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INTRODUCTION

HISTORY OF THE SITE

- The David Dunlap Observatory property is an area of 76.5 hectares (189 acres) bordered by Hillsview Drive to the north, Bayview Avenue to the east, 16th Avenue to the south and the CNR Bala Line rail tracks to the west.

- The property was originally the site of a 19th-century farmstead owned by Alexander Marsh, comprised of a brick farmhouse, a lane from Yonge Street, agricultural fields with hedgerows and an orchard.

- When its observatory in downtown Toronto became unworkable due to light pollution, the University of Toronto identified the site as appropriate for a new facility, and the land was purchased as a gift to the University by Jessie Donalda Dunlap, as a memorial to her husband, David Alexander Dunlap. The new Observatory, which opened in 1935, included a dome housing a 74-inch (1.88 m) reflector telescope and an Administration Building with three smaller telescope domes. See Figure 1. The main telescope was the second largest in the world at the time, and remains the largest in Canada.

- From 1935 to the early 1970s, the Observatory was at the forefront of Canadian astronomical research. Its achievements included advances in radio astronomy and the first direct evidence that the star Cygnus X-1 was a black hole.

- Urban encroachment became an issue, and the Observatory took steps to address associated light pollution in the 1950s and 1960s. These steps included the construction of a curvilinear driveway from the north to prevent interference from car headlights, the planting of a large belt of conifers north of the telescope dome, and growth of experimental tree plantations to the west to determine which species would provide the most effective light screening.

- Despite these efforts, increasing light pollution and new technical advancements elsewhere resulted in research being conducted at other facilities and, by the late 1990s, it was clear that the Observatory’s future lay in public outreach.

- In June 2008, the University of Toronto sold the property to Corsica Developments Inc. The sale and subsequent development proposal by Corsica caused concern in the community, and the Town passed a heritage designation by-law in September of 2009 with the aim of protecting the features on the property which are of cultural heritage significance.

- Corsica’s development proposal, and the ensuing Ontario Municipal Board appeals, led to an agreement (Minutes of Settlement) under which Corsica agreed to transfer approximately half of the property to the Town for the purposes of preserving those lands (DDO Park Lands) for public use. A portion of the DDO Park Lands, the Panhandle Lands, was purchased by the Town from Corsica in 2012 as required in the Minutes of Settlement. The remaining DDO Park Lands will be transferred to the Town at no cost upon registration of the adjacent plan of subdivision.

PURPOSE OF THIS REPORT

- The transfer of the DDO Park Lands to the Town will allow the creation of a major public green space in a key area of Richmond Hill. To ensure that this new public space is designed, restored, programmed, and operated in a manner that reflects the input and best interests of the community, the Town has commissioned a Master Plan for these lands.
Figure 1 - Site History: (Clockwise from top left) Elms Lea farmhouse, undated | Postcard showing 74” telescope | The Observatory and Administration Building, shortly after completion of construction in 1935 | Observatory Dome, which was built in England, taken apart, shipped overseas and reassembled on site.
This report is the Master Plan. It sets out a comprehensive, phased plan for the creation of David Dunlap Observatory Park, a unique and important destination park that will serve the residents of Richmond Hill and attracts visitors from across the GTA.

SCOPE OF MASTER PLAN

- The site boundary for the purposes of the Master Plan is shown in Figure 2. The site is 45 hectares (110 acres) in total size. The diagram in Figure 2 also shows the future Corsica Development.

- The scope of the Master Plan includes the Heritage Buildings, although they are not owned by the Town. Due to their location and historical significance, the Heritage Buildings are intrinsically linked to the DDO Park Lands and represent essential components of the vision for David Dunlap Observatory Park set out in this Master Plan. As discussed under “Detailed Planning And Design Recommendations” below, realization of this vision is premised on the Town obtaining the ability to implement the many recommendations of the Master Plan related to the Heritage Buildings.

PLANNING PROCESS

Introduction

- The Master Plan is a product of a comprehensive planning process with an emphasis on community engagement. This planning process has been divided into two main phases: Phase 1 - Principles and Options Report, which is described below, and Phase 2 - Master Plan, which will culminate with the final version of this report.

Phase 1 - Principles and Options Report

- The purpose of Phase 1 was to identify a set of principles to guide the development of the Master Plan and develop options for design themes, programming, circulation, access, facilities and other park components. These principles and options were based on the following inputs:

  - The legal and planning context applicable to the DDO Park Lands and Heritage Buildings. See Appendix A - Legal & Planning Context in the Principles and Options Report.

  - A site inventory, including surrounding uses, site access points, roads and transit, bicycle routes and trails, buildings and parking, topography and hydrology, vegetation, wildlife, views and archeology. See Appendix B - Site Inventory in the Principles and Options Report.

  - A review of dozens of major parks, natural reserves, playgrounds, heritage properties, gardens and other public spaces identified as successful in terms of attracting and engaging users. See Appendix C - Precedent Sites in the Principles and Options Report.

  - Extensive community engagement involving a diverse range of stakeholders. See Appendix D - Community Engagement in the Principles and Options Report.

- With the benefit of this input, two conceptual options for the Master Plan were proposed, representing different visions for the site:

  - Option A – David Dunlap Observatory Park – focuses on the astronomical history of the site. This option leverages the presence of the Observatory through the addition of a planetarium, with the goal of making the site a premiere GTA destination for astronomy-focused, scientific education and outreach. The astronomical theme is carried into other parts of the site, where visitors are
Figure 2 - Master Plan Scope: As shown in the diagram, the site area includes 38 hectares of the David Dunlap Observatory Lands to be transferred from Corsica and the 7-hectare Panhandle Lands already owned by the Town. The Heritage Buildings are included in the scope of the Master Plan.
invited to explore the Observatory’s natural setting.

- Option B – David Dunlap Discovery Park – is a more holistic interpretation of the site’s history and identity. It celebrates the Observatory, but recognizes the site’s agricultural, aboricultural and ecological heritage, as well. Option B envisions the site as a Town-wide destination park, but without the scope of amenities required to make the site a regional attraction.

- A full description of the two conceptual options, including each option’s unique and common elements, is set out in the Principles and Options Report (Janet Rosenberg & Studio, 2015).

Community Review of Options

- With the release of the Principles and Options Report, the community engagement process focused on reviewing the two conceptual options to determine a preferred plan. This stage of the community engagement process comprised several events and components:
  - Consultation at the Town’s Cultural Summit
  - Community Options Workshop
  - Online Options Survey
  - Town Community Services Staff Consultation
  - Environmental Consultation
  - Further interviews with key stakeholders.

- In total, over 275 persons provided input during this stage of community engagement, including 133 persons completing the Options Survey and over 145 persons participating in the workshops, consultations or interviews.

- The key points raised for the Master Plan in this phase of the community engagement process are set out below.
Community Engagement - Key Points

- Option A - Observatory Park is preferred, principally because it features the Observatory, but also because it will have less impact on the natural areas of the site. However, the final Master Plan should incorporate the most desirable features from both options.

- The more desirable features from the two options are:
  - A trail system, including a pedestrian/bicycle bridge over the CNR rail line, a self-illuminating ‘Star Path’ and a Canopy Walk.
  - A restored and enhanced Observatory, including a Planetarium or interpretative centre, a garden referencing the original Beaux Arts plan and a small outdoor amphitheatre.
  - A restored and enhanced Elms Lea Farmhouse, incorporating a Visitors’ Centre with basic amenities, a cafe, a local museum, and a restored orchard or tree nursery.
  - Four season attractions, such as a Conservatory (indoor garden) or a skating rink or trail.
  - Additional parking in the Panhandle Lands.
  - Incorporating public art that can be discovered throughout the park.

- The Master Plan should balance use of the park with preservation of its natural areas by:
  - Limiting the extent of the trail system, including the elimination of any proposed trail in the wildlife corridor from the wetland to the main body of the site.
  - Ensuring picnic areas are limited to those required to meet anticipated Town demand.
  - Keeping a significant portion of the area west of Elms Lea as natural meadow, rather than proposed features such as mazes or other designed landscapes.
  - Reforesting all areas of the site not required for other uses or to be kept as meadow.
  - Investigating whether a wetland can be created in the southwest corner of the site.

- The Master Plan should ensure that the park is fiscally and operationally sustainable by requiring that:
  - Phasing begin with basic elements, such as access, parking, circulation, reforestation and essential building restoration, then later incorporate more complex facilities and features.
  - Construction of facilities with significant capital and operating costs, such as a Planetarium or a Conservatory, occur only after development of a feasibility study outlining how these costs are to be addressed.
  - Introduction of features that require significant maintenance, such as large gardens or orchards, occur only in partnership with local community groups.
INTRODUCTION TO MASTER PLAN

- A perspective rendering, showing what a park built in accordance with the Master Plan might look like, is shown in Figure 4. The Master Plan for DDO Park is shown in Figure 5. All proposed facilities and features are shown on this plan.

