This section takes each layer of the campus introduced in Section 3 and describes it more comprehensively, providing general direction for campus development, including a range of improvements to the circulation, open space and social infrastructure networks. The first six sub-sections focus on the Downtown/Sandy Hill and Lees areas, and the penultimate sub-section describes the plan for Alta Vista. The final section addresses matters directly related to environmental sustainability, including energy, water and other utilities.
4.1 Sites for Renewal or Redevelopment

With few vacant parcels of land remaining on the main campus, there are limited opportunities for major development without demolishing existing buildings. Recently acquired properties have given the University more opportunities to strategically phase its future growth.

Future campus growth will see the evolution of facilities over time through a combination of renewal and new construction. Buildings shown in dark blue require significant investment to improve the condition of the building but will continue to support current, or similar uses.

The buildings with red hatching have been identified for strategic demolition. These buildings, which include the UCU, Montpetit, MacDonald, the Brooks Residence, the Physical Resources office building and many of the houses on King Edward, are either deficient for their intended use, have significant physical issues or prevent more substantial development on their site. Although improvements to these buildings may be required to address immediate issues, significant reinvestment to upgrade them should be discouraged in favour of wholesale replacement. Fauteux is identified for renewal; however, the feasibility of replacing it should be considered before any major improvements are initiated.

The pink areas generally outline where new development on the campus can be accommodated, Lot K being the largest available site (post-LRT construction). Partial or full demolition of hatched buildings will be required to create other substantial sites for new development, although a new building can be accommodated adjacent to MacDonald. Some buildings, such as Fauteux and 100 Marie-Curie, will require further assessment to determine whether they should be maintained, renewed or demolished.

Existing housing owned by the University on Henderson, Osgoode, Somerset and Templeton, and the Sandy Hill Co-op on Henderson, have been identified for renewal, since many of the buildings will require reinvestment or may be candidates for redevelopment in keeping with the character of the neighbourhood. The site where the Sandy Hill Co-op units front King Edward is planned for mixed-use redevelopment.
4.2 Land Use

This chapter describes how the campus should be organized in terms of general land uses. The land use plan promotes a greater integration of uses in strategic locations to facilitate academic interaction, support community building, encourage sustainable modes of travel, rationalize infrastructure and generally improve the quality of life on campus. It acknowledges the desire to increase the University’s presence along King Edward and the opportunity to expand uOttawa’s uses, including academic facilities, dining facilities, community amenities, and housing, towards the Lees campus area.

The land use plan also provides opportunities to leverage economic benefits by seeking development partnerships in the provision of commercial uses, residential development, and athletic facilities and encouraging commercial uses within highly visible ground floor areas. The University should remain flexible and responsive to market conditions to best leverage its land assets.

**Academic**
Teaching and research facilities; administrative uses; ancillary student residences and services

**Academic Mixed-Use**
Teaching and research facilities; administrative uses; student residences; ancillary services and retail

**General Mixed-Use**
General apartment residential; general office; administrative uses; teaching and research facilities; student residences; ancillary services and retail

**Neighbourhood Residential**
General apartment residential; detached, semi-detached or row houses; student residences

**Athletics and Recreation**
Athletic and recreation facilities; student residences; ancillary teaching and research facilities; services and retail

**Academic Mixed-Use/Athletics and Recreation**
Teaching and research facilities; athletic and recreation facilities; administrative uses; student residences; ancillary services

**Major Open Space**

**Precinct Boundary**

Figure 4-2 Land Use Plan
Academic
In areas designated as Academic the University will focus on enhancing its academic and administrative spaces in the form of building additions, renovations and construction of new buildings on key sites. The ground level of academic buildings should be reserved for public uses such as common areas, study spaces, student services, recreation facilities and food services. Generally residential is not permitted as a stand-alone use in the academic land use designation. Exceptions can occur when residential is integrated into the tower portion of new academic buildings, with the podium being dedicated to academic, cultural and community hub uses. Athletic facilities are permitted anywhere in this designation.

Academic Mixed-Use
In areas designated as Academic Mixed-Use, the University should build mostly new academic buildings but seek to incorporate other uses within or above academic “base buildings”. Opportunities for residential towers, for example, should be considered. Office uses (e.g. space for NGOs) and ancillary athletic/recreation facilities would also be appropriate in this designation. On the east side of King Edward and in the River Precinct, stand-alone residences may be considered. Regardless of the primary use(s), the ground floors of buildings in this designation should contain cultural, community hub and/or retail uses that help to animate adjacent streets and open spaces. In the hatched area, where the football field is currently located, athletic and recreation facilities will continue to be appropriate.

General Mixed-Use
In the General Mixed-Use designation, lands should be developed with transit-supportive land uses such as office, academic, recreation, daycare centres, retail uses, entertainment uses and high to medium density residential uses. In this designation, academic buildings are not required as a primary use. The ground floor of buildings in this designation should be animated with cultural, community and/or retail uses, specifically around the LRT station. Athletic facilities are permitted anywhere in this designation.
Athletics and Recreation
This designation recognizes the Minto Sports Complex and the opportunity for additional facilities focused on athletics and recreation on the south side of Mann Avenue. In the hatched area, where the football field is currently located, athletic and recreation facilities will continue to be appropriate. Residential and administrative uses are also appropriate in this area and should be considered as part of a mixed-use development at the southeast corner of Lees and Mann. To expose all students, staff and faculty to a range of sports and recreational opportunities and to promote a sense of community, athletic and recreational facilities are also permitted and encouraged in all other land use designations. Section 4.3 describes the Community Hub strategy.

Neighbourhood Residential
Residential uses are appropriate in all areas of the campus, but along Henderson Avenue, they are the only uses that are appropriate. Academic or commercial uses should not be permitted. Future investments should include renovations, infill housing or redevelopment that is in keeping with the character of the Sandy Hill neighbourhood. Section 4.4 describes the University’s housing strategy.

Open Space
While open spaces are appropriate in all areas of the campus, the land use plan reflects existing and planned major open space elements. These open spaces are centrally located and will be used by the entire campus community and as such require special planning as they will be intensively used and will be integrated with surrounding developments. Section 4.5 describes the open space and streetscape direction in more detail.
4.3 Community Hubs

Community hubs are the places on campus where students, as well as faculty and staff, come together to eat, meet, study, access services and shop for basic supplies. Other amenities, like performance spaces, fitness facilities and day care centres, might also be found there. The plan calls for the existing University Centre to be replaced with a new community hub in a central location on campus, while the development of smaller hubs with dining options and meeting space should be a priority in the River Precinct and at Alta Vista. These improvements will encourage social and academic integration and play an important role in nurturing a strong sense of community on campus.

Primary community hubs should include a full range of campus amenities including food courts, recreational facilities, fitness centres, support services, social spaces and study spaces. These spaces will accommodate a significant amount of users and should be planned accordingly. The University Centre area will continue to act as the main primary community hub on campus due to its location, size and the offerings but other locations - Lees River, Mann Precinct and Roger Guindon - act as primary hubs in those areas but may offer different amenities. Secondary hubs are those facilities that act as campus destinations and include a variety of community uses including food services and/or a dining hall, gyms and/or a fitness centre and potentially other services. Students, faculty and staff should find a range of amenities in each community hub.

Community hubs should be located at intersections within the pedestrian network and relate to open spaces and walkways. The River Precinct, as the new home of the Faculty of Health Sciences, should include a primary community hub that can grow and evolve as the population of the precinct increases over time. Generally, social and cultural spaces, as well as other amenities, should be located on the ground floors of buildings, facing important pedestrian routes, gathering places and primary streets. The University should ensure that new academic buildings contain ground-floor social and meeting space and, where appropriate, dining facilities and cultural space. The new UCU should contain many if not all of the existing uses, an expanded food court, other grab-and-go food outlets and recreational facilities. Some of these facilities and additional amenities should also be considered for existing and future buildings surrounding the UCU. The new Learning Centre, for example, will contain social, dining, learning and study spaces, in addition to teaching facilities.

The following pages describe the recommended approach to planning athletic facilities and food services in the short and long terms.
4.3.1 Athletic Facilities Strategy

Sports, recreation and physical activity are a fundamental part of the uOttawa experience for students, faculty, staff and community members. However, with only 50% of the recreational space required to meet the Council of Ontario Universities standard, uOttawa’s existing athletic facilities are not sufficient to address current athletics needs. uOttawa has identified the following specific priorities to meet current and future demand for varsity sports and general recreation:

- Additional training/exercise rooms
- A triple gym for recreational purposes
- A triple gym for events, including a minimum total stand capacity of 2,500 and a press box;
- A new field house with a 200-metre track, an interior turf, and stand capacity of roughly 500;
- Increase spectator capacity by 1,600 (total 5,000) for the sports field at the River Precinct; and
- A new 50-metre swimming pool with a stand capacity of roughly 1,000.

The University will continue to explore opportunities to share the use of its athletic facilities with the wider community. This will strengthen the relationship between uOttawa and the surrounding communities and help to finance the University’s athletics programming. The University should also continue to explore opportunities for land acquisition or strategic partnerships to develop large-scale recreational facilities such as new sports fields.

The principal athletics and recreational facilities should be located in primary community hubs, with complementary facilities (e.g. training rooms) in secondary community hubs.

