

Algonquin College

Master Campus Development Plan

December 2024 *FINAL DRAFT*



ALGONQUIN
COLLEGE



URBAN
STRATEGIES
INC .

grc architects



Table of Contents

LAND ACKNOWLEDGEMENT

PART I: INTRODUCTION AND PRINCIPLES

1. INTRODUCTION

1.1 Purpose of the Master Campus Development Plan	1
1.2 The Study Process	3
1.3 How the Plan is Organized	5
1.4 How the Plan Will Be Implemented	6

2. GUIDING PRINCIPLES

2.1 Guiding Principles	9
2.2 Sustainability	12

PART II: OTTAWA CAMPUS

3. PLANNING CONTEXT

3.1 Brief History of the Ottawa Campus	18
3.2 The Campus's Setting	20
3.3 City of Ottawa Official Plan	26
3.4 Zoning	27
3.5 Opportunities and Challenges	28

4. BIG MOVES AND LONG-TERM VISION

4.1 Big Moves	33
4.2 Long-Term Vision	36

5. CAMPUS FRAMEWORK PLANS

5.1 Vehicular Access and Streetscapes	44
5.2 Active Transportation	52
5.3 Campus Entrances	58
5.4 Internal Circulation	60

5.5 Open Space and Public Realm	62
5.6 Land Use	68
5.7 Development Sites	72
5.8 Parking	74
5.9 Energy and Decarbonization Strategy	76
5.10 Electricity System	82
5.11 Heating and Cooling Systems	83
5.12 Stormwater Management	84
5.13 Water and Wastewater	88
5.14 Demonstration Plan	91

6. DEVELOPMENT GUIDELINES

6.1 General Guidelines	93
6.2 Site-Specific Guidelines	96

7. DEVELOPMENT STRATEGY

7.1 New Facilities	128
7.2 Other Near-term Initiatives	134

PART III: PEMBROKE AND PERTH CAMPUSES

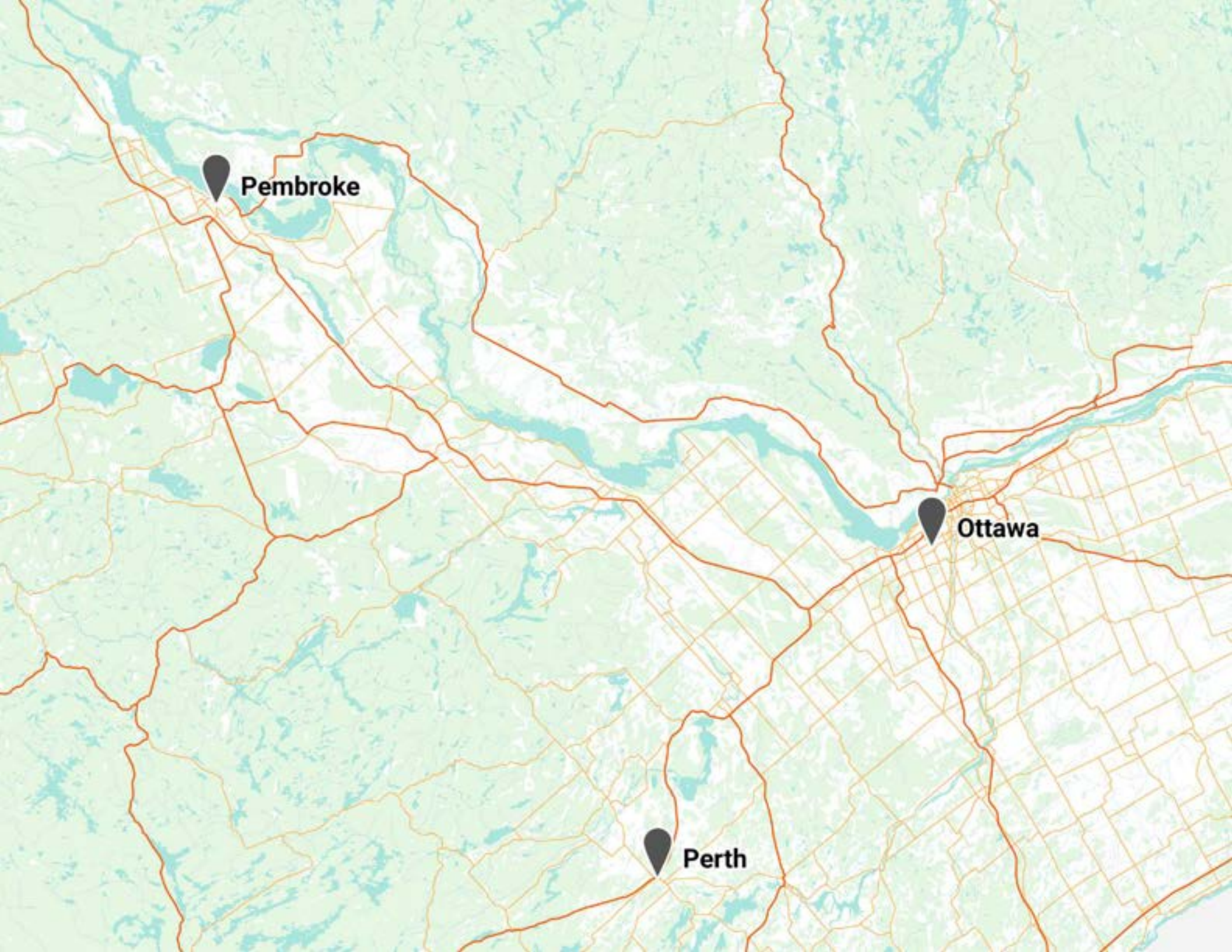
8. PEMBROKE CAMPUS

8.1 Planning Context	142
8.2 Environmental and Land Use Framework	146
8.3 Development Sites and Public Realm Opportunities	147
8.4 Demonstration Plan	149

9. PERTH CAMPUS

9.1 Planning Context	152
9.2 Environmental and Land Use Framework	156
9.3 Development Sites	157

Acknowledgements



Pembroke

Ottawa

Perth

LAND ACKNOWLEDGEMENT

Algonquin College campuses in Ottawa, Perth and Pembroke are located on the traditional unceded, and unsurrendered territory of the Anishinàbe Algonquin People. The Algonquin People have inhabited and cared for these lands since time immemorial. We take this time to express our gratitude and respect to them and to the land for all that it has provided and will continue to provide.

As a post-secondary institution, we acknowledge the harms done to Indigenous peoples and are committed to learning from the past. We pledge to promote healing and resilience as we move forward in partnership with the Algonquin Nations, First Nations, Métis, and Inuit peoples in a spirit of reconciliation.

While we recognize that territorial acknowledgements are only one step in cultivating greater respect and inclusion of Indigenous Peoples, we commit to accompanying these words with actions. We are dedicated to building a future and community that is better for all.

We pledge to continue exploring and making meaningful contributions to the Truth and Reconciliation Commission of Canada's Calls to Action.

PART I: Introduction and Principles

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Robert C. Gillett Student Commons

1. Introduction

1.1 PURPOSE OF THE MASTER CAMPUS DEVELOPMENT PLAN

The purpose of the Master Campus Development Plan (MCDP) is to guide the evolution of Algonquin College’s three physical campuses over the next 10 years and beyond with new buildings, infrastructure and open spaces. Within a long-term vision, the MCDP will guide decisions about campus investments, including short-term initiatives to replace facilities at the end of their life, accommodate future growth and generally improve the campuses.

Algonquin College has served the Eastern Ontario region as a centre for education and training since 1967, and attracts learners internationally. Approximately 21,300 learners were enrolled at the College full-time in 2023 (2023-2024 Annual Report), a third of whom were from overseas. These enrolment figures will increase as the Ottawa region continues to grow and more international learners choose to study at the College. Both full-time and part-time learners take advantage of AC Online, the innovative virtual campus established in 2019. Approximately 58,900 full- and part-time learners are enrolled in AC Online.

The MCDP’s overarching goal is to ensure Algonquin College’s physical campuses are attractive, innovative and efficient and maintain high-quality environments for learning, teaching, working and living. The campus frameworks and guidelines described and illustrated in the plan allow the College to respond to a full range of potential facility needs and development opportunities while ensuring each new initiative contributes to a cohesive, long-term vision.

Taking a strategic approach to development, the MCDP recommends a series of initiatives to upgrade existing facilities, support enrolment growth over the next 5-10 years, and generally improve the campus experience for learners, employees and community members. In addition to sites for academic facilities, the plan identifies potential sites for student housing in standalone residences or mixed-use buildings. New and enhanced open spaces are also a focus of the plan, since they contribute to a positive campus experience, a healthy natural environment and personal wellbeing.

In guiding future campus development, the MCDP addresses the pressing need to replace older buildings on the Ottawa Campus reaching the end of their useful life and costly to maintain in the long term. In this regard, and others, the MCDP emphasizes sustainable development and the ongoing need to address deferred maintenance on all three campuses.

In focusing on the three existing physical campuses, the MCDP recognizes the College may pursue opportunities to establish facilities in other locations where there would be clear benefits to learners and the ability to create campus communities of learners and employees.

ALGONQUIN COLLEGE STRATEGIC PLAN

The MCDP supports Algonquin College's Strategic Plan 2022-2025, which states the College's mission, vision and values and establishes strategic directions and goals to guide future decisions.

Our Mission

To transform hopes and dreams into lifelong success.

Our Vision

To be a global leader in personalized, digitally connected, experiential learning.

Our Values

- **Caring:** We have a sincere and compassionate interest in the well-being of the individual.
- **Learning:** We believe in the pursuit of knowledge, personal growth and development.
- **Integrity:** We believe in trust, honesty and fairness in all relationships and transactions.
- **Respect:** We value the dignity and uniqueness of the individual. We value the equity and diversity in our community.

The plan's Strategic Directions are "Learner-driven" and "People". Algonquin College exists to serve the learners, and their needs are embedded in every decision made at the College. The People who work at the College deliver the learner experience, and they need to be empowered to achieve the goals of this plan.

The other foundational themes of the Strategic Plan are indigenization, agility and flexibility, focus, connected, sustainable, innovation and quality. The goals of the plan are:

1. Provide flexible, personalized and lifelong learner experiences.
2. Empower our people to foster a high-quality, innovative learner, driven culture.
3. Create an equitable, diverse and inclusive work environment.

The College is currently undertaking an new Strategic Plan for 2025 and beyond.

1.2 THE STUDY PROCESS



May 2024 Engagement Event at the Ottawa Campus

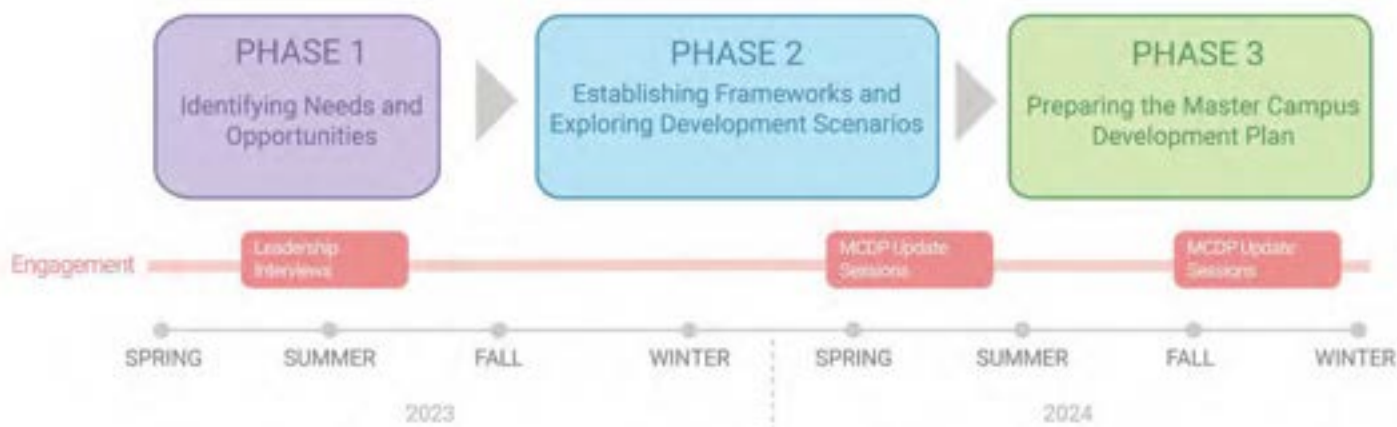


November 2024 Engagement Event at the Ottawa Campus

The MCDP was developed through a highly consultative process over 18 months beginning in 2023 and followed a separate study in 2019-2020 to update general planning principles applicable to all three of Algonquin College's physical campuses. The MCDP process involved three phases of work. In Phase 1, workshops were held with College leadership to understand the potential for short-term enrolment growth, programming priorities and facility needs. Based on input from leadership and its own analysis, the consultant team identified space requirements and opportunities to improve the three campuses. In Phase 2, potential short-term development scenarios were explored in the context of emerging frameworks to guide growth and change on each campus over the long term. The outcomes of Phases 1 and 2, together with the planning principles adopted by the Board of Governors in 2020, provided the basis for preparing the MCDP in Phase 3.

Engagement with not only College leadership but also the communities of learners and employees on each campus and their home communities was fundamental to ensuring the MCDP was informed by a broad range of perspectives on the opportunities and challenges facing each campus:

- Interviews were conducted with the College’s deans, the president, vice presidents and directors early in the planning process.
- An MCDP Working Group comprised of academic and administrative leaders as well as municipal officials was engaged monthly to review and discuss work on the plan as it progressed.
- The Algonquin College Leadership Team (ACLT) and Algonquin College Executive Team (ACET) were consulted routinely for feedback and direction.
- The Board of Governors provided input at sessions held in October 2023.
- Representatives from the College’s Indigenous communities were consulted in sessions with staff at the Mamidosewin Centre and the Indigenous Education Council (IEC).
- Meetings were held with officials from the City of Ottawa, the City of Pembroke and the Town of Perth.
- An online survey was conducted in the fall of 2023 to invite input from learners and employees, a second survey invited feedback on the emerging directions for the MCDP in the spring of 2024 and in the fall of 2024 a survey invited feedback from learners, employees and the public on the final directions for the MCDP.
- In May 2024, a hybrid engagement session with learners and employees on the Ottawa Campus was also used to gather feedback on the emerging directions for the plan. This was followed by virtual sessions with employees on the Pembroke and Perth campuses.
- In November 2024, an engagement session with learners and employees and another session with the public were held at the Ottawa Campus to gather feedback on the final directions for the plan. Sessions with employees and stakeholders were also held at the Pembroke Campus.
- A meeting was held with the Cityview Community Association in November 2024 to discuss the final directions and feedback on the plan.



Master Planning Process

1.3 HOW THE PLAN IS ORGANIZED

The MCDP is divided into three parts and nine chapters. Part I introduces the plan and sets out the Guiding Principles that provide a foundation for all planning at the College. Part II provides context, a framework, guidelines and a development strategy for the future of the Ottawa Campus, and Part III focuses on the Pembroke and Perth campuses.

Since it is the oldest, largest and most complex of the College's three physical campuses, and where most of the College's future growth will take place, the MCDP devotes five chapters to the Ottawa Campus and provides more detailed direction for its future development. Chapter 3 examines the campus's dynamic planning context, and Chapter 4 identifies "Big Moves" intended to address the larger issues and opportunities it faces. Chapter 5 then illustrates and describes the framework for future development in terms of transportation, open space and utility networks and land use zones, followed in Chapter 6 by guidelines for future development sites within the framework. Chapter 7 proposes a near-term development strategy intended to begin implementing the Big Moves and ensure the College has the facilities it needs to accommodate enrolment growth and enhanced programs.

In contrast, the Pembroke and Perth campuses are much newer and smaller, and the main buildings on each have capacity to accommodate new programs and enrolment growth. Changes on the two campuses are expected to be relatively modest but potentially significant in how they improve facilities for learning, teaching, working and gathering. After summarizing the planning context for each campus, the MCDP outlines frameworks and identifies potential initiatives to pursue on the two campuses over the next 10 years .

1.4 HOW THE PLAN WILL BE IMPLEMENTED

As a guide for developing and improving Algonquin College's three physical campuses, the MCDP will be used regularly to assist in formulating, assessing, designing and approving capital projects. Initiatives identified in the plan will be the subject of detailed planning and concept design before being brought forward for review and approval based on the College's priorities for each campus and available funding. Initiatives not explicitly identified in the plan will be assessed against its principles, vision, frameworks and guidelines to ensure alignment before advancing to detailed planning and concept design. Projects should be checked against the plan at various stages, including program development, site selection, concept design, approval and design development.

All campus development projects will be expected to demonstrate consistency with the MCDP when presented to the Executive Team and the Board of Governors for approval.

It is expected municipal staff will review major projects requiring municipal planning approvals against the MCDP. Such projects should also demonstrate conformity with the local official plan and applicable zoning and guidelines, except where variances supported by the MCDP are proposed.

WHO SHOULD USE THE PLAN

The MCDP is intended to be used by anyone involved, or with an interest, in the future development of Algonquin College's physical campuses, including:

- Facilities Management staff, who will use the plan to guide more detailed facilities planning and evaluate proposals for new or improved facilities;
- Academic and administrative leaders at the College seeking to understand where and how proposals for new facilities and other improvements may be accommodated;
- Architects, landscape architects, engineers and other professionals involved in the planning and design of future buildings, open spaces and infrastructure;
- Learners, employees, alumni, neighbouring residents and the broader public wishing to understand the changes being planned and considered on each campus;
- Municipal officials seeking to understand how the future of each campus may support and benefit from broader city/town-building initiatives, and who are responsible for reviewing proposed campus developments;
- Senior leaders at the College and the Board of Governors responsible for evaluating and approving proposed development projects.

Users of the MCDP are strongly encouraged to become familiar with all chapters of the plan, so they clearly understand the short-term and long-term goals behind its recommendations and appreciate the interrelationships between the various aspects of the plan.

2. Guiding Principles

2.1 GUIDING PRINCIPLES

In 2019, Algonquin College initiated an update to the Integrated Campus Development Planning (ICDP) Framework Principles that had been guiding development initiatives and decisions on all three physical campuses for the previous five years. Following consultation with College leadership, new principles were drafted and shared with learners and employees at interactive open houses held on all three campuses for feedback. In March 2020, the Board of Governors adopted the final updated principles.

The new ICDP Framework Principles relate to and tie together four “Capacity Pillars” that inform project planning—Space, Technology, People and Finance. They embody the College’s core values and are relevant to all departments and disciplines. As such, they provide a foundation for the MCDP and will be applied during the planning and evaluation of proposed projects intended to enhance each campus, including but not limited to new or upgraded facilities, technologies and services. The intent is to ensure the College achieves its mission and strategic goals and responds effectively to changes in pedagogy, technology and society in general.





FLEXIBILITY AND AGILITY

- Develop environments that meet the needs of students, staff and the community
- Optimize existing facilities and technology
- Provide spaces and infrastructure that are adaptable and secure
- Facilitate personalized learning



COLLABORATION AND PARTNERSHIPS

- Expand opportunities for experiential learning in the community
- Support and leverage partnerships with industry, communities and alumni
- Facilitate cross-disciplinary and inter-campus learning
- Embrace and support Truth and Reconciliation



STEWARDSHIP AND SUSTAINABILITY

- Reduce the College's carbon footprint
- Maintain and improve existing useful, valued and adaptable facilities
- Assess the full lifecycle costs and benefits of proposed projects
- Incorporate natural features and functions in built environments



COMMUNITY AND CONNECTIVITY

- Develop campuses that are welcoming, navigable and safe
- Be visible and accessible to the community
- Support community well-being and local economic development
- Celebrate the College's social and cultural diversity



IDENTITY AND PLACE

- Create inviting, inclusive and memorable places
- Building complete, 24/7 campuses for learning, working and living
- Promote healthy communities and personal well-being
- Reinforce the College's identity in all campus environments

2.2 SUSTAINABILITY



Algonquin College is committed to sustainability and has developed a framework to guide actions, practices and decisions that will reduce the College's ecological footprint, among other goals. The MCDP reinforces goals within the environmental pillar of sustainability by addressing how all aspects of the campus's infrastructure should be developed and improved.



Mobility

Increasing the proportion of learners and employees who commute to campus by public transit, cycling or walking will reduce greenhouse gas options. The Draft MCDP is based on a framework of campus streets, multi-use paths, internal connections and other infrastructure that will encourage these alternatives to the private vehicle. For those whose only option is to drive to campus, future parking facilities are directed to include charging stations for electric vehicles.



Energy

The College's Energy and Emissions Strategy aims for a 37% reduction by 2030 in the total energy usage from the 2005 baseline. The strategy also identifies a goal of an 80% reduction of the 2005 baseline GHG emissions by 2050. The MCDP supports these goals by listing a range of measures for decarbonizing or reducing the carbon footprint of existing and future buildings. The plan also provides guidance for retrofitting and modernizing the campus's cogeneration plant, specifically identifying options for sustainable energy sources to replace natural gas.



Greening the Campus

More trees, other vegetation and green spaces generally will enhance the ecological wellbeing of the campus and mitigate the heat island effect that contributes to global warming. These goals, along with making the campus more inviting and usable, are fundamental to the open space plan. The plan calls for greener landscapes around existing and future buildings. Over time, surface parking will gradually be reduced or replaced with structured parking below or above ground.



Water

Recent development on the campus has achieved high standards for sustainability, including water conservation. This will continue with future buildings under the MCDP. Onsite low impact development (LID) measures, such as rain gardens and bioretention, will reduce runoff and reliance on municipal infrastructure. Low-maintenance, drought-resistant landscaping will also help to conserve water.



Green Buildings

Carbon emissions will be reduced and potentially eliminated with new buildings and other infrastructure. More broadly, the College strives for LEED Gold certification with major new buildings. The LEED standards will be replaced or complemented by Humber College's Green Building Standards, which represent best practice tailored to colleges and other institutions. These will apply to major renovations and retrofits, in addition to new buildings.

PART II: Ottawa Campus

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Jack Doyle
Athletics and Recreation Centre

3. Planning Context

Future development of the Ottawa Campus will be driven by the facilities needed to support the programs essential to its mission and by improvements needed to enhance the campus experience for learners, employees and community members. The campus's growth and evolution also must respond to its historical development, existing conditions both on campus and in the surroundings, and the City of Ottawa's Official Plan for the area as well as zoning regulations. These considerations make up the planning context summarized in this chapter, which concludes with a discussion on the challenges and opportunities facing the campus.



3.1 BRIEF HISTORY OF THE OTTAWA CAMPUS

Algonquin College was established in 1967 following the merging of the Ontario Vocational Centre and the Eastern Ontario Institute of Technology. The former opened in 1965 on Woodroffe Avenue while the latter was located at the former Rideau Campus. When the Rideau Campus closed in 2002, its programs moved to the Woodroffe site, reinforcing the Ottawa Campus as the College’s flagship location.

When the College first opened, much of the campus lands today and its surroundings were farmland, but the suburban community of Nepean quickly developed around the campus. As the College’s programs expanded and enrolment increased, the campus steadily grew to the east and became a complex of interconnected buildings. Residences for more than 1,000 learners were built in the early 2000s, and in 2011, the campus expanded across Woodroffe Avenue with the Algonquin Centre for Construction Excellence. The Student Commons (2012), the DARE District (2018) and Athletics and Recreation Centre (2021) have made the campus more complete by offering more amenities for learners and employees.

Today, the College offers bachelor's degrees, diplomas and certificates in a range of disciplines and is widely recognized for its research, innovation and sustainability initiatives. The Ottawa Campus has 20 buildings of varying age and architectural style, containing 1.6 million square feet of space. Almost 18,000 full-time and part-time learners are enrolled in programs at the campus and close to 2,200 full-time employees work there.

With many buildings more than 40 years old and some more than 50, the Ottawa Campus is at a turning point: Rather than continuing to expand outward, the College needs to begin replacing outdated buildings on underutilized sites with sustainable, higher-density buildings.

2015 MASTER CAMPUS DEVELOPMENT PLAN

This MCDP builds upon and replaces the Five-Year Woodroffe Master Campus Development Plan prepared by the College in 2015. The previous MCDP identified opportunities to better integrate the campus with the surrounding city, make it more attractive and easier to navigate, and reinforce a sense of community for learners studying and living on campus. The plan recognized the challenge of maintaining older buildings and focused on renewal and revitalization, identifying portions of Building A and Building C as priorities for investment and redevelopment. In taking a longer-term view of campus development, the 2025 MCDP carries forward many of the themes and ideas in the 2015 plan.

Campus Statistics	
Campus Size	91.5 acres
Learners (full- and part-time)*	17,815
Employees (full-time equivalent)	2,165
Student Residence Beds	1,036
Buildings	20

Enrolment numbers provided by Educations Consulting Services Corp.
*Students on campus based on Winter 2023 enrolment

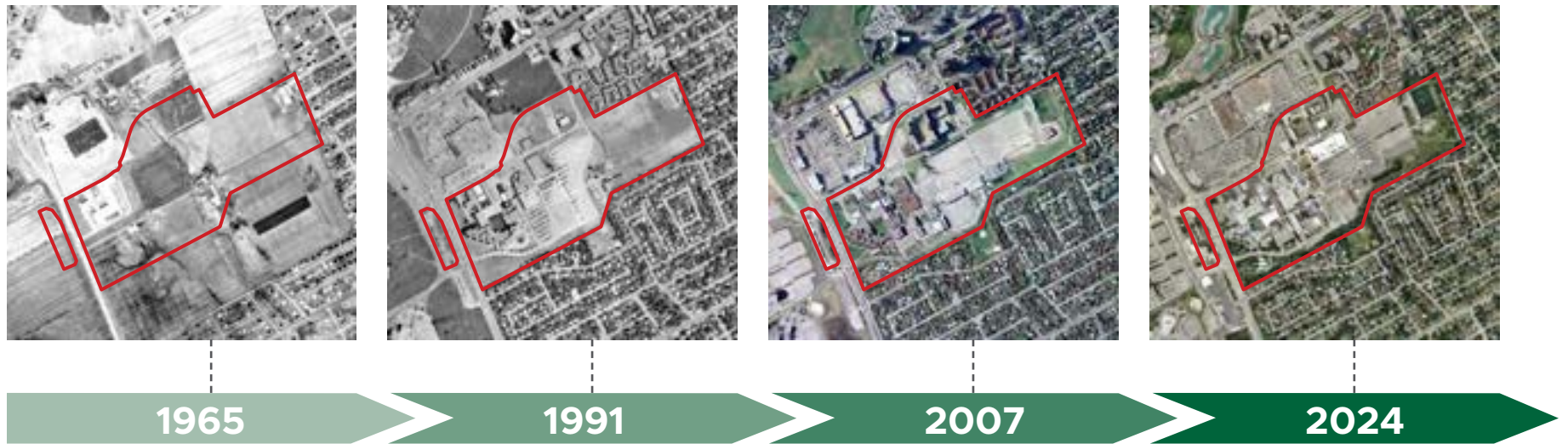


Figure 1. Timeline of Campus Expansion

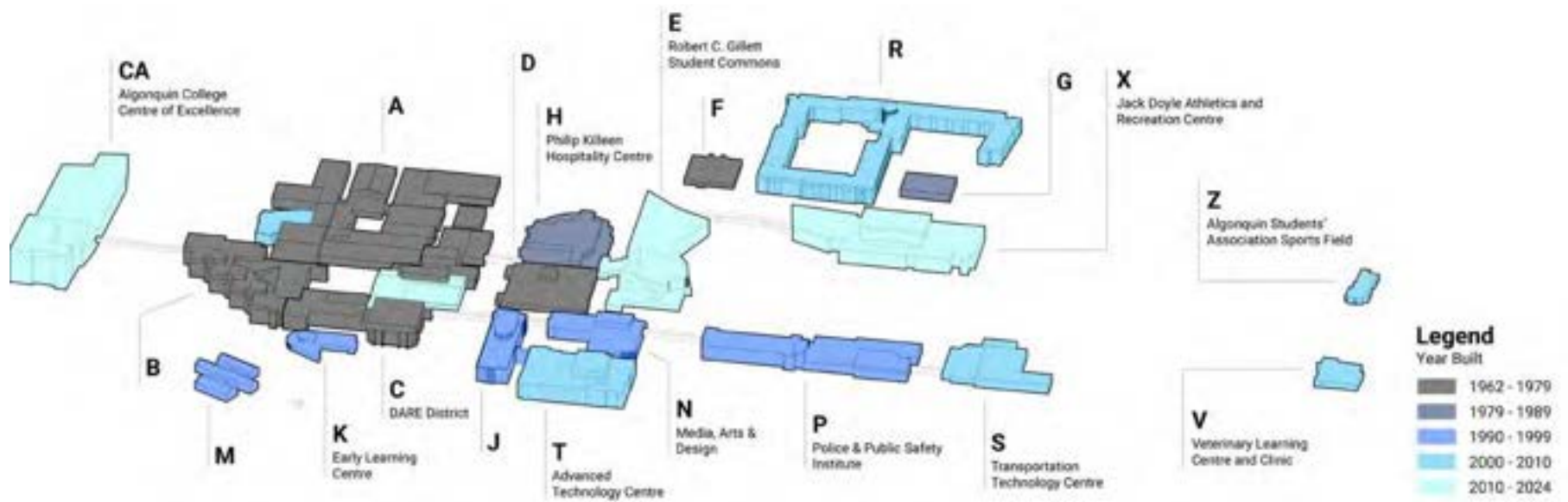


Figure 2. Campus Buildings and Their Age

3.2 THE CAMPUS'S SETTING



Figure 3. Ottawa Campus Lands and Surrounding Areas

The Ottawa Campus is located in the City View Neighbourhood within the former City of Nepean, now part of Ottawa. Much of the campus's surroundings are physically stable, but the area as a whole centred on the future Algonquin Station is expected to see significant change in the coming decades. Campus development will need to continue to respect the character of the neighbourhoods to the east and south and at the same time anticipate and complement the intensification of lands to the north and west.

SURROUNDING LAND USES

To the immediate north of the Woodroffe Campus is the College Square retail plaza, a suburban-style retail area of one-storey commercial buildings and large areas of surface parking. College Square includes two anchor stores, Home Depot and a Loblaws grocery store. It also offers a range of restaurants and other retail offerings patronized by learners and employees of the College. Also north of the campus is Navaho Homes, a residential neighbourhood comprised of townhomes and apartment buildings.

To the west of the campus is the CentrepoinTE neighbourhood, home to provincial and municipal offices, a public library, a performing arts centres, Sir Guy Carleton Secondary School and large areas of surface parking.

Under the City's Official Plan, discussed below, College Square and the underutilized public and private lands west of Woodroffe Avenue are anticipated to redevelop over time with a mix of uses at high densities to take advantage of coming improvements in rapid transit.

South and east of the campus is the City View neighbourhood comprised of one- and two-storey detached homes. Formal and informal pathways through Ryan Farm Park and at the terminus of Lotta Avenue, Côte-des-Neiges Road, Tower Road and Rita Avenue provide access to the campus from the neighbourhood.

