Strengths, Opportunities and Constraints Report

1900 Yonge and Davisville Yard

April, 2023

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Contents

1.0 Introduction

1.1 Purpose

The Strengths, Opportunities and Constraints analysis is done to support the decking feasibility of the Davisville Yard and development concept for the McBrien Site located at 1900 Yonge Street. Strengths are factors on the site that are in favor of the vision for the site. Opportunities are factors that can be used to enhance the design of the development. Constraints are factors that could pose challenges for the development. The aim of this report is to establish a baseline understanding of the sites' characteristics and function to identify strengths, opportunities and constraints relevant to the vision for the site. The purpose of this report is to provide a balanced assessment of the Strength, Opportunity and Constraint factors to help inform decisions of all groups involved in this project. The study area for this report assesses the McBrien Site located at 1900 Yonge Street and the Davisville Yard separately and combined.

1900 Yonge Site

The 1900 Yonge Street site spanning 40,000 sq.ft (3,700 m^2) is located adjacent to the Davisville Yard. The structures on the site include the McBrien Building, Substation and Signal Control Building along with the subway station entrances and Davisville Bus Loop. The 1900 Yonge site is bordered by Yonge Street to the south and east, the retaining wall separating the site from the YUS line tracks to the west, and Chaplin Crescent to the north.

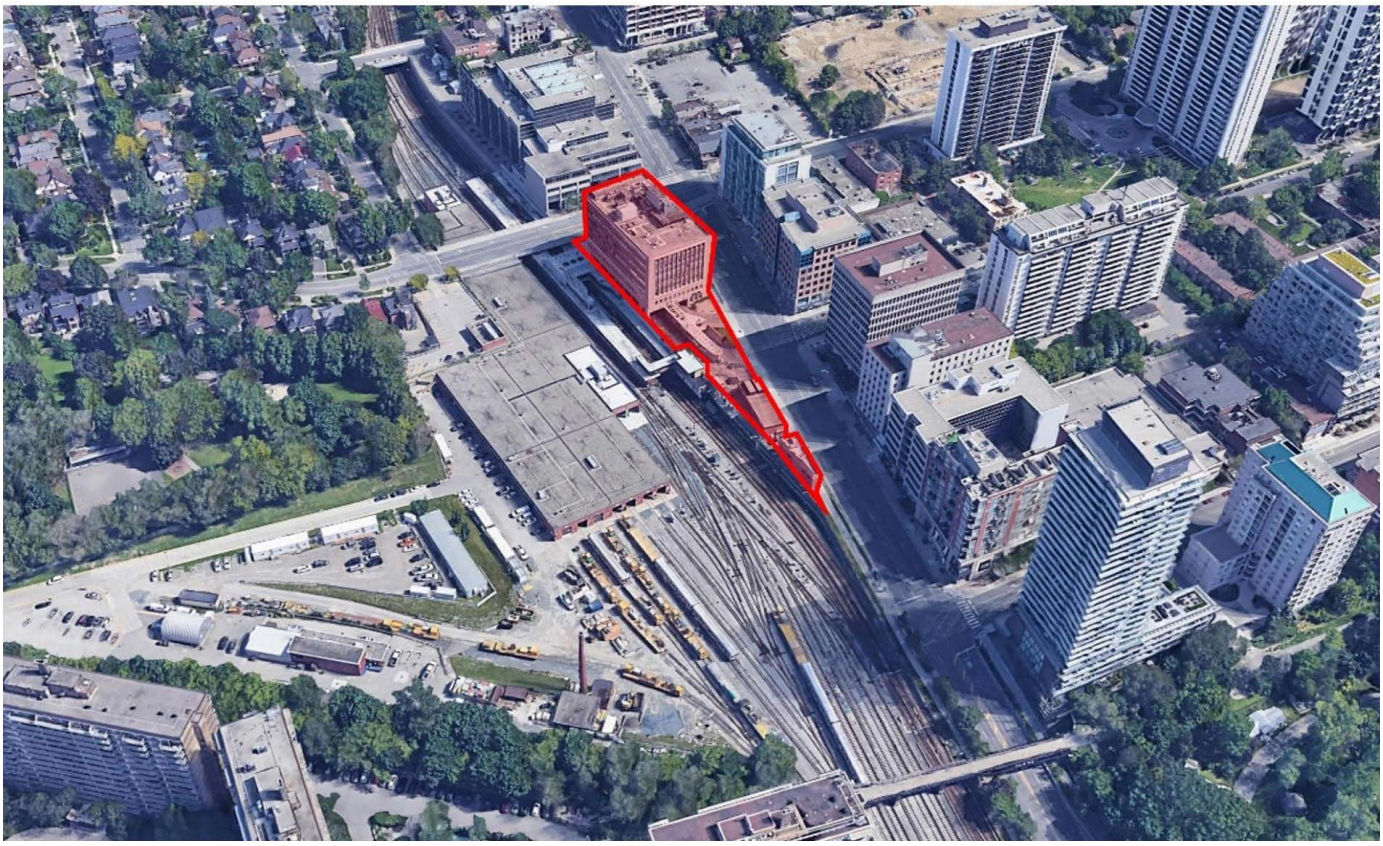

Image 1. 1900 Yonge Site

2.0 Constraints

1900 Yonge Site

2.1 Site Shape

The triangular shape of the site (see Image 2) will impose limits on any proposed construction south of the McBrien Building. As the site tapers, there are fewer opportunities to place structures while still accommodating the existing substation buildings.

2.2 Existing Infrastructure

TTC Developer Guide (2018) sets stringent guidelines when developing above and adjacent to critical TTC infrastructure - Tracks, Station, yard, etc. Guidelines require continued access to, and specific setbacks from the substations. Guidelines prohibit building over existing substations and the de-energizing of substations during and after construction. These restrictions would prohibit any development at the south end of the McBrien Site where the substations are located (see Image 3).

The existing communication equipment from the 8th floor on McBrien Building will need to be relocated to the old signals building located at the south end of Davisville Station. There will be new mechanical equipment located at street level.

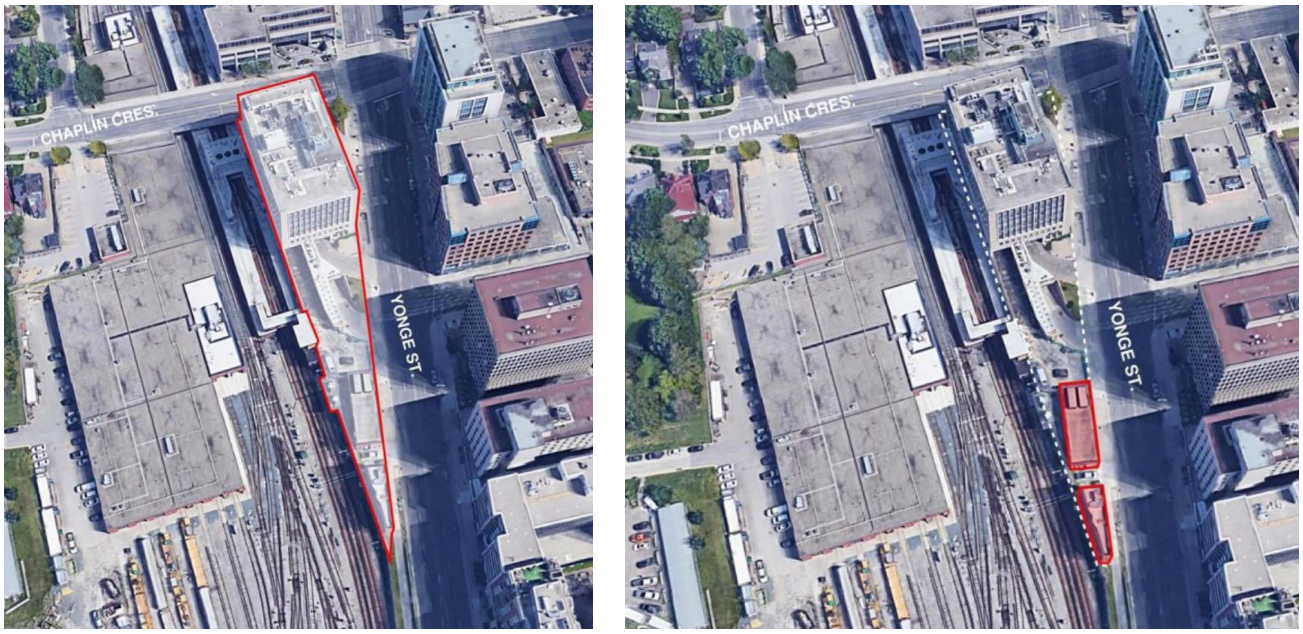

Image 2. 1900 Yonge Property line

2.0 Constraints

1900 Yonge Site

2.3 TTC Public Access

As the primary public access point for Davisville Station, the existing entrance contained within the footprint of the McBrien Building (see Image 4) would need to be maintained throughout the development of any scheme.

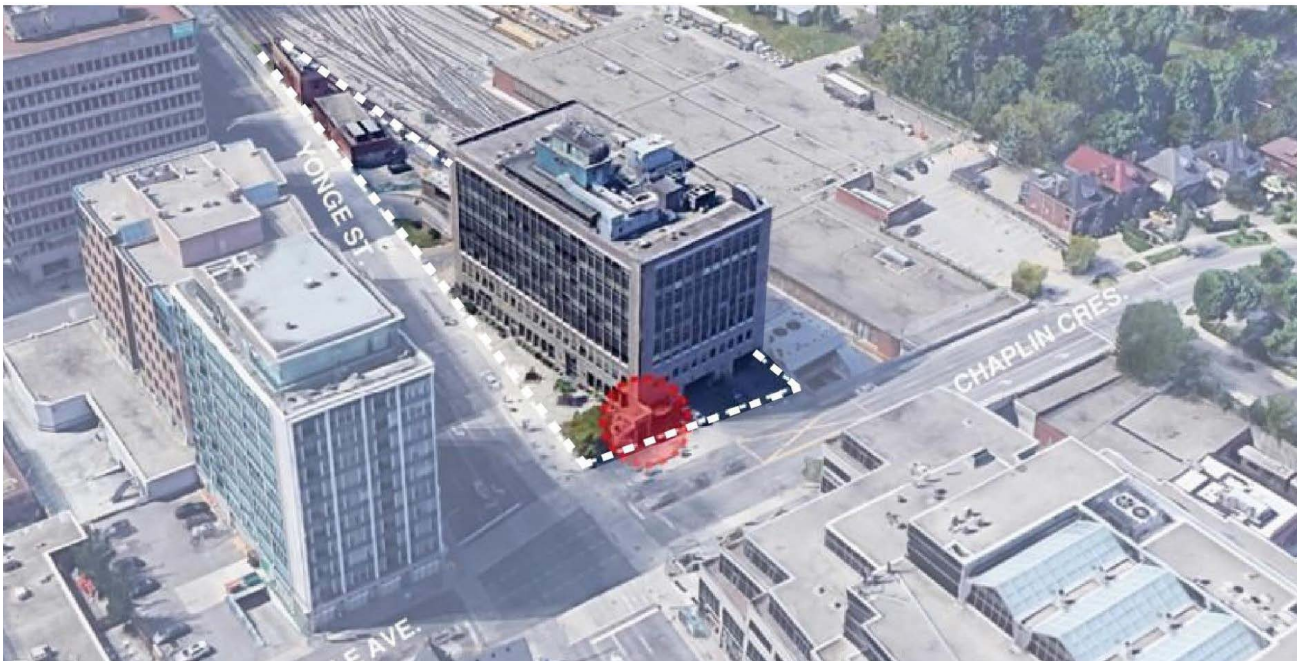

Image 4. McBrien Building TTC Access

Image 5. Accessible Elevator

2.0 Constraints

1900 Yonge Site

2.4 Davisville Station Bus Loop

The existing bus loop location and configuration limits development possibilities on the McBrien Site. Bus loop drive aisles south of the existing building cover much of the open space on site and abut the adjacent substation building. Buses are permitted to make left hand turns onto Yonge St. (heading northbound) when exiting the bus loop (see Image 7).

