

McMaster University Campus Master Plan Update

BrookMcIlroy/
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Table Of Contents

Section One Introduction & Overview	1	Section Four Campus Character Areas	43
1.1 Purpose of the Plan	1	4.1 The Transit Hub	43
1.2 Campus Context	3	4.2 University Avenue/Main Street Frontage	47
1.3 The Master Plan Process	5	4.3 Core Campus	51
1.4 Consultation Overview	7	4.4 Sterling Street Entrance	55
Section Two 2016 Master Plan Update	9	4.5 The Oval	57
2.1 Campus Vision Statement	9	4.6 North Campus	59
2.2 Design Principles	11	4.7 West Campus	63
2.3 Master Plan Overview	13	4.8 Off Campus Sites	67
Section Three Master Plan Systems	15	Section Five Implementation	71
3.1 Campus Entrances	15	5.1 Phasing Strategy/Capital Planning	71
3.2 Vehicle-Free Core Campus	19	5.2 Master Plan Communication Plan	75
3.3 Infill and Intensification	23	5.3 Partnership Opportunities	75
3.4 Parking Strategy	27	5.4 Future Studies and Projects	77
3.5 Cycling	31	5.5 Plan Review Process	78
3.6 Open Spaces and Landscaping	33	Appendix	
3.7 Campus Edges	37	i. Potential Transit Hub Plan	
3.8 Signage and Wayfinding	39	ii. Nineteen Considerations for Future Planning	
3.9 Public Art	41	iii. Summary of the Athletics and Recreation Master Plan/ and the Library Master Plan	
		iv. Consultation/Stakeholder Findings	

Section One

Introduction & Overview

The McMaster University Campus Master Plan (prepared in 2002, and updated in 2008) provided a vision for the future growth of McMaster University. Since then, changes have occurred and are proposed to the physical campus. There has also been a shift in the dynamic and flexible ways that students learn, study, and socialize on campus. The 2016 Campus Master Plan Update will refresh the vision for the campus in line with the broader vision for the University and provide McMaster University with a plan to guide positive future growth.

1.1 Purpose of the Plan

The McMaster University Campus Master Plan was originally prepared in 2002, and updated in 2008. The intent of the plan is to provide a clear vision and framework to guide the development of buildings, open spaces, streets, and other elements that define the campus character.

The objective of this update is to re-focus the 2008 plan to respond to changes on campus, most notably new buildings, planned LRT on Main Street, and new directions in the way students, faculty, staff, and the community engage and interact on campus as well as to reflect the University's focus on advancing human and societal health and well-being, and the commitments made under the Okanagan Charter to embed considerations of health, wellness, and sustainability into our institutional policies and decision-making processes.

The 2016 update includes the addition of a Transit Hub, new development sites, and a considerable re-imagining of the West Campus. This report also departs from previous reports, in that a) it references off-campus locations including both urban developments and environmentally significant natural lands, and b) it is a more concise, practical document so as to be more easily implementable over time.

How to Use This Document

This document has two primary audiences:

The McMaster Community - This includes staff, students, faculty and those who have a vested interest in the long-term growth of the campus (i.e. nearby residents, alumni). For a high-level understanding of where the campus is going, the following sections will be the most useful:

- Campus Vision and Guiding Principles (pp. 9-13).

- Master Plan Systems and Campus Character Areas (pp. 15-42). Each sub-section begins with a brief *Overview* to facilitate a quick understanding.

If You're a Campus Builder - This includes Facility Services staff, and those who are involved in the design and construction of the campus (i.e. consultants). You have a responsibility to understand and achieve the intent of the campus plan and should use the document as follows:

- **Step 1** - Review Campus Vision and Guiding Principles (Section Two) to gain a high level understanding of the campus plan.
- **Step 2** - Review Sections Three (Master Plan Systems) and/or Four (Campus Character Areas) based on relevance to your project. Read both the *Rationale* and *Priority Directions* to ensure a complete understanding.
- **Step 3** - Many campus projects will impact multiple elements of the plan. Where directed to *See Also*, read and understand all references to other sections of the document.

*Existing gateway plaza and signage at Main Street/
University Avenue.*



1.2 Campus Context

The primary McMaster campus comprises 196 hectares (484 acres), located less than five kilometres west of Downtown Hamilton. It is generally bordered by Main Street West, Forsyth Avenue, and Cootes Drive. To the north, the property borders on Cootes Paradise and the Royal Botanical Gardens property.

With the exception of commercial uses along Main Street, McMaster University is bordered by mature residential neighbourhoods, including Westdale South and Ainslie Wood North, and the natural areas of the Royal Botanical Gardens and Hamilton Conservation Authority.

As part of Metrolinx's regional transportation plan, The Big Move, \$1 billion is being invested in LRT in Hamilton, with the line planned along Main Street, from McMaster University to the city's East End. This LRT line will have a transformative impact on both Hamilton and McMaster University. The Main street frontage will become less of a barrier to the campus, and instead will become more integrated with the campus infrastructure. This will invite

members of the community to explore McMaster.

The campus itself comprises a mix of buildings, including academic, administrative, and research buildings, residences, and recreational facilities.

Key open spaces and amenity areas on campus include:

- The Mall (a large centrally-located quad);
- The MUSC Quad;
- The Arts Quad;
- A quad between IAHS and ITB;
- Wilson Hall courtyard;
- Faculty Hollow (a small open space nestled in the trees behind Hamilton Hall);
- The Oval (a large open space at the campus' east edge); and,
- The 10 acre sports field at the northeast edge of the campus.
- The West Campus baseball diamonds.

In addition to these open spaces which are critical

to McMaster's health-promoting aspirations, and to the creation of a healthy educational environment and workplace, many buildings have well-landscaped yards and/or entry plazas that help to tie the campus together.

On the west side of Cootes Drive, a large amount of campus land is used predominantly for parking, as well as a few administration and academic buildings and three baseball diamonds. This edge is bounded by Ancaster Creek, and its sensitive flood zone.



Context Map

1.3 The Master Plan Process

The 2016 Campus Master Plan Update commenced in September, 2015 and was completed in March, 2017. The process included three phases, including:

- **Phase One: Issues and Opportunities** - The objective of Phase One was to gain a comprehensive understanding of the issues and opportunities at McMaster University, responding to recent and planned development, future enrollment projections, and the ongoing evolution of best practices in post-secondary campus design since the last update to the master plan (2008). This understanding was accomplished through site visits, project team meetings, background research and analysis, and data collection.

- **Phase Two: Stakeholder Consultation** - The objective of Phase Two was to engage the University community, including students, faculty, and staff, as well as the broader City of Hamilton, in a dialogue about the future of McMaster University. This was accomplished through multiple engagement sessions, including three feedback stations on the main campus in addition to stations at the David Braley Health Sciences Centre, One James North, and the Ron Joyce Centre; an online survey; and three formal design charrettes to refine the master plan options. One-on-one interviews were also held with key stakeholders representing The City of Hamilton, the Royal Botanical Gardens, the President's Advisory Committee on Community Relations (PACCR) and others.

- **Phase Three: Updated Campus Master Plan** - The objective of Phase Three was to consolidate the findings of Phases One and Two and develop an updated campus master plan and supporting documentation. The plan outlines a clear path for the University to address issues and opportunities in alignment with the Facility Services Five Year Capital Plan. The plan was presented at a Public Open House event, and the information received was used to inform the preparation of this document.

Key directions and project progress were vetted at bi-weekly meetings with a Working Committee comprised of:

- Gordon Arbeau, Director, Communications, U. Advancement
- Mohamed Attalla, AVP & Chief Facilities Officer (Committee Chair)
- Robert Baker, VP Research (at time of publication: Dean of Science)
- Robin Cameron, Professor, Biology
- Linda Coslovi, Executive Director, Finance and Planning (Academic)
- Robert Craik, Manager, Space Planning & Utilization, (Committee Coordinator)
- Jim Dunn, Professor and Chair; Health, Aging and Society
- Carlos Figueira, Director, Custodial Services
- Glen Grunwald, Director of Athletics and Recreation
- Bonny Ibhawoh, Acting Associate Vice-President, Research

- Ehab Kamarah, Director, Design and Construction
- Sean Van Koughnett, AVP (Students & Learning) and Dean of Students, Student Affairs
- Debbie Martin, Assistant Vice-President Chief Administrative Officer, Faculty of Health Sciences
- John McGowan, General Manager, MSU
- Ehima Osazuwa, President, MSU
- Talena Rambarran, President, GSA

At key milestones, the plan was presented to, and feedback received from the following Governing Committees:

- President/Vice-Presidents (PVP)
- University Planning Committee
- Planning and Building Committee
- Provost Council

Looking north through the Arts Quad toward Stearn Drive.



1.4 Consultation Overview

The campus master plan update was founded on ongoing engagement and collaboration with the campus community, including students, faculty, and staff. In addition to bi-weekly meetings with the Working Committee, consultation included:

- **Considerations for Future Planning** - Since completion of the 2008 campus master plan update, Facility Services has been receiving feedback on the physical design and development of the campus. This includes input from students, faculty, staff, and alumni, and has resulted in a series of considerations for future planning. This feedback is reflected throughout the plan, and a detailed overview of the considerations (including their references in the document) can be found in the Appendix.
- **Three In-Situ Visioning Stations (November 3, 2015)** - To kick off the feedback gathering portion of the project, members of the consultant team hosted three informal visioning stations at the McMaster University Student Centre (MUSC), the Michael G. DeGroote Centre for Learning and Discovery (MDCL), and the Engineering Technology Building (ETB). At two hours each, these sessions encouraged passers-by to stop and share their thoughts on the McMaster campus. Using guiding worksheets, participants completed a number of exercises to describe their day-to-day experiences on campus, identify areas they like/dislike, and evaluate precedents from other campuses across Canada and internationally. The sessions were well-attended, including a mix of participants providing brief feedback between classes, and those who were able to stay and provide significant feedback.
- **Off-Campus Sessions (December 3, 2015)**
 - To extend the reach of the In-Situ Visioning Stations, a second series of stations were facilitated at the University's key off-campus sites, including the David Braley Health Sciences Centre, One James North, and the Ron Joyce Centre. Participants at these sessions completed the same worksheet used for the previous sessions and provided a valuable off-campus perspective.
- **Three Formal Design Charrettes (January 14th, 2016)** - Following the preparation of Key Directions, three formal design charrettes were held in Celebration Hall to receive feedback from the campus community. For logistical purposes, the meeting invitations were grouped into: (1) Engineering, Humanities, Business (2) Health Science, Social Sciences, Science, and non-faculty related departments, and (3) Facilities, Athletics and Rec, Finance, Advancement. Those who could not attend their specific sessions were encouraged to join either of the other sessions. At the charrettes,

participants were given a brief presentation outlining the Key Directions to date. Following this, they were split into smaller groups and used a guiding worksheet to review and discuss each of the directions to determine if they agree with the direction, and if not, how they would change/improve it.

- **Stakeholder Interviews** - On February 12th and April 8th, members of the consultant team met for one-on-one interviews with key campus stakeholders. These interviews elicited feedback on a draft master plan concept based on user-specific insight. The intended stakeholders represented the following areas:

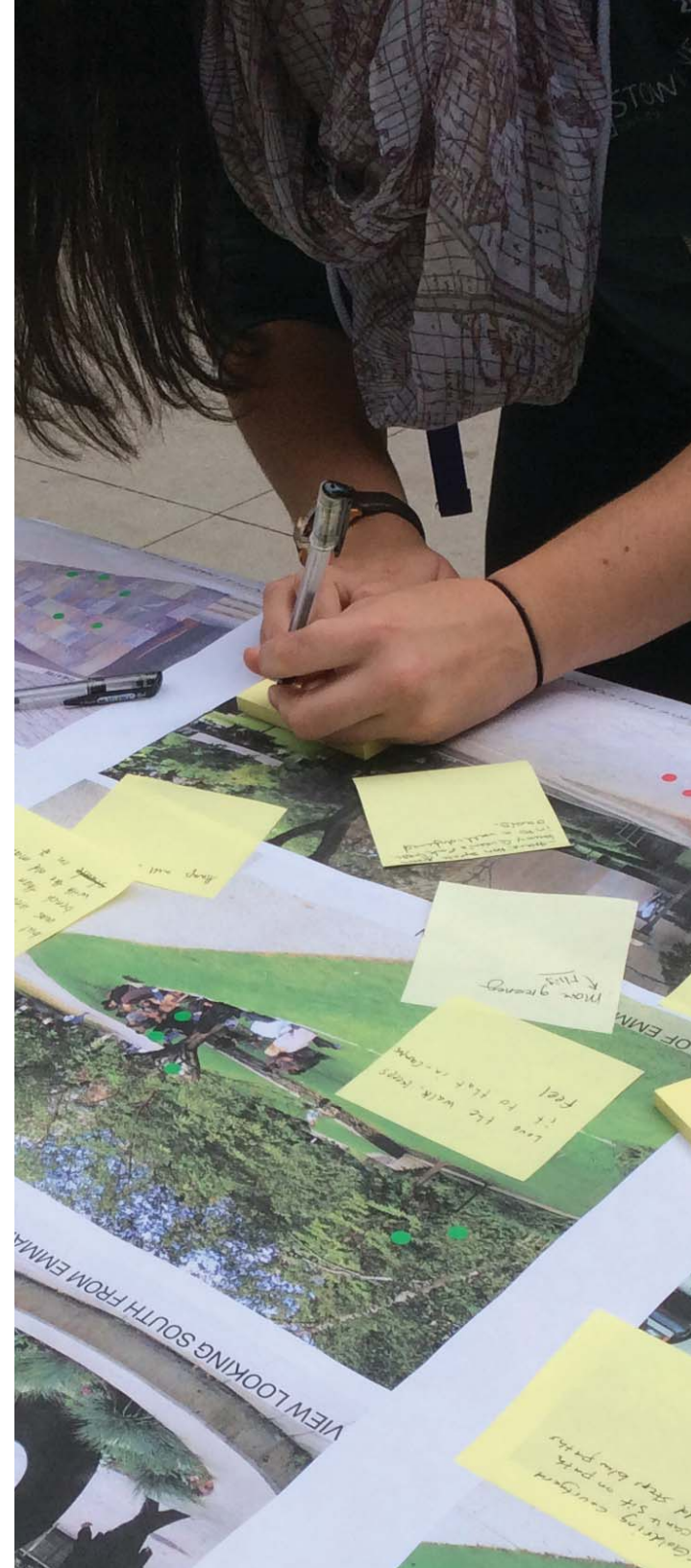
- City of Hamilton Traffic Engineering;
- Royal Botanical Gardens;
- McMaster Sustainability;
- McMaster Museum of Art
- President's Advisory Committee on Community Relations (PACCR);

- Campus Accessibility;
- Campus Security and Parking;
- McMaster Biology Greenhouse;
- McMaster Library;
- McMaster Campus Store;
- Health Sciences.

- **Final Open House (April 15th)** - A final open house was held on April 15th, at the David Braley Athletic Centre, to present the draft final campus master plan. This included three one hour sessions, with each session beginning with a consultant presentation of the plan, followed by a question and answer period. The plan was well received.

Refer to the appendix for the key points identified at these sessions.

Students participate at a campus consultation event.



Section Two

2016 Master Plan Update

2.1 Campus Vision Statement

The following vision statement encapsulates the key directions found throughout this document and reflects the desired long-term character of McMaster University main campus. It should be referenced regularly, and should inform all future building, open space, and landscape projects.

The campus master plan update envisions a future for McMaster University that is attractive, welcoming, health-promoting, and sustainable for generations of students, faculty, and staff.

McMaster University will build on and strengthen the extraordinary qualities that define the campus today, including well-integrated historic and contemporary buildings, a variety of passive and formal open spaces, extensive landscaping, and its striking location adjacent to Cootes Paradise and the Royal Botanical Gardens.

As the campus evolves, new developments will establish a mix of research, classroom, amenity and recreational uses; these will promote synergies between the Core Campus and the West Campus. Vehicular traffic will be further directed to the edge of campus, redefining campus entrances and reinforcing a people-focused and vehicle-free core campus. A new Transit Hub will consolidate campus transit, anchor the southwest edge, and create an attractive 'front door' for many users. New open spaces, and enhancements to existing open spaces, will provide opportunities to teach and study, gather and socialize, exercise, and recreate. The rich history and culture of McMaster University will be subtly embedded throughout the campus, including public art, wayfinding and signage, and landscaping.

*Opposite:
The directions of the master plan will reinforce a welcoming and attractive pedestrian environment.*





Precedent image demonstrating what new and enhanced open spaces may look like on campus.

2.2 Design Principles

The 2008 Campus Master Plan was founded on six principles which reflect the values and priorities expressed by the members of the McMaster community. These principles address many of the issues and opportunities identified throughout this study, and remain relevant. To ensure the master plan reflects contemporary campus growth and reflects the changing ways in which staff, students and faculty engage on campus, six additional principles have been provided.

Original Principles

1. McMaster's **Main Street Campus** will be the **focus for future growth** and evolution.
2. The campus master plan will be **a document** that is practical and visionary, permanent yet flexible.
3. McMaster will have a **pedestrian and cyclist-focused campus** that is accessible and user-friendly for all persons, regardless of their physical abilities.
4. The **setting and image** of the campus will be **enhanced and maintained** at a high level of quality.
5. The campus will be planned to achieve a **high level of sustainability** and environmental stewardship.
6. The campus will **function as a village** and a partner within the larger community of Hamilton.



Precedent rendering demonstrating what new connections may look like on campus.

Additional Principles (2016)

7. The plan will redefine the hierarchy of campus entry points to prioritize **pedestrians first**.
8. A **variety of campus outdoor spaces** will be provided, that reflect the way in which users teach, learn and socialize on campus, and which support the promotion of physical and mental wellness for members of the McMaster and local communities.
9. The core campus circulation networks will be revitalized to **enhance wayfinding**.
10. New buildings and additions will be located to **frame campus streets, entrances and open spaces**.
11. **Student study/lounge and common spaces will be increased** and diversified to reflect contemporary campus activities.
12. Signage, wayfinding, and public art will be developed in a consistent and complimentary manner, to reinforce a **common campus character**.

2.3 Master Plan Overview

The campus master plan update illustrates the long-term vision for the design and development of McMaster University. It outlines opportunities for new development, and intensification of existing facilities, while protecting the historic buildings that define the central part of the campus. Strategic improvements to the campus edges, including Main Street, Cootes Drive, and Forsyth Avenue, will strengthen the image of the campus, and improve the interface with adjacent neighbourhoods.

