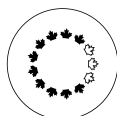


Public



NATIONAL CAPITAL COMMISSION
COMMISSION DE LA CAPITALE NATIONALE

No.	2026-P257
To	Board of Directors
Date	2026-OCT-06

For DECISION

Subject/Title

Federal Design Approval – Public Services and Procurement Canada (PSPC) – Construction of TerraCanada National Capital Area Lab Facility Component 1 – Urban Lands – National Research Council Canada (NRC) Campus – 100% Developed Design Package

Summary

- The purpose of this submission is to recommend approval of the 100% Developed Design for Component 1 of the TerraCanada National Capital Area Lab Facility at the National Research Council Canada (NRC) Campus (1200 Montreal Rd, Ottawa, ON) by the NCC Board of Directors under section 12 of the *National Capital Act*.
- The Proposal has been submitted by PSPC as part of the Laboratories Canada initiative to develop a long-term strategy to strengthen federal science through collaboration by bringing scientists together in built-to-last facilities.
- This is the final approval sought for the project. A prior Level 2 FLUDA for early works was issued in Summer 2026.
- Component 1 will provide specialised laboratories and office space for approximately 490 full-time equivalent positions (FTEs), bringing together multiple science groups currently located at other sites in the National Capital Region working on critical minerals, transition to a low-carbon economy, and oversight of the nuclear industry.
- This Proposal is the second project at the NRC Campus being undertaken by PSPC following the 2024 Board approval of the NRC Campus Master Plan. The 100% Schematic Design was approved by the Board in September 2025.

Risk Summary

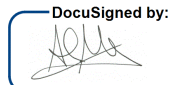
- No significant risks have been identified in relation to this Proposal. The Proposal is consistent with the NCC-approved NRC Montreal Campus Master Plan and generally responds to the advice provided by NCC staff and the comments received from the Advisory Committee on Planning, Design and Realty (ACPDR).

Recommendation

- THAT the Federal Design Approval for the Construction of TerraCanada National Capital Area Lab Facility Component 1 – Urban Lands –National Research Council Canada Campus – 100% Developed Design Package be granted, pursuant to section 12 of the *National Capital Act*.
- THAT the preparation and signature of the Federal Design Approval documents be delegated to the Vice-President, Capital Planning Branch.

Public

Submitted by:

DocuSigned by:


2026-Sep-28

Alain Miguelez, Vice-President Capital Planning Branch and Chief Planner

Public

1. Strategic Priorities

National Capital Commission (NCC) Corporate Plan 2025-2026 to 2029-2030:

- Strategic Direction: Foster an inclusive and meaningful National Capital Region of national significance, reflective of all Canadians, including Indigenous peoples.
- Priority 4: Demonstrate national leadership in achieving an environmentally sustainable and climate-resilient National Capital Region.

Government Priorities:

- Laboratories Canada initiative (Budget 2018)
- Laboratories Canada Long Term Vision and Plan (2020)
- Federal Sustainable Development Strategy, 2022-2026 (2022)
- Greening Government Strategy: A Government of Canada Directive (2020)
- Pan-Canadian Framework on Clean Growth and Climate Change (2016)
- Public Services and Procurement Canada (PSPC) Real Property Sustainable Development and Environmental Strategy: 2020-2023 (2023)
- PSPC Placemat - Baseline Greening Commitments (2021)
- PSPC National Carbon Neutral Portfolio Plan (2017)

2. Authority

National Capital Act, section 12

3. Context

Project Background

Laboratories Canada (“Labs Canada”) is a federal government initiative establishing a 25-year strategy to deliver new modern federal science facilities in Canada.

The TerraCanada National Capital Area (TC NCA) Labs Canada project is located on the NRC Campus at 1200 Montreal Rd, Ottawa, ON, (see Appendix A). The project’s goal is to enable collaboration and innovation in the National Capital Area (NCA) between the partner organizations: Canadian Nuclear Safety Commission (CNSC), Environment and Climate Change Canada (ECCC), National Research Council Canada (NRC), Natural Resources Canada (NRCan), and Health Canada. Development of the TC NCA is guided by the NRC Montreal Road Campus Master Plan, approved by the NCC Board in April 2024.

Component 1 Scope

The current approval is for the 100% Developed Design of Component 1.

Public

The Component 1 site is located along the eastern edge of the southern part of the NRC Montreal Road Campus, between Mackenzie Drive, Ballard Drive, and Blair Road.

Component 1 will house:

- NRCan's CanmetMINING
- NRCan's Geological Survey of Canada (GSC), and
- CNSC

This facility will accommodate specialised facilities for functions relocated from other sites in the National Capital Region located at 555 and 601 Booth Street, and 3484 Limebank Road in Ottawa, ON. The adjacencies and technical requirements of the laboratory functional program are drivers of the building footprint and massing.

Component 1 Program/Functional Requirements

The Proposal is for a 3-storey building with a footprint of 9,200 m², including a partial basement and sub-basement, and mechanical penthouse over a portion of the building. The total gross floor area is approximately 33,500 m².

The building will provide workspace for approximately 490 Full-Time Equivalents (FTEs) in roughly 17,500 m² of program area, including a variety of laboratories (standard, controlled, high bay, simulated environment), science office accommodation areas, building support functions, and public spaces.

