



FROST CAMPUS MASTER PLAN SIR SANDFORD FLEMING COLLEGE

SEPT 2015

BrookMcIlroy/



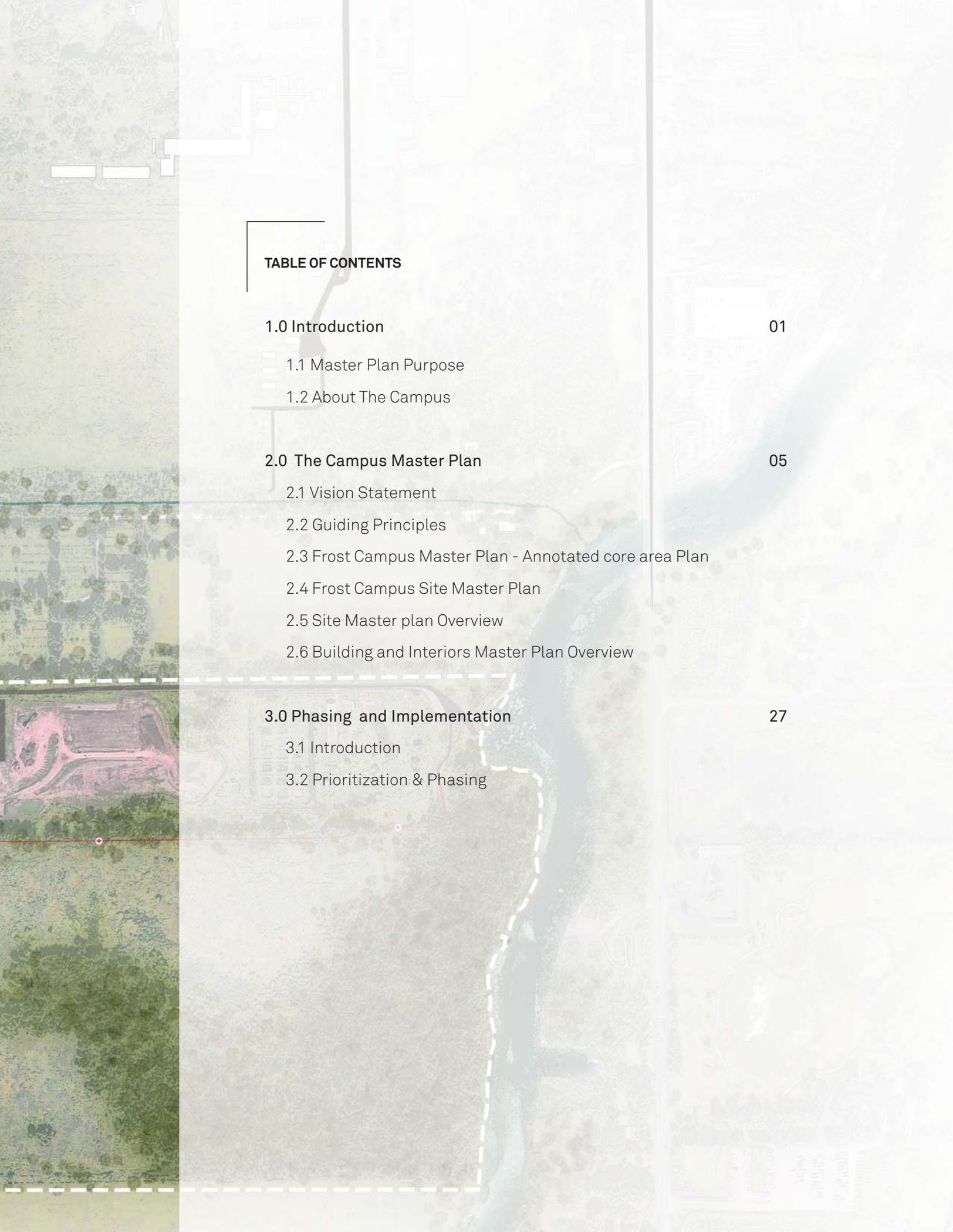


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An aerial photograph of a school campus. The campus features several large, multi-story buildings with brown roofs, interspersed with green lawns and trees. A prominent road runs diagonally across the middle of the image. In the foreground, there are large parking lots filled with cars. To the right, a baseball field is visible. The surrounding area includes open fields and some industrial or construction sites.

1.0 INTRODUCTION



Existing Image of the Frost Campus Community Gardens

1.1 MASTER PLAN INTRODUCTION

The Frost Campus Master Plan provides a comprehensive review of the Campus functions, and offers key recommendations that support the delivery of a first class education in Environmental and Natural Resource Studies as envisioned in the Campus' Strategic and Growth Plans.

The role of the Master Plan is to provide overall guidance on improving Campus circulation, elevating awareness of Campus activities, creating outdoor classrooms, locating / expanding new facilities and buildings, and upgrading existing interior spaces.

At Frost Campus, Fleming College provides a high quality education to students in a number of rapidly growing and culturally relevant fields. Many of the courses and programs taught on Campus are at the forefront of sustainable and technical education, with strong ties to their supporting industries.