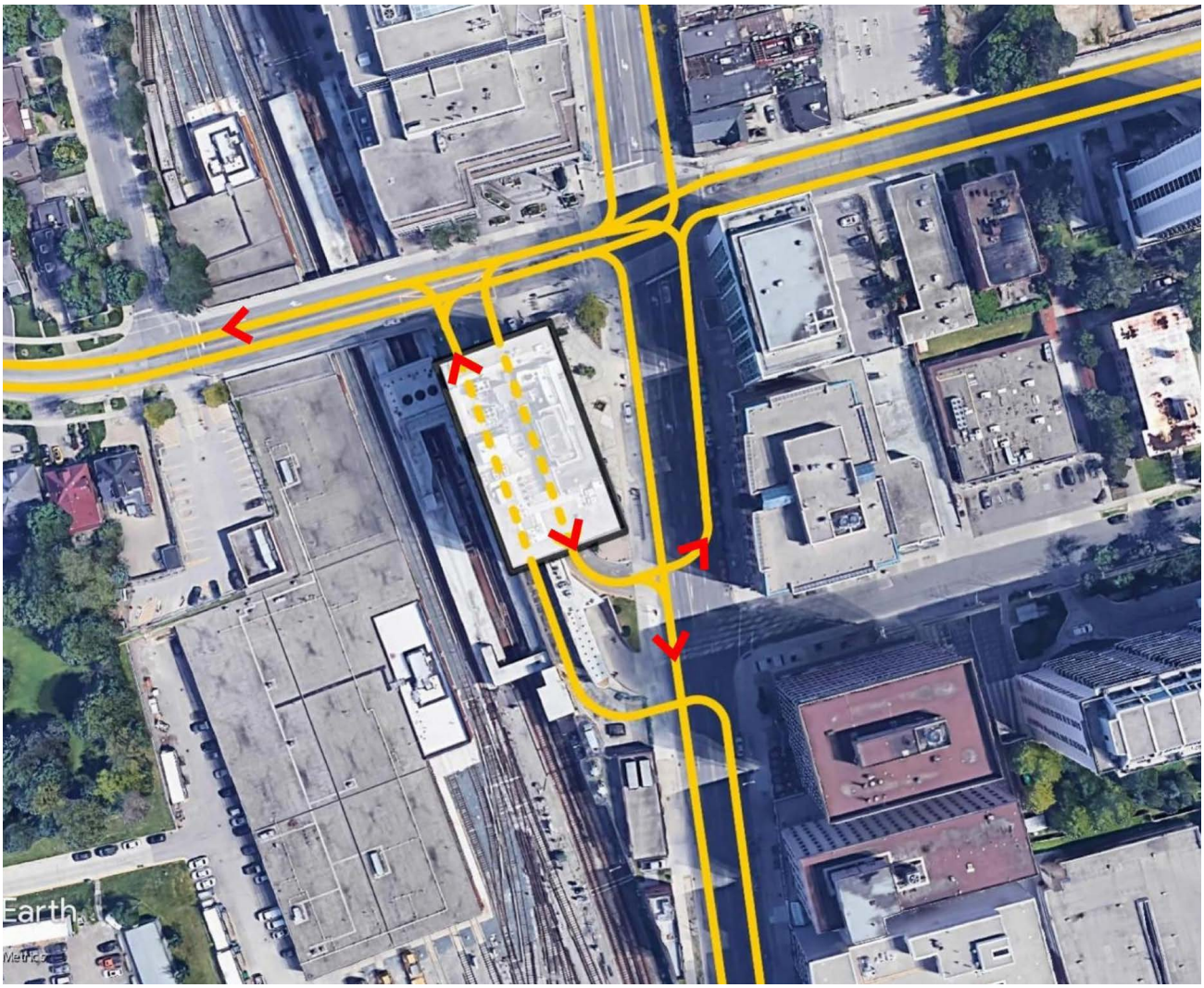

Image 7. Davisville Bus Loop Diagram

2.0 Constraints

1900 Yonge Site

2.4 Davisville Station Bus Loop

The current bus loop location would significantly limit the ability to introduce new structure (columns) and additional elevator / stair core required to support building over the McBrien Building (see Figure 1). To support any structure over the McBrien Building, there will be columns as marked in red in Figure 1, that will have to be located in the existing bus loop aisle within the McBrien Building.

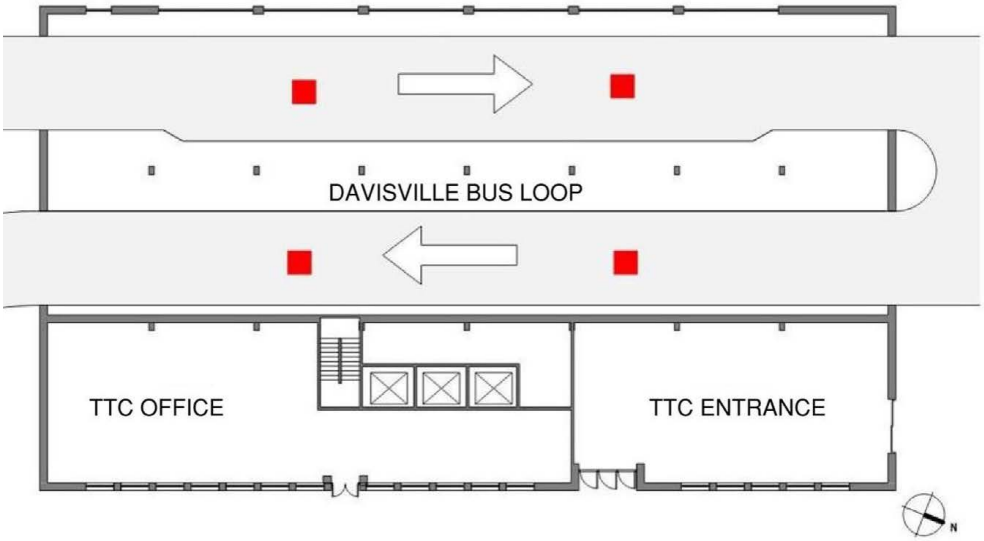

Figure 1. Ideal Column Location for building over the McBrien Building.

Image 8. Bus Loop - North Access

2.0 Constraints

1900 Yonge Site

2.5 On - Site Parking

The single underground parking level below the McBrien Building, the adjacent underground TTC station and the limited space available south of the McBrien Building will limit the potential parking that can be provided on the site for any future development (see Image 10).

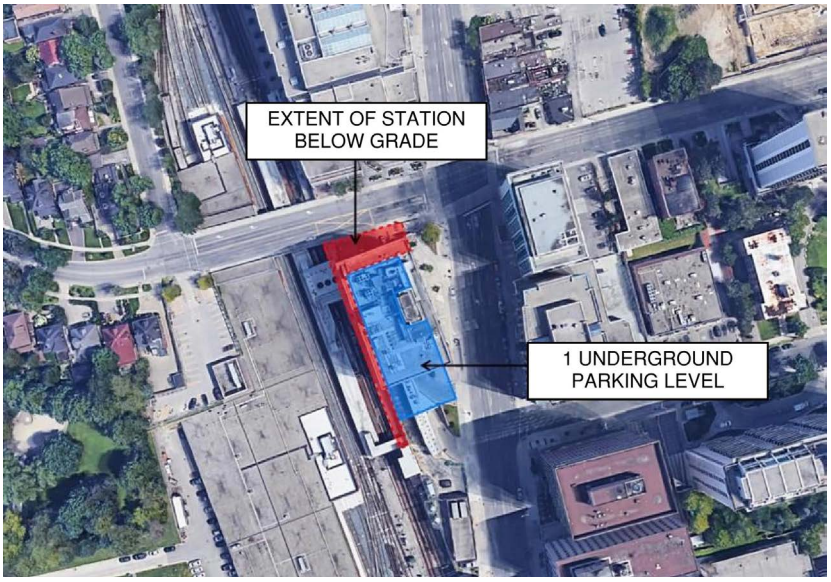

Image 10. 1900 Yonge Parking Availability

Image 11. 1900 Yonge Parking Access

3.0 Opportunities

1900 Yonge Site

3.1 Bus Loop Relocation

Relocation of the bus loop from the 1900 Yonge site would allow for development south of the McBrien Building that could not have been accommodated before. This would allow for the structure necessary to build over the McBrien Building (see Image 12).

