KPU 2050

# OFFICIAL CAMPUS PLAN

## Design Guidelines

KPU KWANTLEN POLYTECHNIC UNIVERSITY

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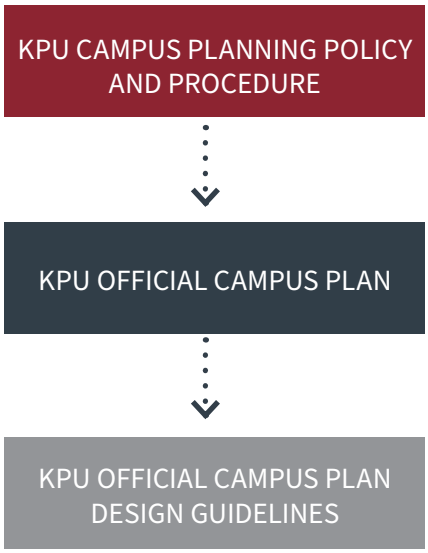



# DG.1 INTENT

## DG.1.1. PURPOSE OF THE GUIDELINES

KPU's campuses have been conceived in the Official Campus Plan as transformational learning environments that are landmarks within their communities; they are a connected ecosystem, responsive to their local contexts while being cohesively KPU. The Design Guidelines document supports this vision by informing, coordinating and regulating project design to achieve a cohesive design language across KPU's campuses. As such, the guidelines are to be used in conjunction with existing governing documents, including the Official Campus Plan.

The guidelines are discretionary, and a degree of flexibility is inherent in their integration. Variations and relaxations to the Design Guidelines may be considered where justified and resolved during the conceptual design and development permit process.

## DG.1.2. USING THE DESIGN GUIDELINES

This document is organized into six (6) parts:

1

*Section 1 Intent*

Section one describes the intent of the guidelines and how they relate to other campus policy.

2

*Section 2 Background*

Section two outlines the overall vision and planning principles for KPU's campuses in reference to the Official Campus Plan.

3

*Section 3 Campus Design Considerations*

Section three provides a summary of the concept plans for KPU's Langley, Richmond, Surrey and Tech campuses.

4

*Section 4 Building Design Guidelines*

The building design guidelines provide general guidance applicable to all the development sites across KPU's campuses. They address building character, use, building form, architectural expression, and building materials.

5

*Section 5 Indigenous Design Guidelines*

The Official Campus Plan strives to uphold Indigenous design principles so that future building designs and spaces are reflective of the cultural context of the First Nations on whose traditional territory the building is intended to be sited.

To ensure that future building designs are contextually appropriate, Campus and Community Planning is committed to early and ongoing engagement with the Indigenous Advisory Committee (IAC) on the application of the Indigenous principles in any new designs.

Project Sponsors will be responsible for undertaking design processes that meaningfully connect local Indigenous communities, knowledge keepers, and elders with designers and consultants to ensure that such processes are inclusive and rooted in respectful deep listening. Designs for new buildings and public realm spaces will also acknowledge the right of Indigenous communities to determine the application of traditional knowledge and cultural representation.

6

*Section 6 Public Realm Design Guidelines*

The public realm guidelines expand on the directions provided for the design of open spaces in the Official Campus Plan in terms of landscape typologies, landscape design elements, and sustainable landscape design.

## DG.1.3. THE DESIGN REVIEW PROCESS

Pre-application discussions between project sponsors and Campus and Community Planning are required as soon as project designers are engaged or feasibility studies begin, in order to confirm a shared understanding of all guidelines applicable to their project.

# DG.2 BACKGROUND

## DG.2.1. VISION AND PLANNING PRINCIPLES

The Official Campus Plan vision describes the end state that all campus planning principles, policies, strategies and actions work to achieve. In doing so, they set out a framework for the development of the Richmond, Tech, Langley and Surrey campuses.

### DG.2.1.1. OFFICIAL CAMPUS PLAN VISION

*KPU's campuses are transformational learning environments that are landmarks within their communities. They are a connected ecosystem, responsive to their local contexts while being cohesively KPU.*

*They are welcoming, inclusive centres of knowledge exchange and hubs of thriving social and recreational activities. KPU's campuses are known as vibrant destinations at all times of day.*

*The campuses are resilient. They are adaptable to technological, social, environmental and economic change to meet the evolving needs of the University.*

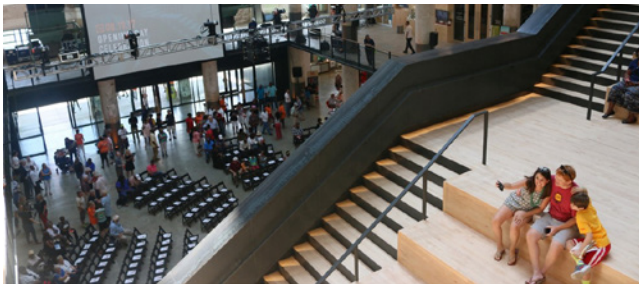
## DG.2.1.2. OFFICIAL CAMPUS PLAN DESIGN PRINCIPLES

### 1 DISTINCTLY KPU

CELEBRATING KPU'S POLYTECHNIC IDENTITY AND PROGRAM OFFERINGS


### 2 INNOVATIVE PEDAGOGY

PRIORITIZING THE LEARNING EXPERIENCE WITH ADAPTABLE AND SCALEABLE SPACES THAT ARE RESPONSIVE TO EVOLVING TEACHING AND LEARNING NEEDS



### 3 PEDESTRIAN ORIENTED

ELEVATING THE PEDESTRIAN EXPERIENCE TO MAKE WALKING A DELIGHTFUL, SAFE, AND PREFERRED OPTION YEAR-ROUND

### 4 CONNECTED

CONNECTING THE CAMPUSES DIGITALLY AND SUPPORTING IMPROVED TRANSIT OPERATIONS

## 5 SELF-SUSTAINING

SUPPORTING RESPONSIBLE STEWARDSHIP OF KPU'S FINANCIAL ASSETS AND BUILDING OPERATIONS

## 6 ROOTED IN PLACE

VIEWING THE CAMPUSES AS A GATHERING PLACE THAT CELEBRATES THE INDIGENOUS HISTORY OF THE LAND AND REFLECTS THE LEGACY OF THE INSTITUTION

## 7 COMMUNITY SERVING

A WELCOMING DESTINATION FOR KPU'S NEIGHBOURS, PARTNERS AND EXTERNAL COMMUNITY MEMBERS

## 8 RESPECTFUL OF THE ENVIRONMENT

SUPPORTING KPU’S COMMITMENT TO ACHIEVE CARBON NEUTRALITY BY 2050 WHILE ENHANCING THE NATURAL ENVIRONMENT AND MEETING KPU’S OPERATIONAL NEEDS

## 9 ACCESSIBLE TO ALL

UNIVERSALLY WELCOMING, INCLUSIVE AND ACCESSIBLE

## DG.2.1.3. OFFICIAL CAMPUS PLAN INDIGENOUS PRINCIPLES

KPU's campuses are on the unceded territory of the Coast Salish Peoples. The following Indigenous Principles were developed through ongoing dialogue with the Indigenous Advisory Committee (IAC) and are complemented with recommendations included throughout the Plan. The principles, themes and actions developed with the IAC will impact KPU beyond the implementation of the Plan and should be considered during curriculum planning, student recruitment, developing protocol and policies, and in internal and external communications.

### 1 CAMPUS DESIGN TO REFLECT THE LAND AND PEOPLES

Honour the unceded territory on which the campuses are situated so that each new building and open space feels like an extension of the Gathering Place.

Be welcoming hosts to students of all backgrounds, reflecting a multicultural identity that is present in the KPU community.

### 2 YOUNG VOICES MATTER

Through ongoing engagement with Indigenous students, support the spaces, programs or resources that Indigenous youth need to succeed at KPU.

### 3 OPEN TO COMMUNITY

Act as an extension of the broader community and welcome the expression of broad and diverse voices.

### 4 WEAVING WORLDVIEWS

Be a forum for cross-cultural dialogue. Through the design and programming of new buildings, open spaces, movement networks and signage, worldviews can be woven together.

## 5 HOLISTIC LEARNING + WELLBEING

Support the emotional, spiritual, physical and mental health of each member of the campus community.

## 6 SUPPORT UNIVERSITY ELDER PROGRAM

Provide space for the University Elder(s) to share knowledge, wisdom and counsel with students.

## 7 ENCOURAGE SAFE & RESPECTFUL DIALOGUE

Be a platform for critical discourse through the provision of spaces that encourage open minds and open hearts.

## 8 EVOLVE CULTURAL AWARENESS

Reflect Coast Salish culture and values, from history to present-day while discovering everyone's unique spirit.

## 9 RECOGNIZE INDIGENOUS ACHIEVEMENT AND CONTRIBUTION

Recognize current Indigenous achievements through the design of the campus' buildings, open spaces, streetscapes, public art, site furniture and event programming.

## DG.2.1.4. OFFICIAL CAMPUS PLAN SUSTAINABILITY PRINCIPLES

The Sustainability Principles describe the sustainability priorities shared through engagement with KPU's students, employees and the Environmental Sustainability Committee. They are the foundation of the Sustainability Plan and offer lenses through which the Built Form, Open Space and Movement Framework recommendations have been developed.

In many ways, the Sustainability Principles are the next step in building upon KPU's demonstrated sustainability to-date.

### 1 A DEEP COMMITMENT TO CARBON NEUTRALITY

All campus buildings and facilities operate using net zero greenhouse gas emissions. New buildings are high performance, prioritizing passive first design approaches and on-site renewable energy generation.

### 2 CONNECTING STUDENTS AND STAFF WITH SUSTAINABLE TRANSPORTATION CHOICES

Walking and rolling are the most convenient, safe, and enjoyable choices to move around on campus.

Alternative modes of transportation including walking, cycling, carpooling, the intercampus shuttle, teleworking, telelearning, and public transit are prioritized for commuting to and between campuses.

Electric vehicle infrastructure and campus fleet electrification support a transition to zero emissions.

## 3 WATER IS RESPECTED AND CELEBRATED

Building water use is reduced through high efficiency fixtures and supplemented by capture and re-use of rainwater and greywater.

Landscape water use is reduced by specifying only drought tolerant/climate appropriate species with priority given to plant species native to the ecoregion. Specified plants should require no irrigation, and/or irrigation supply should be limited to captured rainwater and greywater.

## 4 ECOSYSTEM-BASED APPROACHES INTEGRATE LIVING SYSTEMS

Future interventions on all campuses protect, preserve, and enhance vegetated areas, and explore opportunities to enhance biodiversity and biophilia through open space and building design.

Rainwater is managed through green infrastructure systems and low-impact development practices such as bioswales, rain gardens, and constructed wetlands, reflecting the unique ecological context of each campus.

## 5 OPERATE WITHIN FINITE PLANETARY RESOURCES

Campus waste is managed holistically, reducing source generation and prioritizing creative zero-waste solutions for reuse, donation, re-selling, recycling, or composting.

On-campus food production is expanded, and local, nutritious, culturally appropriate food is readily available for the KPU community.

**Above** - Photos from KPU's Langley, Surrey, Richmond and KPU Tech campuses

# DG.3
# Campus Design Considerations

## DG.3.1. FOUR UNIQUE CAMPUSES

KPU's four physical campuses, acknowledging the airspace parcel nature of the Civic Plaza campus, each have a unique look and feel as a result of the built and green environment in which they are situated.