Frost is unique amongst institutions in the way that programs use indoor and outdoor space, and maintain and store equipment. This is a result of the hands-on approach to teaching and the Campus' innovative offerings. The Master Plan is structured to address the immediate needs of the existing Campus and to provide a holistic Campus Vision that looks 5, 10 and 15 years in the future.

This Master Plan Executive Summary document is divided into 3 Sections

1.0 Introduction: Master Plan Introduction and Campus Overview

2.0 The Campus Master Plan: Guiding Principles and Campus Master Plan Recommendations

3.0 Implementation: Prioritization of the Campus Master Plan Recommendations including Phasing and Costing.

1.2 ABOUT SIR SANDFORD FLEMING'S FROST CAMPUS

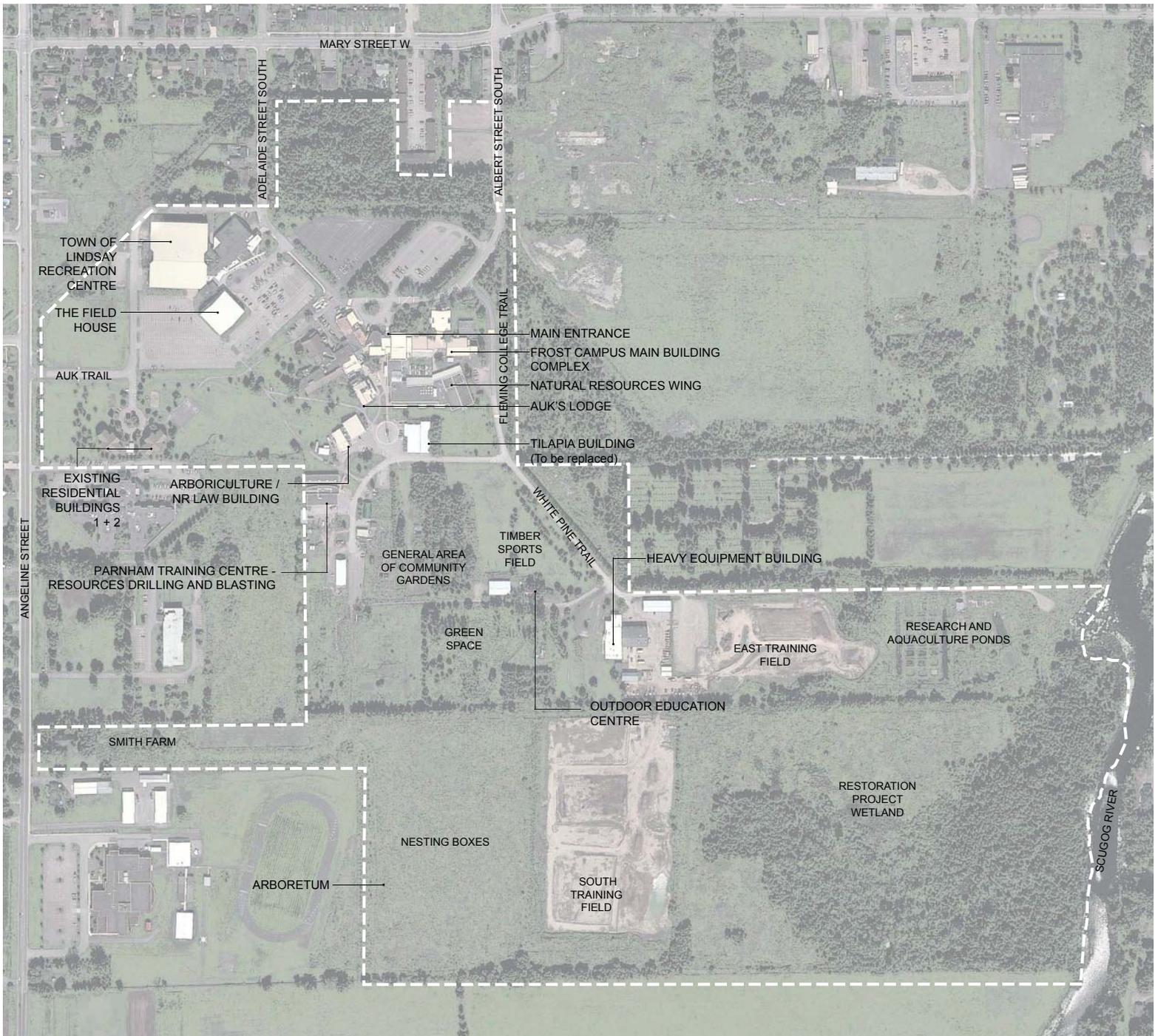
1.3.1 CAMPUS ORGANIZATION

Frost Campus is approximately 68.2 hectares (168.5 acres) in size and is centrally located in the City of Kawartha Lakes in Lindsay, Ontario. The Campus is bounded to the west by Angeline Street, to the east by the Scugog River, to the north by existing residential lands and a cemetery, and to the south by open space lands. The site appears to be mostly flat but gently slopes toward the Scugog River to the east. The Main Building complex is located at the north end of the Campus. The buildings used by Heavy Equipment are located in the southeast quadrant of the Campus. The yards east and south of the building are used for the operation of machinery. Parnham Training Centre - Resources Drilling and Blasting's Building is located south-west of the Main Campus Building and the area south of the building is used for demonstrations and training. The Arboriculture and Natural Resources Law building is located between Parnham Training Centre and the Main Building complex.

