LANDSCAPE + PUBLIC REALM MASTER PLAN

UNIVERSITY OF TORONTO SCARBOROUGH / JUNE 2022

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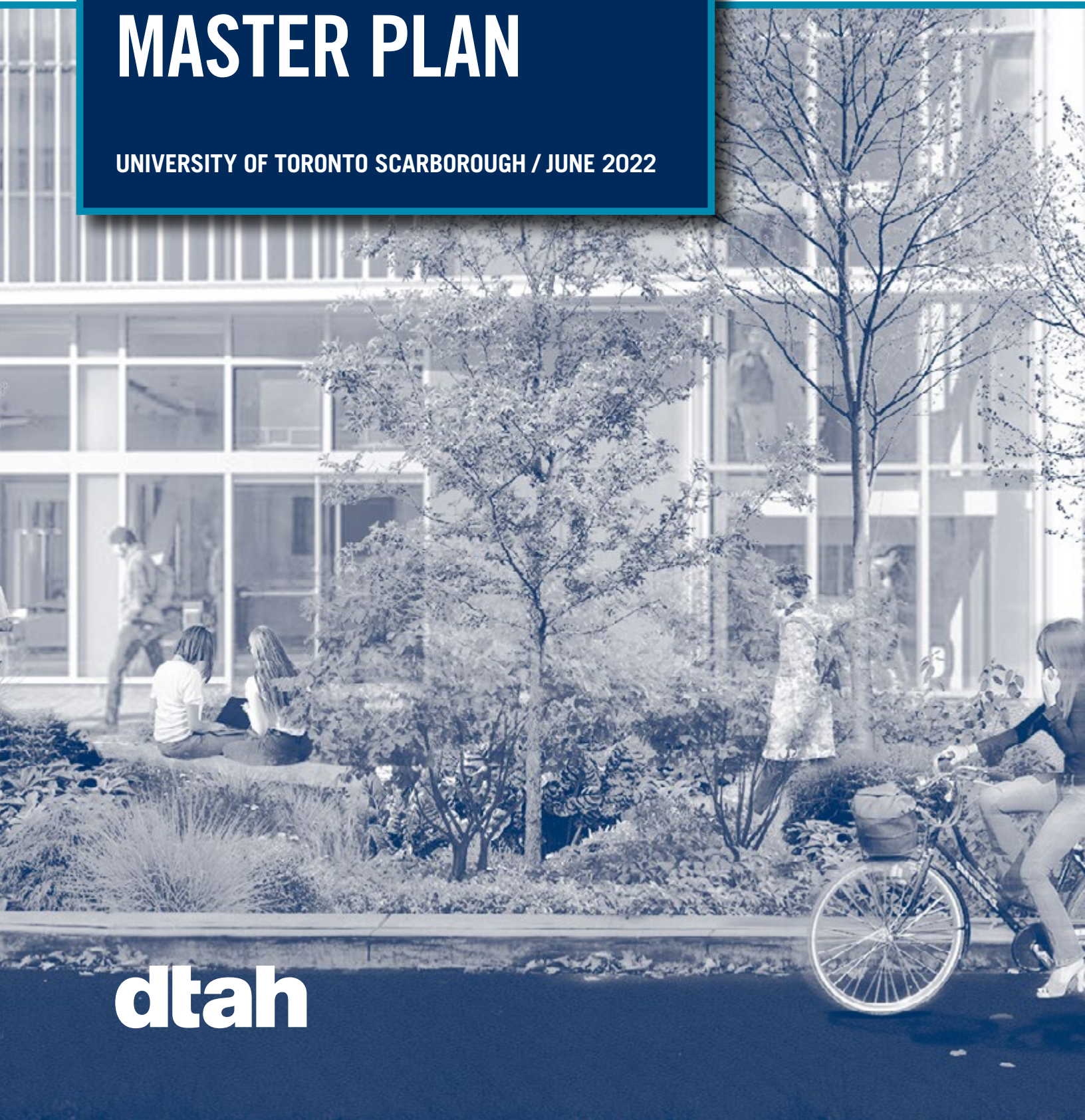

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University of Toronto Scarborough Campus
Landscape and Public Realm Master Plan, June 2022

Prepared for the University of Toronto Scarborough
by DTAH with Jane Hayes

Landscape and Public Realm Master Plan online:
https://www.utsc.utoronto.ca/bosa/campus-projects

Cover Image: Demonstration of the University Streets in the North Campus, DTAH
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CONTENTS

ACKNOWLEDGEMENTS

We wish to acknowledge this land on which the University of Toronto operates. For thousands of years it has been the traditional land of the Huron-Wendat, the Seneca, and the Mississaugas of the Credit. Today, this meeting place is still the home to many Indigenous people from across Turtle Island and we are grateful to have the opportunity to work on this land.

This study would not have been possible without the dedicated and invaluable knowledge and counsel of the Steering Committee, advisors and partners who willingly and expertly guided this process.

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TRCA: Mark Rapus

Community Advisory Group: consisting of representation from the local City Councillor's office, community association and community groups

KEY TERMS

Active Transportation: a category of transportation that focuses on considerations for pedestrian and cycling movement and infrastructure needs.

Analog: Constructed landscapes that uses the plant species, structure and character of naturally occurring ecologies to enhance the ecological integrity and function of disturbed landscapes.

Complexity: A term in ecological studies referring to the quantity and diversity of living things which are supported within a specific environment or ecology.

Diversity: A term in ecological studies referring to the quantity of distinct and different species supported within a specific environment or ecology.

Ecological Horticulture: A practice of landscape design and management that prioritizes the function and relationship between plants within a natural system to create supportive ecologies and environments over aesthetic considerations.

Ecological Integrity: An approach within landscape management that considers and prioritizes the overall value and performance of a living system based on holistic benefits to the environment or context.

Ecological Restoration: A process of reconstructing a disturbed landscape to reinstate a specific historic ecology or landscape condition.

Ecosystem Service: Any positive benefit provided by wildlife or natural systems that contribute to human use of an environment.

Edible Landscape: A planted area using a diverse mixture of plants that prioritize the growing of food for humans and animals. Can function as a demonstration or productive landscape.

Guild: A term used in permaculture practices to describe the function of a group of living things to create a supporting community or ecology for a primary or central organism to enhance yields and contribute to a regenerative system.

Green Infrastructure: Constructed and human-made components that employ natural processes and plants to limit negative impacts of surface water runoff from storm events.

Indigenous Community: A group including Indigenous Rights Holders, Indigenous members of the campus community (faculty, staff and students), and local Indigenous peoples.

Knowledge System: A framework for understanding knowledge, learning and teaching based within cultural practices.

Land-based: A program or process that is carried out on the land to which it applies.

Living System: An adaptive and dynamic collection of interdependent living things that jointly contribute to a naturally functioning and resilient ecology

Living Thing: In Western Knowledge Systems, a term used to collectively refer to any plant, animal or fungus. Within Indigenous Knowledge Systems, this may be expanded to include anything which embodies spirit including Fire, Earth, Water and Sky.

Low Impact Development (LID): Constructed infrastructure and storm water conveyance structures designed to limit impacts from storm water runoff. LID structures may include natural features or processes.

Natural System: A naturally occurring Living System.

Natural Heritage System: A planning term which refers to a network of open spaces that include natural areas as identified by authorities having jurisdiction.

Ornamental Horticulture: A practice of landscape design and management that prioritizes the aesthetic value of plants over ecological function within a landscape or open space.

Permaculture: A design process that uses an understanding of Living Systems to develop and contribute to the diversity, stability and resilience of natural ecosystems resulting in complex regenerative landscapes that provide high yields. Typically applied to productive landscapes.

Plant Community: A complimentary collection or palette of plants that are selected for specific functions or outcomes based on an understanding of the overall ecological performance or objectives for a Living System.

Productive Landscape: A planted area that is primarily used for the growing and harvesting of food for human consumption (e.g. farm, orchard).

Regenerative System: A Living System that produces yields that support and contribute to the on-going performance and health of the system without high-intensity inputs.

Regenerative Landscape Management: A dynamic process of land management and maintenance that uses natural processes and living systems to adapt a disturbed landscape to a resilient and regenerative system based on current conditions

Resilience: A system's capability to withstand or integrate factors of change when impacted by external forces and retain or improve functional performance through adaptation.

Stability: A system's capability to remain unchanged when impacted by external forces.

Succession: A process by which plant communities and living systems change over time through the natural growth and life cycles of the component living things within an environment.

Sustainability: A system's capability to maintain specific performance measures when impacted by external forces.

Yield: A term used within permaculture practices to identify the outcomes or products of a process. Yields may include tangible (i.e. food) and intangible (i.e. social agency) outcomes and are typically measured based on the value to the continued functioning of the system and not monetary or economic value.

Cherry blossoms in the Sakura Grove in the South Campus precinct.

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EXECUTIVE SUMMARY

The landscape and public realm is where academia meets the social and cultural campus community, where students, faculty, and staff can casually share ideas, and where forward-thinking values spill out beyond the classrooms and labs. It is a place to meet, play, rest, and reflect.

This is the first Landscape and Public Realm Master Plan for the University of Toronto Scarborough—one that promotes innovative and transformative strategies for the entire campus. It integrates research and learning, resilient systems and permaculture, Indigenous knowledge, inclusive spaces, and adaptable implementation and management into a landscape and public realm approach that is uniquely UTSC.

Well-considered landscape and public realm interventions, even modest ones, can reinforce campus identity and bring people together in a safe and welcoming place for the campus community and the community beyond. This ambition will weave its way through all aspects of the University of Toronto Scarborough's (the "University" or "UTSC") exterior spaces over time.

PURPOSE

Great campuses are defined by landscapes that reflect and reinforce the spatial structure of the campus. Outdoor spaces and corridors defined by streets, paths and buildings are further enriched and made meaningful through thoughtful development of the campus landscapes and open spaces.

This Landscape and Public Realm Master Plan will reinforce the experience of UTSC as a place of research, learning, and community. This plan will introduce a high quality landscape character that presents a cohesive and well-considered exterior image. Campus landscapes will enhance aesthetics alongside overall environmental performance.

This master plan establishes the direction for future development of the landscape and public realm features of the University, including streets, parks, open spaces, natural areas, and building related landscapes.

A LIVING DOCUMENT

To ensure the ongoing relevance and continued applicability of the recommendations, this document may require adjustments to align with major updates in campus development and policy. While updates will respond to major development milestones and reflect shifts in institutional priorities, the core values and guiding principles should endure over the long term. In the near future, a great deal of activity will reshape the North Campus with numerous projects underway and planned, as well as the potential for higher order transit integration. Together these major initiatives are advancing the evolution and transformation of UTSC into a walkable and connected campus with a strong sense of place. The implementation of a high-quality landscape and public realm across all areas of the campus will play a vital placemaking role and further contribute to the distinct character of UTSC.

MASTER PLAN APPROACH

Initiated in July 2020, this study is the first specific Landscape and Public Realm Master Plan for University of Toronto Scarborough. The master plan considers the existing and future campus, including the campus relationship to the Highland Creek ravine system. This master plan builds upon the values established in the UTSC 2020-2025 Strategic Plan, and the principles, objectives and frameworks defined in the 2011 Campus Master Plan, draft Secondary Plan (2019) and draft Urban Design Guidelines (2020).

MASTER PLAN STRUCTURE

This document is organized into four chapters: Process; Strategies and Guidelines; Demonstration Plan; and Implementation. Each section builds on the previous and should be read together for a comprehensive understanding of the vision for the campus landscape and public realm.

PROCESS

The Landscape and Public Realm Master Plan explores the development of the landscape and public realm through a comprehensive approach to design. Values (based on the priorities and objectives of the Strategic Plan), vision and guiding principles inform key strategies, responses, and implementation recommendations of the plan. The objectives are framed within the context of Research and Learning, Resilient Systems and Permaculture, Indigenous Knowledge, and Implementation and Management.

STRATEGIES AND GUIDELINES

The Landscape and Public Realm Master Plan builds upon a broad foundation of distinct yet complimentary objectives to help achieve the established values, vision and guiding principles. The strategies are organized by four themes: Knowledge and Leadership, Production and Resilience, Place and Movement, and Details and Delivery. The strategies are supported by a series of guidelines, where appropriate, to assist with the planning, design, and implementation of individual landscape and public realm projects over time.

DEMONSTRATION PLAN

A Demonstration Plan is included to help to visualize the intention of the preceding strategies and guidelines. The Demonstration Plan is not a Master Plan. It is presented for illustrative purposes and is not the only potential interpretation of the recommendations, which intentionally allow for several different approaches. The Demonstration Plan is aspirational and considers the campus at full build-out, with a narrative written in the future tense.

The overall Demonstration Plan illustrates potential new development within each of the three campus precincts: North Campus, South Campus, and the Ravine Lands. The overall campus structure is informed by the UTSC Secondary Plan and Urban Design Guidelines.

Within the Demonstration Plan, renderings of specific sites are provided to illustrate a single interpretation of a landscape and public realm character that is possible by following the recommendations. To assist with the understanding of open space typologies and critical character-defining moves, the following areas of concentration have been included: Campus Farm, Promenade, North Common, Mid-Block Courtyard, University Street, Ellesmere Pedestrian Bridge, Central Gateway, ARC Quad, and Valley Fields Connection.

IMPLEMENTATION

The final chapter addresses how to implement the Master Plan recommendations, identifying implementation strategies and discrete tasks—identified as either a project or action—that the University is encouraged to carry out to support the implementation of the public realm vision.

"A Tall Couple" sculpture, by Louis Archambault (1915–2003), located at the head of the Valley Lands Trail in the South Campus precinct.

1.0 PROCESS

Extensive discussions helped to inform and direct the Master Plan outcomes. A steering committee was established to guide the process and included voices from administrative, academic, and operational perspectives. Robust engagement with staff, faculty, stakeholders, and the campus community-at-large contributed to the overall campus vision.

The result is a Master Plan that reflects diverse inputs, identifies achievable objectives, and promotes an innovative approach to campus landscape and public realm design and development.

1.1 STUDY PURPOSE

The great campuses of Canada and the world are defined by landscapes that reflect and reinforce the spatial structure of the campus through outdoor spaces and corridors defined by streets, paths and buildings that are further enriched and made meaningful through development of the campus landscapes and open spaces.

Campus landscapes and public realm, together with buildings, will support the image of UTSC as a place renowned for learning, research, community and knowledge. This master plan will introduce a high quality landscape character that presents a cohesive and well-considered exterior image. Campus plantings will be used to enhance aesthetics alongside overall environmental performance.

UTSC is an innovative institution that is constantly improving its academic programs and facilities. Yet, campus life takes place not only in the lecture halls but across all areas of a campus, including between buildings, and along streets and laneways. The image of the campus begins from the outside in, from the community to the classroom. The campus experience across all scales should provide lasting memories and instil pride in the institution.

This master plan establishes the direction for future development of the landscape and public realm features of the University, including streets, pathways, parks, open spaces, natural areas, and building related landscapes.

The Landscape and Public Realm Master Plan is a living document that:

- Guides future improvements and redevelopment within the campus open space
- Provides a clear organizing physical framework for the campus
- Prioritizes the pedestrian experience while acknowledging operational requirements of a highly active site
- Identifies robust and suitable landscape materials for various campus uses and activities
- Informs and advocates for open space design to respond to site conditions and emphasize quality of place and memorable spaces.

It is governed by the Campus Master Plan and builds on work initiated through the draft Secondary Plan and draft Urban Design Guidelines and supports the values of the UTSC Strategic Plan.

The study process was organized into four phases:

- Frame: Define the parameters of the study
- Understand: Research and analyze site conditions, programming and opportunities
- Explore: Develop guidelines, strategies and demonstration plans
- Refine: Finalize recommendations and strategies

The outcomes of this master plan include principles, strategies, and guidelines to inform and direct the development of future landscape and public realm interventions. The study also identifies additional initiatives for improvements and opportunities for further actions beyond the scope of this study.

1.2 ENGAGEMENT

This undertaking was guided by a Project Steering Committee which met regularly to review findings, discuss potential applications, and identify areas for further inquiry. The Steering Committee was composed of a Core Team (UTSC operational and administrative leads) and an Advisory Team (faculty, community partners, Indigenous advisors and staff). Presentations were made to the University of Toronto Design Review Committee and UTSC Executive to confirm and adopt the strategic direction of the plan.

Due to the limitations of COVID-19, in-person student, staff and community engagement was not carried out. However, virtual information meetings were held with the community to update on progress and outcomes of the study, and each project that results from this master plan will define its own engagement protocols.

Workshops and information meetings were held with the following Campus Stakeholders to identify opportunities for integrating ongoing campus initiatives within the master plan:

- Indigenous Advisory Circle, Elders and Knowledge Keepers
- Campus Farm Steering Committee
- Environmental and Ecological Stewardship Working Group
- Edible Campus Advisors
- Campus Facilities and Operations Staff

The need for continued and meaningful discussions with the UTSC Indigenous Community, including Inherent Rights Holders, were identified as critical for reconciliation and key to the implementation process of future landscape and public realm projects within the campus. This is further elaborated in the implementation recommendations of the master plan.

Aerial view of South Campus precinct with Ravine Lands beyond.

1.3 CONTEXT

POLICY & PLANNING CONTEXT

Founded as Scarborough College in 1964, the campus was profoundly influenced by its landscape with its first buildings sited along the top bank of a significant ravine system. The structures took advantage of microclimatic conditions and strategic views to create unique spaces for learning. Subsequent buildings and landscapes were developed based on a revised master plan building on the original concept by John Andrews and Michael Hough, then in response to a new master plan completed in 2001 by Baird Sampson Neuert. Until 2009, the academic campus and expansions were focused on the South Campus precinct. In 2009, the university began planning the expansion of the North Campus precinct and began development of the current Campus Master Plan (finalized in 2011 by Urban Strategies).

The 2011 Campus Master Plan frames the development of key projects to contribute to the campus' role in hosting events for the 2015 Pan Am and Parapan Am Games, and the on-going expansion of the University's academic and research program offerings. The plan also responds to recent projects developed based on this framework. A renewed approach to landscape and public realm engagement within the campus is demonstrated in the shared plazas between the Instructional Centre and Environmental Science and Chemistry Building, the internal promenade of Highland Hall, and the forecourt of the Toronto Pan Am Sports Centre. All of these buildings also include a street facing presence and support a more urban and integrated development pattern.

In support of the recommendations of the Campus Master Plan and to further facilitate the expansion of the North Campus, the University undertook the development of both a Secondary Plan and Urban Design Guidelines to provide direction on the land use and built form within the campus. As part of this process the need for a strategy to clarify and guide the public realm and landscape character of the campus was identified. At the time of completion for the Landscape and Public Realm Master Plan, both preceding studies were still in draft form, however, the latest version, including updated drafts and finalized documents should be referenced when considering applications and recommendations.

The campus sits within the jurisdiction of both the City of Toronto and Toronto Region Conservation Authority with respect to the natural heritage systems. Projects within the campus should support the City of Toronto's First Resilience Strategy, Ravine Strategy, Biodiversity Strategy, Wet Weather Flow Management Guidelines, and TRCA's The Living City Policies. The University is also a key partner in the implementation and innovation of the City of Toronto's Green Development Standards (TGS) which guide all capital building projects on campus.

As a result of the planned expansion of the City of Toronto/TTC Eglinton East LRT network and the Metrolinx/Durham Region Ellesmere BRT project, the campus will see several new high-order transit improvements adjacent to and through out campus. Though in preliminary stages, the Eglinton East LRT may travel through the north campus along a realigned Military Trail. The proposed street grid of the North Campus redevelopment has evolved since the Campus Master Plan and will be subject to further transportation studies.

SITE CONTEXT

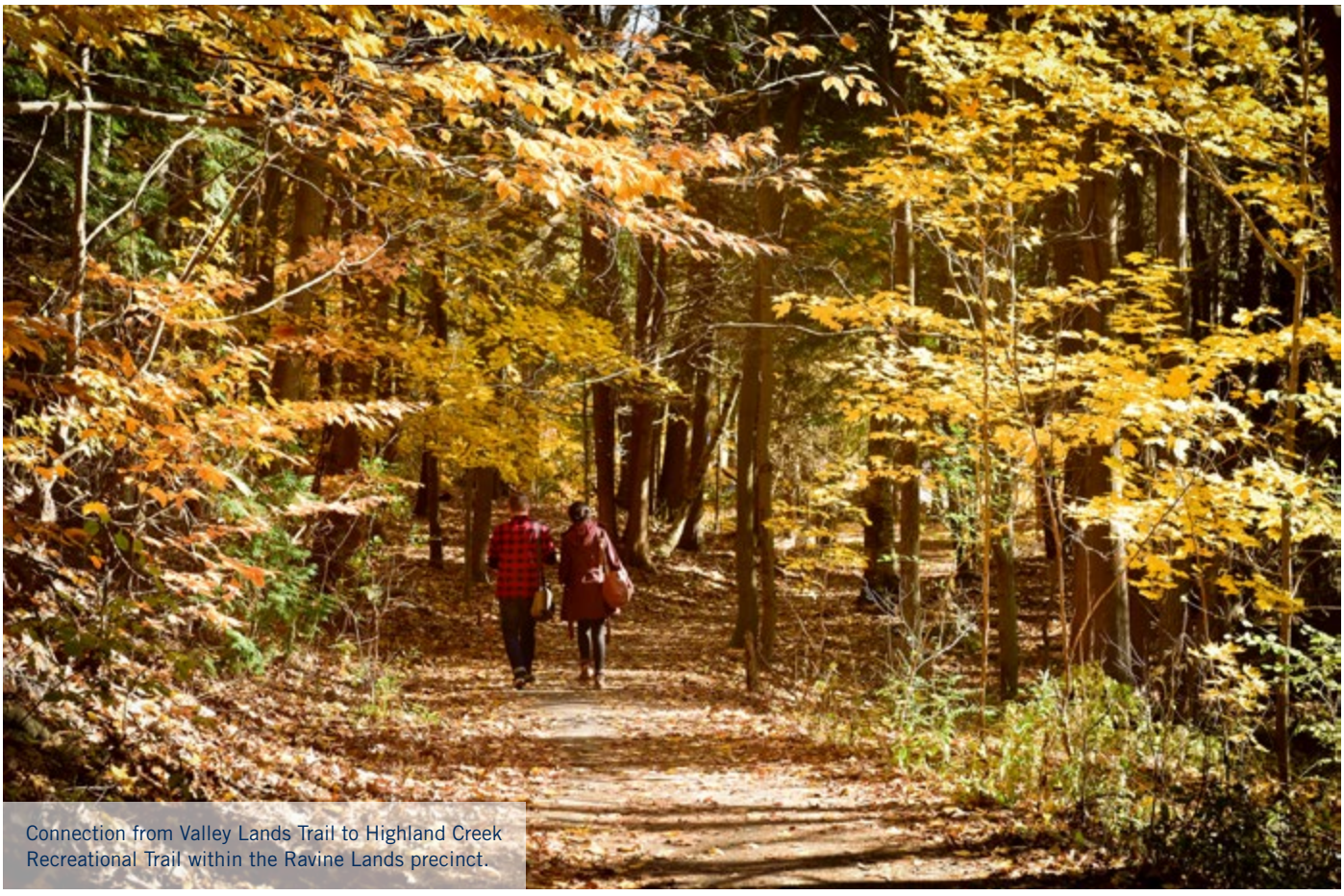
Measuring 123ha (304 acres), University of Toronto Scarborough is the largest of the University of Toronto's three campuses. The campus includes significant natural heritage assets and provides key connections to surrounding neighbourhoods and ecological systems within both the City of Toronto and Toronto Region Conservation Authority (TRCA) natural heritage systems.

The internal structure of the campus is defined by three precincts (or Character Areas) as identified in the Secondary Plan. Each precinct provides a unique character and function within the larger campus framework.

North Campus Precinct

The North Campus is bounded by Ellesmere Road to the south, Morningside Avenue to the west, residential properties to the east, and City of Toronto lands to the north. The northern edge of the precinct includes the Campus Farm, Toronto PanAm Sports Centre (TPASC) and the future site of the Fieldhouse development. The south edge is emerging as an urban gateway, including public-facing capacities within the future site of the LAMP building.

The North Campus is the focus of the planned expansion of UTSC. Capital investments and infrastructure improvements will significantly reshape the precinct, redeveloping surface parking areas and connecting the South Campus and Ravine Lands to existing and future destinations north of Ellesmere. The North Campus provides key opportunities to connect nearby active transportation networks and



Connection from Valley Lands Trail to Highland Creek Recreational Trail within the Ravine Lands precinct.

embed the campus vision for sustainable design and innovation in a holistic way through built-form and open space development. This precinct offers the greatest opportunity for introducing a unifying campus character allowing for the precinct redevelopment to lead with landscape.

South Campus Precinct

The South Campus is anchored along the top bank of the Highland Creek ravine by the iconic John Andrews-designed Science and Humanities Wing structures. The precinct is framed on the north by Ellesmere Road and at the east by Military Trail. Much of the development territory within the precinct is built-out, though opportunities for infill and targeted redevelopment still exist. The built fabric is a mixture of styles and materials, and presents a variety of open space conditions.

The South Campus will benefit from the ongoing implementation of unified and coordinated public realm elements to enhance and connect the various spaces into a legible and cohesive landscape and public realm network. Topographic conditions limit opportunities to provide new connections to the Ravine Lands, however the expansion of the campus northward will provide opportunities to improve connectivity of existing circulation networks to destinations within and beyond the North Campus.

Ravine Lands

The Ravine Lands are defined at the north, east and south primarily by the top of banks of the Highland Creek ravine. The west edge is bounded by the Morningside Avenue bridge, but connects directly within the valley to Morningside Park, providing a critical link in the Highland Creek recreational trail and ravine corridor networks. The precinct primarily serves as a natural heritage and active recreation destination for the campus and surrounding communities while also providing opportunities for land-based learning and research. It includes informal and formal sports fields (baseball, soccer) and tennis courts as well as supporting facilities.

The Ravine Lands also include the historic Miller Lash House which provides unique conference and event amenities within the picturesque valley landscape. The gardens and grounds associated with the Miller Lash facilities embody a more ornamental character than elsewhere in the precinct, but still contribute to the ecological integrity and function of the Highland Creek natural heritage system.

While the Ravine Lands are primarily protected natural heritage lands, opportunities exist to supplement the existing character and uses with site-appropriate athletic and academic facilities to support ongoing research and learning within the valley. Improvements to the circulation and wayfinding network will focus on supporting a consistent and legible experience throughout the entire campus.

1.4 VALUES

Guiding this and all efforts at UTSC, the Strategic Plan set out a series of values that inform high-level priorities and objectives for the future of the campus. The values provided on the facing page (from the Strategic Plan) apply to all aspects of the institution. In the context of the Landscape and Public Realm Master Plan, the following interpretations of the values have been derived.

Intentional Inclusion: Creating spaces and experiences that not only accommodate, but also represent diverse lived experiences and abilities as well as approaching the process of design as collaborative and inclusive.

Students As Partners: Engaging students in the act of design, management and activation of campus landscapes and public realm to support connection to the campus.

Reciprocity: Cultivating opportunities for partnerships and collaboration through the design of flexible and inclusive spaces.

Accountable Stewardship: Prioritizing transparent processes, collaborative methods and informed decision-making to ensure landscapes and the campus public realm support future generations and the environment, including opportunities for Indigenous traditions, relationships to land and ways of knowing

Group of students seated on lawn near Valley Lands Trail head.

This master plan builds on the values and mission defined in the UTSC Strategic Plan 2020-2025: Inspiring Inclusive Excellence.

The University of Toronto is dedicated to fostering an academic community in which the learning and scholarship of every member may flourish with vigilant protection for individual human rights, and a resolute commitment to the principles of equal opportunity, equity, and justice.

In alignment with the University of Toronto's mission, we commit to living the following values at the University of Toronto Scarborough:

INTENTIONAL INCLUSION

Only by genuinely embracing and understanding different experiences, backgrounds, perspectives, and identities can we sustain our vibrant intellectual community and address our global challenges. We take pride in the diversity of our community, but it is only meaningful in a culture of equity and inclusion that flows from active and intentional action to ensure that every voice is heard and everyone feels a strong sense of belonging.

STUDENTS AS PARTNERS

Students are active participants and partners in the educational process. From curriculum development to cutting-edge scholarship to community service that produces global leaders to shaping our values, our students play a critical role as valued partners in enriching our academic and community activities.

RECIPROCITY

We are defined by collaborative, fair, and reciprocal partnerships for the mutual benefit of colleagues, students, alumni, Indigenous communities, neighbours, and global networks. As an anchor institution in the eastern GTA, we are committed to shared leadership and will work with our local partners to ensure that we remain responsive, relevant, accountable, and accessible to our communities in the pursuit of our common goals while engaging the world.

ACCOUNTABLE STEWARDSHIP

We continually challenge the status quo in order to be more effective stewards of our resources and to exemplify individual and collective accountability. We make efficient use of our fiscal resources, promote transparent and participatory decision-making, and facilitate effective administrative processes that ensure continuous improvement in all that we provide to the internal and external communities that we serve.

We commit to respecting Indigenous traditions, lands, and ways of knowing; and to protecting the ecosystems that sustain us and which we hold in trust for future generations.

(Excerpt from Inspiring Inclusive Excellence)

1.5 VISION

The vision for the campus landscape and public realm builds on the values established in the Strategic Plan. It is both aspirational and grounded in work already under way. The vision offers a guiding glimpse of a future where the campus is:

- A unique and unified landscape that is progressive, safe, accessible, and equitable.
- A new land-based, productive, and ecologically resilient model, rooted in and advancing the values and principles of Permaculture at the campus scale.
- A series of interconnected and integrated experiences informed by Indigenous protocols, knowledge systems and history that respect and regenerate natural systems across scales and encourage reconciliation through placekeeping.
- A dynamic learning environment to advance pedagogy and scholarship.

Students sitting and walking around entrance to Humanities Wing building in South Campus precinct.

1.6 GUIDING PRINCIPLES

The following series of principles underpin the Landscape and Public Realm Master Plan, building upon the project vision and values, and the principles that inform the UTSC Strategic Plan, Campus Master Plan, and Urban Design Guidelines.

These principles inform the design strategies and guidelines that follow, together creating a robust framework to direct the design and implementation of future campus outdoor spaces and the redevelopment of existing landscapes and public realm infrastructure. The principles are arranged under four lenses (or headings) that are reintroduced within the next chapter (Strategies and Guidelines).

KNOWLEDGE & LEADERSHIP

- Embed Indigenous protocols, knowledge systems and history in connection to the land and in the design of the campus.
- Reflect the diversity of knowledge, experiences and values of under-represented and equity-deserving communities within the expression of open space.
- Integrate ongoing opportunities for teaching and research within the landscape to support academic pursuits, cross-disciplinary studies and collaboration.
- Engage the landscape to reveal learning and research within the adjacent built environment.

PRODUCTION & RESILIENCE

- Integrate socially and ecologically productive landscapes throughout the campus, informed by the principles and practices of permaculture, and regenerative agriculture.
- Embed practices and protocols based in traditional knowledges within the design, programming and management of campus landscapes.
- Design landscapes that are edible, regenerative and ecologically resilient, consider life-cycle costs and reduce carbon footprint.

PLACE & MOVEMENT

- Define the campus through signature spaces, focal points and connected experiences.
- Provide for a safe, comfortable and legible environment during all times of day and all seasons.
- Create an accessible campus for people of all ages and abilities.

DETAILS & DELIVERY

- Create a responsive and regenerative implementation strategy.
- Prioritize ecosystem health, ecological restoration, and landscape function as critical measures of design excellence.
- Develop a consistent and cohesive approach to lighting and materials.

1.7 APPROACH

At the outset of this study key considerations were identified through engagement with the steering committee and advisory groups. These considerations inform the strategies, responses and implementation recommendations of the landscape and public realm master plan. Many of the topics noted below are drawn directly from the Values, Vision and Guiding Principles and are further elaborated on and underpin the strategies discussed in Chapter 2.

RESEARCH & LEARNING

Opportunities for research and learning within the campus landscape and public realm enhance the overall value and function of both the physical campus and the academic offerings of UTSC. Opportunities to demonstrate, expand and communicate existing and future research will help facilitate learning and the sharing of knowledge within the public realm and landscape spaces on campus. Strategies to support these activities are developed and expanded throughout this plan, including opportunities to enhance land-based learning and knowledge sharing, as well as build on the institutional knowledge and expertise in innovative and diverse practices and approaches to land management that reflect the diversity of the campus and provide real-world applications beyond the campus.

RESILIENT SYSTEMS & PERMACULTURE

The landscape and public realm of the campus has been considered from a holistic and connected perspective to take advantage of efficiencies and promote resilient processes within the open space networks. The successful delivery of this plan will rely on prioritizing the connections between the ravine and the natural systems around and throughout the campus to expand ecological networks and create adaptive strategies to support all living things. Emphasis on life-cycle impacts and adaptability will inform the on-going evaluation and evolution of systems, spaces and strategies for the campus.

In support of various resilient processes and systems, this plan also explores the integration of Permaculture principles and practices at a campus scale. The plan considers how to enhance the health, yields and functions of the campus landscape and public realm as part of a living system, including considerations for the social and physical impacts of humans and other animals on the health and function of the landscape. This permaculture lens integrates the social diversity, function and wellness of the campus community with enhanced ecological diversity, function and wellness of the campus spaces. Key considerations include: opportunities for integrating both visible and invisible elements of the land; consideration for the short- and long-term yields of the landscape; and, closed loop cycling of nutrients, water and energy. Leveraging these innovative and regenerative processes creates an opportunity for the campus to grow into a globally significant Permaculture Campus that brings value to the university through student, faculty, research and investment interest.

INDIGENOUS KNOWLEDGE

To build towards reconciliation and elevate restorative practices, opportunities to engage the Indigenous Community are explored to integrate Indigenous knowledge systems within campus spaces. This plan does not seek to define the methods of engagement and knowledge sharing but explores strategies to engage in meaningful dialogue with Indigenous partners to create a space to share knowledge, collaborate and co-create through academic and community-building processes. Opportunities to collaborate on restoration and management practices within the campus landscape are also considered integral to the implementation of this plan.

INCLUSIVE SPACES

The University is a leader in inclusive design and an advocate for its integration in the open spaces of the campus. This plan considers inclusion within the landscape and public realm of the campus through both the physical forms and the processes to design and activate spaces. Meaningful engagement with the campus community ensures the design of spaces support various abilities, while also ensuring representation in the ecology, activation, management and cultural forms of landscapes reflect the diversity of the campus. The integration of adaptable spaces support a wide variety of uses and opportunities for engaging various users in the open spaces and support complex ecologies to enhance the social and ecological resilience of the campus as a whole.

IMPLEMENTATION & MANAGEMENT

Understanding the challenges and opportunities of the existing landscape and public realm networks, this plan develops strategies and management recommendations that promote sustainable practices, employ robust materials, and respect the unique character of each precinct. This plan also explores the role of land management to further enhance and contribute to areas of research and learning throughout the campus, including opportunities to develop testing and monitoring of living soils, and evaluation of the overall health and performance of campus landscapes. The campus landscape and public realm is envisioned as a living lab to develop standards and best practices that will contribute to optimizing management practices within campus and contribute to a body of knowledge for applications beyond UTSC.

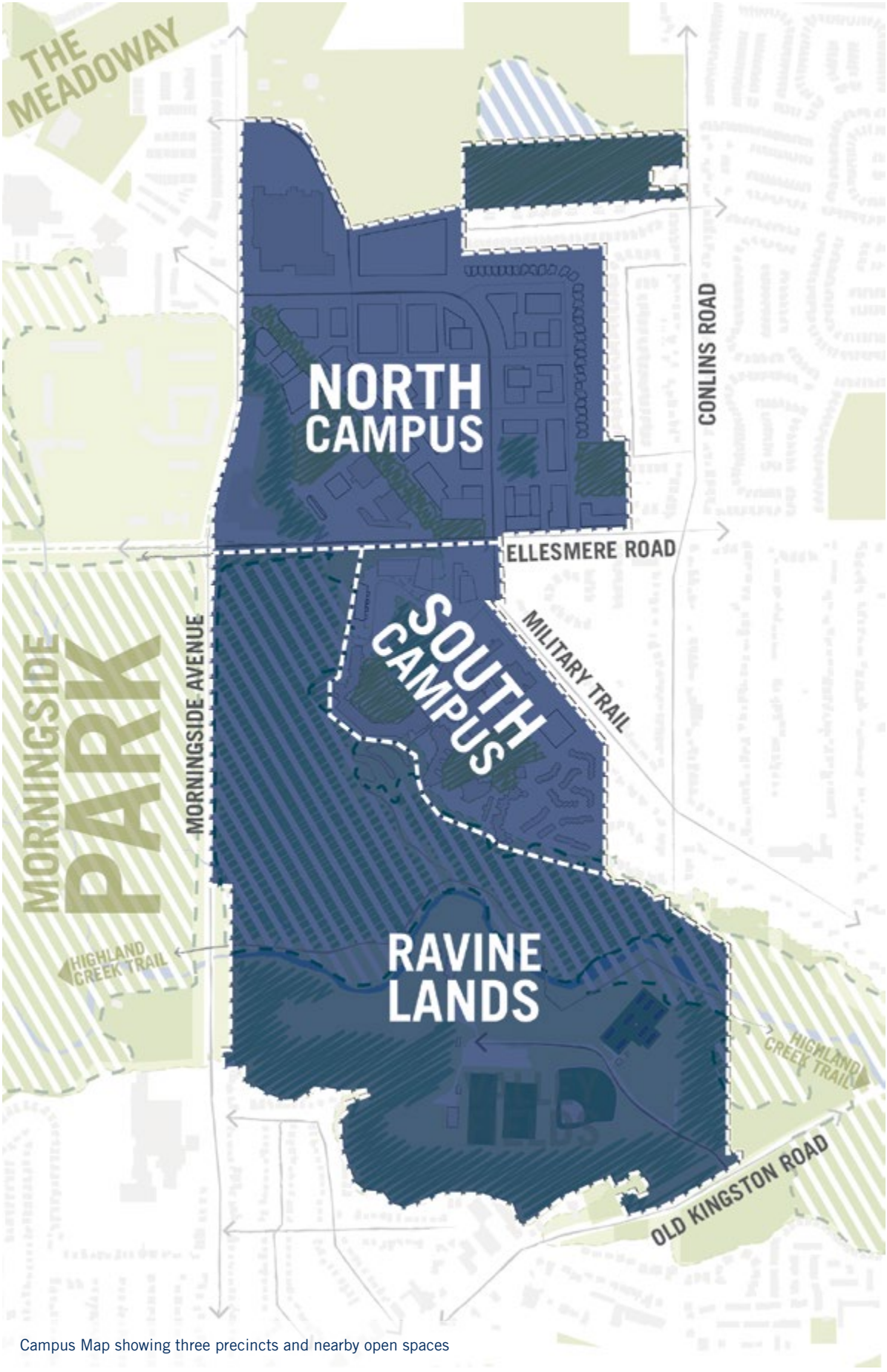
Highland Creek within the Ravine Lands

2.0 STRATEGIES AND GUIDELINES

This master plan builds upon a broad foundation of distinct yet complimentary guiding principles to help achieve the established vision.

The strategies are organized within the same four themes as the principles and are supported by a series of guidelines, where appropriate, to assist with the planning, design, and implementation of individual landscape and public realm projects over time.

Embedded within each theme, elements of the public realm framework set out the physical structure for the strategies and guidelines and inform the development of the demonstration plan discussed in Chapter 3.