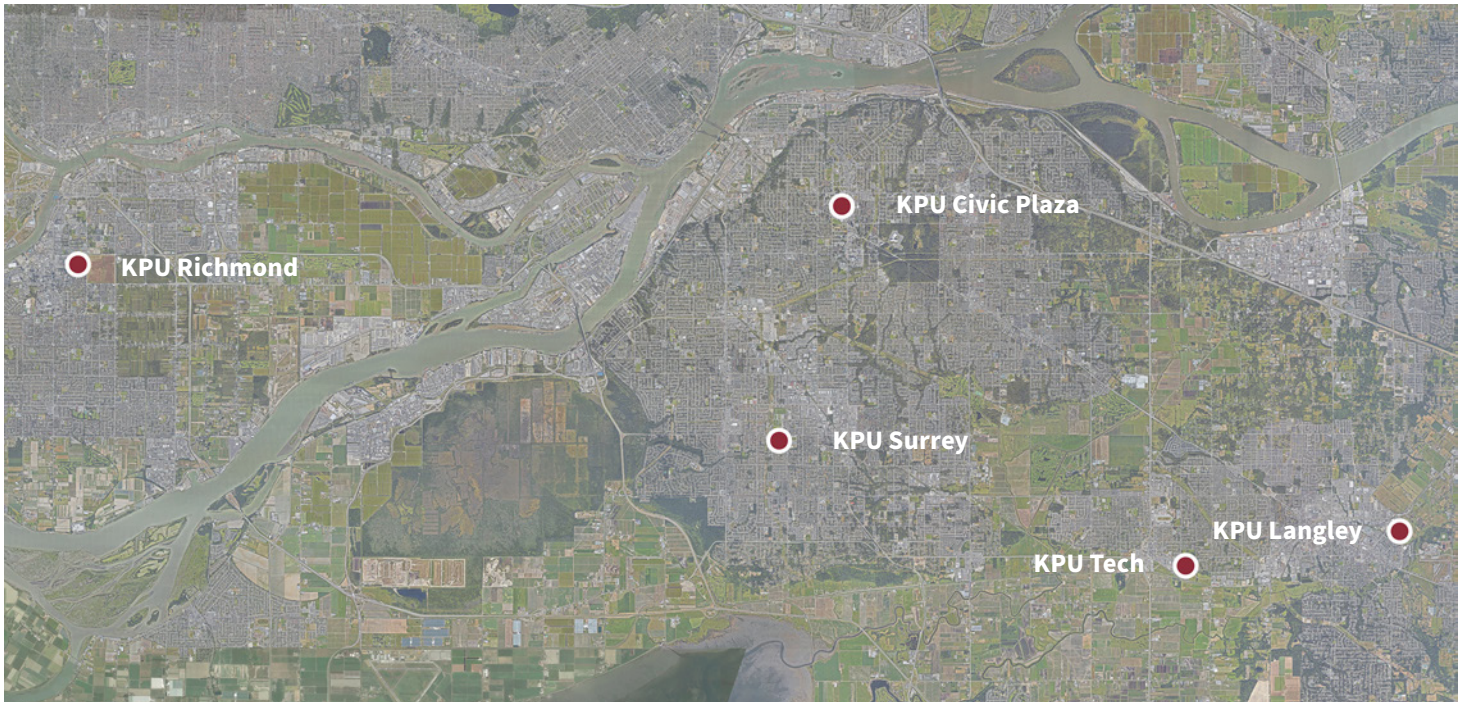
**KPU Langley**, situated within an agricultural zone and cradled by Logan Creek and its associated riparian area, leverages the landscape to create a unique experiential educational environment.

**KPU Tech**, currently situated within Cloverdale's Town Centre, neighbours the treed Shannon Hill Park and is intersected with streams while being surrounded by an active industrial context. With the proposed development of the neighbouring new Surrey Hospital and BC Cancer Centre, the campus will evolve as a destination within the community.

**KPU Richmond** is the most urban of the physical campuses, located within Richmond's City Centre, and in a rapidly developing neighbourhood. The campus, only a short walk away from the Garden City Lands, becomes part of a series of significant and linked destinations for the community.

**KPU Surrey**, situated in what has historically been a low-density residential neighbourhood, demonstrates the ability to integrate a sense of urbanity while preserving a neighbourhood feel. Surrey sensitively integrates built form with stands of existing ecologically significant trees.

The goal of forming a union between the "urban" and "natural" environments while creating places that are inviting and welcoming to the community informed the design of the campuses. The Concept Plans set forth a compact form of development that balances the need for new buildings with an ample allotment of open spaces and the protection and stewardship of ecologically significant landscapes. Each concept plan includes significant new or enhanced greenspaces that are intended to support the wellbeing of the campus ecosystems, as well as the wellbeing of the communities in which they reside.




**Above** - KPU Campus Locations

## DG.3.2. REFLECT THE INDIGENOUS LEGACY OF THE LAND

The Design Guidelines encourage reflection of the core set of Indigenous principles and framework recommendations established in the Official Campus Plan. New building designs and public realm projects will incorporate these important principles to reflect the cultural context of the hən̓q̓əmin̓əm̓, hul'q'umi'num, and SENĆOŦEN speaking peoples, on whose unceded territory the campuses are situated, and to honour the important relationship between all peoples and the land.

As the concept plans are realized, Campus and Community Planning is committed to engaging the Indigenous Advisory Committee (IAC) to ensure that the history of the land and the traditional knowledge and culture of the Indigenous communities on whose traditional territory KPU's campuses are located are meaningfully integrated into the interpretation of the campus' built form, public realm and sustainability.

## DG.3.3. HOLISTIC SUSTAINABILITY

As a component of wellbeing, the Official Campus Plan provides a Sustainability Framework that seeks to provide holistic recommendations for establishing sustainability as a foundational element to KPU's physical campuses, governance, academics and operations. The Design Guidelines take a sustainability-centred approach, integrating sustainability considerations for the design of built form, landscapes, and the public realm.

**Above** - The central plaza on KPU's Surrey campus

## DG.3.4. SIGNATURE CAMPUS ELEMENTS

The Official Campus Plan organizes the campuses' design recommendations into Built Form, Open Space, Movement, Sustainability and Indigenous Frameworks. The recommendations included therein provide detailed descriptions of the character and relationship of new buildings, open spaces and campus streets. As well, signature campus elements as described within the Official Campus Plan become the areas of greatest design significance and include the gateways, landmark buildings, special circulation corridors and significant open spaces.

**Gateways** are the exceptional places and featured elements that are meant to identify the public face of KPU's campuses, their address and the primary points of entry to the campus. The gateways are the first measures in defining the boundaries of the campus in terms of establishing a recognizable character, place, and quality. As landmarks, gateways should be defined by the campus' most significant building and landscape architectural design.

**Landmark buildings** are generally situated within the gateways but can also be positioned as significant standalone landmarks within the campus structure, such as demarcating a view terminus. Building E on the Surrey Campus is an example of a building that is both a landmark building within the gateway and at the end of an important view corridor. As their name suggests, landmark buildings are also critical components of campus wayfinding and identity.

The pedestrian-only spines on the Surrey campus, the mews on the Richmond campus (as defined in the Richmond Campus Open Space Framework), and the Langley campus' Kwantlen Crescent are examples of **special circulation corridors** that require distinguished design features to set them apart as prominent people-places within the campus, not simply movement corridors.

Lastly, each campus concept plan features a **significant and substantial landscape** that is unique to place and seeks to improve the functioning of the campus ecosystems while providing attractive, compelling, and experiential places for people to enjoy and learn within. At the Langley campus, the urban-adapted and riparian landscapes contribute to the feeling of an ecological heart in the city. The Brewery Plaza and Glover Plaza provide an identity-building series of places at the new main entry to the campus. At the Richmond campus, the establishment of the Central Park and the connection to the Garden City Lands form an oasis in the rapidly densifying Richmond City Centre. At the Surrey campus, the integration and enhancement of the forest stands, home to ecologically significant trees, visibly demonstrate KPUs commitment to sustainability. At KPU Tech, the treed face of Shannon Hill and the small streams cradle the industrial campus in a green environment. Moreover, the makerspace plaza and central plaza crate spaces to celebrate the academic programs of the Faculty of Trades and Technology. As the four physical campuses grow, new buildings and open spaces should be designed with the enhancement and stewardship of these spaces as a priority.

The Design Guidelines complement the Official Campus Plan recommendations by providing an additional layer of detail, moving beyond character and relationship to guiding the design for the form and materiality of the architecture and public realm elements.

**Above** - Artistic Rendering of Langley Concept Plan

# DG.3.5. THE CAMPUS CONCEPT PLANS

## DG.3.5.1. KPU LANGLEY CONCEPT PLAN

The Langley Concept Plan celebrates the ecological context of the campus through the ongoing stewardship of riparian areas associated with Logan Creek. Surface parking gives way to compact development and a functional ecosystem. Existing buildings are enhanced to respond to the open spaces, and new buildings are positioned as pavilions in the landscape. Kwantlen Crescent is redesigned to prioritize pedestrians and cyclists and becomes a thread that connects all campus buildings. The campus provides a myriad of open spaces that make new programmatic opportunities possible. Gardens can host experiential and immersive learning; added landscapes create new habitat for birds and pollinators. There are areas to be active, study and relax and new plazas and courtyards to gather in.


**Above** - KPU Langley Concept Plan

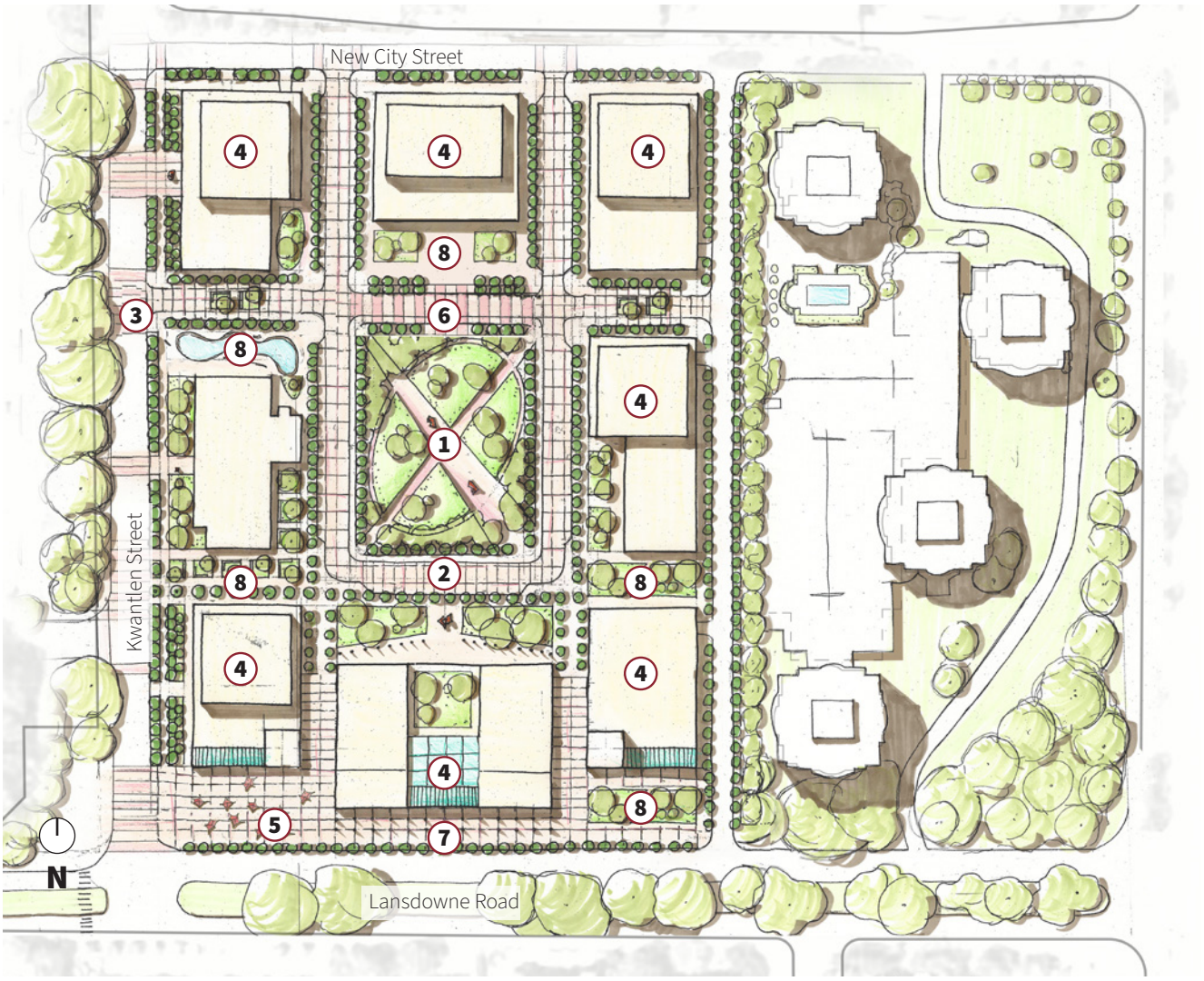
1. Protected natural ecosystems
2. New plaza for KPU Brewing and Brewery Operations
3. New courtyard to support academic programs and amenity space created in the Wark/ Dumais house
4. Synergistic opportunities with Best Western
5. Recreational field
6. Refurbished entry plaza with the potential for a retractable or permanent canopy for a portion of the plaza
7. Reoriented ceremonial entrance to align with the entry plaza
8. Opportunities for uses such as additional research, revenue generation, academic, student housing and industry partnerships
9. Pedestrianized Kwantlen Crescent
10. Treed Landscape
11. Gardens for experiential learning opportunities and cross-cultural knowledge exchange
12. Revenue generating opportunities along Glover Road
13. Celebrated urban entrance along Glover Rd