River Precinct

The existing sports field in the River Precinct should be maintained over the long term, and additional support infrastructure for the field should be incorporated as the precinct evolves. The stand capacity of the field should increase to 5,000 from the current 3,400, representing an increase of 1,600 seats. Additional athletic facilities in the River Precinct should include, at minimum, a new triple gym and a new training room. Facilities such as stacked triple gyms, rowing facilities, or pools may also be considered in the River Precinct based on space needs and their impact on achieving the objectives and requirements set out by the City’s Transit-Oriented Development Plan for the Lees Station area.

Mann Precinct

This area presents the greatest opportunity for the creation of an athletics-focused community hub due to its centralized location and land availability. The University should augment the Minto Sports Complex by adding gyms and additional elite sports facilities on the south side of Mann Avenue, integrating them with housing and community hub uses. This area can accommodate an Olympic-sized swimming pool (replacing the pool at Montpetit), a triple gym with stand capacity, and a field house. This area has the potential to transform into a primary community hub bustling with athletes, students from nearby science and engineering buildings, and residents. The development of such facilities will require negotiations and partnerships with the City and NCC.

University Centre

The Master Plan proposes the demolition of the UCU and Montpetit to develop two new buildings with a substantial increase in gross floor area. These new buildings have the potential to accommodate training facilities and/or an additional gym. Prior to demolition and redevelopment, the existing gyms and swimming pool should be relocated.

Alta Vista Precinct

Significant plans for renovations or additions to Roger Guindon or development of the Peter Morand lands should consider the opportunity for recreational lands that meet the needs of the medical science students, faculty and staff in the area.
4.3.2 Food Services Strategy

Porter Khouv Consulting, Inc. (PKC) was retained by the University to create a strategic campus-wide dining services master plan for the University. This study ran concurrently with the Campus Master Plan. The Study provided the University planning team with specific recommendations regarding the optimum dining program for campus including short and long-term strategies for modifying the University’s food service program as the campus landscape continues to evolve. PKC made the following recommendations, which have been incorporated into the CMP:

**Short Term: (3-5 years)**

1. Over Summer 2015 renovate the entire first floor of the existing UCU into a 24-hour Anytime Dining facility to provide a meaningful socially-rich gathering place in the heart of campus. This venue will offer continuous service and a wide variety of display cooking and made-to-order foods until a new and contemporary Anytime Dining/Learning Commons can be built in the core precinct.

2. A 350-seat Anytime Dining venue in the Learning Centre addition to Lamoureux. This venue will complement (not compete with) the proposed changes to UCU and will provide food service support in the University’s Learning Centre and better serve the southern section of the core precinct. Buildings such as Bioscience, D’iorio, Marion, and Macdonald are all underserviced and will be better served from the Learning Center’s new food court.

**Long-term (5-10 years)**

Create a state-of-the-art marché-style Anytime Dining/Learning Commons in the heart of the core precinct and near the existing residence halls. A new venue will play an important role in adding value to the overall campus experience and that it will become a benefit to living on campus (versus a deterrent). Ideally, this venue would be physically connected to the new UCU proposed in the Master Plan.

The Community Hubs Plan above identifies existing food services locations and areas on campus where Primary and Secondary Community Hubs should be located. The designation of a primary or secondary community hub location was chosen for several reasons including: existing food, athletic and/or social facilities or areas where new facilities should be located. Primary Hubs are locations where large food courts (e.g. existing UCU) should be located to accommodate existing and proposed demand for Food Services. Secondary Hubs are considered locations where a large food court may not be necessary but a Destination Food Place like a Starbucks, Tim Horton’s or Première Moisson either currently exists or should be planned for during new development proposals as shell spaces.
Primary Community Hubs

Four areas on campus are identified as Primary Community Hubs as they relate to food – the area surrounding the UCU, the Mann Precinct, Lees River Precinct and Roger Guindon in Alta Vista.

- **University Centre:** a food court in the Core Precinct, ideally in the UCU, must accommodate 1,000 or more seats for dining and a large kitchen facility. Future planning for a new UCU (either by renovating or full demolition and reconstruction) must go through a detailed planning and design analyses to ensure that from a phasing perspective the existing 1,000 seats per meal period in the UCU are accommodated elsewhere in Core Precinct during construction. Plans should include a cost-benefit analysis of utilizing the existing kitchen facilities versus building new kitchen facilities.

- **Mann Precinct:** there is currently insufficient demand to warrant a new food court in the Mann Precinct. However, if a student residence is built in this precinct, an analysis should be undertaken to determine whether sufficient demand will exist.

- **Lees River Precinct:** as the Lees River Precinct is revitalized with a new Faculty of Health Science building, there will be a need for improved food services (and other services) to meet the needs of students, faculty and staff. If student housing is planned than a food court must be located within this Precinct. However, without a student residence in this precinct, there will be insufficient demand to warrant a large food court and a Destination Food Place should be built.

- **Roger Guindon:** as renovations continue in Roger Guindon the need for improved food services will grow. If the Campus Master Plan vision for an enlarged medical campus at Roger Guindon is realized than a food court should be considered in this location.

Secondary Community Hubs

In Secondary Hubs food service locations will generally be in the form of Destination Food Places instead of large food courts. These spaces should be planned as shell spaces to ensure that the space is adaptable as food preferences and food providers change over time. Depending on the type of development proposed at Lees River Precinct and Alta Vista, these areas may have sufficient demand to warrant either a large food court or a destination food place.
4.4 Research Facilities Strategy

Research excellence is one of uOttawa’s greatest strengths, with the university consistently ranking among the top 10 in Canada for research intensity and the global nature of its research. The Campus Master Plan supports uOttawa’s mandate to continue to provide outstanding teaching and research opportunities, and to raise its national and international rankings to be among the top 5 research institutions in Canada and among the top 100 worldwide.

Today, uOttawa is best known for its strengths in four core areas of research:

- Canada and the World (human rights and social justice, linguistics and bilingualism, governance and public policy, and bijuralism);
- Health (brain and mind health, vascular health, regenerative medicine and innovative therapeutics, human development, and genetics and systems biology of disease);
- e-Society (enabling technologies, digital media and communications, technology and society, and photonics); and
- Molecular and Environmental Sciences (catalysis and nanotechnology, environmental genomics, sustainable environment, and renewable energy).

The University should focus investment in these Strategic Areas of Development with world-class research facilities that contribute to the experience of the university. At the same time, the University should continue to provide a range of research facilities that will allow new and emerging research areas to flourish.

The Campus Master Plan does not assign specific locations for new research facilities across the campus; however, the following principles will assist the University in locating these facilities:

Guiding Principles for the Provision of Research Facilities

1. Research facilities should primarily be located within areas identified as Academic or Academic Mixed-Use within the Campus Master Plan’s land use plan.

2. The university should seek to locate research facilities in proximity to their associated faculties and in a way that promotes synergistic and innovative relationships between researchers.

3. New research spaces should be complemented by a range of nearby amenities (e.g. conference facilities, hoteling space for visiting professors) and housing to ensure the diverse needs of faculty, graduate students, visiting professors, and international students are met, and to attract new faculty and staff.

4. The university should leverage its strategic land base and advanced research infrastructure to continue building exceptional relationships with affiliated research hospitals and institutes, federal and provincial institutions, the private and community sectors, and the wealth of research laboratories in the national capital region and beyond (see Figure 3-8: Potential Strategic Partnership Sites).

5. Environmental considerations such as noise, vibration and air quality should be carefully considered in the location of new research facilities, and the placement of other facilities near research facilities. This does not necessarily require a distance-based separation of uses, but a holistic, risk-managed approach to meeting the university community’s diverse needs.

6. The university should monitor the impacts related to future construction activities and the operation of the future LRT system on research facilities and infrastructure, and take steps to avoid or mitigate any negative impacts.
4.5 Housing Strategy

uOttawa is committed to ensuring students have access to affordable, good-quality housing on or close to campus.

Improving the supply of residences geared toward first-year students, and housing options for upper-year, graduate, and professional students, will contribute to uOttawa’s competitiveness and enhance the overall student experience. Recently, three housing projects have been completed by the University: a new 8-storey leased building at 240 Friel Street housing 386 first-year students in uOttawa’s first “Living Learning Community”, the conversion of a former hotel at 290 Rideau Street into the new Rideau Residence housing 372 first-year students, and construction of a new 172-bed residence on Henderson Avenue near Mann Avenue. Other opportunities for new student residences on or close to the main campus will continue to be pursued in the near term, and modernizing older residences will also be a priority. Next, a range of new housing initiatives will focus on the needs of upper-year, graduate, and professional students, most but not all of whom will choose to live off campus. The need for convenient housing for visiting scholars and post-docs will also be considered.

uOttawa’s first housing priority is to accommodate all first-year undergraduate students, and with a series of recent housing initiatives, the university is now comfortable that this goal has been met. However, older residences such as Marchand, Stanton, Thompson and Leblanc require significant reinvestment or replacement. As the University renews or replaces these residences, new ones will be required to ensure the supply of first-year beds is maintained at the current level and the overall supply of housing is gradually increased. In total, the University’s goal is to provide 6,000 beds to ensure that the needs of both first-year and upper-year undergraduate students are accommodated.

