



Staff Report for DDO Park Project Steering Committee

Date of Meeting: February 6, 2023

Report Number: SRPI.23.017

Department: Planning and Infrastructure

Division: Infrastructure and Engineering Services

Subject: Richmond Hill David Dunlap Observatory Park
Project Update

Purpose:

To provide an update on the status of the Richmond Hill David Dunlap Observatory Park early phase priorities.

Recommendation(s):

- a) That Staff Report SRPI.23.017 be received;
- b) That staff proceed with the Pedestrian / Cyclist Bridge, and Pickleball Facility preferred options at a future Public Information Centre.
- c) That staff continue with the implementation of the early priorities projects.

Contact Person:

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Report Approval:

Submitted by: Kelvin Kwan, Commissioner of Planning and Infrastructure

Approved by: Darlene Joslin, City Manager

All reports are electronically reviewed and/or approved by the Division Director, Treasurer (as required), City Solicitor (as required), Commissioner and City Manager. Details of the reports approval are attached.

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Background:

Commemoration of the national historic significance of the David Dunlap Observatory occurred at a special ceremony in June 2022 to unveil the National Site and Monuments Board of Canada commemorative plaque.

For over 70 years, the David Dunlap Observatory was a premier location for scientific research, academic astronomy that change fundamental concepts of the Universe. The state-of-the-art facilities attracted students, astronomers and recognized academics whose research and breakthroughs led to hundreds of publications. The observatory was the centre of a major astronomical breakthrough in 1971, when Thomas Bolton's research confirmed the existence of black holes. The observatory was also the research home of Helen Sawyer Hogg, a renowned expert on star clusters and Canada's best-known astronomer through the middle of the 20th century.

David Dunlap Observatory receiving the honor as a National Historical Site of Canada Historic recognizes the significance the David Dunlap Observatory played in positioning Canada at the forefront of space discovery.

Implementation of the Early Priorities continues with the extended timeframe to smoothen the capital costs of construction over additional years, while maintaining the vision of the Master Plan.

The Richmond Hill David Dunlap Observatory (RHDDO) Park Master Plan is a visionary plan that highlights the cultural heritage landscape, Observatory and Administration Building and will contribute to the City's identity. The Master Plan recommends implementation of individual components of the plan within three priority groups. Each of the three priority groups (Early Priority, Medium Priority and Late Priority) includes specific projects for implementation over the planned horizon. By extending the implementation of the early priorities, from 5 years to 8 years as per the direction of the Capital Sustainability Steering Committee (CSSC) on September 24, 2019, it smoothen out the capital costs while focusing on the implementation of the passive elements of the Master Plan.

- Phase 1 - Early Priorities (1-8 Years)
- Phase 2 - Medium-term Projects (8-15 Years)
- Phase 3 - Long-term Projects (15+ Years)

Four conceptual plans with different alignments and entry plaza layouts were developed and evaluated as part of Assignment 3 Pedestrian Bridge design

The Richmond Hill David Dunlap Observatory (RHDDO) Park Pedestrian / Cyclist Bridge is a vital next step in the implementation of the RHDDO Park. The bridge will provide a safe and sustainable pedestrian and active transportation connection to RHDDO that crosses over the CN Railway. The Plaza area and signage will become the main western entrance into the RHDDO Park.

Design and construction of this project includes site servicing for the RHDDO Park, the Observatory Lane pedestrian / Cyclist Bridge over CN Railway, approach ramps, and entry plaza, pedestrian drop off, and parking lot at 63 Observatory Lane.

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The fundamental goal of this infrastructure is to improve active transportation connectivity, enhance accessibility within the community, and provide a safe connection for pedestrians/cyclists to access the park as well as across the park providing a connection between Yonge Street, Bayview Ave and 16th Avenue. The Yonge Street and Carville Road/16th Avenue KDA is an intensification area and a major node of retail and commercial development on the Yonge Street Regional Rapid Transit corridor that will benefit from this pedestrian-orientation connection to the RHDDO.

Four conceptual plans with different bridge alignments and entry plaza layouts were developed and evaluated. The evaluation criteria was based on a number of considerations including bridge span length, bridge alignment with the CN Rail, proximity of the bridge structure to the residential properties on Observatory Lane, approach ramp length, entry plaza and green space layout, parking lot design and costing.

Concept 4 is the preferred alternative as it provides greater separation from the residential properties, reduces the bridge spans and costs and is also preferred from a traffic safety perspective

- Proposed bridge alignment provides greater separation from the residential properties, which is beneficial due to the visual impact of the approach ramps, and bridge structure that requires a minimum 7.61m vertical clearance above the rail tracks.
- Bridge alignment crosses perpendicular to the CN Rail reducing the bridge spans and costs.
- Parking lot driveway access locations are preferred from the traffic safety perspective. The outbound driveway is located closer to the curved road providing better sightlines.
- Layout improves opportunities for landscape and tie-in to adjacent properties.

