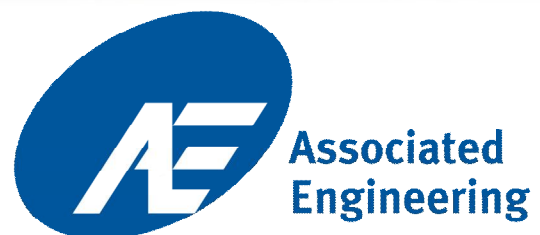




Rosehill Reservoir Rehabilitation

September 13, 2017



Agenda

Doors open	6:00pm – 7:00pm
Welcome and introductions	7:00pm – 7:05pm
Councillors Wong-Tam and Matlow	7:05pm – 7:15pm
Working Group	
(led by Rosehill Vision Committee)	7:15pm – 7:20pm
Presentation	7:20pm – 8:00pm
Questions	8:00pm – 8:30pm
Open forum	8:30pm – 9:00pm

Meeting Ground Rules

- As the facilitator, my purpose is to ensure we have a good meeting, stay on topic, on time with the agenda and finish on time
- Please show decorum and respect to both your neighbours and staff. We want to create a safe environment at this meeting to respect all opinions and feedback
- One speaker or discussion at a time please
- Please **hold all questions** until after the presentation

Welcome and Introductions

Introductions

- City Team:
 - Engineering & Construction Services
 - Toronto Water
 - Public Consultation Unit
 - Heritage Preservation Services
 - Parks, Forestry & Recreation
 - Toronto and Region Conservation Authority
- Councillors:
 - Kristyn Wong-Tam – Ward 27
 - Josh Matlow – Ward 22
- Consultant Team:
 - Associated Engineering
 - Brodie & Associates Landscape Architects
 - Brown & Storey Architects

Councillors' Address

Working Group Address (Rosehill Vision Committee)

Project Background

Background

The open-topped Rosehill Reservoir was commissioned in 1874 with a storage capacity of 156 Million Litres of potable water.



Open Reservoir, July 1936



Reservoir Construction, 1965

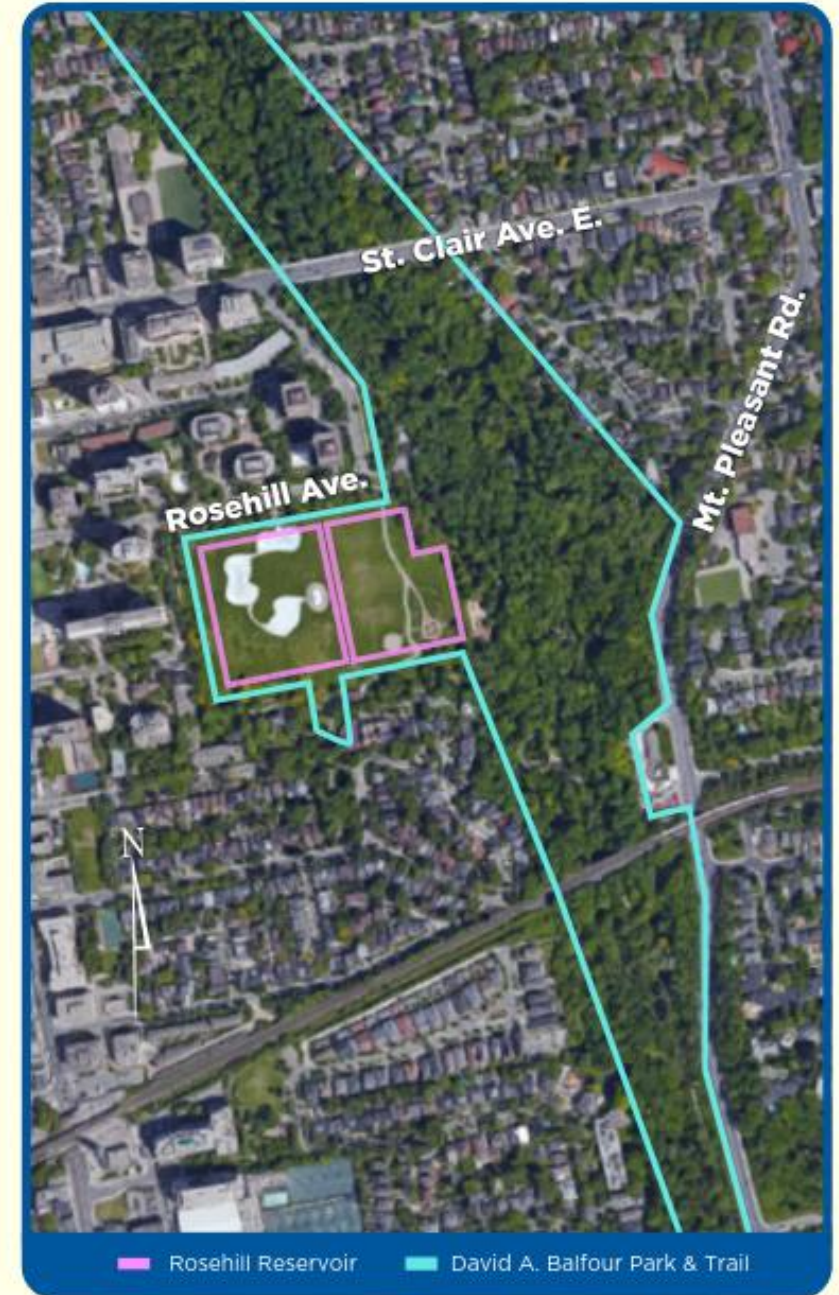
In 1966, the reservoir was expanded to a storage capacity of 270.3 Million Litres and the structure was covered.



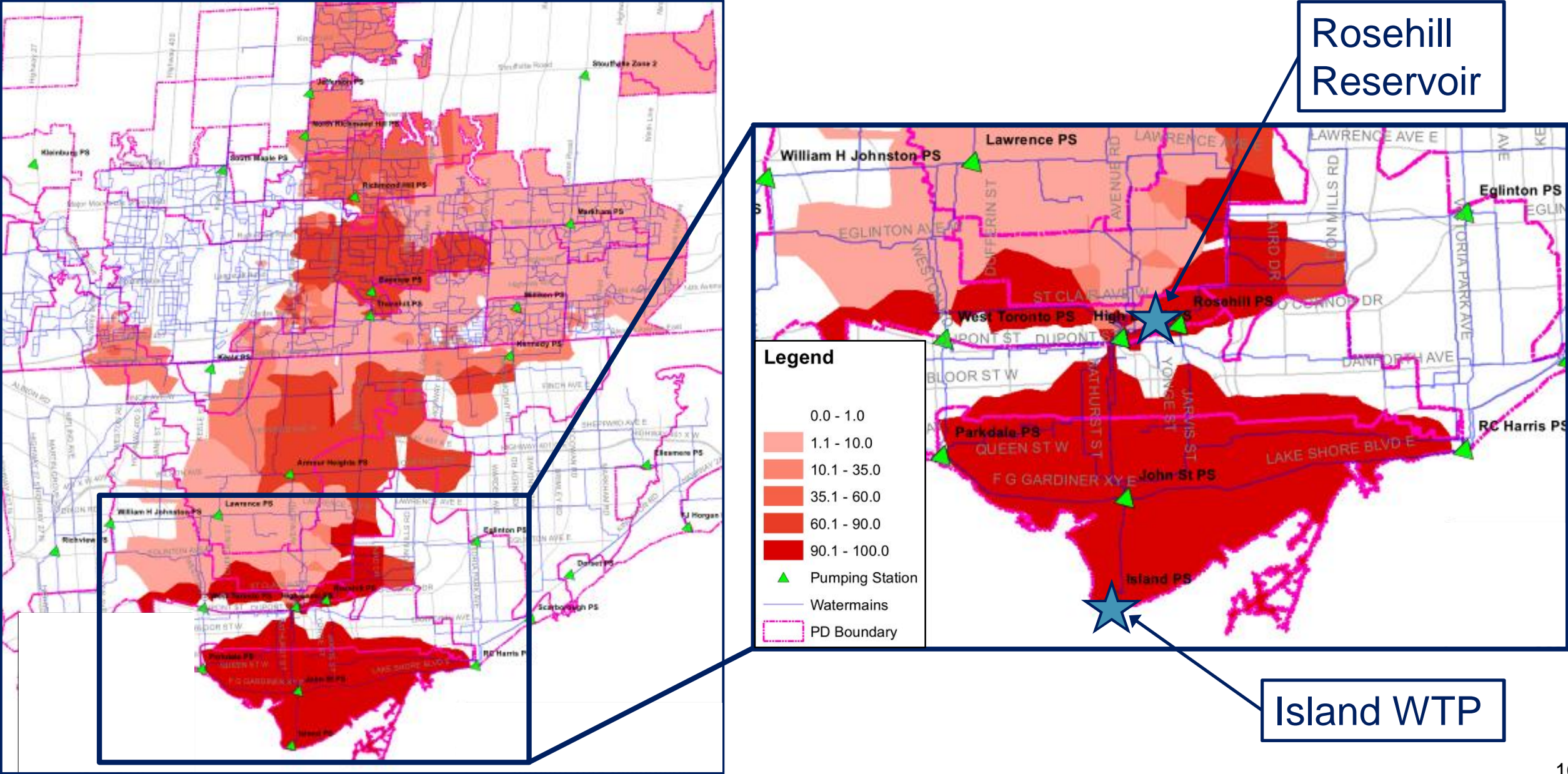
Aerial Photo, 1947



Covered Reservoir, 1975



Distribution Map



Infrastructure Rehabilitation Scope

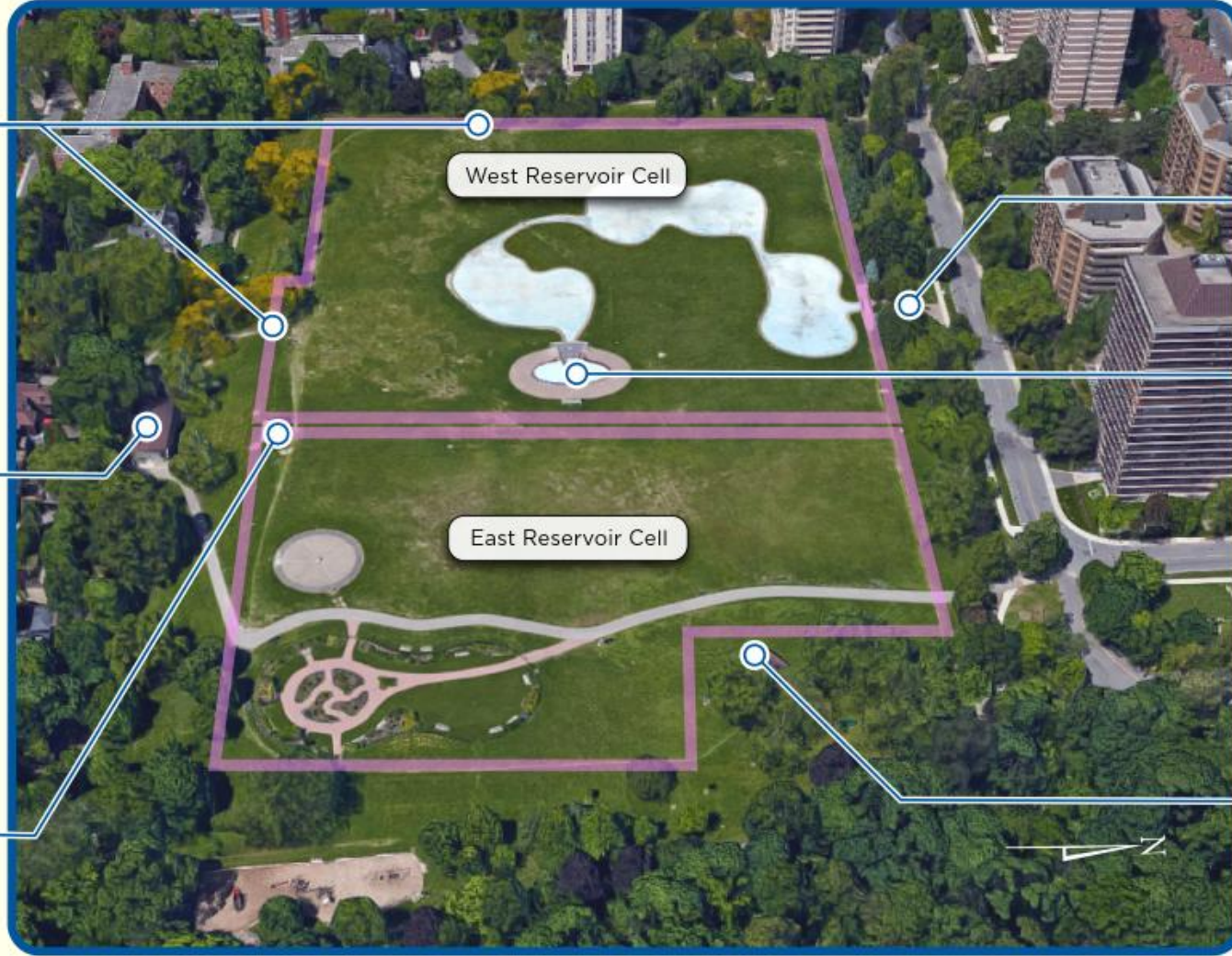
Rehabilitation Needs

- The Rosehill Reservoir was last upgraded 51 years ago (1966)
- Condition assessment was completed in 2014
- Due to the age and critical nature of the reservoir infrastructure, rehabilitation and upgrades are required to:
 - Ensure the structural integrity of the reservoir
 - Extend the service life of the reservoir
 - Bring the infrastructure to a state of good repair