- The building mass is organized into three main volumes (see Appendix C), including:
 1. Laboratory bar that houses the restricted-access laboratory spaces and some collaborative break-out spaces. It includes a dedicated secure staff entrance from Mackenzie Drive, basement, and a two-storey penthouse.
 2. Science Office Accommodation (SOA) wing that provides shared, collaborative, general-purpose workstations, meeting spaces, lounge areas and support services for the tenants. The SOA also includes the main south-facing public visitor entrance for the building, Indigenous ceremonial space, secure bicycle parking, changing facilities, and publicly accessible washrooms. The SOA building component connects to the laboratory bar component through an open atrium.
 3. "High bay" laboratory program that occupies space independent of the main laboratory building on the south-eastern edge of the site to accommodate a higher clearance and to provide access required for handling larger scientific materials. It is also physically smaller than the main laboratory volume to minimize its visual impact on the residential neighbourhood east of Blair Road.
- The parking area includes:
 - Maintenance area and fleet vehicle parking (covered and uncovered).
 - 136 on-site vehicle parking spaces for employees and visitors (on-street and surface).

Public

- 7 on-site accessible vehicle parking spaces for employees and visitors (on-street).
- 53 additional employee and visitor vehicle parking spaces will be dedicated to TC NCA at an existing parking lot within the NRC Campus.
- Electric vehicle charging capacity for both fleet and employee parking.
- 25 secure interior bicycle parking stalls.
- 20 secure exterior bicycle parking stalls, and
- 5 short-term unsecured bicycle racks to serve visitors and couriers.
- The service yard includes:
 - Truck lay-by and loading zone.
 - Hydrogen tank storage area, and
 - Secure mailroom.

Design Principles/Themes

The TC NCA design was developed in alignment with the Labs Canada Repeatable Laboratory Design Framework (RLDF) and design principles of the Labs Canada Long-Term Vision Plan (LTVP), including Design Excellence; Collaboration; Flexibility; Functional Suitability and Expandability; Universal Accessibility; Intelligent Building Infrastructure; Sustainable Development; Health and Safety; Project Controls; and Indigenous Engagement.

The TC NCA Component 1 work applies an Indigenous Participation Plan (IPP) that focuses on human resources, sub-contracting, and skills development. The design team includes Indigenous designers, architects, landscape architects, and strategists who have advised on a holistic design strategy to include Indigenous teachings and cultural values in the building form and landscape. The project team has also engaged with members of federal Indigenous Employee Networks and staff from the organizations to be located at the site.

Architecture

The overall concept for the TC NCA Component 1 is “A Village of Forms.” Its key elements are described below and illustrated in Appendices C and D.

The architectural massing comprises three volumes, each with a distinct expression and façade treatment that reveals the building’s varied functions and reflects the diversity of the regional landscape studied and preserved by TC NCA. The laboratories and high-bay area use a steel superstructure to evoke the region’s geology, while the SOA uses

Public

mass timber as its primary structural system to reduce embodied carbon. SOA details draw inspiration from birchbark canoe construction and local craftsmanship.

Landscape and Urban Design Concept

Key design requirements for the landscape and site layout include:

- Access to and through the site.
- Inclusion of a geothermal field.
- Crime Prevention Through Environmental Design (CPTED) and illumination best practices, and
- Universal Accessibility.

The landscape proposal's vision statement is "The Intersection of Geological Science and Indigenous Science." The proposal weaves contemporary ecological practices with Indigenous Traditional Knowledge, inspired by Anishinàbe Algonquin teachings. The design approach applies co-design principles where Indigenous and non-Indigenous participants collaborated on design actions informed by Indigenous protocols and cultural values, referencing specific cultural touchstones of the host Nation, such as paper birch basketry.

A key element of the landscape is the introduction of a new north-south roadway and parallel multi-use pathway on the western edge of the site, and the realignment of Ballard Drive on the southern edge. Between the surrounding roadways and the building edge, a system of swales, pedestrian walkways, naturalised plantings, and hardscaped gathering or resting spaces is proposed (see Appendix E). These landscaped areas serve multiple functions, including mobility infrastructure (pedestrian pathways, multi-use pathways, parking), stormwater management, ecological functions, and provide visual and physical buffers and screens.

Sustainability

The project is targeting LEED Gold and WELL Silver certifications by including features such as:

- Mass timber superstructure in the SOA wing.
- Application of fritted glazing on the south and west facing facades to reduce solar heat gain and glare.
- Tightly sealed, super insulated facades using energy efficient window systems.
- Energy efficient and resilient mechanical, electrical, and plumbing (MEP) systems.
- Geothermal field under landscaped areas, and
- On-site bioswales and water detention features.

Public

The proposed design also considers the long-term adaptability of the building for changing laboratory and research needs. The design of Component 1 has accounted for the potential future expansion of the TC NCA project, including a physical connection to the future Component 2, consolidating servicing and future stormwater management requirements in alignment with the NRC Montreal Road Campus Master Plan policies.

4. Options Analysis / NCC Staff Analysis

Planning Framework Analysis:

The Regulator Advocate (FLUDTA team) has guided the Proponent to ensure the Proposal is compatible and in alignment with the applicable planning policies:

- The Plan for Canada's Capital 2017-2067 (2017)
 - Milestone 14: improved urban integration of federal employment areas, including greater density and new facilities that support transit and active modes of transportation.
- The Capital Urban Lands Plan (2015)
 - Major Federal Employment Area land designation.
 - Coordination with the municipal requirements.
- The NRC Montreal Road Campus Master Plan (2024)
 - Site location and arrangement of key features, including a campus-facing plaza at the north-west corner of the site.
 - Animation of buildings' exterior architectural features that interact with public spaces to support placemaking, including the facades.
 - Anticipating access to and use of campus-wide services, including a future mobility hub.
 - Design guidelines for District 5: Southeastern Edge:
 - Consolidation of site services and infrastructure.
 - Animation of the front façade that contributes to the vibrancy of the public realm.
 - Articulation of building volumes to offer a transition in scale and massing from the smaller, low-profiled existing buildings, and form a coherent whole where constructed volumes balance with the surrounding landscape, open spaces, and wooded areas.
 - Providing a green buffer along the campus edge to transition from the neighbouring land uses.
 - Open space at the front of the building that connects to the landscape network, and
 - Maintaining existing vehicle and pedestrian accesses along Blair Road.

