





PROSCENIUM ARCHITECTURE + INTERIORS INC.

SUBMISSION REQUIREMENTS

TABLE OF CONTENTS

| SUBMISSION REQUIREMENTS | DRAV |
|---|------|
| APPLICATION FORMProvided by UBC* | |
| WRITTEN DESCRIPTION4 | |
| DESIGN POLICY COMPLIANCE5 | |
| TITLE SEARCHProvided by UBC* | |
| SITE PROFILEProvided by UBC* | |
| TREE SURVEY12 | |
| GREEN BUILDING CERTIFICATION | |
| GEOTECHNICAL REPORTProvided by UBC* | |
| HAZARDOUS MATERIALS REPORT Provided by UBC* | |
| PHOTOS - SITE AND CONTEXT14 | |
| DP NOTIFICATION SIGN | |
| BUILDING SIGNAGE19 | |
| 3D MODEL Provided Electronically | |

*Available through Project Services, UBC Infrastructure Development.

ARCHITECTURE + INTERIORS INC.

| AWING REQUIREMENTS | APPENDICES |
|--|-------------------|
| COVER SHEET WITH PROJECT STATISTICS21 | PLANNING |
| CONTEXT PLAN | APPLICATI |
| PROJECT SCOPE DIAGRAM23 | TITLE SEA |
| CONTEXT SECTIONS | SITE PROF |
| SITE PLAN26 | ARBORIST |
| UTILITIES27 | GEOTECH |
| SURVEY PLAN | HAZMAT R |
| SHADOW ANALYSIS29 | 3D MODEL |
| FLOOR PLANS | UTILITY PL |
| ELEVATIONS | SURVEY PI |
| SECTIONS | |
| LANDSCAPE PLANS | |
| LIGHTING Refer to Landscape Sheet L200 - p.37* | |
| RENDERINGS49 | |
| | |





| G & DEVELOPMENT | MEMO54 |
|-----------------|----------------------|
| | Provided Separately* |
| ARCH | Provided Separately* |
| FILE | Provided Separately* |
| T REPORT | Provided Separately* |
| INICAL REPORT | Provided Separately* |
| REPORT | Provided Separately* |
| L | Provided Separately* |
| LAN | Provided Separately* |
| PLAN | Provided Separately* |

WRITTEN DESCRIPTION

PROJECT DESCRIPTION

The project is a major renewal of the MacLeod Building, a 7,282 GSM 4-storey concrete frame building located at 2356 Main Mall, constructed between 1961 and 1964. The work is intended to comprehensively address deferred maintenance for the building, meet current service objectives, codes, sustainability objectives and principles, and UBC technical standards. Integral to this goal is achieving Seismic safety at a level of resilience planning, in alignment with UBC's goals for Seismic safety at a campus-wide level.

Scope will include demolition and replacement of the existing envelope, interior layout and finishes, mechanical and electrical systems, and significant upgrades to the building structure. The upgrade will include re-configuration of interior spaces within the existing building footprint to support modern pedagogy and research. The upgrade will also address two existing bridges to other buildings, as well as the adjacent connected Fred Kaiser building.

Part of the project scope is preparation for a potential future two-storey vertical expansion on the building's Main Mall elevation. While this expansion will not be part of the renewal project, building systems and layouts are to be designed to accommodate future addition.

BUILDING USE

The building houses undergraduate teaching labs and support, workshops and limited research functions for the Faculty of Applied Science's Department of Electrical and Computer Engineering (ECE). The building also accommodates a number of classrooms serving both ECE and UBC's larger classroom pool.

SITE CONTEXT AND EXISTING BUILDING

The building is located on the east side of the Main Mall near Agronomy Rd, immediately adjacent the existing Fred Kaiser Building to the north, ICICS Building to the south, both of which are linked by interior connections – on all four storeys with Kaiser and via an above-grade interior bridge to ICICS. The immediate landscape between the building and Main Mall is lawn with a number of mature trees. To the east, the building frames a courtyard, home to the recently completed Engineering Student Centre, and is connected via above-grade interior bridge to the Brimacombe Building. The courtyard landscape immediately adjacent MacLeod is a lawn with fairly substantial berm, under which lies the majority of major utility connections for the building at relatively shallow depth. South of the building is an existing paved pathway and service lane connected to Engineering Road. This lane houses large garbage compactors that serve this and other neighbouring buildings and also accommodates loading access for the ICICS Building.

Across Main Mall from MacLeod is the existing MacMillan Building, which is expected to be replaced in the future due to seismic concerns, and the domestic-scale Owl at the Barn Childcare Centre, on a large lot, which can also be expected to be replaced by a much larger institutional building in the future. Designed by the renowned Vancouver architectural firm Thompson Berwick and Pratt, the existing building is an elegant but modest example of the modern style, although not a listed or designated structure. The building is characteristic of civic and institutional buildings of the 1960s, including other buildings of similar vintage on the Point Grey Campus by the same architects. The Macleod building is comprised of clean lines, tectonic expression of the structure, and a restrained palette of white glazed brick and raw concrete. The glazed, white brick exterior cladding is mimetic of other projects on campus and establishes material continuity with nearby buildings. Other notable features include the cast-in-place flying concrete frames at the building corners, visible column and beam grid on the building exterior, and multi-storey glass stairwells. The existing building is a low, 4-storey structure with small rooftop penthouse, set well back from the Main Mall. The building is L-shaped in plan, with two major wings. The principal entrance is located at the crux of the building and addresses the Main Mall near its south east termination. The existing entry is via a raised plaza at Level 02, which does not provide an accessible route into the building. Plantings around the entry plaza currently obscure the approach to the building, detracting from a legible sense of arrival. Secondary entry-points are provided into the south and east exit stairwells on Level 01 and on Level 2 on the courtyard side of the connection between MacLeod and Kaiser.

The existing building exterior cladding is not seismically restrained, is not designed to modern building science best practices, and does not perform thermally in a way that addresses UBC's energy performance goals. Its remediation and retention has been analyzed by the design team and found to result in a sub-optimal envelope with increased loss of interior area due to inboard insulation which remains compromised by thermal bridging. Seismically upgrading the existing envelope would also be more costly and laborious than other recent renewals of buildings of similar vintage on campus due to the widespread use of concrete masonry unit back-up in this building. For these reasons a complete replacement of the envelope will be undertaken.



DESIGN RATIONALE

The design concept proposes substantially maintaining the building's existing exterior relationships, including maintaining the main entry point at the northwest corner. However, the design seeks to make the entry sequence to the building both more legible - contributing to an appropriate sense of arrival and provide a dignified and equitable accessible path of entry. For these reasons, and with consideration to cost, logic of construction, and impact on interior program space, the design proposes relocating the entry to Level 1. In addition to the drivers noted above, this move will harmonize the entry levels of MacLeod and Kaiser, as well as allow the ground floor of the building, which will house some of the more visually interesting program spaces, to be more intuitively connected to the main entry and, in turn, to animate the entry sequence.

Other building entrances will be retained, though, to address programmatic requirements for ECE workshop spaces, a new south-facing entrance is proposed for the south service laneway. This will provide access to relocated building stores and will be connected to both the main building circulation and animated new independent study and lounge space.

The renewal project proposes to retain the massing of the existing building, though the required envelope replacement necessitates a reconsideration of the façade. Given the modest elegance of the existing building and dynamism of the ECE programs, the design seeks to fundamentally respect and reflect the form and structure of the existing building, while updating its expression with subtle formal disruptions that bring in contemporary best practices in post-secondary facility design that both support and reflect the forwarding-thinking interests of ECE and UBC.

This is proposed to be accomplished with a dynamic deployment of faceted metal or precast concrete panels combined with highperformance fibreglass glazing. The faceting of the facade is a contemporary reinterpretation of the subtle depth established by slight changes in depth on the existing façade, which serve to create a sense of rhythm and rigour.

A key goal in the renewed exterior expression is to enhance the connection between interior uses and the exterior expression, including the judicious introduction of full-height glazing at key program areas – such as new social learning spaces – and fully solid façade where appropriate - such as washrooms, which were not registered in the original highly formal design. This approach is both appropriate to the exterior design goals as well as to the interior approach, which seeks to address the building's current lack of animation by maximizing views from and between the exterior, program space and circulation space.

All design decisions have been made with a view to addressing the key project drivers of deferred maintenance, energy performance, seismic resilience, appropriate public presence, and program accommodation.

ARCHITECTURAL EXPRESSION

Building Height & Setbacks

• The building renewal project will maintain the existing height, with subtle adjustment for new parapet insulation and detailing. Due to seismic and code concerns, the existing rooftop penthouse is proposed to be demolished and replaced with a smaller structure; this would not affect building height and will reduce the visual impact of the penthouse on Main Mall.

• The building renewal will maintain the existing footprint and setbacks, with minor expansion of Building Area to accommodate exterior insulation and cladding.

Potential future vertical addition:

• The possible future two-story addition onto MacLeod would be on the west wing (Main Mall) only.

• Broadly, the proposed addition would adhere to the massing, academic growth, social intensity and character objectives of the Campus Plan. By increasing the on-site density, ECE will have the opportunity to grow as a program, while using land efficiently and avoiding "sprawl."

• The proposed addition would still be within the 28m height limit of the Campus Core.

• The proposed addition proposes to maintain the existing building setbacks. The 5m setback after the first 18m of building height set out in the Campus Design Guidelines would render the addition infeasible because of the narrow building footprint of the Western wing of MacLeod. The MacLeod building is set back further from Main Mall (25m) than the adjacent Kaiser and ICICS buildings (16m) which both feature the 5m setback above an 18m building height to respond to the scale of the Red Oak trees along Main Mall. Even with an additional two stories, MacLeod's façade would remain significantly further setback that the adjacent buildings, which will reduce the impact of increased building scale on the adjacent row of trees and pedestrian realm. This reasoning has been previously discussed with Campus + Community Planning staff: a memo by Brett Liljefors of UBC Planning and Design dated October 2019 recommends to the Director of Planning that the 5m setback be waived in the case of MacLeod (please refer to attached memo in Appendix.)

• An additional two stories will have no impact on the view corridor looking South along Main Mall because of the generous 25m setback from the boulevard.

Campus Core Architecture

The project adheres to the following Campus Core supplementary architectural guidelines:

Style Precedents

• The proposed building façade references the International Style modernism that typifies the existing MacLeod building – the structural grid is expressed on the renewed exterior of the building

• The proposed façade breaks down scale with expressed structural frames. The vertical columns separate window bay modules

• Light coloured and plain cladding is proposed, either in the form of white aluminum composite panel or light pre-cast concrete

to ICICS and Engineering Road

• The sunken plaza embeds the building entry into the landscape

Horizontal Massing:

- Horizontal massing predominates in the proposed re-cladding: the previous brick infill and expressed floor slabs that established horizontality are referenced by a thick folded band in the new cladding that runs the entire width of the building on every floor.

- While subtle disruptions are proposed to the existing horizontal banding with some instances of full-height glazing and façade corresponding to appropriate program uses, the horizontal datum line will continue to be predominant.

Main Mall Cornice Line:

• The original four-stories of MacLeod will be clad in a unified façade that maintains the existing cornice line.

cornice line.



UBC

• A highly penetrable ground plane is established with a new sunken Level 1 entry plaza that ties into existing pedestrian routes

• The design team recommends that expression of the future vertical addition incorporate a visual break at the parapets of the original MacLeod building - maintaining the datum of the original

GRID EXPRESSION: EXISTING SYSTEM







EXISTING BUILDING STRONG VERTICAL AND HORIZONTAL ELEMENTS

GRID EXPRESSION: EXISTING SYSTEM









EXISTING HIERARCHY

VERTICAL COLUMN LINES

HORIZONTAL SLABS

WITH INFILL BRICK PANELS

GRID EXPRESSION: PROPOSED FACADE









RETAINED HIERARCHY

VERTICAL COLUMN LINES

HORIZONTAL SLABS

WITTER INFILL BRICK PANELS

GRID EXPRESSION: PROPOSED FACADE







RETAINED HIERARCHY

Existing mature trees will provide shading

Solid panels strategically where storage is required, lecturns and presentations screens are present as well as to hide expanded shear walls

CAMPUS CORE MATERIAL PALETTE

While the existing building incorporates the glazed white brick noted as a primary material for the Campus Core Material Palette, thorough investigation of the practicalities of its retention and remediation for seismic and building performance has shown that retention of the existing brick is unfeasible on a large scale.

As a recognition of the campus core material palette, and the building's original materiality, a select section of white brick on the projecting theatre face will be retained and the wall insulated inboard. This unique 'bump-out' condition on the Western façade warrants a unique material response.

Because the recladding of the building will involve addition of insulation and cladding outboard of the existing structure – as opposed to the flush or subtly recessed brick infill in the existing – using glazed brick in the new envelope (either reused or new) would result in the distortion of elegant proportions of the existing façade and would depart from the honesty of material expression that is so central to the building's modernism. For this reason an alternate primary material palette is proposed.

Either white pre-finished aluminum composite or light coloured concrete pre-cast panels are proposed as the primary cladding of the building. In their light-colouration, both materials adhere to the Campus Core visual identity and are reflected in existing adjacent buildings.

Existing cast-in place natural concrete corner beams will remain in the project to offer a connection to the Campus Core primary material palette and reinforce the simple and slender horizontal expression of the existing building.

Significant glazing expanses are deployed in the proposed façade to reference the campus' legacy of the International Style

• Secondary materials such as aluminum and soft wood will be included in the interior as handrails and glass framing

• Naturally coloured concrete will be visible with the exposure of internal beams and floor slabs

• Glass windows will be patterned with a ceramic frit to adhere to both bird-friendly guidelines, and the additional secondary material palette from section 3.1.2 of the Campus Core Materials Palette

EXISTING MATERIALS



CONCRETE STRUCTURE WITH GLAZED BRICK INFILL



EXISTING WHITE BRICK



EXISTING CONCRETE

PROPOSED MATERIALS



OPTION 1 - WHITE PRE-FINISHED ALUMINUM COMPOSITE



OPTION 2 - LIGHT COLOURED CONCRETE PRE-CAST PANELS



FIBERGLASS PUNCHED WINDOWS - PRIMARY GLAZING





SELECTIVE USE OF EXISTING CONCRETE



SSG GLAZING - FEATURE GLAZING



SELECTIVE USE OF EXISTING WHITE BRICK

BUILDING ENTRIES / UNIVERSAL ACCESSIBILITY

• The main building entry is to remain at the Southwest corner, as it addresses the most prominent street – Main Mall, and is most conveniently located to provide ease of access for the two wings of the building. The existing entry location ties into a pedestrian path off of Main Mall that links a secondary route to ICICS, and a pass-through between MacLeod and ICICS to Engineering Road.

• While the main entry is to remain at the Southwest corner, the design team is proposing to demolish the existing entry plaza that uses two flights of stairs to access to Level 2 in favour of excavating an entry of comparable footprint to go down to Level 1. The new lowered plaza will provide dignified universal access with wheelchair-accessible ramps. Due to the existing floor elevations relative to main mall, relocating access to Level 1 allows a significantly shorter length of ramp and fewer stair risers to provide access to the building compared to what is required to access Level 2.

• Visible from the main entry will be the Makerspace and Workshop areas on Level 1 of MacLeod. The exciting activities of ECE will be apparent from the exterior and therefore the new façade and entry reinforce the expression of a thriving university per the intent of Campus Plan Architectural Expression (Section 2.3.5)

• The principal entry is legible from a distance through the use of verticality – proposed double-height glazing at the new entry doors on Level 1 increases the perceived height and prominence of the entry when seen from Main Mall. The coverage of the entry by an existing concrete awning further reinforces the legibility of the entrance while providing ample weather protection.

• A new secondary entry will be provided on the South façade and will have a minimal overhang for rain protection purposes.

SUSTAINABILITY

• The existing MacLeod building is energy inefficient due to its concrete structure being exposed to the exterior, the entirety of its glazing being single-pane, and the lack of an air-tight envelope.

• The renewal project will adhere to EUI and TEDI targets commensurate with comparable new-build major projects on the campus, and targets LEED Gold, with re-cladding and mechanical refurbishment being the primary methods of obtaining improved performance.

• The re-skinned air-tight façade will feature greater insulation values and employ modern rain screen principles, with deep vertical elements providing shade in the summer.

