

Shadow Study:
3085 Hurontario Street, Mississauga

The following information has been prepared by Diamond Schmitt Architects and are to be read in conjunction with the shadow drawings in Appendix A.

Introduction

Site Latitude and Longitude

Acquired through Google Maps by enter address: 3085 Hurontario Street and right-clicking on pin.

Latitude: 43.582347288393294

Longitude: -79.61892940307845

Time Zone

Daylight Saving Time GMT-4/Standard Time GMT-5

Reference Bearing for Hurontario Street:

Approximately N46°25'55"W

Astronomic North and Software Use to Prepare Shadow Analysis

The North Arrow in the survey was used to set up the True North in Revit 2022. This survey was prepared by:

R-PE Surveying Ltd. Ontario Land Surveyors on November 25, 2020

The base plan originated from the survey above and the base map was taken from Google Maps.

The project address was entered into Autodesk Revit 2022 which geolocates the site and the orientation to astronomical north established accurate shadows of the development.

Origin of Base Plan

The base plan was taken from Google Maps with satellite view.

3.1 Residential Private Outdoor Amenity Spaces

Private residential outdoor amenity spaces near the development is indicated in the shadow studies images. No private residential amenity spaces are impacted by the subject development.

3.2 Communal Outdoor Amenity Areas

Communal outdoor amenity areas comprise of:

- a) Five communal swimming pools to the east of the site that belong to adjacent apartment buildings,
 - i. 3151 Jaguar Valley - Pool (NE Communal Pool)
 - ii. 3131 Kirwin – Pool (Kirwin communal pool)
 - iii. 3120 Kirwin – Pool (SE Communal Pool)
 - iv. 3170 Kirwin Ave – (East Private Pool)
 - v. 3100 Kirwin Ave – pool (SE Private Pool)
- b) 3100 Kirwin Ave outdoor tennis courts, east of the subject site.
- c) The subject development rooftop amenity spaces on Buildings 1, 3 and 4.
- d) The subject development site amenity spaces (POPS and Pocket Park)
- e) TL Kennedy Secondary School to the west with their outdoor fields further westward

These are noted on each of the shadow studies images with labels. The criterion is met if there is no shadow impact from the development for at least half the test times or 50% sun coverage all the time.

June 21:

- a) There is no shadow impact on the above communal outdoor amenity space on any of the test times therefore the criteria has been met.
- b) There is no shadow impact on the above communal outdoor amenity space on any of the test times therefore the criteria has been met.
- c) All rooftop amenity spaces have no shadow impact for at least half the test times in June.
- d) On the subject development site amenity space, the POPS has less than 50% sun access factor and does not meet the criteria.
 - On the subject development site amenity space, the Private Park has 50% sun coverage majority of the test times and 0% sun coverage for 3 hours of the day and does not meet the criteria.
- e) There is no shadow impact on any of the test times therefore the criteria has been met.

Sept 21:

- a) There is no shadow impact on the above communal outdoor amenity space on any of the test times therefore the criteria has been met.
- b) There is no shadow impact on the above communal outdoor amenity space on any of the test times therefore the criteria has been met.
- c) On subject development rooftop amenity space, Building 3 rooftop space is in shadow for over 50% of the test times and does not meet the criteria, Building 4 has sun coverage for 50% of the test times and meets the criteria.

- d) On the proposed development site amenity space (d), the POPS and Private Park have less than 50% sun access factor and do not meet the criteria.
- e) There is no shadow impact on any of the test times therefore the criteria has been met.

Dec 21:

- a) There is minimum 50% sun access factor to the private outdoor amenity spaces a) and b) therefore the criteria has been met.
- b) There is minimum 50% sun access factor to the private outdoor amenity spaces a) and b) therefore the criteria has been met.
- c) Building 3 and 4 rooftop amenity have less than 50% sun access factor and do not meet the criteria.
- d) The POPS has 50% sun access factor, the Private Park has less than 50% sun access factor and do not meet the criteria.
- e) There is no shadow impact on any of the test times therefore the criteria has been met.

3.3 Public Realm

The area of Hurontario and Kirwin is considered *Mixed Use, Commercial, Employment and High-Density Residential Streets*.

There is no shadow impact of the development site on the opposite side of Hurontario Street during the above times and therefore is in accordance with the criteria.

Public Open Spaces close to the subject site includes John C Price Park in the SE direction, closer to the intersection of Kirwin and Dundas.

The park has Sun Access Factor of 89%.

	21-Sep	Total Area (At)	Shadow Area	Sun Area (As)
1	835	29,659	-	29,659
2	912	29,659	-	29,659
3	1012	29,659	-	29,659
4	1112	29,659	-	29,659
5	1212	29,659	-	29,659
6	1312	29,659	-	29,659
7	1412	29,659	-	29,659
8	1512	29,659	4,220	25,439
9	1615	29,659	10,703	18,956
10	1712	29,659	10,451	19,208
11	1748	29,659	9,813	19,846
			35,187	291,062
At				29,659
As(ave)				26,460
Sun Access Factor = As(ave)/At				0.89

Impact on Public Open Spaces, Parks and Plazas:

The development occurs on the east side of Hurontario Street and is not immediately adjacent to Kirwin Avenue and therefore the angular plane views have no maximum angular plane limit for the former condition and are not applicable for the latter condition.

3.4. Turf and flower gardens in Public Parks

There are no turf areas or flower gardens within the shadow test area.

3.5. Building Faces to allow for the possibility of using solar energy

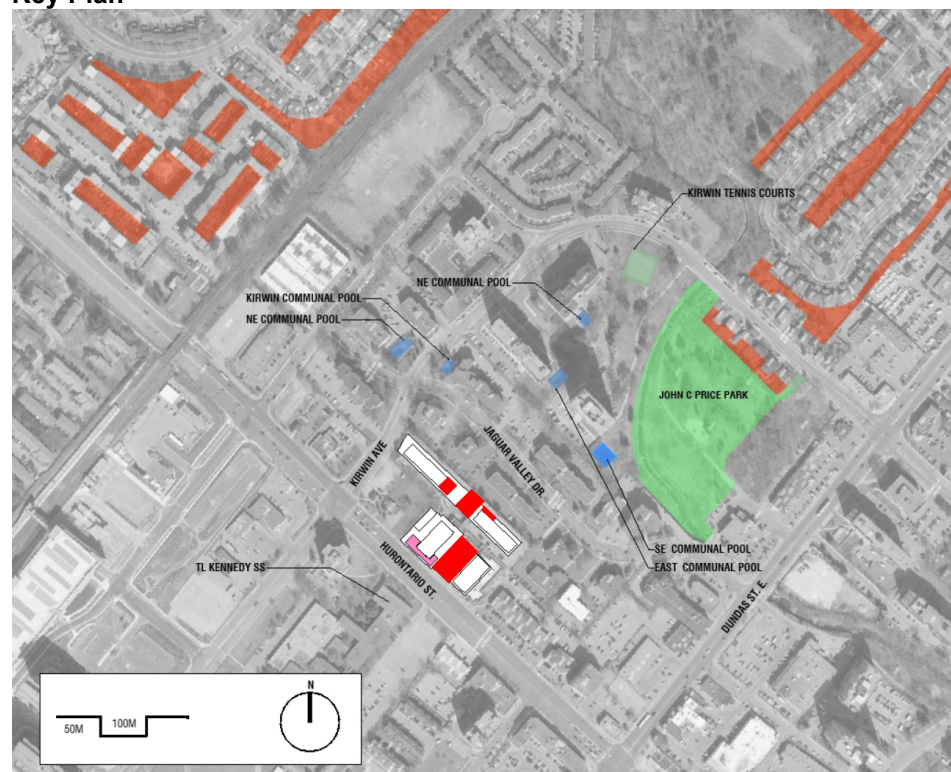
There are no adjacent low rise residential buildings (defined as one to four storeys) in the vicinity of 3085 Hurontario. Any surrounding residential is comprised of 5 storeys or more apartment buildings.

Analysis and Mitigation Plan

To conclude, the proposed development meets the shadow impact criteria for all existing amenity areas and public spaces. The spaces that are affected by not meeting the shadow impact criteria are within the subject development site.

The key plan below indicates the areas and time of year that do not meet the criteria:

Key Plan



Impacted areas not meeting the shadow impact criteria are noted in red in the key plan. They are the POPS, Private Park, and 2 rooftop terraces on the subject development. They contain hardscaping with softscaping in planters and outdoor furniture.

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Effort has been made to improve the shadow impact by keeping floor plates under 750sm and also by keeping the grade amenity close to each other to allow porosity from one space to another if one is impacted.