Public

The 50% Developed Design was presented to the NCC's Advisory Committee on Planning, Design, and Realty (ACPDR) on December 11, 2025. ACPDR comments informed the Regulator Advocate's final review, including:

1. The site planning and building layout generally complies with the policies and guidelines of the NRC Montreal Road Campus Master Plan (2024).
2. Campus and Building Connections:
 - a. Ensuring that the building layout and landscape support connections for active modes of transportation (particularly pedestrians) between buildings in current and future components, as well as to the broader campus. The site design of the Proposal implements the NRC Campus Master Plan and facilitates good connections to future components to the South.
3. Architecture:
 - a. The expression and legibility of primary building entrances have been improved by framing their location using architectural features including canopies, changes in geometry, and materiality. The design of the landscape has also been refined to provide direct lines of sight to entryways from the principal curbside drop-off areas, and to distinguish them from the broader field of view.
 - b. The north elevation of the laboratory bar has been refined to better express the function of the building by incorporating a geological motif into the pattern of pre-cast concrete panels that clad its façade.
 - c. The mechanical penthouse has been greatly reduced in scale, improving the overall architectural expression by focusing the visual presence of the primary exterior building facades.
4. Landscape:
 - a. Permanent parking areas have been distinguished from temporary spaces that will be relocated and/or modified as the NRC campus is developed in subsequent phases.
5. Mobility and Transportation:
 - a. Traffic safety concerns associated with vehicle movement to access angled parking along the new north-south road have been mitigated through the introduction of a roundabout at its intersection with Ballard Drive.

The proposal generally demonstrates principles of good planning and design. The proposed building massing and site layout respond to the challenges of an irregular site shape and significant grade changes.

The overall architectural approach and design of exterior and interior public spaces prioritizes durable materials, simplicity of forms, and high-quality user experience. The

Public

themes expressed are responsive to the site, building purpose, and input received through an Indigenous engagement and co-design process. The architectural approach respects the NRC Campus Master Plan guidelines.

The interior laboratory and staff-oriented spaces are designed according to specialized Labs Canada and tenant requirements and guidelines and therefore are not subject to detailed NCC review.

The landscape design provides a balanced response to site conditions and project requirements by:

- Integrating Indigenous cultural expression, ecological features, stormwater management and site security into a system of pedestrian walkways and drainage swales.
- Providing required parking through the utilization of existing surface lots and on-street angled parking to reduce requirements for new surface lots, and
- Allowing for intuitive, accessible entry to the building from both the north and south.

The Proponent has addressed the recommendations and requirements for modifications to the design identified by FLUDTA staff.

5. Financial Details

Not Applicable – external project

6. Opportunities and Expected Results

Approval of this Proposal will enable the remainder of construction works in alignment with the Proponent's timelines to deliver on the commitments of the Labs Canada initiative.

The TC NCA Component 1 will be a key step in the implementation of the NRC Montreal Road Master Plan and will support the implementation of relevant policies and objectives identified in the NCC's planning framework.

7. Alignment with Government and NCC Policies

- Treasury Board Standards (March 2022)
- Directive on the Management of Real Property, including National Building Code, National Fire Code, and barrier-free access (CAN/CSA B651-23)
- Laboratories Canada: RLDF (including Federal Identity Program, GBA+ analysis, universal accessibility in laboratory spaces) and long-term vision plan (LTVP)
- Federal Sustainable Development Strategy, 2022-2026 (2022)

Public

- The Proposal was evaluated under the *Impact Assessment Act* (IAA). An Environmental Effects Evaluation (EEE) was signed on April 30, 2026 to include the scope of work being submitted as part of the 100% Design Development approval.

8. Risks and Mitigation Measures

Risk	Likelihood	Impact	Mitigation Measure
Any delay in receiving approval will impact the project schedule and related PSPC project agreements	Low	Medium/High	Proceeding with the approval of the Developed Design will allow the construction to advance as planned.
Changes to the approved design resulting from the selection of exterior cladding materials during procurement	Low-Medium	Moderate	• The Design Development approval letter will include conditions requiring submission of material samples and product data of exterior cladding materials ○ NCC staff will review submittals for exterior cladding materials to ensure that the selected products are in conformance with the approved design, or that acceptable alternates are provided to the satisfaction of the Regulator Advocate

9. Public Engagement and Communications

Proponent engagement and communications strategy included:

- Engagement with the Anishinàbe Algonquin community through: Visioning Sessions, site blessing ceremony, and government of Canada presence at community events.
- Project information provided to the host Nation through:
 - Project update briefing to Algonquin Anishinabeg Nation Tribal Council (AANTC), Kitigan Zibi Anishnabeg and Algonquins of Pikwakanagan, and
 - Project update and Indigenous Participation Plan notice sent to Kitigan Zibi Anishnabeg and Algonquins of Pikwakanagan Chiefs.
- Discussions with the tenants regarding collaborative sharing of spaces and space optimisation.
- Staff-level engagement with the City of Ottawa and OC Transpo.

Public

- Notice of the TC NCA project and the NRC Montreal Road Campus Master Plan was provided to adjacent residents and community associations (including Rothwell Heights, Wateridge Village and Beacon Hill), and
- Posting on the Canadian Impact Assessment Registry in March 2026.

