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Design Narrative

Background

The Ontario Association of Architects (OAA) initiated this design competition to advance the goals at the foundation of the recently completed Renew + Refresh initiative. The competition is described as, “a natural extension and continuation of the ethos underpinning the OAA‘s Renew + Refresh project”.
Specific design objectives as set out by the OAA comprised the following:

1. Create a welcoming arrival experience
2. Complement and enhance the building
3. Provide a design solution that meets budgetary parameters
4. Acknowledge the Don River Watershed context
5. Acknowledge our relationship with Indigenous Peoples
6. Deliver sustainable stormwater design solutions
7. Public Education and Awareness
8. Improve pedestrian and vehicular access to the site and the building

The landscape interventions as proposed are successful in achieving these objectives, while celebrating the site’s unique ecological context, dynamic natural processes and architectural excellence.

The Vision

CELEBRATE THE SITE'S ECOLOGICAL CONTEXT: The OAA site is situated on land that was once a part of the physiography of the Don River valley. This valley has been a rich habitat for flora and fauna for generations. The First Peoples relied upon the valley and the river for physical and spiritual sustenance. As the land was settled and Toronto evolved, the connection between the site and the river was severed. The concept for the renewal of the landscape is aimed at re-establishing and celebrating the connection between the site and the valley corridor by extending the physical form and ecological function of the valley landform into the site, and by positioning the element of water as the centerpiece of the composition.

CELEBRATE DYNAMIC NATURAL PROCESSES: The proposed landscape interventions seek to model the integration of resilient natural systems within the urban fabric while embracing Indigenous knowledge and tradition to recognize and respect water as sustainer of life. The proposed design prioritizes celebration as a critical posture to healing our relationship with the land. Inspired by Indigenous tradition of ceremony as a way to acknowledge the land and its good gifts, the design elements work together to expose and celebrate natural processes and their annual rhythms and encourage change from a perspective of gratitude and humility, rather than guilt and fear.

CELEBRATE ARCHITECTURAL EXCELLENCE: Built on the first two core elements of the vision, the design is reverent to the iconic architecture of the OAA building and is aimed at amplifying the presence of the key features of the structure and integrating them with the landscape. The design also seeks to celebrate the work of architects and bring the talent of OAA members into the public eye. The design creates a forum for the display of the talent, creativity, and vision of the membership.

Big Moves

STRUCTURE: The structure of the landscape plan is founded upon the celebration of water. Key interventions include a new tributary system and wetland that will replace the existing underground stormwater conveyance system. The site’s grading emulates the morphology of the valley and will bring rainwater to the surface, enveloping the building in the valley landform. The tributary system will be fed by a waterfall feature located at the front of the building which will create a unique and highly animated experience for visitors during rain events. The existing roof leader system will be disconnected from the storm sewer system within the first-floor ceiling and redirected via a steel channel to the waterfall where runoff will tumble more than 5 meters to the tributary and wetland system below. The proposed wetland will include diverse plant communities composed of indigenous medicinal flora and habitat supportive native species. The system as proposed will capture, treat and control 90% of all rainfall events and mitigate peak flows.

PRACTICAL SUSTAINABILITY: The plan was conceived with the objective of addressing practical issues with a focus on sustainability. The reduction in the extent of hard surface paving in-turn reduces the requirement for stormwater management while allowing for an increase in the area of soft landscaping. The introduction of permeable pavement is limited only to areas where it will function most efficiently to enable attenuation and infiltration. Trench drains and culverts are proposed to redirect runoff to planted areas that require irrigation, eliminating the need for storm sewers or irrigation systems. Pavement and sub-base materials that are proposed to be removed will be harvested and re-used as infiltration media and tributary substrate. Earth that is excavated to create the valley landform will be re-used on site to create landforms that are designed to screen undesirable views and frame the building.

