





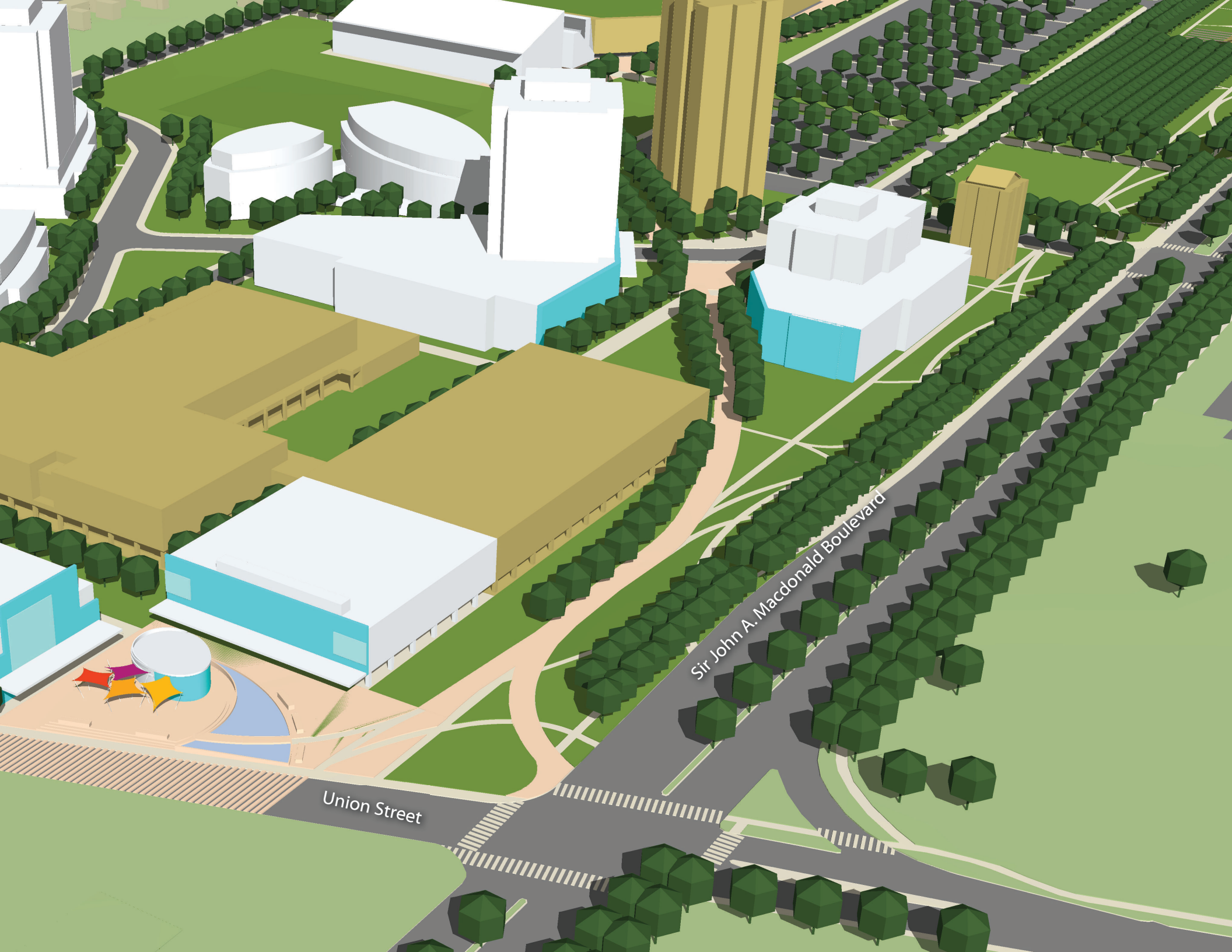
West Campus Master Plan

6

The original agrarian and penitentiary operations that once characterized the West Campus remain as the remnants of a rich and varied past. The West Campus Vision imagines a modern and attractive campus that pays tribute to this varied and rich history. The vision balances learning, working, living and recreation needs by creating a diverse network of flexible, comfortable, and inviting spaces with different characters and functions. Whereas the Main Campus Master Plan emphasizes the renewal of the much-loved historic campus, the West Campus Vision provides the basis for a long-term framework for creating a brand new place that borrows elements from what people love about Main Campus (such as social spaces, beautiful squares and plazas), but recreates them in a contemporary, context-specific manner.



► Figure 6-1
West Campus Perspective



Sir John A. Macdonald Boulevard

Union Street

Building Community on West Campus

On West Campus there are very few social places. The ones that do exist are disconnected or hidden from common experience. Highlighting and expanding these places on West Campus will be a priority.

The following is a strategy to build campus places that aligns use, circulation, places, infrastructure and development to create a critical mass of people and a “sense of place”. The strategy focuses on the south part of West Campus, recognizing the north portion of West Campus will remain as a valuable athletics precinct.



Phase 1

A new plaza will be a West Campus gathering space, framed by Duncan McArthur Hall, a new Green corridor, and Union Street.



Phase 2

Additional development north of Duncan McArthur Hall and west of West Campus Square frames new streets and corridors.



Phase 3

Jean Royce Hall is redeveloped. A new north-south road provides better pedestrian connections.

6.1 Land Use and Social Infrastructure

Envisioned as a 24-hour mixed-use campus, offering University uses as well as housing and services for nearby communities, West Campus will consist of a variety of uses and facility types.

Different types of uses and services including academic buildings, administrative offices, clinics, sports facilities, recreational facilities, and outdoor spaces will intermingle to provide amenity and vitality at all times of day, ultimately creating a more complete campus community than what currently exists.

A mix of uses is encouraged at West Campus, combining University and non-University uses. A loose land use structure is provided to guide decisions regarding what sort of uses should locate where. This structure considers existing uses, as well as proximity to adjacent residential neighborhoods, and certain uses best placed in areas in close proximity to transit, cycling and pedestrian routes.

West Campus has four different land use “clusters.” The term clusters has been chosen rather than “category,” to emphasize that the cluster characteristics do not mean single use areas, but rather a pattern where certain uses are better suited. The different clusters include the Mixed-Use Student Life Cluster, Residential Cluster Academic Core, and Athletics Cluster.

Mixed-Use Student Life Cluster

Centred around Union Street, key transit stops and the proposed West Campus Square, a future gathering space and the centerpiece of West Campus, (see Section 6.4.3) the mixed-use student life cluster will contain services and amenities for the West Campus community. This will include student offices, cafés, convenience stores, a Library that incorporates the enhancements recommended in LAMP, as well as multi-disciplinary study spaces.

The positioning of West Campus as a “health and wellness campus” is borne out of a wider University commitment to the well-being of the Queen’s Community, as well as consultation throughout the Campus Master Plan study process.

A number of factors have influenced this decision:

- The existing presence of sports fields, and expansive open spaces, providing opportunity for a range of athletic activities.
- Students and Faculty of the Faculty of Education have noted the rise in prominence and value of outdoor teaching spaces and the need to promote health and wellness into educational environments;
- An expression of interest by the School of Nursing to potentially relocate to West Campus. The amount of space available would allow for expanded facilities and the opportunity to offer services to the Portsmouth and broader Kingston Communities.

Residential Clusters

There will be two residential clusters on West Campus, the first located generally where Jean Royce Hall is today, and the other south of the Student Life Centre, positioned on the former Prison for Women site. Both clusters will be the home for a concentration of residences, in addition to complementary small scale uses, such as cafeterias, cafés, and recreational uses. The residential cluster south of Union Street is considered a particularly appropriate location for non-University housing due to its proximity to Portsmouth and the waterfront, though market housing may also be located in the Student Life cluster.

Academic Core

The academic core will be the primary location for academic and clinical buildings on campus, though these uses may also be interspersed within other clusters. While any faculty or department may be located here, an appropriate faculty would be the School of Nursing due to the need for expanded facilities, and the

potential to offer services to the Kingston Community, keeping with the mixed-use vision for West Campus .

