

2280 Dundas Street West

SHADOW STUDY
ANALYSIS

June 30, 2022

URBAN
STRATEGIES
INC.

This Sun and Shadow Study has been prepared by Urban Strategies Inc., on behalf of Choice Properties REIT (the “Applicant”) in support of a Rental Housing Demolition application in relation to Official Plan Amendment, Zoning By-law Amendment, and Plan of Subdivision applications (“the applications”) to permit the redevelopment of 2238, 2252, 2264, 2280, 2288, and 2290 Dundas Street West, and 104-105 Ritchie Street (the “site” or “the Subject Lands”) .

The Site is a retail plaza occupied by Loblaws and the LCBO (as well as a large vacant component formerly occupied by Zellers), and a smaller retail area occupied by Kal Tire (and formerly Coffee Time), as well as a Pizza Nova location in a standalone retail building. At the southwest corner of the Site, fronting Dundas St W, is a 3-storey medical building with multiple retail storefronts at grade and office above (total GFA of 4207 m2).

The Site contains an existing 3-storey, residential apartment building with 8 rental units within the property known municipally as 2252 Dundas Street West. The Site is currently underutilized and the proposed comprehensive redevelopment offers an opportunity to improve existing rental housing stock, while offering a broader variety of uses and public amenities.



THE PROPOSED DEVELOPMENT

The Proposed Development will redevelop the site to support mixed-use, transit-oriented intensification while achieving a range of city building and urban design objectives. The Proposal includes seven mixed-use and residential buildings (including five residential towers) on four development blocks. It will offer both ownership and rental housing options, and will be anchored around a new community public park and public street system.

The redevelopment proposes a total gross floor area of 151,895 square metres comprised of 135,274 square metres of residential and 16,621 square metres of non-residential uses (including 9,410 square metres of retail and 7,649 square metres of office). The Proposed Development includes approximately 1,923 residential units in a range of unit sizes, and includes 735 rental units within 3 rental buildings. The proposal includes a large 4,400 square metre public park and a series of other open spaces around the site. A new u-shaped public street system will provide connections to the neighbourhood, including a vehicular connection at Ritchie Ave and a pedestrian connection at Herman Ave.

DEVELOPMENT STATISTICS

TOTAL RESIDENTIAL GFA	135,274 m2	89%
TOTAL NON RESIDENTIAL GFA	16,621 m2	11%
TOTAL DEVELOPMENT GFA	151,895 m2	100%
TOTAL RESIDENTIAL UNITS	1,923	
RENTAL UNITS	735	





LEGEND

- 2280 DUNDAS ST W
- UNDER CONSTRUCTION /
RECENTLY COMPLETED
- APPROVED/SPA Application
- PROPOSED

2.1 PLANNING POLICY CONTEXT

Shadows and sunlight access are important design considerations for new developments. Policies pertaining to shadows are found in various policy documents and urban design guidelines. Below is a summary of the most relevant policies and design guidance.

Official Plan

- Policy 3.1.3.10b (OPA 480) - The tower portion of a tall building should be designed to limit shadow impacts on the public realm and surrounding properties.
- Policy 3.1.2.22d (OPA 480) - Outdoor amenity spaces should provide comfortable wind, shadow and noise conditions.
- Policy 3.2.3.3 (Parks and Open Spaces) - The effects of development from adjacent properties, including additional shadows, noise, traffic and wind on parks and open spaces will be minimized as necessary to preserve their utility.

It is acknowledged that there are also policies pertaining to Mixed Use Areas (4.5.2) which speak to locating and massing buildings to adequately limit shadow impacts on properties in adjacent lower-scale Neighbourhoods.

Tall Building Design Guidelines

- Guideline 1.4 - Locate and design tall buildings to protect access to sunlight and sky view within the surrounding context of streets, parks, public and private open space, and other shadow sensitive areas.
- Guideline 1.4a - Provide slender, point towers with generous separation distances, and limit or vary the height of towers, to retain sky view between buildings and reduce the size of shadows and length of time they are cast on a particular area. Consider the cumulative effect of multiple towers on resulting shadowing.
- Guideline 1.4c - Through a Sun/Shadow Study, demonstrate how the proposed tall building protects access to sunlight and seeks to adequately limit shadowing of neighbouring streets, properties, and open space, including shadow sensitive areas such as schoolyards, play fields, and cemeteries.
- Guidelines 3.2.1 - Recommends that tower floorplates be limited to 750 square metres in size, subject to flexibility for tall buildings greater than 50 to 60 storeys, and organized, located and articulated to minimize shadow impacts on surrounding streets, parks, open spaces and properties.

SUNLIGHT AND SHADOW STUDY SUMMARY

Urban Strategies Inc. prepared a Sun and Shadow Study to assess the impact of the Proposed Development's shadowing on the surrounding areas and within the proposed development site. The study assessed the shadow impacts on an hourly basis from 9:18 am to 6:18 pm for March 21, June 21, and September 21. The Sun/Shadow Study evaluates the net new shadows arising from the existing and approved context (depicted in gray), and the proposed development (depicted in orange). The Sun Shadow Study meets the updated Terms of Reference which came into effect on June 1, 2022. The application also includes the Shadow Study Checklist, which is also included as Appendix A, for ease of reference. See the 3D massing in the proceeding page for a depiction of the context around the Site.

The Proposed Development has been carefully massed to optimize sunlight and sky views, while limiting shadows on surrounding Neighbourhoods and Parks and open spaces, however, the Proposed Development will introduce some net new shadows on nearby properties and streets at limited intervals in the day/year.