**Above** - Artistic Rendering of KPU Richmond Concept Plan

## DG.3.5.2. KPU RICHMOND CONCEPT PLAN

KPU Richmond is set in a rapidly evolving context. The redevelopment of Lansdowne Centre to the west will introduce substantially more residents, amenities and open spaces to the neighbourhood and evolve the area to be more urban in character. As part of that development, Lansdowne Road is expected to transform into an east-west greenway, promoting walking and cycling through Richmond's City Centre.

With the Plan, the Richmond campus is transformed to play an integral role in this greater city building vision. It will become an attractive, connected, welcoming, and pedestrian-oriented neighbour and destination; a place for experiential learning; a place that fosters health and wellbeing; and, a place that showcases leadership in sustainability.




**Above** - KPU Richmond Concept Plan

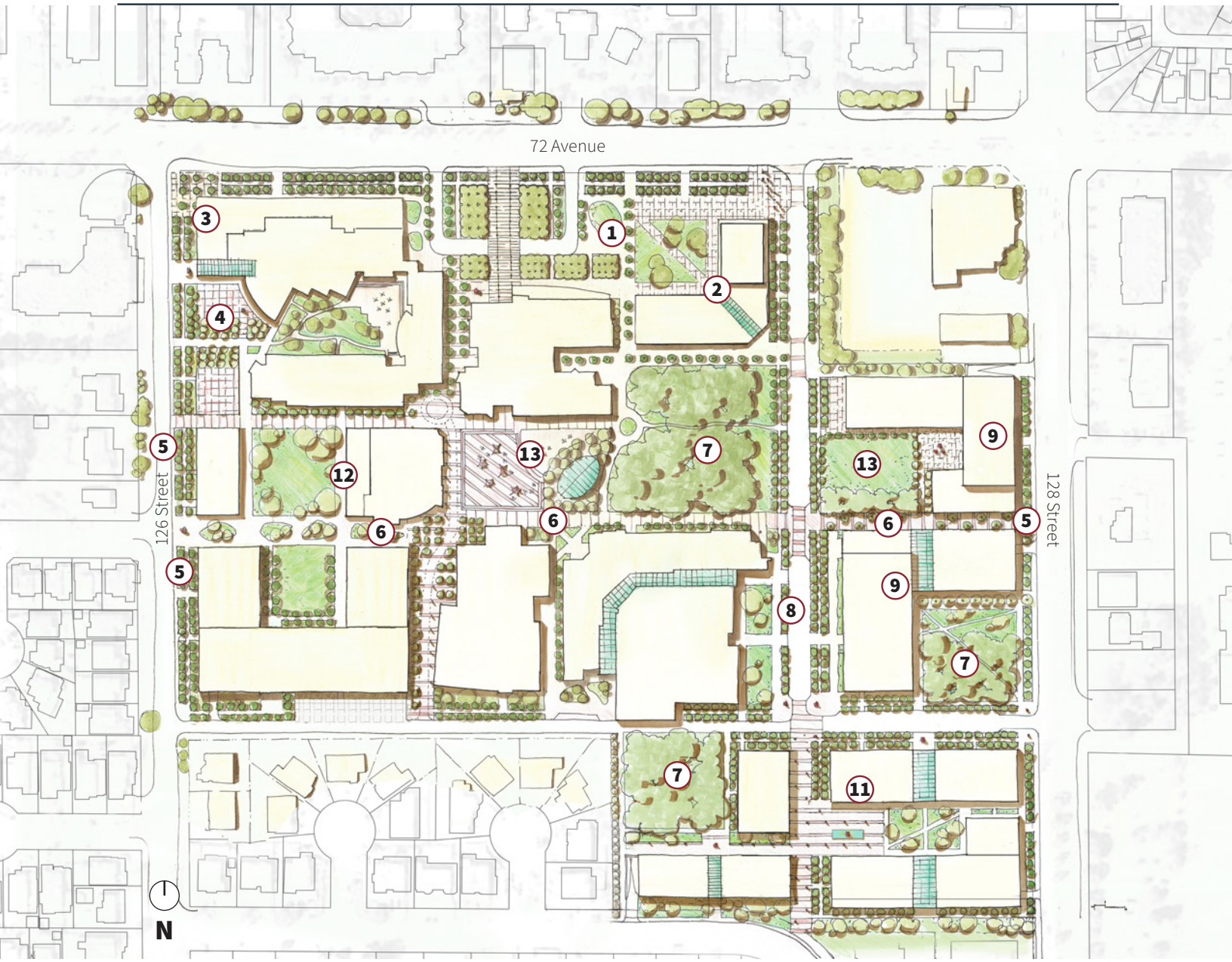
The Concept Plan aims to achieve the following goals:

1. A new central park oasis in the heart of the campus
2. An alignment of new campus streets that provide an efficient and connected layout for new buildings and open spaces
3. Multiple east-west linkages across an enhanced pedestrian oriented Kwantlen Street that has the potential to become a pedestrian-only street from the new campus street south to Lansdowne
4. Seven new building blocks surrounded by trees and landscaping offer potential for industry partnerships, research and/or academic programming, revenue generating uses, housing and amenities
5. A renewed frontage along Lansdowne Road with three new plazas and at-grade building entrances
6. An east-west pedestrian-only street in the north end of the campus with special paving, and fronted by unique open spaces
7. An east-west green promenade at the south end of the campus defined by trees, gardens, and enhanced landscaping fosters a stronger walking connection to the Lansdowne SkyTrain Station and the Garden City Lands.
8. Attractive, vibrant open spaces to support outdoor studying and learning, social gathering, art, and water features

**Above** - Artistic Rendering of KPU Surrey Concept Plan

## DG.3.5.3. KPU SURREY CONCEPT PLAN

The Concept Plan for Surrey Campus reflects the evolving urbanization that is occurring around the campus and is defined by a pattern of integrated buildings, open spaces, and pedestrian corridors. Existing buildings are enhanced and celebrated in a new context. New buildings help to frame and support a variety of open spaces while providing additional academic, amenity, and industry partnership space on campus. The campus' relationship with the neighbourhood also changes. Animated buildings and open spaces frame the edges of the campus, creating a welcoming face to the streets and to the adjacent community, affirming KPU's presence and identity.




**Above** - KPU Surrey Concept Plan

1. Redesigned ceremonial entry and plaza
2. Opportunity for an iconic gateway building
3. A new gateway presence on the corner through building expansion
4. A new plaza and refurbished courtyard space
5. Enhanced streetscape and pedestrian gateways
6. East-west campus spine connects campus hearts
7. Stewardship of functioning forests with improved open space contexts and pedestrian trails
8. New campus street for vehicular circulation
9. New redevelopment “neighbourhood” with the potential for uses such as industry partnerships, research and/or academic programming
11. New student housing “neighbourhood” adjacent to existing residential development
12. Renovated Birch Building and new quad
13. An enhanced central plaza with a new year-round 24/7 pavilion to increase the use and enjoyment of the pond, plaza, and forest

**Above** - Artistic Rendering of KPU Tech Concept Plan

## DG.3.5.4. KPU TECH CONCEPT PLAN

The KPU Tech Concept Plan builds on the existing campus presence located at the corner of Highway 10 (56 Ave) and 180 Street and expands the campus east along 55 Avenue, creating three distinct campus nodes. New landmark buildings and building additions to the current building structure, and an enhanced landscape provide a new frontage and presence for KPU at the corner. Eventually, 55 Avenue will become the main link into the campus. A series of new signature buildings and open spaces will help define the sinuous roadway and are positioned to provide a new frontage and animation to the proposed future Surrey Hospital and Cancer Centre development in the lands south of the campus.


**Figure 1** — KPU Tech Concept Plan

1. Main campus entrance is repositioned towards the street
2. New signature building addition and exhibition plaza at the corner of 180 Street and 55 Avenue
3. Revamped loading area to also function as a makerspace and demonstration plaza
4. A new treed pedestrian and cycling friendly streetscape enhancement for 55 Avenue
5. Opportunity to expand and create a new park open space connected to 56 Avenue with an outdoor pavilion and ampitheatre seating to view the makerspace and demonstration plaza
6. New building gives opportunities for additional academic space, revenue generation, amenities, industry and/or research programs
7. Extended trail network connecting the community and adjacent park by creating a recreational trail loop
8. Protected riparian landscapes and green spaces
9. New open spaces to provide a series of uses, programs and destinations along 55 Avenue
10. Buffered edge and hydro corridor along 184 Avenue.

# DG.4
# BUILDING DESIGN GUIDELINES

## DG.4.1. INTENT

The design and expression of each new building and addition plays an important role in achieving the Official Campus Plan vision of expressing KPU's polytechnic identity, celebrating each campus' distinctive setting, creating a sense of place, showcasing academic research and activities, and animating the campuses. The Building Design Guidelines provide direction for how architecture can advance that vision.

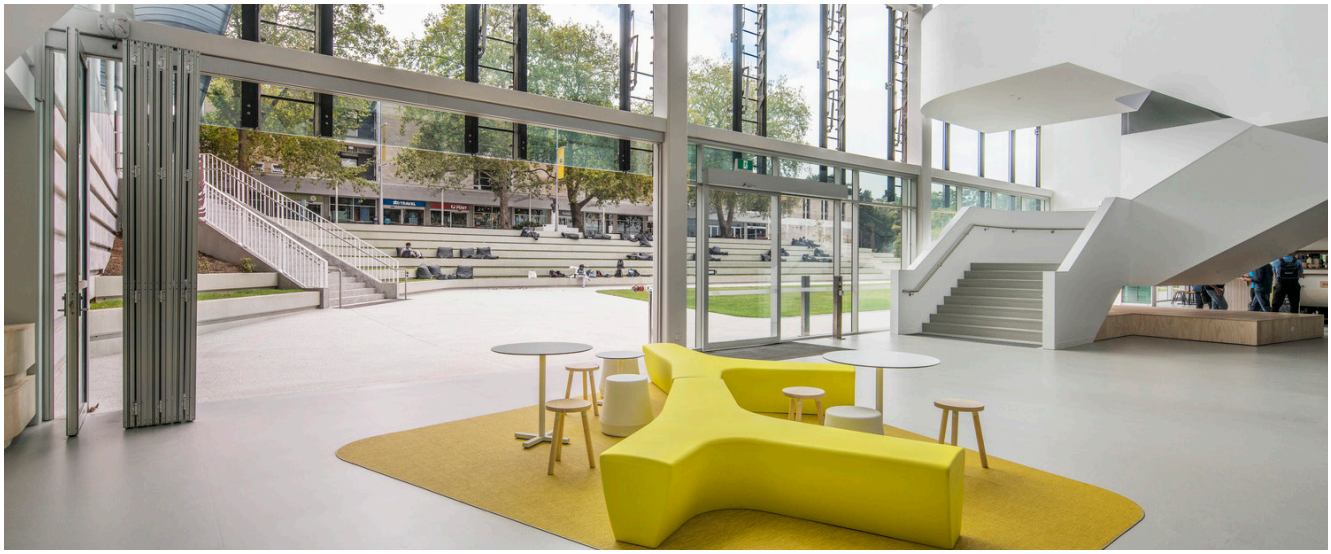
**Above** - Ground-level animation

**Above** - Ground-level animation with classrooms located on the first four levels of the academic building and with labs and office uses above the first four levels

## DG.4.2. USE

The Official Campus Plan recommends a mix of uses to contribute to campus life and diverse experiences on each campus. Integrating a mix of uses, including a mix of academic programs, into the same building contributes to the animation of the campus community, a culture of knowledge exchange, and the delivery of core amenities and services.