Two residences are located at the west end of the site near Angeline Street, as well as a baseball diamond and the Field House. There are three entrances to the Campus. Entrances from the north are Adelaide Street and Albert Street, and from the west Auk Trail is accessed from Angeline Street. The three entrances are interconnected by existing parking lots. Parking has been organized into several lots, which are separated by shelter belt trees that enhance the natural setting.

1.3.2 CAMPUS GROWTH

Frost has identified a goal to increase student enrollment to 2000 by 2020-2021. This represents an increase of approximately 350 students, or a 17% growth from today's enrollment. Continuing Education, Contract Training and new natural resource and environmental program offerings are the focus for the Frost Campus and have been identified as future areas of growth. Increasing the number of women and international students is also an objective of the Campus. The Master Plan will need to accommodate this planned student growth with larger capacity classrooms and labs as well as improved social and working spaces.



Existing Campus Aerial Map



2. THE CAMPUS MASTER PLAN



2.1 VISION STATEMENT

Frost Campus will continue to be a leader in environmental and natural resource sciences, setting standards for education, training, innovation and research.

2.2 GUIDING PRINCIPLES

Guiding Principles have been tested and developed through consultation with stakeholders, administration and students. The principles below set priority setting directions and provide a foundation for best practices at Frost.

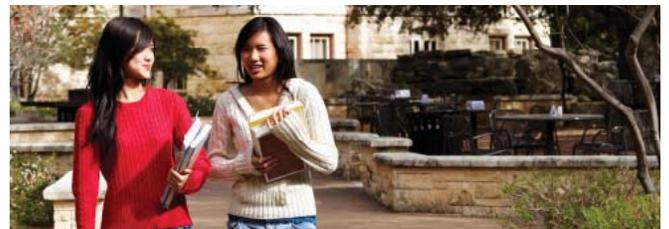
1 **The Compact Sustainable Campus:** A compact Campus where classes are small and contribute to a strong sense of community.



2 **Natural Campus Beauty:** An inspiring setting for studies and a great backdrop for outdoor education, exploration and recreation.



3 **Welcoming Campus:** Orienting and engaging students and visitors through a welcoming sequence of entries and spaces.



4 **Dynamic Learning Environment:** A destination Campus with a hands-on learning environment where graduates are job ready.



5 **Getting There Easily:** Improved access and wayfinding to places both within and beyond the Campus, including downtown Lindsay and surrounding Fleming College Campuses.



2.3 FROST CAMPUS MASTER PLAN - ANNOTATED CORE AREA PLAN





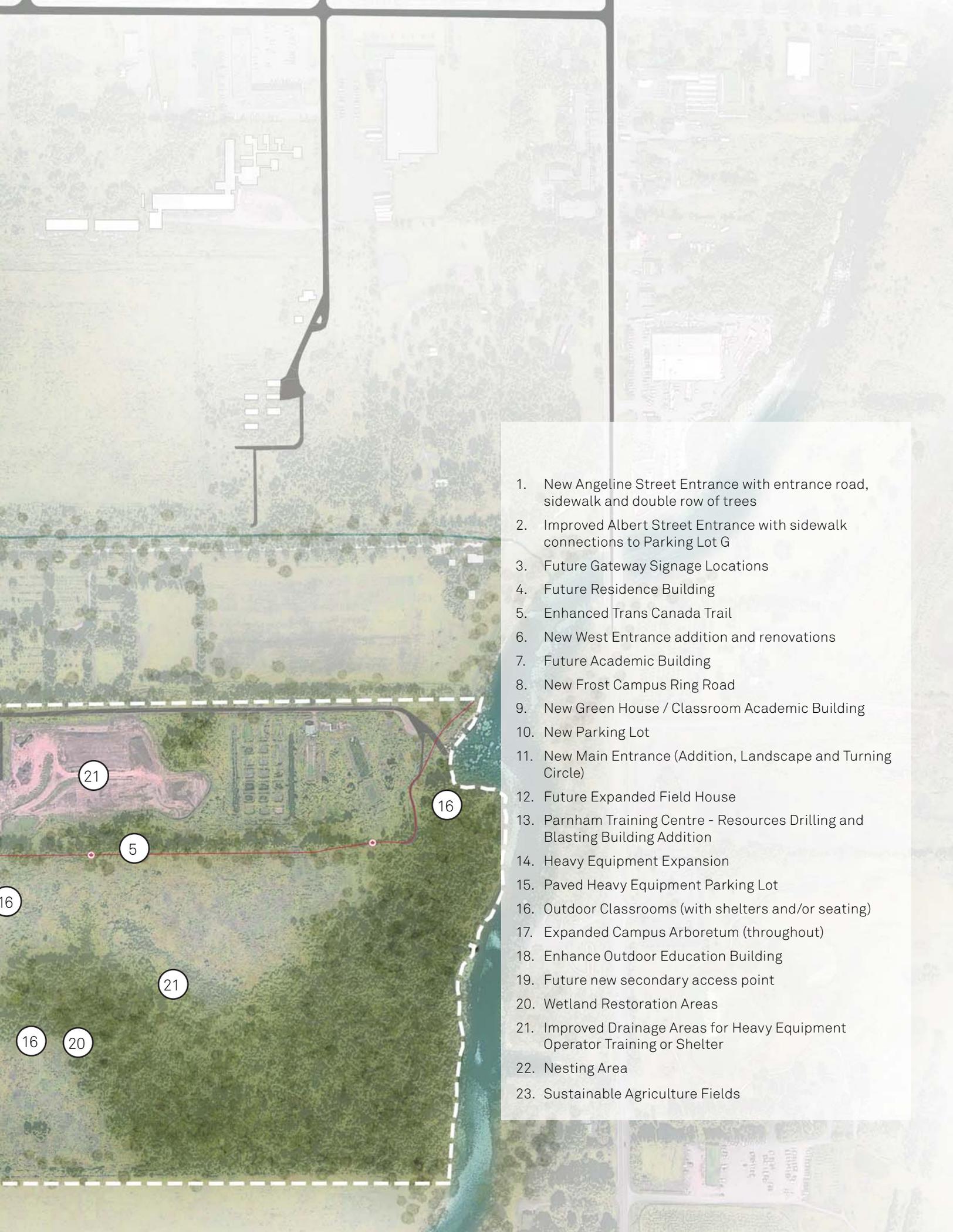
The maps and drawings in Section 2 describe the overall Frost Campus Master Plan Site recommendations. A more detailed breakdown of the Master Plan Recommendations is provided in Section 4.0 of the Full Master Plan Document.