Campus Map showing three precincts and nearby open spaces

2.1 CAMPUS STRUCTURE AND PRECINCTS

At 123 hectares, UTSC is the largest of the three University of Toronto campuses. It's access to nature, presence as a community hub, and legacy of innovative learning and teaching shape the context of the campus landscapes and public realm, and inform the application of the Guiding Principles, Strategies and Guidelines of this plan.

The campus is subdivided into three precincts (shown in map on facing page) each with a distinct character that influences the approach and opportunities. The embedded public realm framework (illustrated as maps throughout this chapter) helps to organize the campus exterior spaces by identifying common elements while highlighting unique aspects of the campus. The commonalities link the overall network of spaces while the unique considerations allow for adaptability within the recommendations. While this chapter considers strategies for the entire site, specific opportunities for each precinct are explored in more detail in Chapter 3.

The North Campus includes the majority of future development sites for the campus. Several new buildings and facilities have already been constructed or are identified for capital project funding within the next 10 years. Major public realm works within this precinct will include the creation of a new internal street network, mid-block connections and repurposing of the existing Military Trail municipal roadway into a new pedestrian spine and open space network to connect the north edge of the future campus to the existing South Campus built form.

The South Campus precinct includes the original campus core as well as opportunities for limited infill development and conversion of several under-utilized open spaces (e.g. surface parking lots, "orphaned" or disconnected courtyards). The resulting opportunities form an interconnected network of landscapes that connect and activate the public realm of the campus.

The Ravine Lands are the largest of the three precincts and are almost wholly composed of natural heritage areas and active recreation facilities to serve the campus community. Targeted opportunities within this precinct will focus on enhancing access to the precinct, supporting landscape management of the open space and research and learning pursuits specific to ravine and natural heritage conditions.

2.2 KNOWLEDGE AND LEADERSHIP

Key to the University's mission is a commitment to advancing a culture of leadership, knowledge sharing, innovation, and collaboration. These commitments inform an approach to creating outdoor spaces that foster learning and invite the UTSC community, inherent rights holders, and the broader public to participate in the sharing of knowledge in these spaces.

The campus landscape and public realm should serve as a dynamic environment where research and opportunities for learning flourish and are celebrated. Opportunities for engaging with the landscape and its living systems through land-based learning already occur through existing research and teaching. These initiatives provide a strong scaffold on which to broaden learning opportunities through both academic and community leadership.

UTSC has committed to actively collaborate with the campus Indigenous community and other stakeholders to co-develop and co-lead knowledge sharing that engages with and informs the landscape.

To support equity of access to spaces for learning, including those within the public realm, UTSC is committed to principles of universal accessibility and provides opportunities to engage the community through meaningful and consensual outreach and sharing.

Guiding Principles

- Embed Indigenous protocols, knowledge systems, and history in connection to the land and in the design of the campus.
- Reflect the diversity of knowledge, experiences, and values of under-represented and equity-deserving communities within the expression of open space.
- Integrate ongoing opportunities for teaching and research within the landscape to support academic pursuits, cross-disciplinary studies and collaboration.
- Engage the landscape to reveal learning and research within the adjacent built environment.

Strategies

1. Create spaces that reflect, welcome, and support the diverse communities within and surrounding the campus, through robust and authentic engagement based on UTSC protocols and policy.
2. Create flexible and dynamic spaces that facilitate teaching, research and knowledge sharing within the campus open space network throughout all seasons.
3. Embed experiential learning, living laboratories, and knowledge sharing throughout campus open spaces to showcase ongoing research and promote interdisciplinary engagement.

4. Create opportunities to advance, support and integrate research and learning based on permaculture practices, traditional land management, and living soil applications in an urban campus context and beyond.

5. Extend and showcase the diverse educational offerings and innovation available within campus through integration and exhibition of research, knowledge sharing and programming in open spaces and the activated edges of built form.

6. Create opportunities for place-based public art to support, engage and reflect the unique environments, and diverse cultures and experiences of the campus and community.

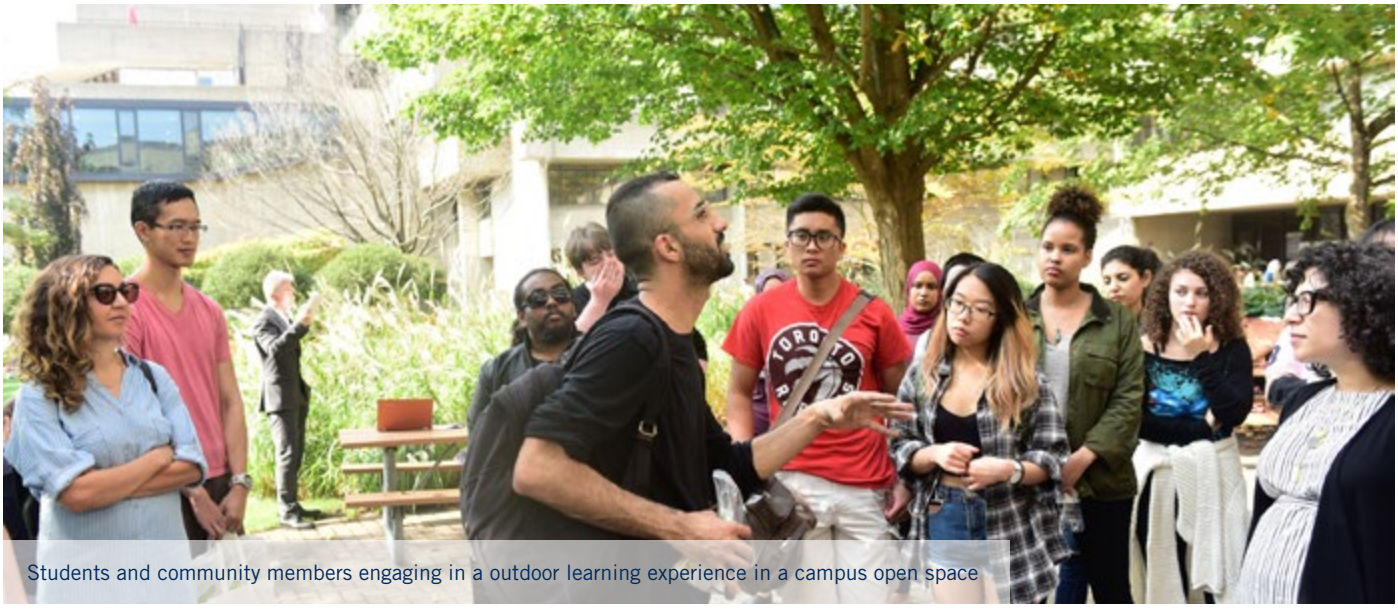
7. Engage with campus Indigenous communities to:

a. Learn, share, and celebrate the history and names of the land, and communicate Indigenous ways of knowing and sharing throughout the campus.

b. Co-create landscapes that respect and honour Indigenous peoples, Indigenous knowledge systems and rights throughout the campus landscape.

c. Practice inclusive engagement in all stages of the design, construction, and management of campus open spaces, based on UTSC protocols and policy.

d. Create opportunities to share knowledge and demonstrate the diversity of Indigenous cultures and values through collaborative place-making, place-keeping and continued engagement to benefit and serve future generations of users and the UTSC community.



Students and community members engaging in a outdoor learning experience in a campus open space

KNOWLEDGE SHARING, RESEARCH AND LEARNING SPACES

Throughout the campus key spaces for research in the public realm may take a variety of forms that can adapt to support diverse academic interests and the evolving needs of the campus community. Spaces will range in size and access depending on the nature of the research. Level of access appropriate to specific research or learning will inform siting for various initiatives. A mechanism to provide oversight--such as a designated individual or established committee--is recommended to steer and manage the engagement and activation of campus open space.

The existing and future landscape of the campus should provide opportunities to facilitate learning on the diverse and evolving bodies of knowledge through land-based education, curated activation, and informal engagement with the campus at-large. Opportunities for sharing research is encouraged beyond hard science-based pursuits to include social sciences, arts, culture, and humanities as a key to the expression and communication of the inherent value of landscape across disciplines and varied interests. Programming, research, and knowledge sharing for these significant areas of academic inquiry and learning will require ongoing collaboration with faculty, and include Indigenous and community partners.

Guidelines

- Expand opportunities for land-based exploration, research, and teaching.
- Extend external relationship building and partnerships to support land-based programming, activities and ongoing knowledge sharing within the campus public realm.
- Engage in knowledge sharing that speaks to land and land-based practices in support of academic and community collaboration.
- Develop new spaces, including those adjacent to buildings, that support learning and extend interior programming opportunities into the public realm and landscape.
- Develop spaces in collaboration with the campus Indigenous community that support reconciliation.

Students engaging around a table outside

Students engaging in a natural area

EDIBLE CAMPUS

Edible landscapes link all precincts and a variety of open space conditions throughout campus to demonstrate opportunities and advantages of creating a public realm that is more than ornamental. The integration of edible planting within a defined network of landscapes and open spaces benefits human and non-human users through the provision of food sources, opportunities for seasonal interest and opportunities for education centred on concepts of food security, sovereignty, and celebration.

Three existing spaces focused on the role of edible plants in both campus life and larger social and cultural discourse are distributed throughout the campus. The Campus Farm is a space for teaching, research and engaging with community around food. Adjacent to Indigenous House the new Indigenous Food Garden (opening in 2023) provides a dedicated space to grow and engage community in the dialogues of food sovereignty and security from an Indigenous lens and will provide opportunities to engage community in celebrating Indigenous food. Within the Ravine Lands, the Valley Lands Trail project incorporates a "food forest" into the restoration of the formerly eroded ravine edge.

Linking the major edible landscape spaces throughout the campus, the proposed Edible Pathway, will provide curated opportunities to engage and educate users informally on the value of creating edible landscapes. Due to the potential liabilities of allowing public users to consume edible plants grown on campus, communication strategies (including clear signs and public awareness messaging), strict quality control measures for soil, plant material and management practices will need to be developed to ensure community safety.

Guidelines

- Site and built-form design for development parcels adjacent to the Edible Pathway network should prioritize opportunities to enhance microclimate to support edible plantings and enhance adjacent mid-block connections with expanded courtyards and internal open spaces.
- Incorporate edible plants and landscapes in accessible green roof spaces as well as at-grade.
- Prioritize opportunities to physically link multiple spaces (including vertically) within development sites along the identified Edible Pathway route.

Student harvesting food on IC2 rooftop

- Prioritize edible landscapes along the Edible Pathway system of spaces and connections to provide opportunities for dedicated interpretation and knowledge sharing about the uses, roles and value of edible plants within diverse conditions.

- Use of edible plants may be explored in strategic locations beyond the Edible Pathway system to demonstrate diverse applications for growing edible plants for human and animal use.

- Integrate edible plant species that reflect and support the cultural diversity of the campus community.

- Reduce use of toxic or irritant plants in publicly accessible spaces, and communicate the diverse uses and values of plants and risks of consuming unknown substances as part of the interpretive strategy for the Edible Pathway.

- Use larger open spaces along Edible Pathway, including those at the Campus Farm, Instructional Centre Roof, Indigenous House, and the Valley Lands Trail to provide programming and knowledge sharing about food production in various conditions and using diverse approaches.

- Planting within identified Edible Campus spaces should prioritize the use of species that are suitable to current climate conditions and contribute to a contiguous landscape experience, including opportunities for research and teaching.

- Encourage opportunities to create thematic and narrative experiences within connected spaces to support programming, research and teaching across the campus and use of the open space as a “Living Lab” both for science and social research and discourse (including topics such as food security and sovereignty within diverse cultures) .

- Explore opportunities for partnering with local and Indigenous plant growers, as well as supporting growers propagating stock from non-GMO, open source, and/or native seeds.

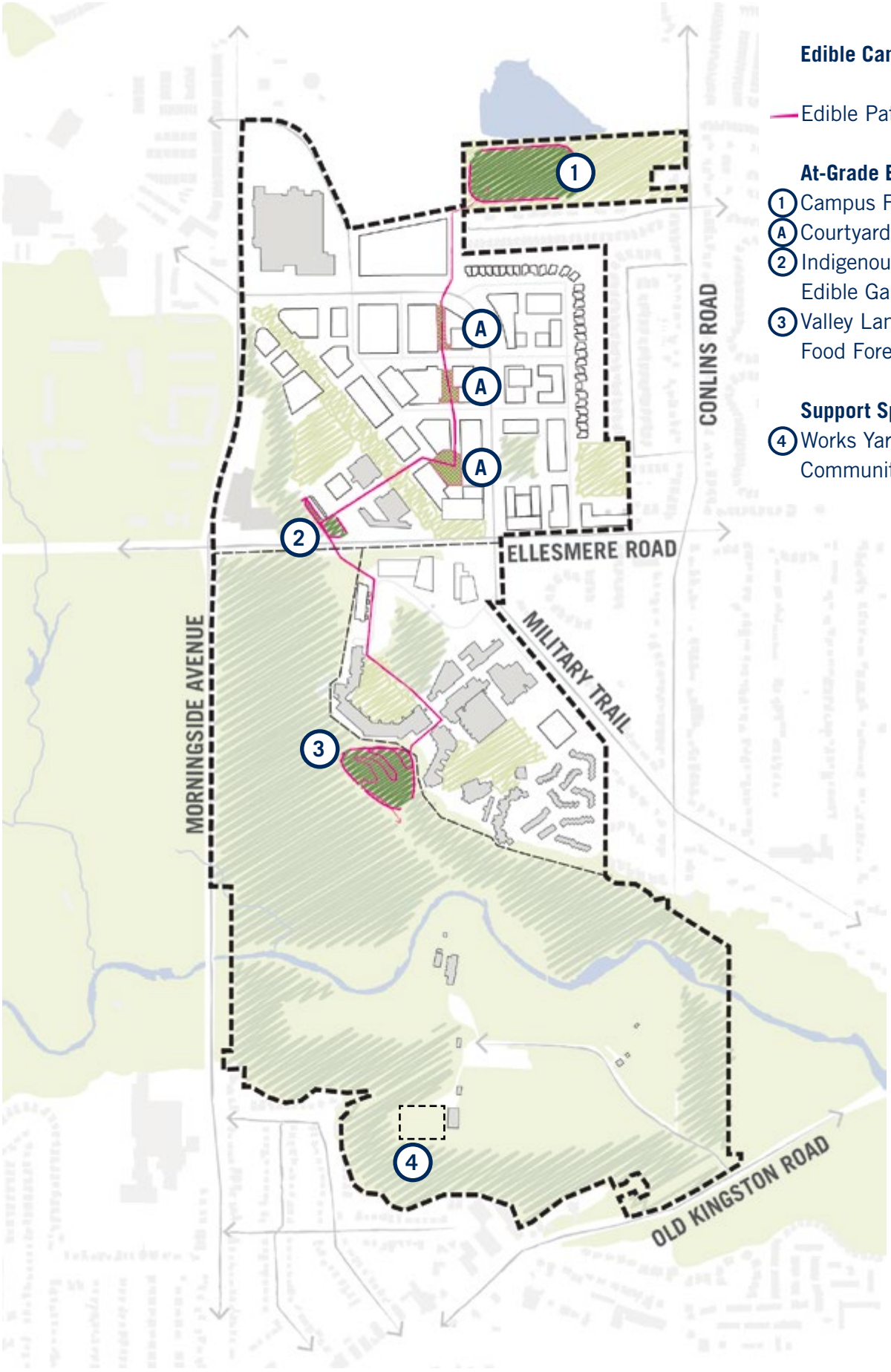
- Explore opportunities to engage with campus operations staff and academic research to propagate and grow nursery stock on campus (refer to “Landscape Management” on page 62)

- Consider opportunities for extending the Edible Pathway to link with operational spaces (i.e. Works Yard Nursery and Community Gardens) as future destinations.

- Identify opportunities for developing partnerships with external service providers to manage waste streams, organic material composting and soil cultivation to control quality and mitigate risks to the public.

- Consider opportunities to integrate edible planting within Ravine Lands in support of ecological and landscape regeneration (refer to “Landscape Management” on page 62).

- Identify opportunities to mitigate and regenerate impacted soils to support edible food production and overall plant health (refer to “Soils” on page 37).



Edible Campus Map

Edible Pathway

At-Grade Edible Spaces

1. Campus Farm
A. Courtyards
2. Indigenous House Edible Garden
3. Valley Lands Trail Food Forest

Support Spaces

4. Works Yard Nursery and Community Gardens

2.3 PRODUCTION AND RESILIENCE

Successfully integrating the principles of permaculture at a broad scale requires all campus landscapes and open spaces to contribute to the overall function of living systems, locally and further afield. The spaces that collectively compose the public realm will need to demonstrate resilience and adaptability to biotic and abiotic factors, and produce social, environmental, and economic yields that contribute positively to the life of the University, community, and environment.

To ensure ongoing performance and resilience within the landscape, the University should integrate landscape function benchmarking and assessments and environmental health monitoring in alignment with permaculture practices into the standard management practices of the campus. Further, the University should cultivate a culture of stewardship and connection to the land as a vital part of the overall campus experience, and reinforce through academic and community engagement.

Guiding Principles

- Integrate socially and ecologically productive landscapes throughout the campus, informed by the principles and practices of permaculture, and regenerative agriculture.

- Embed practices and protocols based in traditional knowledges within the design, programming and management of campus landscapes.

- Design landscapes that are edible, regenerative and ecologically resilient, consider life-cycle costs and reduce carbon footprint.

Strategies

1. Use existing and compatible ecologies to extend the function and character of the Ravine Lands beyond the designated natural heritage areas and connect campus open spaces as a resilient and healthy landscape network.

2. Use productive plants to create a continuous Edible Pathway throughout campus, employing principles of Indigenous Traditional Knowledge, permaculture, regenerative agriculture and land management.

3. Engage faculty, teaching and research within the campus community to develop innovative approaches to campus landscape design and management.

4. Create dynamic, complex, and self-regulating plant communities and landscape systems that integrate productive value and minimize high-energy/low-yield activities and management practices.

5. Develop plant palettes that are locally viable, multifunctional (e.g. edible, pollinator-supportive, biodiverse, etc.), and that embed seasonal and year-round interest and processes to demonstrate natural cycles and succession.

6. Considering various campus open space conditions, design landscapes that:

a. Use biodiverse and adapted planting to support overall social and ecological health and resilience; and,

b. Provide opportunities for demonstrating and practicing Indigenous and Western approaches to sustainability and land management.

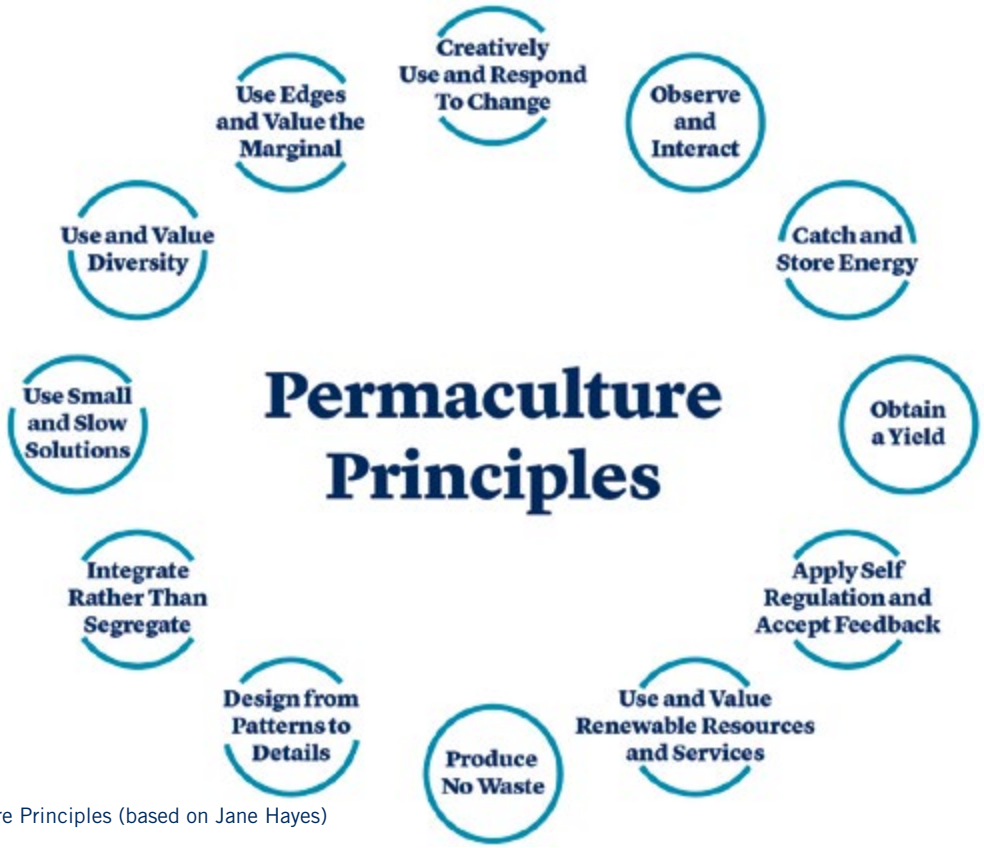
7. Use project benchmarking and on-going performance monitoring through metrics such as social impact, sustainability, and resilience to evaluate success of landscapes and adapt new landscape strategies

8. Use benchmarking, post-occupancy and community evaluation to inform, identify, and improve campus capacities and resources.

9. Employ land management practices that encourage and innovate through holistic approaches to maintenance and reduce reliance on chemical and mechanical methods and practices.

10. Create linked and integrated networks of open spaces to extend and enrich the function of the Ravine Lands as habitat and refuge throughout the campus.

11. Develop sustainable funding, budgeting, governance, and staffing models through institutional initiatives, such as the Campus Farm, to augment University resources in the management, harvest, and distribution of yields from edible campus production.



The twelve Permaculture Principles (based on Jane Hayes)

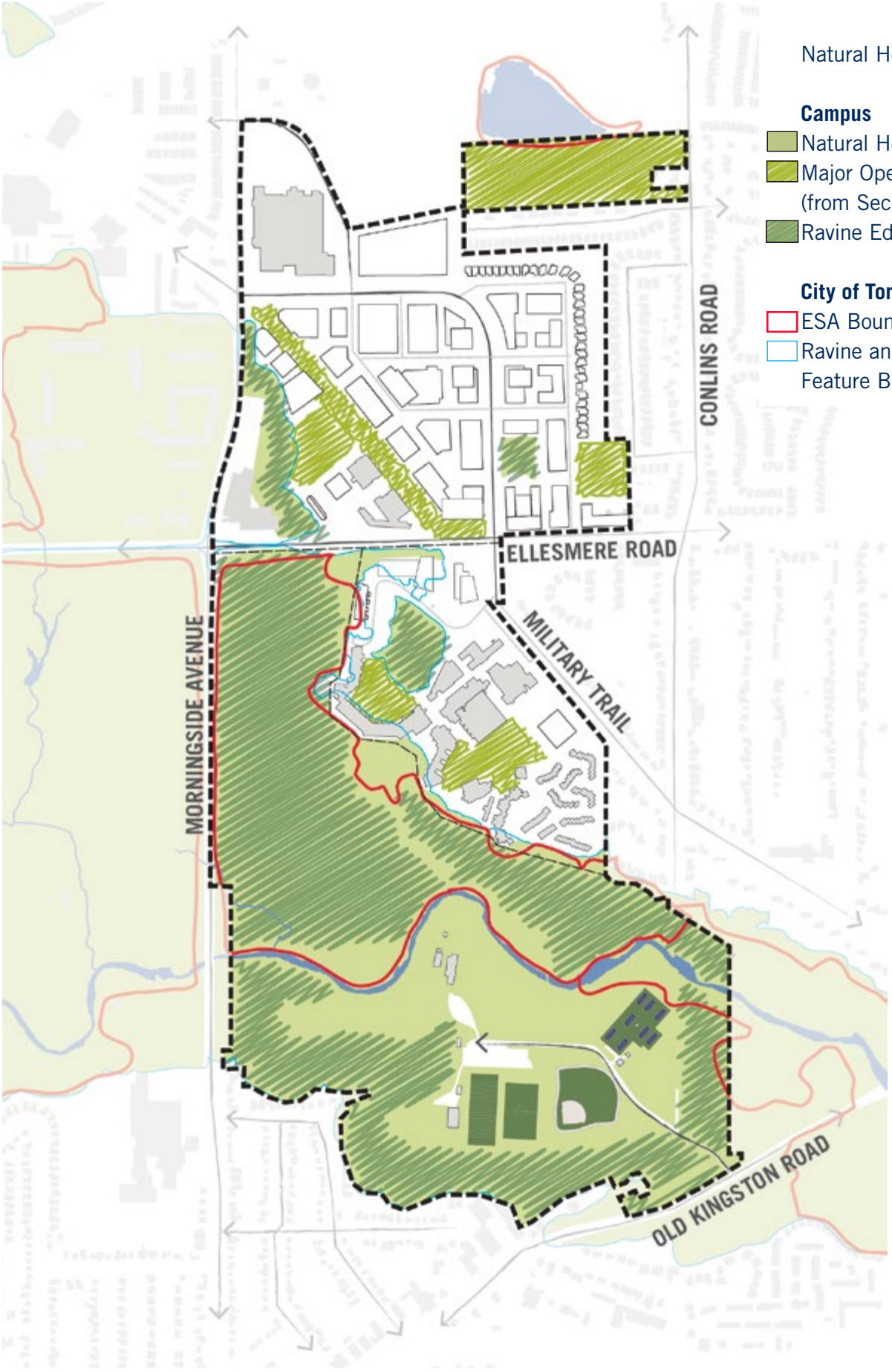
NATURAL HERITAGE SYSTEM

Natural heritage areas make up over 50% of the campus and is illustrated on the map on the facing page. These spaces include two woodlots, the ravine edge and lower valley lands (excluding areas used for sports and recreation fields, and parking lots). The areas within the Ravine Lands precinct connect directly to larger natural systems under City of Toronto and TRCA jurisdiction and create unique opportunities to engage and integrate with spaces beyond the campus.

While the designated natural heritage areas are primarily concentrated within the Ravine Lands, the importance of protecting, supporting, and enhancing these networks within the campus and throughout the vast systems beyond is foundational to the function and integrity of the systems. The support of these networks through new fine-grain connections and open spaces is critical to the overall performance of the landscape and public realm throughout the UTSC campus.

Guidelines

- Support and protect existing natural heritage systems through regenerative landscape management practices.
- Leverage existing living systems, such as linking habitat corridors from the Ravine Lands to the woodlot, to enhance ecosystem services of new open spaces.
- Create new opportunities to engage with and learn from the natural environment.
- Engage with jurisdictional partners to enhance and improve connections within and through the natural heritage systems.
- Explore opportunities for collaborating with Indigenous and community partners to provide land-based learning within natural heritage systems (refer to “Knowledge Sharing, Research and Learning Spaces” on page 20).
- Develop opportunities for educating community and students on responsible management and value of the natural heritage system to create a culture of stewardship within campus.
- Identify opportunities to mitigate and regenerate impacted soils to support natural heritage system health and function (refer to “Soils” on page 37).



Natural Heritage Map

Campus

- Natural Heritage System
- Major Open Spaces (from Secondary Plan)
- Ravine Edge / Woodlot Site

City of Toronto / TRCA

- ESA Boundary
- Ravine and Natural Feature Boundary

OPEN SPACE SYSTEM

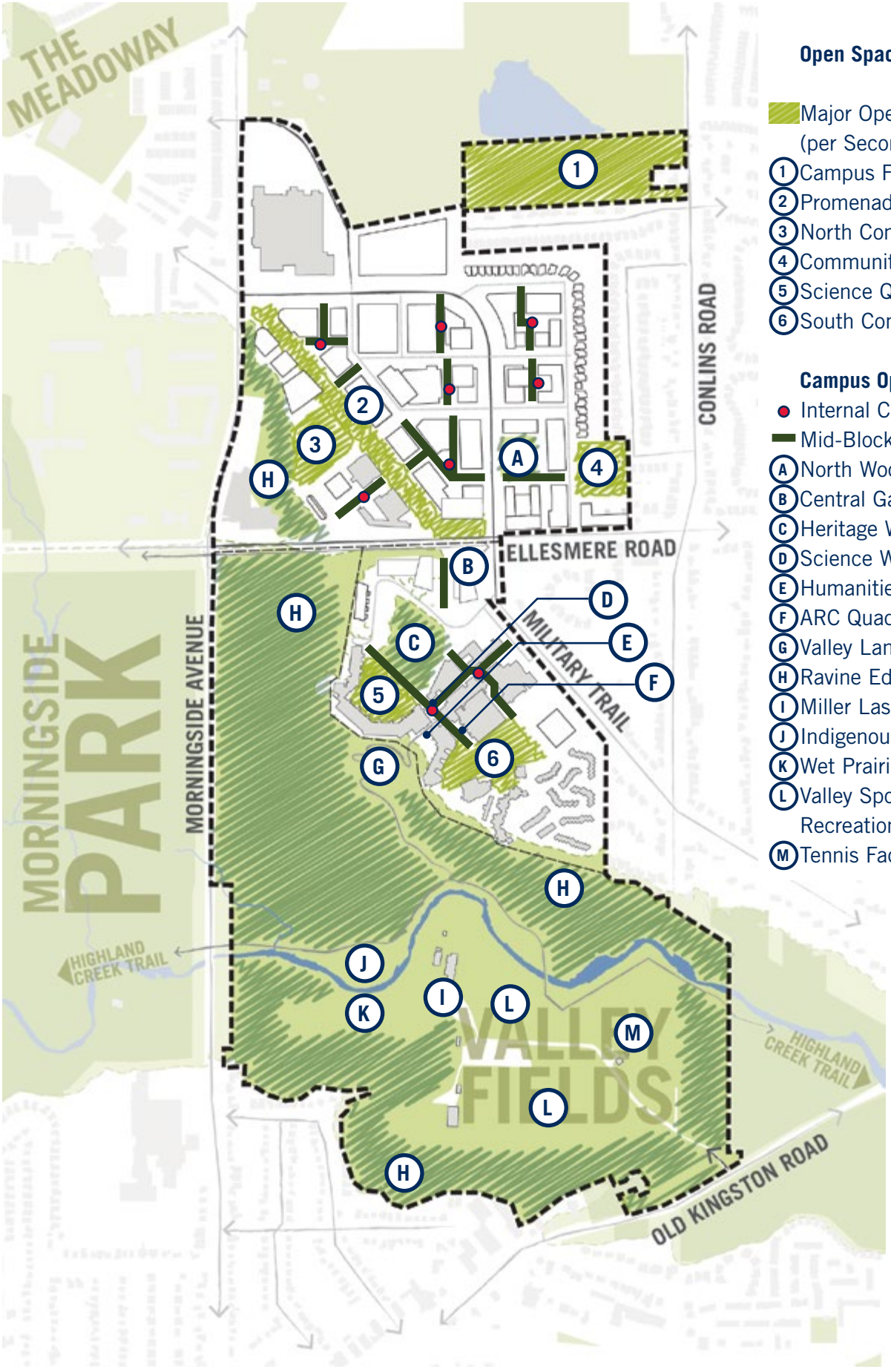
Beyond the natural heritage system, a series of major open spaces will be distributed across the campus (refer to map on facing page). These spaces will connect existing natural heritage networks and provide significant access to natural systems and opportunities for active and passive recreation throughout campus. New open spaces will balance significant habitat and ecological opportunities with the need to support campus life and learning.

The new spaces will provide opportunities for informal activities and spaces to stage large-scale events (such as convocation or community ceremony). New spaces complement existing active recreation spaces within the Ravine Lands and provide additional opportunities for students, faculty, and community to gather and socialize within the campus.

The integration and coordination of new built-form and the proposed open space network will be key to the overall performance of the Landscape and Public Realm Master Plan. Building designs should consider micro-climate conditions both at the interface of building and landscape and the larger impacts of the overall massing in various times of year on potential productive landscapes and an active year-round campus. Considerations for wind mitigation, light access, views within and between spaces and support for connected and resilient living systems between buildings should be central to all future building developments.

Guidelines

- Design built-form to support suitable micro-climate conditions for active and passive uses within adjacent open spaces.
- Design built-form to support productive landscapes, where required (refer to "Edible Campus" on page 21).
- Leverage flexible uses within open spaces.
- Create spaces that support natural systems and contribute to overall campus ecology.
- Use new open spaces to support natural heritage system (refer to "Natural Heritage System" on page 26).
- Create opportunities to program and use spaces in all seasons through consideration of micro-climate, succession, seasonal planting and year-round activation.
- Use large open space to mitigate storm water runoff and manage stormwater capacities for adjacent development blocks.
- Leverage open spaces to provide opportunities to collaborate with Indigenous and community partners through co-creation of land-based learning for internal and external campus communities (refer to "Knowledge Sharing, Research and Learning Spaces" on page 20).
- Identify opportunities for expanding stewardship and landscape management practices beyond natural heritage system into campus open spaces (refer to "Landscape Management" on page 62).



Open Space System Map

Major Open Space (per Secondary Plan)

1. Campus Farm
2. Promenade
3. North Common
4. Community Common
5. Science Quad
6. South Common

Campus Open Spaces

- Internal Courtyards
- Mid-Block Connections

A. North Woodlot
B. Central Gateway
C. Heritage Woodlot
D. Science Wing Plaza
E. Humanities Wing Plaza
F. ARC Quad
G. Valley Lands Trail
H. Ravine Edge
I. Miller Lash Gardens
J. Indigenous Landscape
K. Wet Prairie Restoration
L. Valley Sports and Recreation Fields
M. Tennis Facility

PLANTING

Planting within the campus landscapes and public realm is critical to the support of naturally occurring and adapted living systems on campus. Through an understanding of the natural and adapted ecologies of a site, planting can be used to contribute value to the function of the landscape and to support the ecological integrity and year-round use of the spaces by humans and animals. Within all campus landscapes, opportunities to use planting to support a self-regulating, complex living system should be prioritized to contribute to a more sustainable campus.

Adoption of suitable and supportive planting strategies can also support the development of a unique and resilient landscape character for UTSC. As part of the ongoing evolution and development of the campus, strategies should be explored through research and demonstration spaces to advance knowledge and understanding on the specific applications of each planting strategy and identify new approaches and applications for conditions outlined below. Performance of plant strategies should also be informed by opportunities to enhance habitat value, demonstrate applications of food foraging, and advance indigenous knowledge sharing in support of larger UTSC initiatives and values.

The map on the facing page shows the characterization of the landscape and public realm within the campus. Areas are identified as Natural Heritage/Regenerative Landscapes, Open Spaces, and Circulation Routes. For locations of Edible Campus sites, refer to “Edible Campus Map” on page 23.

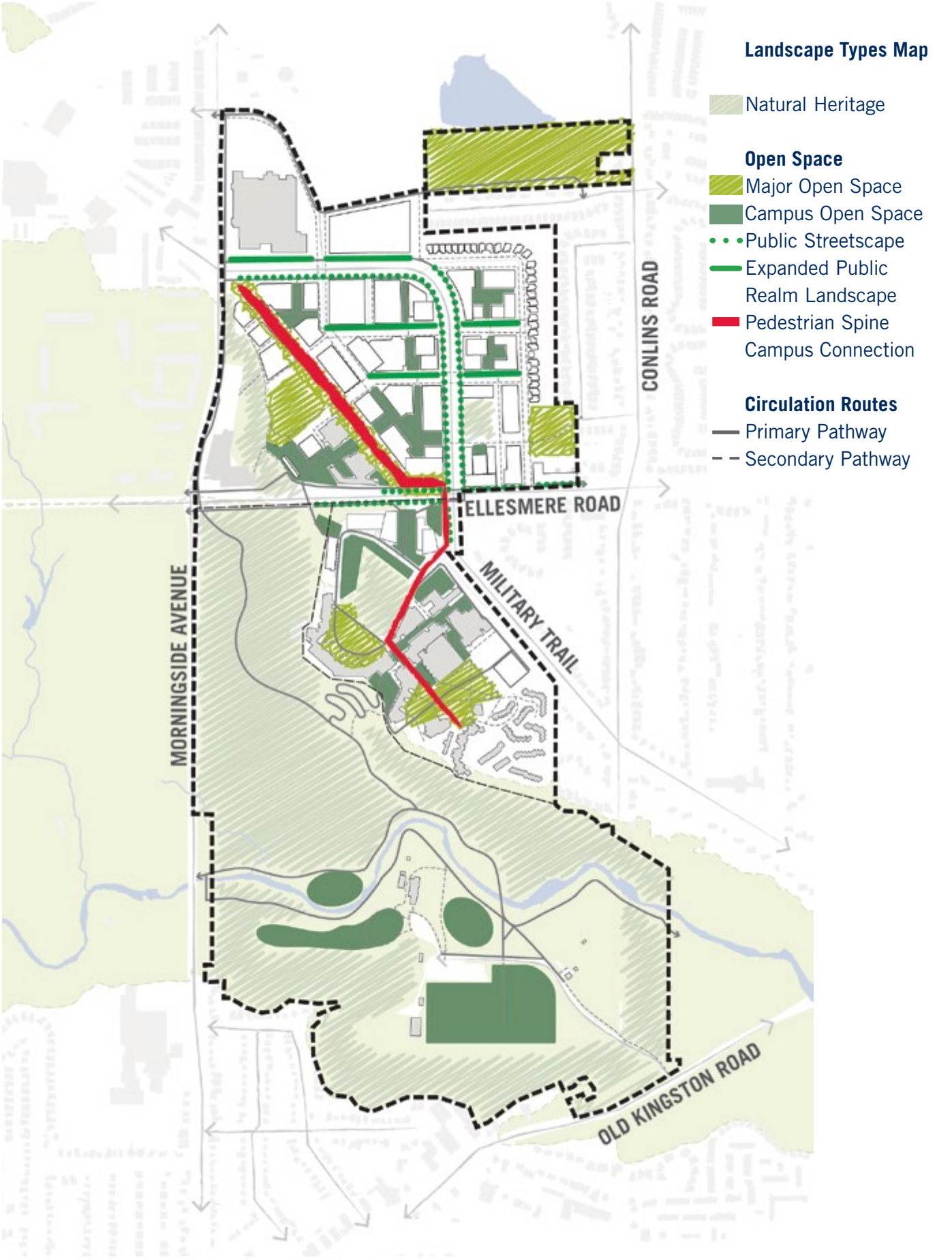
Within Natural Heritage and Regenerative Landscapes

Due to the complex and varied character of the campus natural heritage areas, these spaces require continued assessment, inventory, and identification of baseline conditions prior to the determination of any approach to planting or management. An understanding of the function and potential historic conditions should be used in conjunction with knowledge of the current flora and fauna within and reliant on the area’s habitat to inform approaches.

The natural areas of the campus exist in varying states of disturbance. In consideration for the ongoing impacts of climate change and potential limits in identifying historic ecologies of some sites, a regenerative landscape management approach can be implemented for the campus to achieve objectives in resilience and sustainability instead of seeking full restoration of natural area. Management practices and planting strategies should seek to address currently observed degenerative conditions within a site (e.g. human impacts such as litter and trampling, and ecological impacts such as invasive species establishment) and support an adapted approach to reinstate ecological function and value instead of restoring past conditions.

Planting palettes specific to regeneration of natural heritage landscapes prioritize the creation and support of complex ecologies and enhance the ecological integrity and function of the subject landscape. Plants should be selected to perform specific functions and in consideration for healthy mature vegetation already present within the site.