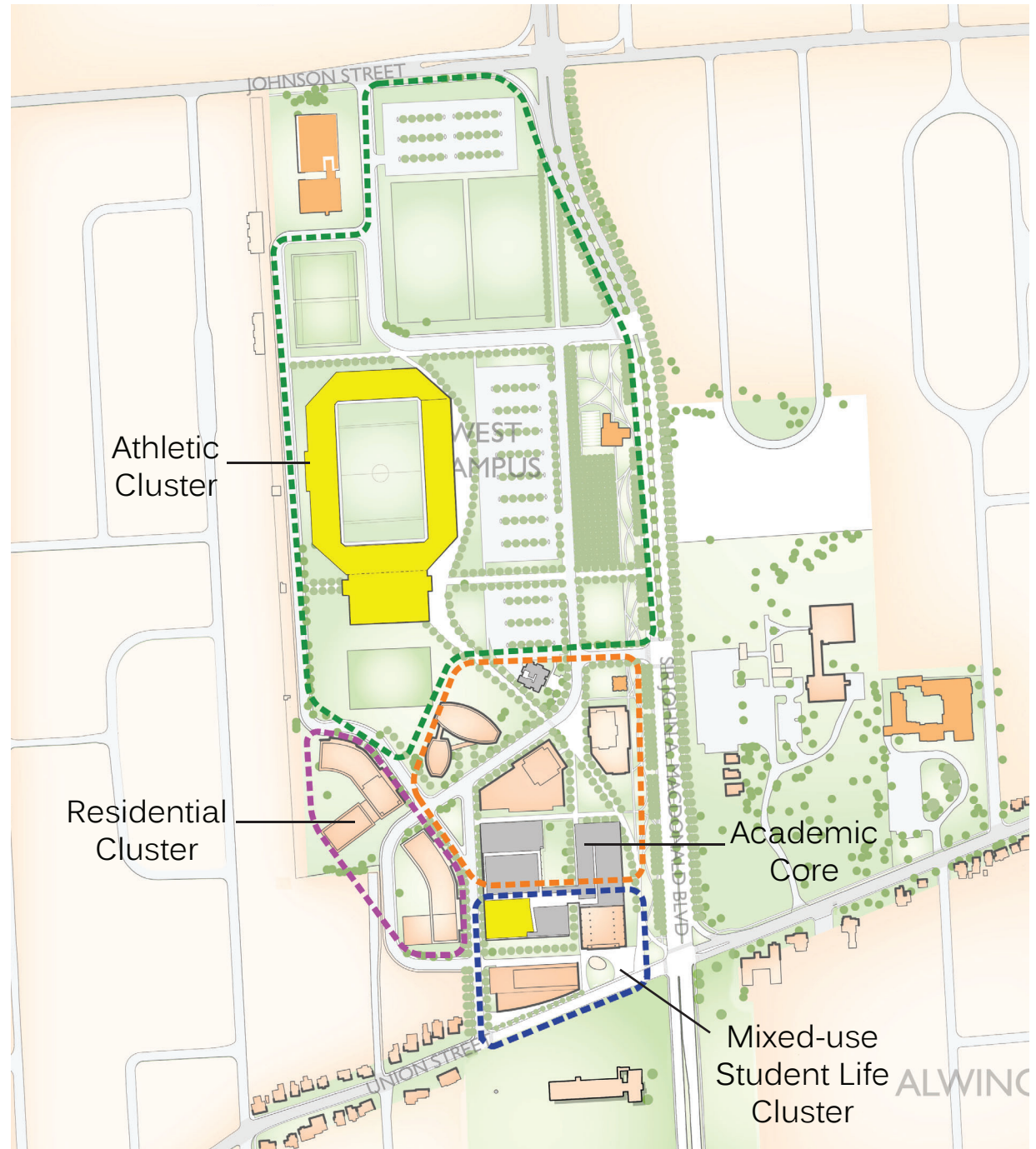
Athletics Cluster

The athletics cluster currently contains space-intensive uses such as Richardson Stadium, practice fields, surface parking lots, and the Coastal Engineering Lab. This area will continue to be a location for space intensive uses (e.g. an arena and/or stadium). With health and wellness identified as one of the characteristics West Campus may have, as well as its existing role as the home to the Faculty of Education, there is a potential to diversify the types of outdoor and recreational uses to complement future programming on the campus. These might include outdoor teaching spaces, naturalized grounds, or a parcourse.

Recommendations

1. The “clusters” indicated on Figure 6-2 should generally be regarded as an organizing structure for West Campus.
2. Academic uses should be located in proximity to one another and to student life uses, to ensure short distance between classes and study facilities.
3. Uses that support the “health and wellness” character of West Campus, such as clinics, health facilities, or recreational uses (such as an arena or stadium), should generally be directed to West Campus.
4. Surface parking is permitted as an interim use for all future development sites. The introduction of any new surface parking should comply with the design direction provided in Section 7.1.7.

- Student Life Spaces
- Corridors
- Academic
- Residences
- Administration / Utility



► Figure 6-2
West Campus
Social Infrastructure

6.2 Heritage

While West Campus isn't defined by its historic buildings in the same way as Main Campus, it still includes a modest number of historically significant buildings, including the Water Tower, originally part of the Kingston Penitentiary Farm.

As with Main Campus, these buildings will be protected due to their historic significance. Unlike the heritage assets of Main Campus that are predominantly institutional buildings that were also part of Queen's, the structures on West Campus provide linkages to Kingston's history as one of the locations of Upper Canada's first correctional facilities and council seat. It also sits in proximity to many historic places including the Kingston Penitentiary and Museum, the former Prison for Women, historic Portsmouth, and Kingston's first City Hall. These narratives are something that Queen's is committed to continuing.

Recommendations

1. Buildings coloured in blue on Figure 6-3 are considered historically significant and will be retained. Internal alteration of these buildings is permitted, however, a facility-specific historic assessment will be required before any reconstruction is permitted.
2. Buildings coloured in blue on Figure 6-3 are permitted for incorporation into new development, so long as their prominence in relation to the street is not compromised. The massing and design of any additions should give prominence to the historic structure. While any addition should complement the historic structure, new components of these buildings should be contemporary in design.

- Historic
- to be protected
- Redevelopment Permitted
- house-form character to be respected
- Existing Buildings
- Proposed Buildings
- Campus Boundary



► Figure 6-3
West Campus Heritage

6.3 Renewal and Development Sites

West Campus contains a number of potential development sites for new, larger scale uses. The development sites are positioned around the future expanded mobility network.

The development opportunities map identifies sites appropriate for redevelopment. Whereas much of the focus for new development on Main Campus is respecting historic character, on West Campus, the priority is to create a compact, pedestrian friendly building pattern. Over the long term, as West Campus develops and begins to house buildings of more intensive use, Duncan McArthur Hall may be expanded or renovated for incorporation into a more contemporary building.

Two types of sites comprise the Renewal and Development Sites on West Campus. As further described in Chapter 2, the development sites on West Campus include vacant or undeveloped sites and certain parking lots. The surface parking in the north part of West Campus will be maintained and expanded to account for relocated surface parking from Main Campus.

Although there are a number of available large development sites on West Campus, near-term growth will be focused on the remaining large development sites with fewer logistical constraints on Main Campus. Identification of the long-term development opportunities on West Campus provides structure and clarity for future campus growth within and beyond the 15-year time frame of this Plan. The near-term plan is provided in more detail in Chapter 8 of this Plan.

The Renewal and Development Sites are subject to the same considerations and conditions as indicated on the Main Campus Plan. These are:

- The identification of **key building frontages** and intersections, to which entrance ways should be oriented and built to.
- **Historic buildings** (or portions of building) to be protected, either through incorporation into new development or facility renewal.
- **Required courtyard spaces** to be included in a building's design.
- Servicing access routes and building service zones.

For a fuller discussion of the intent behind these considerations, please see Section 5.3 of this document. A detailed discussion of these considerations at the precinct scale can be found in Part 2 of this document.

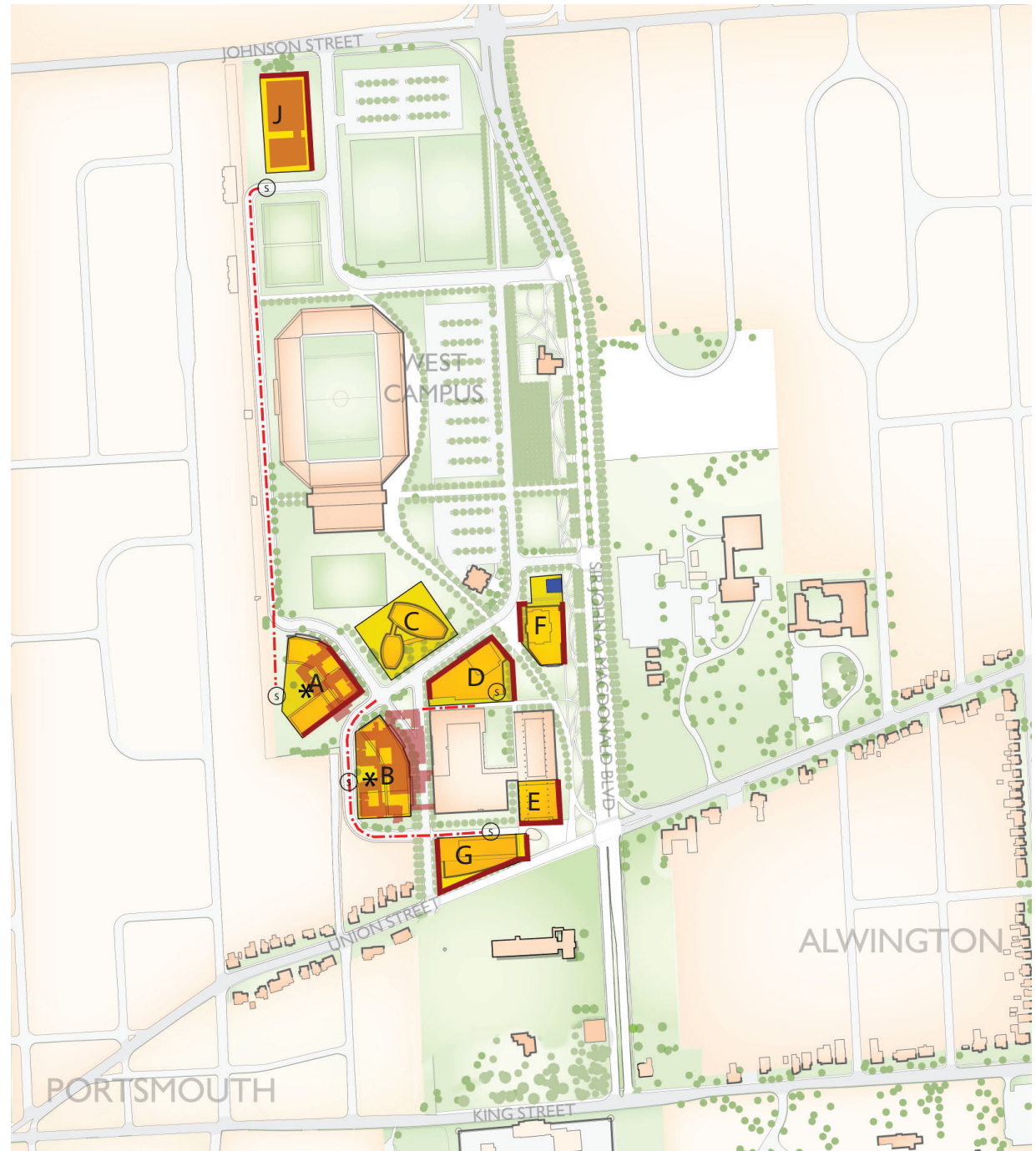
Recommendations

1. The development sites indicated in Figure 6-4 should guide the selection of sites for new development on West Campus.
2. New development will adhere to the considerations and conditions of development as indicated on Figure 6-4.