Infrastructure

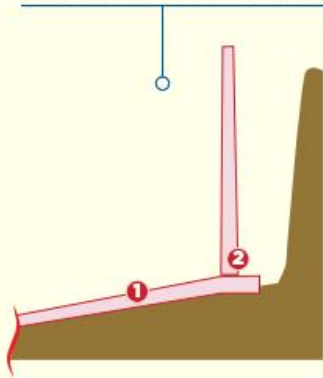


Heritage Impact

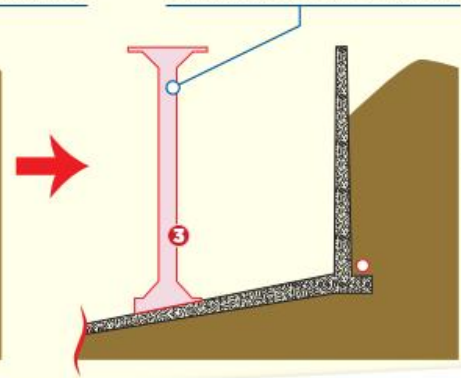


Construction Background

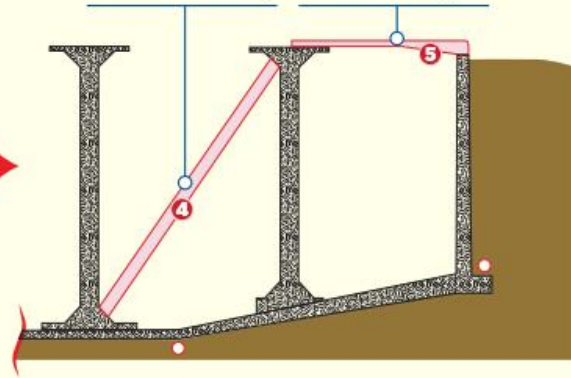
The original open reservoir was covered in 1966 in the following general sequence. First, the concrete reservoir floor was poured. The walls were then installed.



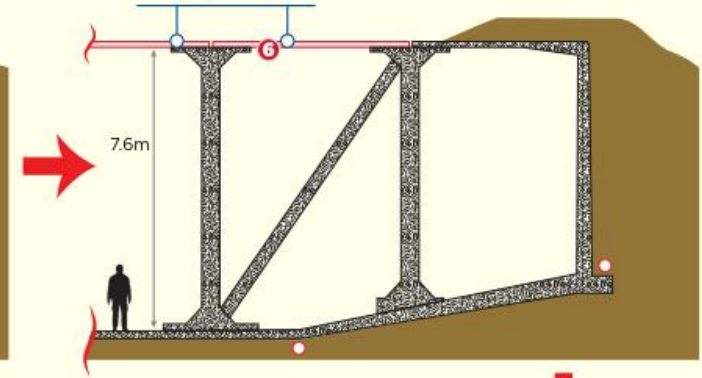
Columns were then installed throughout, to support the roof. There are over a thousand columns inside the reservoir!



In some places, bracing columns were added for structural stability.



As the columns and bracing were installed, the roof installation began.



Hundreds of separate roof panels were carefully cast-in-place, forming the roof.



Original uncovered reservoir dates back to 1874. (1875 photo)

Covered reservoir construction (1966)

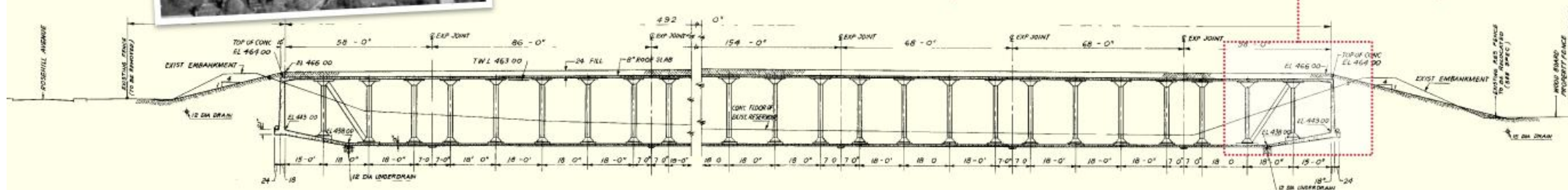
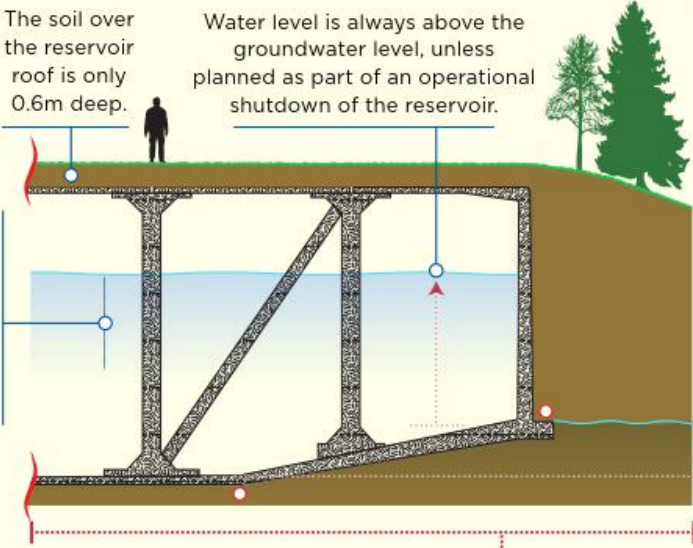
Rosehill Reservoir Park (1975)

The soil over the reservoir roof is only 0.6m deep.

Water level is always above the groundwater level, unless planned as part of an operational shutdown of the reservoir.

Operating levels are typically between 3.5m and 5.5m above reservoir floor level.

Average groundwater level is 1.5m above reservoir floor level.



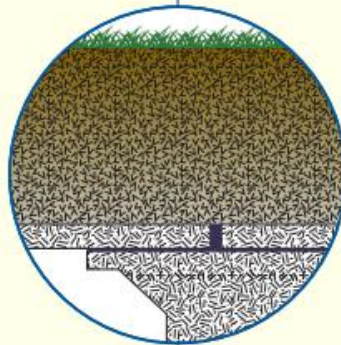
Scope of Work

The soil over the reservoir roof has a high clay content (>20%) and is not free draining. To improve site drainage, all soil over the reservoir roof will be replaced with new, well draining soil.



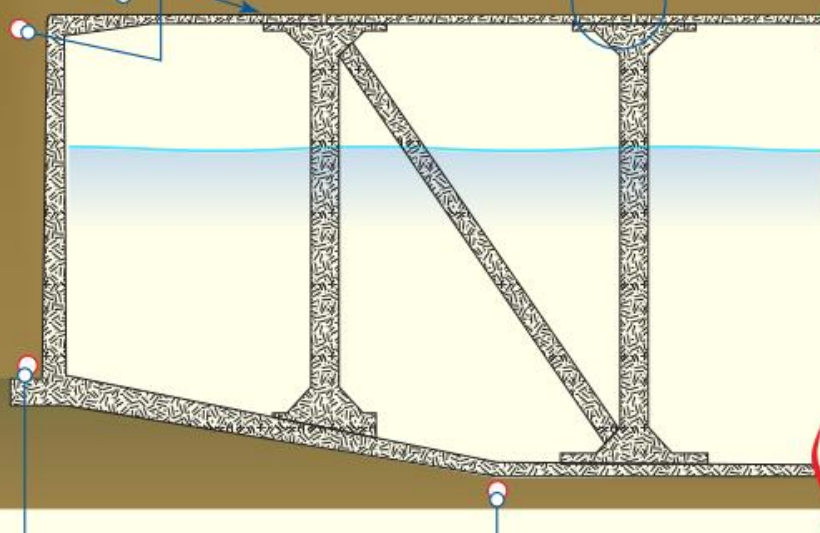
A new subdrainage system will be installed over the reservoir roof along with a new perimeter drain system to improve site drainage and minimize pooling on the surface.

Expansion joints between each roof panel (highlighted in red on the image below) require repair.



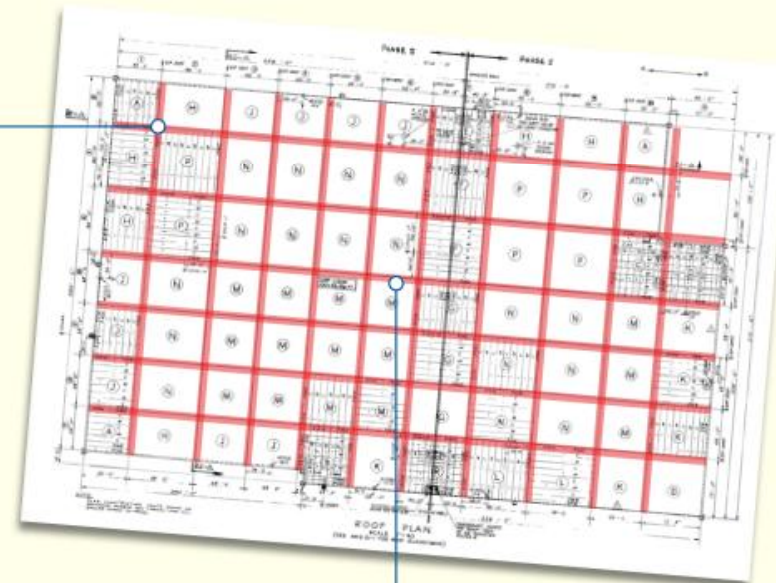
Reservoir footing perimeter drain (in-situ rehabilitation rather than open excavation)

Foundation drain



Major Rosehill Reservoir Rehabilitation scope items include:

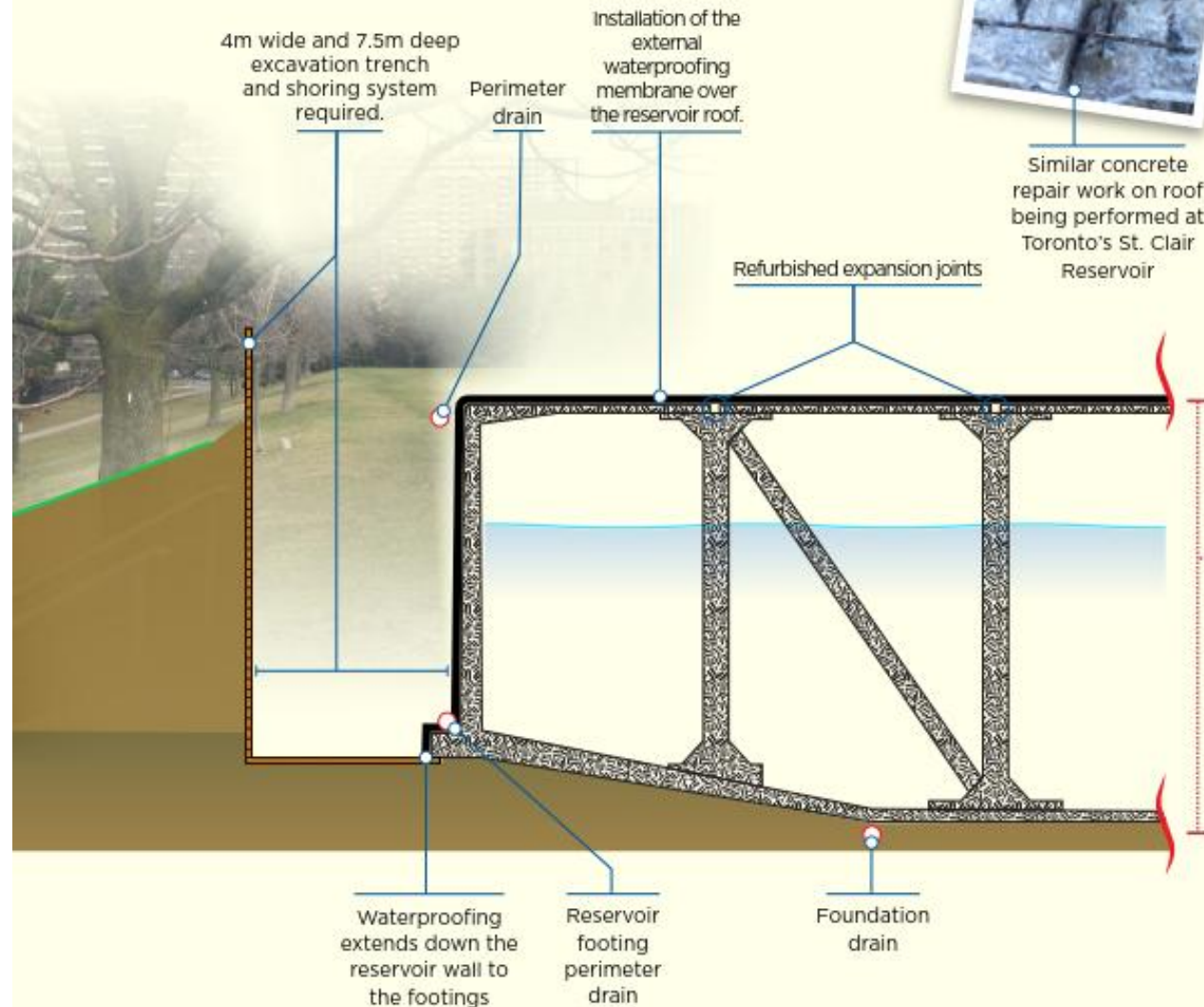
- Rehabilitation of interior and exterior concrete and refurbishment of expansion joints
- Upgrades to improve reservoir access for operation & maintenance
- Replacement of reservoir roof exterior waterproofing membrane system
- Rehabilitation of the reservoir Access House and Valve House
- Replacement and repair of process piping and valves
- Replacement of soil over reservoir roof and improvement of surface drainage
- Rehabilitation of perimeter storm drainage and perimeter footing drain systems
- Reinstatement of reservoir greenroof and park facilities



