NATIONAL CAPITAL COMMISSION
COMMISSION DE LA CAPITALE NATIONALE

No.	2018-P182
To	Board of Directors
Date	2019-06-20

For DECISION**Subject/Title**

Lester B. Pearson Building Rehabilitation, 125 Sussex Drive, Ottawa

Purpose of the Submission

- To obtain Concept Design Approval for the proposed Lester B. Pearson (LBP) Rehabilitation.

Recommendation

- THAT the Concept Design for the Lester B. Pearson Building Rehabilitation be approved, pursuant to section 12 of the *National Capital Act*, subject to :
 1. The Developed Design being submitted to the NCC for review as a Level 3 Federal Approval;
 2. The glazing design details including a mock-up being advanced as a Level 2 Federal Approval following endorsement by FHBRO.
- THAT the signature of the Concept Design Federal Approval for the Lester B. Pearson Rehabilitation be delegated to the Executive Director, Capital Planning Branch.

Submitted by:Daniel Champagne, Executive Director, Capital Planning Branch
Name_____
Signature

1. Authority

National Capital Act, section 12

2. Project Description

- The goal of this project is the rehabilitation of the Lester B. Pearson Building to provide a cost effective, modern and efficient workspace for Global Affairs Canada (GAC), while also setting a national and international example of Canada's commitment to environmental sustainability in a federal heritage building. The building houses approximately 3,400 employees.
- Lester B. Pearson Building (LBP) is a Classified Federal Heritage Building that was completed and opened in 1973 (designed by Webb Zerafa Menkes, architects). It was designated by the Government of Canada in 2012 for its historical associations with Canada's international diplomacy and the creation of the former Department of Foreign Affairs (now Global Affairs Canada). Its architectural significance as a late Brutalist and modernist complex is expressed in its tiered massing and strong horizontal lines and sculptural qualities.
- The building's four office towers are asymmetrically arranged on a raised podium. They were built using high quality craftsmanship and materials throughout, imparting a dignified and ceremonial quality. The building is a strong marker for those leaving and entering the Capital on Macdonald Cartier Bridge.
- The LBP building is sited prominently on Confederation Boulevard, located across from the British High Commissioner's official residence (Earncliffe) and the National Research Council's headquarters.
- The proponent defined the project's intent as: "... meet[ing] [GAC's] required program while protecting the building's heritage value and character-defining elements. ... [The] outcome of the project will be functional modern spaces with reduced carbon footprint while maintaining its key heritage values and ongoing use."

Perimeter Security Project

- Other major projects are being completed on Lester B. Pearson, including the perimeter security project which was approved by the NCC in July of 2017.
- The purpose of the Security project was to improve security of the building for occupants and operations through the implementation of:
 - Two new guard booths screening areas outside of the building and a security landscape/fence on site perimeter.

Federal Heritage Building Review Office (FHBRO) Review

- The project was presented to the Federal Heritage Building Review Committee (FHBRC) in April 2019 and a draft recommendation is attached (Appendix C).

3. NCC Staff Analysis / Risks and Mitigations Measures

Pedestrian Experience

- The (NCC approved) Perimeter Security Project confirms that this property will not contribute to an improved pedestrian environment in the near term.
- The proponent's presentation (Appendix B) confirms a "... need for a broad vision for future projects outside the secure perimeter at the public sidewalk ...".

Landscape and Roof Scapes within the Complex

- The proponent's team has followed ACPDR's advice and retained a landscape architect.
- Results were presented to FHBRO and ACPDR in May 2019 and comments have been provided – please refer to Appendices C and D.

Glazing and Site Logistics

- The proponent has requested an early (level 2) approval for glazing, based on procurement timelines.
- ACPDR commented favourably on this approach, given a mock-up will be reviewed by NCC and FHBRO staff, and the proponent has confirmed their intent to address concerns raised as part of this review.
- ACPDR also suggested that a mock-up for the insulation of existing precast panels be done to evaluate potential effects of freeze-thaw cycles such as micro cracks.
- Site logistics approval is in progress.

4. Strategic Links

NCC Mandate: To set the long term urban planning direction for federal lands; and guide and control the use and development of federal lands in Canada's Capital Region.

2019-2020 to 2022-2024 Corporate Plan

- Strategic Directions, Priorities and Guiding Principles: "Foster an inclusive and meaningful National Capital Region of national significance through strong relations with the public, Indigenous peoples and all orders of government."
- Corporate Priority 4: "Initiate, renew and communicate land use plans, and provide timely and effective coordination of federal land use and design in the National Capital Region."
- NCC Plan for Canada's Capital, 2017-2067:
 - *"Promote the quality of design to ensure the creation of responsive, accessible, enduring [...], buildings, structures and landscapes over time."*

- Core Area Sector Plan, 2005:
 - *“...manage the federal accommodations and facilities that support the administrative functions of the federal government in ways that are sustainable, effective and efficient.”*
 - *“Promote a comprehensive approach to the preservation of built heritage [...] in the Core Area.”*

5. Consultations and Communications

- FHBRO Review of Intervention in progress (please refer to Appendix C).
- Municipal Coordination has begun with the Site Logistics team.

6. Next Steps

- ACPDR for comment on Developed Design – August 2019
- NCC Board for Developed Design Approval – September 2019

7. List of Appendices

Appendix A – Location Map

Appendix B – Project Summary Presentation

Appendix C – FHBRO Draft Recommendations – April 2019

Appendix D – Draft excerpt of the minutes of the ACPDR meeting, May 16-17, 2019

8. Authors of the Submission

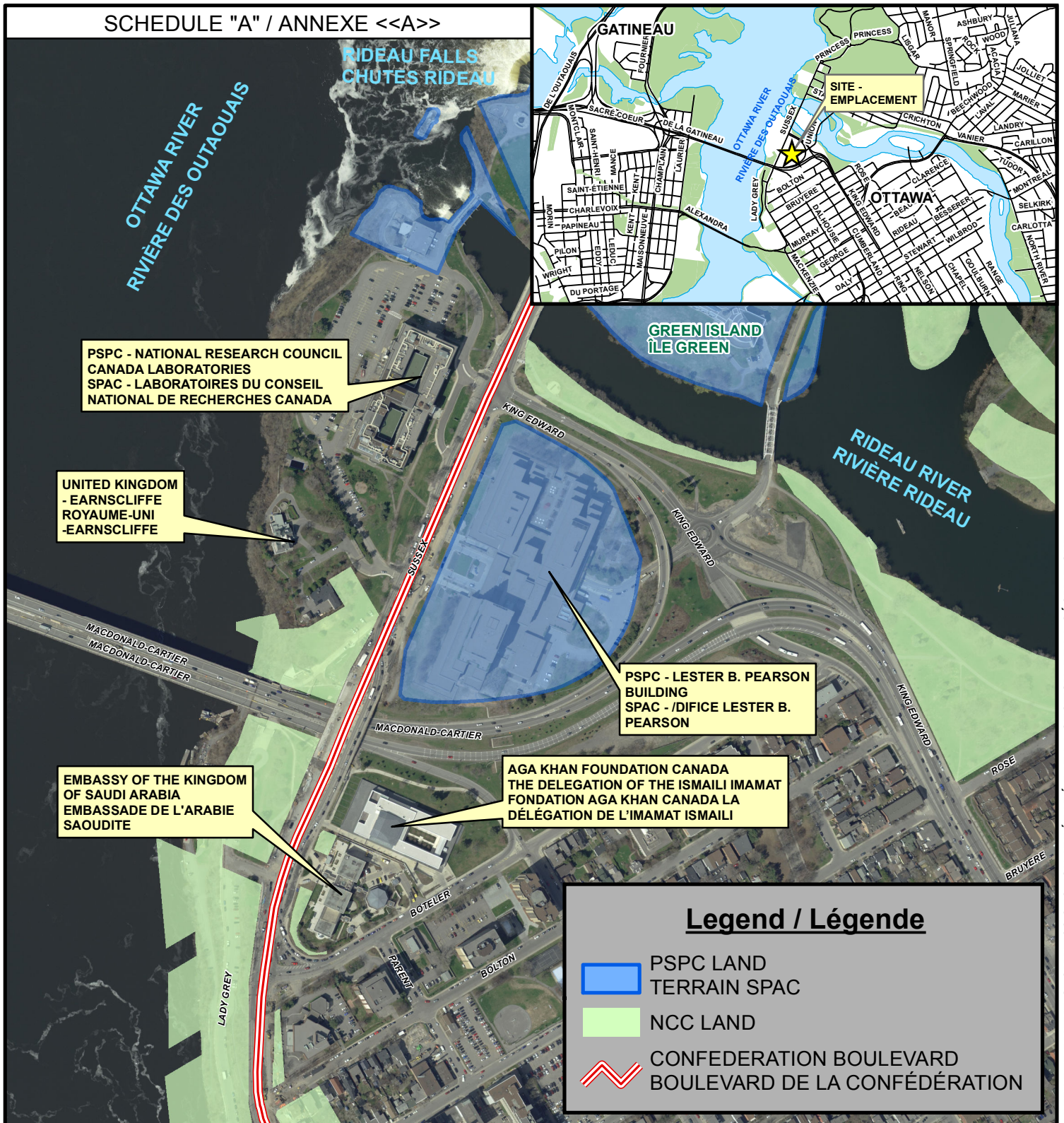
Daniel Champagne, Executive Director, Capital Planning Branch (CP)

Isabel Barrios, Director, Federal Approvals, Heritage & Archaeological Programs, CP

Jason Hutchison, Acting Chief, Federal Approvals, CP

Christopher Hoyt, Senior Architect, Design and Land Use, CP

SCHEDULE "A" / ANNEXE <<A>>

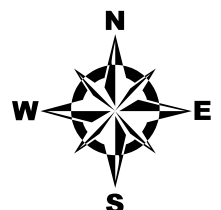


PREPARED BY THE GEOMATICS SECTION / PRÉPARÉ PAR LA SECTION DE LA GÉOMATIQUE



NATIONAL CAPITAL COMMISSION
COMMISSION DE LA CAPITALE NATIONALE

Canada



Subject - Objet LESTER B. PEARSON BUILDING, 125 Sussex Drive, Ottawa, ON
ÉDIFICE LESTER B. PEARSON, 125 promenade Sussex, Ottawa, ON

Submitted by - Soumis par D. CHAMPAGNE, Executive Director / Directeur général
Branch - Direction CP / AC

Date 2018-11-09
Scale - Échelle 1:5,000
Parcel - Parcelle



LESTER B. PEARSON REHABILITATION PROJECT

SECOND CONCEPT DESIGN PRESENTATION TO ACPDR

INTEGRATED DESIGN & CONSERVATION TEAM

Construction Manager
Ellis Don

Project Manager
BGIS

Public Services and
Procurement Canada

Tenant
Global Affairs Canada

Prime Consultant
D I A L O G

in association with
MCROBIE Architects + Interior Designers (MCR)

Team

- Heritage Conservation (MTBA)
- **Landscape Architecture (DIALOG)**
- Sustainable Design (DIALOG)
- Building Science (MH)
- Interior Design (DIALOG and MCR)
- Functional Programming (DIALOG + MCR)
- Mechanical Engineering (DIALOG + GWA)
- Electrical Engineering (DIALOG + GWA)
- Structural and Seismic Engineering (DIALOG + AAR)
- Code Consulting (MH)
- AV and Acoustic Design (SOTA)
- Safety and Security (ASRA)
- Signage and Wayfinding (DMC)
- Photovoltaic Panel Engineering (ZON)
- Lighting (Gabriel Mackinnon LD)
- IT Infrastructure (Fancom)

AGENDA

1. Transportation
2. Landscape
3. The Building
4. Windows and Window Mock-up
5. Heritage
6. Sustainability
7. Wellness and Accessibility
8. Next Steps