Given UTSC’s deep academic research and knowledge base with respect to the campus’ natural heritage and ecology, opportunities for engaging students, faculty and researchers in the assessment and development of planting strategies for these spaces should be integrated within any approach. Engagement on planting should be complimented by considerations for landscape management practices (refer to “Landscape Management” on page 62)


Landscape Types Map
Natural Heritage
Open Space
Major Open Space
Campus Open Space
Public Streetscape
Expanded Public Realm Landscape
Pedestrian Spine Campus Connection
Circulation Routes
Primary Pathway
Secondary Pathway
CONLINS ROAD
ELLESMERE ROAD
MILITARY TRAIL
MORNINGSIDE AVENUE
OLD KINGSTON ROAD

Examples of Ecological Analogs:

Miyawaki (Tiny) Forests

Designed as densely-planted biodiverse gardens, Miyawaki (or Tiny) Forests encourage ecological competition and nutrient sharing to create a complex, interconnected living system that aims to achieve climax forest conditions in significantly reduced time frames. The compact plantings self-regulate, contribute significantly to carbon capture, and regenerate disturbed areas while also enhancing the habitat value of the landscape. Designed based on using species of natural potential vegetation (or species that would likely naturally occur) for a specific site, the plantings can help to re-vegetate disturbed areas of various sizes and conditions. Consider their use for constrained at-grade conditions.

Miyawaki (Tiny) Forest in Almere, ND

Alvar and Cliff Ecologies

In exposed sites, where soil depth and below grade water infiltration are limited (i.e. on-slab constructions), plants that typically exist within Alvar ecologies may thrive. Alvar ecologies exist primarily on limestone plains where little to no soil is available for rooting and nutrients. Plants within alvar ecologies are adapted to grow in the reduced depths and survive long periods of drought. Alvar ecologies are typically adapted to green roof and xeriscape applications, but are suitable for other applications.


Alvar ecosystem in Bruce Peninsula

Savannah Ecologies

Savannah analogs are highly suited to large open landscape areas. Consider their application when designing spaces such as the North Common or upland spaces within the Ravine Lands. Savannahs typically consist of mixed woodland and grassland ecosystems. Savannahs are sometimes managed through controlled burns to minimize invasive species growth in the open grasslands and regenerate soil.


High Park Black Oak Savannah

Using Ecological Analogs

Where it serves the overall performance and character of a landscape to extend the character, function and value of the natural heritage of campus into areas of new development, planting strategies should consider ecological analogs. Analogs are constructed landscapes that use the plant species, structure and character of naturally occurring ecologies to enhance the ecological integrity and function of disturbed landscapes. Analogs should be considered based on site conditions and desired character of a specific site and not applied as a broad measure. Within UTSC, sites that directly abut the natural heritage system (such as the North Common, Science Wing Quad, and sites within the Ravine Lands) should prioritize the use of ecological analogs. Additionally, where opportunities exist, it may be suitable to combine several analogs to address complex or diverse conditions.

On the previous page are some examples of analogs used within landscape design and regenerative landscape management practices. These are provided as examples and points of departure for the development of strategies specific and suitable to UTSC and should not be considered the only viable options.

Within Open Spaces and Development Sites

Within the campus, formal and informal open spaces necessitate unique approaches to planting design. The landscape and public realm are more than the plants or program that structure them. Approaches that maximize planting areas and reduce built or paved surfaces will enhance the overall ecological integrity and integration of the landscapes and built-form to create a cohesive and supportive campus ecology. Opportunities to extend adjacent natural systems, such as the ravine landscape, and environmental functions into campus are encouraged for both landscape and building design, including sympathetic design of green roofs using analogue strategies from exposed and shallow-growing ecologies within adjacent natural spaces. All future projects should consider how to connect fragmented and orphaned spaces, create habitat corridors and promote non-human use of campus spaces.

Within major open spaces, clustering trees with under-storey planting in open planters maximizes resilience of the planted areas. As such, single trees planted in an urban condition with grates and surrounded by paving, should be avoided to promote an overall healthier condition for planting throughout campus. Using native and adapted species for lawns and meadow areas within major open spaces should be considered to reduce demand for irrigation and mowing and demonstrate sustainable alternatives to conventional campus open space typologies.

Throughout the campus, open space and public realm design should prioritize the creation of a resilient landscape condition. Built-form should be modified to establish and support long-term optimal growing conditions for landscapes, including considerations for light access, wind mitigation and microclimate. To support a healthy soil condition, in-ground planting and continuous volumes of uncompacted soil are preferred. Where spaces are located above a structure, the use of raised open planters should be explored to support connected landscape networks and maximize storm water capture throughout campus. Refer to “Soils” on page 37 for additional guidance on the composition and function of soils within the landscape and public realm. Refer to “Stormwater Management” on page 38 for further guidance on the use of planting in open spaces to support infrastructure throughout campus.

Along Circulation Routes

Planting design along corridors and circulation routes should support safe movement of humans and animals between spaces. Planting within public property and along public rights-of-way will conform to city standards, but may offer opportunities to provide innovative applications

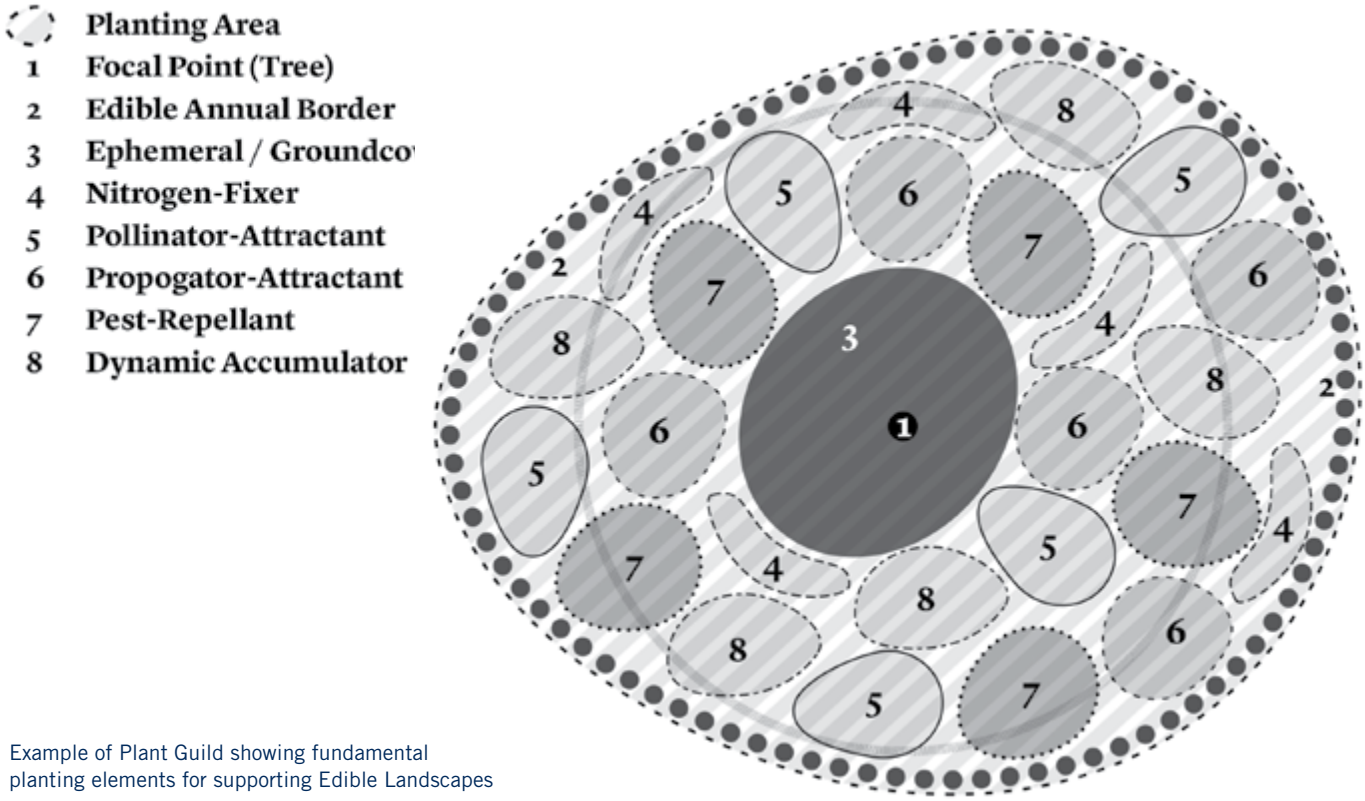
of standards or pilot new details established through ongoing collaboration with municipal partners. Within the campus, continuous soil volumes and clustered plantings within open beds can be used to support layered and diverse planting designs as well as provide opportunities for the integration of green infrastructures and stormwater management from adjacent hardscape and built-form (refer to "Stormwater Management" on page 38 for further guidance).

Within Edible Landscapes

Edible landscapes exist throughout campus in support of the Edible Campus initiative (refer to page 21). Within edible landscapes, planting palettes based on guilds and other naturally occurring ecological analogs and plant communities help to support and enrich the regeneration of the productive soils and contribute to a self-regulating living system (refer to "Soils" on page 37). These efforts also contribute to the implementation of permaculture principles and practices within campus.

Guilds are constructed ecologies or communities that rely on specific plants and organisms (fungi, bacteria, animals, insects, etc.) to fulfil defined functions or roles within a Living System and contribute to the overall operation of the community, resulting in improved yields for the focal plant (typically a fruit tree) within the community.

In support of universal accessibility throughout campus, productive landscapes within the Edible Campus network should integrate raised planters and plants that can be cultivated by individuals experiencing disability. Spaces should consider inclusion of individuals with visible and invisible disabilities and design considerations may include such measures as space clear of any path of travel to position a mobility device at a planter, stable surfacing adjacent to planting beds or identification labels that integrate clear text or Braille. Further considerations may be identified through consultation with user groups and the campus community during the design process for each landscape or open space.



Example of Plant Guild showing fundamental planting elements for supporting Edible Landscapes

Guidelines

- Develop planting palettes for all capital projects that actively contribute to the existing and future natural and living systems of the campus through succession and ecological integrity.
- Prioritize use of species that support ecological horticulture over ornamental expression and are naturally occurring, adapted or provide critical value to the overall function of the landscape (i.e. edible, nitrogen-fixing, habitat, etc.).
- Develop planting palettes based adapted ecological analogues, site context, guilds, or desired ecological function to enhance the overall function and reduce high-intensity maintenance of campus landscapes.
- Explore opportunities to develop sports field management practices and planting strategies that align with overall campus strategies of regenerative landscape management and low-intensity maintenance.
- Consider opportunities to use naturally occurring plant communities and ecosystems as the basis for developing planting palettes for campus landscapes and public realm.
- Explore opportunities for introducing analog ecologies as demonstrations within existing campus landscape to enhance ecological integrity of campus landscapes.
- Plant palettes should be created to provide complimentary ecological benefits (habitat, seasonal use, soil regeneration) to support the overall ecological integrity of the campus landscape.
- In areas of campus where highly ornamental character is desirable (e.g. Miller Lash House), planting palettes should provide additional ecological benefits and overall contribution to a regenerative landscape in additional to ornamental value; strictly ornamental plants should be avoided.
- Prioritize planting in clusters and consolidated open planting beds to promote development of plant communities.
- Explore opportunities to integrate green infrastructure and storm water infiltration within planting beds adjacent to hardscape and new development.
- Integrate habitat supportive elements and planting within consolidated planting areas to promote wildlife connection and movement between natural heritage areas.
- Develop planting palettes for all capital projects that actively contribute to the existing and future natural and living systems of the campus through succession and ecological integrity.
- Planting should support safe movement within and use of campus open spaces, including conformance with best practices for campus design, such as CPTED.
- Opportunities for planting beds designed for accessible use should be provided in all areas of the campus and should consider opportunities to integrate programming and productive landscapes beyond typical applications.

Campus community harvesting food from the roof garden on IC2

SOILS

Soils are critical to the overall health and function of the landscape. Through continued investigation and evaluation of the diverse soils present within the campus, the University can be a leader in the development of performance standards, management practices and restoration protocols in support of permaculture practices to advance the understanding of the role of soils in impacted, urban, and natural environments. The campus can serve as a trial ground for improving the understanding of biotic and abiotic factors affecting soils and their impacts on overall environmental health and function. The University is encouraged to expand on existing academic, community, governmental and professional partnerships to contribute to the growing body of research related to this subject.

In support of Edible Campus initiatives and permaculture practices, consider all soils as part of a living system within the landscape and specific to their site. Avoid the use of chemicals and additives in all campus landscapes to minimize potential for contamination of food sources. Plant selection should consider existing soil conditions and avoid requirements for imported growing media and soil amendments.

Soil regeneration is an essential aspect for all self-regulating and productive landscapes. To this end, campus landscapes and planting palettes should be designed to support dormant and regenerative cycles and integrate the use of plant guilds to provide diverse nutrient and ecosystem functions and reduce reliance on chemical fertilizers and supplements. UTSC is encouraged to explore opportunities for developing partnerships with service providers (including internal partners) to process organic waste produced within campus into compost and other components for soil restoration to develop closed loop waste management strategies.

Guidelines

- All landscape projects should seek to exceed the minimum soil requirements as defined by the City of Toronto Green Development Standard.
- Develop specifications and performance standards for the use and stewardship of living soil to support ecological function throughout diverse campus landscapes, including in support of Edible Campus initiatives (refer to “Edible Campus” on page 21).
- Expand research and teaching to inform ongoing improvements and restoration of campus soils.
- Establish a soil health, monitoring and management process to inform refinements and improvements in future landscape projects.
- Develop a composting and soil regeneration program that integrates organic waste materials from the campus including food services, organic collection, and plant material.

Example of living soil showing organic matter, insects and diversity of particles sizes that support soil regeneration

STORMWATER MANAGEMENT

As a leader in innovation and integration of sustainable technologies and best practices in built form, UTSC is encouraged to expand its reach by investing in opportunities to model and advance strategies for green infrastructure and storm water management in a campus context and mitigating impacts on the sensitive ecologies of the Ravine Lands.

As the built form intensifies, campus landscapes and public realm will need to play a more significant role in the mitigation of stormwater run-off. In support of municipal guidelines on the management of stormwater quality and quantity, large campus open spaces provide the opportunity to incorporate infiltration galleries, permeable surfaces and green infrastructure elements.

Existing infrastructure should be evaluated in conjunction with new development and open space design to identify opportunities to upgrade, retrofit and redesign storm water management systems. Explore opportunities to integrate low-impact development practices within new and existing infrastructure systems as part of state of good repair and capital improvement projects.

Adjacent to natural heritage areas, especially within the South Campus and Ravine Lands precincts, opportunities to introduce stormwater mitigation and infiltration facilities can reduce impacts on slopes by reducing peak volumes, delaying or dispersing run-off and the creation of more stable planted edges with improved root integrity to reduce the impacts of erosion. Bioswales and other linear green infrastructures along roadways and paths provide similar erosion mitigation and also provide buffering between chemicals, such as salt or vehicle fluids, and sensitive ecologies of the natural areas that are washed into adjacent landscapes during heavy rain or snow-melt events.

Where possible, precinct-based strategies for stormwater management are encouraged. This may include exploring opportunities to reuse grey water within the campus landscape to promote closed-loop systems and reduce impacts of intensification on downstream infrastructure.

Guidelines

- Include green infrastructure elements as part of all public realm projects. These may include rain gardens, bioswales, bioretention/ infiltration and large non-compacted soil volume as part of planting areas.

- Explore opportunities for integrating stormwater management systems in private streets and spaces to support and augment adjacent development site initiatives and reduce reliance on conventional stormwater collection systems.

- Seek to exceed minimum stormwater management targets as defined by the City of Toronto Green Development Standard.

- Explore precinct-based or campus-wide opportunities to minimize reliance on below-grade infrastructure for storm water run-off.

- Identify opportunities in natural heritage sites to enhance storm water retention and ecological function through planting strategies and micro-topography to delay peak flows into existing watersheds (refer to “Planting” on page 30 and “Landscape Management” on page 62).

Integrated curb cuts direct runoff from street into adjacent planting

Integrated seating and social space within infiltration planting area

Bioswale buffer along pathway

Example of planted boulevard with Green Infrastructure

2.4 PLACE AND MOVEMENT

The campus is composed of a series of destinations (nodes) and connections (corridors) that structure human movement and contribute to the sense of place within the campus. Improvements to this network will support the pedestrian experience, signal pedestrian priority within mixed circulation zones, and enhance the sequence of movement throughout the campus. As UTSC expands and transit is improved, the campus will connect more completely with the surrounding communities. It is expected this will result in reduced dependence on personal vehicles, and facilitate the conversion of surface parking lots and centralized pick-up / drop-off (PUDO) facilities into other uses. These spaces could be reconceived to include pedestrian infrastructure, open spaces and new development sites.

The distribution of smaller accessible PUDO locations throughout the campus is recommended to provide more suitable and convenient access to various campus amenities. Accessible parking will continue to be identified in all precincts to improve access to campus facilities and reduce barriers to the University.

An enhanced public realm network will provide opportunities to engage with landscape in new ways and improve connections throughout campus. Enhancements to pedestrian networks will also create safer connections for active transportation (cycling, walking, etc.) and expand connections to nearby recreational trails.

Guiding Principles

- Define the campus through signature spaces, focal points and connected experiences.
- Provide for a safe, comfortable and legible environment during all times of day and all seasons.
- Create an accessible campus for people of all ages and abilities.

Strategies

1. Create sequential experiences that contribute to an over-arching campus character.
2. Create unique spaces to share the diverse human and natural histories and narratives of UTSC and surrounding areas on site (through research, public art, installations, events, and dialogues on diversity, equity, and inclusion).
3. Integrate opportunities to rename and identify spaces throughout campus, including consideration of Indigenous languages and meanings.

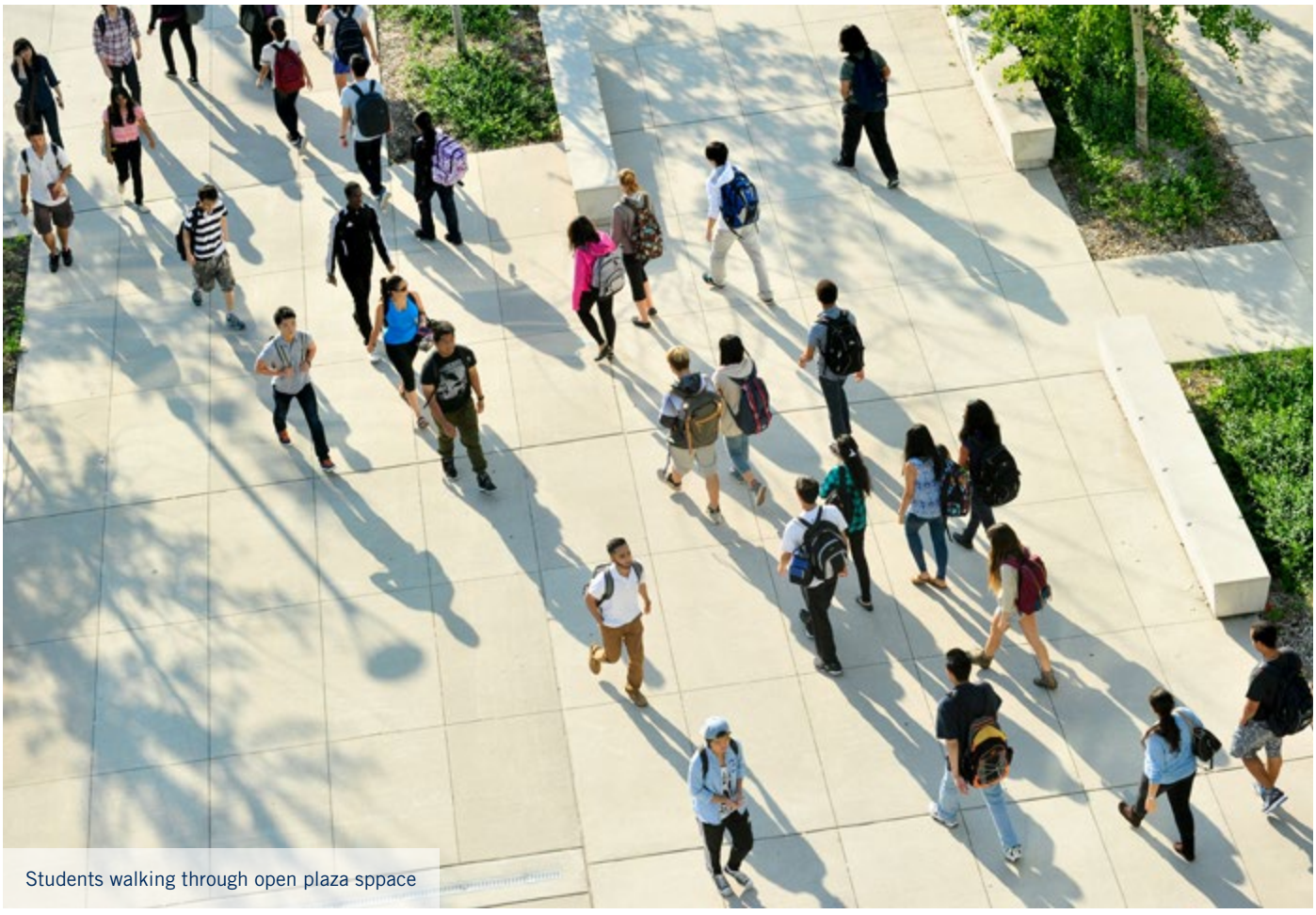
4. Improve movement corridors through the consideration of "complete journeys" to ensure consistent experiences across the routes including consistent levels of service across the system. Include consideration for consistent, convenient, and secure infrastructure and facilities to support active transportation within and to campus.

5. Ensure universal accessibility continues to be integrated into all new campus spaces and experiences as a primary objective to avoid the need for post-rationalized design solutions.

6. Integrate opportunities for active mobility and recreation throughout campus

7. Prioritize pedestrians and cyclists within core circulation.

8. Develop circulation networks to support and enhance natural heritage systems throughout campus.



Students walking through open plaza sppace

PEDESTRIAN SPINE

The Pedestrian Spine links several existing and future open spaces and pedestrian circulation routes to create a unifying corridor through the North and South Campus precincts. As identified in the Campus Master Plan and Secondary Plan, the Pedestrian Spine leverages the realignment of Military Trail from Ellesmere Road to Morningside Avenue to extend the character and function of a series of linked spaces in the South Campus through the North Campus using the decommissioned vehicular right-of-way. The new continuous corridor will provide safe and accessible pedestrian and cycling connections from the Toronto Pan-Am Sports Centre to the future South Common with connections to Ravine Lands. The route re-imagines the pedestrian experience throughout the entire campus.

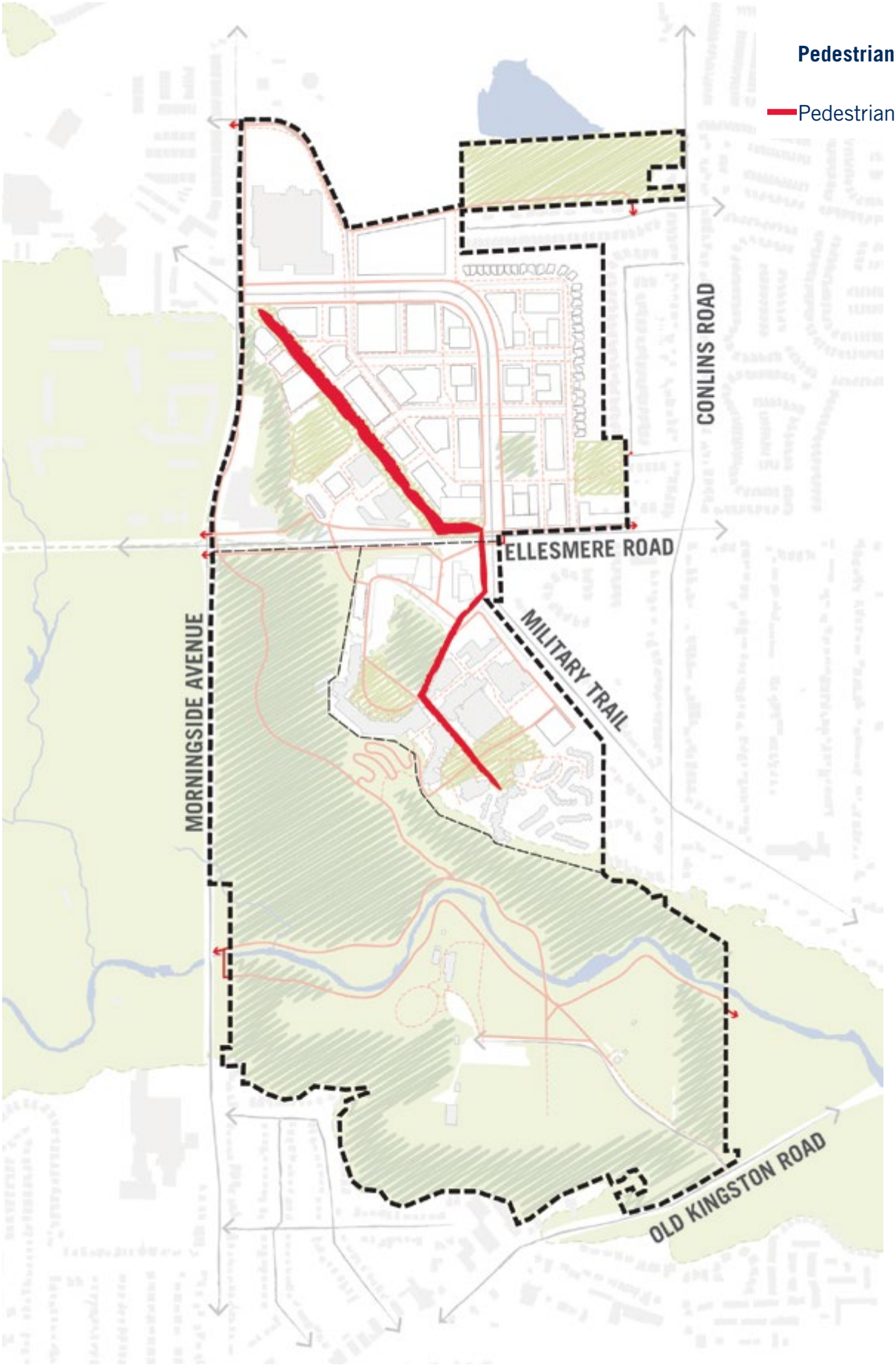
Within the North Campus precinct, the Pedestrian Spine follows the new North Promenade to a realigned intersection of Ellesmere and Military Trail. At the intersection the Pedestrian Spine jogs to accommodate potential connections both at-grade and below grade to support safe and flexible crossings at the busy nexus. New proposed open spaces at the intersection provide placemaking opportunities and generous plazas to engage and activate the landmark buildings at the campus gateway.

The south segment of the Pedestrian Spine connects along Military Trail to existing mixed traffic routes of Rock Walk and Scholars Way to link with the new South Common and campus housing at the south. The spine allows for vehicular access but is recognizable as a pedestrian-priority space.

The Valley Lands Trail provides an opportunity to link the Pedestrian Spine to the Ravine Lands precinct and existing and proposed recreational trails within the natural areas along Highland Creek. Further discussion of the pedestrian and cycling circulation throughout all precincts is included in the section on “Pedestrian Circulation” on page 52, and “Cycling Infrastructure” on page 56.

Guidelines

- Pedstrian priority and universal accessibility should be integrated into all aspects of the circulation routes and adjacent spaces.
- Access for servicing vehicles should be maintained, but limited to off-peak hours where possible, within the campus to minimize conflicts with pedestrians.
- Access to designated accessible parking and drop off locations for buildings adjacent to the Pedestrian Spine should be maintained, but designed to minimize conflicts with pedestrians.
- Balance spaces for activation and public use with opportunities to provide green infrastructure and enhance campus-wide planting strategies.
- Fixed furnishings and structures should be sited at the periphery of the corridor to ensure clear access and maximize flexible use and programming of the entire space.


Pedestrian Spine Map
Pedestrian Spine
CONLINS ROAD
ELLESMERE ROAD
MILITARY TRAIL
MORNINGSIDE AVENUE
OLD KINGSTON ROAD

GREEN LINKS AND GREEN ROOFS

Existing and proposed internal campus streets and mid-block connections link the larger elements of the public realm at-grade. A network of green roofs planted to support biodiversity and pollinator species will provide a secondary set of linkages for flying animals and insects to travel through the campus as they are developed. The complex and inter-woven nature of the green links at- and above-grade will create a network of spaces that are more resilient and provide a higher likelihood of success for campus-wide landscape strategies.

Green Links will enhance the porosity and accessibility of the campus circulation network and extend ecological and sustainable landscape opportunities deep within campus blocks and public realm networks. Diverse approaches (i.e. landscape buffers, layered planting, public art and site furnishings with integrated habitat opportunities, elevated boardwalks) may be explored to enhance the ecological function within constrained and generous spaces, creating opportunities for extending the ecological character and function of the natural heritage system through the campus as a form of "Ravine Echo" ecological analog (refer to "Planting" on page 30 for additional examples). The suitability of these features will be considered based on adjacent program opportunities and connections within the overall network to support precinct- and campus-wide strategies. These strategies may include using planted buffers along University Streets and Laneways as green infrastructure to mitigate stormwater runoff.

Green roofs are required as part of all new developments through application of the Toronto Green Development Standards and Green Roof By-law and therefore will be concentrated in the North Campus precinct. Efforts to integrate principles of biodiverse green roof design, including varying growing medium depth, integration of habitat and water within roofscapes and support for pollinator and productive planting on roofs should be supported to enhance the overall ecological value of the campus landscape.

Guidelines

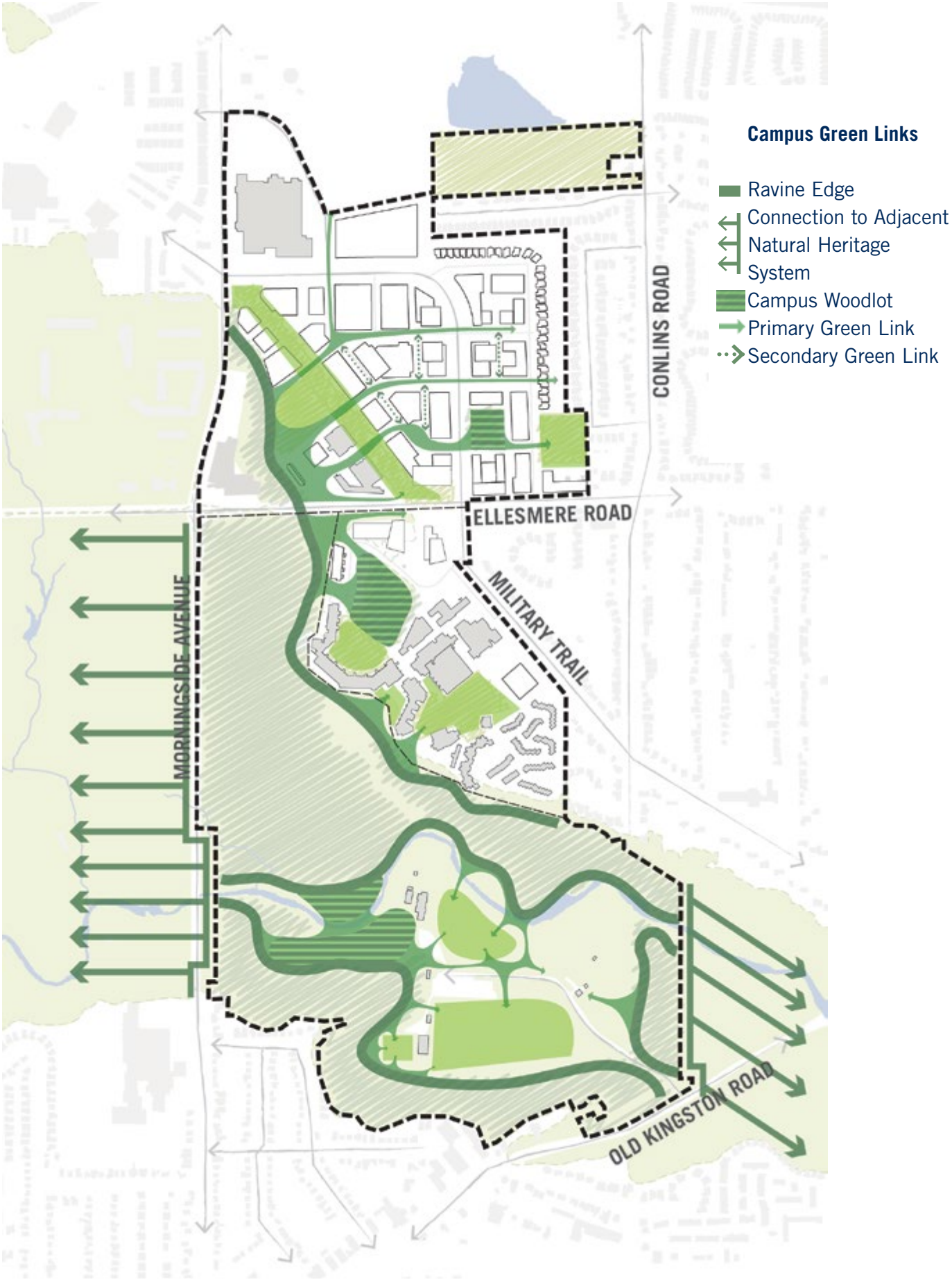
- Planting and materials within the Green Links should consider adjacent sites to create a continuous character and support campus-wide initiatives.

- Strategically locate hardscape within Green Links to allow for accessible movement while providing maximum area for stormwater infiltration and robust planting areas that support multiple layers of plant material.

- New development should consider providing green roofs within range of at-grade planting and adjacent green roofs to enhance the above-grade connections for insects and birds to promote pollination and enhance environmental resilience throughout the campus.

- Planting within the public realm should support above-grade connections through the use of trees and, where appropriate, climbing plants along building façades to facilitate vertical movement of animals and insects within the landscape.

- Public art, site features, and furnishings that contribute to habitat value should be considered, where appropriate, within Green Links and on green roofs to enhance ecological function of spaces.


Campus Green Links
Ravine Edge
Connection to Adjacent Natural Heritage System
Campus Woodlot
Primary Green Link
Secondary Green Link
CONLINS ROAD
ELLESMERE ROAD
MILITARY TRAIL
MORNINGSIDE AVENUE
OLD KINGSTON ROAD

VIEWS

The original campus structures were constructed to actively control views from the open spaces of the South Campus. Existing Heritage Views are specific to views of or created by the built form of the Humanities Wing and Science Wing structures. The Valley Lands Trail head takes advantage of one these views and represents a significant feature of the campus and its relationship to the ravine. These views are not part of an official register but represent significant features to the structure and history of the campus development.

Other views to the Ravine have been significantly limited by the density of planting at the ravine edge. With the exception of the Heritage View at the Valley Lands Trail, the only existing significant view of the Ravine and beyond is from the north side of Ellesmere Road near Indigenous House. Through the development of new bridges and access points along the ravine edge new opportunities to leverage similar and complementary views into the ravine and along the Highland Creek corridor will enhance the visual connection of the campus to the Ravine Lands.

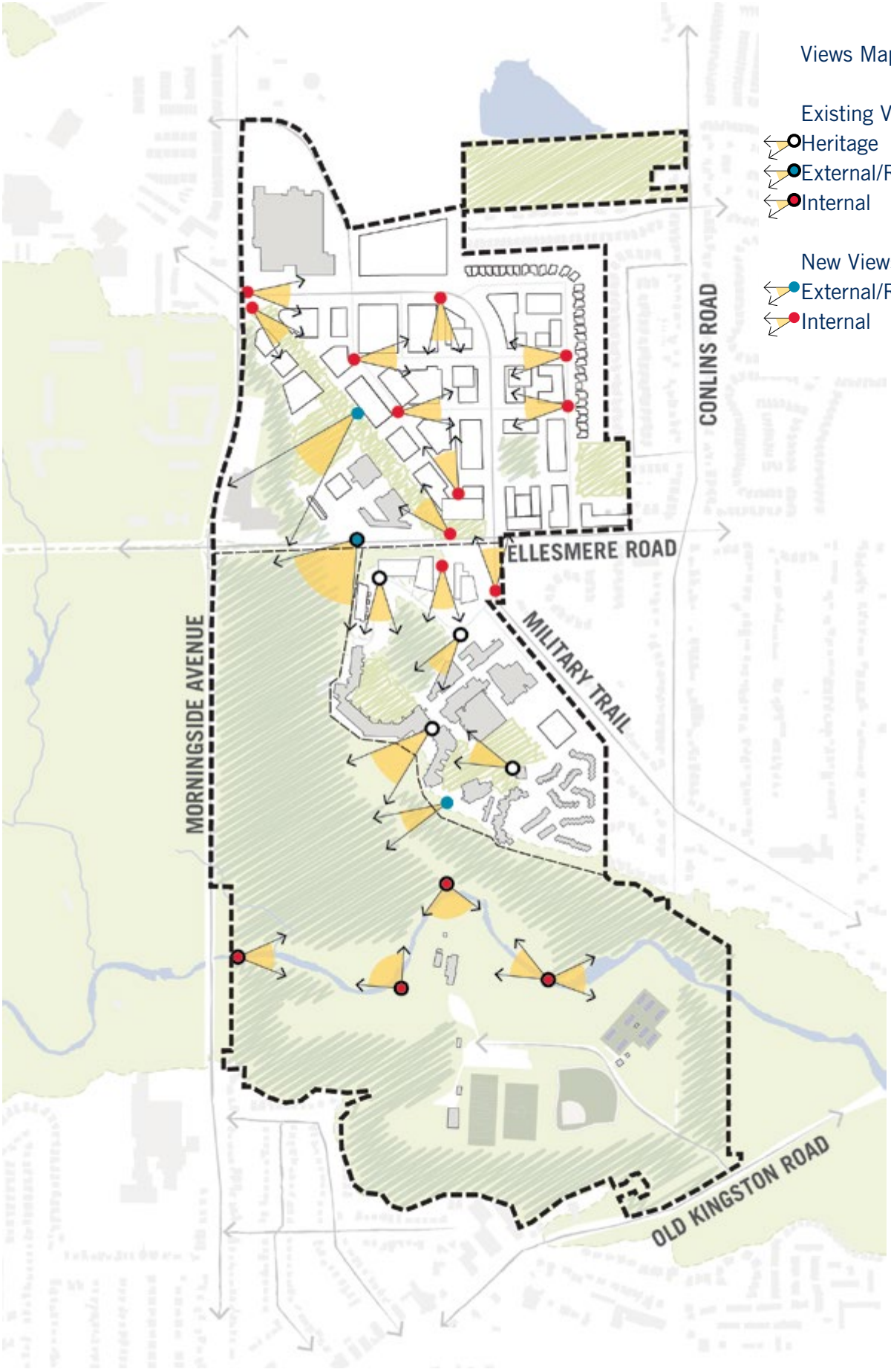
Existing Internal Views primarily occur within the Ravine Lands along Highland Creek. These views are framed and constrained by the topography of the landscape, but provide unique vistas that support the usage of the Ravine Lands as a refuge from the development of the surrounding areas. New internal views will leverage visual connections within the intensification of the North Campus. New view corridors will be created to frame emerging landscape spaces, such as long views down the Promenade and internal views within mid-block connections. Internal views provide opportunities to visually connect spaces and create opportunities for passive wayfinding in the changing built form of the future campus.

Guidelines

- Where possible, carefully and intentionally create views to natural features from existing and proposed open spaces that are currently obstructed by overgrown vegetation (refer to “Landscape Management” on page 62).