The plan furthers the University's commitment to a vehicle-free core campus, consolidating parking and transit service at the campus edges. Upgrades to internal streets, including University Avenue, College Crescent, Scholars Road, and Sterling Street, will reinforce pedestrian priority and cycling throughout the campus, promoting environmental sustainability health and wellness.

A new Transit Hub anchored by the LRT at the southwest edge of campus provides seamless integration between all modes of transportation. It integrates HSR and GO Transit on site, while providing an iconic welcome centre and arrival plaza for LRT on Main Street. New buildings will frame and enhance Cootes Drive and Main Street, while accommodating a mix of academic, research, and supporting campus uses.

Building on the momentum of the Peter George Centre for Living and Learning, the plan proposes new buildings, improvements to Stearn Drive, and enhanced pedestrian pathways to better connect the North Campus to the remaining campus, while reinforcing the recommendations of the Athletics and Recreation Master Plan (Perkins + Will, 2016) and the Library Master Plan (Perkins + Will, 2015). Please refer to the appendix for a summary of these documents.

A re-imagining of the West Campus focuses on establishing a self-sufficient campus, with a mix of academic, research, amenity and social space that supports day-long use. New development will respond to and integrate unique natural features, including the Ancaster Creek floodplain, MacMarsh, and existing mature tree stands, in an environmentally sensitive and sustainable way.

The plan was developed through ongoing consultation with students, faculty, and staff. It demonstrates one way in which the vision and guiding principles can be achieved. It will be used to guide future development and decision making processes, while allowing the flexibility to respond as the campus evolves, ensuring development is consistent with the intent of the plan.



- Property Line
- Approved / Under Construction Buildings
- Potential Development Sites / Additions
- Potential Vertical Additions
- Multi-Use Atriums
- Shuttle / Transit Shelter
- Enhanced Open Spaces / Gardens
- Quads
- Plazas
- Pathways/Sidewalks
- Pedestrian Priority Streets
- Sports Fields
- Landscape Buffer
- Street Trees
- Trail Heads

Section Three

Master Plan Systems

3.1 Campus Entrances

Re-directing the majority of vehicle traffic to Cootes Drive and Sterling Street, and providing direct routing to parking areas, allows the Main Street/University Avenue entrance to reflect its role as the primary pedestrian gateway, and a welcoming and memorable ‘front door’ for campus users and visitors from the surrounding communities.

Rationale

Primary access to McMaster Campus is provided from Main Street and University Avenue, including a mix of pedestrians, cyclists, vehicles and transit. The unusual geometry of this entrance, which includes access to College Crescent and the hospital parking garage, as well as pedestrian and cyclists crossing, results in significant congestion, confusion and anxiety.

Entrances should signal arrival to the campus, establish a strong identity and sense of place, and reinforce safety, wayfinding and orientation. They should be designed to reflect a clear hierarchy, including:

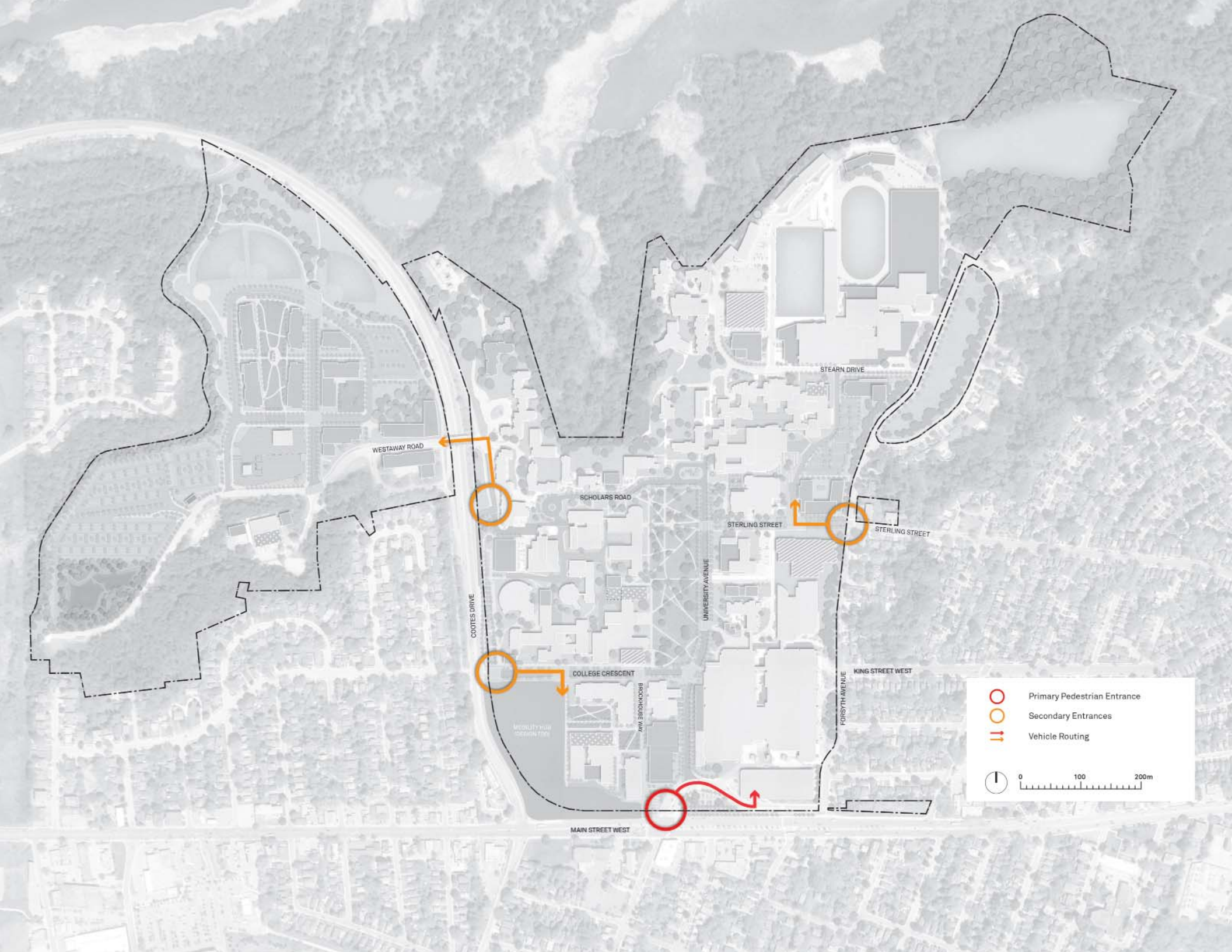
Primary Pedestrian Entrance - As the primary pedestrian entrance, and the most visibly significant access point, Main Street/University Avenue should be a focus for funding. It should have the highest quality of design and should facilitate clear, safe, and memorable access to the campus. New development, landscaping, gateway signage, public art, and high quality materials should all reinforce

the significance of this entrance. While vehicles will use this entrance to access the hospital parking garage, its design will prioritize pedestrians.

Secondary Entrances - Secondary entrances, including Sterling Street, and the existing and proposed entrances off Cootes Drive, will accommodate the majority of vehicle traffic on campus. These entrances should reinforce a sense of arrival through strong built form, unique planting and landscape features, and directional signage to key campus locations.

Tertiary Entrances - Tertiary entrances are informal pedestrian access routes, such as King’s Walk at the terminus of King Street West. These entrances should be formalized through enhanced landscaping, high-quality paving, and wayfinding signage. Where these entrances are not highly visible, they should be well lit to ensure safety and security throughout the day.

*Opposite:
Campus Entrances Map*



Primary Pedestrian Entrance

Secondary Entrances

Vehicle Routing

0100200m

Priority Directions

1. A new Secondary Entrance at College Crescent and Cootes Drive. With the re-focusing of the University Avenue/Main Street entrance as a pedestrian gateway (see Sections 3.2 and 4.3), the majority of vehicles will enter campus at College Crescent (this includes most buses; some will still enter at Sterling Street). This entrance should reinforce a sense of arrival through strong built form, unique planting and landscape features, and directional signage to key campus locations.
2. Right-out access from Forsyth Avenue to Main Street to re-route traffic from Forsyth Avenue, and exiting the hospital parking garage, away from the Main Street/University Avenue intersection. This would require the creation of a T-intersection between the two sections of Forsyth Avenue, with stop signs. Right-in access would not be permitted due to lack of visibility and potential conflicts with vehicles turning left onto the northern section of Forsyth Avenue. In preliminary discussions with the City of Hamilton, it was noted that a detailed transportation study would be required prior to implementation to determine the traffic impacts on Main Street, the Westdale neighbourhood and local schools.



Precedent showing how new infill buildings on campus can frame and animate outdoor spaces, including quads, plazas, pathways, and streets.

3. A new plaza and landscaping at Main Street, in association with new infill buildings (i.e. at T13 and CRL), to complement the existing landscaping on the east side of University Avenue (see Section 4.2). This should include new entry and wayfinding signage, seating areas, public art, and bicycle parking.
4. An improved entrance experience on Sterling Street through the development of L.R. Wilson Hall, and a new building on the north side of Sterling Street. This should include the removal of the existing traffic island to provide additional boulevard width, as well as more room for cycling.



Existing gateway plaza at Main Street/University Avenue.

3.2 Vehicle-Free Core Campus

By redirecting vehicle traffic to the edge of campus, and providing a dedicated location for bus circulation at the Transit Hub, University Avenue, College Crescent, and Scholars Road can be re-imagined as Pedestrian Priority Streets that reinforce the University's vision for a vehicle-free core campus that puts pedestrian safety, health and wellness at the forefront.

Rationale

McMaster is committed to providing users with a vehicle-free core campus. Currently, vehicles are not permitted on University Avenue or Scholars Road, with the exception of HSR buses, emergency vehicles, and University vehicles. To facilitate this, parking areas are located at the edge of campus.

Reducing vehicles on campus has a variety of benefits, including:

- Provides a safer and more attractive campus by minimizing potentially dangerous conflicts between users.
- Allows enhanced opportunities for users to walk, cycle and exercise on the campus.

- Provides additional space within existing roadways to accommodate dedicated cycling routes.
- Eliminates damage, and the associated maintenance costs, caused by buses.

As LRT reduces the demand for buses and private vehicles on campus, this master plan update is the next step in realizing the University's vision for a vehicle-free core campus. Restricting vehicle access to the edge of campus will allow the conversion of University Avenue, College Crescent and a significant portion of Sterling Street to Pedestrian Priority Streets.

Opposite: Rendering demonstrating the future character of University Avenue, looking north from College Crescent.



Priority Directions

1. Re-direct vehicular traffic to a new Secondary Entrance at College Crescent and Cootes Drive, or to Sterling Street, where parking will be provided in the immediate proximity of the campus entrance.
2. Eliminate vehicle access on the entirety of University Avenue with the exception of University vehicles, emergency vehicles, and traffic from Main Street accessing the hospital parking garage.
3. Provide right-out access from Forsyth Avenue to Main Street to re-route traffic exiting the hospital parking garage away from the Main Street/University Avenue intersection.
4. Eliminate vehicle access on Sterling Street west of Stearn Drive, with the exception of emergency and University vehicles. If it is determined that a bus turn-around is required off Sterling Street long-term, a portion of the existing window road can be maintained (eliminating Building BB on Page 24 as a potential development site).
5. Convert University Avenue, College Crescent, Sterling Street, and Scholars Road to Pedestrian Priority Streets, including special paving, seating, enhanced landscaping, and embedded public art. Refer to the proposed cross-section on the following pages.
6. Remove College Crescent between Scholars Road and the new Cootes Drive entrance. Provide a well-landscaped multi-use pathway that links College Crescent and Scholars Road, providing a 'pedestrian-loop' through the core campus. Prior to removal of the road, the University should undertake a detailed study to confirm frequency of use, and the impacts of removal in the context of the new Cootes Drive access.



Vehicle-free Core Campus (Plan)



Vehicle-free Core Campus (Section)

Varies	3.0m	0.8m	4.0m	4.0m	0.8m	3.0m	Varies
Landscape and Furnishings	Sidewalk	Edge Zone	Drive Lane + Sharrow	Drive Lane + Sharrow	Edge Zone	Sidewalk	Landscape and Furnishings

3.3 Infill and Intensification

A number of new infill and intensification opportunities have been identified on campus, subject to funding and University needs, including a new Transit Hub that integrates LRT on Main Street and a variety of buildings that re-imagine the West Campus as a self-sustaining destination.

Rationale

In the 2008 Campus Master Plan, a number of potential development and expansion sites were identified, subject to University needs and funding. These sites included areas that are currently vacant and/or underutilized (e.g. surface parking lots). Since this time, two of the sites have been realized: L.R. Wilson Hall and the Peter George Centre for Living and Learning (under construction). The remaining sites continue to be recognized as infill sites in this update.

In addition to the previously identified sites, this plan recognizes a number of new (or revised) opportunities for development, including a Transit Hub at the southwest edge of campus, additional buildings within the West Campus, and smaller additions throughout the campus.

Many of these sites are challenging for development, given their location, policy context, and/or access. As McMaster requires new building sites, these locations should be balanced against opportunities for the intensification of existing lower-density (i.e. 2-storey) buildings that may be nearing the end of their life cycle, and that better achieve the development objectives.

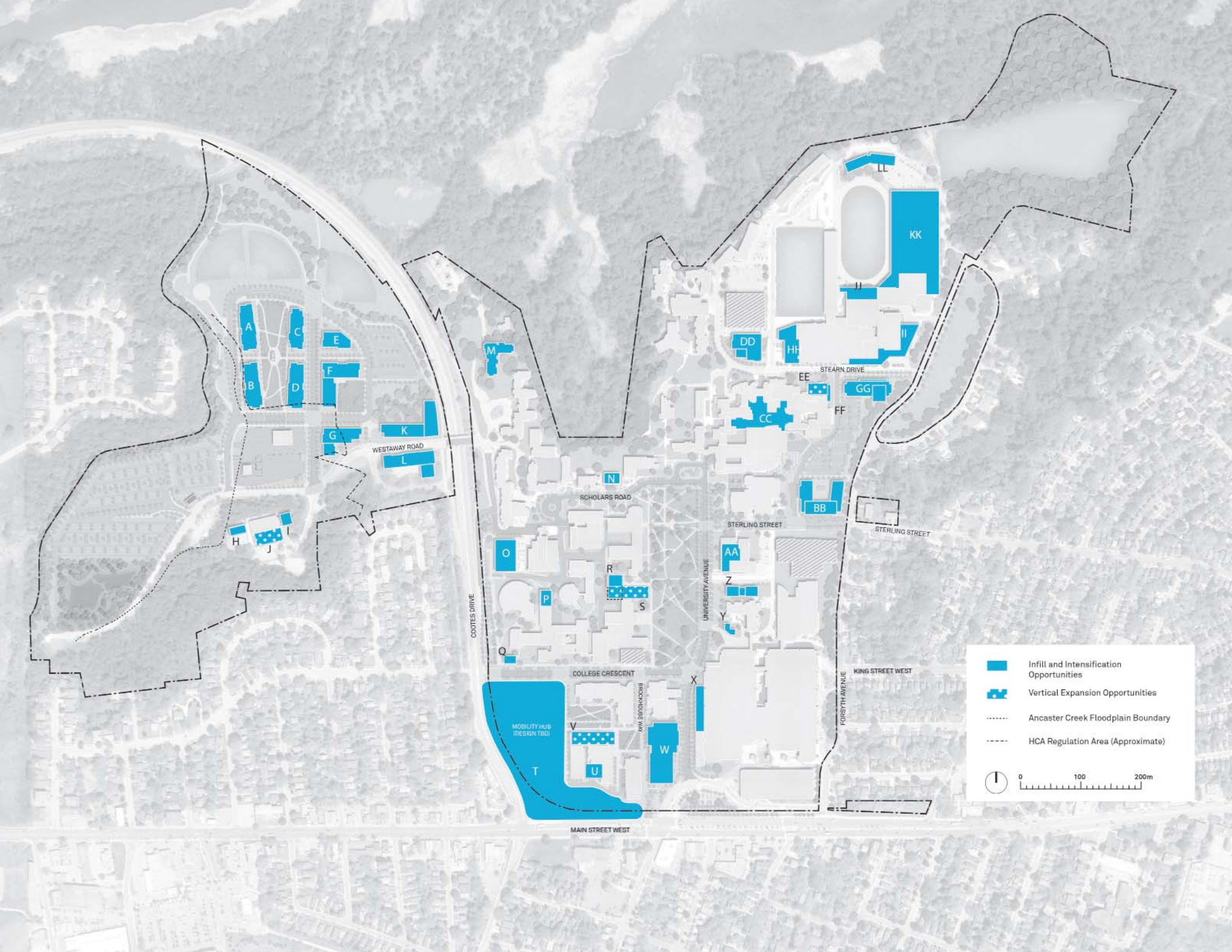
McMaster University is located directly adjacent to Cootes Paradise, which is part of the Niagara Escarpment and identified as an Escarpment Natural Area (Niagara Escarpment Plan, Map 2). To

setback provisions may apply as determined by the implementing authority in consultation with the Ministry of Environment and Climate Change, the Conservation Authority, and the Ministry of Natural Resources and Forestry (Niagara Escarpment Plan, Section 2.6.3). It is recommended that the University engage the Niagara Escarpment Commission prior to the development of any infill or intensification sites to confirm boundary lines, identify potential issues, and foster positive partnerships.

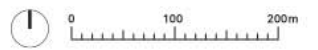
No development is permitted within the Ancaster Creek Floodplain. The sites identified in the West Campus are outside of the floodplain. However, as they are partially within the Regulation Area, the precise hazard limits have to be determined on a site-by-site basis and may involve hazard assessment studies. If such studies demonstrate that the proposed buildings are truly outside of the hazard area (stable slope and setback), all that is required is a Letter of Permission from the Conservation Authority. Considering this, partnerships with the Hamilton Conservation Authority are encouraged throughout the redevelopment process.

For a breakdown of the infill and intensification sites, including their potential use and yield, please refer to the table on page 26.

