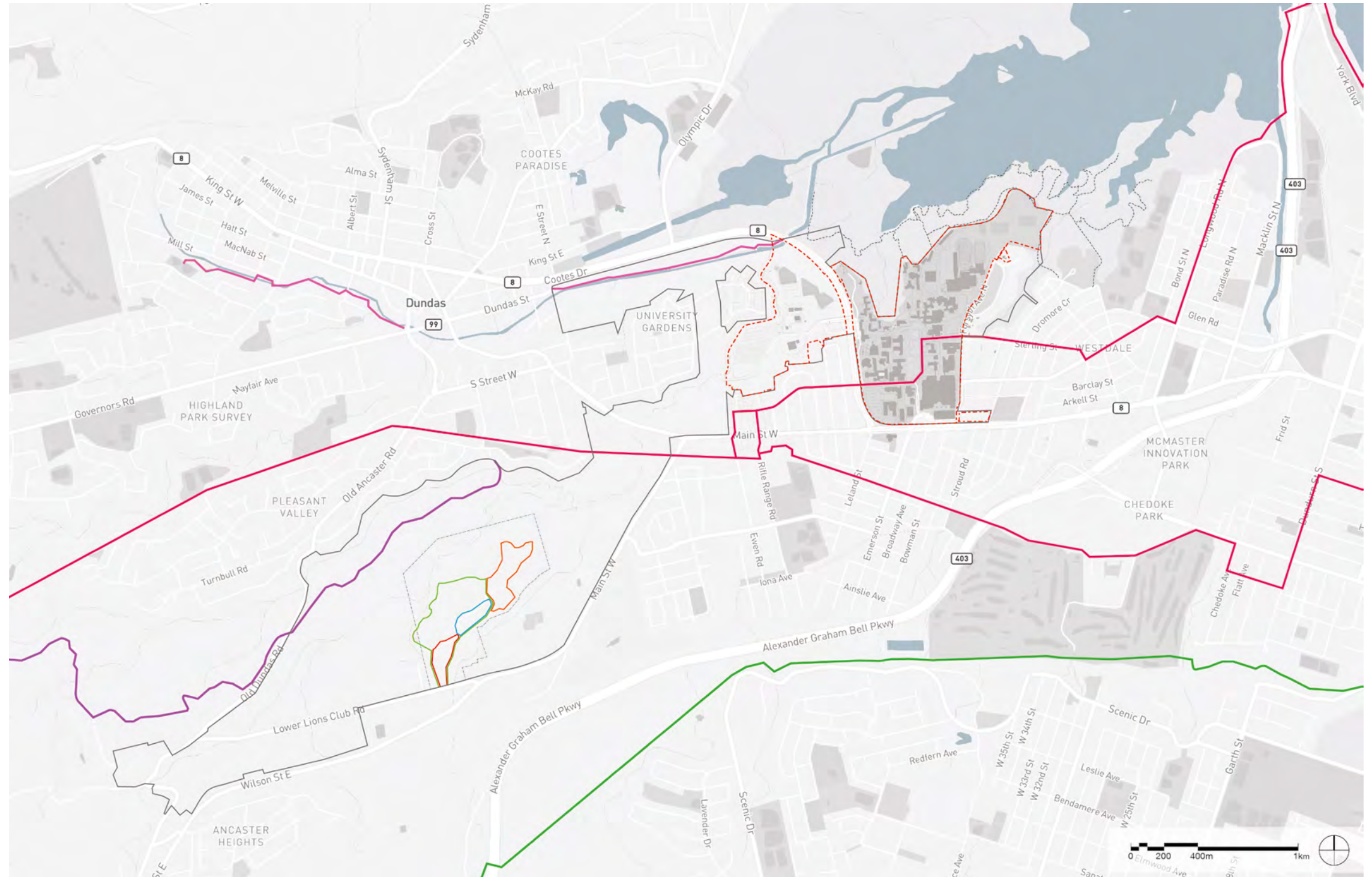
- LEGEND**
- McMaster University
 - Hamilton Conservation Authority
 - Hamilton Conservation Authority (Previously Owned by McMaster)
 - City of Hamilton
 - Hydro Corridor
 - Private Lands
 - Hydro One Transformer Station
 - Hydro/Utilities Easement
 - Recent Land Acquired by McMaster



Above: Natural lands ownership map

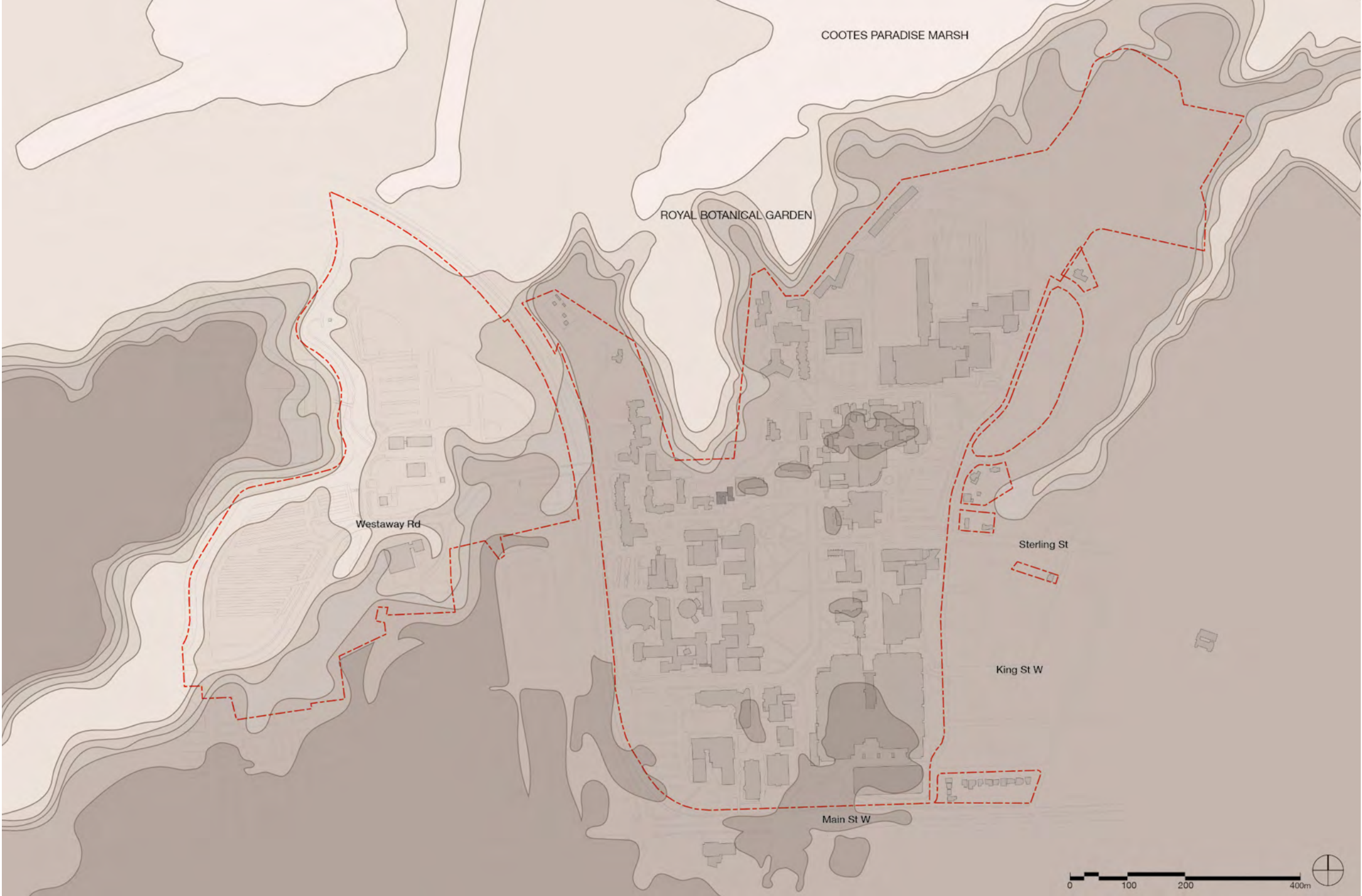
Natural Trails

- Trans Canada Trail
- Bruce Trail
- Spencer Creek Trail
- Monarch Trail
- Prairie Loop Trail
- McMaster Forest Loop Trail
- Bluebird Loop Trail
- McMullen Loop Trail
- - - McMaster Forest Property Line
- McMaster Research and Conservation Corridor
- - - Royal Botanical Garden Lands Trails
- - - Property Line