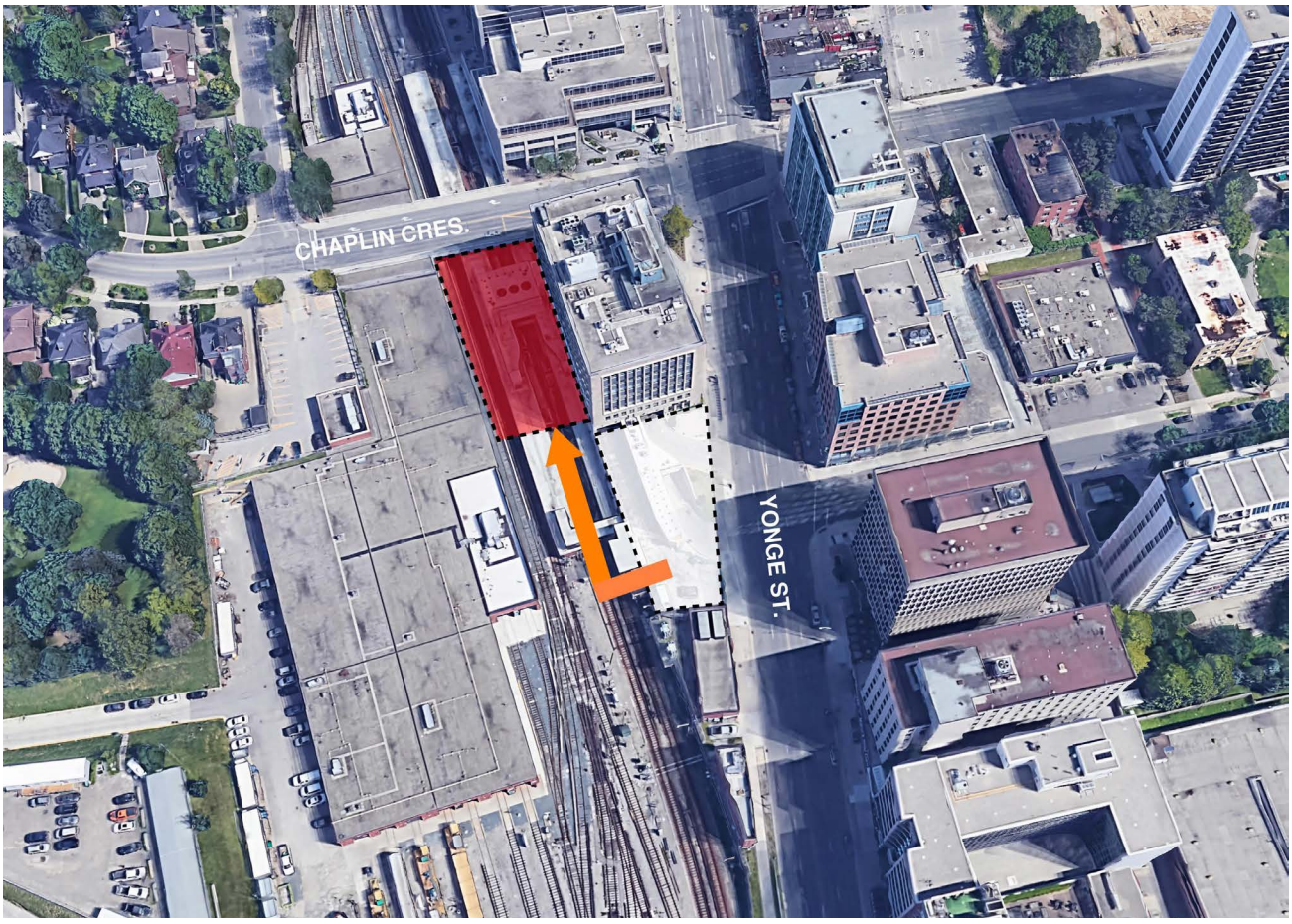

Image 12. Bus Loop Relocation

Potential Future Bus Location

3.0 Opportunities

1900 Yonge Site

3.2 McBrien Building Existing Condition

The good condition of the McBrien Building and structure could facilitate new construction over the existing building without necessitating significant re-mediation of the existing building (see Image 13). Relocation of the bus loop would allow for the structure necessary to build over the McBrien Building.

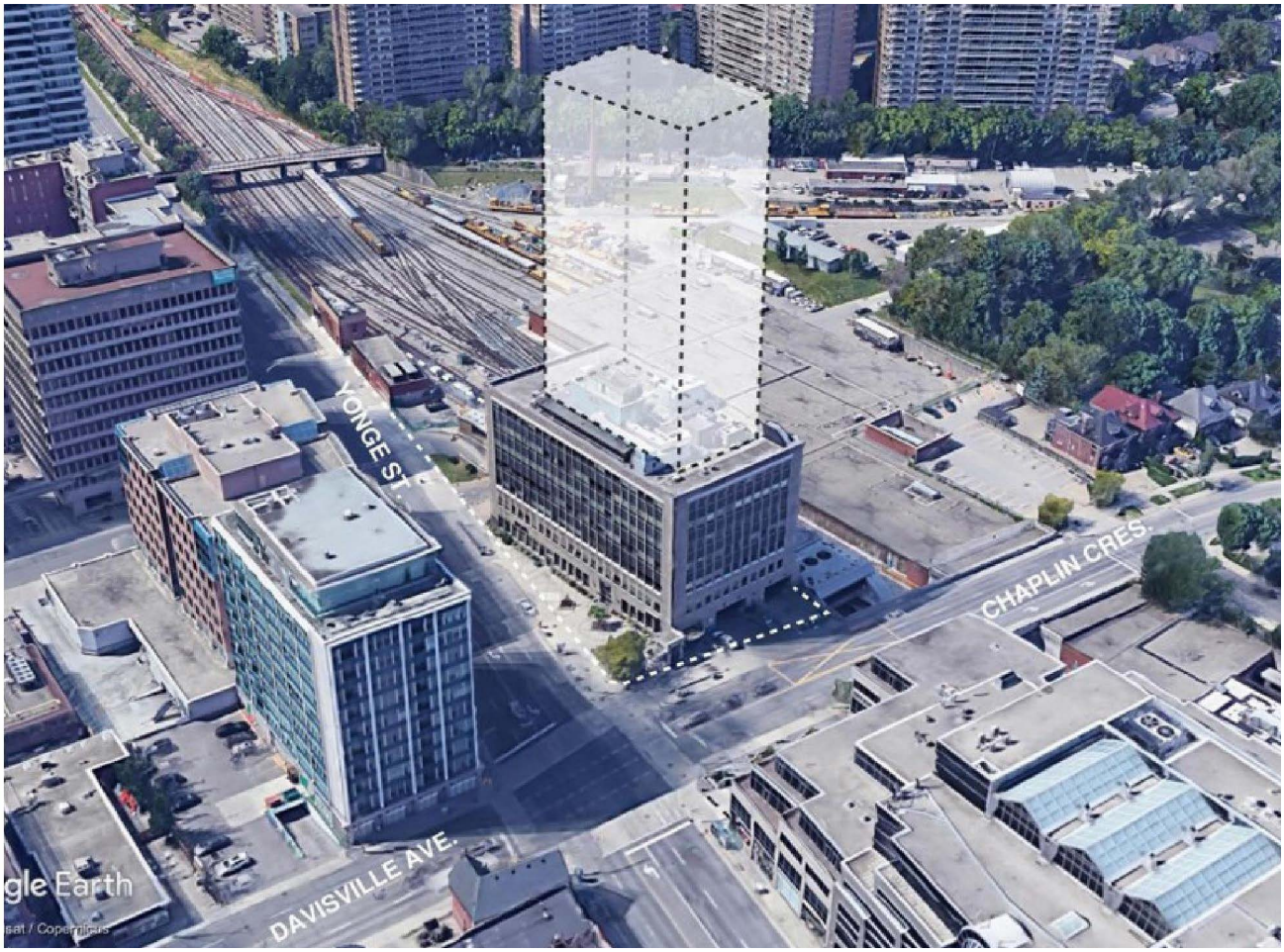

Image 13. Existing McBrien Building with additional density

3.0 Opportunities

1900 Yonge Site

3.3 Yonge - Eglinton Secondary Plan, 2019

Yonge - Eglinton Secondary Plan (2019) policies promote density in the Davisville Station Core and support the desire to provide increased development on the site. Yonge - Eglinton Secondary Plan built form policies indicate the Davisville Station Core as a prime site for mixed use towers of 20+ storeys. The ability to accommodate tall buildings whether built over the McBrien Building or standalone structures increases the viability of development on the 1900 Yonge Site.

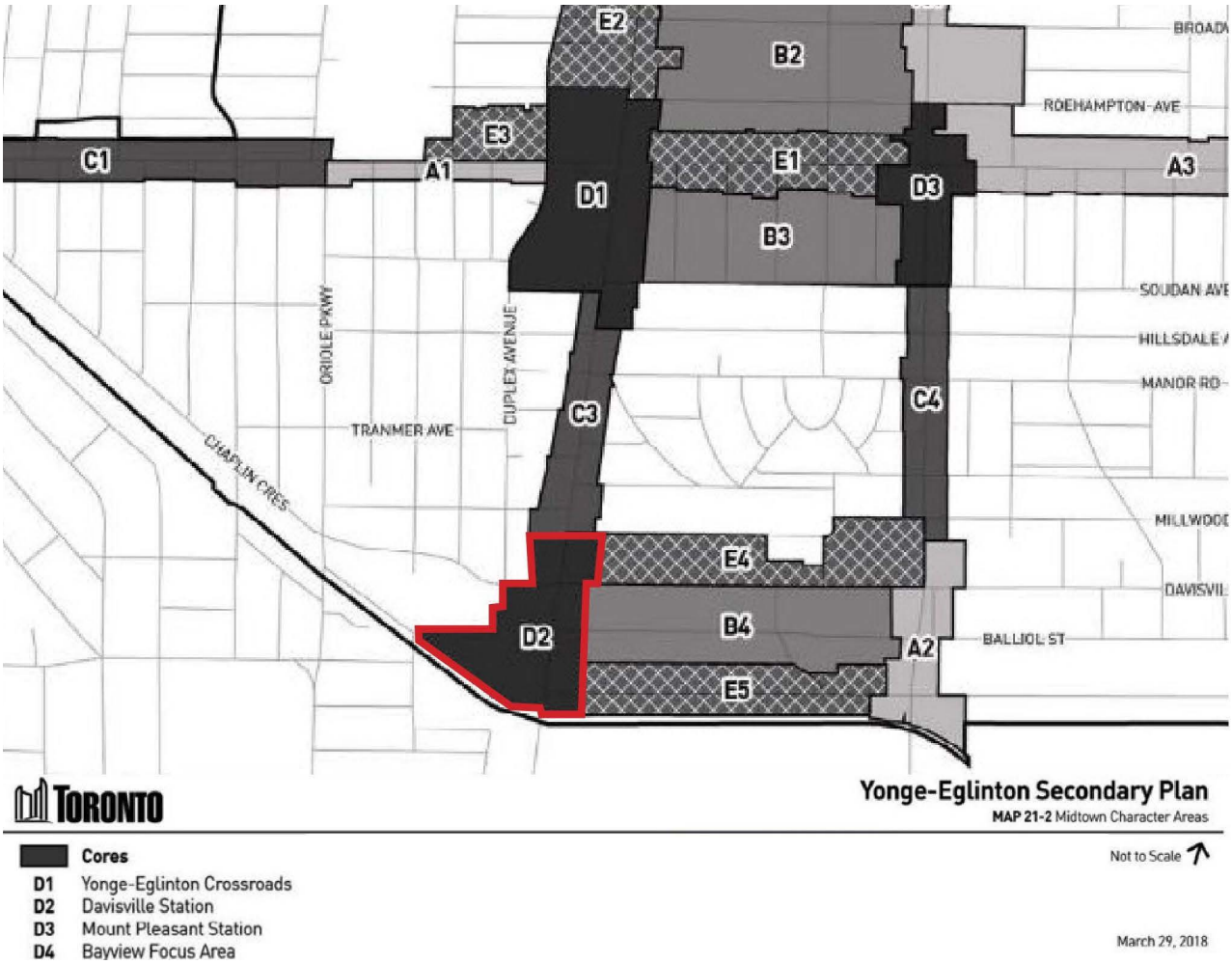

Image 14. Yonge - Eglinton Secondary Plan (Map 21-2)

3.0 Opportunities

1900 Yonge Site

3.3 Yonge - Eglinton Secondary Plan, 2019

Immediate proximity, and direct connection to the Davisville subway station may offset parking needs for residential developments on site. A transit oriented community will justify reducing / eliminating on-site parking.