The expansion joints between each roof panel require repair. To expose and repair the joints, digging a 2m wide trench over the joints would be required. This is equivalent to 3km of 2m-wide trenches over the roof! As the scope also includes improving overall site drainage and exterior waterproofing of the reservoir roof, all soils on top of the reservoir must be removed, which will facilitate the expansion joint repair.

Waterproofing Requirements

The regulatory authority (Ontario Ministry of Environment and Climate Change (MOECC)) requires exterior application of waterproofing on reservoir roofs and walls to extend down to footings to minimize the risk of groundwater infiltration.



A

PF&R will provide this area for construction staging to avoid lane closure on Rosehill Ave., minimize the impact on trees, and maintain north/south pedestrian access.

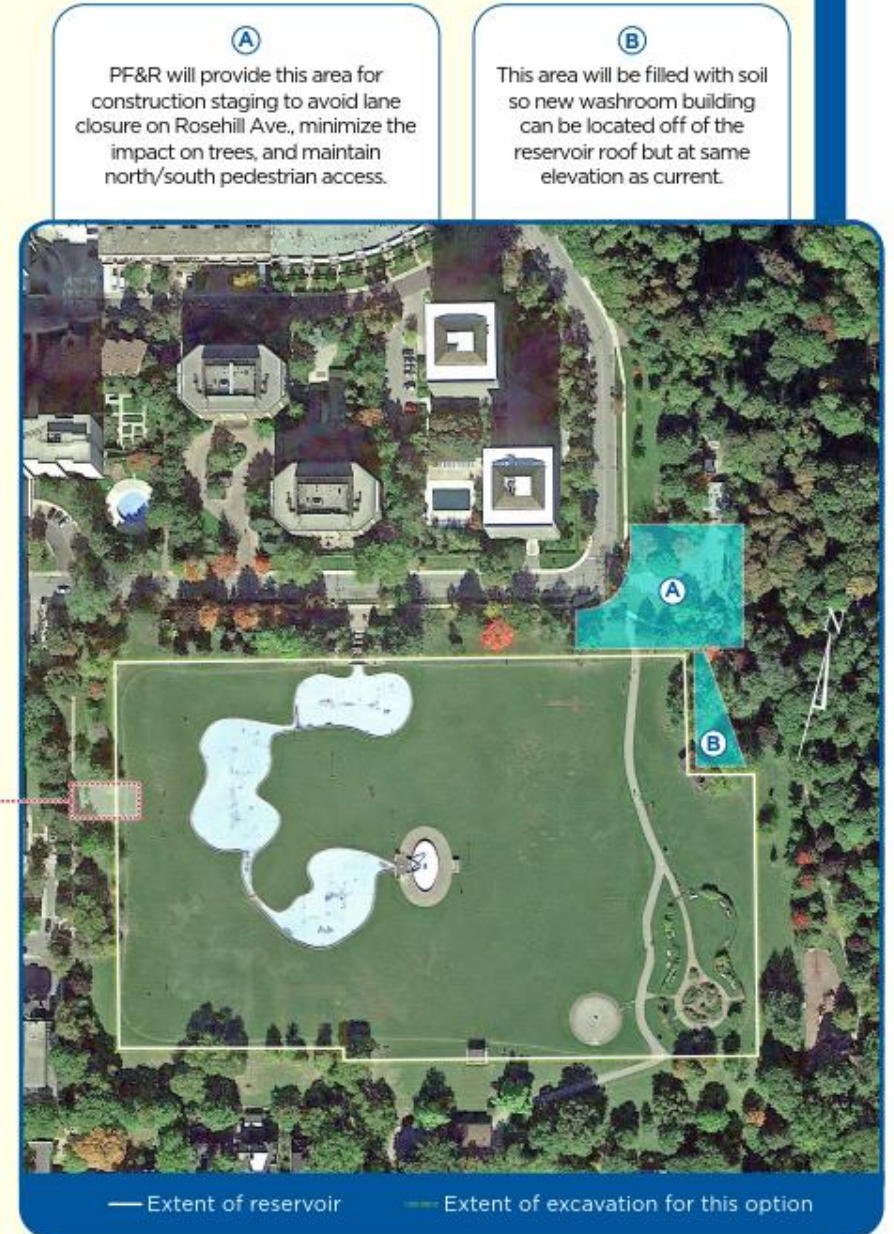
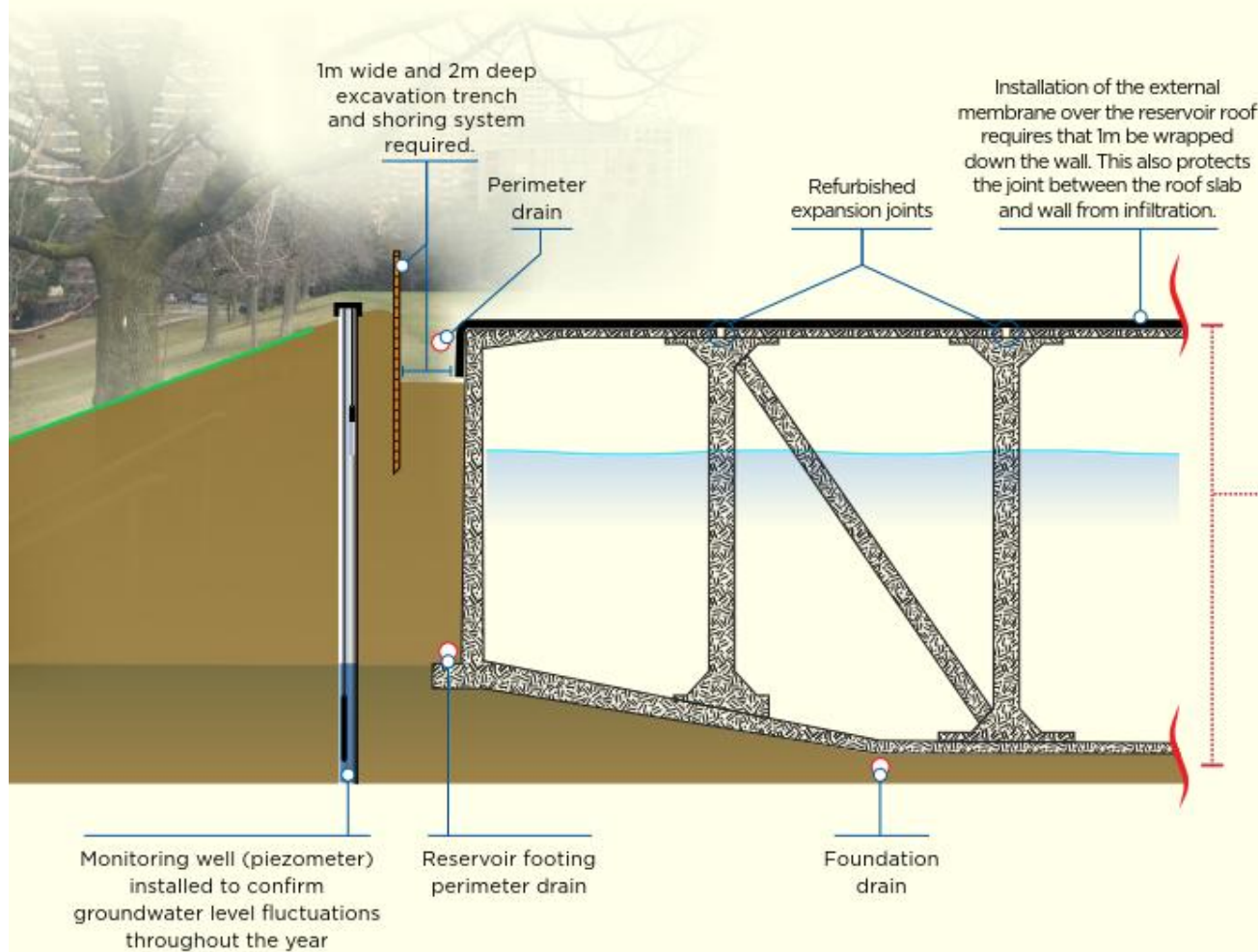
B

This area will be regraded to accommodate new washroom building off of the reservoir roof but at same elevation as current and maintaining the existing glade area.