Above: Off-campus trails map

Topography

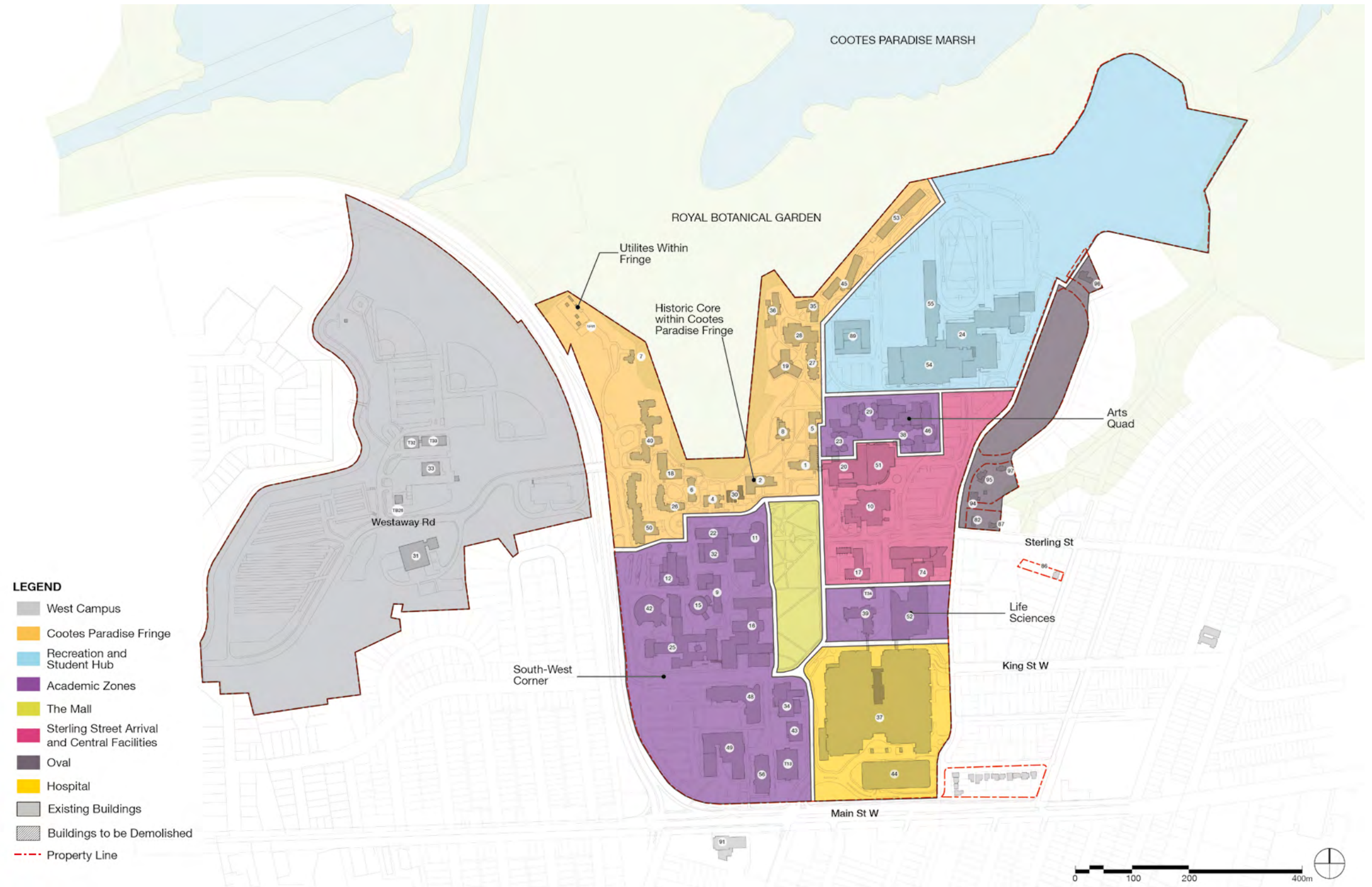


Above: Overall topography levels on the Main and the West Campuses

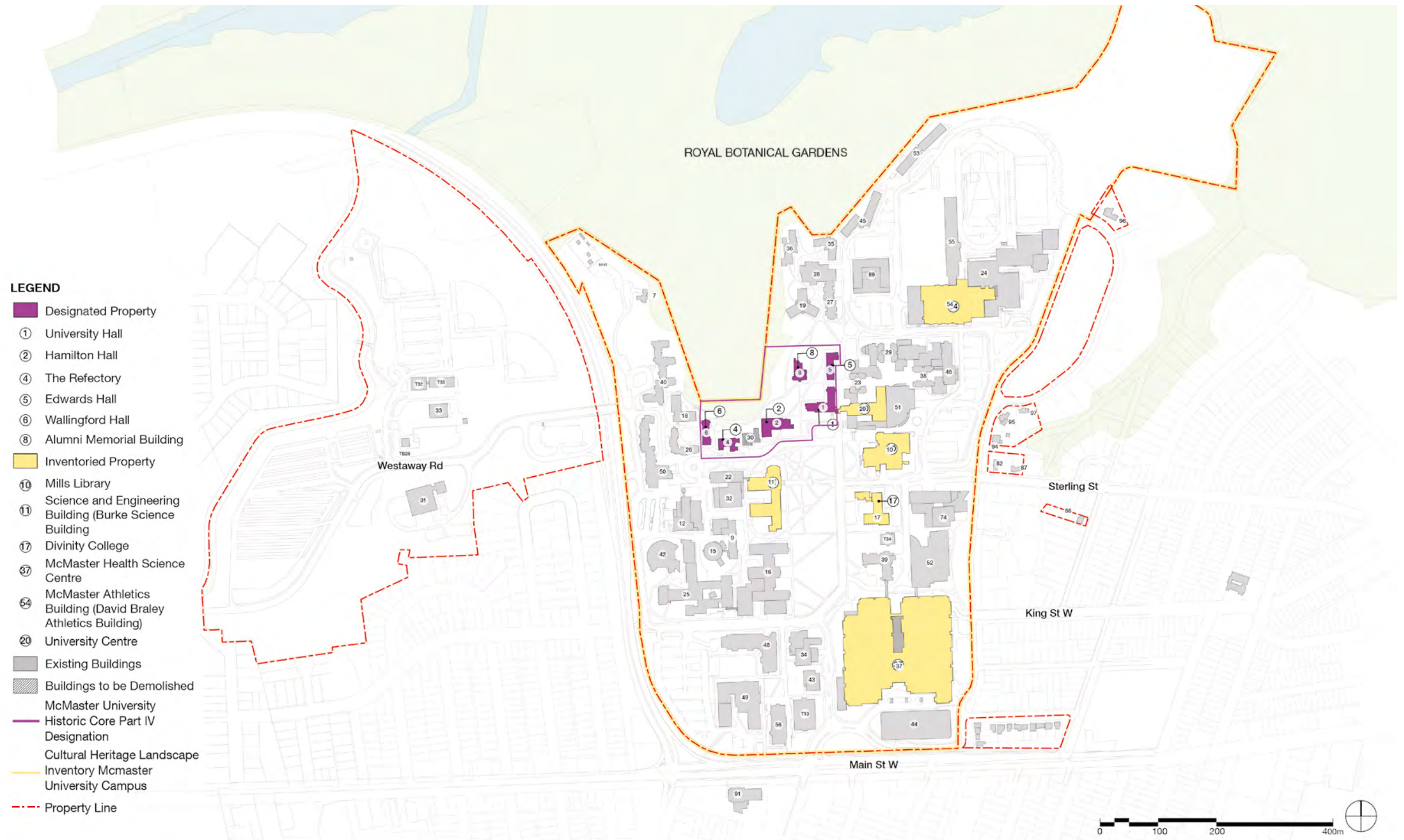


Above: Overall green spaces

Campus Character Areas



Above: A diagram showing the different character areas on campus

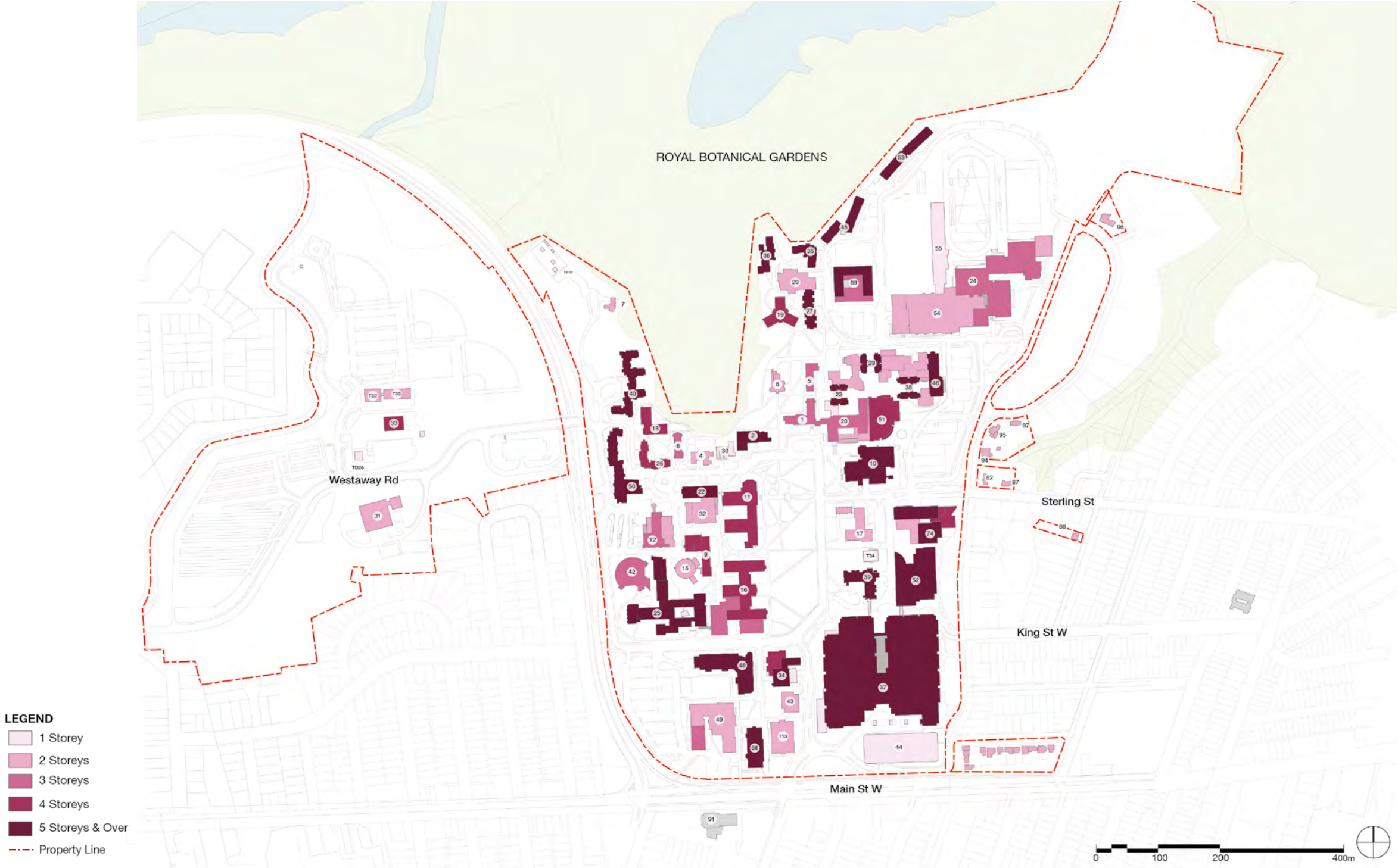


Above: The types of heritage buildings (designated and inventoried property) within the Main Campus