- **All Buildings** - The ground-level of all campus buildings - especially those that frame and support the destination and gathering-oriented campus open spaces such as plazas, quads, fields, courtyards, and gardens - should be animated with uses such as retail, restaurants with outdoor patios, community/recreation, amenities, social gathering space, and gallery and academic program display space.
- **Academic Buildings** - Academic buildings see heavy traffic during class changes. For ease and efficiency of circulation and to reduce the cost of multiple elevators per building, core academic classroom spaces should generally be located in the first four-storeys of buildings. Other uses such as labs, research, and/or office uses can be located in and beyond the first four storeys of academic buildings. Labs, research and office uses on upper building levels must be supported by co-located amenities and services.
- **Non-academic Buildings** – Non-academic buildings (student housing, office, industry-oriented buildings, event space, etc.) should allocate primary amenities on the ground levels of buildings with other uses above.



**Above** - Ground-level public space designed as an extension of the exterior public space with a combination of fixed and moveable furniture.

## DG.4.3. INTERNAL PUBLIC SPACE

Internal public spaces afford opportunities to gather and socialize indoors, to locate amenities, and to provide flexible teaching, learning, and study space. Such spaces are where people wait between meetings and classes, have impromptu study or teaching sessions, gather with friends, take time to eat and nap, and are places for demonstration and gallery display.

- **Location** - Internal public spaces should be located along internal building circulation corridors on all levels and be clearly visible and accessible.
- **Ground Level Public Space** - Indoor public spaces on the ground level should be:
  - clearly visible, accessible and physically connected to interior and exterior spaces and circulation routes.
  - designed as extensions of the exterior spaces.
  - designed with a high degree of space and use flexibility to accommodate a variety of programming and uses throughout the year. Consider a combination of built-in and moveable furnishing.
- **Upper-Level Public Space** - Buildings with heights greater than four storeys should provide internal public space and amenities at the upper levels of the building to service upper level uses and reduce circulation inefficiencies such as elevator congestion. Upper level public spaces should be located where they can be animated without noise or circulation disruption to other adjacent uses and take advantage of views through the campus or to internal public spaces.

**Above** - Alignment of a main internal corridor to the edge of the building

**Above** - Above-grade pedestrian connection designed as an open space

## DG.4.4. INTERNAL CIRCULATION AND CONCOURSE CONNECTIONS

Clear internal circulation is as important as intuitive exterior circulation. The internal building corridors should have a relationship with outdoor pedestrian routes for ease of circulation.

- **Alignment of Corridors** - Main internal corridors should be aligned to the edge of buildings to allow for a continuous connection, relationship, and visibility into the external public realm where appropriate and considered in balance with overall space efficiency (i.e. use of space for circulation vs. academic uses).
- **Concourse Connections** - Generally, above-grade building concourse connections are discouraged as they take away from the at-grade animation of the public realm. Internal building connections between buildings can be provided with approval from Campus and Community Planning, but must consider the importance of the surrounding open space system and the delivery of key open space accessibility, visibility, and animation objectives.
- **Minimum Dimensions of Above-grade Concourse Connections** - If permitted, above grade connections should be a minimum of two storeys above-grade and 3m wide to function as a useable internal open space, accommodating lounge chairs, tables and other furnishings, and be located to take advantage of views and vistas. The 3m width also creates weather protection for pedestrians below the concourse.
- **At-grade Concourse Connections** – If permitted, at-grade concourse connections should be transparent and accessible (unlocked door access/egress) and should not create a physical or visual impediment or barrier to a seamless and connected network of open spaces. Any at-grade concourse should allow both pedestrians and cyclists to pass through freely.
- **Feature Design** – Where concourse connections are permitted, they should incorporate feature design/public art elements to add visual intrigue to the public realm.

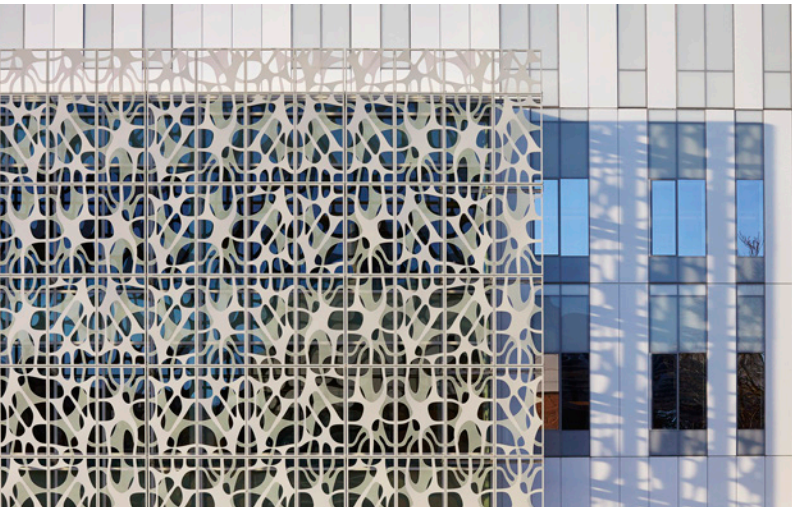
**Above** - Campus building that prioritizes ground-level glazing, reducing the WWR on upper levels.

# DG.4.5. BUILDING FORM

## DG.4.5.1. BUILDING TRANSPARENCY

Windows play a significant role in creating spaces within buildings that support the wellbeing of those who inhabit them. They provide views, daylight, a relationship with the outdoors and often fresh air into a space. Although a substantial benefit, they are the one of the weakest thermal elements in the building envelope and pose a risk to birds. As such, the performance, size and location of windows should be carefully considered to improve thermal comfort and reduce energy use in buildings, minimize impacts on birds, and support occupant wellbeing.

- **Daylight and Views** - Buildings are to optimize daylight and views to support wellbeing and biophilia for occupants. Building designs shall balance this objective with controlling unwanted solar gain and glare and maximizing building envelope performance.
- **Window-to-wall Ratio** – Buildings are to target an overall window-to-wall ratio (WWR) that aligns with the recommended pathways outlined in the Sustainability Framework within the Official Campus Plan.
- **Reduction of Energy Use Associated with Glazing** - Buildings with extensive glazing are to employ strategies such as high-performance glazing, shading devices or buffer spaces to improve thermal comfort and to reduce energy use associated with glazing.
- **Ground-Level Glazing** - Buildings shall prioritize ground level glazing to contribute to the safety and vibrancy of the public realm and overall wayfinding. WWR ratios should be higher at grade and lower above the first storey to accommodate an overall building WWR within the range recommended in the Sustainability Framework within the Official Campus Plan.



**Above** - Shading strategies for glazing, including shading elements as architectural features

**Above** - Shading strategies for glazing, including shading elements as architectural features

**Above** - Tinted glazing used to highlight architectural features

- **Operable Windows** - Operable windows should be integrated into building design to provide natural ventilation and help reduce mechanical heating and cooling requirements.
- **Façade Orientation** – Building glazing should be responsive to the façade orientation. For east and west elevations use either internal or external shading devices to block unwanted solar gains in warmer months while allowing solar gains from lower sunlight in the winter. Horizontal shades should be prioritized on southern elevations while vertical fins can be used to block incoming summer sun on western façades as well as undesirable afternoon and evening solar gain.
- **Bird Friendly Glazing** – The critical zone for bird collision is within a building's first four storeys, or mature tree height, whichever is greater. Use visual markers on the external surfaces of glass that are no more than 50mm wide and 100mm high within the critical zone. Possible visual markers include UV markers, fenestration patterns, adhesives, etching, fritting, sunshades, louvres, screens, blinds, and netting.
- **Mirrored Glazing** – The use of mirrored glazing is not permitted.
- **Appropriate Size** - Buildings should size windows to respond to interior and exterior functions (i.e. maker spaces, interior and outdoor public spaces, or event spaces should have larger windows than office or typical classroom uses).
- **Primary Glazing** – Primary glazing shall be mainly clear coloured and transparent, except when a special case is approved for security or research reasons. Opaque glazing must be located away from public open spaces.
- **Feature Glazing** – Tinted and coloured glazing may be considered by Campus and Community Planning to highlight architectural features.

## DG.4.5.2. PASSIVE BUILDING DESIGN

Passive building design is an approach that uses the building architecture to minimize energy consumption. Both the form and material performance of building elements (including architectural, structural, envelope and passive mechanical systems) contribute to passive design.

- **Massing** - Consider the effect of massing on building envelope heat loss. Prioritize simple shifts in massing and changes in exterior colors and textures to articulate facades.
- **Building Orientation** - Prioritize orientation for maximum solar-gain potential from the south to reduce heating demand in colder months. This guideline should be regularly reviewed within the context of a warming climate, including exploring strategies to reject solar gain in hot weather to reduce air conditioning requirements.
- **High Performance Building Envelope** - Use insulating materials and/or thermally broken building products for exterior walls and roofs to reduce building heat loss from thermal bridges, such as concrete balconies and beams that run from the building's interior to exterior.
- **Tree Canopy** - Trees should be planted to provide natural shading, particular on the east and west facades, to reduce overheating in warmer months. Trees planted along the south façade should be planted strategically so maximum solar-gain potential is possible during the colder months. This guideline should be regularly reviewed within the context of a warming climate.
- **High Efficiency Heat Recovery** - High efficiency heat recovery ventilation systems should be used at whole building or individual unit scales to reduce heat losses.
- **Strategic Space Planning** – Cooling dominant spaces should be located on the north side of the building and heating dominant spaces shall be oriented towards the south side.

**Above** - Weather protection designed as an integral element of the building's architecture

**Above** - Canopy of at least 3m in depth that mitigates rain and snow shedding on pedestrian paths

## DG.4.5.3. WEATHER PROTECTION

In our climate, adequate weather protection for pedestrians is an important contributor to the year-round comfort of the campuses.

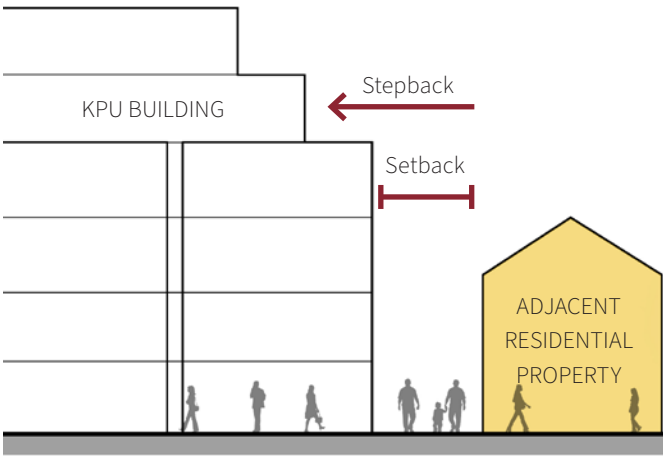
- **Entries** – Prominent weather protection must be provided at all pedestrian entrances to buildings.
- **Canopy Size** - Canopies must be at least 3m in depth across the length of building façades when adjacent to public spaces or walkways.
- **Design** - Weather protection and shading elements should be designed as integral elements of a building's architecture. Colonnades should be avoided as weather protective elements as they interrupt free pedestrian circulation and pose accessibility challenges.
- **Drainage and Shedding** - Canopies should be designed to mitigate rain and snow shedding onto pedestrian paths and building forecourts and should drain into the stormwater system.
- **Maintenance** – Canopies must be designed for ease of cleaning and maintenance to avoid build up of leaves, moss and/or algae.