A Station Area Core zone includes transit station(s), residential intensification, a concentration of office uses and collectively greater intensity than in the Secondary Zones.

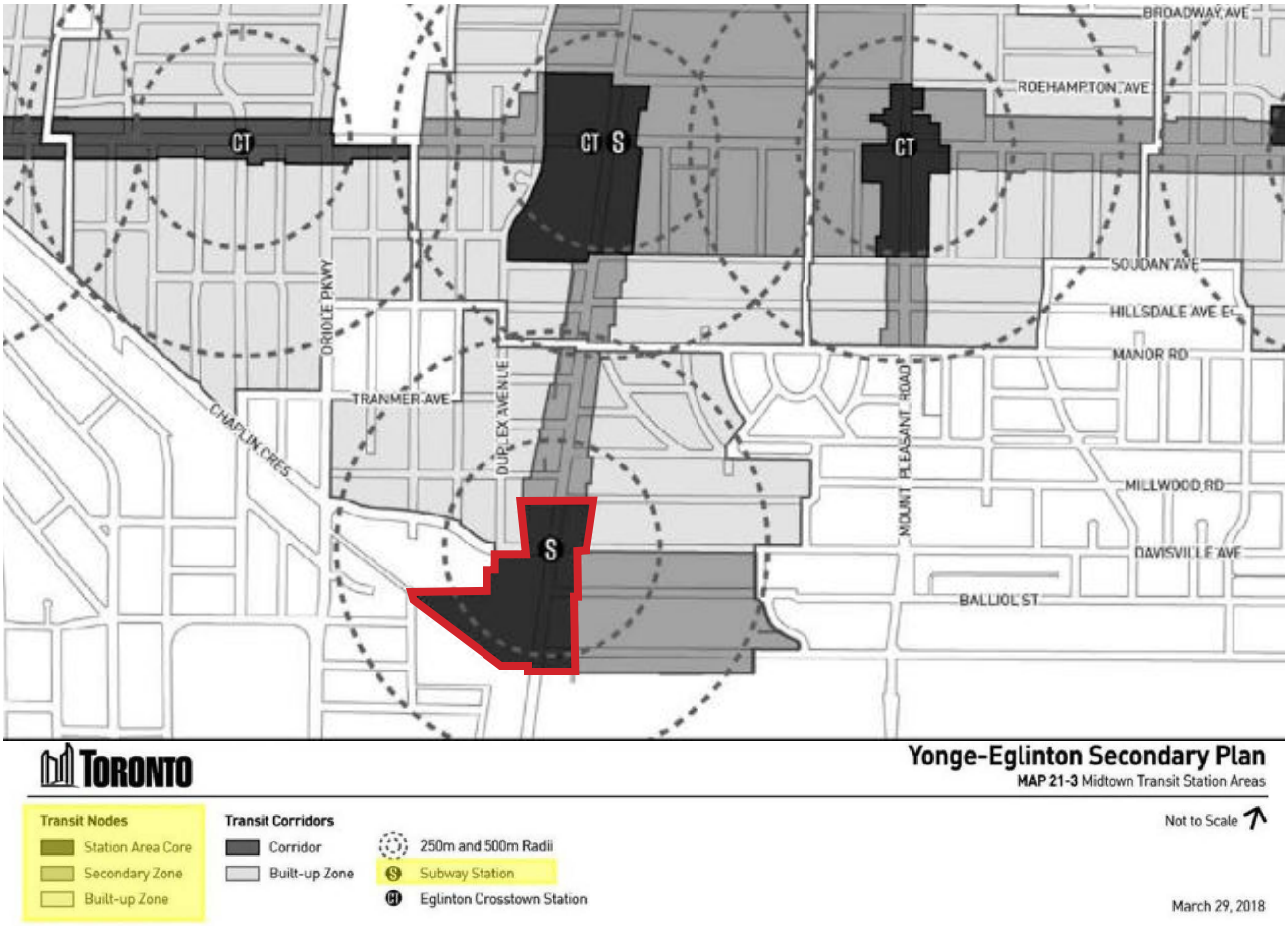

Image 15. Yonge - Eglinton Secondary Plan (Map 21-3)

Davisville Yard

Davisville Yard is approximately 477,000 sq.ft (44,300 m^2) that includes the associated TTC lands south of Imperial Street. The Davisville Yard includes several TTC subway facilities that include the Davisville station platform serving TTC Line 1 and other tracks used for storage, servicing and maintenance operations. The structures on the yard include the Carhouse, Boiler House, Way Building and Gate House.

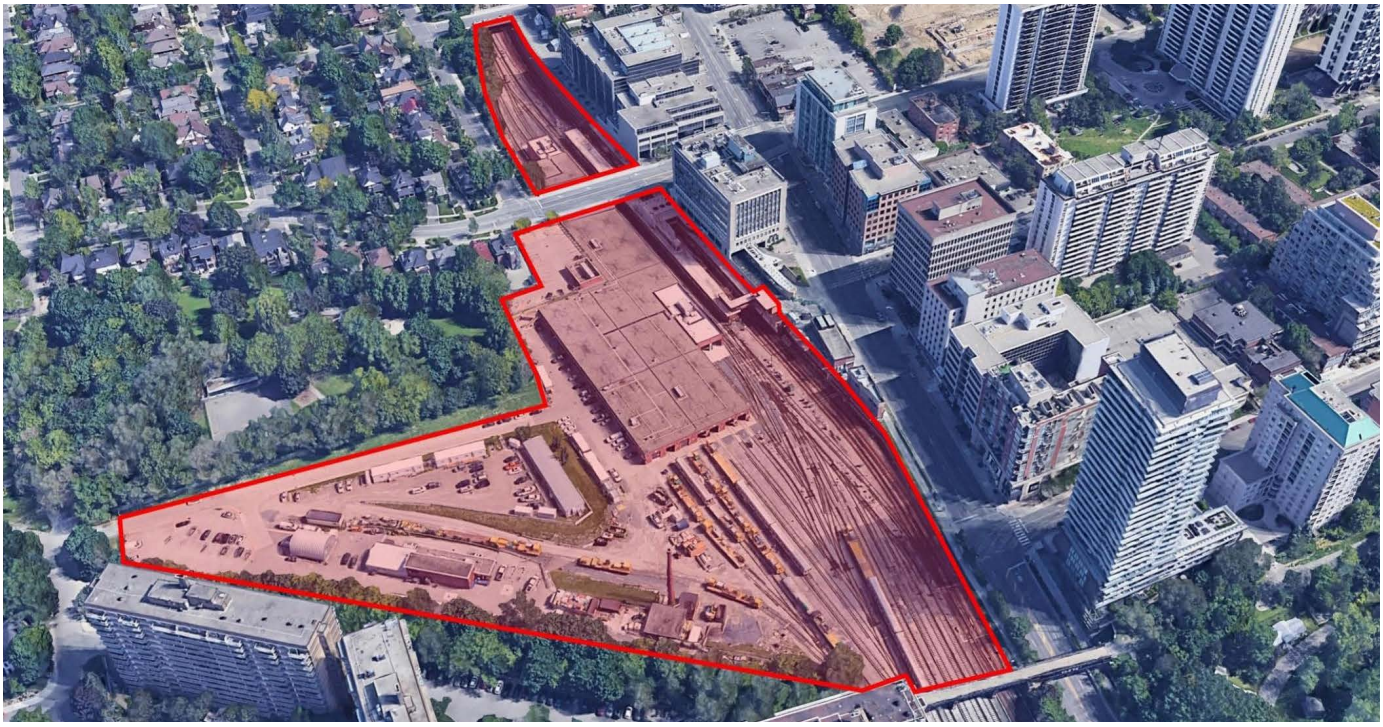

Image 16. Davisville Yard Site

4.0 Constraints

Davisville Yard

4.1 Existing Infrastructure and Services

TTC Line 1 and Maintenance rails servicing the Carhouse are fully operational (see Image 17). Rail functions in the yard cannot be disrupted by development or decking solutions, during or after construction. As a functional maintenance facility for TTC revenue and maintenance stock, the Carhouse must remain functional throughout decking and development. Completing work during non-operational hours are limited to between 2-4 hours a day, with priority given to TTC maintenance work. TTC requires approximately 150 parking spaces on site for maintenance staff. Parking levels need to be maintained in any proposed decking/development proposal. TTC currently utilizes a series of portables for office and maintenance use (see Image 18). Decking and development will need to accommodate the same area required for current uses in the same or alternate form.

Existing Yard has a high ground water condition. It will be difficult to de-water any excavations that would be needed for footings, re-routing of existing services, etc.

