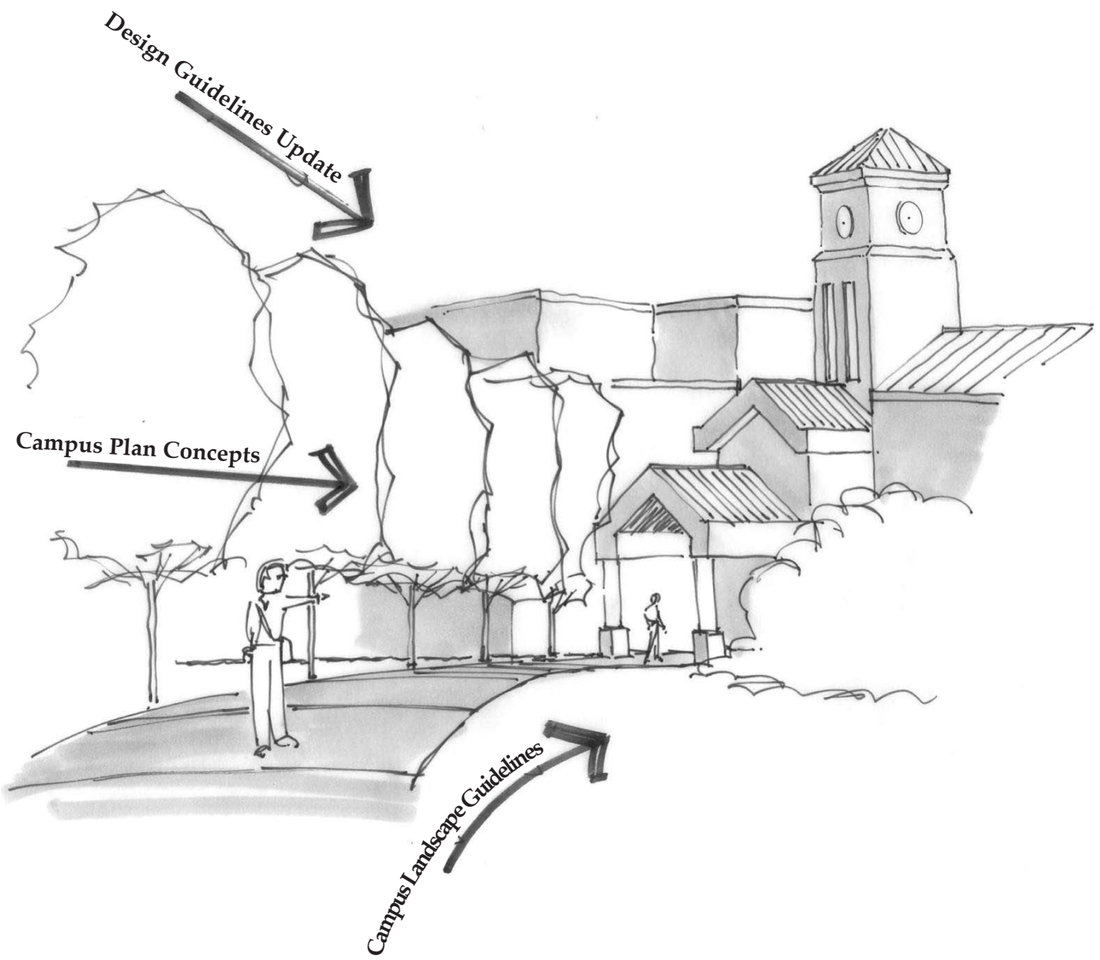
THOMPSON RIVERS UNIVERSITY

Working Paper 4: Campus Design Concepts



INTRODUCTION

Working Paper #4: Campus Design Concepts builds on the information developed in previous working papers to establish the new version of the Campus Plan. It graphically depicts the future vision of TRU based on the parameters, concepts and guidelines developed earlier in the Campus Plan process and is intended to guide future development at TRU. This working paper encompasses the following three areas:

A - Design Guidelines Update
This section updates the design guidelines established in the 1991 version of the campus plan, the Campus Development Plan. These remain essentially unchanged except for a recommendation to increase the height of some significant buildings in the Academic Zone to allow for increased overall density so that travel distances remain acceptable.

B - Campus Plan Concepts
This section graphically illustrates the proposed development of the campus for each of the 10,000, 13,000, and 16,000 FTE student enrollment scenarios and compares two different approaches to long term development. It recommends that a slightly higher density approach be established to preserve the guiding principles of Integration, Sustainability and Community Leadership.

C - Campus Landscape Guidelines
This section describes in considerable detail, landscape guidelines for TRU's campus. These guidelines, together with the Campus Plan are intended to guide future development and improvements by identifying the characteristics of various landscape components.

CONTENTS

THOMPSON RIVERS UNIVERSITY DESIGN GUIDELINES UPDATE

INTRODUCTION

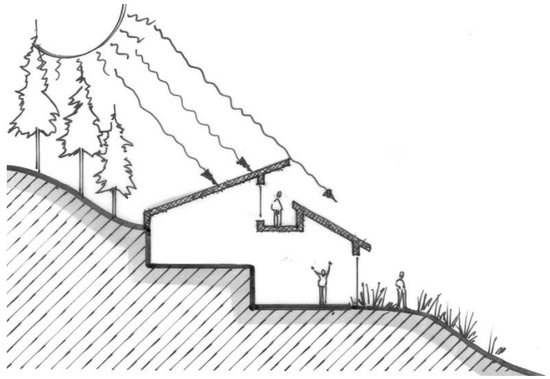
The 2003 version of TRU's Campus Plan includes a review of the Design Guidelines developed for the 1991 Campus Development Plan. For the most part the 1991 design guidelines have served TRU well and a number of important buildings including the Trades and Technology Centre and the Campus Activity Centre have been constructed based on these guidelines. Both of these buildings exhibit high standards of design and reflect well on the quality of the guidelines including their flexibility to allow good architecture to happen within restricted building budgets.

The intent of this review is to avoid making unnecessary changes and for the most part few changes are made. The only exception is in regards to building height. Where indeed earlier guidelines recommended a maximum height of three stories the revised guidelines are recommending that certain buildings of significance should be allowed to be up to five storeys in height. As explained in the Campus Plan, the main reason is to create, as the university grows over time, a higher density of development, which will prevent unnecessary sprawl and preserve the underlying principle of integration between all academic programs. As mentioned this should be reserved for special buildings such as the proposed library or "information commons" and other academically significant structures.

1.0 DESIGN GUIDELINES

The Campus Development Plan establishes guidelines for future buildings. The development of detailed guidelines is not intended to restrict the freedom of design professionals, but to assist them in making choices that will contribute to an overall sense of unity throughout the campus. Rather than defining a particular architectural style for future buildings, a "kit of parts" approach provides the flexibility needed to accommodate disparate functional programs in a variety of buildings as well as the distinctive skills of future architects and engineers.

Three distinctly different buildings with an assortment of external finishes and features that co-exist on the TRU Campus. From left to right: The Clock Tower, Library and Campus Activity Centre.

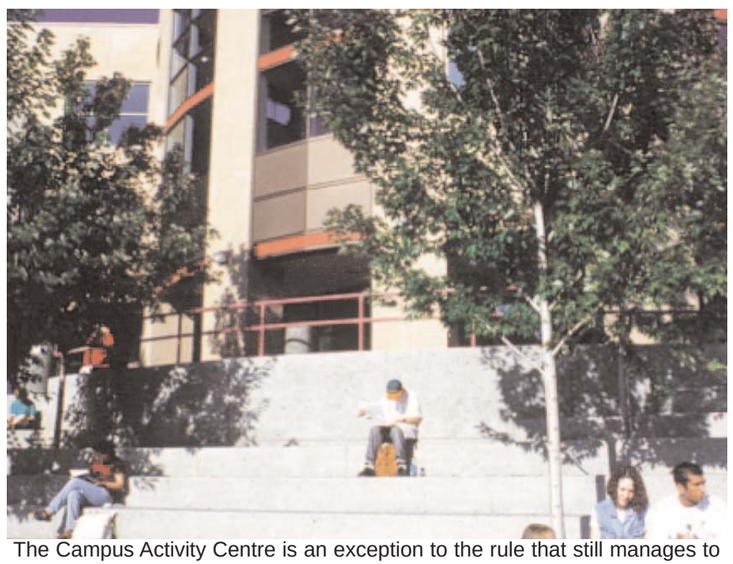


2.0 BUILDING CHARACTER

The majority of the buildings on the Campus will be between one and three stories. In order to provide an appropriate human scale for the outside courts, to minimize cast shadows, and to help relate the buildings to the natural terrain, the Campus Plan recommends one and two-storey lean-to forms with low sloping roofs in relation to three-storey buildings. Buildings of four to five storeys can use a similar technique to reduce scale and maximize penetration of sunlight. There are also opportunities given the topography of the campus to "bury" portions of higher buildings into the sides of slopes. Where possible, sloping roofs will complement the prevailing topography, and where the footprint of a building is too large for a single sloped roof, a flat roof and lean-to can be used.

The Arts and Education Building is an example of a building cooperating with its surrounding environment.

Examples of existing brick work on campus.



The Campus Activity Centre is an exception to the rule that still manages to compliment the surrounding architecture.

3.0 EXISTING FINISHES

The existing Campus buildings, except the Old Main and Food Training Centre Buildings originally used Clayburn Giant Brick "Walnut". More recent additions to the Library and Science Building have used IXL Giant Brick "Kootenay Brown", similar in color. The Campus Plan recommends Kootenay Brown Brick on future additions in the vicinity of the existing core. Buildings grouped around other Courts. e.g. those proposed for the The Campus Common contained by The Campus Activity Centre and the future Central Library, should be of different but compatible color - e.g. Dark Tweed. When the next scheduled maintenance cycle occurs, the University may wish to change the stucco color on the Food Training Building to the beige color utilized on other campus buildings.


The TRU Clock Tower

4.0 PALETTE OF FINISHES

4.1 Exterior Walls

- Giant Brick for academic buildings as per existing with limited color change
- Painted concrete block for utility and industrial buildings the same as the beige color utilized on other buildings
- Use of stucco (cement or acrylic) to be discouraged on academic buildings, but may be used with concrete block on utility and industrial buildings the same as the beige color utilized on other buildings

4.2 Sloped Roofs

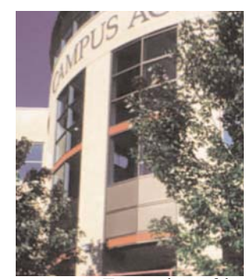
- Metal to match Clock Tower or same profile in galvanized steel

4.3 Glazing

- Clear or brown tinted, non-mirrored glass in painted or anodized sash
- Clear or obscured Glass Block used where translucent light penetration is required