All renovation, acquisition or new development of residential facilities should aim to address student housing preferences. For example, first-year undergraduates typically prefer semi-suites and suites, upper-division undergraduates prefer private rooms, and graduate students and families prefer apartment units. First-year undergraduate student residences should provide a range of amenities and programming to promote a welcoming living environment, and the concept of “Living Learning Communities” should continue to be developed. Generally, a minimum of 400 beds is required to support the necessary range of amenities and services. In contrast, second-year students require fewer amenities and services, and can be housed in smaller scale apartment-style housing types.

As uOttawa addresses the growing need for student housing, it will need to recognize the increasing diversity of the student population. The University is seeing a decline in the proportion of traditional-aged incoming students and a rise in mature students, international students, and graduate students, whose on-campus and off-campus housing needs are more varied. It is expected that a broader range of housing options and associated amenities will be needed. Diverse forms of student housing should be available near the University, ideally within a 10-minute walk of campus, but opportunities for student-oriented housing may also arise in other strategic parts of the city, notably near transit stations along the Confederation LRT Line. The University may explore and develop new forms of student housing on its land, potentially in partnership with private developers, while the private sector pursues off-campus projects.
Stanton Residence and Marchand Residence

Brooks Residence
Areas for On-Campus Housing

There are a number of locations on university land with the opportunity to develop new student residences, as described below.

- The designated “Academic” areas in the Core Precinct are intended to be reserved for existing and future academic and administrative buildings. While the existing Stanton and Marchand towers within the Residential Complex at 90 University will be maintained or may be redeveloped with a new residential building, new residential buildings in the Core Precinct should be integrated with academic or administrative uses. On large redevelopment sites, such as Lot K, there may be opportunities to accommodate residential towers above an academic or administrative “base building”. In most such cases, the residential component would have a separate entrance, lobby and elevators from those serving the other uses.

- The “Academic Mixed-Use” areas along King Edward are intended to accommodate a broad range of uses that will support a lively street. Residential is generally permitted as a primary use in these areas or in conjunction with academic uses. Regardless of the primary uses in individual buildings, the ground floors of each new building should contain active uses, such as retail, restaurants, services and cultural facilities, fronting King Edward. More students living and learning along the corridor will enhance the market for such uses.

- Future residences on the west side of King Edward, where redevelopment sites are deeper and there is no height limit, should take a tower form and be integrated with an academic base building, as described above. On the east side of King Edward, shallower sites and height restrictions will make mixed academic-residential developments more challenging. Thus, stand-alone residential apartment buildings that generally meet zoning requirements (i.e., 4-6 storeys) are appropriate provided they incorporate active uses on the ground floor.

- Residential buildings of up to four storeys are also appropriate in the designated “Neighbourhood Residential” areas along Henderson. The form and architecture of any new development should respect the established character of the street, and the integration of Category 2 heritage buildings should be considered.

- First year student residence buildings, due to the minimum number of beds required to be able to provide the desired level of amenities, are generally not appropriate along the east side of King Edward and along Henderson.

- Facilities for “Athletics and Recreation” are intended to be the primary uses on the lands immediately north and south of Mann. However, as in the heart of the campus, there may be opportunities, notably at the southeast corner of Mann and Lees, to integrate a residential tower above or adjacent to a recreation complex.

- The “Mixed-Use” areas surrounding the Lees Station are intended to accommodate a mix of residential, commercial and potentially institutional uses that support transit. Given the City’s objective to achieve high densities on these lands, they may be most appropriate for private sector rental or ownership housing targeted to upper-year and graduate students as well as university faculty and staff. The podiums of residential towers could accommodate academic or commercial office space, and active uses would be required on the ground floors adjacent to the station.
In the River Precinct, also designated "Academic Mixed-Use", any plans for student housing should be coordinated with plans for academic uses and student services to ensure they complement one another. Generally, housing should be located in towers above mixed-use base buildings and should be concentrated in the west half of the precinct for easy access to Lees Station and to nurture a sense of community.

At the Alta Vista campus, the lands at the periphery of the Peter Morand Precinct could be considered for apartment buildings or townhouse developments aimed at students, staff and visiting scholars working at Roger Guindon, although such uses may require a zoning amendment.
Housing Development Opportunities

The map and table at right identify specific sites where the University may consider new student residences or other forms of housing for students and visiting faculty, either as a stand-alone project or as a component of a new academic building or other mixed-use project, and the estimated housing capacity of these sites.

New first-year undergraduate student residences may be accommodated west of King Edward and in the Mann, River and Station Precincts, where larger residences with a range of amenities, services, and programming may be provided. Properties east of King Edward may accommodate student apartments as part of new mixed-use buildings, with units in such projects generally geared toward upper-division students, international students, and potentially families.

In total, the sites identified in yellow could accommodate approximately 6,700 beds. If the student-oriented housing was also developed on the sites identified in orange, another 6,700 beds could be realized. Note, the illustrated building footprints are conceptual and do not represent the only potential housing sites. For example, residential towers above academic buildings can also be considered in the Core Precinct.

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<td>Station</td>
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Estimated Capacity of Potential Housing Sites

- Average 3.5 Beds/Unit (Based on 110 Sq.m per Unit)
- Average 2 Beds/Unit (Based on 60 Sq.m per Unit)
Figure 4-5
Potential Housing Sites
Off-Campus Housing

The University’s growth, and that of other institutions in Ottawa, has altered the local off-campus student housing market. One result has been a significant increase in the conversion of houses to multiple-unit buildings, particularly in the Sandy Hill community, where it has had a destabilizing effect. Recent zoning refinements by the City have begun to address this concern. At the same time, developers who specialize in private student residences have proposed projects close to the uOttawa campus. While not without controversy, these projects have the potential to address neighbourhood issues by housing students in well-managed living environments. In certain circumstances, it may be appropriate for the University to collaborate with appropriate parties to ensure that such projects respect the scale and character of the surrounding community and support overall campus life objectives.

In addition, uOttawa should consider partnering with private developers on housing projects on campus, such as on King Edward or in the Lees area as university-run or privately run facilities. This would not only ease the burden of building housing to meet demand but may also help ensure privately operated student housing are well maintained and affordable over the long term. The partnerships can take many forms including:

- Design-Build-Finance;
- Design-Build-Finance-Maintain;
- Design-Build-Finance-Operate-Maintain; and
- Lease-Leaseback Hybrid, among others

Housing initiatives by both the University and the private sector, particularly those aimed at upper-year students, should acknowledge the likely impact that the Confederation LRT Line will have on the student housing market. The LRT will allow students to reach campus in 20 minutes or less from any station along the line. Over time, more and more students will look for housing in the areas surrounding many of the stations, and developers and property owners can be expected to respond, encouraged by zoning that permits high-density development around the stations. The greater dispersal of students living across the city should reduce the pressure on the neighbourhoods surrounding the campus to accommodate more student housing.

Shorter-term Strategies (0-10 years)

To help meet its goal to provide a total of 6,000 beds for first-year and upper-year students and broaden housing options for all students, the University should consider the following actions:

- Develop a new residence on-campus, or partner with a private developer or hotel, to ensure the demand for first-year housing continues to be met as older residences are upgraded or replaced.
- Invest in renewing or replacing the Stanton and Marchand residential towers on campus to meet current standards.
- Replace the Thompson Residence with a mixed academic/residential building on the same site or relocate the housing component to another site on campus.
- Pursue development of housing for upper-division and/or graduate students on the east side of King Edward, integrating commercial uses and social spaces on the ground floor.
- Ensure proposed academic buildings on the west side of King Edward consider opportunities to incorporate a residential component.
• Prepare and issue a request for expressions of interest for a public/private mixed-use development adjacent to the Lees Station (to be implemented post-LRT construction).

• Encourage and promote private residential development aimed at students in the areas surrounding all of the LRT stations along the Confederation Line.

• Support City initiatives to better regulate the conversion of houses into multiple apartments and enforce property standards.

Longer-term Strategies (10+ years)
As part of a broader strategy aimed at addressing the needs of all students seeking housing on or close to campus, the University should:

• Study the feasibility and potential programming of a mixed-use development at the southeast corner of Mann and Lees that combines a residence with an athletics/recreational facility.

• Plan to replace the Brooks Residence with new, higher-density housing, some of which may be accommodated on the same site within a mixed-use development.

• Consider developing one or more family-friendly graduate student residences. Potential locations include Henderson and the Robinson, River and Peter Morand Precincts.
4.6 Open Space and Streetscapes

Green space plays a fundamental role in the identity and experience of a campus. While enjoying proximity to the Rideau Canal and Rideau River, the uOttawa campus itself lacks green space. To meet the need for outdoor places for gathering, relaxing and playing, significant new open spaces and greener streetscapes and pathways are planned in all areas of the campus. A new “University Square” on Lot X will become a signature open space but only the largest of several new open spaces and green corridors to be incrementally built over the long term.

An interconnected green network will support the University’s sustainability objectives, reinforce the circulation system and provide an attractive setting for existing and new buildings. A linked series of well-designed green spaces, courtyards, walkways and pedestrian-oriented streetscapes will also provide a variety of experiences for students, faculty and staff as well as visitors to the campus.

The following major open space improvements should be pursued to implement the vision of the Master Plan. These initiatives may be implemented as stand-alone projects, as part of infrastructure renewal, or in conjunction with the construction or renovation of adjacent buildings. Open space and streetscape improvements will include the addition of coordinated street furniture, lighting, signage and other wayfinding elements to ensure the campus feels welcoming, comfortable, safe and easy to navigate. Visually appealing signage and branding initiatives should complement the landscaping and architecture of the campus to enhance the image of the University, with a particular focus on areas with high visibility such as key intersections, entry points to the campus and major open spaces. To further aid navigation and reinforce the identity of distinct places on campus, university-owned streets should have consistent, memorable names with local significance.

