

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 and architectural drawings.

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 2020. 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 with coloured regions noted in Revit.

The project address was entered into Autodesk Revit 2020 which geolocates the site and the orientation to astronomical north established accurate shadows of the development.

3.1 Residential Private Outdoor Amenity Spaces

Private residential outdoor amenity spaces near the development comprise of:

- a) four communal swimming pools to the east of the site that belong to adjacent apartment buildings,
- b) communal outdoor tennis courts along Kirwin, east of the site, which is also a shared amenity of the adjacent apartment building.

- c) The proposed development rooftop amenity spaces
- d) The proposed development site amenity spaces (courtyard)

These are noted on each of the shadow studies with labels. The criterion is met if there is no shadow impact from the development for no more than two consecutive hourly test times in the No Impact Zone.

June 21:

- There is no shadow impact on the above private outdoor amenity spaces a) and b) on any of the test times therefore the criteria has been met.
- On proposed development rooftop amenity space (c), there are periods over 2 hours throughout the day that are impacted. The west rooftop amenity is affected in the hours between 05:37 and 08:20; the east rooftop amenity is affected from 09:20 to 13:20 and 15:20 to sunset and does not meet the criteria
- On the proposed development site amenity space (d), the courtyard is affected from 05:37 to 10:20 and from 14:20 to sunset and does not meet the criteria.

Sept 21:

- There are three different hourly test times where the development casts a shadow on the SE Communal Pool at 16:12, 17:48 and at 19:18. These three occurrences are not consecutive and therefore the criteria has been met. The other Private Outdoor Amenity Spaces have no shadow impact from the development.
- On proposed development rooftop amenity space (c), the west rooftop amenity is not affected however the east rooftop amenity is affected from 08:35 to 14:12 and from 15:12 to sunset and does not meet the criteria
- On the proposed development site amenity space (d), the courtyard is affected from 07:05 to 11:15 and from 13:12 to sunset and does not meet the criteria

3.2 Communal Outdoor Amenity Areas

Communal outdoor amenity spaces within the project development vicinity are

- TL Kennedy Secondary School to the west with their outdoor fields further westward
- John C Price Park in the SE direction, closer to the intersection of Kirwin and Dundas.

These are noted on each of the shadow studies. According to the Terms of Reference, shadows from the proposed development should allow for full sun on the above places with a Sun Access Factor of at least 50% sun coverage on June 21, Sept 21 and Dec 21.

June 21:

- There is no shadow impact on the above communal outdoor amenity areas; Sun Access Factor is 100% from the development site.

Sept 21:

- The TL Kennedy Secondary School located to the west of the development site has Sun Access Factor of 100%

Dec 21:

- There is no shadow impact on the TL Kennedy Secondary School; Sun Access Factor is 100% from the development site.
- There is some impact on the John C Price Park on Dec 21 and has the Sun Access Factor of 98%

All the communal outdoor amenity areas have a Sun Access Factor above 0.5 and therefore the development is in accordance with the criteria.

3.3 Public Realm

The area of Hurontario and Kirwin is considered *Mixed Use, Commercial, Employment and High-Density Residential Streets*. Terms of Reference for shadow studies notes that developments should allow for full sunlight on the opposite boulevard including the full width of the sidewalk on Sept 21, for at least 5 hours that must include the 2 hour period between 12:12pm and 2:12pm and an additional 2 hour period on either side of that time interval.

Impact on 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.

Impact on Public Open Spaces, Parks and Plazas (Criterion 3b):

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

The public park John C Price Park to the south-east and has full sun on September 21 from 1.5 hours after sunrise to 2.5 hours before sunset and therefore is in accordance with this standard.

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. The shadow analysis shows that the development site is in accordance with this standard.

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 proposed development site. Effort has been made to improve the shadow impact by reducing all the tower floorplates and by allowing the site amenity courtyard to be open at each end (north and south), and locating amenity areas with sun exposure in mind, along the south edges of roofs and the site.