ARRIVAL EXPERIENCE: The design is focused on amplifying the connection to the ‘front door’ from the street. The stair tower is a signature element of the building. In response, the design is aimed at bringing the architectural form of this iconic element to the street. The proposed stairway will provide direct access to the main entrance while separating pedestrians from vehicle traffic. A boardwalk is proposed to traverse the wetland while providing barrier free access to the building. The landform that is proposed to establish the wetland and tributary system transitions from organic to geometric, complementing the angular form of the building and melding the building with the topography. Interpretive displays will educate the public about the stormwater management function and ecology of the tributary and wetland system.

CELEBRATING THE PROFESSION: While the OAA building is distinctive and exemplary, it is somewhat anonymous from the street. The proposed design is aimed at conveying the identity of the OAA and demonstrating the talents of its members. A display wall and court are proposed north of the stair tower which will allow members to exhibit their work through the use of a projection system and physical models that will be visually prominent from Moatfield Drive. Rotating curation is proposed to animate the space throughout the year. This space will elevate public awareness of the architectural profession. A projection system is also proposed to animate the wall west of the main entrance to enhance the entrance experience.

NATURAL EVOLUTION: The landscape is proposed to comprise of a forest edge community, a grassland, wetland, and tributaries that will be planted with native, indigenous species that will succeed naturally over time with minimum maintenance. The species that have been selected are appropriate to microclimate and soil moisture regime, while providing habitat benefits. Perimeter plantings are designed to contain and frame views from both the ground level and the upper-level meeting spaces within the building.

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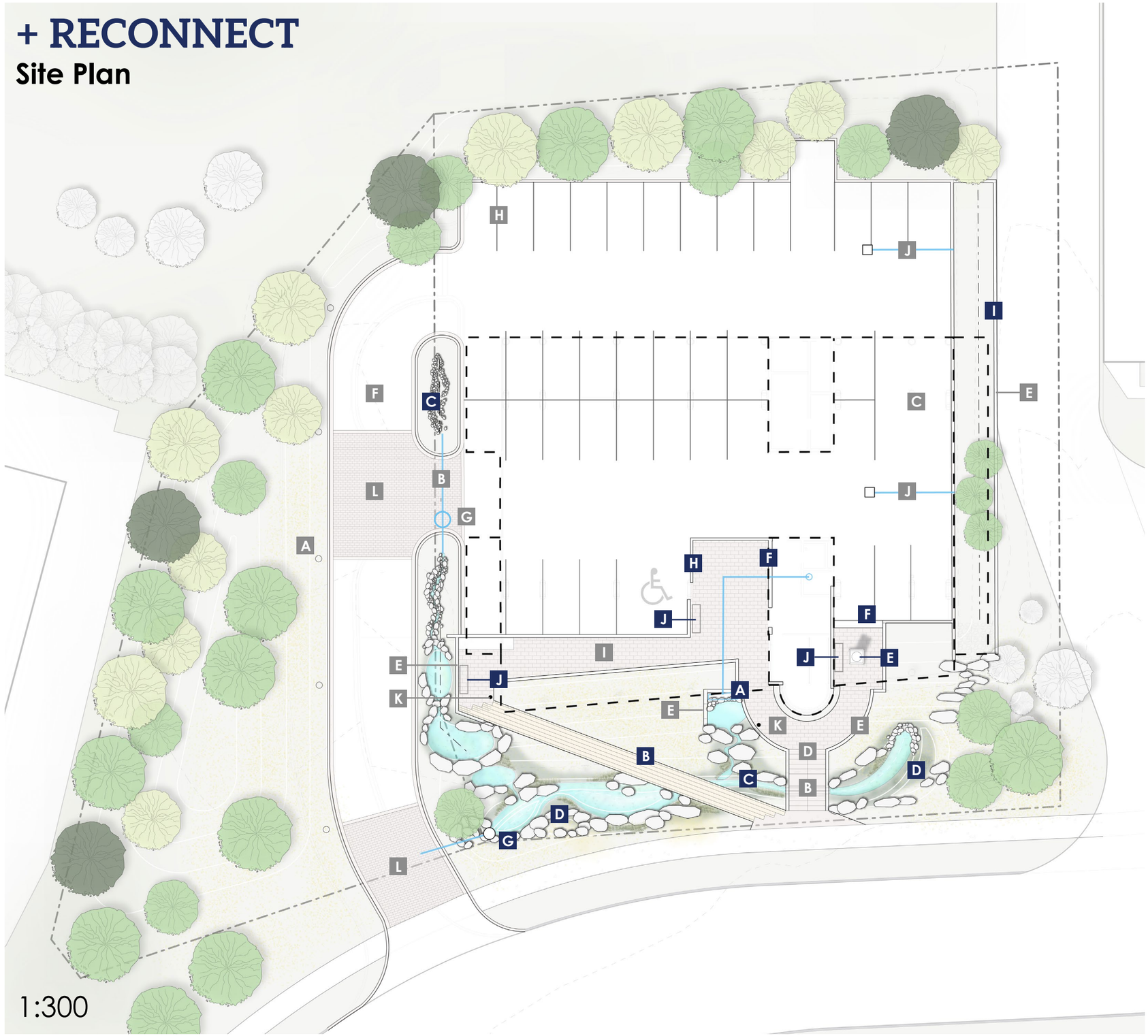
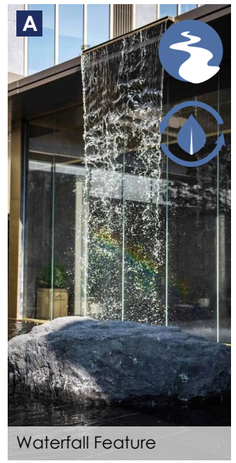
Site Plan