• New high-performance windows will significantly improve thermal performance and occupant comfort. Up to 25% of the new window area will be operable to provide natural ventilation. Fresh air from the operable windows will be pulled through the classrooms into interior corridors by a negatively pressurized atrium at the nexus of the corridors. The semi-passive ventilation concept eliminates return air ducting, allows heat recovery form return air, and reduces overall energy use.

• All existing structure will be insulated outboard to eliminate the thermal bridges that previously were responsible for the high energy loads of MacLeod.

• In prioritizing intuitive navigation, visibility of activity and provision of welcoming formal and informal learning spaces, the design actively supports UBC's priority of social sustainability.

• In retaining the existing structure, the renewal keeps large volumes of concrete out of landfill and provides an economically viable and sustainable way to provide a new facility for ECE and UBC

LANDSCAPE EXPRESSION

The landscape design aims to:

- 1. Respond to the existing context and desire lines along Main Mall.
- 2. Be strategic with tree retention to maintain high value trees.
- 3. Provide a front door presence on Main Mall.
- 4. Create a variety of social spaces and opportunities to pause in the upper and lower plaza.
- 5. Provide a direct accessible route to the front door.
- 6. Focus the construction within the demolition of the previous entry experience.

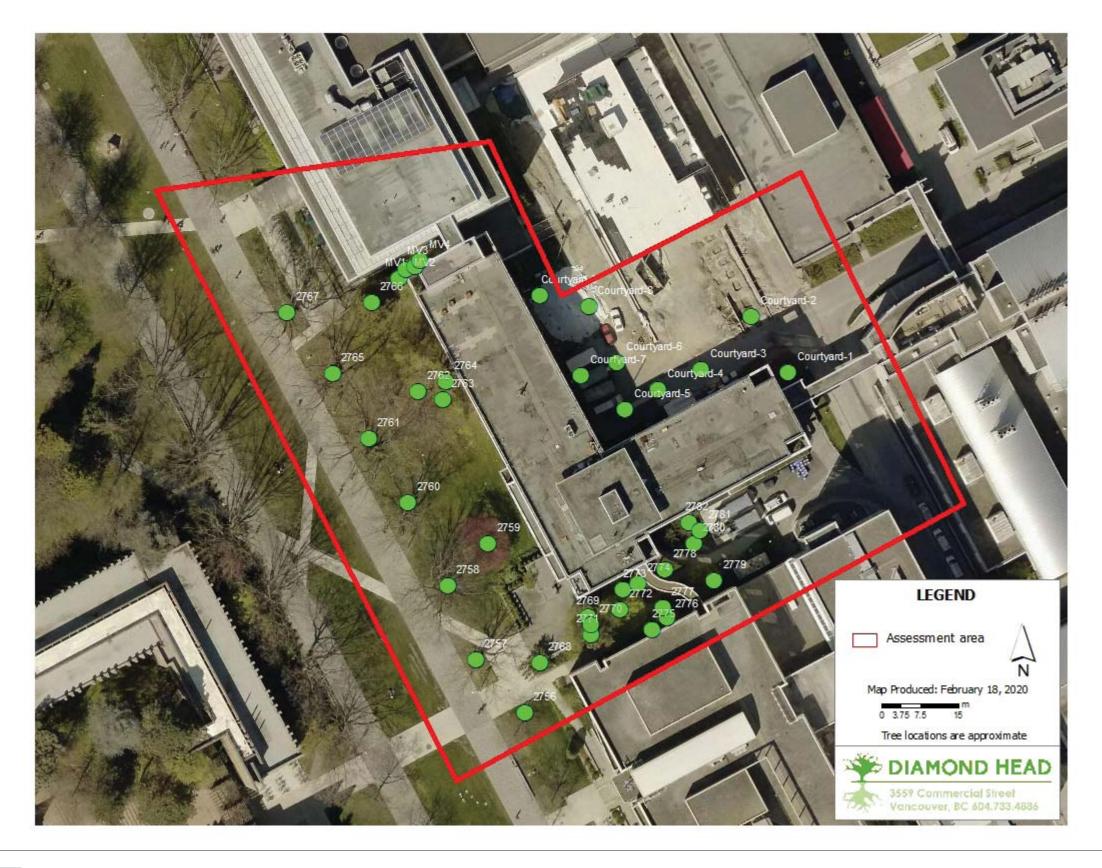


TREE SURVEY

NOTES

Draft Arborist Report, produced by Diamond Head Consulting Tree Care Services on February 18 2020. Refer to appendix for full report.

| Red Oak | Tree 2756 Tree 2757 Tree 2758 Tree 2760 Tree 2761 Tree 2765 Tree 2765 Tree 2765 Tree 2767 |
|-------------------------------|---|
| Japanese Maple | Tree 2759 Tree 2772 Tree 2775 |
| European Beech | Tree 2762 Tree 2763 Tree 2764 |
| Japanese Cedar | Tree 2766 |
| Juniper spp. | Tree 2768 Tree 2769 Tree 2770 |
| Silver Birch | Tree 2771 |
| Kousa Dogwood | Tree 2773 Tree 2774 Tree 2776 Tree 2777 Tree 2779 Tree 2780 Tree 2781 |
| Arbutus | Tree 2782 |
| Vine Maple | Tree 2778 MV1 MV2 MV3 MV4 |
| Cotoneaster Ash Dogwood | Courtyard 1 Courtyard 2 Courtyard 3 Courtyard 4 Courtyard 5 Courtyard 6 Courtyard 7 Courtyard 8 Courtyard 9 |









GREEN BUILDING CERTIFICATION

UBC MacLeod Renewal - Preliminary Scorecard

| UBC MacLeod Renewal - Preliminary Scorecard | | | Targeted | Unlikely Botential BALLZER BAL | | | ECTIVE | | | | |
|---|--|----------|----------|---|----------|------|--------|------|--------|---|---------------------|
| ted | tial | 2 | | Blue cells indicate credits identified as mandatory, that must be earned by all UBC projects. | | 60 | 25 | | 15 | TOTALS Possible Points | s: 110 |
| Targeted | Potential | Unlikelv | | | | | | Ce | rtifie | d: 40 to 49 points, Silver: 50 to 59 points, Gold: 60 to 79 points, Platinu | m: 80 to 110 |
| Tai | P0 | 5 | S 2 | | | | | | | LEED v4 New C | Construction |
| 1 | | | | IPc1 Integrative Process | 1 | | | | | Febru | ary 24, 2020 |
| 9 | 3 | 2 | 2 | Location and Transportation | 16 | 7 | 4 | 0 | 2 | Materials and Resources | 13 |
| | | | 16 | LTc1 LEED for Neighborhood Development Location | 16 | | , | Y | | MRp1 Storage and Collection of Recyclables | Required |
| 1 | | | | LTc2 Sensitive Land Protection | 1 | | ` | Y | | MRp2 Construction and Demolition Waste Management Planning | Required |
| | | 2 | | LTc3 High Priority Site | 2 | 2 | 3 | | | MRc1 Building Life-Cycle Impact Reduction | 5 |
| 5 | | | | LTc4 Surrounding Density and Diverse Uses | 5 | 1 | | | 1 | MRc2 Building Product Disclosure and Optimization - EPD | 2 |
| 3 | 2 | | | LTc5 Access to Quality Transit | 5 | 1 | 1 | | | MRc3 Building Product Disclosure and Optimization - Sourcing of Raw Mat | erials 2 |
| | 1 | | | LTc6 Bicycle Facilities | 1 | 1 | | | 1 | MRc4 Building Product Disclosure and Optimization - Material Ingredients | 2 |
| | | | 1 | LTc7 Reduced Parking Footprint | 1 | 2 | | | | MRc5 Construction and Demolition Waste Management | 2 |
| | | | 1 | LTC8 Green Vehicles | 1 | | | | | • | |
| | | | | | | 11 | 5 | 0 | 0 | Indoor Environmental Quality | 16 |
| 3 | 3 | | 4 | Sustainable Sites | 10 | | | Y | | EQp1 Minimum Indoor Air Quality Performance | Required |
| | - | Y | | SSp1 Construction Activity Pollution Prevention | Required | | , | ſ | | EQp2 Environmental Tobacco Smoke Control | Required |
| | 1 | | _ | SSc1 Site Assessment | 1 | 2 | | | | EQc1 Enhanced Indoor Air Quality Strategies | 2 |
| | 2 | | _ | ssc2 Site Development - Protect or Restore Habitat | 2 | 3 | | | | EQc2 Low-Emitting Materials | 3 |
| | | | 1 | ssc3 Open Space | 1 | 1 | | | | EQc3 Construction Indoor Air Quality Management Plan | 1 |
| | | | 3 | ssc4 Rainwater Management | 3 | 2 | | | | EQc4 Indoor Air Quality Assessment | 2 |
| 2 | | | | ssc5 Heat Island Reduction | 2 | 1 | | | | EQc5 Thermal Comfort | 1 |
| 1 | | | | SSc6 Light Pollution Reduction | 1 | 2 | | | | EQc6 Interior Lighting | 2 |
| | | | | | | | 3 | | | EQc7 Daylight | 3 |
| 5 | 4 | 2 | 0 | Water Efficiency | 11 | | 1 | | | EQc8 Quality Views | 1 |
| | | Y | | WEp1 Outdoor Water Use Reduction | Required | | 1 | | | EQc9 Acoustic Performance | 1 |
| | | Y | | WEp2 Indoor Water Use Reduction | Required | r | | | | | |
| | | Y | | WEp3 Building-Level Water Metering | Required | 6 | 0 | 0 | 0 | Innovation | 6 |
| | 1 | 1 | _ | WEc1 Outdoor Water Use Reduction | 2 | 1 | | | | IDc1.1 Innovation: Occupant comfort survey | 1 |
| 3 | 2 | 1 | _ | WEc2 Indoor Water Use Reduction | 6 | 1 | | | | IDc1.2 Innovation: Green Building Education | 1 |
| 2 | | | _ | WEc3 Cooling Tower Water Use | 2 | 1 | | | | IDc1.3 Innovation: Purchasing - lamps | 1 |
| | 1 | | | WEc4 Water Metering | 1 | 1 | | | | IDc1.4 Exemplary Performance: LTc5 | 1 |
| | | | | | | 1 | | | | IDc1.5 Innovation: WELL Features | 1 |
| 15 | _ | 6 | 7 | Energy and Atmosphere | 33 | 1 | | | | IDc2 LEED Accredited Professional | 1 |
| | | Y | | EAp1 Fundamental Commissioning and Verification | Required | r | | _ | | | |
| | | Y | | EAp2 Minimum Energy Performance | • | | 1 | 0 | 0 | Regional Priority | 4 |
| | | Y | | EAp3 Building-Level Energy Metering | Required | 1 | | | | RPc1 Regional Priority: | 1 |
| | | Y | | EAp4 Fundamental Refrigerant Management | Required | 1 | | | | RPc2 Regional Priority: | 1 |
| 4 | | | _ | EAc1 Enhanced Commissioning | 6 | 1 | | | | RPc3 Regional Priority: | 1 |
| 9 | 2 | 5 | 2 | EAc2 Optimize Energy Performance | 18 | | 1 | | | RPc4 Regional Priority: | 1 |
| 1 | | | | EAc3 Advanced Energy Metering | 1 | | | | | | |
| 1 | | | 1 | EAc4 Demand Response | 2 | | | | | | |
| | 1 2 EAc5 Renewable Energy Production 3 Points in this scorecard represent estimates by the project team. LEED is used a framework to analyze | | | o analyze | | | | | | | |
| | | 1 | | EAc6 Enhanced Refrigerant Management | 1 | buil | ding | perf | orm | ance and to guide design and construction. | |
| | 2 | | | EAc7 Green Power and Carbon Offsets | 2 | | | | | | |







EXISTING BUILDING - PHOTOS







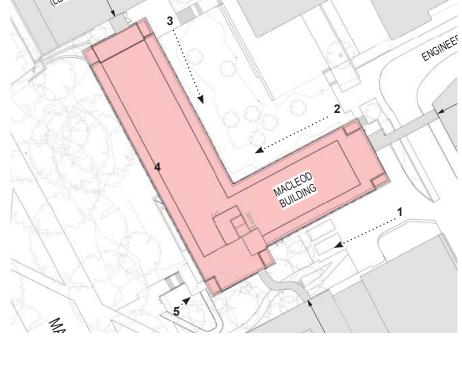




3 - NORTH STAIR EXIT AT LEVEL 2



4 - INTERIOR LABS





5 - EXISTING ENTRY CONDITION



EXISTING BUILDING - PHOTOS





1 - LOADING AREA AT SOUTH

2 -COURTYARD INTERIOR LANDSCAPING



- - 4 VIEW OF ENTRY FROM MAIN MALL

5 - EXISTING SETBACK FROM MAIN MALL

4

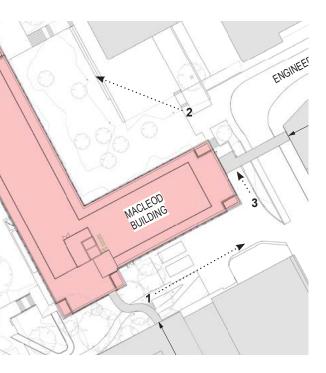


3 - EAST STAIR CONNECTION









CONTEXT PHOTOS



EARTH SCIENCES BUILDING

BEATY BIODIVERSITY MUSEUM



EARTH SCIENCES BUILDING



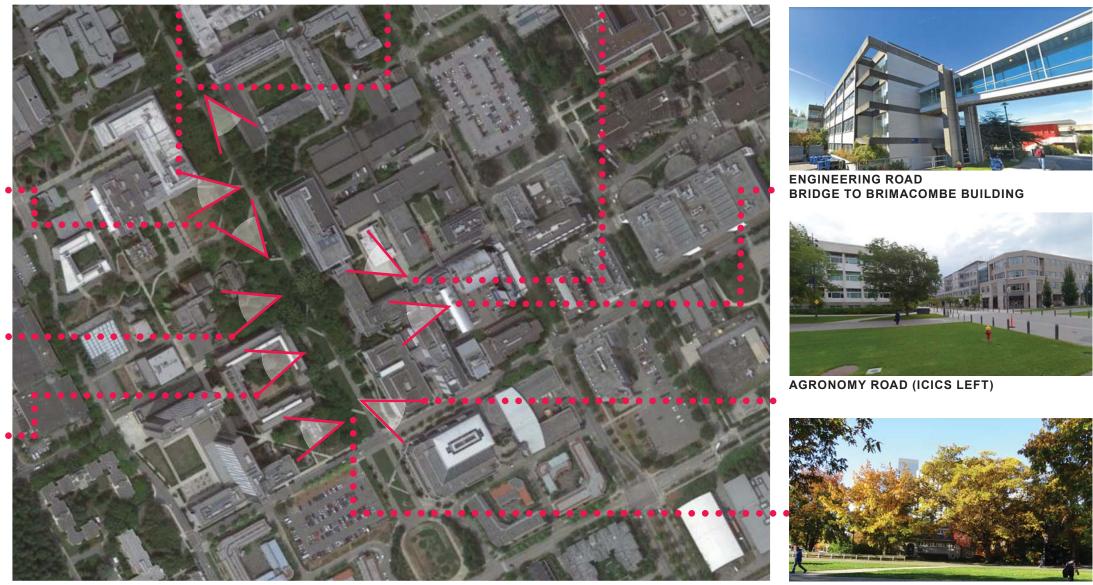
MAIN MALL (EARTH SCIENCES BUILDING LEFT)



MAIN MALL (FACING THE BARN)



MACMILLAN BUILDING









LANDSCAPE ARCHITECTURE ANNEX

CONTEXT PHOTOS



1 - BEATY BIODIVERSITY MUSEUM





METAL PANEL SOFFIT

WHITE BRICK



CONCRETE



CURTAINWALL



2 - KAISER BUILDING



FRITTED GLASS



CEMENT PANEL



CURTAINWALL + CANOPY



3 - ENGINEERING STUDENT CENTRE







METAL PANEL



WOOD SOFFIT



4 - MACMILLAN BUILDING







CONCRETE BANDING



FAIRVIEW GROVE & BEATY BIODIVERSITY MUSEUM KAISER BUILDING (ENGINEERING STUDENT CENTRE BEYOND BUILDING) MACLEOD BUILDING (MACMILLAN BUILDING BEHIND CAMERA)