10. Next Steps

- September 2026 – November 2030 – Federal Approval Monitoring
- Fall 2030 – Substantial Completion / Occupancy / Project Close-out

11. List of Appendices

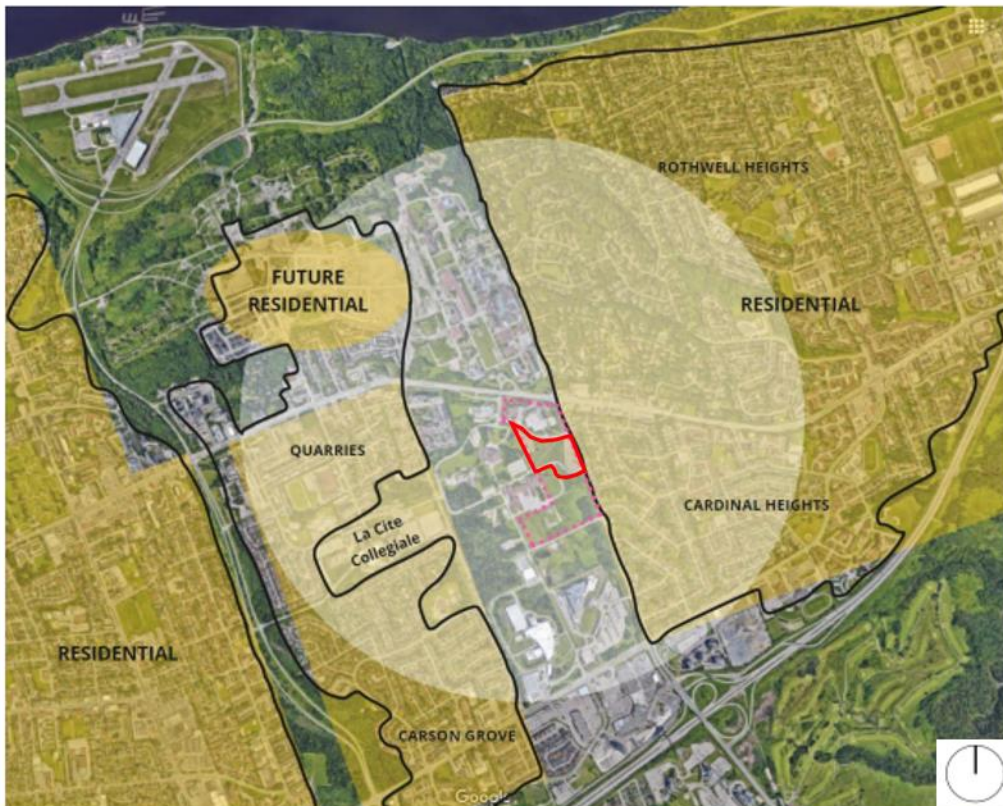
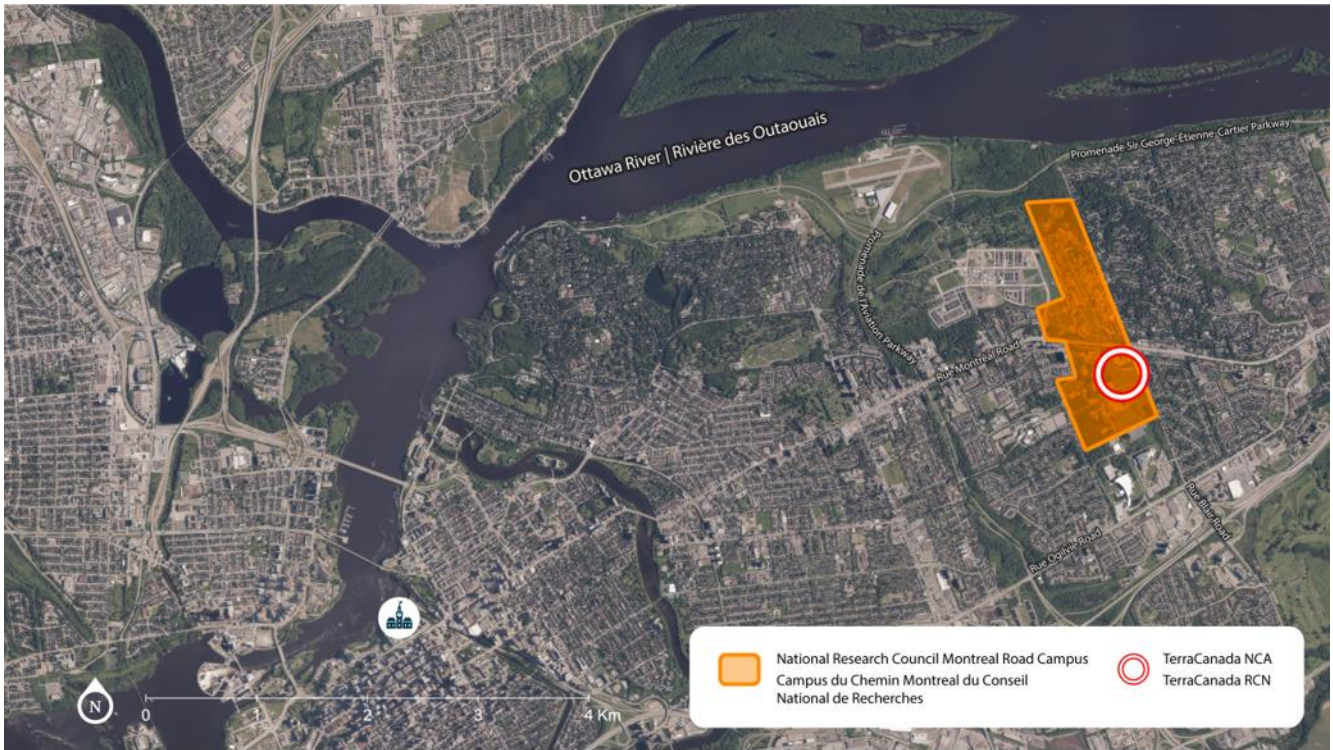
- Appendix A – Location Map
- Appendix B – Existing Site Conditions
- Appendix C – Site Plan
- Appendix D – Plans and Sections
- Appendix E – Materiality and Renderings