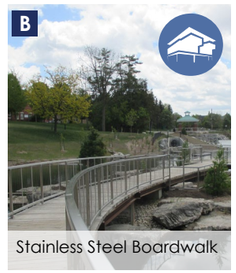


Design Details

- **A** Relocated Solar Light Bollards
- **B** CSP Culverts
- **C** Removal of four (4) parking stalls to permit vehicular loop
- **D** CIP concrete staircase (3m wide)
- **E** Precast concrete retaining wall
- **F** Realigned asphalt entrance aisle (7m width)
- **G** Modification of Existing Manhole to permit flows to surface
- **H** Electrical vehicle charging stations (2)
- **I** Interlocking paver pedestrian pathway
- **J** Trench drain
- **K** Interpretive signage (2)
- **L** Permeable Pavers

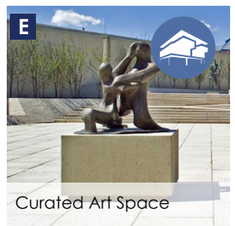
Site Features

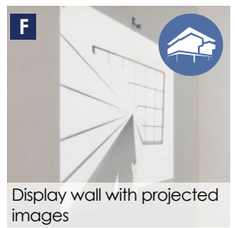

A
Waterfall Feature


B
Stainless Steel Boardwalk


D
Wetland Pockets

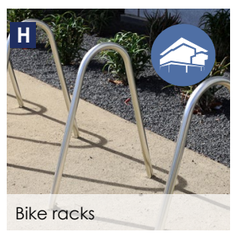