*Opposite:
Infill and Intensification Map*



- Infill and Intensification Opportunities
- Vertical Expansion Opportunities
- Ancaster Creek Floodplain Boundary
- HCA Regulation Area (Approximate)



Priority Directions

1. As LRT is integrated along Main Street, the parking lot at Main Street/Cootes Drive should be redeveloped to provide a Transit Hub that integrates all modes of transportation (e.g. HSR, LRT, and GO Transit), provides a 'welcome centre,' and accommodates a variety of transit-supportive buildings.
2. Provide a number of new buildings in the West Campus to create a self-sufficient campus that clusters complementary uses, and allows students, faculty, and staff to remain on this campus for the majority of their day.
3. Implement the recommendations of the Athletics and Recreation Master Plan (Perkins + Will, 2016), including additions to existing buildings.
4. As GO Transit services relocate to the Transit Hub, redevelop the existing terminal location as a new academic or research building.
5. Provide new development to the south of the Peter George Centre for Living and Learning, and at Stearn Drive/Forsyth Avenue to frame and create a stronger presence on Forsyth Avenue.
6. Integrate the Communications Research Laboratory with the redevelopment of T13. At 2-storeys, this building site is currently underutilized. Redevelopment of both sites would allow more intensified use at this
7. important entrance, and a building that appropriately addresses University Avenue
8. Provide a new building on the north side of the Life Sciences Building (incorporating the existing tunnel) to further frame the eastern edge of The Mall, and the pedestrian connection to the north.
9. Re-location of the existing Biology Greenhouse to the south side of the Life Sciences Building. The existing site should be redeveloped as an academic or research space.
10. A maximum 2-storey closed atrium space within the existing Arts Quad to create a unique, flexible space that can be used year-round.
11. A narrow addition on the western edge of the hospital to soften this edge, and provide a stronger, pedestrian-oriented presence on University Avenue. As a narrow addition, this site could accommodate a unique study/lounge space with limited retail, and opportunities for spill-out and active uses.
11. With the recent indication by Hamilton Health Sciences that its 20 year strategic plan envisions its relocation from the McMaster University Medical Centre, the future use of this building/site should be considered in the future planning of the campus.

Planning and Zoning Implications

The following table supports the infill and intensification sites identified on Page 24. It identifies the potential use and development yield for each of the sites, as well as the planning/policy implications that will need to be considered at the time of development.



Precedent showing how new buildings can frame and animate campus edges.

Opposite: Table demonstrating the potential development yield and use of identified infill and intensification sites.

Infill Site	Site Area (Square Metres)	Built Form Recommendations					Policy Implications
		Min Height (Storeys)	Max Height (Storeys)	Min GFA	Max GFA	Potential Use	
A	1,834.54	4	6	7,338.15	11,007.23	Academic, Research or Residence	ZONING BY-LAW 6593 Permitted Uses: The current zone 'B' allows for all of the proposed uses. The zone permits 'a school, college, university or seminary of learning, public or private, with or without a dormitory and dining room but excepting a commercial school or a sanatorium school.' This site meets the required conditions related to horizontal area and adjacencies (see Section 8(1)(iii)(b) and (d)). This zone also permits a library, art gallery, museum, observatory, community centre, gymnasium, swimming pool or similar cultural, recreational or community buildings or structures, golf course, bowling green, tennis court, playground, playfield, play lot, picnic ground or other similar recreational uses. Maximum Height: In a "B" District, no building shall exceed two and a half storeys and no structure shall exceed 11.0 metres (36.09 feet) in height (see 8(2)). A Zoning By-Law Amendment will be required to achieve the proposed building heights. Minimum Property Dimensions: Every individual building must be sited on a site where it has a front yard of a depth of at least 12.0 metres; a side yard along each side lot line of a width of at least 3.0 metres; and a rear yard of a depth of at least 9.0 metres (see 8(3)). The Site must also have a width of at least 20.0 metres (65.62 feet) and an area of at least 1,100.0 square metres (11,840.69 square feet) (see 8(4)). Floodplain Implications: The sites identified in the West Campus are generally outside of the Ancaster Creek Floodplain. However, as they are partially located within the Regulated Area, the precise hazard limits have to be determined on a site-by-site basis and may involve hazard assessment studies. If such studies demonstrate that the proposed buildings are truly outside of the hazard area (stable slope and setback), all that is required is a Letter of Permission from the Conservation Authority.
B	1,889.40	4	6	7,557.60	11,336.39	Academic, Research or Residence	
C	1,518.51	4	6	6,074.05	9,111.07	Academic, Research or Residence	
D	1,892.67	4	6	7,570.70	11,356.04	Academic, Research or Residence	
E	1,116.00	4	6	4,464.00	6,696.01	Academic, Research or Residence	
F	2,630.46	4	6	10,521.84	15,782.76	Academic, Research or Residence	
G	1,901.14	4	6	7,604.56	11,406.85	Student Learning Centre	
H	430.00	2	2	860.00	860.00	Office Space (Addition)	
I	330.00	1	1	330.00	330.00	Office Space (Addition)	
J	920.00	1	1	920.00	920.00	Office Space (Vertical Addition)	
K	2,808.35	4	6	11,233.42	16,850.12	Academic, Research or Residence	ZONING BY-LAW 05-200 Permitted Uses: This property is zoned Institutional Uses (I3). This zone allows for the proposed uses. It permits an Educational Establishment, Hospital, Lodging House, Medical Clinic, Multiple Dwelling or Recreational, among other uses. Maximum Height: The maximum height is 18.0 metres, only where the property line abuts a Residential Zone property line. As this property does not abut a Residential Zone, the proposed building heights are permitted (see 8.3.2.2). Niagara Escarpment Implications: McMaster University is located directly adjacent to Cootes Paradise, which is part of the Niagara Escarpment and identified as an Escarpment Natural Area (Niagara Escarpment Plan, Map 2). To protect the water quality of the adjacent stream, setback provisions may apply as determined by the implementing authority in consultation with the Ministry of Environment and Climate Change, the Conservation Authority, and the Ministry of Natural Resources and Forestry (Niagara Escarpment Plan, Section 2.6.3). It is recommended that the University engage the Niagara Escarpment Commission prior to the development of any infill or intensification sites to confirm boundary lines, identify potential issues, and foster positive partnerships.
L	2,339.51	4	6	9,358.03	14,037.04	Academic, Research or Residence	
M	1,194.78	4	6	4,779.11	7,168.66	Academic, Research, Residence or Amenity/Conference	
N	586.50	4	6	2,346.00	3,519.00	Academic or Research	
O	1,822.82	4	6	7,291.29	10,936.93	Academic, Research or Residence	
P	586.50	4	6	2,346.00	3,519.00	Research (Addition)	
Q	239.24	1	1	239.24	239.24	Welcome Facility/Information Kiosk	
R*	912.00	4	6	3,648.00	5,472.00	Academic or Research (Addition)	
S*	1,312.00	2	2	2,624.00	2,624.00	Academic or Research (Vertical Addition)	
T	Mobility Hub (Design TBD)					Mobility Hub: Academic or Research	
U	842.50	3	4	2,527.50	3,370.00	Academic/Office Space (Addition)	
V	1,620.00	1	1	1,620.00	1,620.00	Academic/Office Space (Vertical Addition)	
W	4,305.00	8	10	34,440.00	43,050.00	Academic or Research	
X	950.00	4	6	3,800.00	5,700.00	Student Study/Lounge Space (Addition)	
Y	320.44	1	1	320.44	320.44	Biology Greenhouse (Potential)	
Z	847.29	4	6	3,389.17	5,083.75	Academic or Research	
AA	912.80	2	2	1,825.60	1,825.60	Academic or Research	
BB	2,844.52	4	6	11,378.09	17,067.14	Academic or Research	
CC	3,067.00	2	2	6,134.00	6,134.00	Arts Quad Expansion	
DD	1,983.53	4	6	7,934.12	11,901.18	Academic, Research or Residence	
EE	150.00	1	2	150.00	300.00	Academic, Research or Office (Vertical Addition)	
FF	190.00	1	2	190.00	380.00	Innis Library Expansion	
GG	1,955.78	4	6	7,823.11	11,734.67	Academic or Research	
HH	Refer to Athletics & Recreation Master Plan (Perkins + Will, 2016)					A&R Master Plan Addition (Phase 1)	
II						A&R Master Plan Addition (Phase 2)	
JJ						A&R Master Plan Addition (Phase 2)	
KK						A&R Master Plan Addition (Phase 3)	
LL						A&R Master Plan Addition (Phase 3)	

* Potential development to be either a new addition (Q) or an addition on top of the existing building (R).

3.4 Parking Strategy

As infill and intensification occurs on campus, structured parking (including both underground parking and a parking garage) will be required to maintain the existing number of parking spaces consistent with the University's focus on advancing human and societal health and well-being. Efforts should be made to balance additional campus populations with a modal shift

Rationale

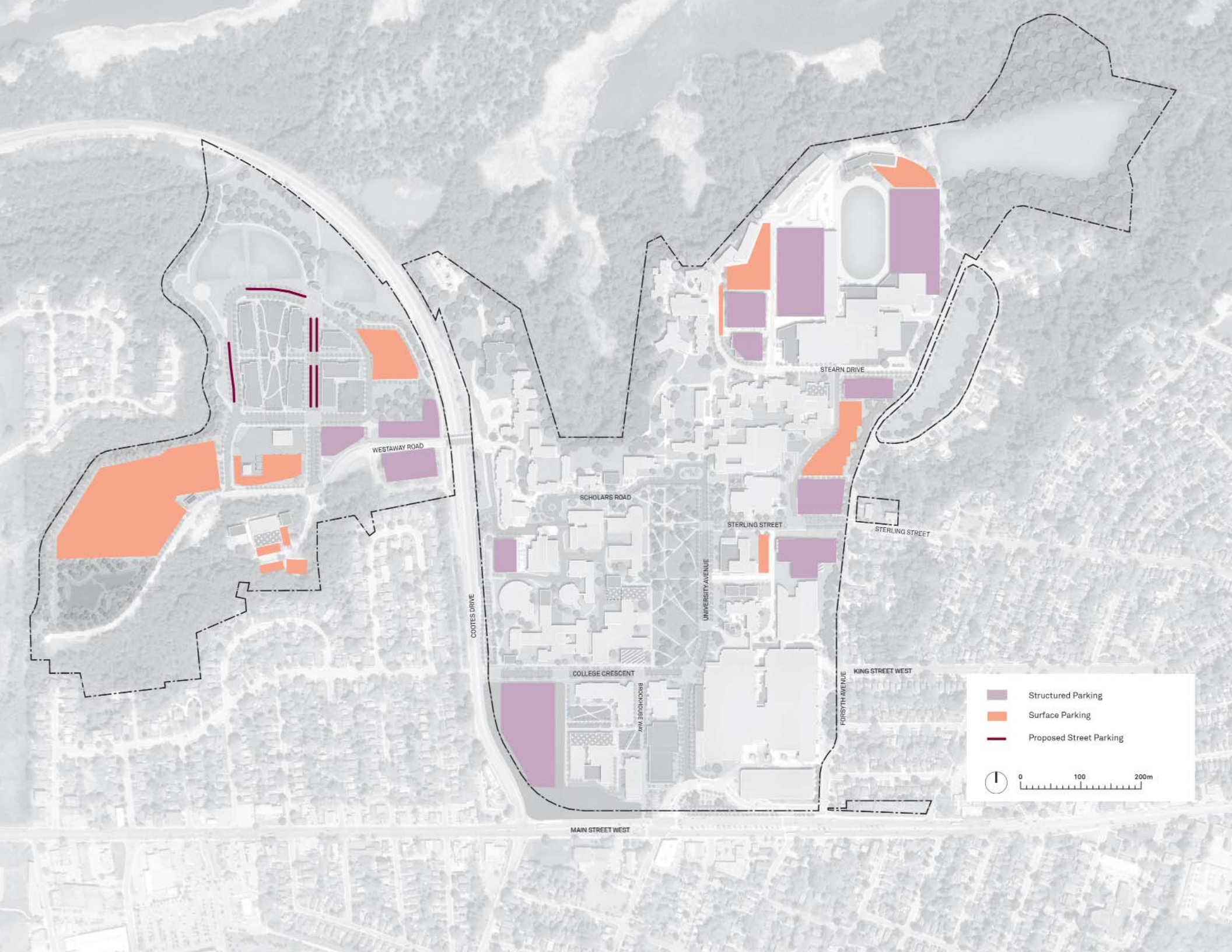
Short term parking, as well as available permit parking that is close to the core campus, was identified as an issue. Campus users have available parking locations that are not necessarily close to the core.

As infill and intensification occurs on campus (see Section 3.3), surface parking lots are prime sites for redevelopment. It is anticipated that LRT on Main Street, and the cycling improvements proposed throughout this document, will alleviate some pressure on existing parking facilities. However, a long-term solution is required that balances parking demand with the broader goals of developing the campus edges, promoting physically-active transportation, and reinforcing a sustainable campus. As noted in the McMaster University Sustainability Policy, "The University encourages sustainable modes of transportation and recognizes the need to balance the demands of pedestrians, cyclists and vehicles."

A parking assessment has been undertaken which analyzed data during selective days. Some of the results follow:

- Data was analyzed for main campus and Ward Avenue parking spaces for an average September day. Of 3,728 parking spaces analyzed, data showed peak utilization for 3,003 parking spaces. This equates to 81% of the parking spaces being utilized;
- The demand for parking spaces at most parking lots is within the lot's capacity;
- Some smaller lots on campus (i.e. Forsyth Avenue/Stearn Drive, Michell Crescent north of the playfield, and east of Hedden Hall) may have limited spare capacity. These lots are more expensive to park in compared to lots further from campus;
- September sees the peak demand; typically demand is lower than this in other months of the year;
- Drivers parking at the University appear to be cost-conscious and elect to park further away to reduce their parking costs. Similarly, if parking rates are increased, these users may seek different modes to access the campus (e.g. transit); and,

*Opposite:
Parking Map*



WESTAWAY ROAD

COOTES DRIVE

SCHOLARS ROAD

COLLEGE CRESCENT

BISCHOPHOUSE WAY

UNIVERSITY AVENUE

STERLING STREET

STEARNS DRIVE

FORSYTH AVENUE

KING STREET WEST

MAIN STREET WEST

- Structured Parking
- Surface Parking
- Proposed Street Parking



- Parking supply should be managed and not designed for the peak period; doing so would be fiscally irresponsible and would not encourage the use of more sustainable modes.

To manage parking as the campus evolves, the analysis recommends:

- Maintaining the current supply of parking (4,581 spots¹) as a baseline, and to manage future demand;
- Enhancing cycling and pedestrian circulation to encourage these modes of travel by providing dedicated cycling lanes and paths, increasing the number of bike racks, and ensuring that an interconnected network of pedestrian sidewalks is maintained;
- Advocating for expedited construction of the proposed LRT on Main Street;
- Working with the City and GO Transit to review and improve bus routings and timings;

¹ Includes surface lots, underground parking, smaller individual spaces, and off-campus parking spaces broken down as follows:

- Main Campus – 3586 (includes short-term parking, Wilson parking, proposed LLC parking)
- Ward Avenue – 490
- RJC – 247
- DBHSC Underground – 82
- DBHSC Surface – 176

- Identifying locations to construct additional parking, including underground parking in association with new buildings, as well as a parking garage on campus.

Priority Directions

1. Parking needs should be regularly reassessed in light of the increasing size of the McMaster University community and changing commuting patterns.
2. Structured parking should be considered within new buildings located at the campus edges and within the West Campus. Future development of the sites shown on Page 28 with buildings that include structured parking could provide an increased total inventory of 525 spaces.
3. Where underground parking is not feasible, opportunities to accommodate parking above grade should be explored on a site-by-site basis, including parking within the first two storeys of buildings, or a stand-alone parking garage on one of the infill and intensification opportunities identified on Page 24. This approach is anticipated in the West Campus where underground parking is not feasible.

4. Where above-grade parking is provided within the first two storeys of new buildings, it should be wrapped by active uses (e.g. offices, campus amenity spaces, etc.) and should not be visible from the public realm. Vehicular access to these sites should be from the rear or side of the building and should also be screened from view.
5. Improved wayfinding within parking lots (surface and underground) to facilitate immediate and direct access to campus destinations.
6. Where surface parking is provided, the principles of low impact development should be incorporated to mitigate impacts. Low impact development seeks to absorb stormwater on site through the regular placement of control mechanisms (i.e. bioswales, permeable paving, rain gardens).
7. An updated shelter for the West Campus shuttle. It should be fully enclosed, and should include electronic updates related to shuttle arrival and campus news.
8. Explore strategies to increase parking costs in order to reduce demand and encourage users to travel via transit and/or cycling. This will need to be introduced strategically to ensure receptivity.



Precedents demonstrating how new and updated surface parking areas should minimize their visual and environmental impacts through permeable paving, significant buffer planting, and other Low Impact Development interventions.

3.5 Cycling

Cycling is a primary mode of transportation for a significant number of students, faculty and staff. With the integration of LRT, and the University's commitment to a vehicle-free core campus, dedicated cycling routes will be provided on key streets to ensure safe, continuous connections to, and throughout, the campus.

Rationale

There is a strong network of cycling routes in close proximity to, and approaching the McMaster campus, including bicycle lanes on Sterling Street, King Street, and Sanders Boulevard, and multi-use trails along Cootes Drive and just south of the campus (Hamilton-Brantford Rail Trail). These trails end abruptly at McMaster campus which does not provide marked and consistent paths through internal streets resulting in an increased risk of cyclist/vehicle conflicts.

With a commitment to a vehicle-free core campus (see Section 3.2), a series of dedicated cycling routes should be provided on key north-south and east-west streets through the campus to provide access to key destinations, facilitate connections through the campus, and link to adjacent bicycle lanes and multi-use paths throughout the City.