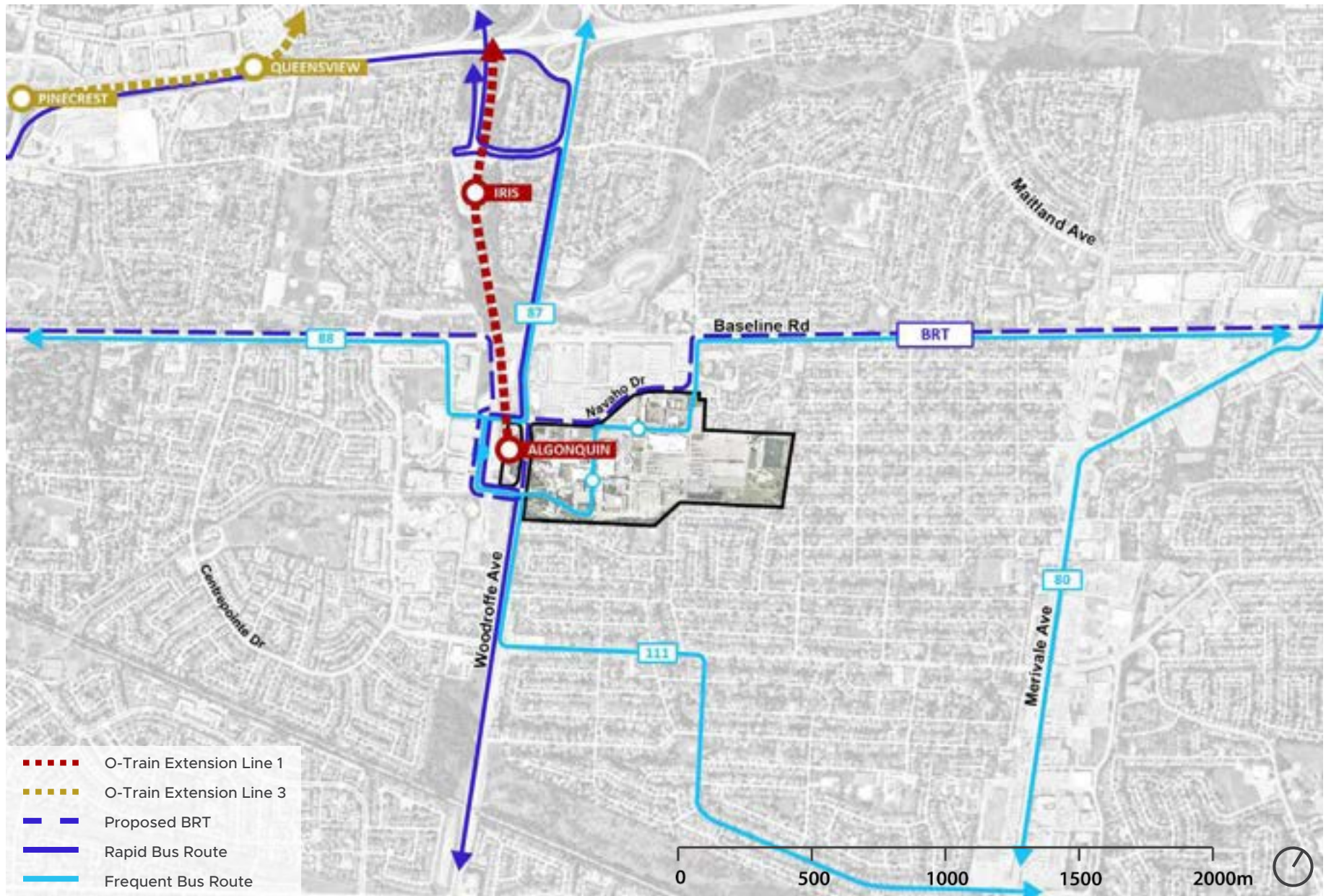


Figure 4. Existing and Planned Public Transit Serving the Ottawa Campus

PUBLIC TRANSIT

The campus is served by several bus routes that stop on Transitway and the 88 Bus, which travels through campus with stops on Wajashk and Nigig. Transit access to the campus will improve significantly with the extension of the O-Train Line 1 to the future Algonquin Station, expected to be in service late 2026. The station's southern entrance and bus rapid transit terminal will connect directly to the ACCE Building via a pedestrian bridge. In addition, the City is moving forward with plans for the Baseline Transitway, a Bus Rapid Transit (BRT) line mostly within a dedicated right-of-way that will travel along Navaho Drive adjacent to the campus, with stops at Wajashk and Algonquin Station. When operational, the 88 Bus will travel along the BRT route and will no longer travel through the campus.



Figure 5. LRT Expansion



Figure 6. Planned Baseline BRT Route



Figure 7. Open Space and Active Transportation Routes

OPEN SPACE NETWORK AND ACTIVE TRANSPORTATION

The campus is within a network of open spaces and trails that branches through neighbourhoods to the north, northeast and west. These open spaces and trails include the Experimental Farm Pathway, the Pinecrest Creek Pathway, multiple hydro corridor rights-of-way and the Nepean Trail, serving both commuters and recreational trail users. The City View Neighbourhood contains several small local parks. Pinecrest Park and Centrepointe Park are two major recreational parks close to campus.

The campus is located at the intersection of several active transportation routes that connect the area to destinations in all directions. Planned bike lanes along Baseline Road and Woodroffe Avenue will connect cyclists to nearby transit stops, commercial centres, ravine open spaces and other community amenities. The Baseline Transitway initiative includes cycle tracks on both sides of Navaho Drive, continuing along Baseline Road.

Future development of both the campus and lands to the north and west will create opportunities to enhance connections within the area's networks of open spaces and active transportation infrastructure.

3.3 CITY OF OTTAWA OFFICIAL PLAN

The City of Ottawa Official Plan, approved by Council in November 2021 and by the Province a year later, is the City’s policy document that guides growth and development to 2046. By 2046 the population for the City is expected to increase by over 300,000 people to a total of 1.4 million people. The plan identifies Algonquin College’s campus and much of its surroundings for strategic intensification over time. Key designations and policies that apply to the campus are summarized below.

Hubs: The campus and adjacent areas to the north and west are identified as a Hub in the Official Plan. Hubs are planned as areas around existing or future transit stations that will intensify over time with high-density mixed-use development. Hubs are also intended to become the places for major employment uses. The Official Plan allows buildings up to 40 storeys in Hubs.

Mainstreet Corridors: Woodroffe Avenue is designated as a Mainstreet Corridor. The designation applies to the lots abutting the corridor up to 220 metres in depth from the centreline of the street. Mainstreet Corridors are planned for intensification with a mix of uses including office and potentially commercial uses at the ground level. The Official Plan allows buildings up to 40 storeys along Mainstreet Corridors.

Minor Corridors: Navaho Drive is designated as a Minor Corridor. The designation applies to the lots abutting the corridor up to 120 metres in depth from the centreline of the street. Minor Corridors are also planned for intensification with a mix of uses. The Official Plan allows buildings up to 6 storeys along Minor Corridors.

Evolving neighbourhoods: Areas adjacent to the campus are designated as evolving neighbourhoods. Evolving neighbourhoods are expected to gradually evolve from suburban development to a more urban built form over time.



- Open Space
- Evolving Neighbourhood
- Main Street Corridor
- Hub

Building on the general policies of the Official Plan, the City will be initiating a more detailed Secondary Plan for the area around Algonquin Station in 2025. The MCDP will provide input to the Secondary Plan, and the College will be an active participant in the planning process to help ensure the vision and policies for the larger area are coordinated with the MCDP.

3.4 ZONING

In the City's current Zoning By-Law, the Ottawa Campus is zoned Major Institutional (I2). The uses permitted in an I2 zone include (but are not limited to) post-secondary institutions, community and recreation centres, day cares, libraries, museums, parks, recreational facilities and training centres. Residential uses are permitted as an ancillary use if they are on the same lot as a post-secondary institution. The zoning does not set a maximum height for buildings in the I2 zone unless buildings are within 12 metres of a residential R1, R2 or R3 zone, where the height limit is 15 metres. The campus is surrounded by mostly mixed-use and commercial zones to the north and west and residential zones to the east and south.

The City of Ottawa is currently drafting a new zoning by-law, which will be considered for approval in 2025. The new by-law will implement policies and directions in the City's new Official Plan, which proposes an ambitious growth and density strategy. In the current Draft Zoning By-Law, the campus's zoning remains Institutional, but some sites surrounding the College are rezoned to permit a greater mix of uses and higher-density development.

3.5 OPPORTUNITIES AND CHALLENGES



The Ottawa Campus today has many assets that support the College’s diverse programs, contribute to a generally positive campus experience, and attract learners and employees. Newer buildings stand out for their architecture and high-quality facilities, including Algonquin Centre for Construction Excellence (ACCE), the Robert C Gillett Student Commons, the DARE (Discovery, Applied Research, and

Entrepreneurship) District and the Jack Doyle Athletics and Recreation Centre (ARC). Other valued facilities are located throughout the campus. These assets are acknowledged in the MCDP and inform where future changes are planned. In providing guidance for future growth and improvement of the campus, the MCDP addresses the following challenges and opportunities.

DEFERRED CAPITAL RENEWAL

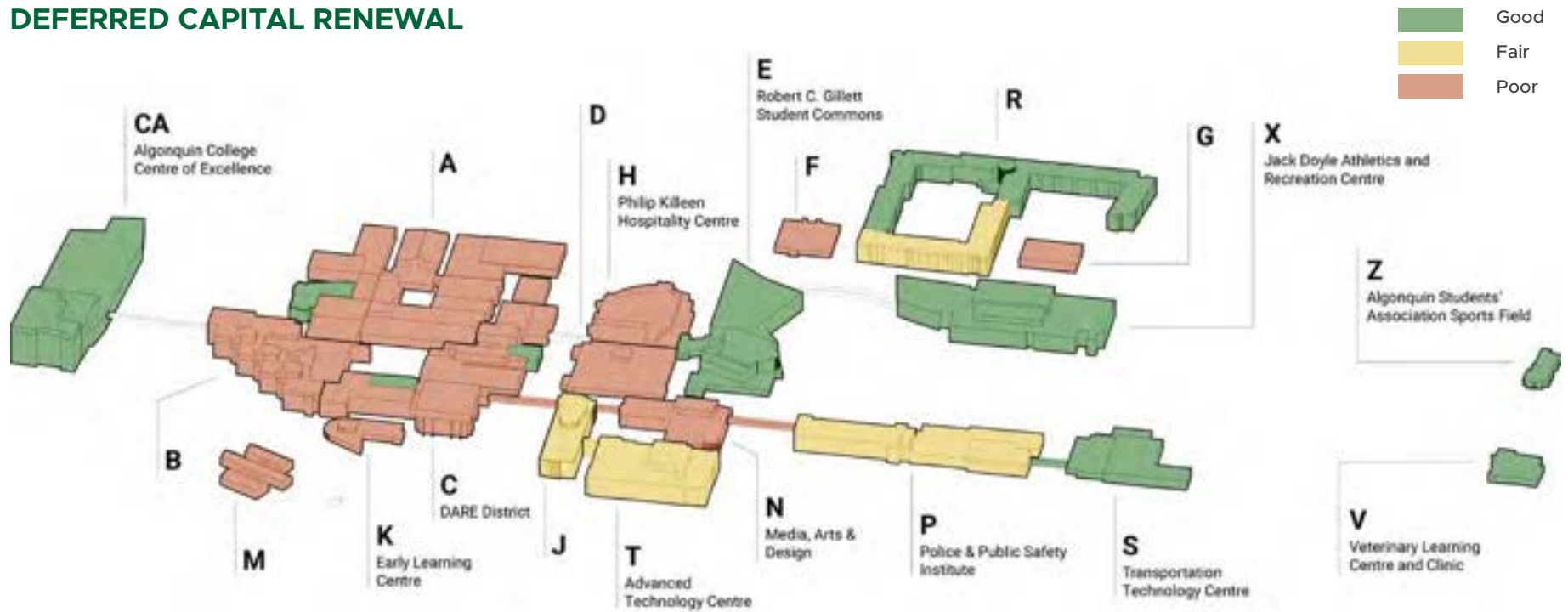


Figure 8. Existing Building Condition

Many of the older buildings on campus are in poor condition due to their age and deferred investments in capital renewal, which is an ongoing financial concern. Some older buildings are worth continuing to invest in while others should be demolished to reduce the deferred maintenance liability and make way for modern buildings that optimize land and infrastructure. The MCDP includes a development strategy that recommends demolition and redevelopment on key sites over the next decade to achieve a more environmentally and economically sustainable campus.

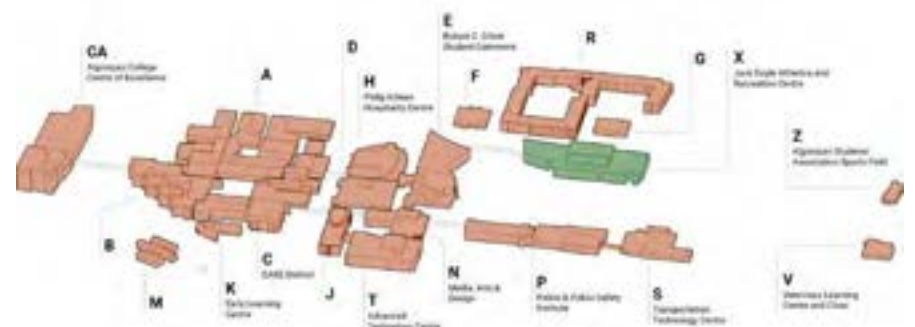


Figure 9. Building Condition in 2032 if Deferred Maintenance is Not Addressed

ENROLMENT GROWTH

Algonquin College's enrolment is expected to steadily increase in the years ahead. With little capacity to accommodate enrolment growth on the Ottawa Campus, this will necessitate the building of more space for learning. The MCDP focuses on where new academic space needed in the short term and longer term should be located.

HOUSING DEMAND

The College's existing residences do not meet the current demand for on-campus housing, which is likely to increase. To assist the College with future plans for additional housing, the MCDP identifies appropriate sites for both standalone residences and mixed-use buildings that include housing.

CAMPUS IMAGE AND EXPERIENCE

The north edge of campus along Navaho Drive, between Woodroffe Avenue and Wajashk, is defined by several older, unattractive buildings in poor condition. The MCDP demonstrates how redevelopment of these lands can transform the image of the campus and how new buildings and streetscape improvements along Wajashk can contribute to a more inviting and vibrant campus.



Existing Student Residence Building R (Looking North)



Building A from Navaho Drive

OPEN SPACE

The campus has notable and valued open spaces, including the courtyards, the horticultural gardens and the central lawn, but not many open spaces that are well used. The MCDP builds on existing assets with new open spaces and linkages to create an interconnected network that will make the campus greener and more sustainable.

MOVING AROUND

The Ottawa Campus functions generally well for vehicles and, internally, for pedestrians moving throughout the interconnected buildings. As the campus grows and takes advantage of improvements to the City’s transit and active transportation infrastructure, improvements will be needed to the College’s network of streets and pathways to facilitate more walking and cycling. The MCDP also describes how the internal circulation can be expanded and improved.



Ishkodewan Courtyard



Pedestrian Bridge Between ACCE and Building B Over Woodroffe Avenue

4. Big Moves and Long-term Vision

4.1 BIG MOVES

Based on the Guiding Principles in Chapter 2 and analysis of the Ottawa Campus’s challenges and opportunities summarized in Chapter 3, this chapter describes five interrelated “Big Moves” intended to provide high-level direction for growing and improving the Ottawa Campus. Each Big Move involves a series of incremental initiatives that together can have a transformative impact on the look, experience and functions of

the campus as they support the College’s mission and strategic goals. Over time, the Big Moves will lead to a more complete, attractive and sustainable campus. This chapter also includes a conceptual vision of the future campus to illustrate the potential for growth and change over the long term and demonstrate the intent of the MCDP’s guidelines.

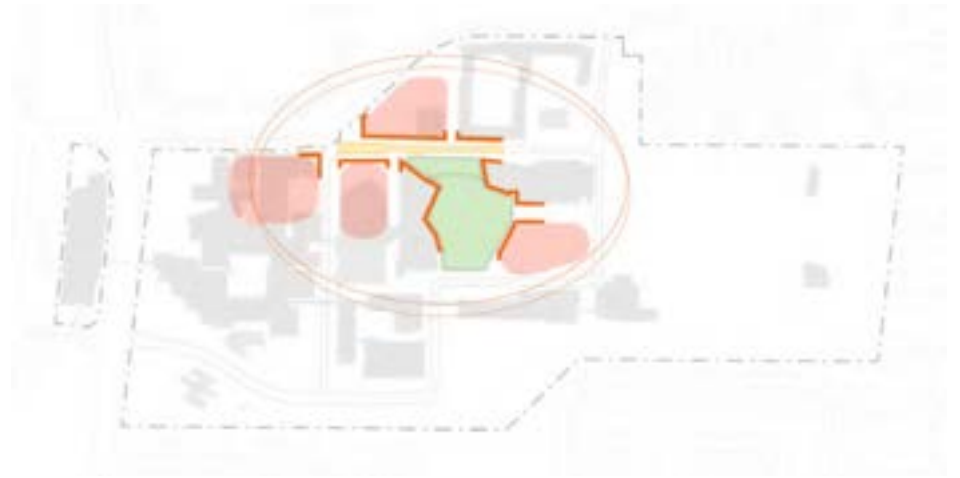
RENEW AND BUILD UP THE CORE

The core of the campus, currently occupied by older buildings in poor condition, is a strategic area to focus development in the next 10-20 years. Multi-storey academic and potentially mixed-use buildings replacing single-storey buildings and parking lots will support the clustering of related programs, optimize land and utilities, and minimize walking distances. Focusing near-term development around the entry from Navaho Drive will also significantly improve the image of the campus and align with the City’s Official Plan policies for the area.



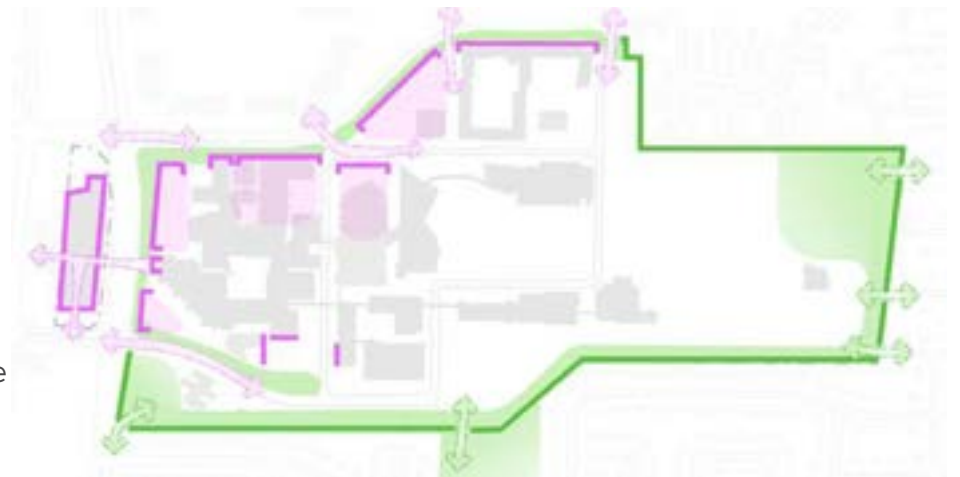
CREATE A MORE COMPLETE, LIVABLE, AND WELCOMING CAMPUS

Development of the Student Commons and the Jack Doyle Athletics and Recreation Centre significantly enhanced the amenities available to learners and employees. With many more learners expected to be living on and close to campus as the College grows, additional amenities, such as expanded food service options and social spaces, will need to be included in new buildings. Concentrating new housing in mixed-use buildings close to the heart of campus will reinforce a sense of community and keep indoor and outdoor gathering spaces lively.



ENHANCE EDGES, ENTRIES, AND CONNECTIONS TO THE COMMUNITY

The Ottawa Campus's varied surroundings suggest the need for varied conditions along its edges. The landscaped buffer adjacent to the relatively stable low-rise neighbourhoods to the south and east can be enhanced as an amenity for the on-campus population and neighbourhood residents with pathways and other landscaping. New buildings on the south side of Navaho Drive, together with landscape improvements, will not only improve the campus image and arrival experience from the north, but also support a pedestrian- and transit-friendly street and set the stage for complementary mixed-use development on the College Square site.



ESTABLISH A DIVERSE, INTERCONNECTED OPEN SPACE NETWORK, INCLUDING AN ENHANCED CENTRAL GREEN SPACE

The Ottawa Campus lacks usable, attractive green space. A network of landscaped pathways and open spaces will enhance the setting for future buildings and provide amenities for learners, employees and community members. An expanded, multi-purpose central green space will reinforce the hub of student life, support casual recreation and accommodate special events.



SAFELY FACILITATE ALL TRAVEL MODES

The Ottawa Campus is located in a car-oriented suburban environment planned to evolve into a denser, mixed-use hub that benefits from future O-Train service and a planned bus rapid transit line on Baseline Road and Navaho Drive. Encouraging travel by walking, cycling and public transit with new and improved pathways and other infrastructure, while continuing to accommodate required vehicular parking, will support the College's sustainability goals and make the campus more attractive. Continuing to ensure all buildings and open spaces are universally accessible will also make the campus more welcoming and equitable.



4.2 LONG-TERM VISION

The most successful campus master plans are guided by a vision that can be achieved in different ways over time, recognizing the long-term needs of a college are unpredictable.

The image on the following page looks 50 or more years into the future to conceptually illustrate how the Ottawa Campus could grow and evolve to accommodate enrolment growth, support a greener, more pedestrian-friendly campus, and generally advance sustainability objectives. The future buildings conceptualized in the renderings, in total, could accommodate more than two million gross square feet of additional academic space and 2,500 additional student beds. Even then, there would be capacity for significantly more growth. Aligned with the principles outlined in Chapter 3, the long-term development concept highlights the opportunity to build a more complete, compact campus of well-designed buildings, open spaces and streets.

Building on the campus framework plans described in Chapter 5, the images are intended to assist in interpreting the intent of the MCDP's recommendations and guidelines.

VISION FOR THE OTTAWA CAMPUS

The continued growth and evolution of Algonquin College will support a vibrant campus and an even greater place to learn, teach, work, live and play.

New, multi-storey academic and mixed-use buildings, along with existing buildings, will contain modern facilities and be designed to reinforce the College's identity and a strong sense of belonging. New opportunities for living on campus and a full range of amenities and services will contribute to a more complete campus and lively public spaces. New open spaces will include plazas and courtyards and an enhanced central gathering space for a variety of activities and events.

Landscaped pathways and tree-lined streets complementing planned improvements to the City's transit and active transportation networks will make it easier to get to and around campus. New buildings will extend the internal circulation system and contain spaces for studying and socializing.

Over time, the campus will become more compact and integrated with future mixed-use development envisioned around Algonquin Station to create a pedestrian-friendly urban centre. Landmark buildings that expose the College's outstanding facilities and gathering spaces that celebrate its cultural diversity will draw visitors and enhance the campus experience for learners and employees.



The north edge of campus along Navaho Drive will be transformed with new buildings that establish a welcoming entry from the north and anticipate redevelopment of College Square over time.





The Central Green should be expanded and improved to become a signature open space where learners and employees come together for informal gatherings and organized events.



Growing the campus up, in taller buildings, will support the clustering of programs and a strong sense of community, and it's a more sustainable approach to development than expanding outward.

5. Campus Framework Plans

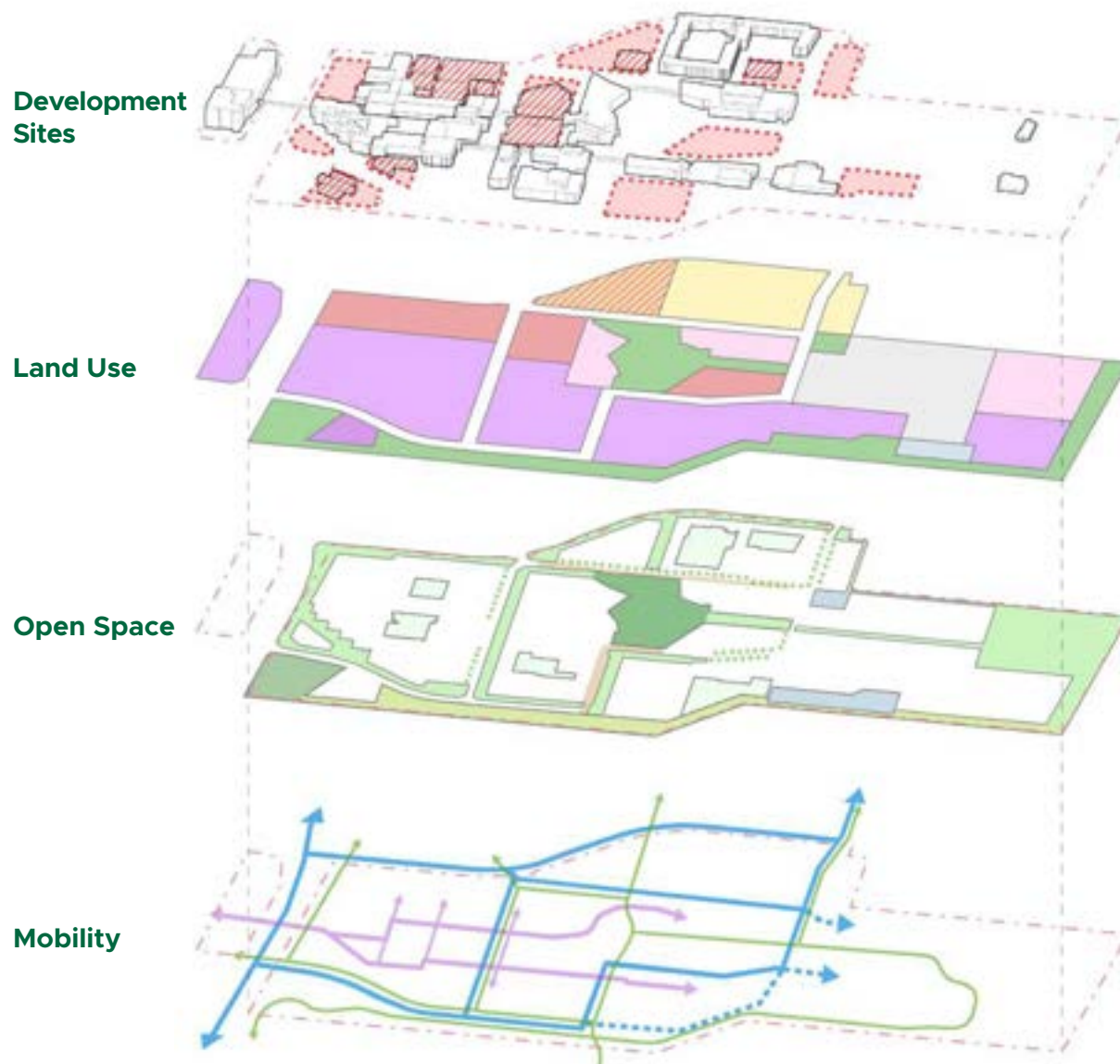


Figure 10. Framework Layers

This chapter describes and illustrates a series of coordinated plans that individually and together provide a framework to guide development of the Ottawa Campus, including buildings, open spaces and infrastructure. The intent of the campus framework plans is to ensure the College has the flexibility it needs to respond to facility needs as they arise while also ensuring that each new or improved facility or other development project contributes to the long-term vision of a cohesive, efficient and sustainable campus.

As illustrated in Figure 11, the structuring layers that make up the framework plans include mobility, open space, land use zones and development sites. The framework plans build on the existing structure of the campus and identify initiatives and guidelines for reinforcing and improving various framework elements.

Streets will continue to play an important role on the campus, supporting access and mobility by all modes (transit, cycling, walking and driving) and all vehicle types. They also help to define development sites and determine how buildings should be oriented. The vehicular mobility network plan illustrated in Figure 12 will provide for the safe and efficient movement of personal, commercial, service and transit vehicles. It reflects the existing street network on and off campus, with some modifications, as described below. The plan also identifies general locations for access to the loading and servicing areas of existing and potential future buildings, with the intention of minimizing their visual impact and potential conflicts between vehicles, pedestrians and cyclists.

The network of public and private streets providing access to and through the campus is not expected to change significantly in the foreseeable future. Modifications to intersections and street alignments, however, are proposed, and the role and character of some streets are expected to evolve as new buildings define their edges and the campus generally evolves:

- Navaho Drive, a City road and main route into campus, will evolve with implementation of the Baseline BRT Corridor, which will include bus stops at Algonquin Station and at Navaho Drive and Wajashk. The BRT line, expected to be completed in phases, will replace the OC Transpo 88 bus that currently serves the campus. Improvements to Navaho Drive will include bus-only lane markings, bus stops on both sides of the road at Wajashk and the addition of uni-directional cycle tracks on both sides.
- The Navaho/Wajashk/Nigig intersection has the potential to be improved to make it safer for pedestrians, cyclists and drivers and reinforce it as a key campus gateway. As described below, the College is currently exploring three options for reconfiguring the intersection.
- Building on recent streetscape improvements, Wajashk is intended to evolve into a “pedestrian priority street” enlivened by future buildings on F Site and H Site. As described and illustrated in Figure 13, generous boulevards for seating, landscaping and other pedestrian amenities are planned.
- Wàbisheshì will evolve to fully become a proper campus street designed for pedestrians, cyclists and vehicles. With development of a building on Lot 8, the east-west section of Wàbisheshì should be re-aligned as conceptually shown in Figure 12 to allow it to extend east to serve future development in the long term on Lot 9. In conjunction with the re-alignment, the street should be re-designed as a second pedestrian priority street, as per the guidelines below.
- Adjidjàk, formerly College Avenue, will continue to serve as a main entrance to the campus from Woodroffe Avenue with generous landscaping on both sides of the street and active transportation improvements.
- Woodroffe Avenue will be improved by the City with cycle tracks and protected intersections at Navaho Drive and at Adjidjàk, better connecting the main campus to the ACCE Building and Algonquin Station.
- Nigig will continue to function primarily as a service road while also supporting north-south active transportation connections through campus.

Also, in conjunction with the planning of a future building on Lot 8 or south of P Building, the College should consider the feasibility, costs and benefits of re-aligning a portion of Wàbisheshì, where it passes Buildings P, N and T, to bring it closer to the south edge of campus and between Building P and Building S. This would establish a ring road condition and allow the portion of the existing street south of the Central Green to be closed at times to all vehicles except service, commercial and emergency vehicles (access for pick-up and drop-off may also be permitted). Any plans to re-align Wàbisheshì in this way should consider the following:

- Pedestrian and vehicular traffic safety;
- The impact of removing the existing pedestrian walkway between Building P and Building S and other impacts to the existing buildings;
- The impact on loading access for P Building;
- Other potential impacts on Buildings P and S to ensure there is appropriate accommodation for the loop road;
- Impacts to the landscape buffer along the south edge of campus and on the existing residential neighbourhood;
- Impacts to the outdoor instructional space south of Building P.