ALTERNATE MODES

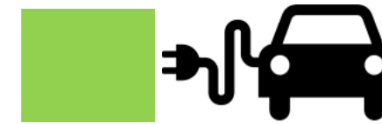


GROUND P1 LEVEL

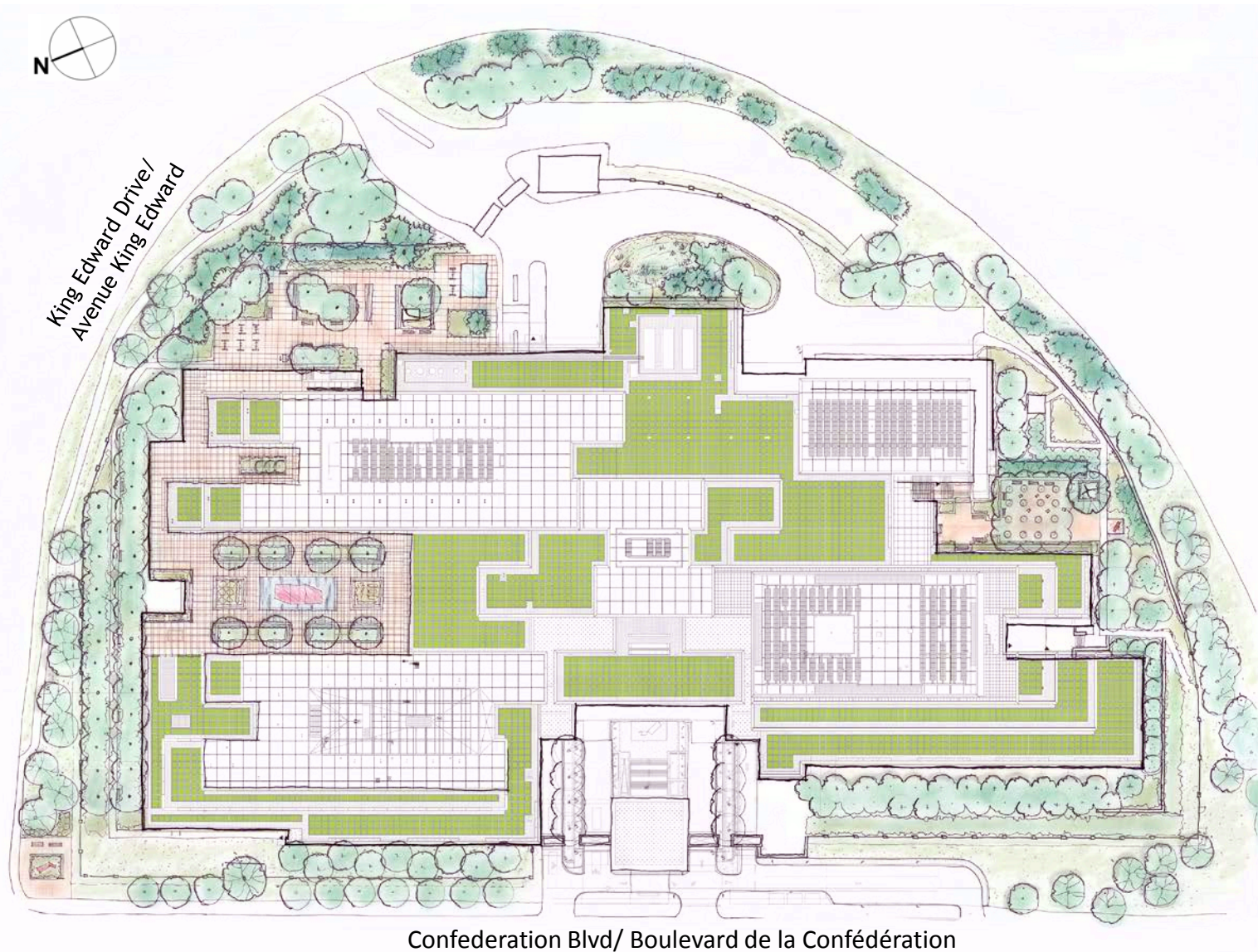


BASEMENT P2 LEVEL PARKING

450 new sheltered / interior bicycle spaces, 27 new carpooling priority parking spaces, 21 new vehicle charging stations, 30 new showers in expanded changerooms

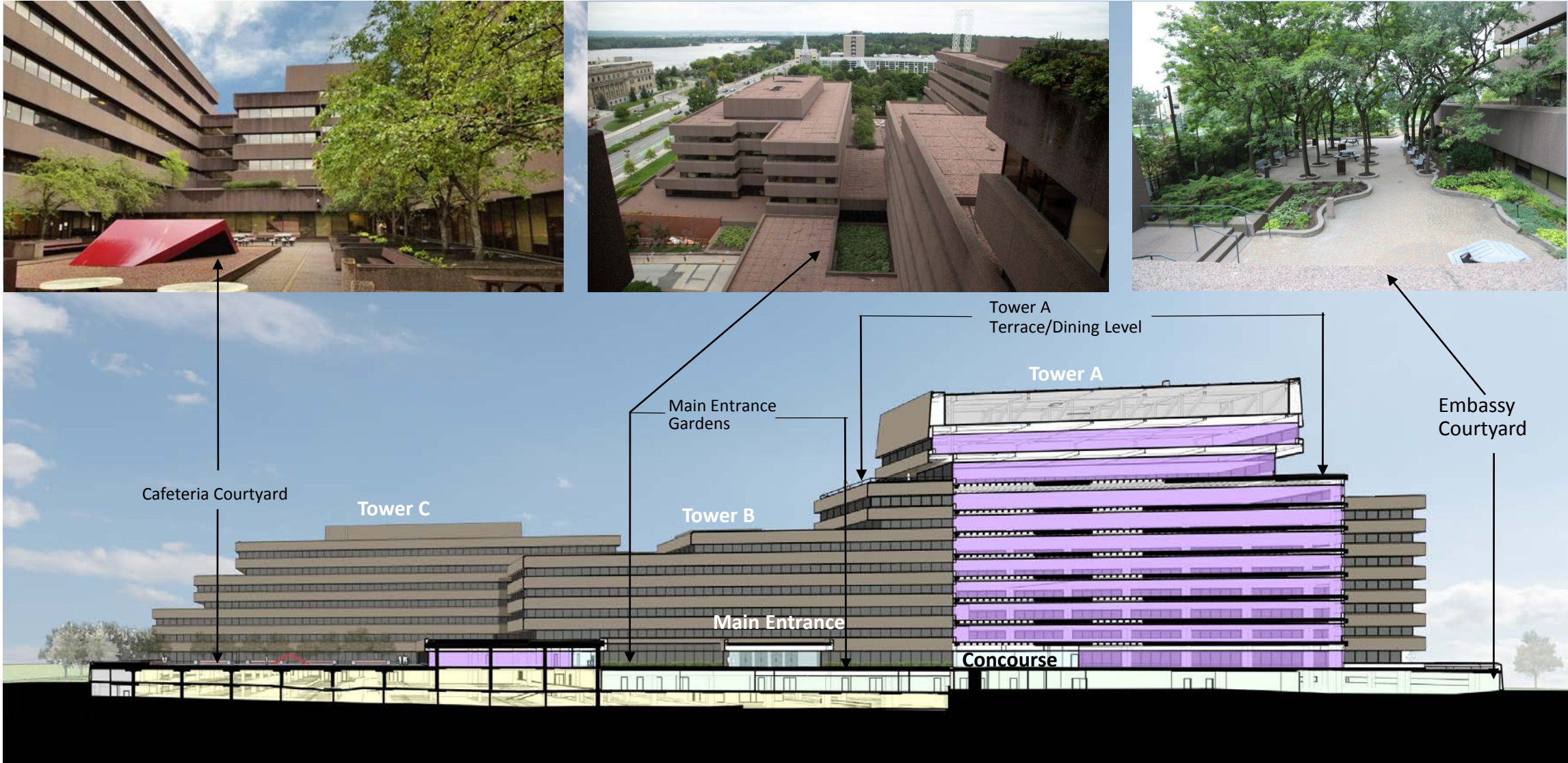


LANDSCAPE

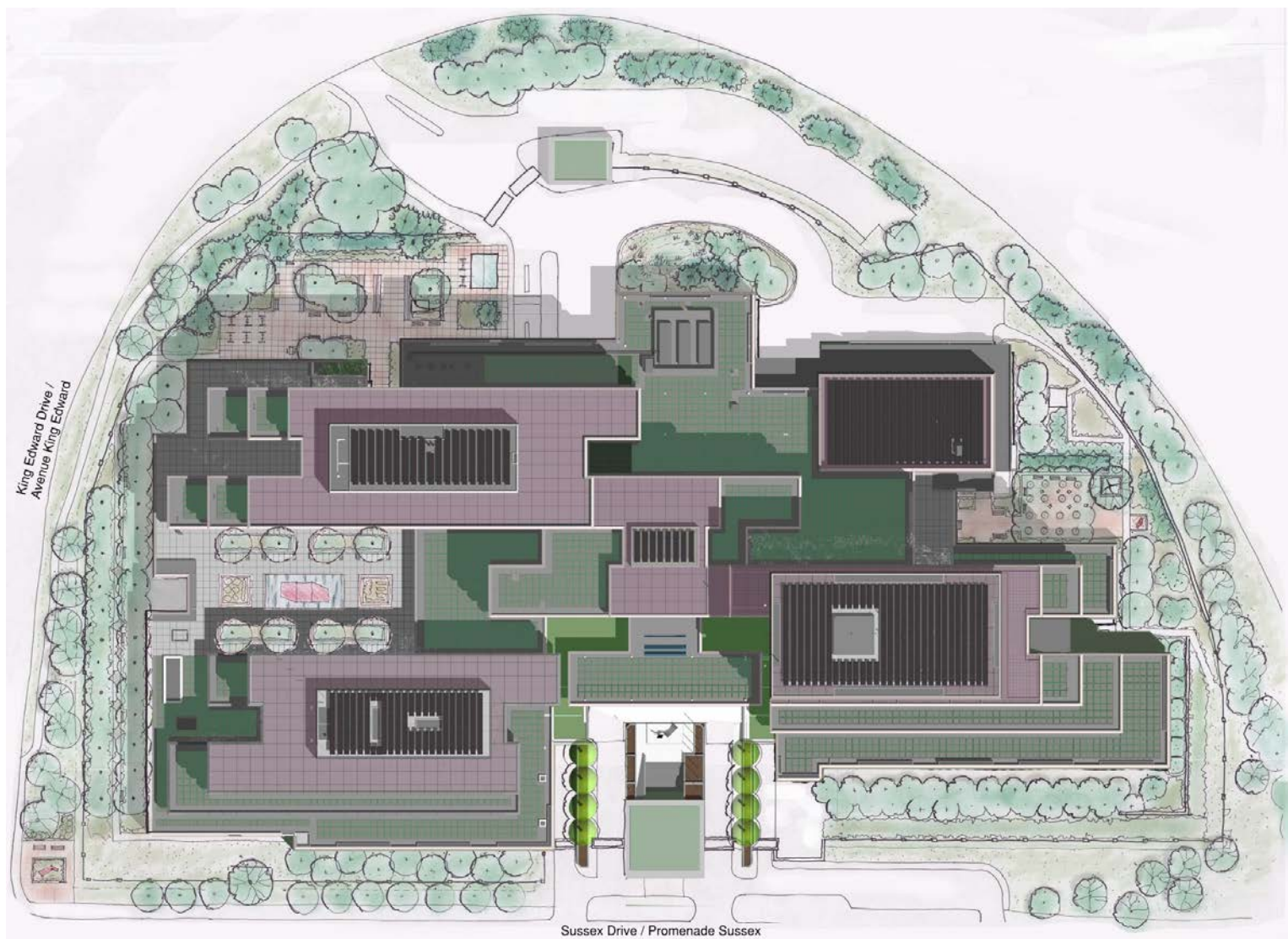


- Intensification of deciduous and coniferous trees
- Reinstallation of outdoor art
- Completion of formal street tree planting along Confederation Blvd.
- Landscape upgrade to the grounds to encourage leisure interactions
- Need for a broad vision for a future projects outside the secure perimeter at the public sidewalk