## DG.4.5.4. HEIGHT, BUILDING SETBACKS AND STEPBACKS

Setbacks are required to allow for landscaped or plaza forecourts that can accommodate gathering or circulation space at entryways, and for building and streetscape beautification and identity. Stepbacks in building height create a comfortable at-grade pedestrian environment and mitigates shadowing of the public realm and contextual buildings.

- **Setbacks** – Generally setbacks will conform to 10m from edge landscapes and 4m from campus street Rights of Way as listed in the Official Campus Plan.
- **Setbacks from Functional Landscapes** — Functional landscapes include riparian, forest and urban-adapted landscapes. Natural treed buffers should be left undisturbed within the functional landscapes. A minimum 10m setback should be provided as a buffer landscape to all existing forested landscapes adjacent to buildings and streets
- **Upper-Storey Stepbacks** — Upper-storeys of new campus buildings should stepback a minimum of 3m to maintain a desired four storey street wall in order to create a comfortable "human scale" pedestrian environment and to minimize shading on adjacent open spaces and pedestrian connections. A minimum 3m stepback also allows for useable upper level terrace space.
- **Adjacent Properties** – Stepbacks, setbacks and landscaped buffers should be applied to support a respectful transition towards neighbouring residential properties.


**Above** - Upper-storey stepbacks to maintain a four-storey streetwall




**Above** - Stepbacks and setbacks applied to transition towards a neighbouring residential building

## DG.4.5.5. ADDITIONAL BUILDING HEIGHT

The Official Campus Plan provides direction on the proposed height of each new building with consideration given to shadowing effects, establishing gateways and landmarks, and creating a cohesive urban design.

- **Building Height** - Should a building height be proposed that is higher than what is offered in the Official Campus Plan, it must be reviewed to ensure that shadowing effects are minimal, gateway buildings are not diminished in significance, and that the urban design of the campus remains cohesive, comfortable, and pedestrian-friendly.

## DG.4.5.6. VIEWS

Views in, out, and through the campus help people interpret and navigate a campus, creating a feeling of safety, accessibility and welcome. The Official Campus Plan indicates where new views should be established in the campuses.

- **Views to Public Realm** - Maximize view opportunities onto the public realm at the ground level of buildings by providing a high level of building transparency.
- **Define New Views -** Frame existing or define new views throughout the campuses through the massing and orientation of buildings and the design of landscape features.

# DG.4.6. ARCHITECTURAL EXPRESSION

## DG.4.6.1. BUILDING ARTICULATION

The form and articulation of building facades are the primary methods through which buildings contribute to a pedestrian-scaled, cohesive public realm. An articulated form can bring attention to specific components of a building such as the main entry or an interior public space. It can also reference features of neighbouring buildings to contribute to a cohesive public realm. Further, building articulation should establish a rhythm and scale that respond to the pedestrian. While articulation is a useful tool, it must not be overused as it can obscure the sense of the building as a cohesive whole and reduce the efficiency of the building envelope.

- **Cohesive Campus Design** – New buildings should be responsive to existing buildings within a shared context. Incorporate existing features such as datum lines, scale of architectural features, and materiality within the new building's architectural design to maintain a sense of cohesiveness throughout the campus.
- **Cohesive Architectural Expression** – While the façade with the primary entrance will be architecturally significant, the design of the building should read as a cohesive a whole.
- **Main Façade Articulation** - The main façade of a building should face a campus street, major open space, or main pedestrian path, and should be articulated to establish clarity in main entry and building identity. Building articulation for the main façade should represent the distinct architectural expression of the building and can be a change in materiality, scale, and architectural elements such as entry canopies or enhanced glazing.
- **Corner Articulation** – Where buildings are sited at intersections, the corner should be articulated to create a sense of visual interest and improve the visibility of the intersection. Architectural strategies can include chamfered or rounded corners, projecting or recessed entrances, volumetric manipulations (for instance, additional height at the corner), enhanced window design or others that work to define a prominent corner.
- **Expression of Gateway Buildings** – Buildings that are within campus gateways should be designed with prominent and distinct features that mark these buildings as significant in the campus. They present opportunities to integrate Indigenous design features, visible sustainability initiatives, public art, and special signage in a place of prominence to contribute to overall campus identity and wayfinding.


**Above** - Examples of cohesive façade articulation to define a main entry, frame views, express internal programming and define gateways

## DG.4.6.2. MAIN ENTRY

An easily identifiable, architecturally significant main entry should be provided along each campus street, pedestrian spine, plaza, quad, and courtyard that a building faces.

- **Building Address** - A building's primary main entry, or "front door," should address the campus street or prominent pedestrian path that it fronts.
- **Corner Address** – Buildings that have an address at prominent intersections, must provide a primary entry at the corner.
- **Universal Access** – All new building designs must include welcoming and universally accessible main door access.
  - Main entrances shall give preference to the use of ramps and avoid the use of flights of stairs unless necessary to reach required Flood Construction Levels (FCL) or mitigate abrupt topographical changes.
  - Where there are non-accessible secondary building entries, directional signs shall point towards accessible entries, ramps and elevators.
  - Ramps as part of a buildings' main entrance should not appear tacked on; they should be innovatively integrated into the design of the main entry.
- **Wayfinding** – Main building entries shall be distinct and recognizable at a distance. Consider projecting or recessing the primary main entry from the building façade, using contrasting colour and/or materiality, incorporating architectural lighting, weather protection features, and designing with increased transparency.
- **Lighting** – Entrances to buildings are to be illuminated to enhance their visibility and improve public safety in accordance with CPTED principles.

**Above** - Building orientation, transparency, lighting and a sloped path define the main entrance

**Above** - At-grade glazing looking into an animated interior contribute to a vibrant public realm

## DG.4.6.3. AT-GRADE EXPRESSION

Where the at-grade portion of a building intersects with the public realm, is directly within pedestrian sightlines, and therefore has the most prominence on the look, feel and sense of welcoming of an environment. As such, building expression at grade is extremely important in contributing to an environment that feels animated, appropriately scaled, vibrant and safe.

- **At-grade Glazing** – At-grade glazing is encouraged on all street façades and façades fronting onto significant open spaces to provide daylight and views to pedestrian areas.
- **Blank Walls** - Textures, patterns, colours, murals, secondary materials, landscaping and building form variations must be incorporated into expansive building elevations. The use of large, blank walls shall be avoided.
- **Animated Interiors** – the most animating uses should be located on the ground floor, adjacent to interior circulation corridors, significant exterior open spaces and pedestrian spines. Consider lounges, cafeterias, cafes, and exhibit space within these spaces.

## DG.4.6.4. STAIRS

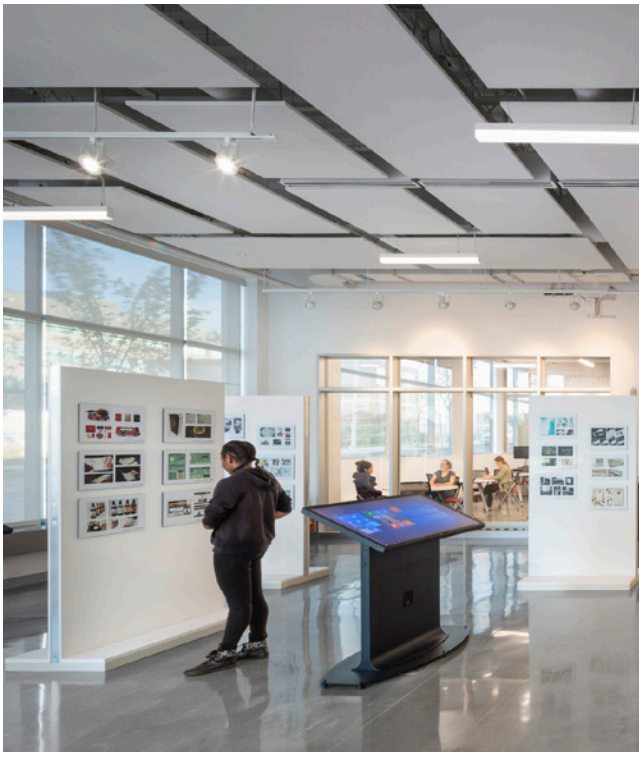
In their role as mitigators of topographical change or transitions between building floors, stairs intrinsically form moments of articulation in architectural design. As such, stairs present a significant design opportunity. Their ability to frame and highlight views, create visual interest and contribute to wayfinding should considered alongside the need for universal accessibility.

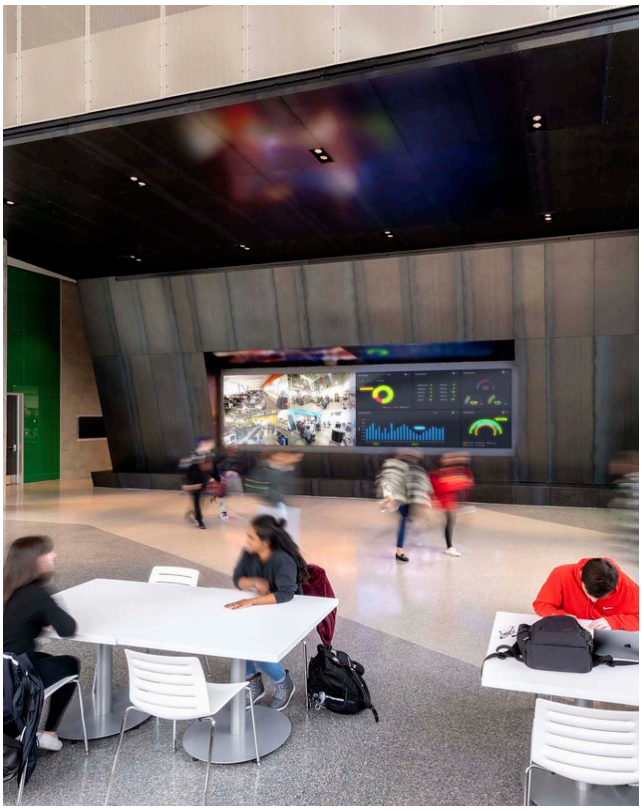
- **Locations** – Internal stairs are to be accessed directly from internal pedestrian corridors and at the perimeter of buildings, so they have ample natural light, and are readily seen from exterior circulation paths.
- **Transparency** – Transparency and co-location of stairs with indoor public spaces should be maximized.
- **Outdoor Stairs in Open Spaces** – Outdoor stairs shall be generous in size, adequately lit, a continuation of a landscape's design, and aesthetically pleasing.
- **Feature Stairs** – Stairs should be highlighted with use of colour or art features on the walls of stairwells where visible from exterior through windows. The features, lit up at night, will assist in wayfinding and animation of the public realm.
- **Social Stairs** – Social stairs may be used in combination with travel stairs to provide comfortable places for gathering. They are best located in areas with an overlook into a larger public space such as a plaza or internal building concourse. Social stairs should have a minimum depth of 355.6mm to accommodate comfortable seating. The height of the riser can relate to the gradient of the slope.
- **Views**– Stairs should be used to frame and highlight interesting views, such as outlooks into open spaces, special indoor areas and outdoor public art.