- Leverage views within and between new and existing open spaces to facilitate intuitive wayfinding throughout campus.

- Heritage views should be preserved and enhanced where possible.


Views Map
Existing Views
Heritage
External/Ravine
Internal
New Views
External/Ravine
Internal
CONLINS ROAD
ELLESMERE ROAD
MILITARY TRAIL
MORNINGSIDE AVENUE
OLD KINGSTON ROAD

ACTIVATED EDGES AND NODES

Plazas, courtyards and informal gathering spaces provide places to experience the life of campus. Spaces framed by buildings can employ Activated Edges to enhance visual connections between exterior open space networks and activities within buildings. Prioritizing Activated Edges along Major Travel Paths within the campus supports the experience of a safe and active campus. Within UTSC, Activated Edges can also be used to concentrate dynamic uses along these key frontages and enhance the landscape character and campus public realm experience for pedestrians.

Community Destinations:
The UTSC campus includes several facilities and spaces that serve as attractors for the community beyond the campus. These Community Destinations benefit from an active public realm which can contribute to passive wayfinding and more intuitive navigation of the campus by visitors. Many of UTSC's Community Destinations are located on the Major Travel Paths and can support the overall legibility of the campus circulation as terminal points and major nodes within the network.

Nodes:
Nodes are key destinations or intersections within an open space network (characterized by both informal and formal spaces) and can provide diverse functions to support the experience and activation of the public realm. Nodes can be defined on a site basis to contribute to the overall organization and legibility of a circulation strategy for an area.

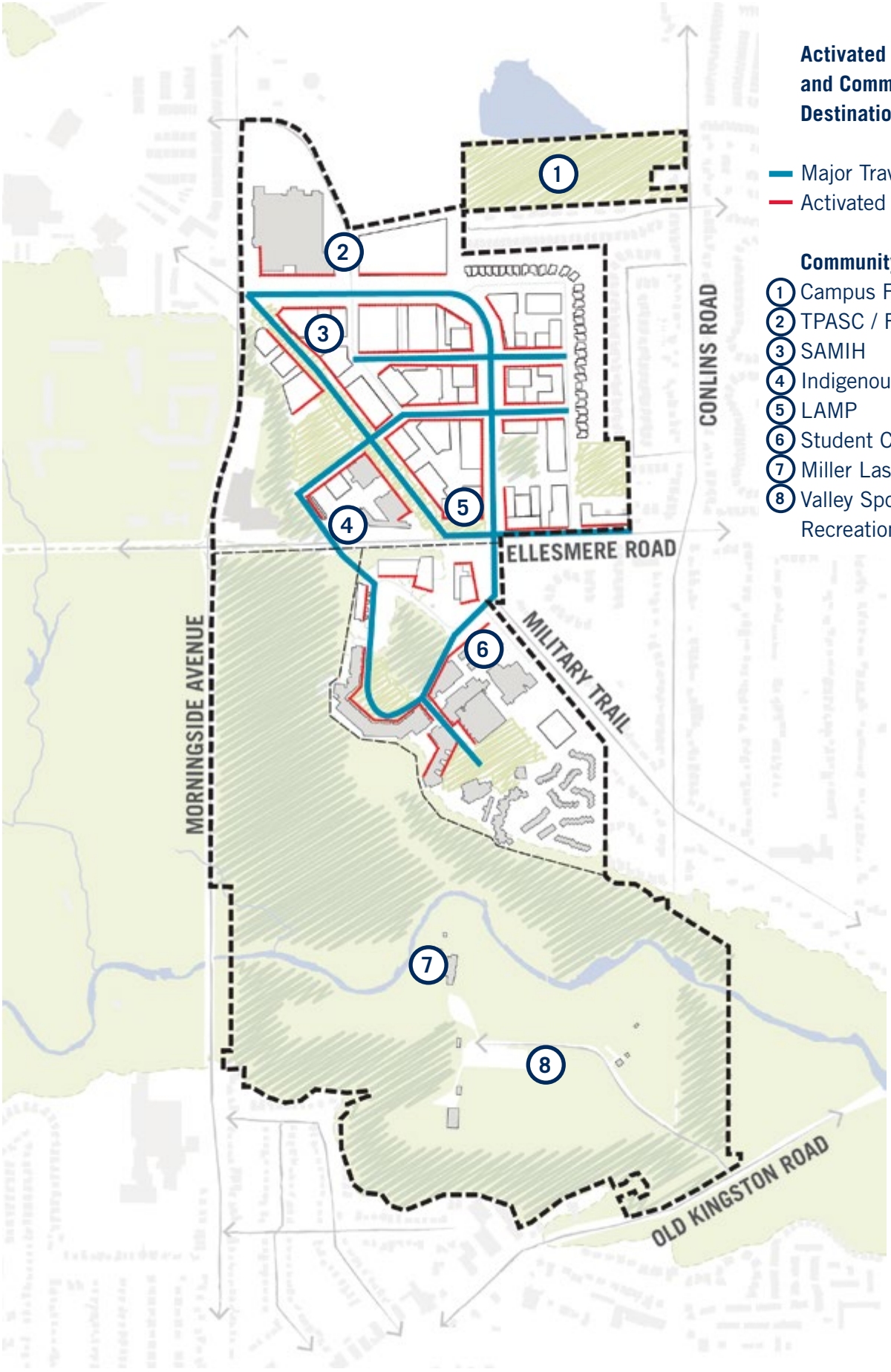
Nodes within informal spaces can serve as meeting points or transition spaces which enhance the passive navigation and wayfinding of a network. Nodes within formal spaces provide opportunities to program small events and engage with adjacent sites and Activated Edges to mark terminal destinations for journeys within a network.

Nodes also exist within large open spaces and do not need to be defined by buildings. Similar to spaces within the built environment, these Nodes may exist as intersections along pathways, key view points or markers for passive navigation of a larger network of spaces, as program areas, or as terminal destinations.

Activated Edges: Public Realm and At-Grade Integration
All new buildings, where possible, should include active and animated ground floors adjacent to streets and public spaces. The design of buildings as publicly-accessible or activated spaces adjacent to Major Travel Paths should be encouraged to enhance the seamless experience of the public realm with the built-form of campus. Uses at grade that support this integration may include retail, teaching spaces or community assets that positively contribute to the character and life of the public realm.

Extended operational hours within Activated Edges also contribute to the passive surveillance or "eyes on the street" for adjacent open spaces, supporting a safer experience for users traveling through and within these spaces. Opportunities for teaching spaces that open on internal courtyards and plazas are encouraged to expand learning outside, and to engage the public realm in the exchange of ideas.

In support of an active public realm, the use of long stretches of blank or uninterrupted solid walls should be avoided, especially along key pedestrian connections (refer to "Pedestrian Circulation" on page 52). If blank or solid walls are required adjacent to pedestrian circulation routes and open spaces, the use of planting should be considered to buffer and mitigate scale impacts and provide visual interest. By strategically locating building entrances near each other, a continuous and legible campus circulation network for navigating seamlessly through buildings, and exterior spaces, particularly in winter and inclement weather, can be supported.



Activated Edges and Community Destinations Map

- Major Travel Paths
- Activated Edges

Community Destinations

1. Campus Farm
2. TPASC / Fieldhouse
3. SAMIH
4. Indigenous House
5. LAMP
6. Student Centre
7. Miller Lash House
8. Valley Sports and Recreation Fields

Guidelines

- Where development blocks are implemented as multi-phase projects, ensure a comprehensive public realm concept plan (including identification of Activated Edges and Nodes) is prepared prior to the detailed design of any single building to ensure a coordinated implementation of the open space network campus-wide.
- Activated Edges should balance planting and accessible pedestrian spaces to enhance the character and ecological function of the adjoining pedestrian networks.
- Nodes between buildings should support a consistent character through coordinated material language that is not specific to any single building, development, or program.
- Ensure the location of Activated Edges and Nodes within a development site supports mid-block connections and the overall open space network and circulation (refer to "Open Space System" on page 28)
- Encourage active uses at-grade for new developments and the renovation of existing structures to support a safe and engaging public realm throughout campus.
- Locate building entrances to create a connected and continuous pedestrian network through the public realm.
- Where appropriate, design Activated Edges and Nodes to support opportunities for land-based education, research and community engagement (refer to "Knowledge Sharing, Research and Learning Spaces" on page 20)
- Avoid extended blank building frontages without entrances or visual transparency along major pedestrian routes.
- Where blank or solid walls are required adjacent to pedestrian circulation routes and open spaces, use landscape and planting to buffer and mitigate scale impacts.
- Consider opportunities to integrate complementary flexible spaces adjacent to buildings at grade and as part of roofscapes to integrate interior and exterior programming throughout the full building (refer to "Green Links and Green Roofs" on page 44).

PUBLIC ART

Art is a key element for the engagement and activated public realm. UTSC already has a collection of public art. Louis Archambault (1915–2003) "A Tall Couple" adjacent to the Valley Land Trail and BGL (2015) "Water Velocity" at the Toronto Pan Am Sports Centre are likely the best-known installations. Public art is a fundamental part of the UTSC legacy and should continue to contribute to the overall cultural vitality of the campus, complement the specific qualities of individual sites and help to articulate the sequence of public spaces. Investing in works of art and artistic expression will advance cultural engagement and reinforce the campus as a place to share dialogue.

With the planned development of new buildings and several major open spaces throughout all three precincts, public art should form a key link in the narrative and experience of these spaces. Major open spaces provide significant opportunity to curate and link larger scale art. The Promenade and other linear connections provide opportunities to engage art through multiple sites and scales and visually link the campus. Mid-block courtyards offer opportunities to showcase art at a more intimate scale that provides opportunities for the public to engage directly with pieces and dialogues.

Guidelines

- Explore opportunities to use public art to provide a focus for new exterior spaces and encourage placement in prominent locations throughout the three precincts of the campus.
- Site new works to demarcate entrances, provide visual linkages and assist with wayfinding.
- Consider land-based art within or adjacent to natural heritage sites and along trails to extend the collection through the entire campus.
- Encourage the integration of public art with its site and context through its narrative, scale, and material. Avoid 'plop' art (pieces devoid of contextual relevance to their site).
- Foster opportunities for temporary, rotating, and theme-based exhibitions that engage emerging perspectives and uplift under-represented voices.
- Consider opportunities for art hubs related to the Doris McCarthy Gallery as well as the formalization of a dedicated arts facility to engage established and emerging artists.

"A Tall Couple" sculpture by Louis Archambault

"Water Velocity" installation by BLG

PEDESTRIAN CIRCULATION

Pedestrian pathways are categorized based on their level of use and maintenance. This structure builds on the framework identified in the Campus Master Plan, Draft Secondary Plan and Draft Urban Design Guidelines.

Primary Network Pathways

Primary networks support universally accessible and unobstructed travel between the major destinations of the campus. Primary pathways may include distinct paving and fixtures to distinguish them from campus-standard routes (refer to "Materials and Fixtures" on page 64). While supporting flexible and multi-modal use (including servicing), these pathways should prioritize pedestrian activity. Where primary paths cross vehicular routes, design should prioritize safe and accessible pedestrian use through the integration of cross walks, vehicle signals and signs, accessible pedestrian signals and traffic calming measures as determined based on the application. Primary pathways should incorporate robust planting and site furnishings to create a comfortable pedestrian experience and support spaces to rest or meet out of the path of travel. Primary pathways will receive a high level of maintenance during all seasons, including being cleared of snow in winter before other routes.

Secondary Network Pathways

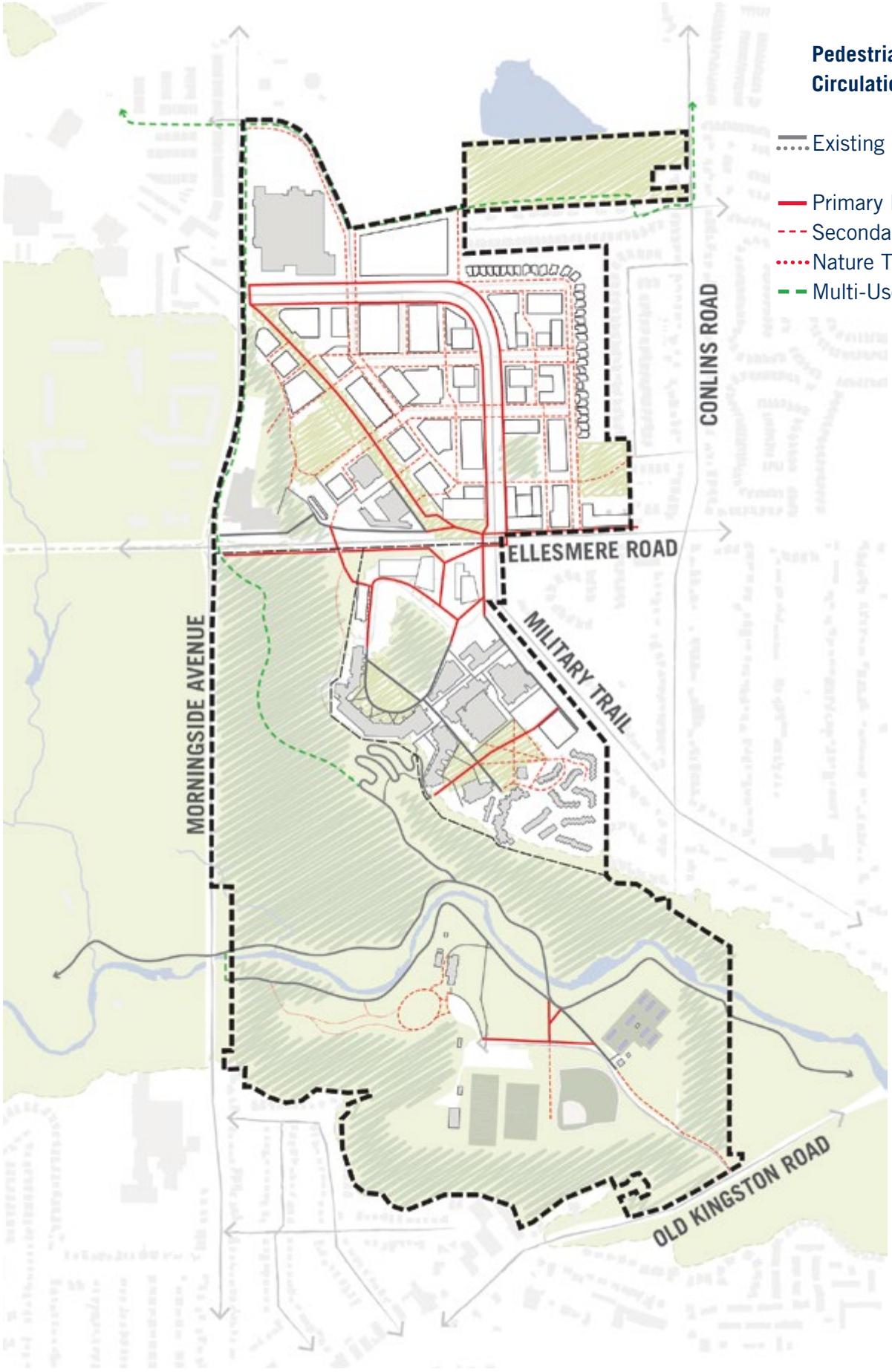
Secondary networks connect primary circulation routes to other significant destinations throughout campus. These pathways will have smooth, comfortable, and barrier-free surfaces and encourage comfortable and convenient navigation of the campus. Where possible, secondary networks should follow the shortest distance between destinations to limit wear on adjacent landscapes. Secondary pathways should use campus standard finishes and fixtures to create a consistent public realm character (refer to "Materials and Fixtures" on page 64). These routes usually exist adjacent to roadways but need to accommodate service vehicle access as required.

Multi-use Paths

Multi-use pathways provide convenient connections for pedestrians, cyclists, and other modes of active transportation throughout and beyond campus. These pathways should safely accommodate multiple users simultaneously. Multi-use pathways are predominantly situated in isolated areas of the Ravine Lands or more public segments of the North Campus. Materials should prioritize robust finishes and facilitate reduced levels of maintenance (refer to "Materials and Fixtures" on page 64). Some multi-use paths are part of larger networks (such as the Highland Creek Trail in the Ravine Lands and the future Meadoway north of the campus) and are maintained in partnership with external agencies (such as TRCA or City of Toronto). These have not been differentiated within the map on page 55, but will require coordination with the partner agency when considering any modifications to the route, function or materials of the pathway.

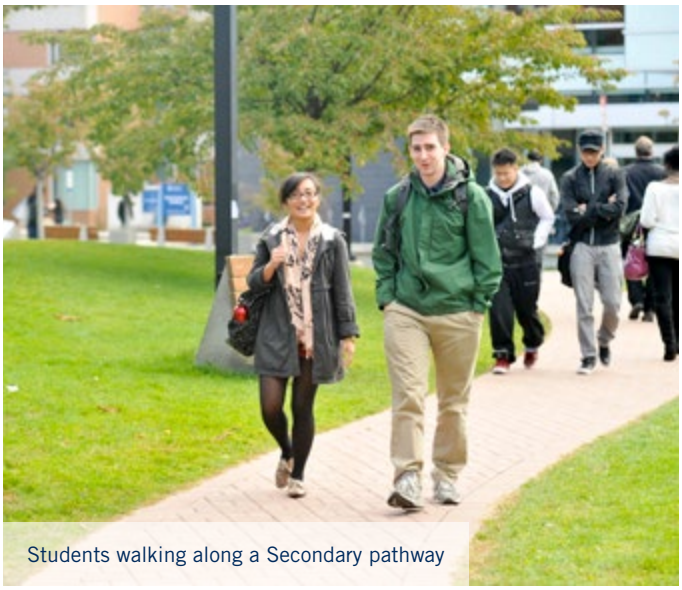
Nature Trails

Nature trails are composed of stable, smooth, and slip-resistant materials. These pathways are not always maintained and possibly left uncleared in winter to provide opportunities for snow-shoeing, cross-country skiing or hiking. Nature trails are located within natural heritage spaces, and where they impact the landscape least. Nature trails may not always provide barrier-free access, but where continuous linkages between other accessible routes are possible, mark and stabilize trails to provide access to natural areas for individuals using mobility devices.


Pedestrian
Circulation Map
Existing Path / Trail
Primary Network
Secondary Network
Nature Trail
Multi-Use Path
CONLINS ROAD
ELLESMERE ROAD
MILITARY TRAIL
MORNINGSIDE AVENUE
OLD KINGSTON ROAD

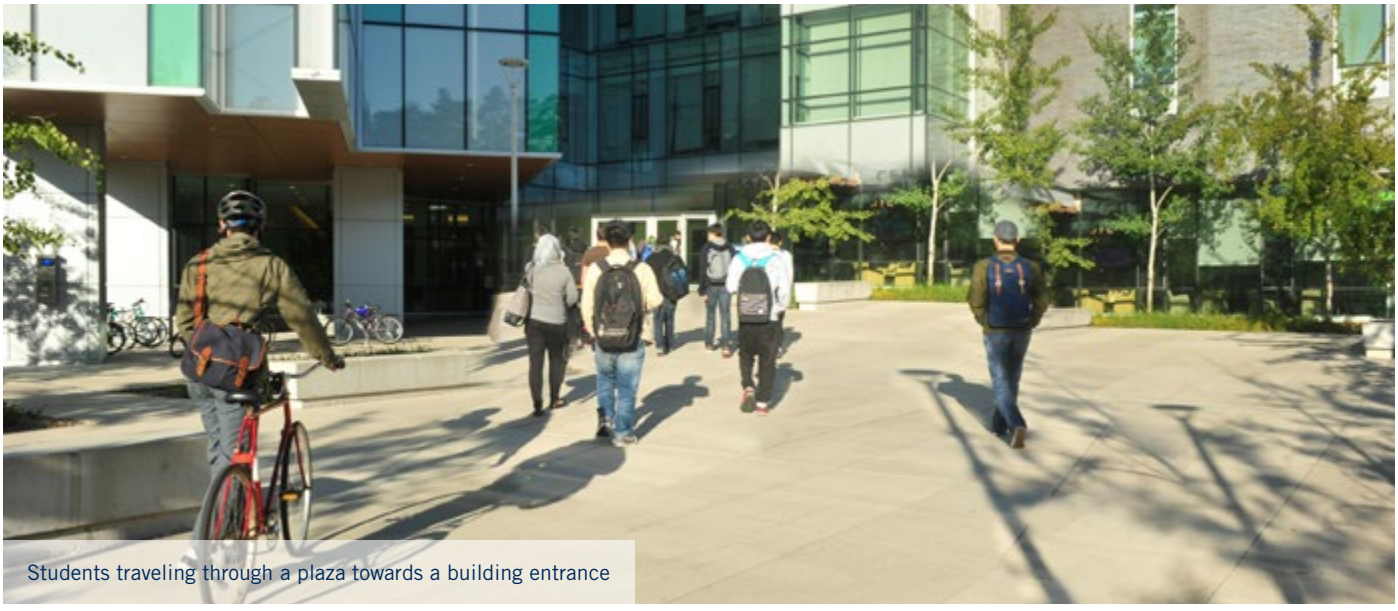
Guidelines

- Ensure Primary, Secondary and Multi-Use pathways are universally accessible and designed for maintenance in all seasons.
- Ensure pathways are designed using suitable materials for their function (refer to “Materials and Fixtures” on page 64).
- Ensure pathways within designated Natural Heritage Sites are constructed and maintained to minimize impacts on surrounding environment.
- Where universal access cannot be accommodated, clearly sign and communicate conditions to any potential users including those experiencing disability at predictable and intentional decision points (e.g. path intersections, rest areas/turnaround points, etc.)
- Consider opportunities to create seasonal recreation routes where snow coverage is desirable and paths are intentionally unmaintained (e.g. Nature Trails)

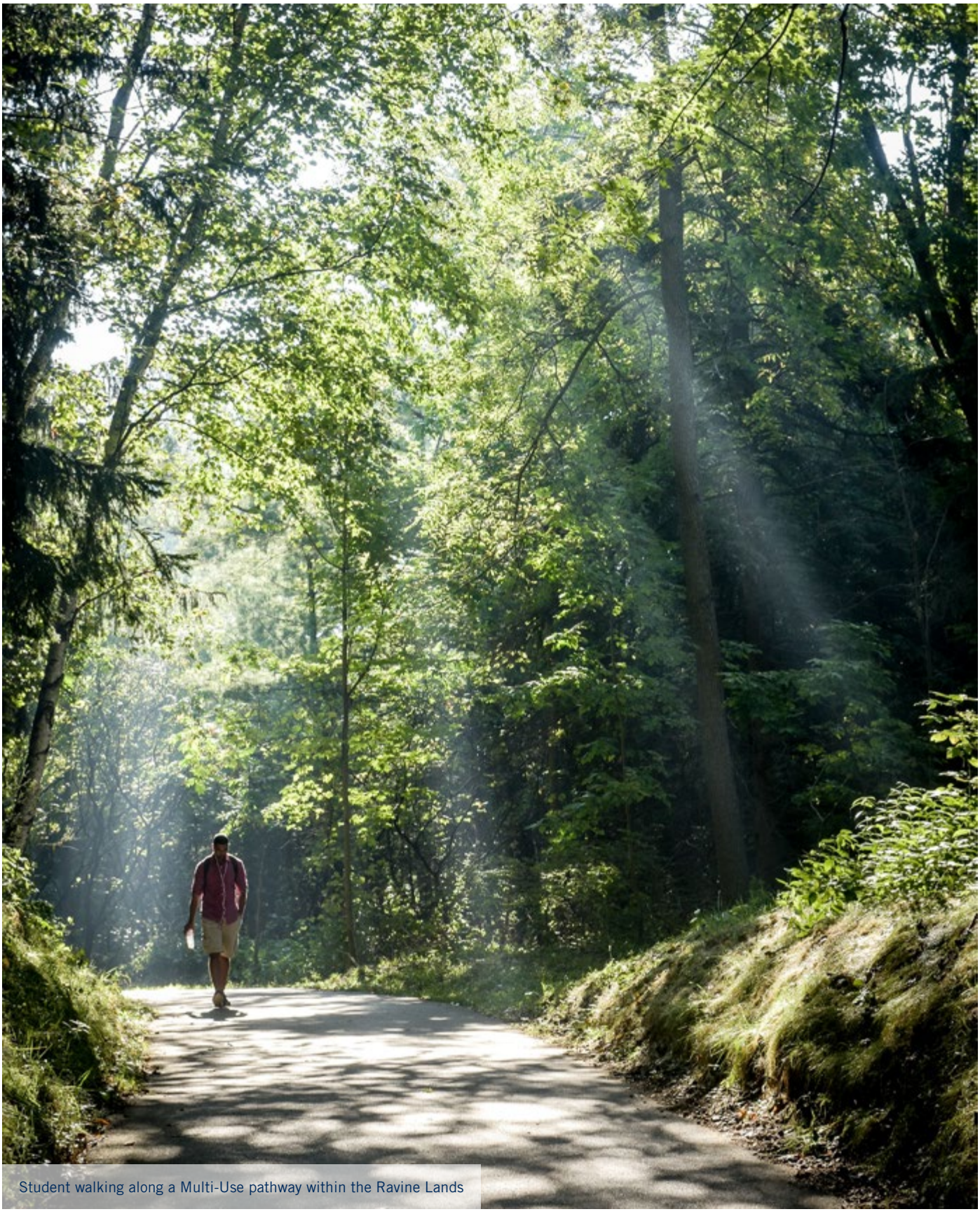


Students walking along a Secondary pathway

Students walking along a cleared Primary pathway in winter



Students traveling through a plaza towards a building entrance



Student walking along a Multi-Use pathway within the Ravine Lands

CYCLING INFRASTRUCTURE

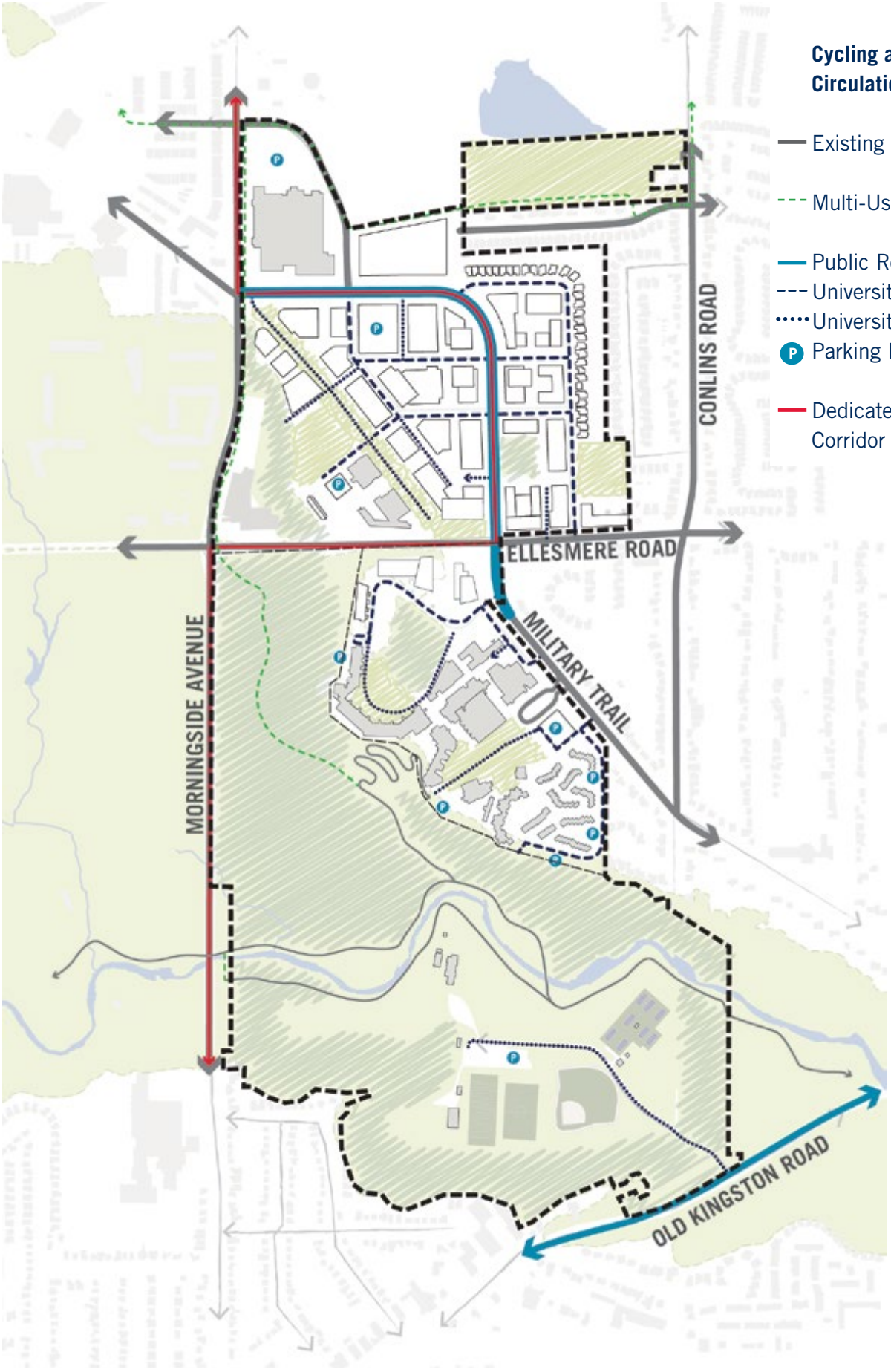
Cycling infrastructure throughout campus is primarily provided through shared use of the Primary Pedestrian Network and Multi-use Pathways. Cyclists can also use the private University Streets and public roadways to navigate the campus with exposure to slow moving and fewer vehicles. Where cyclist and pedestrians share pathways, markings, and signs should clearly indicate priority users.

The current City of Toronto cycling network includes existing multi-use pathway connections within the Ravine Lands via the Highland Creek Recreational Trail and discontinuous facilities on Kingston Road. Future on-road and separated routes are being considered on Morningside Avenue, Ellesmere Road and the new Military Trail alignment. The proposed alignment of the Meadoway Recreational Trail will connect trails east and west of the campus via new on- and off-road connections through the North Campus.

Within campus, new and expanded facilities for bicycle parking will support the potential for increased use to and through campus with the development of additional routes nearby. In accordance with TGS and official plan requirements, facilities may be integrated within new development and as improvements to the surrounding public realm. Clear access and proximity to potential destinations are key to the use and usability of bicycle parking. To support the ongoing expansion of the cycling network at UTSC diverse parking facilities (e.g. bike rings, lockers, integrated bike storage rooms, etc.) and locations near key amenities should be prioritized within the overall public realm.

Guidelines

- On higher-volume roadways, cycling infrastructure should prioritize protection and ease of movement for cyclists and follow best practices and the latest local design standards to ensure seamless integration with nearby systems.
- On Private University Streets and Laneways and Multi-Use Paths, cycling infrastructure should prioritize ease of movement and protection of cyclists as secondary to pedestrians.
- Ensure proposed facilities suit type (e.g. occasional visitor, regular commuter, etc.) and duration of use (e.g. short-term, full day, etc.) for projected application.
- Markings and signage should be used to indicate priority mode (vehicle, cyclist, pedestrian) on any shared path.
- New cycling connections should support opportunities to connect discontinuous networks within and beyond the campus.
- Where possible, bicycle parking facilities should be integrated within or adjacent to buildings and new developments.



Cycling and Vehicular Circulation Map

- Existing Routes
- Multi-Use Path
- Public Road
- University Street
- University Laneway
- Parking Lot
- Dedicated Transit Corridor

VEHICULAR INFRASTRUCTURE

Within the campus, vehicle access is limited to roadways and shared laneways. Where service vehicle access on shared routes is required, pedestrians are still the priority, and the route should clearly indicate this to minimize potential conflicts. Pedestrian routes that support service and emergency vehicle access should include design features to discourage vehicle access. Where possible, green infrastructure along all new vehicle routes and parking areas will help to mitigate stormwater impacts on the immediate environment and municipal infrastructure.

Parking within campus will progressively become embedded within new development as surface parking lots are replaced with buildings. While centralizing parking in the North Campus into a multilevel structure will facilitate the redevelopment of the site, convenient accessible parking is still necessary throughout the campus including short-term PUDO and paid street parking as identified in the Secondary Plan and Urban Design Guidelines. Prioritize parking resources to address accessibility requirements within suitable distances of buildings.

Within the Ravine Lands, vehicle circulation primarily serves program specific uses. Explore opportunities to incorporate green infrastructure and expand existing parking to accommodate additional demand.

Guidelines

- Provide accessible surface and roadway parking close to campus buildings.
- Concentrate non-accessible parking within parking lots.
- Limit vehicle traffic within internal campus areas by locating parking lots at campus periphery.
- Explore opportunities to consolidate servicing areas below grade and in centralized locations accessed by University Laneways (as described in Secondary Plan and Urban Design Guidelines) to limit demand for vehicles within internal campus areas.

UBC Main Mall pedestrian promenade facilitate safe pedestrian and cycling movement while allowing for off-peak servicing to buildings (credit: PFS)

Shamrock Avenue complete street pilot with enhanced pedestrian realm, robust planting, narrowed drive aisle and lay-by parking (credit: Thierry du Bois)

Humanities Wing Plaza with students sitting and passing through

2.5 DETAILS AND DELIVERY

Implementation of this plan requires an understanding for how the strategies and guidelines interact and contribute to a more balanced and consistent approach to the campus landscape and public realm. While large areas will change drastically, particularly in the North Campus, it is equally important to ensure the existing spaces and natural heritage areas are considered and also contribute to the ultimate vision. Review of day-to-day operations, assessment and analysis of the successes and limitations of current and past projects and evaluation of sustainability metrics will inform the continued development and evolution of these guidelines.

Guiding Principles

- Create a responsive and regenerative implementation strategy.
- Prioritize ecosystem health, ecological restoration, and landscape function as critical measures of design excellence.
- Develop a consistent and cohesive approach to lighting and materials.

Strategies

1. Employ evidence-based design practices, including Sustainability Benchmarking (Life Cycle Assessment, Embodied Carbon Analysis, Storm Water Balance, etc.) and Post-Occupancy Analysis of completed projects to inform aesthetic, technical and programmatic decisions for all new and redeveloped open spaces.
2. Design and implement social and budget impact tracking systems to observe, document and measure yields and impacts, such as: economic activity and impact; people engaged; skills shared, learned, and taught; engagement in healthy activities (e.g., movement, growing and healthy eating); food produced.
3. Maintain and update operations budget to capture existing and new landscape maintenance needs and facilitating community engagement in landscape and public realm projects.
4. Implement evidence-based approaches to restore and manage landscapes and enhance ecosystem services, value, and resiliency throughout the campus, in alignment with Indigenous, Western, and local community practices and knowledge.
5. Engage internal and external partners through research, projects, and partnerships around regional strategies to restore and manage landscapes and enhance ecosystem services, value, and resiliency within and beyond the campus (regional/global impact).
6. Demonstrate design excellence on all projects beyond aesthetics, to include ecological integrity and resilience.
7. Refine standards for landscape components and construction materials through research and benchmarking.

LANDSCAPE MANAGEMENT

Through continued support of the enhancement of biodiversity and ecological function within campus landscapes and public realm, UTSC has the opportunity to position itself as a leader in the use of permaculture principles and practices within landscape management at a campus scale and beyond typical productive landscapes. Existing research initiatives and the continued use of the campus as a "Living Lab" should be leveraged to support the creation of resilient and self-regulating landscapes based on rigorous study and research with opportunities to modify and adapt spaces over time based on observed conditions. Landscape management strategies that consider the natural dynamics and cyclical nature of living systems present within or compatible with the open space and natural heritage networks of the campus, should continue to be integrated within the practices of campus staff and design projects. Considerations for ecological succession and function should be prioritized as essential considerations within any planting or land management strategy for the campus.

Different types of spaces will require and warrant different approaches to management and maintenance. The campus should develop an overall management strategy to maintain landscapes with holistic practices that minimize reliance on mechanical and chemical methods and align with permaculture principles. Training is vital to ensure that all involved in the delivery and maintenance of campus landscapes appreciate and adopt more ecological and community-engaging horticultural practices. Training and implementation strategies should promote the progressive adaptation from intensively maintained plantings to living systems that encompass regenerative and self-regulating processes for landscape management.

Guidelines

- Engage with academic faculty, staff, and administration active within ongoing research of campus landscape and land management practices to develop campus-wide management and staffing strategy to support holistic landscape management and monitoring.
- Develop an implementation plan to transition existing landscapes to the permaculture-driven proposed ecologically responsible model.
- Develop operational training for staff to support overall landscape management strategy.
- Ensure continued use of accessible landscape and public realm spaces through ongoing maintenance and management.

Students engage in research within campus open spaces to manage invasive species

Landscape features should be designed to accommodate standard maintenance procedures and equipment while promoting innovative design and management practices

Students engage in monitoring and research within campus open spaces

MATERIALS AND FIXTURES

The campus has four (4) categories of spaces that inform the use of public realm materials and fixtures:

- Public
- Campus Standard
- Special, and
- Building-Specific

Guidelines

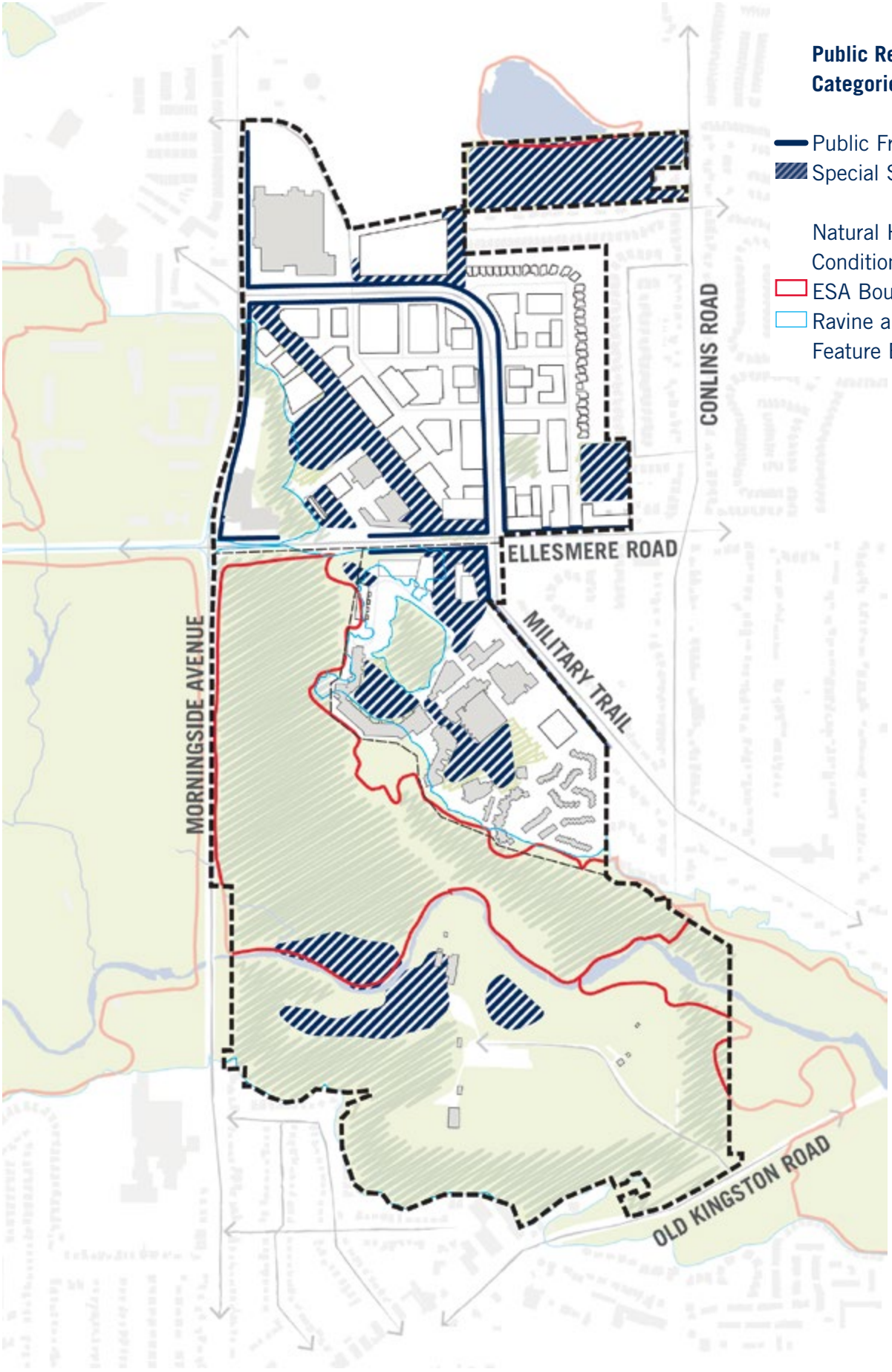
The applicable guidelines are based on a subject site's location as defined here:

- Public: Spaces adjacent to municipal rights-of-way and maintained by the City. These spaces should create a consistent public realm character over the entire length of the ROW and avoid variation between development blocks and individual buildings. Fixtures and finishes should satisfy the City standards based on the latest Streetscape Manual and local planning policies. Opportunities exist to enhance these spaces but will require discussions and maintenance agreements between UTSC and the City.