C
Tributary System


E
Curated Art Space


F
Display wall with projected images


G


Laser cut stainless steel outlet riser


H
Bike racks


I
Bioretention Planter


J
Benches

0 5 10 15m

Sumac

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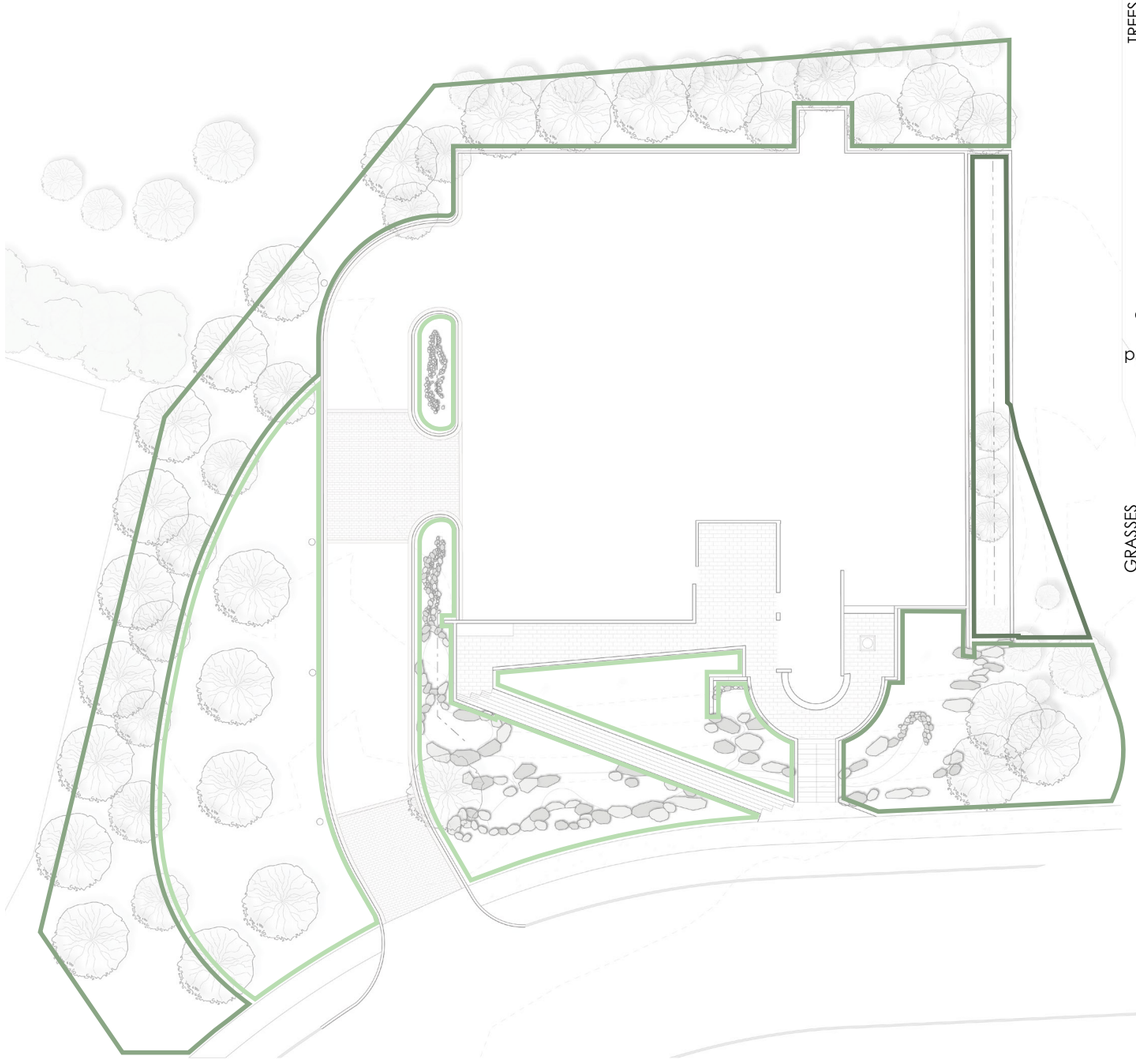
Planting Plan



FOREST EDGE

This palette was selected to reflect the composition of the Don River valley and its historical vegetation communities. Sugar Maple, White Pine, Red Oak, Paper Birch, Sumac and Alternate-leaf Dogwood will create a strong edge condition, framing views and providing a natural buffer between land uses and the valley corridor. The phenology calendar (right) summarizes the seasonal cycles of the forest edge community.