- The Master Plan is a guide, intended to provide a framework in which the park envisioned by the Master Plan can be developed. All elements of the Master Plan are recommendations, and descriptions, renderings and precedent images in the Master Plan are illustrations of how these recommendations may be implemented.

VISION STATEMENT

- The following vision statement describes the future park that will result if the goals of the Master Plan are reached. This vision statement is ambitious but achievable, and is intended to inspire stakeholders to work together to create a unique and enduring public space.

`Vision Statement`

David Dunlap Observatory Park will be one of the preeminent public parks in the Greater Toronto Area, where visitors come to see Canada’s historic observatory, celebrate the stars and enjoy acres of natural parkland. It will be a treasured place that embodies discovery, education, sustainability and inclusion and, in so doing, forms part of the identity of Richmond Hill.
Figure 5 - David Dunlap Observatory Park Master Plan

1. Planetarium
2. Beaux-Arts Garden
3. Amphitheatre
4. Relocated Parking Lot
5. Central Fountain Plaza/Drop-off
6. Elms Lea Visitors’ Centre
7. Conservatory
8. Community Orchard
9. Elms Lea Parking Lot
10. Skating Trail
11. Railway Overpass
12. Great Lawn
13. ‘Event Mode’ Connecting Drive
14. Ring Road and Parking
15. South Lookout and ‘Star Path’
16. Refurbished School Land
17. Tennis Courts
18. Refurbished Arena Parking Lot
19. 16th Avenue Entrance
20. Woodland Rest Area
21. Restored Radio Shack
22. Picnic Area and Washrooms
23. Playground and Water Play Area
24. East Lookout
25. Heritage Tree Plantation
26. Wildlife Corridor
27. Wetland/Wildlife Sanctuary
28. Storm Pond
29. Southwest Wetland

- Existing Trees
- Proposed Trees
- Naturalized Area
- Lawn
- Sculpture
- Entrance Feature
- Picnic Table
During Phase 1 of the Master Plan process, eight Key Principles were identified to guide the development and implementation of the Master Plan. These Key Principles are set out in Figure 6.

The following overview of the Master Plan describes how the key elements of DDO Park - including, facilities, programming, site relationships, operations and park identity, express these Key Principles.

Figure 6 - Master Plan Key Principles
Mix of Activities

- The proposed mix of activities for DDO Park - which reflects both community engagement feedback and Town planning requirements - is described below and in Figure 7.

- The Observatory will become a regional centre for education and public outreach related to astronomy, astronomical research and the history of David Dunlap Observatory and Canadian astronomy.

- The Elms Lea area will support the Observatory by providing amenities and diverse, four-season activities.

- The Town has plans for a second refrigerated skating trail. The area southwest of Elms Lea is an ideal place for this skating trail, which could wind through both meadow and woodland areas.

- There is a need in the Town for additional picnic space, including covered picnic facilities for larger groups. DDO Park is a good location for picnic areas, given its proximity to current and future high density neighborhoods without private yards.

- The Town requires more tennis courts. Four courts are proposed, north of Elvis Stojko in the Panhandle Lands.

- A playground is required to be located in the east of the site to serve the residents of the Corsica Development. Based on community feedback, this playground is proposed as a unique destination playground to be constructed of natural materials, rather than ‘off-the-shelf’ play structures.
Walking, cycling, hiking and experiencing nature on trails of different types will be a key activity in DDO Park’s natural areas.

Location of Activities

With both large natural areas and important heritage attractions, establishing the proper balance between use and preservation in DDO Park requires facilities and programming to be located appropriately. The approach set out in the Master Plan is shown in Figure 8.

Activities intended to attract larger groups will be located around the Heritage Buildings and in the Panhandle Lands. This will create a central core of activity that is connected by drives, primary trails and a series of focal points, and supported with parking and other amenities.

Activities attracting smaller groups, such as picnicking and play, will be located east of the Observatory in areas historically landscaped and planted with specimen trees. The location of the playground is nearby the Corsica Development in order to meet the Town’s requirement that each neighborhood has a nearby park.

The largest portion of DDO Park - the natural areas located peripherally to the central core of more intensive activities - will be reserved for trails.

The wetland in the southeast corner of the site and the wildlife corridor that connects it to the main body of the park will be left undisturbed as a refuge for wildlife.
David Dunlap Observatory, the historic home of Canadian astronomy, is a special place that makes the site unique. The Master Plan includes a number of initiatives and facilities intended to feature the Observatory and improve the experience of visiting it, as shown in Figure 10 and discussed below.

- The Observatory Dome and Administration Building will be restored and made universally accessible.

- Subject to heritage requirements, the interior of the Administration Building will be modified to support anticipated uses such as public outreach and education, historical and interpretative displays, and events.

- A study will be undertaken to determine the feasibility of adding a planetarium to the Observatory. A planetarium would help enhance visitors’ understanding of astronomy in a manner that the existing Observatory was not designed to do.

- The architect’s original plan for the Observatory included a formal Beaux-Arts garden that was never built (see Figure 9). The landscaping of the Observatory has some heritage features requiring preservation, but is not of the same architectural quality as the buildings. A new garden with elements of the original landscape plan will enhance the Observatory while maintaining its heritage value.

- The current parking lot serving the Observatory Complex is in poor condition, has no heritage value and detracts from the beauty of the cultural heritage landscape. The parking lot will be relocated to the new area to the west as shown in the Master Plan.

- An outdoor amphitheatre that can seat approximately 200 people will be added to accommodate cultural and Observatory events. The amphitheatre will be designed to be unobtrusive and consistent with the cultural heritage landscape.

- The Radio Shack will be restored in a manner that both celebrates its heritage value and creates an interesting focal point within DDO Park.

- The heritage views identified in the Conservation Management Plan that relate to the Observatory will be preserved. In addition, a clear view of the Observatory from the north end of the Panhandle Lands will be created by tree pruning and the siting of paths and other features.

- A ‘Star Path’, using phosphorescent aggregate that glows at night, will be installed from the north end of the Panhandle Lands to the Observatory, creating an interesting connection that will not cause light issues for the Observatory.

Figure 9 - Original Beaux-Arts Garden Plan, 1933
Figure 10 - Observatory Area - The plan shows the area and precedent images show what key elements might resemble.
The natural areas of DDO Park will be preserved and enhanced in order to create a beautiful, accessible and diverse natural space that can be enjoyed for generations to come. The Master Plan includes a number of key recommendations to do this, as shown in Figure 11 and described below.

- Woodland improvements will include reforestation to expand woodlands and management of existing woodlands. Woodlands in DDO Park will be reserved for low-impact uses such as trails.

- Meadows create a diverse ecology and preserve agricultural heritage landscapes and views. The meadows shown on the Master Plan will be preserved and managed as necessary and reserved for low-impact uses such as trails.

- Trails will be limited to those required to experience natural areas in a sustainable manner.

- The existing wetland on DDO Park is the only source of water for wildlife on the site. Access to the wetland will be difficult due to its isolated location and the required construction of the stormwater pond for the Corsica Development immediately north of the wetland. Accordingly, the wetland and the wildlife corridor connecting it to the main body of the site will be kept undisturbed as a sanctuary for DDO Park wildlife.

- To provide an accessible wetland and enhance the biodiversity of the site, an additional wetland in the southeast corner of DDO Park, which is currently subject to seasonal flooding, should be created, if possible. This wetland should be made accessible through adjacent trails, boardwalks and lookouts.
Figure 12 - DDO Park’s Natural Areas

DDO Woodlands

DDO Meadows

DDO Wetlands
Elms Lea has the potential to become a beautiful and historic landmark that complements the Observatory, adds facility space and provides a diverse experience for visitors to DDO Park. The Master Plan includes a number of initiatives and facilities intended to realize Elms Lea’s potential.

- Elms Lea will be restored according to the Conservation Management Plan and made universally accessible.

- Subject to heritage requirements, the interior of the Elms Lea will be modified to create a Visitors’ Centre, with an information area, washrooms, flexible space for events and education and public outreach. A small restaurant or cafe may be included.

- Elms Lea has a remnant orchard that is no longer functional due to lack of care. The remnant orchard will be restored with new trees and operated as a Community Orchard.

- A study will be undertaken to determine the feasibility of adding a Conservatory housing an indoor garden to the Elms Lea area. A Conservatory fits well with a heritage farmhouse, highlights the Town’s history as a centre for greenhouse flower production and, along with the Observatory and the site’s hiking and skating trails, will provide diverse four-season programming.