- Campus Standard: Spaces adjacent to municipal rights-of way and maintained by UTSC or spaces within the University private property that serve typical functions and connect spaces beyond individual development blocks or buildings. These sites should create a consistent public realm character over the entire interconnected space but may serve to differentiate the University from adjacent municipal spaces. Public realm connections, including Public Streets, University Streets and Mid-Block Connections, should adopt a material palette that facilitates consistent legibility between development sites and individual buildings.

- Special: Major campus open spaces and key destinations within the campus should have a unique character that is not restricted to the Campus Standard. These sites should differ from the typical condition and may use specific alternative finishes and fixtures.

- Building-specific: Building-adjacent open spaces and transitional public realm. These spaces should integrate building form and program into neighbouring connections and open spaces. The design of these spaces should complement connecting spaces and integrate adjacent programs and functions seamlessly.


Public Realm Categories Map
Public Frontages
Special Spaces
Natural Heritage Conditions
ESA Boundary
Ravine and Natural Feature Boundary
CONLINS ROAD
ELLESMERE ROAD
MILITARY TRAIL
MORNINGSIDE AVENUE
OLD KINGSTON ROAD

PAVING

The ground plane of the streets and public spaces through campus should aid with navigation. This can be achieved through the consistent and hierarchical application of paving materials, patterns, and level of finish.

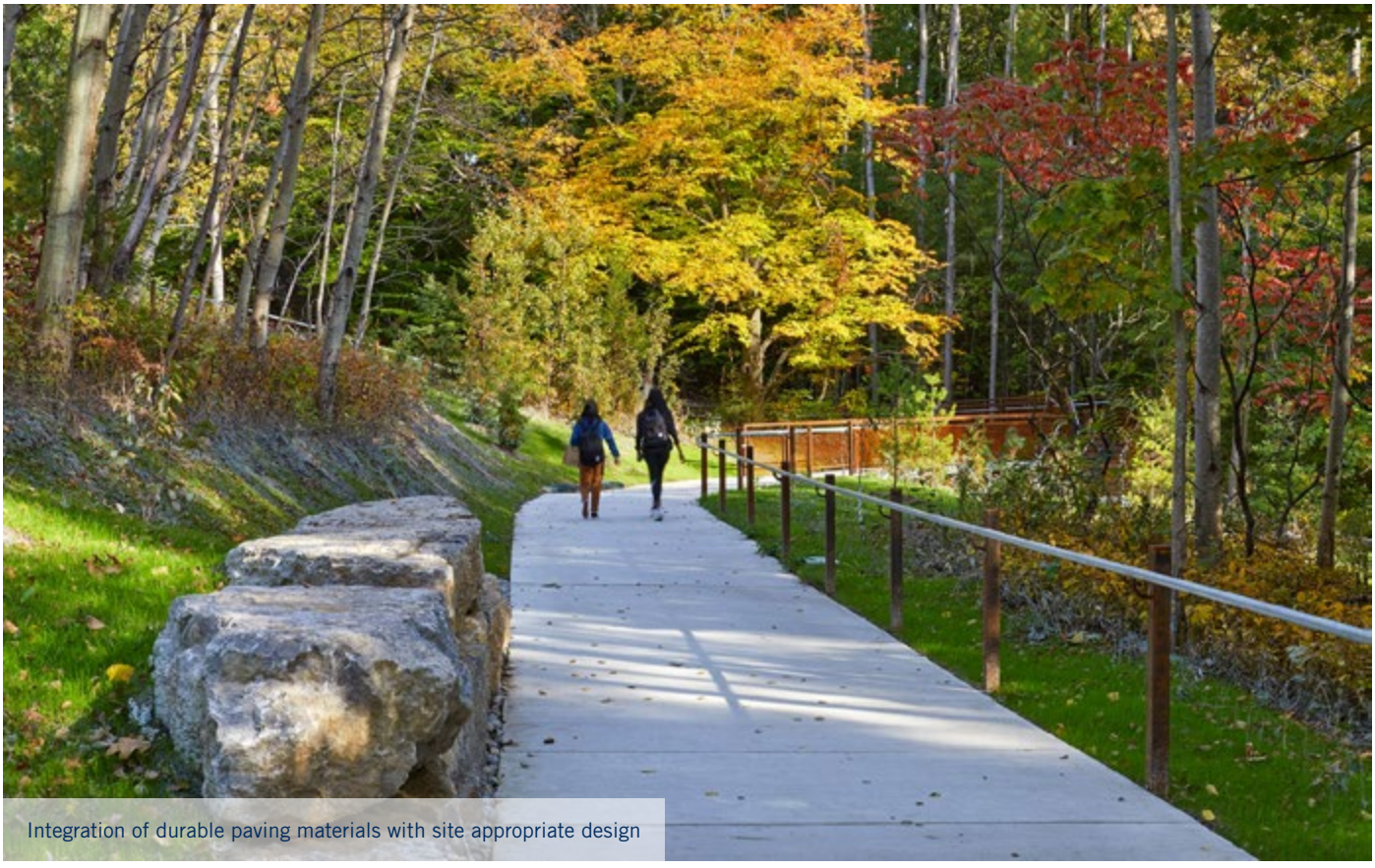
Throughout the campus, paving should support a continuous and consistent experience for pedestrians and vehicles. Surfaces should support universal accessibility and ensure safe and slip-resistant travel in various conditions. Select materials that are robust, durable, and readily available to minimize maintenance and facilitate repair and replacement over time. In support of campus-wide initiatives to mitigate stormwater runoff, consider permeable materials where appropriate and where proper maintenance can be carried out.

Guidelines

- Use materials that are stable, consistent and slip resistant in all applications

PUBLIC

- Pedestrian and vehicular paving:
  - » Should conform to City Standard materials and finishes to contribute to a consistent public realm character.
  - » Multi-use trails within campus that connect to larger city-wide and regional networks should conform to City Standard materials and finishes to ensure a cohesive character over the full length of the trail.
  - » Pedestrian crossings at Public Streets should use applicable City standard materials and finishes to demarcate suitable locations and enhance safety.

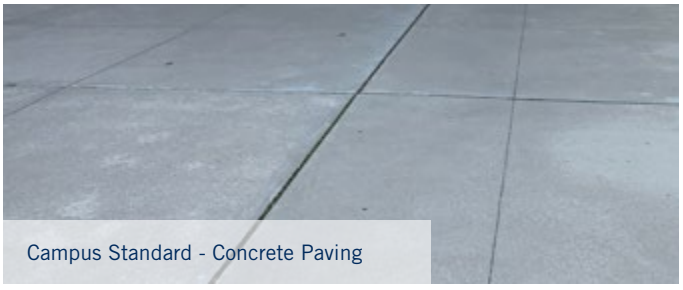


Integration of durable paving materials with site appropriate design

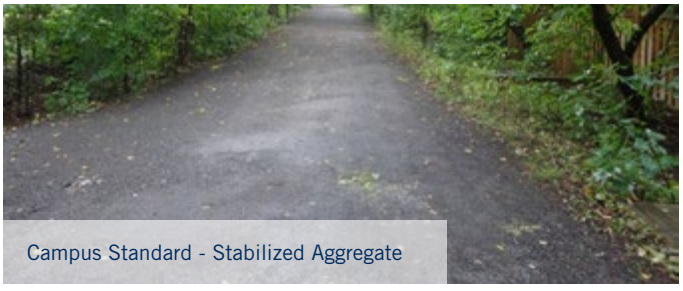
CAMPUS STANDARD

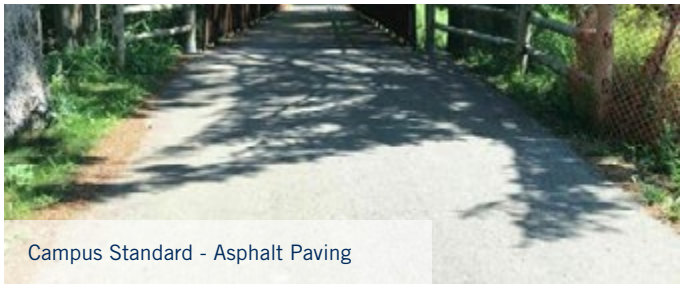
- Pedestrian paving:
  - » Design to accommodate service vehicle access.
  - » Should conform to current best practices for reducing urban heat island impacts.
  - » Should conform to current best practices for accessible surface design specifically for joint sizing and visibility.
  - » Cast in place concrete should be untreated and uncoloured and designed to ensure consistency across sites and minimize maintenance requirements post-installation. Finish should suit use and desired level of slip-resistance. Avoid surface treatments and coatings. Use saw-cut control joints, not tooled, with consistent panel sizing across entire surface and minimize quantity of expansion joints. Avoid complex jointing and perimeter banding patterns.
  - » Applications of precast concrete unit paving should be used sparingly. If used, apply running bond laying patterns. Avoid high contrast patterning and banding. Grey tones are preferred to create a consistent character across all campus spaces.
  - » In natural heritage areas, consider stabilized and resin-bound aggregate paving as an alternative to asphalt paving or to formalize worn trails and mitigate trampling in sensitive areas. Avoid use in high traffic areas that require constant winter maintenance.
  - » For multi-use pathways, use asphalt paving except where special consideration is required (refer to SPECIAL guidelines below). Use an uncoloured finish, free of any surface treatment or markings other than directional markings.

- Vehicular paving:
  - » Should conform to current best practices for pavement design and markings to ensure a legible and consistent interface with municipal roadways.
  - » Avoid special colouring and applied finishes beyond directional markings.
  - » Avoid unit paving within vehicular areas.


Campus Standard - Concrete Paving


Campus Standard - Precast Unit Paving


Campus Standard - Stabilized Aggregate


Campus Standard - Asphalt Paving

SPECIAL

- Pedestrian paving:
  - » Design to accommodate service vehicle access, where appropriate.
  - » Use robust and durable materials that facilitate simple maintenance and repair or are readily available to ensure easy replacement over time.
  - » Should consider interfaces with adjacent spaces and materials to ensure clean transitions.
  - » Should conform to current best practices for accessible surface design specifically for joint sizing and visibility.
  - » Explore use of permeable materials where appropriate.
  - » Cast in place concrete should conform to Campus Standard guidelines.
  - » Precast concrete unit paving should conform to Campus Standard guidelines.
  - » Consider natural stone paving where appropriate. Only granite stone should be considered for exterior applications due to the durability and resistance to standard management practices. All other types of stone should be avoided. Select consistent paver sizes appropriate to the application. Avoid large slabs where vehicle access is required to minimize potential for cracking and damage. Preference for running bond laying patterns to provide consistent character and minimize irregular angles or joints which may fail. High contrast patterning and banding should be limited to locations where accessible use requires to minimize confusion or conflicting information. Grey tones are preferred to create a consistent character across all campus spaces.
  - » Wood decking may be considered in areas where no vehicular access is required, pedestrian volumes and intensity are lower, and winter maintenance is reduced. Use untreated natural wood for decking that is suitable for extended exterior use and permitted to weather naturally.

- Vehicular paving:
  - » Consider unit paving within vehicular areas. Modules should include horizontal and vertical interlocking joints to minimize shifting and displacement caused by vehicle manoeuvres.

BUILDING-SPECIFIC

- Pedestrian paving:
  - » Should respond to and complement adjacent areas and building materiality to create a consistent transition between public realm and private spaces.

- Vehicular paving:
  - » Should respond to and complement materials of adjacent vehicular infrastructure and suit use requirements.
  - » Avoid unit paving in vehicular areas such as loading bays and interior access drives.


Special - Wood Surface


Special - Vehicular Unit Paving

LIGHTING

Guidelines

- For all new lighting, use fixtures that are LED, full cut-off, CRI 90 or better. All will have a colour temperature between 2700-3000K. Give preference to light fixtures easily integrated with a BAS, DMX or Campus-wide control program at a future date, and lamps that are simply replaceable, serviceable, and require minimal specialized tools or knowledge. Where possible, favour sourcing fixtures and poles from local fabricators to minimize lead times and promote local manufacturing.

- Where lighting is adjacent to or within natural heritage areas, fixtures should consider additional shielding, dimming controls and performance measures that conform with current best practices in ecologically sensitive lighting.

PUBLIC

- All lighting within public rights-of-way maintained by the City of Toronto should conform to City Standards.

- Lighting maintained by UTSC should conform to Campus Standard guidelines.

CAMPUS STANDARD

- Roadway and Vehicular Area Fixture:
  - » Pole mounted, with fixtures mounted at appropriate heights to achieve minimum light levels required for intended use (7.5 to 10m height, or as specified by lighting designer).
  - » Consider combining with pedestrian height fixture when located adjacent to vehicular and pedestrian spaces. Pedestrian fixture should conform to Pathway and Pedestrian Area Fixture guidelines.
  - » Use straight square metal poles.
  - » Coordinate fixture and pole colour, using matte black or other similar dark standard finish where conditions suit.
  - » Use rectangular box form fixtures, with short horizontal tenon connection.
  - » Avoid custom fixtures, finishes, and colours.

- Pathway and Pedestrian Area Fixture:
  - » Use on all primary pathways. Consider using on secondary pathways and internal spaces.
  - » Use pole mounted fixtures at 5m above finish grade.
  - » Consider opportunities to mount pedestrian-specific fixture on roadway or site lighting pole where pathways adjacent to vehicular area.
  - » Use straight square metal poles.
  - » Coordinate fixture and pole colour, using matte black or other similar dark standard finish where conditions suit.
  - » Use rectangular box form fixtures, with short horizontal tenon connection.
  - » Avoid custom fixtures, finishes, and colours.

Campus Standard - Pathway and Pedestrian Area Fixture

- Bollard Fixture:
  - » Consider using along secondary pathways and within internal spaces only.
  - » Use straight round metal bollards with minimal ornament or detail.
  - » Coordinate fixture and pole colour, using matte black or other similar dark standard finish where conditions suit.
  - » Use round post-top mounted fixtures.

- Integrated Fixture:
  - » Use fixtures that are accessible/replaceable without significant modification to the site element.
  - » Install to limit tampering and damage from vandalism.
  - » Avoid coloured light.

- Building-mounted Fixture:
  - » Mounted at 5m above finish grade
  - » Use where site conditions preclude use of pole mounted fixture.
  - » Coordinated with Pathway and Pedestrian Area fixture.

Campus Standard - Bollard Fixture

SPECIAL

- Roadway and Vehicular Area Fixtures:
  - » Should conform to Campus Standard guidelines.

- Pathway and Pedestrian Area Fixtures:
  - » Use pole mounted fixtures to suit design and achieve minimum light levels required for intended use.
  - » Use straight round metal poles or wood poles, colour/finish to suit conditions.
  - » Consider multi-headed fixtures to minimize quantity of poles required to achieve desired lighting.

Special - Pathway and Pedestrian Area Fixture

- Bollard Fixtures:
  - » Coordinate with Pathway and Pedestrian Area fixture.
  - » Use only where no other fixture option is suitable.

- Integrated Fixture:
  - » Should conform to Campus Standard guidelines.

- Building-mounted Fixtures:
  - » Should conform to Building-specific guidelines.

BUILDING-SPECIFIC

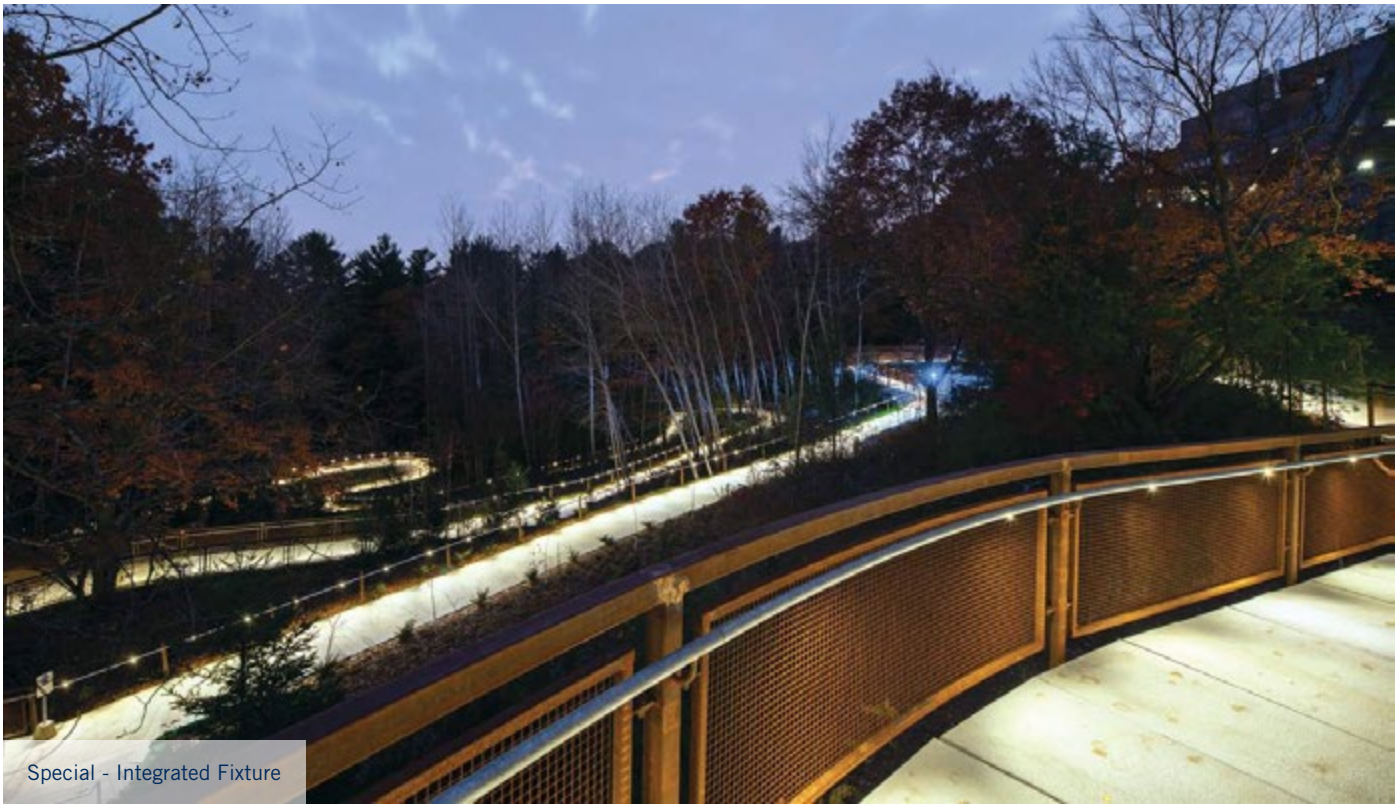
- Roadway and Vehicular Area Fixtures:
  - » Should conform to Campus Standard guidelines.

- Pathway and Pedestrian Area Fixtures:
  - » Should conform to Campus Standard guidelines.

- Bollard Fixtures:
  - » Should conform to Campus Standard guidelines.

- Integrated Fixtures:
  - » Should conform to Campus Standard guidelines.

- Building-mounted Fixtures:
  - » Should suit architecture and avoid ornate, decorative, or overly stylized forms.
  - » Avoid custom fixtures, finishes, and colours.



Special - Integrated Fixture

WAYFINDING

The form and articulation of the campus public spaces should serve as the primary means of wayfinding. Campuses typically have internal pedestrian circulation networks and are often confusing places through which to navigate whether in a car, on a bike or on foot. This characteristic is best represented by the arrangement of buildings and spaces on the South Campus. Conversely, the North Campus will have a more urban arrangement of streets and blocks which are less confusing and easier to move through allowing visual connections through spaces and consistent use of materials to signal a hierarchy of spaces.

The spatial design, materials and furnishings used for the streets, public spaces and internal routes through campus buildings should contribute to identity and aid in wayfinding. A well-designed comprehensive wayfinding sign system will assist visitors to the campus, make them more comfortable, and add another layer of richness to the public realm.

Beyond a clear and consistent use of signage, wayfinding can be enhanced through the arrangement of site elements, intention design and consistent use of materials within the public realm. Considerations for site design and opportunities for integrating public art and architectural features to contribute to the passive navigation and circulation through campus should be explored to complement and strengthen more conventional wayfinding elements.

Guidelines

- Provide physical landmarks at strategic locations to direct individuals towards their destination or to points of decision and to support the development of a coherent mental map of the campus.

- Expand and update the wayfinding sign system for the campus, and coordinate with current efforts at other campuses as part of a University of Toronto-wide strategy.

- Coordinate interior and exterior routes and spaces for individual projects as part of their public realm improvements and contribution to a clear pedestrian circulation network (refer to “Pedestrian Circulation” on page 52)

- Ensure all signage meets standards for visual and physical accessibility, including colour contrast, mounting and reading heights, etc.

- The design and detailing of public spaces and streets should incorporate the principles of Crime Prevention Through Environmental Design (CPTED) to accommodate the widest range of users in a safe and comfortable manner.

Campus Standard Building Identification sign—part of a coordinated campus approach to signage

FURNISHINGS

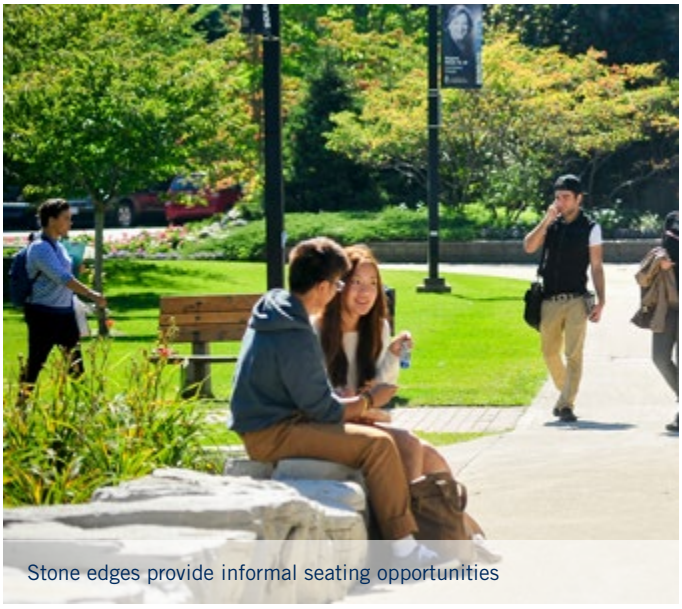
Employ a common palette of furnishings in the public realm to contribute to the identity and place making of the campus. Furnishings are visible elements that should contribute to the character and identity of the campus. A contemporary, elegant, and engaging style with a clean and refined aesthetic is most appropriate given the existing and anticipated built form context. The selection of furnishings should consider the best of what is currently used on campus, durability, life cycle cost, maintenance, ability to repair, and the opportunity to engage campus resources for fabrication and replacement.

Guidelines

- Seating Areas:
  - » Furnishing should be arranged to accommodate various clustering and solitary conditions.
  - » Spaces for mobility devices to be parked outside paths of travel should be incorporated.
  - » Opportunities for service animals to rest with owners outside path of travel should be considered.
  - » Consider opportunities for contrast paving to signal transition from path of travel to seating areas to assist all users in maintaining clearways.

Seating areas using seat walls create flexible gathering options


Picnic table clusters with accessible ends and supports


Stone edges provide informal seating opportunities

- Bench Seating:
  - » Provide cast aluminium or steel frame, raw, weathering, or matte black painted finish.
  - » Provide surface mount with vandal resistant hardware.
  - » Provide untreated hardwood (reclaimed Douglas Fir, Ipe or Jatoba) seat and back to allow for weathering.
  - » Provide a variety of backed and backless options throughout campus to provide seating for wide range of users.
  - » Ensure seating allows for transfer from mobility devices through the incorporation of arm rests and other mechanisms.
  - » Provide space adjacent to bench where mobility devices can be located outside the path of travel.
- Casual Seating and Tables:
  - » Provide movable furnishings to provide maximum flexibility within open spaces.
  - » Provide cast aluminium or steel frame, finish to suit location.
  - » Ensure tables should provide suitable clearance for user in mobility device.
  - » Avoid dark colours in unsheltered locations.
  - » Provide a variety of arm and armless chairs to accommodate diversity of postures and body types.
  - » Provide square or rectangular tables to allow for clustering/combining.
  - » Provide adjustable feet on tables and chairs for levelling.

Bench seating with armrests at ends

Movable seating and table with central support for accessibility

Bench seating with space at ends for mobility device and a variety of back and arm rest conditions

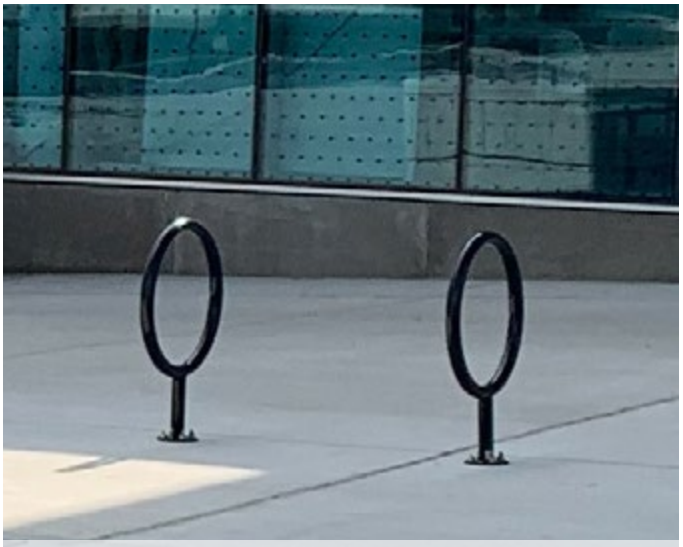
- Bicycle Locking Facilities – Single Bike Post:
  - » Provide cast aluminium or steel, anodized, stainless, or matte black painted finish.
  - » Provide direct burial installation.
  - » Avoid overly decorative designs to ensure ease of use and adaptability for multiple bicycle sizes and types.

- Bicycle Locking Facilities – Multi-Bike Rack:
  - » Provide cast steel, stainless or matte black painted finish.
  - » Provide surface mount with vandal resistant hardware.
  - » Avoid overly decorative designs to ensure ease of use and adaptability for multiple bicycle sizes and types.

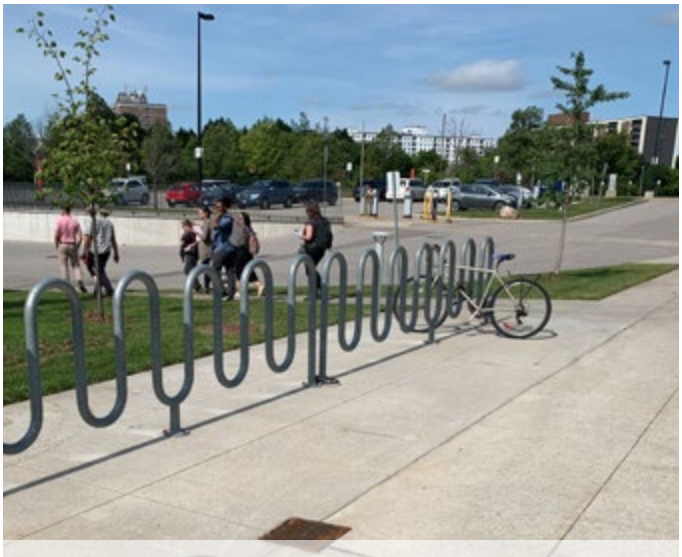
- Permanent Bollards:
  - » Provide cast steel, raw, weathering, or matte black painted finish.
  - » Ensure simple design with minimal ornament or detail.
  - » Provide direct burial installation.
  - » Provide crash-rated configuration based on site requirements.

- Waste Receptacle:
  - » Provide formed steel frame, raw, weathering, or matte black painted finish.
  - » Provide surface mount with vandal resistant hardware.
  - » Provide untreated hardwood (Ipe or Jatoba) cladding.
  - » Provide combined garbage and recycling unit.
  - » Must conform to UTSC waste collection performance standards.

- Movable Planters:
  - » Provide unpainted precast concrete or formed steel frame, raw, weathering, or matte black painted finish.
  - » Provide modular designs with integral forklift slots for repositioning and drainage.
  - » Provide crash-rated configuration based on site requirements.



Single bicycle locking post spaced to fit multiple locking positions



Multi-bike rack adjacent to pathway

3.0

DEMONSTRATION PLAN

The Demonstration Plan is a tool to visualize the intention of the Landscape and Public Realm Master Plan recommendations. It illustrates one potential outcome informed by the guidelines presented in Chapter 2. However, it does not preclude alternate applications of the guidelines and strategies that may emerge out of detailed design and investigation of specific site conditions.

3.1 USING THE DEMONSTRATION PLAN

The Demonstration Plan is not a master plan. It is presented for illustrative purposes and is not the only potential outcome of the recommendations identified in Chapter 2. The Demonstration Plan is aspirational and considers the campus at full build-out.

The Demonstration Plan shows potential new development within each campus precinct: North Campus, South Campus, and Ravine Lands. Specific sites have been identified in coordination with UTSC's 10-year capital planning process. The overall campus structure will be informed by the UTSC Secondary Plan and Urban Design Guidelines. The built form is for illustrative purposes only and does not suggest permissions or proposals for sites that are not actively in design or under construction. Where designs are available for future sites, the built form has been adapted to reflect the proposed condition.

In addition to the overall Demonstration Plan, renderings of 9 specific sites are provided to illustrate the potential landscape and public realm character that is possible by following the recommendations of the Landscape and Public Realm Master Plan. Included are illustrations of the following primary open space typologies and critical character-defining moves: Campus Farm, Promenade, North Common, Mid-Block Courtyards, University Streets, the Ellesmere Bridge, Central Gateway, ARC Quad, and Valley Fields Connection within the Ravine Lands.

INTEGRATION ACROSS MULTIPLE SITES

For any project, whether it is a capital improvement or state of good repair maintenance, the proposed design should demonstrate how the new works relate to and integrate with the existing and planned context. The campus public realm should present a coordinated character, creating spaces that build on and contribute to the overall function of the landscape and area improvements. Interventions should consider the site as a living whole with an interconnected network of spaces and not individual parcels.

Through the implementation of the Landscape and Public Realm Master Plan development of the campus should aim to 'lead with landscape' in advance of the development of individual sites to strengthen the quality and importance of the public realm.

On the following page is an example of how site context and guidelines from this plan can be integrated across a series of adjacent spaces in the North Campus to support an interconnected network of open spaces and an overarching landscape character through an adaptive framework.

1. The existing wild and natural landscape of the ravine edge meets the campus at the western limit of the North Common. Considerations for connecting to an existing natural heritage system, landscape management practices and mitigating impacts of stormwater should be integrated within the proposed edge condition of the North Common landscape.

2. The plant palette of the North Common should integrate the diverse character and ecology of the ravine as an analogue and extended the planting to enclose the central lawn of the common. Pathways, dense planting, and green infrastructure buffer the slope edge to mitigate impacts from stormwater runoff and the high-intensity campus from the sensitive ecology of the ravine.

3. The "Ravine Echo" analog extends to include the Promenade. It is identifiable in the plant palette, ecological complexity and performance of the landscape elements linking the Common to the Promenade. While the function of the Promenade shifts to support circulation and movement through campus, the landscape character continues to link back to the ravine and acts as a bridge to spaces further east.

4. The Mid-Block Connections, Courtyards and University Streets, integrate aspects of the "Ravine Analogue" into interior spaces and along the faces of new buildings within generous planted boulevards and planting beds that promote dense and robust planting, regenerative ecologies, and biodiverse and complex living systems within the public realm.

5. The new alignment of Military Trail interrupts the contiguous landscape of the analogue and creates a physical barrier within the natural heritage and open space networks of the campus. Through supportive street tree and boulevard planting the landscape character can be visually linked between the interpreted ravine condition and the woodlot.

6. Adjacent to the woodlot, landscapes associated with new development mimic and support the ecological function of the natural heritage systems. The planting extends and complements the character and function of the woodlot.

7. The landscape of the ravine is connected through the diverse internal open spaces and public realm of the campus and links to the community beyond.

3.2 NORTH CAMPUS

The North Campus precinct is the nexus for development within the campus and the focus of major open space and public realm improvements. The structure of the precinct overlays a conventional grid of University Streets with a realigned Military Trail municipal right-of-way. The existing Military Trail roadway will be decommissioned, making way for a new pedestrian space to connect the active recreation facilities and communities along Morningside Avenue with the core campus, providing safe, comfortable, and accessible connections through the heart of the new precinct.

The anticipated introduction of higher order transit along the realigned Military Trail will provide increased access to the precinct and will decrease dependence on personal vehicles for the entire campus. This shift will facilitate the transition to a pedestrian campus and allow for meaningful investment in the public realm. The network of University Streets, Laneways and a move towards centralizing service areas will allow service vehicles to access the campus, while minimizing conflicts with pedestrians. New connections to the Meadoway Recreational Trail along the north edge of the campus will improve and promote safe and convenient bicycle access to and from campus. Within mixed circulation routes on campus, cyclist are welcome but without dedicated infrastructure in these pedestrian priority areas.

Introducing and promoting resilient landscapes within the new development of the North Campus will prioritize and support the overall campus adoption of permaculture practices. Landscape design will adopt a systems perspective to maximize the function, value and health of the campus environment. New developments will configure to create usable and valuable spaces that respond and contribute to adjacent blocks, forming networks that promote habitat creation, mitigate stormwater impacts and create spaces for the community to interact, share and learn. The North Campus will become a hub for the Edible Campus initiative through ongoing advancement of the Campus Farm as well as the integration of edible plants within a network of campus landscapes to enhance the ecological and social value of these spaces.

TPASC & Fieldhouse ① ②

In support of Healthy Active Campus initiatives, the ongoing expansion of active recreation and athletic facilities within campus, and to provide year-round access to sports fields for students and the broader community, the Morningside fields will be replaced with a permanent fieldhouse. The fieldhouse will build upon the open space framework and sports infrastructure of TPASC. It will reinforce the north edge of the realigned Military Trail streetscape, including setbacks to accommodate green connections from the Campus Farm and trail connections to internal campus spaces.

While design and programming of the fieldhouse will develop in the future, the opportunity exists to engage the Campus Farm and Edible Campus initiatives to support healthy active living and active recreation. The future connection of the Meadoway Recreational Trail will pass on the north edge of the fieldhouse site. A planted buffer along the north property edge is recommended to help define this connection and mitigate the transition to the existing landfill north of the campus.

DEMONSTRATION SITES

- D1 Campus Farm
- D2 Promenade
- D3 North Common
- D4 University Street
- D5 Mid-Block Courtyard

DEVELOPMENT SITES

1. TPASC
2. Fieldhouse
3. Military Trail Realignment
4. Parking Structure
5. SAMIH
6. EaRTH Vertical Farm
7. Instructional Centre 2
8. New University Street
9. Indigenous House
10. LAMP
11. New Student Residence

1. North Campus Precinct Enlargement

Military Trail Realignment (3)

In joint development with the City of Toronto and TTC, the realignment of Military Trail will provide opportunities for introducing higher-order transit to the campus. The new right-of-way will help resolve safety issues of the current "far-side blind" intersections at Ellesmere Road and Morningside Avenue. The new alignment will create perpendicular four-way crossings at both intersections. The new street frontage will create opportunities to relocate major vehicular traffic away from the core campus, and reinforce pedestrian-priority. The future public realm will provide generous sidewalks, cycling infrastructure and boulevard areas to support healthy tree growth along the new corridor.

Where opportunities exist, street tree planting should be clustered within open planters to promote under-storey planting, improve ecosystem value along the street and create a consistent public realm with other areas within campus.

Fixtures and materials within the public right-of-way will need to conform to city standards, but the University may seek opportunities to elevate the treatment of this key space within the campus in partnership with the City of Toronto.

Parking Structure (4)

A new multi-level parking structure is anticipated for completion in 2024. The new structure will relocate existing parking from surface lots into a centralized structure on the realigned Military Trail at Pan Am Drive. The structure will house a central loading facility to serve IC2 and potential for use by future developments, and will provide a centralized hub for the North Campus service vehicle fleet. The structure is designed to accommodate flexible use and creates opportunities to engage with the street to create public realm activation on primary frontages.

The landscape around the parking structure will pilot the first segment of the new University Street asymmetrical alignment (see page 102) creating a robust and multifunctional planted buffer and open space along the south frontage.

View of future Parking Structure (credit: GH3)

View of future LRT within Military Trail (credit: City of Toronto)

SAMIH and the North Promenade Terminus (5)

At the north end of the Promenade, the new Scarborough Academy of Medicine and Integrated Health (SAMIH) is scheduled to open as early as 2025. This new complex will act as a hub for the campus and community (including potential clinical and pharmacy spaces) and will occupy the threshold between the two. It's prominent place at the northern access to the campus and as a counterpoint to the LAMP complex at the south will inform the function and character of the Promenade (see page 94).

Given SAMIH's role in community building, the interface of the building with the public realm will promote pedestrian porosity and activity. Opportunities to provide outwards facing program within the at-grade areas and opening the space to the new pedestrian spine are important to explore. Programming within the public realm will reflect principles of integrated health, well-being and supporting resilient communities.

On the south side of the Promenade, the built form will mirror SAMIH and frame the northern segment of the new pedestrian space. Where the realigned Military Trail meets Morningside Avenue, a new arrival plaza will serve as a gateway to mark arrival to the campus from the north. Within this space, art and community use are a priority. The space will feel welcoming and open. Given the exposed nature of the site, consideration for mitigating winter winds and snow will be critical to creating a comfortable and vibrant public realm.

EaRTH Vertical Farm Facility (6)

In partnership with Centennial College, a new sustainable technologies hub will leverage institutional knowledge and research in advancing the development of clean technologies and sustainable practices within the campus and area. The facility and surrounding site will test and demonstrate technologies developed within the hub that can adapt and respond to these emerging initiatives.

The vertical farm will provide opportunities to demonstrate means and methods for integrating food production and intensive agriculture within urban settings. The adjacent landscape should reflect and support the facility function and yields through the integration of complementary natural systems and ecological strategies at-grade.