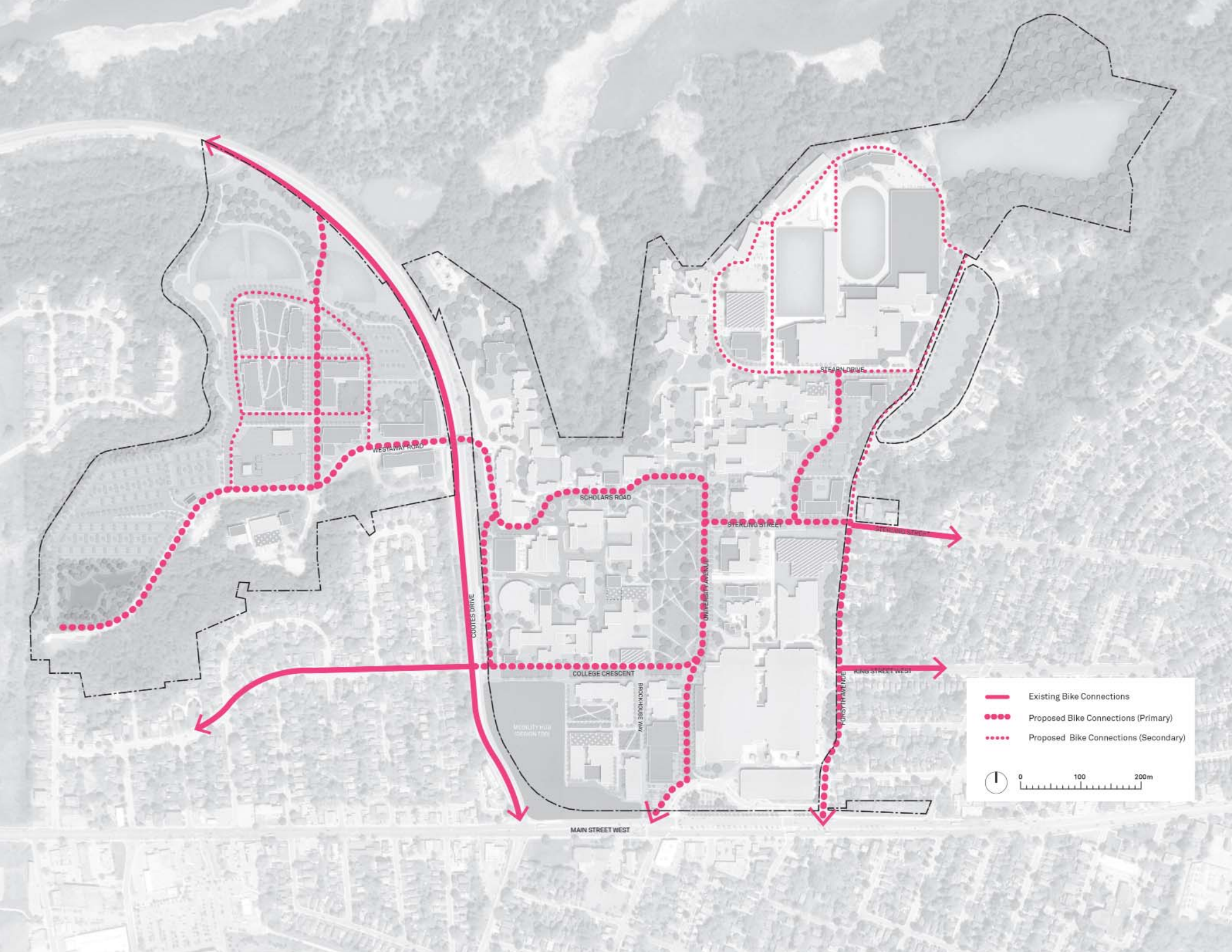
Priority Directions

1. Sharrows on College Crescent, University Avenue, Sterling Street, Scholars Road, and Westaway Road. As vehicle traffic is limited on these streets, sharrows will provide a generally exclusive route for cyclists.

2. Provide additional bicycle parking at the Primary, Secondary and Tertiary Entrances identified in Section 3.1, including weather-protected facilities where possible.
3. Provide significant bike parking and storage at the Transit Hub to facilitate convenient transition between modes of transportation.
4. Expand SoBi Hamilton (Hamilton Bike Share) to the Transit Hub, and to the West Campus.
5. Provide a second location for MACycle within the Transit Hub.
6. Upgrade and formalize existing bike parking areas to reduce undesirable conditions (e.g. broken facilities, forgotten bicycles, muddy conditions, etc.).



Above: Shared-lane Arrow (Sharrow)
Opposite: Cycling Map



— Existing Bike Connections

... Proposed Bike Connections (Primary)

- - - Proposed Bike Connections (Secondary)

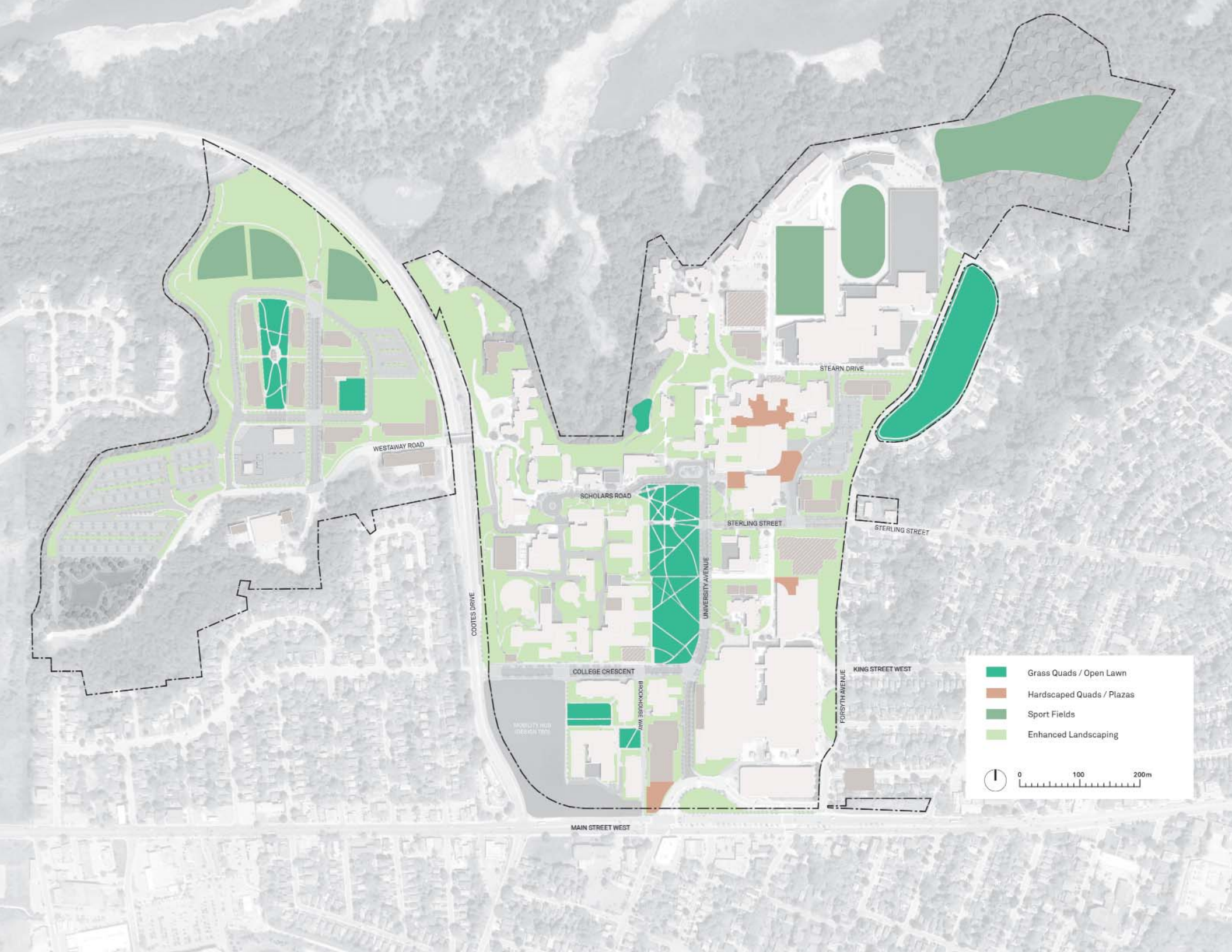
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3.6 Open Spaces and Landscaping

Open spaces and landscaping reinforce a strong aesthetic quality and a memorable experience at McMaster. The master plan envisions new open spaces, and enhancements to existing open spaces, to reinforce this network and provide a variety of spaces to teach, collaborate, exercise, and socialize.

Rationale

The McMaster University campus has a strong network of open spaces, including a mix of large formal quads (The Mall, the Arts Quad, the east side of the MUSC Quad), and open lawns (The Oval, Faculty Hollow). These spaces are framed and highlighted by well-landscaped areas at the edge of buildings and along pathways. Together, these features enhance the aesthetic quality of the campus, and offer gathering and social spaces. In providing opportunities to connect with nature, such spaces also support the promotion of mental and physical wellness, as well as a healthy environment for all members of the McMaster community. The master plan update looks to strengthen this network through the creation of new open spaces as well as upgrades and improvements to existing



- Grass Quads / Open Lawn
- Hardscaped Quads / Plazas
- Sport Fields
- Enhanced Landscaping



Priority Directions

1. Continuous and high-quality landscaping at the edge of all buildings, and in 'left-over' spaces, to support beautification across the campus. Where underutilized outdoor space exists (e.g. in front of the A.N. Bourns Science Building), consider unique and functional interventions, such as urban agriculture, informal plazas, or rain gardens.
2. The University should establish a formal process for the consistent naming/theming of new open spaces and gardens. This should involve all relevant departments (e.g. Facility Services, University Advancement), and should consider:
 - Historic/cultural theming and stewardship opportunities;
 - Identification requirements (e.g. plaque, sign) including size, location, and materials;
 - Branding;
 - Amenities (e.g. seating, bike racks, public art) including University standard vs. custom;
 - Initial and replacement costs of donated elements;
 - Maintenance and lifespan of elements; and,
 - Guidelines to govern donated items.
3. A new entrance plaza in association with the redevelopment of T13 and CRL (see Section 4.2). Associated landscaping will provide a direct visual and physical connection to the 'welcome centre' within the Transit Hub (see Section 4.1).
4. Formalized pathways through The Mall with seating at the edges (see Section 4.3).
5. Improvements to the MUSC Quad to support its use as a flexible, outdoor gathering space (see Section 4.3).
6. An improved quad between IAHS and ITB as part of the redevelopment of the Transit Hub (see Section 4.1).
7. A new quad within the West Campus to provide attractive outdoor space and support the West Campus as a self-sustaining campus (see Section 4.7).
8. Provide for additional athletic and recreational use of The Oval through increased awareness and programming while providing a buffer to adjacent residential uses: a dense row of trees at the east edge.
9. Smoking should be banned within 9m of all primary building entrances.



Left: Precedent showing the use of native, low-maintenance species to create an attractive campus edge.

Right: Precedent showing how small 'left-over' spaces can be converted to welcoming, attractive places.

3.7 Campus Edges

The edges of campus are most visible from adjacent streets and neighbourhoods, and often set the foundation for an attractive and welcoming campus. New street trees and additional landscaping will strengthen the campus edges along Main Street, Cootes Drive, and Forsyth Avenue. Campus edges should be visually distinct from the broader community, but complement adjacent uses.

Rationale

The edges of campus, or the areas that interface with adjacent uses, determine the initial impression of McMaster University for many users. This is most notable at the south edge, where McMaster has significant frontage on Main Street, but is also important along Forsyth Avenue and Cootes Drive. With the integration of LRT on Main Street, and the reconfiguration of campus entrances (see Section 3.1), these edges will become visible to a much greater number of users, and should reinforce a welcoming and attractive environment.

Priority Directions

1. A new entrance plaza in association with the redevelopment of T13 and CRL (see Section 4.2).
2. A double row of trees along the entire Main Street frontage.
3. A strong entry plaza near the corner of Main Street and Cootes Drive to accommodate users arriving to campus by LRT.

1. High-quality landscaping along Cootes Drive, including a continuous pedestrian pathway, as part of the Transit Hub redevelopment.
2. The University should undertake a detailed study of the window road portion of College Crescent that runs parallel to Cootes Drive to confirm the frequency of use, and the impacts of removal in the context of the new Cootes Drive access. With direct access from College Crescent to Cootes Drive, this connection may no longer be required (and may result in significant congestion due to insufficient spacing between intersections). Removal of this road will further the University's goal for a vehicle-free core campus and provide the opportunity for a high-quality landscaped edge that continues throughout the Transit Hub.
3. Infill trees as necessary along Forsyth Avenue to ensure a dense tree canopy that screens the University uses from the adjacent community and enhances the pedestrian experience.



Rendering and precedents demonstrating how high-quality landscaping can define campus edges.

3.8 Signage and Wayfinding

Signage and wayfinding creates cohesion across campus, reinforces the University's reputation, and enhances the daily experience for students, faculty, staff, and visitors. A detailed signage and wayfinding strategy will identify appropriate signage types and locations.

Rationale

Signage and other wayfinding elements are one of the simplest ways to create cohesion and a unified campus character. On the grand scale, gateway signage is an important part of the University's brand development, and provides a sense of arrival and establishes the identity of the campus. At a smaller scale, signage provides directional links between key locations, as well as locational cues upon arrival.

Throughout the campus consultation, students, faculty and staff all expressed frustration with a lack of clear wayfinding on campus, including directional signage and building identification signage.

Priority Directions

1. Update the University's existing signage and wayfinding strategy to identify the best locations for various types of signage (wayfinding signage, building signage, etc.), and to ensure consistency across campus (and at the University's off-campus sites).
2. Develop all signage within the branding guidelines of the University.

1. Updates should consider opportunities to consolidate signage, and to reduce the amount of required signage, in order to minimize clutter. Building signage is to be limited to the building name, rather than also include the department and/or faculty. This secondary information can be provided in a less prominent format.
2. Stronger entrance signage for the Mills Memorial Library, as well as clearer signage for loading facilities.
3. Welcome signage, campus maps and directional signage at all entrances identified in Section 3.1. This signage should allow students, faculty, staff and visitors to quickly and easily find their destination.
4. Explore opportunities for integrating digital wayfinding/mapping across campus.
5. Establish other methods to enhance wayfinding that utilize emerging technologies, such as information stations.



Above: Precedent showing simple, uncluttered campus signage.

Left: Precedent showing electronic campus signage.

3.9 Public Art

Public art beautifies the campus, and enhances the day-to-day experience of many users. Led by the McMaster Museum of Art, a comprehensive Public Art Strategy will identify key locations and recommended commissions, while exploring partnership opportunities with McMaster and local artists.

Rationale

When carefully integrated throughout a campus, public art enhances the day-to-day experience of students, faculty, and staff, and broadens their knowledge of McMaster University, the surrounding area, and Hamilton's rich history. Campus art also provides the opportunity to promote local artists and draw visitors from the surrounding community.

Priority Directions

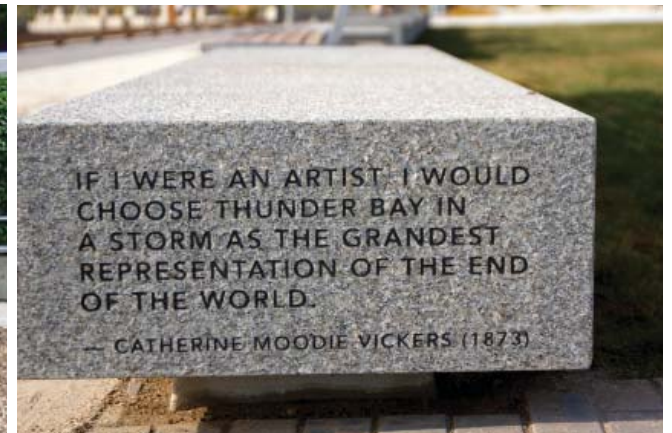
1. Undertake a detailed Public Art Strategy to integrate public art at strategic locations throughout campus. This could be led by the McMaster Museum of Art to connect with, and increase awareness of, its extensive collection.

1. Formalize and increase awareness of the Artists Garden associated with the McMaster Museum of Art (located near the southwest corner of the MUSC Quad). This could include formal signage (local and wayfinding), unique collaborations, etc.
2. Explore opportunities for non-traditional forms of public art, including embedded art (e.g. in pathways, furniture, etc.), interpretive pieces, and sculpted or patterned landscapes.



Left: Existing Artist Garden at McMaster.

Right: Precedent showing how public art can be subtly integrated into campus furniture, pathways, etc.



Section Four

Campus Character Areas

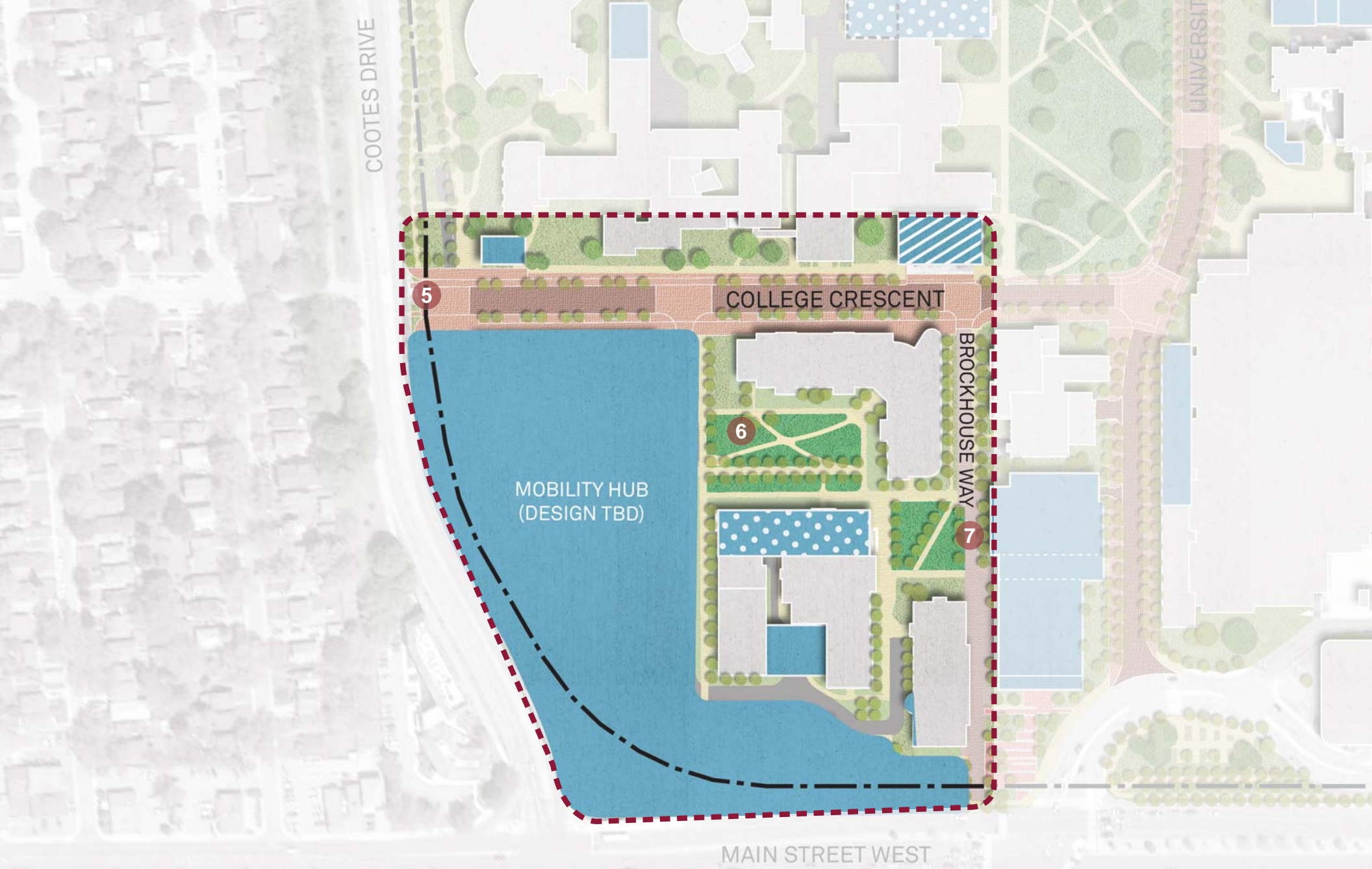
4.1 The Transit Hub

To achieve the full advantages of the LRT on Main Street, a new Transit Hub at the southwest edge of campus will integrate all modes of transportation. New buildings will provide an iconic ‘welcome centre’ on campus, as well as parking and space for academic, retail, and recreation uses; and social space. New plazas and open spaces will create a comfortable and welcoming environment that accommodates active and passive recreation.