Several of the proposed open space improvements will need to be developed above existing infrastructure including parking structures, utilities and underground tunnels. Accordingly, these sites must be appropriately planned to ensure that trees and plantings will thrive over the long-term. Sustainability features such as stormwater capture systems should be considered for all landscape improvement projects.

The open space and mobility network should be designed to improve the relationship between the campus and the Rideau Canal. New development should optimize views to the canal wherever possible, and the University will work with the City to enhance access to the canal’s multi-use trails.

1. Tabaret Lawn
2. Car-free Core
3. Campus Green
4. Marion Square
5. University Square
6. King Edward Park
7. King Edward Streetscape
8. uOttawa Parkway
9. Lees Station Transit Plaza
10. River Quad
11. Riverfront Park and Trail

Figure 4-6 Open Space
Major Open Space Initiatives

1. Tabaret Lawn

Tabaret Lawn will be improved by removing the parking lot and eliminating vehicular access to the Grande-Allée. The Lawn will be repurposed into a usable open space that can host large campus events. The materials used in this landscape should be durable and of a timeless quality to complement the historic buildings that surround the space.

▲ Figure 4-7 Tabaret Lawn
2 Car-free Core
The streets of the campus inner-core, from Laurier to the SITE building, and from the Transit Way to Louis Pasteur, will be transformed into a car-free zone to create generous spaces for pedestrians and cyclists. This initiative will break down into a series of phased projects involving new paving, tree planting, improved lighting, signage, seating and other landscape improvements. Emergency and servicing vehicles will continue to have access to the car-free streets where necessary.

3 Campus Green
Campus Green is an existing open space adjacent to Fauteux Hall and Thompson residence. As the space is improved with the installation of an underground chiller bank, it should maintain its green character by ensuring that care is taken to preserve existing mature trees. As new development occurs around it, the open space will be improved with simple treatments such as benches and lighting to make it more inviting.

4 Marion Square
Demolition of the Cube and development of a new building on the parking lot in front of MacDonald Hall will allow for the creation of a new open space on the site. This open space will become a quiet space for studying or relaxing. It will help to extend the car-free core further south, contributing to a safe and comfortable walking experience from the SITE building up to Laurier.

▲ Figure 4-8 Car-free Core
▲ Figure 4-9 Campus Green
▲ Figure 4-10 Marion Square
5 University Square

The existing surface parking lot (Lot X) south of the University Centre will be transformed into a multi-purpose plaza with a mix of hard and soft landscape. It will be designed to become the central outdoor gathering space on campus, capable of accommodating a range of programmed activities and special events besides being a place to just hang out. Major events such as Welcome Week and Carnival will be centred in the square. To optimize the site, the design of the square should extend from building edge to building edge on all sides.
Figure 4-12 University Square
6 King Edward Park
Redevelopment of Brooks Residence should include a new open space that enhances the edge of King Edward and provides a break between the buildings planned along the street. Future buildings will frame the green space and enliven it with active uses on the ground floor. The space may be smaller than shown in the illustration below but should be well landscaped to provide places to sit, study and perhaps play a sport. A parking structure under the park should be allowed.

7 King Edward Streetscape
King Edward, a City street, will be revitalized with a new public realm. The Plan proposes two rows of trees and a separated two-way cycle track on the west side, one row of trees on the east side, planters and other street furniture elements to better define and beautify the street. Formalized pedestrian crossings with special paving are proposed at key intersections along the street.
8 uOttawa Parkway

The streetscape of Lees Avenue, south of Mann, will be improved to establish a strong green link between the campus core and the Lees area, and create a more comfortable environment for pedestrians and cyclists. A double row of trees and a multi-use trail is planned on the east side of Lees.

Figure 4-15 uOttawa Parkway Cross Section Concept
Riverfront Park and Trail

Future development in the River Precinct will be oriented to a system of linked open spaces along the Rideau River. A linear riverfront park will have a mostly naturalized edge and continuous pathway while providing opportunities for views and physical access to the river. New buildings will frame the park, leaving generous gaps, including a central open space, to ensure the riverfront experience is woven into the precinct. The multi-use trail will connect the campus to the City’s bicycle network. The river’s edge will be further enhanced with a boat launch facility.
Lees Station Transit Plaza

A public plaza will be developed in conjunction with future building surrounding the Lees LRT Station. Transit riders will give life to the plaza, but it should also be bordered by active uses on the ground floors of the buildings. The design for the space should include trees, seating, public art and lighting.
4.7 Campus Identity

The uOttawa campus should have a strong visual presence and clear identity within the city. Key sites, entry points to the campus and other visual focal points will play a critical role in enhancing the image of the campus through architecture, open space features, streetscape design, signage and branding initiatives.

Focal points on the campus are illustrated in Figure 4.19. These include key entry points or “gateways”, major pedestrian routes and transit hubs, and areas with high visibility from key external vantage points such as the Rideau Canal and major transportation routes.

All future buildings, open spaces and streetscapes on campus should display design excellence, i.e., they should be durable, attractive, functional and sustainable. At focal points and the termini of key view corridors, however, special consideration should be given to architecture and landscape design. Buildings in these locations should be of the highest quality and have distinctive architectural features while respecting the surrounding built fabric in terms of scale, form and materials. Many of these areas will be appropriate for the development of landmark buildings.

The design of the public realm at focal points and view termini should complement adjacent buildings and may include distinctive elements, such as public art, unique benches or other furniture, or enhanced plantings. Focal points are also the locations for prominent campus signage and branding initiatives. The design of signage and other branding should be consistent, recognizable, and integrated into the campus landscape.

The Precinct Plans and General Guidelines for the campus provide further guidance on the design of buildings and the public realm.
4.7.1 Public Art and Culture

As the campus continues to develop, opportunities for public art and cultural activity should be pursued to celebrate the University, promote its cultural diversity and enhance the experience of the campus.

All forms of public art, including commemorative features, sculptures, murals, multimedia, lighting and street furniture, should be encouraged across the campus. Locations to target for public art are those with high levels of pedestrian traffic and visibility, such as main entries to the campus, major open spaces, key pedestrian axes, and the exteriors and lobbies of prominent buildings. Public art should also be considered at the termini of key views and in smaller courtyards and plazas. While there are opportunities to add public art to existing open spaces and buildings on campus, generally, the integration of public art should be considered early in the design process for a new project, and, when the opportunity for public art has been identified, a public art consultant and/or an artist should be part of the design team.

Improvements to uOttawa’s open spaces and streetscapes will enhance the culture of the campus by encouraging social interaction and recreation on a daily basis. In addition, existing and planned major open spaces can also serve as destinations for the celebration of art and culture as well as the broader achievements and contributions of the University. When a significant new open space is designed, its ability to accommodate events such as concerts, theatre performances, art displays and festivals should be considered. Specific elements to consider include gathering spaces, electricity access, and locations for tents and temporary stages.

Figure 4-20 identifies the existing locations of public art and high visibility areas that represent the strongest opportunities to integrate new public art. It also highlights the existing and planned major open spaces that have the most potential for cultural programming.
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WALLER
STEWART
ALEX
PELOUSE
MORRISET
PLACE DE CAMPUS
UOTTAWA
KING EDWARD
LAMOUREUX
LOUIS PASTEUR
MARION
OSGOODE
ALTA VISTA
LOUIS PASTEUR
KE-P-1
KE-1
L#
SOMERSET
KING EDWARD
TEMPLETON
MINTO

Proposed Vertical Connection
Existing Parking/Loading Access
underground parking
View Terminus
Two Way Street (Proposed)
One Way Street (Proposed)
Pedestrian Connection
Possible Indoor/Outdoor
Proposed uOttawa Open Space
Sport Complex/Field
Proposed  Secondary Open Space
uOttawa Existing Building
ARC
KING EDWARD
TEMPLETON
MINTO

uOttawa Cycling Facilities
Existing Tunnel Network
Sport Complex/ Field
Property line
Possible Tall Bldg. Location
Building for Renewal
uOttawa Existing Building
Primary Sport Facility
Private Servicing Area
Mixed Traffic Area
(Within Pedestrian Priority Area)
Proposed Multi-Use Pathway
Existing Bike Lanes
Existing Pedestrian/Bike Tunnel

Existing Public Art
uOttawa Existing Building
Proposed Multi-Use Pathway
Proposed Bike Lanes
Existing Pedestrian Only Route
Existing Two-Way Campus Street
Existing One-Way Campus Street
Existing Multi-Use Pathway
Existing Street which may require realignment
Potential Central Logistics Facility Location
Servicing/Loading access to be determined at
Future uOttawa Building Footprint (Conceptual)
Proposed Loading/Servicing  Zone
Proposed Street Redesign with Cycling and Transit
Existing Two-way Street with Proposed Cycling Facility
uOttawa Proposed Building Site
STO Bus Route 300
STO Bus Route 200/Terminal
NCC Property (Under Long Term Lease by the City)
Potential Site to be Considered for Partnership
Somerset Pedestrian/Cycling Corridor
University of Ottawa Property-Under Option
uOttawa Leased/Partnership Property
Existing Student Housing Building
Existing BRT Line/Stop
Future LRT

Major Open Space
student residences; ancillary services
Academic Mixed-Use/Athletics and Recreation
houses
Student Housing
General Mixed-Use
Teaching and research facilities; administrative uses;
Academic Mixed-Use
Academic
Neighbourhood Residential
Neighbourhood Residential
Academic-Mixed use Potential Housing Sites

Key Exterior Opportunity for Public Art
Existing Public Art
uOttawa Existing Building
Proposed Multi-Use Pathway
Proposed Bike Lanes
Future Pedestrian/Bike Tunnel
Future Multi-Use Pathway
Existing Multi-Use Pathway

5.0 metres
1.2 metre
8.0 metres
12.5-metre existig street width*
12.5-metre proposed street width*
18.3 -metre existing street width
18-metre R.O.W
26-metre R.O.W

18.3-metre proposed street width

uOttawa Existing Building
uOttawa Proposed Building Site
Cultural Destination
Existing Public Art
Key Exterior Opportunity for Public Art
4.8 Mobility

Great university campuses are highly walkable places that also can be accessed by bicycle, public transit, automobile, delivery truck and service vehicle. Today, 83% of those who travel to the uOttawa campus do not use a car, an exemplary “modal split” that the University would like to see increase. The new LRT and the planned changes to the mobility network described in this section will help to reach this goal and ensure the campus is easy to get around.