- Development Site
- Key Building Frontage
- Demolition - Due to Poor Facility Condition
- Demolition - Site Under Utilization
- Historic
- * Courtyard Space Required
- Proposed Service / Access Route
- S Proposed Service / Access Zone

Development Sites

- A Jean Royce North Site
- B Jean Royce South Site
- C South Practice Field Site
- D Refrigeration Plant Site
- E McArthur Hall Extension
- F Water Tower Site
- G Union and Hargreaves Way Site
- H Deleted
- I Deleted
- J Coastal Engineering and West Campus Storage Site



► Figure 6-4
West Campus Renewal
and Development

6.4 Open Space Network

Recommendations

There is substantial opportunity and need to improve the quality of open space on West Campus. The Open Space Network for West Campus consists primarily of proposed new spaces, and is organized by four landscape types, each with their own role and function.

Once complete, this network will form a varied open space network that greatly improves West Campus' sense of place and provides new opportunities for the Queen's and Kingston communities to enjoy.

The new open spaces provided in this section will be designed and implemented in conjunction with new development, as indicated as Enabling or Coordinated Projects in Part 2 of this Plan.

1. A Landscape Master Plan for West Campus should be developed as a comprehensive guide to landscape investment based on the landscape projects identified in this document. Landscape projects will be implemented according to University objectives and funding opportunities.
2. The open space projects described in this section will be designed and implemented in conjunction with new development, indicated as Enabling or Coordinated Projects in Part 2 of this Plan.
3. As a campus with a health and wellness focus, new open spaces on West Campus should consider features that promote physical activity or mental well-being, such as outdoor fitness equipment, a parcourse, walking or running trails, reflexology footpaths, or shaded and protected areas with flexible seating for outdoor activities and/or classes.
4. General Open Space Recommendations 3 - 8 of Section 5.4 regarding planting selections, surface treatments and maintenance of open spaces also apply to West Campus and should be adhered to in the planning for any new landscape project.

► Figure 6-5
**West Campus Open
Space Network**



Signature
Landscape



Formal Linear
Landscapes



New Plazas,
Courtyards and
Small Greens



Gateways





◀ Figure 6-6
Signature Landscapes

6.4.1 Signature Landscape

West Campus is in need of the same high quality open spaces that so many people cherish on Main Campus. To enhance the quality of place on West Campus is the proposition of a legacy signature landscape project — West Campus Green. This landscape, detailed on the following pages, will be a defining element of West Campus.

Landscape Projects:

A West Campus Green (L9)



University of Washington



Rice University

West Campus Green

West Campus Green will be a large scale linear park adjacent to Sir John A. Macdonald Boulevard. It will be experienced as a singular linear park, legible through common design elements, consisting of many distinct character areas. It will be a defining place on West Campus, as well as a significant gateway feature.

A continuous double row of trees will line Sir John A. Macdonald Boulevard, and will also frame the different components of the park, each with a distinct identity. These different components or zones will vary in active and passive uses such as formal gardens, parkettes, plazas, pavilions and small informal playing fields. Integrated with pedestrian, jogging and cycling paths, most notably Ceremonial Trail, (see Section 6.4.2), the West Campus Green will be both a destination in itself as well as a carrier of people to and from West Campus.

Recommendations

1. A double row of trees should be planted along the west side of Sir John A. Macdonald Boulevard with the dual purpose of buffering West Campus Green and defining Sir John A. Macdonald Boulevard.
2. West Campus Green should consist of a variety of character areas with distinctly different settings and uses. The themes, design, and programming of different character areas should honour past uses and reflect current needs. Such character areas may include spaces for active recreation (small playing fields), educational components (native species plantings), working landscapes, including agricultural demonstration areas and knowledge gardens
3. Tree plantings of the same species should act as a consistent design element unifying the different character areas.
4. The design of West Campus Green should be integrated with protected and comfortable pedestrian and cycling paths. Where these paths intercept with vehicle routes, formalized crossings or design treatments that prioritize pedestrians should be installed.
5. Buildings may be situated beyond a 30.0 meter setback from the Sir John A. Macdonald Boulevard right-of-way.

► Figure 6-7
West Campus
Green



Figure 6-8
Existing Condition



Figure 6-9
Proposed West Campus Green



Sir John A. Macdonald Boulevard



◀ Figure 6-10
Formal Linear
Landscapes

6.4.2 Formal Linear Landscapes

The landscape projects proposed for West Campus provide the opportunity to think holistically regarding the design of the open space and movement network. Formal Linear Landscapes consists of Walks (pedestrian routes integrated with landscaping and open space) as well as streetscapes.

As illustrated in Figure 6-10, the Linear Greens on West Campus consist of the following:

Landscape Projects:

- A** West Campus Walk (L10)
- B** Ceremonial Trail (L11)

Other Projects for Consideration:

- C** Union Street Improvements
- D** Entry Allée and Other Walks

The general recommendations for Formal Linear Landscapes, provided on Page 68 of the Main Campus Master Plan also apply to the Planning and design of Formal Linear Landscapes on West Campus.



Cornell University



University of Pennsylvania

West Campus Walk

Running parallel to Sir John A. Macdonald Boulevard, West Campus Walk will be the primary north-south direct pedestrian connection that carries pedestrians through the academic core of West Campus. If Duncan McArthur Hall is renewed, a portion of it may be a covered walkway through what is now the wing that connects it western and eastern halls .

Recommendations

1. The University should prepare a design plan for the West Campus Walk, considering a consistent paving treatment and landscape plan.
2. Ensure new development on West Campus reserves the right-of-way for the installation of West Campus Walk including the future development plans for the former Prison for Women site and the renewal of Duncan McArthur Hall.
3. Reconstruct the wing that connects the western and eastern portion of Duncan McArthur Hall into a covered walkway.
4. Special consideration should be given for the interface with squares and parks that intercept the walk. These spaces should provide visual and physical relief, as places to sit and rest, but should not disrupt with route's continuity. A consistent trail will be achieved through wayfinding, pavement treatments and architectural features such as archways.

► Figure 6-11
West Campus Walk
Perspective



Figure 6-12
Existing Condition



Figure 6-13
Proposed West Campus Walk



Landscape Project L11 Ceremonial Trail

The Ceremonial Walk celebrates the traditional procession from Main Campus to Richardson Memorial Stadium. The Ceremonial Walk will be a special paved route that diagonally bisects the campus, beginning at the southern foot of West Campus Green (see Section 6.4.1) and terminating at the north end of the Stadium, integrated with Athlete's Plaza (see Section 6.4.3). Its diagonal, meandering alignment stands as a contrast to the more linear designs that defines most of the other landscapes on West Campus. The Ceremonial Walk will be lined with trees to help define the walk and increase legibility.

Recommendations

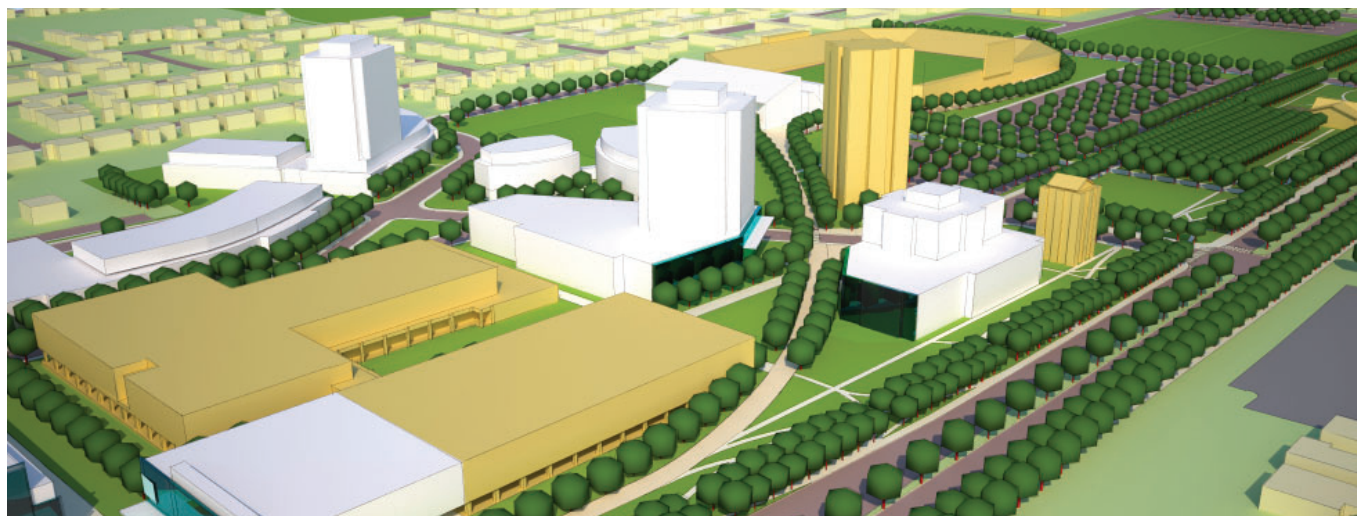
1. The University should prepare a design plan for the Ceremonial Trail, considering a consistent paving treatment and landscape plan.
2. In the design of Ceremonial Trail, consider methods to tell the history of Queen's and its traditions, including public art, signage or enhanced pavement design.



Figure 6-15
Existing Condition



Figure 6-16
Proposed Ceremonial Trail



▲ Figure 6-14
**West Campus Walk
Perspective**

Other Projects for Consideration

There are a number of other linear landscapes that have been positioned to terminate at key landmarks and destination on West Campus. Together they create a fine-grained pedestrian network, providing multiple opportunities to navigate the future expanded West Campus.

Entry Allée

Entry Allée is the most westerly north-south walk, providing access through residences and academic buildings.