TREES

Acer saccharum

Pinus strobus

Quercus rubra

Betula papyrifera

Populus tremuloides

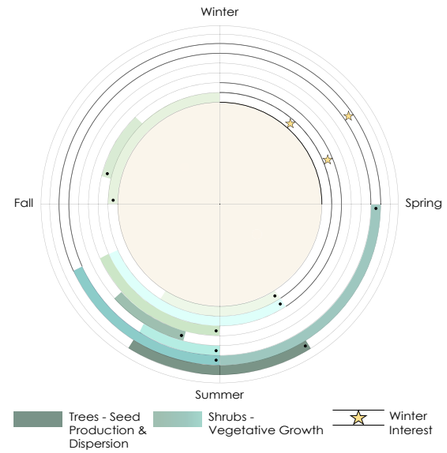
SHRUBS

Amelanchier

Rhus typhina

Cornus alternifolia

Viburnum dentatum



GRASSLAND

This community was selected to reflect the valuable landscapes stewarded by Southern Ontario's original caretakers. Dry and moist grasslands once dominated the landscape and were managed and celebrated by Indigenous peoples long before colonization. Black Oak with foundation planting of Sand Cherry and New Jersey Tea will be scattered throughout the landscape to provide structure while Little Blue Stem, Prairie Dropseed, Junegrass, Wild Rye and medicinal Sweetgrass will create a dynamic ground plane providing year-round visual interest. Low growing, flowering species of coneflower, sunflower, butterflyweed, aster and lupines will provide splashes of colour and highlight the passing of the seasons. The phenology calendar (right) summarizes the seasonal cycles of the grassland community.

GRASSES

Hierochloe odorata

Elymus canadensis

Koeleria macrantha

Sporobolus heterolepis

Schizachyrium scoparium

SHRUBS & PERENNIALS

Ceanothus americanus

Lupinus

Asclepias tuberosa

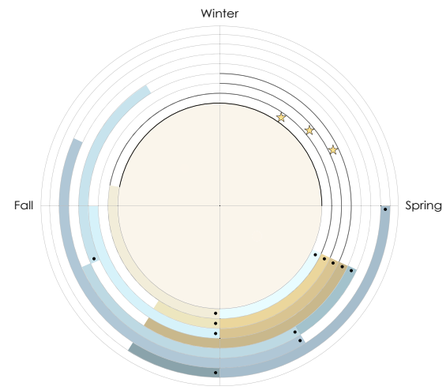
Symphyotrichum ericoides

Prunus pumila L.

Ceanothus americanus

Penstemon digitalis

Ratibida pinnata



ARCHITECTURAL EXHIBITION

To celebrate the work of the architecture profession in advancing sustainability within the built environment and to connect with the curated installation and display area to the north of the main entrance, the north side of the building will be planted with bamboo and flowering specimen trees. Bamboo has been identified as a sustainable and renewable alternative to structural steel in reinforced concrete and provides a tangible example of the valuable role plants play in shaping and supporting society. The phenology calendar (right) summarizes the seasonal cycles of the planting.