ICICS BUILDING

Teeple Architects









5 - ICICS BUILDING

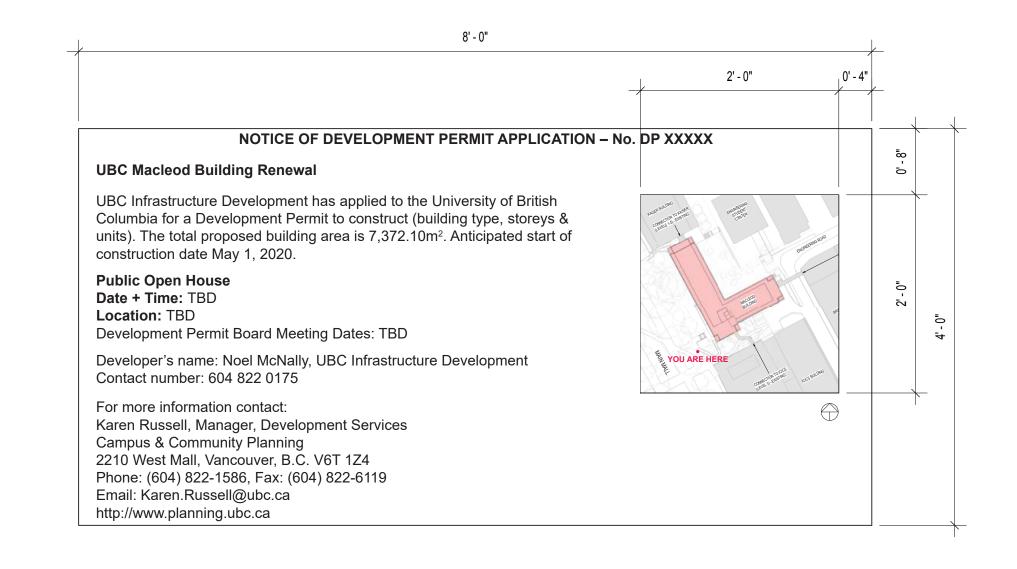


CURTAINWALL + SPANDREL GLASS



CEMENT PANEL

AGRONOMY ROAD





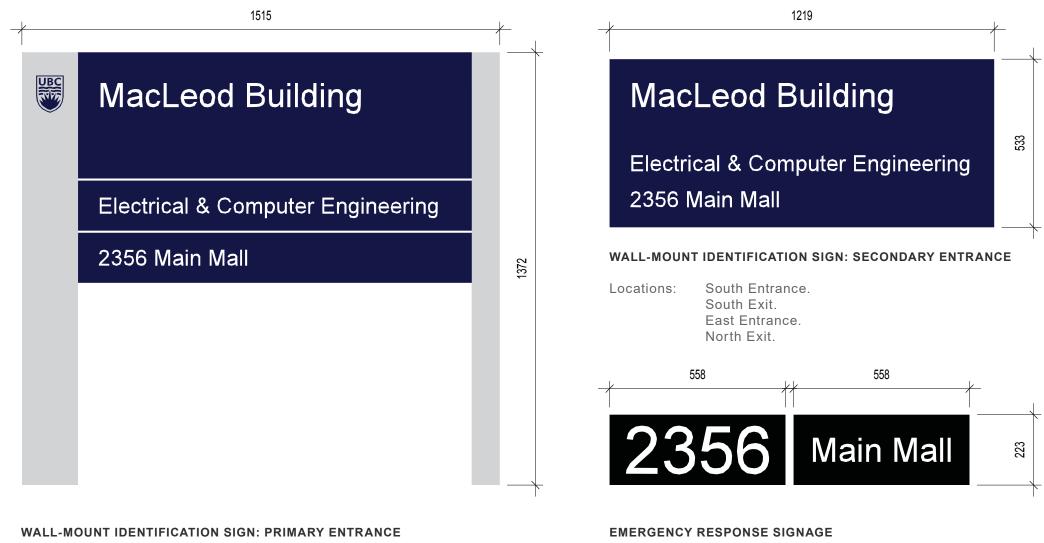


BUILDING SIGNAGE

REFER TO SITE PLAN & BUILDING ELEVATIONS FOR PROPOSED LOCATIONS

Draft signage is for discussion only - please note this is to be developed in consultation with UBC.

Possibility to re-use existing signage to be reviewed.



Locations: Main Mall Entrance. Location: Main Mall Entrance.

MACLEOD BUILDING

CANOPY-MOUNTED IDENTIFICATION SIGN: PRIMARY ENTRANCE

Implementation of feature signage to be determined in consultation with CACP Locations:







DRAWING REQUIREMENTS

COVER SHEET / PROJECT STATISTICS

MACLEOD BUILDING RENEWAL DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING 2356 MAIN MALL

DEVELOPMENT PERMIT APPLICATION

ARCHITECT - TEEPLE ARCHITECTS Stephen Teeple 5 Camden Street Toronto, ON, M5V 1V2 1416 598 0554 steeple@deeplearch.com

ARCHITECT - PROSCENIUM ARCHITECTURE AND INTERIORS Kori Chan 1 West 7th Avenue Vancouver BC V5Y 1L4 604 879 0118 kchan@proscenium.ca

CODE - LMDG BUILDING CODE CONSULTANTS Allen Jung 4th Floor, 780 Beatty Street, Vancouver, BC, V6B 2M1 604.682.7146 Ext. 406 ajung@lmdg.com

STRUCTURAL - WSB CONSULTING ENGINEERS Lawrence Chan 118 – 3855 Henning Drive Burnaby, BC V5C 6N3 604.294.3753 Ichan@wsb-eng.com

MECHANICAL - AME GROUP Taio Waldhaus 200 – 638 Smithe Street Vancouver, BC V6B 1E3 604.684.5995 taiowaldhaus@amegroup.ca

ELECTRICAL - AES ENGINEERING Brad Ou-Yang 950 One Bentall Centre Vancouver, BC V7X 1M4 604.569.6500 brad.ouyang@aesengr.com

RJC - ENVELOPE Douglas Watts 1285 Broadwa Suite 300, Vancouver BC V6H 3X8 604.738.0048 dwatts@rjc.ca

PFS STUDIO - LANDSCAPE Dustin Dilts 1777 West 3rd Avenue Vancouver BC V6J 1K7 604.736.5168 ext.135 ddilts@pfs.bc.ca

RECOLLECTIVE - SUSTAINABILITY Chris Kendall 210 - 128 W Hastings St, Vancouver, BC V6B 1G8 604 669 4940 chris@recollective.ca THIS PROJECT IS TO COMPLY WITH THE BCBC 2018 CONSTRUCTION TYPE: 3.2.2.24 GROUP A, DIV 2, ANY AREA SPRINKLERED

ENERGY TARETS: ASHRAE 90.1 and LEED Gold

PROJECT TYPE: MAJOR RENOVATION

SCOPE INCLUDES - SEISMIC UPGRADES, NEW FOUNDATIONS, NEW ENVELOPE, NEW INTERIOR LAYOUT AND FINISHES, NEW MECHANICAL AND ELECTRICAL SYSTEMS

SCOPE AREA (AS INDICATED ON DRAWINGS): 4646.5 SQ M BUILDING COVERAGE: 1975.8 SQ M

BUILDING HEIGHT: 4 STOREYS + MECH PENTHOUSE AND ELEVATOR OVERRUN MEASUREMENTS FROM AVERAGE GRADE = 14.26 M T/O PARAPET (NO CHANGE) = 18.86 M T/O ELEVATOR OVERRUN (NO CHANGE)

SETBACKS: TO FACE OF KAISER (30' 3" FROM EXISTING BUILDING FACE) FSR = N/A (CHANGE IN FLOOR AREA ONLY AT ROOF LEVEL)

OFF STREET PARKING AND LOADING: NONE EXISTING/PROPOSED LOADING STALLS: N/A (LOADING AREA AT SOUTH, SHARED WITH ICICS) END OF TRIP FACILITIES SHARED WITH KAISER, NO ADDITIONAL PROPOSED CLASS B BICYCLE SPACES (EXISTING): 10 CLASS B BICYCLE SPACES (PROPOSED): 10

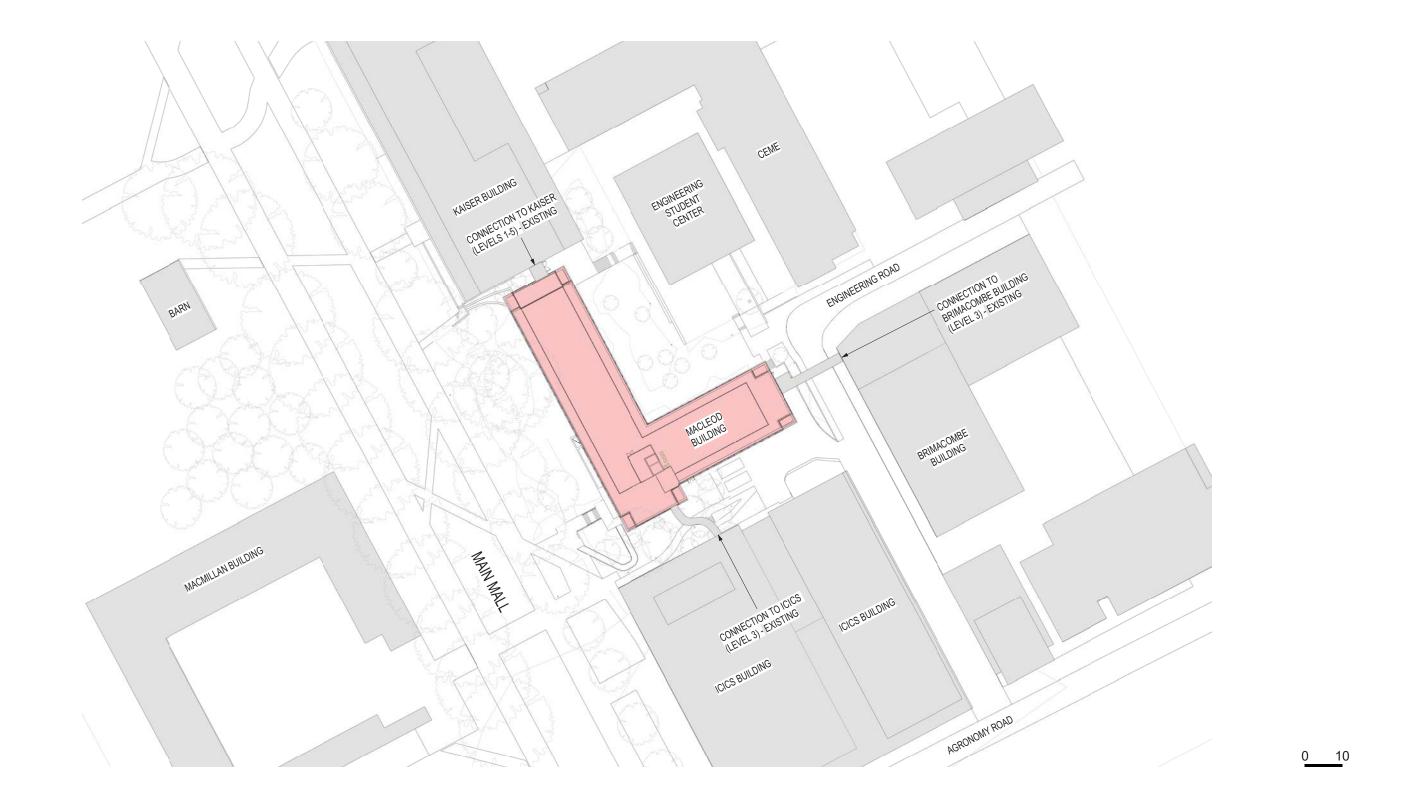
| | GFA - PROPOSED | |
|------------------|------------------------|---------------|
| LEVEL | PROPOSED AREA | EXISTING AREA |
| | | |
| 1 | 1812.08 m ² | 1812.08 m2 |
| 2 | 1847.11 m ² | 1847.11 m2 |
| 3 | 1828.50 m ² | 1828.80 m2 |
| 1 | 1829.24 m ² | 1829.24 m2 |
| ROOF | 54.88 m ² | 227.55 m2 |
| Grand otal: 5 | 7371.80 m ² | 7,544 m2 |

| ROOM SCHEDULE_SUMMARY | | |
|-----------------------|---|---|
| Image | Department | Area |
| | | |
| | A. CAPSTONE, GENERAL UNIVERISTY CLASSROOMS, DESIGN TEAMS | 1288.70 m ² |
| | | |
| | A. TEACHING LAB | 1122.74 m ² |
| | | |
| | B. INFORMAL LEARNING, STUDY, STUDENT LOUNGES, ECE STUDENT SOCIETY ETC. | 639.49 m ² |
| | | |
| | C. WORKSHOPS, MAKER SPACE, RAPID PROTOTYPING | 588.29 m ² |
| | | |
| | D. RESEARCH | 368.32 m ² |
| - | r | |
| | E. STORES, IT SERVICES, ENGINEERING SERVICES | 167.77 m ² |
| | | |
| | F. BUILDING SUPPORT | 427.11 m ² |
| | | |
| | G. ADDITIONAL WORKSPACE | 163.94 m ² |
| Grand total: 128 | | 4766.35 m ² |
| | | *PROGRAM AREA NOT INCLUDING CIRCULATION, EXTERIOR WALLS AND SERVICE AREAS |