Union Streetscape Improvements

Improvements to Union Street should be coordinated with the City and brought forward as part of the installation of West Campus Square. Any improvements should consider special design for the portion that runs through West Campus and should include a wide pedestrian right-of-way, street trees and other plantings, and opportunities for street furniture.



Figure 6-17
Plazas, Courtyards, and
Small Greens

6.4.3 Plazas, Courtyards and Small Greens

A variety of settings have been envisioned for West Campus to support life outside of the classroom or office. Plazas provide celebratory settings for gatherings and festivities, whereas courtyards and other small greens provide quieter settings for day-to-day activities.

As illustrated in Figure 6-17 the Plazas, Courtyards, and Small Greens consist of the following:

Landscape Projects:

- A West Campus Square (L12)
- B Athlete's Plaza (L13)
- C Mascot Plaza (L14)

The general recommendations for Plazas, Courtyards, and Small Greens, provided in Section 5.4.3 of the Main Campus Master Plan also apply to the planning and design of Formal Linear Landscapes on West Campus.



Ann Arbor



UCDS

West Campus Square

West Campus Square will be a new public plaza framed by Duncan McArthur Hall, a new Green corridor, and Union Street. It will be the centre of activity at West Campus as a meeting place, transit hub, access point to the Athletics Cluster, and as an interface with the broader Kingston community. The siting of new buildings around West Campus Square will define the square and provide a sense of enclosure to the space.

A central pavilion and water feature will provide a landmark element framing this important gateway into West Campus. West Campus Square will also provide amenities for the shuttle that connects to Main Campus.

Recommendations

1. A landscape and renewal plan should be developed to address the recommendations described herein.
2. A uniform design scheme should be installed around the square as well as the streetscape itself. This may be achieved through special pavement treatments, uniform landscaping, or common street furniture.
3. West Campus Square may contain a central pavilion offering services for students, faculty, staff and Kingston community members such as a cafe.
4. A high quality public art or water feature should be incorporated in the West Campus Square design. Preference should be made to art that celebrates the University's history, culture, and heritage, or a topic complementary to West Campus' health and wellness focus..
5. Weather protection, such as bus shelters or tree plantings should be integrated with transit waiting areas.
6. A variety of seating choices should be offered throughout West Campus Square, with ample seating opportunities (either in the form of benches or integrated into planters or public art) near transit waiting areas.

► Figure 6-18
**West Campus
Square Perspective**

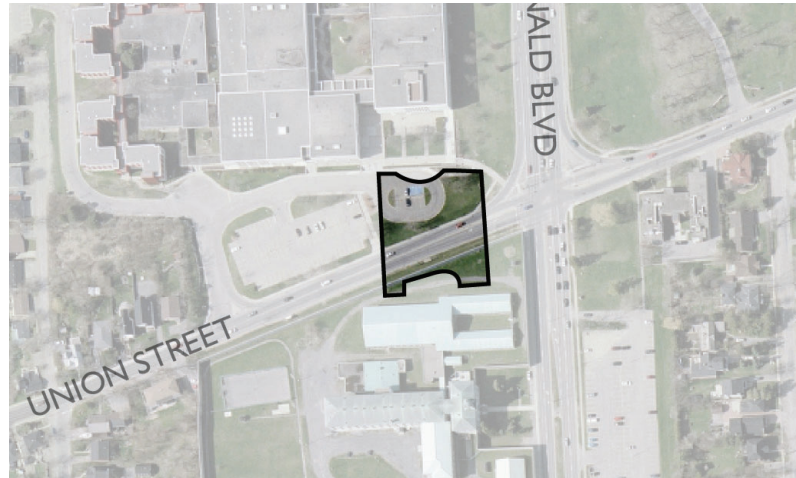


Figure 6-19
Existing Condition

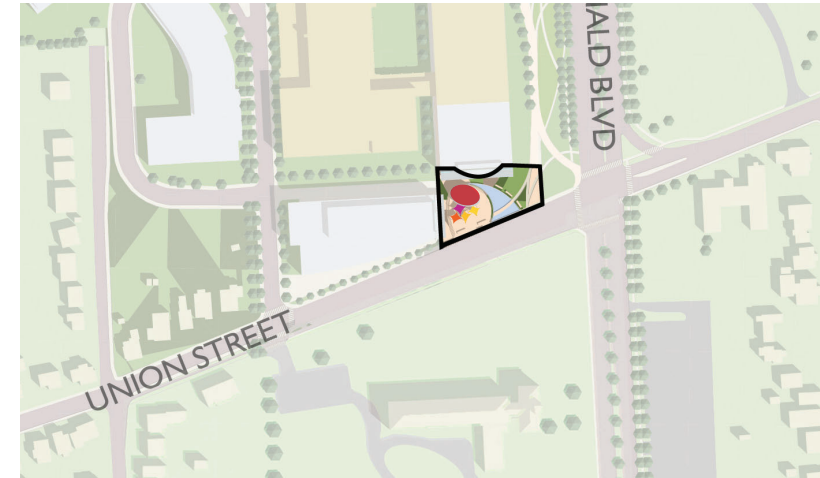
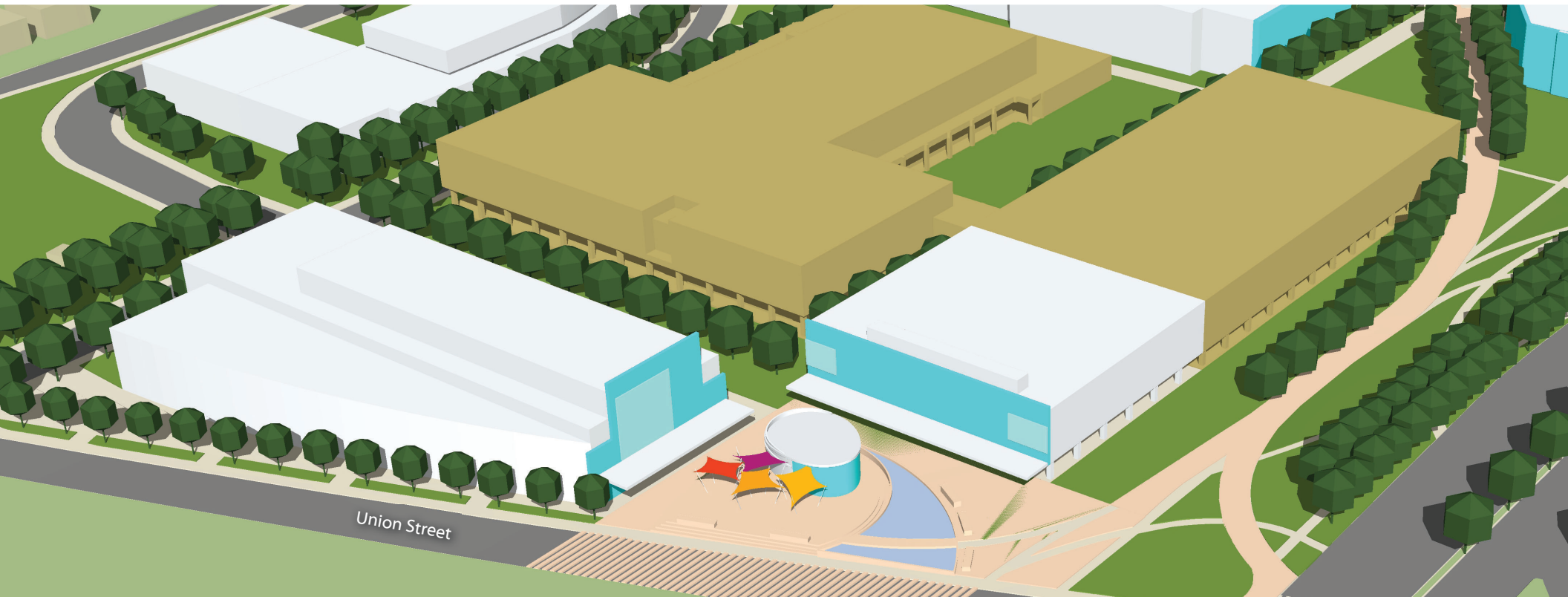


Figure 6-20
Proposed West Campus Square



Landscape Project L13 Athlete's Plaza

Athlete's Plaza, located adjacent to the expanded Richardson Stadium will be a meeting place closely associated with sporting events. It should contain street furniture that supports the activities associated with sporting events, such as picnic tables and seating. Its design should consider its integration with the Ceremonial Trail, and include wayfinding measures such as common pavement treatment or signage.

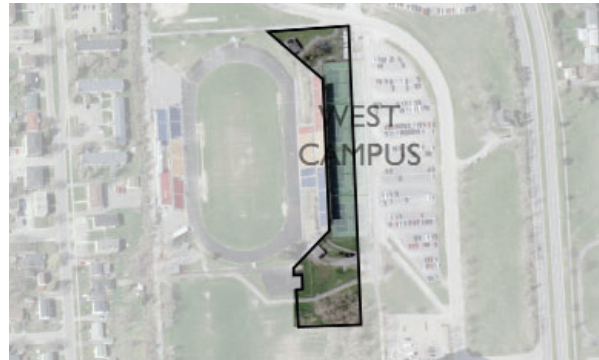


Figure 6-21
Existing Condition

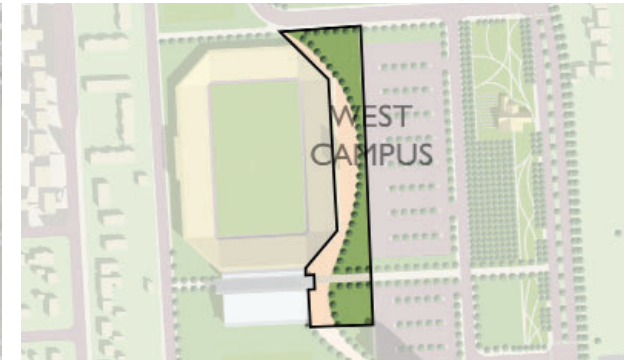


Figure 6-22
Proposed Mascot Plaza



Figure 6-23
Mascot Plaza Perspective

Landscape Project L14
Mascot Plaza

Located amongst residences and academic buildings, Mascot Plaza will be the backyard for West Campus students and should be designed as an enclosed, comfortable flexible space that can be used for many purposes.