Key Views



Above: Key views within the Main and West Campus

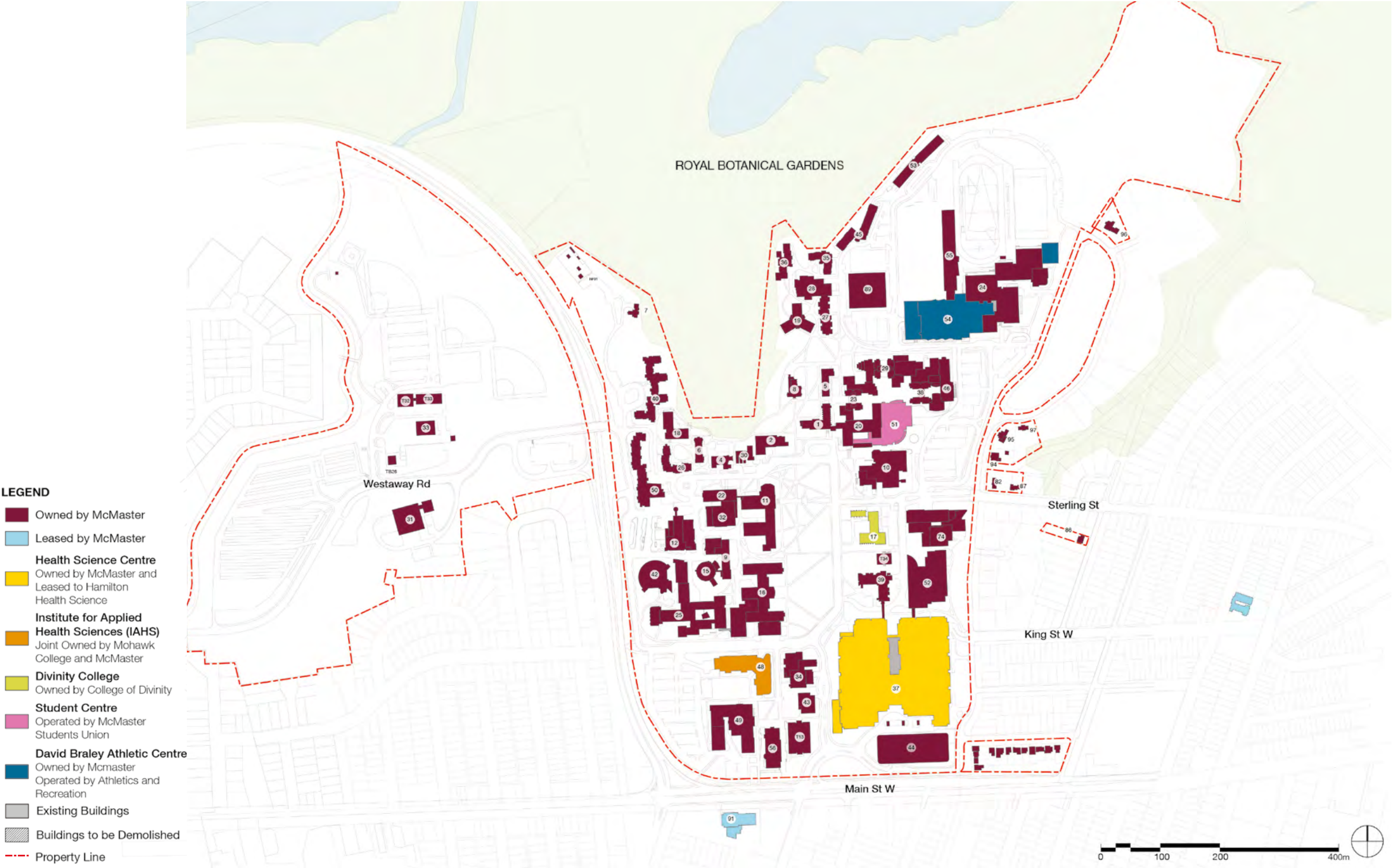


Above: A diagram showing the overall number of storeys on campus



Above: Density map of the McMaster University and surrounding neighbourhood

Building Ownership



Above: Building ownership on campus and the surrounding area diagram

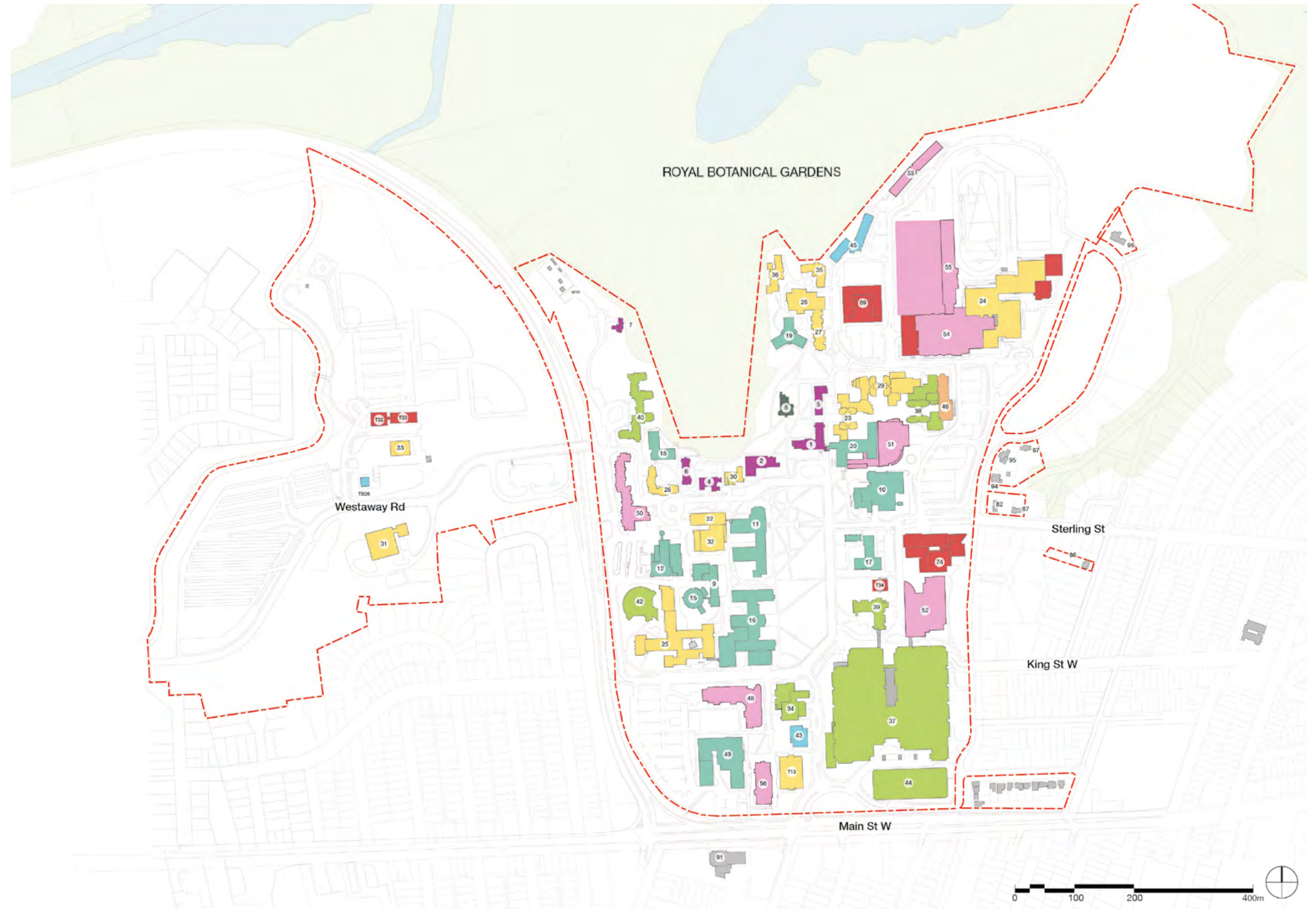
Building Age

LEGEND

1 University Hall	43 Communications Research Laboratory
2 Hamilton Hall	44 Health Sciences Complex Parking Structure
4 Reflectory	45 Hedden Hall
5 Edwards Hall	46 DeGroot School of Business
6 Wallingford Hall	48 Institute for Applied Health Sciences Building
7 Alumni House	49 Information Technology Building
8 Alumni Memorial Hall	50 Mary E. Keyes Residence
9 Nuclear Reserach Building	51 McMaster University Student Centre
Mills Memorial Library Building	52 Michael G. DeGroot Centre for Learning and Discovery
10 McMaster Museum of Art (Alvin A. Lee Building)	53 Les Prince Hall
11 Burke Science Building	54 David Braley Athletic Centre
12 E.T. Clarke Centre	55 Ron Joyce Stadium
15 Nuclear Reactor	56 Engineering Technology Building
16 John Hodgins Engineering Building	73 St.Pauls Anglican Church
17 Divinity College	74 L.R. Wilson Hall
18 Moulton Hall	82 Bertrand Russel Archives and Research Centre
19 Whidden Hall	83 David Braley Health Sciences Centre
20 Gilmour Hall	85 One James North
22 General Sciences Building	86 47 Whitton Road
23 Chester New Hall	87 182 Sterling Street
24 Ivor Wynne Centre	89 Peter George Centre for Living and Learning
25 A.N. Bourns Science Building	91 Canadian Martyres CES Testing/Exam Centre (Licensed Space)
26 Matthews Hall	94 96 Forsyth Avenue North
27 McKay Hall	95 106 Forsyth Avenue North
28 Commons Building	96 132 Mayfair Crescent
29 Togo Salmon Hall	97 8 Mayfair Crescent
30 Biology Greenhouse	T13 Prelim Laboratory
31 Campus Services Building	T26 Temporary Building, Multi-Use
32 Tandem Accelerator	T32 Temporary Portables, Offices
33 Applied Dynamics Laboratory	T33 Temporary Portables,
34 Psychology Building	McMaster Children's Centre
35 WoodStock Hall	T34 Temporary Lecture Theatre
36 Brandon Hall	
37 Health Sciences Sentre	
38 Kenneth Taylor Hall	
39 Life Sciences Building	
40 Bates Residence	
42 H.G. Thode Library of Science and Engineering	

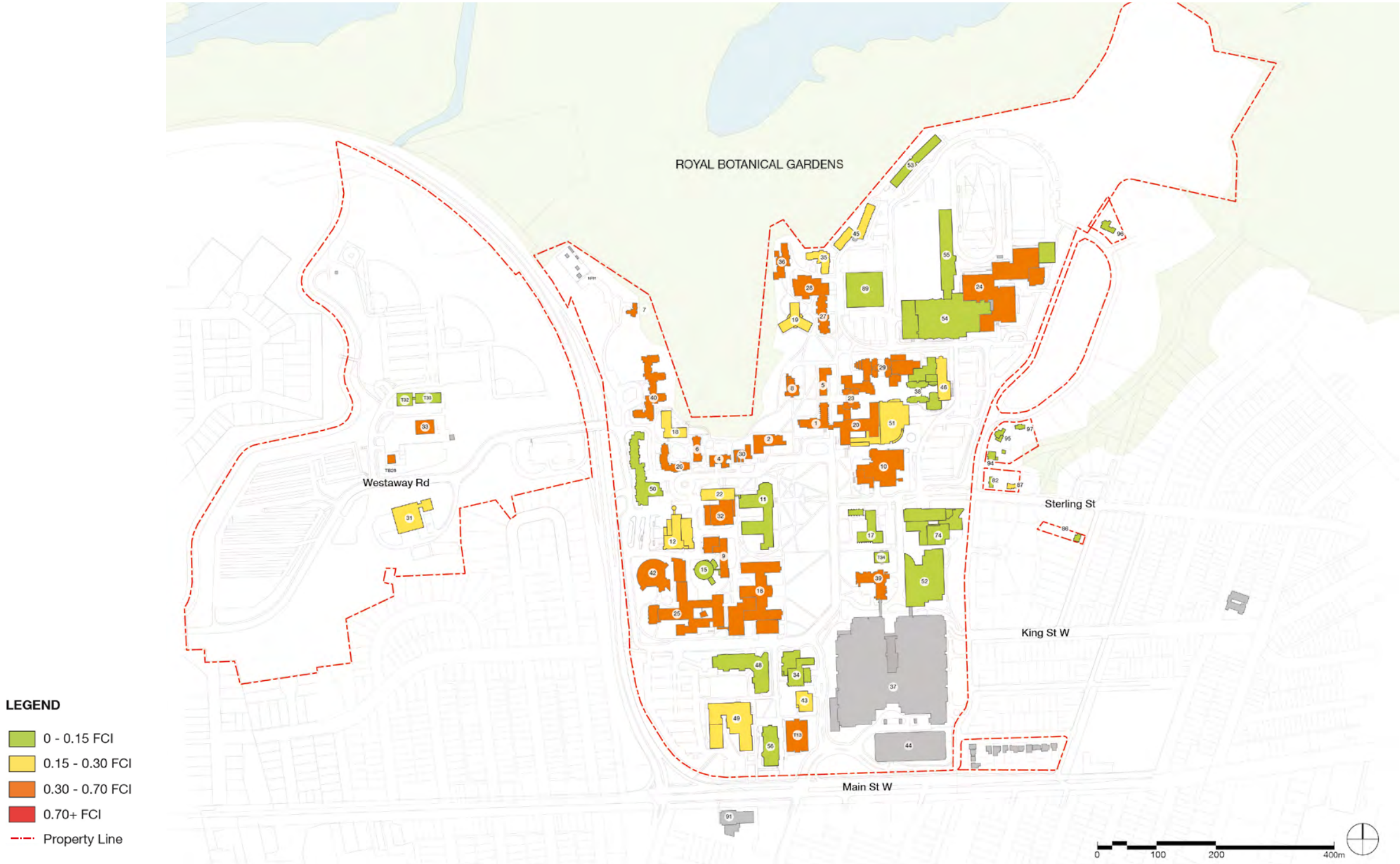
LEGEND

	1920s
	1930s
	1940s
	1950s
	1960s
	1970s
	1980s
	1990s
	2000s
	2010s
	Property Line