- Locating the skating trail to the southeast of Elms Lea will concentrate a number of activities in this area, allowing convenient access to parking and other amenities and keeping more natural area unaffected.

Figure 13 - Elms Lea Farmhouse
Figure 14 - Elms Lea Area - The plan shows the area and precedent images show what key elements might resemble.
CREATE A VIBRANT AND INCLUSIVE PLACE

- The Vision Statement for DDO Park sees it as one of the preeminent public parks in the Greater Toronto Area. To achieve this, DDO Park must have unique attractions, four-season activities, flexible design that can accommodate diverse programming and events, accessible facilities, appropriate amenities and, most importantly, the involvement of community groups and other partners.

- The Observatory will provide attractions that are unique to the GTA, while attractions in the Elms Lea area will be unique to the Town. Along with the large natural areas, these facilities will provide four-season programming.

- A number of flexible gathering places are proposed in the Master Plan (see Figure 15). These include:
  - The Great Lawn, which provides an area for passive recreation, informal sports and outdoor gatherings.
  - The Amphitheatre, which provides space for small cultural events and outdoor lectures related to astronomy.
  - The Central Fountain Plaza, a paved area with a water feature at the convergence of drives and trails that provides space for small events, markets and vendors, and the like.
  - Picnic pavilions that can accommodate small, medium or large groups.
  - The Ring Road area, which provides space for picnicking and informal recreation.
  - The Administration Building and Elms Lea Visitors’ Centre, which will have space for events and displays.

- DDO Park will be used to advance the goals of the Town’s Cultural Plan, principally by providing space for cultural activities.

- Public art creates a sense of importance, connection and identity for public spaces. Over time, works of public art should be placed throughout DDO Park to be discovered by new visitors and function as landmarks for frequent users.

- DDO Park will be designed to the highest practicable standards of accessibility.

- DDO Park will incorporate extensive, well-designed amenities designed to make it comfortable and convenient to use.

- The Town will seek, wherever possible, to develop and operate DDO Park and its facilities in partnership with community groups or other partners in order to:
  - Ensure the park is continually responding to community needs
  - Create a sense of ownership by involving the community in the governance and operation of the park
  - Limit the burden on Town resources by expanding sources of funding and involving volunteers.
Figure 15 - Flexible Gathering Places - The plan shows location and precedent images show what they might resemble.
Plan for Connectivity

- One of the key planning considerations for DDO Park is its lack of access and visual connection due to the CNR Bala Line to the west of the site, and the fact that its only direct connection to a major roadway is where the Panhandle Lands abut 16th Avenue.

- To address this, the Master Plan includes a comprehensive plan to provide convenient access, logical internal circulation and strong connections to greater Richmond Hill.

Entrances

- 16th Avenue will be the principal entrance to DDO Park, with a redesigned frontage that includes an updated landscape treatment and a major monument, sculpture or similar feature. Site conditions make a major gateway right at 16th Avenue difficult, so users will be encouraged through drive, path and landscape design to move up the Panhandle Lands to the park proper.

- Donalda Drive is proposed as the other vehicular entrance to DDO Park. It will be refurbished in a manner consistent with heritage requirements.

- A pedestrian and cycling Rail Overpass at the CNR Bala Line is required to provide access to DDO Park from the west and create a connection to Yonge Street. This may require the Town to acquire additional land west of the rail line, in which case the Town should consider acquiring enough land to create a major park entrance with parking.

- The other access points shown on Figure 16 will be developed as secondary pedestrian, bicycle and, in some cases, service entrances to DDO Park.

Trail System

- The proposed system of trails is shown in Figure 16. The trail system is hierarchical, with Main Trails designed for universal accessibility and heavy use, multi-use Supporting Trails, and Nature Trails designed to provide more challenging routes with an appropriate environmental footprint. Sidewalks will also be used along driveways.

- Three focal points form part of the internal circulation plan. Two of these, one at the north end of the Panhandle Lands and one at the park’s eastern entrance, are intended to signal to visitors that they have reached the main portion of the park. These are designated as ‘Lookouts’, as many park features will be visible for the first time. The third focal point is the Central Fountain Plaza, located south of the Observatory at the confluence of the major multi-use trails and Donalda Drive.

- The multi-use trail from the northwest corner of DDO Park to 16th Avenue creates an important north-south cycling and trail route, fulfilling a requirement identified in the Town’s Pedestrian and Cycling Master Plan. The connection along “A” Street, across DDO Park, and over the proposed Rail Overpass at Observatory Lane creates a convenient east-west route and connects to the Town’s Greenway System.

Driveway System

- The proposed system of driveways is shown in Figure 16. The driveway system as proposed has two modes: Normal Mode and Event Mode.

- In Normal Mode, the driveway system will consist of two separate drives:
Donalda Drive, in the north, which is a two-way drive that begins from Hillsview Drive and proceeds to a one-way circular drop-off by the Observatory. It continues as a two-way drive south to parking lots for the Observatory and Elms Lea.

The Ring Road, in the south, that begins as a direct two-way drive from 16th Avenue and becomes a one-way circular drive with parallel parking beyond the rise in the Panhandle Lands. It has a drop off at the north end.

In Event Mode, a connecting drive will be opened that allows visitors to access all parking from each entrance and facilitates convenient access for event set-up and maintenance.

Proposed parking is phased. A total of 84 spaces - 34 in the Ring Road and 50 in the relocated Observatory parking lot - are proposed as early priorities. These are in addition to 128 spaces in the lot at Elvis Stojko arena, which is to be refurbished. Later expansion includes 20 spaces at Elms Lea and, if necessary, further spaces in the Observatory parking lot or southwest of the Ring Road. For more information on parking, see “Parking” (page 35).

Transit Connections

DDO Park is well-served by transit and its location close to Richmond Hill Centre should ensure that this transit infrastructure continues to improve and better connect DDO Park, both locally and regionally. Minor improvements to transit should be considered over time. See “External Connections” (page 37).
- DDO Park has a unique combination of natural, heritage and scientific features and facilities that make it an ideal place for education and public outreach. Effective and well-attended educational and outreach programming is key to establishing DDO Park as a regional destination.
- The Town will create formal consultative relationships with local school boards and public outreach groups to aid in the development of facilities and programs relating to education and outreach.

- The Observatory’s main function will be educational and public outreach programming. Restoration and enhancement efforts will be focused on creating the best possible experience for those visiting the Observatory to learn about its history, astronomy and astronomical research.

- A planetarium will significantly enhance the Observatory’s ability to support educational and outreach programming. It will allow visitors’ to share, in a convenient and entertaining way, the understanding of our universe made possible, in part, by the work done at the Observatory.

- Elms Lea’s facilities will function as a satellite area to support the education and outreach programs of the Observatory. The Visitors’ Centre will provide amenities such as an eating area and additional event spaces. The Conservatory, Heritage Orchard and Skating Trail are additional elements that can enrich field trips and other visits.

- DDO Park will incorporate a system of interpretative information, preferably employing both traditional signage and digital media, to allow visitors to explore the park through this information.

Figure 17 - Education and Outreach: Child’s Solar System model | University of Toronto Astronomy Camp Field Trip
The marketing of DDO Park is critical if it is to be one of the Town’s successful ‘Destination Parks’. The site’s importance is rooted in its astronomical history and should not be watered-down by other elements. A clear identity for the park, based on the Observatory and reflected in its design, will attract users.

The site will be named “David Dunlap Observatory Park”, with the short form “DDO Park”.

Design of park elements will reinforce the park’s identity:

- Entrance features and signage will reference the Observatory.
- The main trail from the top of the Panhandle Lands to the Observatory will include a ‘Star Trail’ using phosphorescent aggregate that glows at night.
- One or more of the Central Fountain Plaza, the Rail Overpass, the Skating Trail and the Playground will reference the Observatory or astronomy. See Figure 18.
- The water play area will incorporate the relocated pump house used originally to provide water to the Observatory. The restored Radio Shack and radio astronomy antenna will be located nearby.
- Public art in the park may reference the Observatory or astronomy.

A comprehensive marketing strategy based on the site’s identity and reflecting its importance as a destination park will be implemented in conjunction with the park’s early development and expanded as facilities and programming come on line.

Figure 18 - Nightstar Bridge - This bridge in Richmond Hill is the type of designed feature that creates identity.
DETAILED PLANNING AND DESIGN RECOMMENDATIONS

HERITAGE PROPERTIES

Ability of Town to Direct Planning

- Due to their location and historical significance, the Observatory and Elms Lea are intrinsically linked to the DDO Park Lands and represent essential components of the vision for David Dunlap Observatory Park set out in this Master Plan.