Figure 6-24
Existing Condition



Figure 6-25
Proposed Mascot Plaza



Figure 6-26
Mascot Plaza Perspective

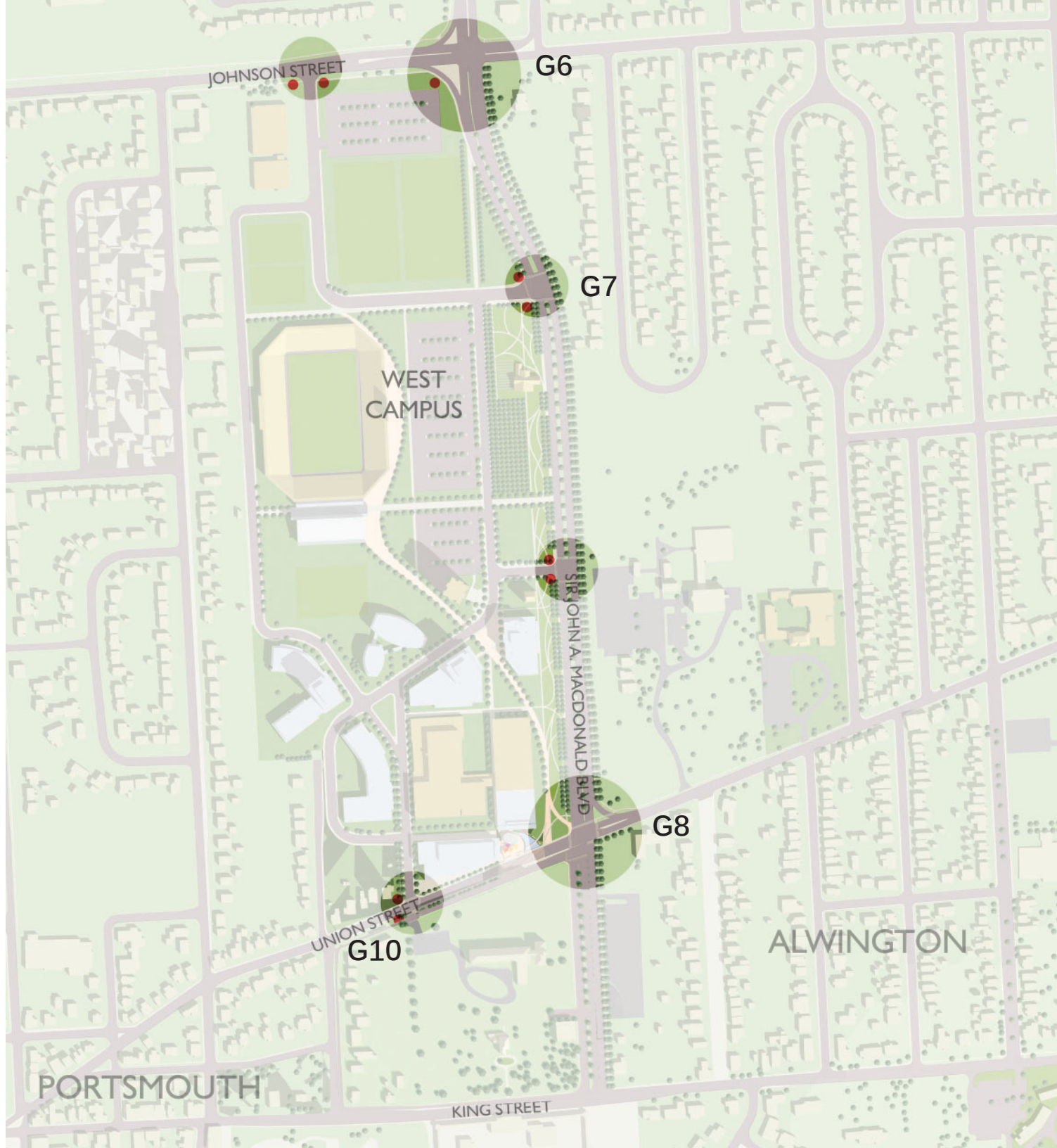


Figure 6-27
Gateways

6.4.4 Gateways

For many first time visitors to Kingston, West Campus is the first encounter with the Queen's Campus. For that reason, enhancing the gateways on West Campus – the places within the larger open space network that mark the transition from City to the campus – should be considered of particular importance.

The plan on the opposite page illustrates two primary gateways, to be the sites of larger scale improvements such as public art, signage and special landscaping, and a number of secondary gateways, which should receive enhanced landscaping attention, but will not provide the same grand sense of arrival.

Sir John A. Macdonald Blvd. / Johnson Street Gateway (G6)

This intersection is the first encounter with Queen's from the Sir John A. Macdonald Boulevard Highway 401 Exit and North Kingston. As this corner will remain open space, the gateway's elements will be achieved through special landscaping, as well as the views of new architectural features such as the new stadium. The University should revisit the existing sign at this location and incorporate a gateway element and better pedestrian access into the streetscape design of Sir John A. Macdonald Boulevard as well as the West Campus Green

Sir John A. Macdonald Blvd. / Coach's Lane Gateway (G7)

This will be a new gateway that can be implemented as part of the installation of Coach's Lane (detailed in Section 6.5.2). It is the first access point to West Campus when traveling south on Sir John A. Macdonald Boulevard and provides access to the northern surface parking lots.

Sir John A. Macdonald Blvd. / Union Street Gateway (G8)

This is the primary entryway to West Campus from Main Campus. West Campus Square will be a gateway in the form of a great public space, and its role as a gateway should be considered in its design.

Union Street / Hargreaves Way Gateway (G10)

The Union Street and Hargreaves Way Gateway signals entry from Kingston's west end. While secondary in importance to the Sir John A. Macdonald Boulevard and Union Street Gateway, it will provide opportunity to implement entry features such as special landscaping or signage as part of its redesign. Improvements here should be complementary and coordinated with any improvements to Union Street.

6.4.5 Summary of West Campus Landscape Projects

The plan on the opposite page compiles the array of landscape projects described in this section. The new landscape projects in this project will be incorporated into new development projects or infrastructure renewal, or may simply evolve incrementally over time.

Their integration with new development, as well as other design and implementation considerations, are described in further detail in Part 2 of this Plan.

Signature Landscapes

L9 West Campus Green

Formal Linear Landscapes

L10 West Campus Walk

L11 Ceremonial Trail

Plazas, Courtyards and Small Greens

L12 West Campus Square

L13 Athlete's Plaza

L14 Mascot Square

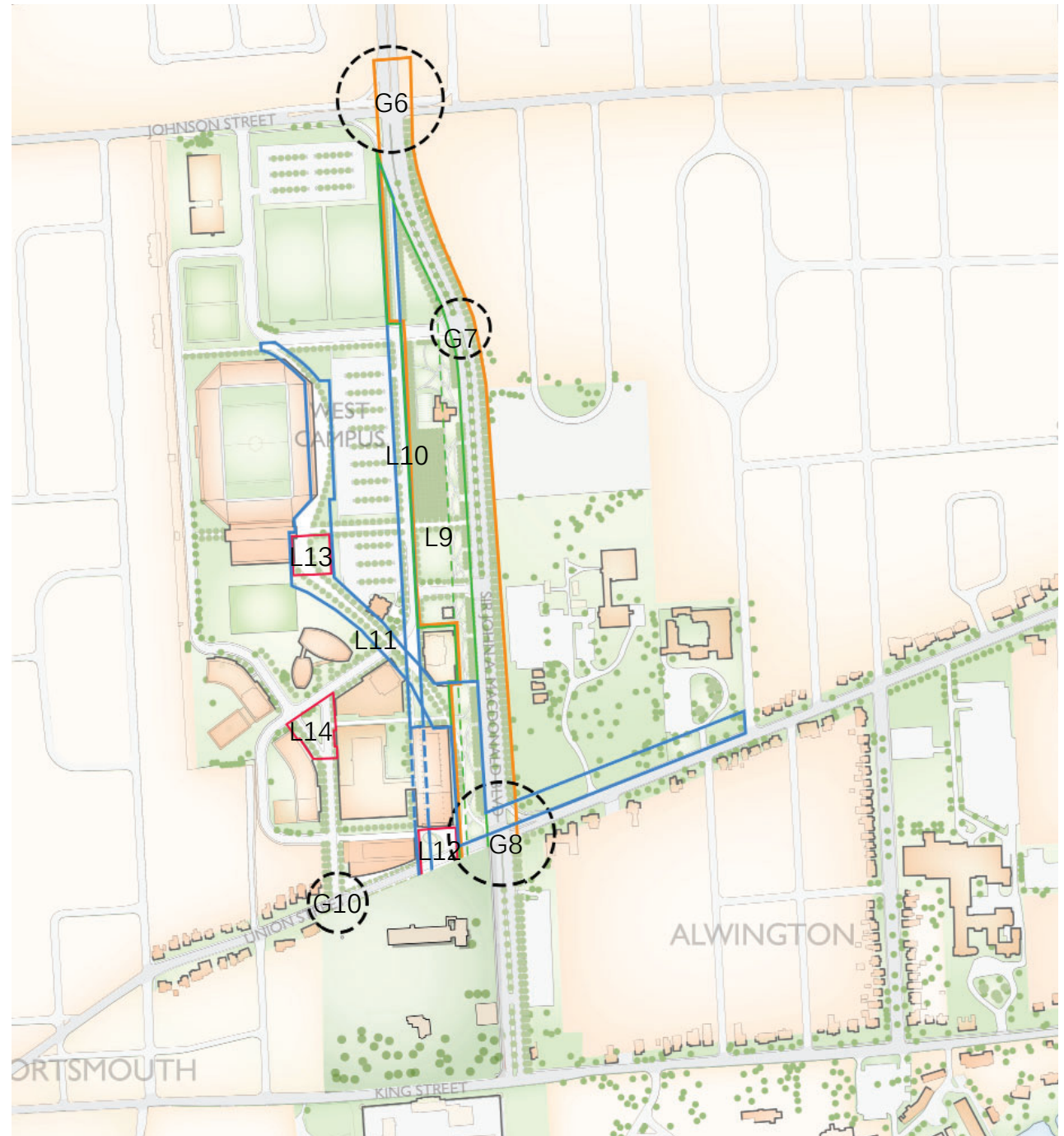
Gateways

G6 Sir John A. Macdonald Blvd. / Johnston Street Gateway

G7 Sir John A. Macdonald Blvd. / Coach's Lane Gateway

G8 Sir John A. Macdonald Blvd. / Union Street Gateway

G10 Union Street / Hargreaves Way Gateway



► Figure 6-28
West Campus Landscape
Projects Summary

6.5 Movement

Great University campuses are highly walkable places, balancing all modes of transportation. While the movement network today on West Campus is sufficient to serve the limited places that exist today, as it develops further, it will be imperative that the street and pathway network is expanded to create more movement options for pedestrians and cyclists, and ensure good vehicular flow.