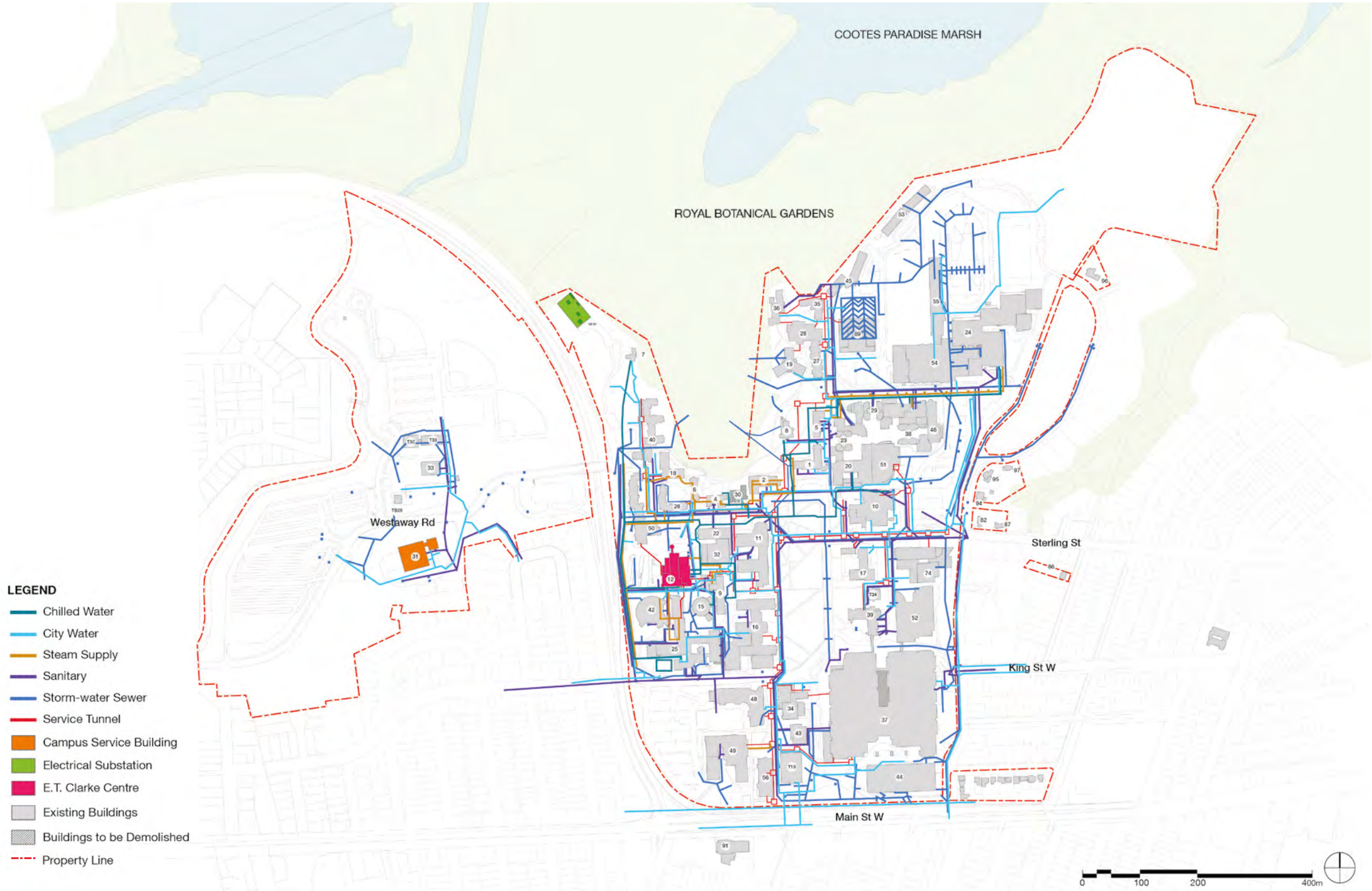


Above: A diagram showing building ages

Building Condition












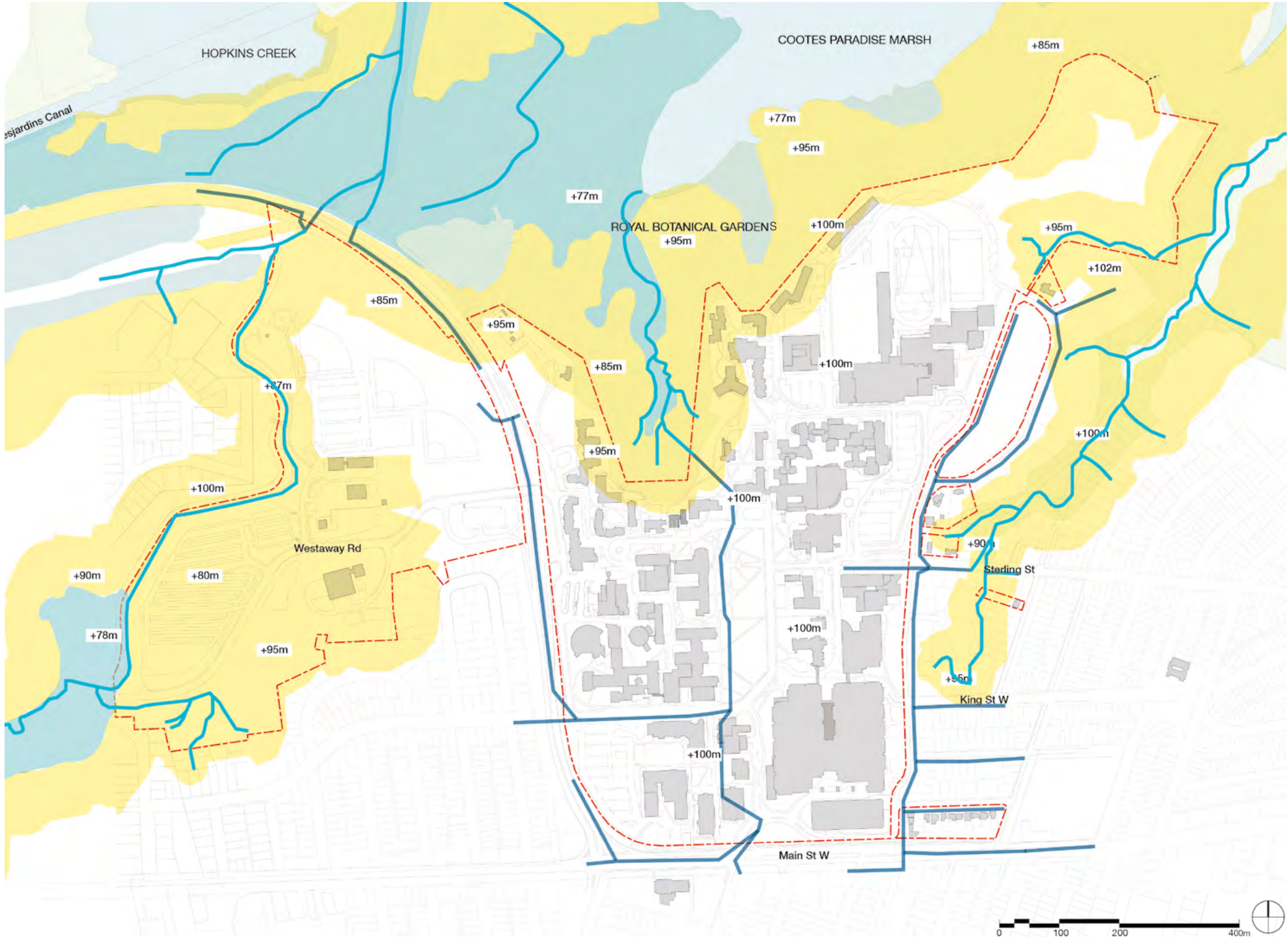
Above: Building condition based on the Facility Condition Index (FCI) diagram



Above: A diagram showing the various utility infrastructure systems

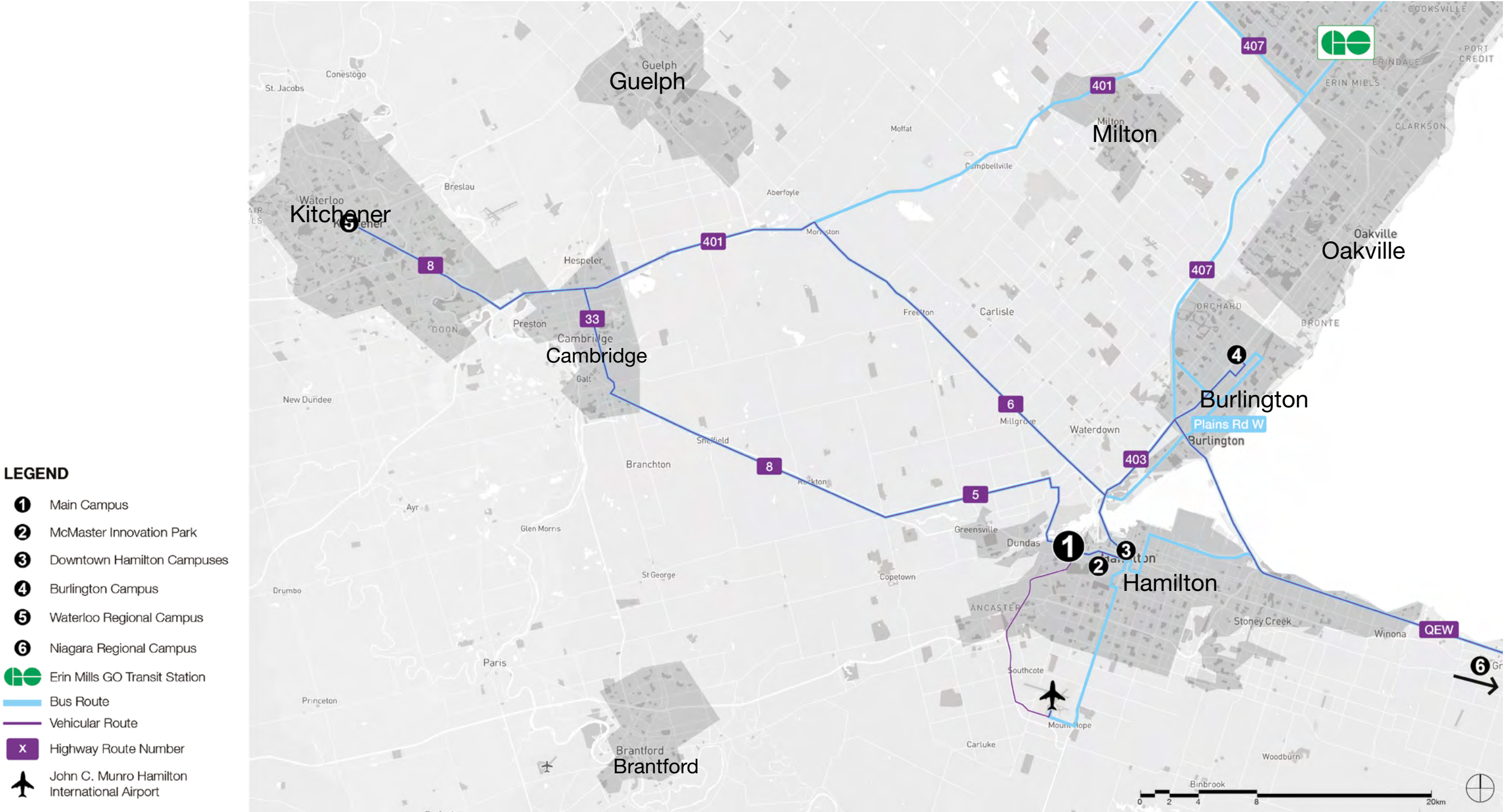
LEGEND

-  Natural Water Flow
-  Piped Water Flow
-  Water Bodies
-  Regulated Wetland
-  +xx Elevation Levels (Approximate)
-  HCA Regulated Area
-  Existing Buildings
-  Buildings to be Demolished
-  Property Line