PEDESTRIAN PRIORITY STREET DIRECTIONS

Portions of Wajashk and Wàbisheshì are identified in Figure 12 as pedestrian priority streets to be designed with a quality and character that supports their intended functions as not just mobility infrastructure but also lively public spaces.

These streets are located at areas of high pedestrian activity near student life facilities, student residences, future open spaces as well as future campus facilities. The streetscape design elements should include street trees, generous sidewalks, special paving for sidewalks and the roadways, seating, lighting, bollards and rolled curbs or curbless streets. While vehicles are permitted on pedestrian priority streets, pedestrian traffic should be prioritized. Portions of these streets can be closed to vehicular traffic at times to support campus events. The pedestrian priority streets will balance the pedestrian activity with the need for vehicular pick-up/drop-off and loading access.

Wajashk

1. Wajashk should be designed with generous sidewalks, seating areas, street trees, pedestrian-scale lighting and high-quality paving materials.
2. Rolled curbs may be considered, but the use of bollards to mark the edge of the roadway should be minimized.
3. A 3-metre landscape boulevard with street trees should be located between the sidewalk and the roadway to provide generous space for trees to grow and provide shade.
4. Layby pick-up and drop-off zones for 2-3 vehicles may be located at building entrances.
5. The roadway should include one 3.5-metre travel lane in each direction to accommodate personal, commercial and service vehicles while minimizing crossing distances for pedestrians.
6. Cycling should be accommodated within the roadway, which should be appropriately marked to indicate a shared street. The maximum speed limit posted should be 20 km/hour.
7. The planting zones for street trees should be a minimum of 2.5 metres wide to allow for sufficient space for the growth of roots to allow for a substantial tree canopy. The use of silva cells, passive irrigation and bioswales are recommended to provide thriving sustainable landscapes.



Figure 12. Wajashk Cross Section Looking East



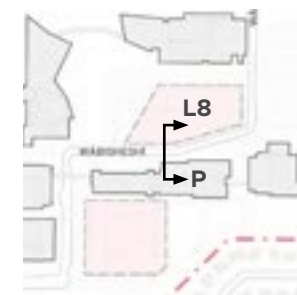
Key Plan

Wàbisheshì

1. In conjunction with the planning of new buildings on Lot 8 and south of P Building, the adjacent sections of Wàbisheshì should be designed with generous sidewalks on both sides, zones for street trees adjacent to the roadway, and a bi-directional cycle track on the south and east sides.
2. The roadway should include one 3.5-metre travel lane in each direction.
3. The bi-directional cycle track should be 3-4 metres wide and have marked paving distinct from the sidewalk.
4. The planting zones for street trees should be a minimum of 2.5 metres wide to allow for sufficient space for the growth of roots to allow for a substantial tree canopy. The use of silva cells, passive irrigation and bioswales are recommended to provide thriving sustainable landscapes.



Figure 13. Wàbisheshì Cross Section Looking East



Key Plan

Navaho/Wajashk/Nigig Intersection

The existing Navaho/Wajashk/Nigig intersection has an unconventional configuration where the streets come together in close proximity to each other though not all in the same place like a typical Y- or T-intersection (Figure 15). There is a traffic signal on Navaho Dr and a stop sign when traveling north on Nigig, and traffic is allowed to move in all directions, including trucks traveling to the loading and servicing areas on Nigig. The intersection can be confusing for drivers and difficult to navigate for pedestrians and cyclists, with the potential for traffic conflicts for all street users.

The conceptual reconfiguration of the Navaho/Wajashk/Nigig intersection has been explored and is supported by a traffic analysis. The objectives of the intersection improvement are to:

1. Make the intersection safer and reduce the risk of conflicts between vehicles and pedestrians/cyclists/other vehicles
2. Better manage the flow of vehicular traffic
3. Support the vision for Wajashk as a pedestrian-centric campus street
4. Support improved transit access to campus
5. Enhance the campus entry and arrival experience



Figure 14. Existing Navaho/Wajashk/Nigig Intersection

The **preferred concept plan** for the intersection creates a new entry road and two proper intersections at Navaho and Wajashk (Figure 16). This will simplify traffic movements and reduce the risk of conflicts. The entry road creates an opportunity for a more formal arrival to the campus with increased public space opportunities. In this option, the Building H site is reduced in area while the Building A site becomes slightly larger. The traffic analysis shows that this concept plan will have minimal impacts on traffic operations.

Further study will be required to implement the intersection improvement. The next steps are to undertake a schematic engineering design for the street alignment and intersection configuration along with a more detailed traffic study. The intersection improvement should be implemented with the redevelopment of either the northeast portion of Building A or the Building H site. As discussed in Section 7.1, Building F is the ideal site for the next new building on campus and will not be impacted by the intersection improvements.



Figure 15. Preferred Intersection Configuration

Two other concepts for the intersection were explored. Alternative Concept A, as shown in Figure 17, closes the intersection with no vehicular access from Navaho Drive. This eliminates the traffic conflicts at the intersection and creates a strong pedestrian gateway to the campus. Traffic analysis shows that closing this intersection results in the intersection of Woodroffe at Adjidjàk being over capacity in the morning peak travel period. With the future traffic volumes based on the projected growth of the campus, the intersection of Wàbisheshì and Wajashk would also be over capacity in the morning peak travel period. Truck traffic would increase on Wajashk as vehicles traveling to Nigig would now need to enter the campus from Navaho Drive at Wàbisheshì. For these reasons, this concept is not recommended. If vehicle trips on campus decrease significantly in the future then this concept may become a viable option.

Alternative Concept B, as shown in Figure 18, closes Nigig and creates a simplified intersection at Navaho Drive and Wajashk. This option would improve the arrival experience and create larger development sites for Building A and Building H. The traffic analysis shows that this concept plan would have minimal impacts on traffic operations. Truck traffic, however, would increase at the Woodroffe and Adjidjàk campus entrance without direct truck access from Navaho Drive to Nigig.



Figure 16. Alternative Intersection Concept A



Figure 17. Alternative Intersection Concept B

5.2 ACTIVE TRANSPORTATION



Figure 18. Active Transportation: Cycling Framework Plan

- ▶ Main Pedestrian Entrances
- Proposed City Bike Lane/Cycle Track
- Multi Use Path
- Trail
- Shared Street
- Potential Development Site
- Existing Bus Stop
- Algonquin Station South Entrance
- Algonquin station North Entrance
- Future Baseline BRT Station
- Bike Parking: Existing
- Bike Parking: Proposed
- Existing Bike Repair Station

The active transportation framework plan identifies the primary exterior routes for walking and cycling (and users of other micromobility vehicles such as scooters, skateboards and e-bikes) to and across the campus. As the City continues to expand its active transportation and transit infrastructure, and more residential buildings are constructed around the future Algonquin Station, it is anticipated more learners and employees will arrive by foot, bike and transit. The City of Ottawa actively promotes active transportation, adopting a policy to construct cycle tracks on any arterials and collectors being planned for road renewal or repaving. Cycle tracks are planned for Woodroffe Avenue, and improvements to Navaho Drive to accommodate the planned Baseline BRT will include dedicated cycle tracks adjacent to the sidewalks on both sides.

The new and enhanced multi-use paths (MUPs) identified in Figure 19 are intended to be the primary pedestrian and cycling routes providing direct connections from the City's active transportation network to main building entrances and other destinations on campus. MUPs generally will be lighted and lined with trees and other plantings, and in many areas of campus they will complement existing and future sidewalks along campus streets. Although it is expected cycling to campus will steadily increase over time, the volume of cyclists on MUPs within the campus is not expected to result in frequent or high-danger conflicts between cyclists and pedestrians. Shared asphalt paths three metres wide generally should be adequate. Where MUPs pass through areas with high volumes of pedestrians, however, the College should use markings to clearly delineate a lane for cyclists, and signs should warn cyclists to slow down and yield to pedestrians.

Design Directions for Multi-use Paths

1. Multi-use paths (MUPs) should be designed with a generous paved area, at least three metres wide, to accommodate two-way movement for pedestrians, cyclists and other micromobility devices. MUPs should be marked or signed as a shared path, except in areas of routinely high pedestrian volumes, where a lane for cycling should be clearly delineated with distinctive paving and/or markings.
2. Multi-use paths should be separated from adjacent campus streets by a landscape buffer with a minimum width of 2.5 metres to create a tree-lined buffer between the path and the roadway.
3. Buildings should be set back from multi-use paths to provide a planting area in front of buildings and minimize the potential for conflicts between cyclists and pedestrians entering and existing the building.
4. As described in Section 5.5, the pathway planned along the south edge of the campus may have the character of a trail, and its design may vary along its length. Generally, however, it should be three metres wide. A permeable paving material, such as crushed limestone, should be considered.

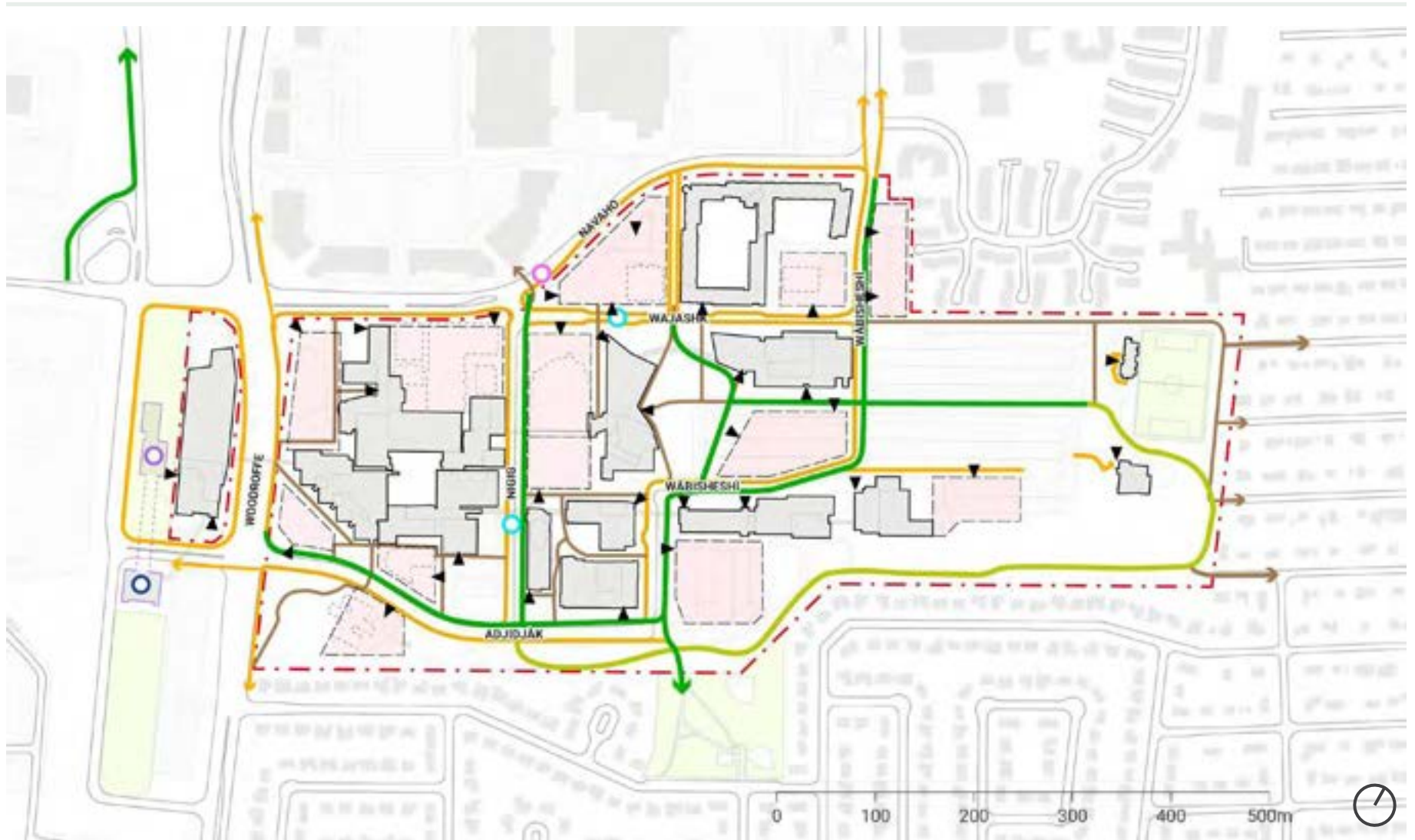


Figure 19. Active Transportation: Pedestrian Framework Plan

- | | |
|-----------------------------|------------------------------------|
| ▶ Main Pedestrian Entrances | ▭ Potential Development Site |
| ■ Multi Use Path | ○ Existing Bus Stop |
| ■ Trail | ○ Algonquin Station South Entrance |
| ■ Sidewalk | ○ Algonquin station North Entrance |
| ■ Pedestrian Path | ○ Future Baseline BRT Station |

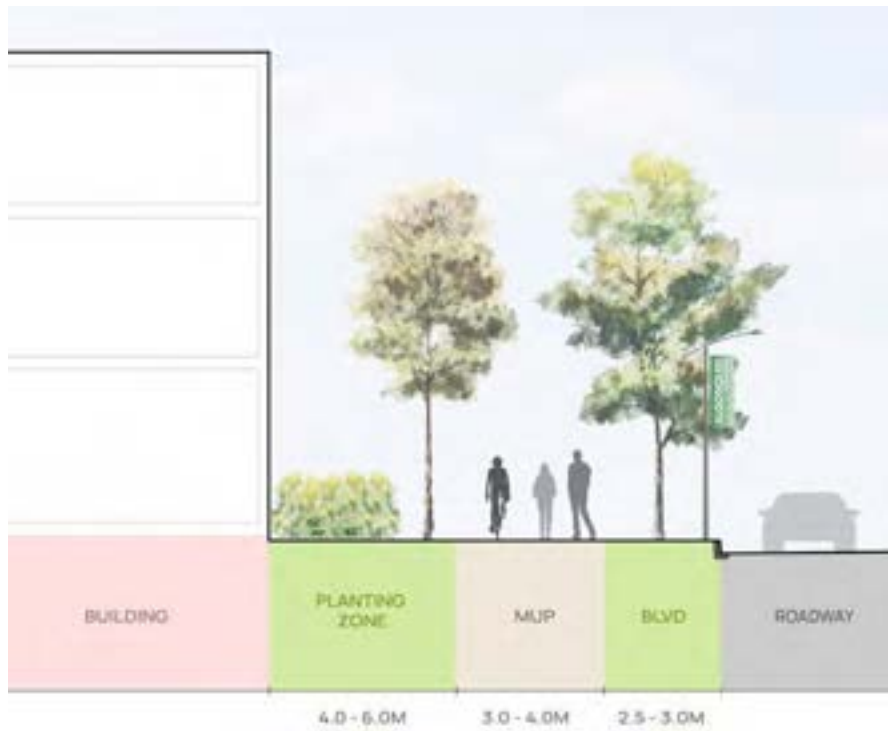


Figure 20. Cross Section of a Multi-Use Path



Multi-Use Path on Swarthmore College Campus, Swarthmore, Pennsylvania



Multi-Use Path on Michigan State University Campus, East Lansing, Michigan

As described in Section 5.1, Wajashk will support east-west connectivity through the campus for cyclists as a shared street.

As the network of multi-use paths and the campus overall develops, new covered facilities for bike parking close to main building entrances will be added in the general locations identified in Figure 19. In addition, indoor bike parking, on the ground floor or as part of underground vehicular parking facilities, should be considered in the design of future buildings and the retrofitting of existing buildings, particularly in buildings close to the main entries to campus. Existing locations for outdoor bike repair stations are also identified in Figure 19, but incorporating such facilities within buildings should also be considered. Amenities for learners and employees commuting by bicycle including lockers, showers and changing rooms should be considered for new facilities.

Figure 20 identifies primary pedestrian routes that will complement multi-use paths. Generally, primary pedestrian routes will be landscaped paths at least two metres wide, designed with varying paving materials, where cycling should be discouraged or prohibited.



Covered Bike Parking along the multi-use pathway south of the Jack Doyle Athletics and Recreation Centre.



Bike Repair Stations allow cyclists to mount their bicycles and use the provided tools to perform minor repairs.

As the campus evolves, new and renewed facilities will optimize the use of limited existing campus lands and bring more activity to the campus. The growth of the campus and increased activity will require efficient movement of people to, from and around campus. Maximizing transportation options will allow more efficient movement of people and optimization of campus lands.

A Transportation Demand Management (TDM) Plan should be prepared to assess the most effective measures to improve transportation options for the campus. As outlined to the right, TDM measures can be categorized from higher to lower implementation cost, including TDM measures that require capital expenditures, resource staff, pricing or policy shifts.

TDM measures requiring capital expenditures

- improved bus stops/shelters
- improved lighting
- improved pedestrian and cycling facilities (e.g., adding missing links, improved connectivity, secure parking, lockers and shower facilities)
- improved roadway crossings

TDM measures requiring resource staff

- rideshare matching service
- car sharing program
- bike-share program
- emergency/guaranteed ride home program

TDM measures focused on pricing or policy shifts

- reduced parking supply
- increased parking rates
- preferential parking spaces and rates for carpools
- improved terms for student transit pass (UPASS)
- parking permits based on need rather than first-com first-serve

5.3 CAMPUS ENTRANCES



Figure 21. Campus Entrances Framework Plan

- ▶ Main Pedestrian Entrances
- Key Entry Site
- Entry Building Frontage
- Primary Arrival Routes
- ✦ Gateways/Entry Landscape
- - - Potential Development Site
- Places of Arrival

The main entrances to a campus and places of arrival connect it to the surrounding city, establish first impressions for visitors and are fundamental to the overall image and experience of the campus. College Avenue, now Adjidjàk, and Building C served as the main entrance to campus for much of the College's history and are where most visitors continue to be directed.

Building CA (ACCE) established a western entry to campus for those arriving by buses that currently stop on Transitway. This entry will be expanded with completion of the Algonquin O-Train Station, which will include a south entrance connected to Building CA with a pedestrian bridge.

Building E (Student Commons) and the adjacent open space mark the eastern entrance to campus, which is heavily used by those who drive to campus and park in Lots 8, 9, 11 and 12, as well as learners living in the residences north of Wajashk. This place of arrival will be enhanced over time with construction of a new building on Lot 8 and coordinated open space improvements, including expansion of the Central Green and a landscaped promenade between the new building and the Athletics and Recreation Centre.

Many learners and employees arrive via Navaho Drive and Wajashk by car, bus or bicycle, and more transit users and cyclists will enter the campus through the Navaho-Wajashk intersection with completion of the Baseline BRT Line and cycling infrastructure on Navaho. The north edge of campus, however, does not look or feel like a front entrance to campus. This will change over time with development of new buildings and landscapes where buildings F and H and the northeast wing of Building A are located today. These future buildings will have amenities, labs and other active uses on the ground floors to showcase the facilities and vibrancy of the campus. Designing Wajashk to prioritize pedestrians will reinforce this place of arrival as a welcoming people place.

Ensuring future buildings at or near the four main entrances to campus are designed to a high standard and with distinctive features will reinforce a memorable sense of arrival and enhance the overall campus experience. Main building entrances should be clearly defined, and signage should point to common destinations. Small plazas and other landscape features at these entrances should also reflect design excellence. Such features should include seating and pedestrian-scale lighting. Public art outdoors or in the lobbies of major buildings would also reinforce the four entrances.



Building C - The South Main Entrance to Campus

5.4 INTERNAL CIRCULATION

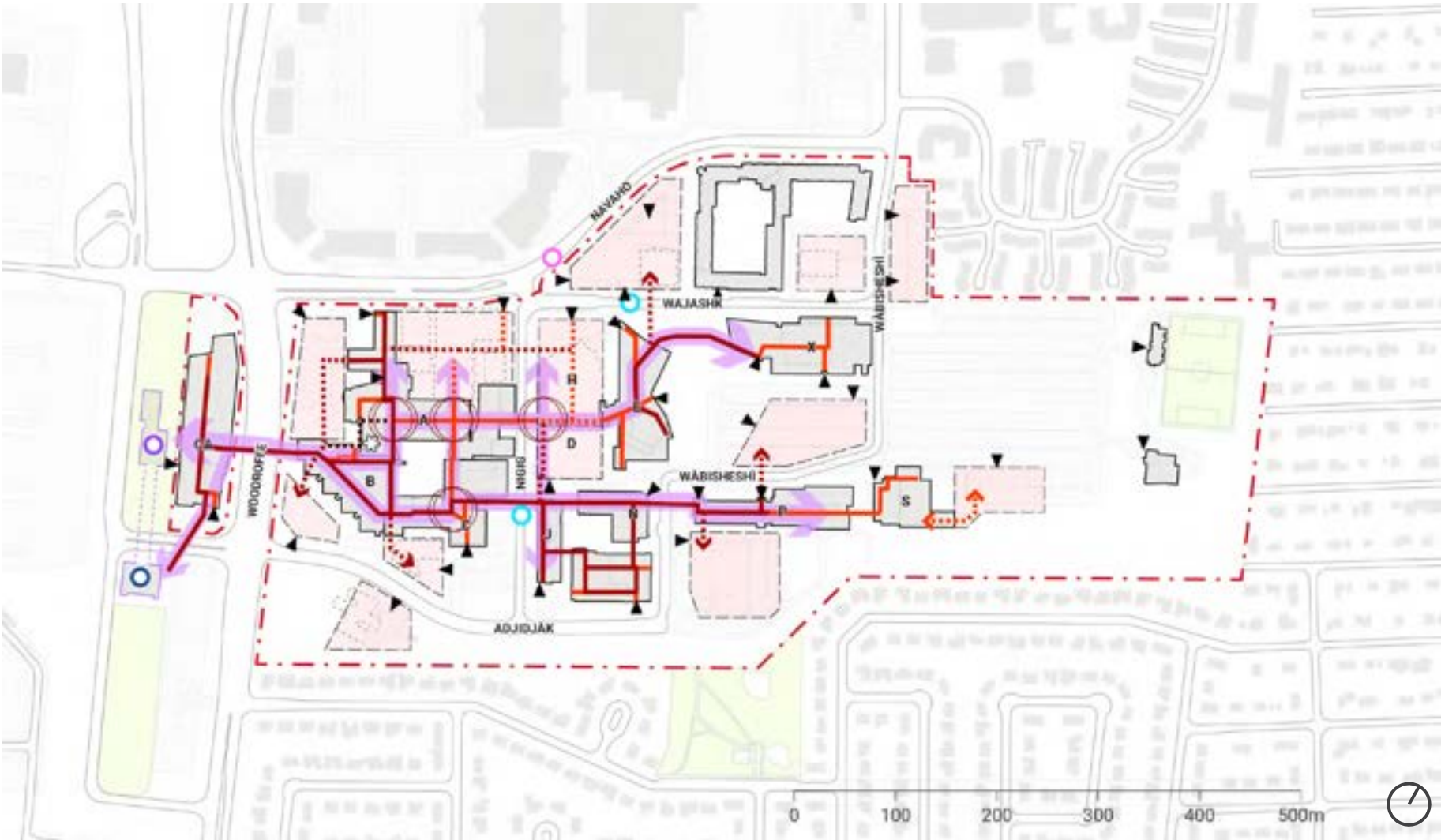


Figure 22. Internal Circulation Framework Plan

- ▶ Main Pedestrian Entrances
- ▭ Potential Development Site
- ➔ Primary Internal Circulation Route
- Interior Circulation 100 & 200 Level
- - - Future Interior Circulation (100 & 200)
- Interior Circulation 100 & 200 Level
- - - Future Interior Circulation (100 & 200)
- - - Future Interior Circulation (200)
- Existing Bus Stop
- Algonquin Station South Entrance
- Algonquin station North Entrance
- Future Baseline BRT Station
- ✿ Former Gym
- Key Node

The existing internal circulation network interconnects most of the buildings on campus at the first storey and second storey through internal corridors, enclosed walkways and pedestrian bridges. There are two primary east-west corridors: one that extends from ACCE to the Athletics and Recreation Centre via buildings B and A, the corridor between buildings H and D, and Building E; and one that also starts in ACCE and passes through buildings B, C, J, N and P to Building S. The former has multiple turns as it moves people between the first and second levels around the former gym making the route confusing to navigate. Shorter north-south corridors through Buildings C and D provide connections between the two east-west corridors and to buildings north and south of the main corridors.

As existing buildings are redeveloped in the heart of the campus, the internal circulation network should be extended and enhanced to form a grid-like pattern that provides direct connections between buildings wherever possible. Incremental redevelopment of the north half of Building A and redevelopment of the Building H site will create the opportunity for a new continuous east-west corridor over time. Where new corridors within and between buildings are planned, alcoves with seating should be considered to complement larger spaces for studying and socializing. The expanded wayfinding system should build upon the Indigenous Pathways and provide direction and walking distances/times to key destinations.

Redevelopment of the former gym should include a more direct connection between the second storey of Building B and Building A via generous corridors, stairs and an elevator. At other major crossroads in the internal circulation network, including those identified as key nodes in Figure 23, when the College renovates adjacent spaces, the addition of food services, casual meeting spaces or other services seeking convenient locations should be considered.



Pedestrian Bridge Between ACCE and Building B Over Woodroffe Avenue

5.5 OPEN SPACE AND PUBLIC REALM



Figure 23. Open Space and Public Realm Framework Plan

- Major Open Space
- Enhanced Landscape Area
- Potential Development Site
- Enhanced Streetscape
- Courtyard
- Pedestrian Priority Street
- Public Open Space
- Stormwater Management
- Enhanced Edge Open Space
- Gateways/Entry Landscape

Open spaces and their landscaping are fundamental to the image and experience of a campus. They add beauty and contribute to the wellbeing of learners and employees, as well as the natural environment. A network of green spaces is also critical to achieving sustainability goals.

The open space framework for the Ottawa Campus comprises various types of open spaces that together form a network. As identified in Figure 24 and described below, they include major open spaces with special designs and functions; a continuous edge open space that provides a buffer and amenity between the campus and the City View Neighbourhood; landscape corridors between buildings and along streets; and more intimate courtyards framed by buildings. The intention is that over time the different types of open spaces will be enhanced to create a greener campus with more outdoor amenities and gathering places.

HORTICULTURAL GARDEN

The Horticultural Garden is a major open space on campus that helps define the College Avenue entry to campus and provides a space for rest and respite. It also serves as an outdoor learning space for the horticulture learners who maintain the garden. The garden should be maintained in its current location and be further supported by a new facility expected to replace Building M.

SPORTS FIELD

The Algonquin Students' Association Sports Field, used by the College's soccer and rugby teams, and surrounding landscape form a major open space at the east end of the campus. The field and Building Z, containing locker rooms and the Algonquin Sports Therapy Clinic, will be maintained in their current location.

LANDSCAPE CORRIDORS

The Landscape Corridors identified in Figure 24 will play a vital role in reinforcing a network of green spaces on campus. These corridors will be enhanced over time as independent landscape projects or as new buildings are constructed on adjacent development sites. Most of them will accommodate generous streetscapes or multi-use paths for pedestrians and cyclists, as described in Section 5.2. Deciduous and coniferous trees will be a dominant feature of Landscape Corridors, but other plantings and seating are encouraged, particularly at the entrances to buildings. The planting zones along streets should be a minimum of 2.5 metres wide to allow for sufficient space for the growth of roots to allow for a substantial tree canopy. The use of silva cells, passive irrigation and bioswales are recommended to provide thriving sustainable landscapes.

COURTYARDS

Courtyards offer quieter spaces for socializing, studying and gatherings, and some play a role in teaching and learning. The development of academic buildings on large sites, such as the lands occupied by Building H, Building D and the northeast wing of Building A, will create opportunities to enhance existing courtyards and create new ones. Courtyards should include trees, other soft landscaping and seating, including benches and moveable chairs. They are also appropriate locations for public art and decorative lighting.

CENTRAL GREEN AND PROMENADE

The open space between the Student Commons and the Athletics and Recreation Centre (ARC) has the potential to become a multi-purpose gathering space and signature feature that promotes the College’s identity—a distinctive and inviting place for studying, relaxing, socializing, informal recreation and organized events. A future academic or mixed-use building on Lot 8 will result in an expansion of the Central Green and help to define and enliven the space.

Figure 26 illustrates a concept for the Central Green and a future landscaped promenade between the ARC and a building on Lot 8.



Figure 24. Central Green Programming Diagram



Figure 25. Central Green and Promenade Concept Plan

Directions for the Central Green

1. The Central Green should be designed to accommodate a range of activities, including studying, socializing, casual recreation and planned events, as well as for passive enjoyment.
2. The Central Green should be predominantly a green space with lawns, trees planted in clusters to provide natural shading and a variety of other native plantings, with wide permeable pathways where possible and hardscaped areas at main building entrances.
3. A central hardscaped area where east-west and north-south paths through the space intersect should also be considered as a meeting place, an area to stage events and a potential location for public art (for example, a water feature could be used to inform people of Pinecrest Creek, which once flowed through the campus).
4. Hardscaped areas should contain benches, chairs and where appropriate, tables for outdoor dining and studying, following Algonquin College's Exterior Furniture Standards.
5. Electrical services and anchors for tent tie-downs should be installed to support events staged in a plaza space or at the south end of the Central Green, where temporary stages may be accommodated.
6. Geo-grid or permeable paved pedestrian paths should follow desire lines between main building entrances. Pedestrian-scale lighting and benches should be located along pathways.
7. The east-west landscaped promenade that will connect the Central Green to Lot 9 should be designed as a main pedestrian corridor leading into the Central Green and the core of campus that is shaped by the existing Athletics and Recreation Centre and the Future Lot 8 development. The promenade should include generous planting spaces to support large trees on either side of the walkway.
8. The main north-south and east-west paths through the Central Green and the promenade to Lot 9 should be designed to safely accommodate pedestrians and cyclists with a minimum width of 5 metres. If the volume of pedestrians and cyclists poses a high risk of conflicts, then it may be necessary to delineate a zone for cyclists within the pathways with markings and special paving.
9. When developing the Central Green, native soil horizons should be re-established. Irrigation of the central green using harvested rainwater should be considered.

EDGE OPEN SPACE

The Edge Open Space is located along the south and east edges of the campus and provides a buffer between the campus and the adjacent residential neighbourhoods. The open space is well treed and contains plots used by horticulture programs, a small parking lot, gravel service roads and a stormwater management facility.

The College should undertake the following improvements to the Edge Open Space, potentially with the support of horticulture learners and guided by the concept illustrated in Figure 27, to make it an amenity for learners, employees and the broader community:

- Construct a multi-use path for pedestrians and cyclists from the foot of Nigig to the streets that terminate at the east edge of campus (Lotta Avenue, Cotê-des-Neiges Road, Tower Roads and Rita Avenue).
- Create landscape islands along the north edge of Lot 17 to accommodate trees.
- Introduced naturalized landscapes to the portion of the Edge Open Space east of Ryan Farm Park to enhance habitats for wildlife and generally beautify the space.