Staff received direction in 2022 to locate a community Pickleball Facility in the 'panhandle' of RHDDO Park as documented in staff report [SRPI.22.087](#).

On April 13, 2022, Council passed a resolution directing staff to study to report on options to build a world-class Pickleball facility located preferably near major transit hubs such as regional roads, option to provide either an outdoor facility (with the option for a bubble) and or indoor/outdoor facility that includes a 50m and 100m buffer from residents.

Parks and Natural Heritage Planning Staff Report [SRPI.22.087](#) Response to Motion – Community Pickleball Facility Location identified the panhandle lands of Richmond Hill DDO Park as a suitable location for a community Pickleball facility within Richmond Hill. The report including the timing of design of being 2022-2023 and constructing projected for 2024-2025. The design of the panhandle drive / ring road required revisiting due to replacing the four proposed tennis courts as shown in the Master Plan with a larger Pickleball Facility.

Staff met with representatives of the Tennis Advisory Committee to explain the analysis of the park sites and Parks Planning selection of the RHDDO Panhandle Lands as the preferred location. The Tennis Advisory Committee voiced their support for relocating

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the four proposed tennis courts to another location in order to enable a community Pickleball facility within the panhandle lands.

Four conceptual Pickleball and clubhouse configurations were developed and evaluated as part of this council directed change in scope to Assignment 4 in the 'panhandle' of RHDDO Park

These panhandle lands offer a number of advantages in terms of siting either tennis courts or a purpose-built community Pickleball facility including access to parking, proximity to transit services and the future residential population that will be accommodated along the growing Yonge Street corridor, and adequate buffer distances from adjacent residential lots.

Four concepts that consisted of 15 or 16 Pickleball courts in rows of 2, 3 or 4 courts, a clubhouse, plaza space, access drive, and parking lots with 75-85 parking spaces including EV charging stations and the ability to expand the number of EV charging stations increase the number in the future, multi-use paths and walking paths were developed for Staff evaluation.

Each concept took into account the desired 50m minimum buffer distance from residential lots, site grading, anticipated parking requirements for the Pickleball facility as well as the provision to provide additional parking spaces for the park. The ability to dome the courts in the future, minimize the extent of earth works, tree removal and preservation of open lawn area are being considered and will continue to be as the preferred design is further developed.

The Pickleball facility will affect the existing solar system art installation located in the panhandle. A new art installation that will pay homage to the solar system is being considered as part of this assignment.

Concept 4 is the preferred alternative as it situates parking and washroom access for both the Pickleball and Park users better and has greater flexibility convert a portion of the courts to tennis in future if needed

- Parking lot located on north end of panhandle services both the Pickleball Facility and RHDDO Park.
- Courts meet setback 50m requirements from residential properties due to noise concerns.
- Clubhouse on north side of the court provides access to washroom facilities for both the Pickleball and Park users.
- Open lawn area south of the Pickleball courts has dual usage as a small passive recreation space and underground storage tanks for stormwater management.
- Court configuration provides ability to convert a portion of the Pickleball courts to tennis.

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Presenting the preferred option for the Pedestrian / Cyclist Bridge and Pickleball Facility at a Citywide Public Information Centre (PIC) will allow the project to remain on schedule

Staff are developing a robust consultation and communications plan to support the Pedestrian / Cyclist Bridge and Pickleball Facility designs and to solicit feedback on the designs from all residents of Richmond Hill.

The Public Information Centre will consist of presentation materials that show the preferred designs and a virtual meeting and question period hosting by an independent facilitator.

Starting February 21, 2023 residents will receive communication on the March 9, 2023 PIC Meeting through social media, City's website, Liberal newspaper, English and multilingual digital advertising, physical signs around RHDDO Park and email notifications.

The notices will include a QR codes and website address directing residents to the proposed plans and online comment form.

Staff will report the outcome of the PIC Meeting and comment period that ends on March 17, 2023 to the RHDDO Project Steering Committee in a memorandum.

The Traffic study and Parking study will inform multimodal travel needs and is anticipated to be completed in Q2 2023

The goal of the Traffic and Parking Study is to assess the extent of the RHDDO Park's multimodal travel demands, vehicular parking demands and to develop a strategic implementation and monitoring plan to manage current and future travel and parking demands for the park.

The study is being conducted accordance with York Region's Transpiration Mobility Guidelines (2016) and will provide an overview of the existing transportation system, road network, intersections, multimodal conditions and proposed development overview within the study area. The study's data collection, review and analysis includes an evaluation of the horizon and peak periods based the sites existing conditions, 5 years from date of Traffic Study and future after the implementation of the master plan. Site-specific peak hours will be determined based on the sites seasonal uses / amenities and the expected peak hours of use being weekday PM and weekend mid-day.