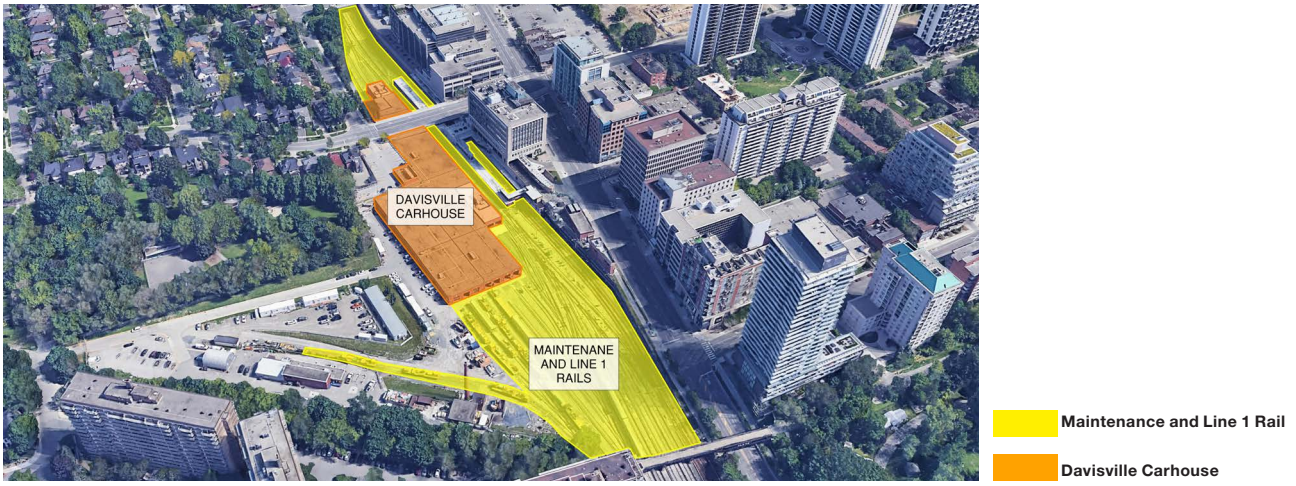

Image 17. Existing Infrastructure

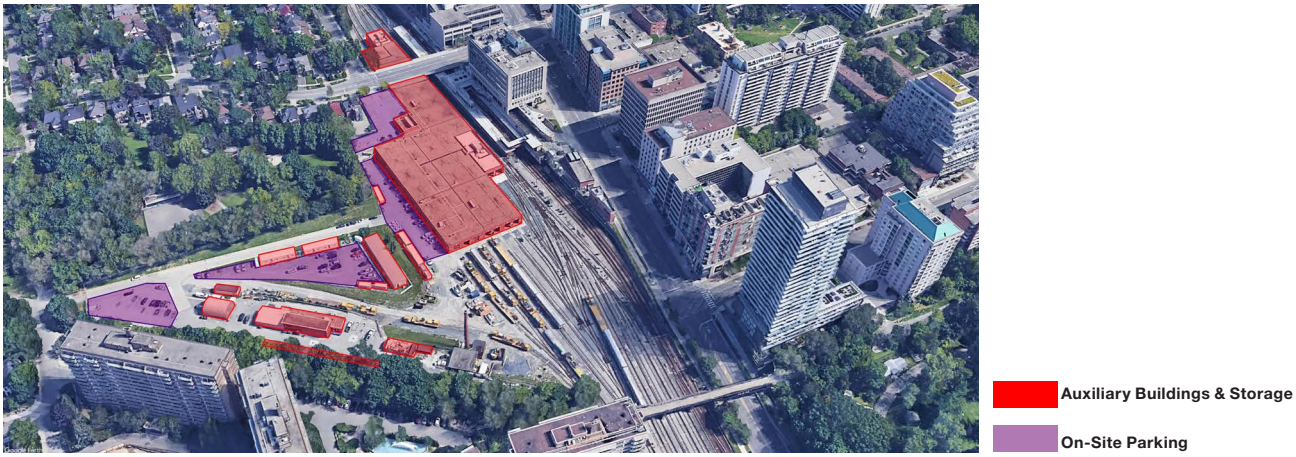

Image 18. Auxiliary Buildings, Storage and On-Site Parking

4.0 Constraints

Davisville Yard

4.2 Existing Davisville Subway Station

The Yonge-University Subway Line is an essential part of city's transportation infrastructure. Any development contemplated over the active rails and station would have to accommodate for and limit any disruption to those TTC functions. Two bridges, one adjacent to Chaplin Crescent and one at the southern extent of the station provide the only access to the Southbound subway platform. Any decking that interrupts these connections would necessitate an alternative solution to accessing the southbound platform.

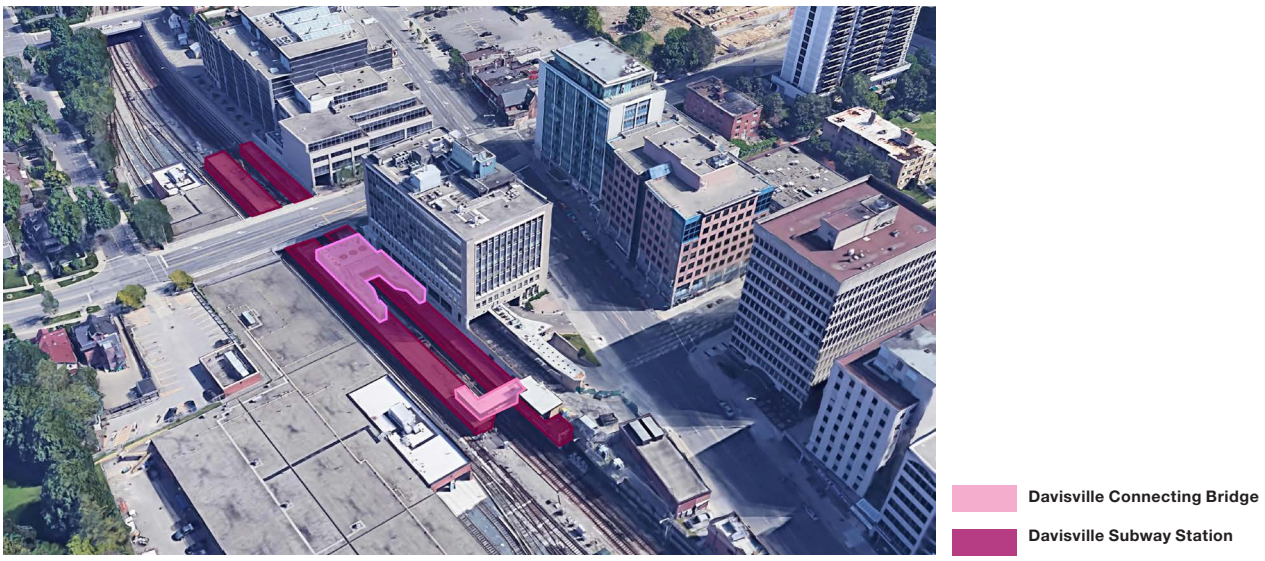

Image 19. Existing Davisville Subway Station

Image 20. View South From Chaplin Crescent Bridge

4.0 Constraints

Davisville Yard

4.3 TTC Rail Requirements

TTC design requirements indicate both static and dynamic envelopes over and around all rails. This envelope establishes limits on overhead height above the yard and active rail lines as well as horizontal limits between cars, rails, and structure. Design requirements will impose limits on height and the placement of structure.

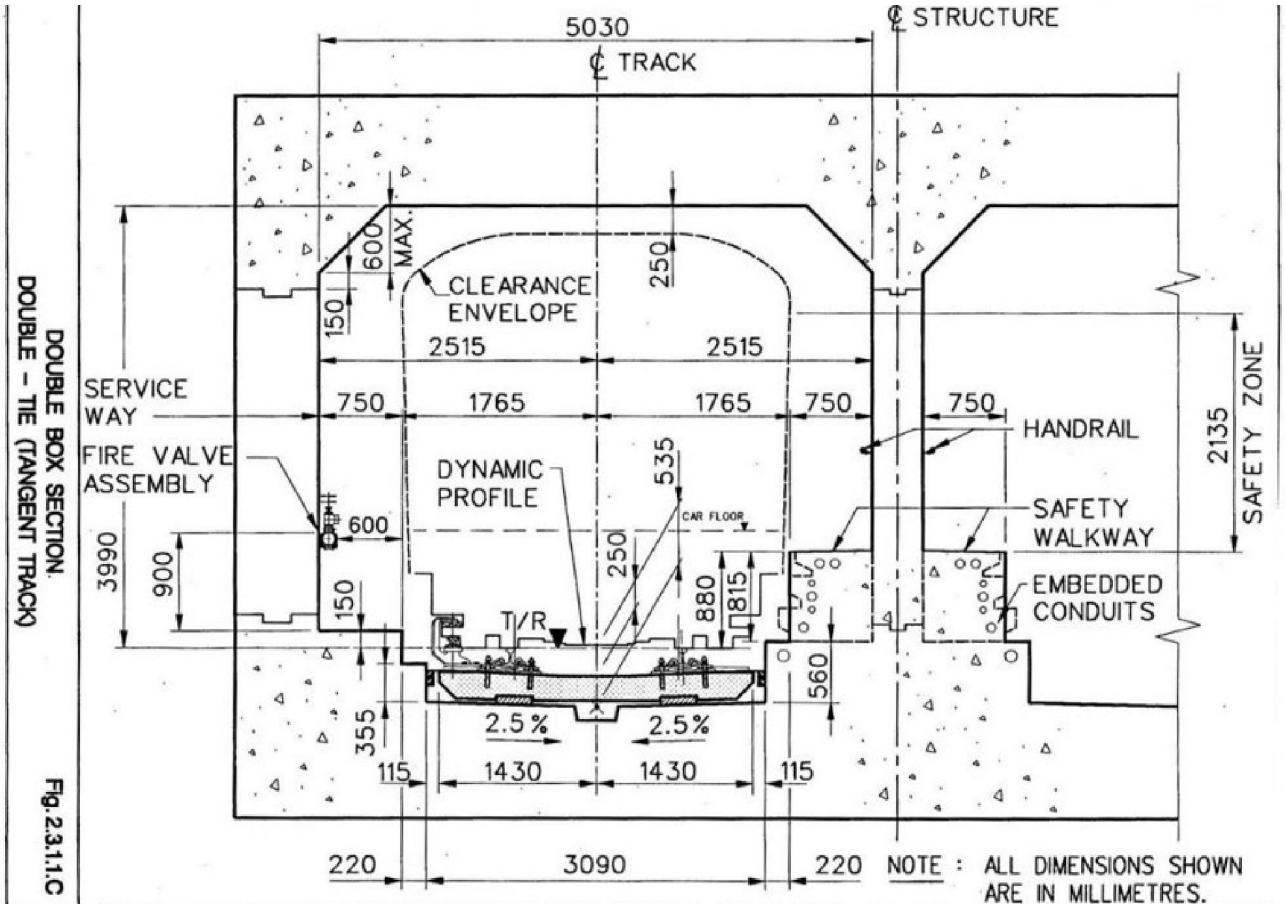

Image 21. TTC Envelope Diagram

4.0 Constraints

Davisville Yard

4.4 Edge Conditions - Grade Differences

Grade differences between the Yard and adjacent properties across the site will result in challenging edge conditions. Creative solutions including stairs and ramping will be required to connect the deck and adjacent properties at certain locations. (See Figure 2 and Figure 3)

TTC Line 1 rails are directly adjacent to the property line at the south easternmost edge of the site (see Figure 3). Conditions limit the ability to accommodate the structure necessary to deck at this location. Any decking and structure that can be accommodated at this location will present a sharp contrast in grade with the public realm along Yonge Street (see Figure 3).