Off-Site

In March and September 21, the early morning the shadows cast by the Proposed Development fall to the west of the Site, with some shadowing to the designated Neighborhoods located along Alhambra Avenue, but the majority of the new net shadow falls on Mixed Use Areas designated properties to the west on Dundas St W and to the north on Bloor Street and to the east. Similarly to the east, moderate net new shadows are cast between 5:18pm and 6:18pm on the Mixed Use Areas properties and the small pocket of Neighbourhood designated properties between Perth Avenue and Sterling Road, and there is no net new shadow on the Sterling Road Park. It

should be noted that by 5:18 and 6:18pm a large portion of the residential neighbourhoods are already in shadow from the existing approved and approved/built condition, so the impact at these times is marginal. On June 21, the Neighbourhood to the east is not impacted by net new shadow until 6:18pm, and only minor shadowing occurs on the Sterling Road Park. The Thomas Merton / Bishop Marrocco Catholic Secondary School (immediately north of the site), which is designated as Mixed Use Areas, experiences net new shadow impact, with shadows and partial sun moving across the school site throughout the day. The net new shadowing on the school site is minor by 16:18 and moves off the site by 17:18. On June 21, there are only minor shadow impacts on the school and school yard.

On-Site

The majority of the proposed new public park (the Community Green) receives moderate to full sun for 6 hours on March/September 21 and June 21. Other components of the public realm on the site experience a mix of sun and shadow throughout the day. The South Garden Walk and the Ritchie Garden receive nearly full sun throughout the year, while the Railway Walk receives approximately 4 hours of sun in the morning and mixed sun and shadow in the afternoon. Street A experiences shadow throughout the day, but benefits from the placement of the park, which provides sunlight along its north edge throughout the day. Street B experiences intermittent shadow throughout the day, with sun primarily from 16:18 onwards.

Summary

In our opinion, this Shadow Study demonstrates that the shadows created by the Proposal are appropriate for a major urban intensification area, and that little net new shadowing will be cast on the proposed public realm as a result of the proposed development. Although shadows will be cast on

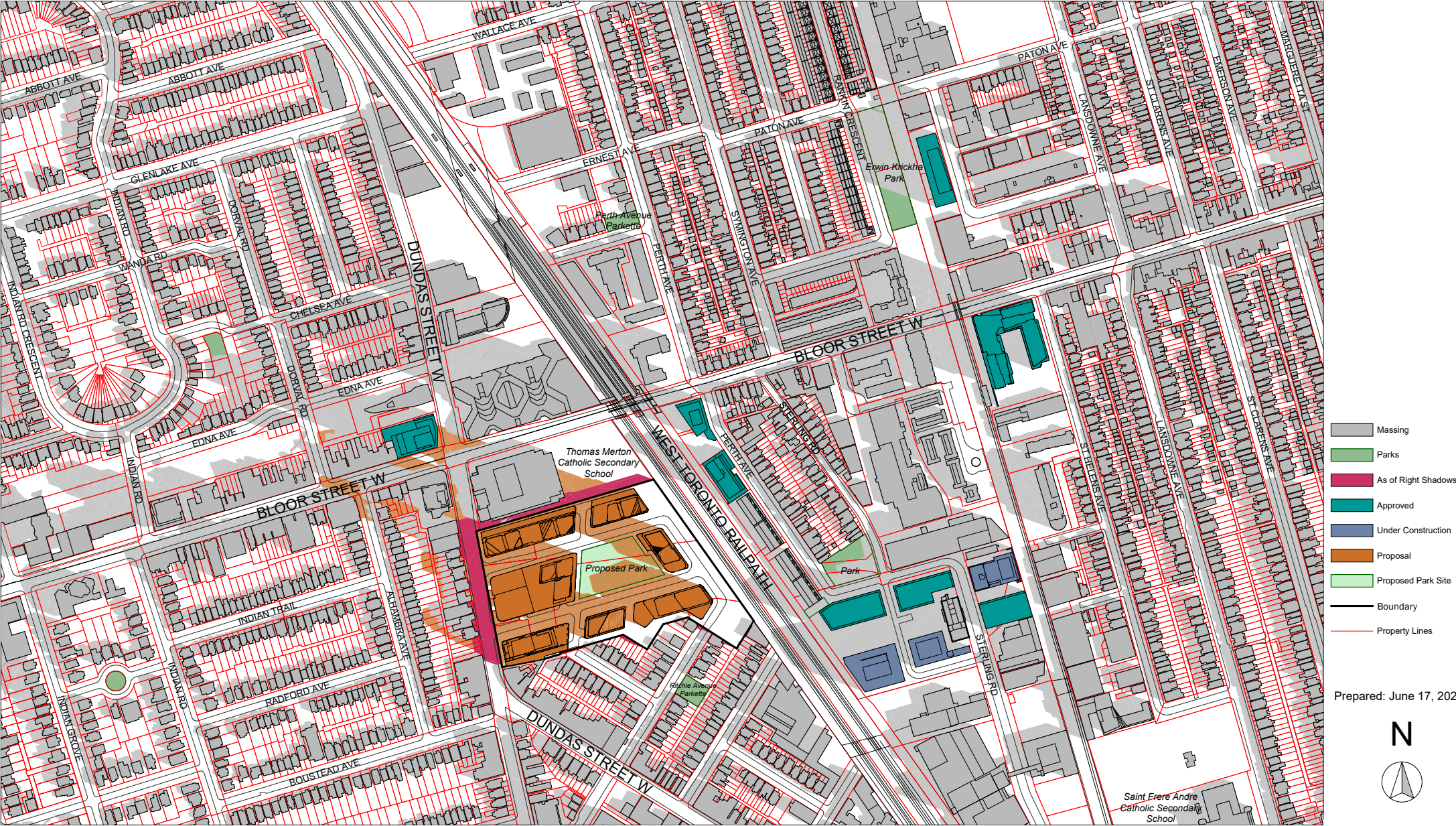
the new public park in the morning, this shadow moves off of the park by 11:18 am. The majority of the shadow cast by the proposed residential towers will fall on the school site to the north and the rail corridor to the east.

The proposed tower floorplates, generally 750 square meters GFA, are slender and the towers have been oriented in a east-west direction with results in smaller and faster-moving shadows in the morning and afternoon. Most of the shadows fall on properties designated as Mixed Use Areas, within a designated MTSA that is planned for additional height and density. The shadows resulting from the proposed development have been adequately limited by implementing a responsive massing and design strategy, with a uniquely shaped tower floorplate, setbacks and stepbacks, orienting the tower in an east-west direction, and ensuring a minimum 25 metre tower separation distance can be achieved from future development sites. Together, these strategies help to minimize shadow impacts and ensure that they move quickly.