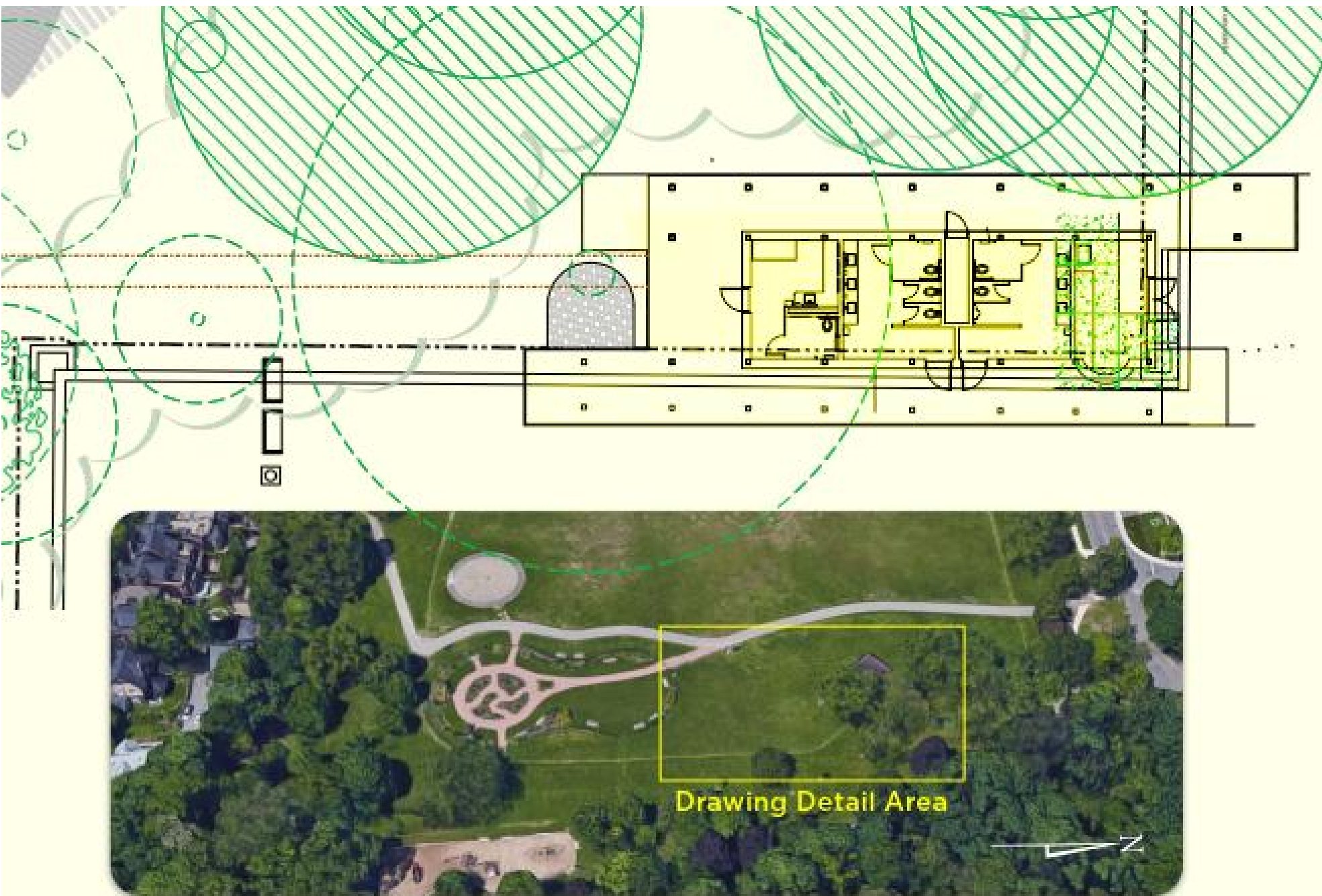


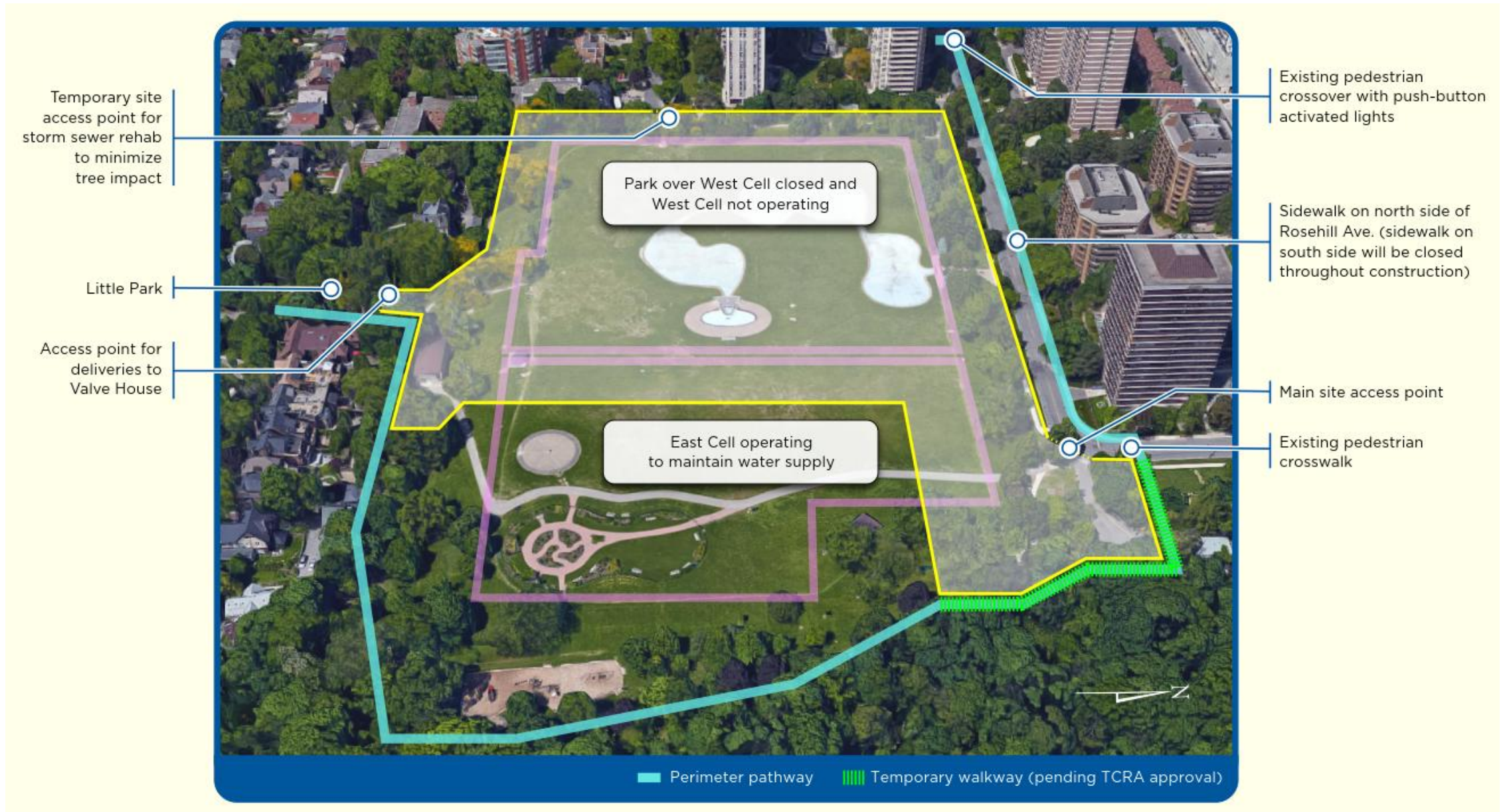
Waterproofing Approach

Groundwater level data was collected for over one year to confirm and negotiate an agreed-upon waterproofing approach. Toronto Water has also committed to implementing a special reservoir operating procedure to satisfy the MOECC that the risk of infiltration has been eliminated. The MOECC has agreed to permit the alternative and less disruptive waterproofing application which extends only 1 m down the reservoir wall from the roof.