1. New Angeline Street Entrance with entrance road, sidewalk and double row of trees
2. Future Residence Building
3. Enhanced Trans Canada Trail
4. New West Entrance addition and renovations
5. Future Academic Building
6. New Green House / Classroom Academic Building
7. New Consolidated Campus Trail Network (throughout)
8. New Frost Campus Ring Road
9. Parking Lot Greening
10. New Parking Lot
11. New Accent Paving areas (for hard surface areas within the Ring Road only)
12. Future Outdoor Classroom with seating
13. Bus Stop
14. Sheltered Bike Parking
15. New Main Entrance Drop-Off and Transit Hub
16. New Main Entrance Addition
17. Future Expanded Field House
18. Parnham Training Centre - Resources Drilling and Blasting Building Addition
19. Rain Garden
20. Outdoor Classrooms
21. New continuous sidewalk to northern parking lots and residential neighbourhood
22. Expanded Butterfly Garden
23. Main Courtyard with existing trees trails and naturalized planting
24. Future T-Intersection with Stop Sign and Crosswalk
25. New Windmill Location

2.4 FROST CAMPUS SITE MASTER PLAN



See section 3.3.4 for Core Area Blow-up



1. New Angeline Street Entrance with entrance road, sidewalk and double row of trees
2. Improved Albert Street Entrance with sidewalk connections to Parking Lot G
3. Future Gateway Signage Locations
4. Future Residence Building
5. Enhanced Trans Canada Trail
6. New West Entrance addition and renovations
7. Future Academic Building
8. New Frost Campus Ring Road
9. New Green House / Classroom Academic Building
10. New Parking Lot
11. New Main Entrance (Addition, Landscape and Turning Circle)
12. Future Expanded Field House
13. Parnham Training Centre - Resources Drilling and Blasting Building Addition
14. Heavy Equipment Expansion
15. Paved Heavy Equipment Parking Lot
16. Outdoor Classrooms (with shelters and/or seating)
17. Expanded Campus Arboretum (throughout)
18. Enhance Outdoor Education Building
19. Future new secondary access point
20. Wetland Restoration Areas
21. Improved Drainage Areas for Heavy Equipment Operator Training or Shelter
22. Nesting Area
23. Sustainable Agriculture Fields

2.5 SITE MASTER PLAN OVERVIEW

2.5.1 LANDSCAPE - FIRST APPROACH

The overall structure of the Campus is based on a 'landscape-first' approach. A network of connected landscapes (quads, courtyards, forested areas and tree allee's) are recommended to define the over-riding structure that determines the placement of building additions, new buildings, roads and parking areas.

This 'landscape-first' approach is synergistic with the College's identity as a centre of excellence for environmental sustainability. In this sense, the form of the evolving Campus will reinforce and strengthen Frost's unique brand-identity.



Campus Master Plan Diagram highlighting formalized courtyards and quad, water courses, and the existing tree canopy

Key recommendations related to the 'Landscape-first' approach are outlined in Section 4.0 and are summarized below:

- Create a variety of outdoor teaching spaces that blend with the landscape.
 - The landscape design should focus on a diversity of flora and fauna, storm water management techniques, water features and landscape varieties.
 - Plant trees with a variety of streetscaping and landscaping technique, including linear tree trenches, soil cells, orchards and naturalized forest planting to provide teaching and research opportunities.
- Orient the Campus Master Plan around a series of landscapes. Each landscape should have a different naturalization approach. Each approach expands on the existing Campus structure and includes the Rain Garden, the Butterfly Garden, the Adelaide Street Courtyard, the Geo-Thermal Gardens and the Agriculture Gardens.