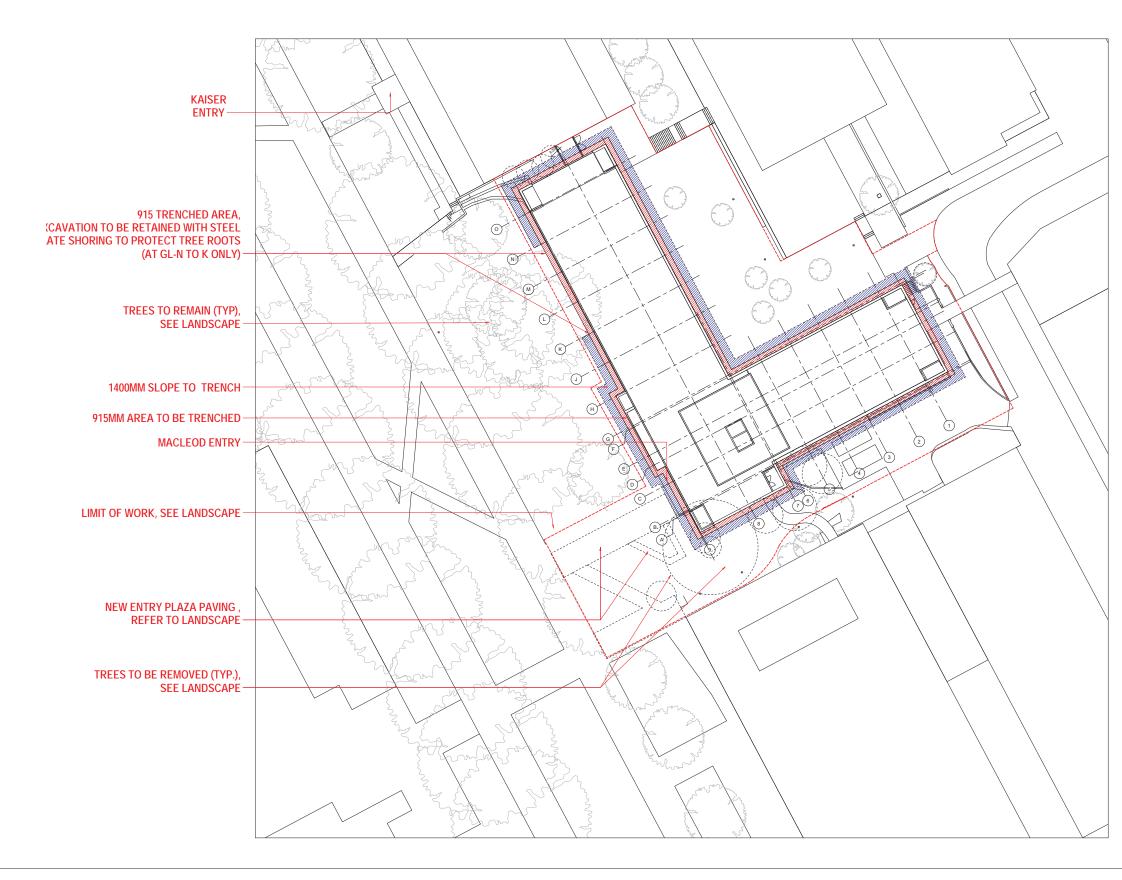






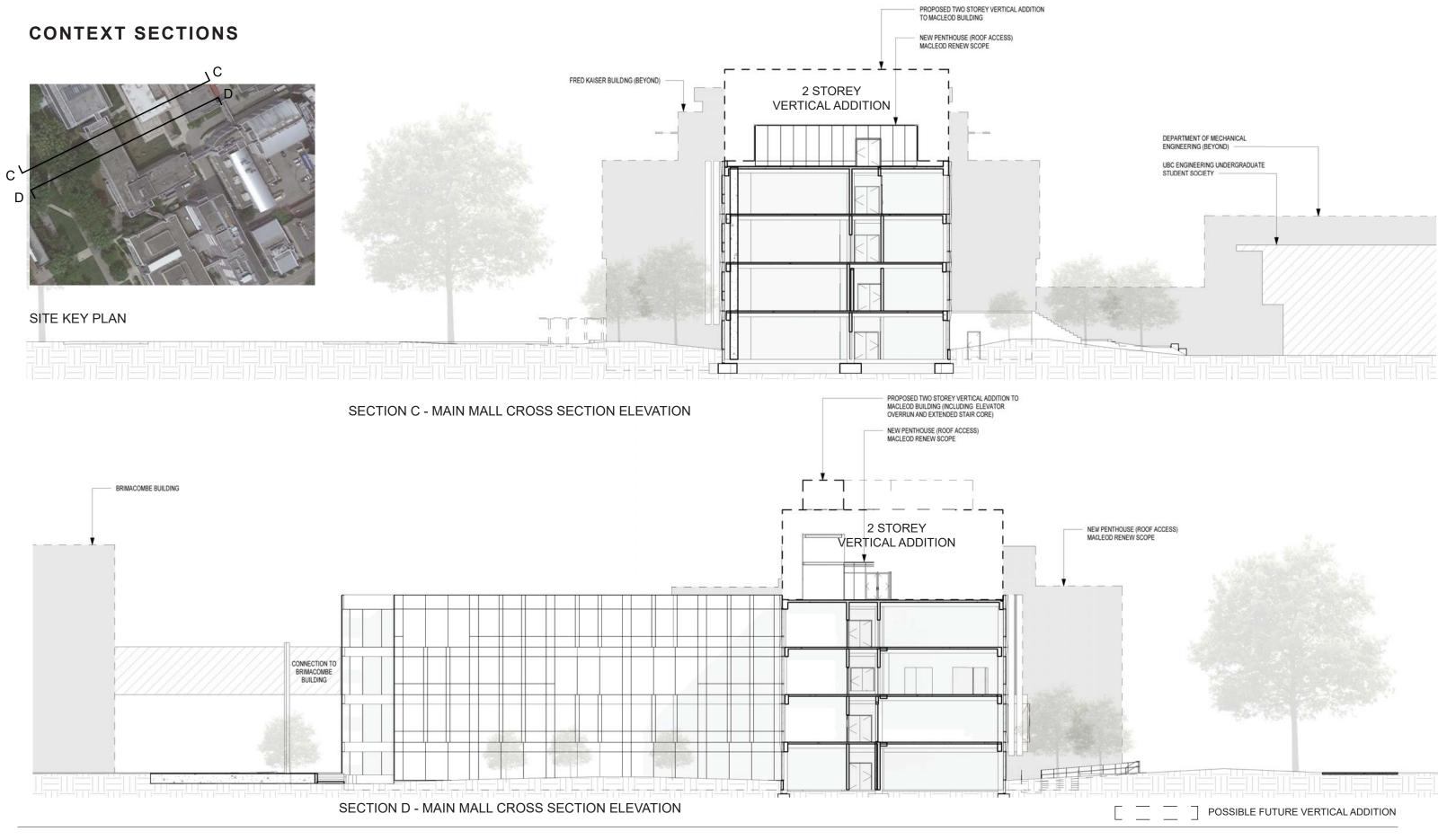


SCOPE





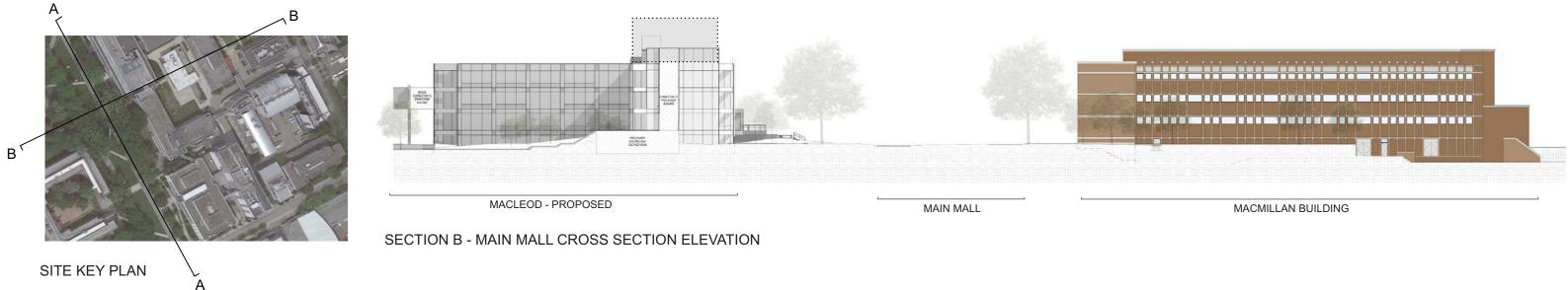
| AREA AFFECTED BY TRENCHING (+/- 36" or 915mm) |
|--|
| AREA AFFECTED BY ADDITIONAL SLOPED TRENCHING (+/- 55" or 1400mm) |
| LIMIT OF SCOPE (SEE LANDSCAPE) |

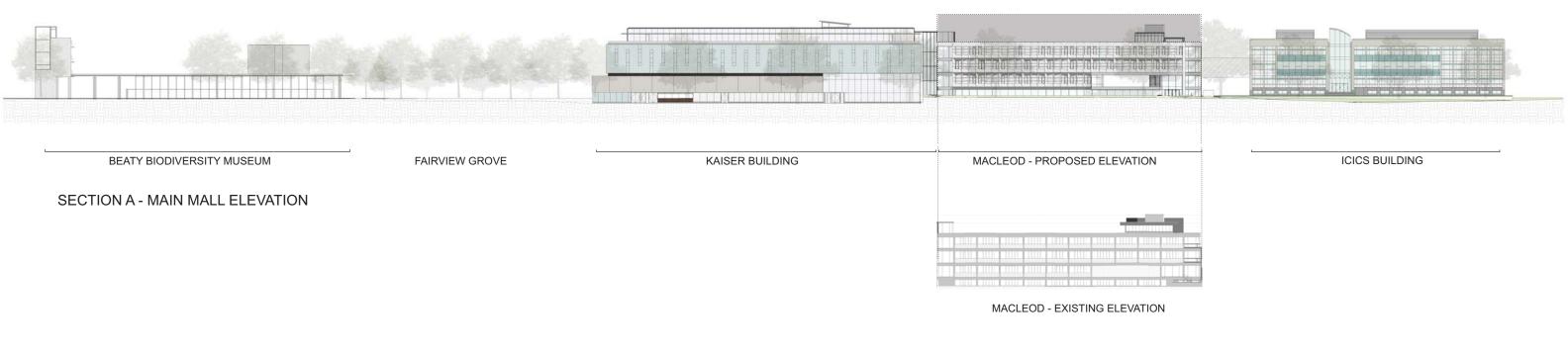






CONTEXT ELEVATIONS



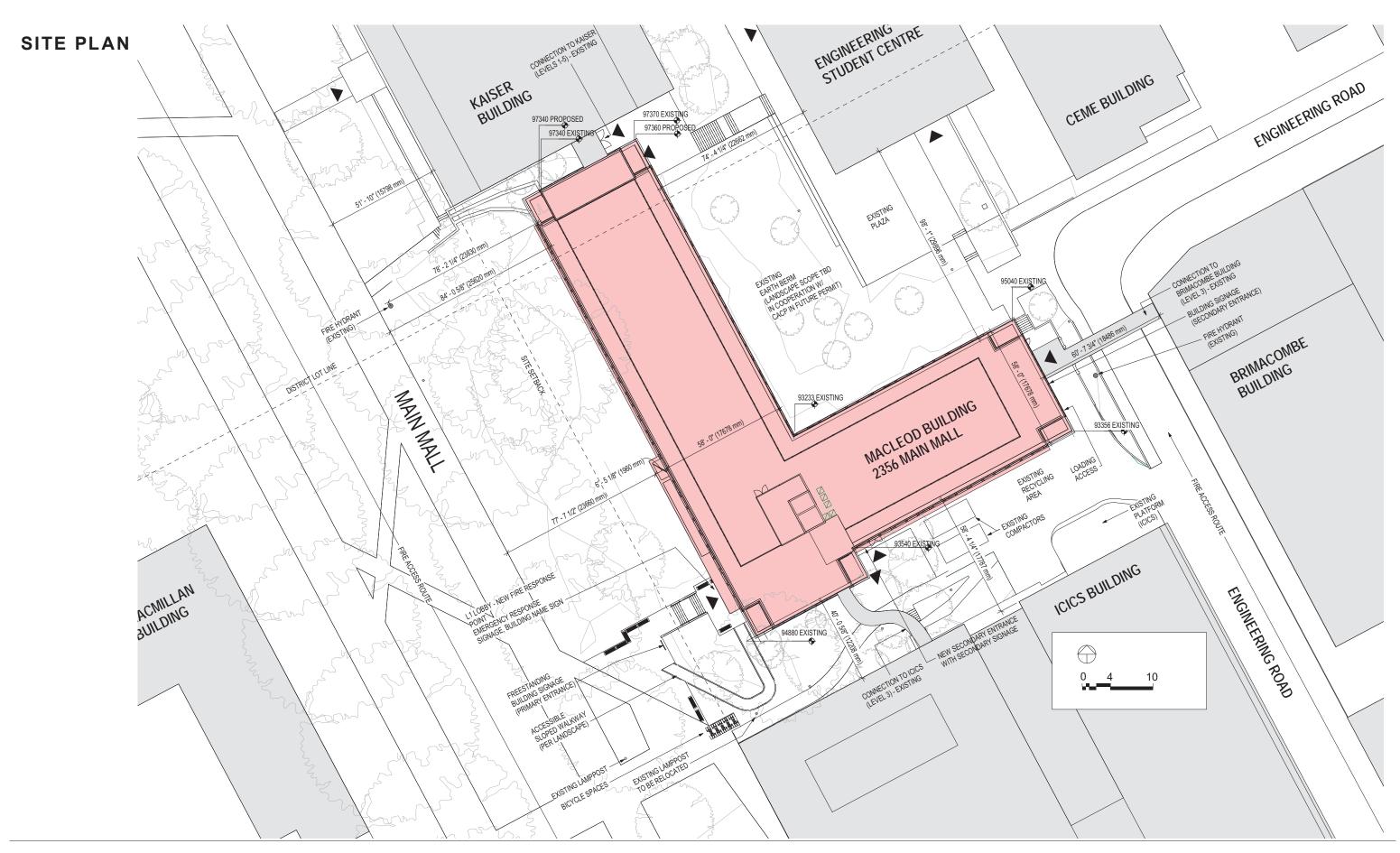




UBC



POSSIBLE FUTURE VERTICAL ADDITION





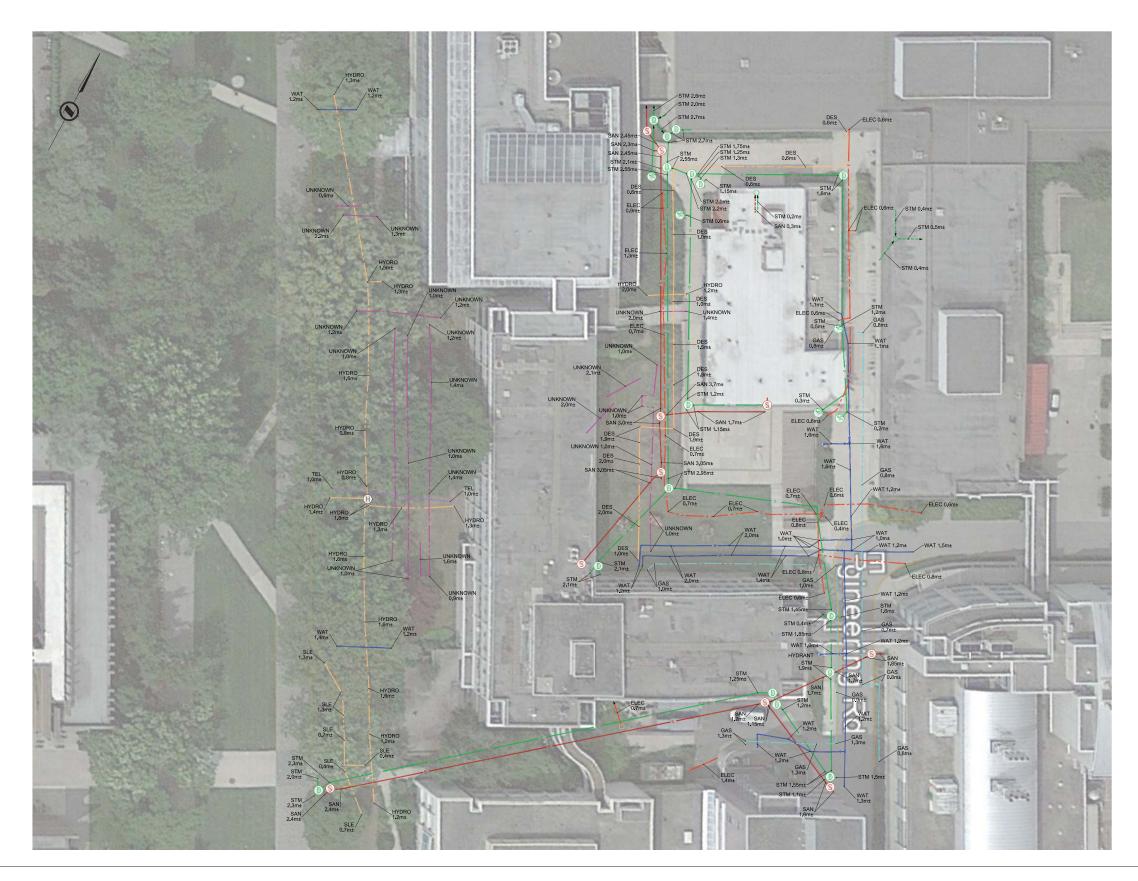
PROSCENIUM

ARCHITECTURE + INTERIORS INC.

UTILITIES

NOTES

Full size 23.4"x33.1" (Metric A1) electronic copy of survey is available. Drawing by Quadra Utility Locating dated February 18, 2020.







Teeple Architects

SURVEY PLAN

SURVEY PLAN

Full size 34"x44" (ANSI E) electronic copy of survey is available.