Summary prepared by Persis Lam, Architect, Diamond Schmitt Architects

Shadow drawings prepared by Anthony Gugliotta, Intern Architect, Diamond Schmitt Architects

Regards,

Persis

Persis Lam

OAA MRAIC CPHD

Associate

**diamond
schmitt**

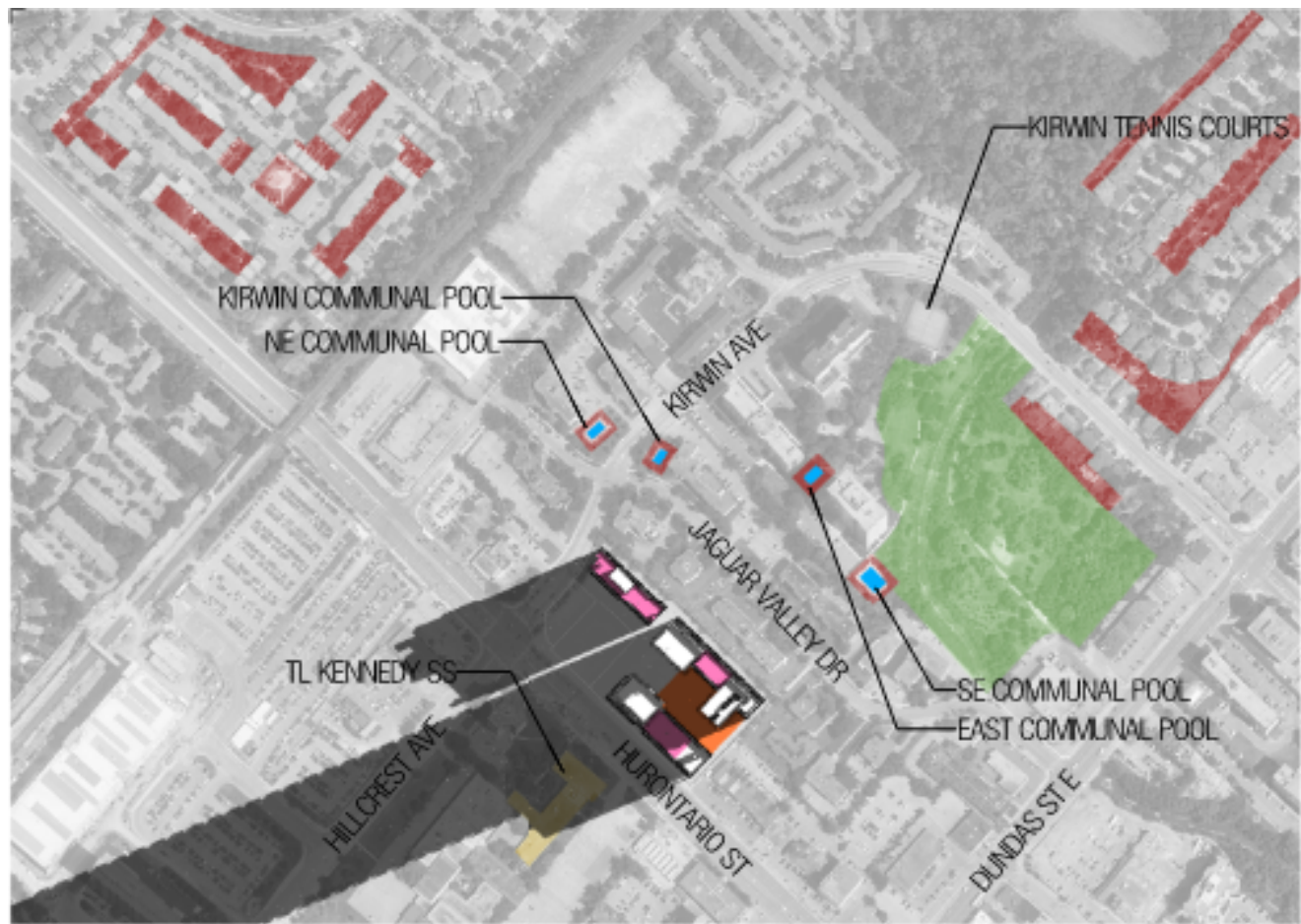
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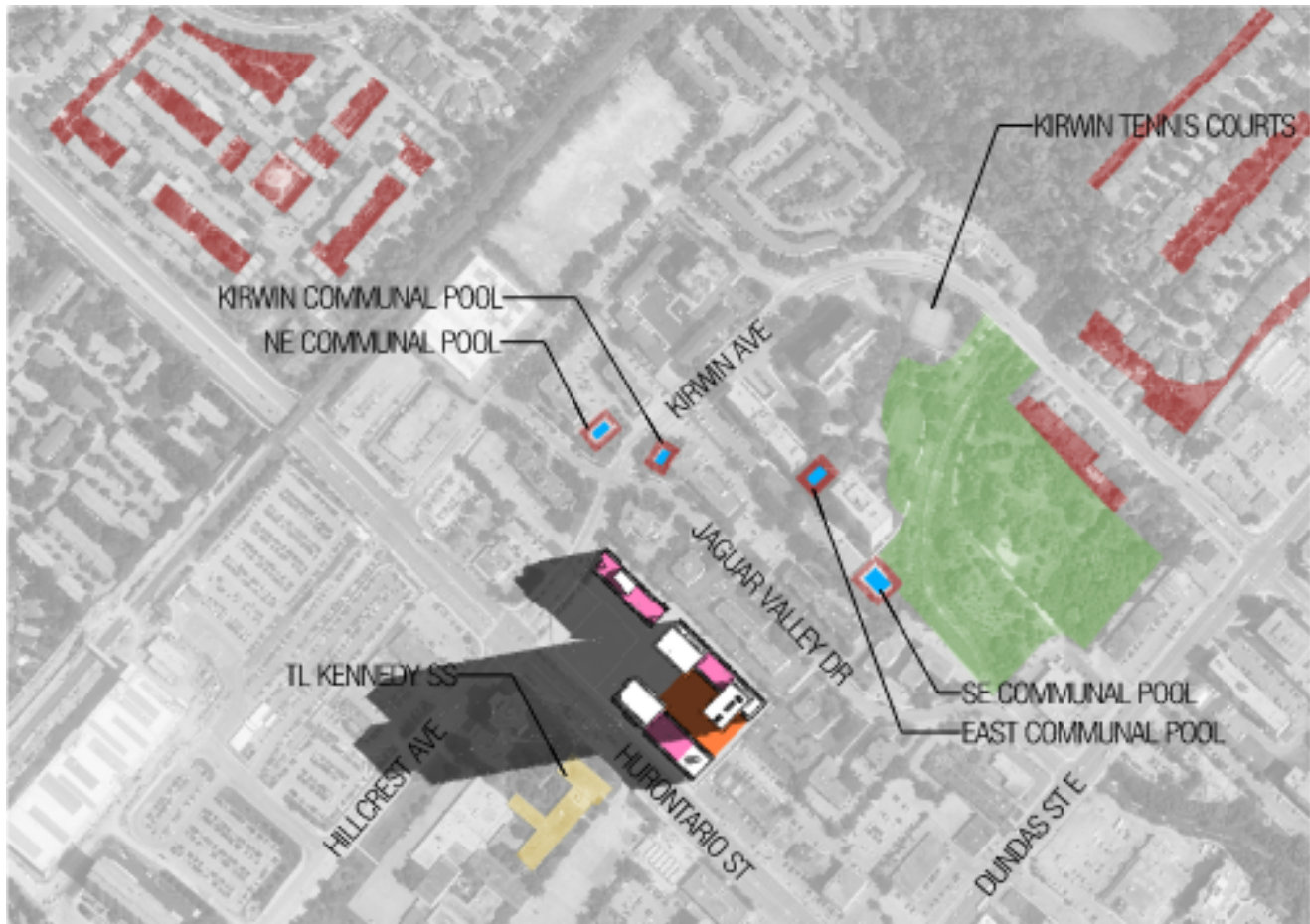
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- DEVELOPMENT ROOFTOP AMENITY