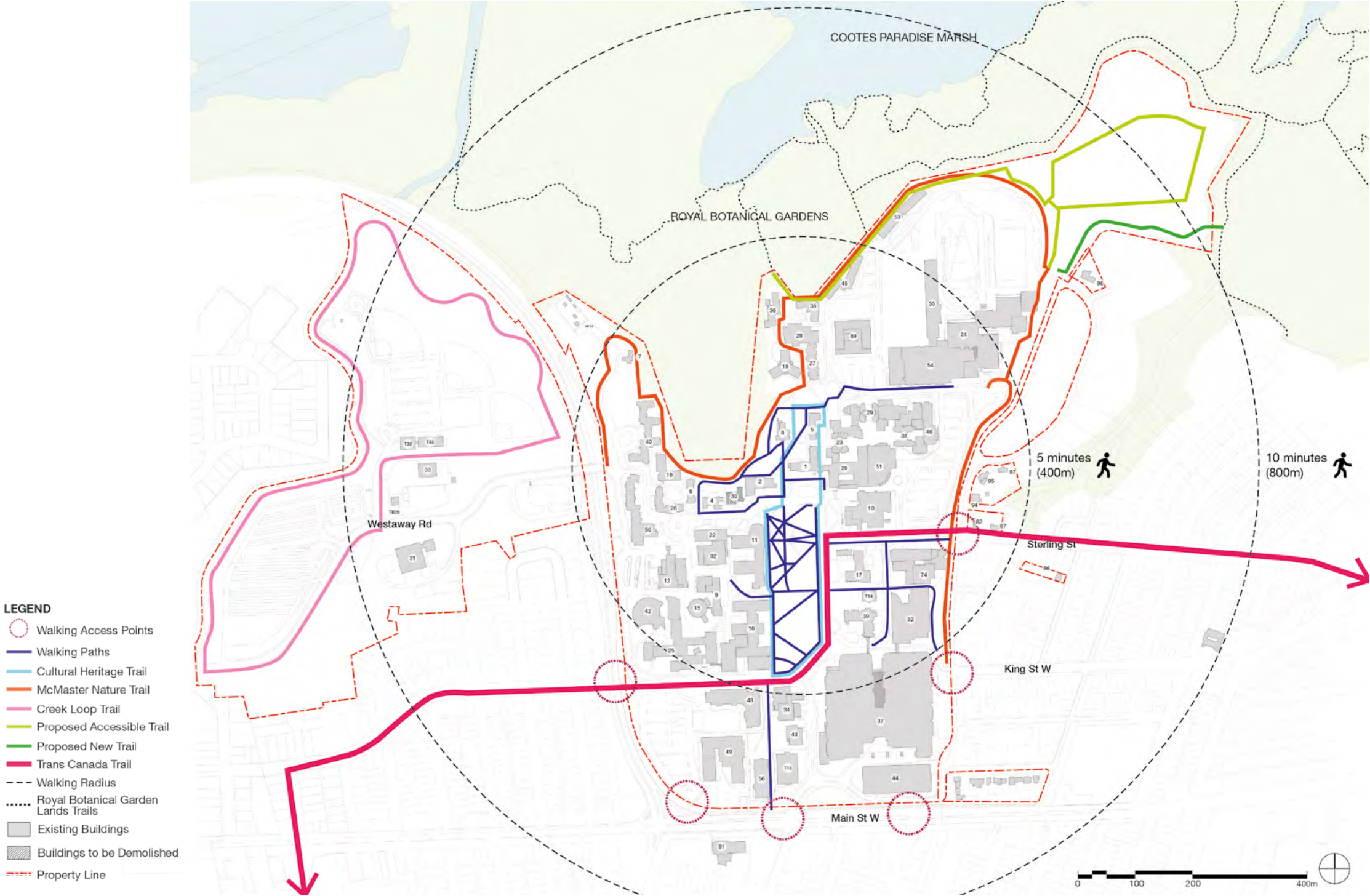
Above: Stormwater management and drainage diagram