4.4 Pedestrian Pathway & Court Paving

- Granite, brick or interlocking pavers, exposed aggregate, brushed concrete

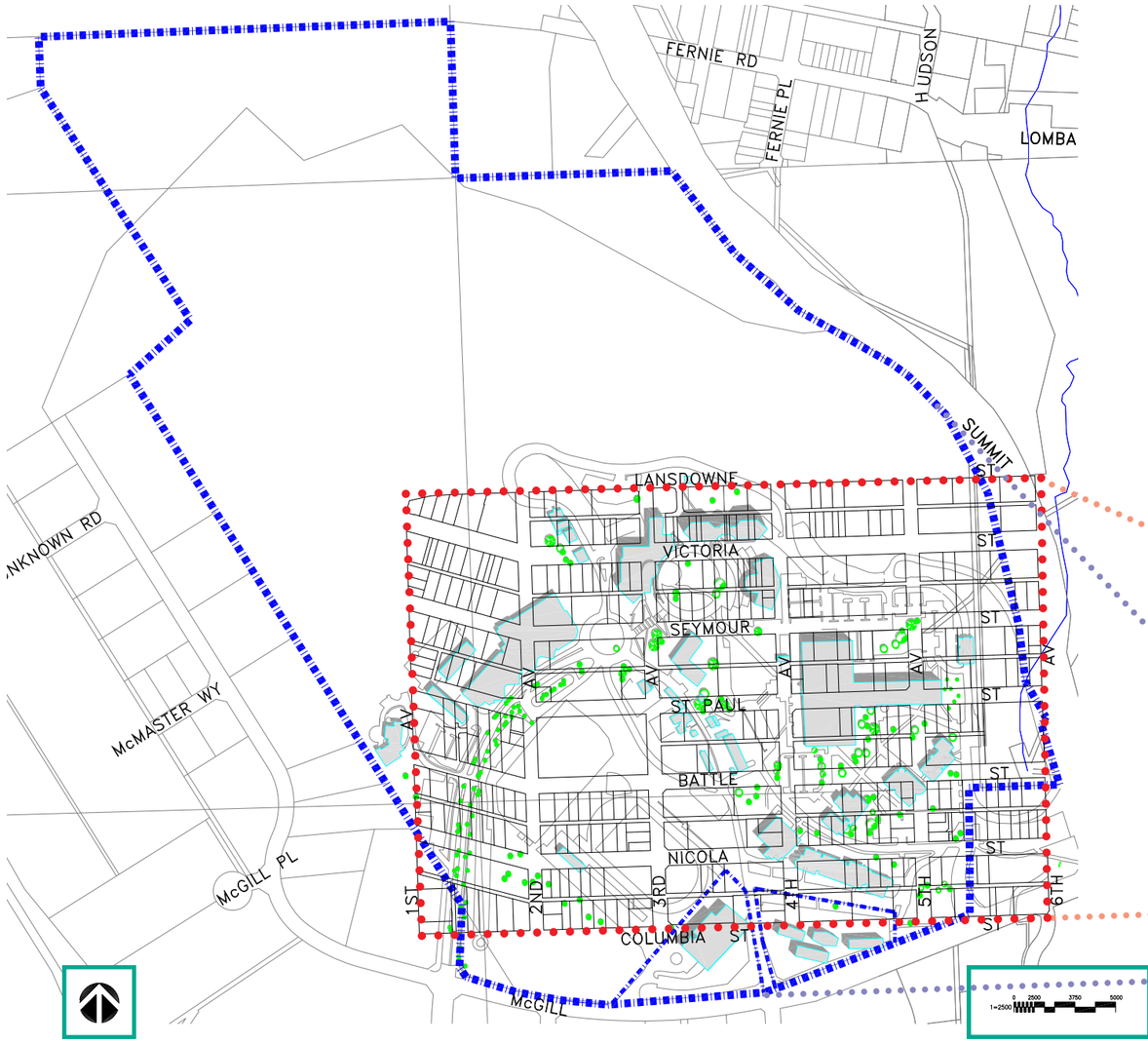


Examples of brown tinted glazing


Interlocking pavers

CAMPUS PLAN CONCEPTS - CONTENTS

TRU CAMPUS \ KAMLOOPS DOWNTOWN - SCALE COMPARISON

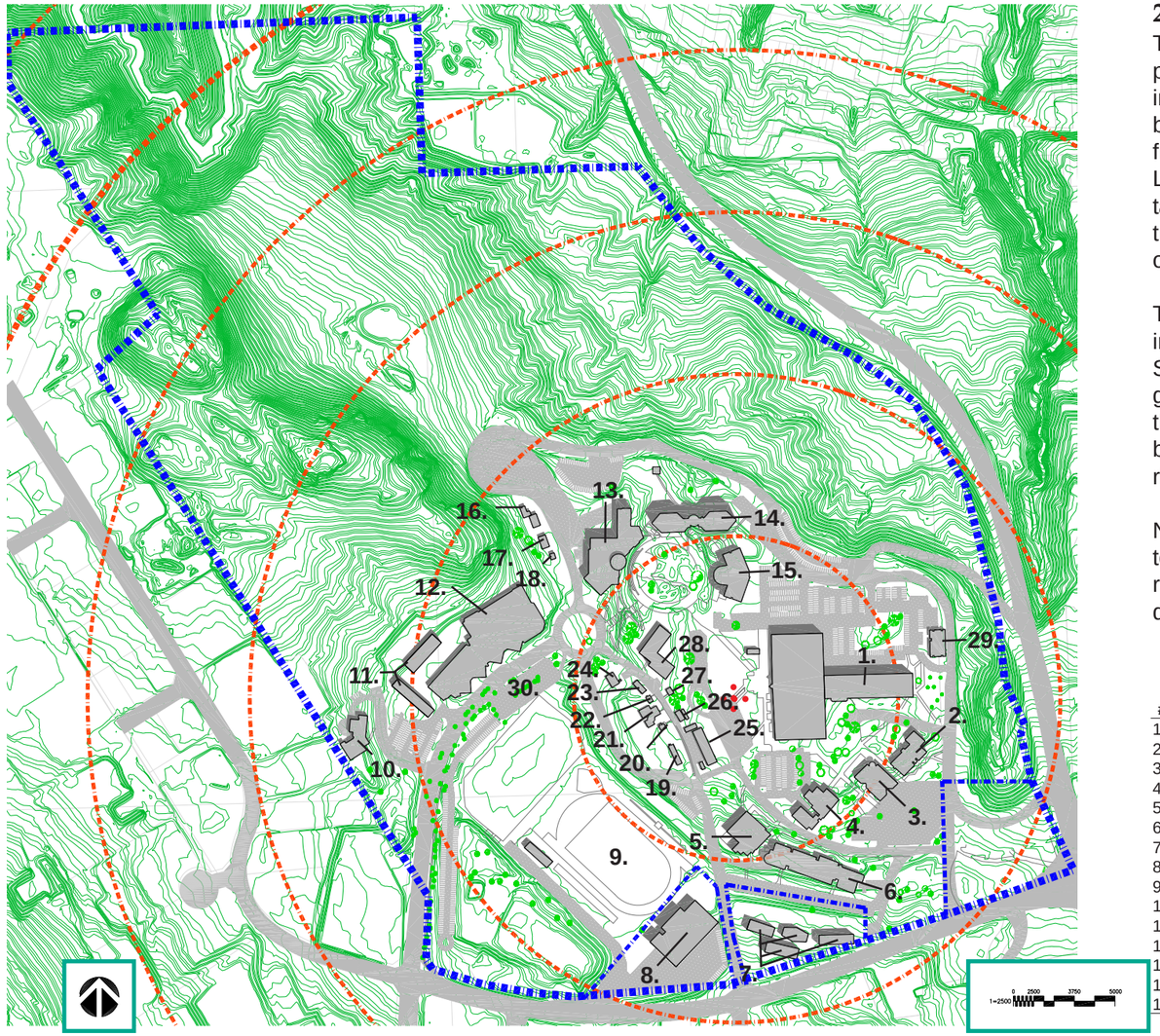


1. 0 THE CAMPUS AND DOWNTOWN KAMLOOPS

Two drawings illustrate the relative size of the University campus and the downtown area. The downtown extending from the south bench where the Royal Inland Hospital (Columbia Street) is located to the rail yards on the north side (Lansdowne Street) between 1st and 6th Avenues, is superimposed on TRU's Campus to the same scale. The illustration shows the downtown block pattern superimposed on the campus building pattern. This image illustrates the significant difference in the approach to the organization of development and use of land. In the downtown, building and other developments are organized by a rectangular pattern of development of streets and blocks, which ensures a clearly understood framework of public circulation, building frontages and addresses and a discipline of building footprint sizes. By contrast the campus is developed with a much looser pattern of buildings organized around a series of open spaces. The density is much lower than the downtown with building footprints occupying a much smaller area and with significantly greater distances between buildings.

The second drawing compares both the downtown and the campus and serves to illustrate the comparative distances. Overall the downtown can fit comfortably within the south half of the campus. Some campus buildings like Old Main and Trades and Technology occupy the equivalent of entire city blocks. More importantly walking distances on campus, for example, to go from the student residences to the Campus Activity Centre, are equivalent to one end of downtown to the other.

TRU CAMPUS - 5 MINUTE WALK (200 m)



2.0 THE CAMPUS CORE

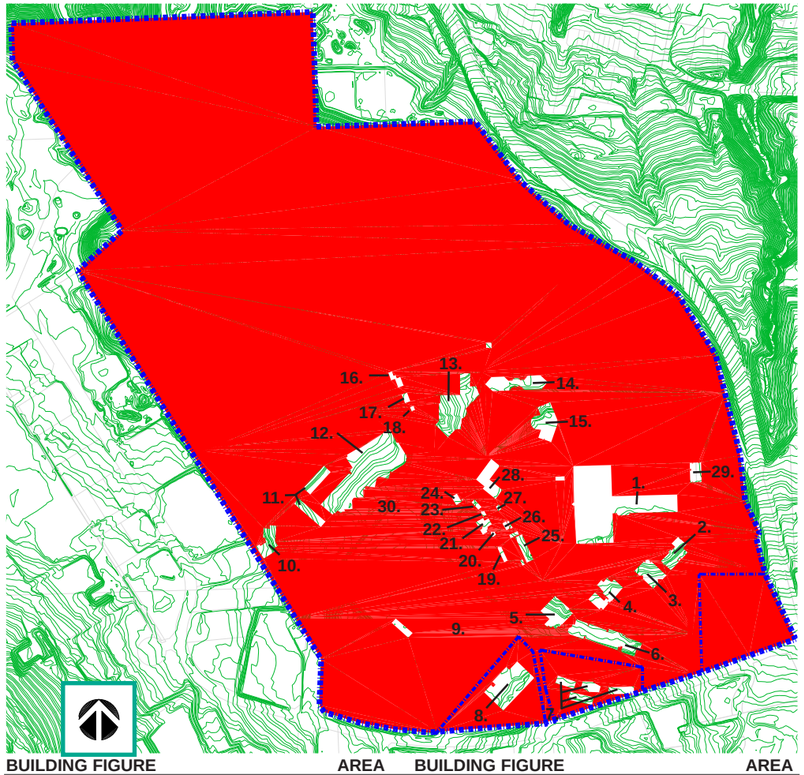
TRU's campus has grown primarily by adding new buildings to the periphery of the campus. As can be seen by the accompanying drawing, the distance it takes to walk five minutes is now exceeded between many of the buildings. To walk across campus, say to go from a class in the Animal Health Science building to Old Main or to Library to do research, is approaching ten minutes. Increasing distances on campus will impact the concept of integration between trades, diploma and degree students and may well lead to the creation of ghettoes.

There is considerable advantage as well as convenience, to maintaining a compact set of buildings within relatively short walking distances. Some buildings such as residences and support structures such as greenhouses, maintenance and physical stores buildings can be on the periphery. This facilitates traffic, including trucks accessing these buildings without penetrating the campus core, which should be primarily a pedestrian environment.

New facilities will have to be sited to avoid spreading the campus out too much and maintain a pedestrian friendly environment. This will require balancing the requirement to build higher buildings to increase density, with the desire to maintain the low-rise scale of the campus.

#	BUILDING	#	BUILDING
1.	Old Main	16.	Horticulture
2.	Clock Tower	17.	Foundation/Alumni
3.	Library	18.	CFBX Campus Radio
4.	Food Training	19.	Research Centre
5.	Gymnasium	20.	First Nations
6.	Sciences/Health Sciences	21.	Day Care
7.	Campus Housing	22.	Purchasing
8.	Aquatic Centre	23.	Faculty Annex "C"
9.	Hillside Stadium	24.	Child Care
10.	Animal Health Technology	25.	Central Stores
11.	Storage Sheds	26.	Facilities
12.	Trades and Technology	27.	"Omega" Newspaper
13.	Campus Activity Centre	28.	Special Project Centre
14.	Arts and Education	29.	Faculty Annex "A"
15.	International Building (Planned)	30.	Transit Hub

TRU CAMPUS - EXISTING BUILDINGS FIGURE

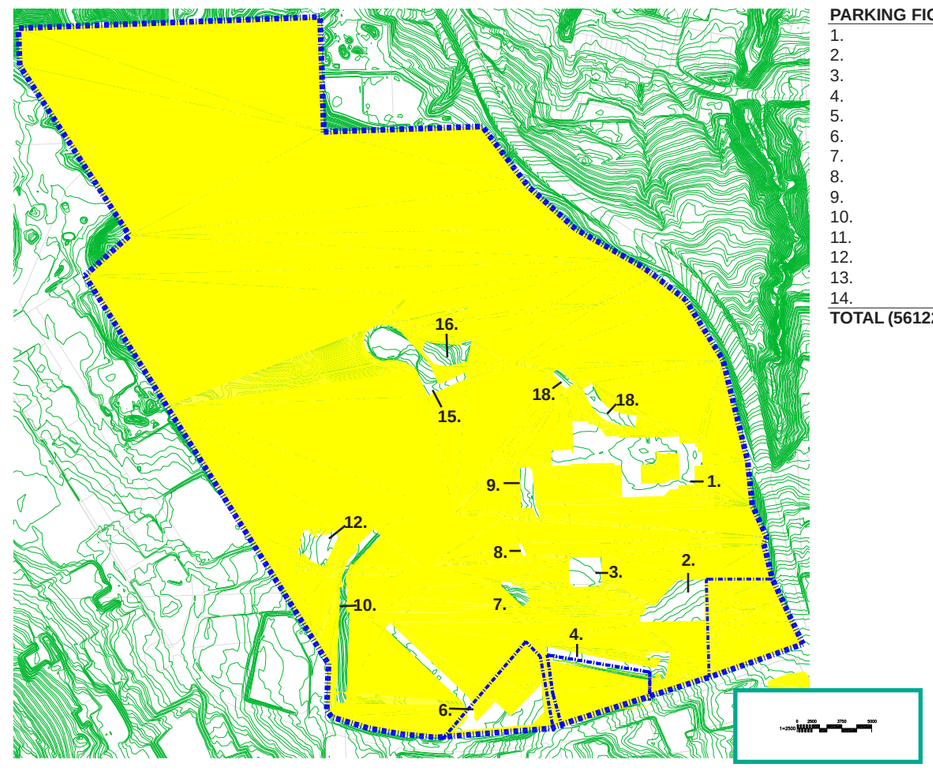


BUILDING FIGURE		AREA	BUILDING FIGURE		AREA
1.	Old Main	(11757 m²)	16.	Horticulture	(394 m²)
2.	Clock Tower	(1129 m²)	17.	Foundation/Alumni	(172 m²)
3.	Library	(1274 m²)	18.	CFBX Campus Radio	(201 m²)
4.	Food Training	(1393 m²)	19.	Research Centre	(172 m²)
5.	Gymnasium	(1615 m²)	20.	First Nations	(52 m²)
6.	Science/Health Sciences	(3059 m²)	21.	Daycare	(377 m²)
7.	Student Housing	(1913 m²)	22.	Purchasing	(51 m²)
8.	Aquatic Centre	(3319 m²)	23.	Faculty Annex 'C'	(118 m²)
9.	Hillside Stadium	(N/A)	24.	Child Care	(175 m²)
10.	Animal Health Science	(1080 m²)	25.	Central Stores	(701 m²)
11.	Storage Sheds	(1508 m²)	26.	Facilities	(140 m²)
12.	Trades and Technology	(8211 m²)	27.	"Omega" Newspaper	(55 m²)
13.	Campus Activity Centre	(3687 m²)	28.	Special Project Centre	(1306 m²)
14.	Arts and Education	(1896 m²)	29.	Faculty Annex 'A'	(617 m²)
15.	International Building	(1821 m²)	30.	Transit Hub	(N/A)
				TOTAL	**(48193 m² or 4.82 Ha)**

3.0 FIGURE GROUND

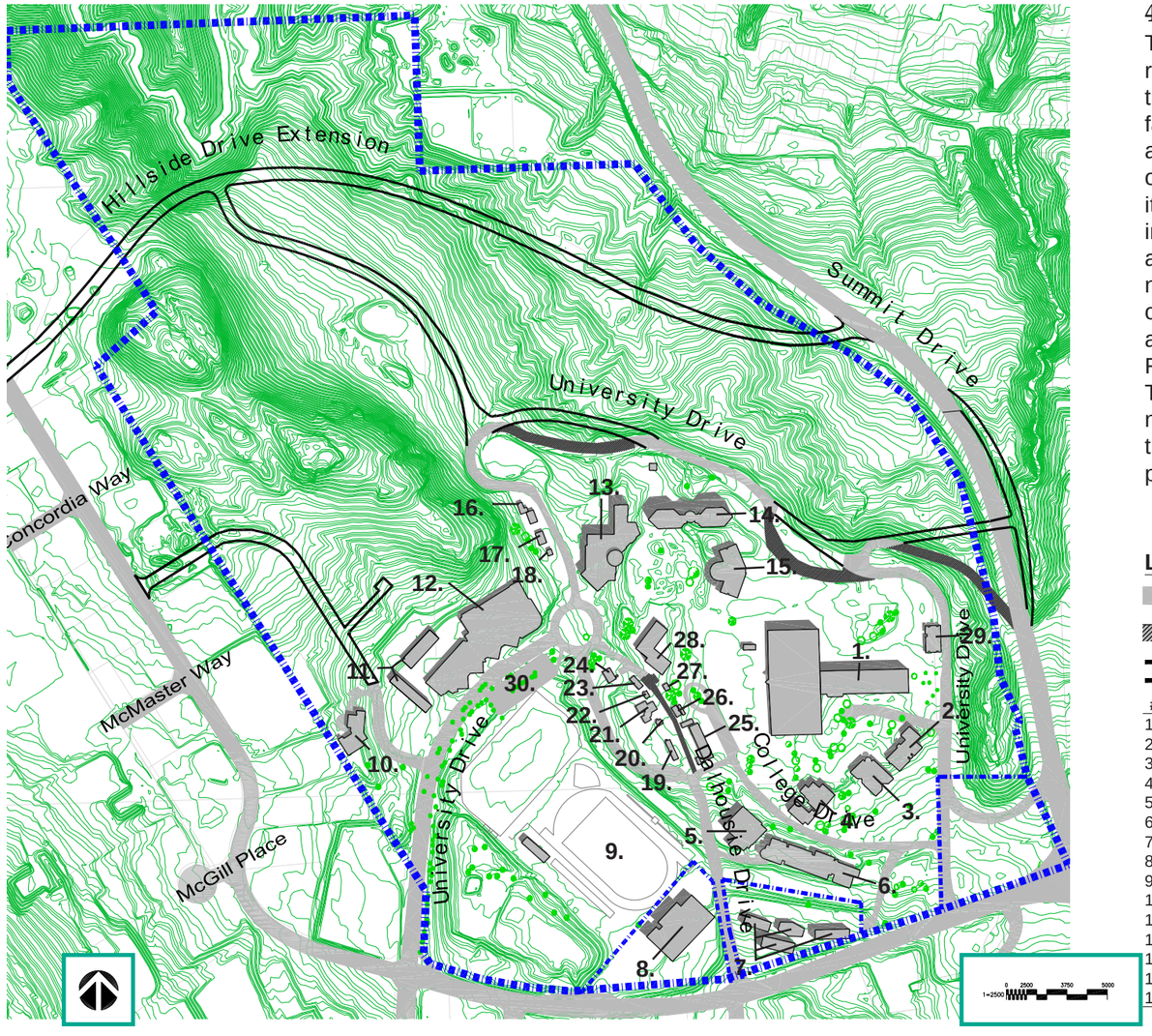
The following figure ground or reverse image drawings serve to show the relative areas devoted to buildings and parking for the campus. Overall building footprints are slightly smaller to parking lot footprints at the current stage of campus development and can be said to be in balance with each other. As the campus develops over the next number of years this balance should be maintained.