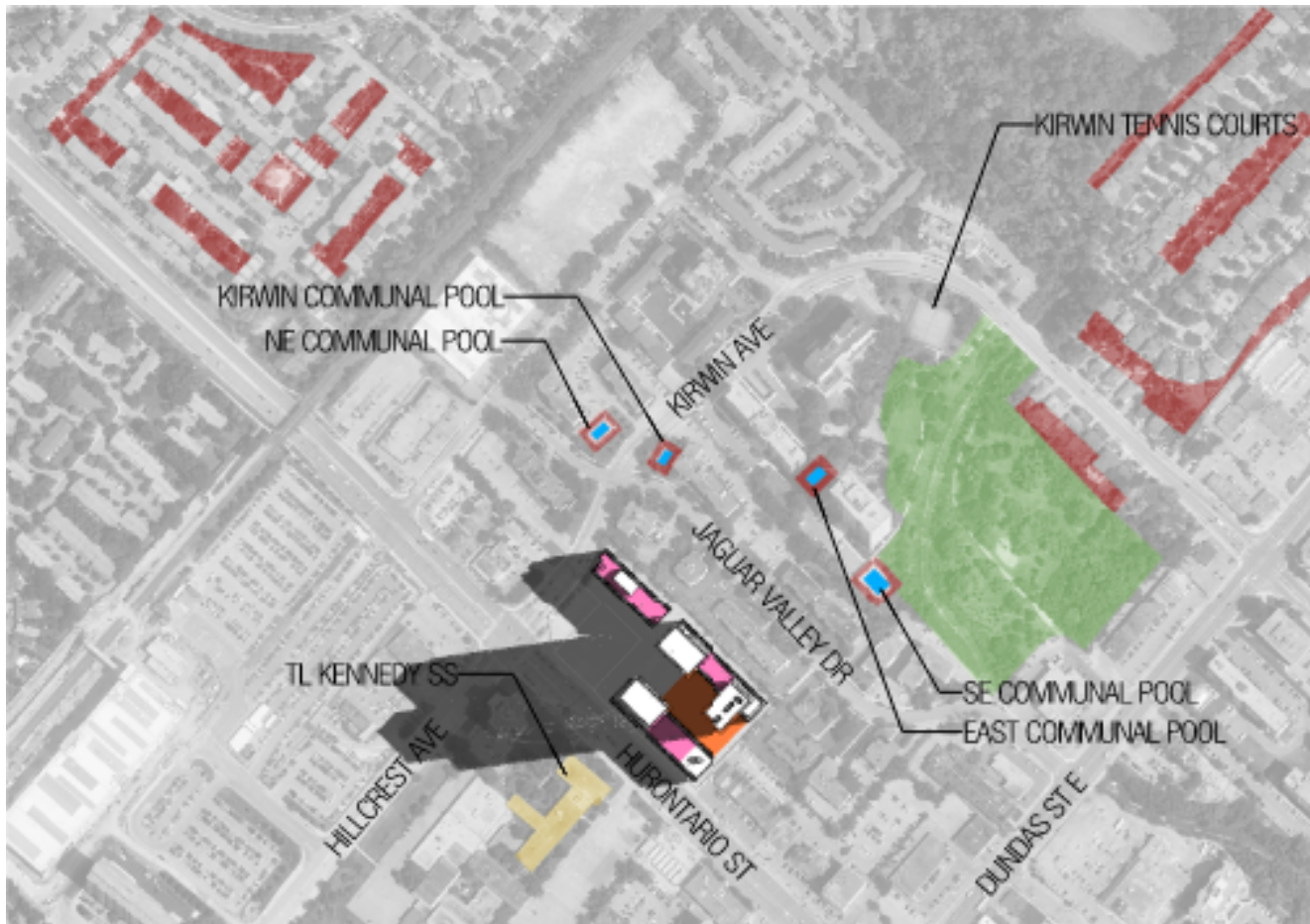
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