- In order to implement the Master Plan, it is essential that the Town acquire the ability to direct the restoration, enhancement, and operation of the Observatory and Elms Lea, either solely or in partnership, whether through acquisition, lease or other arrangement.

Heritage Considerations

- The Observatory Dome, the Administration Building, the Radio Shack, and Elms Lea farmhouse, as well as certain landscapes, are protected as a cultural heritage landscape under the Ontario Heritage Act. The Master Plan has been developed with heritage considerations in mind. Nevertheless, many of the recommendations of the Master Plan will not be implemented without a detailed heritage impact assessment that may result in refinement of Master Plan concepts and recommendations.

Design Recommendation - Heritage

Heritage stewardship is not only about preservation, but also about experience and use. Modifications that enhance the experience of DDO Park’s heritage buildings and landscapes should be encouraged, if core heritage features are preserved. When modifications are made, a contemporary aesthetic that clearly delineates new elements from heritage elements is preferred.

Figure 19 - Royal Ontario Museum - Modern addition enhances use, clearly delineates heritage and new features.

Observatory

- Plans to restore and enhance the Observatory are discussed in detail under “Master Plan Overview - Feature the Observatory” above. Additional design recommendations are discussed below.
Design Recommendation - Planetarium

A planetarium would significantly enhance the Observatory experience by allowing visitors to experience our knowledge of astronomy in an entertaining way. Beyond its function, however, the planetarium building itself should be an attraction by virtue of its design.

Figure 20 - Planetariums - Smaller, architecturally-interesting planetariums are the trend, such as the Greenwich Planetarium (right), built in 2007 and seating 120, and the Alexandria Planetarium, built in 2010 and seating 99.

Design Recommendation - Radio Shack

The Radio Shack has significance as the facility in which key advancements in Canadian radio astronomy were made. However, the building itself is basic and, even when restored, may not communicate the importance of the work accomplished within it. To address this, the antennas should also be restored, such as the zig-zag antenna of the 1950s, which is visually impressive.

Figure 21 - Radio Shack - The Radio Shack’s basic exterior does not communicate the important work done within it. Restoring one or more of the impressive antennas associated with the Radio Shack should be considered.

Elms Lea Farmhouse

- Plans to restore and enhance the Elms Lea are discussed in detail under “Master Plan Overview - Use Elms Lea in Complementary Role” above.
ENTRANCES

16th Avenue

- As the only direct access point from DDO Park to an arterial road, the 16th Avenue entrance is important to DDO Park. However, there are a number of site conditions that pose a challenge to creating a major gateway at this location:
  - The prominence of Elvis Stojko arena and related parking lot.
  - The adjacent 16th Avenue Public School, which utilizes the area in front of Elvis Stojko and its parking lot for student pick-up and drop-off.
  - The location of the signalized intersection at the school entrance to the west.
  - The proposed widening of 16th Avenue to add HOV and bicycle lanes planned for 2019 to 2023.

- To address these site conditions, the Master Plan proposes creating a focal point at 16th Avenue, comprised of an updated landscape treatment, a major monument, sculpture or similar feature, and signage, that clearly identifies this as the main entrance to DDO Park. By virtue of a direct drive, multi-use sidewalk and allee of trees, visitors to the park will be directed to proceed north to the Ring Road area, which will constitute the true entrance to the park, particularly the drop-off and nearby ‘Lookout’ at the north of the Panhandle Lands.

- As DDO Park becomes a significant destination, it may be advisable to rationalize the entrance by eliminating the current driveway and creating a single entrance to DDO Park, Elvis Stojko Arena and 16th Avenue Public school at the signalized intersection. A reconfiguration of this type requires further study and should be considered in conjunction with the planned widening of 16th Avenue.

Design Recommendation - 16th Avenue Entrance

The 16th Avenue entrance and frontage is a key area to focus design efforts. An effective design must clearly identify this as the principal entrance to a major park, encourage people to enter despite the fact that the park is set back from the entrance, de-emphasize Elvis Stojko Arena without obscuring it, and contribute to the DDO Park brand.

To accomplish this, a landscape design featuring a major piece of public art or architecture should be commissioned, ideally through a juried competition process.

Figure 22 - *Cloud Gate* - Anish Kapoor’s sculpture in Millennium Park, Chicago has created an iconic park entrance.
Pedestrian/Bicycle Rail Overpass at Observatory Lane

- A pedestrian and bicycle overpass over the CNR Line will create an essential connection to Yonge Street and highlight the Elms Lea farm laneway as an important heritage feature.

- Due to the clearance requirements over the railway, the ramp for cycling and accessibility will be long and require significant space. Finding this space on the west side of the bridge may lead the Town to consider acquiring land west of the rail line for the purpose of creating a major entrance to DDO Park with parking and a transit drop-off.

Design Recommendation - Rail Overpass

Any overpass across the CNR Line will be the principal element of DDO Park that travellers on the GO Train associate with the site. It should therefore incorporate a high-quality and considered aesthetic that references the Observatory.

Donalda Drive

- Donalda Drive is proposed as the other vehicular entrance to DDO Park. This driveway will be subject to a minor realignment at the north end as part of the Corisca Development. Donalda Drive is a protected heritage feature, so improvements must be done in a manner consistent with heritage requirements.

Design Recommendation - Donalda Drive

The Donalda Drive entrance has been the main entrance to the Observatory since the 1950s. The re-aligned and refurbished entrance should continue as the Observatory entrance, incorporating elements such as a gate, gatehouse, lighting, landscape and signs designed in the historic Beaux Arts style of the Observatory Buildings.
Other Entrances

- Other entrances will be pedestrian and cycling entrances that connect specific local communities.
- The current access to the 16th Avenue Public School rear schoolyard from Gordon Rowe Crescent should be extended west to the Panhandle Lands or north to the main DDO Lands to create a convenient secondary entrance for residents of the neighborhood to the southeast of DDO Park.

**Design Recommendation - Secondary Entrances**

A common monument, eye-catching sign or similar feature should be placed at each secondary entrance to the park (and at the entrance to the Corsica Development on Bayview Avenue). These entry features should reference the Observatory or share a common design language with the major entrance feature recommended for the 16th Avenue entrance.

*Figure 24 - Gold Star Families Memorial Park* - Pylon sculptures at the north and south entrances of this park memorializing Chicago’s firefighters are meant as open doors and clearly identify the entrances to the park.
INTERNAL CIRCULATION

Driveway System

- The driveway system, which is shown in Figure 16, has two modes: Normal Mode and Event Mode.

- In Normal Mode, it consists of two separate drives: Donalda Drive in the north, and the Ring Road, in the south. Donalda Drive is a two-way drive that begins from Hillsview Drive and proceeds to a one-way circular drop-off by the Observatory. It continues as a two-way drive south to parking lots for the Observatory and Elms Lea. The Ring Road begins as a direct two-way drive from 16th Avenue, the becomes a one-way circular drive beyond the rise in the Panhandle Lands. It has a drop off at the north end.

- In Event Mode, the two drives become connected by an additional drive that runs from the top of the Ring Road to the Elms Lea parking lot. This extra connection will allow visitors to access all parking from each entrance during busy periods, and will facilitate convenient access for event set-up and maintenance. In Normal Mode, this additional drive will be closed to vehicles. It should be surfaced with unit paving or other special materials, to lessen its visual impact when not in use.

- The driveway system accommodates required fire access, although this access may have to be re-evaluated as new facilities are built.

Trail and Walkway System

- The trail and walkway system in the Master Plan is hierarchical, comprised of four different types:
  - Main Trails - Principal circulation routes designed to accommodate heavy use by pedestrians, cyclists and maintenance vehicles. These trails should be fully accessible.
  - Supporting Trails - Secondary trails principally for pedestrians. Surfacing and design will be based on conditions and anticipated use. These trails should be fully accessible.
  - Nature trails - Speciality trails designed for pedestrians in ecologically sensitive or heritage plantation areas. Surfacing and design will be based on conditions and anticipated use. These trails will offer challenging routes for individuals looking for a more adventurous experience.
  - Sidewalks - Sidewalks adjacent driveways and heritage buildings or connecting important facilities in the park. These sidewalks be surfaced with unit paving or concrete.

- All trails should be designed in compliance with the Town’s Parks & Open Space Trails Design & Construction Guidelines. Trails must also comply with the AODA Standard. See “Accessibility” (page 44).

Focal Points

- Three focal points form part of the internal circulation plan. Two of these, one at the north end of the Panhandle Lands and one at the eastern entrance by the Corsica Development, are intended to signal to visitors that they have reached the main portion of the park. These focal points are designated as “Lookouts”, as many park features will be visible for the first time at these locations.
The third focal point is the Central Fountain Plaza, located south of the Observatory at the confluence of the major multi-use trails and Donalda Drive. See “Central Fountain Plaza” (page 38).