Generally the campus is not seen as pedestrian friendly today due to the number of roads, parking lots and parking spaces throughout the main campus. Infrastructure for cars and trucks tends to squeeze the space available to pedestrians, except in places like the Grand Allée. During class changes, congestion at pinch points on campus is not uncommon. Completion of the Corktown Bridge has increased congestion in the City-owned tunnel under Nicholas Street, and this will only worsen with completion of the LRT and the Somerset-Donald bridge over the Rideau River. The latter project is expected to significantly increase bicycle traffic crossing the campus and heading downtown from points east.

The Master Plan provides direction for a more walkable campus that includes a car-free core and enhanced pedestrian and bicycle infrastructure throughout the campus. The new open spaces described in the previous section will form an integral part of the pedestrian network. With the LRT improving transit access to the campus, the new uOttawa, Lees and Rideau LRT stations will become more important hubs in the mobility network. Most remaining parking lots will be replaced by buildings with underground parking, except Lot X, which will become a central open space. On-street parking and a small supply of surface parking will continue to support “short-stay” visits to the campus.
4.8.1 Street Network

The street network provides the framework for all types of mobility, including walking, cycling, driving and public transit (except the LRT). Through the incremental re-establishment of a grid of streets, the uOttawa main campus can become a more pedestrian-focused and bike-friendly environment while also accommodating cars and service/delivery vehicles in appropriate locations.

In addition to supporting safe and efficient movement, the street network is also an important element of the public realm, providing connections to open spaces and to the surrounding community. Campus streets will be designed and enhanced to reinforce the character of the campus and contribute to place-making and the larger open space network. A number of strategic improvements to the street network will also create more efficient circulation patterns. To create a grid network, new car-free streets will be introduced in the core of campus as buildings are replaced or significantly altered. The campus will also become more permeable with the introduction of new east-west streets dividing the blocks on the west side of King Edward. The University will need to continue to work with the City to ensure that the public streets in and surrounding the campus support a pedestrian-focused environment.

New Streets and Laneways

A new pattern of streets should be implemented in the King Edward Precinct as redevelopment occurs. Three new east-west streets are planned—north of Fauteux, through the Brooks Residence block and north of the power plant. The new connections will allow for improved servicing of the core precinct and better access to the campus generally from the east. Precinct Plan work will determine whether streets will be two-way or one-way and whether vehicular access must be restricted, and whether new streets can be signalized at King Edward. Both the existing and new east-west streets will facilitate passenger pick-up and drop-off within the campus, avoiding the need for circular driveways. A series of laneways to the east of King Edward will provide access and servicing for new developments on the east side of King Edward.

King Edward Avenue

Until recently, the University has treated King Edward Avenue as an edge to the campus but not a face. However, King Edward is an important and busy arterial road traveling through the campus. Once both sides of the street are redeveloped, King Edward’s role as a public space will evolve. New buildings like ARC will bring more pedestrian activity to the street, as will potential new academic, residential and mixed-use buildings on both sides. Ultimately, the road should be redesigned as a “complete street” (see Section 4.5). The University will need to work with the City to ensure improvements within the right-of-way and on adjacent University land are coordinated.
4.8.2 Primary Pedestrian Network

At uOttawa, students, faculty and staff get to the campus using a variety of transportation modes, but once they arrive they use the campus’ pedestrian network (including tunnels and overhead bridges) to get from class to class, meeting to meeting or simply to get a breath of fresh air. Pedestrian routes stitch the campus together and help to organize development for ease of access and navigation.

The existing pedestrian network on campus consists of a number of different components: sidewalks along streets, pedestrian malls like the Grande Allée and various pathways, as well as internal hallways at ground level and the second level that provide access through and between buildings.

The Primary Pedestrian Network Plan is aligned with the planned open space and street networks to reinforce a grid system in the core, which will support a more interconnected campus. Removing cars from the core will provide more space for pedestrians and enhance safety. Sidewalks within and at the edges of the campus should be designed for high pedestrian volumes, with a minimum width of three metres wherever possible. Diagonal and/or perpendicular pathways across existing and future open spaces should provide pedestrian shortcuts within the grid network.

New buildings should address a primary pedestrian route, and active uses such as lounges, food services and hallways should be encouraged on the ground floors of buildings fronting these routes. Internal ground-floor corridors should provide “mid-block” pedestrian routes within the grid system where possible and appropriate. These internal “streets” should be generous in width and height.

By encouraging walking between buildings at the ground level, and reducing the number of second-floor pedestrian bridges over time, the sense of vitality on campus will improve. Covered walkways between campus streets and building entrances may be considered.

The University’s pedestrian network should connect to the City’s planned pathway along the LRT where possible and to a future multi-use pathway along the Rideau River. The University should also work with the City to enhance pedestrian connections between the Main Campus and the Lees Station area and establish the uOttawa Parkway; signage and branding will be important elements in improving the connections. In time, as the Robinson Precinct develops, a new pedestrian/bicycle bridge across the Queensway should be planned to provide a more direct link to Lees Station. As the River Precinct builds out, an additional pedestrian/bicycle bridge across the river should be considered, which will improve access to and from the neighbourhoods and open space on the south side.

As part of the University’s commitment to ensure the campus is accessible to all, new additions or improvements to the pedestrian network will need to be designed to meet current accessibility standards. All elements of the primary pedestrian route should be lighted and have benches at appropriate intervals. Signposts should be located at intersections for wayfinding and campus maps should be located at key entry points and intersections.
4.8.3 Bicycle Network

Ottawa’s ever-expanding network of multi-use pathways, bike lanes and other cycling routes encourages commuting to and from campus. An interconnected street system and more places for bike parking will promote more cycling within the uOttawa campus.

All campus streets should be designed to accommodate bicycles. Car-free streets in the Tabaret, Core and River precincts generally should be wide enough to be shared by pedestrians and cyclists without the need for designated lanes. Signage on these streets should tell cyclists to travel slowly and yield to pedestrians.

On Marie-Curie, linking Somerset to the uOttawa LRT station, bike lanes will be required to avoid conflicts between cyclists, pedestrians and drivers. Once Jean-Jacques Lussier is closed to cars, Louis Pasteur and Copernicus should be designated as a primary north-south cycling route through the core of campus. Between MacDonald Hall and Colonel By Hall, this route should be linked to the multi-use pathway along the LRT line. King Edward, which should accommodate bike lanes in the future, will provide an alternative north-south route.

Improved bicycle parking and storage should also be a priority. Bike racks should be located outside all buildings, with weather protection provided wherever possible. New academic and administrative buildings should include indoor bicycle storage facilities and change rooms.

The existing underpass that together with the Corktown Bridge links the two segments of Somerset Avenue divided by the canal is a key piece of pedestrian and bicycle infrastructure in the city. With completion of the LRT, congestion in the City’s tunnel will increase and more conflicts between pedestrians and cyclists can be expected. The University should continue to work with the City and the Rail Implementation Office (RIO) to widen the underpass and implement other improvements aimed at reducing congestion and minimizing conflicts.
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Precinct Boundary

Major Open Space

Administrative uses; student residences; ancillary services

Ancillary teaching and research facilities; services and retail

Athletic and recreation facilities; athletics and recreation houses

Detached or row; student residences

General apartment residential; detached, semi-

General office; teaching and research facilities; administrative uses;

General mixed-use

Teaching and research facilities; administrative uses;

Academic mixed-use

Teaching and research facilities; administrative uses;

Academic mixed-use potential housing sites

Key View Terminus

Key Exterior opportunity for public art

Existing public art

Cultural destination

uOttawa Proposed building site

uOttawa existing building

(Within pedestrian priority area)

Proposed shared bike route

(Within pedestrian priority area)

Existing shared bike route

or other dedicated bike facilities

Proposed bike lanes

Existing bike lanes

Existing pedestrian/bike tunnel

Existing bike/pedestrian bridge

Future bike/pedestrian bridge

Future multi-use pathway

Existing multi-use pathway

Future multi-use pathway

Proposed multi-use pathway

Existing street which may require realignment

STO bus route 300

STO bus route 200/terminal

OC transpo bus routes

uOttawa shuttle bus

Future LRT line/station

Existing uOttawa building

Future uOttawa building (conceptual)