LANDSCAPE AND BUILDING INTEGRATION



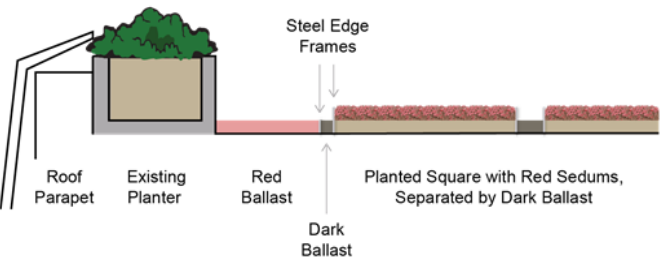
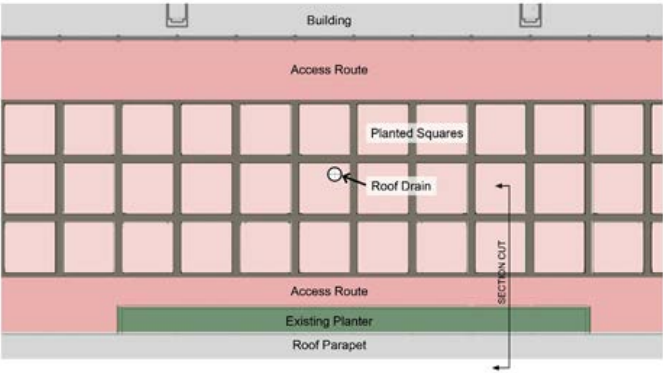
OVERALL ROOFSCAPE INTERVENTION APPROACH



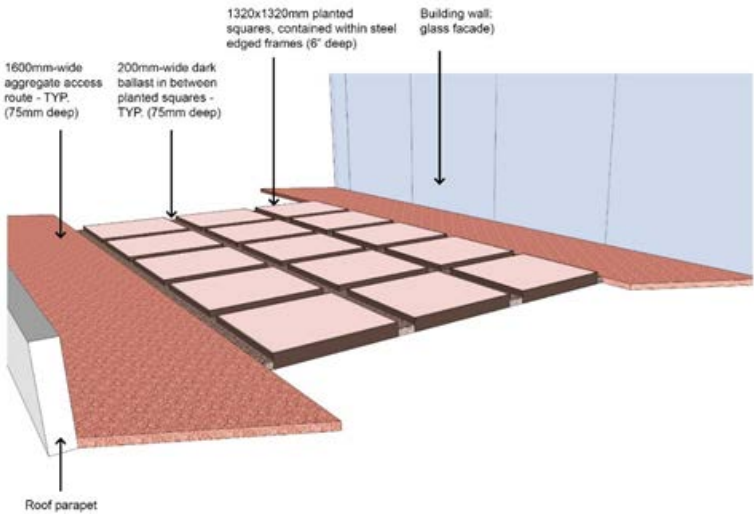
- Respect for original design intent despite significant intervention requirements
 - Maintaining dominant grid
 - Retention of granite aggregate
- Three major roof type interventions:
 - Tower roof tops reinstatement of granite aggregate & bronze grid
 - Penthouse rooftops installation of PV panels on grid with granite aggregate perimeter
 - Terrace roofs installation of vegetated trays on grid with granite aggregate

LANDSCAPE EXTENSION OF THE GRID

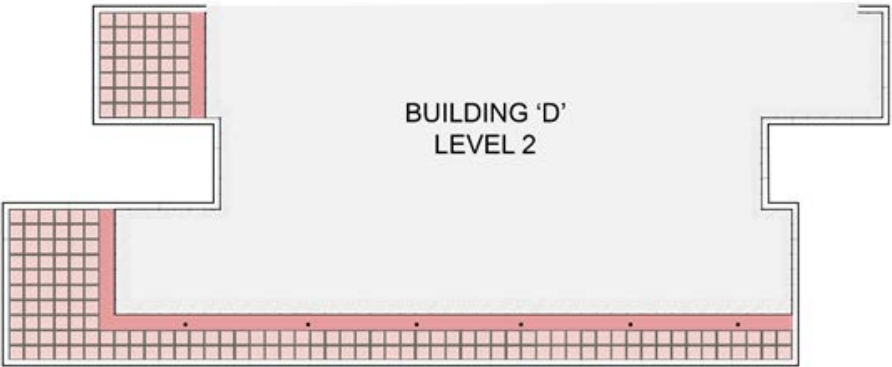
GREENROOF DESIGN- TYP.
PLAN VIEW DIAGRAM



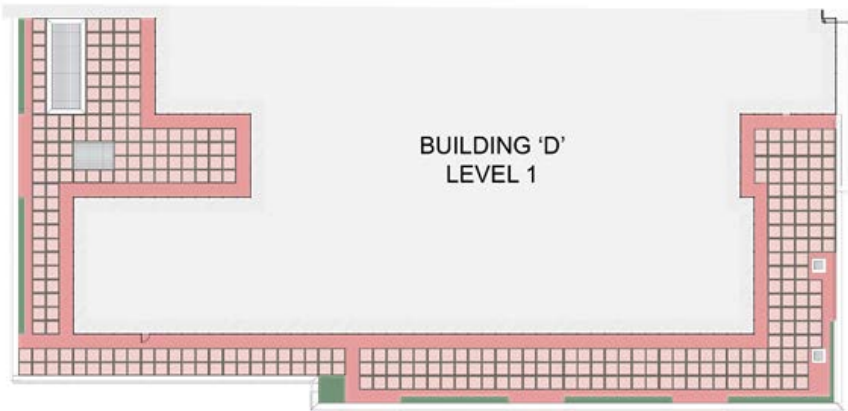
GREENROOF DESIGN- TYP.
PERSPECTIVE DIAGRAM



Illustrative Perspective of Extensive Vegetated Roof



Layout of Extensive Vegetated Terrace Level 2

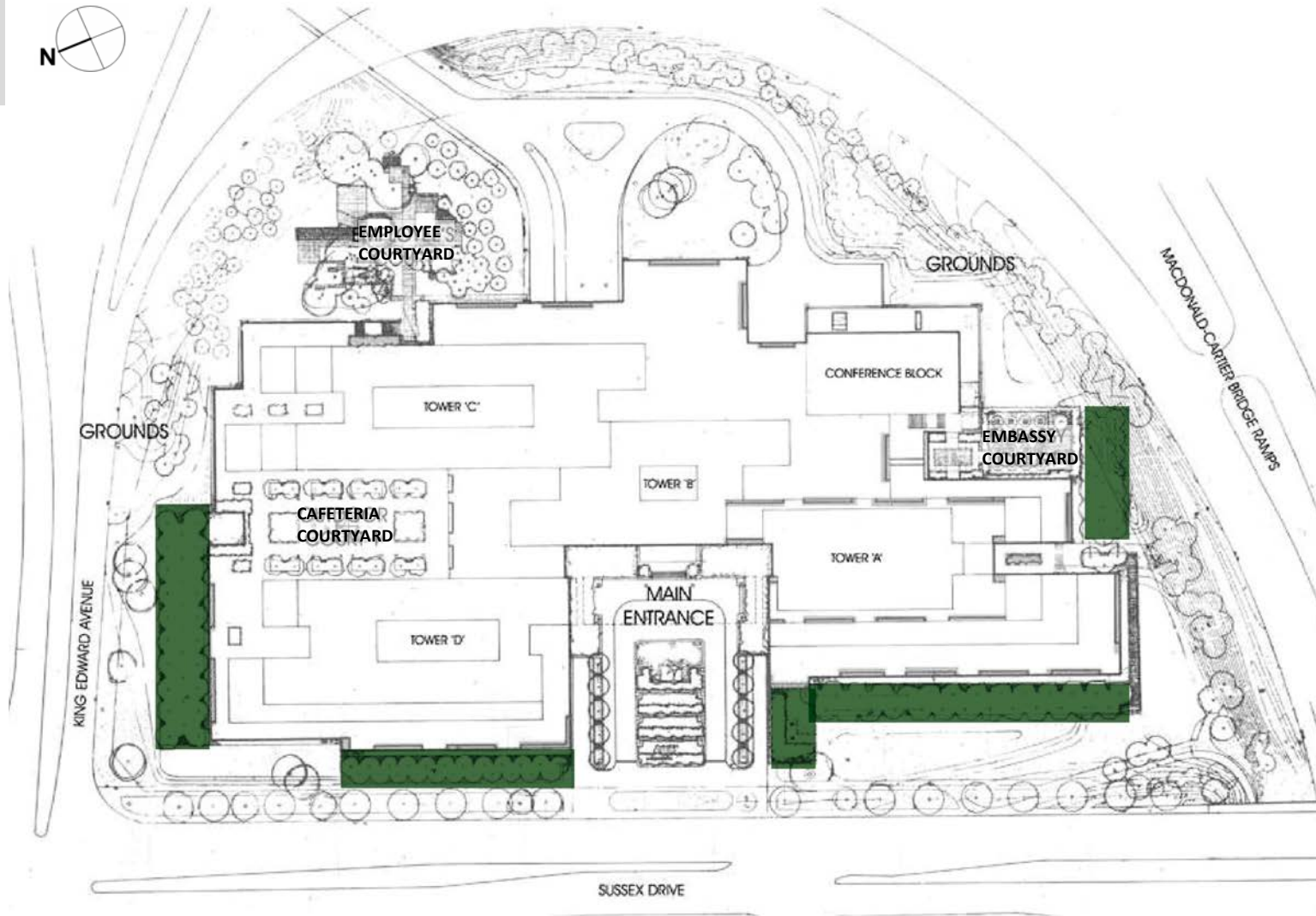


Layout of Extensive Vegetated Terrace Level 1

LEGEND

- Planted Squares with Red Coloured Sedums
- Existing Planters with Low Profile Evergreen Shrubs
- Ballast Type 1 - on Access Routes: Re-used Existing Red Aggregate
- Ballast Type 2 - between Planted Squares: Dark Tone Aggregate