TRU CAMPUS - EXISTING PARKING FIGURE



PARKING FIGURE	AREA
1.	(15218 m²)
2.	(5778 m²)
3.	(2759 m²)
4.	(4327 m²)
5.	(8917 m²)
6.	(1027 m²)
7.	(154 m²)
8.	(3053 m²)
9.	(4881 m²)
10.	(2707 m²)
11.	(1807 m²)
12.	(2665 m²)
13.	(584 m²)
14.	(2245 m²)
TOTAL (56122 m² or 5.61 Ha)	

TRU CAMPUS - ROAD NETWORK



4.0 ROAD NETWORK

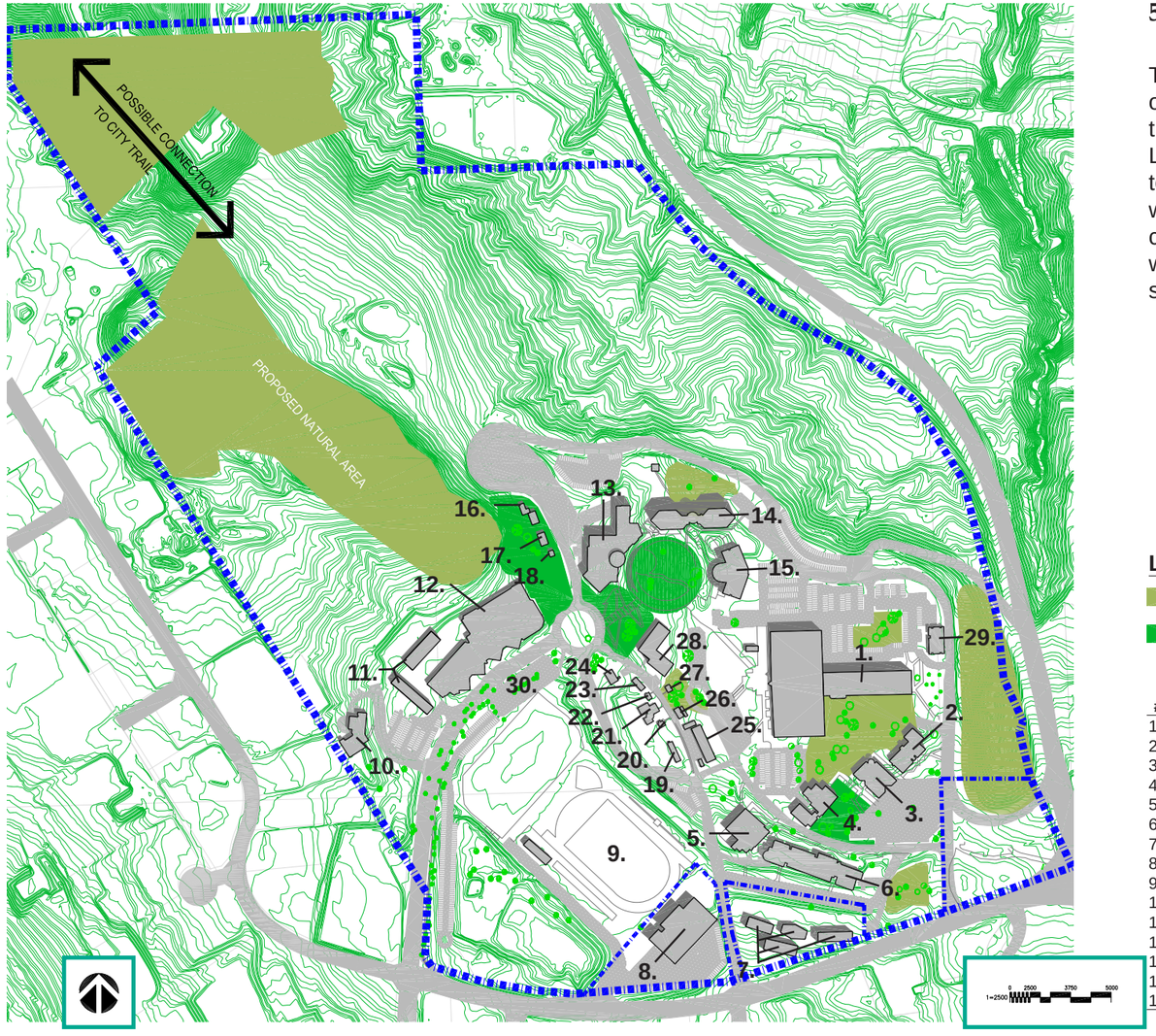
TRU's campus is bounded on the south and east by major arterial roads. Four entrances feed off of these into the campus and form three looping interconnected roadways on campus. Some buildings face the roadways while others are set back in park like settings and accessed through parking lots or green space. There is no clear organization and this has lead to problems regarding orientation of visitors on campus. Proposed changes to the road network include taking advantage of the proposed Hillside Drive extension to the north by adding a new access point to the campus from the north. This will significantly improve overall campus access and will also facilitate development of the north bench and land adjacent to Hillside Drive. An additional access point on the west side of the campus from McGill Road is also recommended. This will facilitate access to the Technology Zone as well as the relocated support services (maintenance, grounds and purchasing). This access point will help to ensure that heavy truck traffic and other delivery vehicle penetration into campus will be limited.

LEGEND

- Existing Roads
- Existing Roads to be Abandoned
- New Roads

#	BUILDING	#	BUILDING
1.	Old Main	16.	Horticulture
2.	Clock Tower	17.	Foundation/Alumni
3.	Library	18.	CFBX Campus Radio
4.	Food Training	19.	Research Centre
5.	Gymnasium	20.	First Nations
6.	Sciences/Health Sciences	21.	Day Care
7.	Campus Housing	22.	Purchasing
8.	Aquatic Centre	23.	Faculty Annex "C"
9.	Hillside Stadium	24.	Child Care
10.	Animal Health Technology	25.	Central Stores
11.	Storage Sheds	26.	Facilities
12.	Trades and Technology	27.	"Omega" Newspaper
13.	Campus Activity Centre	28.	Special Project Centre
14.	Arts and Education	29.	Faculty Annex "A"
15.	International Building (Planned)	30.	Transit Hub

TRU CAMPUS - LANDSCAPE PRESERVATION



5.0 EXISTING LANDSCAPE PRESERVATION AREAS

The following drawing illustrates the indigenous and landscaped areas on campus that have been identified for long-term preservation through consultation with campus stakeholders, including the Landscape Advisory Committee. Objectives include, ensuring the long term viability of indigenous plants, including pine and sage brush as well as the preservation of the "ridge" geological feature and potential connection to the City of Kamloops trail system. Future landscaping will build on this base and a mixture of indigenous and manicured landscaping maintained.

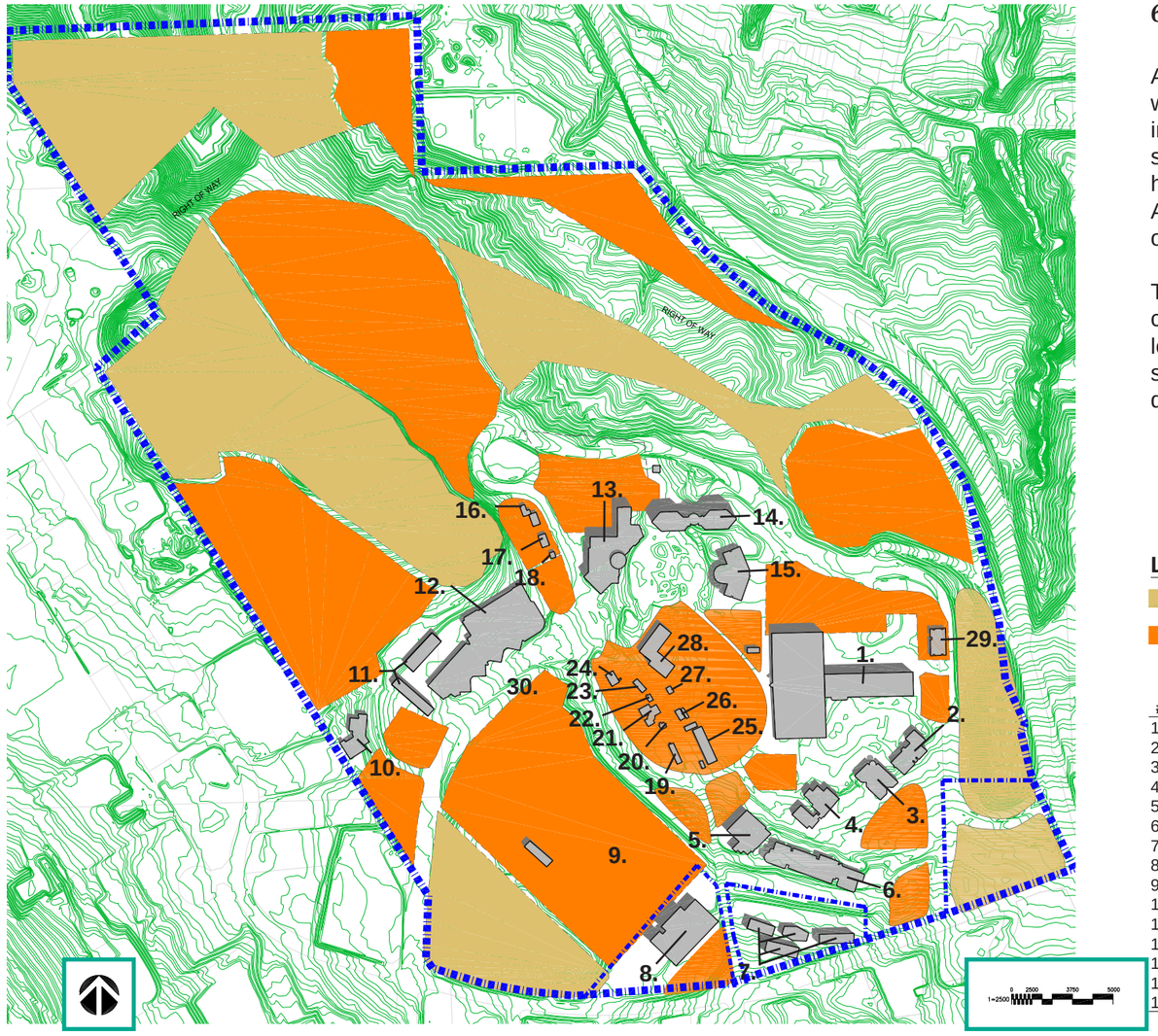
LEGEND

Indigenous Landscape to be Preserved

Landscape Areas to be Retained

#	BUILDING	#	BUILDING
1.	Old Main	16.	Horticulture
2.	Clock Tower	17.	Foundation/Alumni
3.	Library	18.	CFBX Campus Radio
4.	Food Training	19.	Research Centre
5.	Gymnasium	20.	First Nations
6.	Sciences/Health Sciences	21.	Day Care
7.	Campus Housing	22.	Purchasing
8.	Aquatic Centre	23.	Faculty Annex “C”
9.	Hillside Stadium	24.	Child Care
10.	Animal Health Technology	25.	Central Stores
11.	Storage Sheds	26.	Facilities
12.	Trades and Technology	27.	“Omega” Newspaper
13.	Campus Activity Centre	28.	Special Project Centre
14.	Arts and Education	29.	Faculty Annex “A”
15.	International Building (Planned)	30.	Transit Hub

TRU CAMPUS - DEVELOPABLE AND NON-DEVELOPABLE LAND



6.0 DEVELOPABLE AND NON-DEVELOPABLE LAND

A distinguishing feature of TRU's campus is the high proportion of land which is not suitable for development for a number of reasons. These include former uses including garbage dumps, steep topography with slopes in excess of 12% and other geophysical limitations such as sink holes or watersheds and road right of ways (Hillside Drive extension). Although the campus in total is 90.09 Ha the land that is readily developable is only 26.36 Ha or 29 % of the total campus.

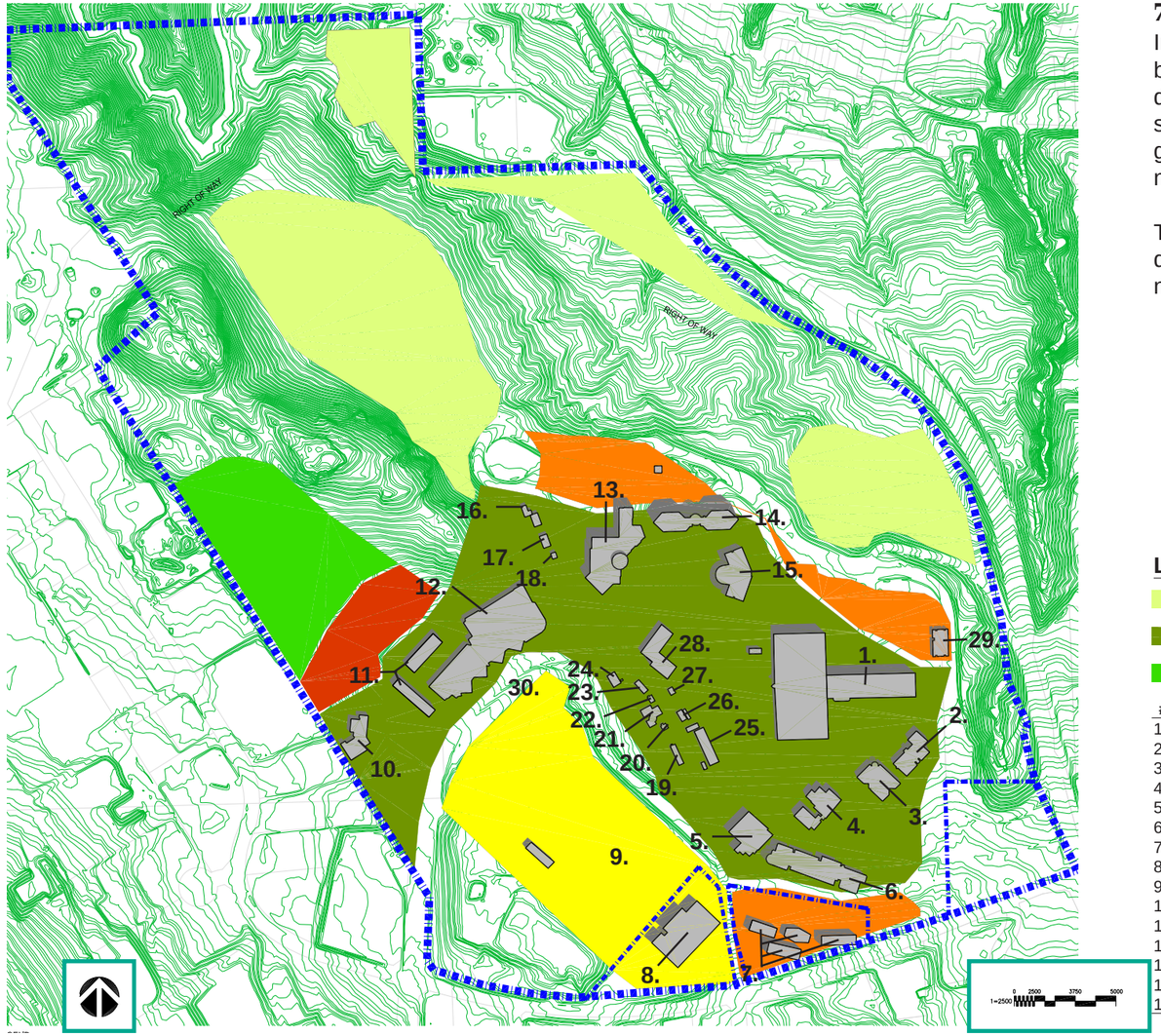
This has significant implications for the long term development of the campus, in particular if sufficient developable land is to be available for long-term needs. A development pattern, which adopts a higher density approach than current, may be required to assure an adequate developable land base for the long term.