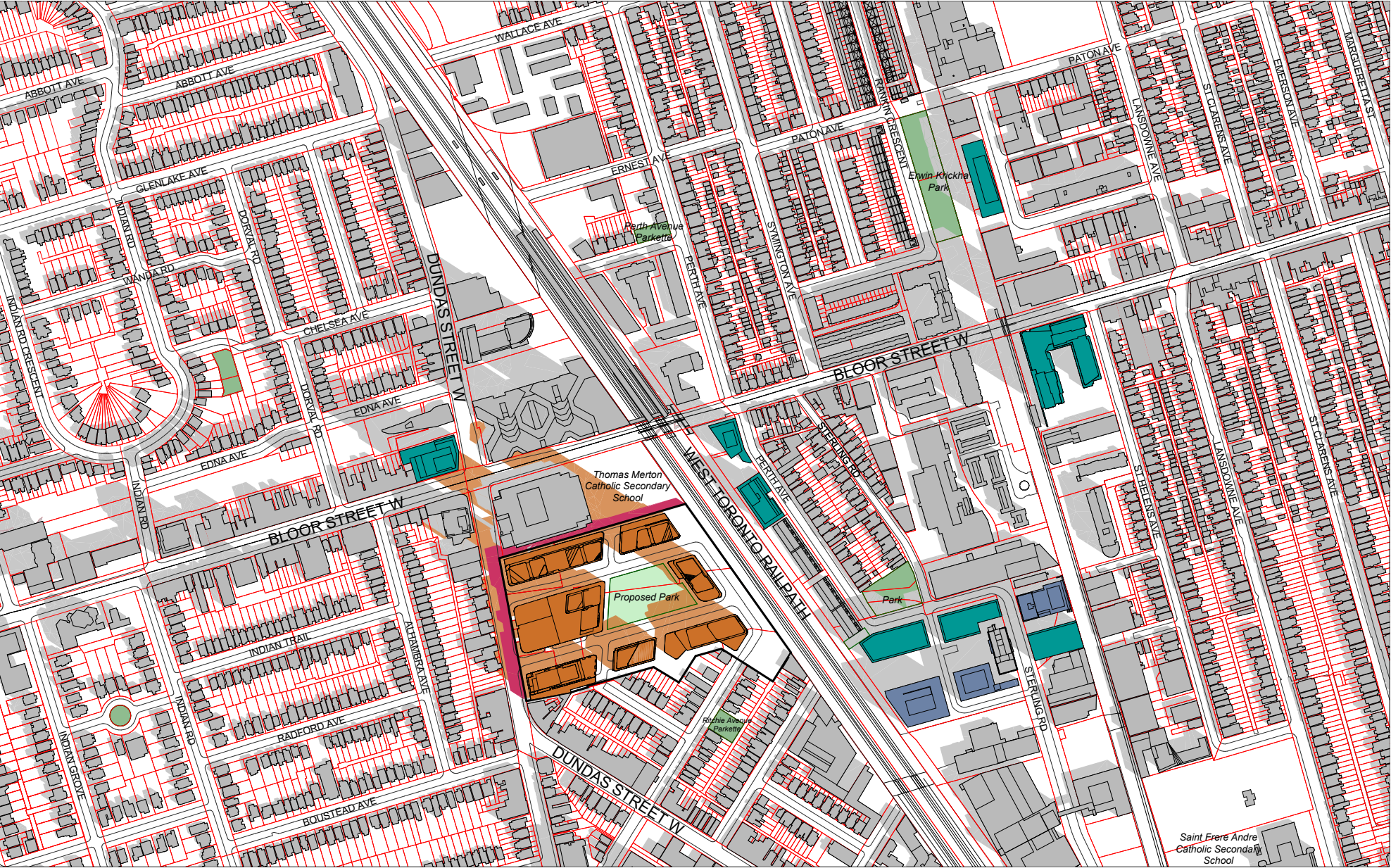
The new shadows are also regarded as acceptable given the broader community and public realm benefits associated with the Proposed Development, and most critically the creation of a new public park and open space and the proposed new public street system. The Proposed Development also meets key Official Plan policies, as the tower has been designed to adequately limit shadows on the public realm and surrounding properties, as well as on sidewalks, parks, open spaces and designated neighbourhoods. Overall, the shadows created by the Proposed Development are considered to be acceptable, given their moderate impact on designated Neighbourhoods, and given the policy directives for the Site to accommodate transit-supportive densities.