The proposed movement networks introduce new streets, laneways, pedestrian, jogging, and cycling routes to support West Campus' future role as a compact, 24 hour campus. A particular priority is to better connect the northern and southern portions of campus for pedestrians, cyclists, transit, and private vehicles.

6.5.1 Pedestrian Network

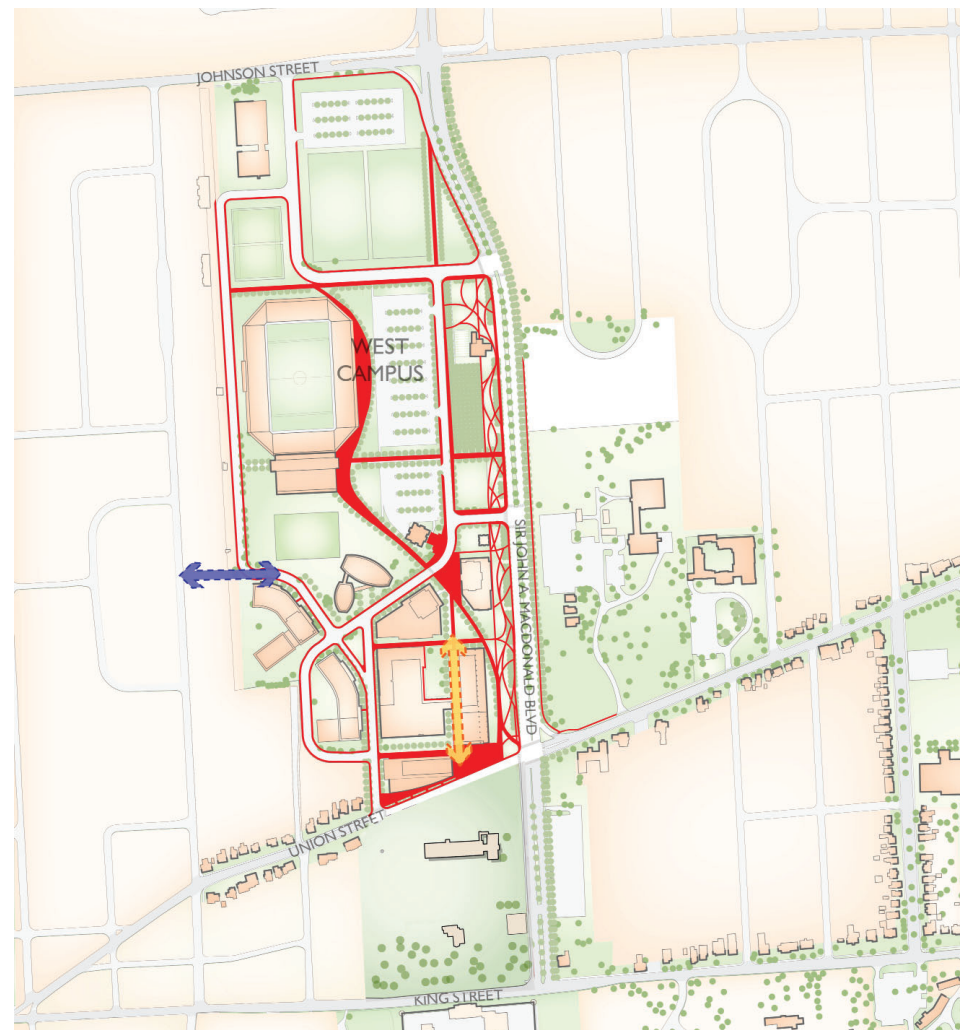
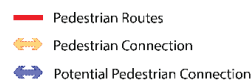
An expanded pedestrian network on West Campus will consist of a number of new walks weaving between new campus buildings as well as the addition of sidewalks to existing campus streets. Together, the pedestrian network will provide a fine-grained network of paths similar in scale as Main Campus forming a safe and thorough system for getting around campus. The crosswalk enhancements described in 6.6.2 will ensure the vehicle and pedestrian networks are carefully integrated. As with Main Campus, newer, larger buildings will be designed as an extension of the exterior fine-grained pedestrian network, providing internal hallways that align with the pedestrian network, and design features that facilitate clear through movement.

Individual design considerations and individually specific characteristics of new walks and pedestrian paths illustration on Figure 6-29 are described in detail in the Formal Linear Landscapes Section of the West Campus Master Plan (see Section 6.4.2). The general recommendations regarding the design and considerations of formal linear landscapes, as described in Section 5.4.3 also apply to the design of all new pathways. The installation of these walks are considered landscape projects, and should be implemented with adjacent new development or renewal projects.

Recommendations

1. The enhancement of existing sidewalks and paths on West Campus should be considered a priority in order to ensure a safe, walkable, and accessible environment. Enhancements should aim to create protected and inviting routes. Design considerations should include:
 - Continuous, identifiable paving
 - Framing and protective elements such as trees or planting
 - The incorporation of street furniture such as benches to provide places to rest. These should be located on either side of the path but should not obstruct the pedestrian right-of-way
 - Regard for Design for Crime Prevention through Environmental Design principles
2. Pedestrian activity should remain at grade and be designed in accordance with Queen's Accessibility Guidelines to accommodate those with mobility-related disabilities.

3. Walks and Pedestrian Pathways should be aligned with one another to ensure a continuous and co-ordinated network. Any new walk or re-alignment of an existing walk should be designed to join with other components of the pedestrian network.
4. To provide safe, well-lit routes, install pedestrian-scaled lighting along pedestrian routes either as stand-alone structures or as part of adjacent buildings.
5. When designing new buildings, ensure the placements of entries and exits align with existing pedestrian routes as illustrated on Figure 6-29. Entry ways should utilize transparent materials to provide a sense of porosity to the new building, indicating a pedestrian through-way.
6. As West Campus intensifies, preserve a right-of-way for a potential future connection to Yonge Street. This connection will provide access from the West and support pedestrian and cycling activity.



▶ Figure 6-29
**West Campus
 Pedestrian Network**

6.5.2 Street Network

An expanded street network will support the new places and destinations on West Campus and provide more movement options through West Campus. A number of expansions to the street network will be realized over time as West Campus evolves. As with Main Campus, streets on West Campus are also be part of the open space and pedestrian networks, and should incorporate safe and attractive design consisting of continuous sidewalks and accommodating different modes of travel.

A re-alignment of Hargreaves Way at the northern edge will allow for an increase in surface parking to accommodate relocated parking from Main Campus. As more surface parking is located in the northern portion of West Campus, additional minor streets will connect with Sir John A. Macdonald Boulevard to provide access points. In addition, a number of service lanes will be extended and redesigned as streets with sidewalks and will provide more vehicular routes throughout campus, supporting not only private vehicles but also the proposed campus circulator. The relocation of parking and the campus circulator project are described in detail in Section 4.2.

Expansion of the Street Network

Figure 6-30 indicates the future street network of West Campus. The street reconfigurations and

extensions will be realized in conjunction with new development and are therefore indicated as infrastructure projects. The following is a list of these projects and the intent behind them:

- A new north-south street will be formed by the extension of the existing service lane between Jean Royce Hall and Duncan McArthur Hall to meet Hargreaves Way.
- The extension of Stadium Lane south to meet with the new north-south street previously discussed will create more interconnection on campus.
- A new east-west Connection extending from Hargreaves Way to Sir John A. Macdonald Boulevard (north to the existing access street) will be a necessary additional access point to the surface parking on West Campus. As new athletics facilities are built here, this street will provide additional access during games.
- The current vacant land parcel where Campus Lane angles northwest provides an opportunity to link with Yonge Street in the Portsmouth neighbourhood to the west of West Campus. As a mixed-use campus containing non-University uses, this will be a key infrastructure move to increase connectivity with adjacent neighbourhoods.