Parking demand for RHDDO Park will increase as the implementation of the Master Plan continues to provide additional attractions to draw visitors from the City and beyond to the park. The increased number of park visitors and the length of time they stay have impact the parking demand within the RHDDO Park and the parking lots within the panhandle lands and at 63 Observatory Lane. The Traffic and Parking Study will includes an evaluation of the parking requirements, parking supply and a strategic plan to assist the City with managing the sites parking demand and operation.

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The inclusion of a Pickleball Facility rather than tennis courts within the panhandle lands has resulted in an adjustment of the Parking and Traffic Study scope of work to reflect this change in facilities and the revised design of the panhandle lands.

The consultant is to submit the draft Traffic and Parking study early March 2023 and the final version in late Q2 of 2023.

Over 8,185 native trees and shrubs have been planted while ecological restoration of the RHDDO Park continues.

The first two phases of the Woodlot restoration that includes the removal invasive species, dead and hazardous trees, planting of native trees and shrubs and invasive species management has begun in 2017. Phase 1 is the restored 3.5 hectares wildlife corridor and phase 2 is 2.5 hectares of new woodland and restoration of 1.5 hectares of existing woodland. Between 2017 and the fall of 2022, 2875 native trees and shrubs were planted during phase 1 and over 5310 were planted during phase 2.

The Phase 3 Restoration Plan is currently in development in partnership with the TRCA with Implementation beginning in 2023 and completing in 2027. The work includes the removal of dead, hazard and invasive species (ash, buckthorn, Manitoba maple etc.) management. 1.3 HA of woodlot creation and 1.3 HA of Meadow restoration composed primarily of grasses, sedges and wildflowers.

Additional phases of woodlot restoration to occur in the coming years.

A review of the sequencing of the ‘Early Priority’ projects essential in establishing the RHDDO as a passive park and the impact the adding of the Pickleball Facility on the project was undertaken.

Early Priority phase projects include development of basic infrastructure, most park entrances, driveways, and important pedestrian pathways and overpass connection, lighting, wayfinding signage and amenities. The park users desire the amenities that include the playground, a water feature element and picnic area. Individual Early Priority projects have been combined in a logical sequence referred to as “Assignments” for ease of implementation and are outlined in Table 2.

The RHDDO Staff Steering Committee ranking of the Early Priorities Projects included in staff report [SRPI.22.017](#) **David Dunlap Observatory Park Early Priorities Project Update** and presented to the Project Steering Committee on April 12, 2022 as minuted in [DDOP#01-22](#) required revisions to ensure the project sequencing responded to the inclusion of the Council directed Pickleball facility. In addition, the re-design of 16th Avenue entrance and restoration of Elvis Stojko Arena Parking lot advanced in response to the Pickleball Facility and anticipated increase in park users utilizing the south entrance.

Table 1 below is a summary of the completed Early Priority Projects and woodlot restoration progress in the implementation of the RHDDO Park.

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Table 1: Early Priority Projects Progress

Project/Activity	Status
Update RHDDO website and landing page	Completed
Restoration of Observatory and Administration Building	Completed
Administration Building - Water Supply Improvements	Completed
Assignment 1 - Interim Trails	Completed
Cultural and Recreational Programming in-person and virtual	Ongoing
Woodlot Restoration Phase 1 and 2 (multiyear implementation)	Ongoing
Woodlot Restoration Phase 3 Restoration Plan Development	Ongoing

Table 2 below is a summary of the anticipated timeframe for current and future Early Priority Projects.

Table 2: Anticipated timeframe for current and future Implementation

	2023	2024	2025	2026	2027	2028
RHDDO Assignment 2						
Studies	Traffic & Parking Study					
Perimeter Fencing						
Park Entrances Features and Signage	MUP / Nature Trails	Entrances and Fencing				
Multi-use Path / Nature Trails						
RHDDO Assignment 3						
Site Servicing	2 Year Design. Started in 2022					
Pedestrian Rail Bridge / Overpass						
Entry Plaza on Observatory Lane	Site Servicing	Pedestrian Bridge and Entry Plaza				
RHDDO Assignment 4						
Pickleball Courts and Club House	2 Year Design. Started in 2022					
Panhandle Drive, Ring Road, Multi-use Path and Parking Lot	Panhandle Drive	Pickleball Facility				
RHDDO Assignment 5						
16th Ave. Entrance and Entry Element						
Restoration of Elvis Stojko Arena Parking Lot						
RHDDO Assignment 6						
Washroom Facility						
Playground and Water Feature Element						
Great Lawn						
RHDDO Assignment 7						
Picnic Area and Covered Pavilions						
Observatory Parking Lot						
RHDDO Assignment 8						
Park Operations Maintenance Facility						

Legend



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Financial/Staffing/Other Implications:

Extending the timeframe for implementation of the Early Priorities smoothens the capital costs of construction over a longer duration while maintaining the vision of the Master Plan.