NCC property (under long term lease by the city)

Potential site to be considered for partnership

Surrounding neighbourhoods

Somerset pedestrian/cycling corridor

Future LRT line/station

uOttawa leased/partnership property

Existing utility tunnels

Proposed new utility tunnels

Existing utility tunnels

Precinct boundary

Student housing building

Existing student housing building

Core precinct—student housing strategy

Potential student housing site

Food services

(Not owned by uOttawa)

Existing sports field

Secondary community hub

Primary community hub

Existing building

Co-op

Fit

Deficient

Housing Co-op

Building for demolition

Building for renewal

Potential development site

uOttawa existing building

Downtown Ottawa

O-train

uOttawa shuttle bus

Future BRT line/stop

Existing BRT line/stop

Future LRT

LRT downtown tunnel/station

University of Ottawa

Neighbourhood renewal

Building for demolition

uOttawa existing building

Proposed traffic light

Future pedestrian tunnel

Existing pedestrian/bike tunnel

Existing pedestrian bridge

Future pedestrian bridge

Future multi-use pathway

Existing multi-use pathway

Proposed bike lane

Proposed vehicle route

Primary existing vehicle route

Building for demolition/demolition

Building for renewal

Proposed pedestrian only route

Existing pedestrian only route

Future multi-use pathway

Existing multi-use pathway

Proposed bike lane

Proposed vehicle route

Primary existing vehicle route

Existing street which may require realignment

Future uOttawa building footprint (conceptual)

Existing uOttawa building

Existing pedestrian/bike tunnel

Proposed shared pedestrian priority street

Existing shared pedestrian priority street

Existing traffic light

Facilities (Refer to Arts Court Rideau Public Realm Plan Options - Proposed street redesign with cycling and transit

Two way street (proposed)

One way street (proposed)

One way street-existing

Existing uOttawa open space

University of Ottawa car free area

Existing/Proposed uOttawa open space

Proposed pedestrian priority route

Existing pedestrian priority route

Proposed sidewalk

Existing sidewalk

Proposed pedestrian only route

Existing pedestrian only route

Future multi-use pathway

Existing multi-use pathway

Proposed bike lane

Proposed vehicle route

Primary existing vehicle route

Building for demolition/demolition

Building for renewal
4.8.4 Public Transit

University of Ottawa students, faculty and staff rely heavily on the City’s public transit network to get to and from campus and to travel from one end of the campus to the other. 83% of students, staff and faculty travel to campus on foot, bicycle or public transit, which includes OC Transpo’s and Société de Transport de l’Outaouais’ (STO) extensive bus systems, the University shuttle service and the U-Pass. Transit usage is expected to increase further with completion of the LRT in 2018, which effectively will bring much more of the city closer to campus by significantly reducing travel times from any of the stations along the line.

Enhancing the pedestrian and cycling networks on campus, as described in the previous sections, will be important to encouraging more students, faculty and staff to use public transit. The future LRT stations should be integrated seamlessly, efficiently and safely within those networks. The University should continue to work with the City and the Rail Implementation Office (RIO) to ensure the detailed design of the stations responds to the Campus Master Plan.

With the closing of the Laurier Station when the LRT is completed, many students traveling to the north end of the campus will likely use Rideau Station. The University should monitor pedestrian traffic between the station and campus and work with City to ensure sidewalks and crosswalks are adequate, safe and comfortable. The City of Ottawa is currently completing its Rideau/Arts Precinct Public Realm Plan which proposes to improve mobility and pedestrian safety into the campus.

OC Transpo buses will continue to have a presence on the campus after the LRT is completed. Notably, Waller Street will be a “time point” within the bus system, where buses pause to remain on schedule. The University should work with the City and OC Transpo to ensure the reconfiguration of Waller post-LRT supports the transit system while also improving the pedestrian environment.

Campus Shuttle

Currently, students and staff traveling between the Downtown, Lees and Alta Vista areas of the campus can rely on the City’s bus system or the University-run shuttle. Completion of the LRT may reduce demand for the shuttle, and when the planned bus rapid transit line to Alta Vista from Hurdman Station is completed demand may drop further. The University should periodically review the shuttle route and schedule to ensure optimal service delivery.
4.8.5 Parking, Loading and Servicing

Parking
As uOttawa continues to develop its campus in ways that promote walking, cycling and public transit, it will also need to accommodate parking for vehicles. Consistent with the vision of a car-free core campus, Lot X and the parking lot in front of MacDonald Hall will be replaced with new open spaces, Lot K will become a development site and surface parking generally on the Downtown campus will be reduced.

New parking will need to be located underground in bright, well designed garages, where economically feasible. New buildings on the west side of King Edward present the strongest opportunities to accommodate underground parking. The Desmarais block, on the west side of Waller Street, also has capacity for additional underground parking, and future development at the corner of Mann and Lees should also include underground parking. Future development in the Station, Robinson and River precincts should also locate parking underground.

On-street parking and small surface parking lots will accommodate “short-stay” parking. Required parking lots should be located at the rear of buildings wherever possible and be landscaped to partially screen them from public view.

As the University reduces parking in some areas of campus and builds new parking in other areas, it will need to monitor overall supply and demand and ensure the supply the requirements of the City’s Zoning By-law, which permits the University to meet its parking needs anywhere on the Downtown campus or in the River Precinct.

Loading and Servicing
The campus street network, including car-free streets, will continue to provide access to existing and future loading and servicing areas. As redevelopment occurs in the core, opportunities to create shared loading areas should be considered, and new loading areas should be located away from the primary pedestrian network wherever possible. Loading and servicing areas generally should be enclosed within the building, and driveways should be designed to minimize conflicts with pedestrian movement. Exterior servicing areas should be screened.

Where service routes overlap the pedestrian network, they should be designed as high-quality pedestrian spaces to discourage unsafe vehicular movement and reinforce the pedestrian nature of campus.

To further minimize the impacts of delivery and service vehicles, and potential conflicts with pedestrians, the University should schedule deliveries and servicing during “off-peak” times where possible.

Figure 4-25
Parking, Loading and Servicing Plan
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University of Ottawa Streets

* Actual width for street may vary/TBD due to existing buildings or future field locations

Parking to be considered if existing buildings are removed

Parking access to be determined at detail design stage

setbacks and overall design around Lees station to be determined

30 metres RUCA setback

8.0 metres

6.5 metres

5.0 metres

1.6 metre

Existing Shared Servicing/Emergency Route

Existing Servicing Route

Proposed Servicing Route

Primary Servicing Route

Secondary Servicing Route

20-metre R.O.W

20-metre R.O.W

26-metre R.O.W

6.5-metre private driveway

12.5-metre existing street width*

15-metre existing street width

20-metre proposed street width

20-metre existing street width

18.3-metre proposed street width

18.3 -metre existing street width

18-metre R.O.W

20-metre R.O.W

Potential Central Logistics Facility Location
Figure 4-26 Illustration of the Vision for Alta Vista
4.9 Alta Vista

The University’s facilities at Alta Vista are fundamental to its mission and will play a key role in advancing uOttawa as a research institution. While the area is linked by transit to the rest of the campus, it is physically disconnected and distinct. This section describes the unique opportunities to expand facilities at Alta Vista, develop new buildings and generally improve the public realm. Many of the opportunities will need to be coordinated with overall plans for the larger Ottawa Health Sciences Complex.

Sites for Renewal or Redevelopment

There are short-term plans (5 years) to expand Roger Guindon to accommodate additional research space and improve existing labs. Significant growth in the longer term will likely require developing a portion of the parking lot to the north and west of the existing building for new facilities and structured parking. The Peter Morand lands, a large portion of which is used for parking, also has significant capacity for development.

Figure 4-27 Alta Vista Renewal and Redevelopment Sites
Land Use and Community Hubs

Most of the University’s lands at Alta Vista should be reserved for academic uses, such as research labs, classrooms, meeting rooms and offices, as well as complementary service uses that cater to students, faculty and staff. In Roger Guindon, these complementary uses, including dining options, recreational resources and lounge space, should be clustered to form a community hub for students, faculty and staff. As the Peter Morand Precinct develops, a second community hub that potentially includes indoor recreational space and/or a fitness room should be planned.

The property on the west side of Peter Morand is designated Academic Mixed Use, which recognizes that a range of uses would be appropriate in this location, including apartment, office and/or academic buildings, potentially with commercial amenities on the ground floor. Residential uses may require a rezoning.

Figure 4-28 Alta Vista Land use Plan

- **Academic**
  - Teaching and research facilities; administrative uses; ancillary student residences and services
- **Academic Mixed-Use**
  - Teaching and research facilities; administrative uses; student residences; ancillary services and retail
- **Major Open Space**
- **Primary Community Hub**
- **Secondary Community Hub**
- **Existing Sports Field**
  (Not Owned by uOttawa)
Open Space
Greening the Alta Vista area will enhance the pedestrian environment, create enjoyable outdoor spaces and soften the built environment, dominated as is by buildings and parking. A central open space is planned at the heart of the Peter Morand Precinct, linked to streets to the south and west by landscaped pathways. A central shared green space exists adjacent to Roger Guindon. As part of future development for new University facilities north of Roger Guindon, the edges of the parking lot should be landscaped to accommodate pathways, seating areas, trees, other vegetation and potentially stormwater management features such as bioswales.
Mobility
As the Alta Vista area further develops, the street and pathway network will expand to accommodate increasing volumes of bus, car, bicycle and pedestrian traffic and create safe, convenient connection between buildings.