LEGEND

- Land Not Developable for Physical and/or Economic Reasons
- Land Developable

#	BUILDING	#	BUILDING
1.	Old Main	16.	Horticulture
2.	Clock Tower	17.	Foundation/Alumni
3.	Library	18.	CFBX Campus Radio
4.	Food Training	19.	Research Centre
5.	Gymnasium	20.	First Nations
6.	Sciences/Health Sciences	21.	Day Care
7.	Campus Housing	22.	Purchasing
8.	Aquatic Centre	23.	Faculty Annex "C"
9.	Hillside Stadium	24.	Child Care
10.	Animal Health Technology	25.	Central Stores
11.	Storage Sheds	26.	Facilities
12.	Trades and Technology	27.	"Omega" Newspaper
13.	Campus Activity Centre	28.	Special Project Centre
14.	Arts and Education	29.	Faculty Annex "A"
15.	International Building (Planned)	30.	Transit Hub

TRU CAMPUS - SITE ZONING



7.0 SITE ZONING

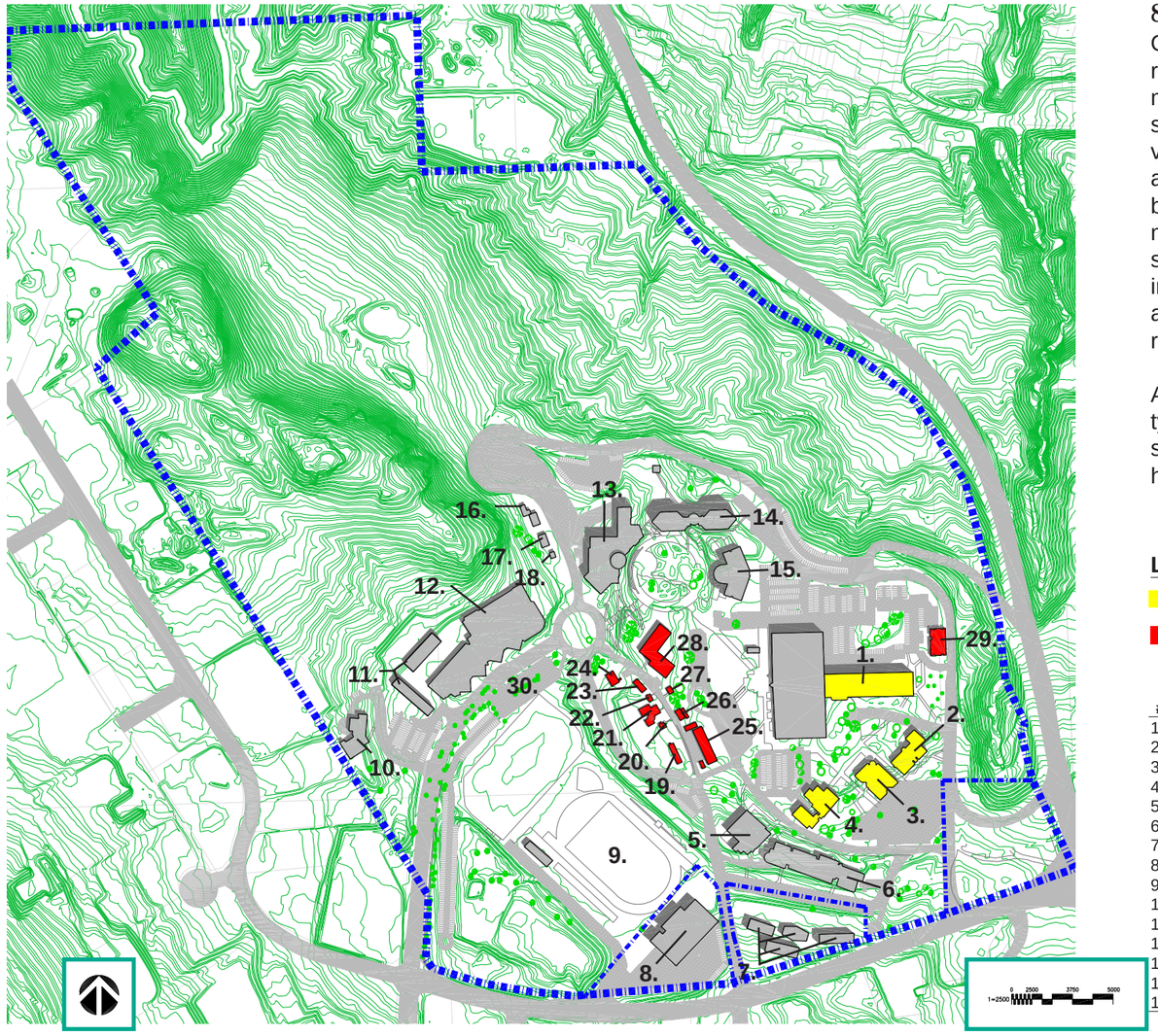
In the course of developing this version of TRU's Campus Plan a number of land use requirements where identified. These included land dedicated to research and technology facilities, university support services, recreation/kinesiology, academic, student residences (undergraduate and graduate) and long-term development potentially in partnership with the private sector.

The following drawing delineates these zones. Each is not rigidly defined but may overlap with adjacent zones as opportunities and needs are identified and facilities developed.

LEGEND

- Development Zone (Potential P3)
- Academic Zone
- Technology Zone (Potential P3)
- Student Residential University Support (Potential P3)
- Recreation/Kinesiology Zone
- University Support

#	BUILDING	#	BUILDING
1.	Old Main	16.	Horticulture
2.	Clock Tower	17.	Foundation/Alumni
3.	Library	18.	CFBX Campus Radio
4.	Food Training	19.	Research Centre
5.	Gymnasium	20.	First Nations
6.	Sciences/Health Sciences	21.	Day Care
7.	Campus Housing	22.	Purchasing
8.	Aquatic Centre	23.	Faculty Annex "C"
9.	Hillside Stadium	24.	Child Care
10.	Animal Health Technology	25.	Central Stores
11.	Storage Sheds	26.	Facilities
12.	Trades and Technology	27.	"Omega" Newspaper
13.	Campus Activity Centre	28.	Special Project Centre
14.	Arts and Education	29.	Faculty Annex "A"
15.	International Building (Planned)	30.	Transit Hub



8.0 BUILDING/ STRUCTURE REPLACEMENT

Over the next fifteen years a number of buildings and structure will require replacement due to their age and/or location on campus. The majority of these buildings are located in the centre of the campus, are smaller single storey, wood frame construction and occupied by university support functions (purchasing, facilities/stores) for which they are not particularly well suited. In addition this zone of the campus is best suited to academic functions. Given these factors it is recommended that the functions in these buildings be relocated to a university support services zone and other buildings and the existing buildings demolished. It is also proposed that the daycare be relocated, into a new facility in the Academic Zone when its current location is required for campus development.

Another building, Faculty Annex 'A', is a temporary single storey faculty office structure and should be demolished once additional office space is developed to allow for the development of additional student housing.

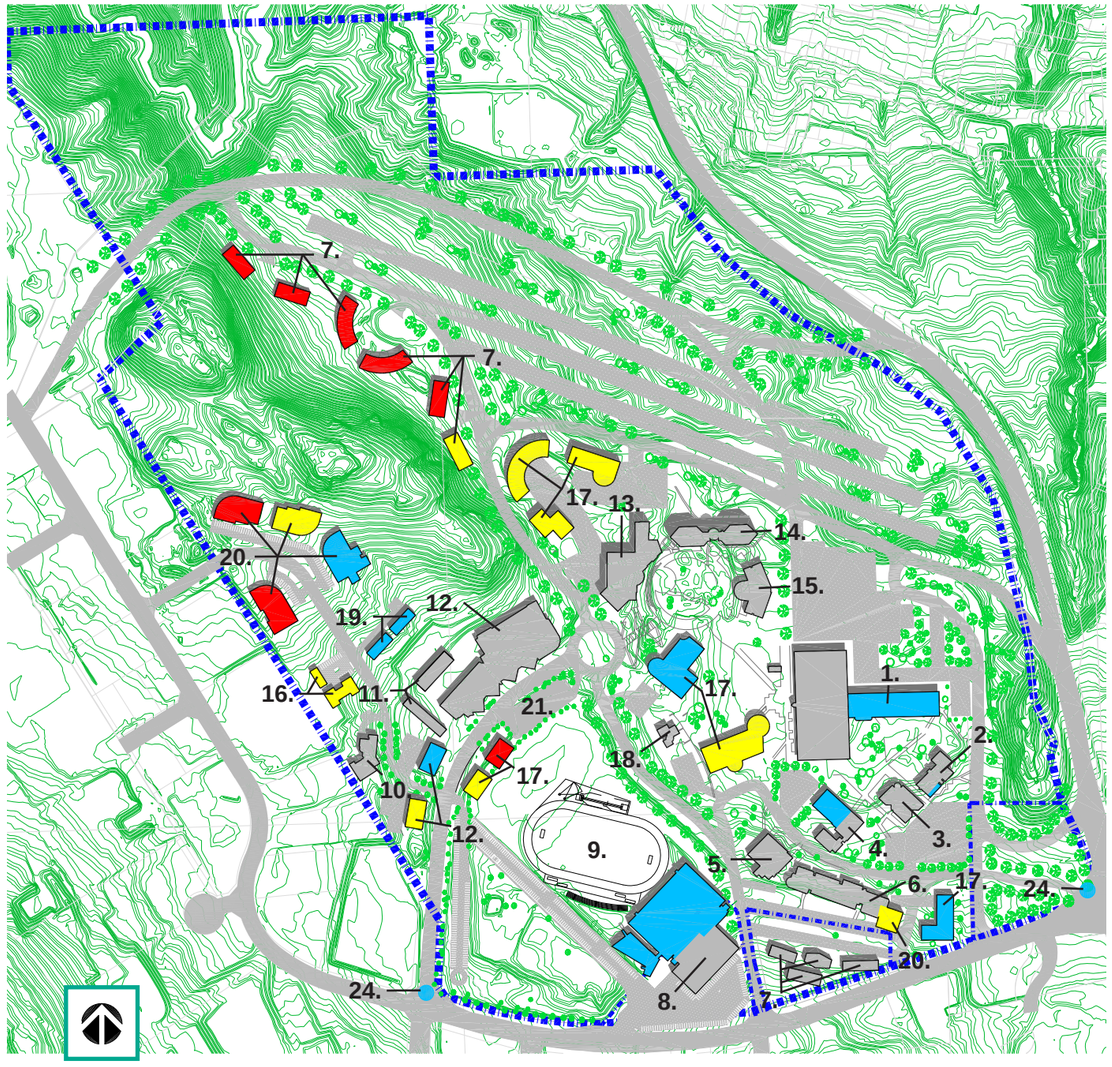
LEGEND

Existing Buildings/Structures Requiring Functional Upgrade

Existing Buildings/Structures to be Replaced

#	BUILDING	#	BUILDING
1.	Old Main	16.	Horticulture
2.	Clock Tower	17.	Foundation/Alumni
3.	Library	18.	CFBX Campus Radio
4.	Food Training	19.	Research Centre
5.	Gymnasium	20.	First Nations
6.	Sciences/Health Sciences	21.	Day Care
7.	Campus Housing	22.	Purchasing
8.	Aquatic Centre	23.	Faculty Annex "C"
9.	Hillside Stadium	24.	Child Care
10.	Animal Health Technology	25.	Central Stores
11.	Storage Sheds	26.	Facilities
12.	Trades and Technology	27.	"Omega" Newspaper
13.	Campus Activity Centre	28.	Special Project Centre
14.	Arts and Education	29.	Faculty Annex "A"
15.	International Building (Planned)	30.	Transit Hub

TRU CAMPUS - DISPERSED PATTERN SCENARIO (10K, 13K, 16K)