LANDSCAPE PLANTING RESTORATION AT BUILDING GRADE

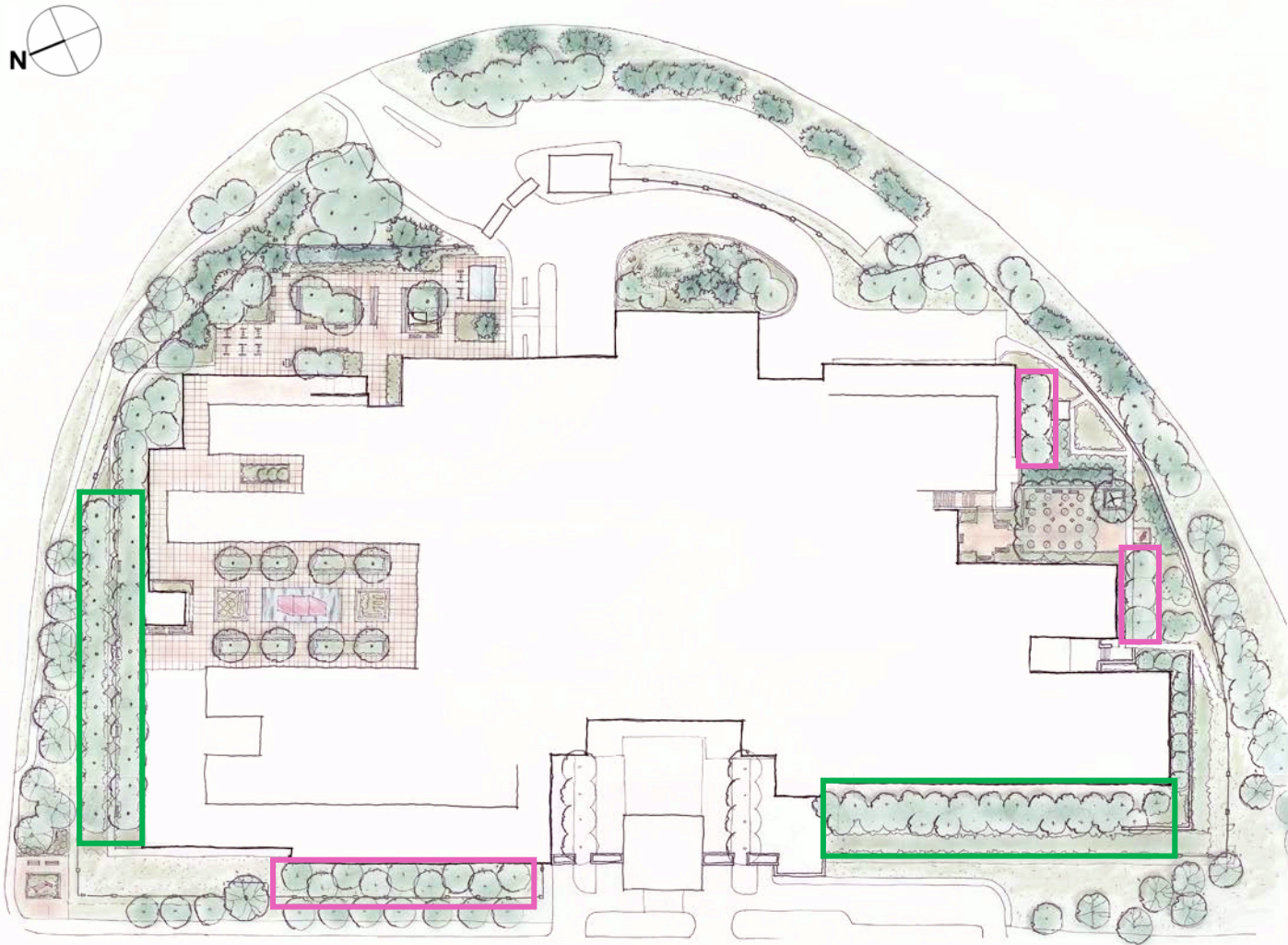


Original design intent:

- Building emerges from structured landscape
- Formal plantings define building edge experience
- Blocks of crabapple trees with evergreen underplantings

Formal Planting

PLANTING RESTORATION AT BUILDING GRADE

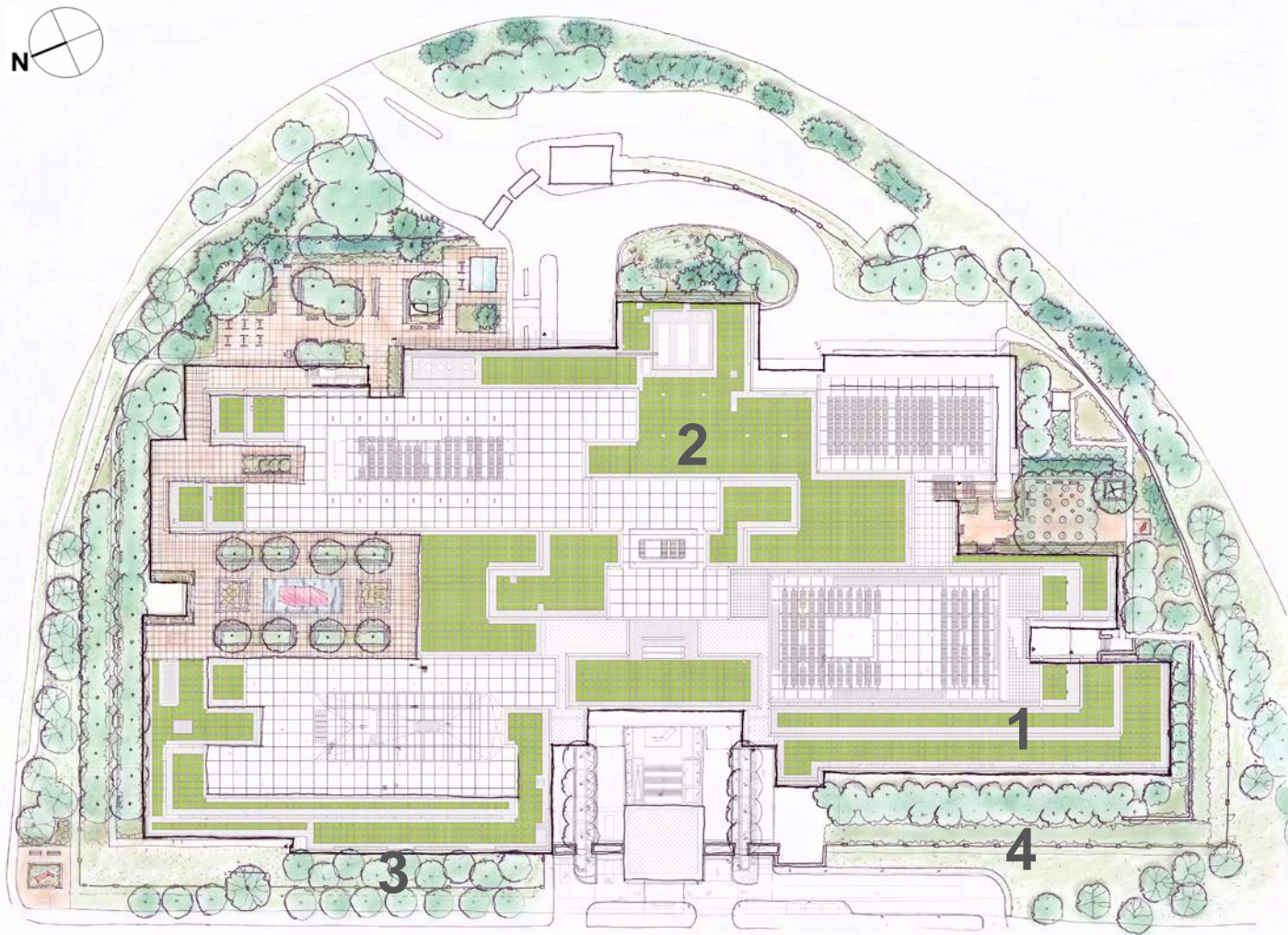


Maintain and enhance existing linden tree formal plantings and introduce shrub understory planting



Introduce crabapple trees along Tower D Frontage and south edge

HORIZONTALITY/LOW PLANTING OPPORTUNITIES



Roof terrace parapet planters & sedum planting



Formal low canopy crabapple planting



Formal understory shrub planting

NATIVE PLANT MATERIAL



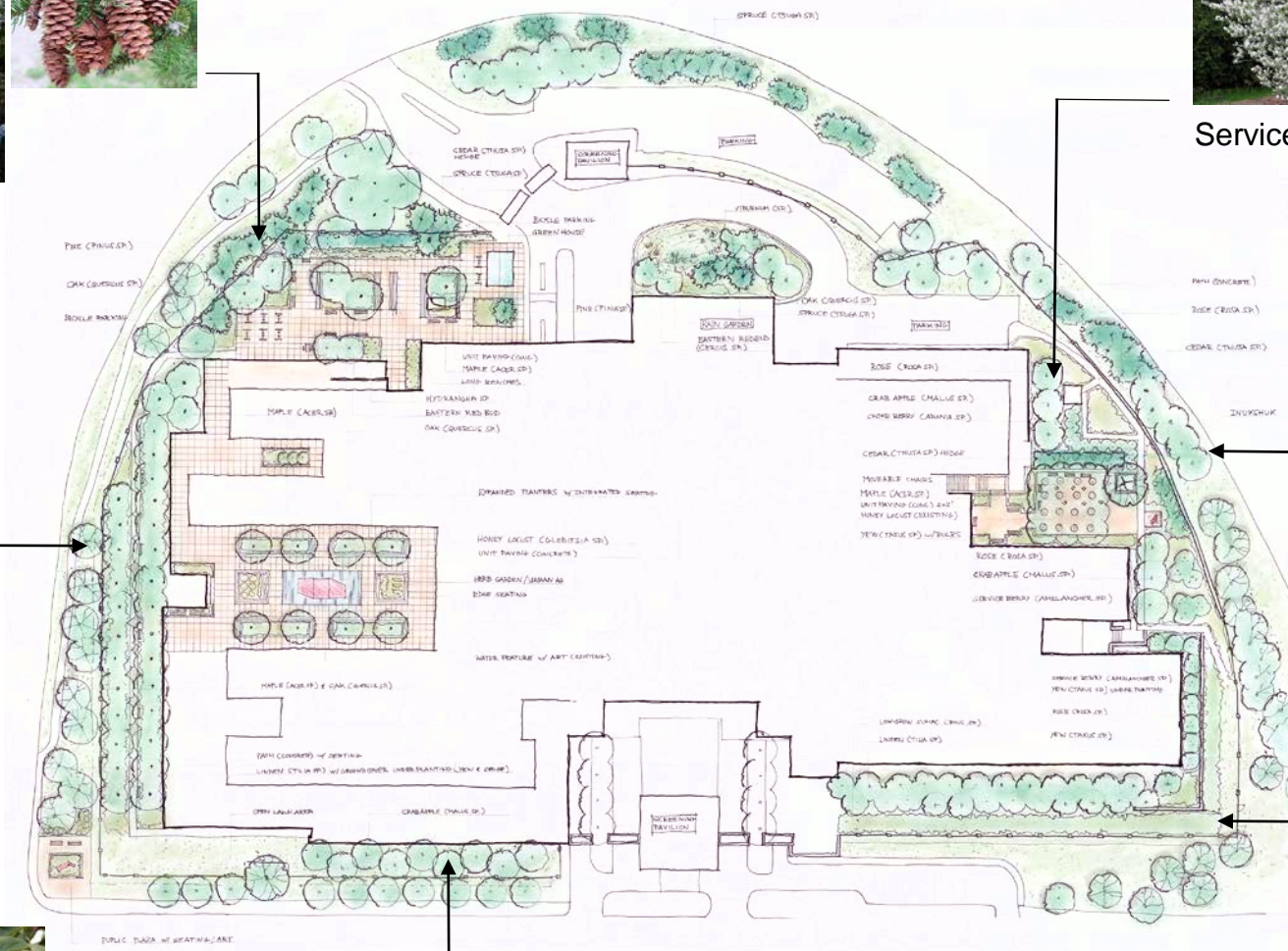
White spruce / *Picea glauca*



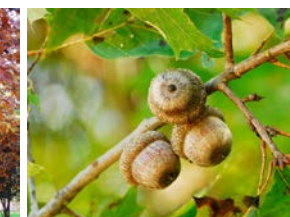
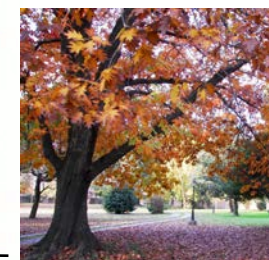
Sugar Maple / *Acer saccharum*