Image 22. Existing Site

4.0 Constraints

Davisville Yard

4.4 Edge Conditions - Grade Differences

Figure 2. Section 'A' Showing Edge Condition With Deck Along Existing Bus Loop

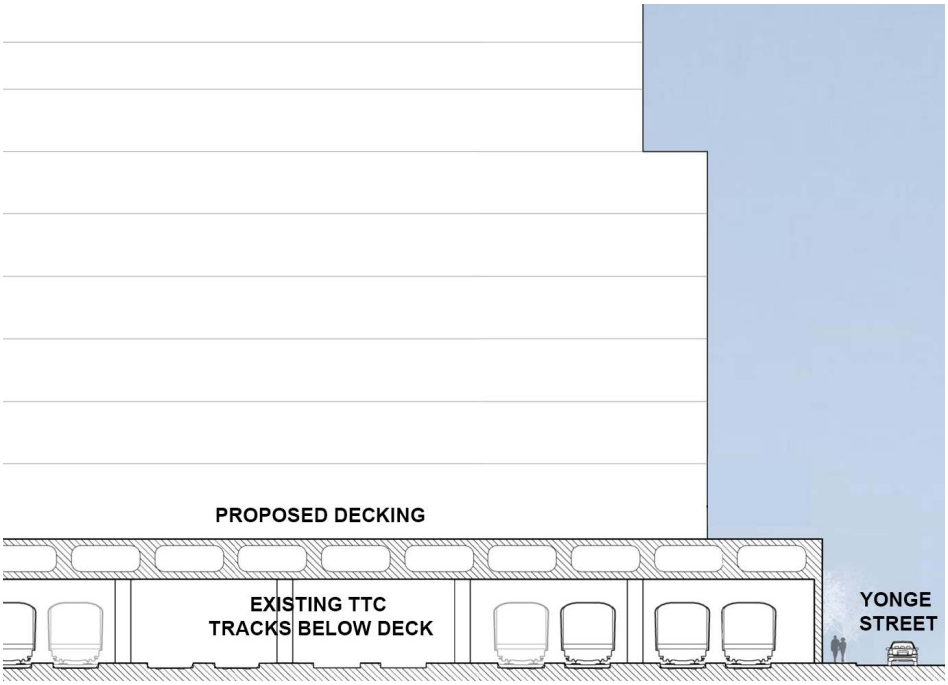

Figure 3. Section 'B' Showing Edge Condition With Deck Along Yonge Street

4.0 Constraints

Davisville Yard

4.5 Code Considerations

Any decking solution that encloses the Rail Yard and Car House would prompt safety considerations that do not currently apply to the site including exiting and ventilation requirements because it is uncovered.

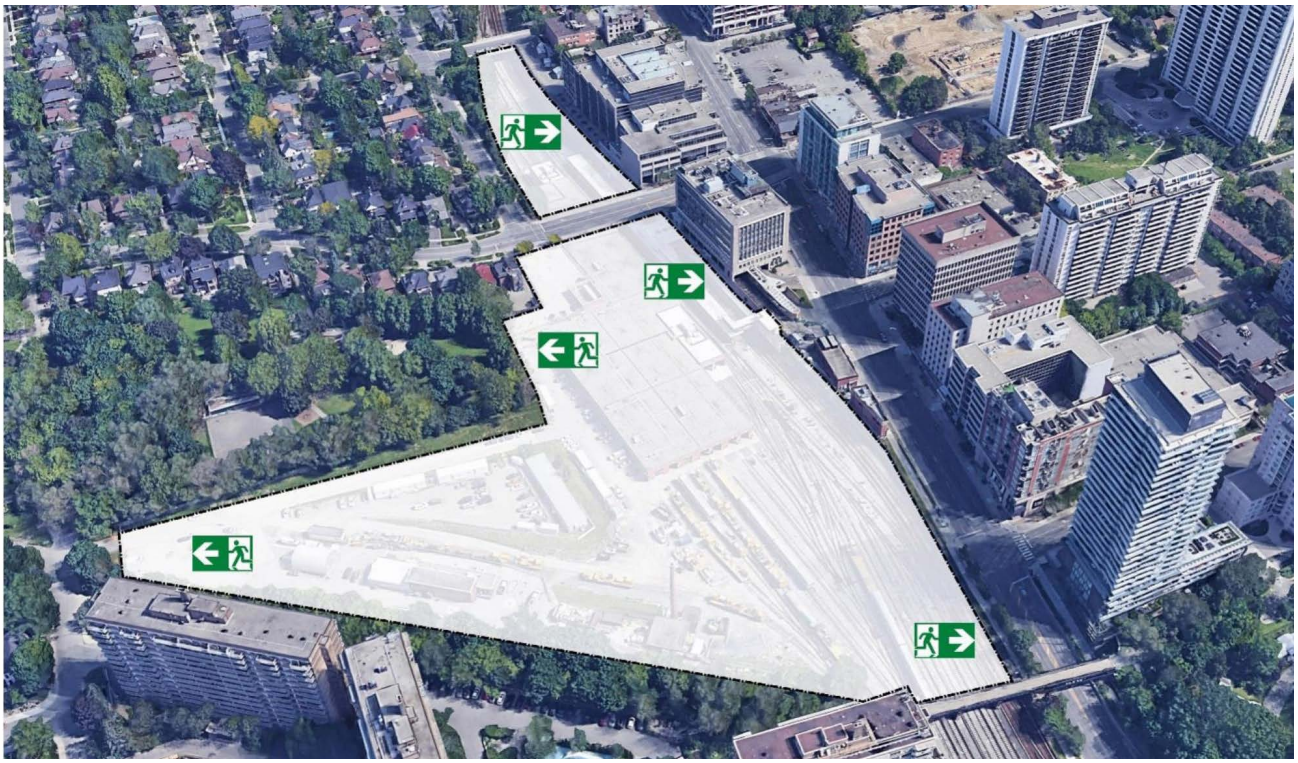

Image 23. Potential Exit Locations from Below the Deck

Potential Exit Locations From Below the Deck

4.0 Constraints

Davisville Yard

4.6 Shadow Impact

The Official Plan and the Yonge - Eglinton Secondary Plan (see Image 24) guidelines prohibit or strongly discourage any net new shadows on existing parks or school recreation areas. Adjacency along a significant portion of the site to Oriole Park may limit any density that could introduce new shadows on the park itself.

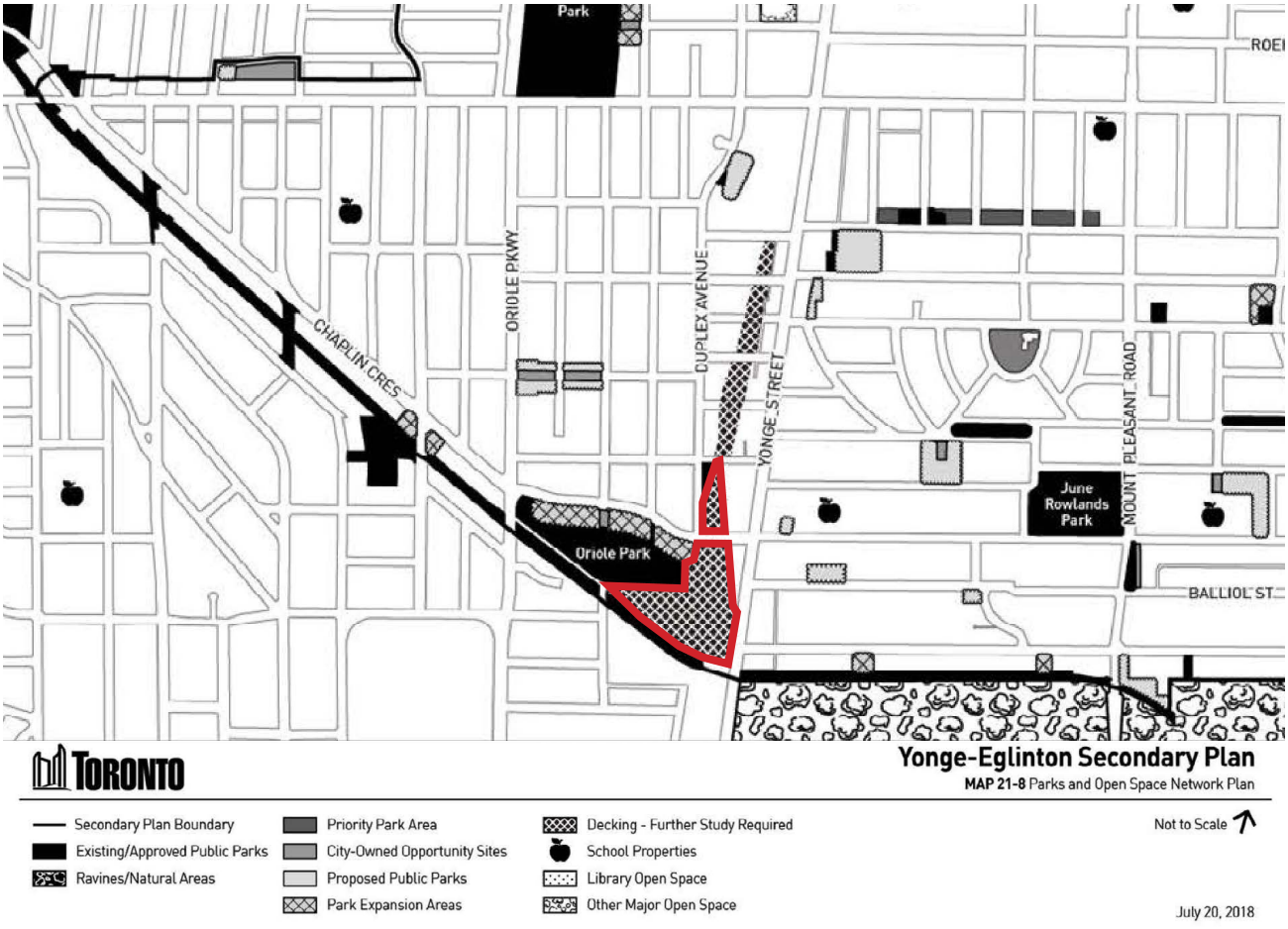

Image 24. Yonge - Eglinton Secondary Plan (Map 21-8)

5.0 Opportunities

Davisville Yard

5.1 Rail Yard Organization

The existing layout of the Rail Yard infrastructure, parking and offices on the west end of the site is not well organized. Redevelopment of the yard will provide an opportunity to consolidate and organize various site functions, unlocking site potential and providing value to the TTC.