9.0 TACTICAL SCENARIOS: DISPERSED PATTERN OF DEVELOPMENT

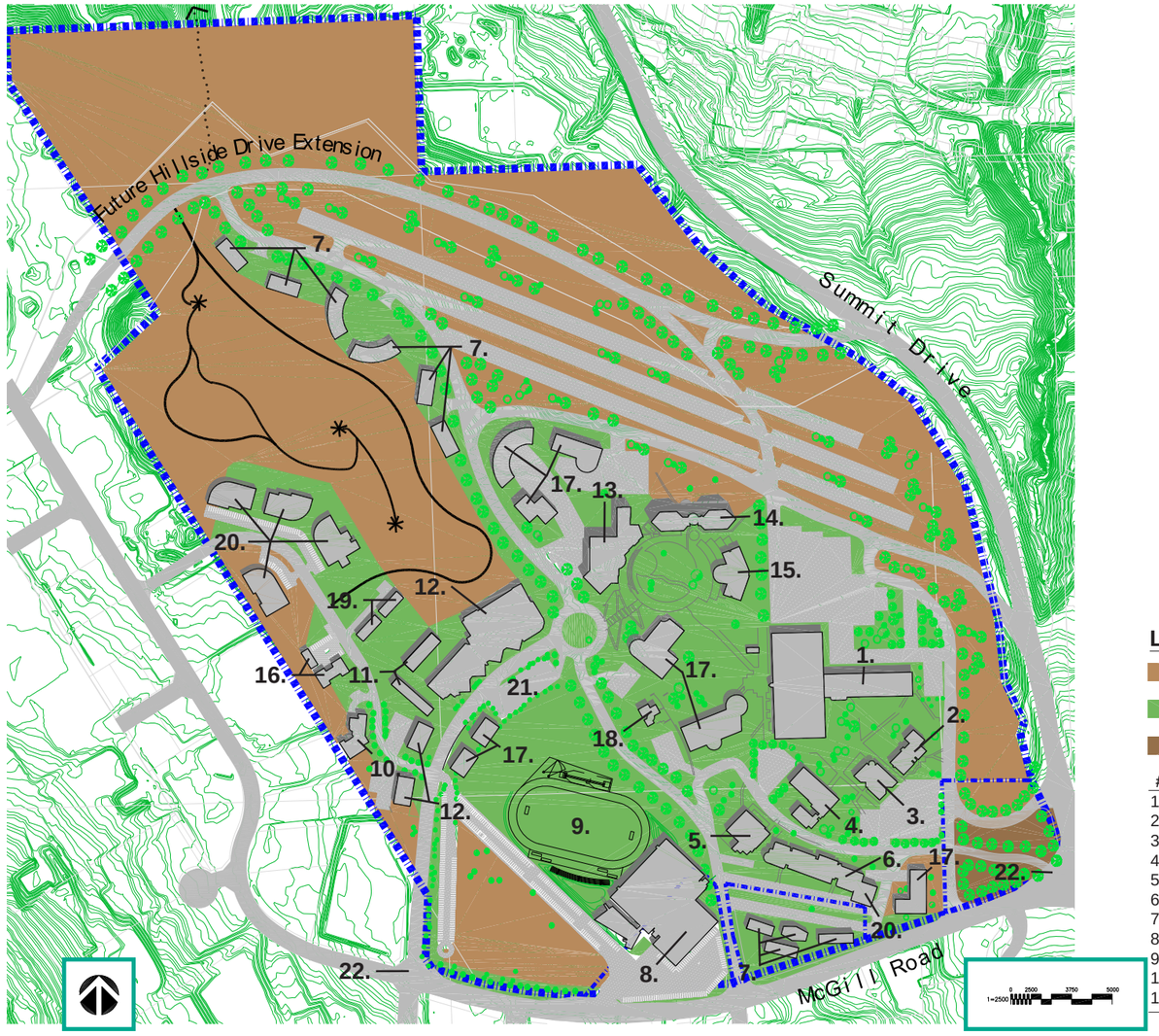
The following drawings illustrate for each tactical scenario of 10,000, 13,000 and 16,000 FTE student enrollment, the development phasing based on maintaining the current pattern of development. The current pattern of development based on the 1991 Campus development Plan restricts building heights to a maximum of 3 storeys, with 1 or 2 being the preferred height. Although feasible, the low rise-approach forces campus buildings to consume a significant amount of land and spread out over most of the available developable campus.

LEGEND

- Dispersed Pattern 10,000 Pop.
- Dispersed Pattern 13,000 Pop.
- Dispersed Pattern 16,000 Pop.

#	BUILDING	#	BUILDING
1.	Old Main	12.	Trades and Technology
2.	Clock Tower	13.	Campus Activity Centre
3.	Library (Future Health Sciences)	14.	Arts and Education
4.	Food Training	15.	International Building (Planned)
5.	Gymnasium	16.	Horticulture
6.	Sciences/Health Sciences	17.	Academic
7.	Campus Housing	18.	Daycare
8.	Aquatic Centre/Field House	19.	Stores and Facilities Services
9.	Hillside Stadium	20.	Research
10.	Animal Health Technology	21.	Transit Hub
11.	Storage Sheds	22.	Campus Gateway

TRU CAMPUS - DISPERSED PATTERN SCENARIO LANDSCAPE (16K)

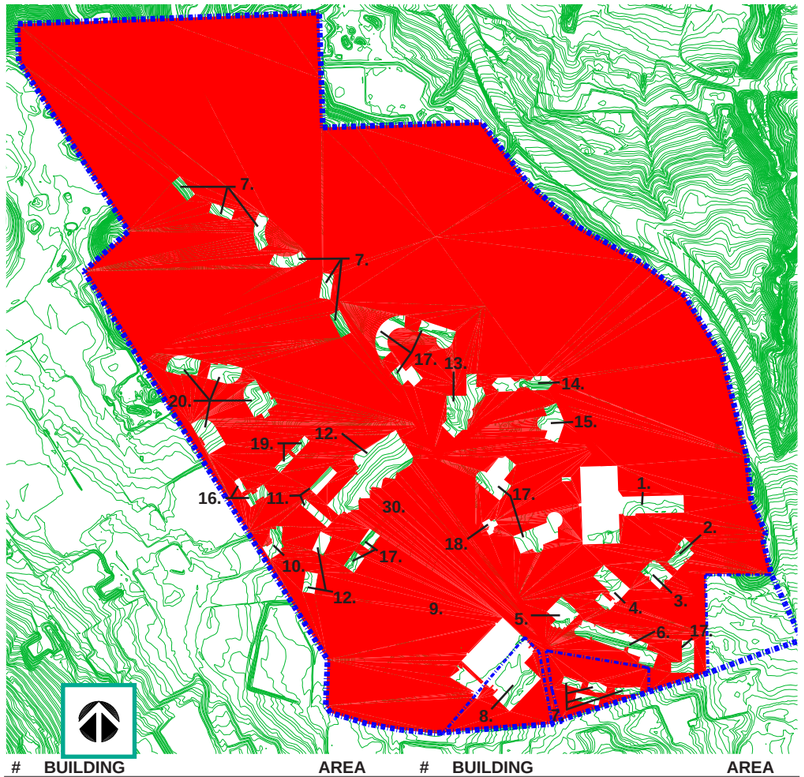


LEGEND

- Indigenous Landscape - Existing/ Restored Areas
- Intensive Landscapes - Manicured Areas, Horticultural Teaching Gardens, Meeting Places
- Featured Landscape Area - Supernatural Landscape Gateway Feature
- Parking Areas, Roads, and Buildings
- Trails, Rest Stops

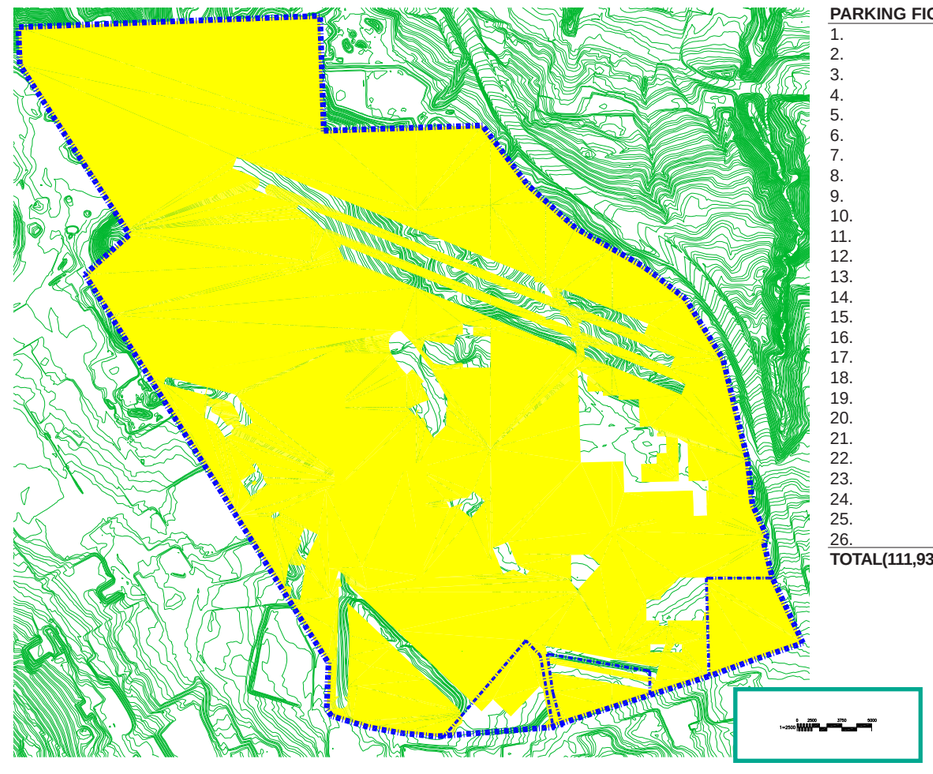
#	BUILDING	#	BUILDING
1.	Old Main	12.	Trades and Technology
2.	Clock Tower	13.	Campus Activity Centre
3.	Library (Future Health Sciences)	14.	Arts and Education
4.	Food Training	15.	International Building (Planned)
5.	Gymnasium	16.	Horticulture
6.	Sciences/Health Sciences	17.	Academic
7.	Campus Housing	18.	Daycare
8.	Aquatic Centre/Field House	19.	Stores and Facilities Services
9.	Hillside Stadium	20.	Research
10.	Animal Health Technology	21.	Transit Hub
11.	Storage Sheds	22.	Campus Gateway

TRU CAMPUS - DISPERSED PATTERN PROPOSED BUILDINGS FIGURE (16K)



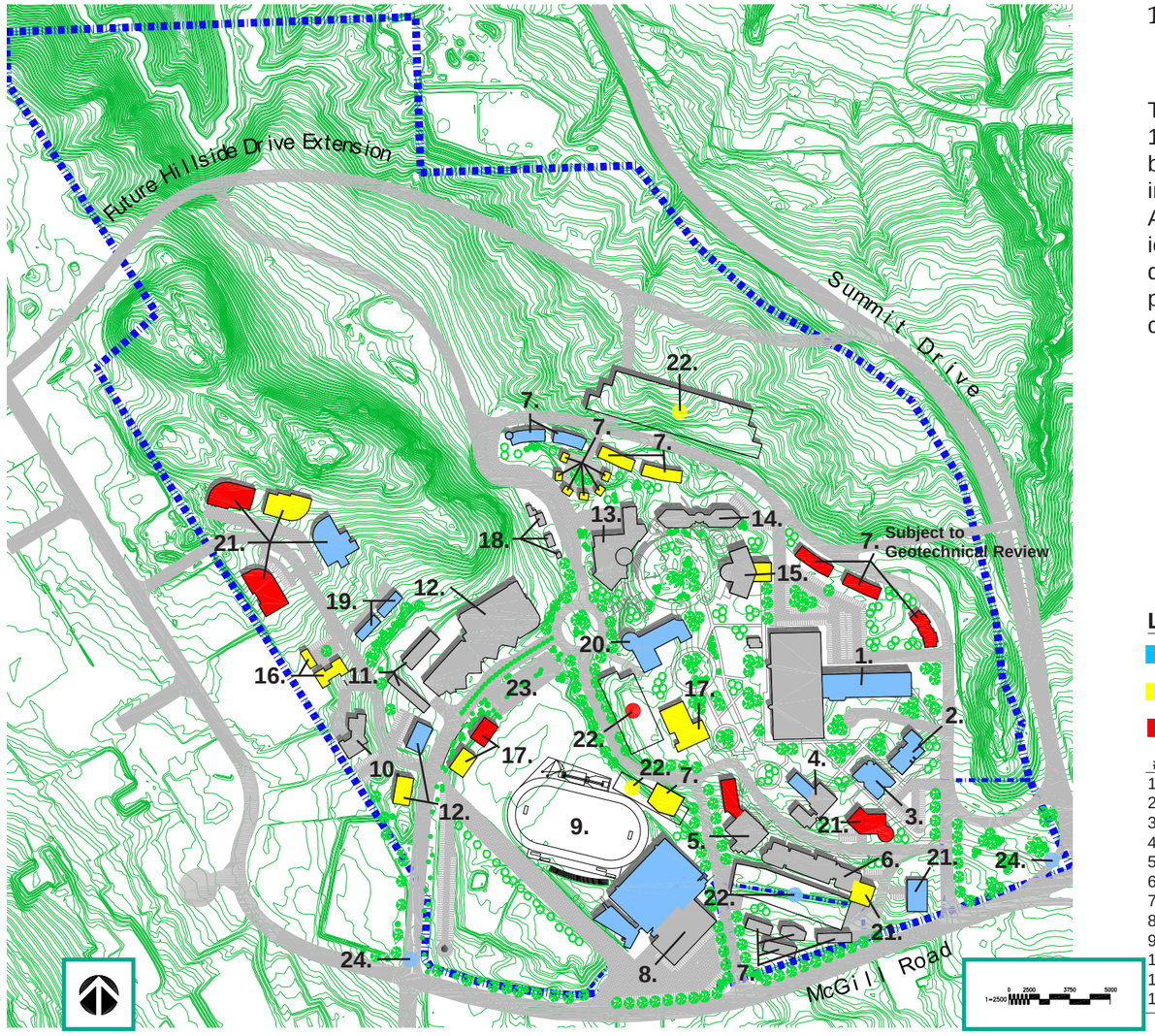
#	BUILDING	AREA	#	BUILDING	AREA
1.	Old Main	(11757 m²)	12.	Trades and Technology	(9644 m²)
2.	Clock Tower	(1131 m²)	13.	Campus Activity Centre	(3470 m²)
3.	Library (Future Health Sciences)	(1274 m²)	14.	Arts and Education	(1755 m²)
4.	Food Training	(1859 m²)	15.	International Building (Planned)	(2232 m²)
5.	Gymnasium	(2413 m²)	16.	Horticulture	(908 m²)
6.	Sciences/Health Sciences	(3728 m²)	17.	Academic	(11044 m²)
7.	Campus Housing	(7027 m²)	18.	Daycare	(377 m²)
8.	Aquatic Centre/Field House	(11902 m²)	19.	Stores and Facilities Services	(813 m²)
9.	Hillside Stadium	(N/A)	20.	Research	(6848 m²)
10.	Animal Health Technology	(1077 m²)	21.	Transit Hub	(N/A)
11.	Storage Sheds	(1545 m²)			
				TOTAL	**80622 m² or 8.06 Ha**

TRU CAMPUS - DISPERSED PATTERN PROPOSED PARKING FIGURE (16K)



PARKING FIGURE	AREA
1.	(5810 m²)
2.	(216 m²)
3.	(297 m²)
4.	(3340 m²)
5.	(2324 m²)
6.	(1852 m²)
7.	(1472 m²)
8.	(1206 m²)
9.	(7179 m²)
10.	(7889 m²)
11.	(3880 m²)
12.	(1418 m²)
13.	(998 m²)
14.	(98 m²)
15.	(1079 m²)
16.	(869 m²)
17.	(2415 m²)
18.	(6486 m²)
19.	(5122 m²)
20.	(8252 m²)
21.	(9467 m²)
22.	(11614 m²)
23.	(2855 m²)
24.	(3156 m²)
25.	(3345 m²)
26.	(19300 m²)
TOTAL	**(111,939 m² or 111.94 Ha)**

TRU CAMPUS - CONSOLIDATED DENSITY SCENARIO (10K, 13K, 16K)