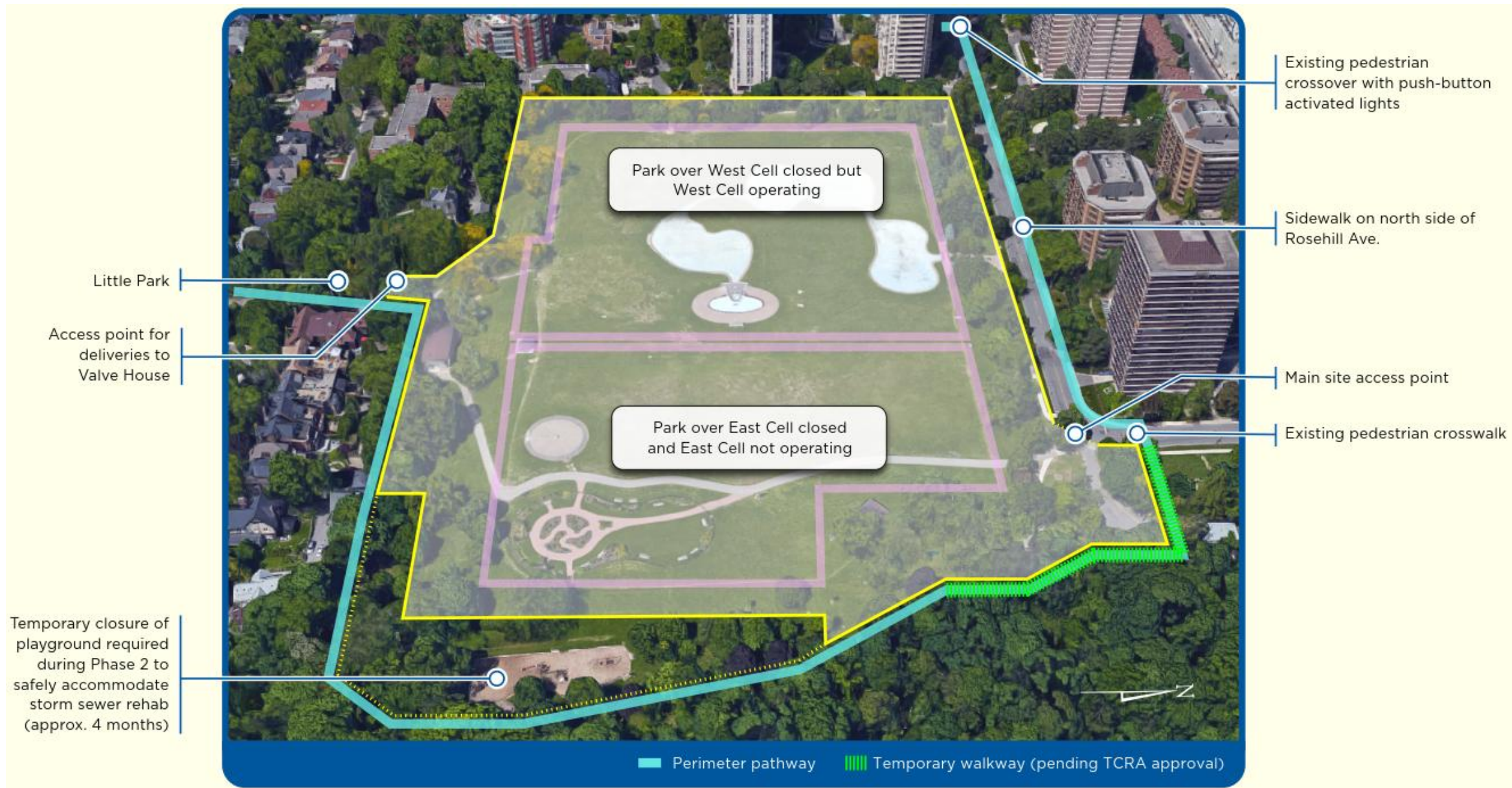


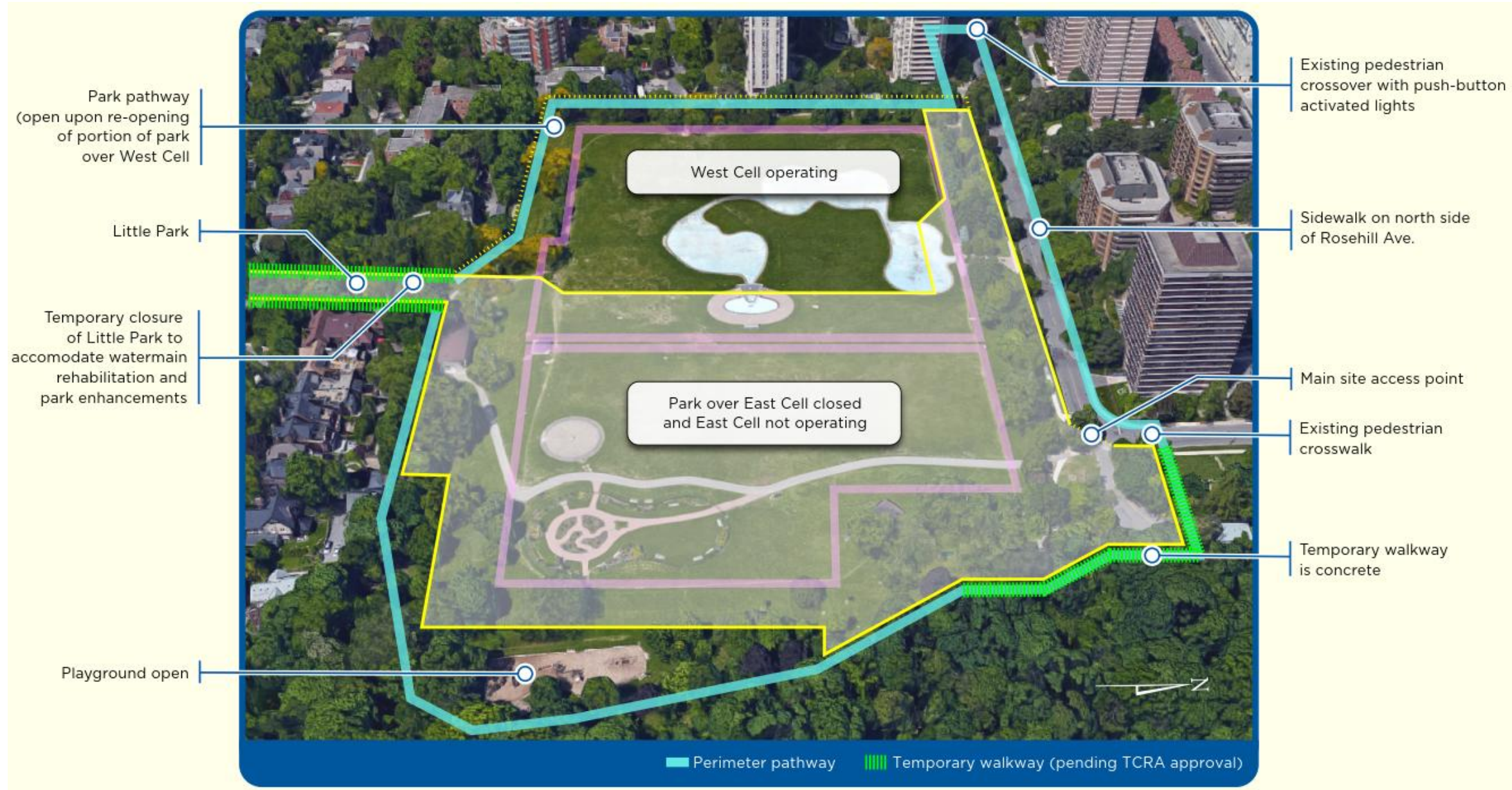
Washroom Redesign





Phase 2: Q2 2019 – Q3 2020





Public Consultation Process

Project Stakeholders

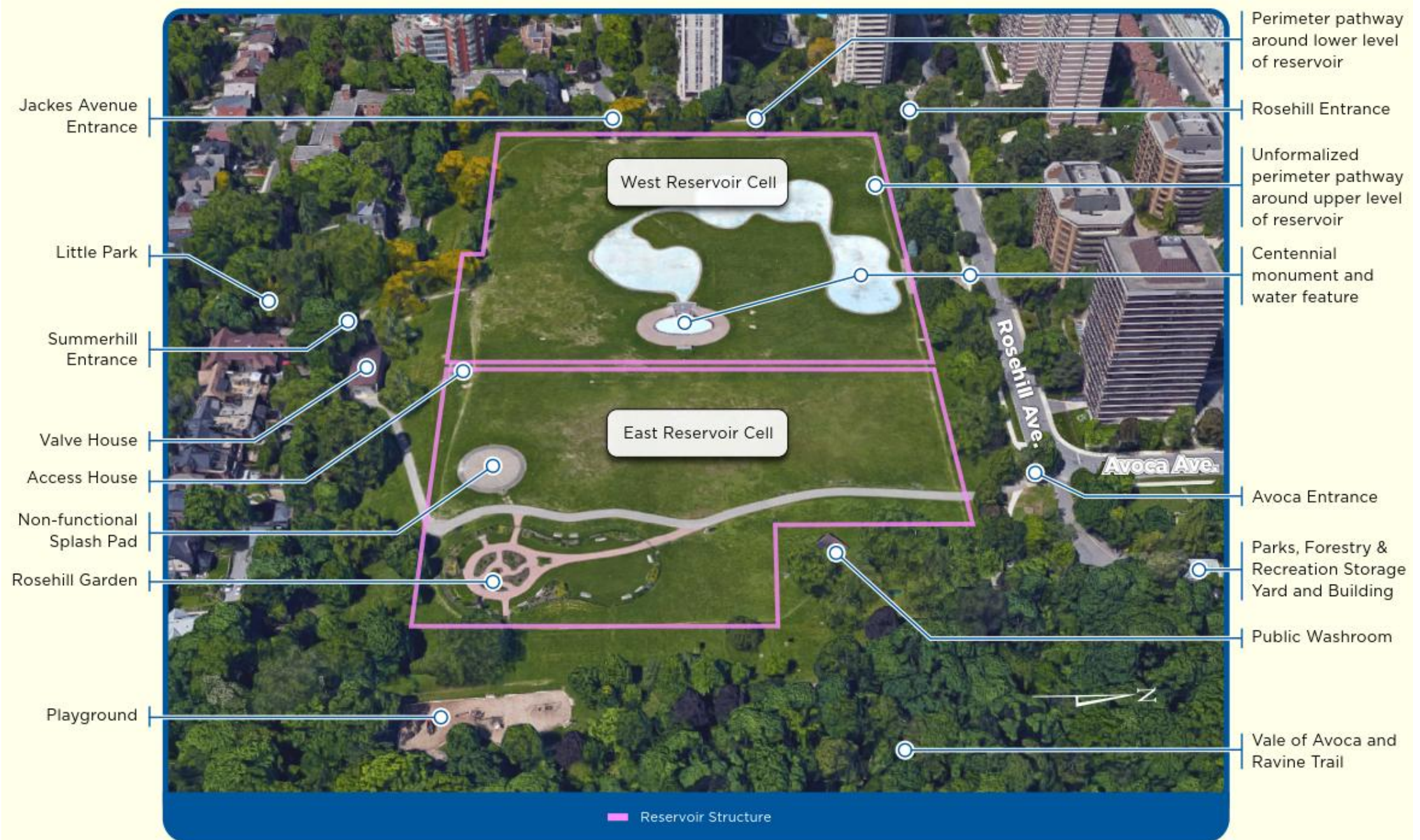
- Wards 22 and 27 Councillors
- City Divisions (Toronto Water, Engineering & Construction Services, Public Consultation Unit, Parks, Forestry & Recreation, Planning/Heritage Preservation Services)
- Toronto Regional Conservation Authority (TRCA)
- Residents and park users
- Working Group (with the Rosehill Vision Committee)
- Summerhill Residents Association
- Rosehill Garden Volunteers
- Permit takers (including sports groups and local schools)

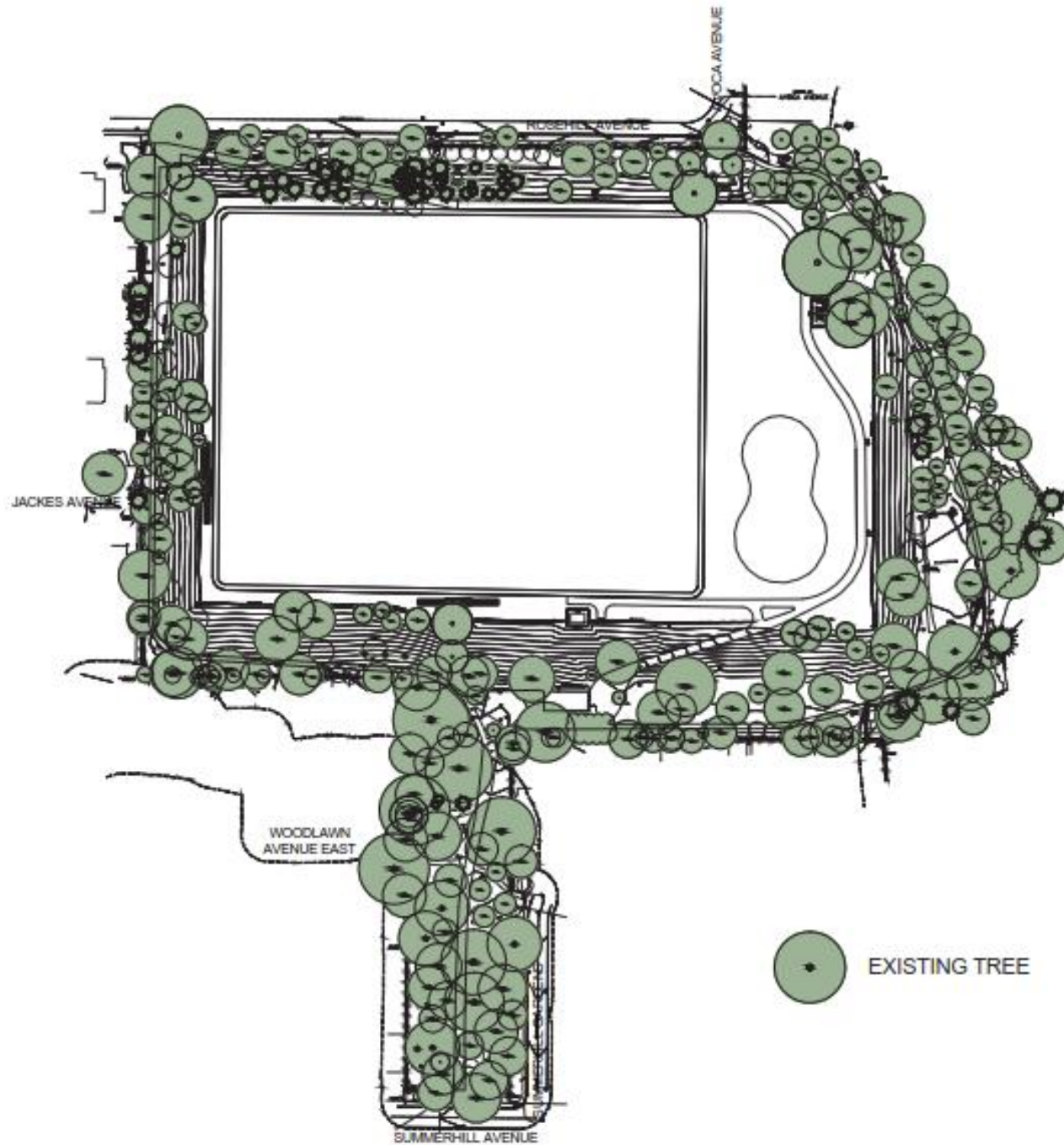
Consultation Process So Far

- 2015 onwards: Meetings and conversations with the Rosehill Garden Volunteers and local stakeholder groups, schools, and park permit holders (including sports organizations)
- Late 2015: Notices of site works delivered to study area, email list established, project website established (www.toronto.ca/rosehill)
- Spring 2016: Site signage installed, project business cards distributed on-site
- Fall 2016: Presentation to Summerhill Residents Association
- May 2017: Rosehill Vision Committee Community Meeting
- Ongoing: Email list is growing, updates are sent out regularly, website is updated regularly, and the project team continues to receive and review comments from the public via phone and email