Design Recommendation - Lookouts

The two Lookouts are important spaces signaling entrance into the main area of DDO Park. They should incorporate areas of special paving, lawn, benches, water fountains and interpretative or wayfinding signage. Public art should also be considered for these areas.

Figure 25 - Lubert Plaza - Thomas Jefferson University
PARKING

- The proposed parking facilities for DDO Park are shown in Figure 26. All parking space numbers are approximate and may change during detailed design.

- A study of both local and North American parks suggests that one parking space per acre of general use parkland is typical. The Master Plan makes provision for 114 parking spaces, which is appropriate given DDO Park’s 110 acres.

- Additional parking may be required to accommodate special facilities such as the Planetarium or the Conservatory, depending on the size of these facilities. Areas for parking expansion have been identified (see Figure 26).

- The Rail Overpass at Observatory Lane may require the Town to acquire additional land west of the rail line, in which case the Town should consider acquiring enough land to create a major park entrance with parking (see Figure 26). This may allow for a reduction in parking within the park itself.

- Parking is divided into four areas:
  - The parking lot for Elvis Stojko Arena, which will be renovated, reducing the number of spaces slightly from 136 to 128.
- Parking along the Ring Road, which will include 34 spaces. A lawn area to the southeast of the Ring Road can accommodate additional parking, if required.
- A relocated parking lot for the Observatory, which will include approximately 50 spaces. The area south of this lot will be available for parking expansion, if required.
- A new parking lot for Elms Lea, which will include 20 spaces.

Typically, the Elvis Stojko and Ring Road parking will be accessible from 16th Avenue only, and the Observatory and Elms Lea lots will be accessible from Hillsview Drive only. During events, all parking lots will be connected by an additional drive opened for this purpose. See “Driveway System” (page 33).

**Design Recommendation - Parking**

The parking lots at DDO Park should enhance the park, both aesthetically and ecologically, and serve as examples of parking lot design best practice. All lots should incorporate ‘green’ features: planted islands, bioswale drainage, permeable paving, safe walking areas and extensive shade trees. Trees with large healthy canopies are particularly important. Urban tolerant species should be selected and each tree provided with at least 30 cubic metres of soil.

*Figure 27 - Green Parking Lot at Cornell University - Well-designed ‘green’ parking lots include bioswale drainage, extensive shade trees and a safe walkway.*
EXTERNAL CONNECTIONS

- DDO Park connects to the road system at 16th Avenue to the south and at Hillsview Drive to the north. See “Driveway System” (page 33). Hillsview Drive dead-ends at the CNR Bala Line.

- Multi-use trail and greenway connections are shown in Figure 28. The multi-use trail from the northwest corner of DDO Park to 16th Avenue creates an important north-south cycling and trail route, fulfilling a requirement identified in the Town’s Pedestrian and Cycling Master Plan. The connection along “A” Street, across DDO Park, and over the proposed Rail Overpass at Observatory Lane creates a convenient east-west route and connects to the Town’s Greenway System.

- DDO Park is well-served by transit and its location close to Richmond Hill Centre should ensure that this transit infrastructure continues to improve and better connect DDO Park, both locally and regionally. However, the following improvements to transit to serve DDO Park should be considered:

  - When the pedestrian bridge over the CNR Bala Line at the east end of Observatory Lane is built, a regular bus route stop should be established near this bridge in order to better connect this access to Yonge Street.

  - A shuttle service from Langstaff or Richmond Hill GO Station should be considered if a major attraction is established, or special events held.

Figure 28 - Trail, Cycling and Greenway Connections
PARK GATHERING PLACES

Great Lawn

- The Great Lawn is intended as a flexible gathering space that will support passive recreation and informal sports on a day-to-day basis, as well as moderately-sized outdoor events. Other areas of DDO Park will be formally designated for picnicking, so tables and barbecues for the Great Lawn are not proposed, but informal picnicking will take place.

Design Recommendation - Great Lawn

The Great Lawn is an ideal location for a major piece of public art, which would mark the area as special and attract more users.

Figure 29 - Great Lawn at Nelson-Atkins Museum of Art - ‘Shuttlecocks’ sculpture by Claes Oldenburg and Coosje van Bruggen add a special touch to the Missouri museum’s landscape.

Central Fountain Plaza

- The Central Fountain Plaza is a gathering area located south of the Observatory at the confluence of many of DDO Parks driveways and trails. It is part of the Donalda Drive drop-off, and a landmark on the way from many of the park entrances to the Observatory.

- The Central Fountain Plaza will feature a fountain that separates vehicles dropping visitors from the rest of the plaza. The design of the fountain should incorporate an astronomical theme. It will also have seating, trees or other shade, special paving and a park map.

- As the only substantial paved area in DDO Park, the Central Fountain Plaza will function, in addition to being a drop-off, as a flexible space to accommodate small events, street vendors and the like.

Picnic Area

- There is a need in the Town for additional picnic space, particularly covered picnic facilities that can be reserved for larger groups. DDO Park is a good location for picnic areas, given its proximity to current
and future high density neighborhoods without private yards.

- The Picnic Area is proposed east of the Observatory in the area historically landscaped and planted with specimen trees. It is located adjacent to the Playground, so families picnicking with children can use both facilities conveniently.

- The Picnic Area will have approximately 16-20 tables, half of which will have charcoal barbeques. It will also have three covered pavilions, each of which can accommodate 36 persons, located proximately so that groups larger than 36 can use two or three of the pavilions.

- A washroom facility is proposed near the pavilions, to serve the Picnic Area and Playground.

**Design Recommendation - Picnic And Washroom Pavilions**

As a special venue, all DDO Park’s new facilities should be unique and contemporary, avoiding typical, cliched or dated elements. This design approach should be applied to the picnic and washroom pavilions.

**Figure 30 - Washroom Pavilion - Jean Sibelius Square, Toronto**

**Ring Road Area**

- The area within the Ring Road is proposed as an ancillary park and picnic space, intended for those who want or need the convenience of adjacent parking. It will also function as park space for people who have used or are waiting to use the Tennis Facility.
RECREATIONAL FACILITIES AND AMENITIES

Skating Trail

- The Town has plans for a second refrigerated skating trail. The area southwest of Elms Lea is an ideal place for this skating trail, which could wind through both meadow and woodland areas. This location is also convenient to both the Elms Lea and Ring Road parking areas.

- The skating trail will require a support building with a heated change room, washrooms and a garage for the ice resurfacing machine.

- The skating trail may be designed for rollerskating and rollerblading in summer.

Playground

- A playground is required to be located in the east of the site to serve the residents of the Corsica Development. Based on community feedback, this playground is envisioned as a non-traditional playground that uses natural materials, rather than ‘off-the-shelf’ play structures. A playground of this type will connect children with the ecology and landscape of DDO Park and fit well with preservation of the cultural heritage landscape. It could also incorporate astronomy-themed elements.

Design Recommendation - Natural Playground

Incorporating materials and features from nature allows children to explore and understand the world around them. The design of the playground at DDO Park should include elements from the site. Examples include play structures from recycled ash trees, “stands” of vertical materials that reference the heritage tree plantations, and a hill for climbing like the one on which the Observatory is located.
Design Recommendation - Water Element

The playground as proposed includes a water element. There is a pump house on the DDO site near Bayview Avenue that used to supply the Observatory with water. Under the Minutes of Settlement, Corsica is required to preserve and relocate this pump house to DDO Park. The pump house should be restored and incorporated into the water area. For the water element, a mister, rather than a splash pad, should be considered.

Figure 32 - Mister - A mister will fit better with a natural playground and uses less water.

Tennis Courts

- There are currently no tennis courts within the concession block in which DDO Park is located. The Panhandle Lands are therefore recommended as the site for four hard-surface tennis courts that will help meet the Town’s service level provisions for tennis facilities. A small pavilion is proposed, with changing rooms and equipment storage. The site will be considered for a tennis bubble should the Town determine that it should own and operate a facility of this type.

Seating and Rest Areas

- Numerous formal rest areas are incorporated in the Master Plan, including the ‘Lookout’ Areas, the Central Fountain Plaza, the Great Lawn and rest areas in woodlands to the north and west. These rest areas should include accessible seating and wayfinding signage.

- In addition to formal rest areas, seating should be provided along trails and walkways at intervals required by the AODA and the Town’s Parks & Open Space Trails Design & Construction Guidelines.

Washrooms

- The Master Plan includes four washroom locations: in the Observatory, in the Elms Lea Visitors’ Centre, in the Skating Trail Pavilion and in a washroom pavilion for the Picnic Area and Playground. There are also washrooms in Elvis Stojko Arena.