Local Transportation Context

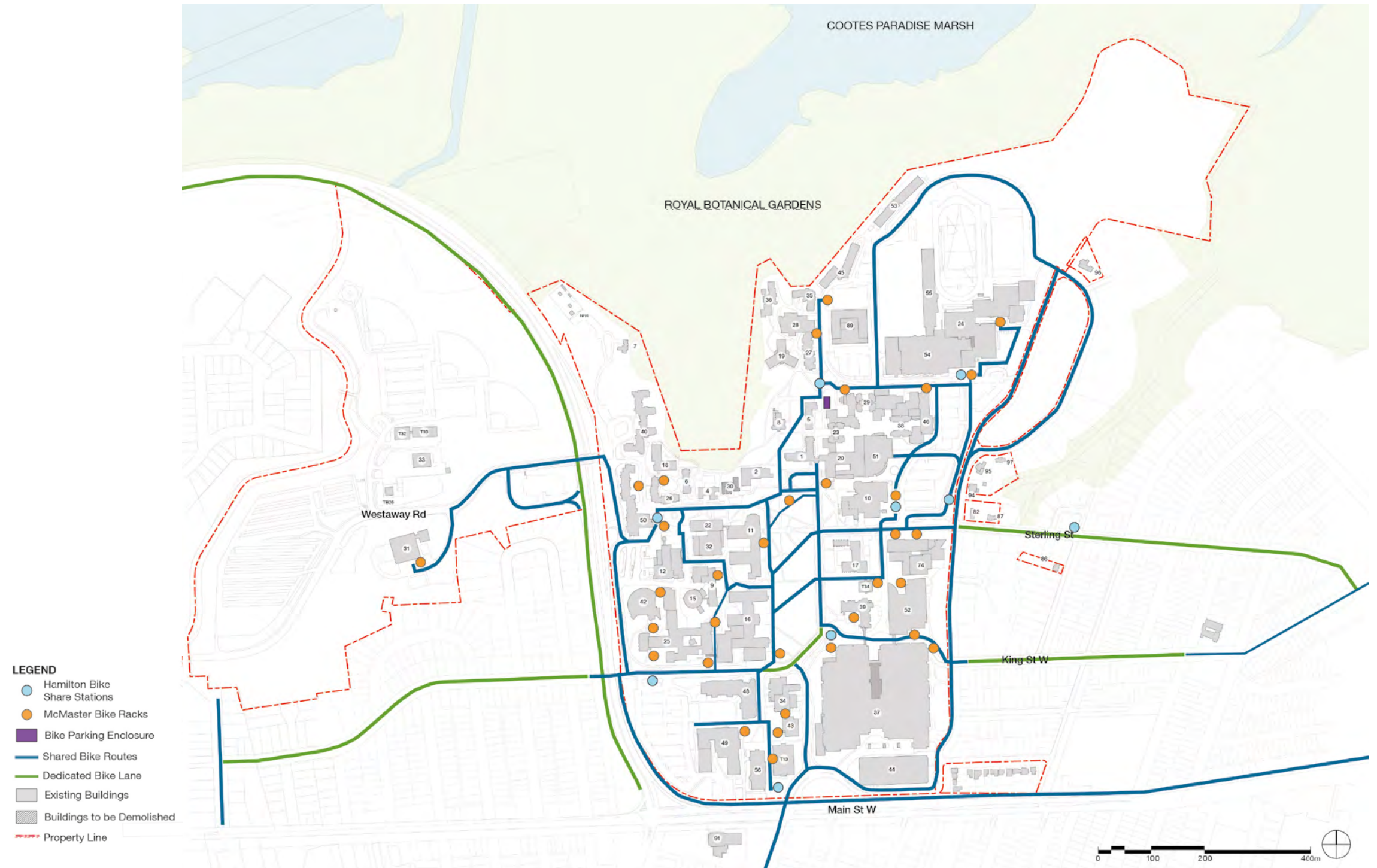


Above: Transportation routes between main and regional campuses map

Movement around campus

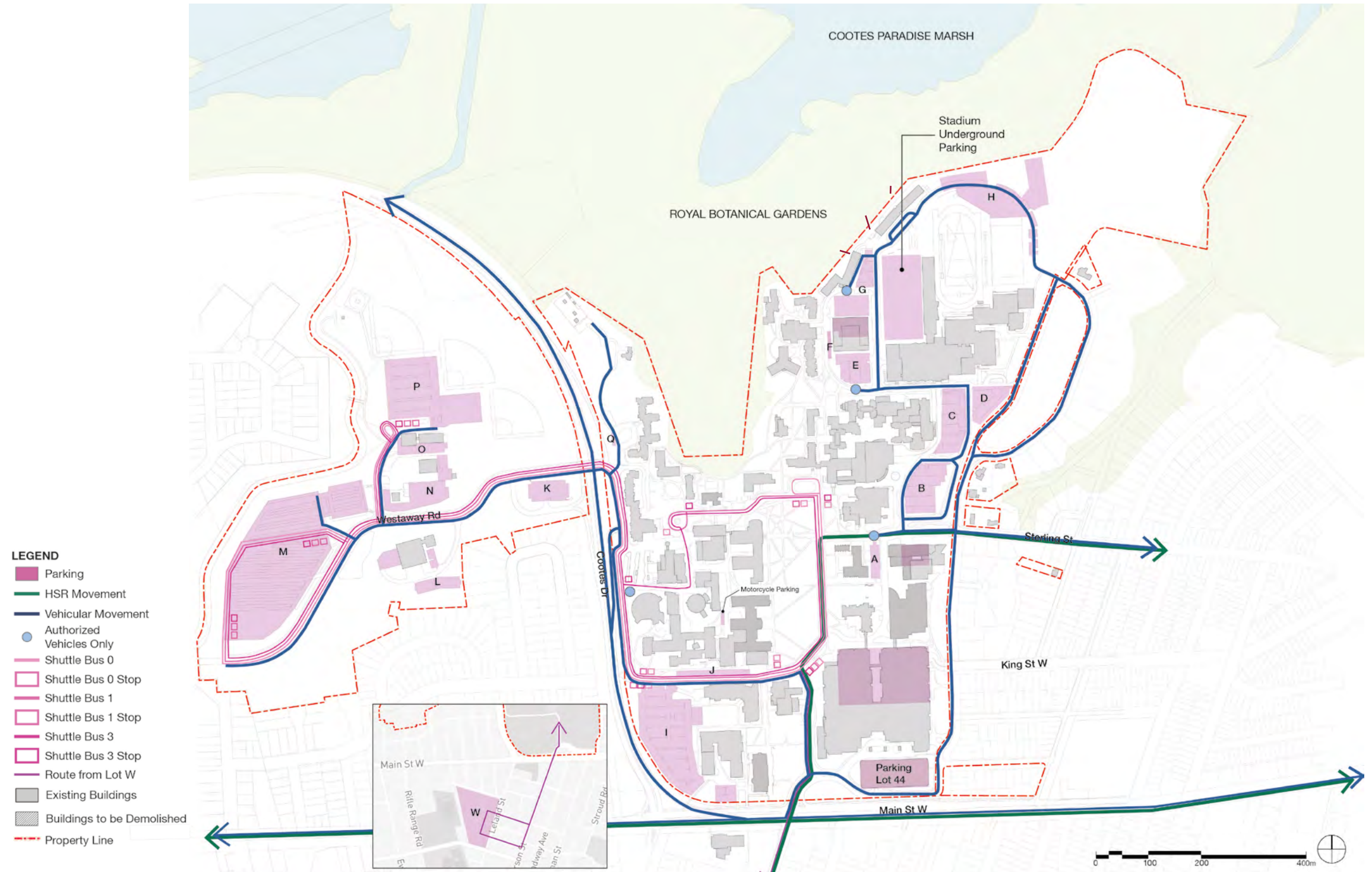


Above: Pedestrian walks and trails diagram



Above: Cycling routes diagram

Vehicle Movement

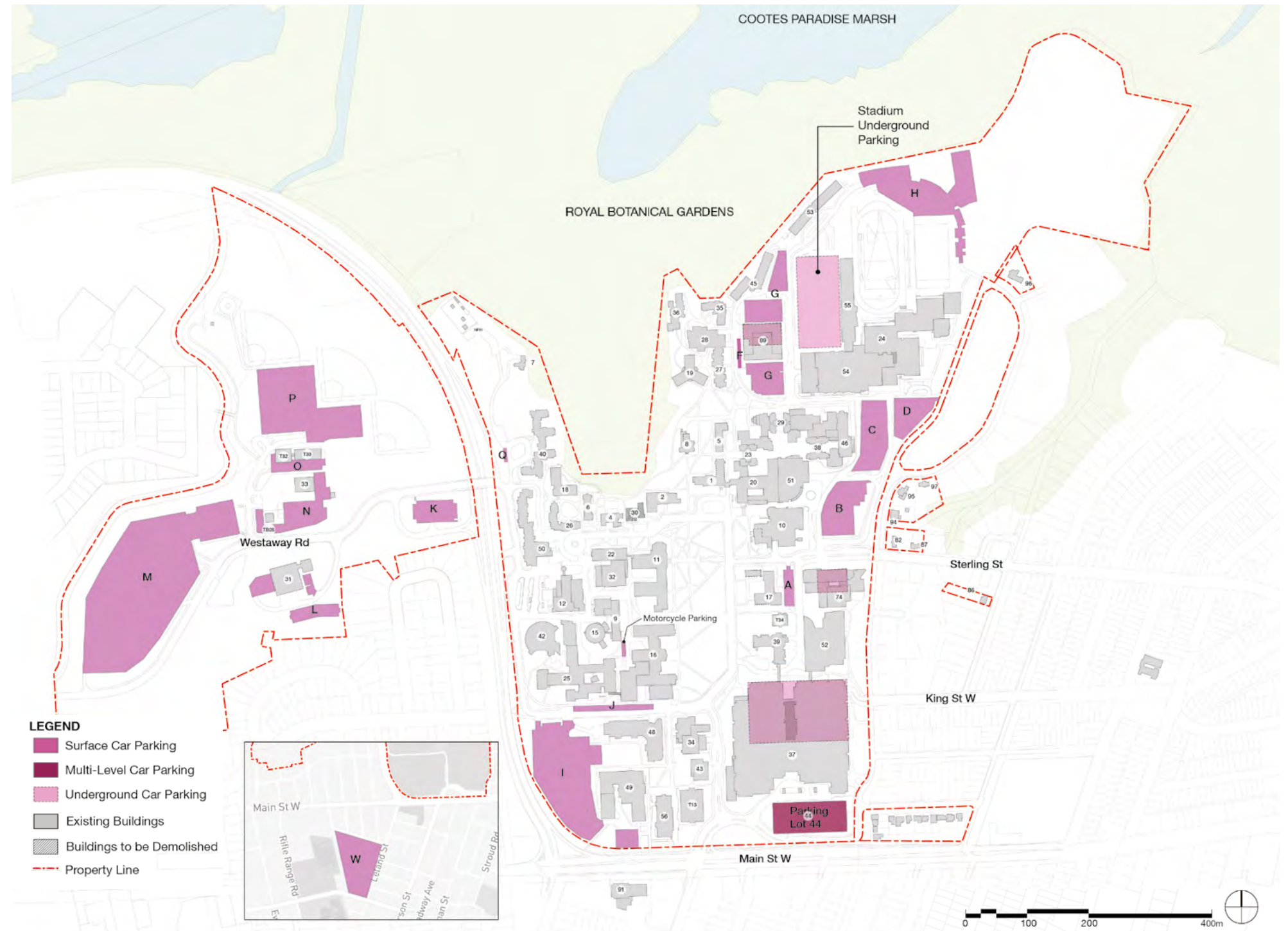


Above: Vehicular movement through the campus diagram

Car Parking

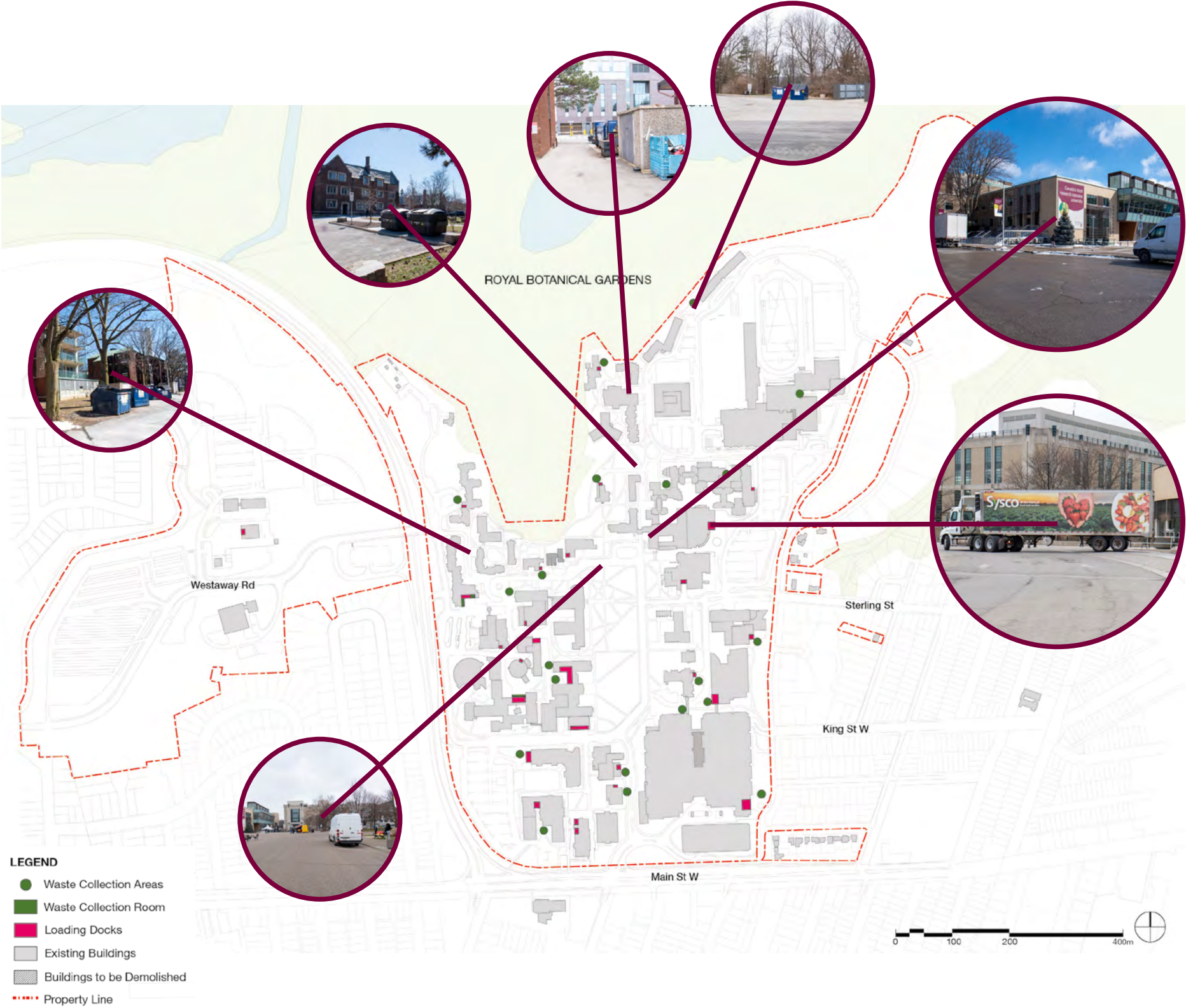
The table below shows the Existing Parking Supply at McMaster University

Parking lot	Supply
Lot A	41
Lot B	108
Lot C	130
Lot D	31
Lot E	117
Lot G	108
Lot H	216
Lot I	474
Lot K	97
Lot M	1,151
Lot N	105
Lot O	0
Lot P	452
L.R. Wilson Underground	52
PGCLL	55
Stadium Garage	322
Lot W	473
Long-Term Parking	3,932
Lot F	17
Lot J	47
Lot L	70
Lot Q	52
Short-Term Parking	186
Miscellaneous Parking Supply	64
Total Parking Supply	4,182