As part of Metrolinx’s regional transportation plan, The Big Move, \$1 billion is being invested in LRT along Main Street, from McMaster University to the East End of Hamilton. This LRT line will have a transformative impact on both Main Street, and McMaster University. With the re-routing of vehicular traffic to entrances at Cootes Drive and Sterling Street, and the consolidation of bus access at the Transit Hub, there is an opportunity to reinforce a strong presence on Main Street through the establishment of an integrated development at the southwest quadrant of the campus.



Precedent images demonstrating the type of high-quality, visual landmark buildings that should be provided within the Transit Hub, particularly at the corner of Main Street and Cootes Avenue.



NOTE:

A detailed demonstration plan for the Transit Hub was prepared as part of this process (please refer to Appendix i). As the LRT alignment and bus circulation requirements are finalized, it is anticipated that the final design may change. Where the design changes from Appendix i, it should still achieve the Priority Directions outlined in this section.

Priority Directions

1. An anchor Transit Hub building that consolidates access and circulation for all transit services, including HSR, LRT, and GO Transit. This building should have a mix of uses, which could include academic uses, lounge space, a cafe, recreation facilities, etc.
2. A 'welcome centre' on Main Street as the first access point for users entering campus from the LRT and/or the University Avenue/Main Street entrance. This should be a landmark building, with a strong entry plaza, and could provide study/lounge space, a starting point for campus tours, and a western location for the Compass Information Centre (currently at MUSC).
3. Academic buildings on the south side of College Crescent to frame the street and provide additional classroom, research, and office space.
4. Structured parking should be provided in new buildings to offset parking lost to

redevelopment, and to provide additional capacity. Where feasible, underground parking is recommended. If it is determined that this is not feasible, above-grade parking may be considered within the first two-storeys, though it should be 'wrapped' with active uses or architectural devices, so as not to be visible from the public realm.

5. A new connection to Cootes Drive from College Crescent to accommodate transit access and to provide access to structured parking facilities to offset parking lost to redevelopment.
6. Improvements to the ITB/IAHS Quad to create an attractive, welcoming plaza and internal connection between University Avenue and the Transit Hub.
7. Upgrades to Brockhouse Way to provide a continuous, pedestrian-focused connection between Main Street and College Crescent.

See Also

- 3.1 Campus Entrances
- 3.2 Vehicle-Free Core Campus
- 3.3 Infill and Intensification
- 3.4 Parking Strategy
- 3.5 Cycling
- 3.6 Open Spaces and Landscaping
- 3.7 Campus Edges

4.2

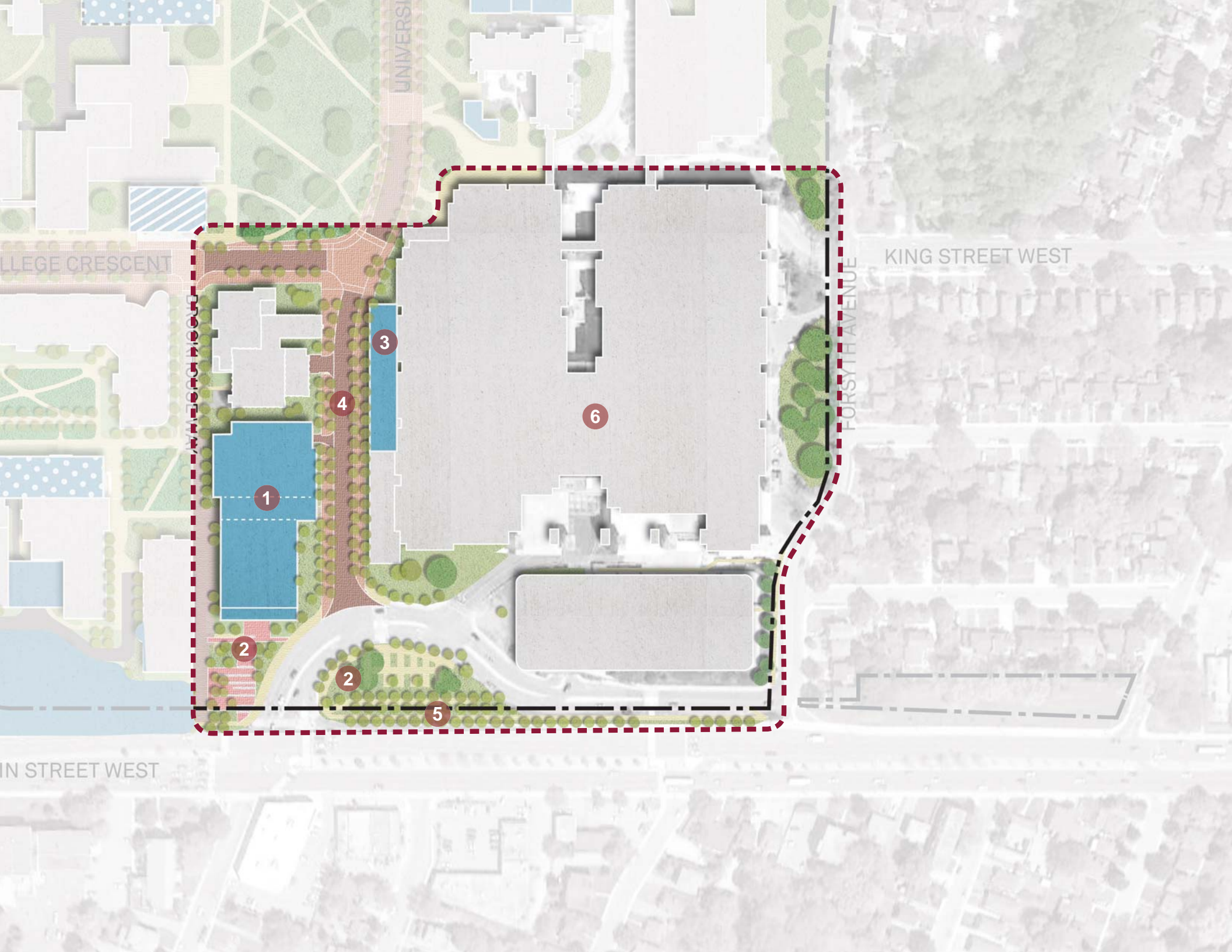
University Avenue/Main Street Frontage

The frontage on Main Street, and University Avenue, will be upgraded and enhanced to reflect its role as the primary campus entrance. Large, well-landscaped plazas will frame both sides of this gateway, while upgrades to University Avenue will provide a direct visual and physical link to The Mall. New infill (T13) buildings, and the intensification of existing sites (CRL), will frame and animate University Avenue.

With the majority of vehicle traffic entering campus from College Crescent/Cootes Drive and Sterling Street (see Section 3.1), there is an opportunity to re-envision University Avenue and the Main Street frontage as the primary gateway to the campus.



*Left: Precedent demonstrating what a new plaza could look like on the west side of University Avenue, at Main Street, in association with the redevelopment of T13 and CRL.
Right: Current gateway plaza at University Avenue and Main Street.*



UNIVERSITY

COLLEGE CRESCENT

KING STREET WEST

FORSYTH AVENUE

IN STREET WEST

1

2

2

5

4

3

6

Priority Directions

1. Redevelop T13 and the Communications Research Lab to provide a new building that frames University Avenue and provides a strong at-grade relationship on all sides.
2. A new entrance plaza in association with the redevelopment of T13. This, combined with the existing entry park on the east side, will frame both sides of the University Avenue entrance with public space.
3. A narrow addition on the western edge of the hospital to soften this edge, and provide a stronger pedestrian-oriented presence on University Avenue. As a narrow addition, this site could accommodate a unique study/lounge space with limited retail, and opportunities for spill-out and active uses.
4. University Avenue redesigned as a beautiful, tree-lined north-south campus allée that provides a direct visual and physical connection to The Mall.
5. A double row of street trees along the entire Main Street frontage.
6. With the recent indication by Hamilton Health Sciences that its 20 year strategic plan envisions its relocation from the McMaster University Medical Centre, the future use of this building/site should be considered in the future planning of the campus.

See Also

- 3.1 Campus Entrances
- 3.2 Vehicle-free Core Campus
- 3.3 Infill and Intensification
- 3.7 Campus Edges
- 3.8 Signage and Wayfinding
- 3.9 Public Art

4.3 Core Campus

The Core Campus will prioritize pedestrians, including students, faculty, and staff, through the conversion of College Crescent, University Avenue, and Scholars Road to vehicle-free streets (except service and delivery vehicles). This focus on campus users will be extended through upgrades and enhancements to the MUSC Quad and the re-imagining of the Arts Quad as a flexible, covered atrium space.

The Core Campus is the most densely populated area and generally refers to the buildings and open spaces located along College Crescent, University Avenue, and Scholars Road. At the heart of the Core Campus, The Mall provides a defining open space and a favourite destination for many campus users. Other key spaces include the MUSC Quad, a busy and significant space for gathering, socializing, working, and campus events, and the Arts Quad, a key space that provides a link between MUSC and the various Liberal Arts buildings. As the focal point of the campus, significant effort should be made to ensure buildings and open space are attractive and well-connected.



Left: Precedent showing what The Mall could look like with upgraded pathways and seating at the edge.



Right Top: Precedent showing what a flexible, internal atrium space at the Arts Quad might look like..



Right Bottom: Precedent showing how unique furniture, with warm materials, can enliven campus spaces, such as the MUSC Quad.



WESTAWAY ROAD

COOTES DRIVE

SCHOLARS ROAD

STERLING STREET

UNIVERSITY AVENUE

COLLEGE CRESCENT

BROOKHOUSE WAY

FORSYTH AVENUE

KING STREET WEST

EARN DRIVE

MOBILITY HUB
(DESIGN TBD)

Priority Directions

1. College Crescent, University Avenue, and Scholars Road reconfigured as Pedestrian Priority Streets (see rendering on Page 20), including high-quality paving, street trees, seating areas, and sharrows with limited vehicular traffic.
2. Formalized pathways through The Mall to strengthen the physical appearance of this space as the heart of the campus. New pathways should respond to existing 'desire' paths, and should include opportunities for seating.
3. Undertake an inventory of existing trees within The Mall, identifying their existing health and a long-term replacement strategy.
4. Infill the existing GO Transit Terminal with a new academic building that provides a strong frontage along Cootes Drive.
5. Expand the ground floor of MUSC consistent with the findings of the MUSC Feasibility Study (2014) to improve functionality and pedestrian flow, beyond those improvements made in 2016.
6. Improvements to the MUSC Quad to support its use as a flexible, outdoors gathering space.

Opportunities include:

- A new palette of high-quality materials that reinforce the MUSC Quad as a primary open space on campus.
- Work with the Campus Store, Mills Memorial Library (and others as necessary) to re-imagine the northwest corner, including the Campus Store entrance and the nearby landscaped circle. An integrated design could help draw attention to the Campus Store entrance, while providing unique opportunities for landscaping, public art, seating, etc. Much of the existing bicycle parking could be relocated to the opposite side of the MUSC Quad stairs (adjacent to the accessible ramp), and to the east side of the quad as part of a new transit loop and drop-off area (see Section 4.4).
- The refurbishment of the large concrete bench at the south end of the Quad. A wooden surface would create a warmer appearance, and encourage use throughout the year.

- Replacement of the existing benches with movable (but tethered) chairs and tables. This provides flexible seating options, but can be removed if additional space is required for an event.
7. A 2-storey closed atrium space within the existing Arts Quad to create a unique, flexible space that can be used year-round. This space should accommodate a mix of uses, including study and collaboration space, small scale retail, lounge space, etc.
 8. A new Biology Greenhouse located at the southwest corner of the Life Sciences Building.
 9. The site of the existing Biology Greenhouse should be converted into a new academic or research building.

See Also

- 3.1 Campus Entrances
- 3.2 Vehicle-Free Core Campus
- 3.3 Infill and Intensification
- 3.5 Cycling
- 3.6 Open Spaces and Landscaping
- 3.7 Campus Edges

4.4 Sterling Street Entrance

Sterling Street will be reinforced as a key campus entry, and an arrival point for many campus users. A re-configuration of the existing circulation network will rationalize access to parking, while providing safe and convenient pedestrian circulation.

Sterling Street is the main entrance for a number of users approaching campus from the east. This role will be even greater with the re-direction of traffic from University Avenue (see Section 3.1). Currently, the entrance is difficult to navigate due to irregular access roads (to nearby parking), which often results in challenging conditions for pedestrians. Where Sterling Street enters campus, it is significantly constrained to accommodate a central traffic median. This leaves little room for pedestrian boulevards or cycling and makes the entry experience less than welcoming.

As a key Secondary Entrance (see Section 3.1), opportunities to improve conditions at this entrance should be prioritized.

Priority Directions (not ranked)

1. Reduce bus traffic on Sterling Avenue. Most buses will enter the campus at the Transit Hub.
2. Remove the median on Sterling Street and realign travel lanes to accommodate cycling facilities and wider boulevards, and minimize pedestrian/vehicle conflicts.
3. Remove the eastern portion of Stearn Drive that runs parallel to Forsyth Avenue on McMaster property. This road is redundant and its removal will help to regularize circulation in this area of

campus. Existing Parking lots 'B' and 'C' can be re-planned to accommodate through traffic.

4. Improvements to the east end of the MUSC Quad to establish a welcoming arrival area, including seating, landscaping, signage, etc
5. A new building on the north side of Sterling Street (opposite the new L.R. Wilson Hall) to frame the street and create a well-defined entrance. Underground parking should be provided to offset the existing spaces lost to redevelopment.

See Also

- 3.1 Campus Entrances
- 3.2 Vehicle-Free Core Campus
- 3.3 Infill and Intensification
- 3.4 Parking Strategy
- 3.5 Cycling
- 3.7 Campus Edges
- 3.8 Signage and Wayfinding



STARN DRIVE

STERLING STREET

3

4

5

2

4.5 The Oval

The Oval will be protected in its existing form, with efforts made to increase awareness and use of this unique campus open space through signage and additional programming. Additional trees and landscaping on the east edge will provide a visual and auditory buffer to the adjacent neighbourhood.

The Oval is a large, informal lawn on the east side of Forsyth Avenue. It is well-used by local school programs during the summer, but is generally underutilized by the campus community as many people are either unaware of it, or associate it with the adjacent residential neighbourhood. Opportunities to increase use and awareness of The Oval should be explored, but should carefully consider impacts on the adjacent neighbourhood.

Priority Directions

1. Plant additional trees along the eastern edge of The Oval to provide a visual and auditory buffer between University recreational use and the adjacent residential neighbourhood.



STEARN DRIVE

1

1

1

4.6 North Campus

The North Campus will remain an athletic hub situated adjacent to the beautiful Royal Botanical Gardens property. Enhancements, as outlined in the Athletics and Recreation Master Plan, will strengthen this role and are in keeping with McMaster's commitments as a health-promoting University. The new Peter George Centre for Living and Learning, the Fitzhenry Studios and Atrium, and other new infill opportunities, combined with upgrades to Stearn Drive, will help to integrate this area with the remainder of the campus.

Traditionally McMaster University was characterized by a Core Campus south of Stearn Drive, while the North Campus was recognized as an area for athletics and residences. The new Peter George Centre for Living and Learning, as well as the Fitzhenry Studios and Atrium addition at Togo Salmon Hall, demonstrate a new focus on providing greater integration between the North Campus and the Core Campus. The master plan furthers this integration, while enhancing the role of the North Campus as an athletic and recreational hub as outlined in the Athletics and Recreation Master Plan (Perkins + Will, 2016).

The North Campus focus will also explore opportunities to promote synergies between the McMaster Campus, and the Royal Botanical Gardens in a manner that protects and enhances use of this sensitive natural area in an environmentally responsible way.



Left: Precedent showing consolidated campus signage.



Right: Precedent showing how an outdoor classroom might be integrated at the Royal Botanical Gardens gateway with minimal disruption to the natural environment..



Priority Directions

1. New infill buildings along Stearn Drive to frame and animate the street.
2. New infill and additions as recommended in the Athletics and Recreation Master Plan (Perkins + Will, 2016), including upgrades to existing facilities.
3. Enhancements to Stearn Drive to reflect its important role as a spine through the North Campus. Opportunities include special paving, street trees and landscaping, seating, and cycling facilities.
4. Provide dedicated cycling routes on Stearn Drive to provide continuous connectivity throughout campus, and to provide direct connections to natural trails through Cootes Paradise.
5. Provide a strong entryway to the Royal Botanical Garden site including outdoor classroom space. This was favoured in initial discussions with the Royal Botanical Gardens, and the classroom has been recently constructed. Trail head signage should be provided, consistent

with those that currently exist near Hedden Hall and Woodstock Hall, and should include information and education related to the use of the property. Access from unsigned locations should be prohibited through signage.

6. Provide a direct connection from the outdoor classroom and trail head to the pathway on the east side of the David Braley Athletic Centre. This will minimize pedestrian/vehicle conflicts, and further enhance pedestrian priority and opportunities for the promotion of physical and mental wellness on campus.
7. Eliminate 'corners'. There are points where the property line turns at an angle, such that it appears to be a convenient location to enter the adjacent property, but is not necessarily permitted. These can be addressed through continuous landscaping and continuous paths on the McMaster University property. This will discourage users from veering into the Royal Botanical Garden's property while enjoying the North Campus.

See Also

- 3.1 Campus Entrances
- 3.3 Infill and Intensification
- 3.4 Parking Strategy
- 3.5 Cycling

4.7 West Campus

The West Campus can be a pillar of sustainability at McMaster, and within Hamilton, demonstrating how large scale redevelopment can be accommodated with minimal disruption to adjacent natural features. The West Campus primarily serves the main campus, but can become more self-sustaining: the West Campus can provide the academic facilities, and supporting services, to retain users throughout the day.