**Above** - Social stairs that overlook a public space

**Above** - Feature stairs that assist in wayfinding and animation of the public realm after-dark

**Above** - Adequately lit outdoor stairs that are generously sized and integrated into a landscape design





**Above** - Example showcase spaces

## DG.4.6.5. ACADEMIC AND SUSTAINABILITY SHOWCASE

KPU's campuses are envisioned as pedagogical environments, extensions of the learning that happens within classrooms and labs. Architectural and public realm design should enrich teaching and learning opportunities.

- **Academic Symbolism** – Opportunities to embody the activities and culture of the academic community within the new building should be considered in the architectural design process.
- **Exhibition Space** – Academic displays are to be integrated into the architecture and visible from adjoining public open spaces wherever possible.
- **Buildings as Teaching Tools** - Interactive elements such as the building operational systems should be incorporated as a teaching tool.
- **Witnessing Learning** – Buildings should maximize views into labs, workshop and studio spaces when appropriate for the academic programming.
- **Sustainability Features** – Sustainability systems and features such as solar shading and stormwater management are to be integral parts of a building's architectural design.

## DG.4.6.6. ARCHITECTURAL LIGHTING

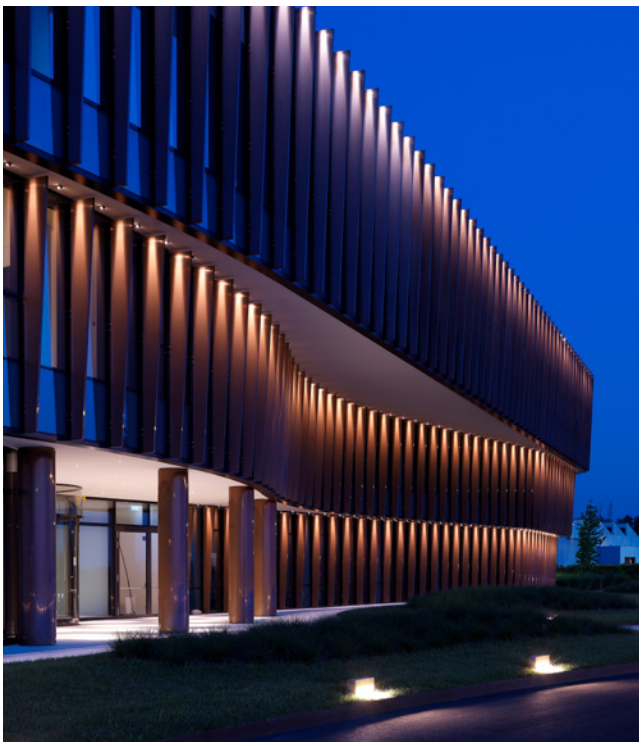
Architectural lighting can support building identity and wayfinding in the nighttime hours.

- **Architectural Integration** - Where building-mounted lighting is proposed on the primary entry façade, it is to be integrated within the architectural expression of the building.
- **Bird-Friendly Lighting** – Building mounted lighting should be targeted and shielded to reduce light spill and its associated light pollution. Down lighting is preferred, as is the use of green or blue light before white and red light.

## DG.4.6.7. SERVICE AREAS

Service areas include areas for loading, storage, waste sorting and utilities. While a necessary component of a landscape, these typically “back of house” uses should not detract from the public realm.

- **Screening from View** - Loading areas, outdoor storage, dumpsters, and utility boxes shall be integrated into the landscape or building and screened from view.



**Above** - Down-lit integrated building lighting

**Above** - Green roof designed for use

**Above** - Screened mechanical systems

**Above** - High-albedo roof materials

## DG.4.6.8. ROOFSCAPES

The design of roofs as living landscapes or with high-performing roofing materials can contribute to the vibrancy and sustainability of the campuses.

- **Design for Use** - Provide opportunity for safe roofscapes that can accommodate social spaces, amenity areas and/or teaching and learning opportunities.
- **Green Roofs** – Promote living roofs whenever possible, particularly when visible and accessible for maintenance.
- **Albedo Effect** - When green roofs are not possible, design roofs to reduce the urban heat-island effect through high-albedo roofing materials.
- **Mechanical Systems** - Roof vents and stacks should be grouped and screened from view.

## DG.4.6.9. BUILDING MATERIALS

Each building material has an associated aesthetic, maintenance and sustainability profile. The choice of building materials should contribute to a high-quality design aesthetic, decrease maintenance and have minimal embodied emissions.

- **Quality Materials** - Exterior materials are to be of high quality with sense of permanence. The materials should be durable to reduce building maintenance expenditures over a building's lifetime. Prioritize materials with low embodied emissions.
- **Locally Sourced** - Materials sourced from the region shall be prioritized to reduce the GHG emissions associated with transportation and to support local economies.
- **Volatile Organic Compounds (VOC)** - Low or no-VOC materials shall be prioritized to contribute to healthy indoor environments.
- **Lifecycle of Materials** – Renewable and recyclable materials that can be reused after building decommission should be prioritized.
- **Faux Finishes** - The use of faux finishes such as artificial stone and wood effect materials for exterior building materials is not permitted.

## DG.4.6.10. COHESIVE MATERIAL PALETTE (ACROSS CAMPUSES)

The following material palettes are provided to create a cohesive look and feel across the campuses.

*Primary Palette*

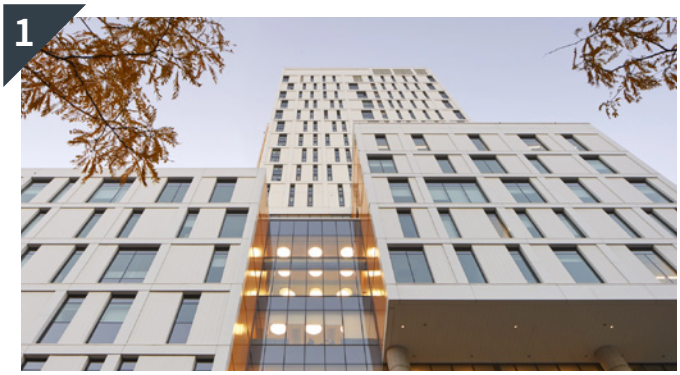
- Wood (mass timber), glass, medium-grey paneling, concrete, and stone are the primary palette for campus buildings.

*Material Relationships that Should be Considered*

- White and light grey paneling to reference contemporary architecture and urban contexts.
- Natural materials such as medium brown-red brick, terracotta, wood and natural-coloured metals to be used in buildings abutting Forest, Riparian and/or Urban Adapted Landscapes to complement the surrounding Indigenous and west coast inspired landscape.
- Industrial materials such as dark metals, weatherized (corten) steel and wood to celebrate the industrial character of the KPU Tech campus.
- Transparent and vibrant materials to emphasize main entries, ground level connections, design features, or significant interior open spaces.
- Coloured materials to emphasize significant architectural design features.

**Above** - Primary palette of materials

1



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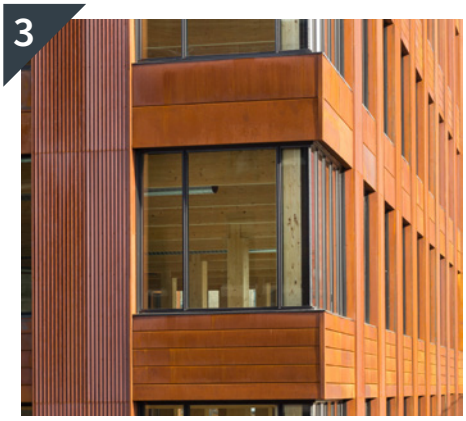
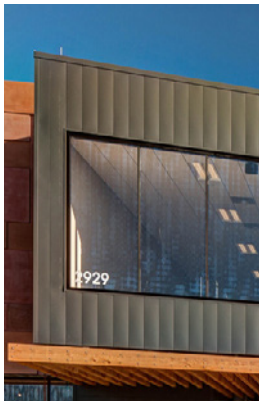
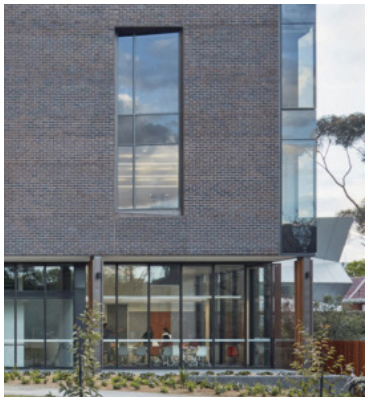


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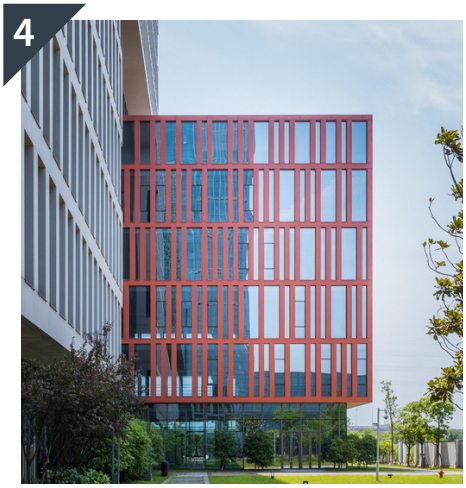



**Row 1** - White and grey paneling to reference contemporary architecture and urban contexts.

**Row 2** - Natural materials to complement the surrounding Indigenous and west coast inspired landscape.

**Row 3** - Industrial materials to celebrate the industrial character of the KPU Tech campus.

**Row 4** - Transparent and vibrant materials to emphasize main entries, ground level connections, design features, or significant interior open spaces and coloured materials to emphasize significant architectural design features.

# **DG.5** Indigenous Design Guidelines

## DG.5.1. INTENT

KPU acknowledges that we teach and learn in a region which overlaps with the traditional, ancestral lands of the hən̓q̓əmin̓əm̓ (hun-kuh-mee-num) and SENĆOŦEN (sen-choh-sen) speaking peoples, who have been stewards of this land from time immemorial. KPU further recognizes the broader connections we have to the Indigenous cultures from abroad.

To ensure that future development is contextually appropriate, Campus and Community Planning is committed to early and ongoing engagement with the IAC on the application of the Indigenous Design Guidelines in the design of new open spaces.

The following are KPU-wide guidelines for buildings and open spaces.

## DG.5.2. INDIGENOUS BUILDING DESIGN

- Research Coast Salish building typologies and features to ensure their sensitive use in any architectural designs. Examples of such features include the use of horizontal cedar boards and large post and beam structural elements.
- The use of carved cedar doors and house posts should be placed at the entrance to special buildings and main gathering places or spaces

**Above** - Entrance to First Peoples House at University of Victoria

**Above** - Woven cedar wall feature within the Indian Residential School History and Dialogue Centre at UBC

- Use of woven cedar screens, or cladding within lounge areas, special classrooms and meeting rooms is encouraged. Cedar cladding or screens can also be used as wayfinding elements for certain areas of a building.
- Where possible, and especially if a building has cultural significance, have its entrance face east
- Integrate non-conventional decolonized teaching spaces indoors and outdoors that enhances cultural learning and our awareness of the importance of nature.

**Above** - Longhouse teaching space with the First Peoples House at University of Victoria

- Where glazing is a building feature, incorporate etchings or art designs on them and coordinate expanses of glazing and transparency with landscape designs to heighten the experience of being surrounded by nature.
- Incorporate the history to the site and related Indigenous stories throughout the campus using exhibits, signs, architectural features, and Indigenous art, working closely with the IAC and Indigenous communities to determine the application of traditional knowledge and cultural representation.
- Consider including provisions in building design for smudging to occur.

**Above** - Outdoor Smudging Pavilion at Capilano University, North Vancouver

- Integrate colours like Ochre that are drawn from Indigenous culture for feature walls.
- Incorporate names of important buildings using hən̓q̓əmiṅəm̓ dialect in consultation with the IAC.
- Integrate Indigenous artwork from local Indigenous communities throughout the campuses and along building walls where possible.