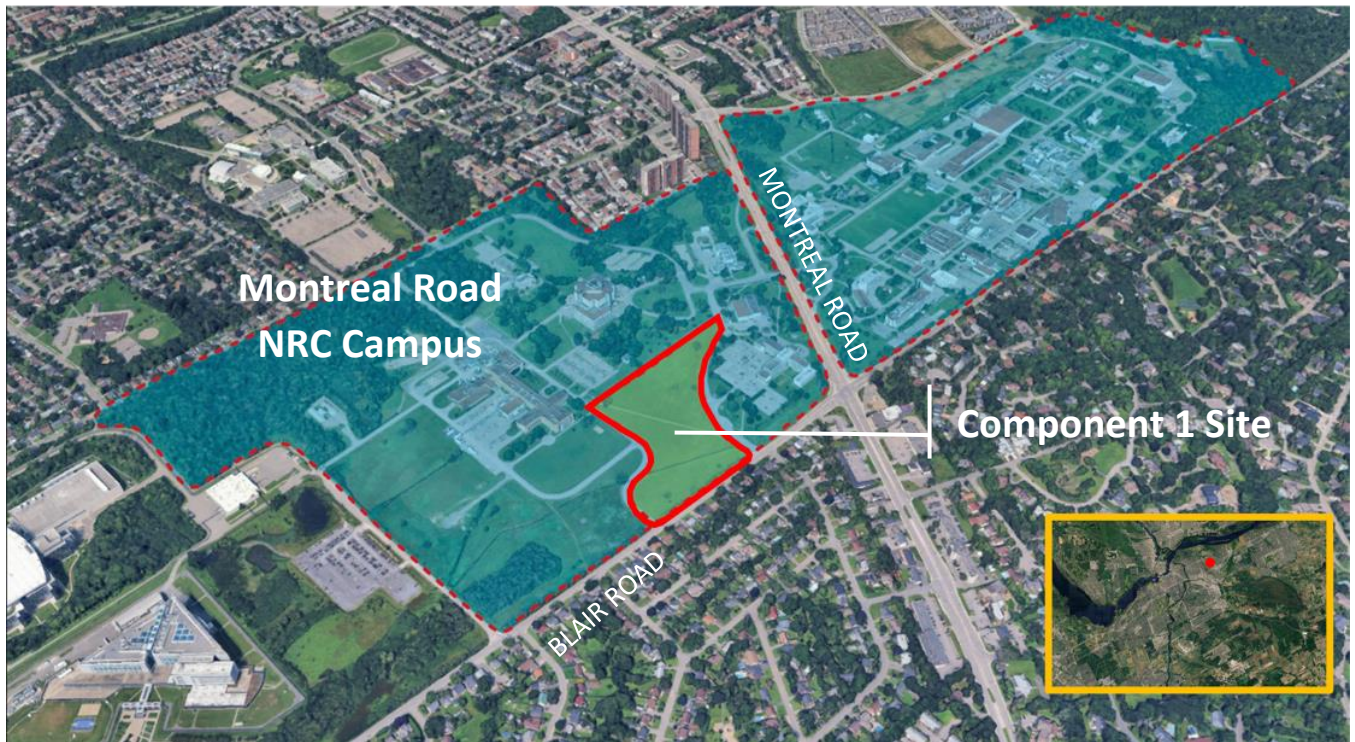
12. Authors of the Submission

- Alain Miguelez, Vice-President, Capital Planning Branch (CP)
- Isabel Barrios, Director, Federal Approvals and Conservation Programs (FACP), CP
- Jason Hutchison, Chief, Federal Approvals and Environmental Compliance, FACP, CP
- Gandhi Habash, Senior Architect, Federal Approvals, FACP, CP

