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Background:

In recent years, there has been an effort from the public and private sectors to make our society more inclusive.

In this project, we will focus on accessibility in buildings & grounds of the University of Victoria.

Statistics Canada reported in 2017 that 22% of Canadians (nearly 25% of British Columbians), age 15 or older, had one or more disabilities [1].

The project is not limited to people with physical or cognitive disabilities, but also people affected by the barriers caused by the current design of the facilities, for example, religious, cultural, and non-binary gender people.

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The University of Victoria campus was established in 1963 after purchasing the land from the Gordon Head Army Camp [2]. A few of the buildings were created during that period. Over the years, some old buildings have been renovated but there are others that still lack accessibility.

Figure 1. Gordon Head Army Camp, 1940-1943

Figure 2. Early Campus Construction (Elliott Building, McPherson Library, Clearihue Building), 1964

Prof. Flavio Firmani

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Client:

As stewards of the University of Victoria's physical campus (buildings and grounds), the **Department of Facilities Management** fosters and enriches an inviting and functional environment that welcomes and supports all who come here.

One of our critical functions is to provide a variety of services to support the principles of universal design, and to create physical environments that are usable and accessible to people with a wide range of abilities. This includes

- Responding to physical accessibility concerns and recommendations from students, staff, and faculty.
- Supplying barrier-free furniture for long and short-term requests.

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- Maintaining building equipment such as elevators and automatic door opening devices.
- Consulting and planning for an accessible environment in regards to physical building features, university grounds, and specific needs for individuals on campus.
- Interpreting building code standards to maximize access for all.
- Managing accessibility improvement projects.

Everything we do must be consistent with vision, values, goals and priorities described in UVic's Strategic Framework 2018-2023. Specifically, in the context of this project, we want to "embed practices of equity, diversity, accessibility, inclusion and dialogue throughout the university community so that all members feel welcomed, valued and supported to achieve their highest potential" [3].

Client Value Proposition:

The Department of Facilities Management is seeking proposals and solutions for ways to improve accessibility in buildings and grounds within the facilities of the University of Victoria

Identify and propose a solution to overcome the barriers within the existing facilities of the University of Victoria that affect accessibility to the university community and visitors.

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Notes:

One key aspect of this proposition is recognizing and identifying the barriers that restrict accessibility to all the members of our community. Another key aspect is understanding the different types of disabilities (end-users). Examples of disabilities are

Physical disabilities. A physical disability affects a person's mobility or dexterity.

Visual disabilities. A visual disability can range from partial loss of vision to complete loss of vision.

Auditory disabilities. An auditory disability could be a moderate hearing impairment or complete deafness.

Cognitive, learning, and neurological disabilities. These disabilities involve neurological, behavioral, and mental health disorders.

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Lack of accessibility may also be present due to barriers that affect religious, cultural or language, and non-binary gender or gender non-conforming people.

It is important that the design concepts related to the physical environment comply with UVic Accessibility Standards [4].

A very useful document on Accessibility and Building Codes in British Columbia is the Building Accessibility Handbook 2020 [5] and the Accessible Design for the Built Environment B651-18 [6].

Accessibility is a broad concept. The goal is to create meaningful access for people of all abilities. Ensure that when you consider a solution, you take into consideration the effect it will have on other people. You do not want to make the environment less accessible to a particular group of people.

When considering improvements to the built environment, refer to Table 1 for specific features that factor into the score card.

Table 1. Eight categories of accessibility in the built environment

Access Category	Examples
Vehicular Access	Parking, passenger drop off zones, pedestrian crosswalks, public Transit Stops
Exterior Approach and Entrance	Main entrance and alternative access routes, exterior pathways leading to the entrance, including ramps, stairs, and walkways
Interior Circulation	Path of travel, doors and doorways, corridors and hallways, interior ramps, interior stairways, elevators, and lifts
Interior service and environment	Lobby and reception areas, general seating and meetings, acoustics and Illumination
Sanitary facilities	Washrooms, change rooms, showers
Signage, Wayfinding, and Communications	Room signage, directory boards, and any kind of general signage Communications such as online or printed materials, assistive technology and staff training
Emergency systems	Emergency exits, fire alarm systems, evacuation instructions and procedures
Additional use of spaces	Amenities such as cafeterias, lobby space for public assembly, etc.

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Project Deliverables:

The project will be delivered in the form of short individual reports that will be submitted throughout the term, a presentation and a final report that will incorporate corrected versions of the previous reports and a description of the final proposal.

Project Proposal & Problem Definition: Include need, problem definition statement, Research, list of design objectives and constraints, and weighted objective chart (WOC). *Due Week 6, 20% of project.*

Project Management: Include work breakdown structures, linear responsibility charts, scheduling, design journals and Gantt charts. *Due Week 9, 10% of project.*

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Design Conceptualization: Summarize functions that have been identified. Include the function-means tree. Develop Morphological charts. List performance specifications - functional and design. Due Week 10%, 20% of project.

Project Presentation: Students will present in front of their lab section chaired by the Teaching Assistant. Week 12, during lab time in person, 20% of project.

Final Report: Incorporate all the previous reports highlighting any changes or new text in red. Include a new section in relation to preliminary design. This includes design metrics, evaluation matrices, a description of the design concept with sketches, a proof-of-concept proposal for testing your design concept, and conclusions. Due Week 13, 30% of project.

References:

[1]   Table 3, "Canadian Survey on Disability Report, 2017," Statistics Canada [Online]. Available: https://www150.statcan.gc.ca/n1/pub/89-654-x/89-654-x2018002-eng.htm

[2]   The Changing Face of University of Victoria Campus Lands. Jane Turner and Don Lovell, eds. [Online]. Available: http://archives.library.uvic.ca/featured_collections/changing_face_uvic_campus/introduction.html

[3]   University of Victoria Strategic Framework 2019-2023. Available online: https://www.uvic.ca/strategicframework/index.php

[4]   "Academic Accommodation and Access for Students with Disabilities: University Policy AC 1205". University Polices, Centre for Accessible Learning. Available: https://www.uvic.ca/universitysecretary/assets/docs/policies/AC1205_2340.pdf

[5]   "Building Accessibility Handbook 2020: Illustrated Commentary on Accessibility Requirements, British Columbia Building Code 2018." Office of Housing and Construction Standards, Government of British Columbia. [Online]. Available: https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/construction-industry/building-codes-and-standards/guides/2020_building_accessibility_handbook.pdf

[6]   "Accessible Design for the Built Environment: B 651-18," Standard Council of Canada. Available: https://www.csagroup.org/wp-content/uploads/B651-18EN.pdf