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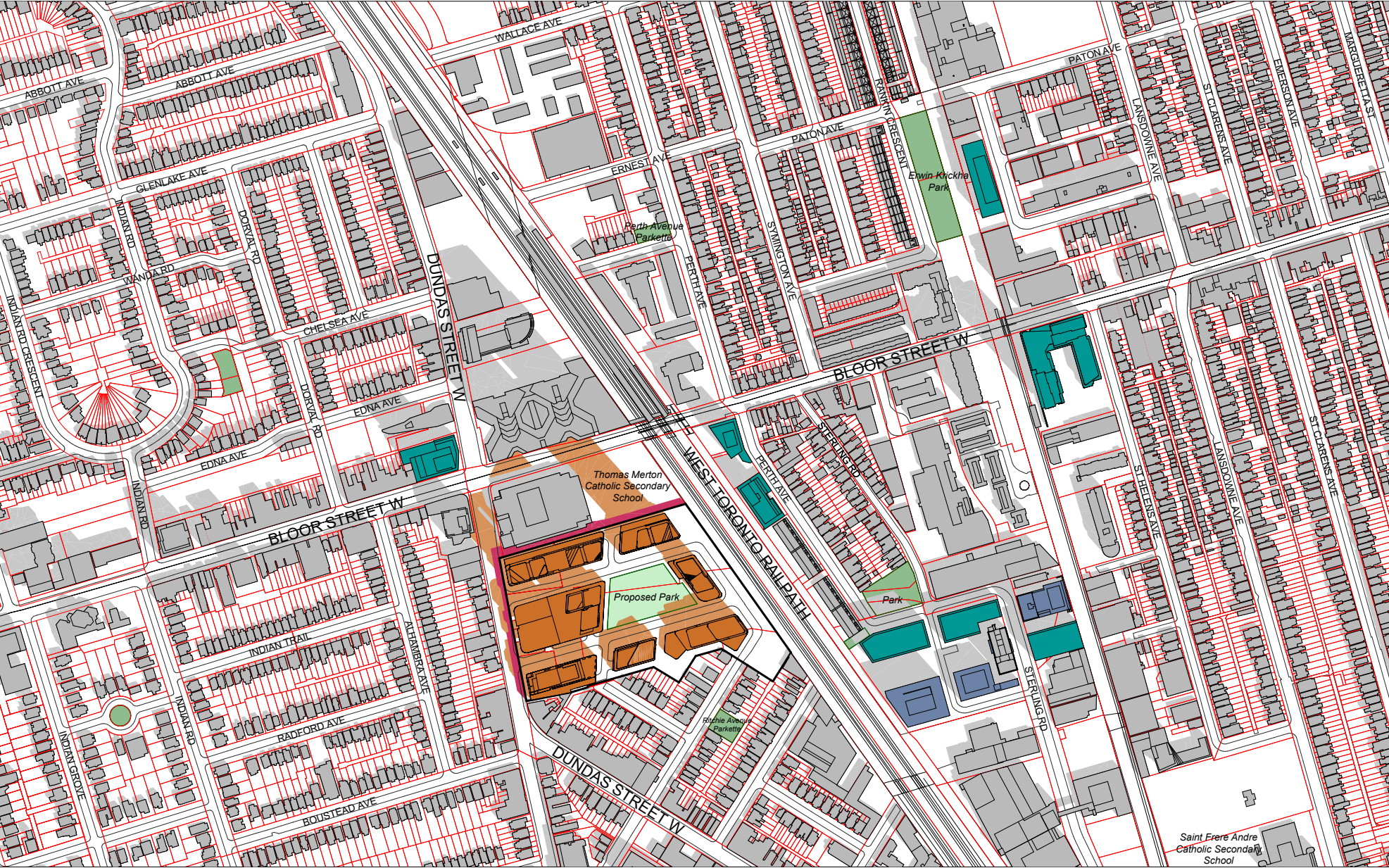
SUNLIGHT AND SHADOW STUDY