Appendix A | Appendice A

Location Map | Plan de localisation





Appendix B | Appendice B

Existing Conditions | Conditions existantes

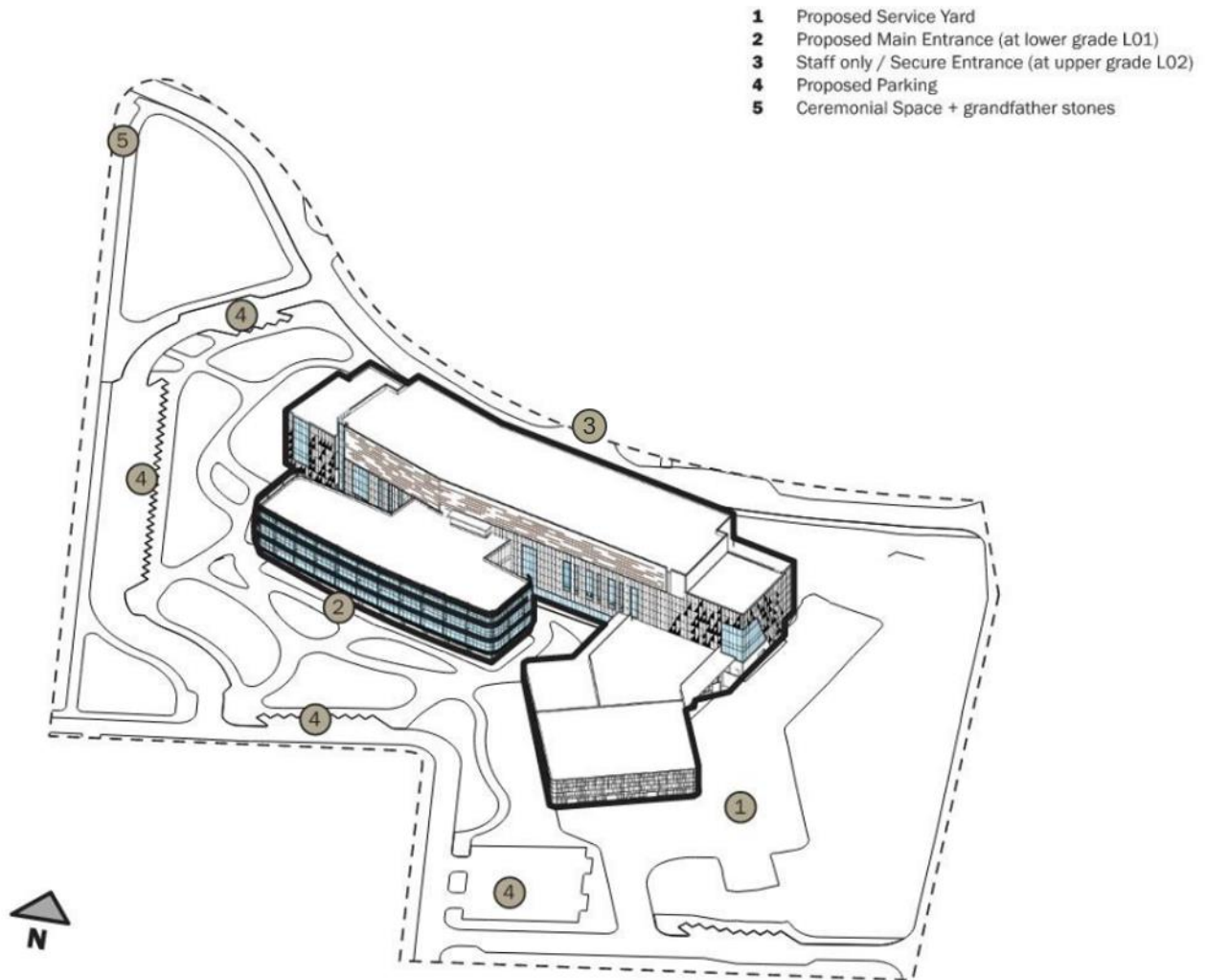


● Bus stops | Arrêts
d'autobus

Appendix C | Appendice C

Site Plan | Plan du site

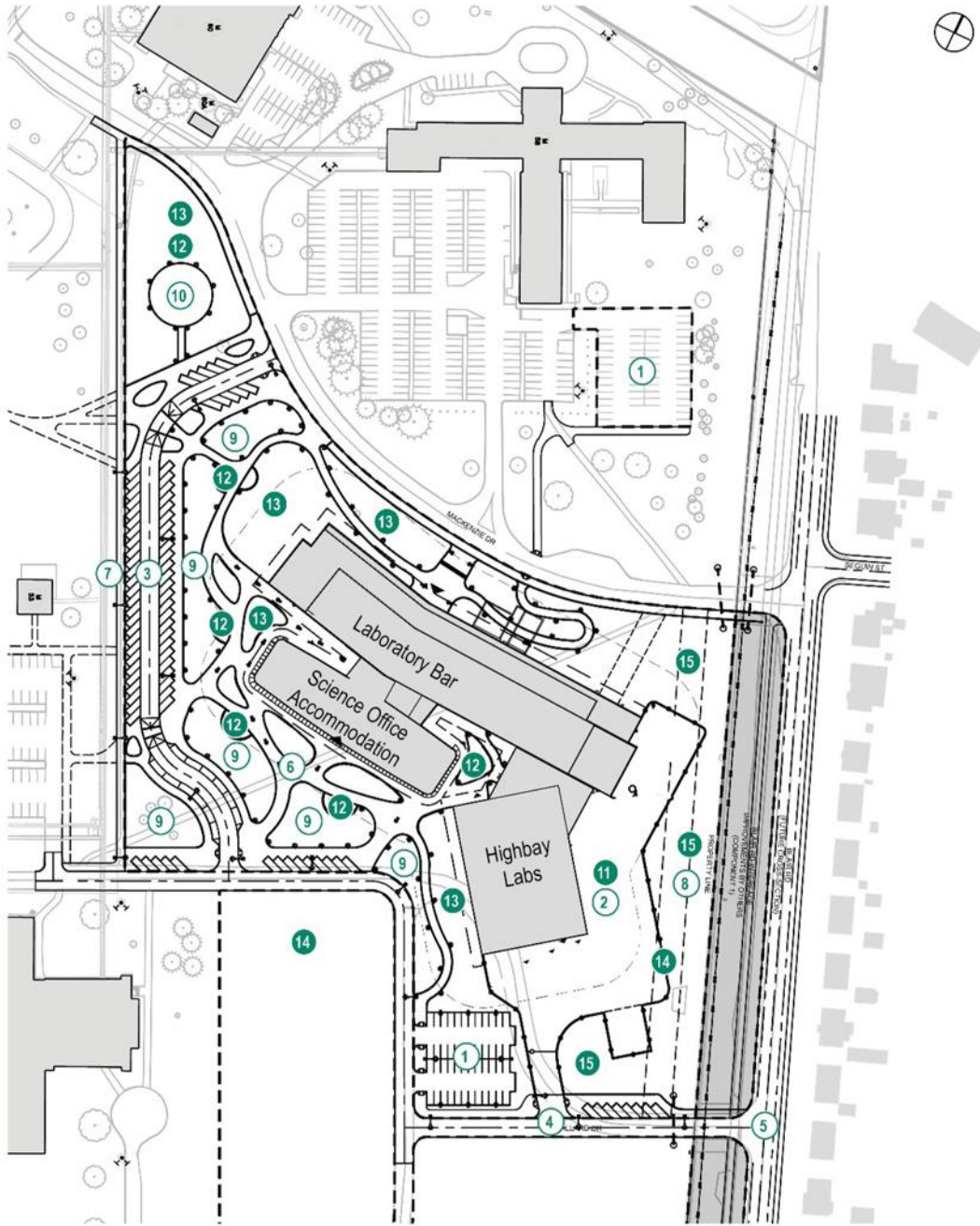
Axonometric Diagram





Program Key

- Service | Service
- Social | Social
- Ecological | Écologique
- Cultural | Culturel
- Green Buffer | Zone tampon verte