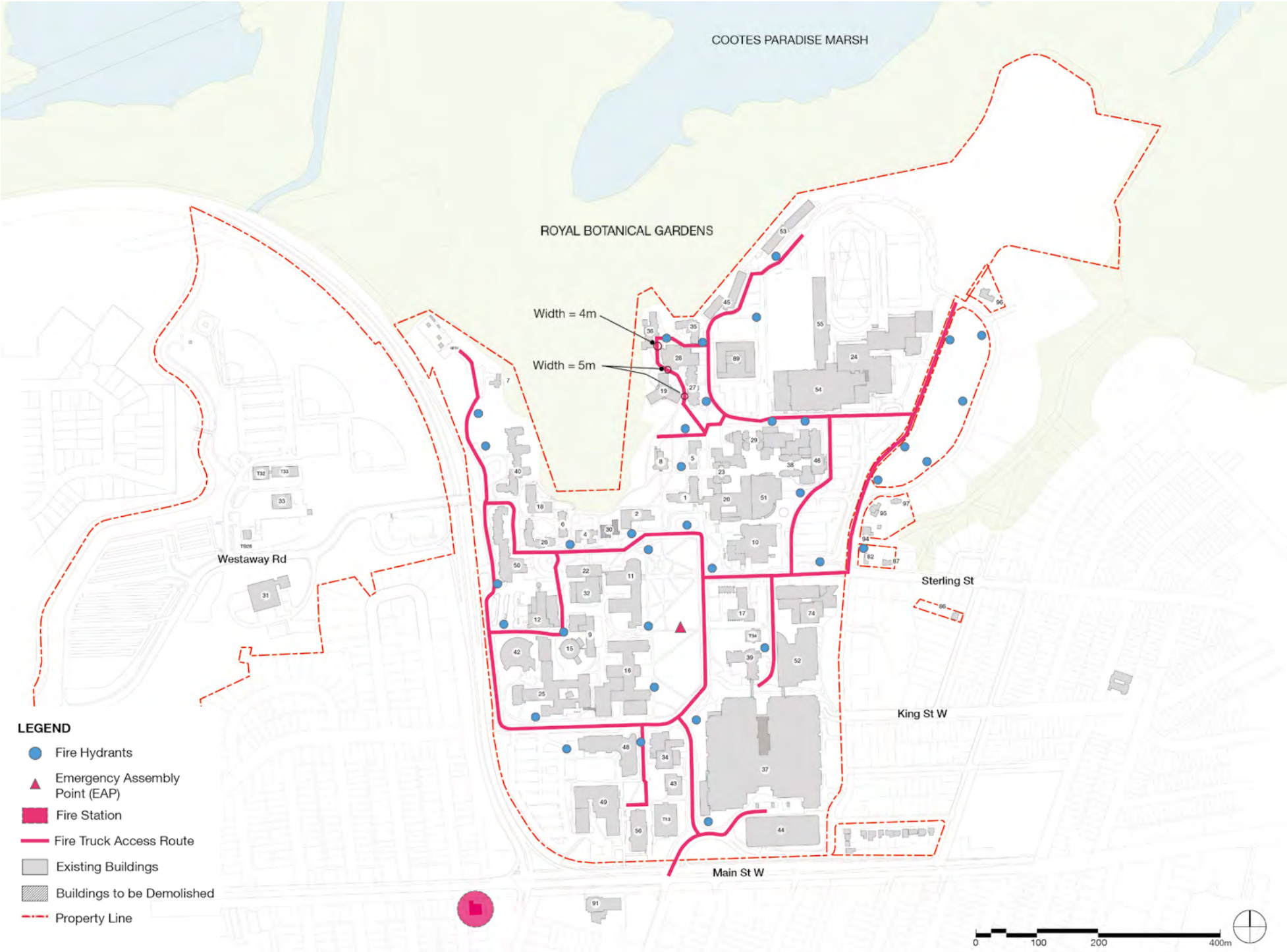
Above: A diagram mapping parking types

Loading Conditions

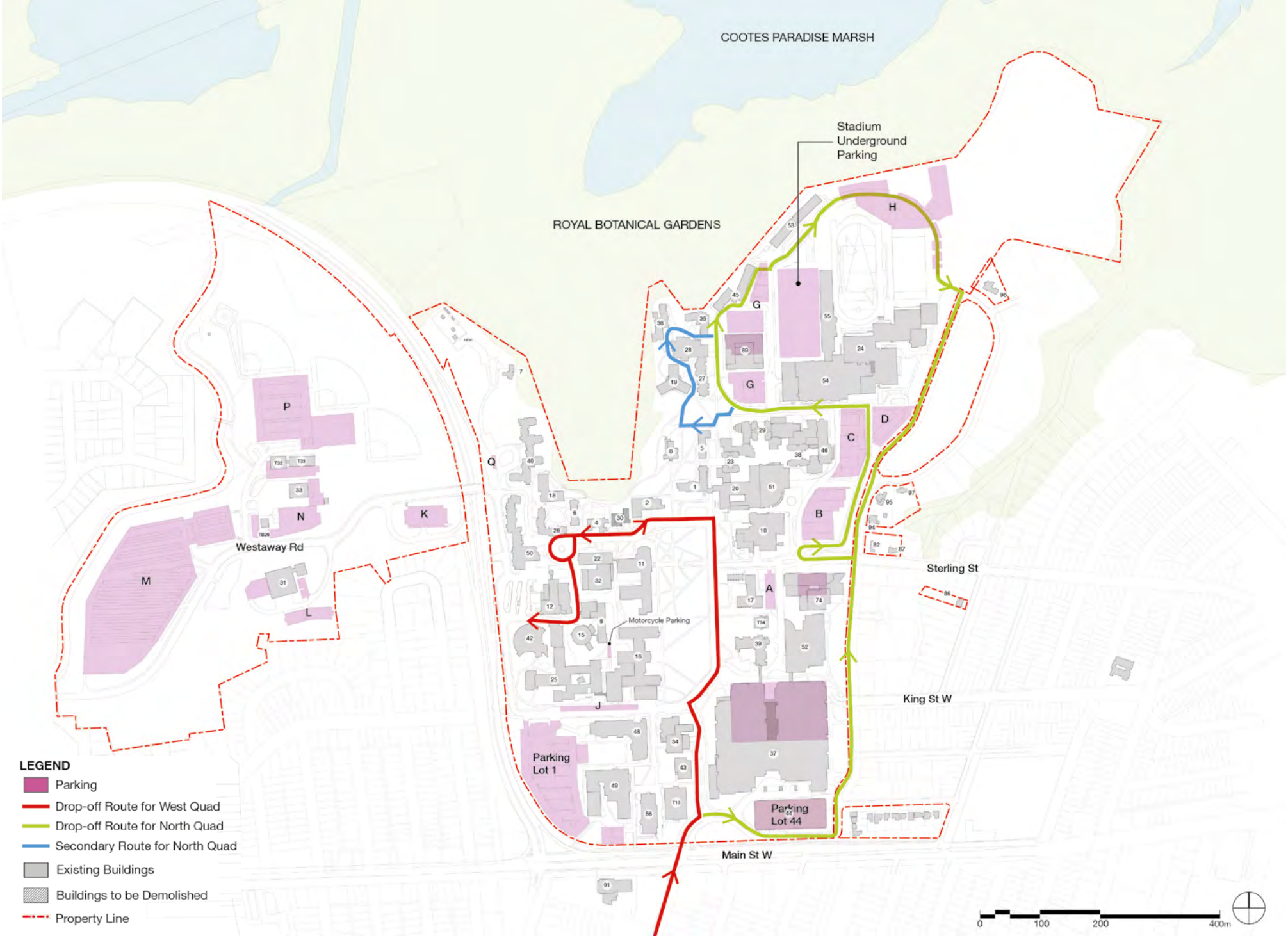


Above: A diagram mapping loading docks and waste collection areas

Fire Routes

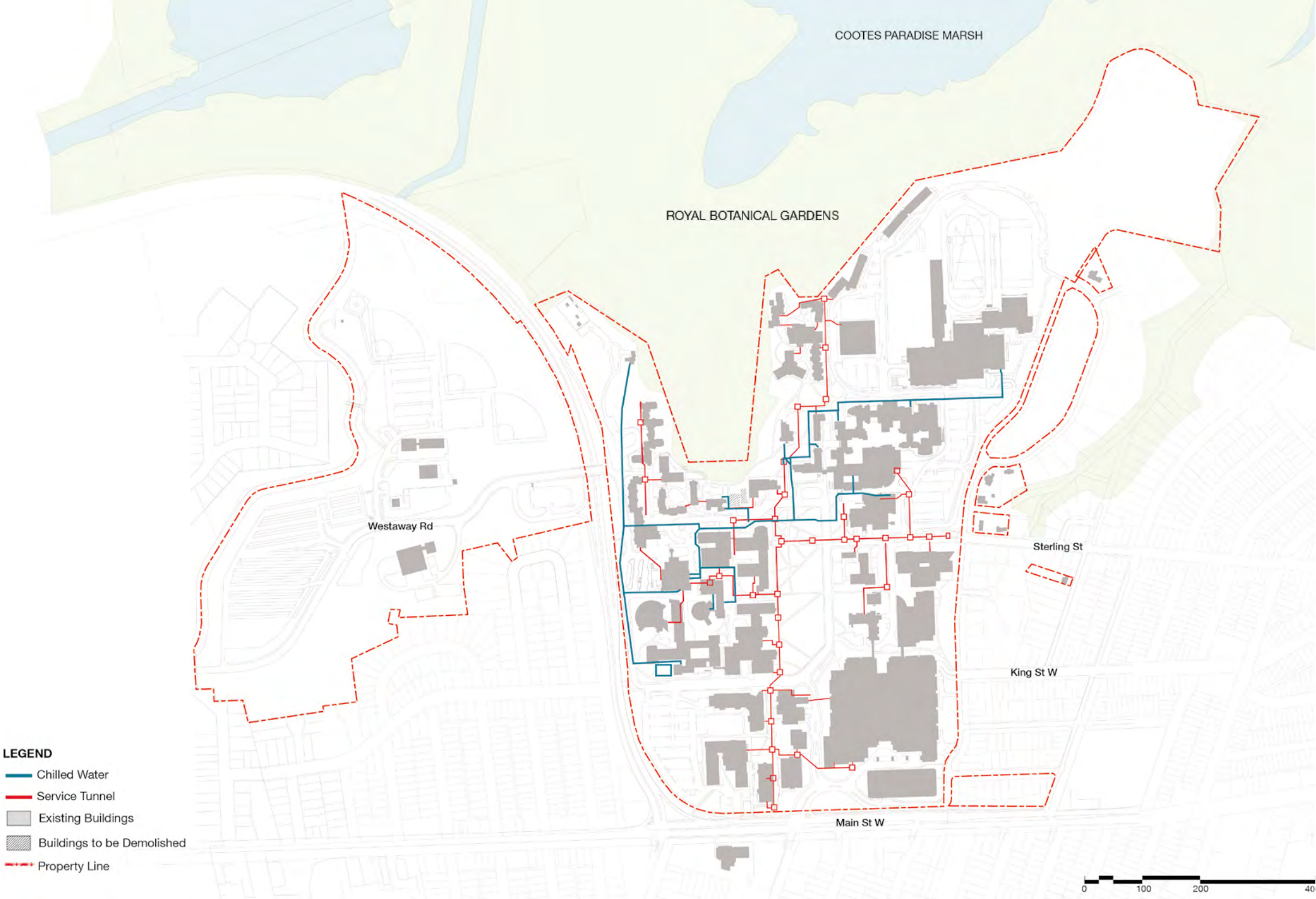