In addition, the College should work with both the City and residents in the adjacent neighbourhoods to explore ways the interface between Ryan Farm Park and the Edge Open Space can be improved to create the sense of a continuous park.



Figure 26. Enhanced Edge Open Space Concept Plan

5.6 LAND USE



Figure 27. Land Use Framework Plan

- Active Edge
- Residential
- Student Life, Amenities, Recreation
- Academic
- Major Open Space
- Parking/Long-Term Development
- Mixed-Use: Academic
- Snow Storage
- Potential Development Site
- Mixed-Use: Residential

The land use framework plan provides a flexible structure for how uses and activities should be organized to reinforce distinct areas of the campus while recognizing opportunities for a mix of complementary uses in strategic areas to create vibrant nodes of sustained activity. As illustrated in Figure 28 and described below, there are eight land use zones that define the types of activities best suited to the different parts of campus.

ACADEMIC

The land use framework recognizes that most of the campus should be reserved for academic uses, particularly the entire southern half, where most existing buildings are intended to be maintained. Academic uses include classrooms, labs, libraries, faculty and administration offices, food services, student services and common areas.

MIXED-USE ACADEMIC

Immediately north of the Academic Zone are several future redevelopment sites currently occupied by academic buildings or surface parking and identified for potential future mixed-use buildings. Such buildings would optimize the use of land, complement future mixed-use buildings on the College Square site and increase the vibrancy of common spaces at the heart of campus.

The academic uses listed above are the primary uses intended for this zone, and such uses should occupy the lower floors of all buildings in the zone. However, student housing is also an appropriate use and is encouraged, but not required, to be located above academic base buildings. Whether academic-only or mixed-use buildings are developed in the Mixed-use Zone, all buildings should have active uses on the ground floor at campus entries, along Wajashk and surrounding the Central Green (see Figure 28). Active uses include labs, lounges, other social or study spaces, food services and dining halls, and other student services.

MIXED-USE RESIDENTIAL

The College has clustered student housing on the north side of Wajashk, which makes the Building F site highly appropriate for additional housing. Since the site is also across the road from the academic heart of the campus, it is also appropriate for academic uses. Future development would ideally include a mix of both academic and residential uses to take full advantage of the site's location. Developing the site only for academic uses is discouraged; however, a standalone residence would be appropriate.

RESIDENTIAL

The Residential Zone recognizes the opportunity to expand student housing onto the Building G site and Lot 11 over the long term thereby reinforcing a sense of community in this part of campus. Other student life uses that complement housing are also appropriate across this zone.

STUDENT LIFE

The Student Life Zone captures the Student Commons, the Athletics and Recreation Centre, and Building Z and the Sports Field. Additional major facilities like these are not anticipated to be needed in standalone buildings in the foreseeable future; rather, additional amenities for learners and employees will be integrated in academic, residential or mixed-use buildings in other zones.



Figure 28. Existing and Potential Clusters

OPEN SPACE

The Open Space Zone highlights the Central Green, the Horticultural Garden and the Edge Open Space as the campus's major public open spaces to be used and enjoyed not only by learners and employees but also the broader community. Section 5.5 provides more details about these spaces as well as other existing and planned open spaces across the campus.

PARKING AND SNOW STORAGE

Lots 9 and 12, and at least a portion of Lot 16, will remain as surface parking for the foreseeable future. An area to the south of these lots will continue to be used to store snow removed from campus streets and parking lots. Section 5.8 provides more detail on the parking strategy for the campus.

ACTIVE EDGE

Active Edge is an overlay designation that applies to some of the above land use zones where an existing or future building plays an important role in helping to enliven an adjacent street or open space and showcase the College's facilities. Active uses should be planned along active edges, such as labs, lounges, other social or study spaces, food services and dining halls, and other student services. These spaces should have a high degree of transparency that contributes to a dynamic and vibrant edge to streets and open spaces. Where social spaces and food services are located along an active edge, opportunities for the uses to spill onto adjacent open spaces or streetscapes should be considered.




Clustering Related Programs and Facilities

As the Ottawa Campus grows and evolves with the building of new facilities and the renovation of existing spaces, the College will seek to maintain existing program clusters and establish new ones. This will help to reinforce the identify of each school and the sense of community within them and within individual programs. Greater clustering will also reduce walking distances between classes. Existing and new social spaces open to everyone will provide community gathering places within each cluster. Meanwhile, the hub for amenities serving all learners and employees, together with student housing, will be the Central Green and increasingly Wajashk.

5.7 DEVELOPMENT SITES



Figure 29. Development Sites Framework Plan

-  Building for Demolition
-  Potential Development Site
-  Long-Term Opportunity Area




Within the mobility and open space frameworks described in this chapter are development sites, as identified in Figure 30. These include existing buildings to be maintained over the long term, sites where older buildings in poor condition are proposed to be demolished in time to make way for new buildings, and parking lots where future buildings would be appropriate. Buildings for demolition have been identified based on the existing building condition, deferred maintenance costs and opportunity to intensify underutilized sites.

Chapter 6 contains design guidelines for each future development site, and Chapter 7 describes a near-term development strategy focused on priority sites near the Navaho-Wajashk entrance to campus.

5.8 PARKING



Figure 30. Parking Framework Plan

-  Opportunity for Below Grade Parking Integrated in Future Building
-  Potential Location for Above-Grade Parking Structure
-  Surface Parking

As the City extends O-Train service to the Ottawa Campus and implements the Baseline BRT Corridor, as well as completing active transportation improvements, more learners and employees are expected to travel to campus by transit, cycling and walking. Many will continue to drive, however, and therefore an adequate supply of parking will need to be maintained. The College will monitor the demand for parking regularly to determine if the currently supply is adequate and if existing parking spaces lost to redevelopment should be replaced.

Since the amount of surface parking will be reduced over time as the campus grows, the development of underground parking may be necessary to ensure an adequate overall supply. Figure 31 identifies development sites where the integration of at least one level of underground parking should be considered when existing buildings and/or parking lots are redeveloped for academic, residential or mixed-use buildings. Alternatively, or in addition, the College may pursue the development of one or more above-ground parking structures. The north half of Lot 9 and Lot 7 are the most appropriate locations for parking structures. New parking areas should be designed so they are screened from the public realm, located below ground or behind buildings. Any new surface parking spaces next to buildings should be within relatively small lots that do not interrupt the public realm and streetscape.

5.9 ENERGY AND DECARBONIZATION STRATEGY

Growth of the Ottawa Campus will depend on a system of powering, heating and cooling buildings that is reliable and efficient and moves the College toward its goal of 80% reduction of the 2005 baseline GHG emissions by 2050. This section outlines general directions for the campus's energy systems and a decarbonization strategy. Sections 5.10 and 5.11 provide more specific direction for how the energy, heating and cooling needs of nearer-term development can be met.

BACKGROUND

The Algonquin College Executive Team approved an Energy and Emissions Strategy in 2017. The strategy describes the long-term goals of the College associated with sustainability, energy efficiency and greenhouse gas (GHG) emissions reduction.

In 2019, the College developed its first Conservation and Demand Management (CDM) plan which outlined the current energy and emissions and provided a list of upcoming projects and strategies the College is pursuing to meet its targets and goals. The CDM plans are developed every five years and provide the current status of the College's energy and GHG emissions. The College's Energy and Emissions Strategy was the compass by which a direction was set to establish the College's overall goals while the CDM plan is a snapshot of the where the College currently sits in relation to those goals.

More about the decarbonization strategy:

- The College's Energy and Emissions Strategy identified a 37% reduction of the 2005 baseline for Total Energy Usage, Energy Use Intensity, and GHG emissions as goals for 2030. The Energy and Emissions Strategy also identified a goal of an 80% reduction of the 2005 baseline GHG emissions with a True North metric of a net zero carbon college, i.e. 100% emission reduction by 2050.

- The College's Total Energy Usage needs to be reduced by 11% to meet the 2030 goal. The College has already surpassed the Energy Use Intensity target for 2030 by 9%.
- Currently the GHG emissions per year are 11,878 tCO₂e/year and therefore needs to be reduced by 47% to meet the 2030 goal.
- The operation of natural gas fired cogeneration engines in the Ottawa campus central plant used as the primary heating, cooling and electrical production systems will prevent the College from meeting these goals.
- The College is in the proposal stages of a Master Campus Decarbonization strategy that will lay out the strategic pathway towards meeting the 2030 and 2050 goals.

ONGOING ENERGY EFFICIENCY, SUSTAINABILITY INITIATIVES AND BENCHMARKING

Existing Building Systems

Algonquin College is committed to sustainable building operation and continuous improvement. The College has been reviewing the existing Sequence of Operations (SOO) specifically focusing on improving in the following areas of building automation in control strategies:

- High-Performance Sequences of Operation
The College emphasizes high-performance sequences of operation for Heating, Ventilation and Air Conditioning (HVAC) systems. In collaboration with the College's controls provider, Siemens, the College's highly trained, on-site controls technicians are implementing controls' strategies to comply with the principles outlined in ASHRAE Guidelines 36-2021. These strategies are actively implemented across the College's heating and cooling plants, ventilation, and hydronic pumping loops to improve occupant comfort, reduce energy usage and improve reliability.

- **Functional Result-Based Approach**

There has been an ongoing in-house approach to adopt functional testing into the Facilities Management standard preventative maintenance system. Recognizing that there are multiple ways to achieve energy efficiency without significant cost or investment can support the College's long term efficiency goal. Whether it is sensors, controllers, or control devices, the College prioritizes solutions that enhance building efficiency and ease of operation.

- **Smart Buildings for Sustainability**

The rising awareness of sustainable measures and escalating energy costs drives the College toward Smart buildings. The College is integrating building level analytics for continuous monitoring and fault detections through the building automation systems. By integrating automation, dynamic control is achieved over HVAC, lighting, and other systems. These Smart buildings adapt to changing conditions, optimize energy usage, and enhance occupant well-being.

Energy Use Intensity (EUI)

The current overall Algonquin College EUI of 27.9 ekWh/sq.ft. is below the 2030 goal of 30.5 ekWh/sq.ft. This shows that the College is already using 9% less energy per square footage than the 2030 target. Through the ongoing efforts of management staff and the facilities team the College has been reducing energy usage in a positive downward trend.

The College's 4 MW natural gas fired central cogeneration heating and cooling plant, installed in 2017/18, produces 70-80% of the College's electricity. The College's Scope 1 and Scope 2 emissions are nearly identical to the 2018 levels. There is a direct correlation between how the College has reduced its energy consumption per square foot although not reducing its

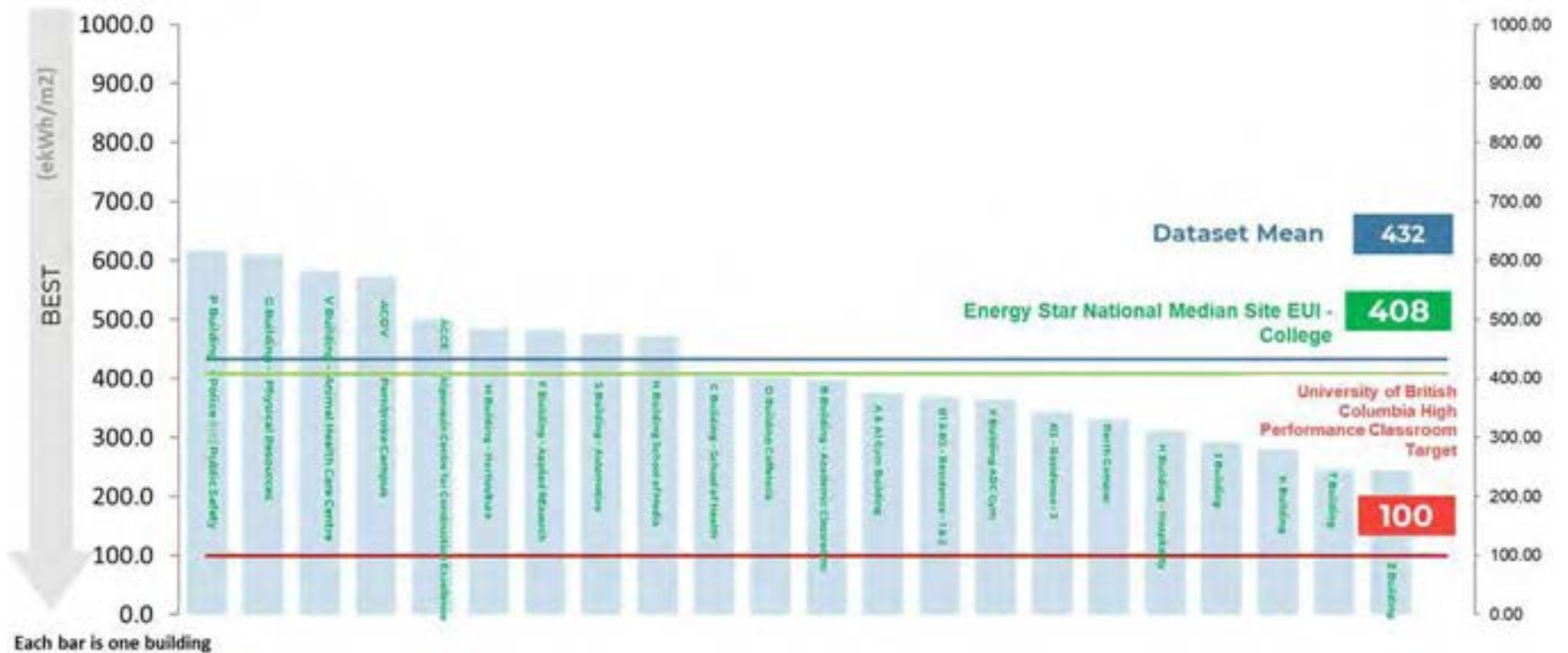
overall GHG emissions. This is typical of facilities with a central cogeneration plant where natural gas is the primary fuel source used to generate electricity and thermal energy.

Benchmarking and Target Setting

The College undertook a campus wide benchmarking initiative with the baseline energy use intensities for each building in 2022 and 2023. The Energy Star Canadian Median Site Energy Use Intensity (EUI) was used as the comparative benchmarking metric for all each building.

The purpose of this exercise was to compare each building's weather normalized site EUI against the other buildings in Algonquin Colleges inventory and to the industry standard for each building based on its usage type.

The ARC, the residences, H Building and J Building are among those that perform better than the Canadian Median Site EUI, while buildings P, G, M, F and N, as well as the ACCE Building, perform worse than the median. Buildings B, C and D are performing roughly at the median of 408 ekWh/m² (see Figure 28).



- (1) ekWh – equivalent kilowatt hour. A unit of energy equal to a load of one kilowatt over the duration of one hour. The “e” in ekWh, short for “equivalent”, signifies conversion of other units of energy into kWh. The energy consumption from the COGEN units was allocated between properties using an area weighted average methodology proportional to each building’s consumption of electricity and/or thermal BTUs.
- (2) The National Median Site EUI are developed by building type by Energy Star.

Figure 31. Algonquin College Total 2022 Energy Use Intensity Benchmark Comparison to Energy Star Canadian Median – College

OTTAWA CAMPUS PORTFOLIO DECARBONIZATION STUDY

The College is currently beginning a strategic decarbonization plan to look at the campus as a whole and begin making decisions to strategically accelerate decarbonization.

Recapitalization, including both decarbonization retrofits as well as new construction, offers a critical opportunity to implement measures that will yield significant carbon reductions. Deep energy retrofits involve significant overhauls to major building systems that can lead to substantial energy and cost savings. Examples include adding insulation to building envelope, installing a condensing boiler or a ground-source heat pump. AC currently uses the latest published energy codes in all recapitalization. Moving forward recapitalization needs to go beyond the energy code by implementing more aggressive measures and ensuring they are installed and operating as designed.

AC's aging infrastructure presents opportunities to improve portfolio condition at the same time as investing in carbon-efficient buildings. AC stakeholders commented that aging infrastructure is a major barrier to reducing carbon emissions. Recapitalization is required for many older buildings, which require replacement or else significant building enclosure repairs (e.g. roof, window and siding replacement) to improve the overall condition of these older buildings, improve operations and support carbon reductions.

New construction and recapitalization projects are sometimes designed beyond AC's O&M capability. The design of new buildings and major renovations must consider personnel capacity and training requirements to ensure the infrastructure can be successfully and efficiently operated.

Decarbonization and carbon reduction implementation during construction (including both major renovations and new construction) may include the following measures:

- Occupancy based lighting and ventilation controls
- New mid-efficiency windows with lower solar gain
- Recommission HVAC systems on a 5 year cycle
- New chilled water equipment, some heat recovery if cost-effective
- Cost-effective enclosure improvements (e.g. eliminate thermal bridging as much as possible, air-tightness, insulation from inside where appropriate, new roofing)
- Better windows (e.g. double low-e coating)
- Replace majority of HVAC with new low-energy schemes, but with maximum reuse of existing systems
- Heat recovery on ventilation, or deeper recovery using heat-pump systems
- On-site renewable energy, typically photovoltaic
- Green roofs where photovoltaic is not applicable
- Solar walls for make-up air
- Transfer air strategies between adjacent spaces
- Full heat-pump system (air-source)
- Full heat-pump system (geo-source)
- Special equipment upgrades (for labs, cooking class & kitchens, specialty class)
- Drain-water heat recovery and/or ultra-low-flow fixtures

Not all decarbonization measures are suitable for every building type. Buildings chosen for decarbonization are typically those connected to the central COGEN system for heating, cooling and electrical generation. Regardless of whether a building uses decentralized boiler systems or centralized heating plants, deep retrofit measures involve electrifying the building's heating system. The College is exploring options to convert the central COGEN plant to low-carbon sources.

Applying Best Practices

Algonquin College strives to be a national leader in sustainable development and campus operations. The College is committed to advancing low and zero-carbon, sustainable, healthy and resilient infrastructure across our campuses through various strategic plans and initiatives.



Photovoltaic panels on the roof of the Student Commons

Humber College has recently developed Green Building Standards that reflect best practices in environmental sustainability and which Algonquin College will be applying to a range of future construction projects. Design and construction teams will be expected to demonstrate compliance through clear deliverables. It is their responsibility to ensure these requirements are reflected in design documents and implemented during construction. The College's goals are straightforward: clearly communicate our sustainability objectives, demonstrate leadership, and accelerate market transformation.

Retrofits and Major Renovations

The College has a detailed review process when approaching any major renovations to ensure the best economic and sustainability systems are integrated with each of the campus's existing systems. This includes conducting pre-design life cycle costing analysis of proposed retrofit design option strategies. The potential strategies and technologies include hybrid fuel roof top units (RTU), integration of solar photovoltaic during all roofing reviews and replacements, modernizing zone level controls, and reviewing renewable energy sources where available.

Central Heating Plant Measures

As noted above, continuing operation of the Ottawa Campus's natural gas fired cogeneration engines in the central plant will prevent the College from meeting its decarbonization goals. In retrofitting and modernizing the COGEN system, the following alternative energy sources may be considered:

- Fuel switching to efficient electric heating (air- and ground-sourced heat pumps).

-
- Low temperature hot water systems and efficiency improvements – conversion from satellite gas boilers to thermal network, improving the efficiency of both generation and distribution.
 - Thermal exchange – replacing fossil fuel use with geexchange, solar thermal, waste heat and/or water-sourced thermal energy, applied after converting to a hot water boiler system.
 - Biomass boiler systems – replacing fossil fuel use with local biomass sources.

Other factors to consider for central heating and cooling plant decarbonization and future redevelopment include:

- Managing increased plant capacity as losses decrease and buildings become more efficient or leave the system. This may result in existing plants becoming oversized, requiring adjustments to address excess capacity for carbon reductions.
- Designing plants to allow for future capacity expansion. Algonquin’s thermal network piping is sized for this expansion.
- Considering additional capacity if there are specific opportunities for GHG reduction by connecting to a low GHG system, such as if a building could be powered electrically through another meter point to Hydro Ottawa or geothermal energy.

5.10 ELECTRICITY SYSTEM

The campus's power supply is primarily fed by a 44kV radial line from a Hydro pole, with a capacity of approximately 5,000 kW, although the exact available capacity is unclear. The peak demand across the campus has been recorded at about 5,800 kW, which exceeds the utility grid's assumed capacity, indicating potential constraints on the available power. The campus has seen a 17.8% increase in power consumption from 2023 to 2024.

Power is stepped down from 44kV to 8.32 kV by two fan-cooled transformers that feed a 1200A 8.32 kV double-ended switchgear lineup in the main electrical room of Building A, distributing power to various buildings throughout the campus and the Central Heating and Cooling Plant (CHP). The transformers and switchgear lineup were upgraded in 2018 and are in very good condition. The transformers have a total capacity ranging from 6,000 kVA to 8,000 kVA with cooling fans in operation. There is about 2,700 kVA available for future load growth, but this may be limited by whatever is available from the grid.

Co-generation is a key part of the campus power supply, with two 2,000 kW natural gas-fueled generators that provide about 75% of the campus's electricity. These generators are synchronized with the utility grid and are capable of supporting the campus load during grid outages, though they would not be sufficient to meet peak demand on their own, triggering load shedding during island mode. Additionally, the campus is equipped with a Battery Energy Storage System (BESS) and photovoltaic (PV) solar arrays. The BESS stores excess solar power for later use and helps maintain optimal generator operation, but the PV system has not been producing at full capacity due to equipment issues.

As the campus redevelops and expands, additional capacity and infrastructure upgrades will be required to meet the

forecasted increases in load. The existing power feed for the buildings is shared, and several buildings are connected to the same supply feeders, raising concerns about potential overloading. Upgrades to the feeders and pad-mount switchgear are essential to ensure reliable power supply for future development.

The development strategy envisions significant new buildings on the Buildings F, H, and A sites. A new mixed-use building on F site will require additional power capacity. Currently, the power feed serving Building F and other connected buildings has a total carrying capacity of about 3,800 kVA, which would be insufficient to support the forecasted additional demand of 1,828 kW. To meet this demand, the existing feeders will need to be upgraded, or a dedicated power supply for Building F from the main 8.32 kV switchgear may be necessary.

Redevelopment of Building H will also require a power upgrade, including a new transformer and upgraded supply cables, as the existing transformer is not adequate for the forecasted peak demand. Redevelopment of the northeast portion of Building A will require substantial power upgrades. The existing transformers and switchboards in Building A are not sufficient to support the forecasted peak demand of 3,430 kW. The transformers will need to be replaced, and the main switchboard will require an upgrade to accommodate the increased load.

For all three priority sites, a dedicated power supply for each building is recommended, with a looped feed configuration for reliability. Pre-construction recommendations include conducting insulation resistance tests, investigating the condition of existing switchgear, exploring new duct bank installations, and evaluating the feasibility of supplying buildings F and H on a shared looped feed.

5.11 HEATING AND COOLING SYSTEMS

The Ottawa Campus's existing Central Heating and Cooling Plant (CHP) serves several older buildings using a mix of cogeneration units, gas-fired boilers, and absorption chillers to provide heating and cooling. The two 2MW gas-fired cogeneration units produce both electricity and heat, with waste heat being used for building heating or cooling via absorption chillers. There is also an 800-ton electric chiller to provide additional cooling when necessary. However, the CHP plant is nearing full capacity, especially for cooling, with supplementary cooling systems in place for certain buildings, which are not connected to the CHP network. Some planned modifications aim to connect these supplementary systems to the CHP.

The campus's heating and cooling systems are distributed via two hydronic loops, one for heating and another for chilled water. Based on estimated design loads, the heating system is generally well-sized for current building needs, but the cooling system struggles to meet demand on peak days. A detailed load summary shows that the CHP can handle current heating needs but faces challenges in providing sufficient cooling, especially during high-demand periods. Certain buildings, like B, H, and P, have substantial cooling needs, and a few buildings are independent of the CHP, relying on standalone systems such as water-source heat pumps or air-cooled chillers.

Campus development anticipated in the next ten years will impact the existing heating and cooling infrastructure. The short-term development strategy (see Section 7) focuses on replacing Building F with a new mixed-use building that will require significant new HVAC capacity, as it is not connected to the CHP. The heating and cooling loads for this building are forecasted to be substantial, and the CHP cannot accommodate these new demands. A standalone HVAC plant

will be necessary for a future development on the Building F site, with options like natural gas heating, air-source heat pumps, or ground-source heat pumps. Each system presents its own benefits and challenges in terms of cost, energy efficiency, and emissions.

On Building H, another potential site for near-term redevelopment, the CHP may be able to support part of the HVAC load after the demolition of kitchen spaces. While the CHP's current capacity is insufficient for the new loads, the decanting of high-demand kitchen areas could reduce the overall load. Similarly, the redevelopment of a portion of Building A forecasts HVAC loads that exceed the CHP's current capacity. However, portions of the building could be served by the CHP, especially for academic and mixed-use spaces, while residential areas may require standalone systems. The overall summary highlights that the CHP cannot fully meet the additional HVAC loads from these developments, and standalone solutions are recommended for all three buildings to avoid overstressing the existing infrastructure.

The existing cogeneration plant is reported to be nearing end-of life, and replacement or complete overhaul is being considered. These two units are the major source of CO₂ emissions for the campus. In order to achieve the college's decarbonization targets, other approaches will need to be considered, but removing and replacing the units with other equipment or all-electric systems will have a major impact on energy costs, as well as significant capital costs for upgrades to the campus electrical systems. Abandoning the cogeneration systems may provide impetus to eventually convert all buildings to smaller standalone HVAC plants.

5.12 STORMWATER MANAGEMENT

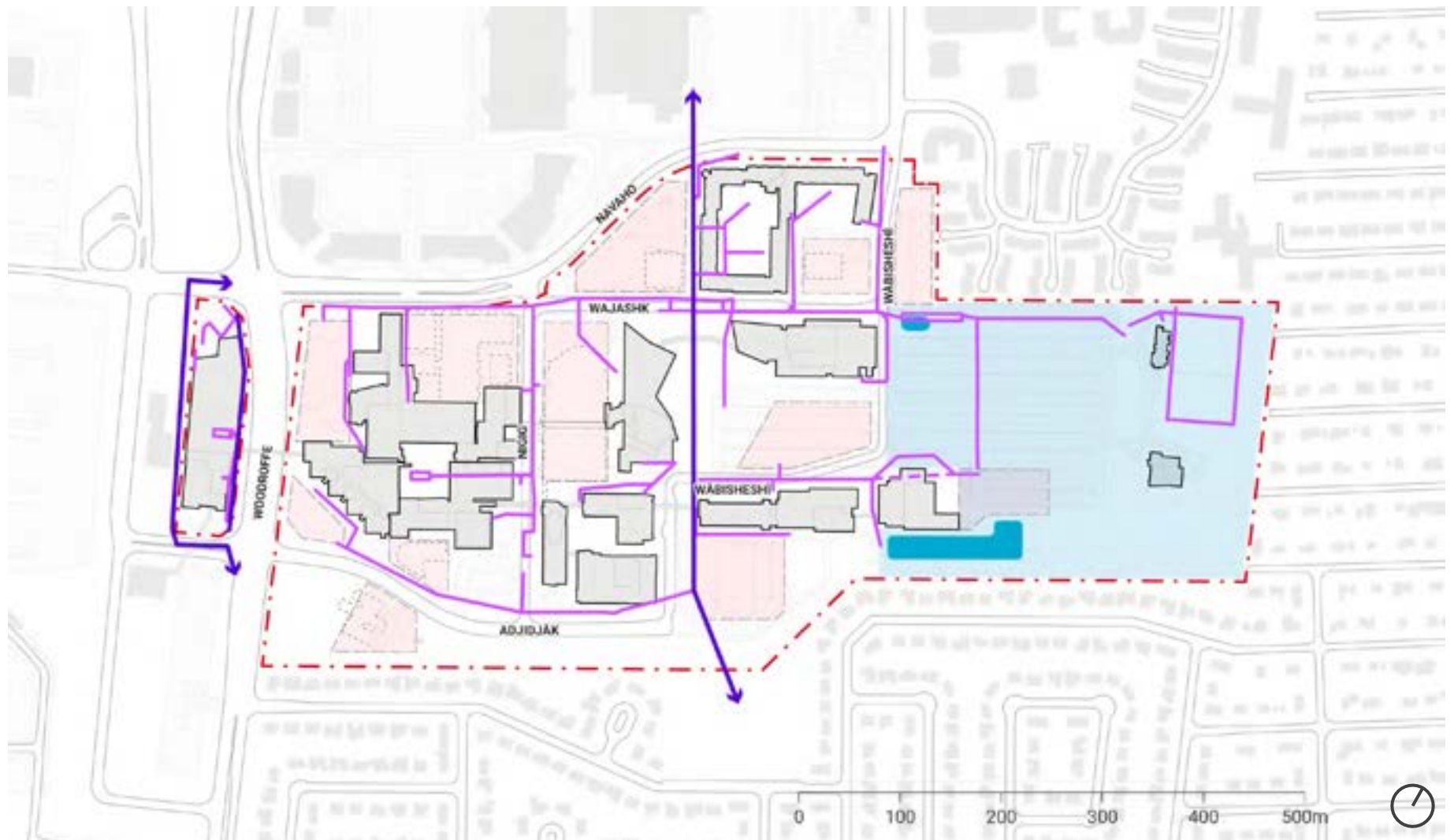







Figure 32. Stormwater Management Framework Plan

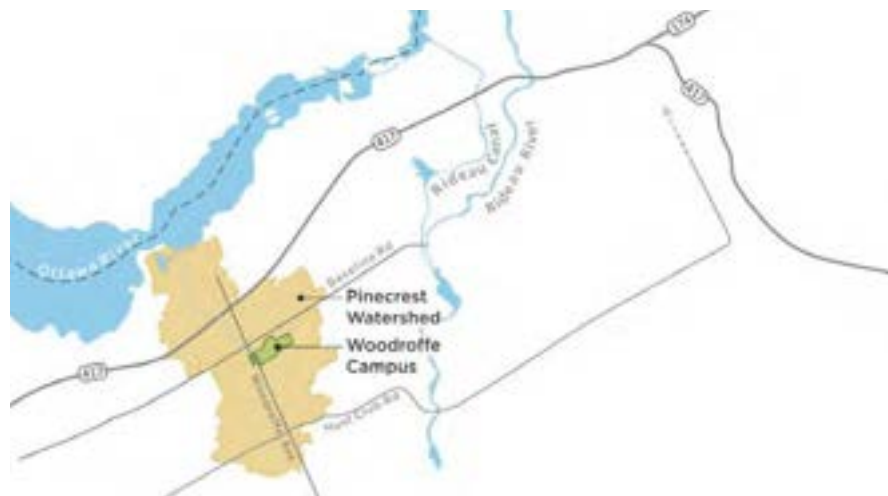
-  Municipal Storm Sewer
-  Existing and Proposed Local Storm Sewer
-  Local Storm Sewer to be Realigned with Development
-  Catchment Area for Stormwater Ponds
-  Stormwater Pond

The Stormwater Management (SWM) framework describes the existing storm infrastructure currently servicing the campus and how these systems may be considered or potentially affected by future development. Development on the campus will affect existing drainage systems and may require additional SWM measures for the control and treatment of stormwater runoff.