**Above** - Capilano University Aboriginal Gathering Place Outdoor Pavilion

**Above** - O Siem Outdoor Pavillion in Squamish

## DG.5.3. OPEN SPACE DESIGN

- Incorporate throughout the campuses the history to the site and related Indigenous stories throughout the campus using exhibits, signs, maps, story boards, landscape architectural features, and Indigenous art working closely with the IAC and Indigenous communities to determine the application of traditional knowledge and cultural representation.
- Reflect a stronger sense of Indigeneity on all campuses, including the creation of celebration and ceremonial spaces and outdoor pavilions for ceremonies and socialization that are grounded in Coast Salish ways and are open in spirit.
- Provide on campus places where Elders are welcome to provide counseling to Indigenous students.
- Work with the IAC and Indigenous community to design weave patterns in the hard surface treatments of the campuses.

**Above** - Integrating building and open space designs at the Indian Residential School History and Dialogue Centre at UBC

- Use a palette of indigenous planting material local to the region along with educational signage.
- Celebrate water and the relationship local Indigenous communities have to the Sto:lo (Fraser River) and the Salish Sea by integrating water features into the campuses.
- In reflection of local rainforests, building and landscape designs should capture water for infiltration and for use in raingardens and water features where the opportunity arises.
- Understand the historic hydrology under the campuses and daylight existing creeks if possible.

**Above** - Integrated water feature at the Indian Residential School History and Dialogue Centre at UBC

# DG.6
# Public Realm Design Guidelines

## DG.6.1. INTENT

Buildings and landscape design work together to create the campus public realm. The public realm should convey KPU's identity, cultural heritage, pedagogy, Indigenous culture, and natural beauty. The Public Realm Design Guidelines complement the recommendations provided in the Official Campus Plan to support sustainable and functional public realm projects.

## DG.6.2. INDIGENOUS DESIGN

The Official Campus Plan strives to uphold Indigenous design principles so that future landscape designs are reflective of the cultural context of the First Nations on whose traditional territory the landscape is intended to be designed. To ensure that future landscape designs are contextually appropriate, Campus and Community Planning is committed to early and ongoing engagement with the Indigenous Advisory Committee (IAC) on the application of the Indigenous Principles in the design of new open spaces.

**Above** - Tree grates separated from the path of travel

# DG.6.3. HARDSCAPE

Hardscape refers to hard surfaced areas on the campus. Campus hardscape creates a cohesive and legible public realm. It can be used to clarify the circulation hierarchy and define unique open spaces. Hardscape should be given judicious consideration before use to minimize overall campus imperviousness.

## DG.6.3.1. SURFACES

Hardscape surfaces should have considerations for drainage, accessibility and long-term maintenance.

- **Finish** - Except for trails, pedestrian ground treatment shall have a permanent, slip-resistant surface. No smooth-finish hardscape is permitted.
- **Drainage** – Paved areas should be designed to drain into adjacent landscape areas that have been designed and graded to receive water. Drainage structures such as French grates in paved areas should be avoided if possible, to reduce operational and maintenance demands.
- **Ground Level Utility Access** – Utility access points located within the hardscape of pedestrian paths and plazas must match the level of the pavers and have a non-slip surface.
- **Tree Grates** – Grates should only be placed within the furnishing zone and should not permit a passage of a sphere of more than 12mm in diameter. Tree grates must be specified appropriately to the tree species.

**Above** - Desire line deviates from the original paved path

## DG.6.3.2. EXTENT AND ORIENTATION OF WALKWAYS

Walkways should be designed to offer an intuitive and accessible circulation for pedestrians.

- **Minimum Width** – Sidewalks and pedestrian paths shall be at least 2m in clear width to support universal accessibility and ease of maintenance. No objects, including site furniture, trees, planters, poles, bike racks and fire hydrants, shall be sited within the minimum width.
- **Minimum Clear Height** – To support universal accessibility, the 2m minimum sidewalk and pedestrian path width must be free from all obstructions between the paved surface to a height of 2m. Exceptions may be given to handrails at the discretion of Campus and Community Planning.
- **Natural Paths of Travel** – Walkways that are part of direct connections, especially from building to building, are to be designed to follow natural paths of travel or, when refurbishing existing hardscaped landscapes, they should follow pedestrian “desire lines.”
    - Desire lines can be observed following snowfalls, in the wear and tear in planted landscapes, and through observing where people to tend to walk.

## DG.6.3.3. GRADIENTS

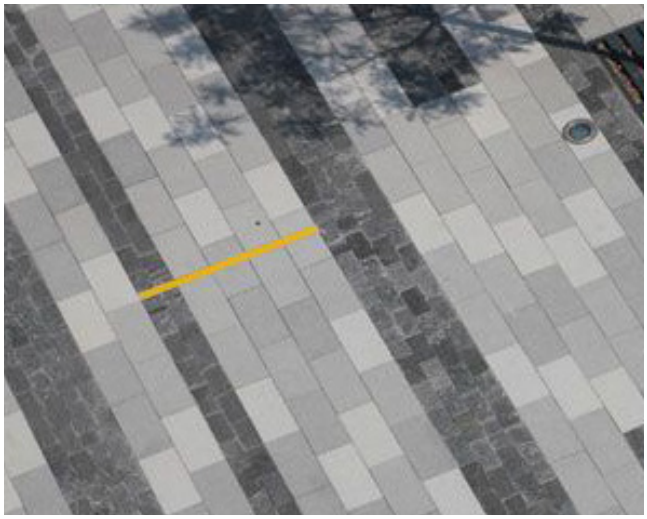
It is critically important that gradients are designed in accordance to best practices of Universal Design.

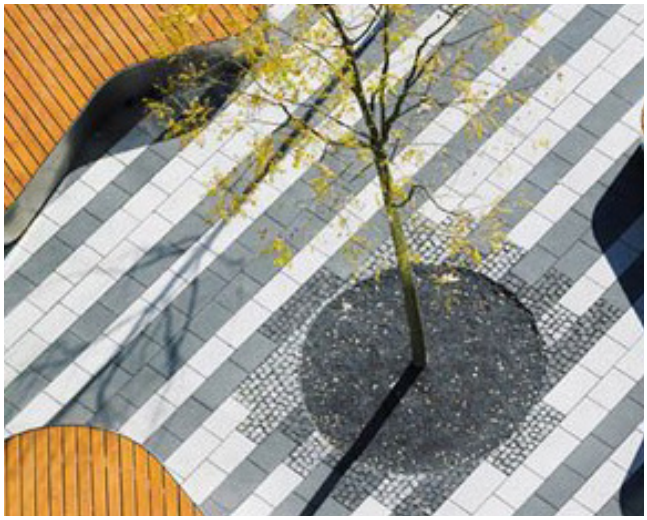
- **Maximum Longitudinal Slope** - Slopes in paved pedestrian areas shall not exceed a ratio of 1:20 (5%).
- **Maximum Cross Slope** - Cross slopes shall not exceed a ratio of 1:50 (2%).
- **Landings** - Distances greater than 12m with a continuous slope of 1:20 (5%) are not permitted in pedestrian routes without landings.
- **Ramps** - Continuous gradients in excess of 5% shall be designed as ramps.
- **Effective Drainage Gradient** - A minimum 0.5% cross slope between a minimum of 0.5% and a maximum of 2% must be provided on any paved area to achieve effective drainage.

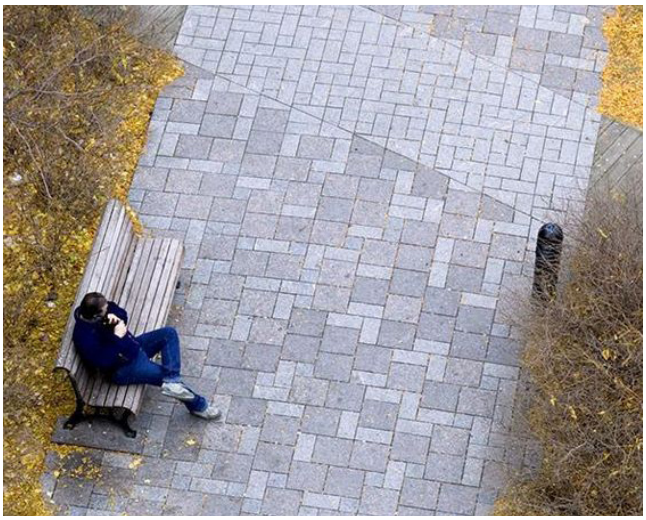
## DG.6.3.4. PATTERNS AND MATERIALS USED FOR HARDSCAPE

Hardscape patterns and materials create a high-quality look and feel of the landscape and provide indication of pedestrian-priority areas.

- **Cohesive Palette** - A cohesive design and palette of materials should be selected for the KPU streetscapes and hardscapes. Grey stone or concrete pavers shall be used as a base palette, with maroon or dark grey stone or concrete pavers as accent.
- **Special Circulation Corridors** – The Richmond campus' Kwantlen Mews and Kwantlen Street, Surrey campus' pedestrian spines and crossings, the pedestrian crossings on Langley campus' Kwantlen Crescent and KPU Tech's 55th Ave should be given special hardscape treatment. Special treatments may include colour differentiation or a warp and weave pattern designed alongside the IAC and Indigenous community, or inscriptions.
- **Intersecting Patterns** – Where two hardscape patterns, materials or colours intersect, there should be an intentionally designed transition.
- **Repairs** - When hardscape treatments are repaired, they should match the material and pattern of the existing hardscape treatment.





**Above** - Examples of appropriate hardscape patterns, including when multiple patterns intersect

# DG.6.4. SOFTSCAPES

Softscapes comprise all the horticultural elements of a landscape and its plantings. Softscaping contributes to the experience of the campus by providing a delightful and restorative public realm that conveys KPU's identity. It also is intrinsically important in the restoration and enhancement of campus ecosystems.

## DG.6.4.1. PLANTINGS

Plant materials should be selected based on the ecoregion, soil conditions, water requirements, and the size of the site.

- **Existing Special Landscape Features** – Existing special landscape features, as determined by Campus and Community Planning (for instance, horticultural gardens and significant treescapes), shall be preserved, integrated into the overall design of the open space, or relocated.
- **Preferred Planting** - The use of indigenous, location and climate adaptive, pollinator-friendly, planting is to be prioritized. As well, such plantings should demonstrate the following characteristics: have low water requirements/be summer drought tolerant; be non-allergenic; and offer ease of maintenance, with a preference for species requiring little pruning. No invasive planting materials shall be included in campus landscapes. Indigenous plants used for Indigenous ceremony should be chosen through collaboration with the IAC and Indigenous Community.
- **Bird Friendly** – The use of plants that support bird habitat is to be prioritized.
- **Use of Shrubs** - Shrubs shall be incorporated in landscape designs to provide colour and beautification, increase habitat and site ecology, enhance streetscapes, define spaces, direct circulation, filter surface run-off, and provide wind screening.
- **Biodiversity** - Diversity in plant materials is encouraged. Plant species that are symbiotic and are self-sustaining should be prioritized. Simple bold swaths of planting are encouraged but monoculture planting is discouraged.
- **Streetscape Tree Canopy** – Trees planted within the streetscape should provide an overhead canopy for shade and shelter from inclement weather, for bird and wildlife habitat, and street beautification. Columnar species, needle leaf evergreens, nut-bearing trees, and small ornamental trees should not be planted in the streetscape.
- **Plant Resilience** – Select plant species that are known to exhibit a high degree of pest and disease resistance. Prohibited plants include those that are invasive, contain toxic substances or produce dusts, exudates or odours that cause irritation, chemical burns, poisoning or allergic reactions. Refer to WorkSafe BC, Toxic Plant Warnings.

Exceptions to the above will be vetted by Campus and Community Planning, depending on location, use, and pedagogical and historical value.

## DG.6.4.2. FOOD AND/OR LEARNING GARDENS

Food and learning gardens have been identified in the Official Campus Plan to support dedicated outdoor spaces for experiential teaching and learning.