Instructional Centre 2 (7)

Opening in 2024, the Instructional Centre 2 (IC2) site will become a new hub for learning and student services in the North Campus. The dynamic and diverse program of the facility will reflect in the design and program of the site. Sloped and faceted walls will create opportunities for informal gathering, enhanced planting and unique engagement with the public realm of the future Promenade.

Located adjacent to both the North Common and Promenade, IC2 has the opportunity to serve as an anchor for campus life. Interior programming should seek opportunities to support the activation and engagement of both these major open spaces.

Artists Concept for EaRTH facility

Rendering of IC2 (credit: ZAS / CEBRA)

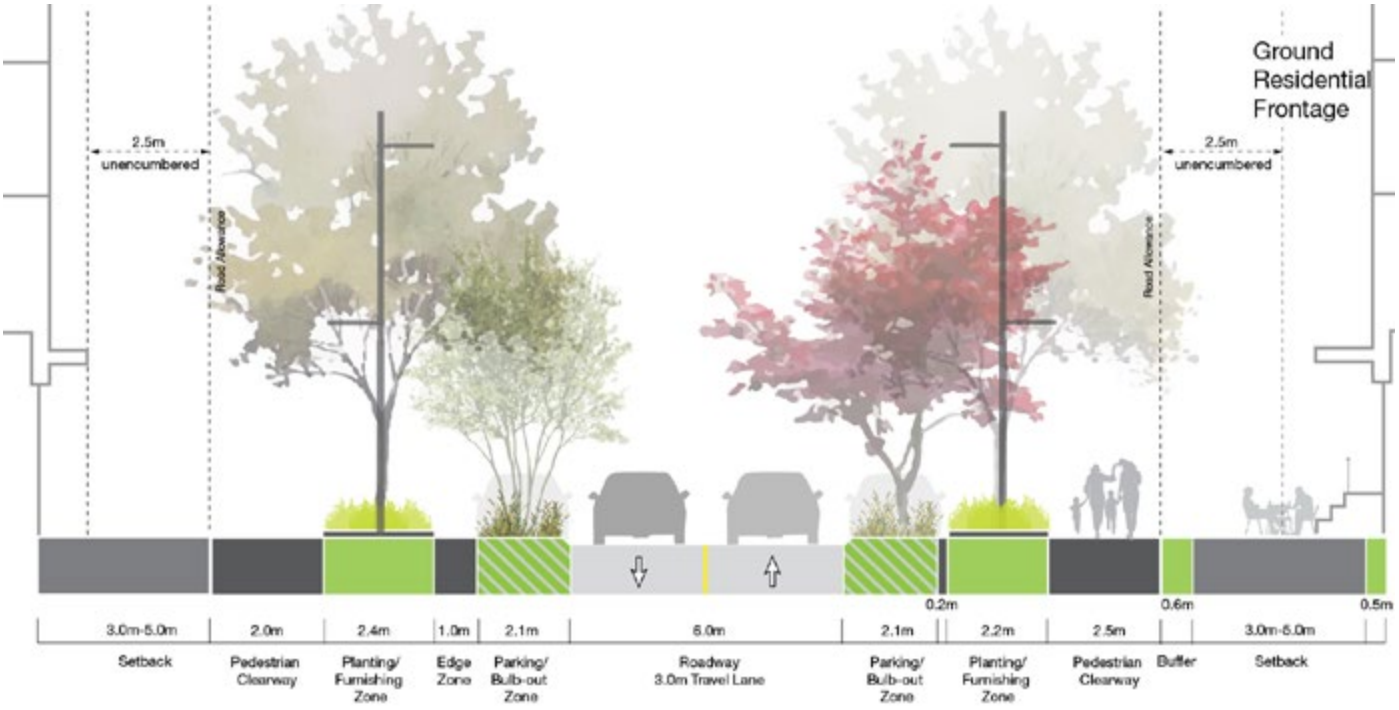
New University Streets (8)

Within North Campus a complete network of new streets is proposed based on the Secondary Plan and Urban Design Guidelines. These roadways are intended to remain university property so can deviate from the standard City roadway configurations and cross-sections. Within the Urban Design Guidelines, the new University Street type roadways have a consistent 20m width (building face to building face). This master plan has explored two configurations of the roadway and public realm to respond to different conditions: Asymmetrical and Symmetrical.

The Asymmetrical configuration can be seen within "Demonstration Site 4: University Street" on page 102. It provides a wider planted buffer on the side of the street that has increased sun exposure and can therefore support enhanced planting. The wider planted buffer also offers opportunities for the integration of green infrastructure to assist with stormwater mitigation in more densely developed areas of campus.

The Symmetrical configuration (shown below) balances the planting on either side of the roadway and is more appropriate in lower density areas as sun exposure would be more consistent on both sides of the cross-section. The narrow width of the right-of-way supports slower speeds and therefore separated cycling infrastructure has not been provided.

The design allows for possible lay-by pick-up/drop-off facilities or parking on both sides and is compatible with development that may require more short-term stopping (such as residences). Where parking is not required, additional planted bulb-outs and bioswale features can be integrated to collect storm water runoff from the roadway and reduce flows directed to storm sewers. If UTSC intends to dedicate any new streets as public in the future, roadway and green infrastructure design should integrate the latest City of Toronto standards.



Indigenous House (9)

Intended as a new gathering place for the campus and local Indigenous communities, Indigenous House is a contemporary expression of Indigenous values, practices, and typologies. The building will provide spaces for teaching, research, and social connection in a uniquely communal environment. The landscape will introduce spaces for growing edible plants and traditional medicines, land-based learning and practices as well as a gathering circle.

The mostly Indigenous plantings will support both the Edible Campus and Permaculture lens within the larger campus environment. Programming for Indigenous House may also explore use of the North Common and other nearby spaces as needed to support Indigenous visibility within the campus.

LAMP, Ellesmere and New Residence (10) (11)

The UTSC/Scarborough Centre for Literature, Arts, Media and Performance (LAMP) is in the planning stages with the intent to anchor the south end of the Promenade and create a new landmark for arts and culture within the campus and community. The complex, as conceived, will become a home for creative exploration and will inform the character and program of the exterior spaces.

LAMP also has a presence on Ellesmere Road and the realigned Military Trail. These frontages will need to meet City standards for materials and fixtures but will demonstrate the unique function of the spaces within LAMP and invite the public to engage with the spaces and public realm of this unique destination.

Opposite LAMP to the east, the new residence building will be opening in 2023. Showcasing innovations in Passive House sustainable construction and development, the residence will also provide new spaces for learning and sharing within the campus community. The site will include spaces for residents to engage with and view the woodlot north of the building at-grade and from a future green roof terrace.

Indigenous House (credit: Formline / LGA)

New Residence Building (credit: Handel / Core)

CAMPUS FARM

The existing Campus Farm is dedicated to teaching and research initiatives, as well as community outreach centred around edible landscapes, enhancing local ecology and the development of permaculture systems that can support the farm and be applied throughout the campus. The facilities that serve the Farm will develop incrementally over time to support the long-term vision of the edible campus.

DEMONSTRATION SITE 1: CAMPUS FARM

Connecting the Farm to the broader campus and community is essential to its success. Located at the north-eastern extent of the UTSC campus, the Farm serves as a transition and mediator between the adjacent residential neighbourhoods and institutional uses. The Farm includes two gates, one public-facing at the intersection of Chartway Boulevard and Conlins Road and one campus-facing at the southwest threshold into the campus. Signs and materials throughout the Farm will complement and relate to the rest of the UTSC public realm. Connections to the future Meadoway recreational trail will provide opportunities to engage the community in a variety of ways and expand the reach beyond the immediate area.

Situated on an environmentally impacted site, the Farm will continue to accommodate research and teaching that explores and demonstrates tactics to improve soil health and enhance yields in reclaimed sites. Similarly, research within the Farm considers the regeneration of soil and its integral role as part of a dynamic living system that is fundamental to the larger approach to permaculture and regenerative landscape management throughout the campus. What is learned through ongoing research and practice within the teaching and research spaces may be used to inform future projects elsewhere on campus.

New structures constructed at the farm may be used to support future programs. For example, an open-air pavilion may serve as a gathering space, shelter, and instructional space within the teaching garden. The potential for a new purpose-built research, servicing and administrative building facing Conlins Road could provide the Farm with a new community-facing address, consolidate various nursery and operational functions, and facilitate opportunities to host education and outreach programming year-round.

Provide accessible permeable paving for main pathways

Support community and campus uses through flexible space

Use natural materials and consider microclimate and opportunities for providing functional amenities within simple structure

Build on existing farm facilities and infrastructure

Ensure planters constructed from materials readily available and suitable for food growing

PROMENADE

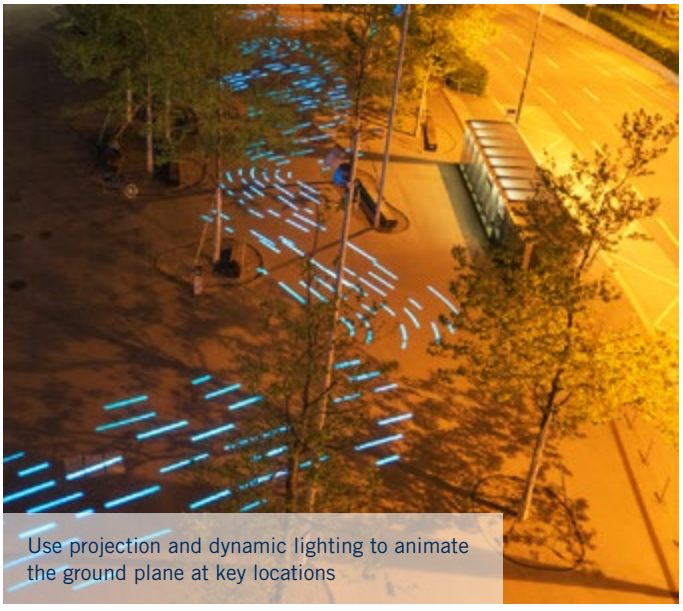
Framed by new buildings and open spaces in the North Campus, the Promenade will convert the existing municipal right of way of Military Trail into the primary pedestrian circulation route and flexible space for campus activities, art, outreach, and learning. It will be precipitated by the realignment of Military Trail to the east to address function limitations of the current roadway. The new pedestrian space is a place to gather and share, composed of the main generous path with a series of adjacent and interconnected spaces from Morningside Avenue to existing networks south of Ellesmere Road. The path will expand and contract to accommodate programming opportunities adjacent to buildings.

DEMONSTRATION SITE 2: PROMENADE

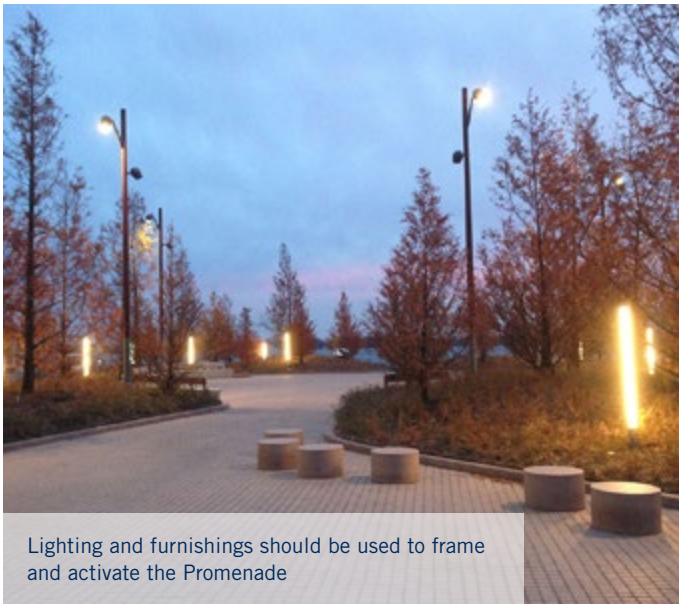
The Promenade will read as a unified open space from building face to building face, and will include robust planting to enhance connections to the natural heritage system and advance campus-wide sustainability initiatives. Creating spaces for year-round use and enjoyment are central to the design of the Promenade. Planting will cluster to enhance the viability and health of the environment and provide opportunities to integrate green infrastructure within the open space. Infiltration areas, bioswales and permeable surfacing, will integrate with planting areas to assist in passive irrigation and stormwater management throughout the site to mitigate pressures on the existing constrained stormwater infrastructure.

The central pathway and fixtures of the Promenade will contribute to a generous and consistent link that accommodates users of all abilities and provides universal access to adjacent buildings and spaces. Unique paving materials will signify its importance within the campus but will avoid overt patterning and textures which may inhibit accessibility. Robust furnishings will employ natural materials and consider opportunities for extended use during events and short-term rest for passers-by.

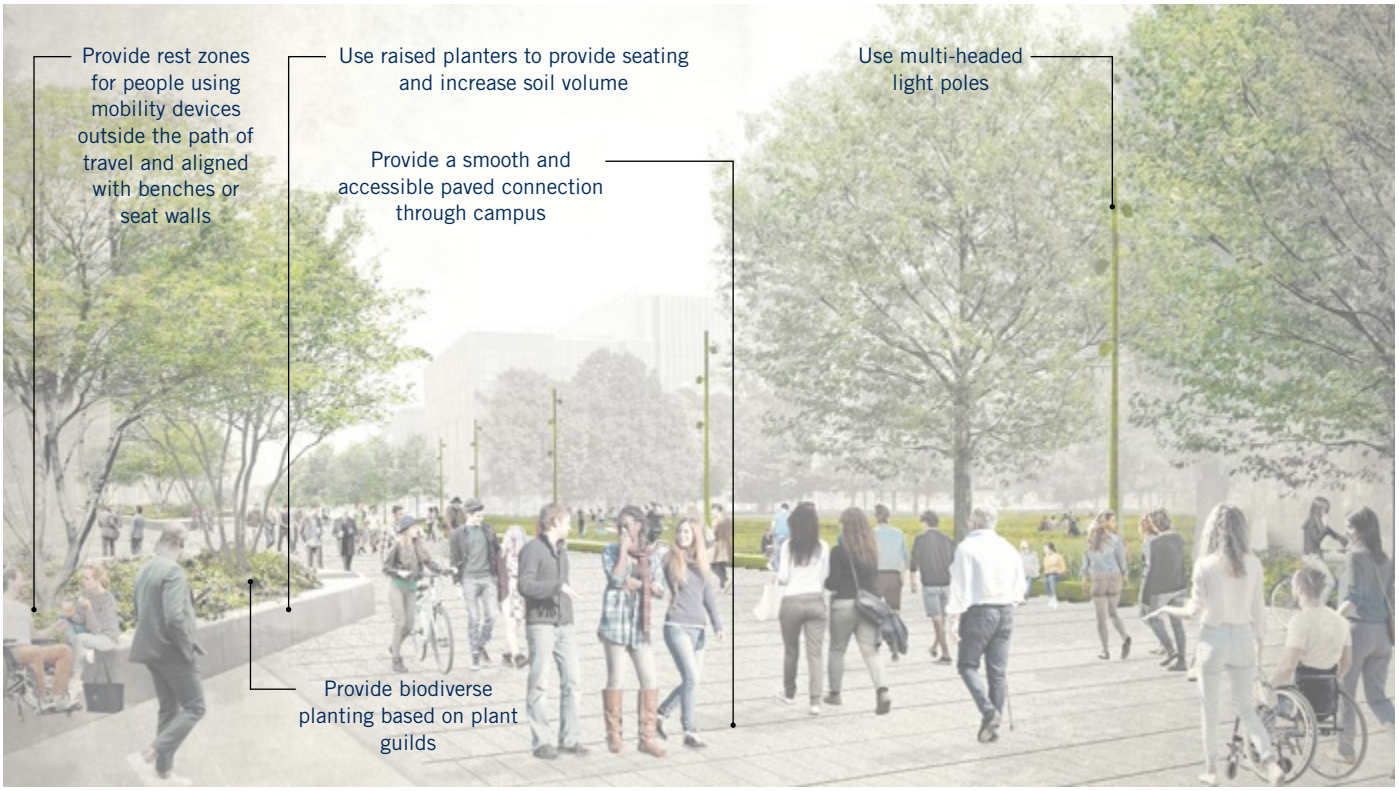
Lighting within the Promenade will explore options for multi-headed fixtures to minimize the quantity of poles and provide flexibility for using light and projection to activate space. Consider natural materials, including laminated timber, for light poles and other vertical elements within the Promenade.



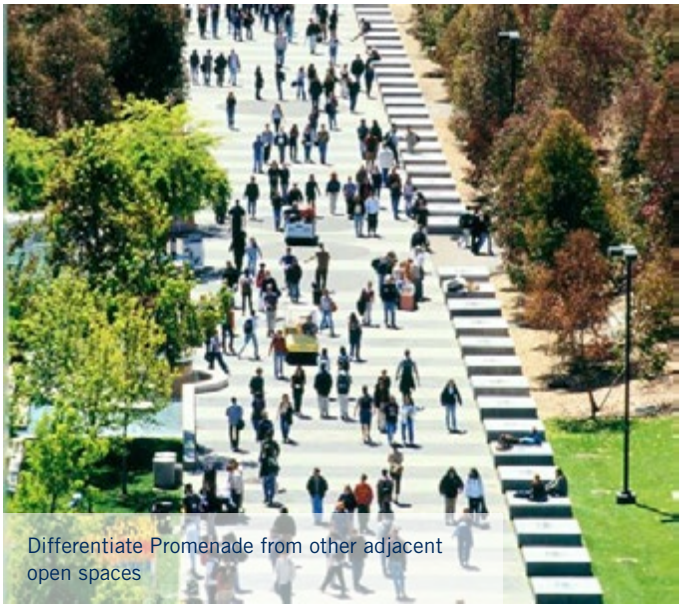
Use projection and dynamic lighting to animate the ground plane at key locations



Lighting and furnishings should be used to frame and activate the Promenade



Design for winter usage, maintenance and access



Differentiate Promenade from other adjacent open spaces

NORTH COMMON

The North Common is a significant new open space within the intensifying North Campus. It includes a central green framed by dense planting that extends the character and function of the ravine system into the main campus and restores ecological function to the site. This new open space provides opportunities for informal recreation and a space for hosting large events, including Convocation and Frosh Week activities. Below grade, the North Common may also integrate parking and geothermal cooling, as well as providing significant storm water infiltration opportunities in the heart of campus.

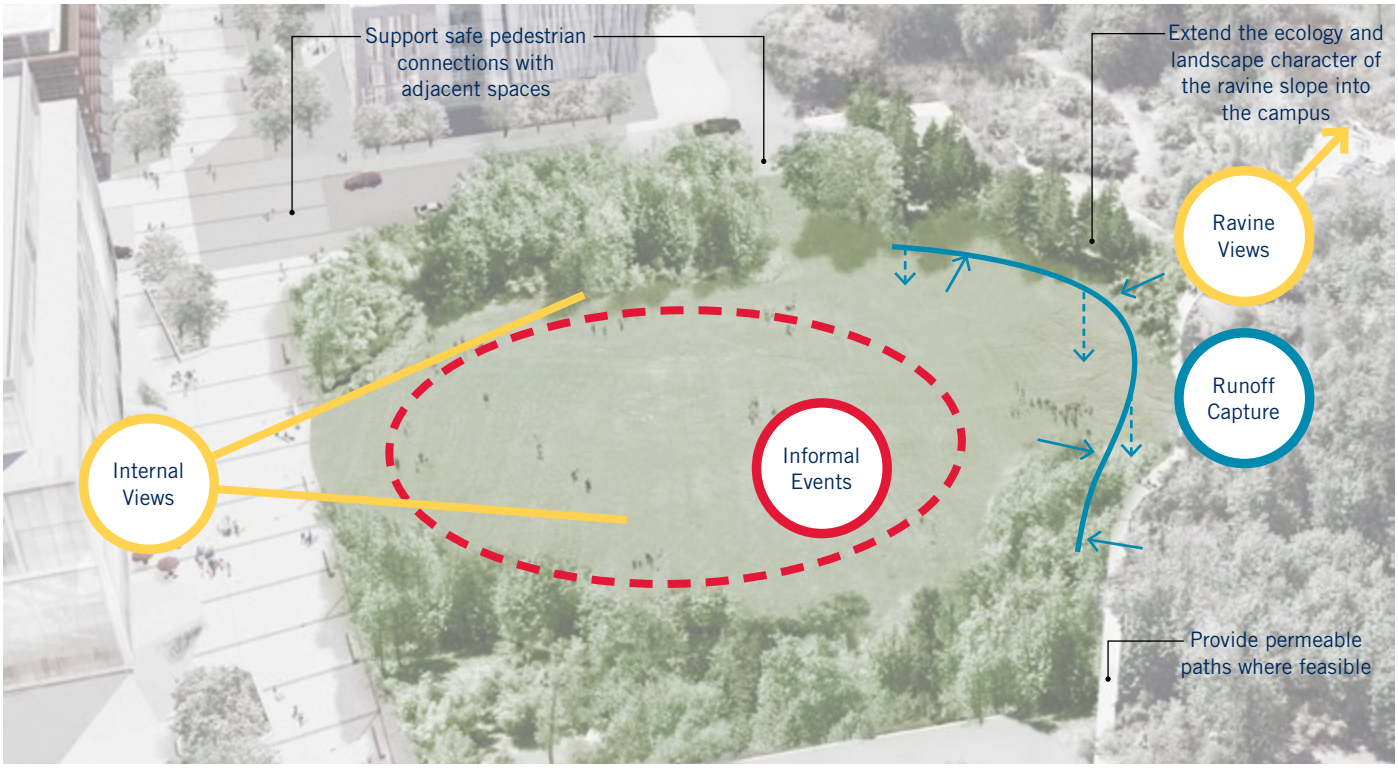
DEMONSTRATION SITE 3: NORTH COMMON

The central lawn acts as a major stormwater infiltration bed, maintained and designed to minimize impacts from runoff on the adjacent ravine edge. Planting within the Common will demonstrate the biodiversity and multi-layered nature of the Ravine Lands as well as respond to the landscape vision for Indigenous House.

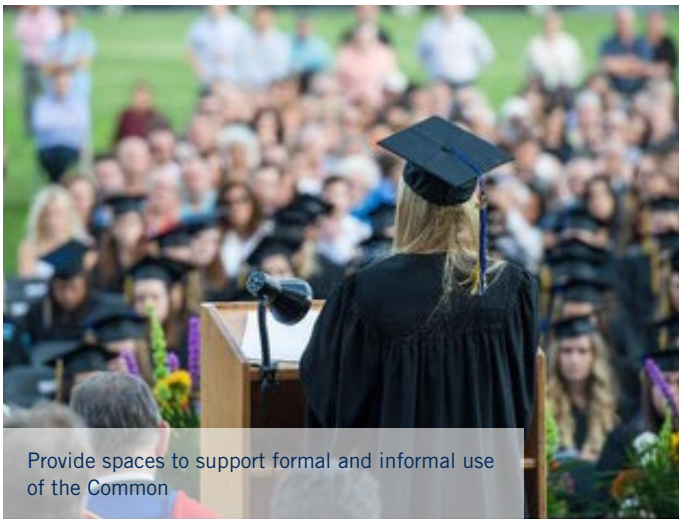
Below the surface, opportunities for integrating geothermal district cooling and a below grade parking and central servicing facility may be explored to support on-going redevelopment of the North Campus. Below grade structures will be designed to demonstrate innovative integration of robust planting, landscape regeneration and stormwater mitigation and green infrastructure measures.

Pathways around the perimeter of the North Common will mitigate erosion and degradation of the ravine edge. Pathways will employ permeable paving, bioswales and other infrastructures to limit runoff from maintained surfaces.

Views within the North Common are focused internally, but opportunities for framed views of the Highland Creek ravine and Morningside Park to the southwest should be considered as moments along the perimeter pathways.



Develop opportunities for winter activation



Provide spaces to support formal and informal use of the Common

Create a variety of conditions to allow for year-round enjoyment of the Common

Provide robust native planting that tolerates high intensity uses from the neighbouring Promenade (credit: Phyto Studio)

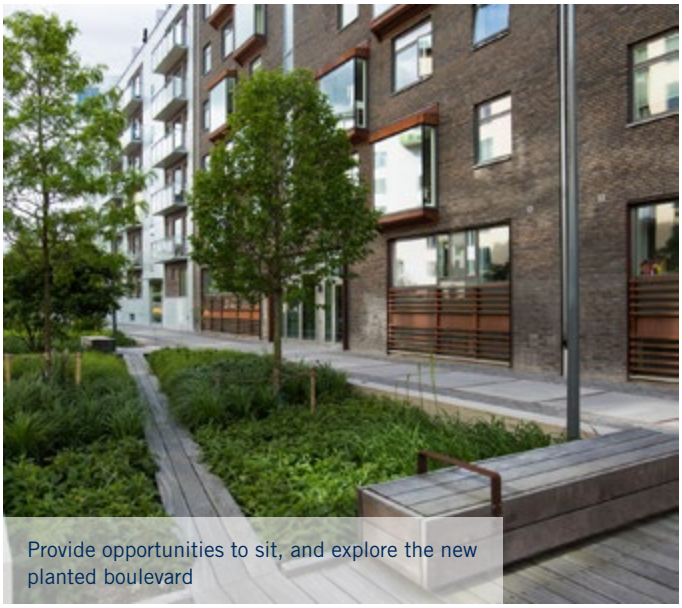
UNIVERSITY STREET

Within the North Campus, a new network of University Streets will facilitate efficient access and servicing to new buildings. The University Streets are privately owned and maintained and will not need to meet municipal guidelines for roadways but will consider interfaces and transitions to public roadways. Within the new rights-of-way, roadways are minimized to provide generous pedestrian spaces and enhanced planting areas that extend the character and function of the ravine's natural systems deep into campus.

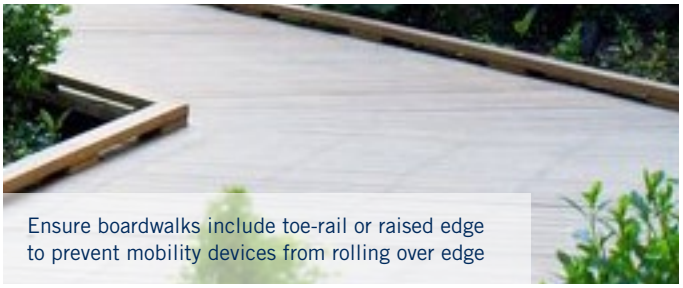
DEMONSTRATION SITE 4: UNIVERSITY STREET

Where an asymmetrical configuration is provided (primarily east-west connections within the North Campus), the roadway will shift to the southern side of the allowance, creating an expanded planting and gathering space that takes advantage of ideal sun exposure and microclimate conditions. Stopping and parking areas, if included, will be located on the south edge of the roadway to provide best access to pedestrian walkways and avoid conflicts with the dense planted buffer along the north roadway edge. Expanded planting areas along new roadways will provide infiltration and bioswale areas to mitigate stormwater runoff from the public realm and may contribute to enhanced stormwater management for adjacent development sites.

Opportunities exist to create gathering spaces and accessible elevated walkways within the expanded planting areas of new University Streets providing access within the space and opportunities to engage with the landscape directly. The location of seating within the planting zones will complement adjacent building program and provide universally accessible spaces to meet, work and learn.



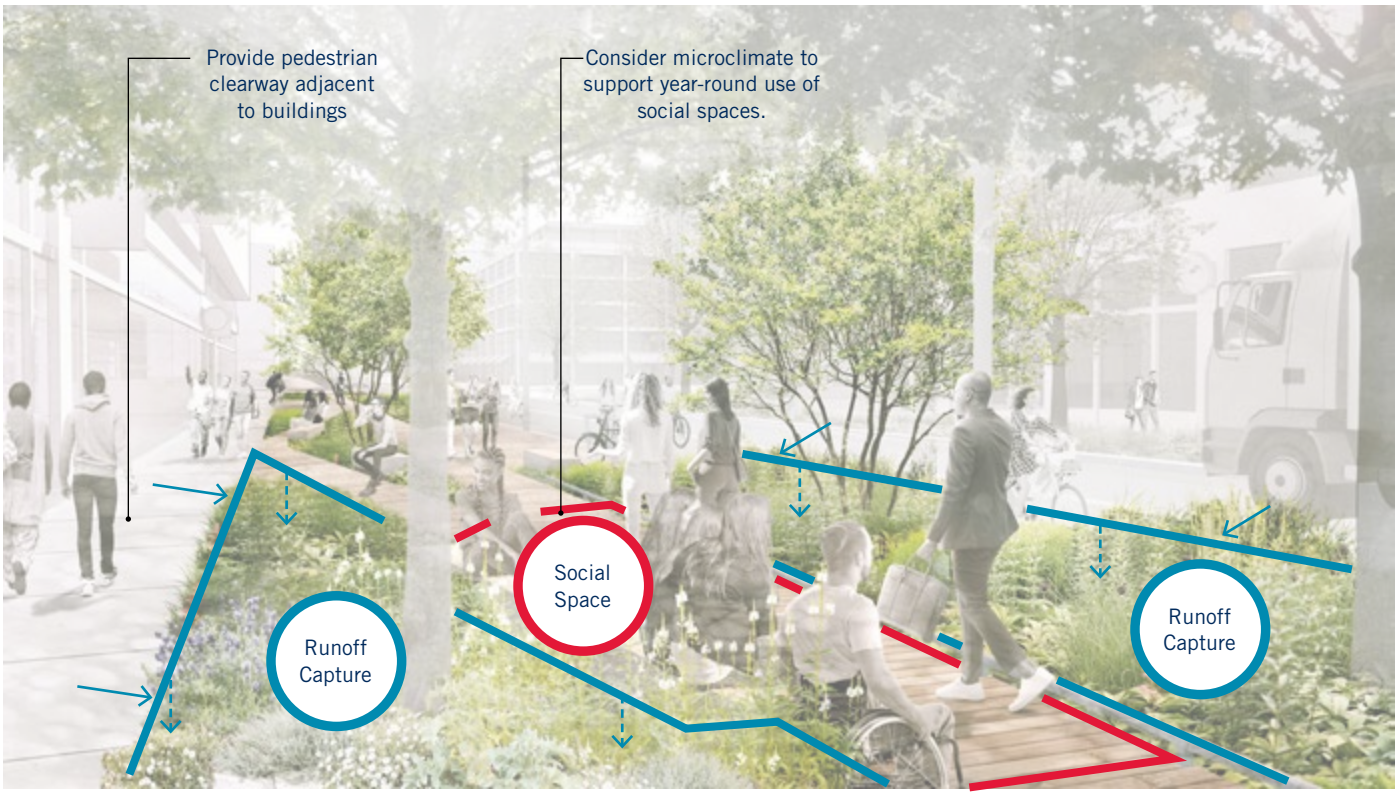
Provide opportunities to sit, and explore the new planted boulevard

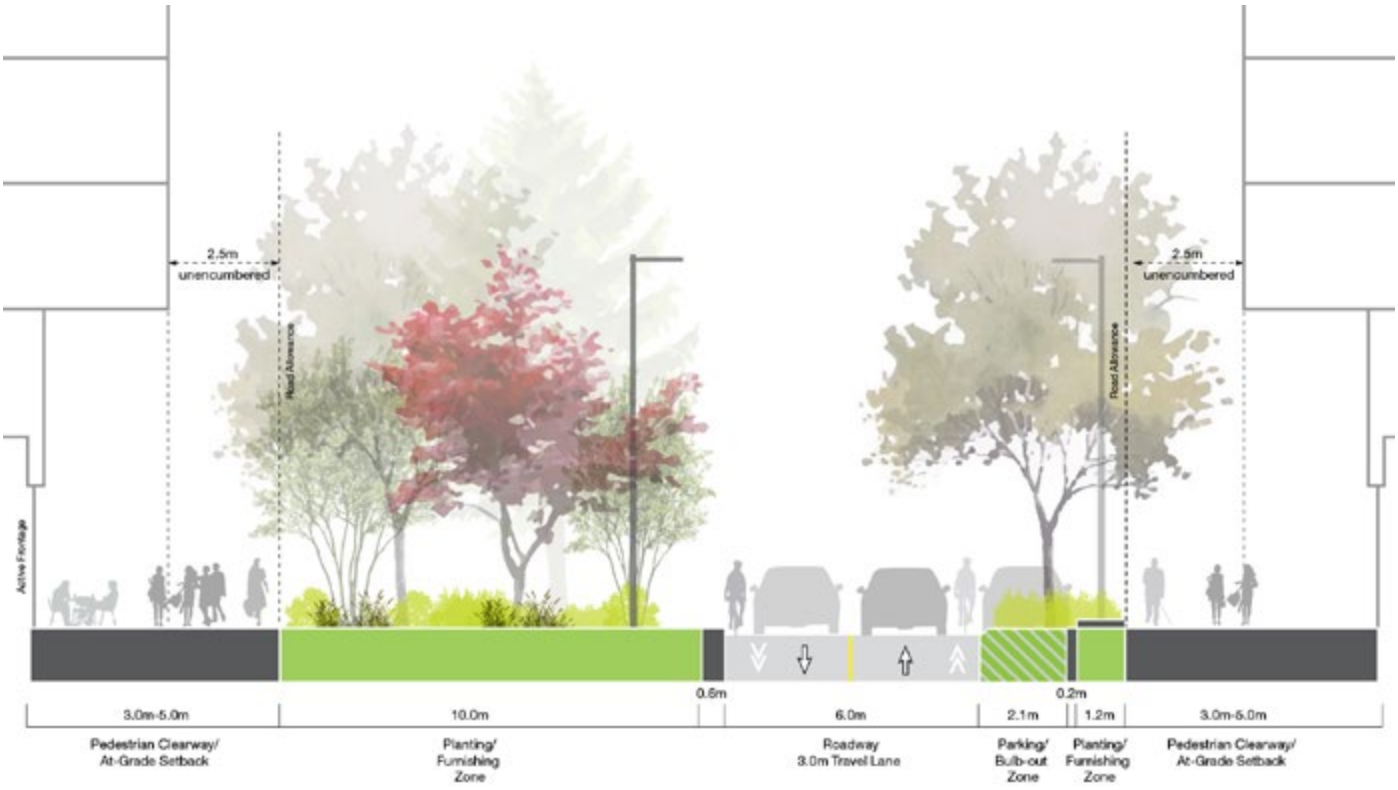


Ensure boardwalks include toe-rail or raised edge to prevent mobility devices from rolling over edge

Provide discrete lighting within fixed elements

Provide year-round interest and value within planting areas


Provide pedestrian clearway adjacent to buildings
Consider microclimate to support year-round use of social spaces.
Runoff Capture
Social Space
Runoff Capture


2.5m unencumbered
Road Allowance
Active Frontage
2.5m unencumbered
Road Allowance
0.6m
0.2m
3.0m-5.0m
10.0m
6.0m
2.1m
1.2m
3.0m-5.0m
Pedestrian Clearway/ At-Grade Setback
Planting/ Furnishing Zone
Roadway 3.0m Travel Lane
Parking/ Bulb-out Zone
Planting/ Furnishing Zone
Pedestrian Clearway/ At-Grade Setback

MID-BLOCK COURTYARDS

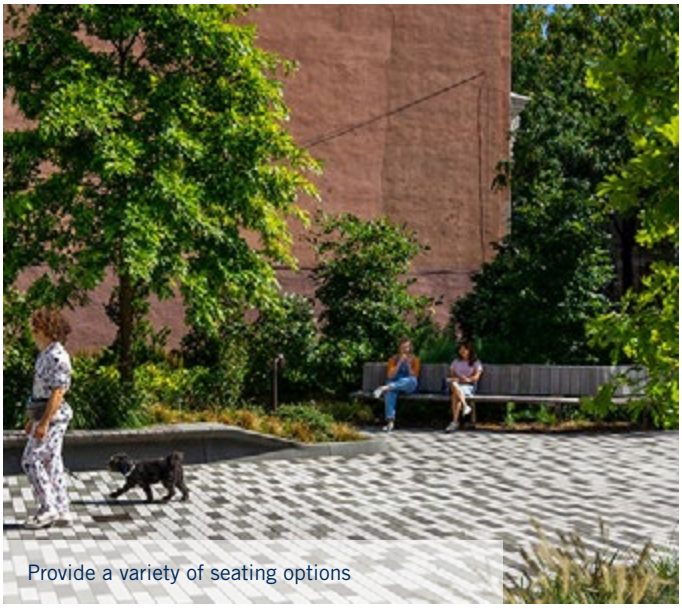
Within the North Campus, the Secondary Plan proposed new street grid will create consolidated development blocks with buildings framing mid-block courtyards. Internal spaces will create new opportunities for activating and engaging building program and extending open space networks between sites, creating a collection of small-scaled social spaces between buildings. The scale and siting of mid-block courtyards will prioritize microclimate conditions, including sun access and wind mitigation, to create comfortable spaces for year-round use.

DEMONSTRATION SITE 5: MID-BLOCK COURTYARD

Mid-block courtyards provide opportunities to enhance the pedestrian porosity of the campus through integration of internal building circulation and public realm connections. Mid-block connections may also accommodate servicing uses where below grade centralized loading areas are not feasible. Where servicing access is required, time of use for vehicles should be limited to provide protected pedestrian spaces during peak times. Paving within courtyards should consider vehicular loading and use suitable materials where applicable to mitigate long term maintenance requirements.

In several locations within the North Campus, planting within mid-block courtyards provides the opportunity to advance Edible Campus initiatives using raised and at-grade planters. Where located along the Edible Pathway, the planting within the courtyards should explore opportunities to demonstrate the ornamental and ecological value of using edible plants within active and vibrant campus spaces.