Signage, Wayfinding and Interpretative Guidance

- Entrance signage must be prominent and identifiable. To accomplish this, either the signs themselves should be distinctive or they should be accompanied by an entry feature that clearly identifies the park. See “Entrances” (page 30).

- Internal wayfinding signage should be located strategically, including at trail heads. Park maps should
be located in the Elms Lea Visitors’ Centre, at the two ‘Lookouts’ and at the Central Fountain Plaza.

- DDO Park should have interpretative signage identifying cultural landscape features and their history. Consideration should be given to digital interpretative guides.

- DDO Park is envisioned as a destination park with a distinctive identity. This should be reflected in all park signage, which should reference both the Observatory and the Town.

**Connectivity**

- Internet connection is a now a standard amenity in many public spaces. Consideration should be given to providing free Wi-Fi in park gathering places, including Elms Lea Visitors’ Centre, the Central Fountain Plaza, the Picnic Area and the Great Lawn.

**Lighting**

- Lighting should be provided around all buildings, within parking lots and along the Main Trail. See “Trail and Walkway System” (page 33).

- Preservation of dark sky is particularly important at DDO Park. Lighting should be designed with to meet the most stringent of the following criteria:
  
  - The Town’s Light Pollution By-law No. 63-95, which is intended to limit light pollution affecting the operation of the Observatory.
  - LEED requirements regarding dark-sky preservation and light trespass.

**Design Recommendation - Lighting**

Lighting is an important design element that should contribute to the overall look of DDO Park. Contemporary, decorative, pedestrian-scale light fixtures should be used, preferably in a style that references the park’s themes of astronomy and discovery.

**Figure 33 - Queen Elizabeth Park, London** - The lighting creates an enchanting and immersive experience.
SUSTAINABILITY

Preservation and Enhancement of Natural Areas

- The preservation and enhancement of DDO Park’s natural areas is the most important sustainability initiative planned for the park. The details of this initiative are set out under “Master Plan Overview - Preserve and Enhance Natural Areas” above.

Stormwater and Water Management

- Construction and restoration of DDO Park buildings and other facilities should employ, to the greatest extent possible, stormwater management best practices based on detention and infiltration, rather than end-of-pipe treatment.

Green Buildings

- Restoration of heritage buildings should seek to improve energy efficiency, water efficiency, CO2 emissions and indoor environmental quality and use sustainable building materials and methods. New buildings should be designed meet the Town’s requirement for LEED certification, which is currently LEED Silver.

Waste Disposal

- Best practices should be employed to reduce waste from events, attractions and daily operations. These include providing ample recycling containers, limiting takeout food containers and utensils, and composting.

Sustainable Landscape Design

- DDO Park adds 110 acres of parkland to the Town’s park maintenance requirements. Detailed design of landscapes should seek to limit these maintenance requirements and the resources associated with them. Examples include:
  - Limiting lawn to areas where it is absolutely required for facilities (such as immediately around picnic areas, for the Great Lawn and around Heritage Buildings). Where lawn is required, using drought tolerant hybrids or alternative groundcovers should be explored.
  - Planting drought tolerant plants in formal landscapes and avoiding invasive species. Irrigating these landscapes with harvested rainwater.
SAFETY AND ACCESSIBILITY

Safety

- The development of DDO Park is an opportunity to implement Crime Prevention through Environmental Design (CPTED) principles to promote park safety and provide users with a feeling of security. Examples of CPTED principles in the Master Plan:
  - Defining clear entrances to the park and limiting access in other areas with landscaping and fencing.
  - Creating natural surveillance by placing focal points - such as the ‘Lookout’ areas, the Central Fountain Plaza, the Great Lawn, etc. - in strategic areas to provide visibility and clear sightlines.
  - Proposing high-quality public spaces with regular maintenance that create a sense of community ownership and responsibility.

- Trails should be designed according to the safety standards set out in the Town’s Parks & Open Space Trails Design & Construction Guidelines. Under these guidelines, Main Trails will be lit, while Supporting Trails and Nature Trails will not.

Accessibility

- The Design of Public Spaces Standard (Standard) of the Accessibility for Ontarians with Disabilities Act (AODA) applies to new municipal parks and recreational facilities built after January 1, 2016. It will apply to DDO Park.

- The Standard sets out design, consultation and operational requirements relating to recreational trails, walkways, outdoor public eating areas, outdoor play areas, parking, service counters and maintenance of accessible elements. Meeting these requirements, which is mandatory, will help ensure that DDO Park’s outdoor areas are accessible and inclusive.

- Accessibility for elements related to buildings, such as building entrances, washrooms and barrier-free paths of travel are not addressed in the Standard. They are addressed through the Ontario Building Code, which will apply to new and retrofitted buildings in DDO Park.

PARK OPERATIONS

- The existing garage at Elms Lea should be converted or replaced to provide a maintenance building which, together with Elms Lea itself, would function as the operations centre of DDO Park.

- All Main Trails provide connections for maintenance vehicles.
IMPLEMENTATION

INTRODUCTION

- Though appropriate for a public space with such important cultural and natural heritage assets, the Master Plan is ambitious, multi-faceted and will require key partnerships and substantial funding. Full realization of the Master Plan could therefore take 15-20 years, with the pace of implementation depending on the Town’s priorities and ability to enter into these partnerships and source this funding.

- To help guide this process, the Master Plan sets out:
  - A Phasing Plan
  - A Cost Plan
  - Governance, community involvement and partnerships recommendations
  - Education and outreach recommendations
  - Recommendations on how the development of DDO Park can respond to the Town’s Cultural Plan
  - Recommendations on park branding and promotion.

SUGGESTED PHASING

- Implementation of the Master Plan is divided into three phases:
  - Phase 1 - Early Priorities (1-5 Years)
  - Phase 2 - Medium-term Projects (5-10 Years)
  - Phase 3 - Long-term Projects (10+ Years)

Suggested Early Priorities

- Early priorities are focused on establishing DDO Park as a working park. This requires development of basic infrastructure, including most park entrances, certain drives and walkways, lighting and wayfinding signage.

- Although full restoration of heritage buildings may not occur within four years, essential restoration in and around these properties is necessary to preserve them and ensure they are safe and accessible.

- DDO Park’s natural areas are a key attraction for Town residents. Restoration of natural areas and establishment of the park’s trail systems will be implemented as early priorities, allowing the full park to be in use quickly.

- A playground is required to be built in the eastern area of DDO Park to serve the residents of the Corsica Development in order to meet the Town’s service levels for park provision under the Parks Plan. The Picnic Area is a logical facility to combine with the trails and playground.

- Feasibility studies for the Planetarium, Rail Overpass and Southwest Wetland should be commenced in Phase 1, and the marketing plan for DDO Park developed. See “Marketing” (page 56).

- A full list of early implementation priorities is set out in the following chart.
<table>
<thead>
<tr>
<th>Project</th>
<th>Scope</th>
<th>Rationale for Phasing</th>
</tr>
</thead>
</table>
| **Park Entrances** | ▪ All Park entrances, other than the Observatory Lane  
▪ Includes landscaping, entrance features and signage  
▪ Refurbishment of Elvis Stojko parking lot  
▪ Perimeter fencing | ▪ Recognizable entrances required to promote use |
| **Essential Restoration of Heritage Properties** | ▪ Restoration of heritage properties required for safety, preservation and external appearance  
▪ Tree trimming for safety and views  
▪ Modifications for accessibility | ▪ Restoration required to preserve heritage asset  
▪ Heritage buildings must be made accessible |
| **Trail System** | ▪ All Main Trails, including ‘Star Path’ illuminating walkway  
▪ Supporting Trails and Nature Trails except those connected later phase projects, including rest areas, seating and lighting  
▪ ‘Lookout’ Areas | ▪ Lower cost project that allows access to DDO Park’s natural areas  
▪ Star Path provides minor attraction linked to Observatory |
| **Picnic Area** | ▪ Individual picnic areas, covered picnic pavilions and associated landscaping  
▪ Washroom facility | ▪ Addresses Town need for picnic areas |
| **Initiate Improvement of Natural Areas** | ▪ Reforestation of areas as shown on the Master Plan  
▪ Management of existing woodlands, including removal of dead and diseased trees  
▪ Management of meadows | ▪ Reforestation funded under Minutes of Settlement  
▪ Enhances natural areas associated with trails |
| **Playground** | ▪ Playground, including associated seating, lighting and landscaping  
▪ Water elements/features, including restoration of historic Pump House | ▪ Playground required for Corsica Development |
Suggested Medium-Term Projects

- Medium-term projects are intended to establish DDO Park as a regional destination based on the Observatory and the Planetarium. These projects will allow full programme of education and outreach, establishing DDO Park as the historic home of Canadian astronomy.