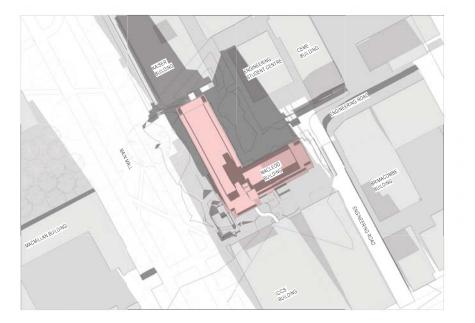
0 2 5 10

Teeple Architects**

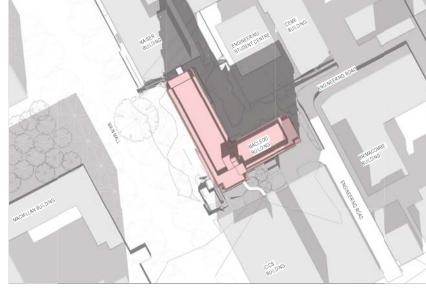




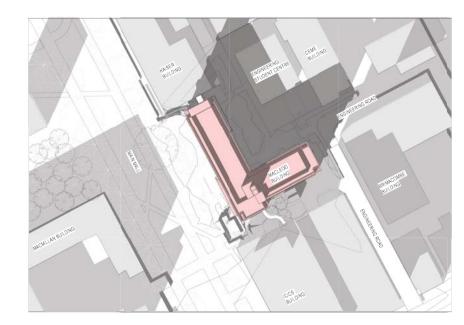
SHADOW ANALYSIS



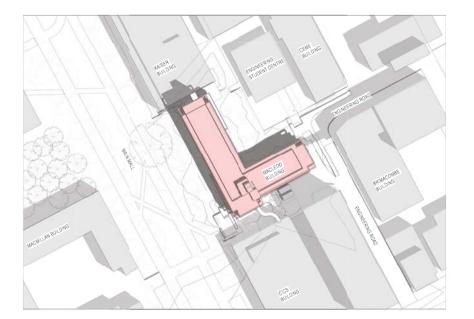
WINTER - 10 AM



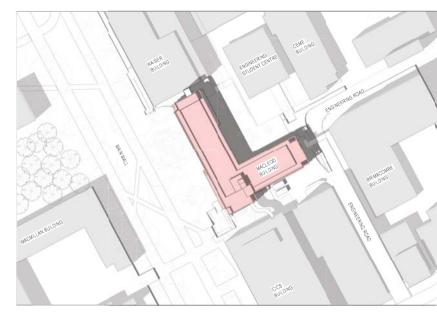
WINTER - 12 PM



WINTER - 2 PM



SUMMER - 12 PM



SUMMER - 2 PM

SUMMER - 10 AM

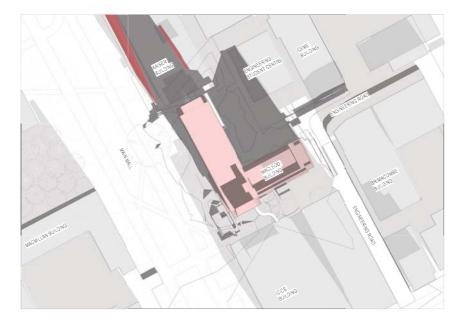
Teeple Architects





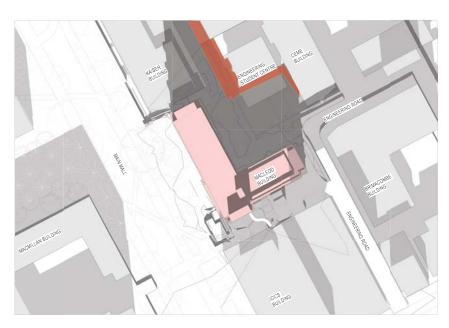


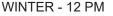
SHADOW ANALYSIS - VERTICAL ADDITION

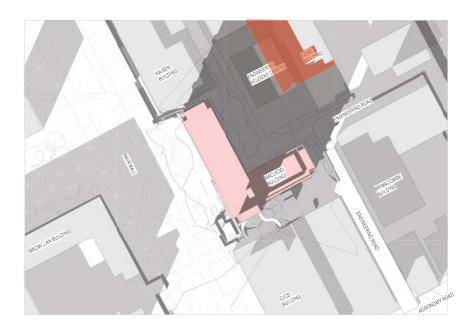


WINTER - 10 AM

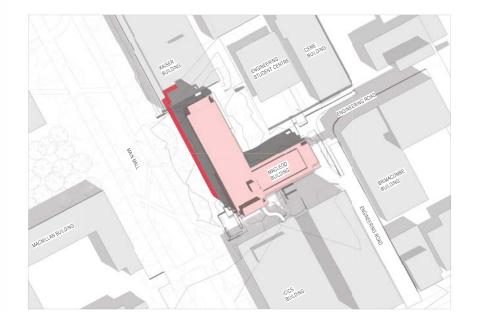
WINTER - 12 PM



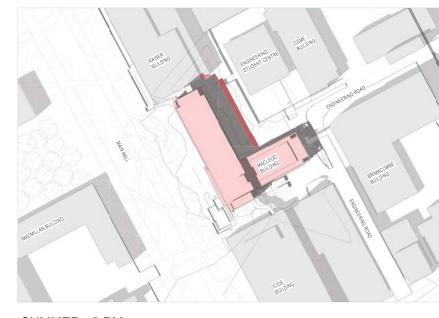




WINTER - 2 PM



SUMMER - 12 PM



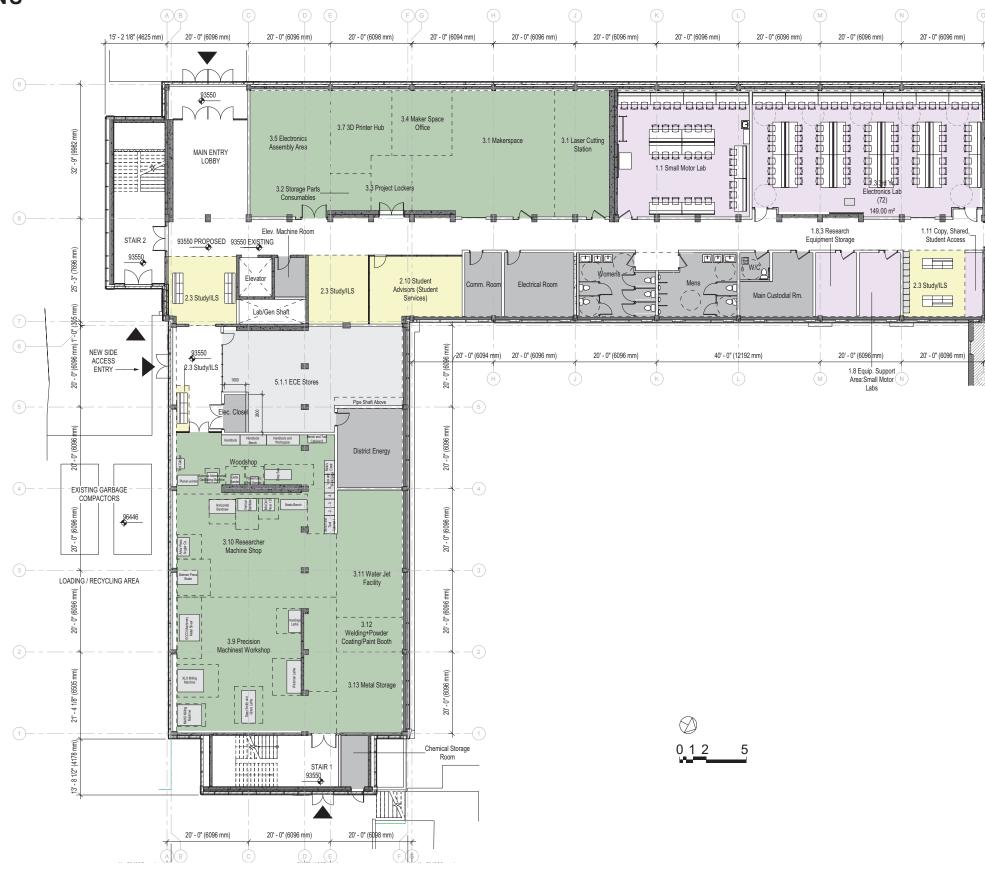
SUMMER - 2 PM

SUMMER - 10 AM





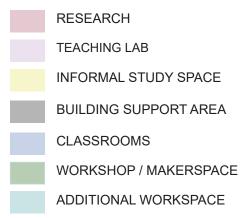
FLOOR PLANS -PROPOSED

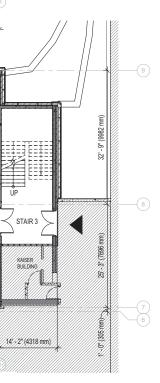




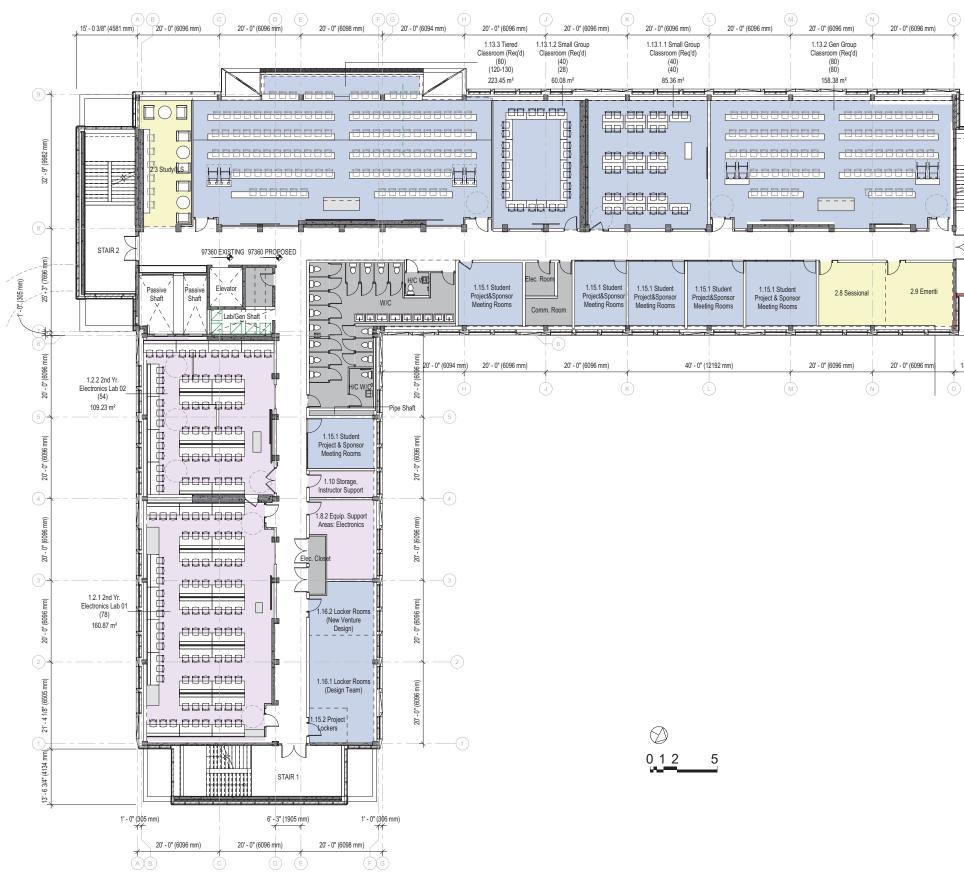


LEVEL 1 PLAN





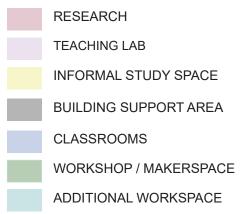
FLOOR PLANS -PROPOSED

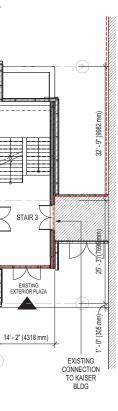


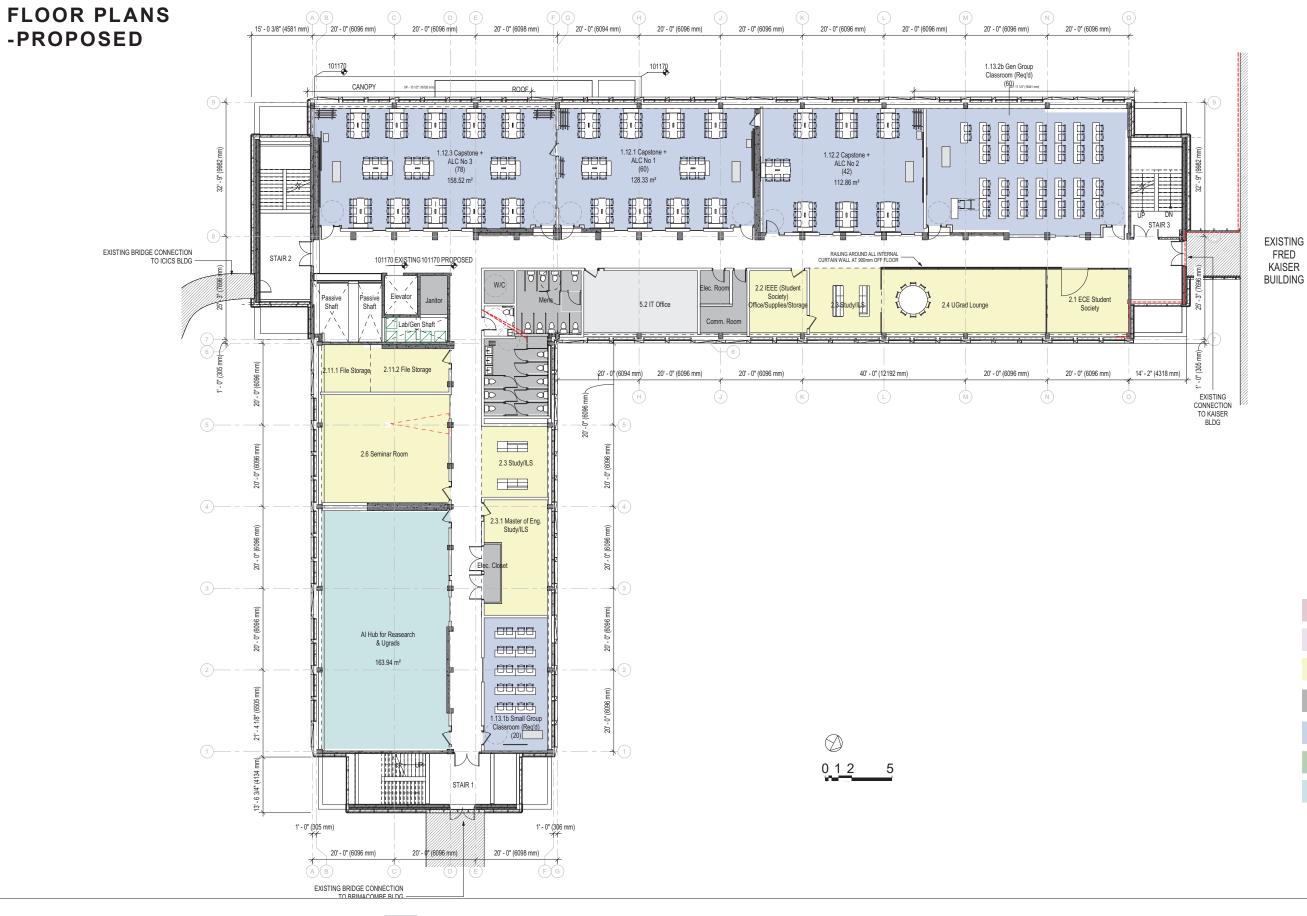




LEVEL 2 PLAN



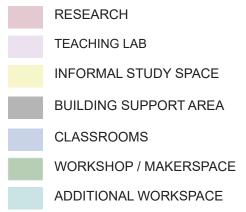


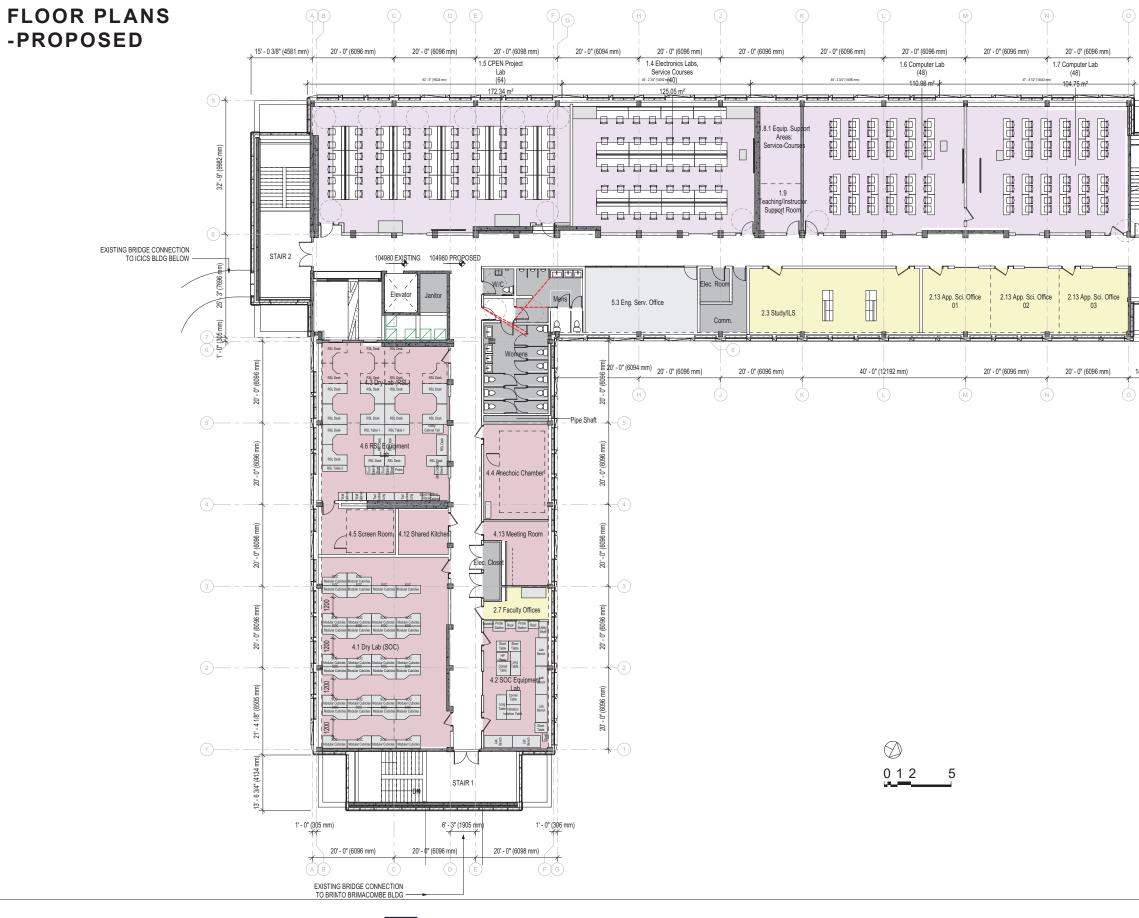




ARCHITECTURE + INTERIORS INC.