Pinecrest Creek

Algonquin College Ottawa Campus is situated within the heart of the Pinecrest Creek subwatershed. Through urban development, the creek has been altered severely in sections. Many portions are now buried, i.e. enclosed in storm sewers and culverts. Under the campus, the creek is enclosed in a 2100mm diameter trunk storm sewer that bisects campus from north to south. The campus is located just upstream of the remaining natural stream portion, which begins on the north side of Baseline Road.

Impacts of uncontrolled runoff from the existing campus are currently being mitigated by a new City of Ottawa SWM pond at the northeast corner of Baseline Road and Woodroffe Avenue



providing water quality treatment and some flood and erosion control on Pinecrest Creek for a total of 445 hectares upstream, including the current campus lands; however, it cannot be relied upon to address SWM requirements for future development/redevelopment. SWM guidelines established for the Pinecrest Creek subwatershed are applicable to campus lands and future campus development.

Storm Sewer Network

Campus lands west of Woodroffe Avenue currently flow at a controlled rate to the 2400mm diameter City of Ottawa trunk storm sewer on Woodroffe Avenue (“Woodroffe Trunk”).

Lands east of Woodroffe Avenue flow mainly uncontrolled or controlled by conventional approaches (e.g., roof drains, catch basins and storm sewers) that collectively outlet to the 2100mm diameter City trunk storm sewer that discharges to Pinecrest Creek north of Baseline Road (“Baseline Trunk”).

On-Site Source Controls

For campus lands west of Woodroffe Avenue, flow is attenuated on-site from the ACCE building to 25% less than pre-development flow via parking lot storage, green/asphalt roof, and an underground cistern. The ponding areas were designed to store the excess runoff from the 100-year design storm as per City of Ottawa Sewer Design Guidelines.

Until recently, east of Woodroffe Avenue, the SWM approach has been conventional. Flow is mainly uncontrolled from hard surfaces or is controlled to pre-development conditions with roof drains and inlet control devices as per the City’s guidelines. An exception is the Student Commons Building, which is controlled to previous 2009 Pinecrest Creek SWM criteria using roof drains, roof storage, landscaping and on-site infiltration basins. The Student Residence (Phase III) and Courtyard is controlled with roof drains, roof storage and landscaping.

More recently, the ARC building was designed to adhere to the 2012 SWM Guidelines for the Pinecrest Creek/Westboro Area. Key features include rooftop storage, bioretention features and an underground infiltration retention/detention chamber below the parking lot area for quantity control (flood management and erosion control) and runoff volume reduction. In addition, an oil grit separator helps provide the required 80% TSS removal or water quality treatment. The proposed SWM system also meets the rainwater management LEED credits.

Existing Stormwater Management Pond

An existing SWM pond is located on the south side of campus immediately south of Building S. The pond was constructed in 2019 to address a previous SWM deficit incurred for three campus developments that had proceeded without adhering to the Pinecrest Creek SWM Guidelines at the time: NE Parking Lot (reinstatement of parking displaced by Student Commons Building); Building C Addition (DARE District); and Building S Automotive Welding Shop Addition (Phase 1).

In the College's 2018 Rainwater/Stormwater Management Plan, the total shortfall volume (345 m³) was calculated as the total SWM volume required to meet the 2012 Pinecrest Creek SWM criteria for the three projects less the total actual storage volume provided on site for each of those developments.

The pond was designed to meet the 2012 Pinecrest Creek SWM Criteria for its upstream drainage area of 9.3 hectares with an imperviousness of 45%. Accounting for the stormwater deficit for the three shortfall projects, the pond has a total remaining reserve capacity of 5,053 m³, including 409 m³ of permanent pool volume and 4,645 m³ of extended detention/active storage volume. The reserve capacity is available to help mitigate impacts of future development depending on its location, size and imperviousness.

The three shortfall projects required a significant portion for the permanent pool to address their requirements for runoff volume reduction (10mm) and water quality storage (80% TSS removal). The remaining capacity in the permanent pool is the limiting factor as it would only address the water quality storage requirements for an additional three hectares of future development at 90% imperviousness.

Guidance for Future Development

All future development on campus is subject to the City of Ottawa 2012 Pinecrest Creek SWM Criteria for runoff volume reduction with on-site retention, water quality treatment (80% TSS removal), and water quantity control (erosion control and flood management).

As per the 2018 Rainwater/Stormwater Management Plan, future development/redevelopment west of Woodroffe Avenue will continue with on-site source control through use of source control and Low Impact Development (LID) measures.

East of Woodroffe Avenue, SWM requirements should be addressed for future development with on-site source controls and LID where possible. Where on-site measures are not feasible, consideration should be given to using the reserve capacity in the existing SWM pond to mitigate impacts of future development and offset SWM requirements for that site. Priority for use of the reserve pond capacity should be given to smaller developments and those located within the 9.3-hectare catchment area for the pond due to mitigation of water quality impacts. Depending on size, imperviousness and remaining reserve capacity, the SWM pond may be relied upon to offset SWM requirements for water quantity control (erosion control and flood management) for sites east of Woodroffe.

Water quality impacts from sites located outside of the drainage area to the pond cannot be (directly or indirectly) mitigated by the pond. Sites located outside of the pond's drainage area, including those identified for near-term development (buildings F, H and a portion of A) may not rely upon the pond to meet their water quality treatment requirements. These sites will be required to provide their own water quality treatment on-site and may also be required to meet the runoff volume criterion (10 mm retention) on-site as well as per the 2012 Pinecrest Creek Criteria.

As shown in Figure 30, a future addition to the east of Building S (0.40 ha, 100% imperviousness) is located within the drainage area to the pond and may be an opportunity to rely on the reserve capacity to the pond.

LEED vs Pinecrest Creek Criteria

As per the 2018 Rainwater/Stormwater Management Plan, the recommended target for future development is that all new projects pursue maximum credits in LEED Gold and meet Pinecrest Creek criteria at the same time. The more stringent criteria will apply. The College should implement a full range of measures, e.g. infiltration practices, water balance, etc.

Climate Change

Climate change design standards for drainage and SWM should include use of future rainfall IDF curves and City of Ottawa stress test (100-year storm + 20%).

Other Opportunities

Many LID opportunities exist on Campus to mitigate impacts of future development.

Parking lots can be redeveloped to include LID measures such as rain gardens and tree pits to help offset SWM requirements for future development.

Future development should be encouraged to mimic the hydrologic cycle with water balance approaches that retain/detain runoff on-site and promote infiltration to groundwater. Preferred SWM measures include green roofs, rainwater harvesting, bioretention, infiltration trenches, permeable pavers, soakaway pits, tree pits, rain gardens and the overall reduction of hard surfaces.

5.13 WATER AND WASTEWATER

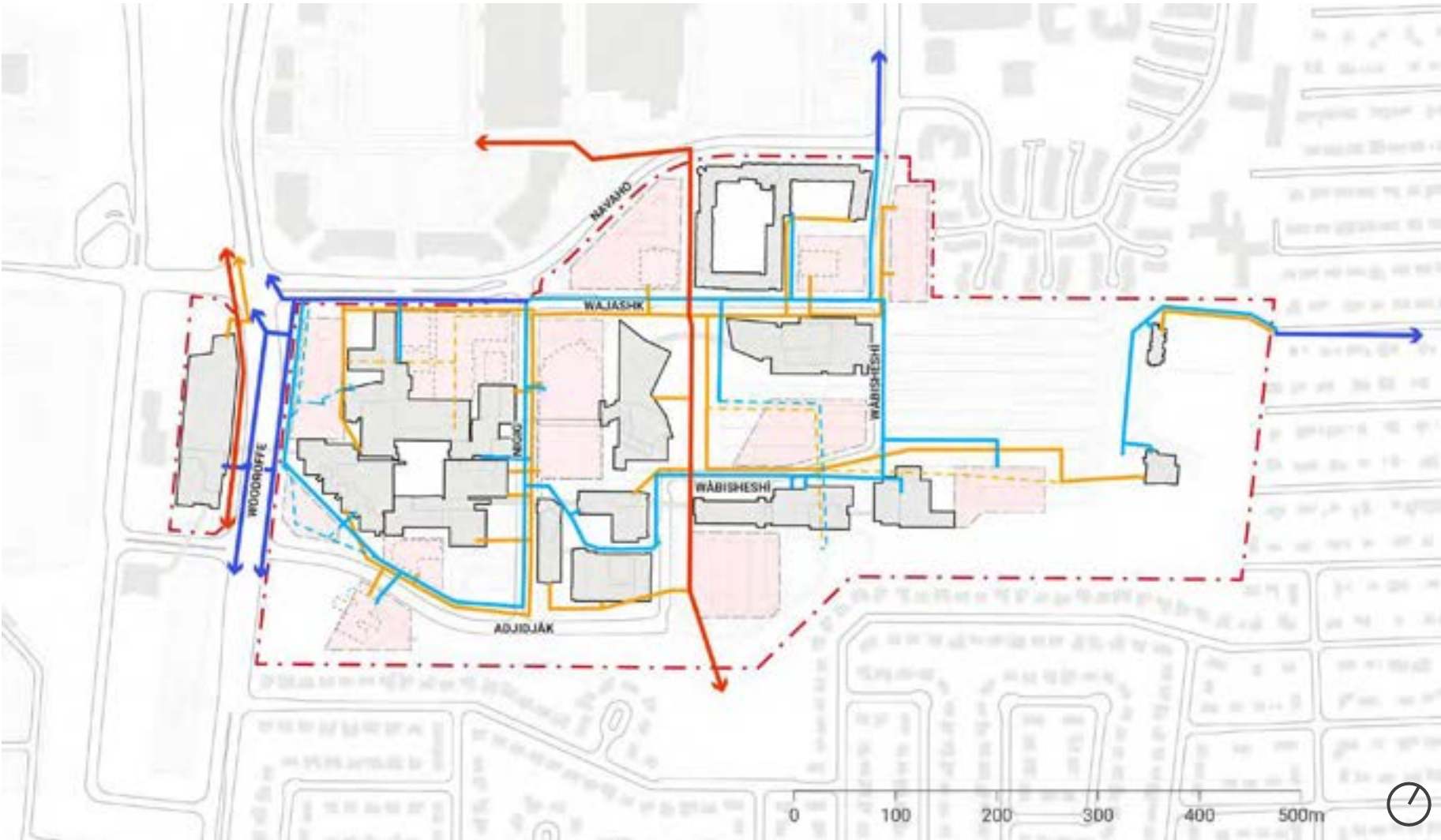


Figure 33. Water and Waste Water Utilities Framework Plan

- Municipal Collector Sanitary Sewer
 - Existing and Proposed Local Sanitary Sewer
 - - Local Sanitary Sewer to be Realigned with Development
- Municipal Watermain
 - Existing and Proposed Campus Watermain
 - - Campus Watermain to be Realigned with Development

Redevelopment and construction of new buildings on the campus will require water supply for domestic use, fire protection and sanitary sewer connections. The Water and Wastewater Framework describes the existing water distribution and sanitary sewer infrastructure that services the campus and infrastructure considerations for new development.

Water Distribution

The water distribution system within the campus receives water from municipal watermains via three connection points: Navaho Drive at Woodroffe Avenue, Navaho Drive at Baseline Road, and Lotta Avenue to the east of campus. Analysis of the water distribution system was carried out in 2010, and partially updated in 2017. At the time, the system was found to have adequate capacity both for domestic demands (which are assessed for a ‘peak hour’ condition) and for fire demands. Applicable design guidelines require that the water distribution system be able to supply the required fire flow (RFF) to each building at the same time as meeting the maximum day demand for domestic flows, with the residual pressure falling no lower than 140 kPa (20 psi). RFFs are calculated following the Fire Underwriters Survey methodology based on the size and characteristics of each building.

The previous analyses found the available fire flows to be in the range of 150 to 220 L/s depending on the location within the campus.

A preliminary assessment for the largest buildings proposed in the long-term plan suggests that RFFs will be in the range of 150 to 200 L/s, assuming non-combustible construction as defined by the Fire Underwriters Survey (2020). Requirements of non-combustible construction include protected vertical openings, a minimum one-hour fire resistance rating for all structural elements, walls, floors and roof, and construction of these elements from non-combustible materials.

Considering the proposed locations of the largest buildings close to the connection points from municipal watermains, it is likely that the RFFs can be met with little or no improvement of the existing water distribution system. Confirmation of this would require water distribution system analysis. Larger buildings or different construction types, including mass timber except where encapsulated, may only be feasible with measures such as subdivision by two-hour firewalls or increased separation from adjacent buildings.

The existing water distribution system extends to, or close to, all new buildings proposed in the MCDP. Figure 34 identifies the long-term water distribution system, including minor watermain extensions and relocations expected to be required to facilitate construction of the proposed buildings. In all cases these are localized and appear feasible to construct.

In addition to providing the required flows, reliable operation of the water distribution system is essential to campus operations. Both scheduled construction or maintenance work and unscheduled or emergency work to repair watermain breaks can cause portions of the system to be temporarily shut down. Lengthy interruptions to service can only be avoided by ensuring that important buildings are serviced by looped watermains which provide multiple pathways for water distribution.

The watermains servicing the western portion of the campus are currently looped, but this is not the case for the watermains servicing buildings N, T, P and S. Extending services to the major new buildings proposed between the ARC building and Building P, and east of Building S, provides the opportunity to install a new looped watermain within Wàbisheshì Private as also illustrated in Figure 34, providing robust water distribution for both new and existing buildings in this area.

For reliability, and to avoid constraining regular construction and maintenance activities, the City of Ottawa requires that new buildings with an average daily water demand of over 50,000 L/d be provided with dual service connections from the adjacent watermain, which itself must be looped. This requirement would typically be triggered by a large residence building but not by academic buildings (which have lower water demands). However, since water outages can be highly disruptive to campus operations, it is recommended that all significant buildings be provided with dual service connections which allows water service to be maintained when the watermain is shut down for planned work or is out of service. This would include residences, food service buildings, large academic buildings and heating/cooling plants.

Sanitary Sewers

The campus is serviced by a network of local sanitary sewers which discharge to a 525 mm diameter municipal collector sewer that runs south to north through the campus.

A comprehensive analysis of these sewers was completed in 2010, including flow monitoring to confirm actual flow rates. This analysis found that under peak flows at that time, the main collector was operating at a maximum of 17% of its capacity. Similarly, it was found that none of the local sewers were operating at more than 17% of capacity. Sensitivity analysis found that the main collector could accommodate a 30-fold increase in the student population over the full-time equivalent population of 18,000 students at that time, although the receiving capacity of municipal sewers further downstream would likely constrain the actual serviceable population to a somewhat lower total.

Condition assessment of the majority of sanitary sewers was also completed in 2010 based on CCTV inspection. This inspection found the majority of the sanitary sewers to be

in reasonable condition with relatively few defects requiring immediate or near-term attention. This condition assessment was completed 14 years ago and should be updated to provide a more current picture of the condition of the campus's sewer infrastructure. However, considering the age range of the sewers (60 years or younger), durable pipe materials (concrete/PVC), and previous condition assessment findings, it is likely that the majority of the sewers have at least 20 years of remaining life or are in suitable condition for rehabilitation by trenchless methods.

At a campus-wide level, capacity of the existing sanitary sewers is not expected to present a constraint to the level of development proposed in the long-term plan.

The significant increase in density proposed for the building A, F and H sites will increase flows in the local sanitary sewer on Wajashk Private. While analysis will be required to determine whether upsizing of this sewer is needed, the cost of upsizing would be not be out of line with the scale of the proposed development.

5.14 DEMONSTRATION PLAN



Figure 34. Demonstration Plan

Figure 35 synthesizes the campus frameworks described in this chapter and adds conceptual footprints of future buildings to demonstrate how the frameworks can help ensure the Ottawa Campus evolves cohesively, holistically and sustainably as it grows over the long term. The demonstration plan also illustrates the design guidelines contained in the next chapter.

6. Development Guidelines

6.1 GENERAL GUIDELINES

A successful college campus is one where the relationship between buildings and open spaces creates a unified and vibrant environment that reflects the institution's identity. On Algonquin College's Ottawa Campus, a blend of diverse architectural elements with well-integrated landscapes can cultivate a sense of place that is functional, inspiring and supportive of academic life.

The following guidelines provide general design direction for campus development, with a focus on buildings. These are followed by more detailed guidelines for the individual development sites identified in Section 5.7. The aim of both general and site-specific guidelines is to ensure the creation of durable, high-quality buildings with landscaping that together contribute to the College's identity and sense of place as they support its mission and strategic goals. An overarching objective is to create inviting, safe and comfortable spaces—both indoors and outdoors—through a commitment to excellence in architecture, landscaping, urban design and construction standards.

In addition to the MCDP's design guidelines, the College will apply sustainability guidelines based on relevant best practices, currently represented by Humber College's Green Building Standards. The buildings on campus will apply the City's design guidelines, in particular Design Guidelines for High-Rise Buildings and Transit Oriented Design.

BUILDING DESIGN AND MASSING

1. New academic buildings should optimize their development site. Academic buildings should have a minimum height of three storeys and taller buildings that contribute to a compact campus and leave room for open space are encouraged.
2. Where development sites will only be partially built out, the planning and design process should consider the potential for future build-out. This ensures the long-term realization of the site's full potential. A conceptual design strategy should be developed alongside the initial building plan, accounting for future expansion or additional structures on the site.
3. A bold and contemporary architectural expression is encouraged for all new developments. This includes the continued use of innovative materials, like those showcased in the DARE District, which reflect Algonquin's commitment to innovation and sustainability.
4. Windows and glazed walls should be transparent, not mirrored, to strengthen the visual connection between interior and exterior spaces, contributing to campus safety and a sense of openness. This design approach will not only enhance the aesthetic appeal of building but also showcase interior spaces and maximize natural light penetration, as demonstrated by the ACCE Building.
5. The residential portion of mixed-use buildings should be stepped back from the podium containing academic uses to reduce the perceived impact of the massing and to ensure adequate sunlight on pedestrian spaces.
6. Long buildings and those with large floorplates should break up their perceived mass with varied setbacks, stepbacks, recesses, articulated facades and/or material changes.

7. Blank walls facing pedestrian routes and gathering spaces, should be avoided. Existing blank walls should be softened with plantings or architectural features to minimize their impact on public realm.
8. New academic buildings generally should be designed to be flexible and adaptable over time to new or expanded programs, varying classroom sizes and changing technologies.



Ishkodewan Courtyard

CIRCULATION AND PUBLIC REALM

1. For buildings in Algonquin’s academic zones, the design should prioritize spacious corridors lined with communal and reception areas. These internal connections should integrate with Algonquin’s broader internal pedestrian network, creating accessible, inviting pathways through and around campus buildings.
2. Heavily-used areas like classrooms and labs should be positioned near internal pedestrian links, while departmental offices, restricted labs and other specialized spaces can be located on upper floors to maintain an efficient flow of learners and employees.
3. The ground floors of buildings should interact thoughtfully with surrounding landscapes and pedestrian pathways. Building entrances should be clearly identifiable through unique architectural features or detailed design elements. Where possible, active ground-floor uses—such as study spaces, or student services—should animate adjacent open spaces and streets.
4. Attractive and consistent paving, planters, street trees, and street furniture should be used to establish a distinct character along campus streets. In pedestrian priority areas along Wajashk and Wàbisheshì, different paving materials should be used to separate the spaces for pedestrians and vehicles/cyclists.
5. To accommodate Algonquin’s year-round campus life, weather protection in the form of canopies or covered walkways should be provided at key pedestrian entrances and transit stations. Similar protection should be considered for amenity areas and pathways linking primary buildings to associated structures. These features will help ensure comfort during the College’s varying seasonal conditions.

BUILDING ACCESS

1. To improve accessibility, building entrances generally should be flush with the exterior pedestrian zone.
2. Service areas and vehicle access should be discreetly integrated into the campus's public realm. Landscape screens and other design measures should be used to minimize the visual and functional impact on the campus environment.
3. Servicing, loading and vehicular parking access should be located at the back of buildings and be accessed from driveways where feasible to maintain attractive streets. Nigig is an exception and is the one campus street that will continue to function as a service corridor that accommodates servicing, loading and parking access.
4. Laneways, service, loading and parking access to buildings should be consolidated where possible to minimize the impact on pedestrian and bicycle movements.
5. Pick-up and drop-off should be accommodated in lay-bys parallel to the street and be located in front of main pedestrian entrances to buildings.
6. Primary building entrances should be located in highly visible places with direct access from the street to support easily identifiable building entrances, pedestrian activity on the street, and direct pick-up and drop-off activities.




Student Commons

6.2 SITE-SPECIFIC GUIDELINES

DEVELOPMENT GUIDELINE ELEMENTS

The site-specific guidelines in this section include illustrations that identify various elements of a building and its immediate setting, as described below.


 **Property Line:** *The property boundary of Algonquin College.*


 **Development Site:** *Area boundaries where new development or redevelopment should occur.*


The development parcels do not necessarily indicate the total development footprint. They may also include landscaping, courtyards, walkways, service/loading areas or other features that extend beyond the walls of the building.

 **Primary Pedestrian Entrance:** *The general location for main building entrances.*

Primary building entrances should be highly visible, well-aligned with the pedestrian network, and contribute to an active public realm. In addition to the primary entrances, secondary entrances are encouraged along primary building frontages.

 **Vehicular Access:** *The route private and commercial vehicles generally will use to access parking, loading and servicing areas.*

 **Servicing Entrance:** *The location for overhead doors providing access to loading areas.*

 **Servicing Area:** *The general location for loading facilities, garbage and recycling bins, and associated storage areas.*

 **Potential Underground Parking Access:** *The preferred location for a ramp to underground parking.*

Servicing Accesses, Servicing Entrances, Servicing Areas, and Underground Parking Accesses should be located away from primary pedestrian routes and building entrances. This will minimize conflict with pedestrians and support the creation of high functioning service routes and loading areas.



Enhanced Landscape: *Areas where improvements to greenspace, sidewalks, street trees, and street furniture are recommended alongside development.*

Enhanced landscapes are noted in areas adjacent to or within the development site that require significant improvements from their existing condition.



Open Space: *Green space projects that improve the open space network on campus.*



Potential Open Space: *Potential green space projects that improve the open space network on campus.*



Landscape Entry Feature: *High-profile areas where unique streetscape features will signify key moments of arrival.*

These places should receive additional design attention and are appropriate locations for art, street furniture and signage.



Primary Building Frontage: *Locations in which facades should generally be aligned with the frontage line to create consistent open space enclosure.*

Primary entrances and active uses should be located along building frontages and loading areas should avoid building frontages.



Active Edge: *Building frontages with a high degree of transparency and where active uses should be located.*

Programs inside the active edge should be student-life or community-oriented and should have a high degree of interaction with the adjacent public realm. Active edges can feature artistic glazing, interior or exterior illumination, and/or facade articulation.



Internal Circulation Connection: *The general location for enclosed connections to neighbouring building should be located.*

New pedestrian bridges and built connections will ensure developments connect seamlessly into the existing internal circulation network. These routes should be intuitive and direct. Views to the outside and the use of natural light is encouraged.

SITE A

SITE AND PROGRAM

Site A, located at the corner of Navaho and Nigig, replaces a portion of Building A. In a prominent location near a future BRT station, Site A is an important gateway to the College and will be integral to revitalizing the north edge of the campus.

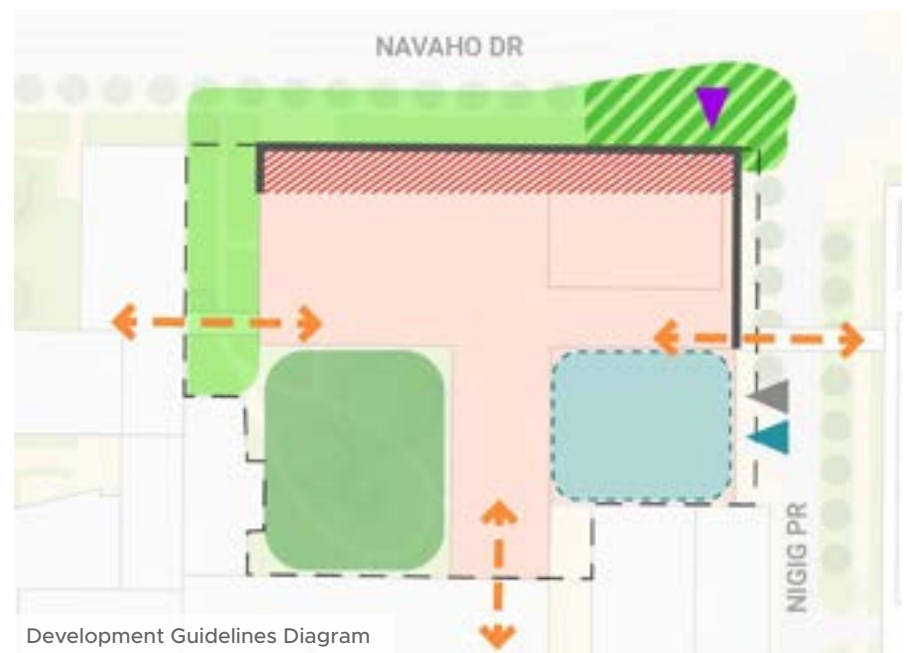
Given its central location, visibility and proximity to existing academic and student life hubs, Site A is suitable for an academic building of 4-6 storeys or a much taller mixed-use building.

KEY PLAN



LEGEND

- | | |
|-----------------------------|--------------------------------------|
| Property Line | Enhanced or New Landscape |
| Development Site | Open Space |
| Primary Pedestrian Entrance | Potential Open Space |
| Vehicular Access | Landscape Entry Feature |
| Servicing Entrance | Primary Building Frontage |
| Servicing Area | Potential Underground Parking Access |
| Active Edge | Internal Circulation Connection |



GUIDELINES

- The frontage along Navaho should be an **active edge**.
- Due to its visibility, the architectural treatment of the Navaho frontage should be of high quality, showcase facilities and promote a positive image of the College.
- The corner of Navaho and Nigig should have a defining **landscape entry feature** that draws attention to the building's **primary pedestrian entrance**.
- The building can be **serviced** and have an **underground parking entrance** along Nigig away from the intersection.
- **Pedestrian bridges** should connect the future building to existing portions of Building A and Building H.
- An **open space courtyard** in the southwest corner of the development site can provide Building A with a more sizeable, light-filled outdoor amenity.
- Design attention should be given to **enhanced landscape areas** along Navaho and between Building A and the new development.

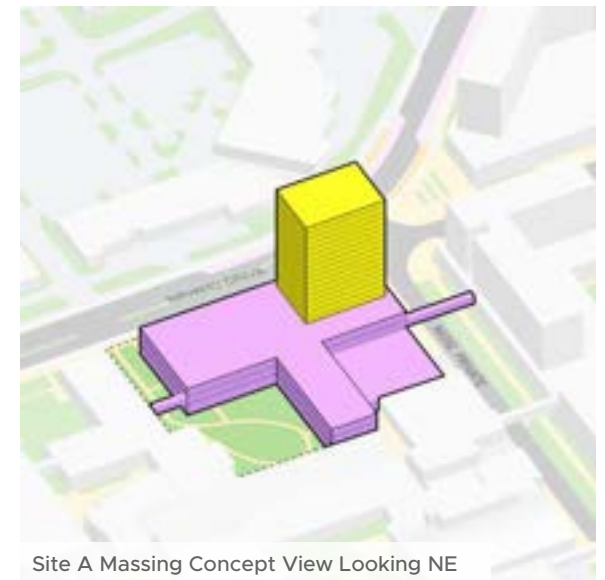


Site A Massing Concept View Looking SW

Development Parameters			
Approx. Site Area	Height Range	Setbacks from Streets	Approx. Academic Development Capacity*
9,070 m ²	Academic: 2 - 6 st Residential: up to 25 st	Navaho ROW: 6-8 m Nigig Curb: 8-10 m	6,700 - 20,200 m ² (72,000 - 217,400 ft ²)

Appropriate Uses	Enabling Projects	Coordinated Projects
<ul style="list-style-type: none"> • Academic • Student residences (in a mixed use building) • Student life/services 	<ul style="list-style-type: none"> • Demolition of northeast portion of Building A 	<ul style="list-style-type: none"> • Potential reconfiguration of Navaho/Wajashk/Nigig Intersection • Baseline BRT Corridor along Navaho

*Development Capacity is expressed as Gross Floor Area. Gross Floor Area is based on a 30% reduction from Building Construction Area.



Site A Massing Concept View Looking NE

SITE B

SITE AND PROGRAM

Site B occupies the corner of Woodroffe and Adjidjàk in front of the existing Building B. The new development can redefine the southwestern campus entrance, welcoming passersby and commuters from the south. Site B is suitable for an academic building of 3 to 6 storeys.

KEY PLAN



LEGEND

- | | |
|-----------------------------|--------------------------------------|
| Property Line | Enhanced or New Landscape |
| Development Site | Open Space |
| Primary Pedestrian Entrance | Potential Open Space |
| Vehicular Access | Landscape Entry Feature |
| Servicing Entrance | Primary Building Frontage |
| Servicing Area | Potential Underground Parking Access |
| Active Edge | Internal Circulation Connection |



Existing Condition



Development Guidelines Diagram

GUIDELINES

- The Woodroffe and Adjidjàk frontage should be an **active edge** with the building's **primary pedestrian entrance**.
- Due to its visibility, the architectural treatment of the Woodroffe and Adjidjàk frontage should be of high quality and promote a positive campus image.
- A **pedestrian bridge** should connect the new building to Building B.
- Design attention should be given to **enhanced landscape areas** along Woodroffe and Adjidjàk.



Site B Massing Concept View Looking NE

Development Parameters			
Approx. Site Area	Height Range	Setbacks from Streets	Approx. Academic Development Capacity*
2,060 m ²	2 - 6 st	Woodroffe ROW: 8-10 m Adjidjàk Curb: 10-14 m	2,300 - 6,900 m ² (24,800 - 74,300 ft ²)

Appropriate Uses	Enabling Projects	Coordinated Projects
• Academic	n/a	n/a

*Development Capacity is expressed as Gross Floor Area. Gross Floor Area is based on a 30% reduction from Building Construction Area.