Summary prepared by Persis Lam, Architect, Diamond Schmitt Architects

Shadow drawings prepared by Tim Birchard, Architect, Diamond Schmitt Architects

Regards,

Persis Lam

OAA MRAIC CPHD

Associate

**diamond
schmitt**

Diamond Schmitt Architects

384 Adelaide Street West, Suite 100
Toronto, Ontario, Canada M5V 1R7
t: 416 862 8800 x 479

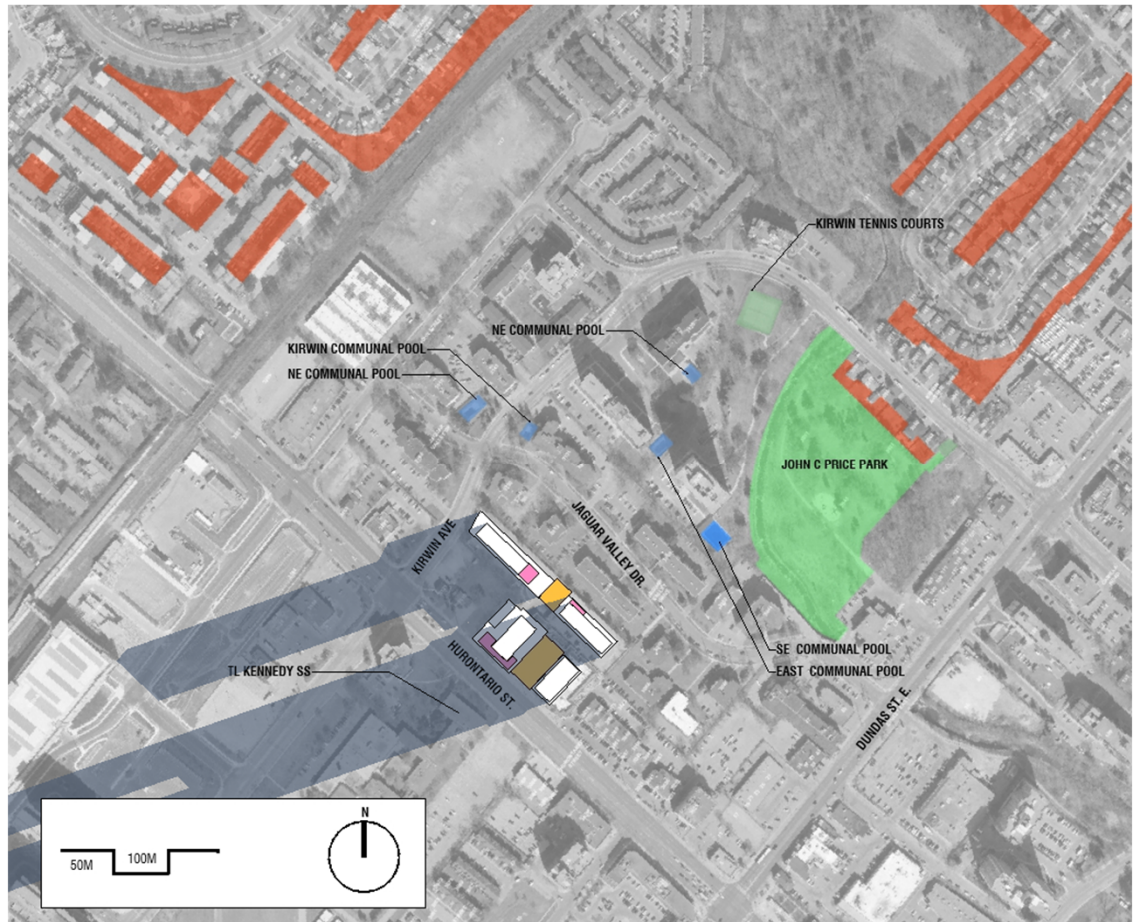
plam@dsai.ca




www.dsai.ca

Appendix A

June 21

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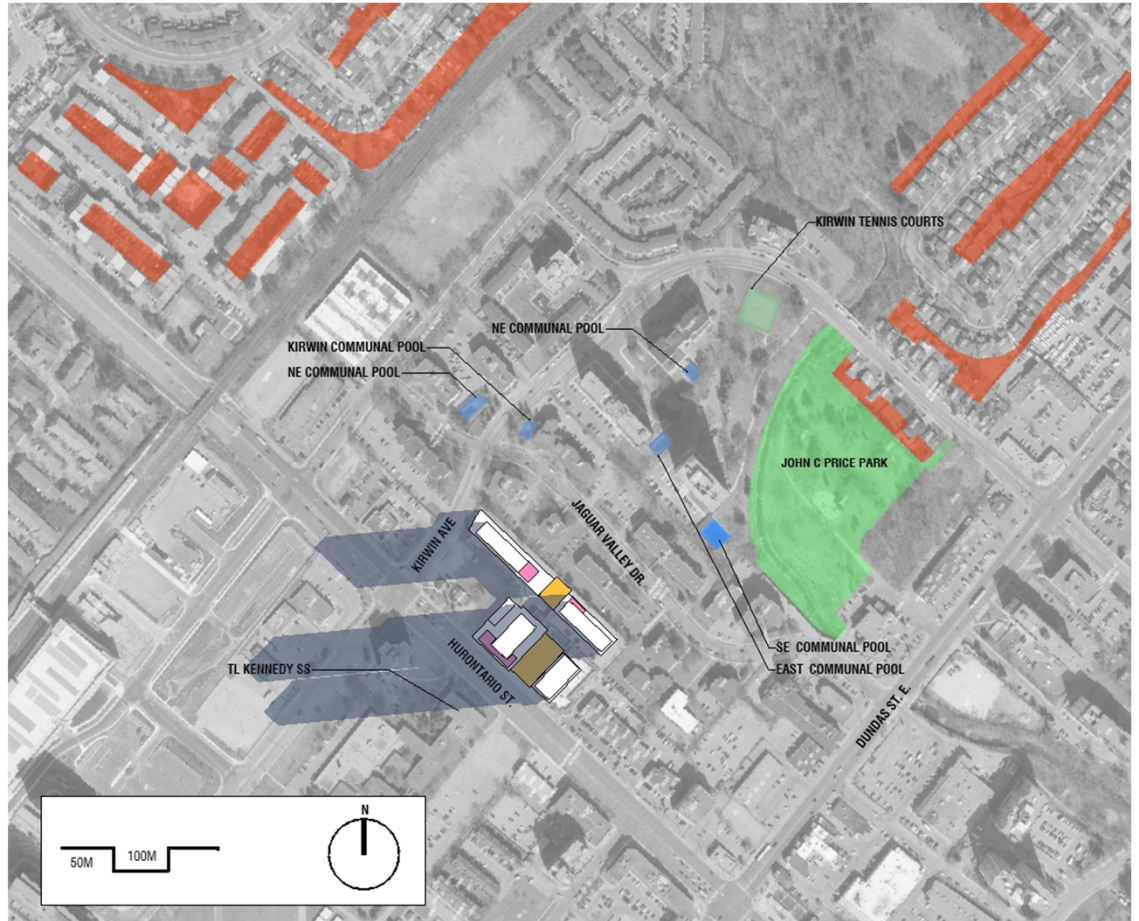





-  7.5m Residential Private Outdoor Amenity Areas
-  Subject Site Amenity
-  Subject Rooftop Amenity

Appendix A

June 21

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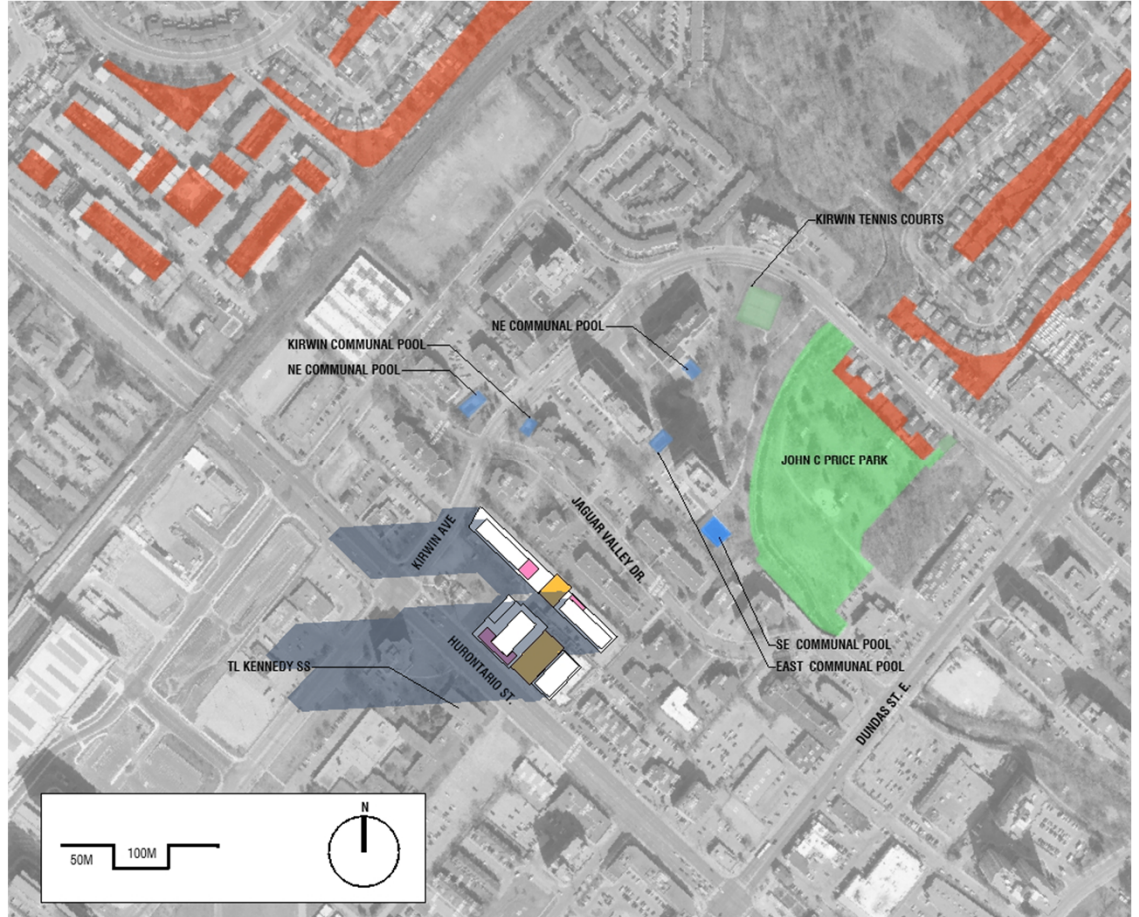





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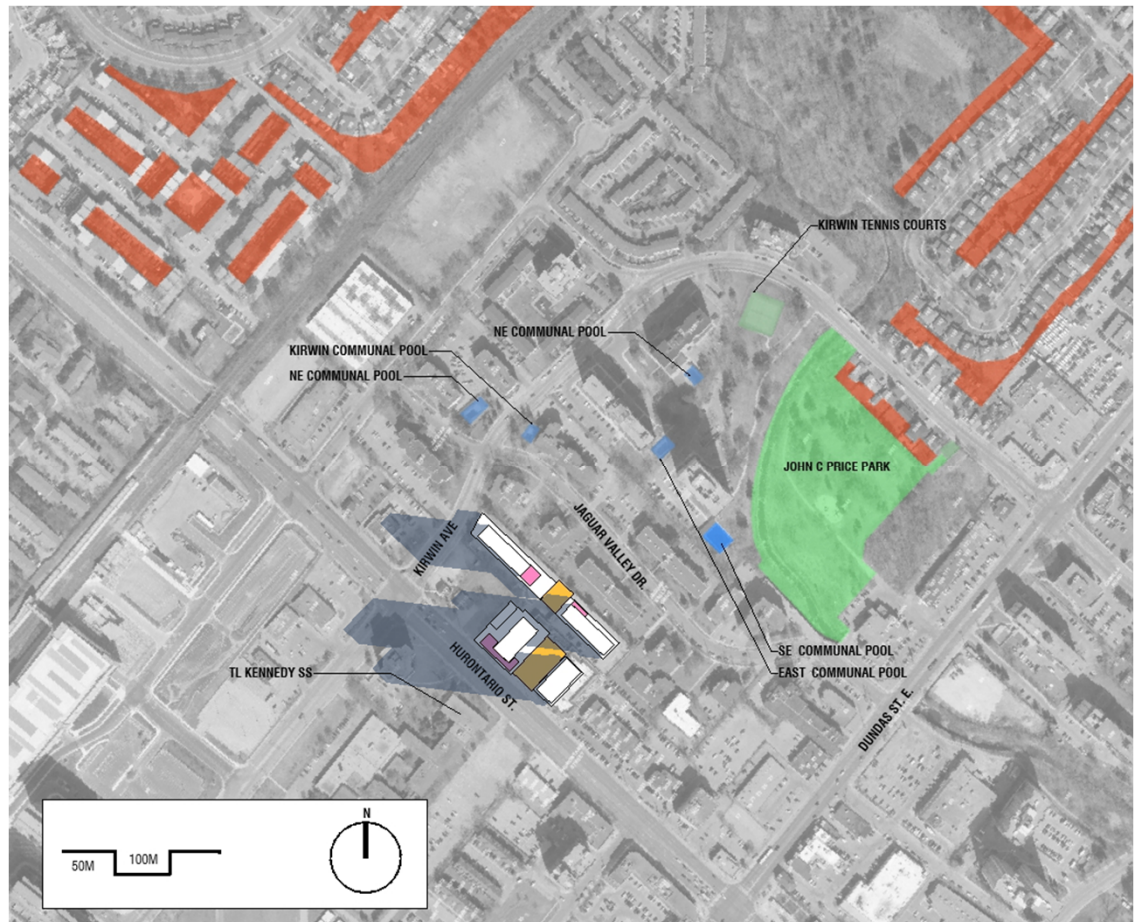
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Appendix A