Above: A diagram showing the assumed extent of the fire route on campus

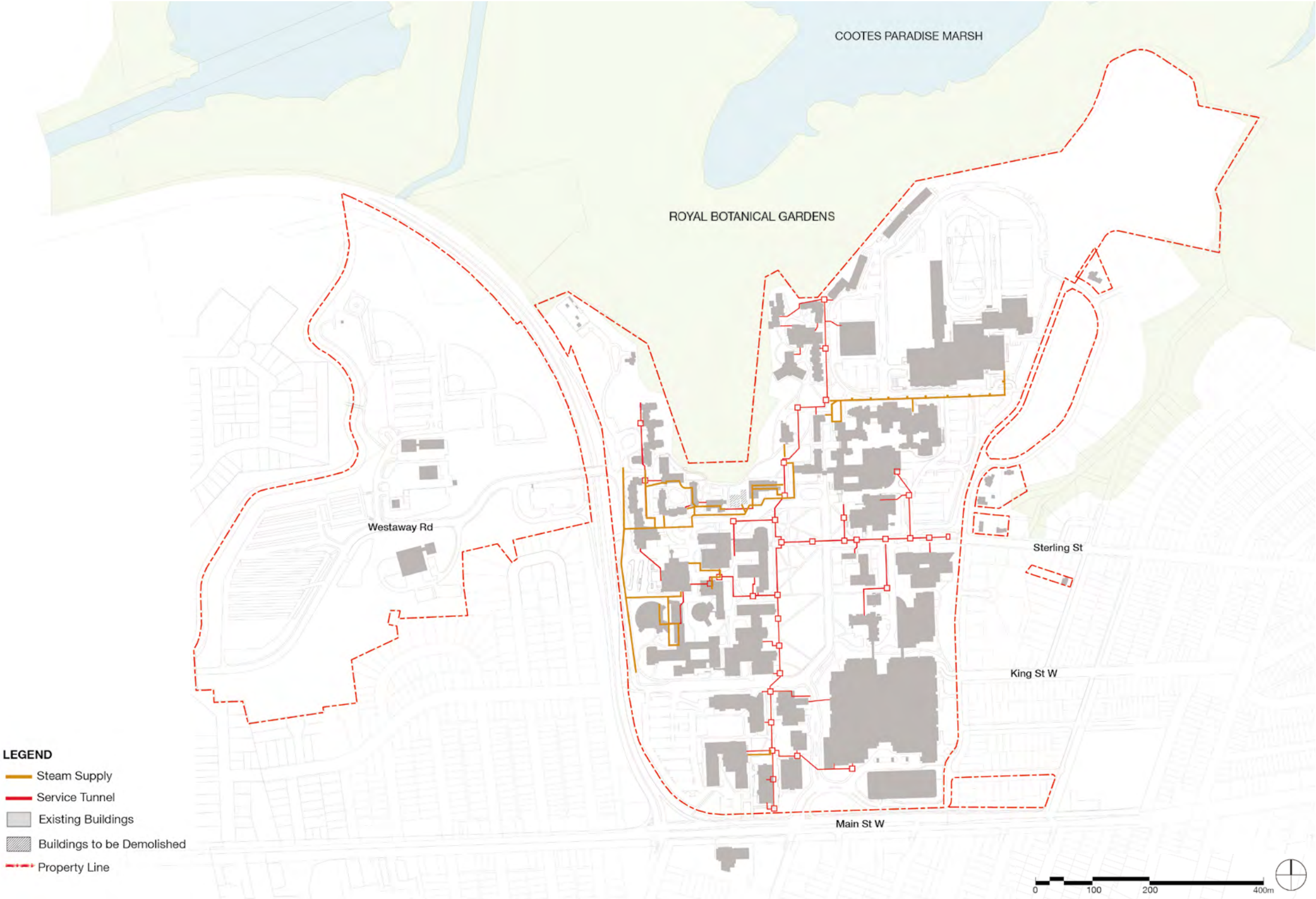


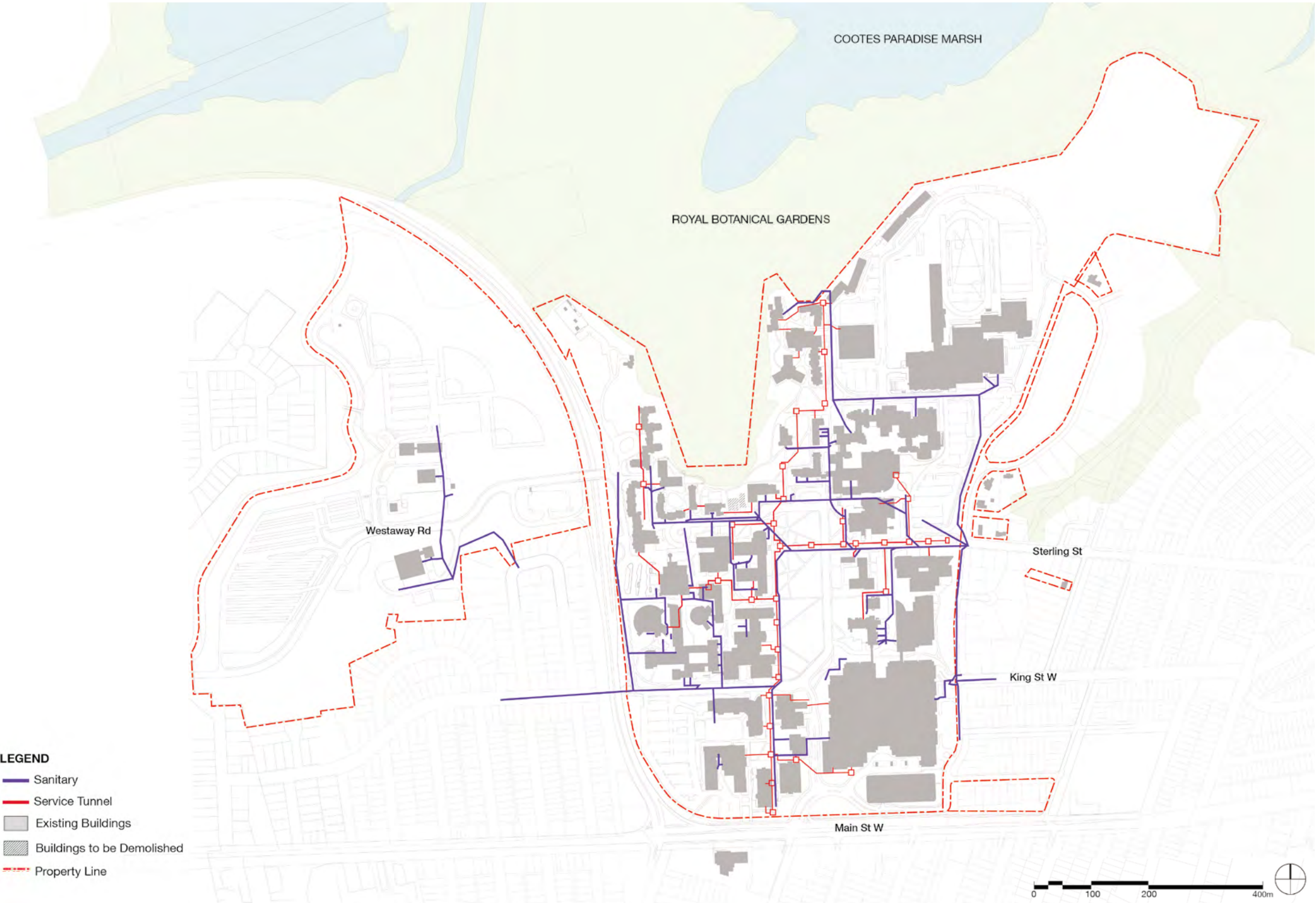
Above: Drop-off routes diagram

Chilled Water

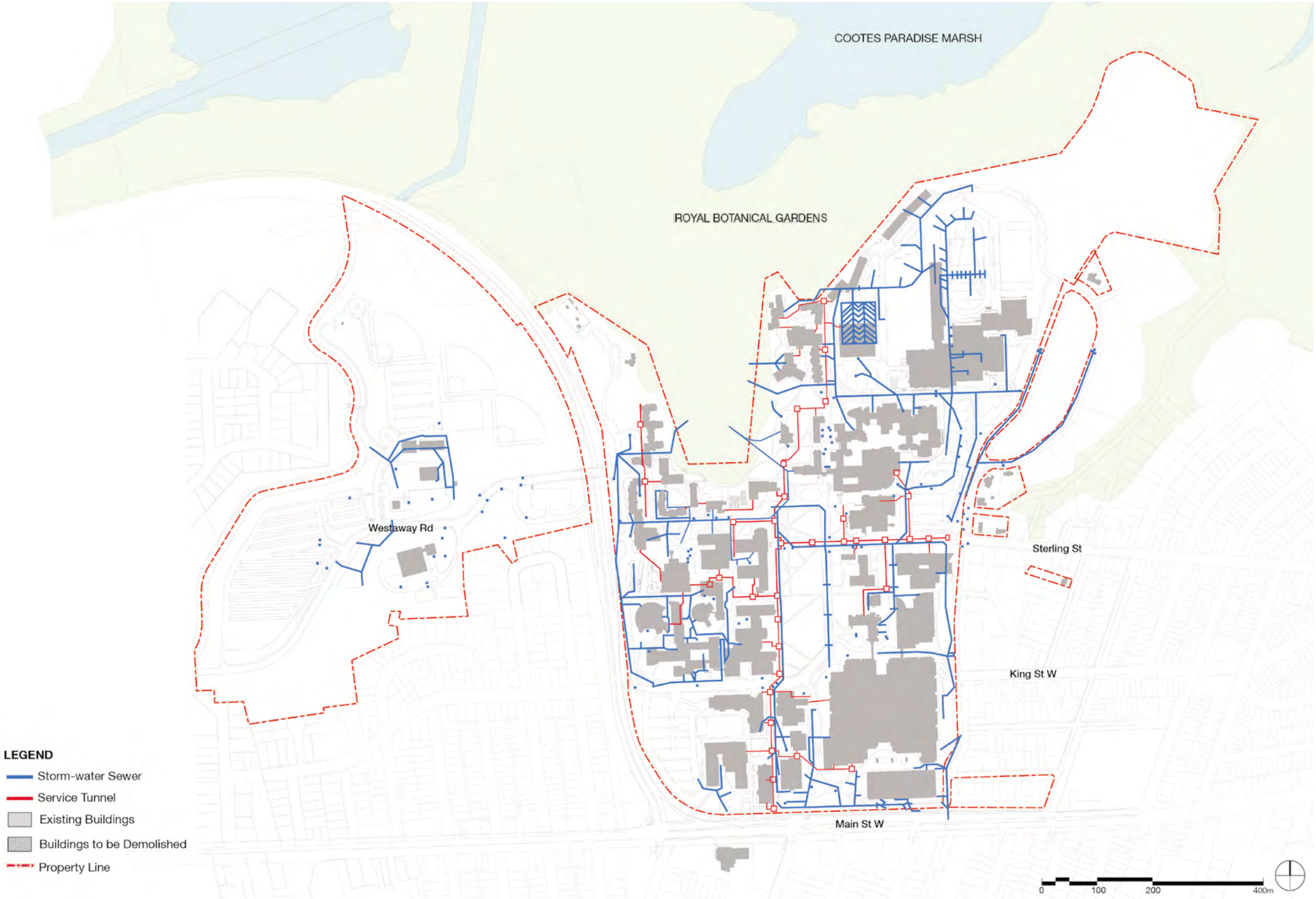


Steam Supply





Stormwater Sewer



BDP.
Quadrangle