Looking south west from the Albert Street Entrance toward the New Main Entrance Building, through the Rain Garden and Naturalized Courtyard (pink arrow below highlights location of rendered view)



Looking south west from the Albert Street Entrance toward the Core Campus Area, pink arrow highlights location of rendered view above.

2.5.2 CIRCULATION

The Master Plan is based on the objective to enhance the arrival experience, create a positive image and rationalize on-Campus circulation. The Angeline Street Entrance will become the formal arrival and welcoming point to Frost Campus, and Albert and Adelaide Streets will become secondary entrances. The visual dominance of parking areas, as experienced from the Angeline entrance, will be mitigated through landscaping and tree-planting. New paths, to encourage active transportation, will be featured for pedestrians and cyclists. These will be clearly marked and illuminated, giving priority for active transportation.

The future Ring Road delineates academic development sites, provides a cohesive pedestrian and trail network and introduces a number of sustainable storm water management features including bio-swales and a rain garden. Key recommendations related to the Ring Road are outlined in Section 4.0 and are summarized below:

- Promote a sense of arrival to Frost Campus through a hierarchy of entrances (2) and gateway features with clearly defined internal street networks, prominent landscape and architectural expression, and entry and wayfinding signage.
- Frame the new Ring Road (1) network with new buildings, additions and an expanded system of courtyards and open spaces.



Looking east along the new Angeline Street Entrance towards the West Wing Addition, the new residence buildings is shown on the right and the New Field House on the left.

- Improve connections between the Core Campus Area and adjacent community, recreational areas and residences.
- Keep surface parking lots around the periphery of the Core Campus, with the majority of Campus activities located within a 500m / 5 minute walking radius.
- Green existing surface parking lots with tree planting and naturalized edges.
- Reconfigure and formalize the Trans Canada Trail along the edge of the future Ring Road system with barrier free surface materials, wayfinding and interpretive signage, pedestrian amenities, landscaping and buffer planting.
- Balance vehicular access with pedestrian and bicycle circulation and safety to promote active transportation that demonstrates a commitment to sustainability.
- Develop a transit-hub at the main drop-off area with a weather protected and heated waiting area.