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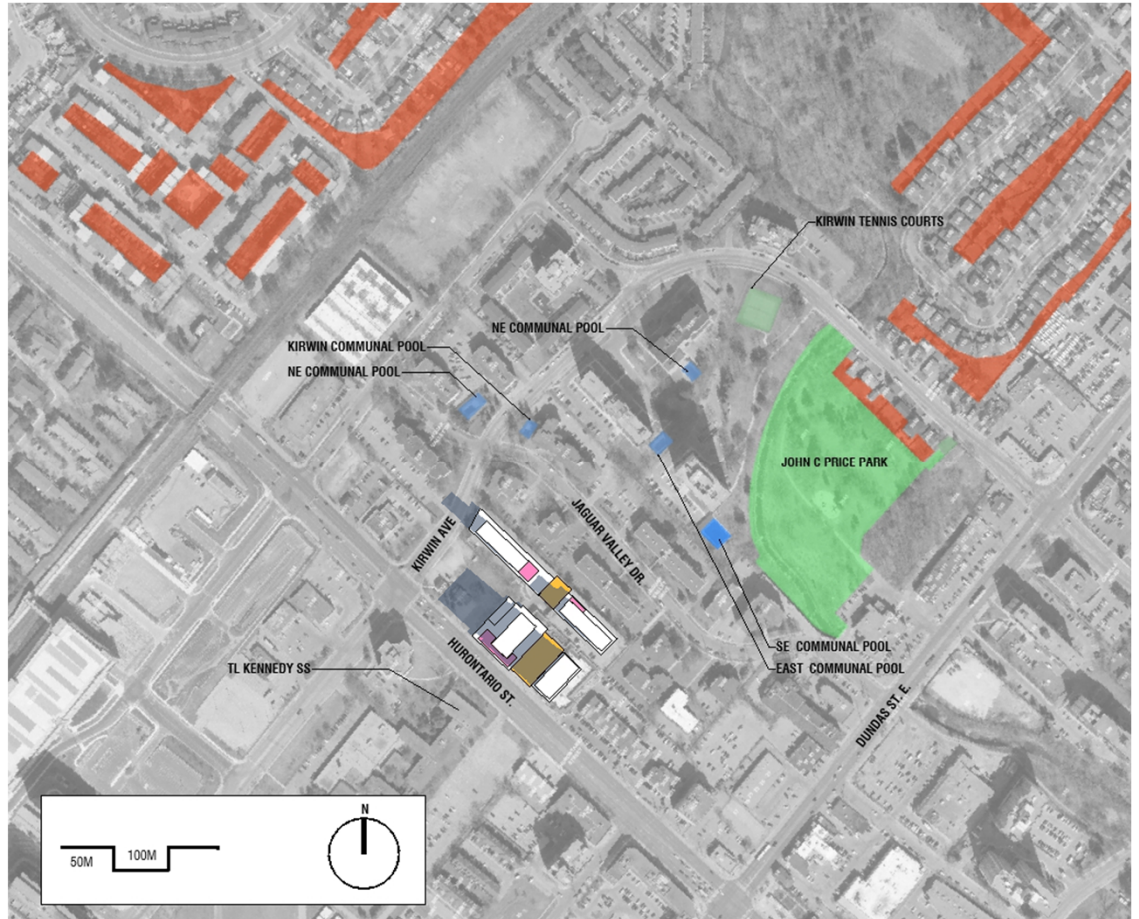





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Appendix A

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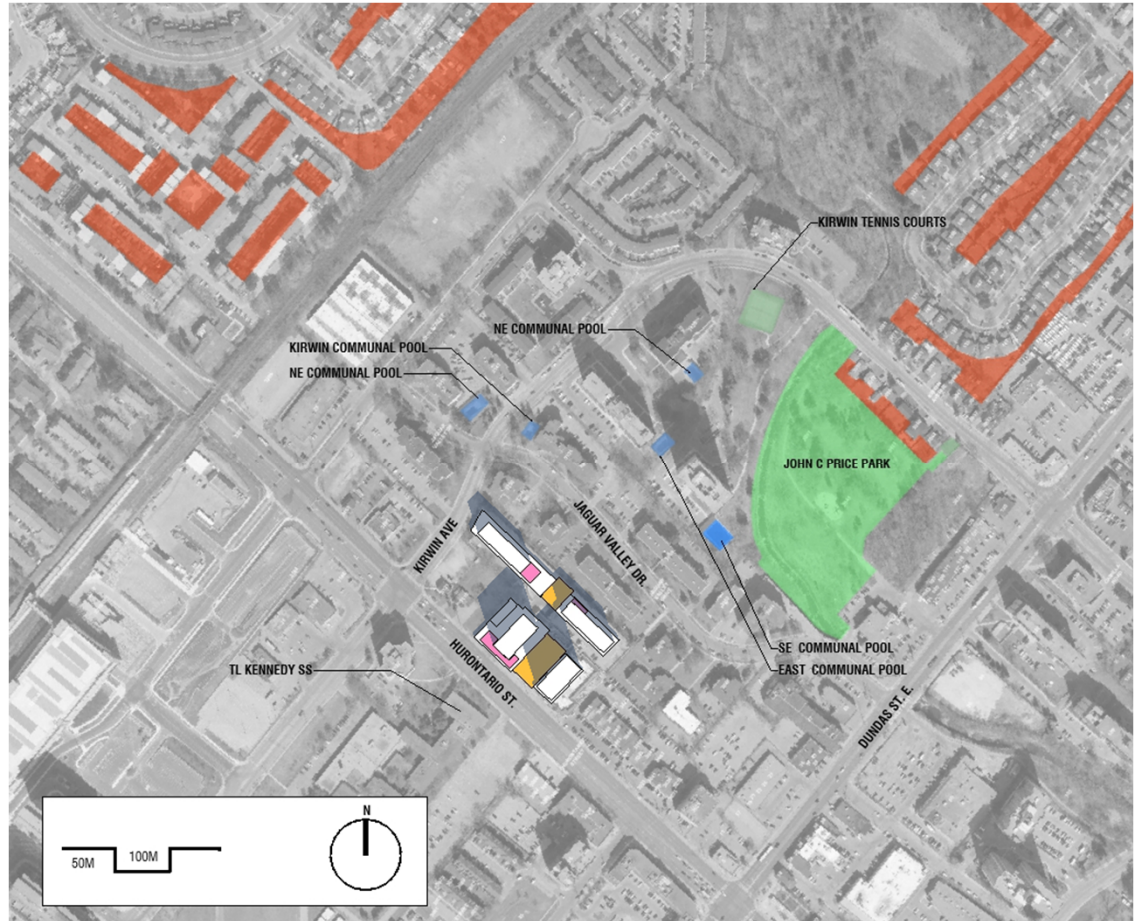





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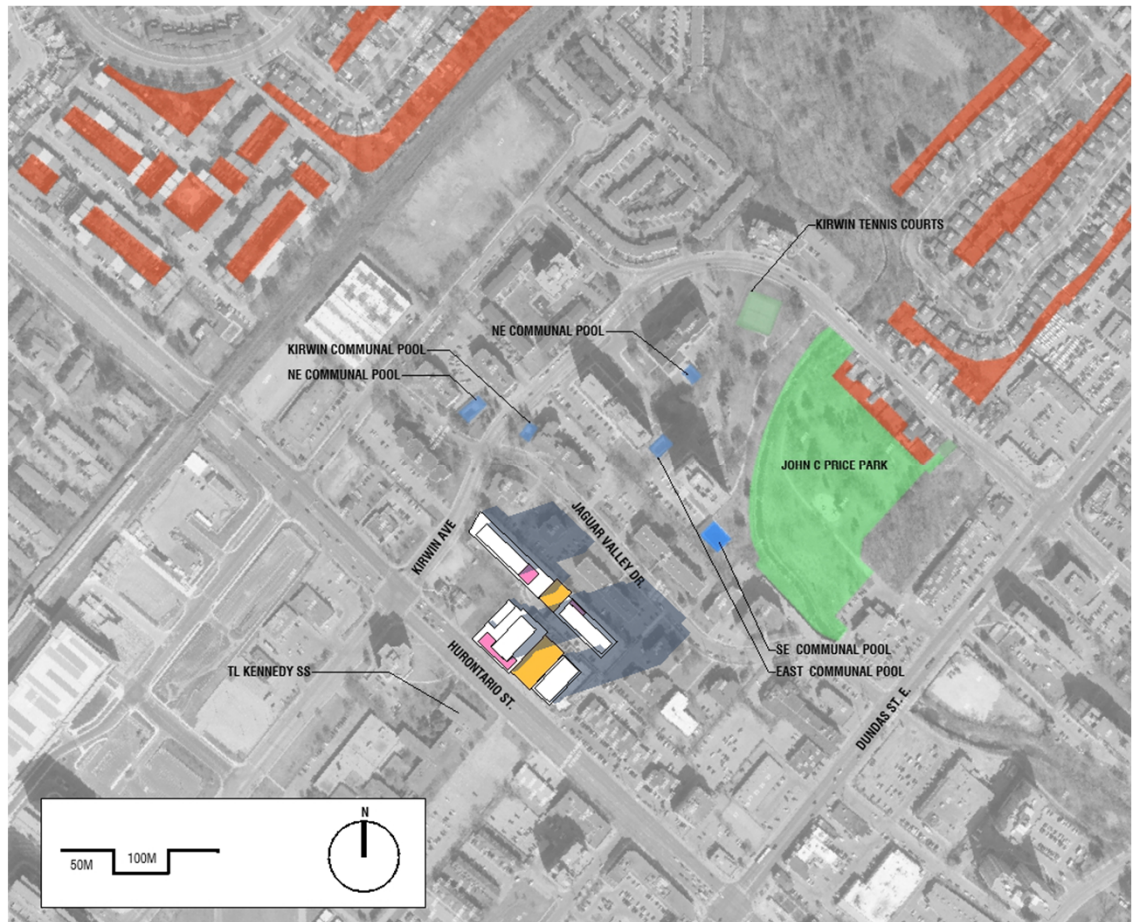