Crabapple / *Malus sp.*



Serviceberry / *Amelanchier sp.*

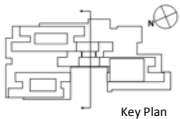
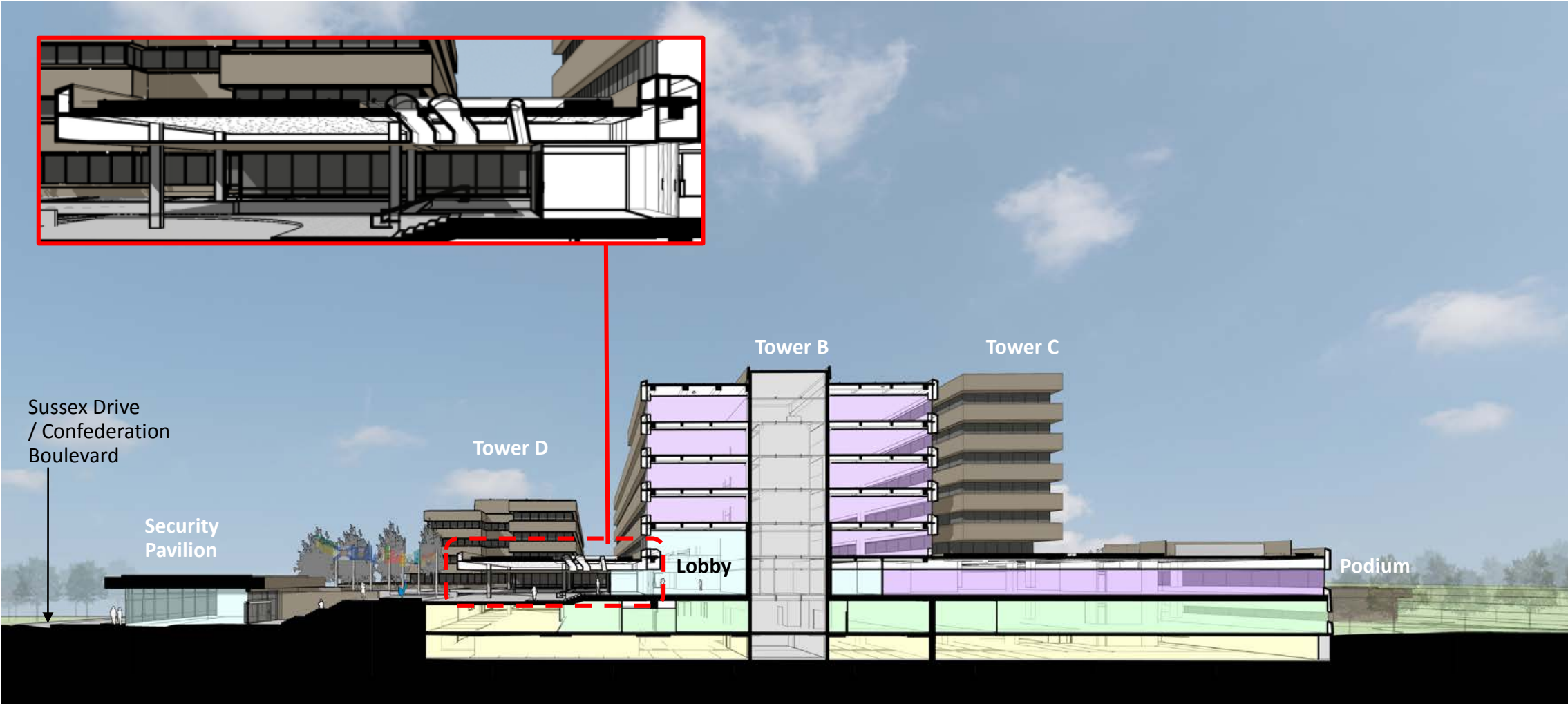