The West Campus, located west of Cootes Drive, is generally underutilized. It is the location for the Applied Dynamics Laboratory, the Campus Services Building, and currently the McMaster Children's Centre, as well as three baseball diamonds that are well used by the community. Otherwise, the West Campus is predominantly used for surface parking that serves the main campus.

Bounded by Ancaster Creek, and highlighted by large tree stands and varied topography, the West Campus provides the opportunity for a large, self-sustaining campus that provides a full range of institutional facilities, open spaces, and amenities that reflect its beautiful natural setting.

The West Campus can be a pillar of sustainability, and a shining example of large-scale environmentally responsible campus development.



Precedents showing how new buildings in the West Campus will be high-quality and will frame outdoor spaces, including quads and plazas. They should be designed with a mix of uses to accommodate users throughout the day.



----- Ancaster Creek Floodplain Boundary
----- HCA Regulated Area (Approximate)

Priority Directions

1. New infill buildings at Cootes Drive and Westaway Road designed and massed to frame the entrance to the West Campus.
2. A beautiful, tree-lined north-south allée that anchors the West Campus and provides an attractive link between buildings.
3. New infill buildings that address the allée, with active uses at grade (e.g. social space, cafes, retail) and a full mix of uses above, potentially including classrooms, laboratories, study and collaboration space, residences, and offices. Buildings in this location should be designed to address the slope where the allée meets Westaway Road.
4. Protect and enhance the Ancaster Creek Floodplain. New buildings are located outside of the flood plain, and Low Impact Development (LID) strategies should be applied throughout the West Campus to mitigate future impacts.
5. Opportunities to accommodate a stand-alone parking garage within one of the identified infill sites, or to provide parking within the first two storeys of new buildings, should be explored to offset the parking lost to development (see Section 3.4), and to provide additional capacity.
6. Where above-grade parking is provided, it should not be visible from the public realm (wrapped instead by active uses, e.g., offices, campus amenity spaces, etc.). Vehicular access to these sites should be from the rear or side of the building and should also be screened from view.
7. A grand, centrally-located quad to act as the heart of the West Campus. This will provide a beautiful outdoor space for exercise and recreation, informal teaching, collaboration and socializing. The Quad can also provide opportunities for campus events (e.g. festivals and orientation activities).
8. Protect and enhance MacMarsh (a naturalized area at Lot M) as a natural research area, and a place for teaching and learning.
9. Preserve the existing parking in Lot M to serve both the West Campus and the main campus. Provide more frequent and convenient shuttle service, including accessible buses, and a comfortable, weather-protected waiting area that provides information about shuttle times, campus news, etc. The shuttle could continue to drop off at or near current location (i.e. GO area) once this area redevelops to maintain a more centrally-located drop-off point.
10. Building on the momentum of the recent Lot M Habitat Restoration project, permeable paving, bioswales, and other Low Impact Development strategies should be used throughout Lot M to minimize run-off and reduce the impacts of this large surface parking area.
11. Preserve the baseball diamonds, in an alternative configuration, to provide recreational space for the campus community and the broader City. These should be located to minimize the destruction of the adjacent natural areas, including alteration of the existing slope (where possible).
12. Re-align the existing helipad and identify an appropriate flight path based on the location of potential new buildings.

See Also

- 3.3 Infill and Intensification
- 3.4 Parking Strategy
- 3.5 Cycling
- 3.6 Open Spaces and Landscaping

4.8 Off Campus Sites

McMaster's off-campus sites play a significant role in the growth of the University. These sites range from the downtown Hamilton David Braley Health Sciences Centre to large natural areas, and provide the University with a variety of unique development opportunities and environmentally significant natural lands.

Outside of the main campus, the University has a number of off-campus holdings that will be a focus for new and unique development, including:

- King and Bay Street, Downtown Hamilton
- Ron Joyce Centre, Burlington
- MacForest

King and Bay Street, Downtown Hamilton

When the University acquired the land to build the David Braley Health Science Centre at Main Street and Bay Street, this included the parking lot at the north end of this site (at Bay Street and King Street). This lot continues to provide parking. Considerations for development of the site should include:

1. A mixed-use building, including retail uses at grade to create an active frontage on both King Street and Main Street.
2. Office or academic-related uses above, up to

12-storeys, to reflect the adjacent context. This height should be concentrated at the corner, stepping down to the lower buildings to the east.

3. A lower building podium to reinforce a human-scale at the streetscape, and to clearly distinguish between the upper and lower building elements.
4. Opportunities to provide a small plaza at the rear of the site to provide attractive outdoor space for those who work in the building, and nearby.
5. Parking should be accommodated underground with access provided at the rear of the site, via the existing laneway. This parking should serve both the David Braley Health Science Centre, as well as the new mixed-use building, and it is anticipated that two floors of underground parking will be required.
6. Servicing and loading should be accommodated at the rear of the site, via the existing laneway.



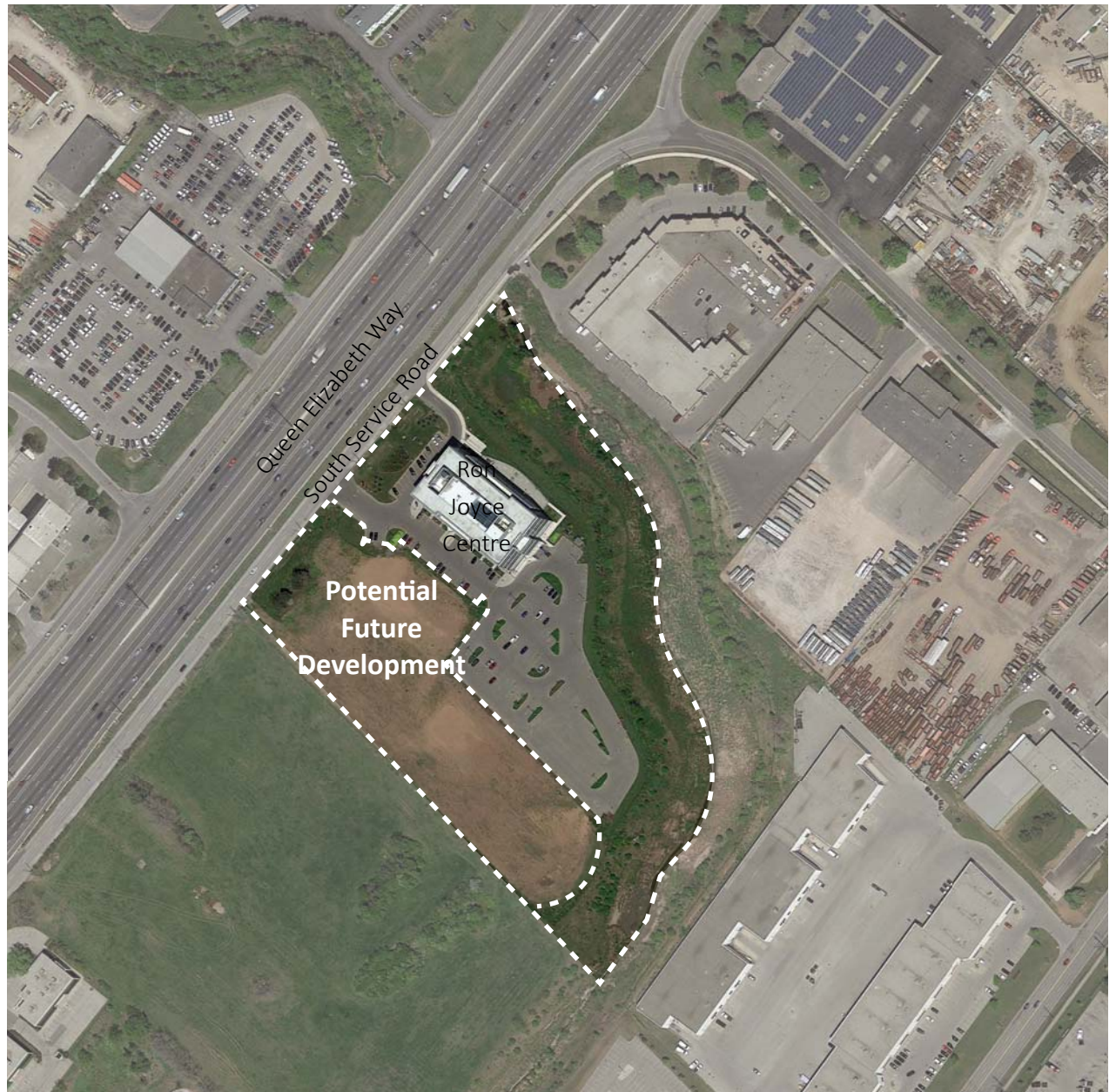
Off-Campus Site: King and Bay Street

Ron Joyce Centre, Burlington

The Ron Joyce Centre is located at 4350 South Service Road, in Burlington (just off the Queen Elizabeth Way). This is a 4-storey academic building that hosts the DeGroote School of Business, including a variety of classrooms, meeting spaces, and lecture facilities. The site is large, and with the potential to consolidate with the property to the west as indicated in the adjacent image, presents opportunities for a new development.

Considerations should include:

1. Transformation of the fourth floor from a shelled space into a floor for teaching and research focused interdisciplinary work (Digital Management and Health Management at the School of Business).
2. Explore the potential for a comprehensive development with the vacant land to the west.
3. A new academic building, similar in size to the DeGroote School of Business, that provides a mix of classroom, meeting, and lecture space as determined by the University's needs.
4. Maintain the existing scale established by the DeGroote School of Business, up to 5-storeys. This is permitted under the existing zoning (BC1) which has no maximum height requirement.



Off-Campus Site: Ron Joyce Centre, Burlington

5. Parking located at the side and rear yard.
6. A clear, safe walkway provided between the DeGroot School of Business and any new development to facilitate synergies between the buildings and their programs.
7. Opportunities for permeable paving, bioswales, and other LID elements should be implemented to minimize the impacts of surface parking.
8. Opportunities for above-grade structured parking should be explored.
9. Additional planting along South Service Road to buffer noise from the Queen Elizabeth Way.

MacForest

MacForest is a 115 acre forest area located at the intersection of Wilson Street East and Lower Lions Club Road. It is located within the Greenbelt Area in the Growth Plan for the Greater Golden Horseshoe (Schedule 2: Places to Grow Concept), and is designated an Escarpment Natural Area and Escarpment Protection Area in the Niagara Escarpment Plan (Map 2). In the City's Official Plan, this area is recognized as a Local Natural Area Environmentally Significant Area (Schedule B-6).

Currently the site is being used for outdoor recreation purposes, research, and for teaching in Science and Fine Arts. Subject to the appropriate approvals, this site has been identified as a desirable location for a small building to facilitate on-site teaching, research, and environmental stewardship.



Off-Campus Site: MacForest

Section Five

Implementation

5.1 Phasing Strategy/Capital Planning

The recommendations of this master plan update provide a long-term vision for the campus, and are subject to the University's needs and prioritization as outlined in Forward with Integrity, the McMaster Mission and Vision, and the Facility Services Five Year Capital Plan (A Future Outlook) and are consistent with the University's focus on human and societal health and well-being. In addition, the implementation of these recommendations are pending the approval of funding and approval through the normal university governance process. Some of the recommendations are already underway, while others have been identified for immediate funding. Other recommendations have no specific timing and it is anticipated that they may not be implemented for several decades (or possibly not at all), and will be subject to additional study, consultation and coordination with partners, and University needs/funding availability.

In addition, the University should budget for and undertake landscaping in open spaces in keeping with the objectives and priorities outlined in Section 3.6 (particularly Priority Directions 1 and 2).

The following sections prioritize the key recommendations of the master plan to align with the capital plan, and ensure funding is applied in a clear and organized manner. It does not represent all on-campus projects, but only those that relate to the master plan.

Ongoing Project and Initiatives

- Design and construction of the Gerald Hatch Centre for Engineering Experiential Learning (30,000 square feet)
- Completion of the Peter George Centre for Living and Learning (Academic/Residence/Admin/Children Centre)

Major Projects (Planned Projects and Initiatives)

The following projects are integral to the campus master plan, but are mostly unfunded. They address the most critical space needs at McMaster University, based on the Campus Capacity Study (2011), and include administrative offices, graduate student offices, assembly facilities, service space, classrooms, research space, recreation space, and quiet study space.

High Priority Projects (Externally Funded)

- Development of the Transit Hub buildings and open spaces in tandem with construction of the LRT and realignment of HSR circulation along Main Street, Sterling Drive and through campus

Projects to be Considered for Funding in the Near Future

- Design and construction of addition to DeGroote School of Business (80,000 square feet on the main campus).

Projects to be Considered when External Funding is Available

- Design and construction of new Academic Building (200,000 gross square feet) to replace T13, along with new plaza and landscaping along Main Street
- Mills, Thode and Innis Library renovations and expansions

- Design and Construction of new Centre for Emerging Device Technologies (80,000 square feet) at McMaster Innovation Park.

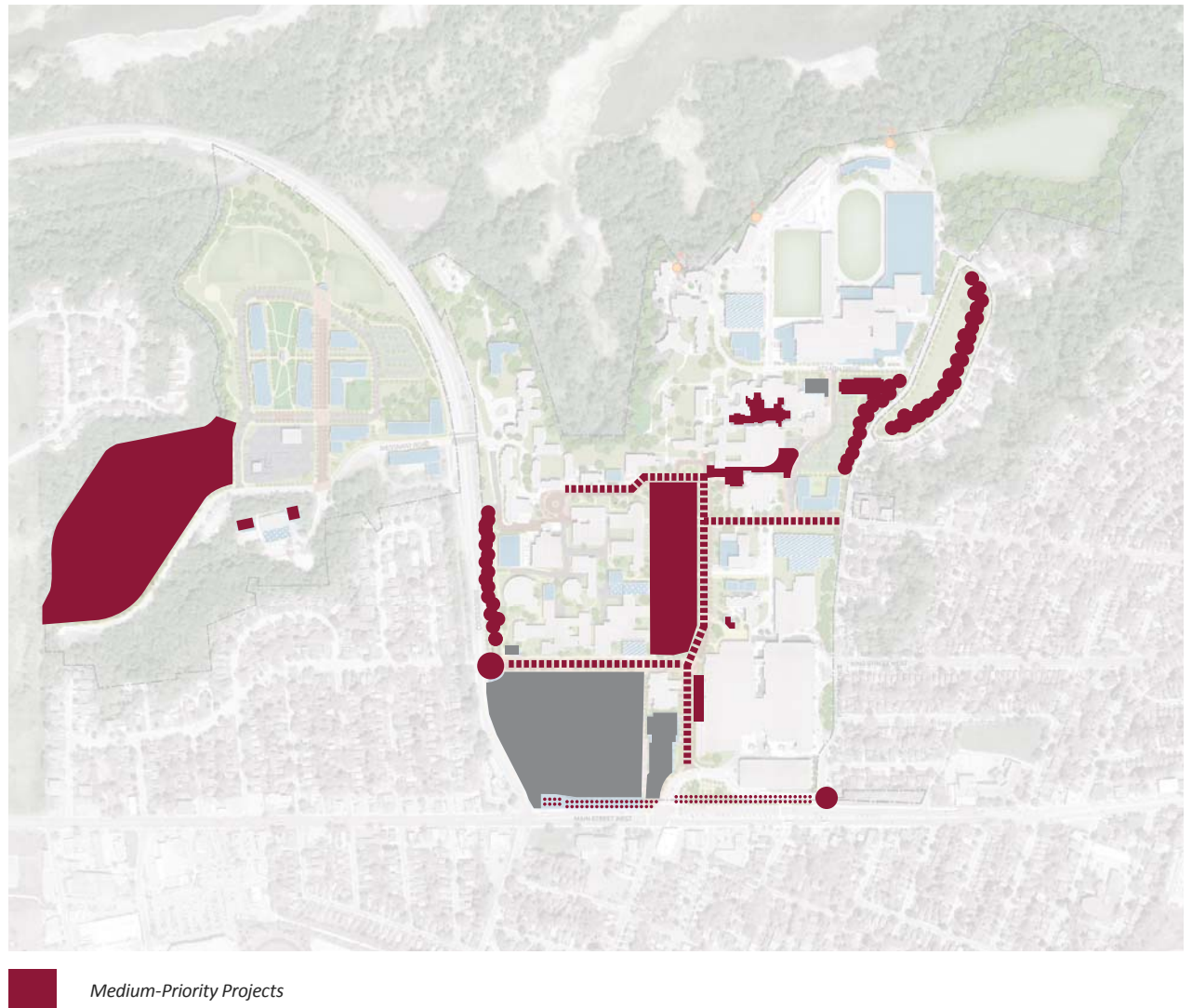
Medium-Priority Projects

Medium-priority directions focus on campus beautification, improvements to campus circulation and transit access, and development of some off-campus sites. They should be addressed as funding becomes available.



Recommended medium-priority directions include:

- Establish Secondary Entrance at Cootes Drive and College Crescent, as well as the adjacent welcoming facility/information kiosk in conjunction with LRT development
- Enclosure of the Arts Quad
- Convert the north section of College Crescent (parallel to Cootes Drive) to a pedestrian-only street
- Upgrades to paving, seating and landscaping in the Mall
- Improvements to MUSC Quad
- Introduce interim cycling facilities throughout campus
- Tree planting along the eastern edge of the Oval and along Forsyth Avenue
- Tree planting along Main Street (double row of trees)
- Establish new right-out access at Forsyth Avenue
- Upgrade pedestrian streets along University Avenue, Scholar's Road and College Crescent, including formal cycling facilities throughout campus
- Addition to the west edge of the hospital to activate University Avenue
- Redevelopment of the site to the south of the David Braley Athletic Centre



- Establishment of MacMarsh and upgrades to the adjacent parking lot (Lot M) to minimize stormwater run-off
- Re-location of the Biology Greenhouse to the south side of the Life Sciences Building

Low-Priority Projects

Low-priority directions focus on the development of infill buildings throughout campus, and will be undertaken as space needs warrant and as funding becomes available.

Recommended low-priority directions include:

- Development of remaining infill sites throughout the main campus, including those outlined in the Athletics and Recreation Master Plan (Perkins + Will, 2016)
- Improvements to the western campus edge, along Cootes Avenue, in association with the redevelopment of the existing GO station area
- Development of the West Campus, including
 - New buildings;
 - The West Campus Quad in concert with new buildings to provide outdoor space for students, faculty and staff;
 - New streets and parking areas; and,
 - Open spaces, including relocation of the baseball diamonds



5.2 Master Plan Communication Plan

The University's website should be the central destination for information related to the master plan update and implementation progress. The website should contain summarized information about the key recommendations and priority directions, for quick reference, as well as any information on implementation projects, as they arise.