LEVEL 3 PLAN

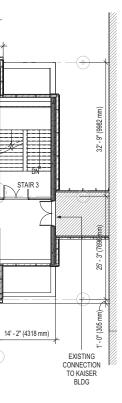


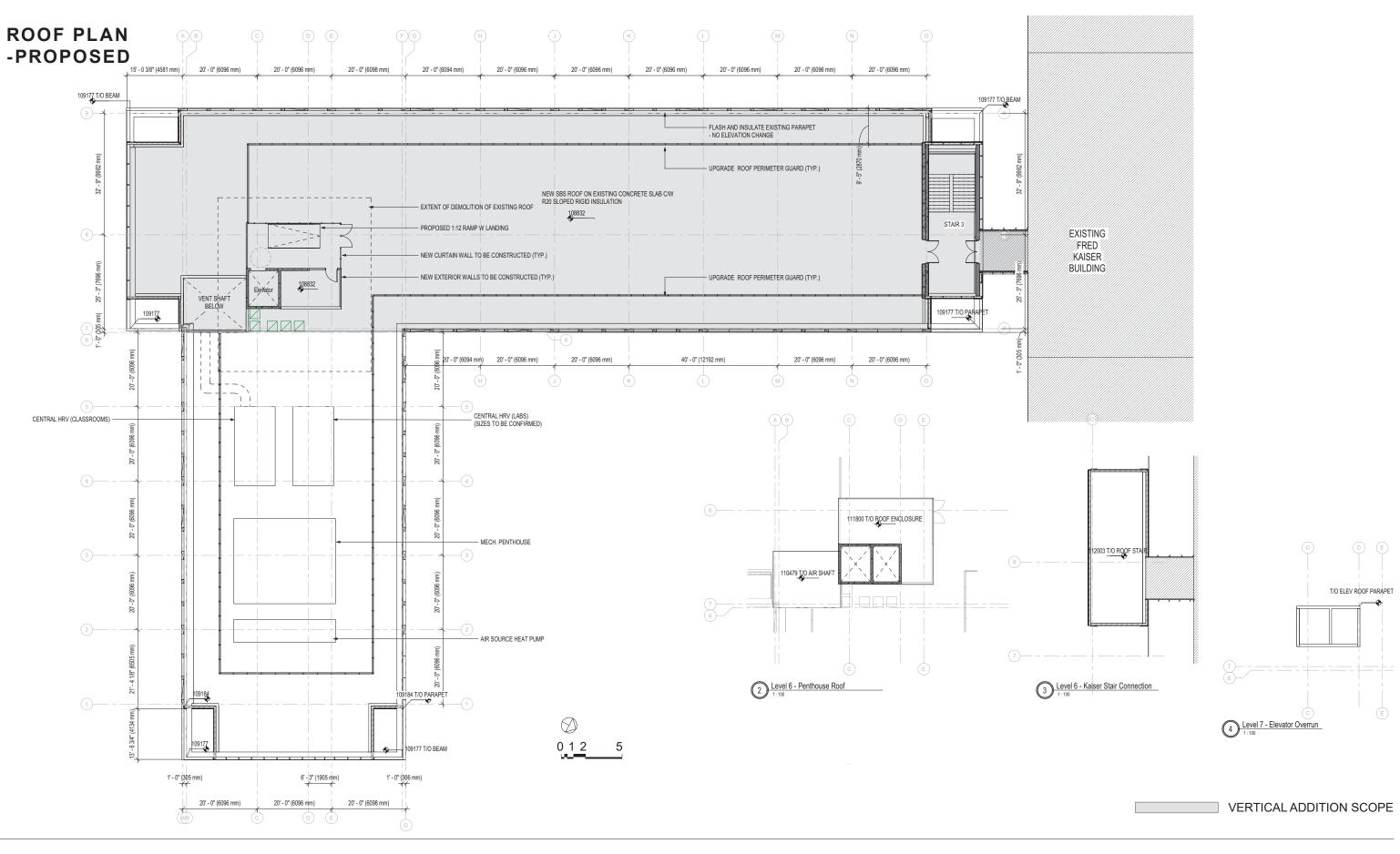




LEVEL 4 PLAN

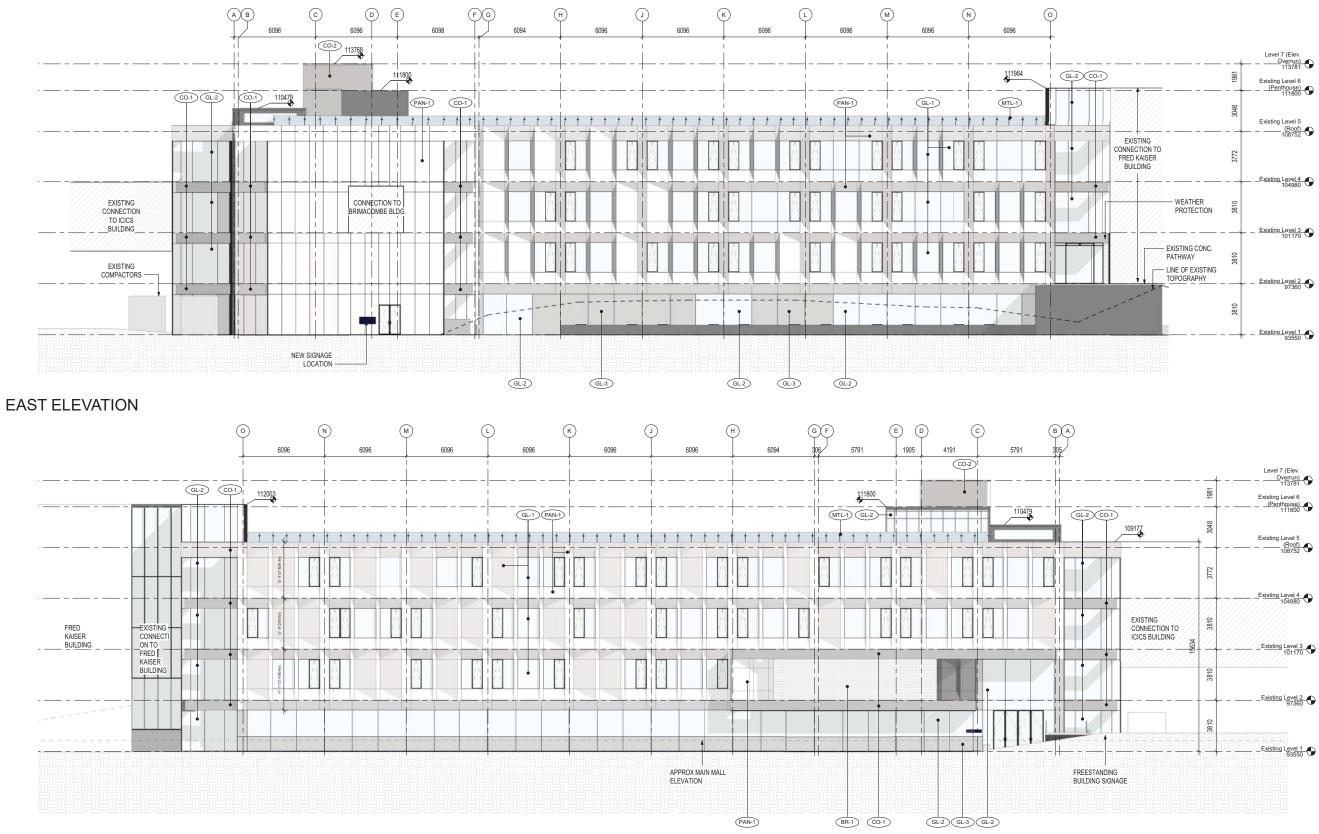








ELEVATIONS



WEST ELEVATION





MATERIAL LEGEND

GL-1

GL-2

GL-3

CO-1 CO-2 MTL-1

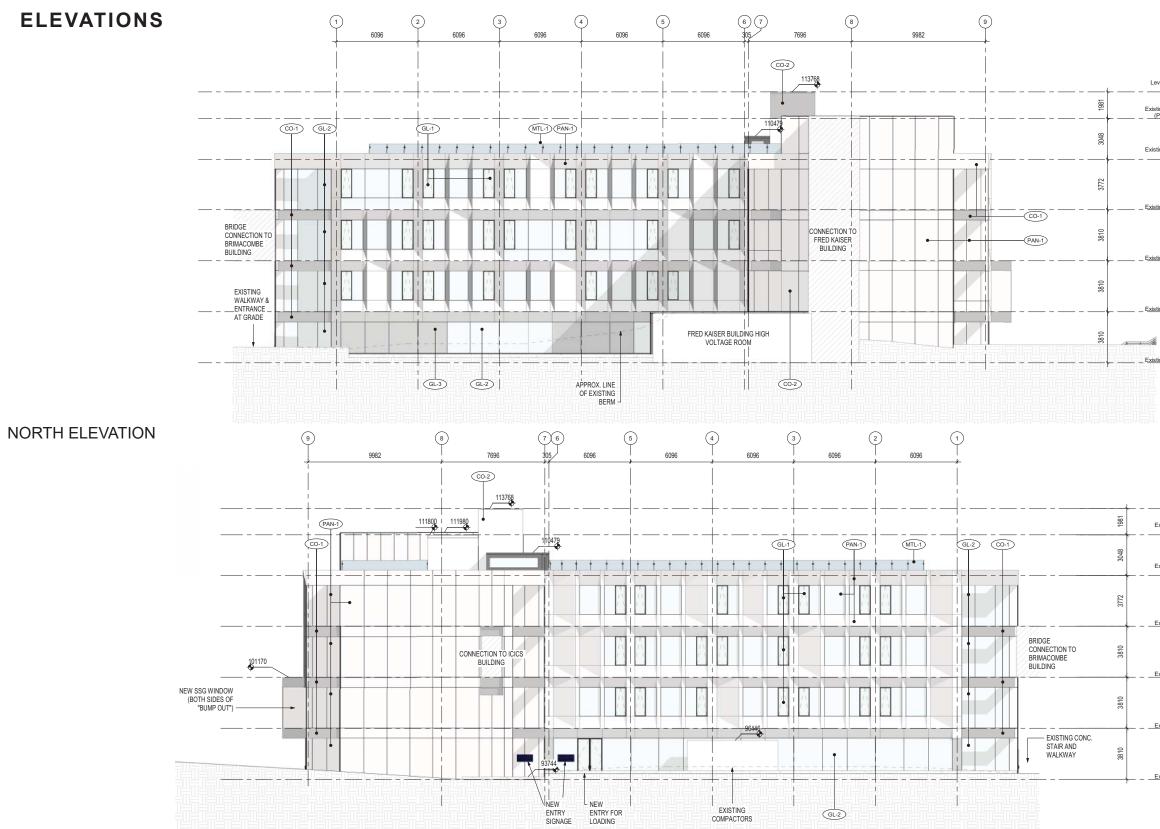
PAN-

BR-1

| - FIBREGLASS DOUBLE GLAZED INSULATED VISION |
|---|
| GLASS PUNCHED WINDOWS |
| - DOUBLE GLAZED INSULATED SSG VISION GLASS |
| CURTAIN WALL |
| DOUDLE OF AZED INCULATED CCC CDANDDEL |

- GLASS CURTAIN WALL
- EXISTING CONCRETE BEAM - EXISTING CONCRETE ELEVATOR CORE
- NEW GUARDRAIL
- PANEL (METAL OR PRECAST PANEL)
- -EXISTING BRICK TO BE RESTRAINED

012 5



SOUTH ELEVATION





| Level 7 (Elev. Overrun) 113781 | MATERIA | LEGEND |
|---|---------|--|
| (Penthouse) | GL-1 | - FIBREGLASS DOUBLE GLAZED INSULATED VISION GLASS PUNCHED WINDOWS |
| 111800 | GL-2 | - DOUBLE GLAZED INSULATED SSG VISION GLASS CURTAIN WALL |
| isting Level 5 | GL-3 | - DOUBLE GLAZED INSULATED SSG SPANDREL GLASS CURTAIN WALL |
| (R <u>oof)</u> 108752 | | - EXISTING CONCRETE BEAM - EXISTING CONCRETE ELEVATOR CORE |
| | MTL-1 | - NEW GUARDRAIL |
| isting Level 4 104980 | PAN-1 | - PANEL (METAL OR PRECAST PANEL) |
| | BR-1 | -EXISTING BRICK TO BE RESTRAINED |
| | | |
| isting Level 3 101170 | | |
| | | |
| isting Level 2 97360 | | |
| 97360 🖤 | | |
| | | |
| isting Level 1 93550 | | |
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| | | |
| Level 7 (Elev. | | |
| Overrun) 113781 | | |
| Existing Level 6 (Penthouse) 111800 | | |
| 111800 🐨 | | |
| Existing Level 5 (Roof) | | |
| <u>(Roof)</u> <u>(108752</u> | | |
| | | |
| Existing Level 4 104980 | | |
| 104300 - | | |
| | | |
| Existing Level 3 101170 | | |
| | | |
| | | |
| Existing Level 2 97360 | | |
| | | |
| Existing Level 1 93550 | | |
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SECTIONS

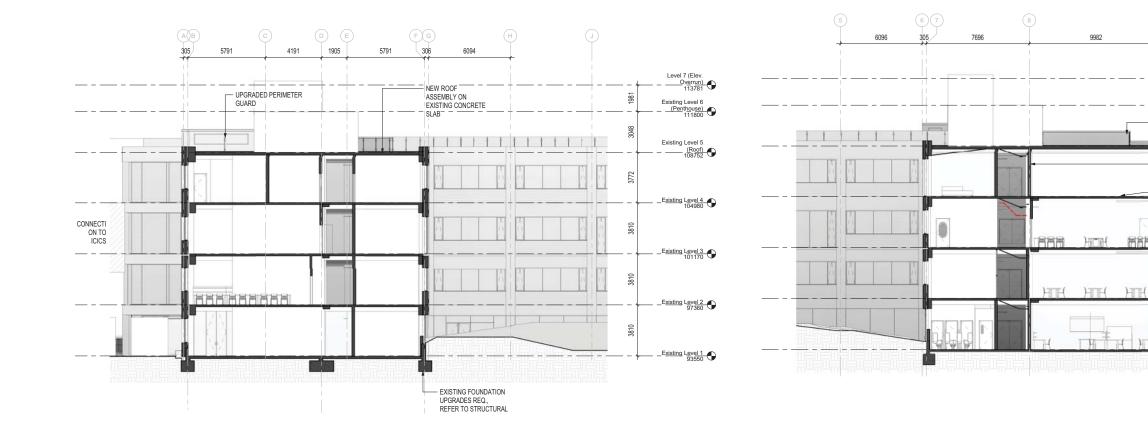




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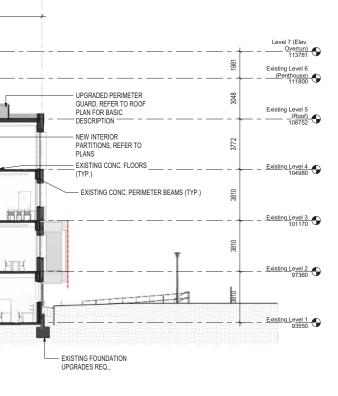