March 21 9:18



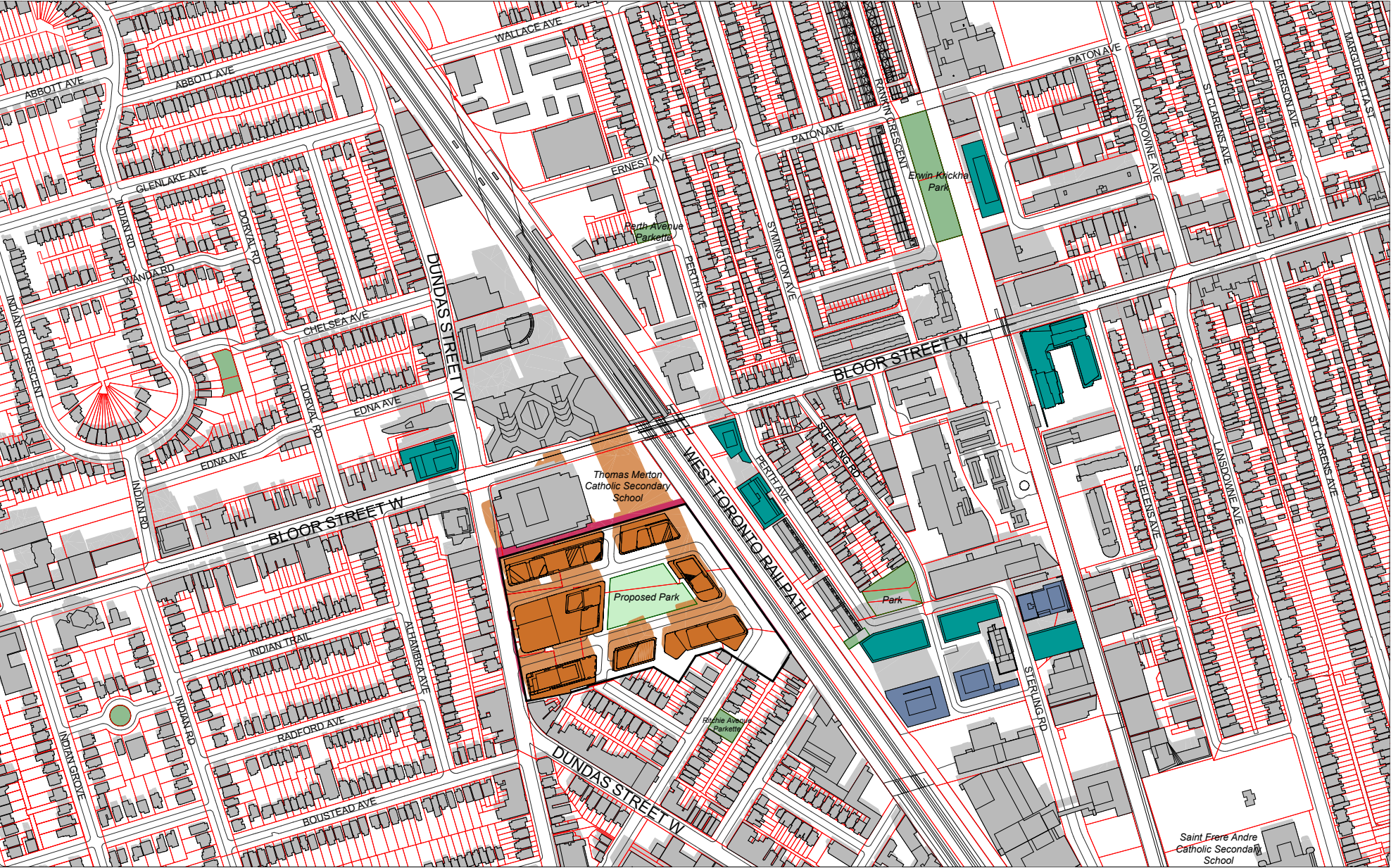
March 21 10:18



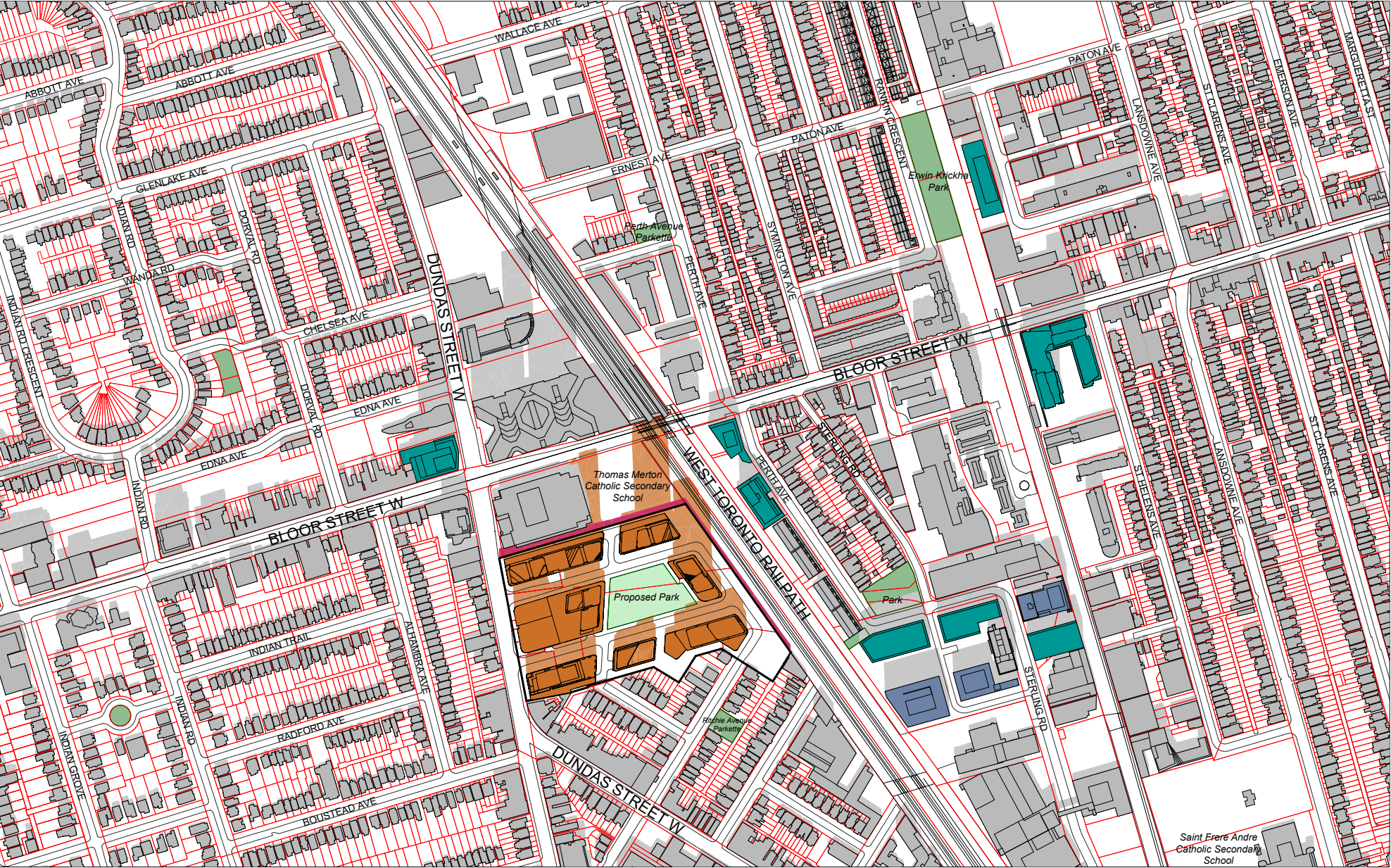
- Massing
- Parks
- As of Right Shadows
- Approved
- Under Construction
- Proposal
- Proposed Park
- Boundary
- Property Lines