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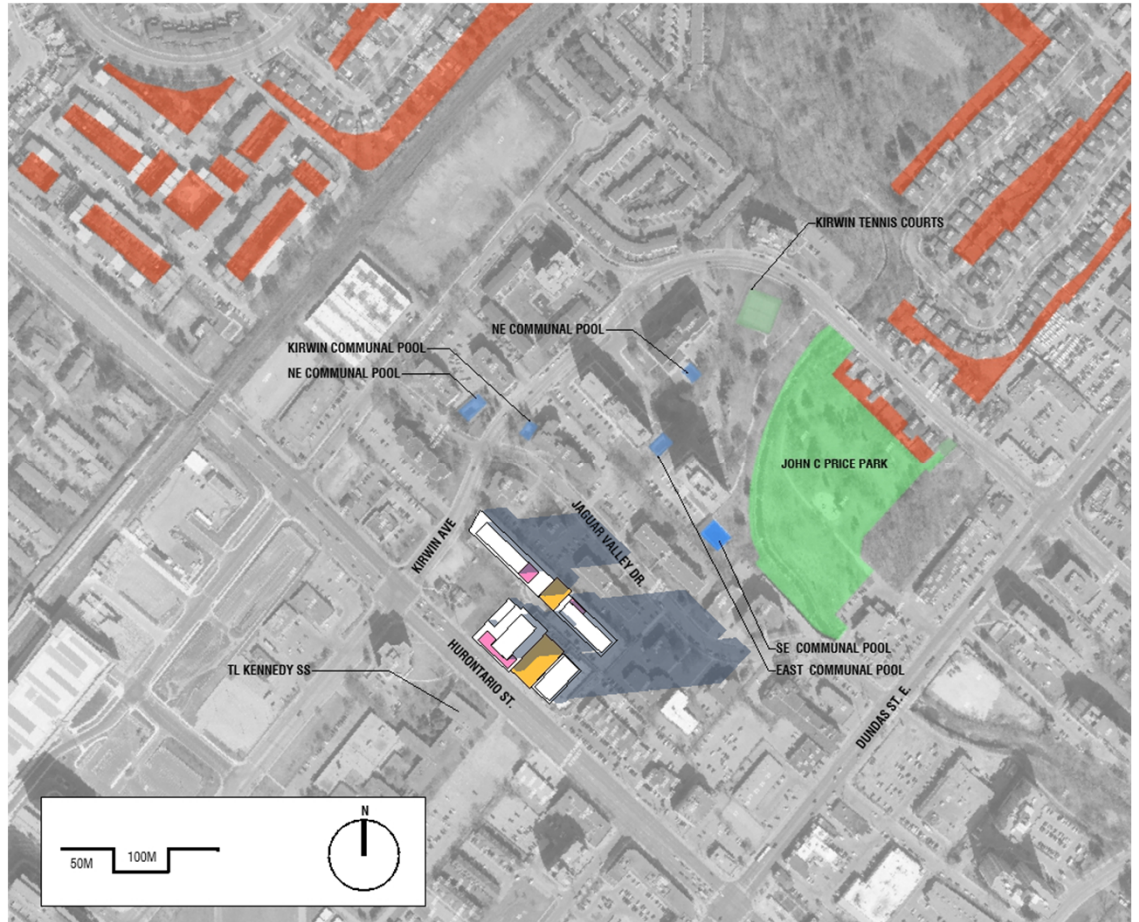