SHRUBS

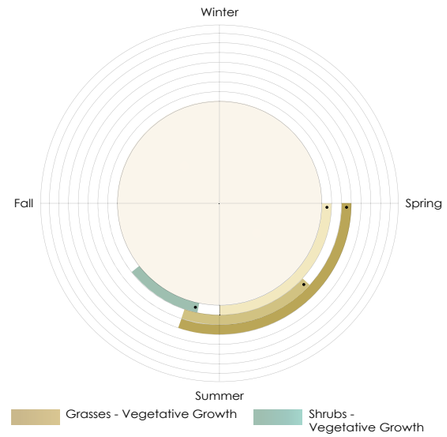
Cornus alternifolia

GRASSES

Phyllostachys aureosulcata

Sedges

Moss



Sumac

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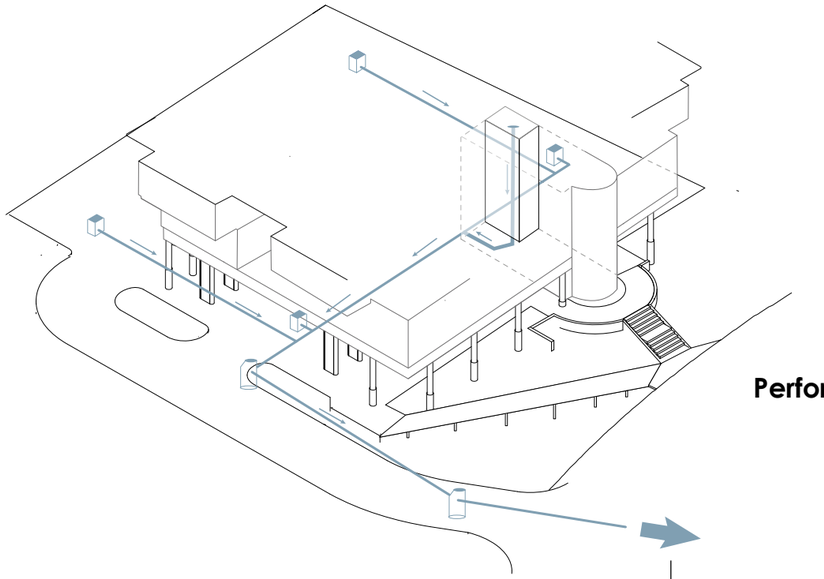
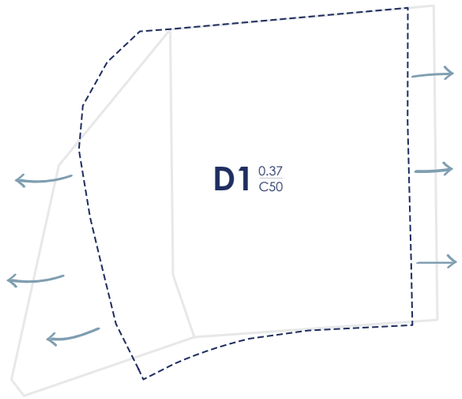
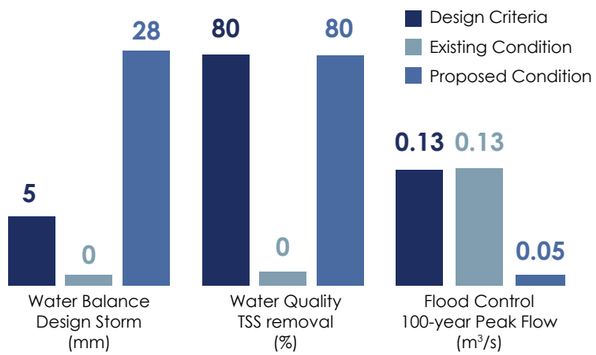
Stormwater Management Approach