10.0 TACTICAL SCENARIOS: ADOPT A CONSOLIDATED DENSITY APPROACH TO CAMPUS DEVELOPMENT

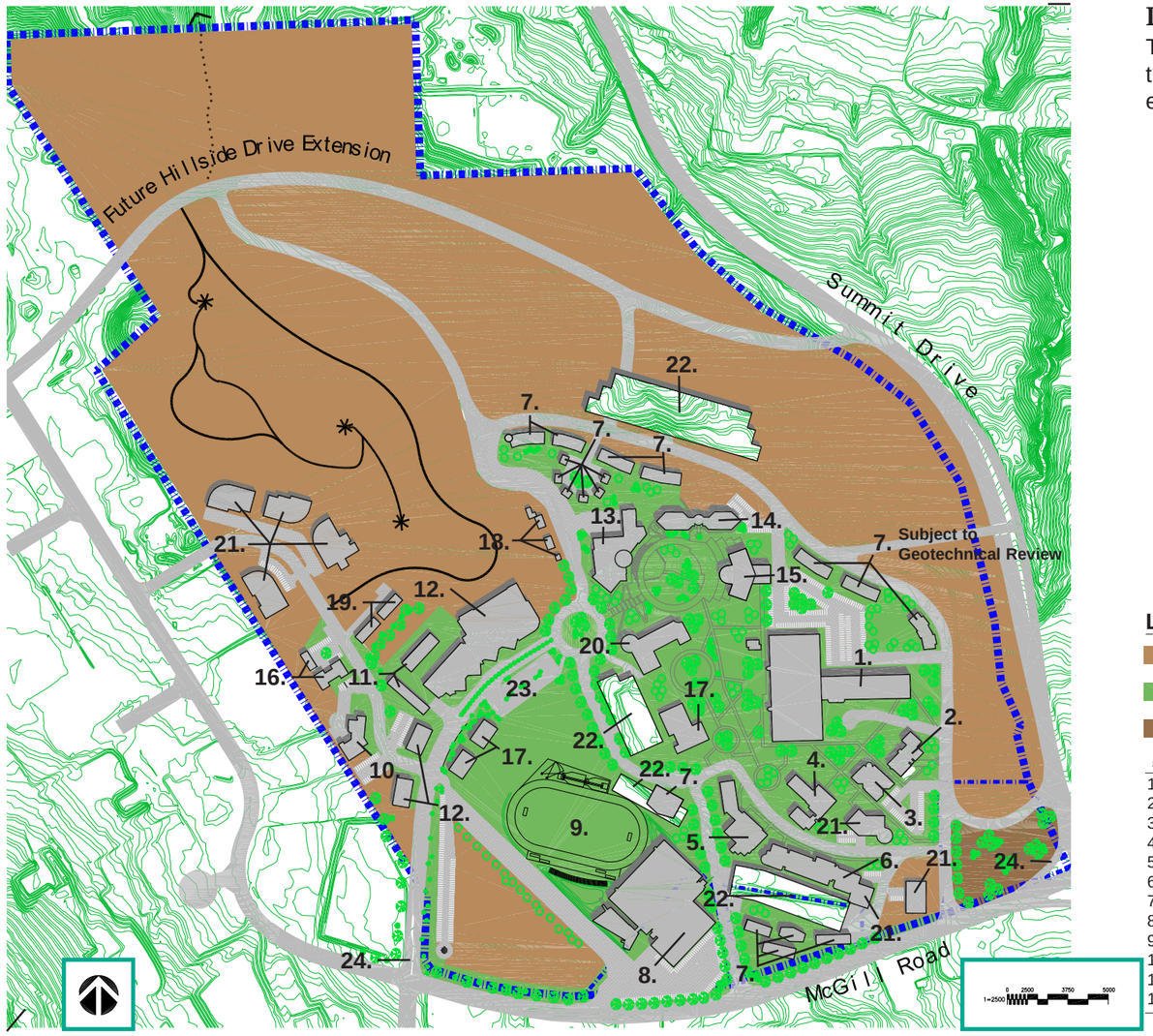
The following drawings illustrate for each tactical scenario of 10,000, 13,000 and 16,000 FTE student enrollment, the development phasing based on achieving a slightly higher density of development through increasing the allowable height of certain significant buildings in the Academic Zone. These could include the new library or other academic building. A slightly higher density would allow for less land to be devoted to building footprints and overall limit the sprawl of the campus allowing TRU's objective regarding program integration, image, character and accessibility to be maintained.

LEGEND

- Dispersed Pattern 10,000 Pop.
- Dispersed Pattern 13,000 Pop.
- Dispersed Pattern 16,000 Pop.

#	BUILDING	#	BUILDING
1.	Old Main	13.	Campus Activity Centre
2.	Clock Tower	14.	Arts and Education
3.	Library (Future Health Sciences)	15.	International Building (Planned)
4.	Food Training	16.	Horticulture
5.	Gymnasium	17.	Academic
6.	Sciences/Health Sciences	18.	Heritage
7.	Campus Housing	19.	Stores and Facilities Service
8.	Aquatic Centre/Field House	20.	Learning Commons
9.	Hillside Stadium	21.	Research
10.	Animal Health Technology	22.	Parkade
11.	Storage Sheds	23.	Transit Hub
12.	Trades and Technology	24.	Campus Gateway

TRU CAMPUS - CONSOLIDATED DENSITY SCENARIO LANDSCAPE (16K)



Recommendation

The consolidated density approach is recommended to TRU due to the following implications regarding the delivery of educational services for TRU:

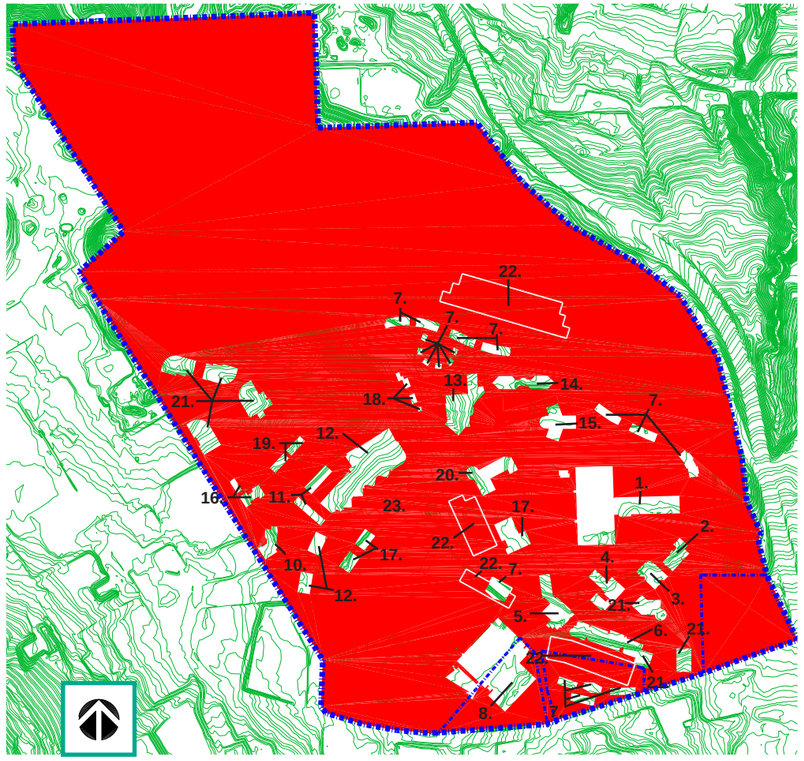
1. Students will have to walk further between classes and may exceed the available time.
2. Facilities shared between the certificate, diploma and degree programs, such as the library and the Campus Activity Centre, will be less accessible due to distance.
3. The increased travel times between facilities may lead to the breakdown of the integrated concept and undermines Guiding Principle #1: Integration.
4. "Campus sprawl" consumes all of the developable land and precludes land being developed on an opportunistic basis to meet TRU's emerging role as the regional leader in the development of a knowledge based economy as set out in Guiding Principle #2: Community Leadership.
5. A compact urban form is much more supportive of a sustainable approach to development and conforms more closely with Guiding Principle #5: Sustainable Campus Development.

LEGEND

- Indigenous Landscape - Existing/ Restored Areas
- Intensive Landscapes - Manicured Areas, Horticultural Teaching Gardens, Meeting Places
- Featured Landscape Area - Supernatural Landscape Gateway Feature
- Parking Areas, Roads, and Buildings
- Trails, Rest Stops

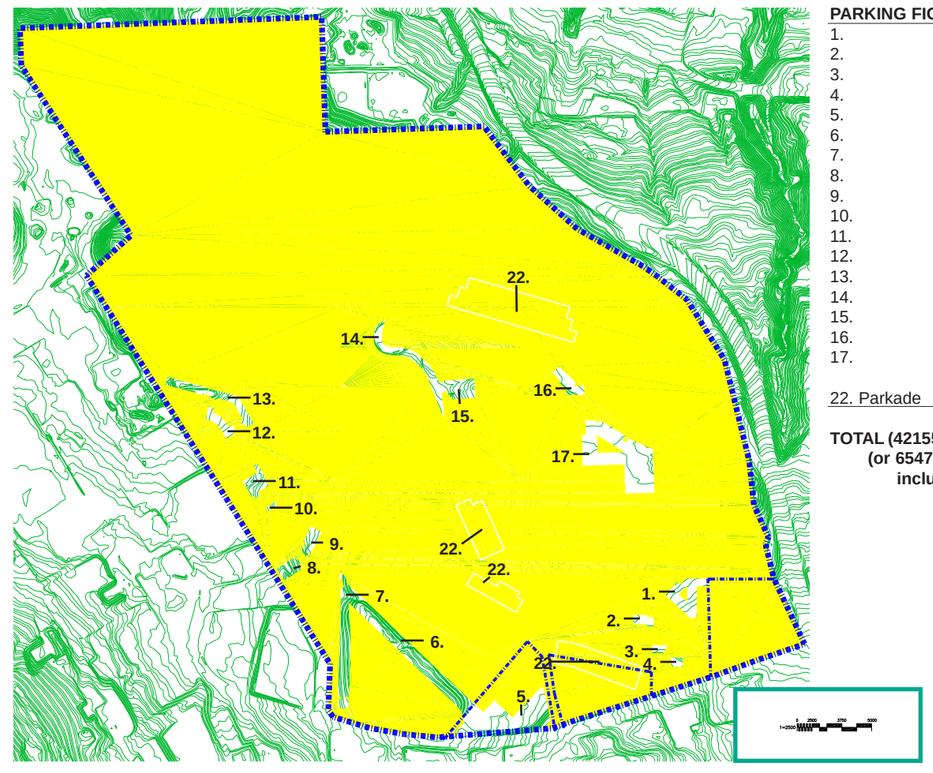
#	BUILDING	#	BUILDING
1.	Old Main	13.	Campus Activity Centre
2.	Clock Tower	14.	Arts and Education
3.	Library (Future Health Sciences)	15.	International Building (Planned)
4.	Food Training	16.	Horticulture
5.	Gymnasium	17.	Academic
6.	Sciences/Health Sciences	18.	Heritage
7.	Campus Housing	19.	Stores and Facilities Service
8.	Aquatic Centre/Field House	20.	Learning Commons
9.	Hillside Stadium	21.	Research
10.	Animal Health Technology	22.	Parkade
11.	Storage Sheds	23.	Transit Hub
12.	Trades and Technology	24.	Campus Gateway

TRU CAMPUS - CONSOLIDATED DENSITY PROPOSED BUILDINGS (FIGURES (16K)



BUILDING FIGURE		AREA	BUILDING		AREA
1.	Old Main	(11757 m²)	13.	Campus Activity Centre	(3470 m²)
2.	Clock Tower	(1131 m²)	14.	Arts and Education	(1755 m²)
3.	Library (Future Health Sciences)	(1274 m²)	15.	International Building (Planned)	(2232 m²)
4.	Food Training	(1859 m²)	16.	Horticulture	(908 m²)
5.	Gymnasium	(2413 m²)	17.	Academic	(3189 m²)
6.	Sciences/Health Sciences	(3728 m²)	18.	Heritage	(451 m²)
7.	Campus Housing	(8397 m²)	19.	Stores and Facilities Service	(813 m²)
8.	Aquatic Centre/Field House	(11902 m²)	20.	Learning Commons	(2444 m²)
10.	Animal Health Technology	(1077 m²)	21.	Research	(9165 m²)
11.	Storage Sheds	(1545 m²)			
12.	Trades and Technology	(9644 m²)	22.	Parkade	(23320 m²)
				TOTAL	**79154 m² or 7.92 Ha**
				(or 102474 m² or 10.25 Ha including Parkades)	

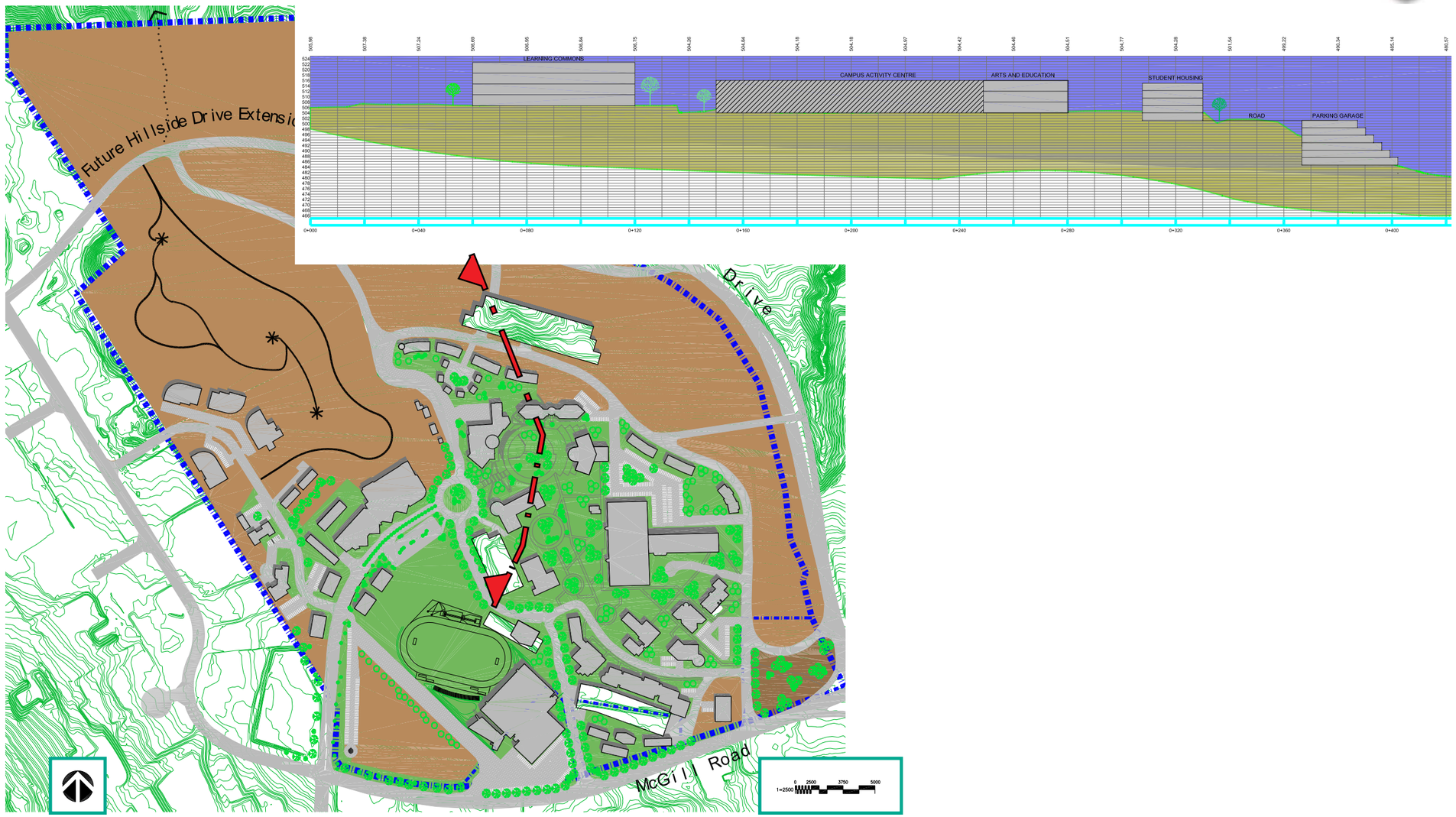
TRU CAMPUS - CONSOLIDATED DENSITY PROPOSED PARKING FIGURES (16K)



PARKING FIGURE	AREA
1.	(2311 m²)
2.	(523 m²)
3.	(297 m²)
4.	(295 m²)
5.	(7179 m²)
6.	(7889 m²)
7.	(3880 m²)
8.	(927 m²)
9.	(852 m²)
10.	(126 m²)
11.	(1158 m²)
12.	(869 m²)
13.	(2425 m²)
14.	(2198 m²)
15.	(2149 m²)
16.	(1098 m²)
17.	(7979 m²)
22. Parkade	(23320 m²)

TOTAL (42155 m² or 4.22 Ha)
(or 65475 m² or 6.55 Ha including Parkades)

TRU CAMPUS - CONSOLIDATED DENSITY PROPOSED SECTION (16K)



CONTENTS

THOMPSON RIVERS UNIVERSITY LANDSCAPE DESIGN GUIDELINES

INTRODUCTION

These Guidelines, together with the Campus Master Plan*, are intended to guide future development and improvements by identifying the characteristics of various landscape components.