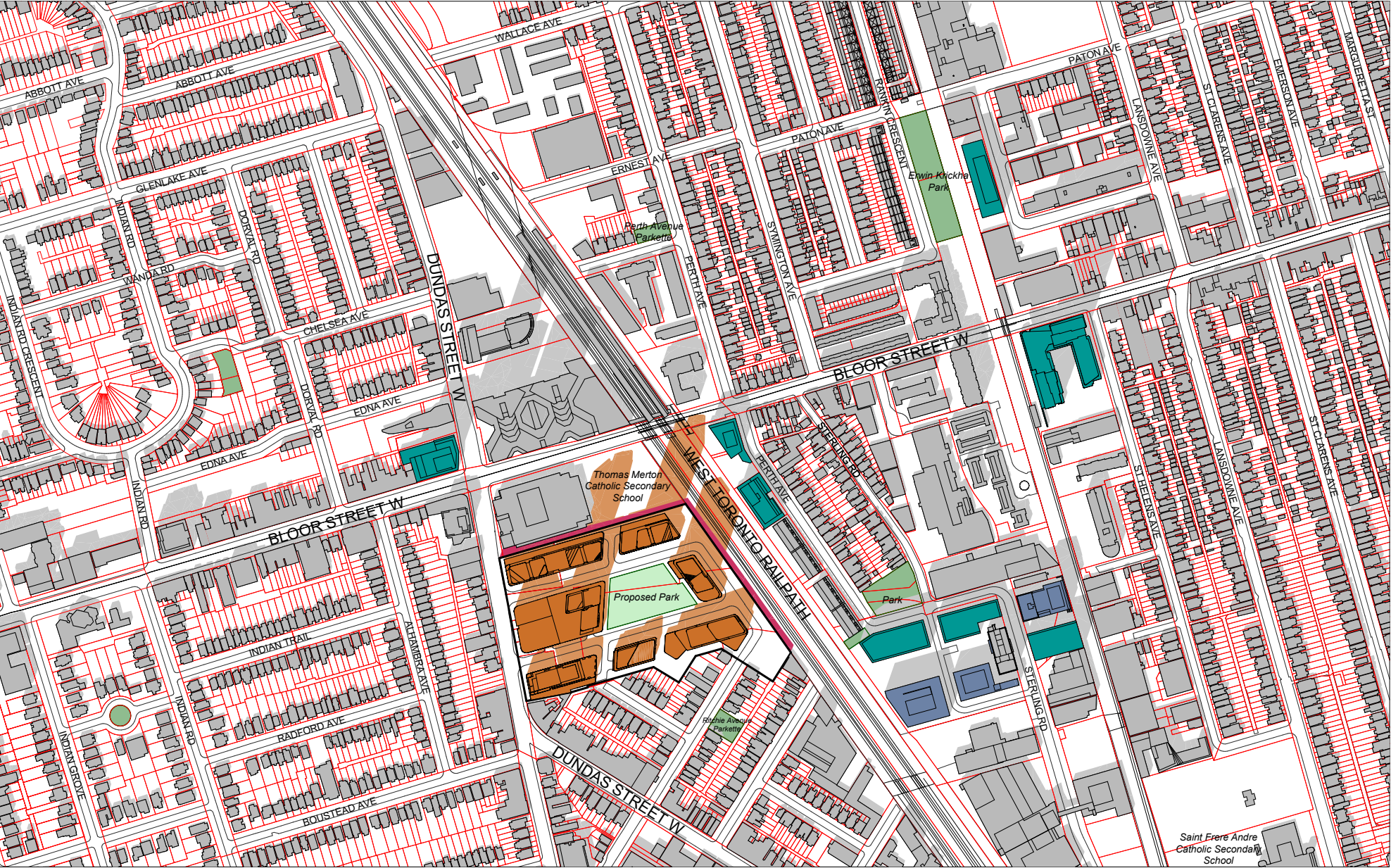
Prepared: June 17, 2022



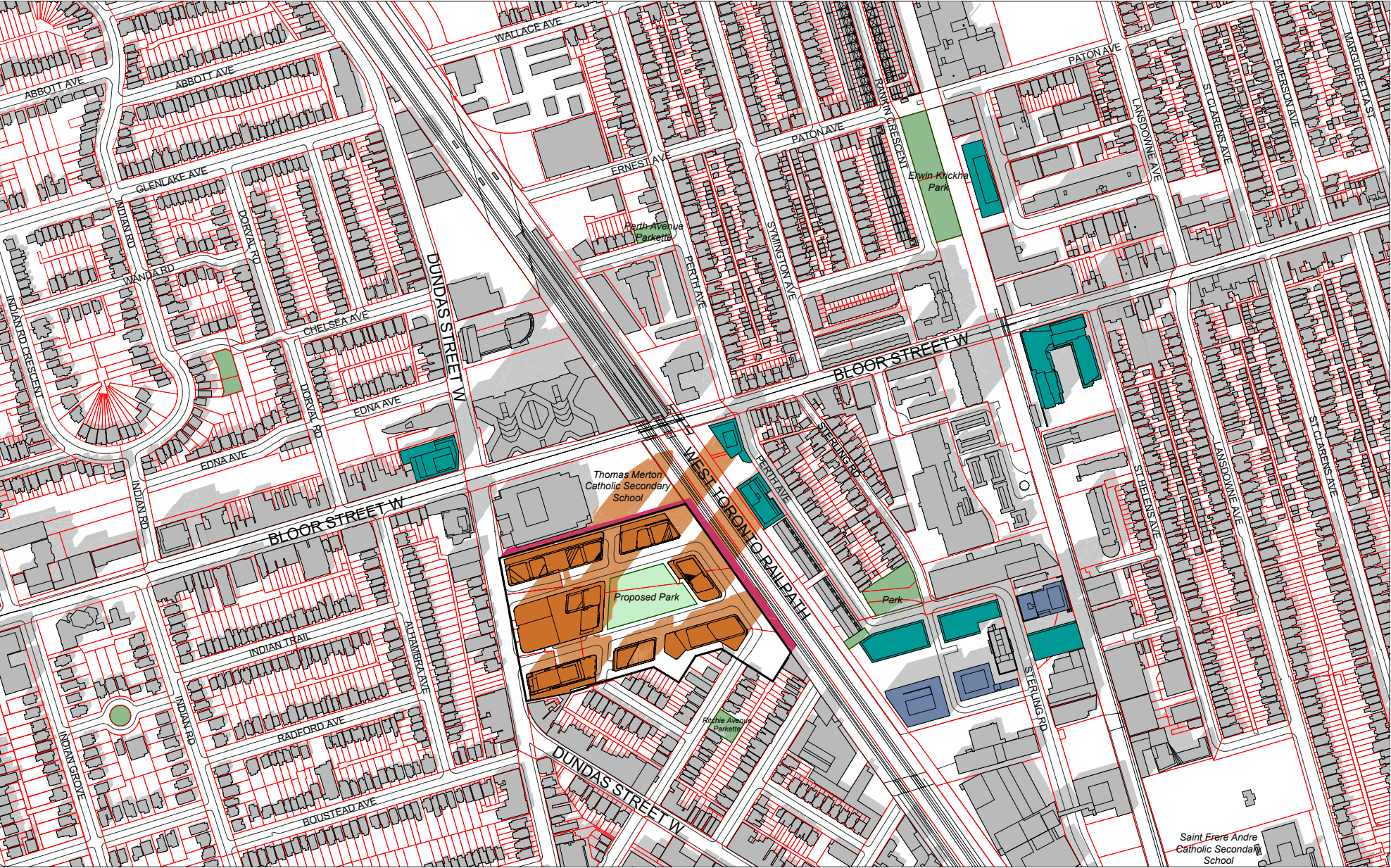


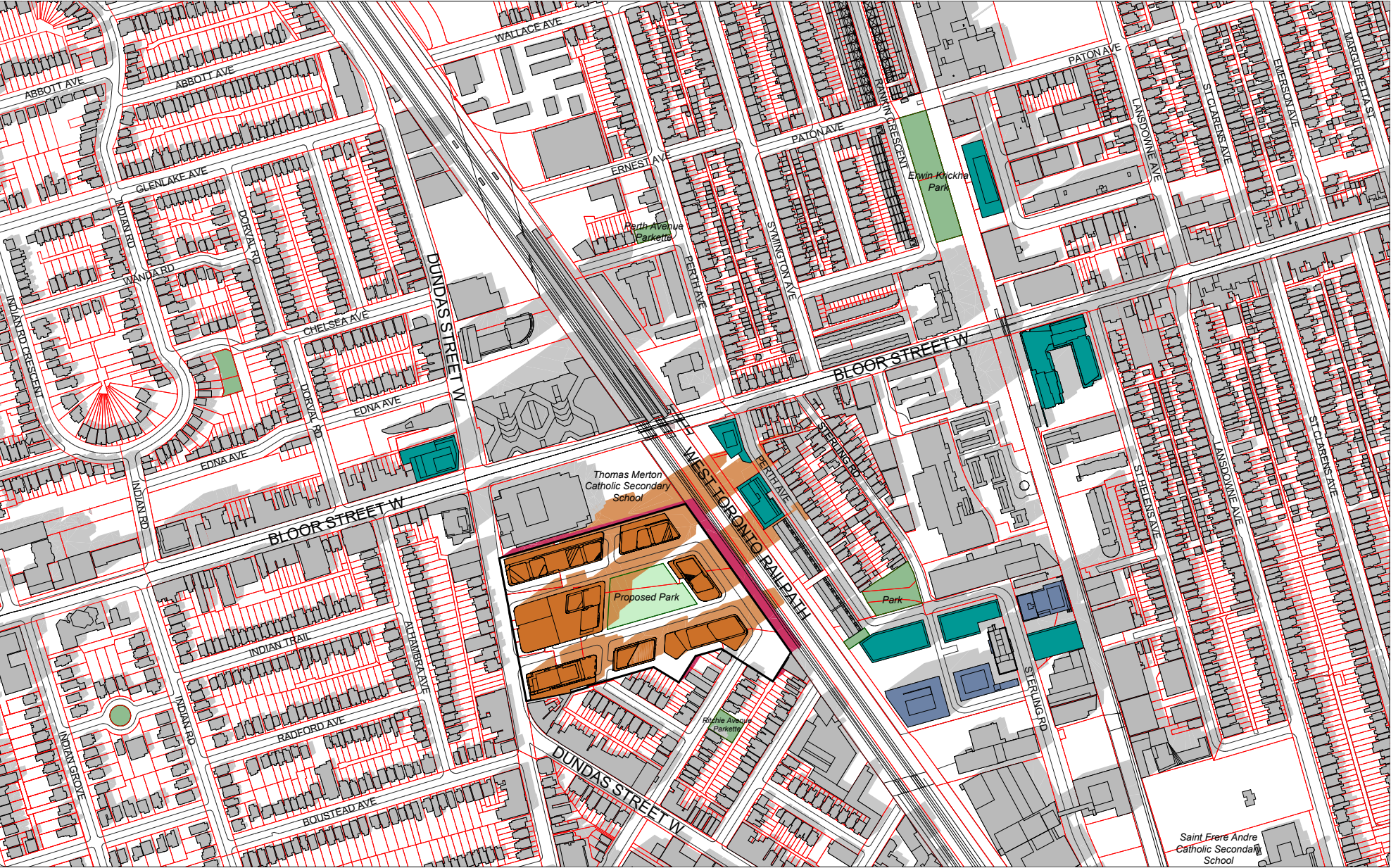