The University should ensure that Campus Builders (i.e. developers and consultants) that will be directly involved in implementation of the priority directions, projects or coordination with partners are fully briefed on the entire contents of the master plan and update. Key groups may benefit from targeted information sessions.

Partners, including Hamilton Health Sciences and the Royal Botanical Gardens, who are engaged to work on campus should also be provided with the detailed master plan update document.

5.3 Partnership Opportunities

A number of partners will be involved in achieving the objectives and priority directions of the master plan update. Key issues to be coordinated with partners are outlined below.

Hamilton Health Sciences and Emergency Services

- Improved access to the hospital and Main Street parking garage with redirection of non-hospital traffic away from the Main Street entrance
- Relocated helicopter pad and modified flight paths in the West Campus
- Removal of College Crescent between the Transit Hub and Scholars Road.

City of Hamilton

- New Secondary Entrance at College Crescent and Cootes Drive and reduction in use of Main Street entrance by non-hospital traffic
- Providing right-out access to Forsyth Avenue from Main Street.
- Removal of Sterling Street median and reconfiguration of bus circulation

- Amendments to Zoning By-Law 6593 to allow heights beyond the existing 2-storey maximum to implement infill opportunities in the West Campus
- Streetscape upgrades along Main Street, Cootes Drive and Forsyth Avenue
- Connecting on-campus cycling routes to those at the edges of campus, including appropriate crossings
- Future redevelopment of the site to the north of the David Braley Health Science Centre and any facilities planned for MacForest

Metrolinx, Hamilton Street Railway, and City of Hamilton

- Reconfiguration of bus circulation with a new terminal at the Transit Hub and a dedicated transit turn-around at the Sterling Street entrance
- Relocation of GO Transit services to the Transit Hub
- Design and implementation of the LRT, including stop locations and design

Niagara Escarpment Commission, Royal Botanical Gardens and Hamilton Conservation Authority

Though the West Campus is beyond the jurisdiction of the NEC and the HCA, consultation prior to redevelopment should be undertaken given the proximity of this site to the Ancaster Creek floodplain and the Niagara Escarpment. Potential facility or trail development in MacForest should also be undertaken in consultation with the NEC and the HCA.

The Royal Botanical Gardens should be consulted on any new signage or connections to the trails on its property. Potential partnership opportunities may be explored to utilize the Royal Botanical Gardens property for low-impact academic programming.

SoBi Hamilton

- Additional stations located at the Transit Hub and the West Campus

Neighbourhood Partners / Resident Associations/
President's Advisory Committee on Community
Relations (PACCR)

- Consult prior to the development of new infill sites on the north side of Sterling Street opposite L.R. Wilson Hall and east side of Stearn Drive opposite the Oval
- Tree planting along the eastern edge of the Oval

City of Burlington

- Potential redevelopment of the site adjacent to the Ron Joyce Centre

5.4 Future Studies and Projects

The following additional studies will be required to move forward with the priority directions and recommendations contained within the master plan update.

Campus Capacity Study

In 2011, a Campus Capacity Study was completed to understand current physical capacity and uses, plan for potential future space needs and optimize space utilization. This study requires updating, with a particular focus on student lounge, social and study spaces.

This master plan update identifies locations for future infill and intensification sites, but the capacity, specific uses and allocation of space within these sites, as well as phasing of site development, should be guided by the updated Capacity Study.

Signage and Wayfinding Strategy

Improvements to signage and wayfinding have emerged as a major priority in the master plan update. An updated Signage and Wayfinding Strategy, developed in alignment with the University's branding and marketing strategy, will enhance the campus experience for students,

faculty and staff, as well as visitors, tour groups, conference attendees and delivery vehicles.

A simple, recognizable wayfinding and signage system will reduce confusion and enhance safety on roadways and at campus entrances. Reducing signage clutter will also contribute to beautifying the campus and reinforcing a visual brand for the University.

Considerations should include:

- Digital/interactive versions of physical wayfinding tools - physical maps at key locations on campus as well as a wayfinding application
- Wayfinding to identify accessible entrances and routes

Public Art Strategy

The University should develop an overall Public Art Strategy to guide the selection and siting of public art throughout campus, both indoor and outdoor. An important opportunity exists to partner with, and draw on, the expertise and resources of the McMaster Museum of Art.

This Strategy should ensure that art is selected and sited appropriately for its location, that it

will be adequately cared for, and that it reflects the University's image. It can also provide the opportunity to showcase student and local Hamilton artistic talent.

Parking Needs Assessment

A high level Parking Strategy is provided in Section 3.4. In light of the increasing size of the McMaster University community, and changing commuting patterns, parking needs should be regularly reassessed as new buildings are planned/constructed. Parking assessments should consider existing parking facilities (at the time of completion) current modal-split (including cycling, LRT, and bus), and planned development projects.

It should also consider:

- Short-term vs. long-term parking needs
- Pick-up/drop-off and loading areas
- Accessible parking provision
- Bicycle parking locations/needs (see Section 3.5, Priority Direction 6)
- Feasibility of underground parking vs at-grade (within the building) for infill sites
- Demand based parking rates

College Crescent (Road) Removal Study, and Stearn Drive (Window Road) Removal Study

Section 3.7 recommends the removal of the portion of College Crescent that runs parallel to Cootes Drive. Section 4.4 recommends removal of the portion of Stearn Drive that runs parallel to Forsyth Avenue North. Prior to removal of these roads, the University should undertake detailed studies to confirm frequency of use, and the impacts of removal in the context of the new Cootes Drive access.

Detailed Design for Campus Spaces

As major campus spaces are constructed, or reach the need for updating or redesign, detailed design should be undertaken on a site-by-site basis, taking into consideration any adjacent historic buildings and their materials, the relationship to the natural environment, and the need for accessibility. Key spaces/elements that should undergo a more detailed design process, guided by the objectives and priorities contained in the master plan update, include:

- MUSC Quad
- The Mall
- Arts Quad Atrium
- Campus Store Entrance
- Pedestrian Priority Streets
- Cycling Routes

Detailed Design/Planning for Off-Campus Sites

Each of the University's off-campus sites should be studied separately, considering space needs, usage synergies, access considerations and architectural and urban design objectives.

Further consultation with local municipalities may be required to understand site limitations and requirements, as well as the existing planning policy framework.

5.5 Plan Review Process

This master plan update reflects the University's current needs and priorities and captures changes on campus and within the City since the previous update in 2008. However, since it is a long-term plan, it is important that the recommendations continue to respond to evolving realities and changing priorities.

It is recommended that the master plan continue to be updated every 5 to 10 years to capture both minor refinements and more significant changes to University needs and priorities, and changes within the City of Hamilton.

Section Appendix

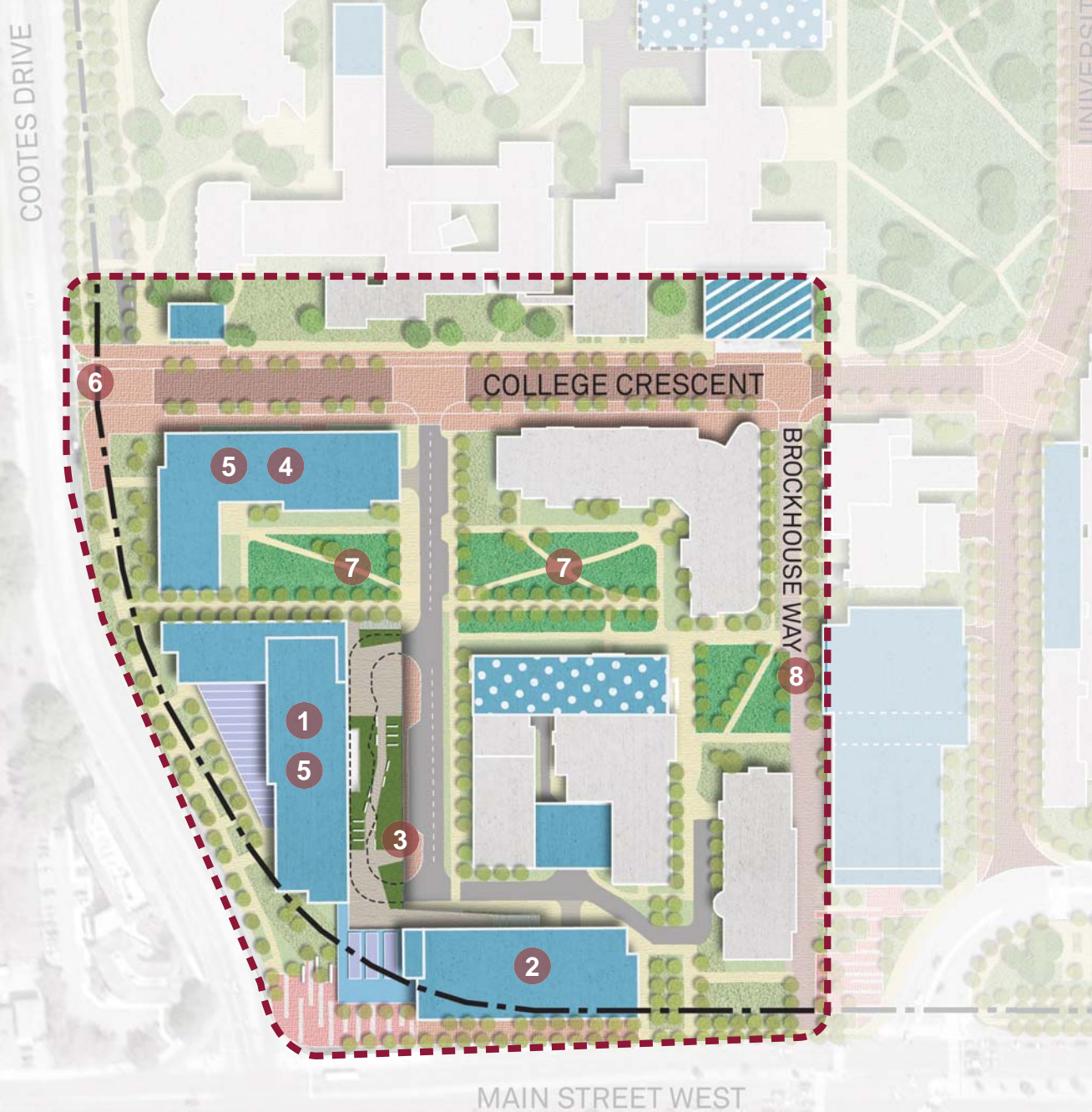
- i. Potential Transit Hub Plan
- ii. Nineteen Considerations for Future Planning
- iii. Summary of the Athletics and Recreation Master Plan/and the Library Master Plan
- iv. Consultation/Stakeholder Findings

i. Potential Transit Hub Plan

The following plan was developed over the course of the study and represents one way in which the Transit Hub can be developed to achieve the principles and objectives of this plan.

Key elements of the plan include:

1. An anchor Transit Hub building on Lot 1.
2. A 'welcome centre' on Main Street.
3. A unique, above-grade park that mitigates the impacts of the transit circulation.
4. An academic building on the south side of College Crescent.
5. Structured parking provided in each of these buildings to offset parking lost to redevelopment.
6. A new connection to Cootes Drive from College Crescent.
7. An enlarged and improved ITB/IAHS Quad.
8. Upgrades to Brockhouse Way to provide a continuous, pedestrian-focused connection between Main Street and College Crescent.



ii. Considerations for Future Planning

Since completion of the 2008 campus master plan update, Facility Services has been receiving feedback on the physical design and development of the campus. This includes input from students, faculty, staff, and alumni, and has resulted in a series of considerations for future planning. This feedback is reflected throughout the plan, and a detailed overview of the considerations (including their references in the document) can be found below.

Specific Spaces

Light Rail Transit (LRT) on Main Street

As part of Metrolinx's regional transportation plan, The Big Move, \$1 billion is being invested in LRT along Main Street, from McMaster University to the Queenston Traffic Circle. This LRT line will have a transformative impact on both Main Street, and McMaster University, promoting an interface that extends the University's frontage outwards, and inviting members of the community to explore the campus.

This LRT line, and the associated Transit Hub, significantly impact the master plan update.

Primary References:

- 1.2 Campus Context
- 2.1 Campus Vision Statement
- 2.3 Master Plan Overview
- 3.2 Vehicle-free Core Campus

- 3.3 Infill and Intensification (Priority Direction # 1; Planning and Zoning Implications)
- 3.4 Parking Strategy
- 3.5 Cycling
- 3.7 Campus Edges (Priority Direction # 3)
- 4.1 The Transit Hub
- 5.1 Phasing Strategy (Medium-Term)
- 5.3 Partnership Opportunities (HSR and Metrolinx)

MUSC Expansion

The MUSC Feasibility Study looked at opportunities to expand the ground floor of MUSC to improve functionality and pedestrian flow.

Primary Reference:

- 4.3 Core Campus (Priority Direction # 5)

Campus Store Entrance Re-Theming

Given the recent death of a tree at the northwest corner of the MUSC Quad and Campus Store entrance, an opportunity was identified to potentially re-theme this area. In the master plan update, this is considered as part of a larger update to the MUSC Quad.

Primary Reference:

- 4.3 Core Campus (Primary Direction # 6)

Arts Quad Enclosure

Given that it is framed by buildings on all four sides, the Arts Quad is an opportunity for creative infill, and the development of a flexible, multi-use atrium space. This vision has been adopted as part of the master plan update.

Primary Reference:

- 4.3 Core Campus (Priority Direction # 7)
- 5.1 Phasing Strategy (Short-Term)
- 5.4 Future Studies and Projects (Detailed Design for Campus Spaces)

Off-Campus Holdings

McMaster University has a significant amount of off-campus holdings. While the plan focuses on the Main Street campus, efforts have been made to address three off-campus sites with significant development potential, including: King and Bay Street (Downtown Hamilton), the Ron Joyce Centre (Burlington), and MacForest. Off-campus consultation was also undertaken as part of this study.

Primary References:

- 1.4 Consultation Overview (Off-Campus Sessions)
- 4.8 Off Campus Sites
- 5.3 Partnership Opportunities (City of Hamilton, City of Burlington)

The Oval

The master plan update considers opportunities to increase use and awareness of The Oval while limiting impacts on the adjacent neighbourhood.

Primary References:

- 4.5 The Oval
- 5.1 Phasing Strategy (Short-Term)

Library Master Space Plan Report

In July, 2015, a Master Space Plan was completed for the University's libraries. As an internal master plan, this document has little impact on the campus-wide master plan with the exception of a small addition proposed for the Innis Library.

Primary Reference:

- 3.3 Infill and Intensification (Infill Site AA)

MacMarsh

Due to its location adjacent to the Ancaster Creek flood plain, a large area in the West Campus has been identified as an opportunity for in-situ education and studies related to biodiversity. This area, known as MacMarsh, has been integrated into the master plan update.

Primary References:

- 2.3 Master Plan Overview
- 4.7 West Campus (Priority Direction # 6)
- 5.1 Phasing Strategy (Medium-Term)

MacForest

MacForest is a 115 acre forest area located near the intersection of Wilson Street East and Lower Lions Club Road. Subject to the appropriate approvals, this site has been identified as a desirable location for a small academic building.

Primary References:

- 4.8 Off Campus Sites
- 5.3 Partnership Opportunities (City of Hamilton, NEC, HCA)

New Greenhouse Location

The Faculty of Science has been exploring new locations for a Biology Greenhouse on the campus. This was considered in the master plan update and a location identified based on discussions with relevant stakeholders.

Primary References:

- 4.3 Core Campus (Priority Direction # 8)
- 5.1 Phasing Strategy (Medium-Term)

General Planning

Pedestrian Safety

Addressing pedestrian safety is an ongoing and evolving consideration at McMaster Campus, and is addressed throughout the Master plan update.

Primary References:

- 2.2 Design Principles (Principle 3; Principle 7)
- 3.1 Campus Entrances
- 3.2 Vehicle-free Core Campus
- 3.5 Cycling
- 4.4 Sterling Street Entrance
- 5.4 Future Studies and Projects (Signage and Wayfinding Strategy)

Building Intensification

Many of the infill sites identified in the master plan are challenging for development, given their location, policy context, and/or access. As McMaster requires new space, the option to develop these locations should be balanced against opportunities for the intensification of existing lower-density (i.e. 2-storey) buildings that could be expanded upon and/or may be nearing the end of their life cycle, and that better achieve the development objectives.

Primary References:

- 2.1 Campus Vision Statement
- 2.2 Design Principles (Principle 1)
- 2.3 Master Plan Overview

- 3.3 Infill and Intensification
- 3.4 Parking Strategy (Priority Direction # 1)
- 4.1 The Transit Hub (Priority Directions # 1, 2 and 4)
- 4.2 University Avenue/Main Street Frontage (Priority Directions # 1 and 3)
- 4.3 Core Campus (Priority Directions # 4 and 7)
- 4.4 Sterling Street Entrance (Priority Direction # 5)
- 4.6 North Campus (Priority Direction # 1)
- 4.7 West Campus (Priority Directions # 1, 2 and 3)
- 5.1 Phasing Strategy (All Phases)
- 5.3 Partnership Opportunities

Lounge/Student Study Space

A proposal was submitted for FWI funding, co-sponsored by the MSU, Alumni Advancement and Athletics and Recreation, that involved conducting an assessment of student-focused space on campus. There was support for the project.

This was considered further throughout this plan, and a number of opportunities have been identified to accommodate study/lounge space, while a more detailed study is recommended as part of the Campus Capacity Study Update.

Primary References:

- 2.2 Design Principles (Principle 11)
- 3.3 Infill and Intensification (Priority Direction # 8)
- 4.1 The Transit Hub (Priority Direction # 2)
- 4.2 University Avenue/Main Street Frontage (Priority Direction # 3)
- 5.4 Future Projects (Campus Capacity Study)

Community Partnerships

McMaster University is well-used by members of the Hamilton community, particularly those attending sporting events, summer camp groups, and local residents who walk/run through the site. The University is committed to maintaining its role as a community partner, including:

- Encouraging public events and partnerships
- Open houses for key campus events
- A welcoming 'front door' and Secondary Entrances
- Clear wayfinding and signage throughout campus
- A 'welcome centre' and information signage

Primary References:

- 2.1 Campus Vision Statement
- 2.2 Design Principles (Principle 6)
- 3.1 Campus Entrances (Priority Directions # 3 and 4)
- 3.8 Signage and Wayfinding (Priority Direction # 4, 5 and 6)
- 4.1 The Transit Hub (Priority Direction # 2)
- 4.2 University Avenue/Main Street Frontage (Priority Direction # 2)
- 5.1 Phasing Strategy (Short-Term and Medium-Term)
- 5.3 Partnership Opportunities (Neighbourhood Partners/Residents Associations)

Landscape Beautification

In addition to formal open spaces, gardens, and landmark landscape features, there is interest in general campus-wide beautification.