In the short-term, the City is planning to build the "Hospital Link", phase one of longer road intended to improve access to the health complex and relieve congestion on Alta Vista Drive and Smyth Road. The Hospital Link will be a two-lane road from Riverside Drive to the northwest corner of the Ring Road. In the long term, this road will be extended to Smyth. To ensure the extension does not create a barrier between Roger Guindon and the Peter Morand Precinct, safe crossing points for pedestrians, cyclists and drivers will need to be incorporated into the design of the road.

The University should work with the City and the other institutions at Alta Vista to develop a network of multi-use pathways aligned with the major roads and which provides access to the open spaces and hydro corridor to the north.

Figure 4-30 Mobility

- Primary Existing Vehicle Route
- Proposed Vehicle Route
- Proposed Bike Lane
- Existing Multi-Use Pathway
- Future Multi-Use Pathway
- Existing Pedestrian Only Route
- Proposed Pedestrian Only Route
- Existing/Proposed uOttawa Open Space
- Future uOttawa Building (Conceptual)
- Existing uOttawa Building
Illustration of the Vision for Alta Vista
4.10 Servicing and Utilities

The servicing and utilities systems – electricity, heating and cooling, water, storm and sanitary sewers, waste management and information technology infrastructure – are essential to the operations, maintenance and sustainable growth of the campus. Innovations in these systems together with the introduction of green building technologies have made them highly efficient and are helping the University to reduce its operating costs and ecological footprint. As the campus evolves, new projects will need to ensure existing utility networks can either support the proposed development or will be improved to ensure the necessary systems are put in place during or prior to project delivery.

Currently, a network of underground tunnels forms the backbone of the utility distribution system and campus operations in the core campus. The tunnel network links the Central Plant to buildings throughout the core campus and is used to carry steam, chilled water, natural gas, fibre-optic networking and electrical cable. This network of infrastructure will be expanded as new buildings are constructed.

The essential services described in this section will need to continue to be maintained and upgraded through a proactive asset management system. As campus growth is managed, the University must also ensure the condition, maintenance and recapitalization of these facilities are addressed on an ongoing basis. Regular condition and asset management studies will be conducted to ensure key activities and the operations of uOttawa are not adversely impacted.

The following pages represent a general overview of existing conditions, considerations, and recommendations for servicing and utilities at uOttawa. These summaries were derived from detailed information provided by the University and consultant reports produced between June and July 2015.
Electricity

Although the University generates some electricity, it relies primarily on Hydro Ottawa. The University will need to continue to monitor the availability of this power source over the long term, and be forward-looking in ensuring any necessary adjustments are made to accommodate planned development and redevelopment.

The majority of the Core, Tabaret, King Edward, and Mann Precincts are served by two 8 MW, 13.2 kV feeders from Hydro Ottawa substations, and one shared emergency feeder with the same capacity. With an estimated 3 to 4 MW of reserve capacity, the electrical system is capable of supporting 7 to 10 new major buildings in the core campus; expected to be representative of campus development over the next 25 years. However, with aging infrastructure, this capacity will be dependent on the introduction of more efficient building systems as parts of the core campus are redeveloped.

The 200 Lees complex within the River Precinct is currently supplied from a 13.2kV circuit out of Hydro Ottawa’s Riverdale substation. The main low-voltage distribution infrastructure is approximately 25 years old and has little spare capacity; this infrastructure will require replacement to support planned development. While Hydro Ottawa has an estimated 5.8 MVA of spare capacity at the 13.2kV level, predominantly supplied from the Riverdale substation, spare capacity on the circuit currently supplying 200 Lees is limited and an extension of an alternate 13.2kV circuit down Lees will be required to accommodate more capacity. These works will need to be carefully planned and coordinated with Hydro Ottawa and other development proponents in the wider service area.

At Alta Vista, there is a uOttawa vault within the campus supplied as part of a loop system from Rogers House and the main 13.2kV switchgear lineup serving the Ottawa Health Sciences Centre complex. As the transformers in this area have recently been replaced and upgraded to larger units, adequate capacity is available to support the planned short-term expansion of Roger Guindon. Due to the sensitivity of research activities, safety systems and back-up power will be required and increased to ensure that these activities are not affected by outages or shutdowns.

Recommendations/Considerations

Campus Wide
1. The University should consistently monitor electrical capacity across the campus as development is planned and implemented.

2. As strategies and timelines for development become more precisely defined, the University should work with Hydro Ottawa to ensure that campus development plans are aligned with utility infrastructure improvement efforts.

Core, Tabaret, King Edward and Mann Precincts
3. The Power Plant, Colonel By, Simard and Tabaret contain main service infrastructure that will require replacement in the near term. Replacement of the main switchgear in the Power Plant is underway.

4. MacDonald Hall and the Brooks residence contain switchgear that has been in service since the 1980’s. With proper maintenance, this infrastructure should remain in service until the buildings are replaced.

5. As the electrical distribution system serving the main campus does not extend to Desmarais Hall or the east side of King Edward within the Mann Precinct, any development within these areas will be supplied directly by Hydro Ottawa. Coordination with Hydro Ottawa will be required.
Station, River and Robinson Precincts

6. In the River Precinct, an entirely new main electrical infrastructure will be required to support the planned development.

7. Spare capacity on the circuit currently supplying the Lees Station area is limited. Development of the River Precinct causing any significant increase in the electricity demand will necessitate extension of an alternate 13.2kV circuit down Lees Avenue from the Riverdale Station in order to provide more capacity.

8. The 13.2kV Hydro Ottawa circuit being used for an LRT track power station may have spare capacity with the potential to supply new development in the Robinson and Station Precincts, although the estimated demands and spare capacity are unknown at this time. The University should continue to explore this potential opportunity.

Roger Guindon and Peter Morand Precincts

9. In order to maintain full redundancy, allowing the system to remain powered in the event of an unexpected single-point failure or scheduled maintenance, the overall loading within the Roger Guindon building should not exceed 3MVA for significant periods of time. Loading of the facility following the proposed building expansion should be monitored to ensure that redundancy is not compromised.

10. Long term expansion and new structured parking at Roger Guindon should include construction of a new transformer vault, independently supplied from the Ottawa Health Sciences Centre 13.2kV loop distribution system.
Heating and Cooling

In recent years, the University of Ottawa has undertaken a number of major energy efficiency projects throughout the campus. As a result, the total energy consumption of the campus has significantly decreased while total building area has increased. The University will continue to take advantage of any opportunities to improve the efficiency of its heating and cooling systems as the campus evolves.

In the Core, Tabaret, and King Edward Precincts, heating and cooling is provided through the Central Plant. The plant provides controls for all environmental and mechanical systems throughout the main campus, and houses a sophisticated computer "watchdog" network that supervises and controls temperature, humidity, fire alarms, clocks and atmospheric conditions in several laboratories, as well as conditions in several other buildings.

In all other areas of the campus, including the Mann Precinct; River, Robinson and Station Precincts; and the Alta Vista Precinct, each building is equipped with stand-alone heating equipment. Each of these areas will require different heating and cooling strategies depending on planned development and redevelopment projects.

The concept of a district-type system for cooling and heating distribution will continue to be applied. This type of system allows for the sharing of heat gains between buildings, better efficiency of chillers, less maintenance, more visually attractive buildings by minimizing visible infrastructure, and reduced mechanical space needs within buildings.

The recommended major tunnel, pipe and infrastructure improvements are shown in the Heating and Cooling Map.

Recommendations/Considerations

Campus Wide

1. All development and redevelopment across the uOttawa campus should be undertaken with energy efficiency in mind. Existing distribution systems should be reused to supply future buildings where feasible.

2. As the campus develops, future heating and cooling needs should continue to be carefully assessed. When necessary, additional equipment would be installed at strategic locations on the campus to increase the system’s capacity.

Core, Tabaret, and King Edward Precincts

1. Heating water systems should be made to operate during periods of extreme temperature that may be experienced in Ottawa, from -45°C to +45°C. The University should install heat pumps with heat rejection equipment within each new building to help produce low-temperature heating water in the winter, and to assist with cooling loads in the summer.

2. Satellite chillers with variable frequency pumps should be added at strategic locations. Should the planned buildings along the east side of King Edward Avenue be connected to the central chilling system, a satellite chiller should be added within one of these buildings.

3. Dedicated outdoor air systems with heat recovery should be installed in each new building. This will reduce peak cooling and heating loads on the district system.

4. The Desmarais building and the planned Phase 2 expansion should remain on standalone heating and cooling systems.

5. Planned buildings north of Hagen Hall should be connected to central heating and cooling systems.
6. Tunnels, heating and cooling pipes should be extended from Thomas More Private / Fauteux Hall to the east side of King Edward Avenue to supply heating and cooling capacity for the proposed new buildings on the east side of the street.

Mann Precinct
7. The Minto Sports complex will continue to function on standalone heating and cooling systems.
8. The planned sports complex at Mann Avenue and King Edward should be designed to operate with a thermal plant serving the Mann Precinct.
9. Due to the exothermic nature of sports complexes, their systems should include heat recovery from the pool exhaust and arena to heat adjoining buildings.