Site Key

- ① Parking
- ② Service Yard
- ③ TerraCan Way w/ Street Parking
- ④ Ballard Dr Service Corridor
- ⑤ Blair Rd Future Cross-Section

- ⑥ Plaza
- ⑦ 3.0m Multi-Use Path Network
- ⑧ Drainage Corridor+Fish Habitat
- ⑨ Stormwater+ Swale
- ⑩ Indigenous Gathering Space

Program Key

- ⑪ Service
- ⑫ Social
- ⑬ Ecological
- ⑭ Active Recreation
- ⑮ Green Buffer

Appendix D | Appendice D

Plans and Sections | Plans et sections

Landscape Plan



Figure 7-10 : Overall Site Plan

Overall Site Plan Legend

1. North Entrance
2. South Main Entrance
3. Para Transpo Drop-off
4. CNSC lightwell
5. Secondary Roads with on street parking
6. Loading area buffered by vegetation + topography
7. Ecological softscape + stormwater swales
8. Geoheritage Area
9. Indigenous Gathering Area
10. Redirected Drainage, North of Road 3
11. Multi-Use Pathway to M55

Floor Plans



Figure 1-6 : B01 Floor Plan



Figure 1-7 : L01 Floor Plan

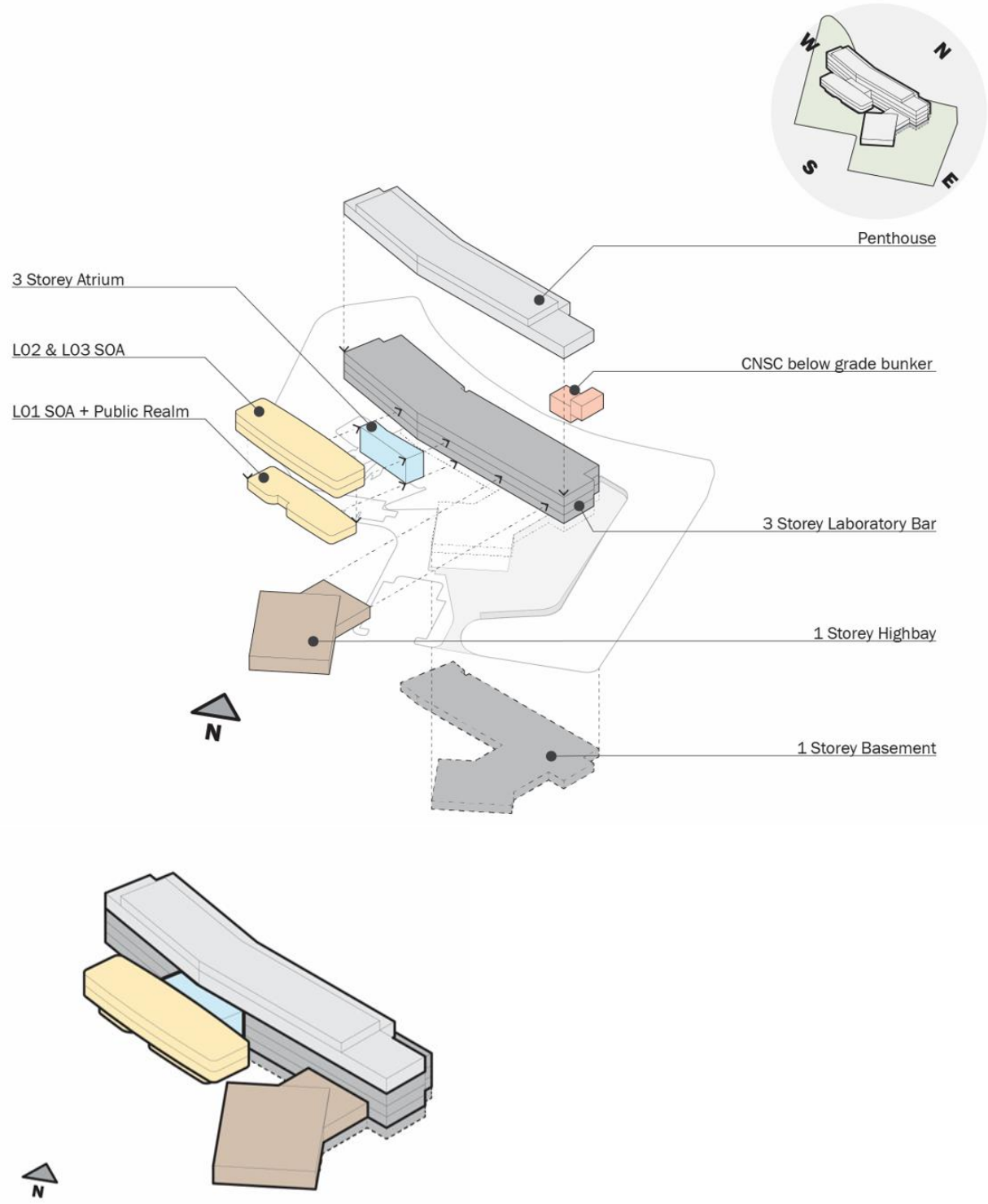


Figure 1-8 : L02 Floor Plan

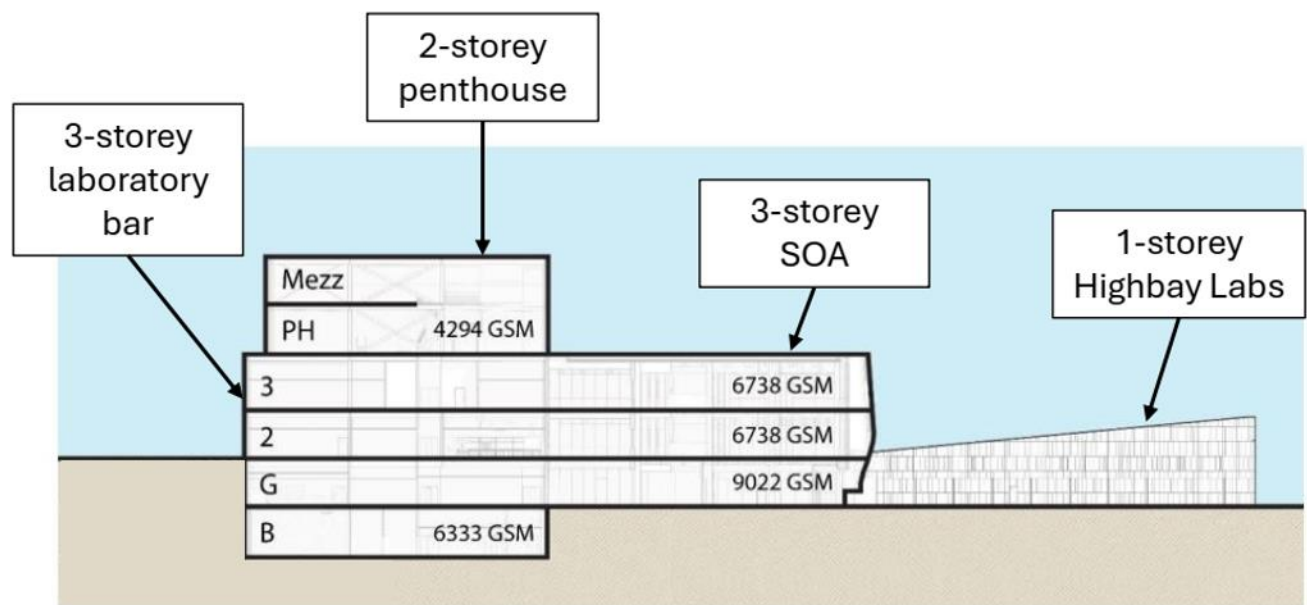


Figure 1-9 : L03 Floor Plan

Exploded Axonometric Diagram



Building Section – North-South



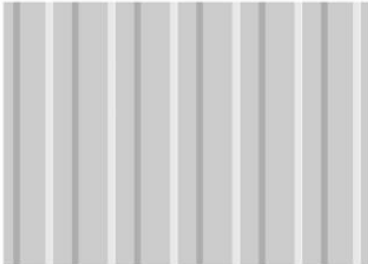
Appendix E | Appendice E

Materials and Renderings| Matériaux et rendus

Exterior Material Board



SCREEN 01



IMP 01

LEGEND

- SCREEN 01** | Perforated Aluminum Screen (around all exposed mechanical and roof top equipment: Lab Bar, SOA, High Bay)
- SCREEN 02** | Perforated Stainless Steel Panel (exterior bike storage)
- IMP 01** | Insulated Metal Panel (Penthouse Mezzanine Level)