Northern red oak / *Quercus rubra*



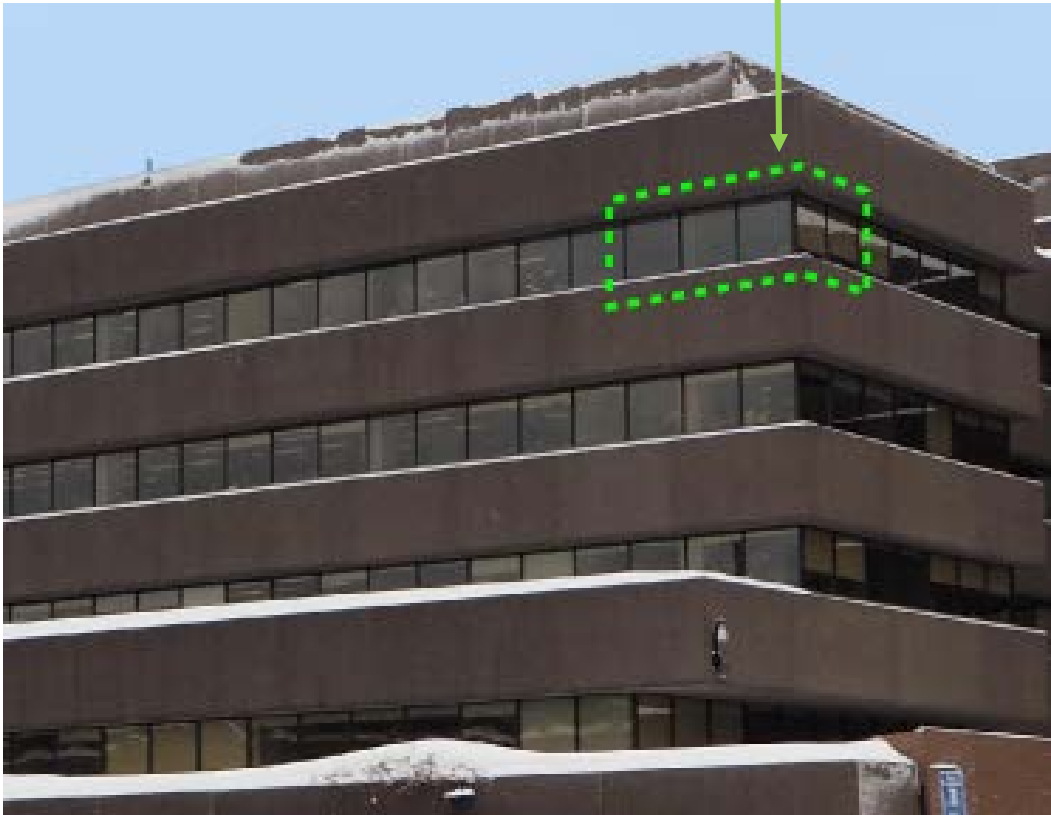
Dogwood / *Cornus sp.*

OPPORTUNITIES FOR TRANSPARENCY



EXTERIOR GLAZING & MOCK-UP

Area of Glazing Mock-up

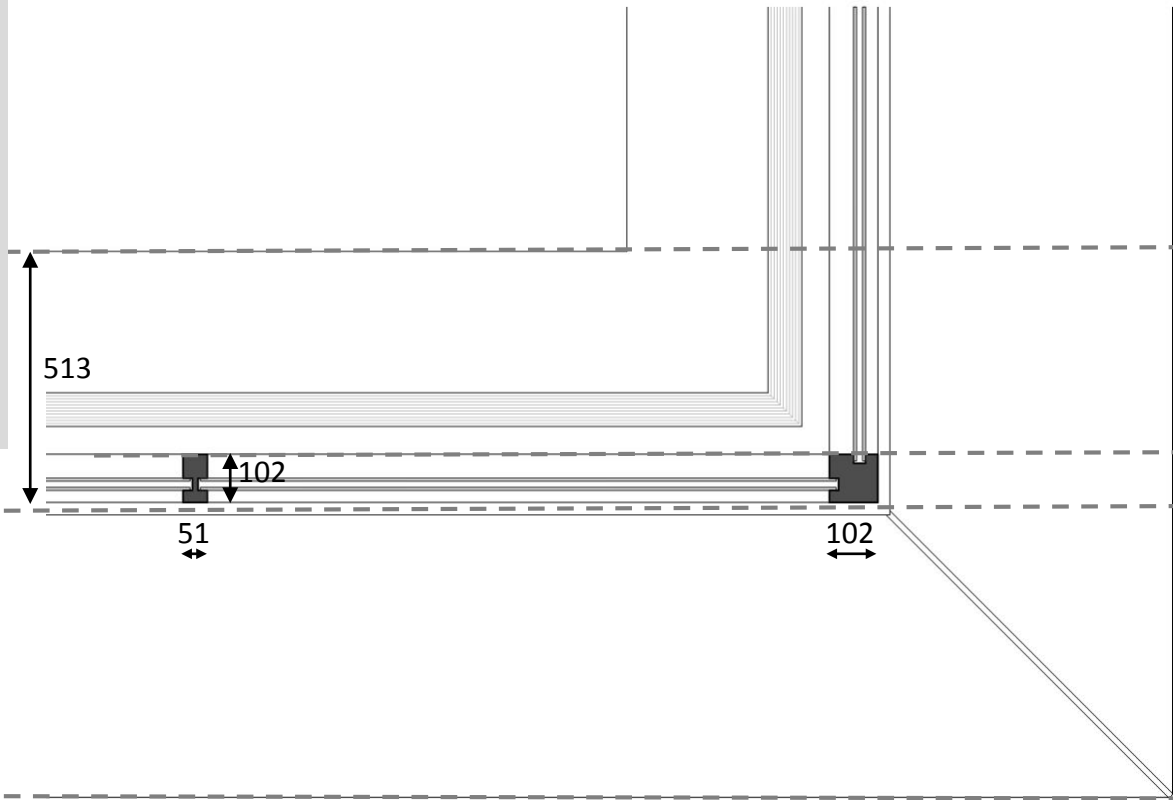


EXISTING CONDITION

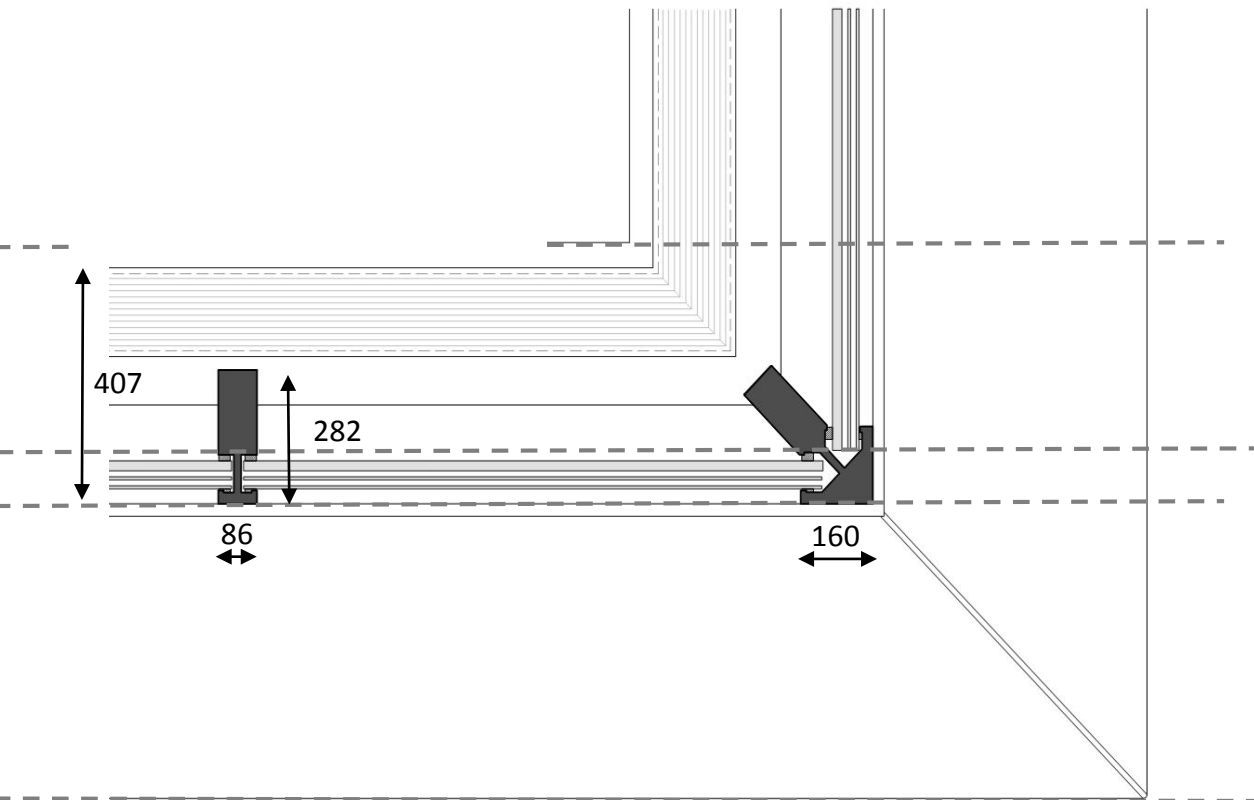


PROPOSED CONDITION

EXTERIOR GLAZING & MOCK-UP



PLAN DETAIL AT TYP. CORNER WINDOW: EXISTING



PLAN DETAIL AT TYP. CORNER WINDOW: PROPOSED

EXTERIOR GLAZING INTERIOR COMPARISON



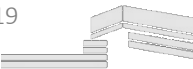
EXISTING CONDITION



PROPOSED CONDITION

SUMMARY OF FHBC COMMENTS

To be completed upon receipt of FHBC comments week of April 15



ARCHITECTURE TRUE TO ORIGINAL; PARTS REMAGINED

EMPLOYEE COURTYARD

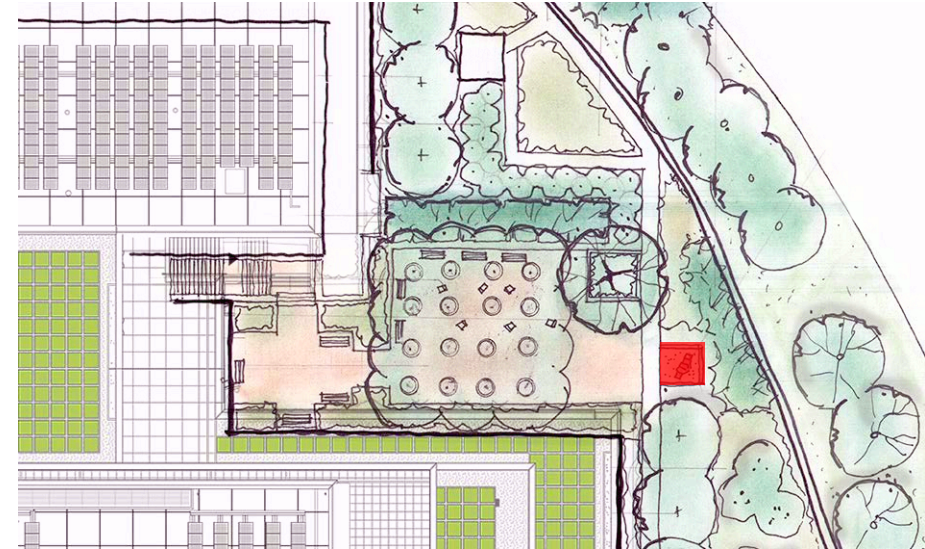


- Reimagining original design intent with respectful interventions: **extending** the grid, re-establishing focus, reinstating a minimal palette

COURTYARDS
RE-IMAGINED

ROOFSCAPES
RE-IMAGINED

EMBASSY COURTYARD



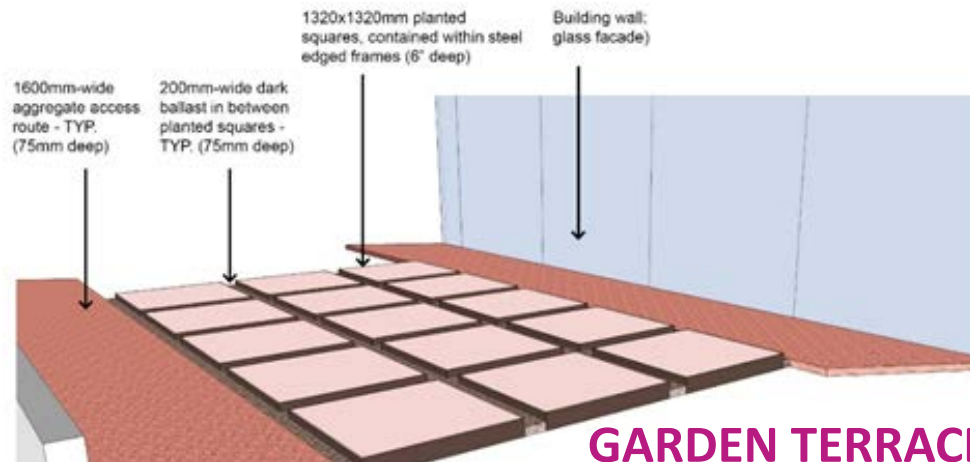
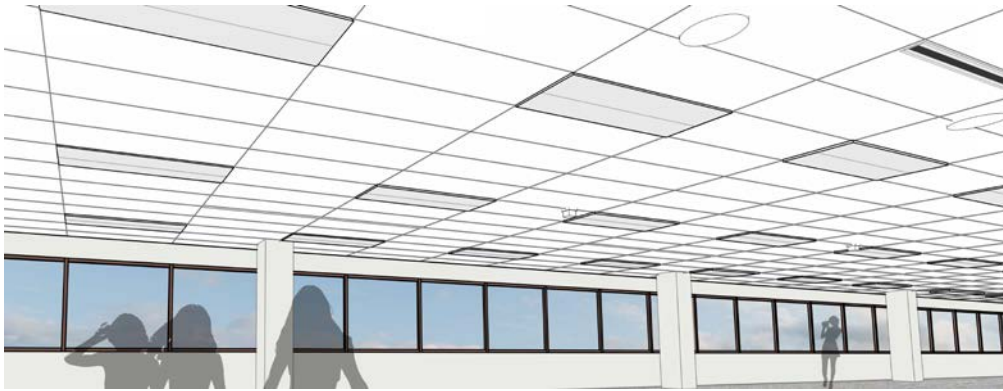
- Use of new structure ■ for architectural containment and use of reinstated/new landscape to create natural containment
- Opportunity to provide a contemporary & imaginative element distinguishable from, yet compatible with, the building

NEW MULTI-FUNCTIONAL
GLAZING SYSTEMS

TYPICAL OFFICE FLOORS
RE-IMAGINED

ILLUSTRATING THE DESIGN & CONSERVATION APPROACH

TYPICAL OFFICES



GARDEN TERRACES

- Reimagining original design intent with respectful interventions: employing the grid to guide interventions, varying approaches based on specific locations
- Maintaining sense of horizontality and linearity
- Creating interventions that are visually compatible with, subordinate to and distinguishable from the historic place
- Increasing “subordinate compatibility” where increase in heritage value.