Site B Massing Concept View Looking SW

SITE D

SITE AND PROGRAM

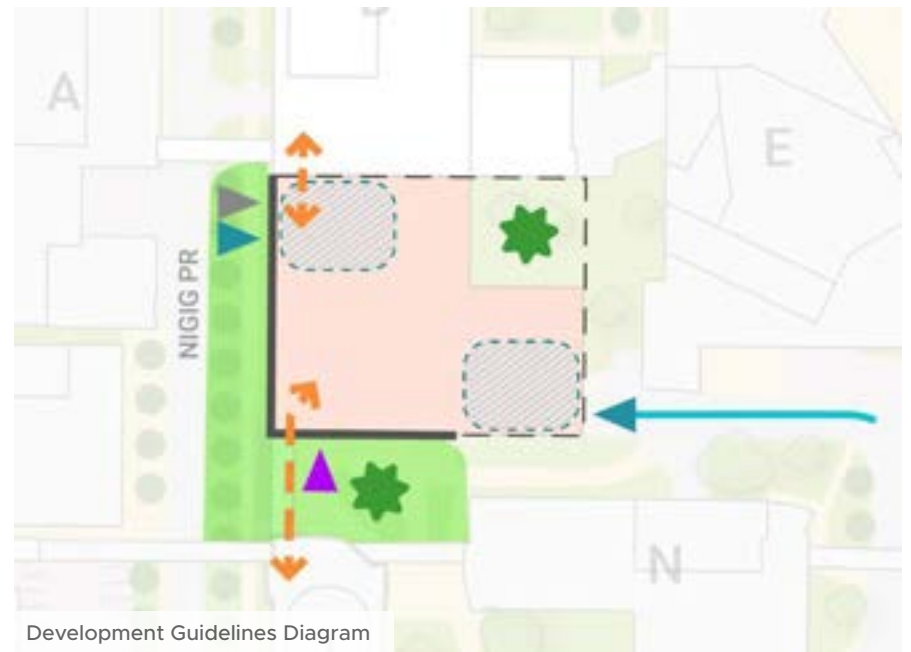
Site D contains the portion of Building D slated for replacement. It is located centrally among existing academic and student services buildings, extending into Building H to the north, and with pedestrian connections to the east, west, and south. With frontage only along Nigig, Site D is not a highly visible site, but can still contribute to the character and image of the campus. Site D is suited as a 2-6 storey academic building.

KEY PLAN



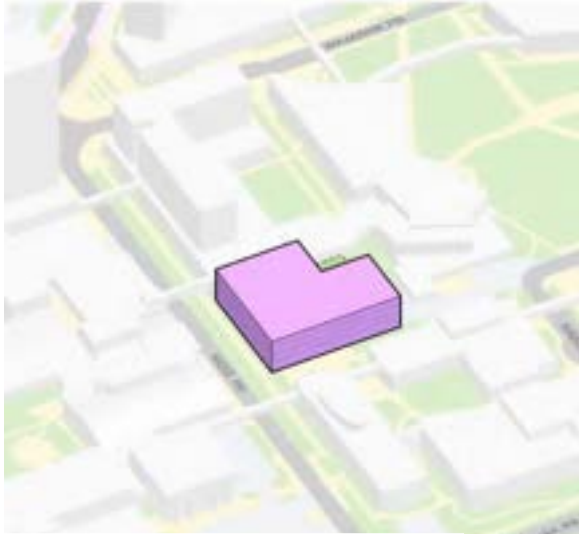
LEGEND

- | | |
|-----------------------------|--------------------------------------|
| Property Line | Enhanced or New Landscape |
| Development Site | Open Space |
| Primary Pedestrian Entrance | Potential Open Space |
| Vehicular Access | Landscape Entry Feature |
| Servicing Entrance | Primary Building Frontage |
| Servicing Area | Potential Underground Parking Access |
| Active Edge | Internal Circulation Connection |

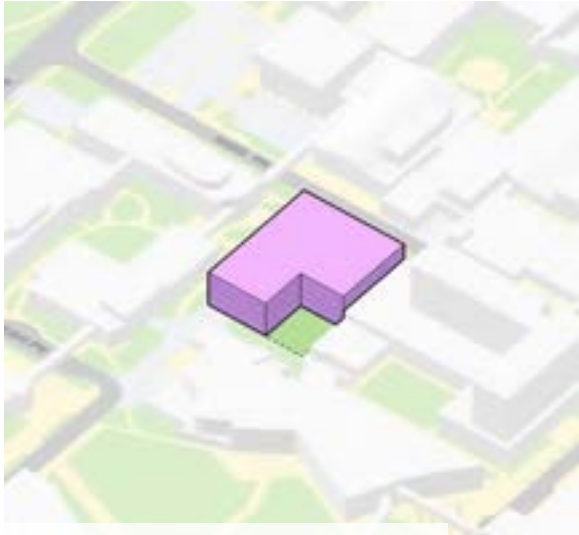


GUIDELINES

- Site D is not required to have active edges and will serve mainly as an extension of Site H, which will have a prominent active uses and entrances along Wajashk.
- The introduction of a small entry **open space** along the southern edge can visually define the space around the **primary pedestrian entrance**.
- An **open space** courtyard can be considered between Building H and Building E.
- An above-grade **pedestrian bridge** should connect to Building J.
- The **servicing area** and **underground parking entrance** could reside in one of two locations: adjacent to Building H’s servicing area along Nigig, or interfacing with the existing servicing driveway to the east. Alternatively, sharing the servicing area and parking entrance with Building H could be considered.
- Design attention should be given to **enhanced landscape areas** along Nigig.



Site D Massing Concept View Looking NE



Site D Massing Concept View Looking SW

Development Parameters			
Approx. Site Area	Height Range	Setbacks from Streets	Approx. Academic Development Capacity*
3,710 m ²	2 - 6 st	Nigig Curb: 12.5 m	3,900 - 11,700 m ² (42,000 - 126,000 ft ²)

Appropriate Uses	Enabling Projects	Coordinated Projects
<ul style="list-style-type: none"> • Academic • Student life/services 	<ul style="list-style-type: none"> • Demolition of Building D 	<ul style="list-style-type: none"> • Multi-use path on Nigig

*Development Capacity is expressed as Gross Floor Area. Gross Floor Area is based on a 30% reduction from Building Construction Area.

SITE F

SITE AND PROGRAM

Site F includes the existing Building F and the adjacent parking lot. It has frontage along Navaho and Wajashk and is directly adjacent to the future BRT station. The site is located at the north edge of the campus and is highly visible. Wajashk, the street bordering site to the south, is planned as a pedestrian priority street. A large storm sewer is located in the landscape area between the student residence and site F.

With existing academic uses to the southwest and residential uses to the east, Site F is suitable for a mixed-use building or a standalone residence. At maximum capacity, Site F can accommodate an academic podium of 3-6 storeys and a residential tower of up to 25 storeys.

KEY PLAN



LEGEND

- | | |
|-----------------------------|--------------------------------------|
| Property Line | Enhanced or New Landscape |
| Development Site | Open Space |
| Primary Pedestrian Entrance | Potential Open Space |
| Vehicular Access | Landscape Entry Feature |
| Servicing Entrance | Primary Building Frontage |
| Servicing Area | Potential Underground Parking Access |
| Active Edge | Internal Circulation Connection |



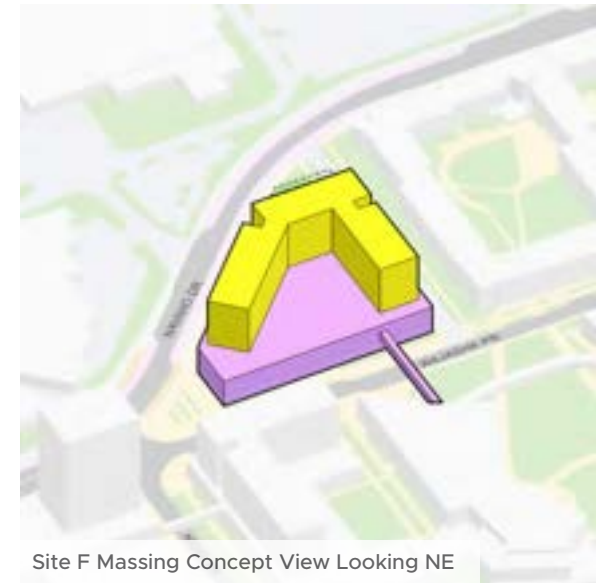
GUIDELINES

- The corner of Navaho and Wajashk and along Wajashk should have an **active edge**.
- Although active uses are not required along Navaho, the building should follow the **primary building frontage** line as indicated to support street character.
- A prominent **landscape entry feature** should establish the corner of Navaho and Wajashk as an important campus gateway, and should be coordinated with the design of the BRT station, if possible.
- Multiple **primary pedestrian entrances** can exist along Wajashk and Navaho.
- The development of Site F should be coordinated with streetscape improvements along Wajashk and the reconfiguration of the Navaho/Wajashk/Nigig intersection.
- The **enhanced landscape** between Site F and Building R should be designed as a well landscaped pedestrian connection between Navaho and Wajashk.
- A **potential open space** can be considered at the northernmost part of the site.
- The construction of a two-way driveway on the east side of F site will support a **servicing area** and **underground parking entrance**. The driveway should be accessible from Navaho, offer layby parking, and have 7m of pavement and sidewalks on both sides.

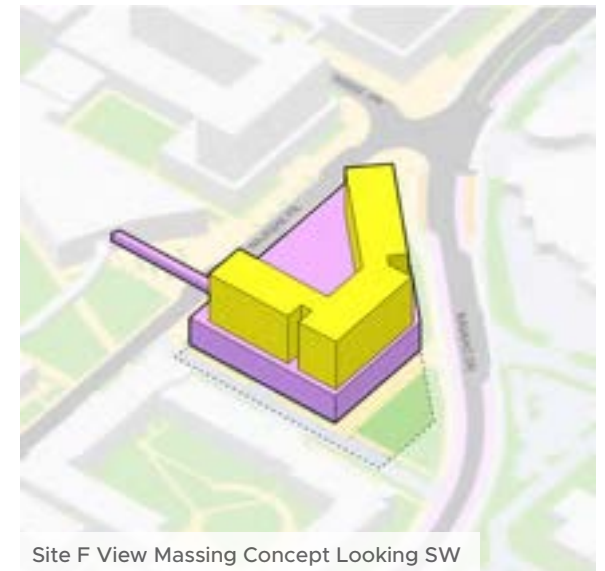
Development Parameters			
Approx. Site Area	Height Range	Setbacks from Streets	Approx. Academic Development Capacity*
8,000 m ²	Academic: 2 - 6 st Residential: 25+ st	Navaho ROW: 6-8 m Wajashk Curb: 8-12 m	8,200 - 24,700 m² (88,300 - 265,900 ft ²)

Appropriate Uses	Enabling Projects	Coordinated Projects
<ul style="list-style-type: none"> • Academic in the podium of a mixed-use building • Residence • Conference facility 	<ul style="list-style-type: none"> • Demolition of Building F 	<ul style="list-style-type: none"> • Potential reconfiguration of Navaho/Wajashk/Nigig Intersection • Baseline BRT Corridor along Navaho • Wajashk streetscape

*Development Capacity is expressed as Gross Floor Area. Gross Floor Area is based on a 30% reduction from Building Construction Area.



Site F Massing Concept View Looking NE



Site F View Massing Concept Looking SW

SITE G

SITE AND PROGRAM

Site G includes the existing Building G and the adjacent parking lot, with frontage along Wàbisheshì and Wajashk. Directly adjacent to an existing residential building, Lot G is suited as residential buildings of 4-10 storeys.

KEY PLAN



LEGEND

- | | |
|-----------------------------|--------------------------------------|
| Property Line | Enhanced or New Landscape |
| Development Site | Open Space |
| Primary Pedestrian Entrance | Potential Open Space |
| Vehicular Access | Landscape Entry Feature |
| Servicing Entrance | Primary Building Frontage |
| Servicing Area | Potential Underground Parking Access |
| Active Edge | Internal Circulation Connection |



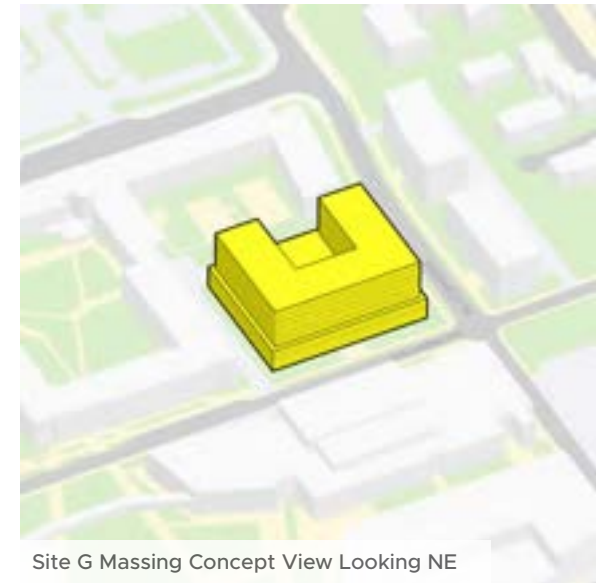
Existing Condition



Development Guidelines Diagram

GUIDELINES

- The building should follow the **primary building frontage** line along Wajashk and Wàbisheshì.
- The **primary pedestrian entrance** should be on Wajashk.
- The **servicing area** and **underground parking entrance** can reside along the north edge of the building, accessed by the existing driveway connecting to Wajashk and Wàbisheshì.
- Design attention should be given to the **enhanced landscape areas** along Wàbisheshì and Wajashk.
- An **open space** courtyard can be considered for the centre of the site, either as a rooftop amenity or at-grade outdoor space.
- The development of Site G should be coordinated with streetscape improvements along Wajashk.

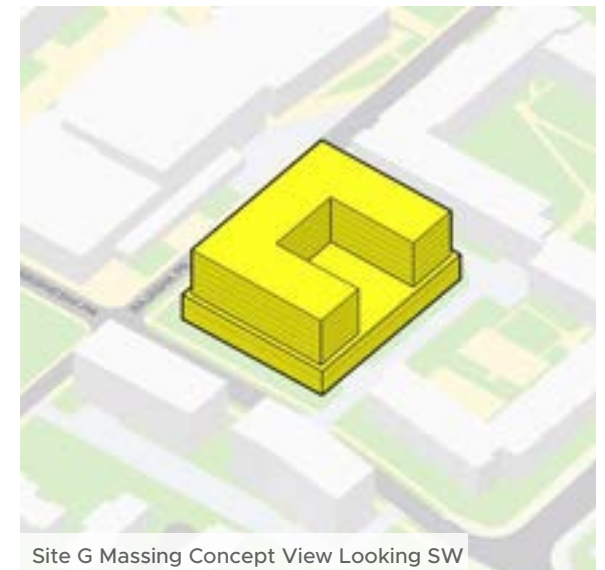


Site G Massing Concept View Looking NE

Development Parameters			
Approx. Site Area	Height Range	Setbacks from Streets	Approx. Academic Development Capacity*
3,580 m ²	up to 10 st	Wajashk Curb: 8-12 m Wàbisheshì Curb: 8-12 m	n/a

Appropriate Uses	Enabling Projects	Coordinated Projects
<ul style="list-style-type: none"> • Residence 	<ul style="list-style-type: none"> • Demolition of Building G 	n/a

*Development Capacity is expressed as Gross Floor Area. Gross Floor Area is based on a 30% reduction from Building Construction Area.



Site G Massing Concept View Looking SW

SITE H

SITE AND PROGRAM

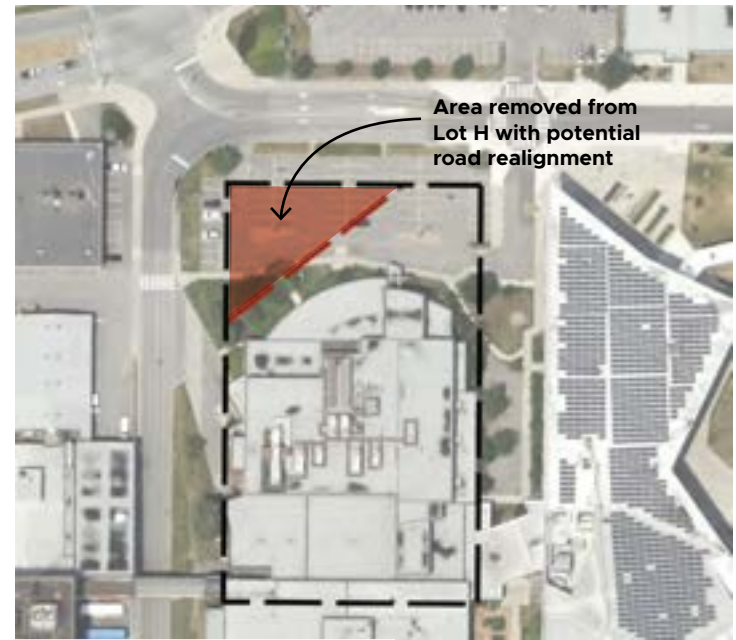
Site H includes Building H and the adjacent parking lot. Located at the intersection of Navaho, Nigig and Wajashk, Site H faces the north main entrance and the future BRT station. Its frontage along Wajashk, planned as a future pedestrian priority street, will contribute to a vibrant pedestrian realm. A future building will also have uses oriented to a generous east-west connecting it to Building D.

Site H's central location and proximity to residential and academic uses make it an appropriate site for a mixed-use building. At maximum capacity, Site H is suited for a podium of 3-6 storeys and a residential tower of up to 25 storeys.

POTENTIAL RECONFIGURATION OF THE NAVAHO-NIGIG-WAJASHK INTERSECTION

If the Navaho-Nigig intersection is reconfigured as recommended (see section 5.1 for more information), Site H's size and shape will be affected. In either case, the site will be an important campus gateway with similar guidelines for development.

KEY PLAN



Existing Condition



Preferred Concept for Navaho-Wajashk-Nigig Intersection



Development Guidelines Diagram: Existing Intersection



Development Guidelines Diagram: Reconfigured Intersection

GUIDELINES

- The building should have an **active edge** along Wajashk with the building's **primary pedestrian entrance**.
- The building should follow the **primary building frontage** line farther south along Nigig and along Building E.
- Due to its visibility, the architectural treatment of the Navaho frontage should be of high quality and promote the College image.
- Existing **pedestrian connections** to Building A, D, and E should be maintained, and a new pedestrian bridge can connect to the northern portion of Building A.
- The **servicing area** and **underground parking access** should reside along Nigig at the southernmost portion of the building.
- An outdoor **courtyard** can be considered between the new development and Building E.
- Design attention should be given to **enhanced landscape areas** along Wajashk and Nigig.

LEGEND

Property Line	Enhanced or New Landscape
Development Site	Open Space
Primary Pedestrian Entrance	Potential Open Space
Vehicular Access	Landscape Entry Feature
Servicing Entrance	Primary Building Frontage
Servicing Area	Potential Underground Parking Access
Active Edge	Internal Circulation Connection

SITE H

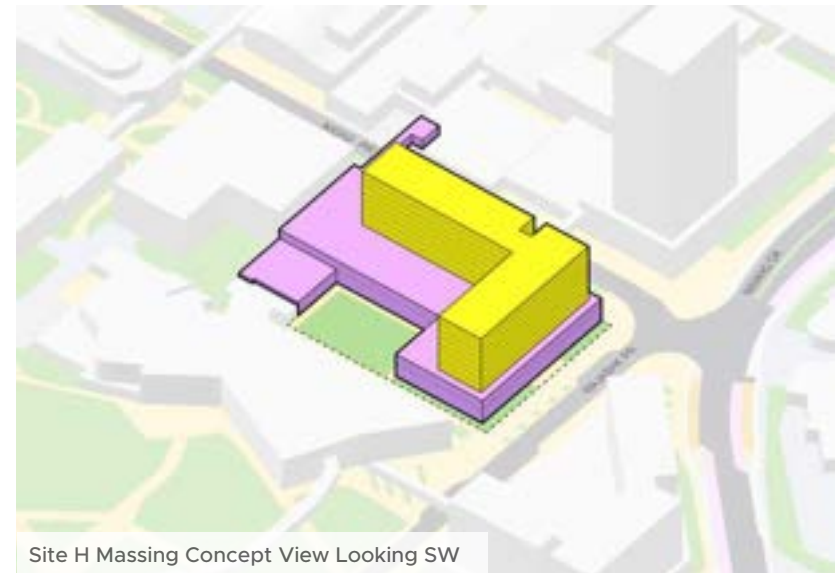
DEVELOPMENT PARAMETERS: EXISTING INTERSECTION

A potential massing for H Site if the existing Navaho-Nigig-Wajashk intersection remains is illustrated below. If the residential portion of the building takes the form of a slab (as illustrated), a maximum height of 10 storeys is recommended (on top of an academic podium).

Development Parameters: Current Intersection			
Approx. Site Area	Height Range	Setbacks from Streets	Approx. Academic Development Capacity*
6,290 m ²	Academic: 2 - 6 st Residential: up to 25 st	Wajashk Curb: 10-14 m Nigig Curb: 10-14 m	7,400 - 21,500 m² (79,700 - 231,400 ft ²)

Appropriate Uses	Enabling Projects	Coordinated Projects
<ul style="list-style-type: none"> Academic Residence within a mixed-use building Conference facility 	<ul style="list-style-type: none"> Demolition of Building H 	<ul style="list-style-type: none"> Wajashk streetscape Multi-use path on Nigig

*Development Capacity is expressed as Gross Floor Area. Gross Floor Area is based on a 30% reduction from Building Construction Area.



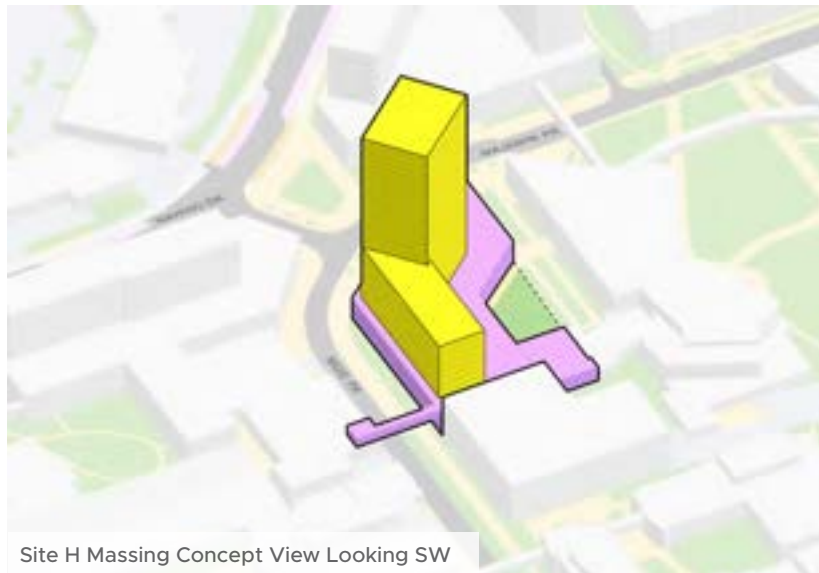
DEVELOPMENT PARAMETERS: RECONFIGURED INTERSECTION

A potential massing for H Site if the preferred Navaho-Nigig-Wajashk reconfiguration is constructed is illustrated below. If the residential portion of the building takes the form of a tower (as illustrated), a height of 25 storeys or more would be appropriate (on top of an academic podium).

Development Parameters: Current Intersection			
Approx. Site Area	Height Range	Setbacks from Streets	Approx. Academic Development Capacity*
5,820 m ²	Academic: 2 - 6 st Residential: up to 25 st	Wajashk Curb: 10-14 m Nigig Curb: 10-14 m	6,600 - 19,000 m² (70,700 - 204,600ft ²)

Appropriate Uses	Enabling Projects	Coordinated Projects
<ul style="list-style-type: none"> Academic Residence within a mixed-use building Conference facility 	<ul style="list-style-type: none"> Demolition of Building H 	<ul style="list-style-type: none"> Reconfiguration of Navaho/Wajashk/Nigig Intersection Wajashk streetscape Multi-use path on Nigig

*Development Capacity is expressed as Gross Floor Area. Gross Floor Area is based on a 30% reduction from Building Construction Area.



SITE K

SITE AND PROGRAM

Site K, situated on Adjidjak, bounds the existing Building K. The development of Site K will help redefine the south main entrance, which is framed by Buildings K, C and J. Given its southern location on campus and short separation distance from existing buildings, Site K is suited for a 2-4 storey academic building.

KEY PLAN

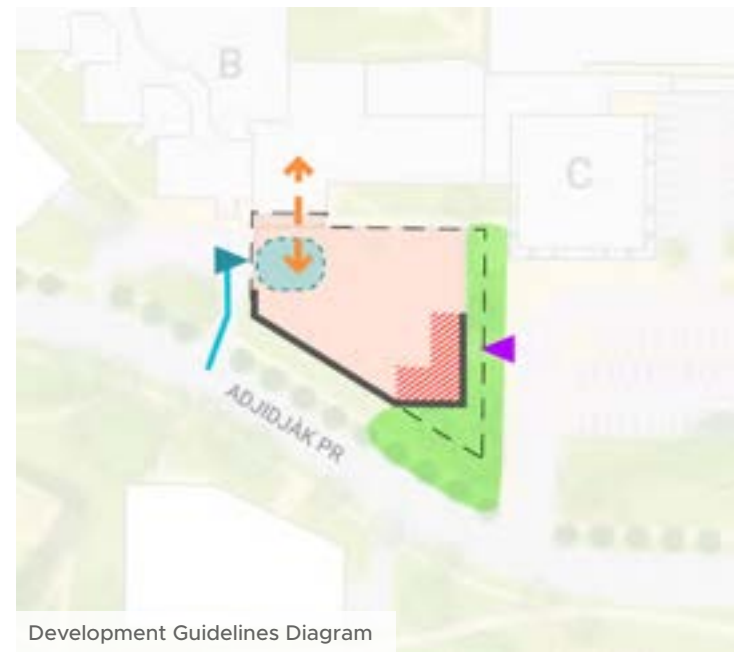


LEGEND

Property Line	Enhanced or New Landscape
Development Site	Open Space
Primary Pedestrian Entrance	Potential Open Space
Vehicular Access	Landscape Entry Feature
Servicing Entrance	Primary Building Frontage
Servicing Area	Potential Underground Parking Access
Active Edge	Internal Circulation Connection



Existing Condition



Development Guidelines Diagram

GUIDELINES

- The southeast corner of the site, which frames the south main entrance of the campus, should be an **active edge** with the **primary building entrance**.
- The building should follow the **primary building frontage** line along Adjidjàk.
- A **pedestrian connection** should be maintained to Building B, ideally, with an above-grade bridge.
- The building should be **serviced** from the west side.



Site K Massing Concept View Looking NE



Site K Massing Concept View Looking SW

Development Parameters			
Approx. Site Area	Height Range	Setbacks from Streets	Approx. Academic Development Capacity*
2,300 m ²	2 - 4 st	Adjidjàk Curb: 10-14 m	2,700 - 5,400 m ² (29,100 - 58,100 ft ²)

Appropriate Uses	Enabling Projects	Coordinated Projects
<ul style="list-style-type: none"> • Academic 	<ul style="list-style-type: none"> • Demolition of Building K 	n/a

*Development Capacity is expressed as Gross Floor Area. Gross Floor Area is based on a 30% reduction from Building Construction Area.

SITE M

SITE AND PROGRAM

Site M, located along Adjidjak, contains the existing Building M. The site is situated between the Horticultural Garden to the east and the urban farm to the west. The development of Site M will contribute to the character of existing campus greenspaces and the arrival experience at the south main entrance.

Given its green setting and proximity to the residential neighbourhood to the south, Site M is suited for a 2-3 storey academic building.

KEY PLAN



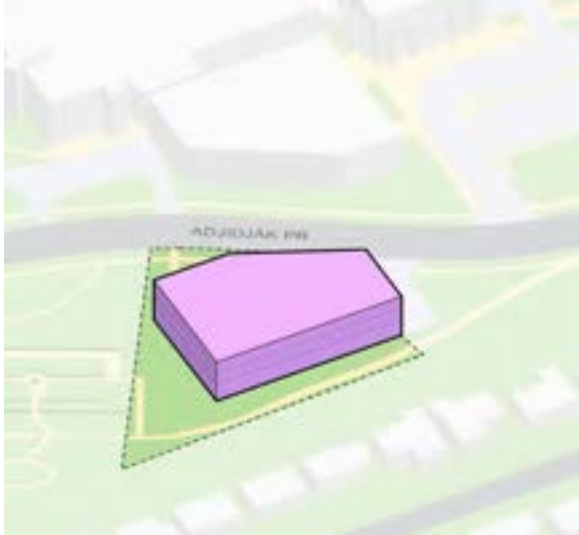
LEGEND

- | | |
|-----------------------------|--------------------------------------|
| Property Line | Enhanced or New Landscape |
| Development Site | Open Space |
| Primary Pedestrian Entrance | Potential Open Space |
| Vehicular Access | Landscape Entry Feature |
| Servicing Entrance | Primary Building Frontage |
| Servicing Area | Potential Underground Parking Access |
| Active Edge | Internal Circulation Connection |



GUIDELINES

- Active uses at grade are not required. However, the building should follow the **primary building frontage** line along Adjidjàk and along the eastern façade.
- The building should address and provide a connection to the existing Horticultural Garden to the west.
- The **primary building entrance** should be along Adjidjàk.
- The building should be **serviced** from the eastern side.
- The building should have a minimum **12-metre setback** from the property line, and the existing large trees at the rear should be maintained as a buffer to the residential neighbourhood.



Site M Massing Concept View Looking NE



Site M Massing Concept View Looking SW

Development Parameters			
Approx. Site Area	Height Range	Setbacks from Streets	Approx. Academic Development Capacity*
3,870 m ²	2 - 4 st	Adjidjàk Curb: 10-18 m	2,400 - 4,800 m ² (25,800 - 51,700 ft ²)

Appropriate Uses	Enabling Projects	Coordinated Projects
<ul style="list-style-type: none"> • Academic • Conference facility 	<ul style="list-style-type: none"> • Demolition of Building M 	<ul style="list-style-type: none"> • Landscape improvements along Adjidjàk and in the Edge Open Space

*Development Capacity is expressed as Gross Floor Area. Gross Floor Area is based on a 30% reduction from Building Construction Area.

SITE S

SITE AND PROGRAM

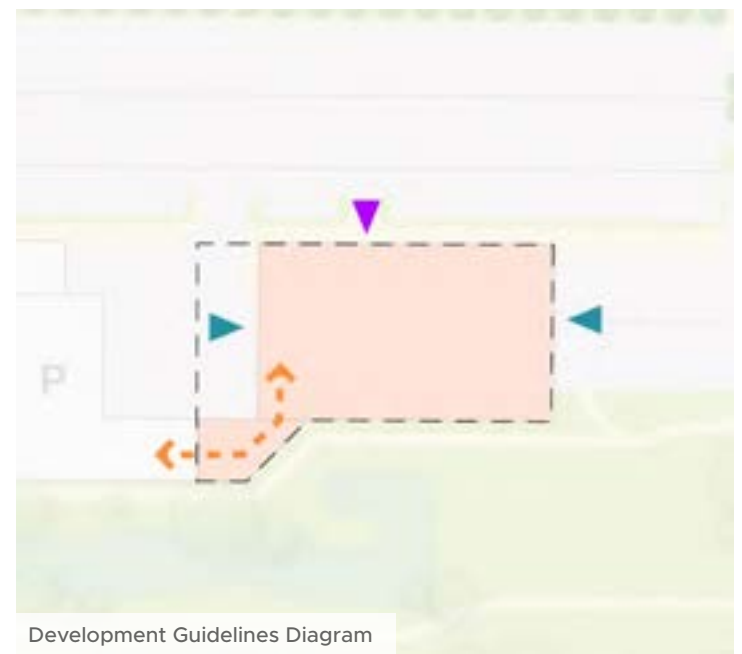
Site S is the easternmost development site in the MCDP, occupying a portion of the existing surface parking east of the existing Building S. It does not currently have frontage on any existing campus streets. It is suitable for a 2-3 storey academic building.