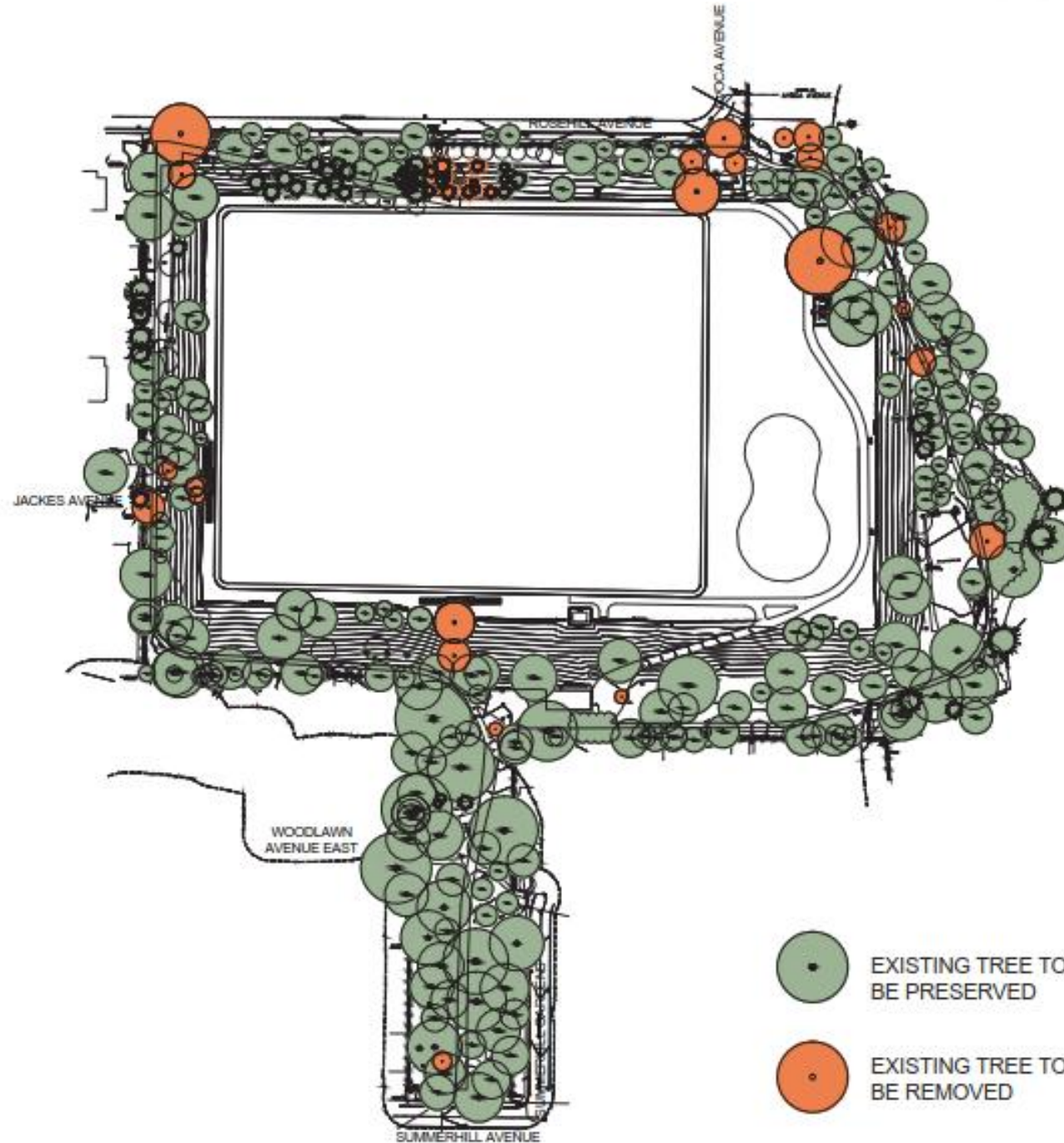
Landscape Vision

Existing Features

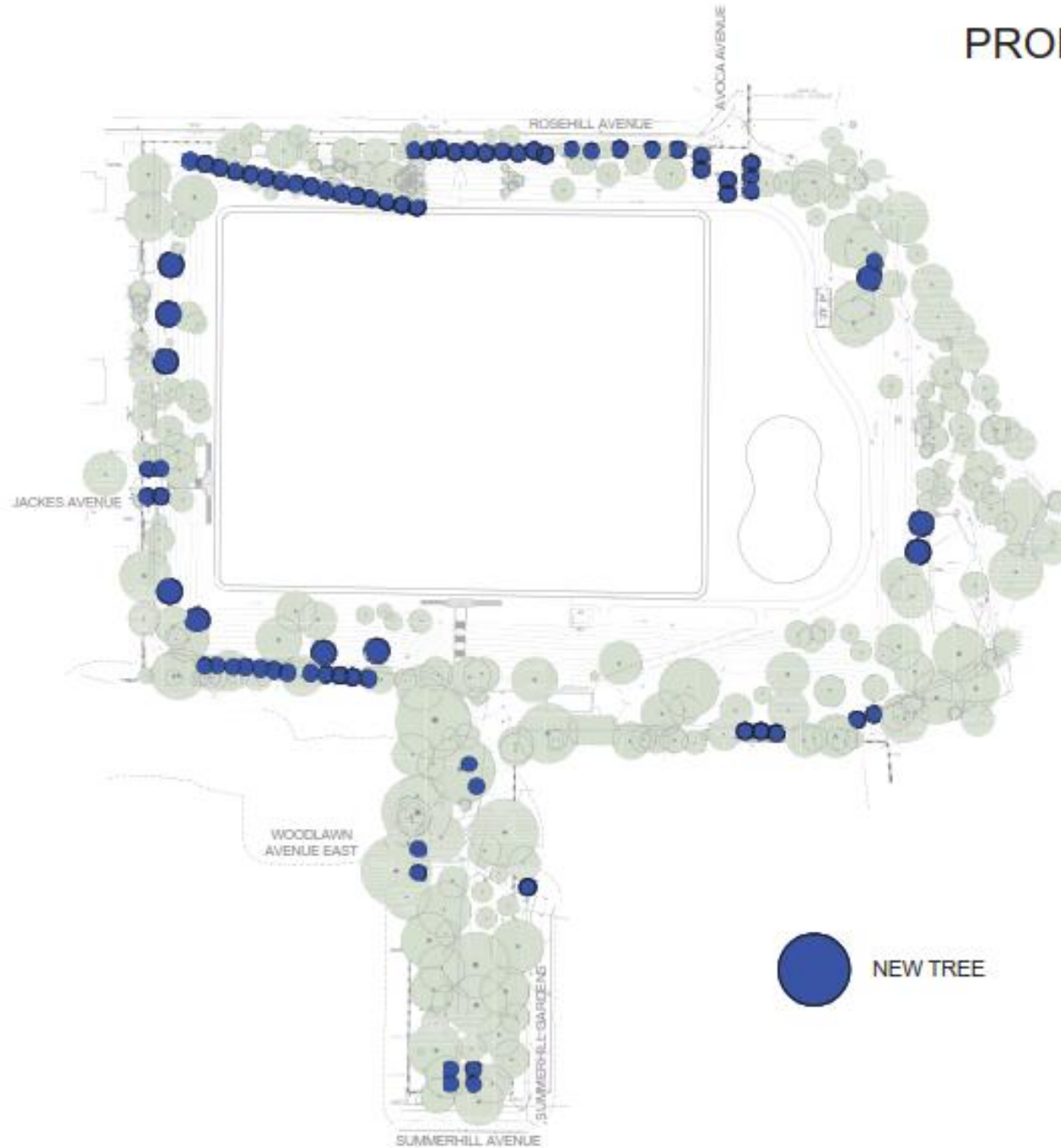




EXISTING TREES



TREE REMOVALS
(35)



PROPOSED NEW TREES (78)

GATEWAY PLANTING - PRECEDENT IMAGES

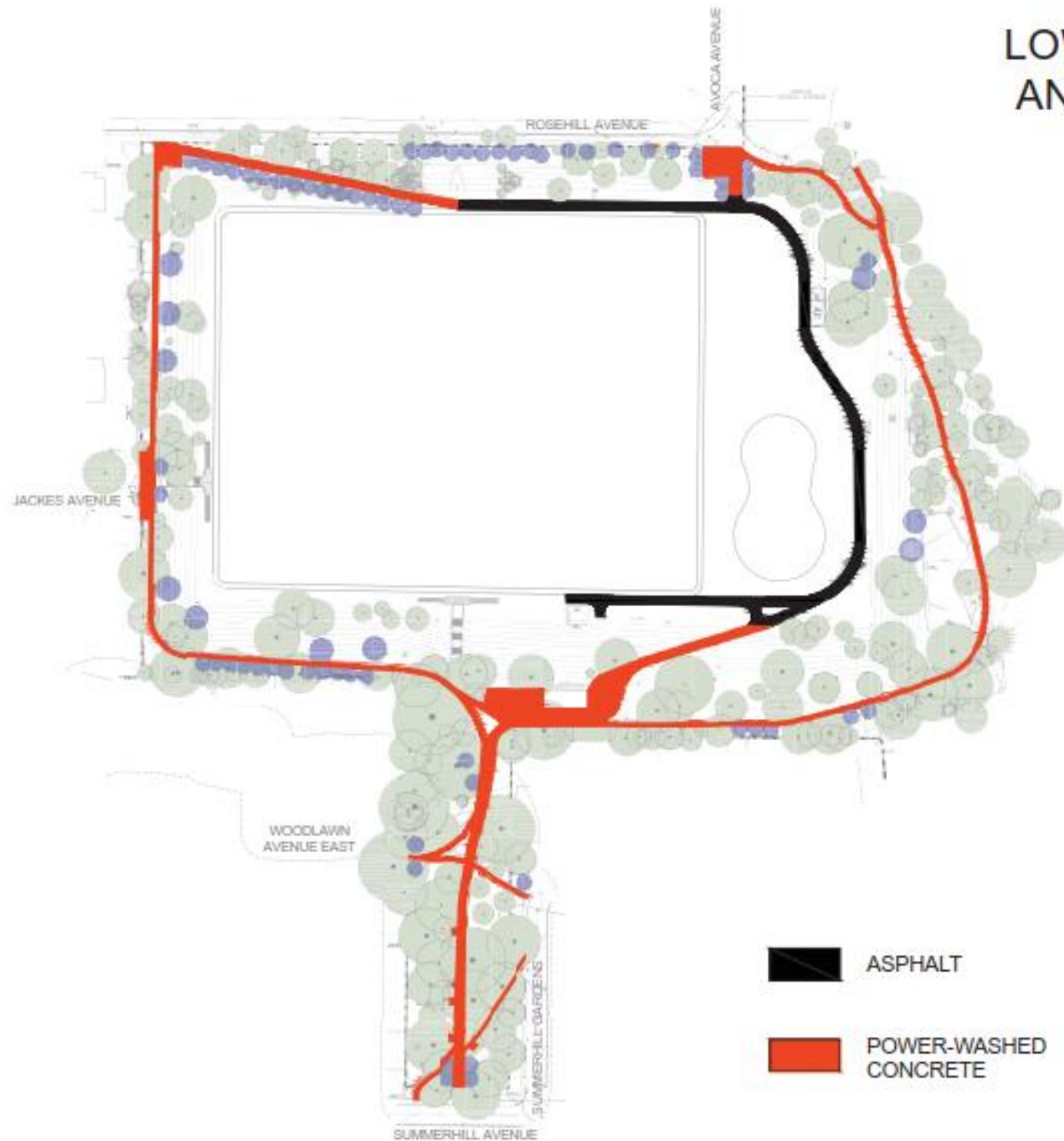


COLUMNAR TREES



MULTI-STEM SHRUBS

Landscape Vision



LOWER CIRCUIT PATH AND MULTI-USE PATH



PRECEDENT IMAGE - ASPHALT



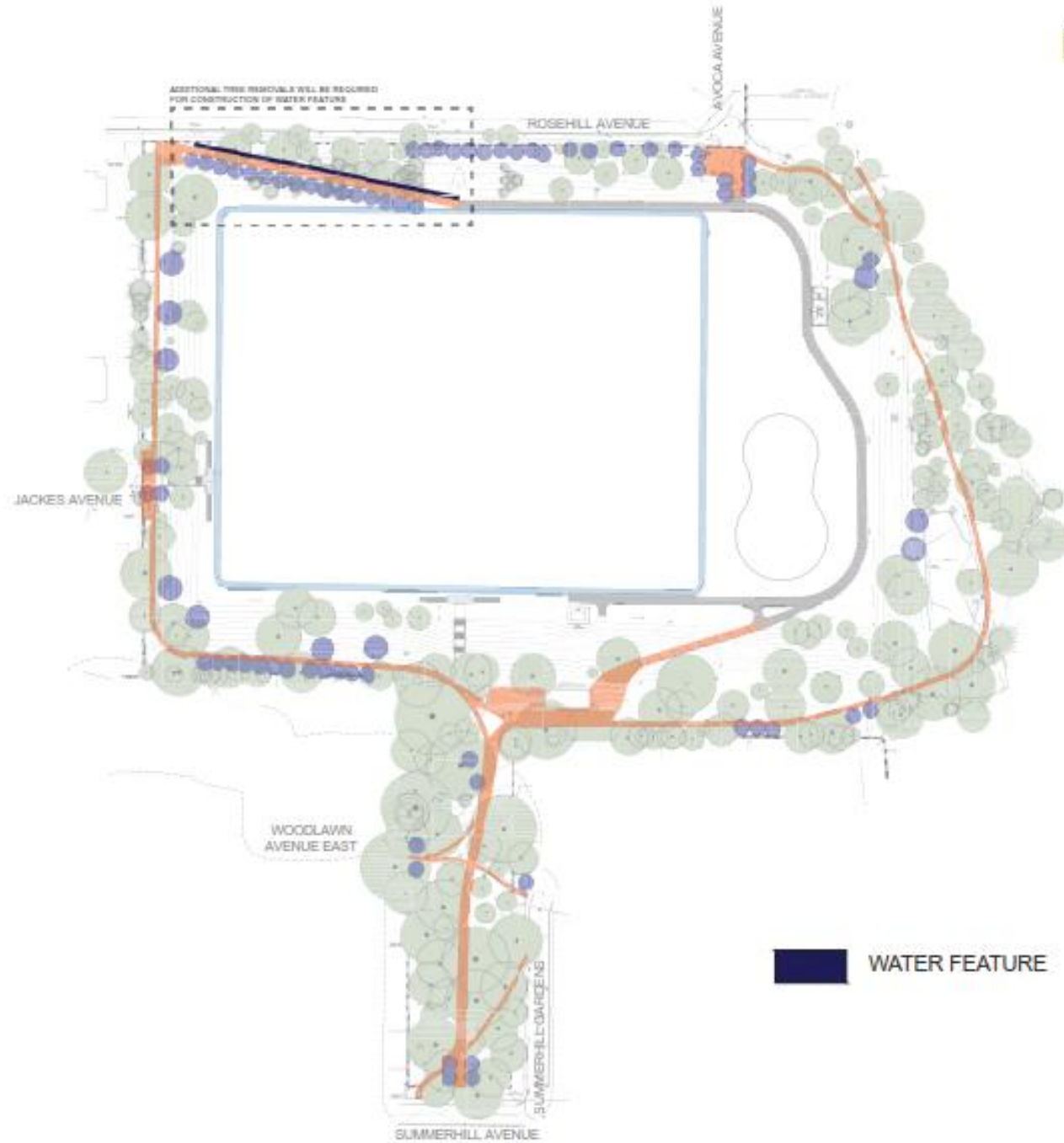
PRECEDENT IMAGES -
POWER-WASHED CONCRETE