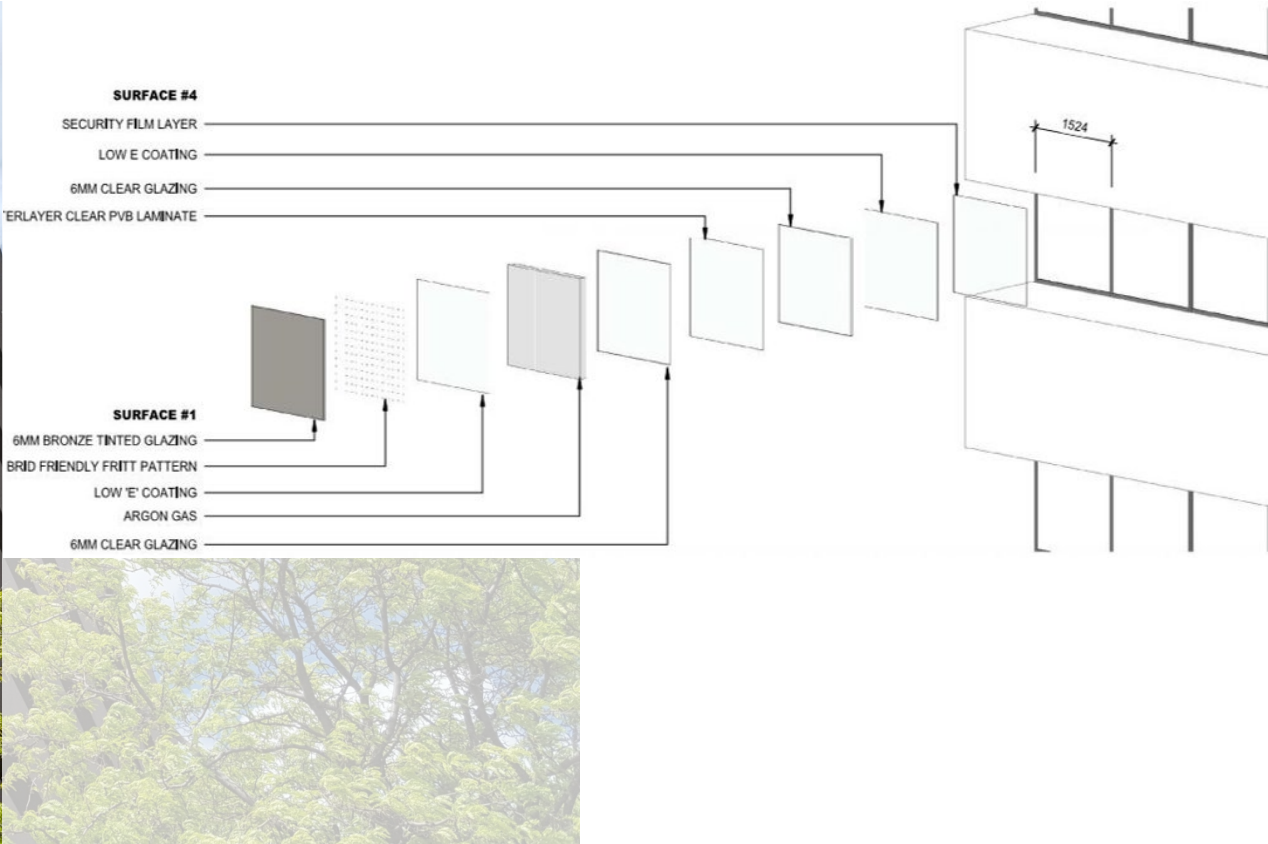
BALANCE PROJECT
OBJECTIVES

APPROACH FRAMEWORK
FOR INTERVENTIONS

SUPPORTABLE DECISION
MAKING MATRIX

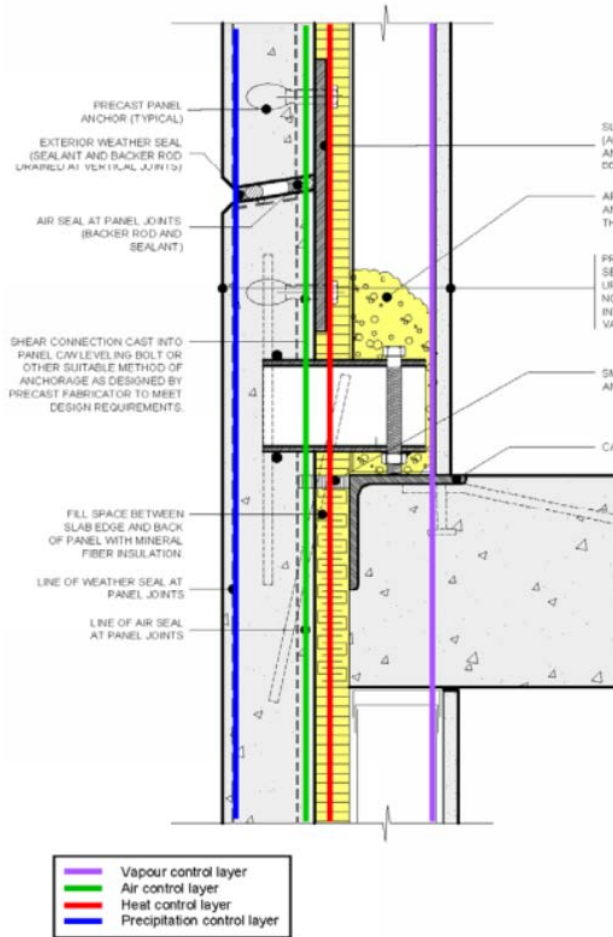
ITERATIVE PROCESS
W/TEAM & STAKEHOLDERS

SUSTAINABILITY



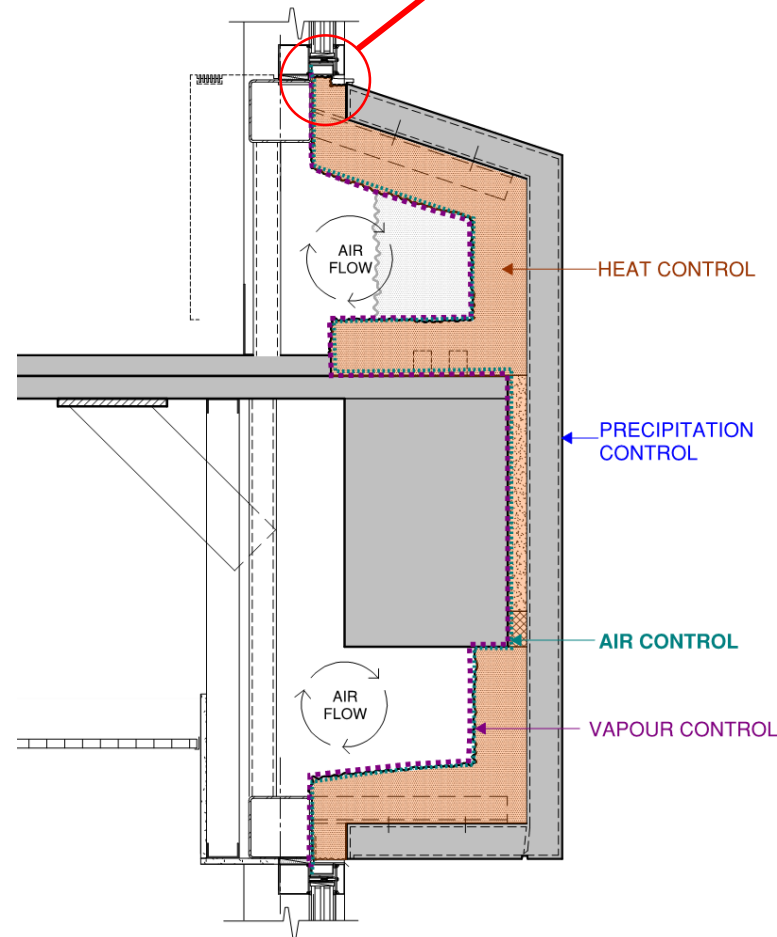
SUSTAINABILITY

INSULATION OF PRECAST PANELS



CPCI BEST PRACTICE GUIDE TO
INSULATE PRECAST CONCRETE

Area of closer investigation to maintain continuity



CONTROL LAYERS

INTERVENTIONS INCLUDE:

- Spray foam insulation** from in the interior side of the precast panel provides complete blanket
- Steel bracing** for seismic and enhanced security requirements
- New flashing and recaulking** to control water shed and proper drainage

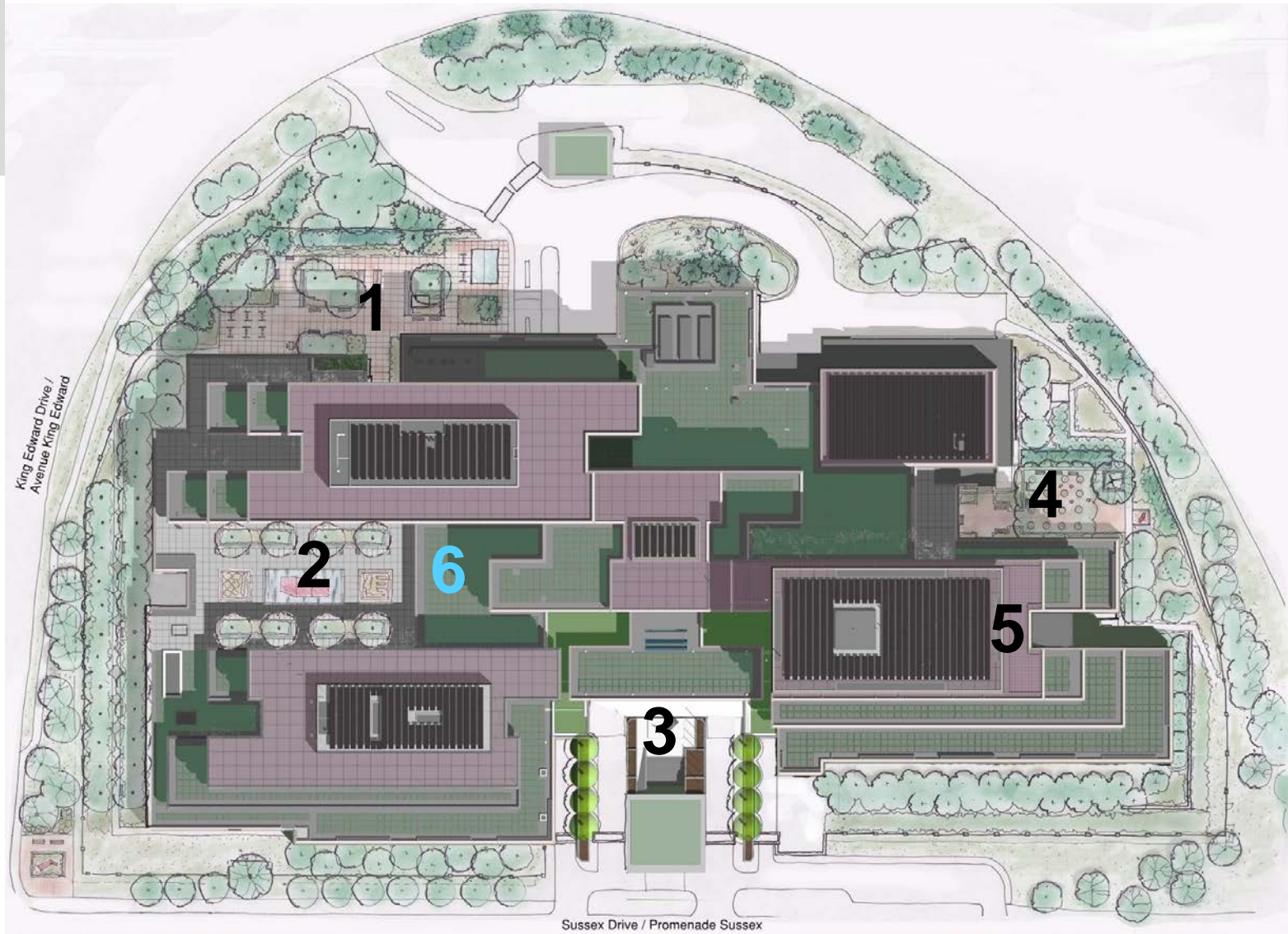
WELLNESS AND ACCESSIBILITY

SUPPORT FOR WELLNESS OF OCCUPANTS

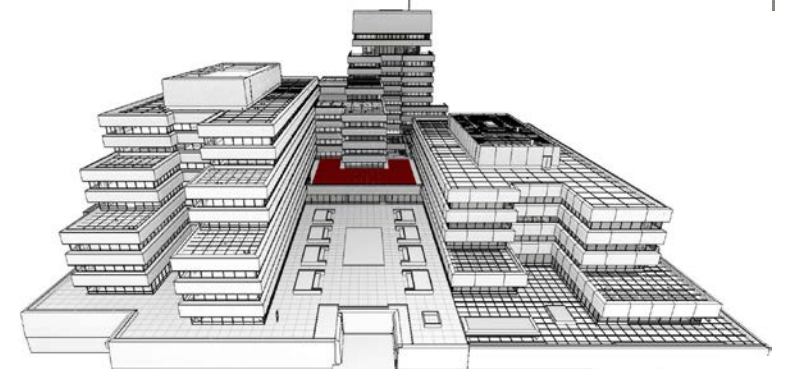
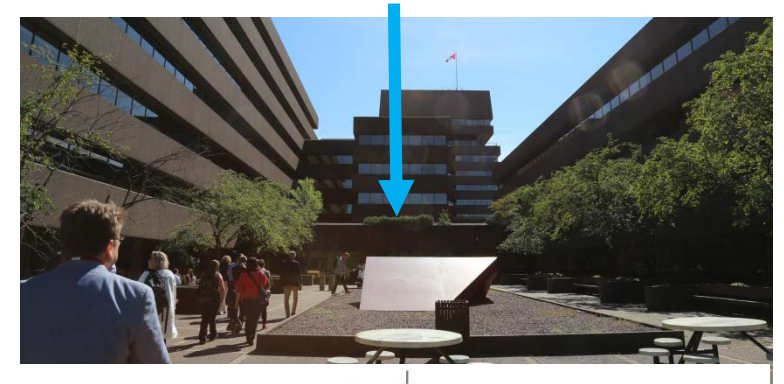
- GCworkplace
- Natural materials
- Increased use of courtyards
- Environmental sensitivities
- LEED v4 Gold
- Landscaping initiatives
- Building operations



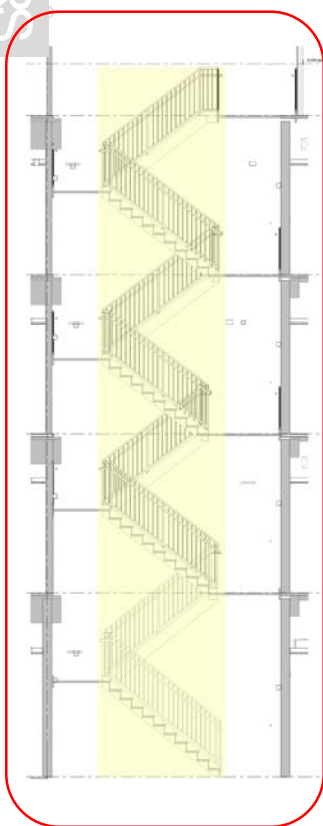
ACCESS TO ROOFS AND TERRACES



1. EMPLOYEE COURTYARD
2. CAFETERIA COURT
3. MAIN ENTRANCE COURT
4. EMBASSY COURT
5. TOWER 'A' 9TH FLOOR TERRACE
6. POTENTIAL 2ND FLOOR TERRACE