The existing landscape encompasses significant natural, historical, cultural and horticultural features, which must be preserved and enhanced over time. Landscaping is an integral part of the horticultural learning programme of TRU.

The Guidelines allow some degree of flexibility and choice to the designer. The TRU Landscape Advisory Committee has first-hand knowledge of the campus landscape and can provide design input and direction. Assessing design proposals, identifying maintenance and security issues and providing continuity of campus development are some of the functions of the committee.

Existing campus landscapes, furnishings, components and hard landscaping have been evaluated over time. The Guidelines illustrate and describe current realities and practices.

The objective of the Guidelines is to create and maintain a landscape that reflects the uniqueness of the Kamloops region, and is essential for creating a lasting impression on students, staff, faculty and the community.

*Appendix A: Campus Master Plan drawing (16,000+)

1.0 GENERAL

1.1 Landscape Design Approval Process

All new development or site disturbances must have an approved landscape plan and include landscape reconstruction for all areas not covered by parking or roadways.

Landscape plans shall be submitted to the Landscape Advisory Committee for review. Comments will be forwarded to the applicant in writing.

1.2 Landscape Types

The campus lands will continue to consist of basically two (2) landscape types *:

1.2.1 Intensively Developed or Manicured Landscapes

These include ceremonial spaces, meeting places, pedestrian links and horticultural gardens. Typically these areas are heavy-use, heavy traffic areas on maintained gardens. An example would be the landscape around the Campus Activity Centre.

As new areas in the vicinity of new building or facilities are identified as functional landscapes, these will be developed and may include paved entrances, pathways, herbaceous plantings, trees and shrubs, furnishings, lighting and signage.

The gardens located at the heritage site (#18 on the Landscape Concept Plan) will continue to be a special place on Campus. This important area serves a number of functions including meeting place, a place for special public and campus functions, and as a teaching focus.

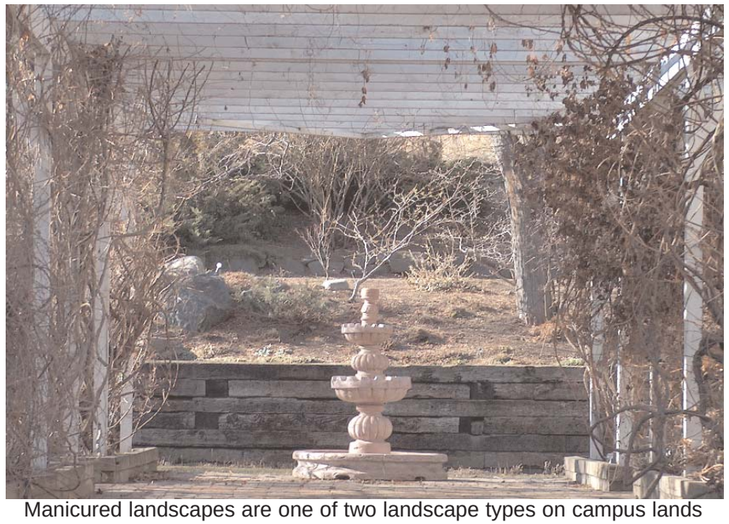
Full automatic irrigation is required for all areas and should be designed for water conservation, such as drip irrigation for planting beds and trees.

1.2.2 Indigenous Landscapes

All areas not designed as intensively used manicured landscapes should be preserved in natural native condition or restored as native landscape.

Design must include provisions to protect native landscapes during construction and/or specifications to restore back to native vegetation; temporary irrigation is may be required to establishment.

Existing ponderosa pines should be preserved with appropriate protection and careful grading to maintain existing elevations and drainage patterns, so as not to disturb the trees in their existing condition.



Manicured landscapes are one of two landscape types on campus lands

*Appendix B: Existing Landscape Preservation Plan

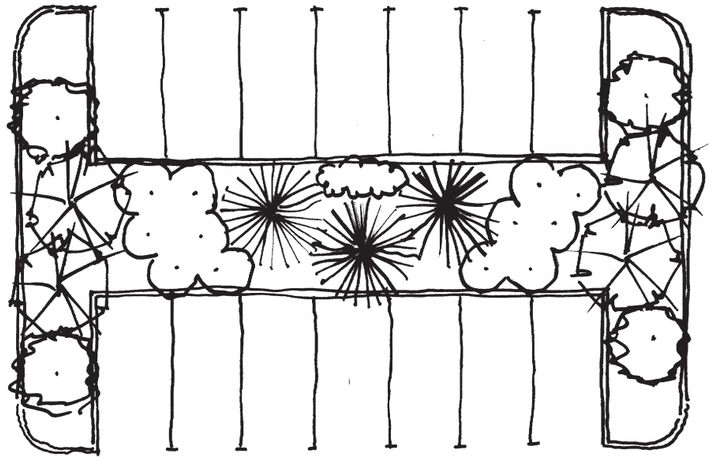
1.3 Site Planning

1.3.1 Existing Landscape Features

Wherever possible preserve all existing large trees or other special landscape features within the context of new campus development.

1.3.2 Parking

Design parking areas to integrate aesthetically with existing grades and vegetation. Break up large expanses of paving, i.e. more than 20 parking spaces, with significant planting areas. Allow for ease of snow removal and areas for snow storage. Maintain a minimum of 10m of landscaping between parking and habitable indoor rooms such as classrooms.



1.3.3 Sight Lines

Design open spaces and pedestrian corridors in consideration of site lines to destinations, safety, and desirable views.

1.3.4 Universal Site Design

Whenever possible provide barrier free pathways to major building entrances. Other design considerations for exterior pathways include 5% maximum gradients and curb cuts. Design of pathways, steps and handrails should meet or exceed the B.C. building code.

1.3.5 Maintenance

All site and landscape design should take into consideration ease and simplicity of maintenance. Locate garbage bins conveniently for loading and pick-up but not in proximity to pathways or passive outdoor facilities.

1.3.6 Building Entrance

In addition to barrier free design, provide adequate roof overhangs, drainage and other means of preventing build-up of ice and snow. Provide protected amenities for smokers away from building entrances.

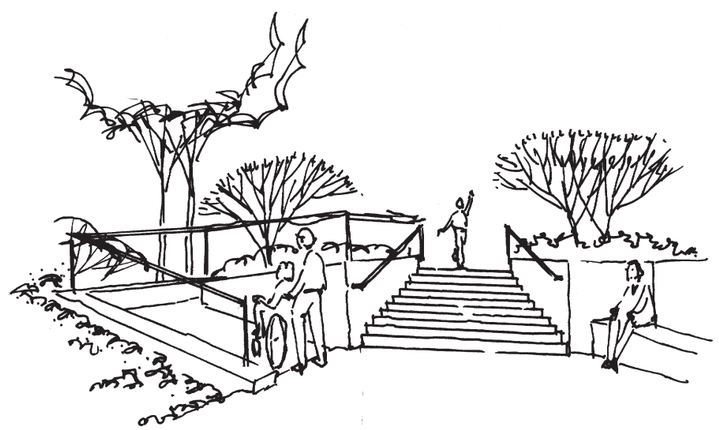
2.0 HARD LANDSCAPE

2.1 Pathways

2.1.1 Universal Design of Pathways

All paved circulation systems must be designed to accommodate the disabled. Attention should be paid to the provision of handrails, curb cuts, radii, and contrasting edge demarcation at stairs and walkways.

Exterior ramps should be avoided. However, when necessary, they should be closely associated with stairs and conform to TRU's policy of 5% maximum gradients.



2.1.2 Pathway Categories

Pathway Type	Definition	Treatment
Formal	Carries large volumes of pedestrian traffic on both a daily and "professional" level	Minimum width 2.0m, concrete with broom finish surface Minimum 3.0m width for combined bicycle route and high volume pedestrian
Secondary	Carries heavy pedestrian traffic between daily destinations	Minimum width 1.5m, concrete with broom finish surface
Informal	Low volume, for leisure/recreational use in natural landscape areas or interpretive trails	Finely crushed stone such as limestone screenings or shale. Minimum width 1.5m
Temporary / Functional	Provides daily functional access to periphery destinations, temporary parking lots or areas under construction	Width determined by volume, asphalt or crushed stone depending on anticipated life cycle

2.1.3 Other Paving Types

Specialty paving treatments may be considered for special ceremonial features or other locations to designate unique functions. Paving types such as stamped and coloured concrete paver stone or high quality exposed aggregate will be approved on a discretionary basis.

2.2 Exterior Stairs

2.2.1 Handrails

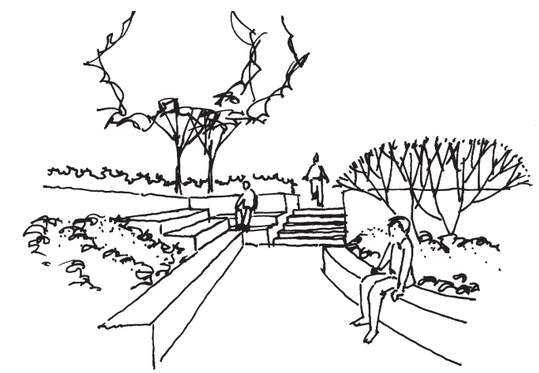
The B.C. Building Code requires handrails on exterior stairs with more than 3 risers. Do not configure stair runs with less than 3 risers. In the interest of safety and convenience provide handrails to comply with the B.C. Building Code.

2.2.2 Barrier-Free Design Standards

Exterior stairs must conform to barrier free design standards and should include tactile and visual warning strips.

2.2.3 Stairs as Informal Seating

Tread and riser design proportions should be selected to integrate comfortable informal seating and safe, comfortable ascent and descent. Integrate seating in such a way as to allow for efficient pedestrian circulation



2.2.4 Stair Materials

Materials for stairs should be broom finish concrete or other attractive finishes with protective nosings to reduce skateboard damage.

2.3 Fencing

Chain link fencing shall be black vinyl-coated in high visibility areas

Galvanized chain-link fencing shall only be used for security compounds in low traffic/low visibility areas.

2.4 Furnishings

2.4.1 General Guidelines

Provide furnishings as appropriate for the design intent of outdoor spaces, and in consideration of programmed uses. Specify materials and construction for longevity and low maintenance. Design of new furnishings should be compatible with existing furnishing styles on campus.

In intensively developed areas provide opportunities for built-in informal seating such as ledges, retaining walls, steps and grass berms.

2.4.2 Benches, Ash Urns and Litter Receptacles

Provide an ash urn at seating locations and litter receptacles nearby and at logical locations such as near building entrances.

Materials & finishes:

wood- certified plantation wood for bench seats

metal- powder-coated, industrial coating systems, stainless steel, or galvanized

concrete- decorative finish such as exposed aggregate, coloured sandblast, detailed formwork, or stone cladding

Where free-standing furnishings are specified they must be securely anchored in place and comfortable in all seasons. All furnishings must be constructed of high quality, durable and maintenance free materials. Use of recycled materials is encouraged.

2.4.3 Bicycle Racks

Provide bicycle racks at convenient locations such as building entrances.

U-racks are the preferred style of bicycle rack. They allow the cyclist to lock both wheels and frame to the rack. Use all-steel construction with durable finishes.

Racks must be bolted down, set in concrete pads, or otherwise anchored securely in place.

With increased usage of bicycles, end-of-trip facilities, such as bike lockers and showers should be incorporated at convenient locations.

3.0 SOFT LANDSCAPE

3.1 Planting

3.1.1 General Guidelines

In accordance with the Campus Development Plan the Campus Landscape will continue to be developed as an arboretum providing:

1. Areas for growing a diversity of plant materials; both new and well known varieties.
2. An outdoor laboratory for teaching purposes.
3. An attractive and functional setting for the buildings and users.

3.1.2 Plant Materials Teaching Program

All proposed plant material shall be appropriate to the teaching program in Forestry, Horticulture and Biological Sciences. A plant list shall be developed in consultation with the Landscape Advisory Committee.

3.1.3 Campus Guide and Plant Inventory

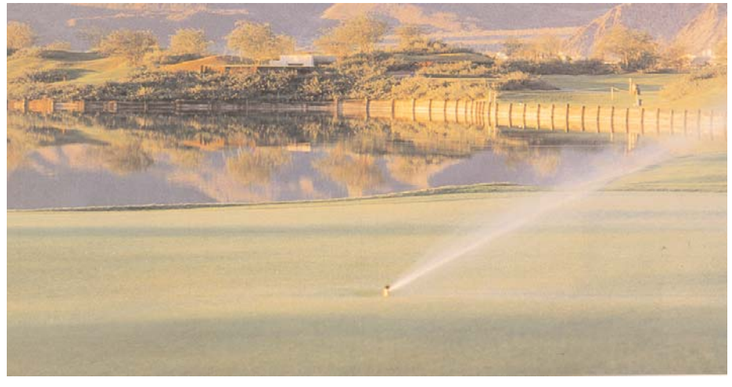
The Campus Guide and Plant Inventory for the Campus Landscape should be regularly updated.

3.1.4 Plant Labeling Program

A plant labeling program should continue to be developed to enhance the Campus Landscape as a learning experience, and to aid in the appreciation of plant diversity on Campus.

3.1.5 Water Conservation

Water conservation is a priority in the planning of the landscape.



4.0 IRRIGATION

4.1. General Guidelines

Optimize energy and water conservation. TRU is implementing a centralized computer controlled irrigation system. Design new irrigation to integrate fully with the computer controlled system.

Provide convenient hose bibs or quick coupling valves in all landscaped areas.