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Appendix A

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Appendix A

June 21

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Appendix A

June 21

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Appendix A

June 21

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Appendix A

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Appendix A




June 21

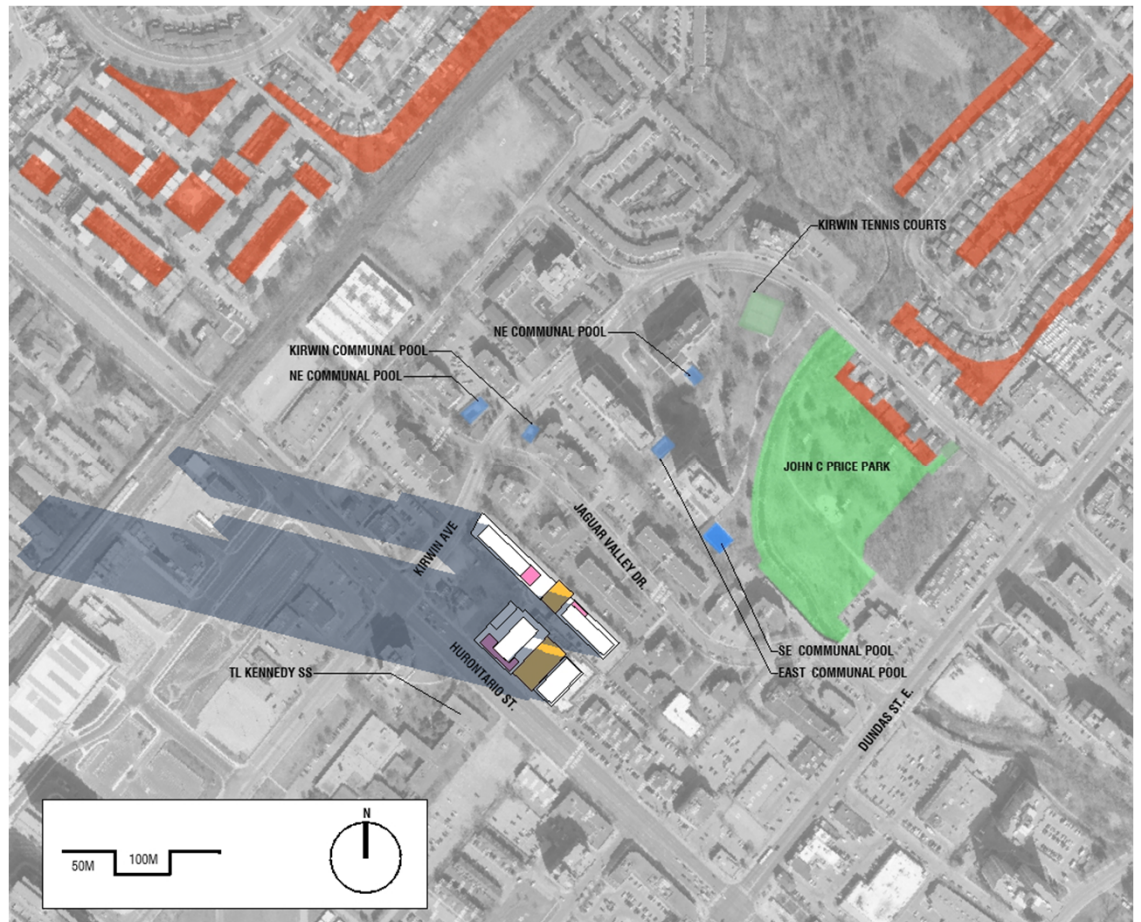