- CONC 01** | Accen Panel - Pre-cast Concrete Panel with photo engraving (feature panels at Northeast and Northwest corners of the Lab Bar)
- CONC 02** | Field Panel - Pre-cast Concrete Panel with Vertical texture for Lab Bar and Horizontal texture for High Bay
- ALUM 01** | Copper Powder Coated Aluminium (Curtain wall mullions at SOA and Satellite SOA in Lab Bar + vertical supports for Brise-Soleil)
- ALUM 02** | Dark Brown Powder Coated Aluminium (Curtain wall mullions at Lab Bar and High Bay)
- SPANDREL 01** | Copper back painted spandrel
- SPANDREL 02** | warm grey back painted spandrel



CONC 01



PRECAST CONCRETE PANEL - Photo Engraved



SCREEN 02



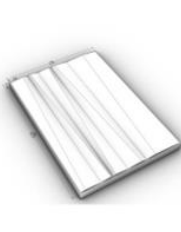
ALUM 01



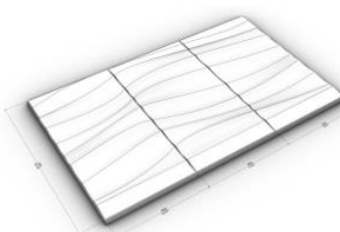
ALUM 02



CONC 02



PRECAST CONCRETE PANEL - Vertical Texture



PRECAST CONCRETE PANEL - Horizontal Texture



SPANDREL 01



SPANDREL 02



Science Office Accommodation Structure and Main Entrance
Édifice des bureaux et l'entrée principale



Science Office Accommodation, Laboratory Bar, and High Bay Labs
Édifice des bureaux, laboratoires, et labos de grande hauteur



Laboratory Bar – North Façade

Édifice des laboratoires – Façade au nord



Potential Design of Interior Lobby Space

Conception potentiel à l'intérieur de l'accueil



Site Landscaping – Typical Planting Island and Hillside Path

Conception du paysage – Plantation typique et sentier à la colline



Site Landscaping – Wayfinding Stone and SOA Plaza

Conception du paysage – Pierre d'orientation de et le centre de l'édifice des bureaux