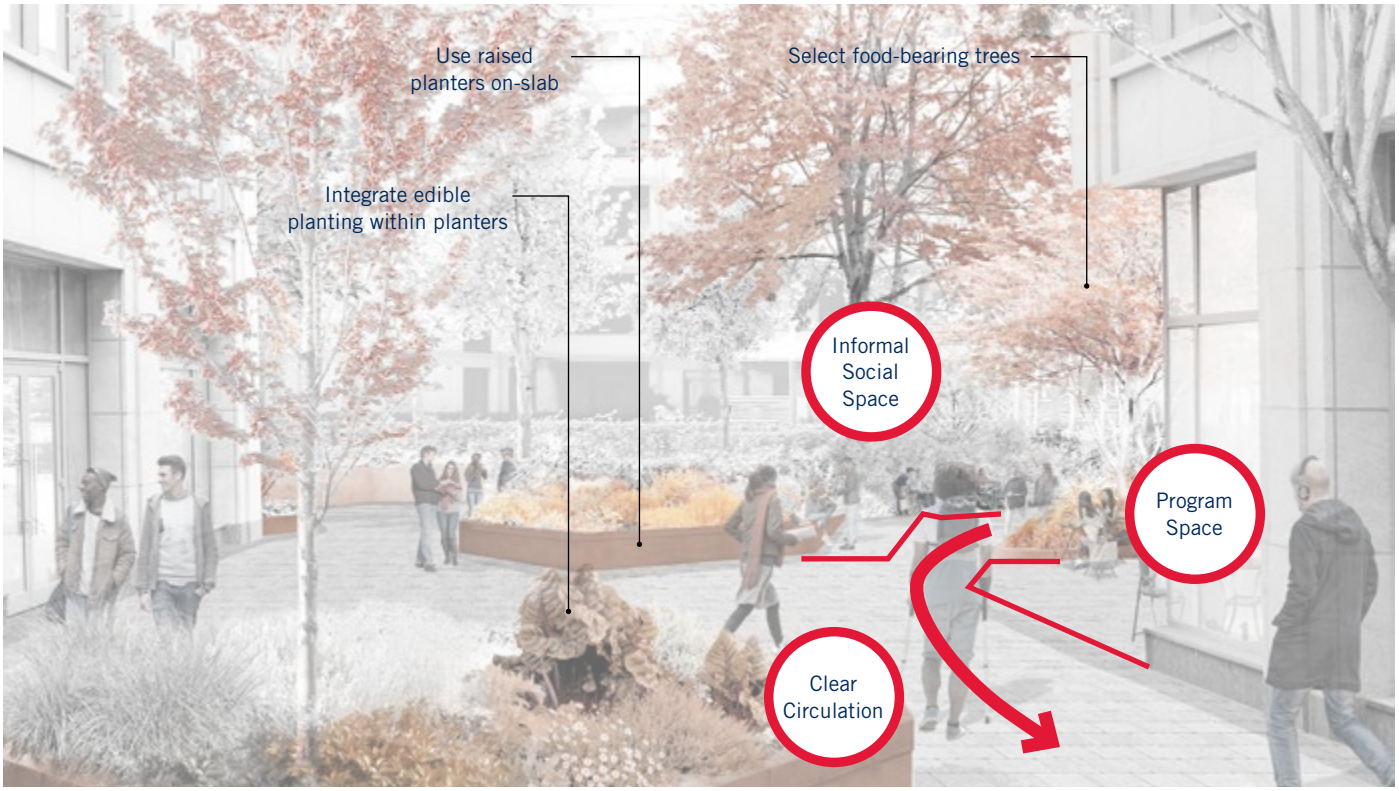
Pollinator support and ecosystem value are critical considerations for designing within the courtyards and mid-block connections to extend natural systems through blocks and deep within the campus. The performance of these urban spaces may also be monitored to support larger campus sustainability and resilience reporting and support opportunities to evaluate the outcomes of integrating permaculture practices and principles within the campus context.



Provide a variety of seating options

Use shade from trees and buildings to create comfortable seating area in all seasons

Use raised planters to structure space and provide flexible use



Select plants to provide winter interest and function

Use paving pattern to define spaces

2. South Campus Precinct Enlargement

3.3 SOUTH CAMPUS

The South Campus is the centre of the original Scarborough College campus. It includes the architecturally significant Science Wing and Humanities Wing buildings (also referred to as the Andrews Building) that trace the ravine edge and frame the limit of the precinct. The built form of the precinct is predominantly built out with only targeted locations for new buildings.

The public realm within the South Campus lacks continuity. Through the introduction of new connections a consistent suite of materials and more robust and integrated planting will provide continuity and has the potential to extend the emerging character of the North Campus through the South to create a unified and complementary network of spaces and experiences across the table lands.

As identified in the Campus Master Plan, Secondary Plan and Urban Design Guidelines, new open spaces may be introduced through the relocation of inefficient or incompatible program and uses, such as surface parking within primarily pedestrianized areas at the South Common. These expanded and new spaces will enhance and support existing open space networks. As aging infrastructure and site elements are replaced, the landscape framework will manifest and enhance wayfinding and connection throughout the precinct. Planting areas will gradually align with campus-wide initiatives and respond to the continual evolution of the public realm. Where possible, impervious surfaces will become replaced with green infrastructure.

Where new buildings are introduced, these will provide opportunities for at-grade activation within the adjacent landscape and public realm. Structures should respond to and respect the adjacent natural environment, and mitigate bird strike through building envelope and landscape design.

Students walking to class in autumn

Ellesmere Block (12)

The north edge of South Campus will redevelop to create a public face to the precinct and provide a visual link between the development of North Campus and the character of the South Campus. The buildings will create a physical presence for the University along the south edge of Ellesmere and provide opportunities for expanding academic and research programming in the South Campus.

At the west, a new plaza will mark the landing of the pedestrian bridge connecting Indigenous House, the North Common and several other North Campus buildings to a network of circulation routes in the South. Leveraging new development north of the Science Wing complex, pedestrian circulation along new building frontages and inside buildings may create comfortable pedestrian routes during all seasons. Planting within the plaza will respond to the natural character of both the ravine edge and woodlot to enhance habitat connections between the spaces.

At the east, new buildings will structure the open space of the Central Gateway site (see page 116). New vehicular connections will allow for lay-by drop-off areas and opportunities to maintain accessible surface parking to serve existing and future buildings. Vehicular paving within the Ellesmere Block will signal pedestrian priority spaces with opportunities for tabletop and shared street conditions to create traffic calming in high pedestrian use areas.

Heritage Woodlot and Science Quad (13) (14)

The existing Heritage Woodlot will connect to the ravine natural heritage system, with a restored landscape and newly introduced landscape corridors directly linking the woodlot to the ravine edge. New formal pathways will trace the perimeter of the woodlot to buffer impacts from the adjacent road. Transitional planting at the edges will support ecological edge functions and filter runoff from maintained pathways.

New informal pathways within the woodlot are possible to allow passage through the natural heritage feature. If introduced, internal paths will use materials that contribute minimal impacts to adjacent areas and provide access to areas for research and learning. Internal pathways will not receive winter maintenance, but could serve as recreation trails if deemed suitable.

At the south end of the woodlot, a revitalized Science Quad will create a flexible open space for passive recreation and informal use. New infrastructure to support events, such as power and possible hook-ups for a temporary stage may be introduced. An existing fire and service lane will serve the Science Wing, but vehicular activity is restricted to off-peak servicing, emergency vehicles, and limited accessible parking to ensure pedestrian safety and comfort within the space.

Rock Walk, Science Wing Plaza and Scholars Way (15) (16) (17)

Forming the southern portion of the Pedestrian Spine (see page 42), these shared access spaces are a key pedestrian connection in the South Campus. The existing spaces will benefit from on-going integration with the campus standard materials and fixtures (see page 64).

Rock Walk will continue to connect the primary passenger drop-off for South Campus along the southeast edge of the Heritage Woodlot to Science Wing Quad, Plaza and the internal campus. Rock Walk serves as a University Laneway providing shared access for service vehicles and some authorized passenger vehicles to accessible parking and loading areas serving the Science Wing complex.

Science Wing Plaza will continue to provide a sheltered plaza for small events and informal use. Due to significant stairs at both the threshold to the Humanities Wing Quad and Scholars Way, pedestrians requiring barrier-free connections south must divert

east around several large buildings or proceed inside to use elevators. At the south end of Science Wing Plaza, a set of steps connects to Scholars Way.

Scholars Way extends to the southern end of the academic campus and connects to the south residence area. Scholars Way provides limited servicing access to the ARC and Humanities Wing buildings, including the South Campus Central Plant.

Humanities Wing Quad and Fred Urquhart Memorial Garden (18)

The Humanities Wing Quad is the threshold between South Campus and the Ravine Lands. A sheltered space with expansive views of the valley and city beyond, the quad will continue as an informal lawn to provide spaces for students to gather and enjoy sunny afternoons. The deep overhangs of the Humanities Wing building create ideal locations to wait out a surprise downpour or shelter from a snow squall.

The Quad will benefit from an update to integrate planting, paving and site furnishings to support and formalize the emerging uses of the open space. The use of art to activate the quad will continue. The University may seek opportunities to commission and exhibit works that engage the unique landscape and complement existing elements within the space. Opportunities for providing additional seating will balance fixed and flexible usage. As an informal meeting and workspace within campus, the quad would benefit from additional power outlets and improvements to the campus wireless infrastructure.

The Fred Urquhart Memorial Garden will continue to showcase the benefits and value of biodiverse and pollinator-friendly planting within the campus. With the expansion of the Edible Campus initiatives and through integration of the permaculture lens, the garden may expand to encompass a more substantial portion of the quad open space and contribute to a larger landscape gesture within the precinct.

South Common (19)

The South Common will be created through the relocation of existing surface parking to a new parking structure along Military Trail. It will provide a terminal open space for the South Campus and the Pedestrian Spine. The South Common will become the new yard for the South Residences, a space for passive recreation and informal gathering, and a place to host larger gatherings and programmed events for the entire campus. The proposed permeable surfacing will mitigate stormwater runoff within the area and will consider additional opportunities to integrate and showcase green infrastructure. New planting will connect the existing tree stand to the natural heritage system and enhance biodiversity and ecological function of the adjacent open spaces.

ELLESMERE BRIDGE

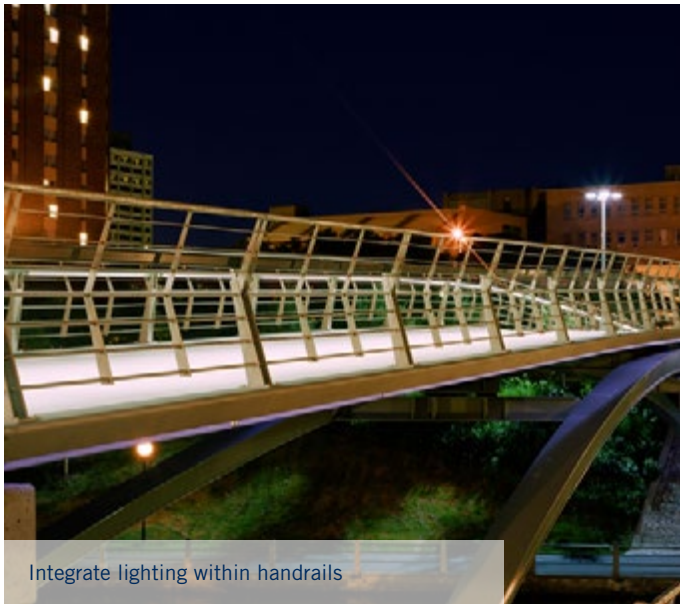
Creating a connection along the west edge of the table lands, the Ellesmere Bridge will enhance pedestrian access throughout the campus. Conceived as a pedestrian and cycling bridge, it will connect the North and South Campuses across Ellesmere Road, between the lands surrounding Indigenous House to the current residential townhouse area and future academic development at the south.

DEMONSTRATION SITE 6: ELLESMERE BRIDGE

The bridge will be strategically located to take advantage of supportive grade conditions and to provide safe access for pedestrians and cyclists along the western edge of the campus. It anticipates the need for a western connection to complement the future eastward shift of Military Trail and to mitigate the congestion of the existing Military Trail crossing.

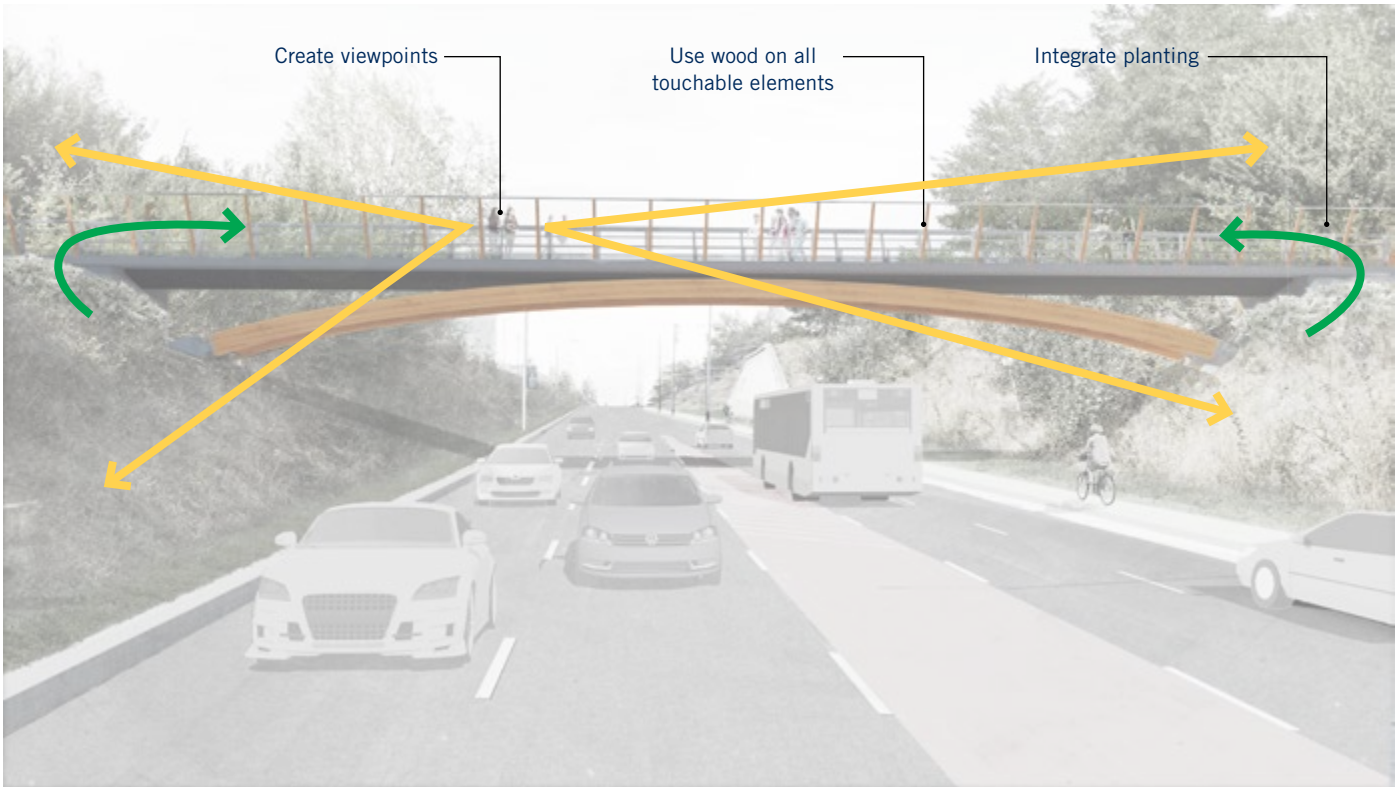
The Bridge will demonstrate innovative and sustainable design and construction practices and consider designs that minimize impact on the adjacent natural heritage systems. The design will serve as a gateway to the campus and visual landmark from Ellesmere Road. It will alleviate congestion at surface pedestrian crossings and improve connections between South Campus, Centennial College and Morningside Avenue.

The bridge will operate year-round and consider alternative surfacing and innovation snow clearing opportunities to create a safe walkable connection in all weather. Railings and guardrails will use natural materials and integrated lighting to maintain pedestrian safety at all times of day.



Integrate lighting within handrails

Use natural materials, such as heavy timber, to provide a design sympathetic to the context



Consider the experience passing under the bridge as well as over

Consider opportunities to integrate plants within the bridge edges

DEMONSTRATION SITE 7: CENTRAL GATEWAY

The intersection of Ellesmere Road and Military Trail is a complex space with several unknown variables. The Realignment of Military Trail is crucial to the redevelopment of North Campus and will create new public realm opportunities for connecting with the existing South Campus. The exploration of future higher order transit connections through and near the new right-of-way in conjunction with external partners will inform the ultimate design and feasibility of various public improvements. Given that these inputs are not yet fully resolved at the time of this plan, what follows are suggestions for how the intersection and adjacent lands could evolve.

Within the demonstration plan an at-grade system of pathways and plazas connect the Promenade and LAMP facility to a new gateway condition at the realigned intersection of Ellesmere and Military Trail and a redeveloped precinct at the north edge of South Campus.

The built form at this intersection will respond to the need for generous and flexible open spaces to support safe and accessible pedestrian movement, create an identifiable and cohesive gateway condition and provide opportunities to extend interior program and activation to the public realm. New development south of Ellesmere needs to consider existing and future location of active services within the municipal right-of-way. Plazas on both the north and south sides of Ellesmere will be created through expanded building setbacks. In addition to creating spaces for activation and occupation, the new landscape spaces will also accommodate safe areas for pedestrians to wait while traffic signals change. Generous and densely planted landscape buffers along Ellesmere are proposed to mitigate grade separation issues, integrate green infrastructure and protect pedestrians from unsafe crossing conditions.

Previous studies of future high-order transit integration have identified the opportunity to provide a pedestrian connection between the North and South Campuses below grade as part of larger right-of-way improvements. The underpass would provide safe and accessible pedestrian connections across the busy vehicle and transit corridor and mitigate conflicts between pedestrians and transit vehicles that may result from extended signal timing to accommodate longer Light Rail Vehicle configurations and complex vehicle manoeuvres to meet proposed system designs.

The following demonstrates two concepts for integrating a pedestrian underpass to create a direct and intuitive link under Ellesmere Avenue and enhance pedestrian connectivity and access throughout the entire campus.

Use planting to buffer grade change (credit: CMG Landscape Architecture)

Create transparent and active building edges to activate upper and lower open spaces (credit: CMG Landscape Architecture)

Concept: Landscape Stair Underpass

The Landscape Stair concept explores opportunities to integrate expanded planting, low-impact development and stormwater management infrastructure, and social spaces at the transition of the Promenade to Rock Walk. Views to the Woodlot connect the designed landscape of the stair to the natural heritage of the campus. Plazas at the upper and lower levels provide access to buildings and activate the open space. Large open spaces at the intersection of Ellesmere and Military Trail provide unimpeded pedestrian circulation and provide public facing spaces to activate and engage with the interior programming of the gateway buildings.

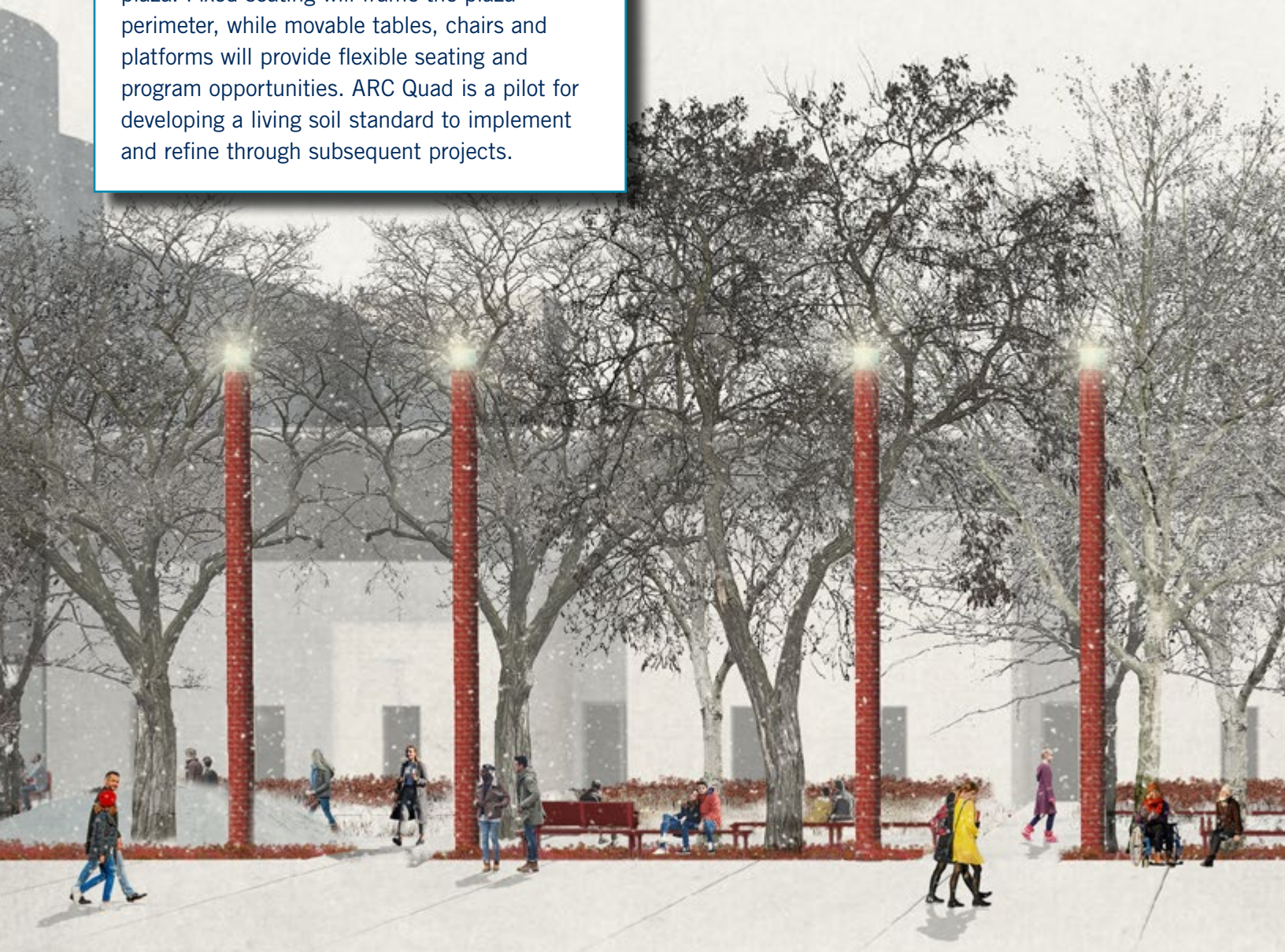
Alternative: Promenade Underpass

A new South Promenade matches the width of the northern Promenade space and connects two generous plaza spaces at the upper and lower levels. The open form allows views to the Woodlot south as pedestrians travel up the stair or ramp. Terraces within the stair provide opportunities for activation and engagement with the adjacent building at various levels. Generous plazas at-grade provide ample space for unobstructed circulation and activation to support and complement the internal program of these landmark buildings.

- Existing or Under Construction Building
- Proposed Building
- Vehicular Circulation
- Proposed High Order Transit Connection
- At-Grade Pedestrian Circulation
- Pedestrian Underpass Connection
- Crosswalk
- Plaza
- Landscape Area
- Existing Buried Water Main

ARC QUAD REVITALIZATION

The renewed ARC Quad is a welcoming part of the campus for all seasons. Naturally sheltered and south facing, the revitalized plaza and planting areas will create a flexible gathering space. New connections through the planting areas will replace worn paths and connect internal food service programming of the adjacent Bladen Wing with the exterior plaza. Fixed seating will frame the plaza perimeter, while movable tables, chairs and platforms will provide flexible seating and program opportunities. ARC Quad is a pilot for developing a living soil standard to implement and refine through subsequent projects.



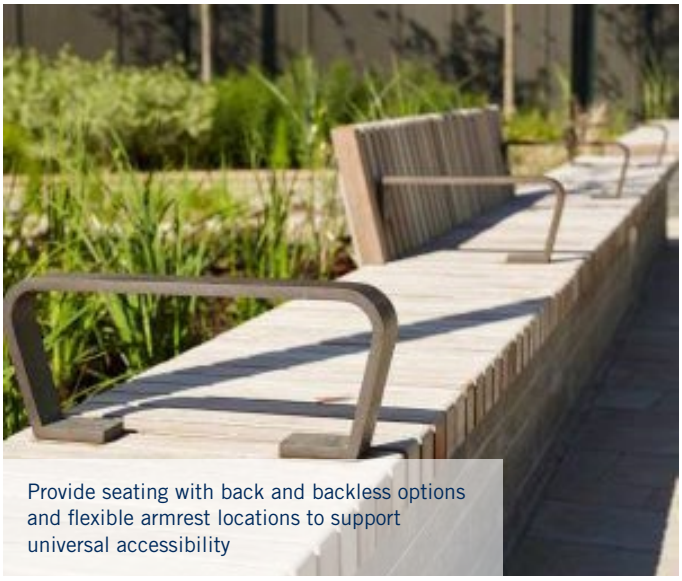
DEMONSTRATION SITE 8: ARC QUAD

A new seasonal canopy structure will create shelter and shade in the plaza during warmer months and be removable in winter to allow the warm sun to reach the plaza. New power infrastructure will provide connection points for food trucks to operate without portable generators, supporting diverse food offerings. Power supply within the site furnishings will provide opportunities for the community to bring their work, classes, and meetings outside.

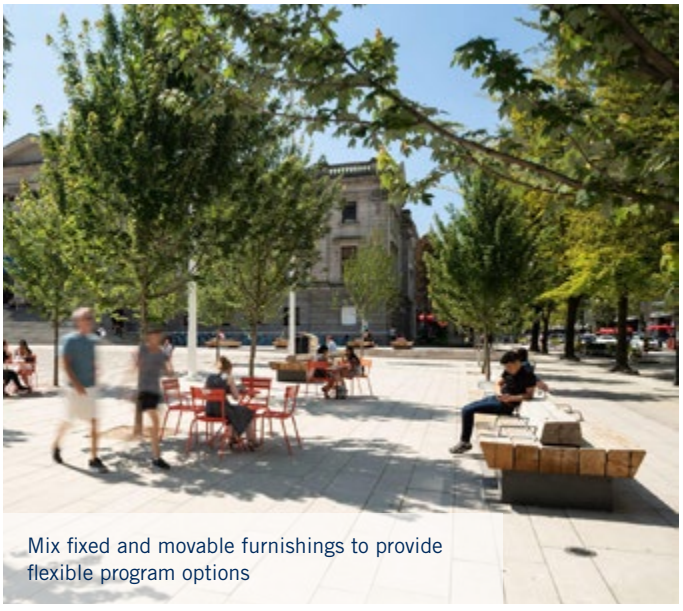
The expanded planting areas within ARC Quad will provide additional areas for passive infiltration. Plant species will support stormwater quality improvements and support regenerative ecology. Opportunities to connect desire paths through planting areas should explore strategies of bridging and elevated connections to minimize impacts on planting areas and maximize opportunities for stormwater infiltration.

ARC Quad will serve as a pilot for developing a living soil standard to implement and refine through subsequent projects. It will also provide opportunities to expand and integrate permaculture and reconciliation efforts through plant selection.

Use elevated walkways to maintain continuous soil volumes and provide expanded stormwater infiltration capacity

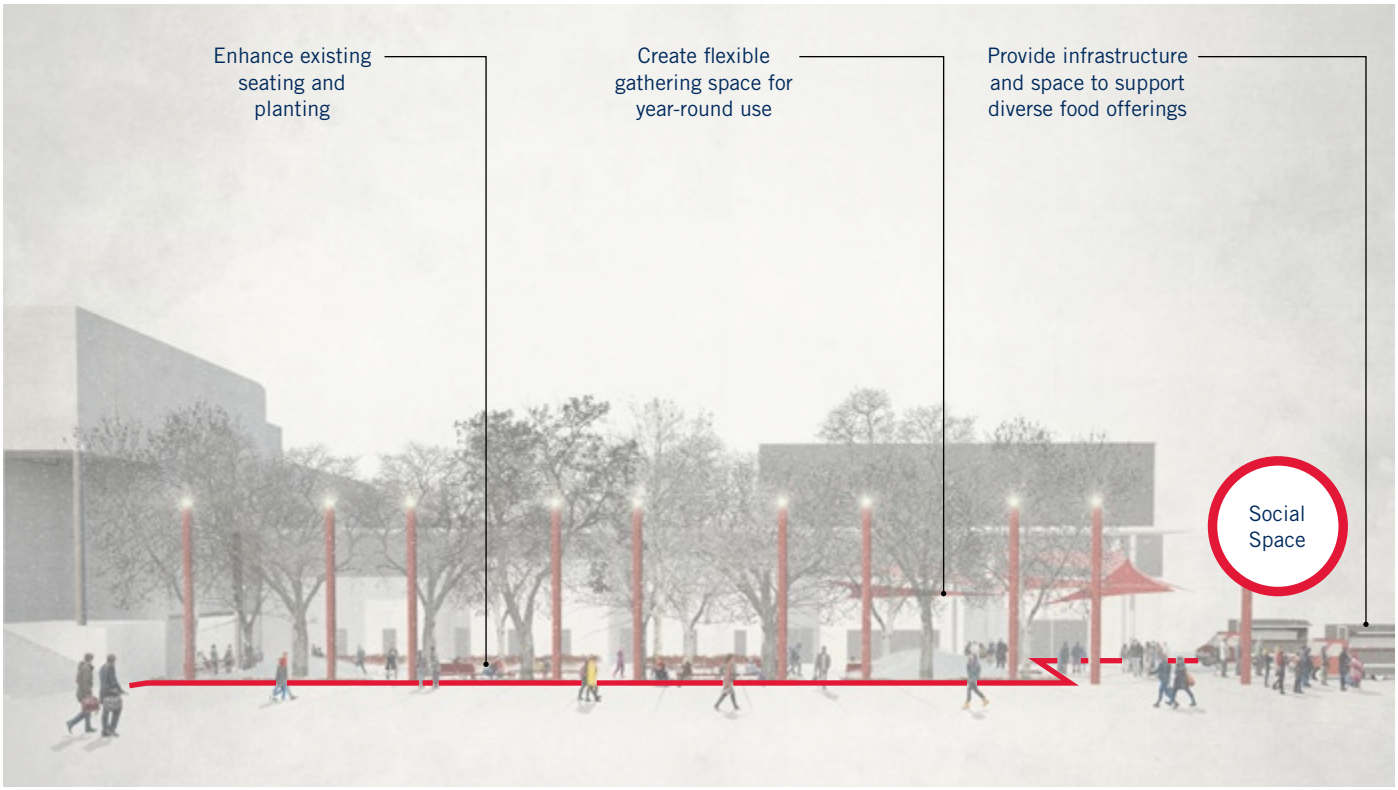


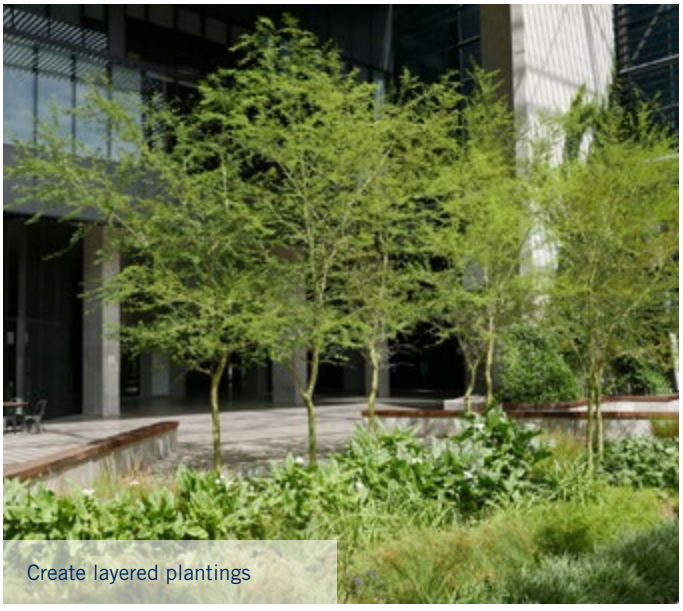
Provide seating with back and backless options and flexible armrest locations to support universal accessibility



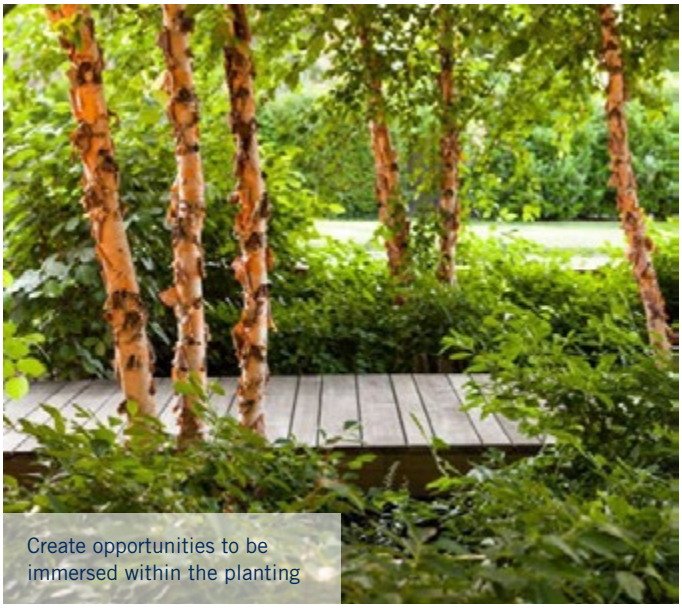
Mix fixed and movable furnishings to provide flexible program options

Shelter should use removable tension fabric to provide increased flexibility for seasonal and special events programming.





Create layered plantings



Create opportunities to be immersed within the planting

3. Ravine Lands Precinct Enlargement

3.4 RAVINE LANDS

The Ravine Lands are over half of the overall campus area and primarily serve active recreation and sport, research, and teaching uses for the campus and act as a welcoming space for the local community. There are significant opportunities within the Ravine Lands to enhance the campus' connection to nature through stewardship and regenerative landscape management activities. Challenges with safety and management of the extensive landscape and creating value and connection for the community will require consistent and ongoing efforts.

As the University continues its work towards Truth and Reconciliation, the Ravine Lands offer distinct opportunities to engage with Indigenous communities to co-develop and collaborate on land-based learning and knowledge sharing opportunities. The University Indigenous community together with Inherent Rights Holders will become active collaborators on informing management, restoration and development of spaces within the Ravine Lands.

Improvements within the Ravine Lands will focus on minimizing impacts on natural heritage while creating new opportunities to engage with and learn within nature. Additional opportunities for creating nursery and horticultural management spaces will be explored within the existing Grounds facilities. Efforts to use local and indigenous material and seed stock for propagation will create opportunities to leverage campus spaces, knowledge and communities to assist with implementing permaculture initiatives throughout campus.

New spaces for research and learning will be integrated into expanded buildings, including the proposed Environmental Innovation Centre. In addition to built spaces for research, teaching and community outreach, initiatives within the Ravine Lands will support the restoration of various ecosystems and the integration of regenerative land management practices to support the unique ecology of the site.

Access and circulation within the Ravine Lands will integrate low impact development practices and improve accessibility and safety of pedestrians while addressing the need for increased parking to serve the existing and expanding program. Integration of CPTED principles will also be crucial to supporting safe landscape and public realm in this isolated area of campus.

The Ravine Lands also provide significant value for external communities to UTSC. The Valley Recreation and Sports Fields and Tennis Facility provide significant active recreation value for the City and surrounding communities. Trails throughout the precinct provide regional connections for walking, running, and cycling as well as opportunities for expanded winter activities when left uncleared or accompanied by uncleared shoulders.

Nestled within the Ravine Lands, Miller Lash House provides event hosting year-round within the buildings and throughout the ornamental gardens, lawns and open spaces of the property. Any improvements within the Miller Lash House site will consider impacts on the cultural heritage of the architecture and landscape. Improvements to the accessibility of the building and site will support broader accessibility initiatives within the larger campus and precinct through sympathetic and subtle design gestures that contribute to the overall heritage value of the site and consider the ecological context.

Trail Connections 20 21

New trail connections will build on existing initiatives to enhance the accessibility and safety of pathways within the Ravine Lands. These connections will serve both the University community and the larger city and will be jointly led with City of Toronto and TRCA.

One such route is a formalized connection that will weave northward through the wooded slope from the base of the Valley Lands Trail to the intersection of Morningside Avenue and Ellesmere Road. The path has the potential to connect the existing Highland Creek Recreational Trail to the future Meadoway Recreation Trail north of the campus.

Within the campus, the existing pathways along both sides of Highland Creek may be connected with a new bridge at the west edge of the campus lands to create a continuous loop and provide alternate access pathways within the University lands. The new loop will provide alternate opportunities to experience the creek and nearby ecological areas, as well as reducing impacts and providing opportunities to selectively limit access for landscape restoration activities within the valley. Stable and accessible paving will provide additional access points to the Highland Creek ravine for the campus community and public.

New lighting that is suitable for natural heritage areas and sensitive ecosystems will be explored to expand use of all valley pathways in low light conditions. During winter, strategic maintenance of pathways will provide opportunities for snow sports and active recreation. In some locations where pathways need to be cleared, additional buffer edges may be explored to assist with the establishment of snowshoe or cross-country ski circuits within the Ravine Lands.

Wayfinding and intuitive navigation are important components of the Ravine Lands trail network. Opportunities for markings on pavement or use of discrete signs will minimize visual clutter within the valley. Opportunities for integrating wayfinding with conventions used in adjacent natural heritage and recreational trail networks will create a consistent character and language for the natural heritage system that complements and contributes to wayfinding throughout the campus.

Indigenous Landscape 22

Within the Ravine Lands are opportunities to collaborate with the campus and local Indigenous communities and Inherent Rights Holders to provide a space dedicated to land-based teaching and knowledge sharing. Ongoing engagement and meaningful dialogues with the University Indigenous communities, Rights Holders, and additional campus partners are essential to develop programming that can support Indigenous and non-Indigenous communities and uses of the space. Opportunities for creating a gathering space along the north bank of Highland Creek to support diverse uses will facilitate opportunities for public and private use by Indigenous communities and allow for the landscape to be co-designed and co-managed with Indigenous partners.

Meadow Restoration 23

A new meadow landscape and wetland prairie garden is proposed on the former site of the golf course south-west of Miller Lash House. Planting will transition from a restored wetland meadow at the west to a more curated prairie garden and formal lawn adjacent to the house to support event uses and programming while providing horticultural examples of ecological planting strategies. Pathways within the restored meadow will explore the use of elevated boardwalks to decrease impacts on the diverse ecosystem and provide a variety of habitat opportunities for species living within the meadow and adjacent riparian areas. Opportunities to introduce regenerative landscape management practices, such as the potential for controlled burns, to manage the meadow landscape will contribute to educational opportunities and programming within the Ravine Lands.

Valley Recreation & Sports Fields and Tennis Facility (24) (26)

The lands formerly occupied by the old tennis courts will continue to support additional informal and formal use as a recreation field and open-air event space. Additional planting to frame the field and open space can be used to provide additional buffering to Miller Lash House. The creation of selective view corridors to the creek and access points to the new pathway will enhance the integration of the space with surrounding spaces to the east.

The sports field located south of the access road and the area surrounding the Tennis Facility will benefit from the introduction of trees around the perimeter of the playing areas to create shelter and refuge from the sun for athletes and spectators. Tree planting at the limit of the outfield of the baseball diamond may not provide significant shade benefit, however the use of densely crowned species may improve safety along the adjacent road and pedestrian paths from fly balls. The integration of bioswales and green infrastructure as field improvements are undertaken will help to mitigate stormwater quality impacts resulting from maintenance of the sports fields and courts.

Opportunities for developing and testing innovative sports field management practices that align with regenerative landscape management and permaculture principles should be explored to align management practices and targets for the entire campus. Strategies developed for sports field management may also inform management and maintenance practices in major opens spaces of the North and South Campus precincts.

Environmental Innovation Centre (25)

A new structure will replace the existing Harbutt House adjacent to the new tennis courts The expanded building will introduce new amenities for the active recreation uses within the Ravine Lands and create a new hub for environmental sustainability research and experiential education. The surrounding landscape will respond to the combined uses of the research hub and courts to provide spaces for users to interact with the landscape and social spaces with shelter from weather. Providing accessible access is essential to the redevelopment of this structure for public use. Surrounding planting will demonstrate consideration for the ecological function and value of the site.