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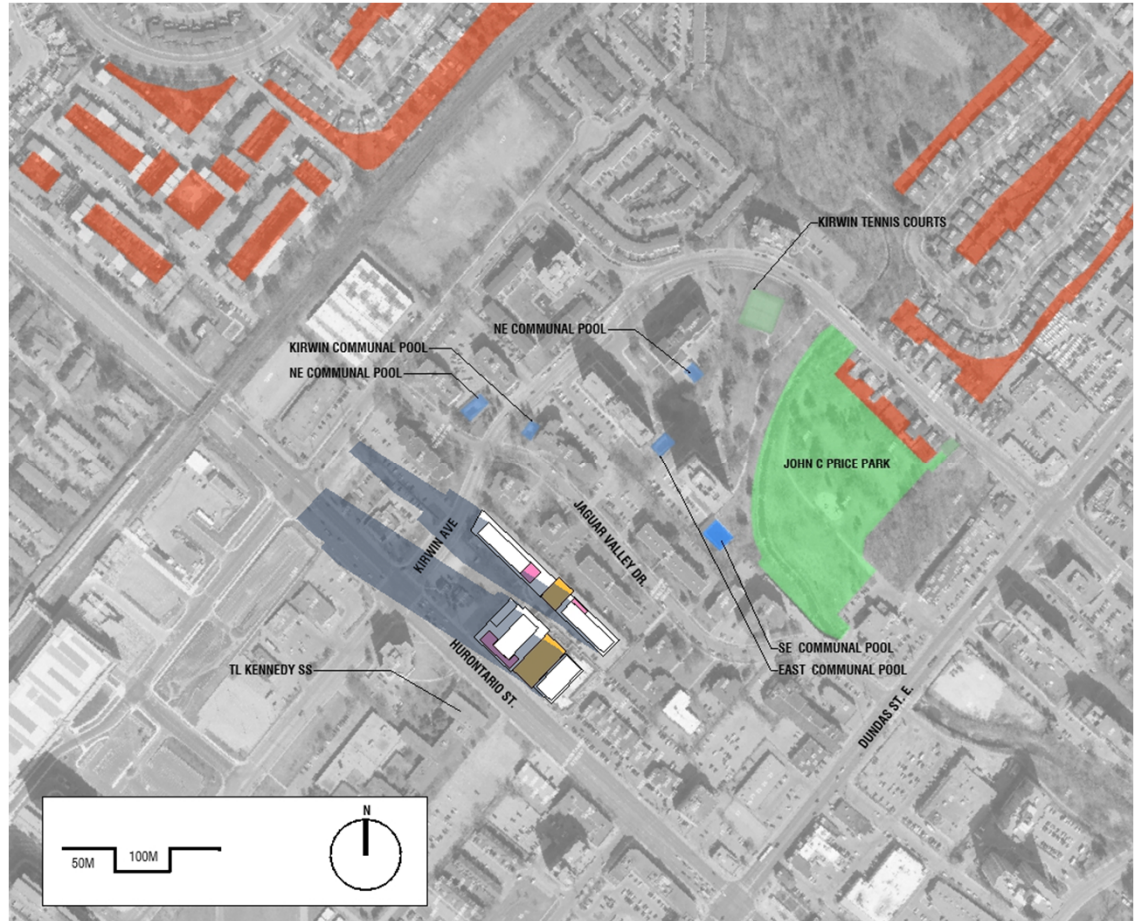
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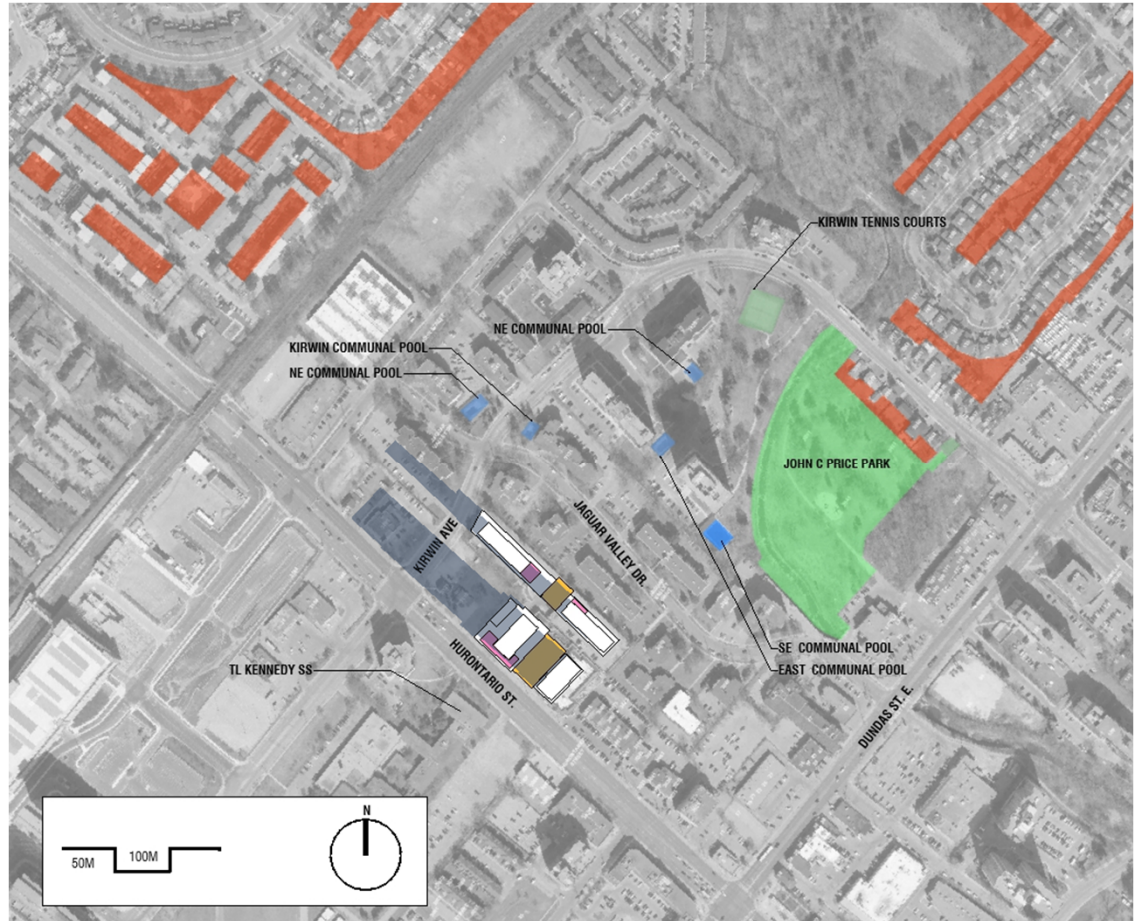
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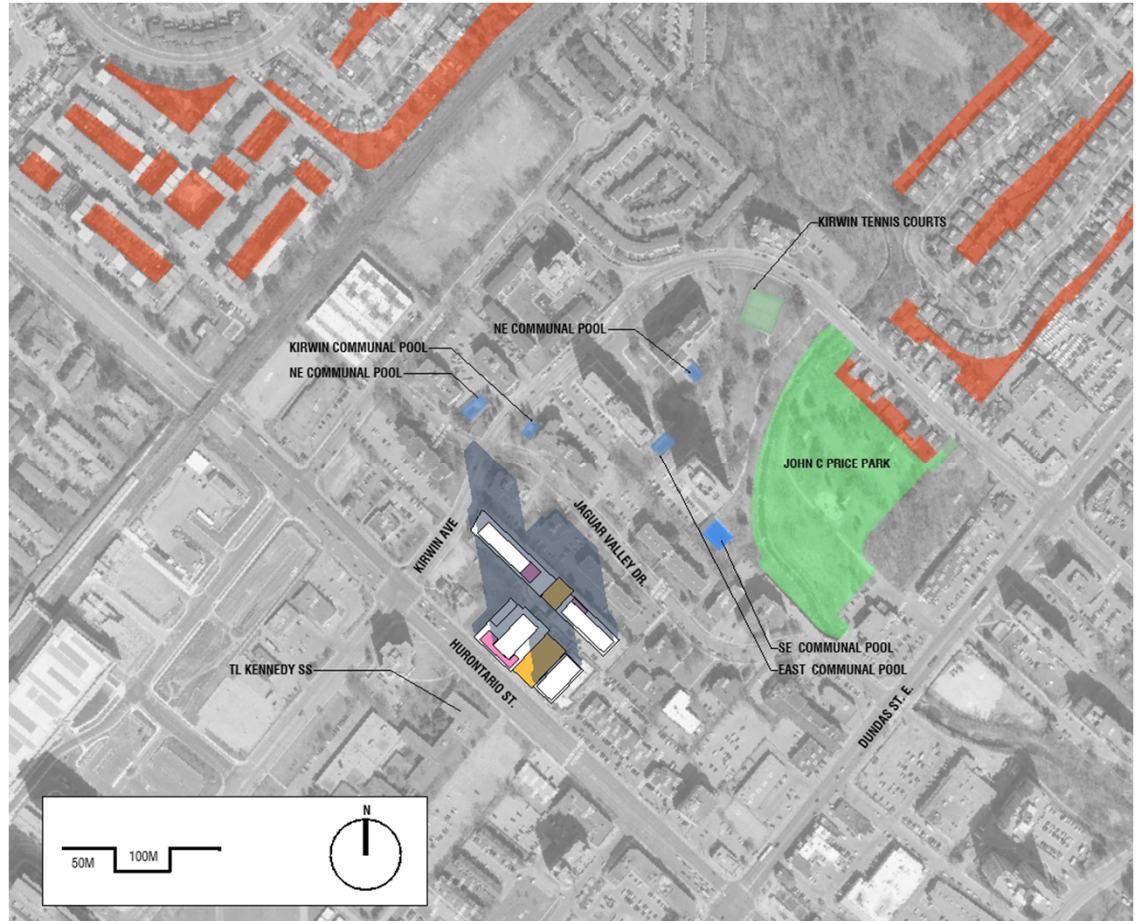
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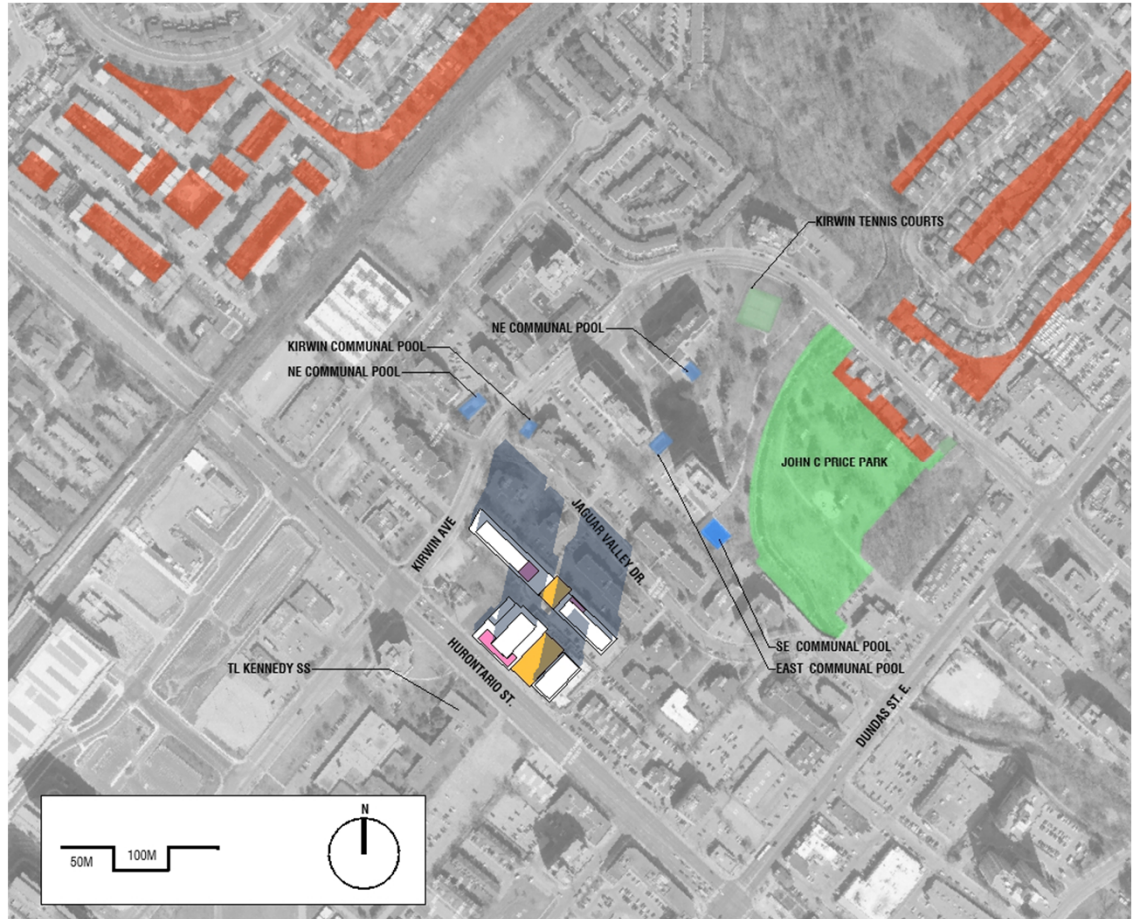
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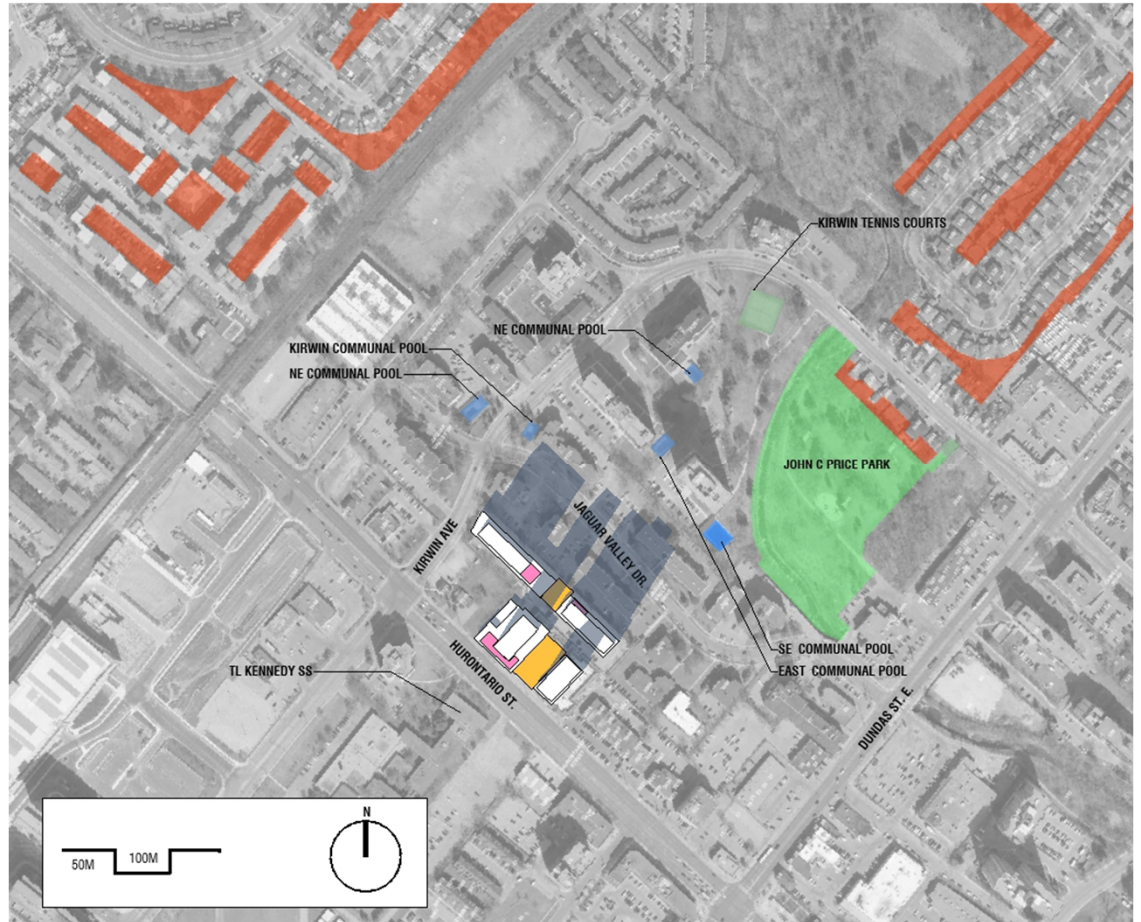