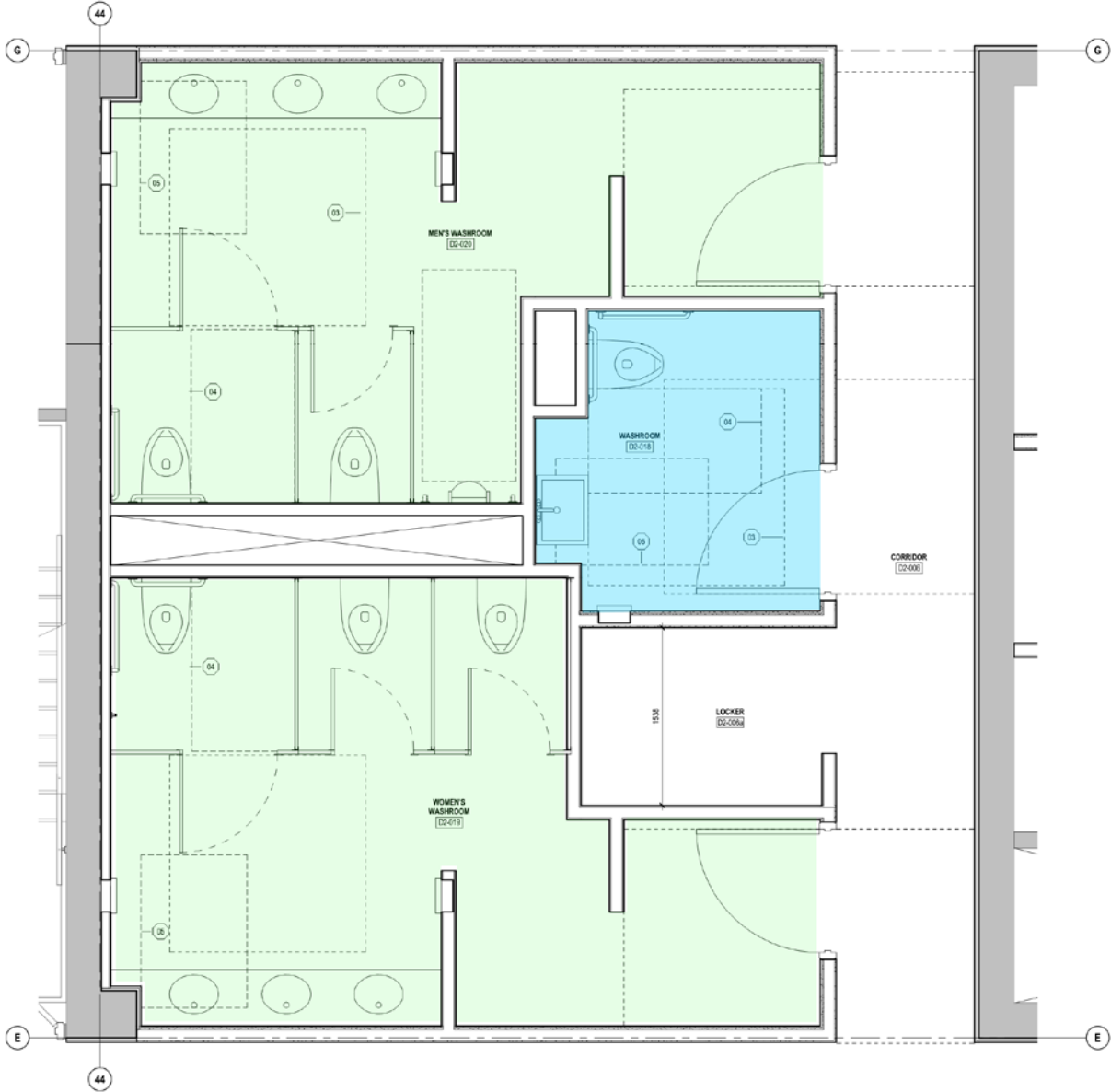


INTERIOR AREA



- EXISTING STAIRWELL
- WOMENS/MENS WASHROOM
- UNIVERSAL WC OR GENDER-NEUTRAL WC
- EXISTING SERVICE RISER
- EXISTING ELEVATOR

INTERIOR AREA

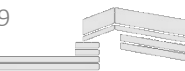


Facility Types	Quantities
Universal WCs	9
Accessible Gender Neutral WCs	12

- WOMENS/MENS WASHROOM
- UNIVERSAL WC OR GENDER NEUTRAL WC

NEXT STEPS

ACPDR Review No.1 of Concept Design	Occurred December 6, 2018
Request for Review of Intervention: Included 100% SD, WP-1and HMMP	Completed January 25, 2019
Meeting with FHBRO internal staff	Occurred March 21, 2019
Presentation to FHBC	Occurred April 3, 2019
Receive FHBBC comments	Occurred late April 2019
ACPDR Review No.2 of Schematic Design	May 17, 2019
NCC Board Concept Approval	June 20, 2019
Tower D Construction Drawing Completion (pending NCC approvals)	July 2019
ACPDR Review of Developed Design	August 2019
Tower D Interior Fit-up Start	August 2019
NCC Board Developed Design Approval	September 2019



Lester B. Pearson Building Rehabilitation Project

Federal Heritage Buildings Committee Review

April 2019

SUMMARY OF RECOMMENDATIONS:

#1 General Comments

- Incorporate the smaller projects into the scope of the Building Rehabilitation Project in order to ensure consistency of approach and have least impact on the heritage character of the building.

#2 Heritage Conservation Approach

- The Heritage Conservation Approach should be updated to clearly articulate requirements for as-builts, documentation, and tracking. Learnings about the existing building and from past interventions, should also be documented as the project progresses and throughout construction. Non-original features/interventions that are kept should be specifically identified.

#3 Landscape

- Complete and submit an analysis of the original design intent for the site and landscaping, with an illustration of what is intended to be retained/restored and what contemporary layer is to be added. This should clearly articulate how the original design intent is to be reflected in the proposed site design.

#4 Security Requirement/Site Staging/Logistics

- Consult the previous FHBRO recommendations related to the Security Fence
- Submit guidelines for site construction protection and a phased construction site plan with existing landscape elements identified, along with appropriate protection measures.

#5 Photovoltaic Panels

- Option 3B of the presented options is preferred.
- Please submit schematics of long distance views illustrating the PVP installation at a 10 degree angle, specifically from the bridge

#6 Roofs

- The green roofs are seen as an appropriate way to balance contemporary needs with the projects biophilic requirements, but must be integrated into the design in a compatible and subordinate way.

Please submit:

- analysis justifying choices and locations of rooftop treatments;
- renderings showing rooftop treatments, including planters, sedum trays, PVP, and occupiable terraces;
- rendering of roof vegetation trays in various colour schemes (but consistent in colour throughout each option);
- renderings from inside looking onto rooftops; and
- a design concept for the planting trays and their (reversible) mounting mechanisms.

#7 Building Envelope/Wall Upgrades

- Option 3 from the presentation documents is preferred
- Inconspicuous envelope mock-ups should be undertaken and monitored to ensure performance over the course of at least one year.

#8 Windows

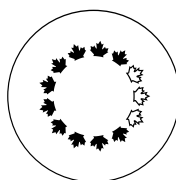
- Continue to seek solutions to minimize the size of the mullions.
- Please submit a detailed comparison of the difference in mullion size from the original design to double and triple glazing.
- Provide analysis regarding assessed risk of bird collision to inform the design approach

#9 Common Spaces

- Option #1 from the presentation is supported. As design develops, seek to minimize the impact of fire shutters through detailing the Design Development stage.
- Submit documents to show what areas and original material will be effected by the new exits.

#10 Interior Interventions

- The continued use of noble materials should be prioritized
- More research should be gathered related to the original design intent regarding the use of Canadian materials in the proposed finishes
- There should be a consistency between floors to create an overall sense of cohesion throughout the building
- Take advantage of the inherent character (non-heritage) and the idea of reintroducing original features in the building to reverse previous incompatible modifications and finish choices.
- Prepare and present a material and color palette proposal to the FHBRO.
- The continuation of a commissioned art program is supported



NATIONAL CAPITAL COMMISSION COMMISSION DE LA CAPITALE NATIONALE

Excerpt of the Minutes of the

Advisory Committee
on Planning, Design and Realty

Meeting of May 16 and 17, 2019

2018-P182 - Lester B. Pearson Building
Rehabilitation (C)

These minutes have not been approved yet.

Members received a presentation on the Lester B. Pearson Building Rehabilitation project. They appreciated the detailed presentation that responds to their previous advice. They made the following comments:

Envelope Testing

- Mock-ups and lab tests should be performed on existing concrete panels including thermal insulation, attachments for seismic upgrades, and water infiltration to ensure performance and durability in all weather conditions.
- Balancing energetic performance requirements with conservation requirements is a key challenge when rehabilitating a heritage building. Micro cracking, freeze-thaw cycles, and moisture penetration are of particular concern.

Glazing

- The original design intent with regard to contrast between horizontal precast concrete cladding and glazing should be retained.
- There is a concern that the window

Extrait du procès-verbal du

Comité consultatif
de l'urbanisme, du design et de l'immobilier

Séance des 16 et 17 mai 2019

2018-P182 - Réhabilitation de l'édifice Lester
B. Pearson (C)

Ce procès-verbal n'a pas encore été approuvé.

Les membres reçoivent une présentation sur le projet de réhabilitation de l'édifice Lester B. Pearson. Ils apprécient la présentation détaillée qui répond aux conseils précédents. Ils font les commentaires suivants :

Essais sur l'enveloppe

- On devrait faire des maquettes et des tests en laboratoire pour les panneaux de béton actuels, incluant l'isolation thermique, les attachements pour mise à niveau sismique, l'infiltration de l'eau, pour s'assurer du rendement et de la durabilité dans toutes les conditions météorologiques.
- L'équilibre entre les exigences du rendement énergétique et celles de la conservation est un défi important lors de la réhabilitation d'un édifice du patrimoine. Les microfissures, les cycles gel-dégel et la pénétration de l'humidité sont une source de préoccupation.

Vitrage

- On devrait conserver l'intention originale du design vis-à-vis du contraste entre le revêtement horizontal de béton préfabriqué et le vitrage.
- Il y a une inquiétude vis-à-vis du fait que

2018-P182 - Lester B. Pearson Building Rehabilitation (C)

These minutes have not been approved yet.

mullions will take a structural character, changing the original design concept (horizontal bands of concrete and clean glazing bands). The consultant should explore the use of structural silicone glazing (SSG) to achieve better proportions.

- Colour of mullions and exterior fence should be consistent.
- Glazing should be as transparent as possible while respecting the original design.

Landscape

- The original design has been well interpreted.
- It will be a challenge for plants to survive the Ottawa winter; specifying hardy species is necessary.
- The combination of the plant species proposed might compromise the linearity of the design. This aspect should be part of the concept.
- The relationship between old and new will need to be clarified for the greenhouse and the Ambassador's Courtyard.
- With such a dark building, it will be important to bring colours and life to the complex through the lighting scheme and landscape.

Building Interior

- The building interior should add interest and inspire users.
- Occupants should be able to use courtyards as much as possible.

Committee Secretary

Caroline Bied

2018-P182 - Réhabilitation de l'édifice Lester B. Pearson (C)

Ce procès-verbal n'a pas encore été approuvé.

les meneaux des fenêtres vont prendre un caractère structural et changer le concept original (bandes de béton horizontales et bandes vitrées épurées). le consultant devrait étudier l'utilisation de vitrage de silicone structurel pour obtenir de meilleures proportions.

- La couleur des meneaux devrait être la même que celle de la clôture extérieure.
- Le vitrage devrait être aussi transparent que possible tout en respectant le design original.

Aménagement paysager

- Le design original a été bien interprété.
- La survie des plantes face à l'hiver d'Ottawa représente un défi; il faut spécifier que les espèces doivent être résistantes.
- La combinaison des espèces de plantes proposées pourrait compromettre la linéarité du design. Cet aspect devrait faire partie du concept.
- La relation entre ancien et nouveau devra être claire pour la serre et la cour de l'ambassadeur.
- Avec un bâtiment aussi foncé, il sera important d'apporter des couleurs et de la vie au complexe grâce au plan d'illumination et l'aménagement paysager.

Intérieur du bâtiment

- L'intérieur du bâtiment devra être intéressant et inspirer les usagers.
- Les occupants devraient pouvoir utiliser les cours autant que possible.

Secrétaire des comités