- ① NEW RING ROAD
- ② NEW ENTRANCE ROAD
- ③ CONSOLIDATED MAIN ENTRANCE DROP-OFF AND TRANSIT HUB
- ④ REMOVE ROAD SEGMENT

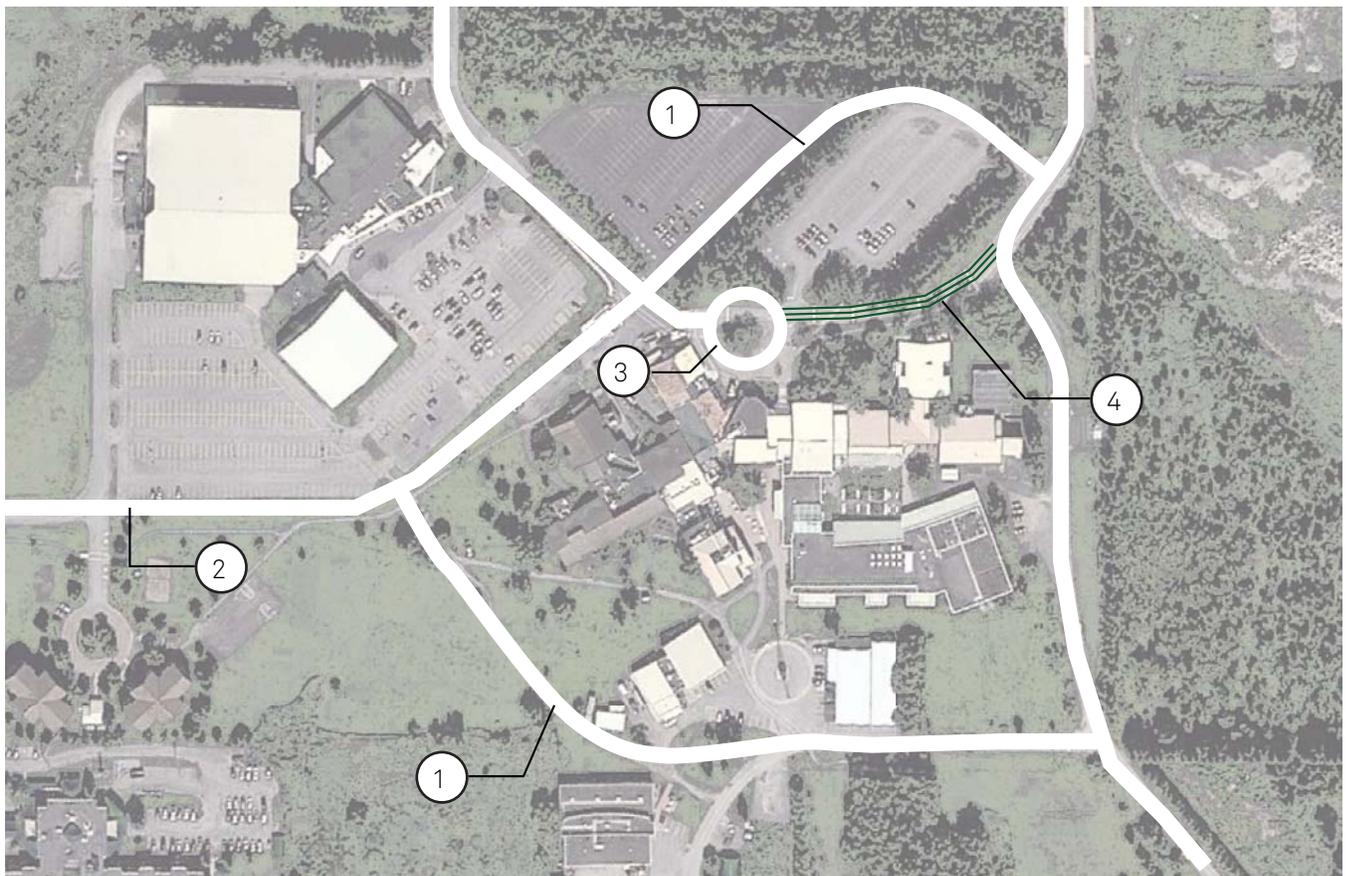


Diagram showing Core Campus Area circulation recommendations

2.5.3 BUILDING AND ADDITIONS

A number of new buildings and additions are recommended. Most of these projects are located in the Core Campus Area. They include:

- Future residence building (1);
- New field house (2);
- West wing addition (3);
- Future west Campus academic building (4);
- The main entrance addition (5);
- 2 new east Campus academic buildings (6+7);
- A new green house facility with classrooms (8); and
- An new entrance addition to the existing Cafeteria (9).
- Teaching Space Addition to the Parnham Training Centre - Resources Drilling and Blasting Building (10)

Outside of the Core Campus area, additions to the Parnham Training Centre - Resources Drilling and Blasting Building as well as the Heavy Equipment Centre, are recommended. Additionally, the outdoor education facility is recommended to have an interior renovation and an entrance vestibule addition. These recommendations are outlined in more detail in Section 4.0.

Key Master Plan recommendations for Buildings and Additions include:

- Retain a sense of human scale in new buildings and emphasize views between indoor and outdoor spaces, barrier-free design, weather protection, and access to natural light.
- Incorporate wood as a prevalent architectural material, and a neutral colour pallet – both of which are evocative of the Campus' forested and natural setting.



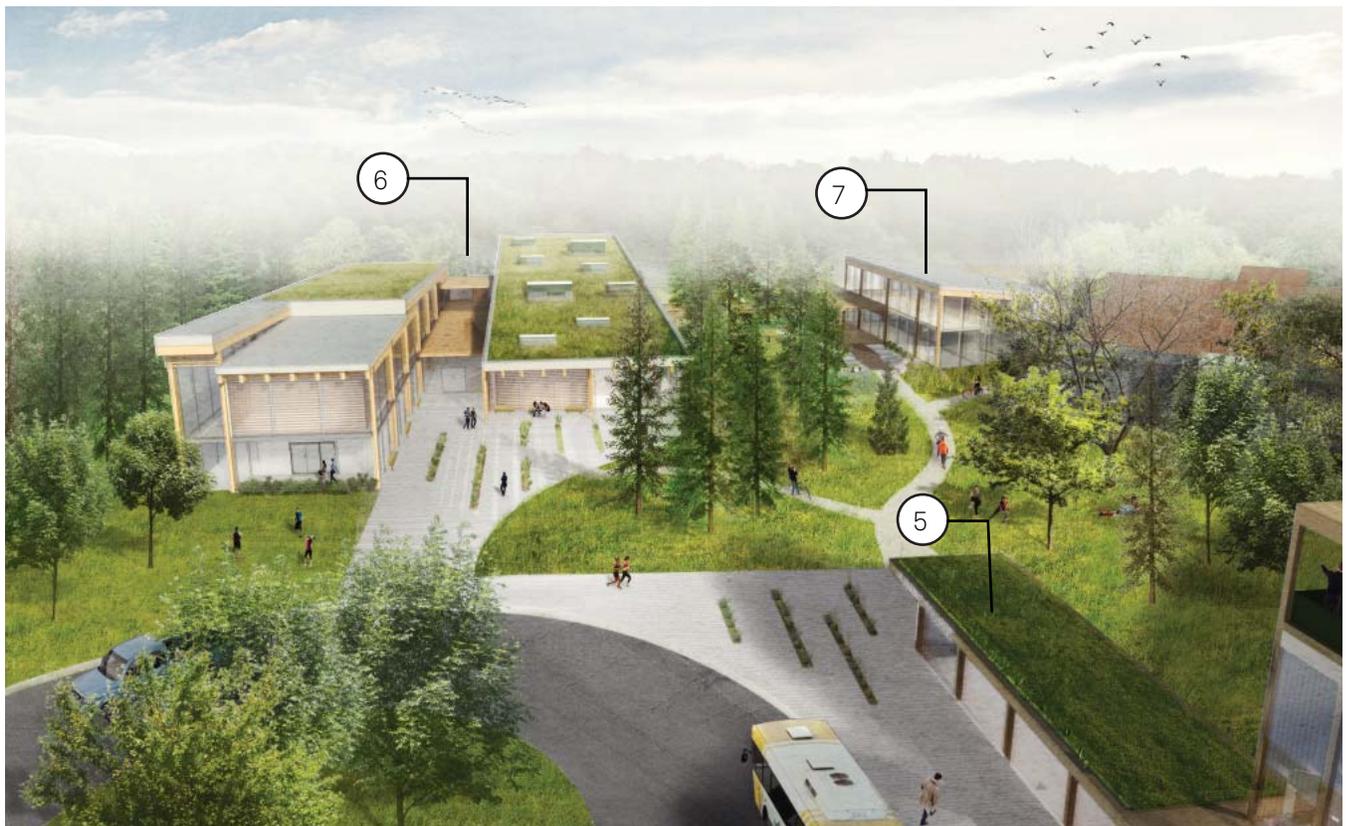
Looking northwards at the Core Campus Area, highlighting the new buildings and additions.