UPPER CIRCUIT PATH



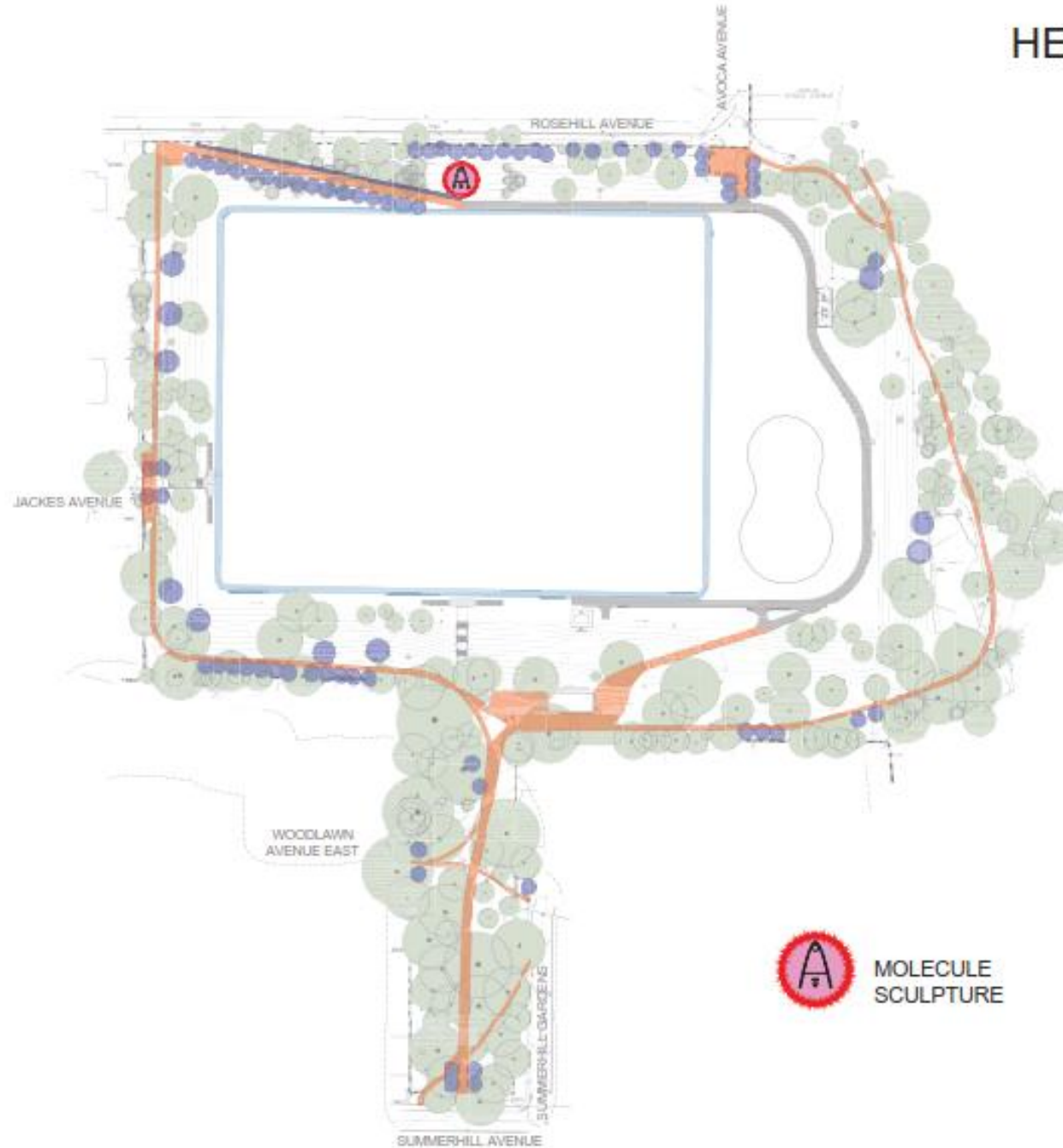
PRECEDENT IMAGES -
CRUSHED LIMESTONE
SURFACE



RAMP WITH WATER FEATURE



PRECEDENT IMAGES -
LINEAR WATER FEATURES

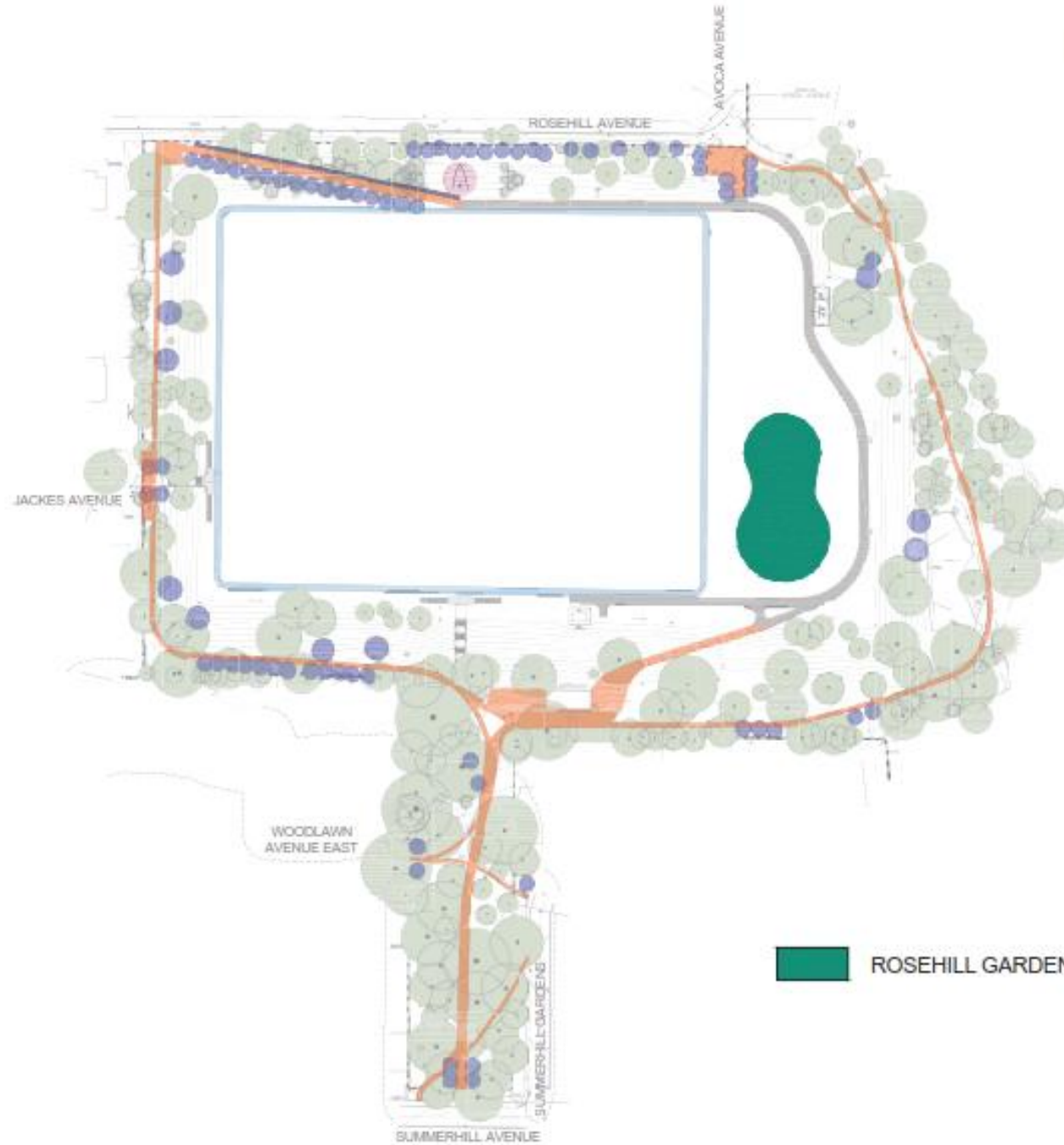


HERITAGE MOLECULE SCULPTURE

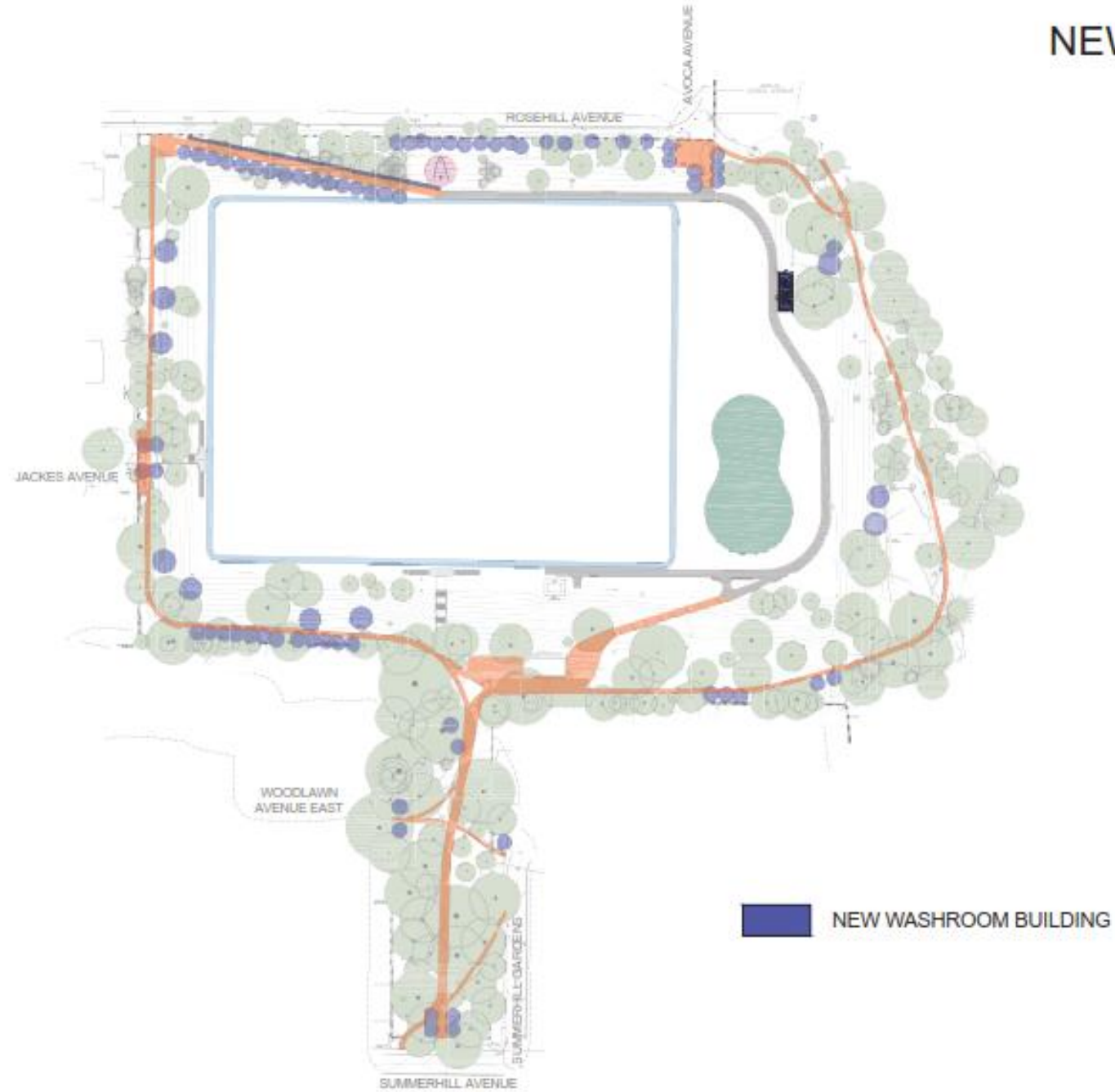


CURRENT IMAGES

ROSEHILL GARDEN



CURRENT IMAGES



NEW WASHROOM BUILDING

Landscape Vision



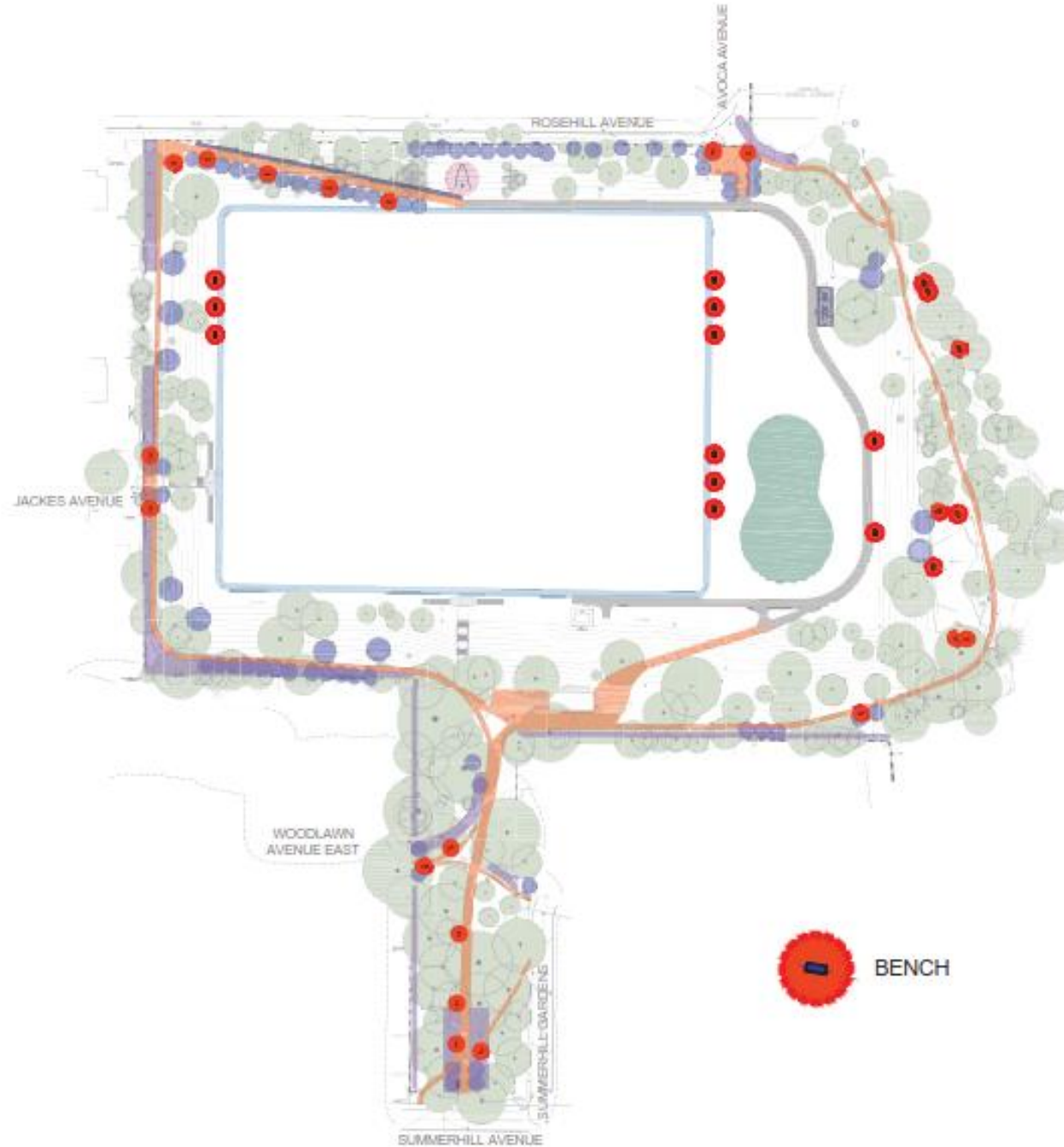
NEW GARDENS



PRECEDENT IMAGE -
SPECIES FOR SCREENING



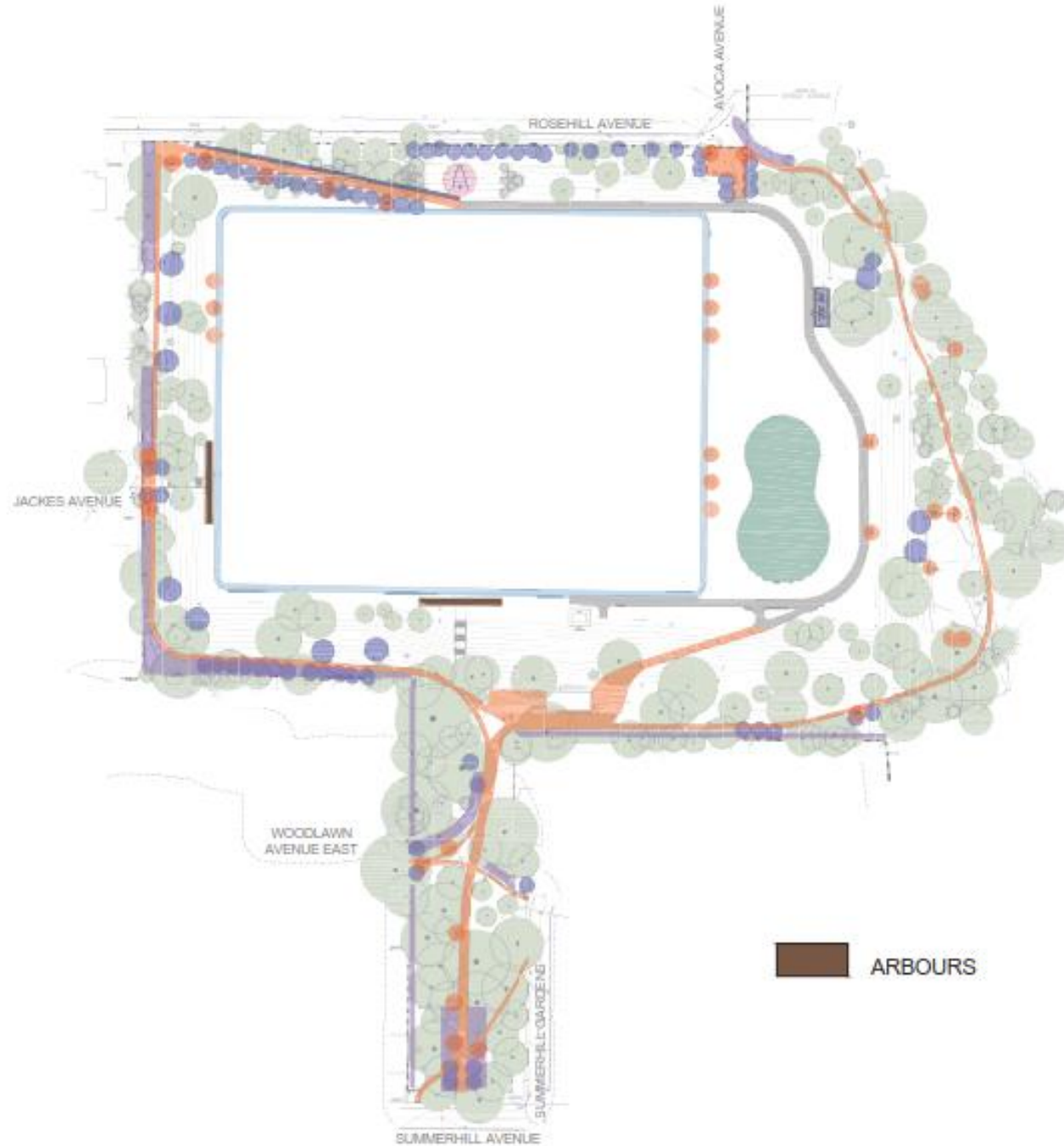
PRECEDENT IMAGES -
NATIVE ORNAMENTAL
SPECIES



BENCHES



PRECEDENT IMAGES



ARBOURS



PRECEDENT IMAGE



SECTIONS



LIGHTING



PRECEDENT IMAGE -
BOLLARD LIGHTING



GREENSWARD PLANTING



PRECEDENT IMAGES -
NATIVE SPECIES

GATEWAY NODE DESIGN LANGUAGE

PLANTING - PRECEDENT IMAGES



COLUMNAR TREES



MULTI-STEM
SHRUBS



FLOWERING SHRUBS



PERENNIALS

AMENITIES - PRECEDENT IMAGES



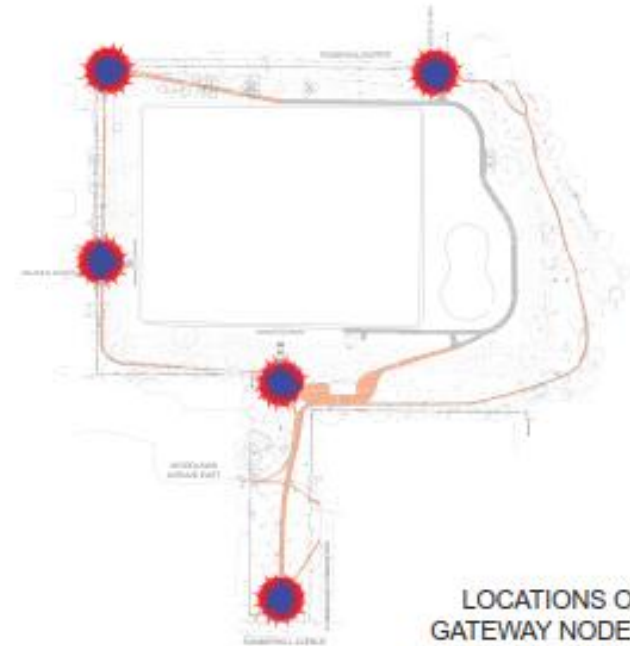
BENCHES



HERITAGE SIGNAGE



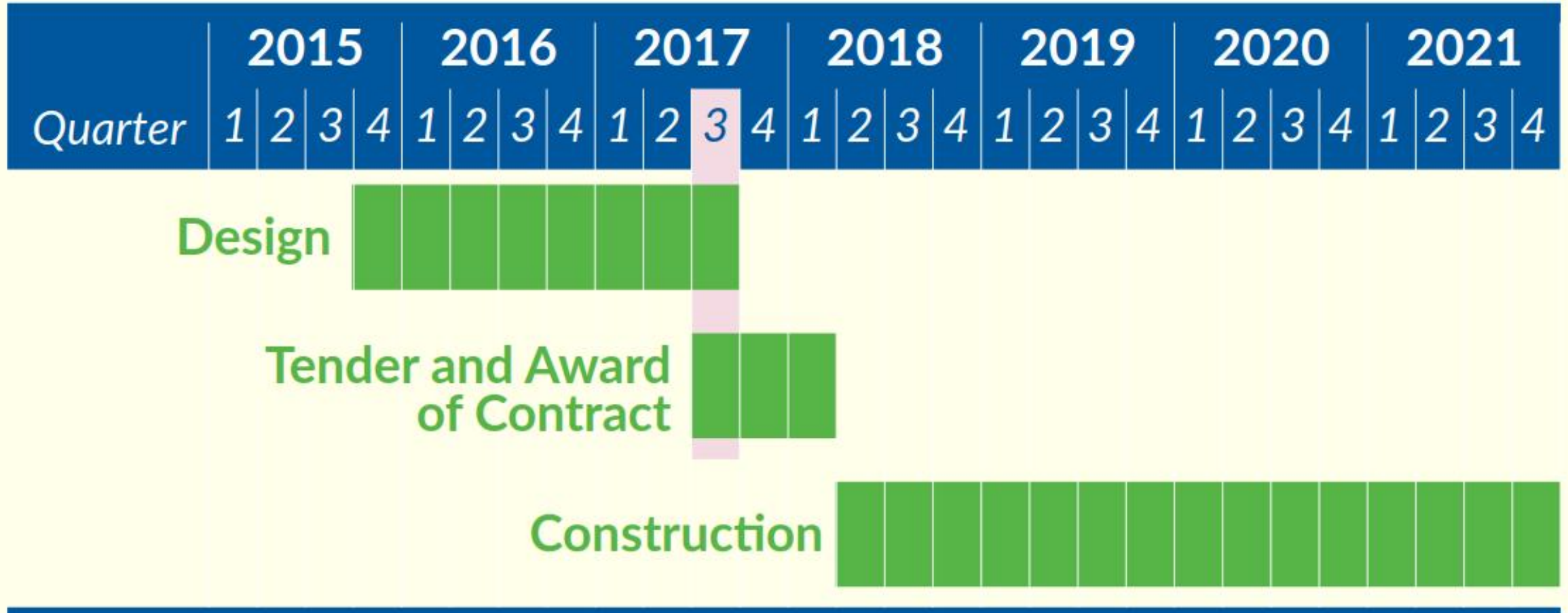
PAVING



LOCATIONS OF
GATEWAY NODES

Wrap-up

Project Schedule



Next Steps

Following this meeting, the project team will:

- Review the comments received tonight and any comments submitted prior to the September 22nd, 2017 deadline
- Make revisions to the landscape plan based on these comments
- Provide a revised landscape plan to the contract bidders before the contract tender closes
- Select and confirm a contractor with City Council's approval
- Hold a second Public Meeting in the new year to share the finalized landscape plan and details of the construction schedule

Get Involved

There are a number of ways that you can participate in the Rosehill Reservoir Rehabilitation project and stay updated:

- Fill out a feedback form or speak with staff tonight
- Submit comments by September 22nd, 2017
- Request to be added to the project email list to receive updates
- Visit the project website for information and updates:
www.toronto.ca/rosehill

Contact: Kate Nelischer, Sr. Public Consultation Coordinator
kate.nelischer@toronto.ca

Q&A Ground Rules

1. All questions should be directed through the facilitator who will moderate the Q&A session
2. A standing microphone will be used so everyone can hear the question/comment and the response
3. The person at the microphone has the floor, please do not interrupt the speaker who has the floor
4. Please introduce yourself before your question or comment for the record of the meeting
5. Please do not interrupt the response to your question

Ian Darragh photo



Open Forum