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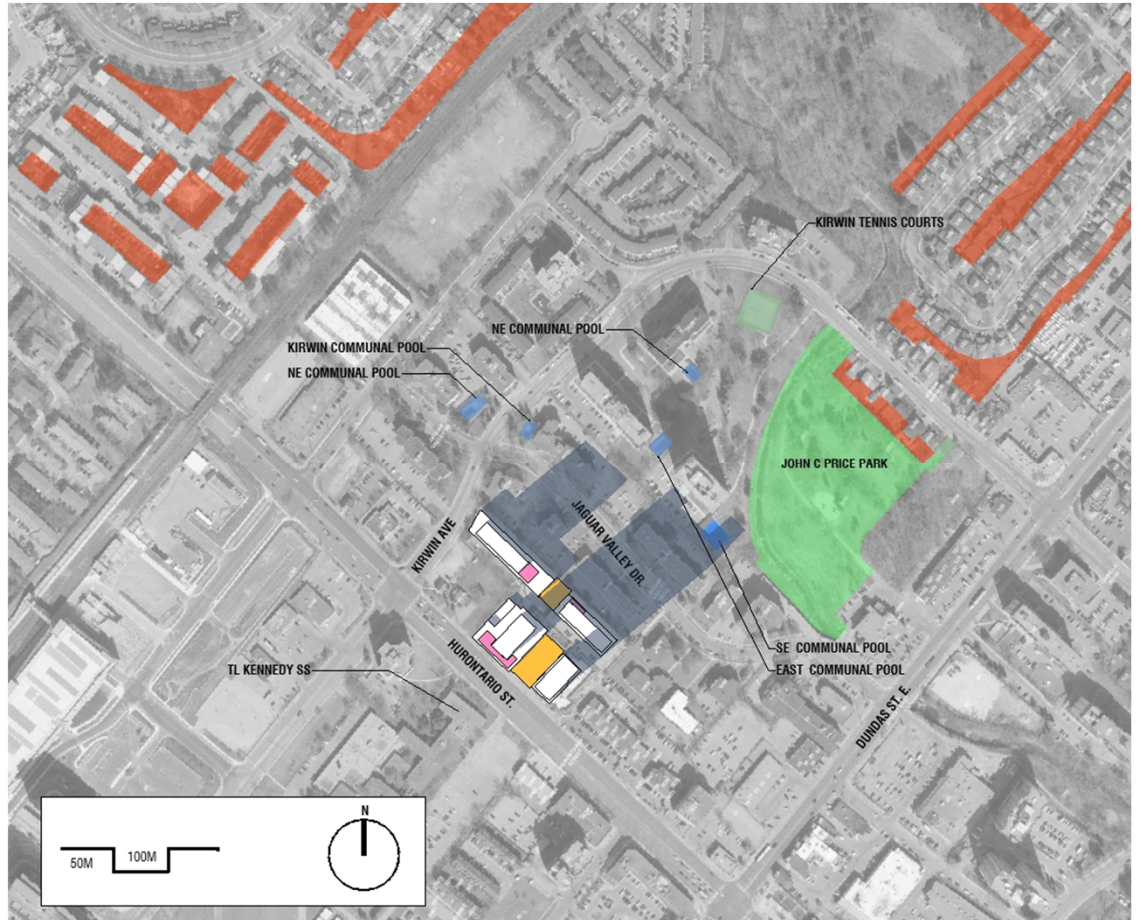
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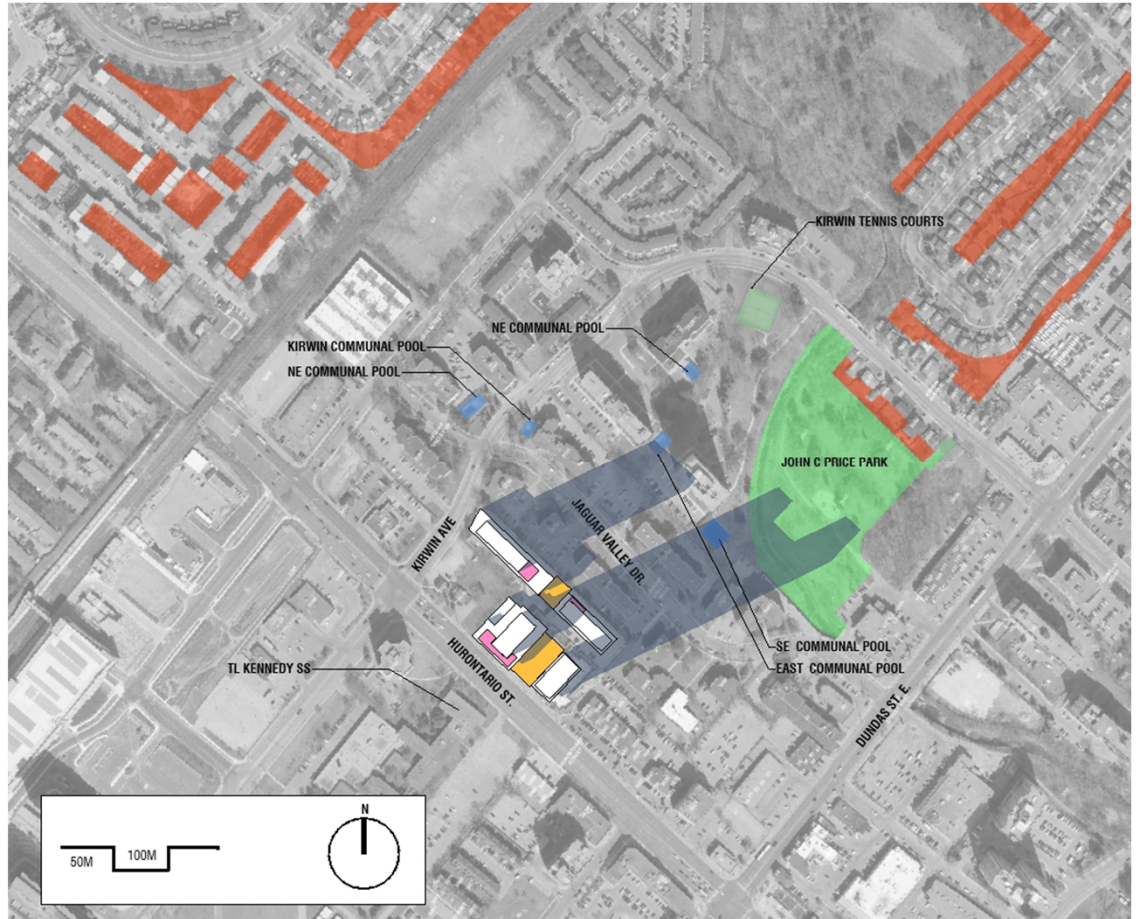
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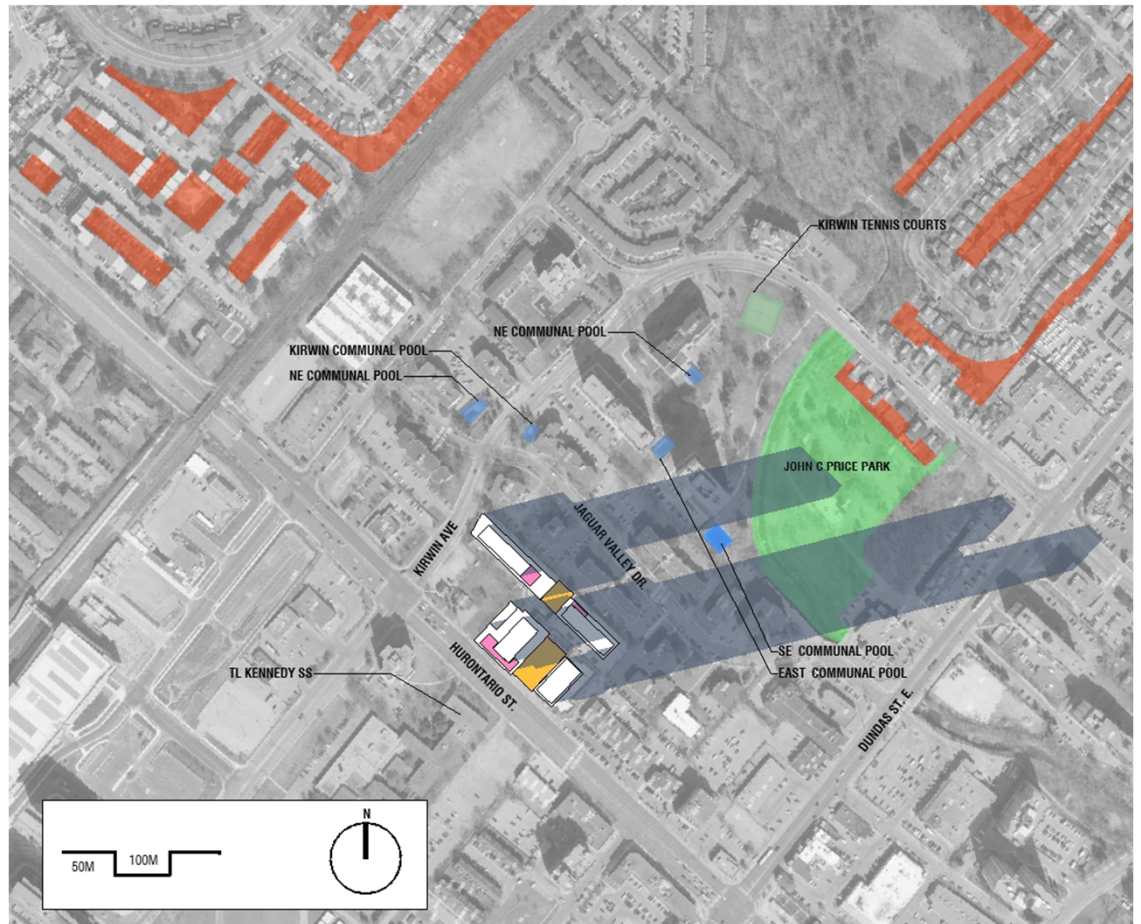
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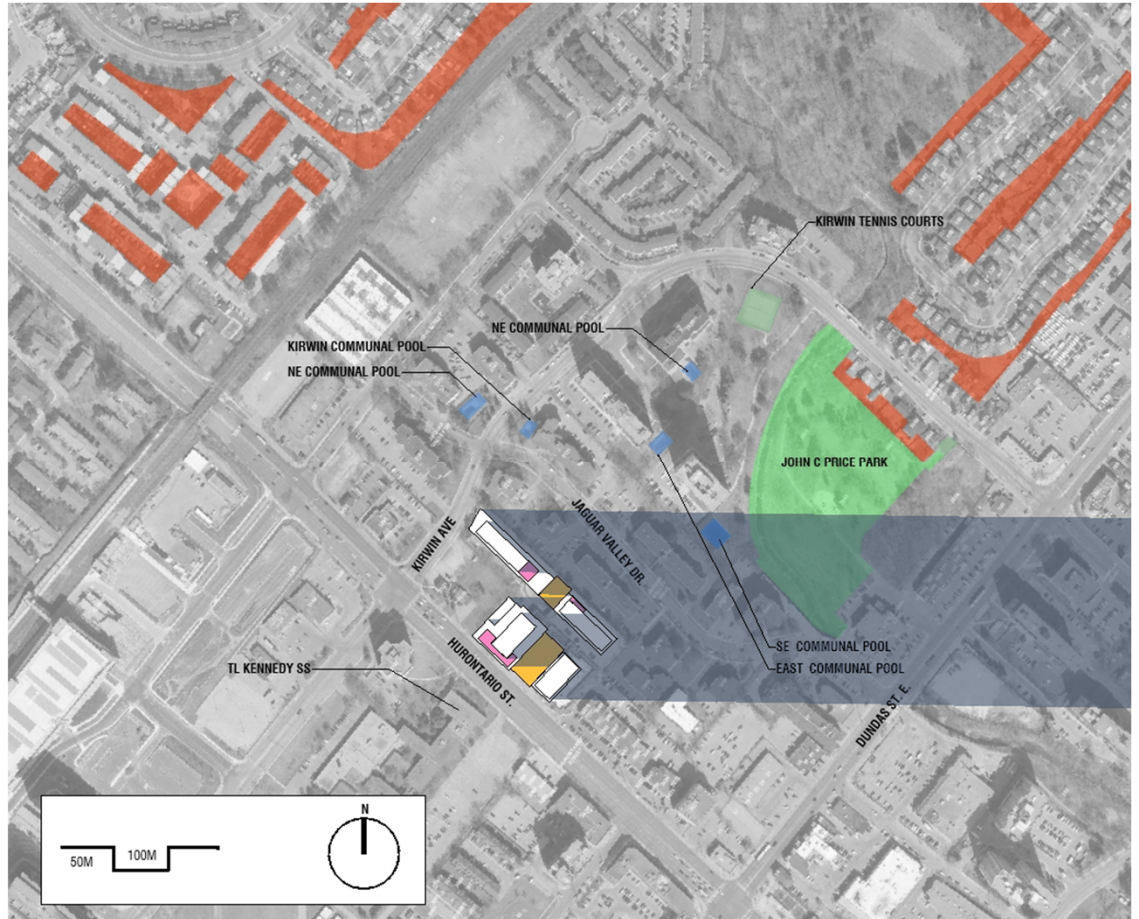
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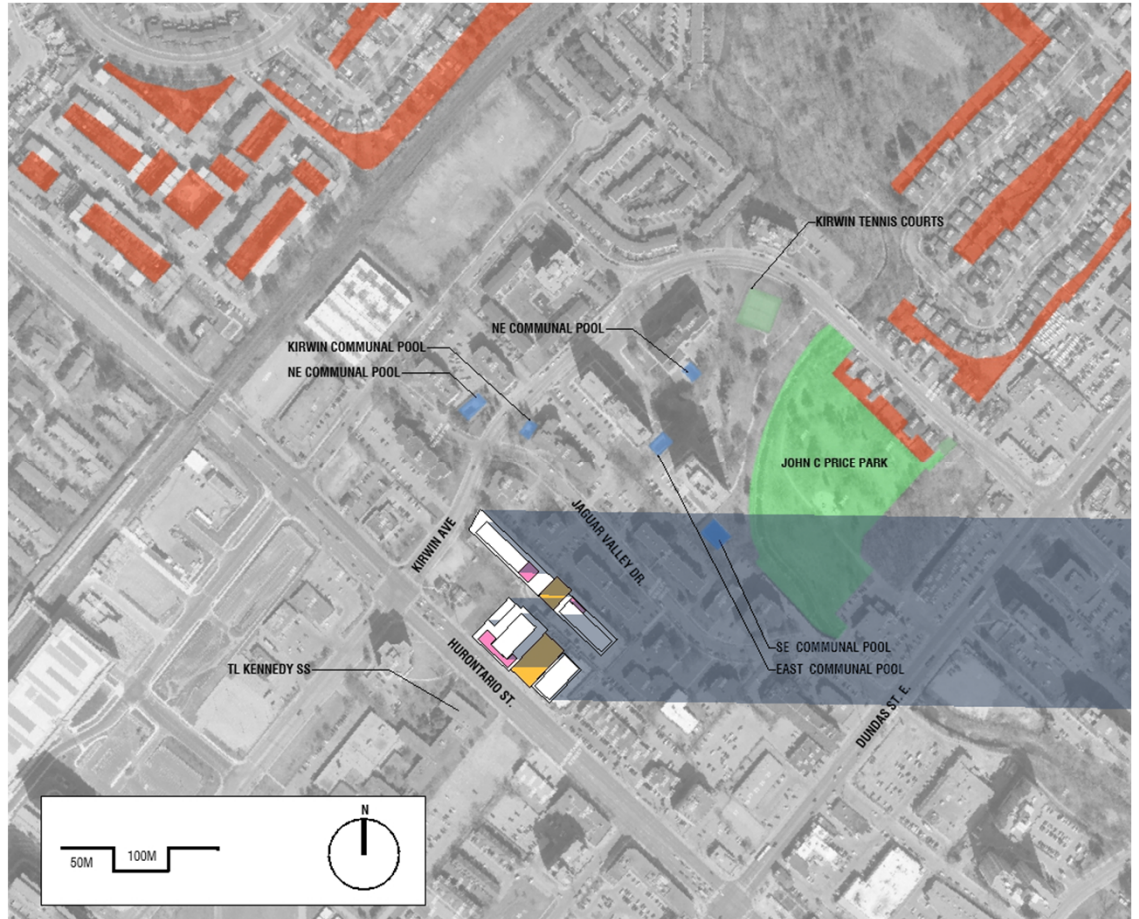