New Intersections and Intersection Improvements

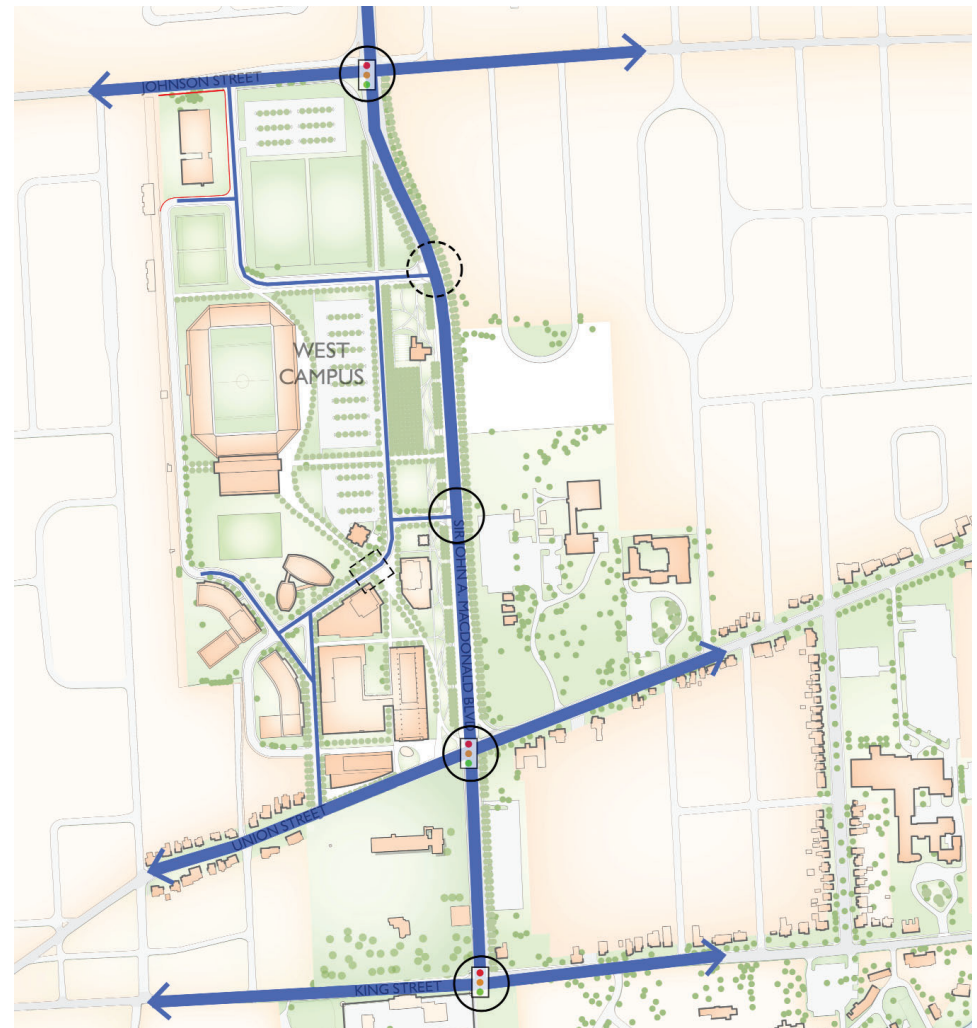
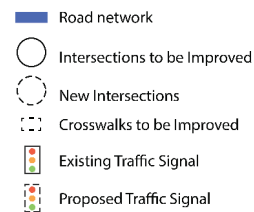
A number of intersection and crosswalk improvements will provide pedestrian safety and priority. Figure 6-30 indicates new intersections (located where new east-west streets connect with Sir John A. Macdonald Boulevard) as well as intersections to be improved.

For existing and new intersections that intersect with Sir John A. Macdonald Boulevard, a reconfiguring of Sir John A. Macdonald Boulevard's median to allow left turns in and out of the new streets is proposed. Allowing full access will be necessary as the intensity of uses on West Campus increases.

Other crosswalks to be improved are indicated where pedestrian paths intersect with roads. Clearer priority for the pedestrian should be reinforced here through special paving, painted lines, or signage. These principles should also be assigned to new intersections that are introduced with the installation of new pedestrian paths as described in Section 6.5.2.

Recommendations

1. Prioritize pedestrian, bicycle and transit activity in the improvement and creation of all West Campus streets and advocate for these modes of transportation in any projects involving city streets.
2. To achieve better access to West Campus, advocate to the City of Kingston for the removal of the centre median on Sir John A. Macdonald Boulevard where new intersection and crosswalks improvements are indicated on Figure 6-30.



► Figure 6-30
**West Campus
Street Network**

6.5.3 Parking

West Campus currently contains surface parking lots that provide day parking for Queen's and Kingston General Hospital staff as well as parking for athletic events. The parking strategy provided in Chapter 4 recommends that as parking is displaced from Main Campus (as a result of new development) replacement parking should be added to the existing supply on West Campus, contiguous to the existing lots. The increase in parking should be supported by new access streets to Sir John A. Macdonald Boulevard, illustrated in Section 6.5.2.

New underground or structured parking is not anticipated on West Campus, due to high construction costs and the large supply of land available for surface parking. However, opportunities to share structured parking should be explored with any private development partnerships that occur south of Union Street.

In the near term, future development sites on West Campus may be used as surface parking to provide spaces closer to the location of activities at the south end of the campus. Any new surface parking

should receive enhanced landscape treatment (e.g. landscaped pedestrian paths, increased tree cover, pedestrian-scale lighting, smaller parking modules) to better reflect the quality of campus and ensure a safe pedestrian experience.

Recommendations

1. Any new surface parking should comply with the design direction provided in Section 7.1.7 and receive enhanced landscape treatment (e.g. landscaped pedestrian paths, increased tree cover, pedestrian-scale lighting, smaller parking modules) to better reflect the quality of campus and ensure a safe pedestrian experience.

6.5.4 Cycling Network

As a campus with a health and wellness focus, the infrastructure and facilities for cyclists on West Campus must be extensive and well-considered. It may also be an appropriate location for a dedicated space to advocate cycling or provide repair services.

The cycling network on West Campus consists of:

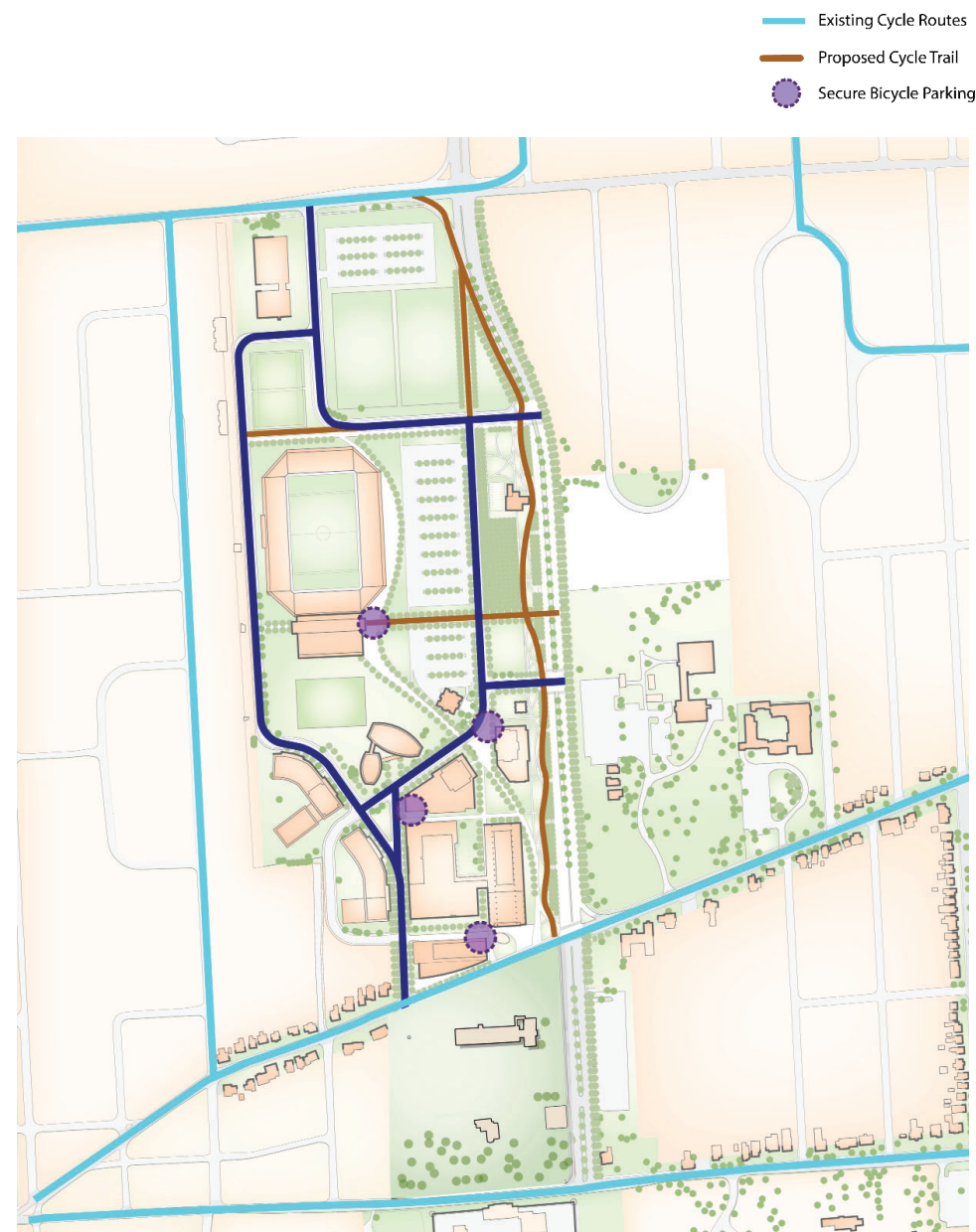
- The existing on-street cycling route on Union Street;
- One Proposed Cycling Trail that will be incorporated into the design of the West Campus Green;
- Design enhancements to existing streets that indicate the right-of-ways for cyclists through various forms, whether it be painted lanes or sharrows.

Figure 6-31 illustrates the location of these cycling network components, as well as Potential Bike Parking Areas, and Enhanced Bicycle Parking Facilities. As described in detail in Section 5.5.4, Potential Bike Parking areas indicate roadside locations for bike racks, posts, or rings and Enhanced Bicycle Parking Facilities refers to higher-security bicycle parking such as bike lockers or bike cages. With many new development sites located on West Campus, there is a great opportunity to incorporate these facilities into new facilities.

As a key entryway to West Campus from Union Street and a Student Life Cluster, West Campus Square should contain ample bicycle parking. However, bicycle parking structures should be located at the periphery of the square, so it doesn't obstruct views or pedestrian movement patterns.