Station, River, and Robinson Precincts
10. The Robinson Precinct will function separately from the River Precinct. Standalone systems should be incorporated for heating and cooling in this area.
11. High density development anticipated for the River Precinct presents opportunities for centralized heating and cooling. The first new building to be constructed at the River Precinct should include a thermal plant large enough to scale up and eventually service the entire site. Due to technical challenges, it may not be feasible to extend pipes to the Station portion of the Precinct.
12. In the River Precinct, there may be opportunities to incorporate heat recovery systems from the groundwater, and to reject heat from the buildings into the Rideau River. These solutions require further examination and discussion with appropriate authorities.

Roger Guindon and Peter Morand Precincts
13. Roger Guindon Hall will continue to receive heat from the TransAlta cogeneration plant shared with the Ottawa Hospital and the Children’s Hospital of Eastern Ontario. As the building is expanded, the University may purchase additional heating capacity from TransAlta.
14. As the cooling systems at Roger Guindon Hall are operating near capacity, additional chillers will likely be needed for any building expansions.
15. Due to the distance and relative remoteness of the site, the facilities on Peter Morand Crescent would likely develop with standalone heating and cooling systems. It may also be possible to link the buildings on a shared geothermal system.
heating water and cooling towers future satellite chiller

Location of existing heating water production equipment

Location of future satellite chiller and cooling towers

Proposed location of future satellite chiller and cooling towers

Expansion of existing tunnel at this point for supply of cooling and heating water to new buildings

Location of existing heating water production equipment

Proposed location of a future thermal plant for the precinct

Robinson precinct would be stand-alone, with a centralized thermal plant in the first building

Depending on the location of the first building, centralized thermal plant for both precincts

Possible heat recovery and/or rejection from groundwater and river

Heating and Cooling
Water and Wastewater

The University is connected to the City’s water and wastewater systems. Infrastructure underlying university-owned streets and lands is owned and maintained by uOttawa, while any utilities in public rights-of-way are owned and operated by the City. As development occurs, water and wastewater systems will need to be monitored and improvements may be required to support future development.

Core, Tabaret, King Edward, and Mann Precincts

**Water:** The Core, Tabaret, King Edward, and Mann Precincts are served by a 700mm diameter watermain at the corner of Nicholas and Laurier and a 500mm diameter watermain on Nicholas, south of McDougall, that feeds smaller water distribution pipes. The smaller existing service watermains range from 150mm to 400mm in diameter.

**Wastewater:** Wastewater (storm and sanitary) for these Precincts discharges to the combined sewer trunk on Somerset. Flows from Somerset join flows with the Rideau River Interceptor before crossing the Rideau River and discharging to the Rideau River Collector.

Station, River and Robinson Precincts

**Water:** A 1200mm diameter water transmission main currently spans the Station and River Precincts. Future development within these areas would either require modification of the existing system or the installation of new service connections. Development plans in the Robinson Precinct will require a new water distribution network, which could involve an extension of the existing 600mm diameter watermain on Chapel Street.

**Wastewater:** The existing storm and sanitary sewers in the Station, River, and Robinson Precincts drain to the existing combined Rideau River Interceptor near Lees and the Queenway, with discharge ultimately flowing to the Rideau River Collector. Additional flows resulting from increased development will need to be restricted.

Roger Guindon and Peter Morand Precincts

**Water:** The Alta Vista Campus is currently served by a 300mm diameter watermain and will require minimal upgrades to the water distribution network.

**Wastewater:** The municipal storm sewer systems serving the area have no known flooding issues. Sewage in the Alta Vista Campus flows from the Roger Guindon drain west to the Rideau River Collector, and flows from the Peter Morand Drain east to the Green Creek Collector; this system is not expected to be negatively impacted by development. Local sewers that leave the campus at the northeast corner and bring flows to the Rideau River Collector also serve the entire hospital campus, including lands not owned by uOttawa. No issues with this system have been reported.
Recommendations / Considerations

Campus-wide:

1. Per the City’s Sewer Design Guidelines, all proposed developed or redeveloped areas require a stormwater management system. To minimize development net flows to the local sewers, proposed condition peak storm rates need to equal or be less than the existing condition rates.

2. All proposed stormwater management systems that discharge to a local combined sewer system will require approval by the Ministry of Environment and Climate Change, to be coordinated with the City’s project manager.

3. New stormwater management systems should include innovative design elements, such as bio-swales, green roofs and/or captured stormwater for irrigation use, to manage storm runoff flows and to help mitigate the impacts of increased flows to watercourses.

Core, Tabaret, King Edward, and Mann Precincts

4. Upgrades to smaller watermains may be required due to fire flows. Through the detailed design of campus development projects, the University should coordinate the potential need for upgrades to water distribution lines with the City.

5. Some existing local watermains are planned for replacement by the City due to age. Existing municipal water distribution system pressures and flows to any proposed development should be confirmed, in coordination with the City, during detailed design.

6. With limited combined sewer trunk capacity, additional sanitary flows will need to be offset by over-controlling the peak storm flows.

Station, River, and Robinson Precincts

7. As development in the Station and River Precincts occurs, the University should work with the City to develop a strategy to modify the existing water supply system or install new service connections.

8. In the Robinson Precinct, a new water distribution network will be required. The potential to extend the existing 600mm Chapel Street watermain to supply future water demands in the Robinson Precinct should be explored.

9. Increased storm and sanitary flows associated with new development should be offset by over-controlling stormwater discharges.

10. The option of discharging stormwater flows directly to the Rideau River, rather than directing flows to the existing sewers, may be explored. This would require the design of a new storm outlet which would need additional government regulatory agency approvals, such as that from the Rideau Valley Conservation Authority.

Roger Guindon and Peter Morand Precincts:

11. New water lateral connections to the existing main, or a new looped system, should be employed to provide extra service reliability.

12. The adequacy of the existing storm sewer system in the Alta Vista should be confirmed during detailed design.

13. During detailed design, a review of the local sewer system should be undertaken to take into account the entire proposed development.
Waste Management

uOttawa has a vision of becoming a zero waste campus, eliminating all waste being sent to landfill. While the campus currently performs strongly in this area with a waste diversion rate of 60%, its waste management practices will need to be improved in order to meet the University’s goals.

The University uses a range of tactics to collect waste on campus. Notably, recyclables and compost are collected by University staff and transported to a processing space in the River Precinct. Waste is collected on campus by contractors or University staff and transported to the River Precinct before being hauled away by private companies.

Movement toward a more unified campus-wide waste management system, such as a centralized or hub waste management system, would improve the stability and efficiency of uOttawa's waste management strategy. In a centralized system, waste is collected at each building and brought to a central processing space, while a hub system would use small regionalized processing spaces. These waste management systems would not require dedicated loading spaces at each building, thereby minimizing impacts on the quality of the public realm. A centralized or hub waste management system would additionally buffer the campus from fluctuations in the amount of waste produced during large events.

Recommendations/Considerations

1. uOttawa should move toward a centralized or hybrid centralized/hub waste management system as the campus evolves.

2. As the River Precinct is developed, operation of the processing space at 200 Lees should be reconsidered. The University should explore options for an alternative central processing location as a permanent solution.

3. Service entrances should be provided at each building, along with a small indoor or outdoor holding space for waste bins, to facilitate the operation of the new system.
IT Infrastructure

The demand for Information Technology services and infrastructure is expected to grow significantly in the coming years. Essential technology services will need to be maintained and expanded, and the demand for secure, redundant, mobile, anytime/anyplace services will be a key priority for the University's Information Technology team. Advancements in emerging fields, including the Internet of Things, will also play a key role in how we interact with the world around us.

The University currently relies on fibre optic communications infrastructure. This infrastructure will be maintained and expanded in the future, while increasingly being complemented by wireless infrastructure. An agile uOttawa Information Technology team will continue to adapt to emerging technologies and a rapidly changing workplace, working to establish uOttawa as a leader in information technology.

Recommendations/Considerations

1. With increasing demand for wireless network speed and bandwidth, uOttawa should achieve 100 percent coverage across the campus, both inside and outside. Additional antennas and Wi-Fi access points will be required for cellular and wireless communications. New antennas will be smaller and architecturally discrete, and will provide enhanced coverage over uOttawa's current technology.

2. The campus may naturally move toward an Internet of Things (IoT) environment, with smart computers incrementally fitted into many pieces of physical infrastructure. This concept of building automation will evolve beyond what is currently in place (heating, lighting, ventilation and security) and will result in buildings that are more intelligent and environmentally sound.

3. A resilient fibre optic infrastructure will remain at the heart of the University's network. Fibre to the desktop will become the norm, and will provide the speed and capacity required to support the University's activities.

4. The University should explore the possibility of establishing core fibre rings across the campus, using existing and future conduit tunnels to connect buildings on campus with dual access fibre for enhanced redundancy and reliability.

5. uOttawa’s physical infrastructure will adapt to changing business needs through such networking concepts as software-defined networking (SDN), allowing new services and applications to be provided quickly and reducing operational costs. The speed at which services will be provided will be further increased through the use of network function virtualization (NFV).

6. A robust virtual desktop infrastructure will begin to replace uOttawa’s existing physical workstations, as will cloud access for most end user applications, storage, and back-up. Remote access from anywhere in the world, and locally for alumni, visiting students, and faculty from around the globe, and sophisticated identity and access management systems will govern the required authorizations.