Image 25. Existing Rail Yard Infrastructure that can be consolidated.

5.0 Opportunities

Davisville Yard

5.2 Code Consideration

Strategic openings in a potential deck and setbacks from site edge conditions can reduce ventilation and exiting requirements that would otherwise apply to a completely covered deck.

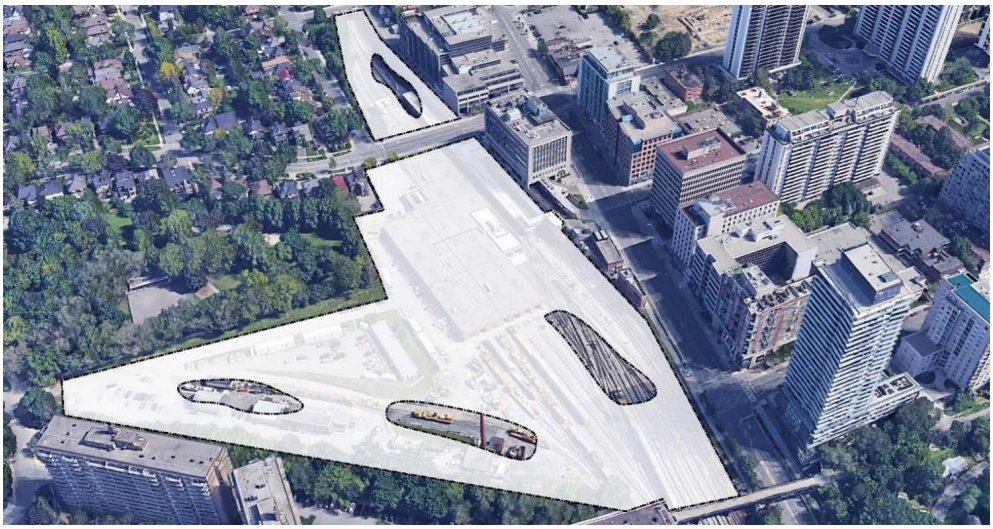

Image 26. Decking Option with Openings

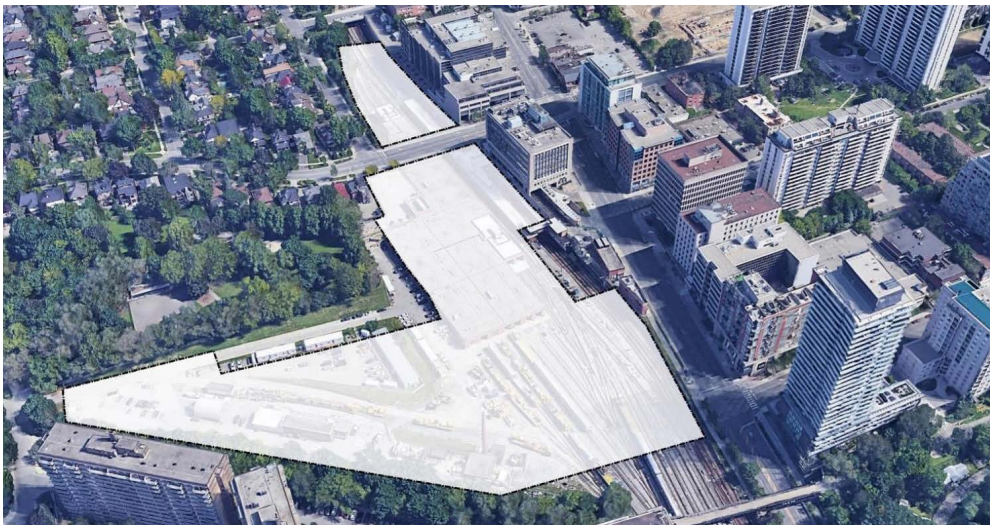

Image 27. Partial Decking Options

5.0 Opportunities

Davisville Yard

5.3 Edge Conditions - Grade Differences

Unique planting and grading solutions can provide gradual transitions from raised decking to adjacent properties and sites. Stairs and exterior elevators can provide access to large grade transitions from the decking.

Image 28. Hudson Yards East Platform, New York

Image 29. High Line 30th Street Access, New York

5.0 Opportunities

Davisville Yard

5.3 Edge Conditions - Grade Differences

While the potential deck would have to negotiate grade changes between the decking structure and adjacent properties and edge conditions, it provides opportunities for unique building and viewing conditions that can generate public and landscape value for the community.

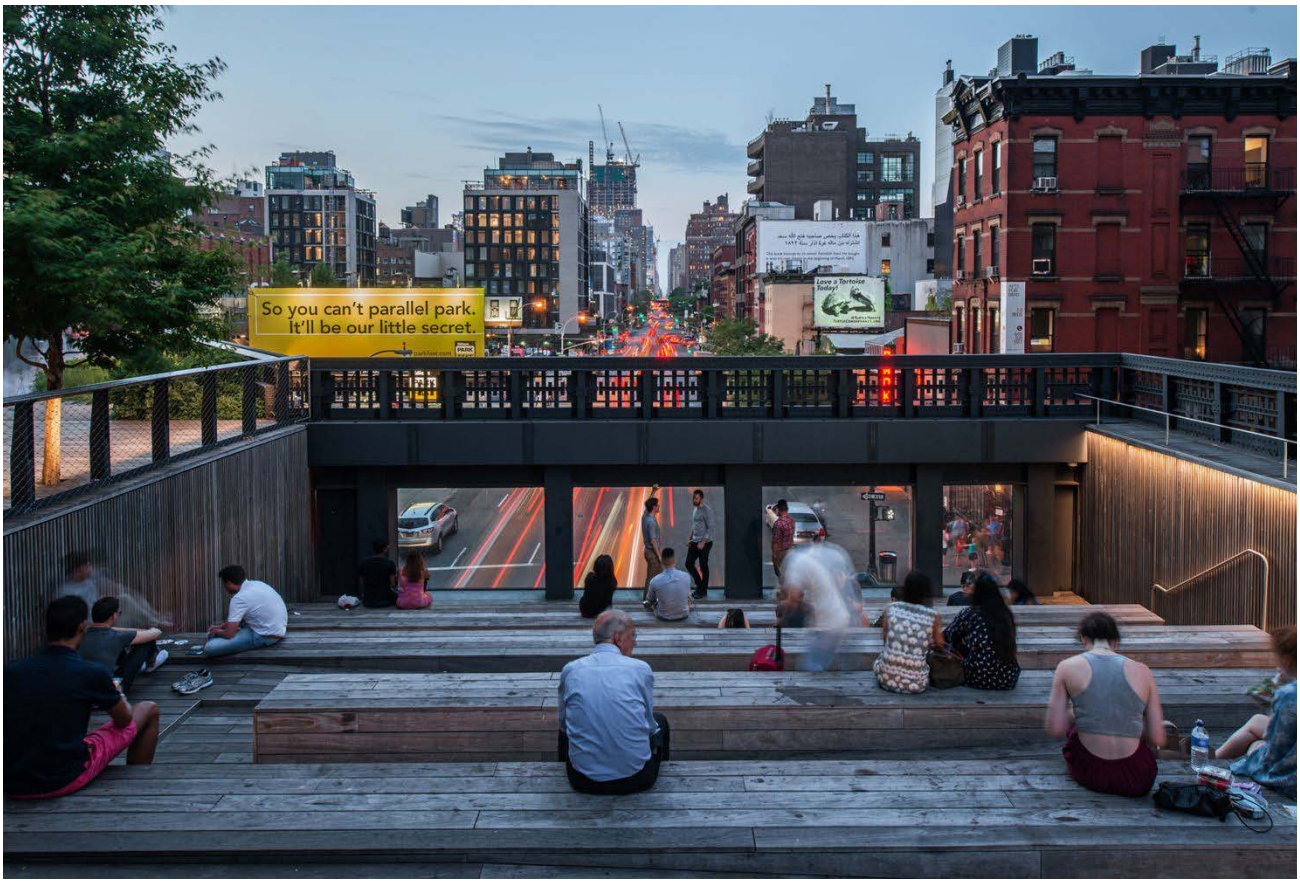

Image 30. High Line Viewing Platform, New York

Combined Site

The combined sites are approximately 5 hectares (12.4 acres) that comprises of the 1900 Yonge Street site, Davisville Yard and the associated TTC lands south of Imperial Street. The structures on the 1900 Yonge site include the McBrien Building, Substation and Signal Control Building along with the subway station entrances and Davisville Bus Loop. The Davisville Yard includes several TTC subway facilities that include the Davisville station platform serving TTC Line 1 and other tracks used for storage, servicing and maintenance operations. The structures on the yard include the Carhouse, Boiler House, Way Building and Gate House.

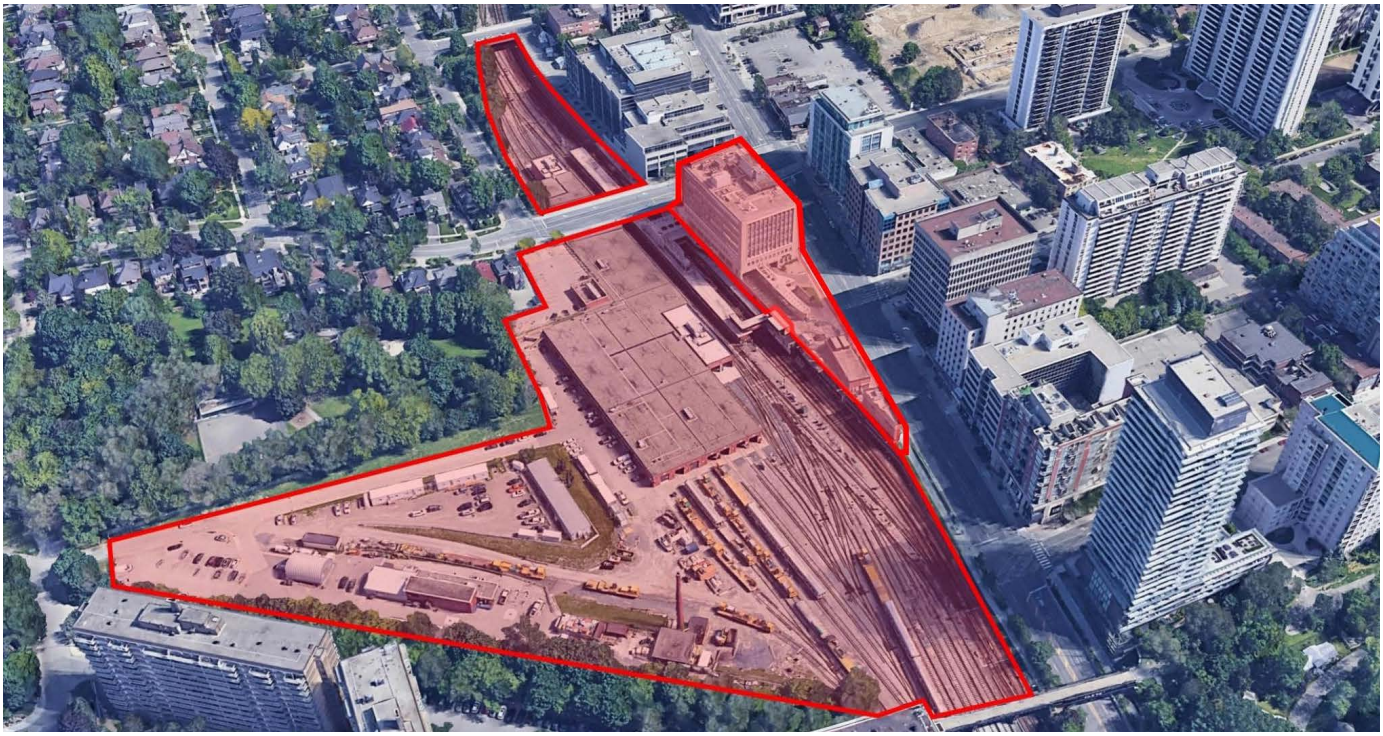

Image 31. Combined Site showing Davisville Yard and 1900 Yonge Site

6.0 Opportunities

Combined Site

6.1 Oriole Park Expansion

Expansion of Oriole Park, and/or a connection to the required new one hectare park provided as part of any decking proposal would significantly increase the utilisation and enjoyment of the site for current park users and future inhabitants.