Recommendations

1. Ensure a comprehensive bicycle network consisting of safe, prioritized areas for cyclists throughout West Campus.
2. Locate a concentration of cycling facilities at the future West Campus Square to promote cycling as a preferred mode of transportation between Main and West Campus.
3. On streets indicated as Proposed Cycling Routes on Figure 6-31, ensure frequent bicycle parking in the form of bike posts, rings or racks located within 20 metres of cycling routes.
4. Include bicycle parking considerations in site planning for new developments including secure bike lockers, bike cages, and shower facilities.
5. Guided by Figure 6-31, incorporate installation locations for Enhanced bicycle parking facilities as part of the cycling parking strategy, recommended in Section 4.3.



▲ Figure 6-31
West Campus Cycling Network

6.5.5 Servicing Network

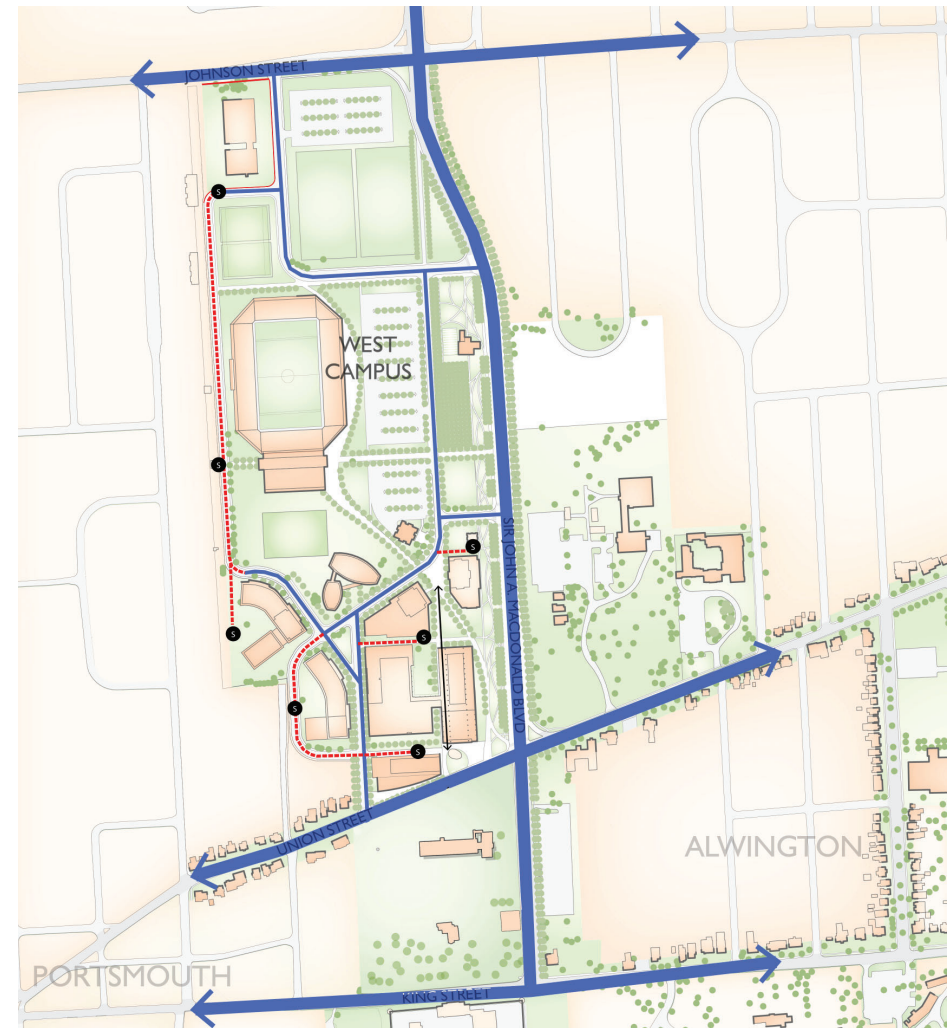
A comprehensive servicing strategy ensures the future functionality of West Campus, while maintaining a safe pedestrian environment.

As with Main Campus, a number of service routes and service locations have been identified in the drawing to the right, as well as service zones that can accommodate more significant loading and “back-of-house” uses. The design of servicing functions needs to be thoughtfully considered and designed, so as not to disrupt the image and the quality of the campus setting.

Recommendations

1. Design building service areas to be oriented to service routes, screened from view and, where possible, integrated into buildings.
2. Consolidated service routes should be designed to ensure appropriate service and truck access to campus facilities.
3. Where service routes overlap the pedestrian network, they should be designed as high quality pedestrian spaces to discourage unsafe vehicular behaviour and reinforce the pedestrian nature of campus.
4. Explore opportunities for a central receiving facility and works yard at the northern periphery of campus.
5. In the design of a new stadium, ensure access for service and emergency vehicles is provided to support physical activity and events.

- Service Lane
- Service Area
- Road Network



► Figure 6-32
West Campus
Servicing

6.5.6 Summary of West Campus Movement Projects

The plan on the opposite page compiles the array of movement projects described in this section. Their integration with new development, as well as other design and implementation considerations, are described in Part 2 of this Plan.

Movement Projects:

- M6** Extension and Realignment of Hargreaves Way
- M7** Coach's Lane / Sir John A. Macdonald Blvd. Intersection
- M8** Water Tower Lane / Sir John A. Macdonald Blvd. Intersection Improvements



Figure 6-33
Movement Projects

6.6 Utilities

The redevelopment identified as part of this Plan will affect and require upgrades to the existing utilities which support Main Campus and West Campus.

In addition to the base utilities, and understanding Queen's strong commitment to sustainability, there is also an opportunity to implement further upgrades to increase energy efficiency and develop a more resilient power system that can withstand severe weather events.

This section identifies the existing systems and proposed solutions for:

1. Main Utilities (Water, Gas, Sanitary and Storm)
2. Power
3. Heating and Cooling

Each recommendation is focused on the underlying goals and objectives of the University and based on their long term vision.

6.6.1 Main Utilities (Water, Gas, Sanitary and Storm Sewers)

A 250 mm diameter sanitary sewer on Stadium Lane is the main wastewater collector for the West Campus servicing the bathrooms surrounding the athletic fields, the Jean Royce Hall buildings, Orr Tower, the Refrigeration Plant and portions of McArthur Hall. There are also two 150 mm diameter connections to the south side of McArthur Hall, which connect directly to the 200 mm diameter sanitary sewer on Union Avenue. Based on available servicing data, there does not appear to be any combined sewers on the West Campus.

The majority of stormwater flows from the West Campus drain to Yonge Street, via a storm sewer system that spans most of the campus and culminates with a 525 mm diameter storm sewer on Stadium Lane. In general terms, drainage is collected in the southern portion of the West Campus via catch-basins which are connected to storm sewers, however the northern portion of the West Campus has several open swales and culverts around the athletic fields, which eventually direct surface flows into the Stadium Lane sewer system. Small drainage areas on

the south end of West Campus are connected to the existing 450 mm diameter storm sewer on Union Street West.

A 300 mm diameter watermain on Sir John A. Macdonald Boulevard provides the main water service for West Campus. Secondary water services are provided by a 250 mm connection on Union Street and a 300 mm connection that runs between McArthur Hall and the Refrigeration Plant, ultimately connecting to the water-main on Yonge Street via Stadium Lane.

The coastal Engineering Lab in the northwest corner of West Campus is independently serviced from the remainder of the campus, making local sanitary, water and storm connections to the municipal utilities on Johnson Street.

The Donald Gordon Centre and associated parking has an independent servicing system. A storm sewer collection system culminates by tying into a 300 mm diameter combined sewer on Pembroke Street. Sanitary and water servicing are from College Street.

6.6.2 Electrical Power Distribution

Recommendations

1. Municipal engineering staff should be engaged early in the development process in order to understand the level of servicing analysis that will be required to support the approval process. Depending on development timelines and the level of intensification proposed, the municipality may request a comprehensive Functional Servicing Report for the entire West Campus rather than separate smaller reports that focus only on local development applications.
2. Stormwater management solutions should attempt to take advantage of the existing open spaces that are available throughout the West Campus, where possible. Low Impact Development features such as infiltration ditches, bioswales, ponds and wetlands should be considered as they will result in cost savings relative to traditional underground stormwater management solutions, they could potentially provide learning opportunities for students and they will minimize the strain on municipal systems by promoting infiltration.

West Campus power system is fully utilized. Like Main Campus, West Campus power distribution system incorporates several levels of redundancy. Buildings are typically fed through a loop distribution system on 5kV; with each building fed from two separate sources. Redevelopment, renovation, or change of building type will result in power increase; new substation will likely be required. This is due to the agreement with the City of Kingston, which limits the amount of high voltage power available to Queen's without the construction of high voltage transformation station.

Recommendations

1. As new development on West Campus is realized, the University should reexamine the West Campus Power Supply study which was completed October 2006, with respect to redevelopment and new buildings included in this Plan. The installation of a new substation would need to be coordinated with Kingston Utilities and the City of Kingston.

6.6.3 Heating and Cooling

Recommendations

The existing heating and cooling systems which support the West campus are described in Section 5.6 of this document.

Heat is provided to the buildings on campus via the West steam line stemming from the central steam plant on Main Campus. The line is approximately 40 years old and in poor condition.

Cooling is provided by a dedicated central chilled water plant located on the West Campus.

1. The recommendations for heating and cooling both Main Campus and West Campus have been considered holistically, however, based on the geographical separation, it is suggested the West Campus to be a satellite system, separate from the Main Campus. The short, medium and long term recommendations identified in Section 5.6 provide more detail for these stand-alone West Campus systems.
2. Additionally, the recommendation for building upgrades (existing and new construction) identified in Chapter 5, are strategies which are applicable to facilities on both campuses. The technologies suggested for further investigation and consideration can also implemented on either campus depending on their feasibility.