2.5.4 OUTDOOR SPACES

The programming and character of outdoor spaces on the Campus should be synonymous with Frost's program offerings. The Master Plan looks to strengthen the naturalized character of the Campus, protect existing trees and shelter belts, increase the programming of outdoor spaces for teaching, increase the Campus tree canopy and introduce a number of new outdoor classrooms. These recommendations are outlined in more detail in Section 4.0.

Key Master Plan recommendations for outdoor spaces include:

- Capitalize on the forested and natural setting by expanding the inventory of tree species, and by enhancing the existing tree canopy.
- Preserve and expand the pattern of shelter belt, double-row, coniferous tree stands.
- Preserve and enhance the Campus as a living laboratory by establishing seamless transitions between indoor and outdoor learning spaces.
- Formalize outdoor classroom spaces for booking during the term.
- Incorporate a hierarchy of sustainable elements and features, relating to the preservation of water resources, into the design of streets and open spaces.
- Replace and relocate the existing windmill to a more prominent location at the Angeline Entrance.
- Increase the prominence of, and level of activity along, the Scugog River.



Looking north east towards the two new East Academic Buildings and the New Albert Street Entrance Courtyard with Rain Garden and consolidated Main Entrance Drop-Off area.

2.6 BUILDING AND INTERIORS MASTER PLAN OVERVIEW

2.6.1 INDOOR SPACES

A number of space planning and building additions recommendations have been developed following a detailed review of the existing interior Campus spaces and extensive consultation with faculty, staff and administration. The space planning recommendations look to achieve a number of key goals including the consolidation of student services, creation of a dedicated industry area, transformation of corridors into vibrant working and social spaces, renovation of the Geology Labs and the introduction of larger, more flexible, classrooms. These recommendations have been developed to address both the existing Campus needs and the future Campus population growth.

The space planning recommendations outlined in this Plan will change how people arrive at the Main Building Complex and rationalize how people are already using the buildings today. These recommendations are outlined in more detail in Section 4.0.

Key Master Plan recommendations for indoor spaces include:

- Expand the existing Main Building Complex entrance to establish a sense of arrival for students, staff, faculty and visitors alike, while incorporating space for common areas, wayfinding information.
- Consolidate Student Services.
- Introduce a main entrance information Booth.
- Relocate and expand the Book Store.
- Establish a dedicated Industry Area.
- Open the Library up to the corridor with a larger more informal entranceway.
- Create a more visible entrance to the Cafeteria that connects to the adjacent social spaces.



Precedent image showing corridors with a mix of social and working spaces

- Renovate the existing Computer Lab with updated furnishings and introduce a variety of student working configurations.
- Relocate the Principal's office to a more central location on the 2nd Floor across from the Main Boardroom.
- Upgrade all main entrances, corridors and common areas with contemporary material finishes, new paint, improved lighting, and wayfinding information.
- Provide barrier-free access to level one at the Main Entrance, with a mezzanine treatment on level two, a new elevator, and a beacon which will establish an iconic architectural element and focal feature, while offering panoramic views of the entire Campus.
- Encourage a range of student activities in all corridors and common areas including socializing and a combination of individual and group-based work.
- Expand key existing classrooms and laboratories to increase student capacity through the consolidation and reorganization of existing learning and office spaces.
- Upgrade existing classrooms and laboratories with contemporary material finishes, new paint, new furnishings, and state-of-the-art learning technologies while maintaining flexibility in design and layout to accommodate changing needs over time.
- Display relevant artifacts, including animal species, plant species, and rock samples within the new Main Building entrance to encourage awareness of Frost Campus' unique features and course offerings.

The following pages provide an graphic overview of the key interior space planning recommendations for the Main Campus Complex.



Precedent image showing divided informal working spaces for groups with plug in and network access



Ground Floor Plan showing Core Campus Interior Recommendations



3. PHASING AND IMPLEMENTATION





3.1 INTRODUCTION

3.1.1 AN APPROVED PLAN

The Campus Master Plan is approved by the Board of Governors as a Frost Campus directional document. In implementation the plan guides Campus improvements, development character, and prioritization of expenditures.