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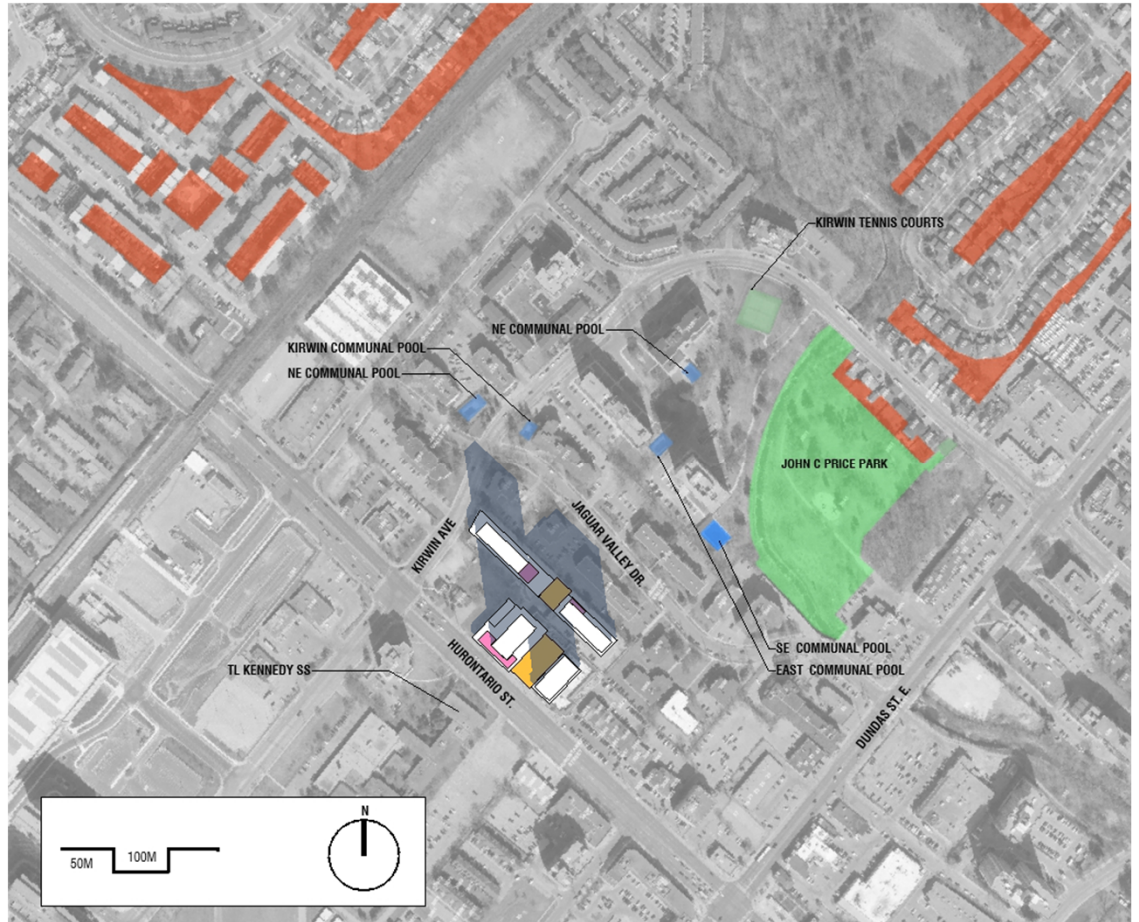
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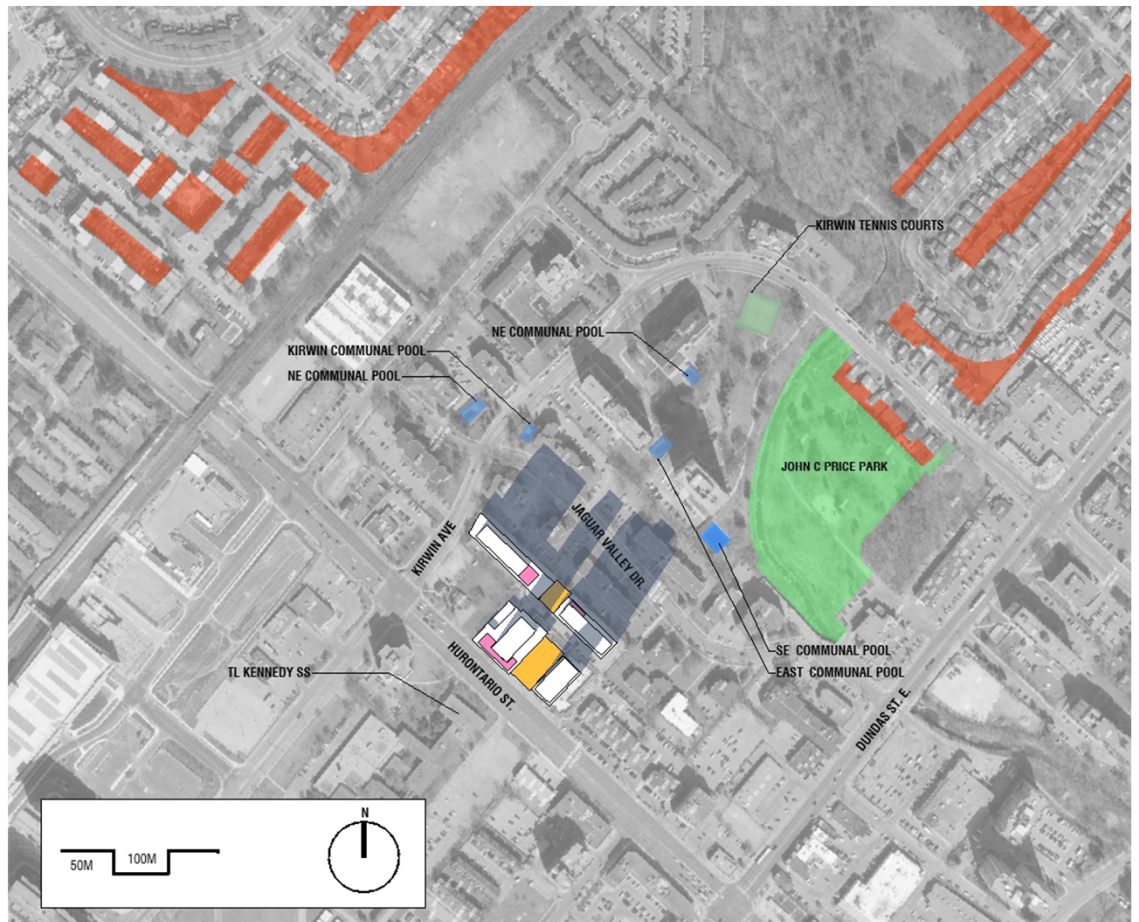
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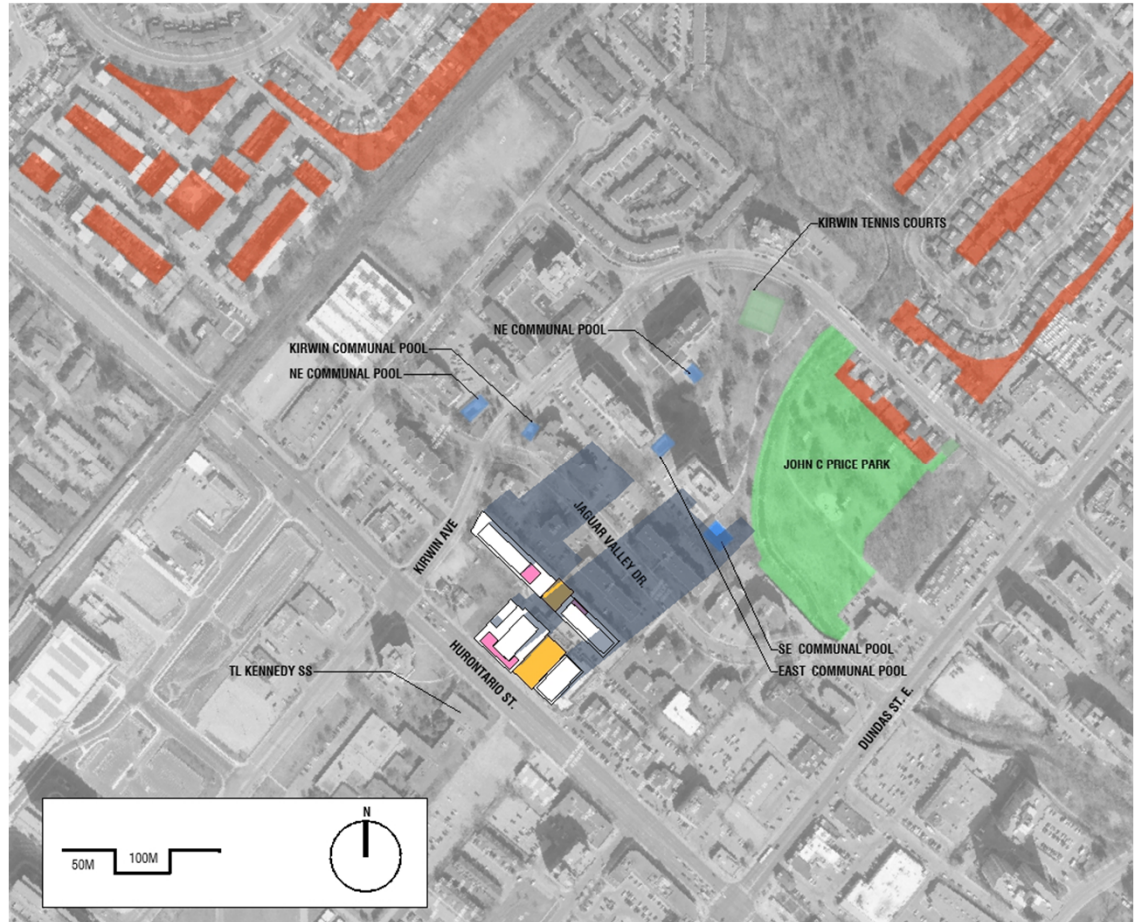
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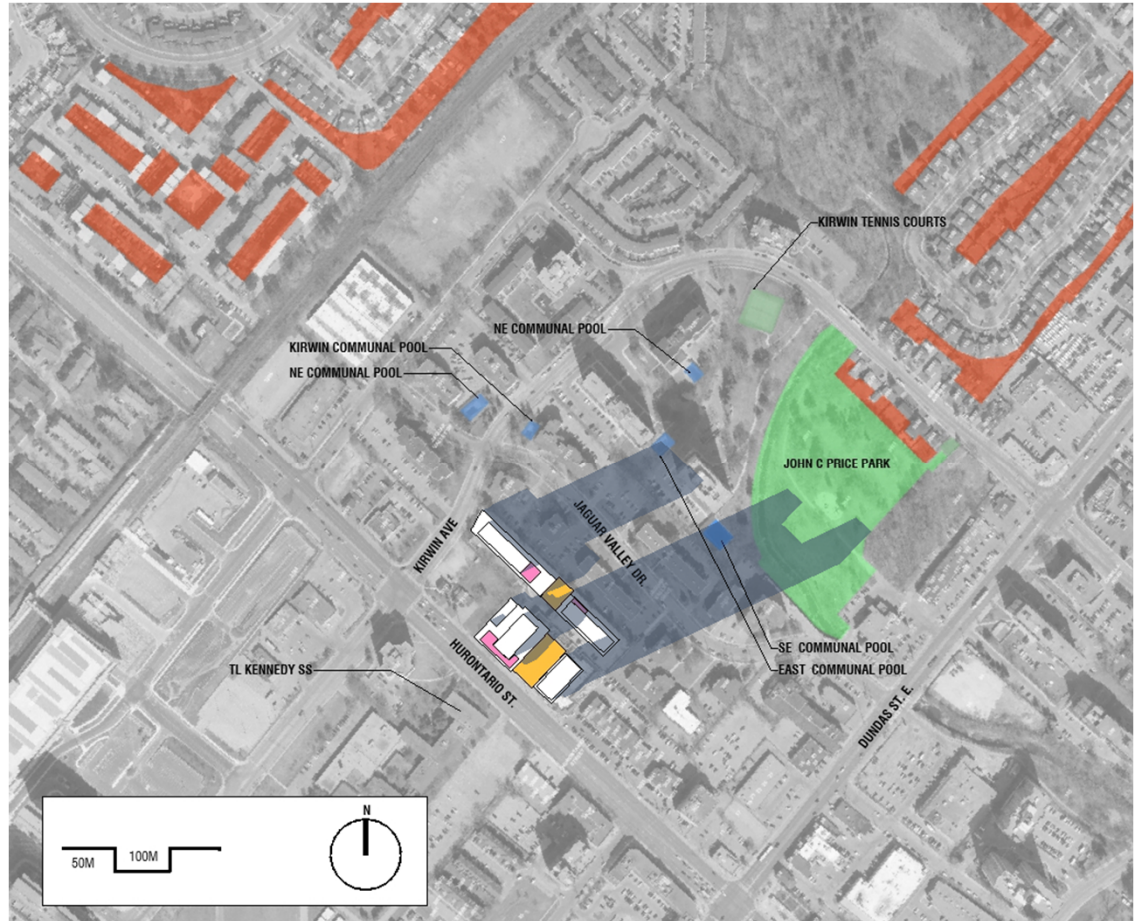
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