4.2 Landscape Categories

4.2.1 Intensively Developed, Manicured Landscapes

Provide fully automatic underground system for all planting laid out and specified by an irrigation expert. Include an irrigation scheduling chart indicating head types, flow rates and pressures, and calculate optimum run times for each zone.

Include satellite controllers fully integrated with the central computer system.

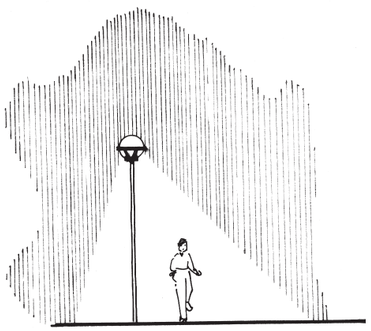
Utilize pop-up heads, shrub sprays, and drip type emitters as appropriate.

4.2.2 Indigenous Landscapes

Provide temporary irrigation to all areas being restored or rehabilitated. Minimize disturbances to all indigenous landscape areas.

5.0 LIGHTING

5.1 General



Select fixtures that minimize glare and have high cut-off values

5.1.1 Lighting Fixture Characteristics

Select lighting fixtures with optical characteristics and distribution patterns that will illuminate only those surfaces and areas required. From an aesthetic and environmental perspective, avoid glare and stray light by selecting optics that are efficient and have high-cut off values.

5.1.2 Lighting Sources

Sources: colour-corrected metal halide.

5.1.3 Continuity of Pole and Fixture Styles

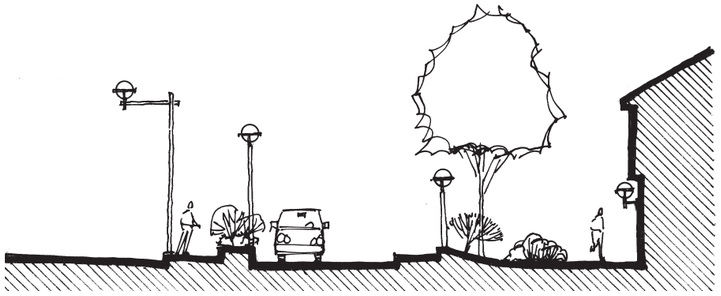
The Campus has existing several pole and fixture combinations. Pole and mounting heights vary depending on the scale of the spaces and their uses. Continue to use similar decorative styles for continuity.

Existing pedestrian-scale fixture

Preferred pedestrian-scale fixture

5.1.4 Other General Considerations

Take into consideration the hierarchy of illuminance levels for various functions, safety and security, ease of maintenance and aesthetics.



Establish a hierarchy of illuminance levels for various functions, safety and security, and aesthetics

Existing parking or high-use pedestrian scale fixture

Roadway type standard fixture

5.2 Illuminance Levels

In general, follow the illuminance ranges for various outdoor uses as set out by the "Illuminating Engineers Society of North America Lighting Handbook" latest edition.

Proper lighting design is a complex study requiring consideration of proximity to roadways and other illuminated structures, the reflective co-efficient of surfaces, plantings, and ambient light from building windows and relative illuminance of other adjacent areas.

The following is a guideline for area lighting and illuminance levels on campus:

5.2.1 Bikeways and Pathways

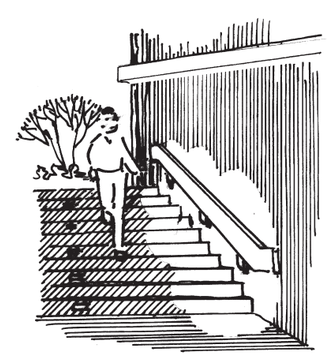
- minimum average horizontal levels 0.6 fc
- average 1.1 fc

to a distance of 2.5 meters on each side of pathway

5.2.2 Stairways

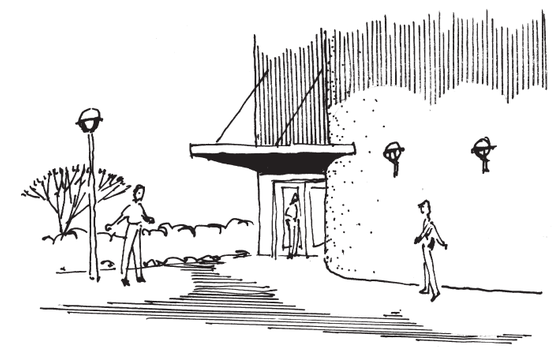
- minimum average horizontal levels 1.8 fc
- maximum to minimum ratio 6:1

Light stairways for safety. Use overhead pole mounted fixtures or wall lights.



5.2.3 Building Entrances

- minimum average horizontal levels 5 fc



5.2.4 Pedestrian Areas Near Buildings

- May be discreetly lit by wall mounted fixtures or spill from interior areas

5.2.5 Parking Areas

- minimum average horizontal levels 0.9 fc
- maximum to minimum ratio 8:1

Whereas mounting heights may be higher than for pedestrian areas, use pole mounted fixtures that are similar or complimentary to the pedestrian fixtures. Use optics that are also efficient and high cut-off to avoid undesirable spill into adjacent areas.

5.2.6 Lighting for Aesthetics

Selected specimen trees or other landscape features may be illuminated for effect using in-ground up-lights or down-lighting from canopies. Use only high quality metal fixtures with lens covers.

Existing Campus Signage Program

1. Typical Pedestrian Directional Marker


2. Pedestrian Directory/ Information Kiosk

3. Typical Pedestrian Directional Marker

6.0 SIGNAGE

6.1 Standard Signage Specifications
All signage should be coordinated with respect to type-face, colour, material, method of mounting and size and should conform to the standard specification.

6.2 Integration of Signage in the Landscape
Wherever possible signs should be integrated with other street furniture or mounted on buildings so as to minimize the number of poles in the landscape.

6.3 Requirements for Motorists, Cyclists & Pedestrians
Mounting heights, scale, and size of graphics and lettering should recognize the differing requirements of motorists, cyclists and pedestrians.

6.4 Special Signage for Universal Access
Consider special signage requirements for the disabled, such as demarcation of handicapped access and routes.

7.0 PUBLIC ART IN THE LANDSCAPE

7.1 Public Art on Campus

TRU acknowledges an important role for public art on campus:

- in enriching the landscape of the campus;
- in providing educational opportunities about art in the University curriculum;
- in defining and demarcating important public areas of the campus; and
- in creating a bridge between TRU and the arts community.

7.2 Integration of Public Art in the Landscape

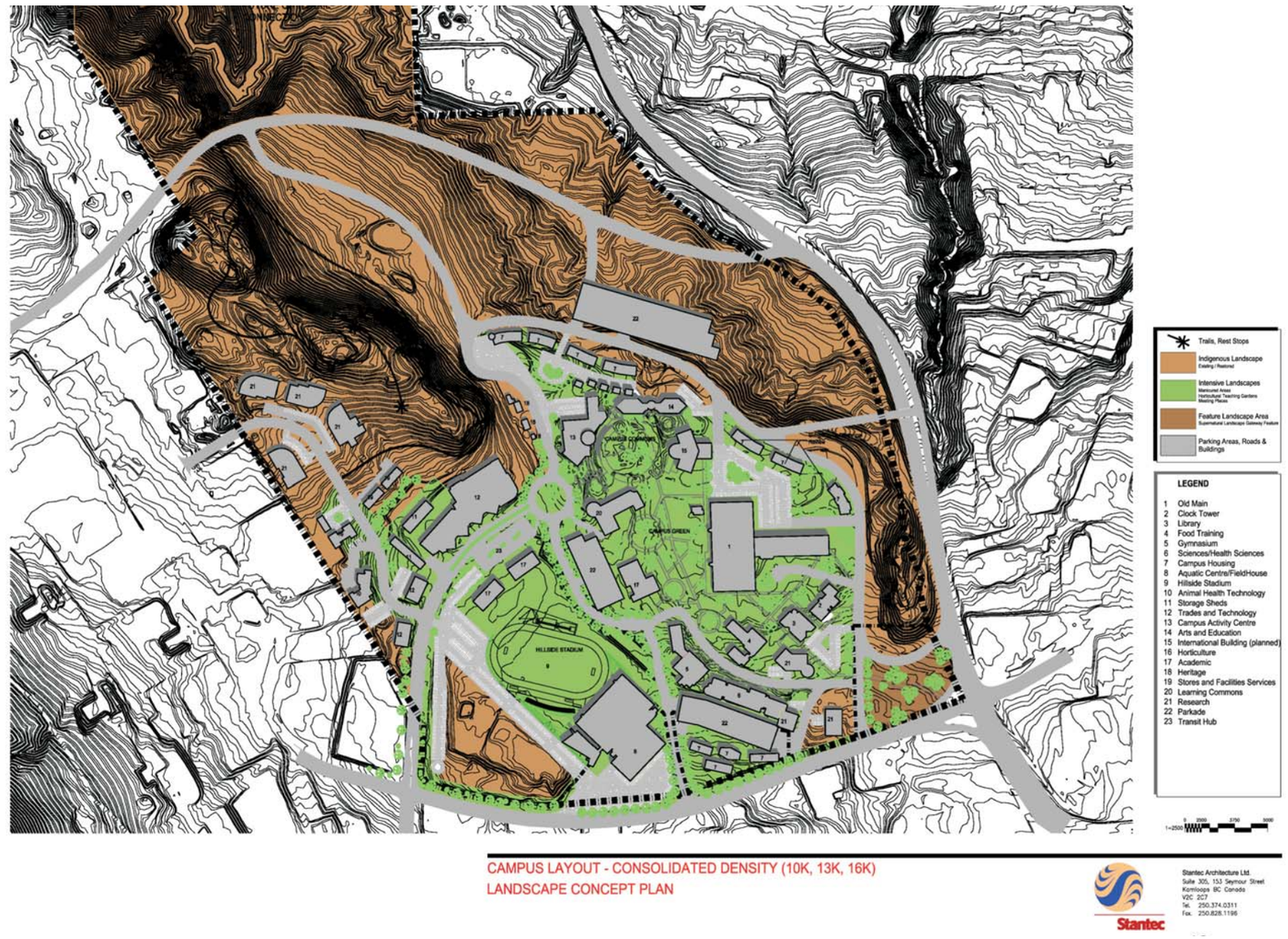
Wherever possible public art installations should be well-integrated with the landscape by:

- taking advantage of natural backdrops of existing vegetation and buildings;
- siting that takes advantage of existing vistas and view corridors;
- offering nearby seating opportunities to view the artwork;
- siting that offers visibility to passing pedestrians and motorists;
- thoughtfully identifies the piece, its title, artist, donor and other relevant information;
- appropriate lighting.

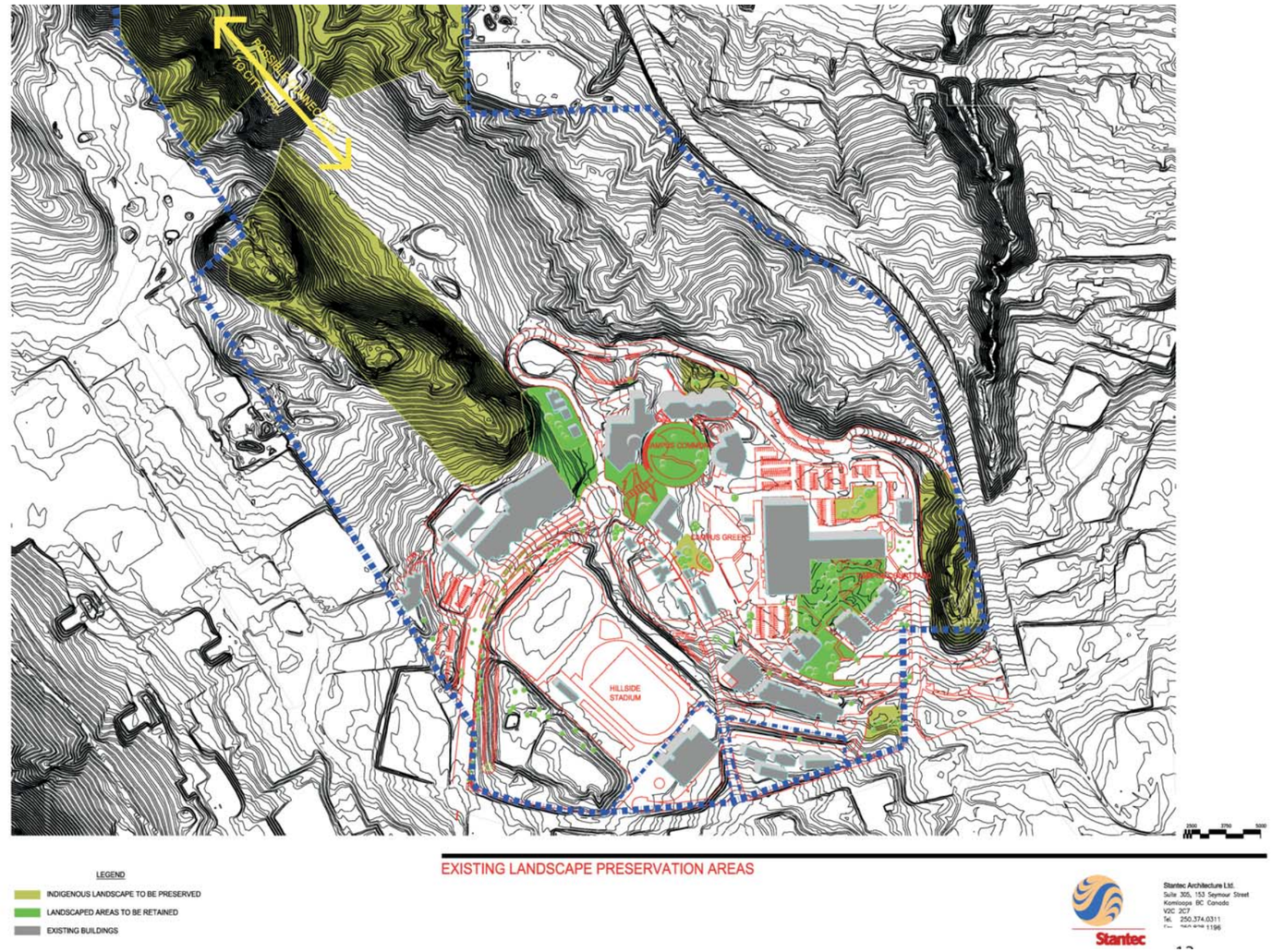
7.3 Bequests of Art to Thompson Rivers University

All bequests of public art will be reviewed by the Landscape Advisory Committee with respect to relevance of the art as legacy, potential siting, ongoing care and maintenance issues, and appropriate commemorative signage.

APPENDIX A- Campus Master Plan



APPENDIX B- Existing Landscape Preservation Plan



APPENDIX C- TRU FRIENDS OF THE GARDENS MISSION STATEMENT

The TRU Friends of the Gardens will enrich people's lives through its ongoing horticultural education and research programs.

This mission statement will be implemented in the following ways:

1. Encourage and promote awareness of horticulture and related issues.

2. Create educational opportunities for all age groups.

3. Properly exhibit, preserve, and expand the horticulture plant inventory.

4. Offer an exchange and provide evaluation of both new and heritage plant material.

5. Provide a bridge between TRU and the horticulture industry.