Primary Reference:

- 2.1 Campus Vision
- 3.6 Open Space and Landscaping (Priority Direction # 1)
- 3.7 Campus Edges (Priority Direction # 5)
- 5.1 Phasing Strategy (Short-Term)

Naming/Theming of Open Spaces

The University needs a documented process to govern the naming/theming of spaces and features, beyond that established in existing document, “Naming Policy & Procedures” of December 16, 2010. This should include installation of statues and gardens (memorial or otherwise). The master plan recommends a formal process be established, and provides an outline of the items that should be considered.

Primary References:

- 3.6 Open Spaces and Landscaping (Priority Direction # 2)
- 5.4 Future Studies (Detailed Design for Campus Spaces)

Planning/Zoning Implications

One of the most practical elements of the 2008 master plan was the planning/zoning section, which outlined the impact of the Niagara Escarpment Commission, Hamilton Conservation Authority, and the City of Hamilton on campus development. The master plan update provides similar guidance, including a reference table outlining the zoning implications of the proposed development.

Primary References:

- 3.3 Infill and Intensification (Rationale; Planning and Zoning Implications)
- 5.3 Partnership Opportunities (Niagara Escarpment Commission, Royal Botanical Gardens and Hamilton Conservation Authority)

9m Smoking Policy

Facility Services has received requests to limit smoking within 9m of all building entrances.

Primary Reference:

- 3.6 Open Space and Landscaping (Priority Direction # 10)

iii.

Summary of the Athletics and Recreation Master Plan/and the Library Master Plan

These summaries pull heavily from the original Perkins+ Will Master Plan documents for the sake of consistency:

Athletics and Recreation Master Plan

In 2016, Perkins + Will completed the Athletics and Recreation Master Plan for McMaster University. The Facility Assessment and Master Plan Study results from six months of research, stakeholder meetings and design charrettes with McMaster's project planning committees, representatives from the McMaster Student Association and student housing and finance stakeholders on campus. The resulting Master Plan focuses on the renovation and expansion of the Ivor Wynne Centre and David Braley Athletic Centre.

The Plan seeks to optimize space where it is most needed according to current trends in demand for fitness space at McMaster University and Nationally. The Ivor Wynne Centre (IWC), built in the 1960s, was designed to accommodate 6,000 students. The David Braley Athletic Centre (DBAC), which opened in 2007 to accommodate more students, was designed for a student population of 14,900. However, since

2007, the student population has more than doubled to over 30,000 with participation rates increasing significantly. The University must respond to these rising numbers with adequate facilities, as low capacity, age and condition of the IWC and DBAC are negatively impacting recruitment and membership efforts. The Master Plan Study identified major opportunities as the following:

- A generous public passage system can accommodate growth
- Growth areas are available at the perimeter of the precinct
- The project team noted that there is some flexibility in programming
- The Kinesiology Department offers synergy of academic and student recreation
- Visual and physical connections to the campus are strong

The Athletics and Recreation Master Plan positions itself as part of a broader vision with the objectives of becoming the healthiest campus in Canada, integrating academics and athletics and providing

high performance facilities. The plan is guided by the following principles:

- To address generational and social changes
- To expand access to wellness, fitness and athletics
- To provide practical strategic achievement of goals
- To provide forums for student interaction
- To incorporate and integrate new educational trends
- To improve the ability to host events and generate revenue

To achieve these objectives, the Master Plan recommends a number of changes. To accommodate demands for programming, the Pulse Fitness space must more than double in overall size. As the demand for strength and conditioning equipment has nearly doubled over the past 10 years, the Master Plan recommends increasing the total fitness space. Phase 1 of the redevelopment strategy accounts for this and also includes new gym space and new student study / lounge space. The key goals for this phase are to improve the overall student experience of the

Athletics Complex Prioritizing the items in Phase 1 creates the opportunity to address both fitness program needs and increase the exposure of athletic activities early on during implementation. Phase 1's goals will also help to enhance academic and student life, address generational and social changes, and better serve varsity athletes and visiting teams.

The Campus Master Plan Update intends to reinforce this Athletics and Recreation Master Plan study by Perkins + Will. With the planned improvements to Stearn Drive and enhanced pedestrian connections to North campus, this update will further enhance the effect of the Athletics hub changes.

Library Master Space Plan

In 2015, Perkins + Will completed a Master Space Plan for the McMaster University Library. The Master Space Plan Report is the result of six months of research, input from 350 participants, and comprehensive analysis of existing conditions and stakeholder engagement. The plan that emerged from that research focuses on updating and revitalizing the Mills Memorial Library (1951), The H.G. Thode Library of Science and Engineering (1978), and the Innis Library (1974) to address generational changes within the campus community and fit the University's contemporary needs. The plan emphasizes long-term flexibility, adaptability and integration, and it locates the revised program within the framework of the existing buildings.

This Master Plan will help McMaster University maintain its competitive edge as a leading institution in both Canada and the world. The plan sets out a comprehensive road map for the McMaster University Library's transformation into a 21st century research library, and proposes a 10 year scope for the completion of necessary renovations. The Master Space Plan supports the following strategic directions

for the University Library:

- Research Acceleration
- Celebrating Unique Collections
- Discoverability
- Learning
- Community Engagement
- Workforce
- Financial Health

All three libraries present significant challenges. The Master Space Plan study revealed inadequate study environments, uninviting and complex design, infrastructure and accessibility issues, hidden collections, and ineffective staff spaces as the key challenges that face the Mills Memorial Library. In its existing condition, the H.G. Thode Library suffers from acoustic control issues, homogeneous study spaces, lack of access to collections, under-programmed spaces, as well as infrastructure and accessibility issues. And in order to accommodate its students, the Master Space Plan Study found that Innis Library must address the need for a more specialized learning space that is tailored to the business school in addition to finding ways to adapt to the DeGroote School of Business' potential expansion.

This Master Plan vision is a reflection of the Library's role as a hub for the McMaster community, a resource for students, faculty, staff and scholars, and an exemplar for McMaster's achievements and aspirations. The Library's 10 year phasing plan attempts to achieve the following goals, which address diversity, integration, quality of space, programs, and 21st century learning:

- Improve connections between existing programs, neighbours and context
- Maintain the library's status as a cutting edge academic facility
- Showcase, celebrate, and foster unique programs
- Address changing work styles and spaces
- Make wayfinding and resource-finding intuitive and exciting
- Provide a diversity of exciting, engaging, and inspiring learning spaces
- Plan for the learning technologies of today and tomorrow

The Master Plan recognizes that each site will play a unique role in achieving those goals. Thus the plan will approach each library differently: Mills as the open book, Thode as the marketplace, and Innis as the specialist. Within Mills, the plan aims to clarify and showcase a diversity of uses. For Thode, it will create order and opportunity within a flexible floorplate. And for Innis, the plan will enhance a focused facility. The master plan defines future program space for collections, learning, general, specialized, partner, public, and staff space.

These changes are important to keep in mind throughout the Campus Master Plan update process. However, with the exception of a minor addition to Innis library, this plan will have little impact on the Campus Master Plan.

iv.

Consultation/Stakeholder Findings

The campus master plan update was founded on ongoing engagement and collaboration with the campus community, including students, faculty, and staff.

Key findings of this engagement included:

Visioning Stations (November 3 and December 3, 2015)

Buildings and Development

1. Protect the historic character of the campus
2. Frame the campus edges with new buildings
3. The West Campus is currently underutilized
4. The North Campus is currently disconnected from the rest of campus

Access and Circulation

5. Strengthen the University's commitment to a pedestrian-focused campus
6. Improve cycling facilities and safety
7. Increase connections to adjacent trails
8. Provide more efficient and convenient parking

Open Space

9. Provide a variety of open spaces
10. Provide flexible open spaces
11. Enhance 'The Mall'
12. Upgrade existing Quads
13. The Oval is currently underutilized
14. Provide better connections to adjacent natural features

Wayfinding

15. Improve wayfinding (directional and informational)
16. Reinforce campus entrances

Sustainability

17. Sustainability should be a key focus of the plan

Accessibility

18. Accessibility should be a key focus of the plan

Design Charrettes (January 14th, 2016)

1. Enhance campus experience for research partners, recruitment, tours, and events
2. Provide alternative large, flexible gathering space (i.e. permanent pavilion)
3. Prioritize approach to short-term parking/drop-offs
4. Locate parking under all new buildings
5. Enhance and integrate wayfinding (i.e. technology)
6. Re-establish information kiosks across campus
7. Provide a mix of uses in Transit Hub (e.g. classrooms, recreation, fitness, student lounge)
8. Create a stronger presence on Main Street
9. Maintain and enhance recreational focus in the North Campus
10. Establish West Campus as a more self-sufficient campus (i.e. Research Hub)
11. Establish cycling and 'no cycling' routes; strategic locations for bike parking and SOBI
12. Explore locations for an arena and/or outdoor skating rink
13. Provide a range of furniture in key public spaces (e.g. flexible seating, tables, outdoor fitness)

Stakeholder Interviews

Office of Sustainability

- Parking is a key issue
- There are lots of cyclists and facilities now, but could be improved (e.g. new parking areas and facilities, regular events, etc.)
- Would be helpful if University paid for faculty transit passes
- McMaster is a certified Bronze Smart Commute Workplace (Provincial program by Metrolinx)
- McMaster has 60% waste diversion
- McMaster has a District Energy System, but not on West Campus
- Gamification is recommended to get people involved in campus sustainability
- Signage should include a feedback loop about usage

McMaster Museum of Art

- Museum is a top University gallery and can borrow from AGO
- 52% of users are from campus
- Insufficient parking for visitors (visitor garage at York U as precedent); metered (i.e. 1 hour) parking nearby would be preferred (i.e. 10 spaces)
- Better signage on campus would be helpful

- The Museum does not deal with art on campus, but would be interested as they are the experts (i.e. Art Committee or Public Art Strategy)
- Would like to see additional campus art tied throughout and relating to museum
- Art helps create great spaces which leads to donors
- Small space near MUSC Quad reserved for 'Artists Gardens'

McMaster Biology Greenhouse

- There are significant synergies between the Biology Greenhouse and RBG
- The area identified to the south is preferred
- A competition is underway to design this facility
- Current size is ~92m²; desire is for ~ 200m² (100 for Greenhouse, 60 for Research, and 40 for Teaching)
- Rectangle is best shape for convenient access
- Associated atrium would front The Mall and could be café (students and hospital), transit stop, etc.
- Cost = \$3 million (1 for Greenhouse, 2 for Atrium) – need funding from Advancement
- The sun at the existing location is great and would be happy to maintain location with new facilities

- Full time staff is not required, particularly with teaching space on site
- Undergraduates are primary visitors; Users depend on timing (i.e. more off-campus users for significant events) and there is a strong local community
- Opportunities to improve Indigenous experience on campus (i.e. teaching Indigenous Peoples to grow blueberries)
- Parking is an issue for visitors
- Improved signage would be helpful
- MacForest is a Smithsonian Forest (every plant is tracked)
- Potential for a building here is in Province's hands
- Faculty are active at the MacMarsh; Restoration here (i.e. parking lot edge) reflects parkland not natural preservation

McMaster Library

- The library is okay with not enclosing the MUSC/Library Quad as the Arts Quad is currently underutilized and could use the boost (students don't want to lose outdoor spaces)
- Cycling/skateboarding through the Quad should be addressed (i.e. require dismount) and enforced

- Quad is rarely full
- It would be better used if it were more attractive and a focal point for events; More seating, and more comfortable (i.e. warmer) design, would be preferred
- Tables and chairs for eating would be nice (flexible and movable during events)
- Grates in Quad currently get clogged up with cigarette butts
- Major work is required on the entrance as identified in the Library Master Plan
- Connectivity to MUSC is difficult at the ground level due to heat/energy loss with too many access/egress requirements
- Entrances are not accessible (i.e. MUSC doors get locked during high winds because they do not close properly)
- Signage for the library is poor; No connection from parking lots and unclear from south side; Signage at loading dock should identify library (not MUSC)

McMaster Campus Store

- A new Campus Store would be useful at Transit Hub depending on services offered (and nearby competition, agreements and traffic)

- The Campus Store has the ability to sell food and snacks
- Have a small location in the Sports Centre, but it is not self-sustaining
- eCommerce is a key focus of business model and could use more pick-up locations
- Attracted external shoppers when parking was easy but this is no longer a reality
- Need the entrance to be more visible within the MUSC/Library Quad including outdoor displays and tie-ins with events

Security Services

- Parking and speed on Stearn Drive is an issue, particularly with people getting 'stuck' on campus following a game
- Security at Peter George Centre for Living and Learning is under discussion (i.e. base vs. premium)
- Parking is continuous consideration throughout campus; the re-naturalization of the Lot M edge removed 100 parking spots
- There is a desire to update the trenches in Lot M with bioswales
- There is a City pumping station at the end of Westaway Road that requires access
- The campus runs on a District Energy

System and the infill site near the President's house needs to be mindful of underground infrastructure

- There is a desire to have security services re-located to the North Campus where they will be more central
- There is a formula for determining the Visitor Parking vs. Transponder Parking (visitor spots make more money, which is factored into this formula)

Health Sciences

- Bus access to the Health Sciences would be nice, but in the past this has damaged the structure of the garage through collisions
- Would like to see the area to the north (between the building wings) beautified
- Health Sciences leases the land from McMaster for \$1
- The helicopter pad is being upgraded this summer
- Ambulances from helicopter pad are very rare (emergencies go to other hospitals in the city); When needed, they come to Cootes/Main not College Crescent
- Health Sciences will look into whether an

addition could be supported on the parking garage

- Consider opportunities to soften west edge of hospital with improvements to University Avenue

Royal Botanical Gardens (RBG)

- Water management is a key concern of the RBG; there is currently a broken drain pipe that is eroding the ravine
- It was questioned whether the University drains into this or if it is a direct connection from Main Street
- Impervious surfaces on campus is the preferred way to reduce surface run-off
- RBG and McMaster signed in 2016 a Memorandum of Understanding related to use between the two facilities
- Signage and access are the two most important issues when dealing with University users utilizing the RBG property
- RBG is able to create its own by-laws and there is currently a by-law that governs usage (i.e. running on the trails is technically illegal)
- The RBG struggles with the scale of the campus; there are so many users directly adjacent to their property that it's difficult to control usage
- There are provincially endangered species located directly on the RBG/McMaster boundary line
- Landscape design is the best way to control use, including the inclusion of very clearly defined paths (on McMaster land) and avoiding 'corners' where users are likely to veer off path
- The nodes between McMaster and RBG should be upgraded and improved with trail head signage, wayfinding, informational signage, etc. There is trail head signage at two of the entrances now, but there should be one at the primary entrance as well (north of Lot H)
- There are some instances where McMaster has built stuff (unintentionally) on RBG property and this should be settled in the future
- The trail that runs behind the residences is a pilot project (2-years) to determine the implications of designated trail access
- Access should generally be limited to the current three locations and where access is not appropriate (for natural heritage reasons) signage is encouraged (both by-law and educational)
- The biggest problem for RBG is students drinking and partying (who end up trampling plants)
- There are a number of programs that want to use the RBG land (i.e. Anthropology, Fine Arts, Biology); if done correctly, the primary entrance at Lot H could be a good opportunity to accommodate these uses
- Both McMaster and RBG use the RBG lands to run summer camp programs; often, McMaster uses it without registering or providing RBG with fees; a formal system should be established to ensure proper use of the area (similar to rbg.ca/uniportal site)
- There is a large public parking area owned by RBG near the Aviary; McMaster staff will park here and walk to work to save money over on-campus parking
- There are approximately a dozen sites within RBG that have archaeological significance
- Through VP Baker, PACNL has circulated a campus-wide survey to faculty and staff about how they use the RBG property; this will help to determine appropriate measures going forward
- Campus security help within the RBG property is welcome
- The area just north of Lot H is a tail-gate party area during football games which often results in bottles, furniture and garbage on RBG property

- The lighting from the stadium can be hazardous to wildlife species in the RBG properties
- There is an area in the north of the RBG property that is being designated an 'Urban Star Park'
- There are sound concerns on RBG property, including Faculty Hollow speakers during orientation week
- On occasion, helicopters fly very low over the RBG property which may result in bird collisions
- The University's district energy facility is sometimes dangerous for wildlife who get through the fence but can not get back out
- Spencer Creek and Ancaster Creek are wildlife corridors from the RBG property; fencing has been installed to direct animals under the bridge at Cootes Drive
- Mississauga's of the New Credit may have an interest in the land and we should follow up with them; there may be an opportunity for signage to celebrate migratory trails, etc.

City of Hamilton (Transportation)

- The LRT plans were made available for public viewing on May 2, 2016
- About 12 to 15 bus bays will be required within a Transit Hub to accommodate all modes of transit
- It was questioned how many people currently use Forsyth Avenue as a 'cut-through' and how many people use the Main Street intersection
- HSR would prefer a direct route out of the Transit Hub, possibly between Main Street and College Crescent (at Cootes Drive); this would depend on discussions with the City's Transportation Department; HSR could live with using College Crescent if needed
- Main Street will change in capacity with the LRT including two lanes in each direction with a cycle track on the north side
- The City will also be closing a lot of pedestrian intersections in order to facilitate quicker movement for vehicles once Main Street is re-configured for the LRT
- The channelized right-turn at Cootes Drive will be removed, consistent with the Master Plan to date
- The goal in the end is a plan for the campus,

Main Street, etc. that works for McMaster, HSR, GO Transit, etc.

- The City has determined conceptual long-term routes for transit, but these won't be finalized for many years
- A connection to College Crescent, as proposed in the plan, already exists but has been closed in the past
- Any transportation changes to the campus will need to consider the implications on Westdale and local schools
- There were questions about trip distribution and the increase with the changes to the campus and LRT on Main Street; MMM Group has been providing high-level analysis of this
- The bridge over Cootes Drive is nearing the end of its lifespan and could be enhanced to create a better conditions for those crossing Cootes Drive; it was suggested that this could become an at-grade entrance as traffic is slowed through changes to the campus
- McMaster has invested a large amount of money into the bridge over the years