March 21 12:18





March 21 14:18



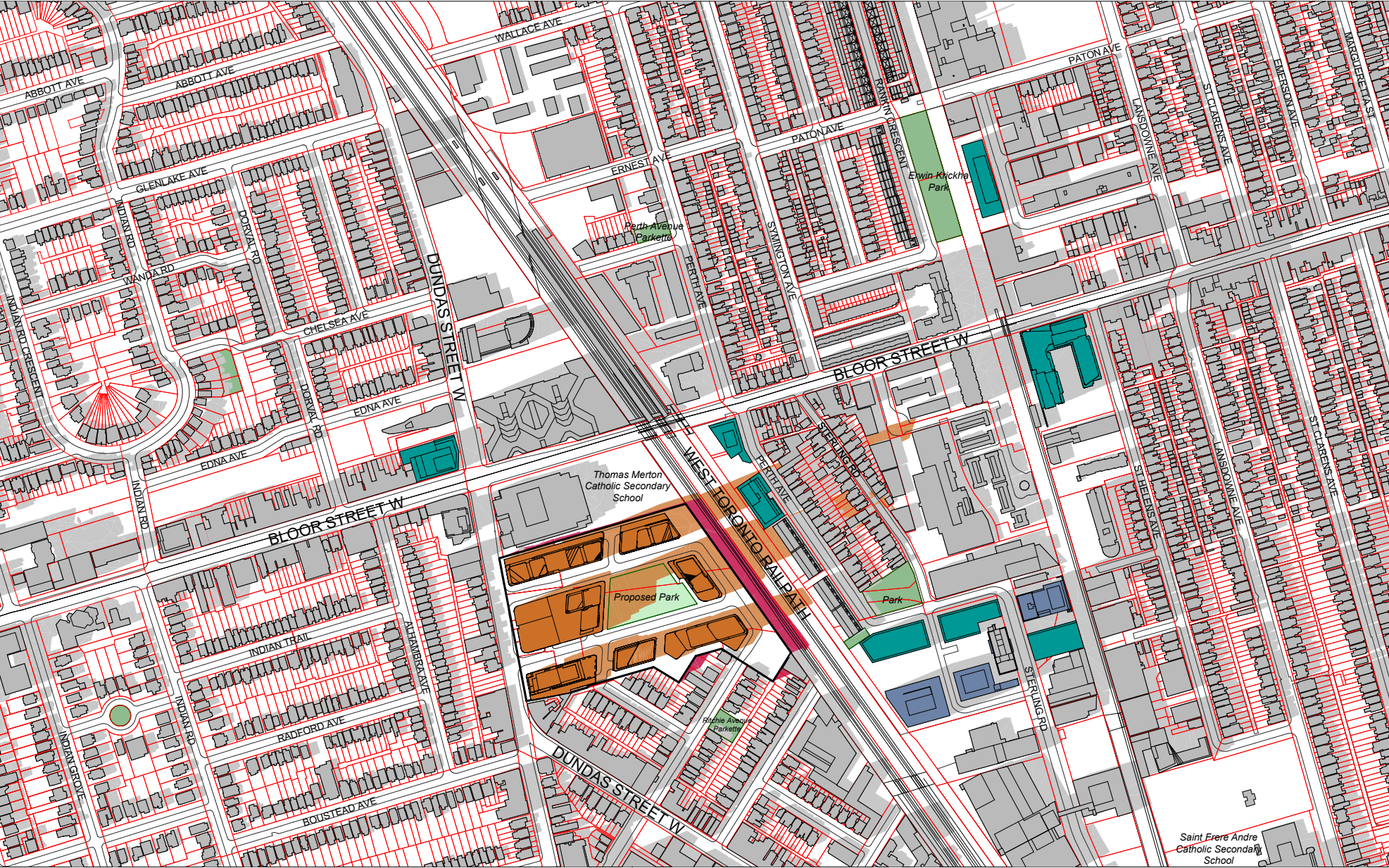


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Prepared: June 17, 2022