- The Planetarium is subject to further study. Projects related to the Observatory should be re-evaluated in light of what the study determines about the feasibility and timing of the Planetarium.

- To support the establishment of the Observatory as the park’s centrepiece, a the Rail Overpass and several gathering places, like the Central Fountain Plaza, Picnic Area will be built.

- A full list of medium-term projects is set out below.

<table>
<thead>
<tr>
<th>Project</th>
<th>Scope</th>
<th>Rationale for Phasing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observatory Lane Overpass</td>
<td>Observatory Lane Rail Overpass</td>
<td>Important project but requires significant planning, funding and coordination with rail authorities</td>
</tr>
<tr>
<td>Planetarium</td>
<td>New Planetarium forming part of Observatory complex</td>
<td>Planetarium is a priority, but the time to study and fund the project may push it past the medium term.</td>
</tr>
<tr>
<td>Restoration/retrofit of Observatory</td>
<td>Full restoration of Observatory</td>
<td>Restoration required to preserve heritage asset</td>
</tr>
<tr>
<td></td>
<td>Retrofit of interior to accommodate Planetarium</td>
<td>Observatory is a key feature of the site - restoration will establish park as regional destination</td>
</tr>
<tr>
<td></td>
<td>Restoration of Donalda Drive, new drop-off and relocation of Observatory parking lot</td>
<td></td>
</tr>
<tr>
<td>New Observatory Landscape</td>
<td>Formal garden around Observatory complex with elements of original 1933 Beaux-Arts plan</td>
<td>Basic restoration of the Observatory and Planetarium study should be completed prior to these enhancements</td>
</tr>
<tr>
<td></td>
<td>Amphitheatre</td>
<td>Partnership with community group to oversee design and maintenance of garden is recommended</td>
</tr>
<tr>
<td>Project</td>
<td>Scope</td>
<td>Rationale for Phasing</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Central Fountain Plaza</td>
<td>▪ Central plaza with fountain and associated seating, amenities and landscaping</td>
<td>▪ Fountain and plaza gathering space will be augmented restoration to the Observatory.</td>
</tr>
<tr>
<td>Panhandle Drives and Parking</td>
<td>▪ Ring Road, including access drive, multi-use path, drop-off, parking and parkland area within Ring Road</td>
<td>▪ Parking required to support new facilities</td>
</tr>
<tr>
<td>Great Lawn</td>
<td>▪ Great lawn area and associated amenities</td>
<td>▪ Lower cost project that creates flexible space</td>
</tr>
<tr>
<td>Tennis Courts</td>
<td>▪ Four hardcourt tennis courts, pavilion and associated landscaping</td>
<td>▪ Helps to meet service level requirements under Parks Plan</td>
</tr>
</tbody>
</table>
| Continue Improvement of Natural Areas | ▪ Management of existing woodlands, including removal of dead and diseased trees  
  ▪ Management of meadows            | ▪ Improvement may take more than four years to complete                       |
| Southwest Wetland               | ▪ Creation of new wetland in southeast corner of DDO Park, including boardwalks, lookouts, etc. | ▪ Requires examination of site conditions to determine feasibility                     |
Later Projects

- Later stage projects are centred around Elms Lea, which will be developed as complement to the Observatory in order to provide logistical support and a more diverse park experience.

- A full list of later stage projects is set out in the following chart.

<table>
<thead>
<tr>
<th>Project</th>
<th>Scope</th>
<th>Rationale for Phasing</th>
</tr>
</thead>
</table>
| Elms Lea Visitors’ Centre            | ▪ Restoration of Elms Lea farmhouse in accordance with Conservation Management Plan  
▪ Retrofit of interior to create Visitors’ Centre  
▪ New parking lot and Event Mode Connecting Drive | ▪ Elms Lea an important facility for creating diverse experience in DDO Park |
| Community Orchard and Maintenance Building | ▪ Restored orchard south of Elms Lea  
▪ Conversion or replacement of Elms Leas garage to create park and orchard maintenance building | ▪ Orchard is lower cost community project  
▪ Maintenance building required for park |
| Skating Trail                        | ▪ Skating Trail, supporting pavilion and associated trails and landscaping | ▪ Town has identified Skating Trail as project for funding, but other park infrastructure, such as Ring Road, should be in place first |
| Conservatory                         | ▪ Conservatory and associated landscaping                             | ▪ Requires feasibility study to determine capital and operating cost implications  
▪ Partnership with community group to oversee design and maintenance is recommended |
| Re-design of 16th Avenue Entrance    | ▪ Re-design of 16th Avenue entrance to serve DDO Park, Elvis Stojko Arena and 16th Avenue Public School from signalized intersection | ▪ Requires coordination with school and should occur in conjunction with widening of 16th Avenue planned for 2019 to 2023. |
COST PLAN

Cost Estimate

- The table below sets out a rough order of magnitude cost estimate for the major projects comprising the Master Plan. This cost estimate is for general planning purposes only and by its nature contains only indicative information and estimates. More detailed cost estimates will be developed for implementation of each project.

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Suggested Early Priorities (1-5 Years)</strong></td>
<td></td>
</tr>
<tr>
<td>Park Entrances(1)(2)</td>
<td>$2,198,000</td>
</tr>
<tr>
<td>Essential Restoration of Heritage Properties(3)</td>
<td>$639,000</td>
</tr>
<tr>
<td>Trail System</td>
<td>$1,625,000</td>
</tr>
<tr>
<td>Picnic Area(4)</td>
<td>$1,006,000</td>
</tr>
<tr>
<td>Improvement of Natural Areas(5)</td>
<td>$1,812,000</td>
</tr>
<tr>
<td>Playground</td>
<td>$459,000</td>
</tr>
<tr>
<td>Consultant Fees (18%)</td>
<td>$1,393,000</td>
</tr>
<tr>
<td>Inflation to 2020(6)</td>
<td>$829,000</td>
</tr>
<tr>
<td>Contingency (15%)</td>
<td>$1,470,000</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>$11,456,000</td>
</tr>
</tbody>
</table>

| **Suggested Medium-Term Projects (5-10 Years)** |               |
| Observatory Lane Rail Overpass(7)              | $2,200,000    |
| Planetarium(8)                                 | $7,000,000    |
| Renovation/Retrofit of Observatory(9)          | $3,572,000    |
| New Observatory Landscape(10)                  | $908,000      |
| Central Fountain Plaza                         | $891,000      |
| Panhandle Drive and Parking                    | $1,898,000    |
| Great Lawn                                     | $113,000      |
| Tennis Courts                                  | $410,000      |
| Southwest Wetland                              | $404,000      |
| Consultant Fees (18%)                          | $3,131,000    |
| Inflation to 2025(11)                          | $3,781,000    |
| Contingency (15%)                              | $3,587,000    |
| **Subtotal**                                   | $27,895,000   |
## Project Cost Estimate

### Suggested Later Projects (8+ Years)

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elms Lea Visitors’ Centre(^{(12)})</td>
<td>$2,185,000</td>
</tr>
<tr>
<td>Community Orchard</td>
<td>$56,000</td>
</tr>
<tr>
<td>Skating Trail(^{(13)})</td>
<td>$2,865,000</td>
</tr>
<tr>
<td>Conservatory(^{(14)})</td>
<td>$2,048,000</td>
</tr>
<tr>
<td>Re-design of 16th Avenue Entrance</td>
<td>Not included</td>
</tr>
<tr>
<td>Consultant Fees (18%)</td>
<td>$1,288,000</td>
</tr>
<tr>
<td>Inflation to 2030(^{(15)})</td>
<td>$2,776,000</td>
</tr>
<tr>
<td>Contingency (15%)</td>
<td>$1,673,000</td>
</tr>
</tbody>
</table>

**Subtotal**: $12,890,000

**Total**: $52,241,000

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1. Includes renovation of Elvis Stojko Arena parking lot.
2. Includes $750,000 allowance for entrance feature at 16th Street Entrance.
3. Includes ‘short-term’ repairs identified by GBCA Architects. Contingency included. Also includes basic landscape improvements.
4. Includes picnic pavilions and washroom facility.
5. Full cost included in Phase 1, although work may extend beyond four-year phase. Includes $1,643,000 of work to be funded by Corsica.
6. 9.08%, based on past five years. Source: Bank of Canada.
7. Includes $750,000 allowance for enhanced design.
8. 50-seat planetarium with support functions located in Administration Building.
9. Includes retrofit for planetarium and ‘long-term’ repairs identified by GBCA Architects. Also includes renovation of Donalda Drive and relocation of Observatory parking lot.
10. Includes Beaux-Arts garden and 150-person grass amphitheatre.
11. 18.42%, based on past ten years. Source: Bank of Canada.
12. Includes Visitors’ Centre retrofit, new parking lot and drive improvements.
13. 1450m² skating trail, changeroom pavilion and ice resurfacer.
15. 32.88%, based on last 15 years. Source: Bank of Canada.