KEY PLAN



LEGEND

- | | |
|-----------------------------|--------------------------------------|
| Property Line | Enhanced or New Landscape |
| Development Site | Open Space |
| Primary Pedestrian Entrance | Potential Open Space |
| Vehicular Access | Landscape Entry Feature |
| Servicing Entrance | Primary Building Frontage |
| Servicing Area | Potential Underground Parking Access |
| Active Edge | Internal Circulation Connection |



GUIDELINES

- The building width isn't defined by existing constraints; it could be longer or shorter than shown in the graphic. The northern limit of the site should generally align with the northern edge of Building P.
- The building can be **serviced** at both the west and east edge.
- The **primary pedestrian entrance** should be on the north edge.
- Site S should be connected to Building P through an at-grade **pedestrian connection**.



Site S Massing Concept View Looking NE



Site S Massing Concept View Looking SW

Development Parameters			
Approx. Site Area	Height Range	Setbacks from Streets	Approx. Academic Development Capacity*
4,040 m ²	2 - 3 st	n/a	4,800 - 7,100 m ² (51,700 - 76,400 ft ²)

Appropriate Uses	Enabling Projects	Coordinated Projects
<ul style="list-style-type: none"> • Academic 	<ul style="list-style-type: none"> • Modifications to the existing SWM pond to re-align the spillway 	n/a

*Development Capacity is expressed as Gross Floor Area. Gross Floor Area is based on a 30% reduction from Building Construction Area.

LOT 1

SITE AND PROGRAM

The Lot 1 development site is located on the existing Parking Lot 1, at the corner of Navaho and Woodroffe. In a highly visible location, future development will define the character of the campus from Woodroffe and enhance the arrival experience through the north main entrance. The development is suitable for a 3-6 storey academic building or taller mixed-use building.

KEY PLAN



LEGEND

- | | |
|-----------------------------|--------------------------------------|
| Property Line | Enhanced or New Landscape |
| Development Site | Open Space |
| Primary Pedestrian Entrance | Potential Open Space |
| Vehicular Access | Landscape Entry Feature |
| Servicing Entrance | Primary Building Frontage |
| Servicing Area | Potential Underground Parking Access |
| Active Edge | Internal Circulation Connection |



Existing Condition



Development Guidelines Diagram

GUIDELINES

- The frontage at the corner of Navaho and Woodroffe should be an **active edge** with the **primary pedestrian entrance**. A **landscape entry feature** at this location should signify entry into the campus.
- The building should follow the **primary building frontage** line along the extent of Navaho and Woodroffe to maintain street character.
- Due to their visibility, the architectural treatment of the Navaho and Woodroffe frontages should be high quality and promote the College image.
- **Servicing** and **underground parking** at the building’s southwest corner can be accessed from a driveway off of Navaho Dr.
- **Pedestrian bridges** should establish connections to Building A and Building B
- Design attention should be given to **enhanced landscape areas** along Navaho and Woodroffe.
- An **open space** can be considered between the northern portions of Building A and Lot 1.



Lot 1 Massing Concept View Looking NE



Lot 1 Massing Concept View Looking SW

Development Parameters			
Approx. Site Area	Height Range	Setbacks from Streets	Approx. Academic Development Capacity*
5,620 m ²	2 - 6 st	Woodroffe ROW: 8-10 m Navaho ROW: 12-16m	4,300 - 11,600 m ² (46,300 - 124,900 ft ²)

Appropriate Uses	Enabling Projects	Coordinated Projects
<ul style="list-style-type: none"> • Academic • Student residences (in a mixed use building) • Student life/services 	n/a	<ul style="list-style-type: none"> • Gateway landscape feature

*Development Capacity is expressed as Gross Floor Area. Gross Floor Area is based on a 30% reduction from Building Construction Area.

LOT 7

SITE AND PROGRAM

The Lot 7 development site is located on the existing Parking Lot 7, south of Building P. The site has frontage along Wàbisheshi, facing buildings N and T. Lot 7 is suitable for a 2-6 storey academic building. Lot 7 could also be suitable for a structured parking facility located behind academic uses.

KEY PLAN



LEGEND

- | | |
|-----------------------------|--------------------------------------|
| Property Line | Enhanced or New Landscape |
| Development Site | Open Space |
| Primary Pedestrian Entrance | Potential Open Space |
| Vehicular Access | Landscape Entry Feature |
| Servicing Entrance | Primary Building Frontage |
| Servicing Area | Potential Underground Parking Access |
| Active Edge | Internal Circulation Connection |



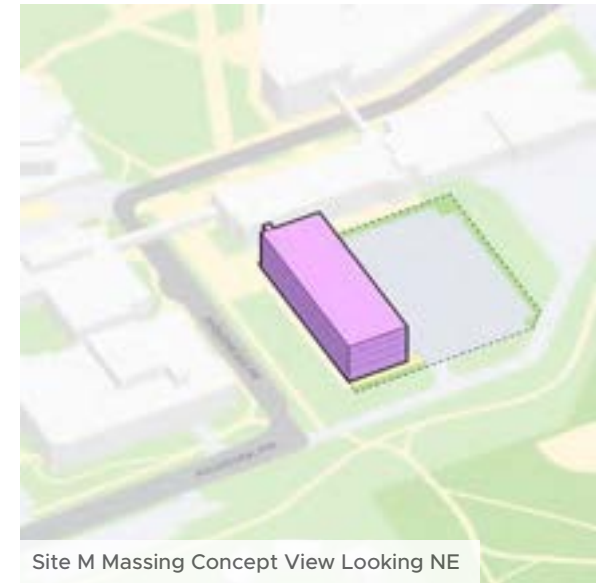
GUIDELINES

- The building should have an **active edge** at the northwest corner, where its **primary pedestrian entrance** should be located.
- The building should follow the **primary building frontage** line along the extent of Wàbisheshì to establish a consistent street character.
- The building can be **serviced** at its southeast corner with the existing driveway off of Wàbisheshì.
- A **pedestrian bridge** should connect to Building P.
- Surface parking should be located at the back of the building where it is screened from the view along Wàbisheshì and Adjidjàk.
- **Structured parking**, if constructed, should be located on the eastern half of Lot 7. It should be a minimum of 11m away from the academic building and could be 36 to 54m in width. The parking structure could have 2-4 levels.
- Design attention should be given to **enhanced landscape areas** along Wàbisheshì.

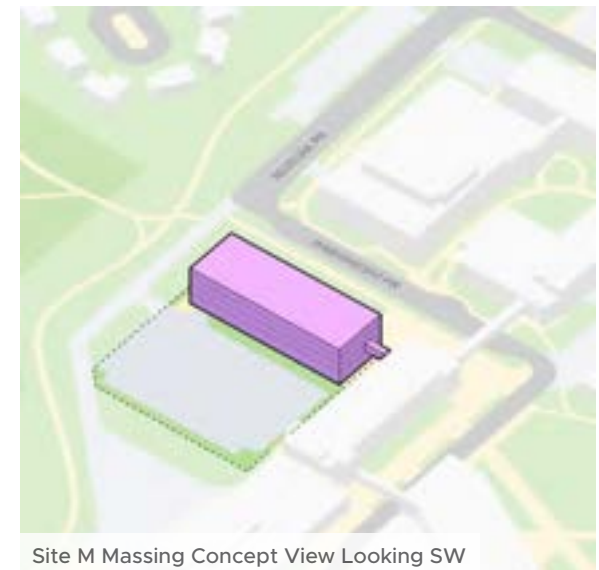
Development Parameters			
Approx. Site Area	Height Range	Setbacks from Streets	Approx. Academic Development Capacity*
7,220 m ²	2 - 6 st	Wàbisheshì Curb: 10-18 m	2,500 - 7,600 m ² (26,900 - 81,800 ft ²)

Appropriate Uses	Enabling Projects	Coordinated Projects
<ul style="list-style-type: none"> • Academic • Parking structure 	n/a	<ul style="list-style-type: none"> • Wàbisheshì streetscape improvements • Ring road feasibility analysis

*Development Capacity is expressed as Gross Floor Area. Gross Floor Area is based on a 30% reduction from Building Construction Area.



Site M Massing Concept View Looking NE



Site M Massing Concept View Looking SW

LOT 8

SITE AND PROGRAM

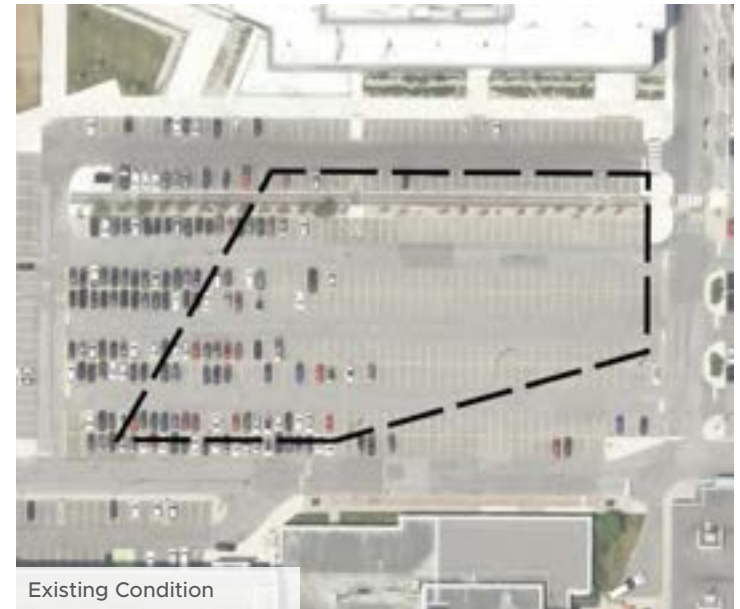
The Lot 8 development site is located on the existing Parking Lot 8. The site has frontage along Wàbisheshì and will interface with an enhanced Central Green and Promenade. Along with the existing Building E (Student Commons) and Building X (the Jack Doyle Athletics and Recreation Centre), the Lot 8 development will frame the greenspace with active, student life-oriented uses, contributing to a distinct sense of place in the heart of campus. The development should be an academic building of 3-6 storeys or a mixed-use building up to 11 storeys.

KEY PLAN



LEGEND

- | | |
|-----------------------------|--------------------------------------|
| Property Line | Enhanced or New Landscape |
| Development Site | Open Space |
| Primary Pedestrian Entrance | Potential Open Space |
| Vehicular Access | Landscape Entry Feature |
| Servicing Entrance | Primary Building Frontage |
| Servicing Area | Potential Underground Parking Access |
| Active Edge | Internal Circulation Connection |



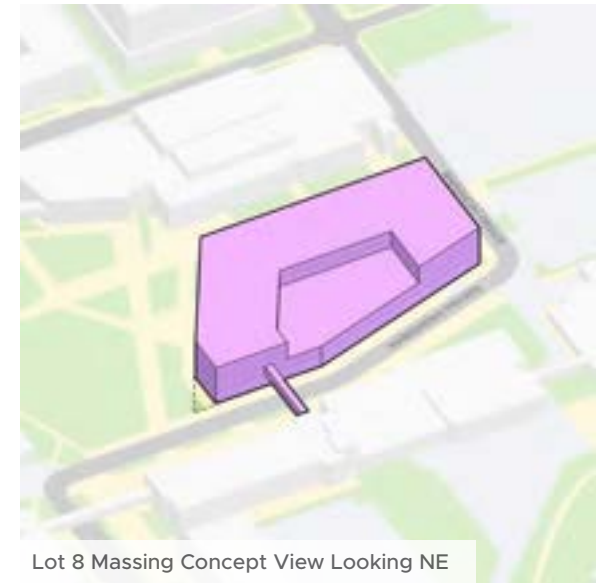
Existing Condition



Development Guidelines Diagram

GUIDELINES

- The building should have an **active edge** facing the central greenspace.
- The entire building should be built to the **primary building frontage** line, which will help to frame the Central Green and Promenade and create a consistent street character along Wàbisheshì.
- The building’s **primary pedestrian entrances** should face the Central Greenspace, with one along the façade’s west edge and one close to Wàbisheshì on the north edge.
- The building can be **serviced** and have **underground parking access** along its south edge on Wàbisheshì.
- A **pedestrian bridge** should connect to Building P.



Lot 8 Massing Concept View Looking NE

Development Parameters			
Approx. Site Area	Height Range	Setbacks from Streets	Approx. Academic Development Capacity*
6,740 m ²	2 - 6 st	Wàbisheshì Curb: 6-8 m	9,100 - 25,500 m ² (98,000 - 274,500 ft ²)

Appropriate Uses	Enabling Projects	Coordinated Projects
<ul style="list-style-type: none"> • Academic • Student residences (in a mixed-use building) • Student life/services 	n/a	<ul style="list-style-type: none"> • Expansion and landscape improvements to Central Green • East-west Promenade • Realignment of Wàbisheshì at P Building • Wàbisheshì streetscape improvements • Stormwater and water line realignments

*Development Capacity is expressed as Gross Floor Area. Gross Floor Area is based on a 30% reduction from Building Construction Area.



Lot 8 Massing Concept View Looking SW

LOT 11

SITE AND PROGRAM

The Lot 11 development site contains the existing Parking Lot 11. The site has frontage along Wàbisheshì, close to its intersections with Wajashk and Navaho. As a small site directly adjacent to an existing residential building, Lot 11 is suitable for one or two residential buildings of up to 6 storeys.

KEY PLAN



LEGEND

- | | |
|-----------------------------|--------------------------------------|
| Property Line | Enhanced or New Landscape |
| Development Site | Open Space |
| Primary Pedestrian Entrance | Potential Open Space |
| Vehicular Access | Landscape Entry Feature |
| Servicing Entrance | Primary Building Frontage |
| Servicing Area | Potential Underground Parking Access |
| Active Edge | Internal Circulation Connection |

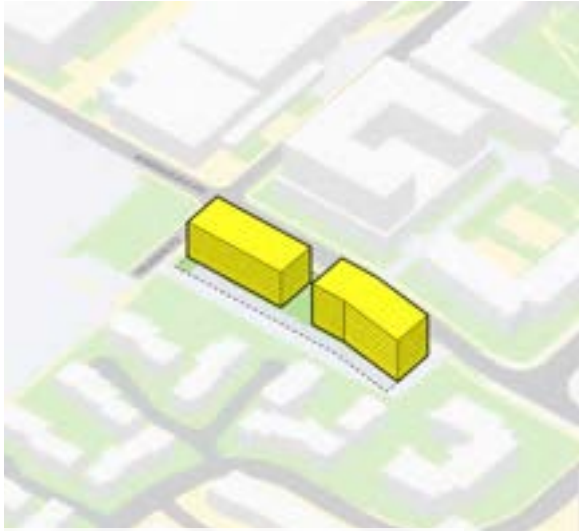


GUIDELINES

- The building(s) should have an **active edge** at the southwest corner of the site, facing the Wajashk intersection.
- The building(s) should be built to the **primary building frontage** line along Wàbisheshì.
- The **primary pedestrian entrances** should be along the frontage lines on Wàbisheshì.
- The building(s) can be **serviced** and have **underground parking access** along the eastern edge(s) via a new driveway with two access points off Wàbisheshì.



Lot 11 Massing Concept View Looking NE



Lot 11 Massing Concept View Looking SW

Development Parameters			
Approx. Site Area	Height Range	Setbacks from Streets	Approx. Academic Development Capacity*
4,140 m ²	4-6 st	Wàbisheshì Curb: 8-12 m	n/a

Appropriate Uses	Enabling Projects	Coordinated Projects
<ul style="list-style-type: none"> • Student residences 	n/a	n/a

*Development Capacity is expressed as Gross Floor Area. Gross Floor Area is based on a 30% reduction from Building Construction Area.

7. Development Strategy

DEVELOPMENT STRATEGY

This chapter describes how the College intends to begin implementing the Big Moves described in Chapter 4 with a proposed strategy for growing and improving the Ottawa Campus over the next decade and beyond. The strategy includes a series of major capital projects with flexible phasing proceeding concurrently with ongoing maintenance and renewal of existing facilities.



7.1 NEW FACILITIES

The next 3-5 major new buildings are intended to be built in the heart of the campus south of Navaho Drive on the Priority Development Sites identified in Figure 36. Focusing new buildings on these sites will significantly advance the first three Big Moves below and support the other two:

- Renew and build up the Core
- Create a more complete, livable, and welcoming campus
- Enhance edges, entries, and connections to the community
- Establish a diverse, interconnected open space network, including an enhanced central green space
- Safely facilitate all travel modes

As the gradual demolition of the older buildings in poor condition on four of these sites makes way for modern facilities in multi-storey buildings, the growing cost of deferred maintenance also will be significantly reduced.



Figure 35. Priority Development Sites

STAGE ONE

Of the five Priority Development Sites, the Building F site is the preferred location for the next major building on the Ottawa Campus. The site has four key advantages:

- The existing Building F uses only a portion of the site and is in poor condition. The College has relocated the previous academic uses on the site, paving the way for demolition.
- In replacing Building F and a surface parking lot, a new landmark building on the site would greatly improve the image and experience of the campus at a well-used entrance.
- The need for new academic facilities to replace outdated facilities and accommodate enrolment growth, coupled with the demand for more on-campus housing, creates the opportunity for the College's next major building to be a mixed-use building, with housing located above academic space. The Building F site's location next to existing residences and close to both the centre of student life and the academic core of the campus makes it an ideal site for mixed-use development.
- The site is highly visible and accessible to the public from Navaho Drive, which is a well-used road and future rapid transit corridor. This makes it highly appropriate for relocating the facilities in Building H that support culinary and other hospitality programs, including Restaurant International. The kitchen equipment in Building H is at the end of its useful life, and the building generally is in poor condition. The site would also be a suitable location for the campus bookstore, currently in Building H.

The preliminary concept illustrated in Figure 37 includes the following components of a future development:

- Approximately 71,500 square feet of lab, classroom, office, and restaurant space on the first and second floors to support culinary and other hospitality programs. This amount of space will support expected enrolment growth in these programs over the long term.
- Approximately 18,500 gross square feet of additional classroom space on the third floor for open scheduling, which could also be used as swing space to allow the decanting of facilities in other buildings to be demolished.
- Approximately 23,000 gross square feet of space on the first and/or second floor for a bookstore, printing services and potentially other campus services.
- Approximately 7,000 gross square feet for common social and study spaces spread across three floors.
- Residential units for approximately 600 learners on eight floors above the three storeys of academic space.
- One additional storey above the academic space to accommodate optional conferencing facilities, which could be supported by both the residential units in spring-summer and the culinary facilities.

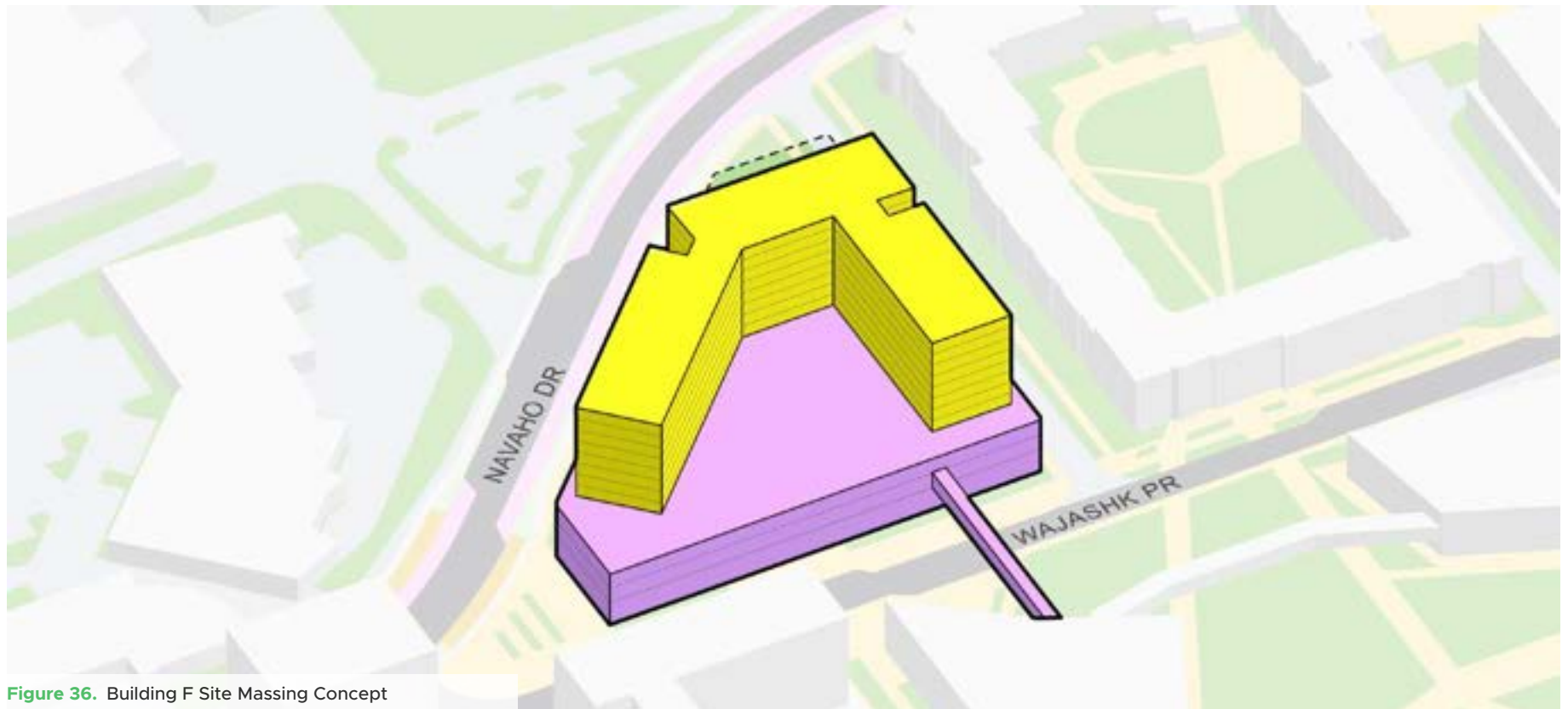


Figure 36. Building F Site Massing Concept

Should the College decide to include fewer learner bedrooms in the development, the height of the residential storeys would be reduced accordingly (for example, 400 beds would likely require five floors).

Given the proximity of the Building F site to the existing residences and the potential of other sites to accommodate academic uses, the site is not recommended for a standalone academic building. If the College decides not to proceed with the development of new academic space and student housing concurrently within a mixed-use building on the site, then an alternative site should be considered for an academic-only building.

Once the facilities in Building H have been replaced with new facilities on the Building F site, Building H should be demolished to prepare the site for another major building. Repurposing it for other academic facilities would be impractical and costly, and demolition would avoid ongoing maintenance costs. Unless construction of the next building proceeds soon after completion of the new building on F site, the College should maintain the Building H site as temporary open space with a lawn and seating and potentially low-cost casual recreation facilities, such as basketball courts and a ball hockey rink.



Figure 37. Building F Site Concept Plan

STAGE TWO

The Building H site would be an appropriate location for the next major academic or mixed-use building, one that would help to transform the northern entrance to campus and the character of Wajashk. Reconfiguration of the Navaho/Wajashk/Nigig intersection should be considered in conjunction with redevelopment of Building H (see Section 6.2 for applicable guidelines). The preliminary concept illustrated in Figure 39, based on the existing intersection, accommodates approximately 150,000 gross square feet of space on four floors for academic uses and student services. Figure 40 illustrates the potential to accommodate housing for up to 500 learners in a tower above three storeys (100,000 square feet) of academic space. Either scenario would include the following facilities:

- Cafeteria to replace the existing food services in Building D and allow it to be demolished
- Classrooms and labs dedicated to programs in media and design (replacing existing facilities in the northeast wing of Building A) and potentially in advanced technology or health studies
- Other classrooms for open scheduling
- Offices for security, risk management, and health and safety (relocated from Building A)
- Other campus services, including IT support and AV services (also currently in Building A)
- Potentially conference facilities if not pursued on the Building F site

Once the central cafeteria is relocated in the new building, Building D could be repurposed as temporary conference facilities, if not included in a previous stage of development, and potentially swing classroom space to allow the decanting of other buildings to be demolished. In the longer term, Building D would be redeveloped as a multi-storey academic building.



Figure 38. Building H Site Massing Concept, Existing Intersection



Figure 39. Building H Site Massing Concept, Preferred Intersection Configuration

STAGE THREE

Once the existing facilities in the northeast wing of Building A have been relocated to a new building on the H Building site or elsewhere on campus, the wing should be demolished to make way for a third new significant academic or mixed-use building. Given its size, prime location and proximity to facilities in the rest of Building A, this site is the preferred site for a signature academic building that consolidates and showcases facilities for Health Studies or another growing school in need of updated and new facilities.

Unless construction of a new building proceeds soon after demolition, the College should maintain the site as temporary open space with lawn and decorative plantings.

Figure 41 conceptually illustrates a four-storey academic building of approximately 140,000 square feet that could be used to accommodate the following facilities:

- Classrooms and labs dedicated to programs in health studies and/or advanced technology
- Other classrooms for open scheduling
- Student services that would be appropriate near the northern entrance to campus
- A new central loading, servicing and storage area accessed from Nigig

Figure 42 illustrates the potential for up to 600 beds to be accommodated in a residence above three storeys (100,000 square feet) of academic space.

Note, the College may make it a priority to demolish the northeast wing of Building A before constructing a new



Figure 40. Building A Site Massing Concept, Academic Building

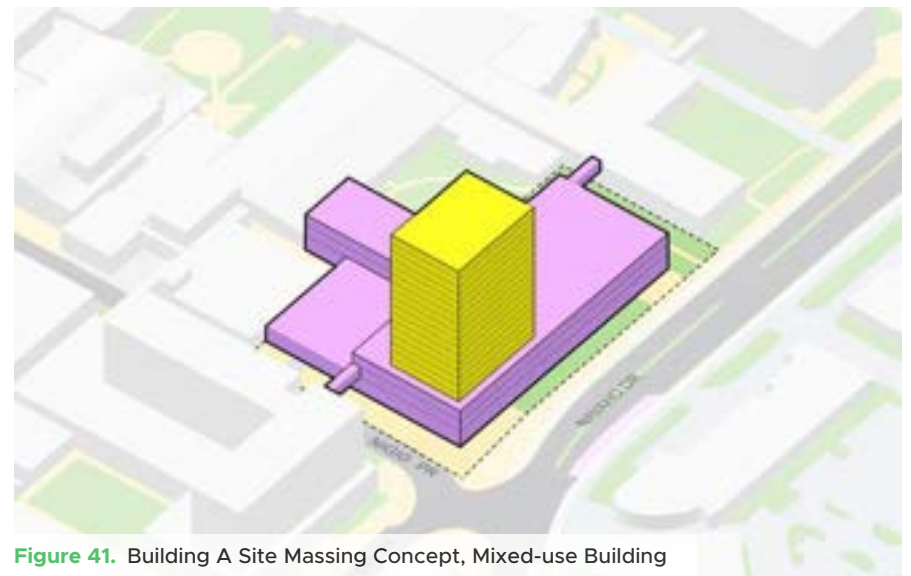


Figure 41. Building A Site Massing Concept, Mixed-use Building

building on the Building H site to avoid significant ongoing costs associated with maintaining the wing. If this is the case, and the existing facilities can be decanted to other existing buildings, then the wing can be replaced with a new academic or mixed-use building, i.e., stages two and three of the development strategy could be reversed buildings; then the wing can be replaced with a new academic or mixed-use building, i.e., stages two and three of the development strategy could be reversed.

OTHER POTENTIAL PRIORITY DEVELOPMENTS

As the College pursues development of the three major buildings conceptually described above, it may also decide to advance construction of the following relatively smaller facilities:

- An addition to Building S to meet the needs of transportation programs.
- Facilities for horticultural programs to replace Building M, which is in poor condition.

7.2 OTHER NEAR-TERM INITIATIVES

Several projects have been identified as near-term opportunities for new space, new infrastructure and building renovations that will improve operations and the campus experience. Some of these projects are already funded while others will become part of the annual budget for upcoming years.

Former Gym Redevelopment Study

The former gym space located within Building A is no longer required for athletics and recreation since the opening of the ARC in 2021. Redevelopment of the space represents an opportunity to provide new academic facilities and significantly improve the interior circulation at a key campus node, where Buildings A and B and the bridge to Building AC meet (and, in the long term, potentially a future building on Lot 1). The gym and adjacent changerooms could be maintained, perhaps with minor renovations, for activities that require a large open indoor space, such as testing, though the opportunities are limited and the space would remain underutilized.

A new two-storey building to replace the gym could add classroom or lab space as it improves east-west connectivity at this end of campus, as conceptually illustrated in Figure 44. The current interior circulation route is narrow and not easy to navigate. With coordinated modifications and a minor addition to Building B, a more generous, direct and intuitive pedestrian link could be created.

As a first step to determining the future of the former gym, the College should initiate a study of reuse and redevelopment options that assesses the full costs and benefits of redevelopment versus maintaining the existing space.