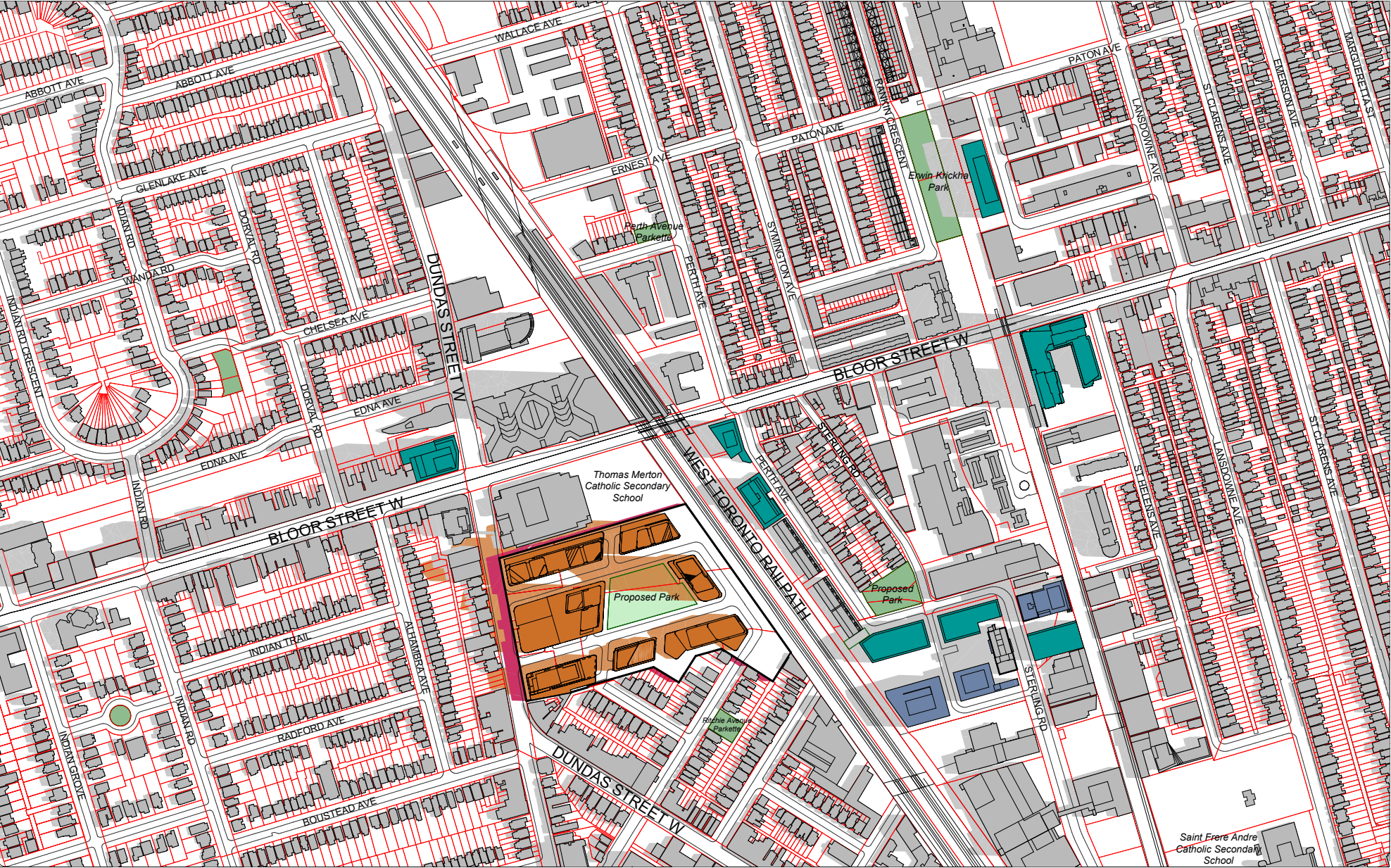


March 21 16:18





March 21 18:18



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