### Sources of Funding

- While identifying specific funding sources for the development of DDO Park is beyond the scope of the Master Plan, there are several potential sources of funding available:
  - The Town’s reserve funds
  - Revenue from the federal Gas Tax Fund for municipal infrastructure
  - Grants or loans from senior governments or agencies
  - Private sponsorships or partnerships
  - Community fund-raising.
COMMUNITY INVOLVEMENT AND PARTNERSHIPS

Overview

- The vision for DDO Park is ambitious, but can be achieved with the appropriate resources. Dedicated municipal staff, extensive community involvement and partnerships with appropriate organizations to support programming, facilities and operations are all hallmarks of successful major parks and will need to be established for DDO Park.

Staff Resources

- Developing DDO Park will require significant staff resources, including to facilitate the community involvement and create partnerships.

“Friends of DDO Park” Groups

- To promote community involvement, the Town should establish one or more community advisory groups. The role of these “Friends of DDO Park” groups would be to:

  - Meet regularly with Town staff and the DDO Park Committee of Council to provide advice on the development, programming, operation and maintenance of DDO Park.
  - With the approval and supervision of the Town, develop, operate and, in certain cases, fund, activities and programs in DDO Park that have community support. Common activities and programs for groups of this type include fund-raising for park improvements, providing guided tours, and overseeing special event organization.
  - Providing supplemental maintenance for DDO Park, such as ecological restoration.

Partnerships

- The Town should seek to develop and operate DDO Park and its facilities in partnership with community groups, public agencies or other partners in order to:

  - Ensure the park is continually responding to community needs
  - Create a sense of ownership by involving the community in the governance and operation of the park
  - Limit the burden on Town resources by expanding sources of funding and involving volunteers.

- Examples of proposed facilities and corresponding potential partnerships:

  - Woodland management and creation could be developed in partnership with the Toronto Regional Conservation Authority.
  - The Southwest Wetland could be developed in partnership with Ontario Streams.
  - Observatory restoration, enhancement and programming could be developed in partnership with RASC Toronto.
  - The Observatory Beaux-Arts Garden and gardens in the Conservatory, could be designed and maintained in partnership with the local horticultural society.
  - The playground could be developed in partnership with an organization such as Evergreen, whose mandate includes promoting natural element play areas.
EDUCATION AND OUTREACH

Overview

- As many who participated in the community engagement process noted, DDO Park has a unique combination of natural, heritage and scientific features and facilities that make it an ideal place for education and public outreach.

- Effective and well-attended educational and outreach programming is a key to establishing DDO Park as a regional destination. People who visit DDO Park as school children, for example, are more likely to return as adults for both formal and informal activities.

- To maximize the effectiveness of education and outreach programming, the Town should create formal consultative relationships with local school boards and public outreach groups to aid in the development of facilities and programs.

Observatory

- The Observatory’s main function should be educational and public outreach programming. Restoration and enhancement efforts should be focused on creating the best possible experience for those visiting the Observatory to learn about its history, astronomy and astronomical research.

Elms Lea

- Elms Lea’s facilities should allow for a meaningful educational and public outreach component. Proposed facilities that have this potential include:
  - The Elms Lea Visitors’ Centre, which should include flexible space for education and outreach programming relating to topics such as local history, agriculture, aboriculture and ecology.
  - The Conservatory, which can provide education and outreach related to horticulture and ecology.
  - The Community Orchard, which can provide education and outreach related to urban agriculture.

Interpretative Information

- DDO Park should incorporate a system of interpretative information, preferably employing both traditional signage and digital media, to allow visitors to explore the park through this information.

CULTURAL PLAN

- DDO Park venues and facilities, including the amphitheatre, the Observatory and the Elms Lea Visitors’ Centre could be used to support the Town’s Cultural Plan. Once these facilities are built:
  - DDO Park could host the Annual Cultural Summit as a way of highlighting the site’s value for cultural events.
  - Events and festivals on the DDO Park could be planned in accordance with the best practices noted in the Cultural Plan. If this planning supports it, the DDO Park could host a major cultural event - ideally related to astronomy or another of the site’s heritage themes - which could become a “Signature Event” as recommended by the Cultural Plan.
MARKETING

Overview

- As set out in the Vision Statement, the Master Plan sees DDO Park as one of the preeminent public parks in the Greater Toronto Area. The branding and promotion of DDO Park must reflect its importance as the Town’s premier destination park.

- The site’s history is clear and compelling and should not be watered-down by elements that are not connected with this history. A clear identity for the park, rooted in the site’s heritage and reflected in its design, will attract users and allow for effective promotion.

Park Name

- The site should be named “David Dunlap Observatory Park”, with the short form “DDO Park”. A wordmark incorporating the Observatory should be developed to assist with branding and promotion.

Park Design

- Design of certain park elements should reference the Observatory, without becoming so overt or frequent that the site takes on the feel of a theme park. An example already proposed in the Master Plan is the ‘Star Path’, which uses embedded self-illuminating aggregate along the multi-use trail from the north of the Panhandle Lands to the Observatory. In addition:
  - Entrance features and signage should reference the Observatory.
  - One or more of the Central Fountain Plaza, the Rail Overpass, the Skating Trail and the Playground should reference the Observatory or astronomy.
  - The water play area should incorporate the relocated pump house used originally to provide water to the Observatory. The restored Radio Shack and radio astronomy antenna should be located nearby.

- Other aspects of the design of DDO Park should contribute to the identity of the site:
  - The heritage elements of DDO Park provide sufficient connection to the past. Other elements of the site should reflect a contemporary look that defines DDO Park as forward-looking and exceptional. As much as possible, typical or cliched elements should be avoided.
  - The Rail Overpass will be the principal element of DDO Park that travellers on the GO Train associate with the site. It should therefore incorporate a high-quality and considered aesthetic. Signage announcing DDO Park events should be located for GO Train users to see.
  - As 16th Avenue is the only access to DDO Park from a major street, the entrance design should clearly identify the site, reference the special nature of the site’s heritage and natural features, and incorporate a high-quality and considered aesthetic.
  - An feature of some kind - sign, sculpture, arch or other monument - should be placed at each entrance to the park (including at the entrance to the Corsica Development on Bayview Avenue). These entry features can differ in terms of size, prominence and type, but should share an identifiable common element that references the Observatory.
Marketing Plan

- A Marketing Plan should be established for DDO Park in conjunction with Early Priority development. As programming and facilities are established, the key benefits of DDO Park for users should be identified and clearly expressed in marketing and promotional information related to the site. These key benefits should be expressed in terms of the positive themes and values associated with the heritage and natural features of DDO Park, such as discovery, education and sustainability. By marketing DDO Park in this way, these positive themes and values will not only attract users, but create an association between these themes and values and Richmond Hill itself.

- Once sufficient programming and facilities are established, DDO Park should have its own web-site. Any “Friends of DDO Park” community groups could either also maintain a web-site or, under the supervision of the Town, contribute to DDO Park official web-site.

- The Town’s a marketing strategy for DDO Park should involve York Region, community groups and other partners involved in the park.

- Regular events should be held at DDO Park to promote the park. For example, the park should be established as the premier GTA destination for astronomy buffs to observe significant astronomical vents, such as eclipses and meteor showers.

Figure 34 - DDO Park Marketing - DDO Park should be marketed as the premier GTA destination for astronomy buffs to gather to observe astronomical events.
CONCLUSION

- The David Dunlap Observatory lands hold a storied place in the Richmond Hill community. The astronomical research conducted on at the Observatory from the 1930s through to the 2000s is a key part of both the Town’s identity and Canada’s scientific history. The lands have been an undeveloped oasis within Richmond Hill’s urban landscape and have provided informal passive recreation opportunities for Town residents for many decades.

- Given the site’s importance, this draft Master Plan envisions DDO Park as a destination park that will draw visitors from across the Town and beyond. The key attraction will be a restored and enhanced Observatory, positioned to be the centre for public education and outreach in astronomy in the GTA. Complementing the Observatory will be acres of natural parkland, designed to be enjoyed in a sustainable manner, and a number of diverse attractions with a local focus, centred around Elms Lea farmhouse.

- Implementation of this Master Plan for DDO Park is long-term process that will require significant time, resources and cooperation among stakeholders. However if the Vision Statement for DDO Park is realized, the result will be a true star in the firmament of the Town’s and the region’s public spaces.