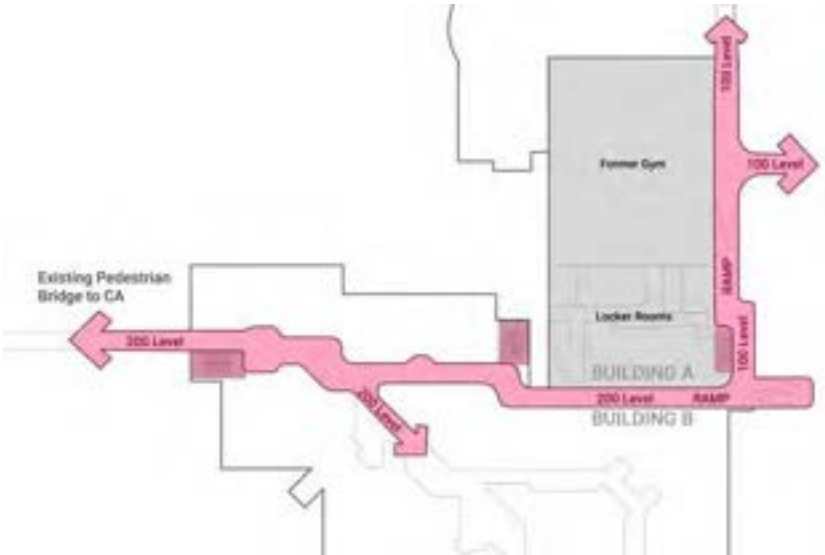


Figure 42. Existing Circulation Around the Former Gym

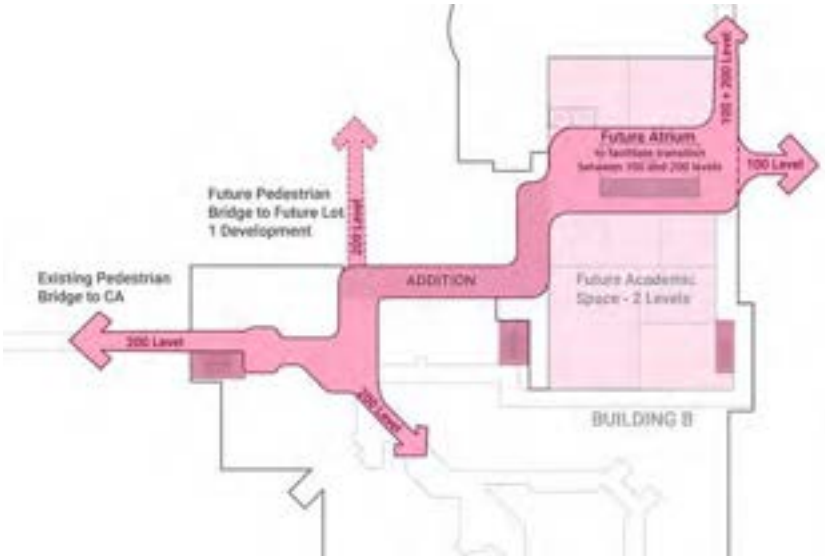


Figure 43. Opportunity for Improved Circulation and New Academic Space

- Existing Facilities
- New Facilities (two levels)
- Internal Circulation
- Vertical Circulation

Redevelopment options for the former gym should consider the following objectives:

1. Transform the space to accommodate new uses
2. Provide swing space that could allow for the decanting of the northern portion of Building A
3. Rationalize interior circulation that anticipates a bridge to a future building on Lot 1

Pedestrian Bridge to Bus Rapid Transit Station

The pedestrian bridge to the BRT Station is being built in partnership with the City of Ottawa to align with the completion of the O-train extension in 2026. An above-grade pedestrian bridge will link the ACCE Building with a new OC Transpo bus rapid transit station being built as part of the Light Rail Transit Stage 2 project. This pedestrian bridge will provide a safe method for crossing the Transitway and an efficient link for transit riders to enter the campus. The project has been funded at a cost of \$3.33 million.

Dental Expansion Project

To meet the ever-growing need for dental assistants and dental hygienists within our community and return to pre-COVID student cohort numbers, there is a need to expand the College's current clinic space. Our Student Dental Clinic boasts an active client list of over 3,000 patients and in alignment with the College's Strategic and Academic plans, affords students meaningful in situ Work Integrated Learning (WIL) experience as they complete their program of study. Restructuring the Student Dental Clinic will increase the capacity of seats and introduce a simulation area which will ensure further efficiencies in curriculum delivery, increase enrollment capacity, and align with the College priorities.

35th Street Market Cafe Renovation

35th Street Market Café, located within the Residence, was built in 2002 and is due for renovations. Open throughout the fall and winter terms, seven days a week, the café accounts for 25% of all Ottawa Campus Food Services sales and 17% of all food service transactions.

The renovation of the 35th Street Market Café will enhance the dining experience for residence students and meal plan holders by updating the space and modernizing food offerings. Serving approximately 900 students, with 70% of their meal plan expenditures at this location, the café's renewal is essential for improving student satisfaction, engagement, and convenience.

Objectives for this renewal include:

- Adapting to changing demographics, food preferences, and expectations by modernizing the food environment, incorporating advanced technology, and updating service models.
- Keeping pace with trends such as healthier eating, sustainability, and convenience (e.g., self-serve ordering) to remain competitive and meet student expectations.
- Enhancing sustainability in food service operations, which is increasingly important to environmentally conscious students, while aligning with broader institutional goals.
- Improving the work environment to boost employee satisfaction and engagement, leading to enhanced service for students.
- Strengthening food services to increase student retention and boost revenue for both the Residence and the College, ensuring long-term financial sustainability.

The 35th Street Market Cafe renewal initiative will support recruitment and retention, enhance engagement, meet learner expectations, and support Algonquin College's sustainability and financial goals.

Marketplace Food Court Renovation

The Marketplace Food Court, located in D Building, is the flagship food service location. The largest food location on campus, it offers multiple food stations and diverse offerings, with a central kitchen that also supports food production for satellite food locations across campus. The Marketplace kitchen also supports our Banquet and Catering operation.

The Marketplace Food Court accounts for 37% of food services sales at the Ottawa Campus. The revenue for this location has increased 11% since 2019-20 showing a high demand for this location. The strategic renewal initiative and investment in the Marketplace Food Court are imperative for sustaining its success and addressing the urgent need for facility upgrades. By enhancing this critical location, Algonquin College can ensure that it continues to meet the needs of its student population, thereby solidifying its reputation as a leader in student services.

Greenhouse Gas Reduction Projects

Algonquin College is committed to reducing its ecological footprint. The College has set an ambitious sustainability target: an 80% reduction in Greenhouse Gas (GHG) emissions from 2005 levels by 2050, intending to ultimately achieve net-zero emissions. Over the past decade, the College has actively pursued this commitment through a series of comprehensive initiatives. This series of projects continues the commitment to sustainability by replacing gas-fired heating, ventilation and air conditioning (HVAC) systems with heat pumps, upgrading roof thermal insulation, and replacing windows, as required. These systems and roofing upgrades are part of the College's response to the deferred capital renewal liability. In addition to replacing end-of-life systems, the College will explore the installation of solar panels on various facilities. Improvements are planned for Buildings A, P, V, R, T, C, J and N. HVAC improvements for Buildings P and V have been budgeted for \$3 million, with additional funding to be sought for the other buildings.



The development strategy focuses on redevelopment and other improvements in the north part of campus, around the intersection of Navaho Drive, Wajashk and Nigig.

PART III: Pembroke and Perth Campuses

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8. Pembroke Campus

Algonquin College has had satellite campuses in Pembroke and Perth since the late 1960s. When the Pembroke Waterfront Campus opened in 2012, thanks to a partnership with the City, it allowed the College to expand its programs and significantly increase enrolment. Today, the campus offers programs in business, the trades, technology, health and community studies and has almost 700 full-time learners. Enrolment is expected to steadily increase in the years ahead, and the existing facilities can accommodate growth. Proposed near-term initiatives include adding space to accommodate carpentry labs currently located off campus, improving access to the Ottawa River and adding amenities to the landscape.



8.1 PLANNING CONTEXT

THE CAMPUS AND ITS SURROUNDINGS

The Pembroke Campus's 13.5 acres comprise a main academic building with approximately 100,000 square feet (9,300 square metres), surface parking and a large, mostly natural open space in the west half, including an Indigenous medicine wheel garden. Much of the campus's open space is located within the floodway of the Ottawa River.

All the College's programs offered in Pembroke have facilities on the Waterfront Campus, except the carpentry program, which is located at the former Eddy Match Company building, approximately three kilometres west of the campus.

To the north of the campus is City-owned land along the Ottawa River, through which the Kiwanis Way Waterfront Trail runs, connecting Riverside Park to the west and Pembroke Waterfront Park to the east. The latter, adjacent to the campus contains an amphitheatre, boardwalk, playground, open fields, the Pembroke Marina and parking areas.

To the immediate west of campus is a large natural open space, and to the immediate south is the Algonquin Trail, a former rail corridor. The trail is part of the 300-kilometre Ottawa Valley Recreational Trail that connects Smith Falls to Mattawa. The city's downtown main street is two blocks south of the campus.

TRANSPORTATION PLANNING

The City of Pembroke has initiated an on-demand transit pilot project. The transit service does not have fixed routes or schedules but allows riders to request pick-up and drop-off locations within the transit service area. The three-year pilot project is anticipated to begin service in April 2025. The project will support the community as well as Algonquin College, particularly learners without other reliable transportation options.

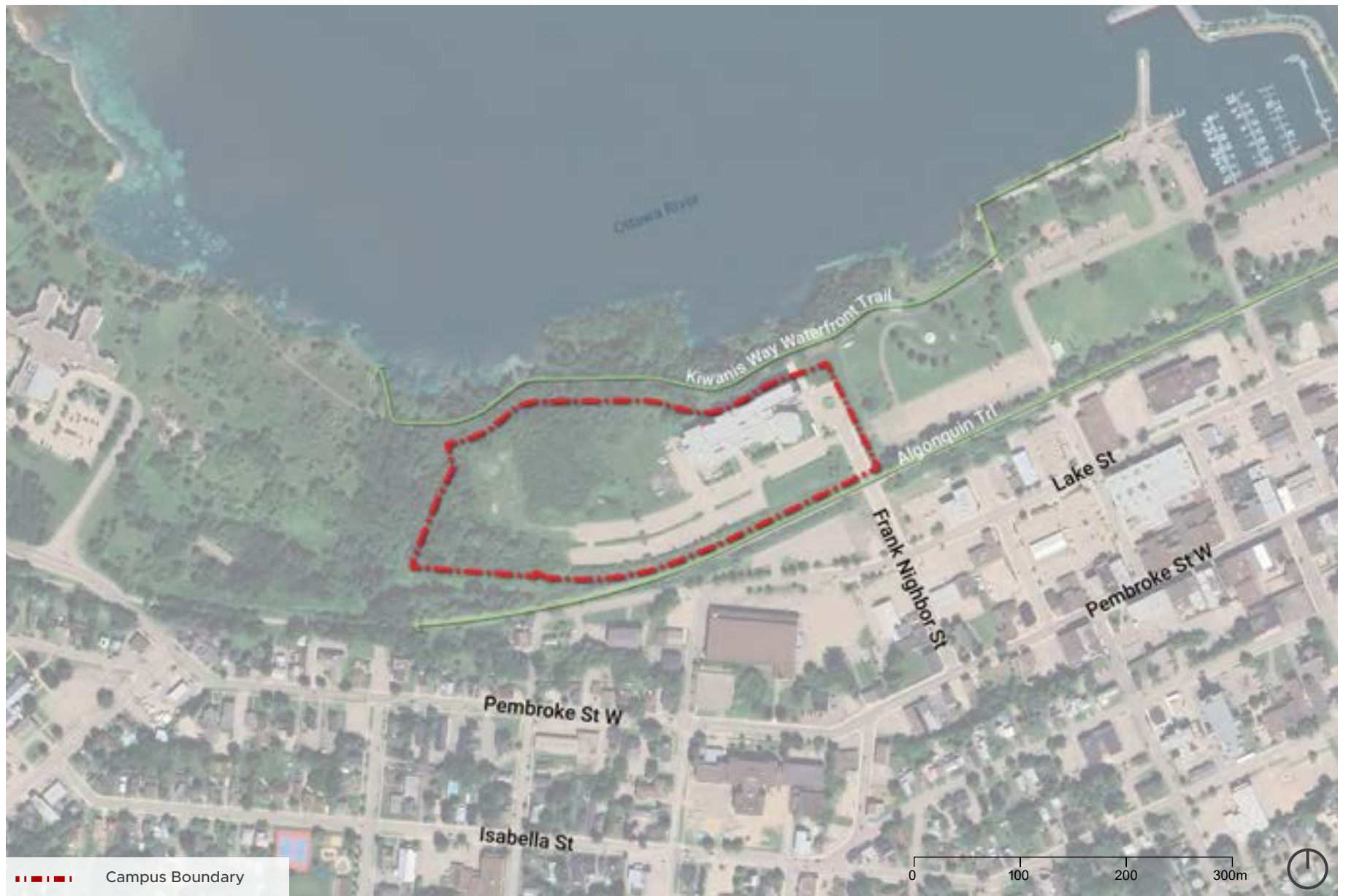


Figure 44. Pembroke Campus and the Surrounding Area

CITY OF PEMBROKE OFFICIAL PLAN

The Pembroke Official Plan was adopted by the City in January 2016 and guides development and public investment to 2034. The campus is within three different land use designations in the Official Plan—Institutional, Flood Fringe and Hazard Land. The intention of the Institutional land use designation is to provide both private and public institutions, including colleges, that serve the community and the areas surrounding Pembroke. Within the Flood Fringe area, development can take place if it is designed to be floodproofed. The Hazard land designation is intended to identify areas susceptible to flooding or erosion and generally not suitable for development. Development may be permitted in Hazard Lands subject to several considerations, including that the hazards can be adequately addressed, new hazards are not created, existing hazards are not aggravated, adverse environmental effects are not created, and safe access is provided during times of an emergency.

A portion of the campus lands are within the City’s Natural Heritage System, where the intent is to have a system of connected natural areas that provide ecological functions and natural habitat for wildlife.



Figure 45. City of Pembroke Official Plan Schedule A Land Use Plan

ZONING BY-LAW 2020-05

The campus lands are within the Institutional (I) and Flood Plain (FP) zones under By-law 2020-05. Site specific zoning provision I-12 provides permits the following uses: post-secondary educational institution, school, educational facility, government offices, continuum-of-care home, community centre, library, museum and uses accessory. Student residences are not listed as a permitted use though would likely be allowed as part of a secondary educational institution. At the time of preparing a development application for a student residence, the College should confirm with the City that a rezoning would not be needed. The maximum building height for schools and post-secondary educational institutions is 18.29 metres (60 feet). Within the I-12-ff zoning designation lower-level openings are not permitted below 114.2 metres CGD. The following uses are permitted in the FP zone: agriculture, conservation, forestry, open space, parking and parkland.



Figure 46. City of Pembroke Zoning By-law Schedule B

OPPORTUNITIES AND CHALLENGES

Nestled between public open spaces on the Ottawa River, the Pembroke Campus boasts an idyllic setting that supports outdoor programs and a pleasant campus experience. Although major new developments are not anticipated in the foreseeable future, improvements to existing facilities will be needed based on program needs and to generally enhance the campus experience for learners and employees. The following opportunities and challenges should inform future projects for the campus.

Access to the River

In partnership with the City, there is an opportunity to improve access to the river adjacent to the campus for learners, employees and potentially the public. Construction of a dock accessed from a trail would create opportunities for the river to be used for learning and research while also providing access for recreational purposes, i.e., launching kayaks, canoes and small boats. Existing or future programs in environmental sciences, environmental management and public safety could benefit from such access and mooring facilities.

Flooding

While the river is an asset that benefits the campus, flooding poses a safety risk and constrains development in much of the campus's open space. Future buildings will need to avoid identified hazard lands in the flood plain and be flood-proofed if proposed in the flood fringe area.

Expanded Trail System

Although the campus's open space close to the waterfront is generally not developable, it does open opportunities for enhanced landscaping and outdoor learning spaces and for more formal public trails connected to the Waterfront and Algonquin trails.

Social and Study Spaces

Following a trend at all college and university campuses, the Pembroke Campus may need to accommodate more social and study spaces to meet the needs of international and domestic learners spending more time on campus. Such spaces are not only essential to maintaining a sense of belonging but also are spaces for learning. The campus also lacks lounge and meeting space for employees.

8.2 ENVIRONMENTAL AND LAND USE FRAMEWORK

Figure 48 identifies the extent of the Ottawa River floodway on the campus and a corresponding setback line within which development generally will not be permitted. The area designated Open Space, nevertheless, will continue to serve the campus and broader community, accommodating a stormwater management facility, a gathering and recreation space centred on the Indigenous Medicine Wheel Garden, outdoor learning space and lands for conservation.

The Academic zone captures the existing building and adjacent lands to the west and south where additions to the building could be located, including spaces for classrooms, labs, faculty offices, common areas, student services and administration.

The grassy area south of the existing building and a portion of the existing parking lot is designated Mixed-Use to recognize the potential for this area to accommodate a second academic building, a student residence or a mixed-use building that contains academic space on lower floors and a residence above.

The Parking area recognizes the potential for the existing parking lot to be extended farther west should parking spaces at the east end be lost to future development or additional parking be required otherwise.



Figure 47. Environmental and Land Use Framework Plan

8.3 DEVELOPMENT SITES AND PUBLIC REALM OPPORTUNITIES

Figure 42 identifies two locations for additional development on the Pembroke Campus:

- Site 1 will accommodate future additions to the existing building for academic purposes. Additions should be 2-3 storeys and designed to be consistent with the existing building in terms of architectural style, materiality and colours. Corridor connections to the existing building should be as direct as possible. The main entrance should be located on the south side, and the north and west facades should be well glazed to capitalize on views to the waterfront open space. Outdoor storage areas should be screened with attractive, durable fencing or walls and landscaping.
- Site 2 is a suitable location for a student residence, an academic building or a mixed academic-residential building that optimizes the site. The minimum height should be 3 storeys and the maximum height should be 6 storeys. The main entrance should be on the north side, opposite the south entrance to the existing building. The building should have an attractive, well-glazed façade on Frank Nighbor Street and landscaping that together reinforce the campus's identity. Amenity space on the ground floor should include a patio.



Figure 48. Development Site and Public Realm Opportunities Framework



Figure 49. 3D Massing Concepts for Development Sites

Figure 49 also identifies two locations for proposed improvements within the public realm:

- A gathering space at the foot of Frank Nighbor Street, adjacent to the Waterfront Trail, designed to accommodate on-campus events and for passive enjoyment. The space should include benches and other seating, decorative plantings, and potentially public art and/or a pavilion or other structure for weather protection.
- A formal trail branching off the Waterfront Trail and leading to the river's edge, terminating at a dock designed to support College programs and potentially for the public to launch kayaks, canoes and other small, non-motorized watercraft. This project should be pursued in partnership with the City and would require approval from the Ministry of Natural Resources. The waterfront open space more broadly could play an enhanced role in supporting the forestry and potentially other programs, with the City's support.

In addition, the Medicine Wheel Garden and surrounding arboretum should be maintained, and the existing stormwater management facility should be maintained and enhanced with additional landscaping.

8.4 DEMONSTRATION PLAN

Figure 51 conceptually illustrates how the Pembroke Campus could grow and evolve over time with additional academic space, open space improvements and potentially a student residence.

The addition to the existing building in the concept, with approximately 11,000 gross square feet of space, would accommodate carpentry labs to replace those currently located off campus, storage space for other programs, and other teaching and study spaces. The conceptual residence shown would accommodate 240 beds and amenities on the ground floor.



Figure 50. Demonstration Plan

9. Perth Campus

When Algonquin College was founded in 1967, it rented classrooms for its programs in Perth and moved to its current site on Craig Street, 1.5 kilometres from the centre of town, a few years later. The first building on the campus was a 22,500 square foot facility that supported a range of programs with classrooms and shops. In 2011, a brand-new campus opened with a 42,000 square foot facility that included more amenities and student services.

The Perth Campus has capacity to more than double the 2024-25 enrolment of 150 learners. As the College promotes enrolment growth, including with the introduction of a new degree program, it will continue to pursue mixed use opportunities that optimize the campus, in partnership with community groups, municipalities and businesses.



9.1 PLANNING CONTEXT

THE CAMPUS TODAY AND ITS SURROUNDINGS

The Perth Campus comprises five buildings: two academic buildings at the east end that together accommodate classrooms, labs, offices, a student common area and the library; the Building Innovation Research Lab at the west end, built by Perth students to accommodate classes and events; and two material storage buildings. The buildings are organized around a surface parking lot and outdoor construction pad for large student projects. Much of the west half of the campus is natural open space, including an area within the flood plain of the Tay River, which is immediately west of the campus.

To the north of the campus is a forested area and a Canadian Pacific railway line. To the east of campus across Irwin Street are rural residential properties and a storage business. To the south of the campus across Craig Street is a small neighbourhood made up of detached homes, townhomes and an apartment building. Wooded open spaces, including lands owned by the Town of Perth, are located on both sides of the neighbourhood.



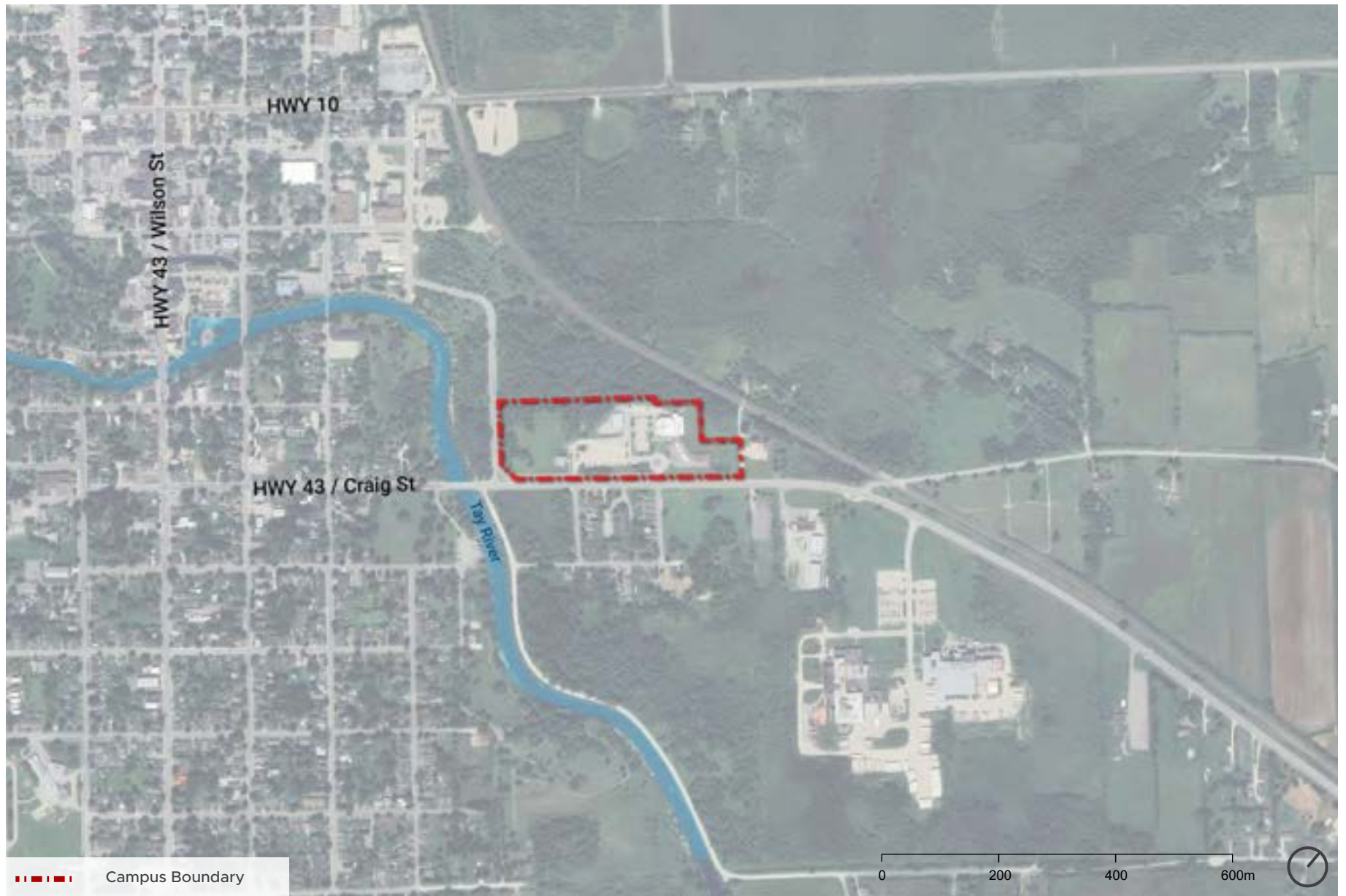


Figure 51. Perth Campus and the Surrounding Area

TOWN OF PERTH OFFICIAL PLAN

The Town of Perth Official Plan was approved in 2000 and provides the policy framework to guide growth and development in the town. The campus lands are designated “Industrial Area” in Schedule A Land Use Designations and Overlays. The intent of the Industrial Area land use category is to encourage light and medium industrial uses to attract investment and jobs. Permitted uses in the Industrial Area include (but are not limited to) manufacturing, warehousing, automotive repairs, custom workshops, institutional and training facilities, research and development facilities, and renewable energy systems. Ancillary uses may include retail and day care facilities; ancillary residential uses are not permitted. The maximum building height is four storeys.

A Flood Plain overlay applies to much of the west half of the campus. Development generally is not permitted in the flood plain.

Schedule B Transportation and Utility of the Official Plan identifies a future arterial road running through the western portion of the campus within the open space to the east of Chetwynd Street, extending from Highway 7 to Craig Street.

The Town is currently undertaking an Official Plan review and update.

ZONING

The campus is zoned Institutional (I) in By-law 3358. Permitted uses include (but are not limited to) hospitals, institutional uses, museums, places of worship and schools. The maximum height of buildings is 10.6 metres.

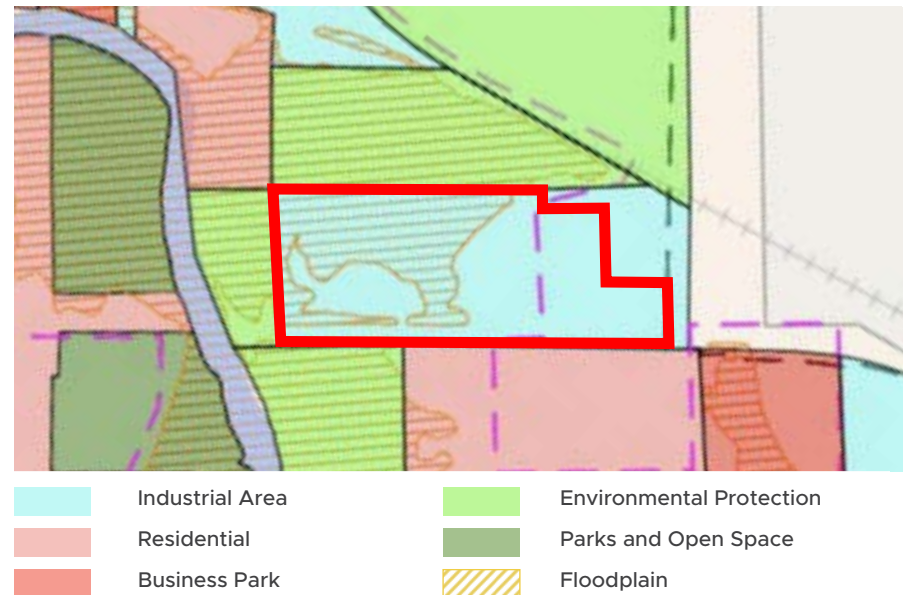


Figure 52. Town of Perth Official Plan Schedule A Land Use

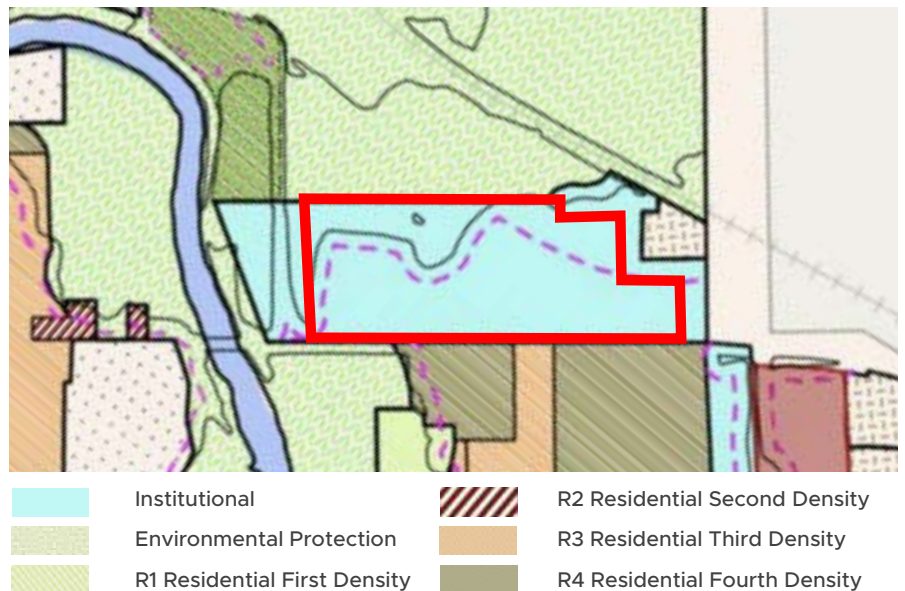


Figure 53. Town of Perth Zoning Map

OPPORTUNITIES AND CHALLENGES

Although no significant developments are planned for the Perth Campus, improvements to existing facilities may be needed based on program needs and to generally enhance the campus experience for learners. The following opportunities and challenges should inform future projects for the campus.

Adapting Spaces

Spaces within the existing buildings and outside may need to be adapted or improved to better support existing and future programs. For example, growth of the nursing program may necessitate the conversion of classroom space to labs, and weather protection over a portion of the construction pad would benefit carpentry programs.

Outdoor Patio

The indoor Student Commons is a valued space on campus that would be enhanced with a patio for outdoor dining, studying and meetings.

Flood Risk

Although the campus appears to have ample land to accommodate any growth over the long term, much of the campus is located within a flood plain, which will restrict where development can happen and how much.

Paved Parking

Paving the existing parking lot would be an appreciated improvement to the campus. However, this may only be permitted by the Town and the Rideau Valley Conservation Authority if stormwater management measures are implemented to mitigate the impacts of run-off on the valley and flood plain lands.

Student Housing

As is the case in Pembroke and Ottawa, there is a lack of affordable housing for learners close to the Perth Campus. Since an on-campus residence would not be economically viable (and may not be supported by the Town), the College will continue to work with the Town and housing providers in the area to help ensure learners can find suitable and affordable housing off campus.

9.2 ENVIRONMENTAL AND LAND USE FRAMEWORK

Figure 48 identifies the current limits of the flood plain and a setback line within new development will be restricted to low-impact buildings, such as sheds, gazebos and utility structures. These lands are designated Open Space, where amenities such as trails and seating, as well as outdoor learning spaces, would be appropriate. In the Academic area in Figure 48, a full range of academic uses would be appropriate, including but not limited to spaces for classrooms, faculty offices, shops/ labs, common areas, student services and administration. Student residences would also be appropriate but likely would require an Official Plan Amendment and rezoning.



Figure 54. Environmental and Land Use Framework

9.3 DEVELOPMENT SITES

Figure 49 identifies the potential locations for future development on the Perth Campus, should expansion of the existing academic buildings be required in the long term. Additions on the east side of the existing buildings would optimize the site and reinforce a sense of community. Building additions could be one or two storeys, with direct corridor connections, and should be consistent with the architectural style, materiality and colours of the existing buildings.



Figure 55. Development Sites Framework

ACKNOWLEDGEMENTS

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