Image 32. Oriole Park Expansion

6.0 Opportunities

Combined Site

6.2 Cross - Site Connections

Decking and development across the Rail Yard and McBrien Building site can begin to provide connections to disparate park elements that border the Davisville Station core.

Image 33. Cross - Site Connections

6.0 Opportunities

Combined Site

6.2 Cross - Site Connections

Decking and development across the Rail Yard and McBrien Building site can begin to provide connections to disparate park elements that border the Davisville Station core.

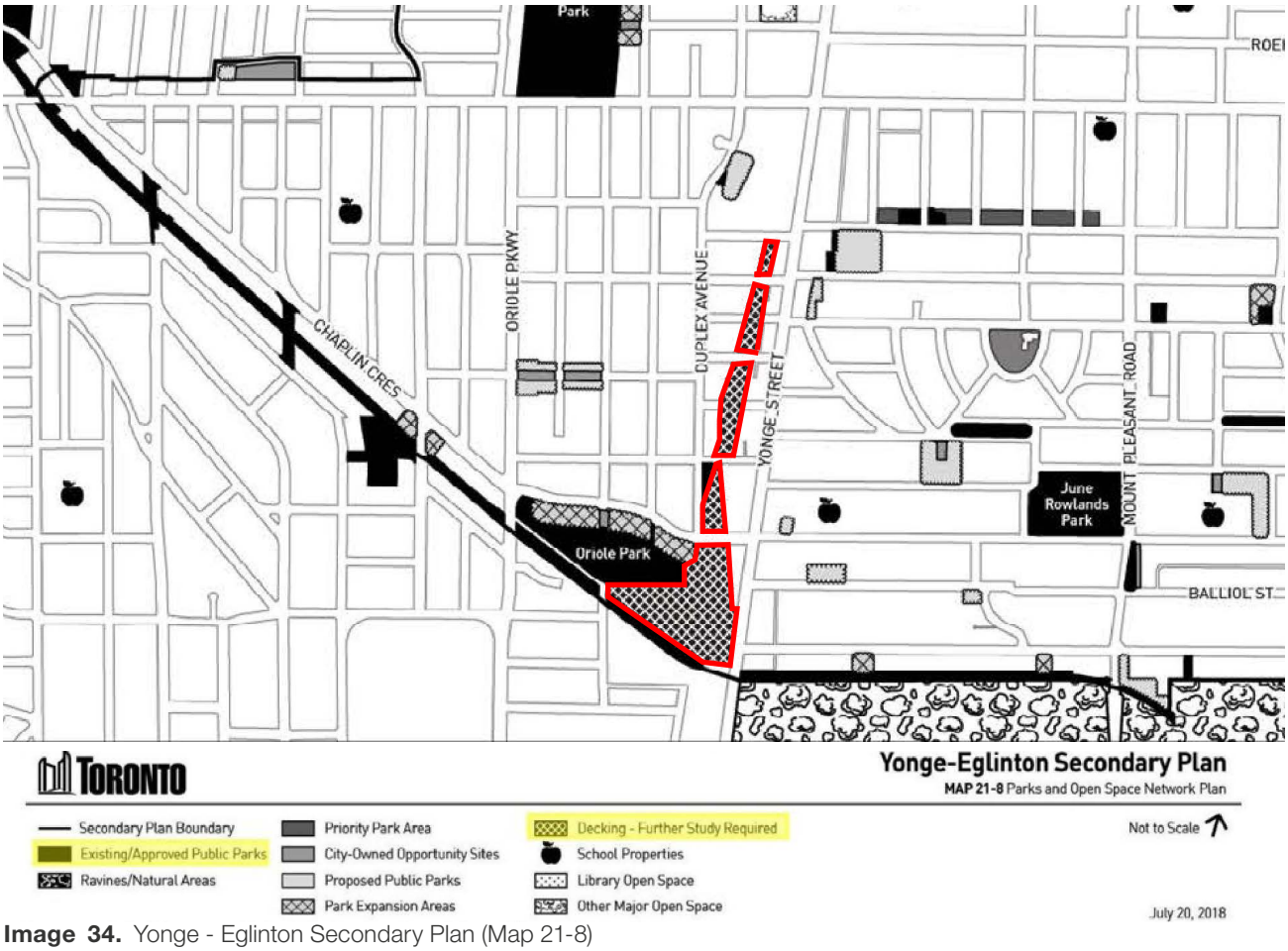

Image 34. Yonge - Eglinton Secondary Plan (Map 21-8)

6.0 Opportunities

Combined Site

6.3 Pedestrian and Cycling Connections

In the current layout, Duplex Avenue, Frobisher Avenue, Balliol Street and Merton Street all converge but ultimately terminate at the various sides of the Rail Yard site. Decking solutions provide the opportunity to improve pedestrian and cycling connections between the Davisville and Chaplin Crescent neighbourhoods.

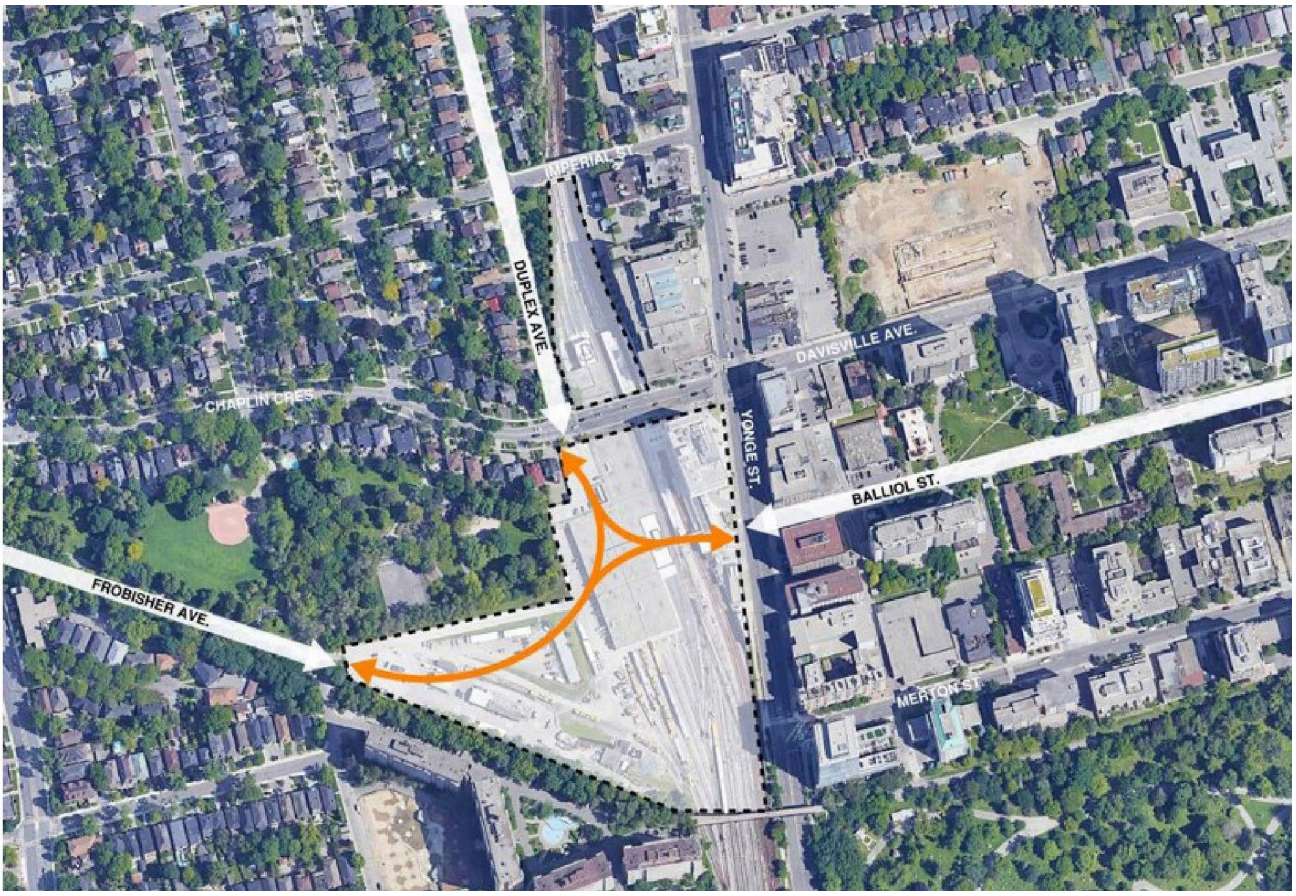

Image 35. Pedestrian and Cycling Connections

7.0 Conclusion

7.1 Conclusion and Next Steps

Based on preliminary analyses, the strengths and opportunities for the decking feasibility of Davisville Yard and development concept for the McBrien Site located at 1900 Yonge Street outweigh the constraints. This study highlights various opportunities in the sites that can help achieve the vision for this project. The constraints listed out in this report can be addressed with engineering and design solutions that will be explored in later stages. Further detailed study will be required in the next phases of the project. This report will help in designing preliminary development concepts for the project and later in arriving at a preferred concept development.

A List of Images

B List of Figures

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