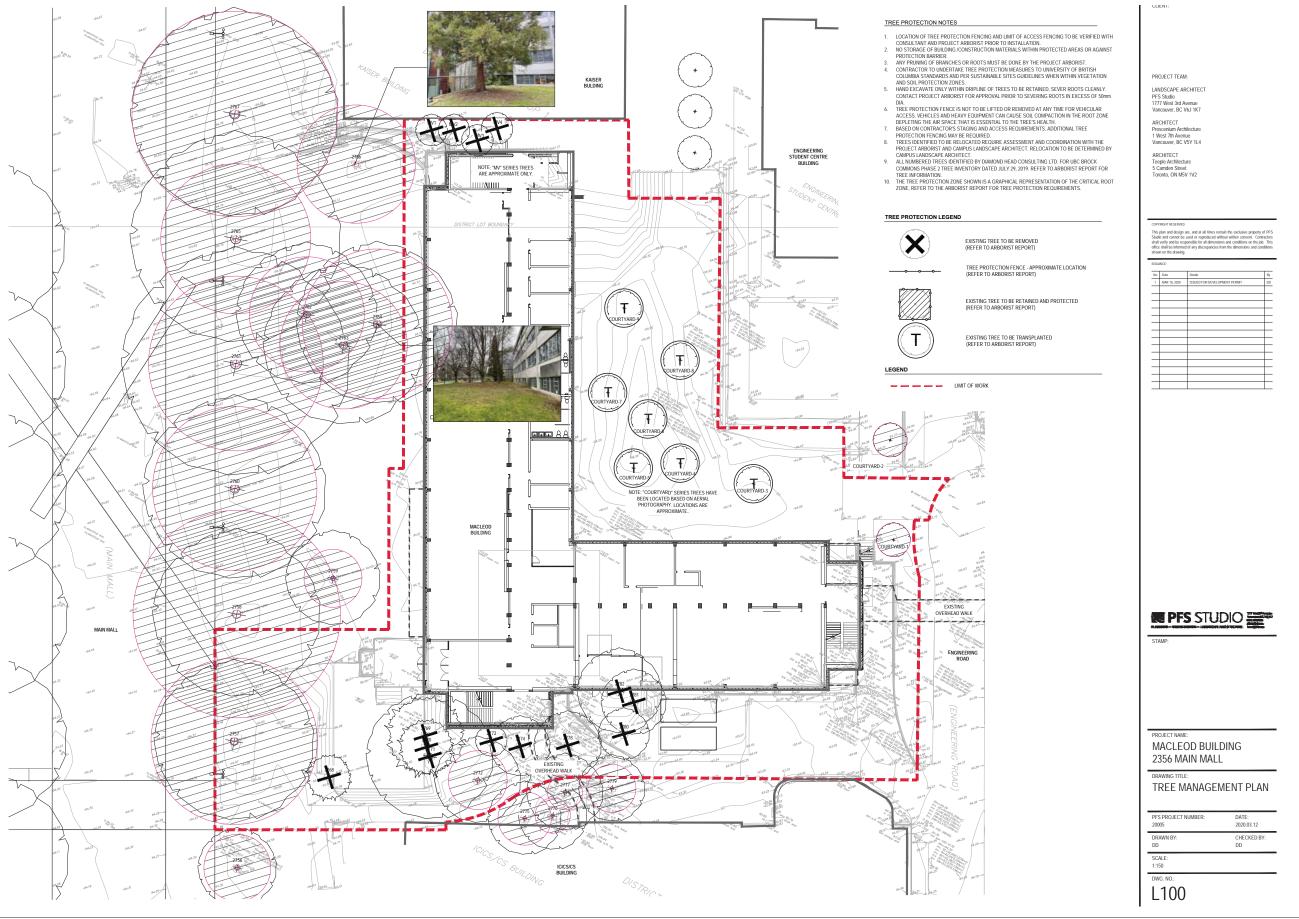












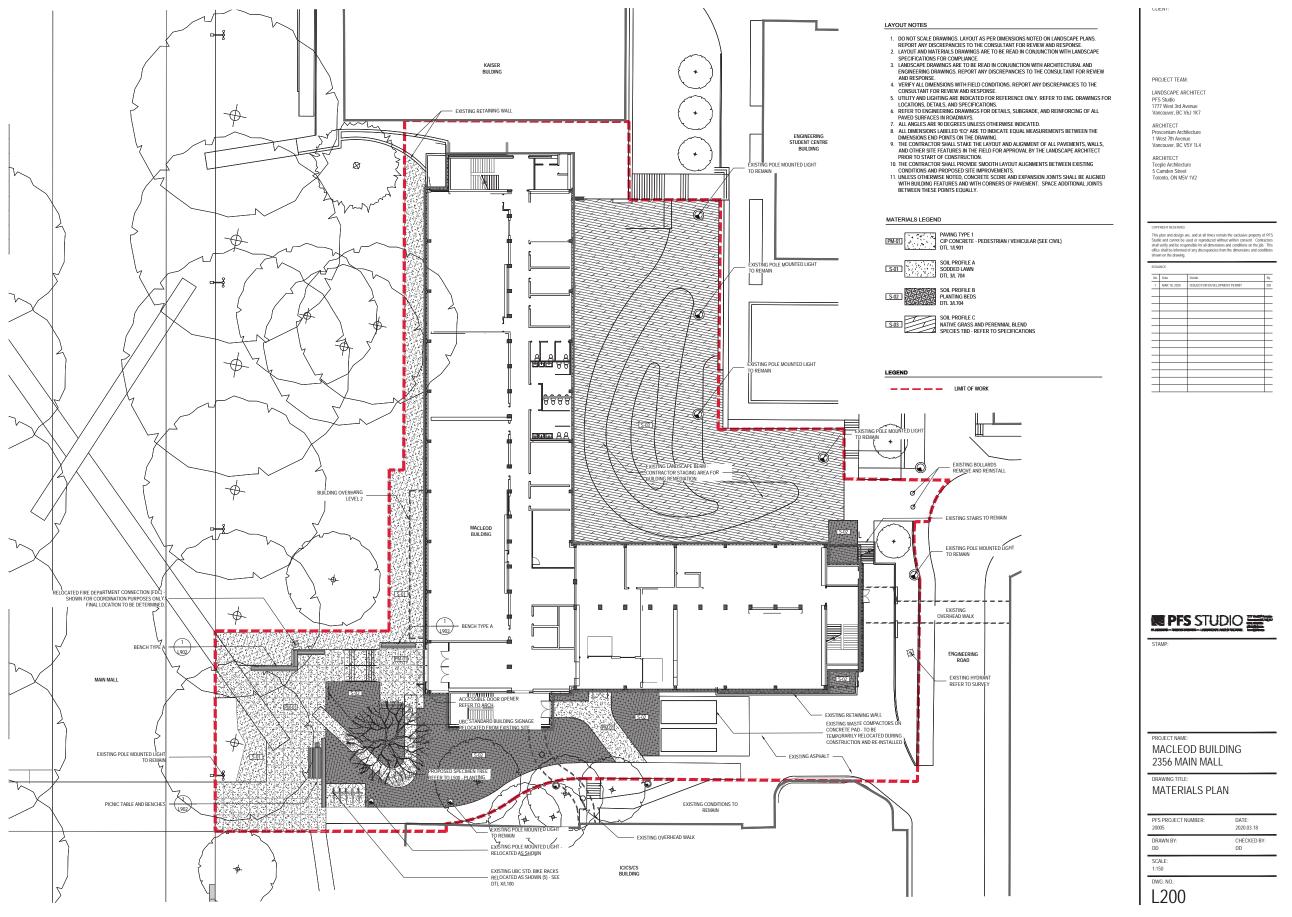


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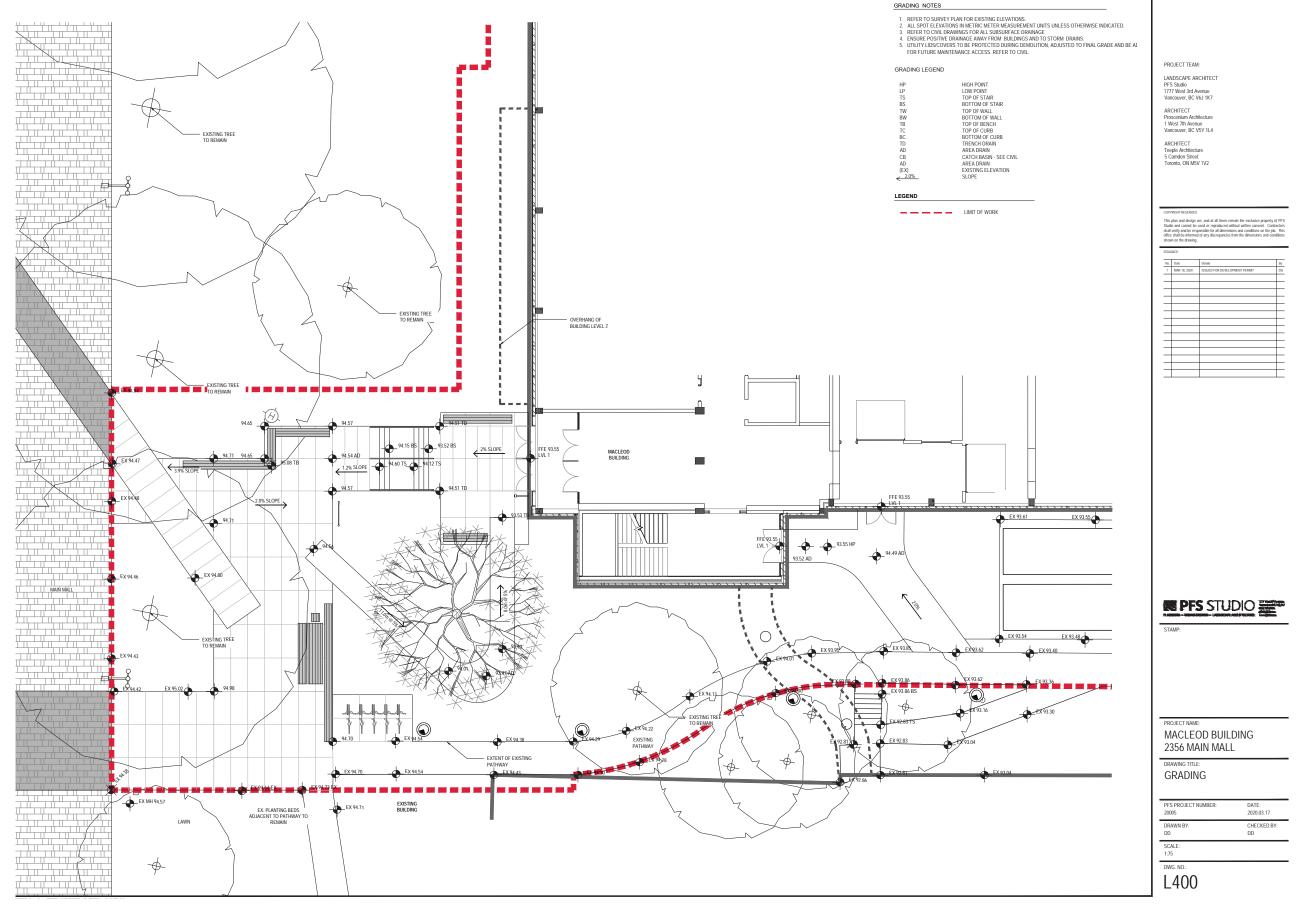
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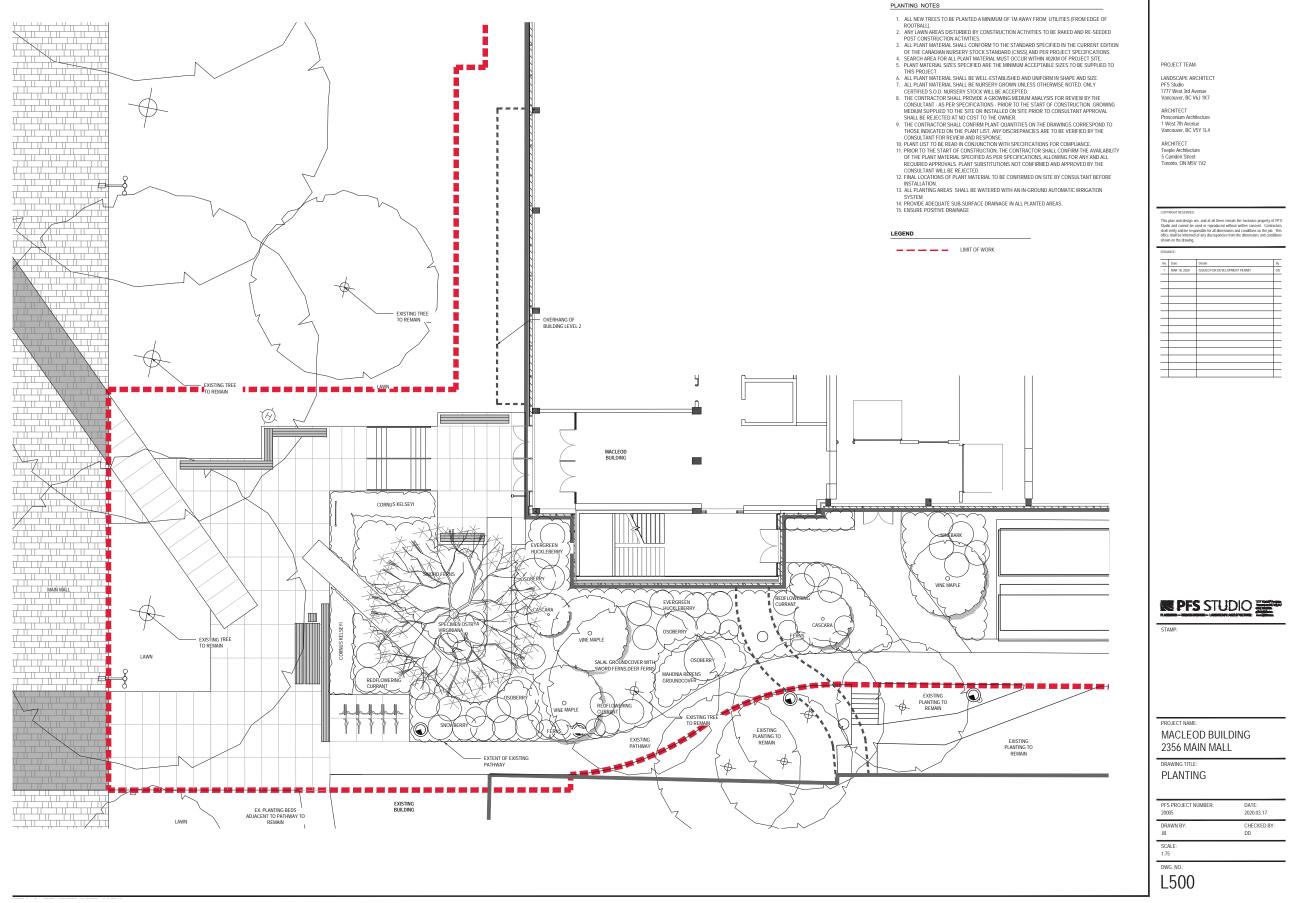
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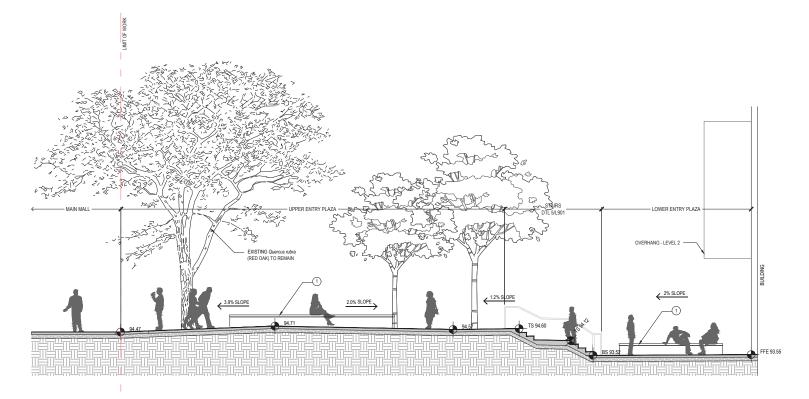


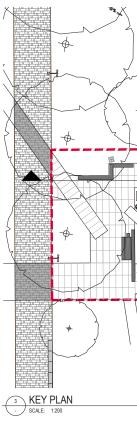






ARCHITECTURE + INTERIORS INC.