It will be the responsibility of Campus Leaders and the Facilities Department to ensure that projects are measured against the Campus Master Plan Recommendations. A review should be completed at all stages of a Project Planning and Development Process to ensure that it is in keeping with the Vision, Priorities and Standards that are outlined in this document.

3.1.2 UPDATING THE PLAN

In order to respond to changing needs over time, the Campus Master Plan will evolve through amendments, as necessary, and updates every five years.

PLAN AMENDMENTS

All projects should follow the principles and priorities of the Frost Campus Master Plan, or an amendment is purposely made. Amendments can be defined as major or minor. Major amendments are when the change would significantly affect the communal interest or the quality of the Campus environment. Major Amendments should be reviewed by a Steering Committee made up of representatives from Fleming College and Frost Campus and where appropriate have Campus community participation. Major Amendments should also be approved by the Board of Governors. Minor amendments would be approved by Campus Leaders or Senior Fleming College Administrators, who will report the changes to the Board of Governors and the Campus community once made.

PLAN MONITORING

Every two years, a report on any measures taken to implement the Campus Master Plan made to the Board of Governors.

GENERAL UPDATES

The Campus Master Plan be reviewed at five year intervals, and approved by the Board of Governors. The Master Plan's principles, priorities and directions be reconsidered, and accumulated amendments incorporated.

TESTING PROJECTS AGAINST THE PLAN

The Master Plan Implementation team (including Facilities, Finance, Planning, the Frost Campus Principal and key Senior Campus Leaders) tests all projects against the Campus Master Plan, and reports consistency or otherwise to the Board of Governors.

An important criterion is how the project's program and location will contribute to the needs of the Campus as a whole, as well as to the needs of the specific group of users, by meeting a majority of planning principles.

During schematic design, the Campus Master Plan's principles and demonstrations provide guidance, and measures for establishing compliance.

Each submission for approval at the Board of Governors includes a report on the project check against the Campus Master Plan.

The Facilities Department should prepare a Master Plan Checklist that can be used to assess compliance of capital projects with the recommendations and guidelines contained in the Master Plan.

3.2 PRIORITIZATION & PHASING

Campus Master Plan recommendations can be undertaken as series of phases in accordance with funding availability. Generally the phasing recommendations for this Campus are in order of priority:

- Improve Sense of Arrival.
- Expand and Improve the Existing Laboratories and Classrooms.
- Expand Outdoor Classroom Opportunities on Campus.
- Improve Campus Circulation for Vehicles, Pedestrians, Cyclists and Transit User.
- Construct New Academic Greenhouse and Classroom Facility.
- Consolidate Student Services.
- Create Dedicated Industry Space.
- Renovate Main Entrance.
- Construct New Academic and Residence Buildings as Required.

The following list of Campus wide and interior improvements are organized according to Immediate, Short, Medium and Long Term Categories (some projects may be considered consecutively):

Phase 1 - IMMEDIATE (0-2 YEARS)

- Outdoor Education Building Renovation and Addition.
- Geology Laboratories Renovations.
- General Corridor Improvements (Ground Floor).
- General Classroom Improvements (equipment and furniture).
- Courtyard Improvements.
- Trees (materials only).
- Seating Areas.
- Entrance Signage.
- Wayfinding Signage.

Phase 2 –SHORT (2-5 YEARS)

- Front Entrance Interior Renovation Second Floor.
- Industry Space Renovations.
- Principal's Office Renovation.
- Front Entrance and Book Store Interior Renovation.
- East Wing Computer Room and Corridor Improvements.

- Library Entrance Retrofit.
- General Classroom Improvements.
- General Corridor Improvements (Second Floor).
- Main Entrance Renovation and Addition.
- New Combined Greenhouse and Classroom Facilities.
- Construct the Ring Road from Angeline Street to Albert on the north side of the Campus with Bioswales.
- New trails and sidewalks through out the Campus.
- Outdoor Classroom Shelters.
- Courtyard Naturalization.
- Expansion to Heavy Equipment Building.

Phase 3 –MEDIUM (5-10 YEARS)

- Expansion to Parnham Training Centre - Resources Drilling and Blasting Building.
- New Consolidated Student Services Renovation and Addition.
- General Classroom and Laboratory Improvements.
- Improved Theatre Seating.
- New Facilities and Staff Lounge Renovation.
- Cafeteria Entrance Expansion.
- New Academic Building A and B at Albert Street Entrance.
- Construction of the south west portion of the Ring Road from Albert Street to the Field House.
- Pave the Heavy Equipment Parking Lot.
- Introduce accent Paving Areas for vehicular surfaces within the Ring Road.
- Construct the Rain Garden at the Albert Street Entrance.
- Construct Covered Walkway from Albert Street to Main Entrance.
- New Wind Turbine -100-kW (at new entrance)
- Site Lighting.

Phase 4 –LONG (10+ YEARS)

- Training Centre and Learning Services Area Renovation.
- West Wing Expansion.
- New West Entrance Academic Building.
- New Field House Building.
- New Residence Building.