Works Yard Nursery & Community Garden (27)

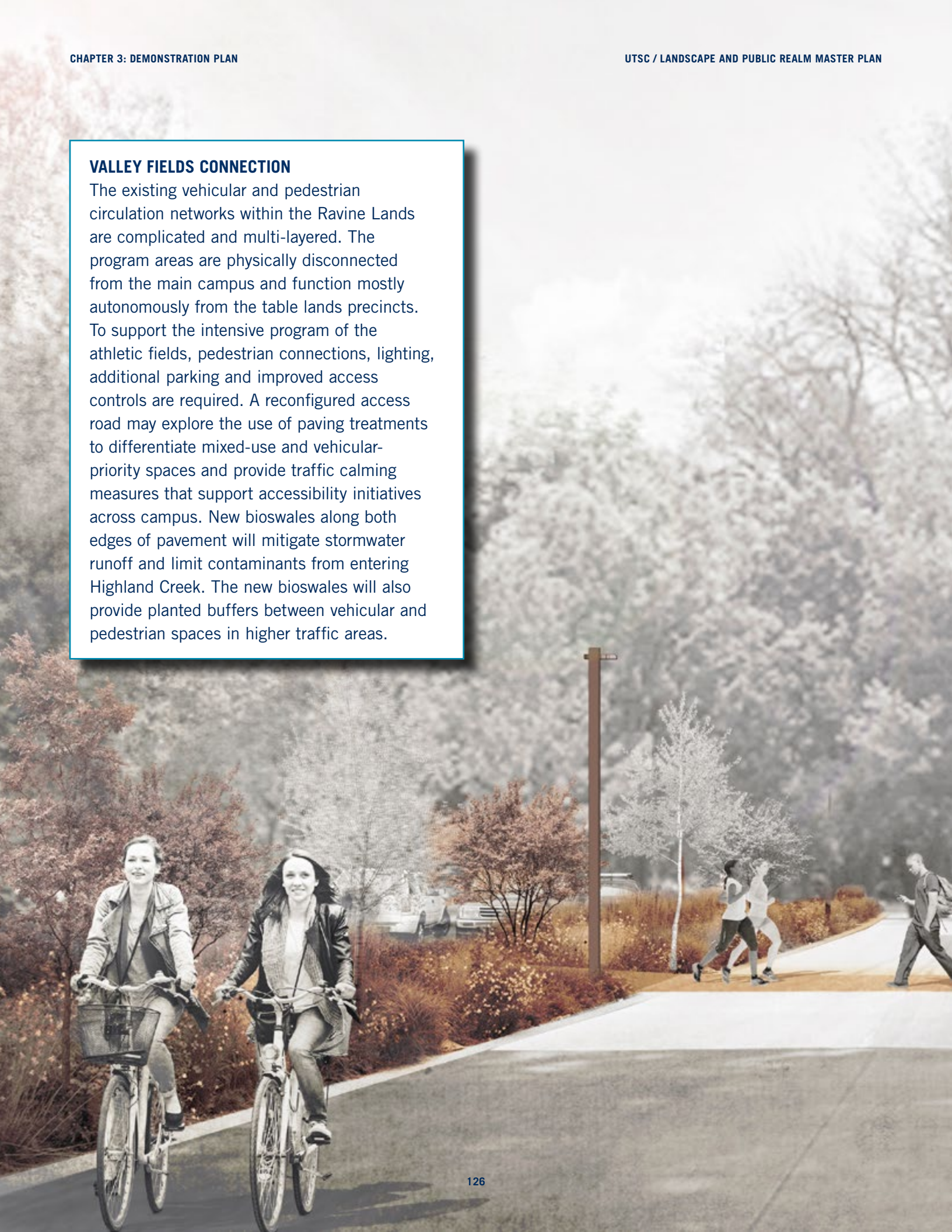
With the expansion of program offerings and community outreach at the Campus Farm, the existing allotment garden within the Ravine Lands may phase out to address safety and suitability issues arising from the garden's proximity to the active operations yard.

The existing Grounds and Facilities operations yard could expand to integrate the allotment garden as a new nursery to grow plant stock for use in campus landscapes and planters. Opportunities to partner with UTSC faculty and research to develop locally sourced and indigenous seed banks, plant stock and propagation research may be explored to enhance the value of the nursery as a space for teaching and learning and support integration of permaculture principles within operational and academic pursuits. Opportunities to integrate the nursery function within Edible Campus initiatives may also support expansion of the Edible Pathway to include spaces within the Ravine Lands.

Miller Lash House

VALLEY FIELDS CONNECTION

The existing vehicular and pedestrian circulation networks within the Ravine Lands are complicated and multi-layered. The program areas are physically disconnected from the main campus and function mostly autonomously from the table lands precincts. To support the intensive program of the athletic fields, pedestrian connections, lighting, additional parking and improved access controls are required. A reconfigured access road may explore the use of paving treatments to differentiate mixed-use and vehicular-priority spaces and provide traffic calming measures that support accessibility initiatives across campus. New bioswales along both edges of pavement will mitigate stormwater runoff and limit contaminants from entering Highland Creek. The new bioswales will also provide planted buffers between vehicular and pedestrian spaces in higher traffic areas.



DEMONSTRATION SITE 9: VALLEY FIELDS CONNECTION

The existing access road will be re-conceived as a route that supports and promotes safe and comfortable use of the Ravine Lands and integrates sustainability and resilience measures to benefit the surrounding natural environment. A new control gate at the entrance will help manage access to the facilities in the valley and provide a turn-around point and pedestrian drop-off to reduce demand for vehicular infrastructure (roads and parking) in the valley.

In support of passive wayfinding and improving safety and legibility of the circulation network in the Ravine Lands, the reconfigured roadway may explore the use of paving treatments to differentiate mixed-use and vehicular-priority spaces. Paving will also be key to signifying crossing points and integrating traffic calming measures along the route. Best practices for the design of traffic calming and pedestrian crossings will be employed to ensure consistency with treatments and strategies employed throughout the campus (in both the valley lands and table lands).

New bioswales along both edges of pavement should be used to mitigate stormwater runoff and limit contaminants from entering Highland Creek. The new bioswales will also provide planted buffers between vehicular routes and pedestrian pathways and gathering spaces in higher traffic areas. The existing parking lot will expand and include new green infrastructure facilities.

Improvements to the existing pedestrian network will enhance the pedestrian experience and accessibility of the Ravine Lands. New pedestrian scaled lighting along all pathways will provide safe access to valley amenities in low light conditions.

Create diverse planting along roadway and within bioswale

Apply current best practices for design of pedestrian crossings for traffic calming (credit: NACTO)

Integrate responsive pathway lighting to mitigate impacts on wildlife


Provide safe pedestrian crossing facilities
Create a dense and diverse planted buffer between vehicles and pedestrians
Provide a generous and flexible pathway to support multi-modal circulation
Runoff Capture


Road Allowance
Road Allowance
5.0m
6.0m
5.0m
3.0m
Parking Lot
Bioswale/ Planting Zone
Roadway 3.0m Travel Lane
Planting Zone
Pedestrian Clearway
Open Space

4.0 IMPLEMENTATION

Effective implementation of landscape and public realm projects is critical to meeting the vision and guiding principles of the Landscape and Public Realm Master Plan.

4.1 PROJECT DELIVERY

The UTSC Landscape and Public Realm Master Plan provides an overview that will guide the long-range development of the campus. This chapter identifies implementation strategies and discrete tasks—identified as either a project or action—that the University may carry out to support the implementation of the public realm vision.

Decisive action is required to achieve the proposed vision for UTSC's public realm. The path to implementation is a logical, incremental process with each step building upon those before it. Certain initiatives, already underway, must push forward and the momentum from these leveraged to initiate new actions.

This Master Plan is not a blueprint for landscape construction and planting. All aspects of implementation will require further levels of preparatory design, planning and management detail before site work is initiated. Development and improvement to the campus public realm must acknowledge its large size and the realities related to ownership, the market and access to potential funding sources.

The improvements recommended in this public realm plan will largely proceed as capital projects by UTSC—either associated with a development site, state of good repair, or as a discrete landscape project—but some, such as the realignment of Military Trail and improvements to the ravine, will involve partnerships with the City of Toronto and the TRCA. The University will invest in elements of the public realm as will their partners. Each individual planning and design process will define the specific details and how they are delivered.

Some landscapes may happen more slowly and incrementally. In these instances, a staged landscape development and management plan is more appropriate. In areas where piloting habitat analogues or edible landscapes is deemed suitable, the implementation approach may involve initial development of "test areas" where plant selection, planting and management techniques are first tested and then more broadly applied once experience has been gained.

4.2 IMPLEMENTATION STRATEGIES

Work in a Coordinated and Strategic Way
UTSC will need to work with numerous stakeholders and partners to successfully deliver the recommendations presented in this plan. This implementation strategy should link to campus work plans for buildings and public spaces to ensure the efficient delivery of each project and align with other University sub-surface and infrastructure projects.

Focus Funding and Physical Improvements in Concentrated Areas
Most of the landscape and public realm projects will rely on capital funding from various sources. To the University's advantage, the great majority of the campus public realm is within its ownership. This increases the opportunity to successfully leverage the investment in buildings and infrastructure to ensure public realm improvements are bundled with these works and not as individual undertakings. Additional opportunities for connecting landscape and public realm funding to ongoing research within the campus or broader community should be considered and pursued.

Update Regularly
The University should revisit and update this implementation strategy on a recommended bi-annual basis at minimum to ensure it remains coordinated with larger campus planning and capital delivery goals. Any changes should take place with due regard to the main principles and strategies of this Plan. The preparation of landscape design and strategic management plans to support the implementation of the landscape and public realm master plan should project to a five-year planning horizon and be reviewed and updated on an annual cycle.

Measure Success over Time
The plan has a long-term time frame, and not all projects identified will occur immediately. Several factors will determine the pace of progress: funding availability, changes in University and partner priorities.

The master plan identifies several projects and actions that the University can comfortably move forward in the coming years. Where possible, coordinate projects with the University's capital planning.

The University should take steps to document the positive and negative outcomes that result from campus public realm improvements, to learn from previous projects and apply those lessons to those that follow.

4.3 PROJECTS AND PHASING

Following are descriptions for known potential projects to advance the objectives and principles of both the Campus Master Plan and this Landscape and Public Realm Master Plan. Intended as a living document, the University should update this list of projects over time to ensure delivery and monitor progress. The plan identifies several projects to construct individually or coordinated with others. It recommends early opportunities and the first major projects. The implementation strategy will assist the University with budgeting, coordination, and delivery. The order of the projects can accelerate with availability of funding and changing priorities. The order of projects within each phase does not suggest order of priority.

ONGOING

Campus Farm. (A)
The program and facilities of the Campus Farm will expand incrementally over time, in consideration of all environmental constraints and as funding allows. Design of the site and programs will consider management capacities, knowledge sharing and research needs in an integrated manner. New and expanded structures and servicing will support the living landscape and learning opportunities at the Farm and demonstrate innovative and regenerative approaches to development. The Farm will be an exploratory space to support the growth of field-tested ideas, and build on the knowledge of UTSC community members across the campus.

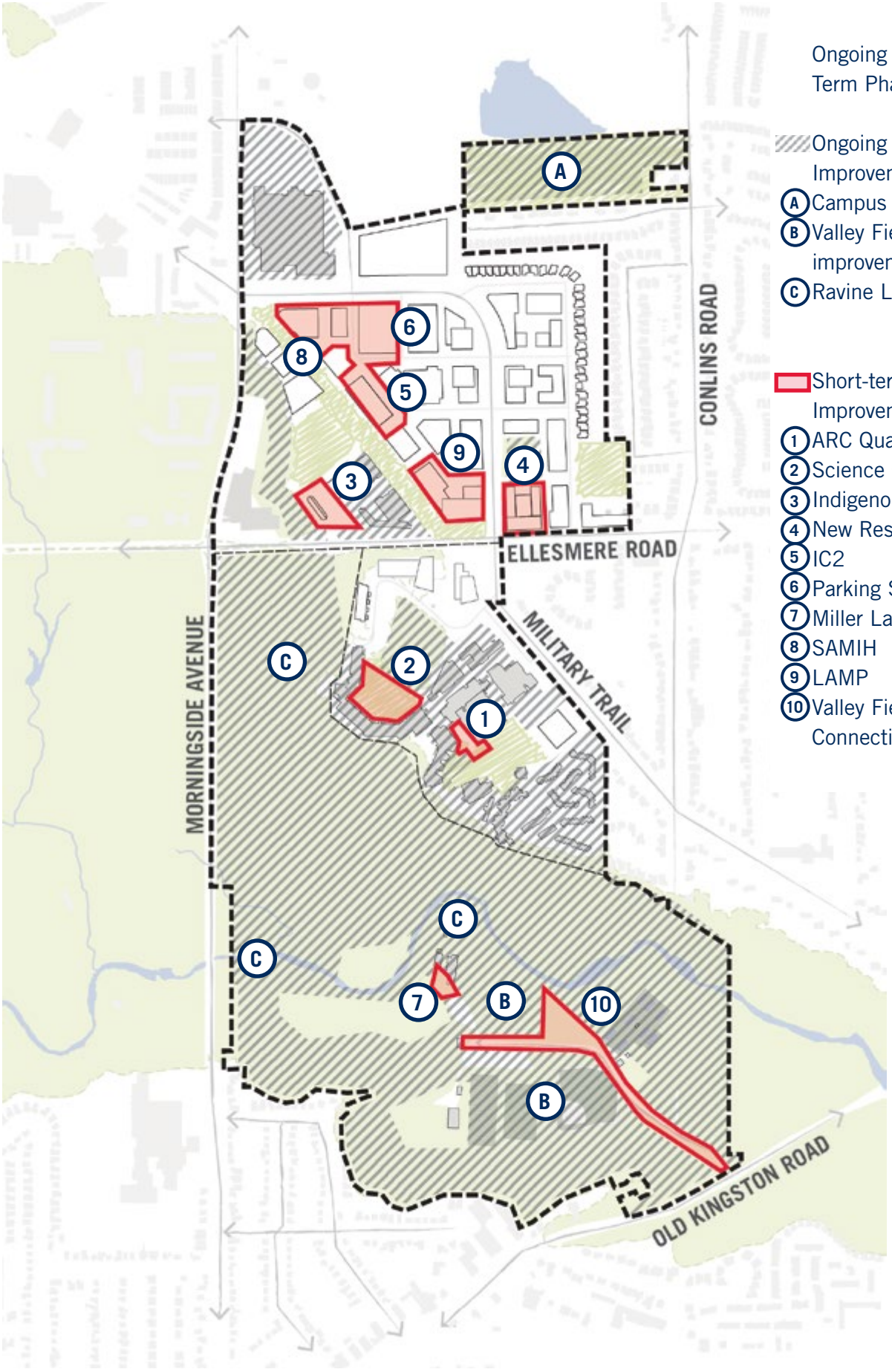
Valley Fields Improvements. (B)
The University will retain and enhance the existing recreational field through restoration and expansion of the perimeter planting. When not in use, the field will provide informal gathering space, open-air performance and event functions and a picturesque space to enjoy the Ravine Lands.

Ravine Lands Trails. (C)
Expansion and maintenance of trails will continue in all phases. New trails along the south edge of Highland Creek and from the base of the Valley Land Trail to Morningside Avenue will require coordination with and approvals from TRCA and City of Toronto.

Ravine and Woodlot Management.
The existing natural heritage of the campus will continue to require consistent and on-going management to mitigate invasive species and degradation of the environment. A comprehensive management strategy and program will be developed to engage the campus community in the protection and restoration of the landscape.

General Public Realm State of Good Repair Improvements.
Significant portions of the South Campus include infrastructure, public realm spaces and landscapes that are reaching the end of life and will progressively need repair, replacement, or augmentation to reflect the current needs of the campus. As state of good repair and replacement improvements are identified, the University will review and coordinate additional minor works to advance this plan.

Social and Ecological Permaculture Activation.
The University will initiate educational and cultural processes within existing and new landscape and public realm spaces focused on collaboration, social justice, decolonization, anti-oppression, and community engagement to build trust and relationships that are given adequate room to be developed in relation to landscapes, gardens, food access and sovereignty.



Ongoing and Short-Term Phases

Ongoing Improvements
- A Campus Farm
- B Valley Fields improvements
- C Ravine Lands Trails

Short-term Improvements
- 1 ARC Quad
- 2 Science Quad
- 3 Indigenous House
- 4 New Residence
- 5 IC2
- 6 Parking Structure
- 7 Miller Lash House
- 8 SAMIH
- 9 LAMP
- 10 Valley Fields Connection

SHORT-TERM (0-5 YEARS)

Projects identified as short-term are already approved, associated with in-progress capital projects, or do not require extensive municipal approvals.

ARC Quad. 1
Revitalization of an existing plaza adjacent to the ARC Building along Scholars Walk. First phase of improvements scheduled for 2022.

Science Quad. 2
This existing open space in front of the Andrews Building currently houses several portables that are being removed. Restoration of the space will happen initially with a redesign planned soon.

Indigenous House. 3
Set to open in 2023, this exciting campus project will represent a highly visible step in the heart of the campus. Set adjacent to the ravine in the north campus, the landscape components will relate to this important setting along pathways linking to future projects, including Ellesmere Bridge, North Common and the Promenade.

New Residence. 4
A new student residence at the corner of Ellesmere Road and New Military Trail will complete construction in 2023. The residence is south of the existing woodlot and will include landscape elements such as improved streetscapes, roofscapes, courtyards and pathways.

IC-2 (Instructional Centre 2). 5
This state-of-the-art teaching space will create a central hub on the North Campus once completed in 2024. The streetscape and a plaza will eventually abut the future Promenade and provide an anchor along the pedestrian route and across from the future North Common.

North Campus Parking Structure. 6
Set to be completed in 2024, this six-storey structure is being constructed in the North Campus along the future realigned Military Trail corridor. Landscape elements will include streetscape enhancements and the first implementation of the enhanced University Street demonstration.

Miller Lash House. 7
Scheduled for completion in 2022, a new accessible pathway and renovation of the ornamental gardens at the front of Miller Lash House will enhance the access and inclusion of the venue. New planting will explore opportunities to integrate an ornamental landscape within a sensitive natural heritage system and enhance the garden's resilience to the negative impacts of climate change.

SAMIH (Scarborough Academy of Medicine and Integrated Health). 8
Targeted for completion in 2025, this future building will support the academic efforts in the area of Health, well-being and resilient communities. Located at the intersection of Morningside Avenue, the Promenade, and the realigned Military Trail and across the street from the Toronto Pan Am Sports Centre, this project has a significant placemaking role on campus. Ensure that the associated landscape and public realm quality is of the highest order.

LAMP (UTSC / Scarborough Centre for Literatures, Arts, Media and Performance). 9
Currently in planning, LAMP will be located at the opposite end of the North Campus to SAMIH. LAMP is also a landmark project that anchors the Promenade at the intersection of Ellesmere Road and the realigned Military Trail. This major building will contain specialized spaces to support academic programs, arts and culture activities, and community collaborations, including potential spaces for art creation and display. The landscape elements should facilitate movement and gathering to support the interior programming.

Valley Fields Connection. 10
Addressing the need for safe and accessible circulation within the Ravine Lands, the new Valley Fields Connection is a multi-modal expansion to the existing road that serves Miller Lash House and the Valley Field parking lot. The reconfigured roadway will accommodate green infrastructure and planted buffers to create a safer and more comfortable environment for pedestrians and mitigate stormwater impacts on the valley ecosystem. The walkway will integrate lighting and buffer planting to enhance the pedestrian experience. New pedestrian crossings will incorporate traffic calming measures.

MID-TERM (5-15 YEARS)

Mid-term projects are tied to anticipated capital funding projects or already identified in State of Good Repair improvement projects. These projects may require municipal or agency approvals.

Ellesmere Bridge. 11
Providing a new pedestrian and cycling link over Ellesmere Road, the Ellesmere Bridge will connect the North and South Campuses at the west. This landmark structure will mark at important arrival to the campus and should achieve a high level of design excellence. Each end of the bridge will feature a landing space to connect with adjacent landscape features, and support passive wayfinding and safe circulation within campus spaces.

Fieldhouse. 12
The Fieldhouse will address the need for year-round access to athletic fields and with the Toronto Pan Am Sports Centre (TPASC) and SAMIH complex create an active recreation hub and wellness hub for the campus and surrounding community. The landscape and public realm of the Fieldhouse will link the Campus Farm with the main campus and include connections to the Meadoway Recreational Trail creating opportunities to integrate the internal program with circulation routes to create activity loops and integrate facilities that support healthy, active living on campus.

Military Trail Realignment. 13
This new public street will catalyze the growth and development of the North Campus and is required before the Promenade is possible given it will occupy the former Military Trail right-of-way. The new alignment will provide address and access to new development blocks. Landscape elements in the right-of-way will require coordination and consultation with the City of Toronto given the street is a public asset.

Promenade. 14
The Promenade will become one of the highest profile public spaces at UTSC. Occupying the former Military Trail right-of-way, this pedestrian priority plaza will serve as the primary address for numerous new buildings as the university grows. The elements and treatments will demonstrate the highest quality on campus and serve as one of the many postcard moments. A temporary landscape and open space may be installed along the frontages of the Promenade in advance of future built form projects to support the full vision of the open space.

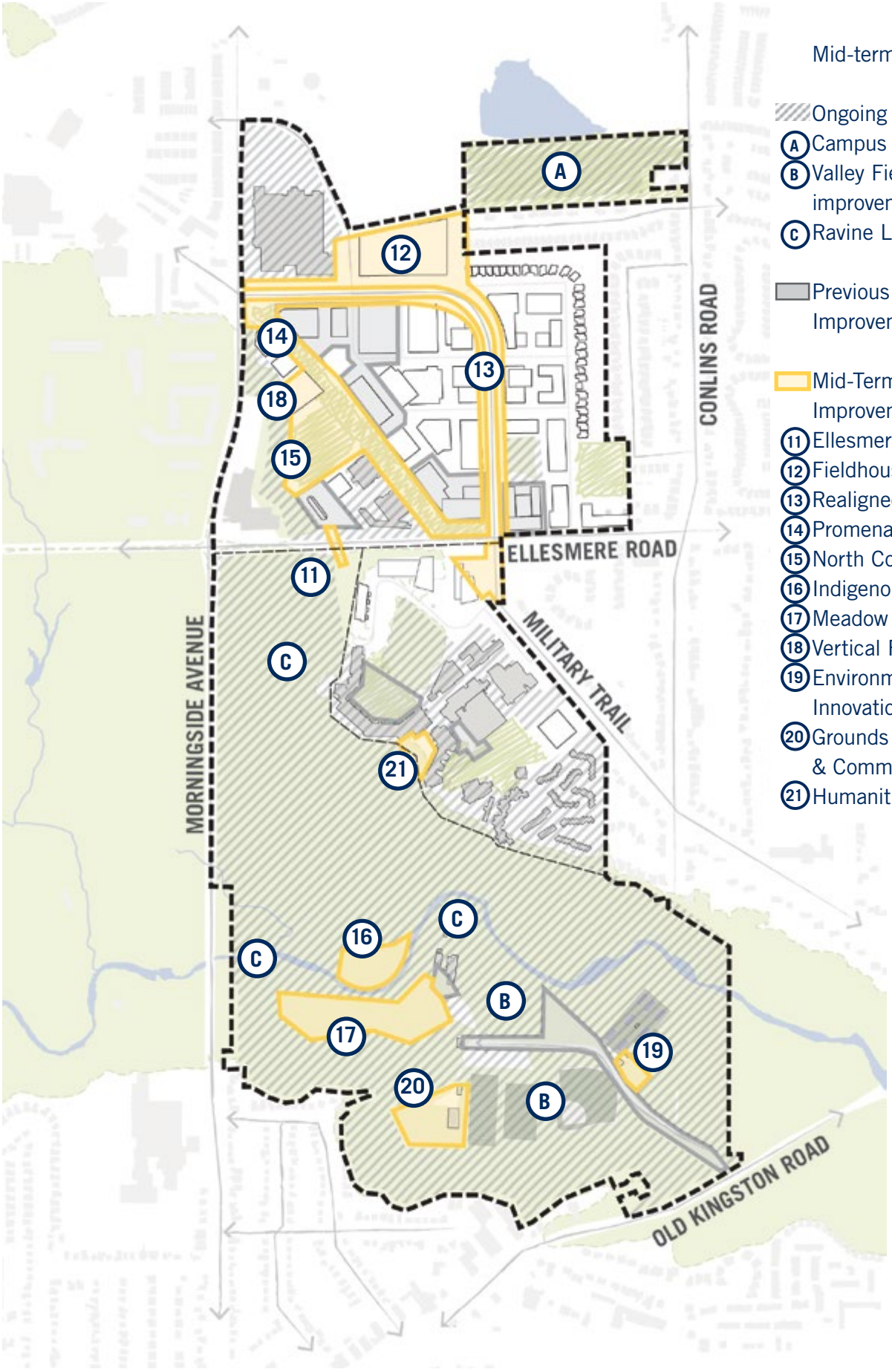
North Common. 15
The North Common will become the central green gathering space on the North Campus. The site moderates the transition from the ravine edge to the Promenade and more urban campus blocks. The main feature will include a large green, but the edges present the opportunity to expand the ravine forest character and function into the campus.

Indigenous Landscape. 16
Ongoing collaboration and dialogue with the University Indigenous communities, Inherent Rights Holders and campus partners will continue to develop opportunities for integrating Indigenous landscapes throughout the campus. Initial spaces within the Ravine Lands may be co-developed with partners and Rights Holders to initiate and build relationships and develop strategies for co-management and joint development of programming and teaching opportunities within the designated landscapes.

Meadow Restoration. 17
The restoration of the former Miller Lash House golf course into a wet meadow and event garden will provide research and teaching opportunities for the management and restoration of endemic landscapes of the Highland Creek watershed. A more curated and formal event garden and lawn will support Miller Lash House programming.

Vertical Farm. 18
A joint effort between UTSC and Centennial College, the Vertical Farm is an exciting initiative aimed at advancing the clean tech sector through research, academic programming, and commercialization. Among the partnership plans include the development of a living lab that will apply innovative technologies to food production in an urban setting. The Vertical Farm will create training and research opportunities in a variety of fields including waste management, clean energy, sustainable building design, water conservation, and urban agriculture, among others.

Environmental Innovation Centre. 19
Conceived as a new home for research and innovation in environmental sciences and sustainability, the centre will replace the existing Harbutt House building and provide amenities for the nearby tennis courts and athletic fields. An exterior event space will provide opportunities to engage with and share the studies explored within the building and throughout the Ravine Lands. The building and site design will demonstrate leadership in environmentally forward design and construction in ecologically sensitive areas.



Mid-term Phase

Ongoing Improvements
- A Campus Farm
- B Valley Fields improvements
- C Ravine Lands Trails

Previous Phase Improvements

Mid-Term Improvements
- 11 Ellesmere Bridge
- 12 Fieldhouse
- 13 Realigned Military Trail
- 14 Promenade
- 15 North Common
- 16 Indigenous Landscape
- 17 Meadow Restoration
- 18 Vertical Farm
- 19 Environmental Innovation Centre
- 20 Grounds Yard Nursery & Community Gardens
- 21 Humanities Wing Quad

Ground Operations Yard and Nursery. (20)
The existing Grounds Operations Yard will gradually expand to include the site of the existing community garden. The community garden will convert into a nursery to cultivate plant stock for the campus and reduce reliance on external plant producers. The nursery will also provide opportunities for the Grounds team to gain increasing experience in horticultural practices and will serve as a training space.

Humanities Wing Quad. (21)
Enhancements to the Humanities Wing Quad will focus on providing additional amenities and infrastructure to support use of the space as a meeting and informal work space. The expansion of the Fred Urquhart Memorial Garden may extend the horticultural expression of the space. All improvements should continue to enhance the natural microclimate of the site and enhance the site's character as a threshold between the Ravine Lands and South Campus.

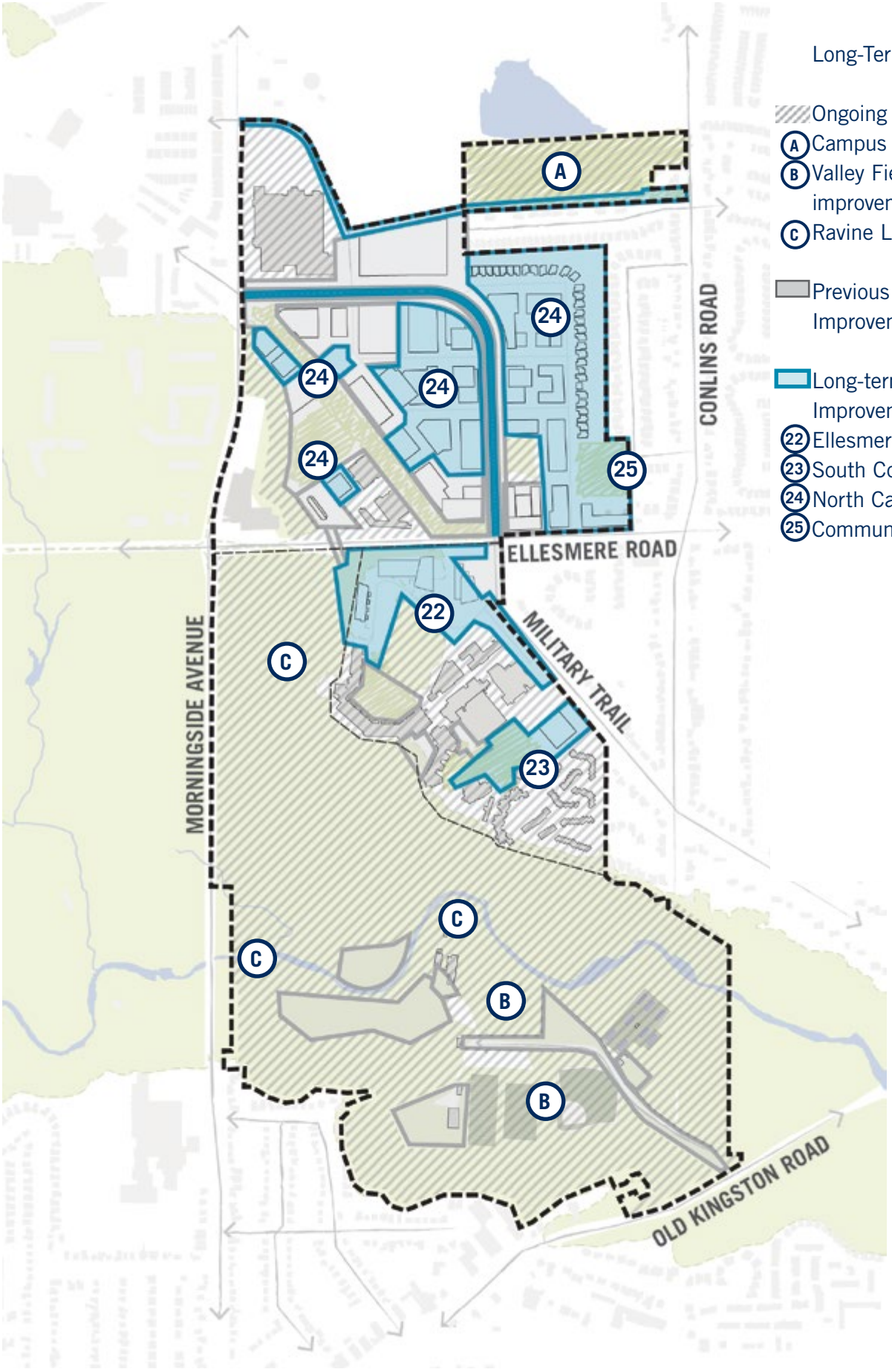
LONG-TERM (15+ YEARS)

Ellesmere Block. (22)
Design and construction of the Ellesmere Block structures will be informed by the ongoing development and opportunities for higher-order transit along both Ellesmere and potentially along the realigned Military Trail. The design of the complementary public realm in this area will address vehicle movement and passenger pick-up and drop-off in this crucial arrival area. Additional consideration for the design of the existing Military Trail streetscape and frontage south of Ellesmere may inform the development of these sites.

South Common. (23)
The south terminus of the primary pedestrian spine, the South Common will replace an existing parking lot and provide necessary open space for the South Campus. The landscape will build on existing open space elements and integrate green infrastructure to mitigate stormwater run-off within the surrounding areas.

North Campus. (24)
Development of the rest of North Campus will take advantage of preceding projects through the coordinated buildout of adjacent sites to frame the implementation of University Streets and Mid-block Connections and Courtyards in continuous segments. Some parcels of the North Campus may be advanced based on funding and academic needs. The composition and program of buildings and adjacent open spaces will be developed as priorities are identified, including the potential to advance new residential opportunities.

Community Common. (25)
The Community Common is a shared open space that acts as a gateway to the adjacent residential community to the east of North Campus. This open space should be completed in conjunction with the construction of the residential blocks in North Campus to provide valuable open space for campus residents, especially for mature student and family housing stock.


Long-Term Phase
Ongoing Improvements
A Campus Farm
B Valley Fields improvements
C Ravine Lands Trails
Previous Phase Improvements
Long-term Improvements
22 Ellesmere Block
23 South Common
24 North Campus
25 Community Common
CONLINS ROAD
ELLESMERE ROAD
MILITARY TRAIL
MORNINGSIDE AVENUE
OLD KINGSTON ROAD

4.4 ACTIONS AND NEXT STEPS

In addition to the projects described above, a series of administrative actions, studies, and next steps are recommended to effectively achieve the vision identified in this Landscape and Public Realm Master Plan.

Develop Project Planning Protocols to include Inherent Rights Holders.
UTSC's Strategic Plan identifies Intentional Inclusion as one of the University's core values. The plan identifies strategic initiatives to strengthen existing relationships and build new connections with Indigenous peoples and communities based on equity, reciprocity, and recognition. In support of these directions and as a path towards reconciliation, every landscape and public realm project on campus should include opportunities for the campus and local Indigenous communities and Inherent Rights Holders to participate in various stages of project development in authentic and meaningful ways. The University should develop protocols for project scoping, capital planning and project development that include regular dialogues to collaboratively identify key projects and opportunities for engagement. Not every project will require the same level of input (for example, state of good repair efforts), but a framework for how and when to start the conversations is essential. The University must stay flexible to opportunities that may emerge in response to increased dialogue with Indigenous peoples and Inherent Rights Holders.

Prepare Project Specific Guidelines.
For every landscape and public realm project, the University should develop a set of guidelines and targets to demonstrate how each project contributes to and meets the overall objectives of this plan. A standard guideline based on the themes and recommendations outlined in this Master Plan should be developed as a template for future projects and updated with future revisions to the plan. Additional criteria and benchmarks should be included within the guidelines to support individual project initiatives.

Develop UTSC Soil Specifications.
The University should collaborate with soil researchers, scientists, and other professionals to develop a UTSC specific approach to soil specifications. The permaculture lens and edible landscape strategy being applied throughout the campus is an exciting and unique opportunity, but success is measured by and entirely dependent on the quality of soil. Healthy soil is central to improving yields, growing strong and healthy plants, and healing the land through regenerative practices. A strong specification will consider the critical biotic aspects and available nutrition alongside the structural characteristics suitable for diverse applications across the campus. Lessons learned through the development of robust and proven soil standards will be invaluable for applications beyond UTSC.

Prepare Landscape Performance Measurement and Monitoring Protocols.
Landscape performance involves assessment of progress toward environmental, social, and economic goals based on measurable outcomes. Research has shown that well-designed landscapes provide a range of benefits from flood mitigation to increased revenues to mental wellness. The growing body of knowledge on landscape performance can help to inform policy, reduce risk, and improve return on investment. UTSC should establish protocols to measure and monitor the performance of campus landscapes to ensure they fulfil their intended purpose and contribute to the sustainability and resilience targets established by the University, City of Toronto, and TRCA. Further, the development and results of these measures and protocols could inform academic research and teaching opportunities and offer prospects for funding and research partnerships.

Establish Criteria and Protocols for Monitoring Living Landscape Performance.
Landscape performance involves assessment of progress toward environmental, social, and economic goals based on measurable outcomes. Research has shown that well-designed landscapes provide a range of benefits from flood mitigation to increased revenues to mental wellness. The growing body of knowledge on landscape performance can help to inform policy, reduce risk, and improve return on investment. UTSC should establish protocols to measure and monitor the performance of campus landscapes to ensure they fulfil their intended purpose and contribute to the sustainability and resilience targets established by the University, City of Toronto, and TRCA. Further, the development and results of these measures and protocols could inform permaculture training and certification training, academic research and teaching opportunities, and offer prospects for funding and research partnerships.

Note: As measurement is not the only way to understand success, UTSC should seek to establish criteria and protocols on the partial- or un-measurable impacts of the living landscape. This could include listening to community stories, understanding the history, learning about student and campus community experiences, documenting and more.

Prepare Adaptive Management Procedures and Develop Permaculture Training and Certification. While some of the landscapes described in the Master Plan will require less maintenance over the long term, they will require different management strategies and informed decision-making to achieve overall objectives. Additional skills and management training will be necessary to effectively implement new snow, storm water and irrigation policies, and to maintain and manage new planting scenarios.

Some landscape development will occur as a result of "adaptive management" rather than discrete capital projects. In this case, adaptive management refers to ongoing activities that will lead to the shift over time from energy-intensive landscapes to those that are more self-supporting.

In support of the integration of permaculture principles and practices at a campus scale and the development of adaptive management procedures, UTSC should explore the development of permaculture training and certification for staff and the broader campus community. The campus landscape can provide an excellent learning opportunity to develop and implement specific skills and knowledge by those implementing and taking care of the landscape and public spaces to ensure successful outcomes.

Grounds Management and Staff will require training to ensure consistent understanding of the overall permaculture approach, why it is important, and how it is different from a conventional campus landscape management. New roles and responsibilities for staff to support the need for stewardship and to champion the expanded skills-based approach to landscape management should be supported within the training program specific to the practices and objectives of UTSC, but also provide applications for a broader audience.

To demonstrate its commitment to and leadership in the integration of permaculture at various scales, the University should develop a permaculture training & education certification program that integrates and is open to all campus community members (e.g. faculty, staff, students). The training program should engage faculty, permaculture educators and facilitators, and other industry experts to develop training procedures and tools for employees involved in landscape design, development, construction, and maintenance of campus spaces of all types, including the campus farm. The training could include subjects such as living soils, water management, ecosystem and wildlife habitats, edible landscapes, and solutions inspired by regenerative living systems. It could also include, and be grounded by, interconnected "sites" (e.g. campus farm, edible campus sites), activities, events, and social permaculture content.

Establish a Permaculture Development and Implementation Committee

Ongoing design, management and evaluation are important aspects of implementing the innovative landscape and public realm recommendations in this Master Plan. Developing permaculture systems at the campus-scale will take time, effort and dedication, as well as learning from successes and failures and budget commitments. To support projects in their conception, design, and implementation, the university should establish a Permaculture Development & Implementation Committee.

In addition to being the overseers of the development of the adaptive management procedures and permaculture training and certification processes, this committee should contribute to the establishment of expectations and benchmarks for project success (e.g. performance), design and implementation processes, budgeting, documentation, and opportunities for learning.

For optimal social and ecological impact, the committee should include people in diverse roles from the campus community, and with diverse perspectives, to be involved in and attend to the quality of permaculture work impacting the UTSC landscape. The committee should engage, listen to and integrate perspectives from the greater community to strengthen the long term vitality, viability and development of permaculture on campus.

The committee should be empowered to collaborate with a wide range of communities, allies, and supporters, such as Indigenous communities, visionary philanthropists and funders, urban agriculture practitioners, community gardeners, farmers, BIPOC growing communities, natural beekeepers, other campus farms, green rooftop specialists, healthy activity programmers, nearby schools, policy makers, urban planners, and landscape architects, to name a few.

Coordinate with City of Toronto and Metrolinx on Eglinton East LRT and Ellesmere BRT Projects.

As noted previously, the expansion of higher order transit will provide improved and sustainable transportation and reduce reliance on private vehicles for commuting to and from UTSC. The university should continue to engage and coordinate with the transit providers to ensure that both projects include public realm improvements. Continue to explore opportunities to enhance the street designs above the basic materials and furnishings so the streetscapes respond to the campus context.

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