- **Expansion** – Any new planting opportunities should seek to expand and enhance existing or deliver new food and learning gardens on campus.
- **Approval** - Food and learning gardens sponsored by student, staff, or faculty may be considered on a case by case basis with approval from Campus and Community Planning.
- **Aesthetic** – Food and learning gardens should be designed for function but should also be considered as an aesthetically pleasing element in the landscape.
- **Maintenance** - Discussions about the establishment, operation and maintenance of any proposed food or learning garden should be held in advance with Campus and Community Planning and Facilities Services. Maintenance and operation responsibilities will not be borne by KPU operational staff without prior approval.
- **Pest Management** - Food producing gardens should be managed so that they do not become unsightly and encourage pests.
- **Stewardship** - The stewardship of the food and learning gardens by student groups or the community is encouraged.

**Above** - Examples of food and learning gardens

# DG.6.5. PARKING

The streetscape is one of the crucial urban design elements that represents and supports the public life of the campus and contributes to the experiential quality of a space. The Official Campus Plan provides directions for the edge landscapes and road right of ways for the campus streets.

## DG.6.5.1. POCKET PARKING

Pocket parking is defined as small lots of surface parking with a maximum of ten parking paces.

- **Provision** - Areas of surface pocket parking is allowed if direct accessibility to buildings is required and cannot be accommodated in parallel parking along the street edge, below grade or in structured parking forms. Surface pocket parking should not be allowed to front any building.
- **Screening** - All pocket parking must be screened and integrated into the landscape design surrounding the building.
- **Maximum Spaces** - A maximum of ten parking spaces are allowed in pocket parking so that it can be discretely integrated into the landscape.
- **Sustainable Design** - Sustainable design measures should be part of the parking design including shrub and tree planting, bioswales, and permeable pavers.
- **Safety** - All pocket parking lots should be well lit, universally accessible, and landscaping planted applying CPTED principles.

## DG.6.5.2. BELOW-GRADE PARKING AND STRUCTURED PARKING

- **Entrances** - Entrances to below-grade and structured parking should be located off of service corridors so as not to minimize conflicts with pedestrians and cyclists.
- **Treatment** – For parking that is partially below-grade, the above-grade portion should be screened from pedestrians as viewed from above.
- **Animating Uses** - Structured parking should not be a stand-alone building. Structured parking should be integrated into the design of buildings with animating uses on the ground-level.
- **Priority Parking** – Accessible parking spaces, EV charging stations and car-share parking should be given the most convenient access to building entrances and be appropriately lighted and signed for ease of identification.
- **Security Gates** – Should be provided at all entrances that are lockable.

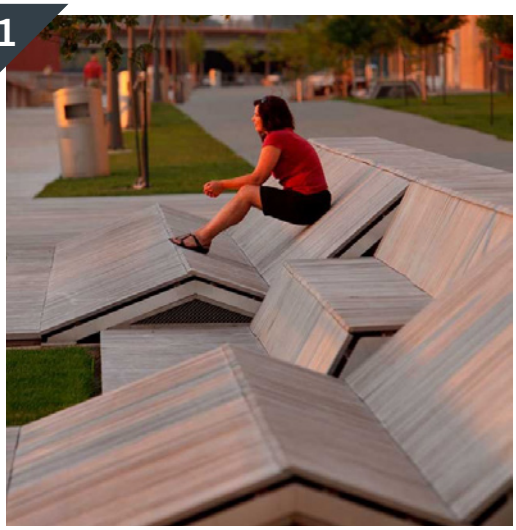
# DG.6.6. LANDSCAPE DESIGN ELEMENTS

Landscape design elements include site furniture, lighting, art and more. They contribute to placemaking by defining the character of outdoor “rooms” on the campuses.

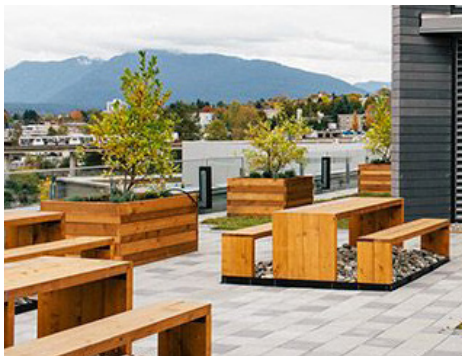
## DG.6.6.1. SITE FURNITURE

- **Consistent Look and Feel** - Site furnishings shall have a cohesive look and feel across the campuses.
- **Furnishing Materials** - Fixed site furniture shall be made of high quality, durable materials that reflect the west coast setting of the campuses, including materials like wood, steel and concrete.
- **Feature Site Furniture** - Feature site furniture can be unique and artistic and should be in prominent locations such as gateway plazas and campus quads. Feature site furniture can be functional public art pieces that respond to the character of the campuses. Consider opportunities to engage with Indigenous makers and faculties in the design of feature site furniture.
- **Moveable vs Fixed Furniture** - Moveable furniture is best used in gathering areas: plazas, courtyards, indoor social spaces, etc. It can be used alone or in combination with fixed furniture. Fixed furniture is best used along planter boxes and as part of the streetscape.
- **Bench Locations** - Benches and/or feature seating elements shall be located at building entrances, along the façade of buildings, within open spaces and at an angle to the street.
- **Sidewalk Benches** - A typical, consistent bench should be located adjacent and perpendicular to sidewalks spaced approximately 15m apart to support universal accessibility, preferably integrated into the design of parcel landscape areas.
- **Tables** - Tables should be included in outdoor open spaces to facilitate social gathering, outdoor eating, and outdoor workspaces.

1



2



3

**Row 1** - Feature site furniture can be site-specific

**Row 2** - Fixed site furniture palette: primarily wood and concrete

**Row 3** - Moveable furniture palette: colourful and playful

## DG.6.6.2. BIKE RACKS AND AMENITIES

- **Location** - Bike racks should be located along cycling routes, near primary entrances, separated from pedestrian circulation to and from entrances, and be weather protected. Outdoor bike racks should be adequately lit and within view from nearby open spaces and buildings for added security.
- **Grouping** - Preference shall be given to smaller clusters of bike racks distributed throughout the campus over large expanses of bicycle parking for ease of maintenance and pedestrian circulation.
- **Bike Amenities** - End-of-trip facilities such as secured bike storage, showers, changing rooms, fix-it stations etc. in new developments should be provided in short walking distance from cycling routes.
- **E-bike Charging Stations** - E-bike charging stations should be provided throughout the campuses along cycling routes and near building entrances. Like bike racks, e-bike charging stations should be adequately lit and within view from nearby open spaces and buildings for added security.

## DG.6.6.3. GARBAGE, RECYCLING AND COMPOST BINS

- **Location** - Combined garbage and recycling bins should be located near building entrances, and within view of tables and benches that may be used for eating and along pedestrian routes, and within public gathering areas.
- **Maintenance** – Garbage and recycling bins should have covered tops to avoid collecting rainfall and they should be front-loading for ease of maintenance.

**Above** - Examples of lighting appropriate for pathways and gathering spaces

## DG.6.6.4. LIGHTING

Lighting creates a welcoming campus at all hours of the day and night. Lighting can provide beauty and a sense of place while performing the functional task of making outdoor settings feel safe. The lighting guidelines reflect the use of light to define gateways, distinguish special places, visually connect the campus and appropriately light building entries, all within the highest standards of sustainability.

- **Sustainability** - Lighting is to follow sustainability best practices by using lighting solutions that limit pollution, limit the disposal of toxic waste, conserve energy, are easy to maintain, are durable and reliable, and that anticipate and can respond to future technology improvements.
- **Pedestrian-Scale Lighting** - Consistent pedestrian-scale and downlit lighting should be used along the Pedestrian-Only Spines on the Surrey campus, the Kwantlen Mews and Kwantlen Street on the Richmond campus, 55th Avenue on the KPU Tech campus, and Kwantlen Crescent on the Langley campus.
- **Lighting in Outdoor Gathering Spaces** - The lighting strategy for outdoor gathering spaces should be considered alongside the lighting strategy of neighbouring buildings.
- **Trail Lighting** – Lighting along trails should be downcast to minimize light pollution and associated impact on habitat.

## DG.6.6.5. ART

The integration of art should be considered in all aspects of design in addition to being a stand-alone art form.

- **Representation in the Public Realm** - Art can be represented in the building's interior and exterior architecture, in the design of special buildings such as the pavilions, and building connections, in gateway treatments, in lighting and site furnishings, and in the design of the landscape and landscape elements.
- **Siting** – Public art should be placed in prominent open spaces, at the termini of view corridors, or integrated into campus architecture. Siting of public art in outdoor spaces shall be determined by Campus and Community Planning and the siting of Indigenous art should also include collaboration with the artist(s), the IAC, and the Indigenous Community.

**Above** - Art as a gateway feature

**Above** - Art integrated into an architectual feature

# DG.6.7. SIGNAGE AND WAYFINDING

Signage is critical for both wayfinding, addressing, and for a cohesive visual identity. A signage program shall be used that has provisions for gateways, directional and identification signage.

## DG.6.7.1. SIGNAGE

*Gateway Signs*

- **Prominence** - Gateway signage shall be the most prominent signage on the campus and indicate arrival to KPU.

*Directional Signs*

- **Predictability** - Directional signage shall be predictable, simple and lead to a destination.
- **Hierarchy** - The signage system shall provide intuitive, hierarchical wayfinding acknowledging the differing scale and travel speeds of pedestrians, cyclists and vehicle drivers.
- **Cohesive Signage System** - Text, symbols, icons and the location of signage shall be consistent throughout the signage system.
- **Integrated in the Landscape** - Free-standing directional signs shall be integrated into the site landscaping.
- **Illuminated Signs** – Illuminated signs are permitted at the pedestrian scale to support wayfinding and identification during the nighttime hours. The light source should be shaded to minimize light pollution.

*Identification Signs*

- **Size and Scale** - The size of a building identification sign shall reflect the scale and proportion of the building.
- **Orientation** - Primary building signs shall be oriented to a single fronting street.
- **hən̓q̓əmin̓əm̓ Place Names** – Collaborate with the IAC to incorporate hən̓q̓əmin̓əm̓ dialect and place names in campus signage.
- **Unified Building Signage System** - The signage system to identify building components (elevators, floors, etc) shall integrate the various sign types into a unified graphic style that is consistent with the architectural design.
- **Animated Electronic Signs** - Animated electronic signs are not permitted.
- **Backlit Signs** – Backlit signs are not permitted.

## DG.6.7.2. WAYFINDING

Wayfinding strategies recommend physical demarcations that work collaboratively to make a built environment easier to navigate. The three principles of wayfinding are landmarks, orientation and navigation.

Landmarks can be public art, buildings, signs or memorable elements in a landscape (like a significant tree or a water feature). Because these elements are easily recognizable, they have a strong effect on the identity of a place.

Orientation devices allow you to identify where you are in space and how far away you are from your destination.

Navigation is the indicator of which direction you need to go. Directional signage enables people to navigate their path to a destination.

*Landmarks*

- **Location** - Landmarks shall be placed at significant pedestrian and/or vehicular intersections.
- **Non-signage Landmarks** - Markers like recesses, overhangs, prominent façades, and/or landscaping shall be used to identify building entrances.
- **Multi-sensory Landmarks** - Tactile, sound, and visual indicators should be incorporated into primary landmarks to aid in wayfinding for those with visual and hearing challenges.

*Orientation*

- **Location** - Orientation devices shall be located at key decision-making nodes such as when two paths intersect.
- **Comprehension of Movement Network** - The hierarchy and roles of paths may be distinguished through differentiation in width, paving pattern, material, and colour to assist in the comprehension of the movement network.
- **Access and Restriction** - Orientation devices shall be used to clearly communicate where the public is welcome and where access is restricted.

*Navigation*

- **Location** - Directional signage shall be located at every decision-making node.
- **Progression** - Navigational elements shall be progressive; the next navigational indicator should be within the cone of vision of the previous one.