The majority of capital costs are eligible for funding from Cash-in-Lieu of Parkland Reserve Fund (92%) and the Outdoor Recreation Development Charges Reserve Fund (8%) reserves. Implementation of the Early Priorities and future phases of RHDDO may have an impact on the sustainability of these reserves. The approach to implement the Early Priorities over a longer period results in the spreading out of the yearly capital budget expenditures into more manageable amounts.

Alternative sources of Funding.

There are other potential sources of funding available including revenue from the federal Canada Community-Building Fund for municipal infrastructure, grants or loans from senior governments or agencies, private sponsorships or partnerships and community fund-raising. Given the magnitude of the project and the number of elements allocated for the Park, financing will be challenging.

In 2022 staff submitted an application to the Federal Ministry of Intergovernmental Affairs, Infrastructure and Communities Active Transportation Fund for the David Dunlap Observatory Park Pedestrian/Cyclist Bridge and Recreation Trails. The Ministry recently informed the City that its application has been approved in principle for the funding request of \$3,180,000, pending execution of a transfer payment agreement between the City and the federal government. These funds will assist the City in the implementation of Assignment 2 the Pedestrian / Cyclist Bridge and Recreation Trails to provide a safe and sustainable pedestrian and active transportation connection to and from RHDDO that crosses over the CN Railway.

Staff will continue to explore alternative sources of funding as park implementation progresses.

Relationship to Council's Strategic Priorities 2020-2022:

Implementation of the Early Priorities is consistent with the Relationship to Council's Strategic Priorities 2020-2022 – **Fiscal Responsibility** given that the extension to the timeframe for implementation of the Early Priorities follows the direction of the Capital Sustainability Steering Committee to smooth the capital budget expenditures over additional years to help maintain a strong financial position for the City.

The Early Priorities includes the implementation of the CN rail overpass, a system of gateways and trails that facilitates **Getting around the City** and builds a **Strong Sense of Belonging** with the surrounding community. In addition, the Early Priorities includes a Pickleball facility, playground, water play element, great lawn and picnic area to promote a wide variety of recreational, educational and leisure experiences for the residents of Richmond Hill.

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The ongoing woodlot restoration project **Balances Growth and Green** by preserving and enhancing natural areas within RHDDO Park. This multi-phased long-term plan to restore and create healthy woodlands throughout the park includes enhancing the woodlands by removing hazardous trees, removing and applying herbicide treatments to invasive species, native tree and shrub planting and monitoring. The enhancement and expansion of the RHDDO woodlands create beautiful, accessible and diverse natural spaces for future generations.

Conclusion:

The commencement of the Richmond Hill David Dunlap Observatory (RHDDO) Park implementation is the beginning of the realization of the Master Plan Vision Statement where visitors can come to see Canada's historic observatory, celebrate the stars and enjoy acres of natural parkland.

The Early Priority Projects planned for the next number of years are a major component of the overall Master Plan and include advancement of multi-use trail, nature trail, CN rail pedestrian overpass, Pickleball facility, park entrances and features, playground, water play element, picnic facilities, great lawn, washroom facility, Operations Maintenance Facility, and additional parking. These projects will highlight the sites significant cultural heritage landscape and contribute to the identity of Richmond Hill.

The capital expenditure to implement CN Rail pedestrian overpass and Pickleball facility is approximately \$14.4 and requires careful reviewed to ensure the implementation of these components of the Master Plan is fiscally responsible. Staff recommends continuing with the design and implementation of the site servicing, and the presentation of the preferred option for the CN Rail pedestrian overpass and Pickleball Facility at a Public Information Centre.

Staff recommends proceeding to present the Pedestrian / Cyclist Bridge, and Pickleball Facility preferred options at a Public Information Centre and continue with the Capital Sustainability Steering Committee's direction to proceed with the implementation of the Early Priorities with an extended the timeframe in addition to the woodlot restoration work approved through the Corsica development agreement.

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Report Approval Details

Document Title:	SRPI.23.017 Richmond Hill David Dunlap Observatory Park Project Update.docx
Attachments:	
Final Approval Date:	Jan 27, 2023

This report and all of its attachments were approved and signed as outlined below:

Bob Levesque - Jan 27, 2023 - 10:25 AM

Paolo Masaro - Jan 27, 2023 - 1:22 PM

Kelvin Kwan - Jan 27, 2023 - 1:51 PM

Darlene Joslin - Jan 27, 2023 - 2:08 PM