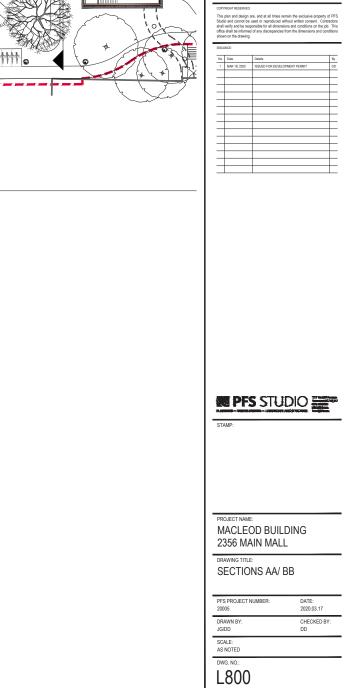


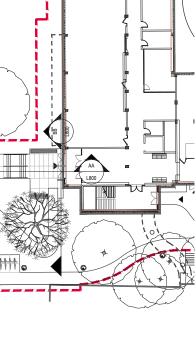
- SECTION AA SCALE: 1:50 LEGEND (1) BENCH TYPE A - DTL 1/L902 2 PICNIC TABLE - DTL 3/L902 3 BIKE RACK - DTL 1/L903 STAIRS DTL 5/L90

UBC PROSCENIUM ARCHITECTURE + INTERIORS INC.

SCALE: 1:50







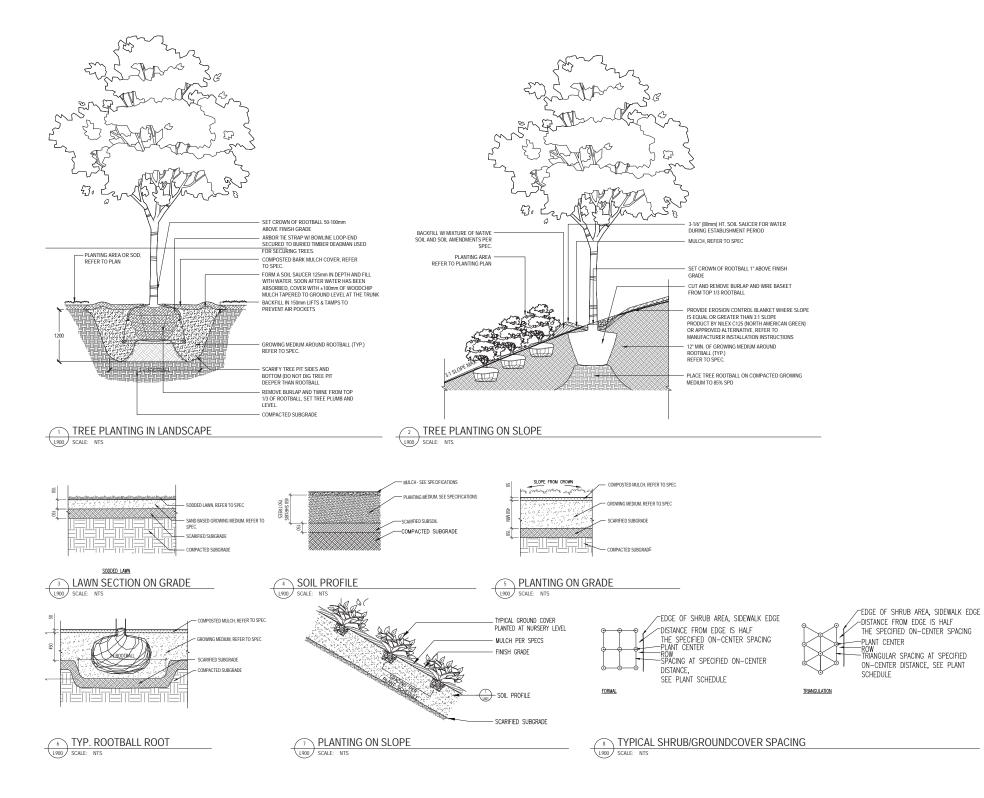
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PROJECT TEAM:

LANDSCAPE ARCHITECT PFS Studio 1777 West 3rd Avenue Vancouver, BC V6J 1K7

ARCHITECT Proscenium Architecture 1 West 7th Avenue Vancouver, BC V5Y 1L4

ARCHITECT Teeple Architecture 5 Camden Street Toronto, ON M5V 1V2





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| PROJECT NAME: MACLEOD BUIL 2356 MAIN MAL | |
| DRAWING TITLE: DETAILS PLANTING | |
| PFS PROJECT NUMBER: 20005 | DATE: 2020.03.17 |
| DRAWN BY: JG | CHECKED BY: DD |
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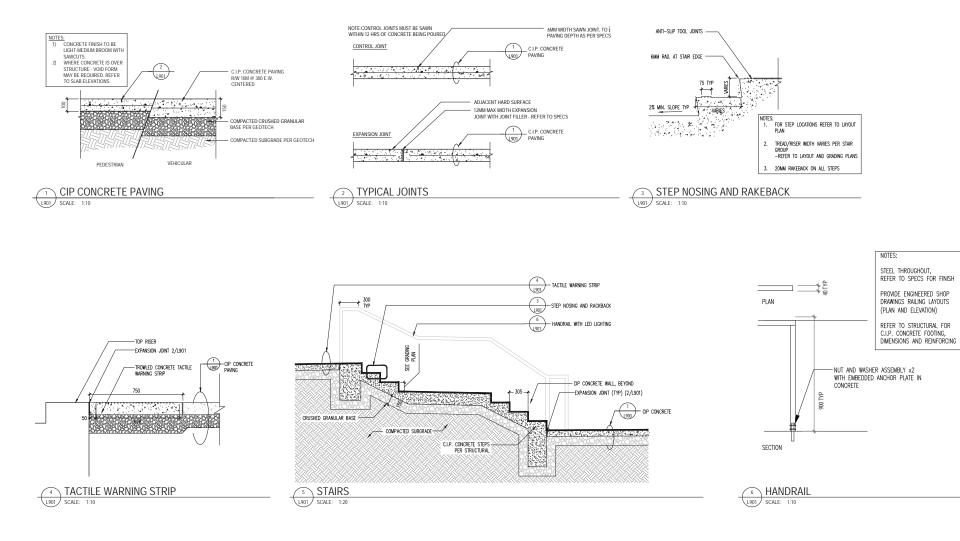
LANDSCAPE ARCHITECT

PFS Studio 1777 West 3rd Avenue Vancouver, BC V6J 1K7

ARCHITECT Proscenium Architecture 1 West 7th Avenue Vancouver, BC V5Y 1L4

ARCHITECT Teeple Architecture 5 Camden Street Toronto, ON M5V 1V2

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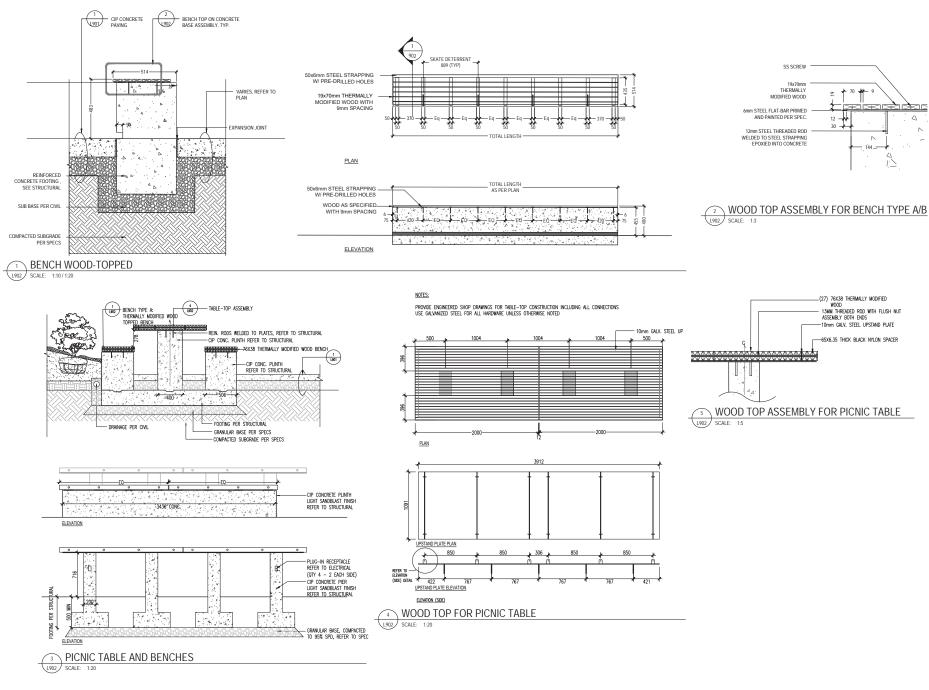
PROJECT TEAM:

LANDSCAPE ARCHITECT PFS Studio 1777 West 3rd Avenue Vancouver, BC V6J 1K7

ARCHITECT Proscenium Architecture 1 West 7th Avenue Vancouver, BC V5Y 1L4

ARCHITECT Teeple Architecture 5 Camden Street Toronto, ON M5V 1V2

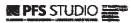
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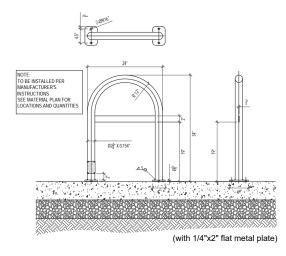
LANDSCAPE ARCHITECT

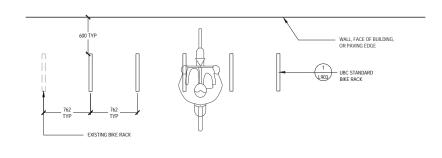
PFS Studio 1777 West 3rd Avenue Vancouver, BC V6J 1K7

ARCHITECT Proscenium Architecture 1 West 7th Avenue Vancouver, BC V5Y 1L4

ARCHITECT Teeple Architecture 5 Camden Street Toronto, ON M5V 1V2

GLIENI





BIKE RACK - SECTION

2 BIKE RACK - PLAN L903 SCALE: 1:20





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| PROJECT NAME: MACLEOD BUILDIN 2356 MAIN MALL | ١G |
| DRAWING TITLE: DETAILS SITE FURNISHING | |
| PFS PROJECT NUMBER: 20005 | DATE: 2020.03.17 |
| DRAWN BY: JG | CHECKED BY: DD |
| SCALE: AS NOTED | |
| DWG. NO.: | |

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PROJECT TEAM: LANDSCAPE ARCHITECT PFS Studio 1777 West 3rd Avenue Vancouver, BC V6J 1K7

ARCHITECT Proscenium Architecture 1 West 7th Avenue Vancouver, BC V5Y 1L4

ARCHITECT Teeple Architecture 5 Camden Street Toronto, ON M5V 1V2

GLIENT



VIEW OF MAIN ENTRY (SW CORNER) FROM MAIN MALL





VIEW FROM ENGINEERING STUDENT PLAZA (SOUTH)









VIEW FROM SECOND LEVEL PLAZA, EXIT FROM KAISER STAIR







VIEW FROM ENGINEERING STUDENT CENTER





APPENDIX

PLANNING & DEVELOPMENT MEMO

THE UNIVERSITY OF BRITISH COLUMBIA

Campus + Community Planning

MacLoed Building Renovation + Addition

| То: | Noel McNally, Project Manager, FACI |
|-------|--|
| c.c.: | Matthew Roddis, Associate Director, Planning and Design |
| From: | Brett Liljefors, Architect - Urban Designer, Planning & Design |
| Date: | Wednesday, October 23 rd , 2019 |
| Re: | Pre-application discussions |

Planning and Design (P&D) met with Teeple Architecture and Proscenium Architecture and Project Services on Monday, October 21st to discuss early design considerations for an interior renovation and envelope rehabilitation/replacement (phase 1) and addition (phase 2) to the MacLeod Building. From that discussion, the project team requested clarification of three key issues that were identified as critical path items for the design process to proceed. The following summarizes and clarifies these issues.

Envelope Treatment and Heritage Conservation

In order for the building to meet current energy code standards, a significant rehabilitation or replacement will be required for the envelope. Encapsulation is the most space efficient but would require covering the exposed structure that is a feature of the building.

The MacLeod Building is not listed within the heritage themes established by the Vancouver Campus Plan (2014; Part 2, 7.2 Heritage Conservation). Regardless, any renovation/addition is expected to have an intentional and sensitive response to the original design intent of the building and landscape. The submission will need to articulate a design rationale that addresses the character of the existing building and its contextual relationships.

Two Storey Addition with No Setback - Variance to VCP Part 3 - 3.1.1.h.ii

The Vancouver Campus Plan (2014) sets out Character Districts to regulate future development on campus in line with the Universities priorities. The MacLeod Building is within the Campus Core District, which restricts building heights to 28m and requires stories of buildings above the 18m height level to be set back a minimum of 5 meters from their fronting façade (3.1.1.h.ii).

Planning and Design recommend to the Director of Planning that this requirement (3.1.1.h.ii) be waived in respect to a future two storey addition to the top of The MacLeod Building. Two primary factors support this recommendation.

First, the setback requirement would render this type of addition infeasible. A setback would place the bearing wall for the addition away from the bearing column grid requiring significant additional structure and associated costs. The building floorplate is narrow, a 5m setback would reduce the width

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of addition floorplate below what is reasonably efficient for both envelope costs and plan organization. The proposed addition, compared to other options, preserves open space and uses UBC land efficiently.

Second, the MacLeod building is currently setback from Main Mall by approximately 25m (from building face to the edge of the East main path of Main Mall). The adjacent Fred Kaiser Building and ICICS/CS Building are setback approximately 16m. The intent of the stepped height setback is to keep the building within scale of the height of the red oaks on this corridor. The generous setback of the whole building façade reduces the impact of the building scale on the formal row of trees and, in the opinion of Planning and Design, supports the intention of this particular VCP provision.

This recommendation for variance only applies to this particular provision (3.1.1.h.ii). All other requirements are to be met. As noted above, the design will need to demonstrate a sensitive response to the original design intent and its context. For example, by creating a clearly defined cornice line to maintain a strong relationship to neighbouring buildings and by using techniques such as a material change from the main massing to the addition to reduce the addition's visual impact.

Relocation of Main Entry from Level 1 to Level 0

The main entry – at level 1 approximately 8' above grade - is accessed via a series of stairs and wide landings. The current access to entry does not satisfy accessibility standards set out in current code standards. The extent of the planned renovation will require the building to be compliant with BCBC 2018 and other relevant code requirements.

To do so, alterations to the current entry access to would require significant ramp structures to access the entry at level 1. As an alternative solution, the design team has proposed relocating the main entry to level 0 - approximately 5' below grade – in the same location.

The relocation would allow for an accessible entry. It would align the entry level with that of the ICICS/CS Building to the South - which houses the same faculty – providing better continuity between the two. An entry on level 0 also presents an opportunity to connect diagonally through the building from Main Mall to the courtyard to the east and the Engineering Student Centre.

P&D support the design directions articulated above and look forward to further development of the project design.

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