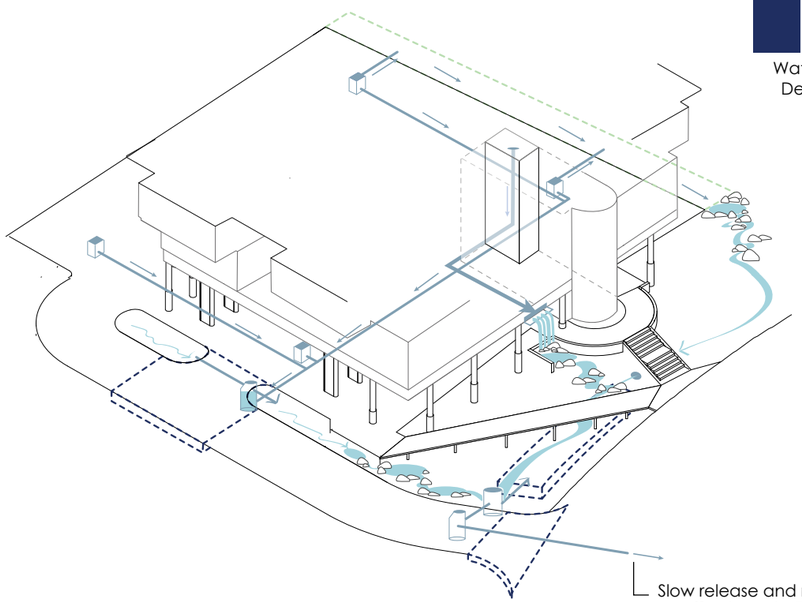


Direct discharge to Don River uncontrolled

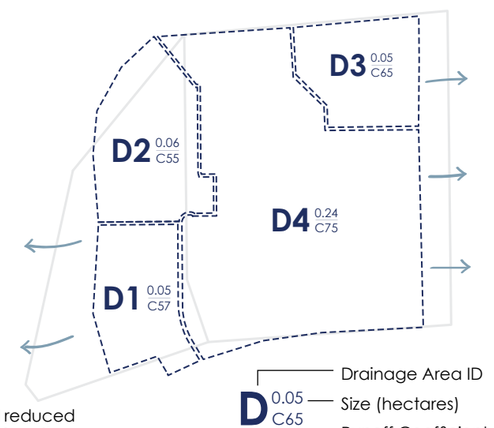


Performance Metrics





Slow release and reduced runoff volume to Don River



D 0.05 C65
- Drainage Area ID
- Size (hectares)
- Runoff Coefficient

Stormwater Narrative

The proposed approach to stormwater management prioritizes bringing water to the surface and restoring pre-development hydrological patterns; slowing, capturing and treating rainfall at the source. When rain falls at the Headquarters, the outdoor space will come to life. Runoff generated by the sites hardscape and roof will be seen rushing over waterfall features, pulsing through the site's tributaries and soaking bioretention planters providing natural irrigation and allowing water to fulfill its role as sustainer of life.

When water reaches the site's low point, a proposed laser cut stainless steel hickenbottom feature will direct flows into a subsurface infiltration facility. This facility will be 1.95m below grade (bottom elev 122.75), ensuring a minimum of 1.05m vertical separation from seasonal high groundwater per Haddad, 2015) and will provide flood control storage for the site, ensuring peak flow rates are controlled, preventing erosion in the Don River, improving water quality and enhancing groundwater recharge.

The design introduces a treatment train approach, using source and conveyance LID tools to meet and in places exceed, the targets set within the City of Toronto's Wet Weather Flow Management Guidelines (2006) and Tier 1 of the Toronto Green Standard (Non Residential Version 4) as well as the TRCA Stormwater Management Criteria (2012) and the Low Impact Development Stormwater Management Guidance Manual (MECP, 2022), the most recent state-of-the-art LID manual. A summary of the site's stormwater performance metrics is provided below.

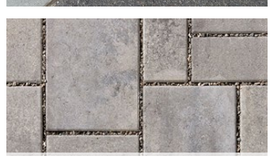
The system has the capacity to infiltrate 90% of all rain events within a 48 hour drawdown period, or the 28mm storm per the 2022 MECP LID Guidance Manual.

Per the 2022 MECP LID Guidance Manual, by fully capturing and infiltrating the 90th percentile event, the site is able to provide enhanced water quality treatment (80% TSS removal)

In the 100-year storm, the landscape will be fully saturated. All facilities have been sized to fully capture the volume required to control peak flow rates to existing levels at a minimum. Final outflow rates subject to outlet structure orifice control design (0.05m³/s used as conservative target).

Low Impact Development and Sustainable Stormwater Elements

D1-D2



Permeable interlock paver surfaces

D3

Stainless steel trench drain to bioretention planter

D4

Tributary conveyance to subsurface storage

Sumac

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Spring Perspective

Sumac