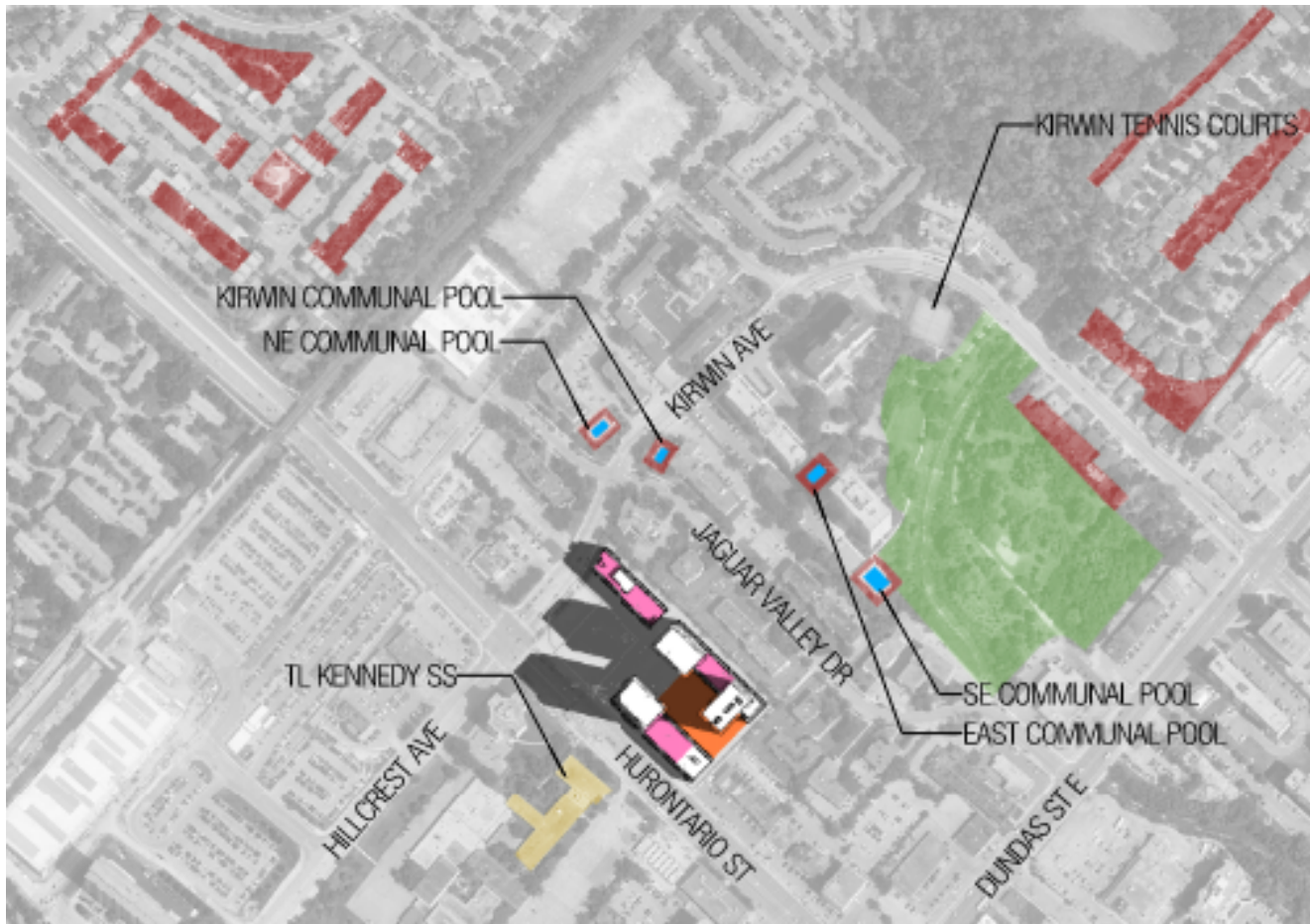
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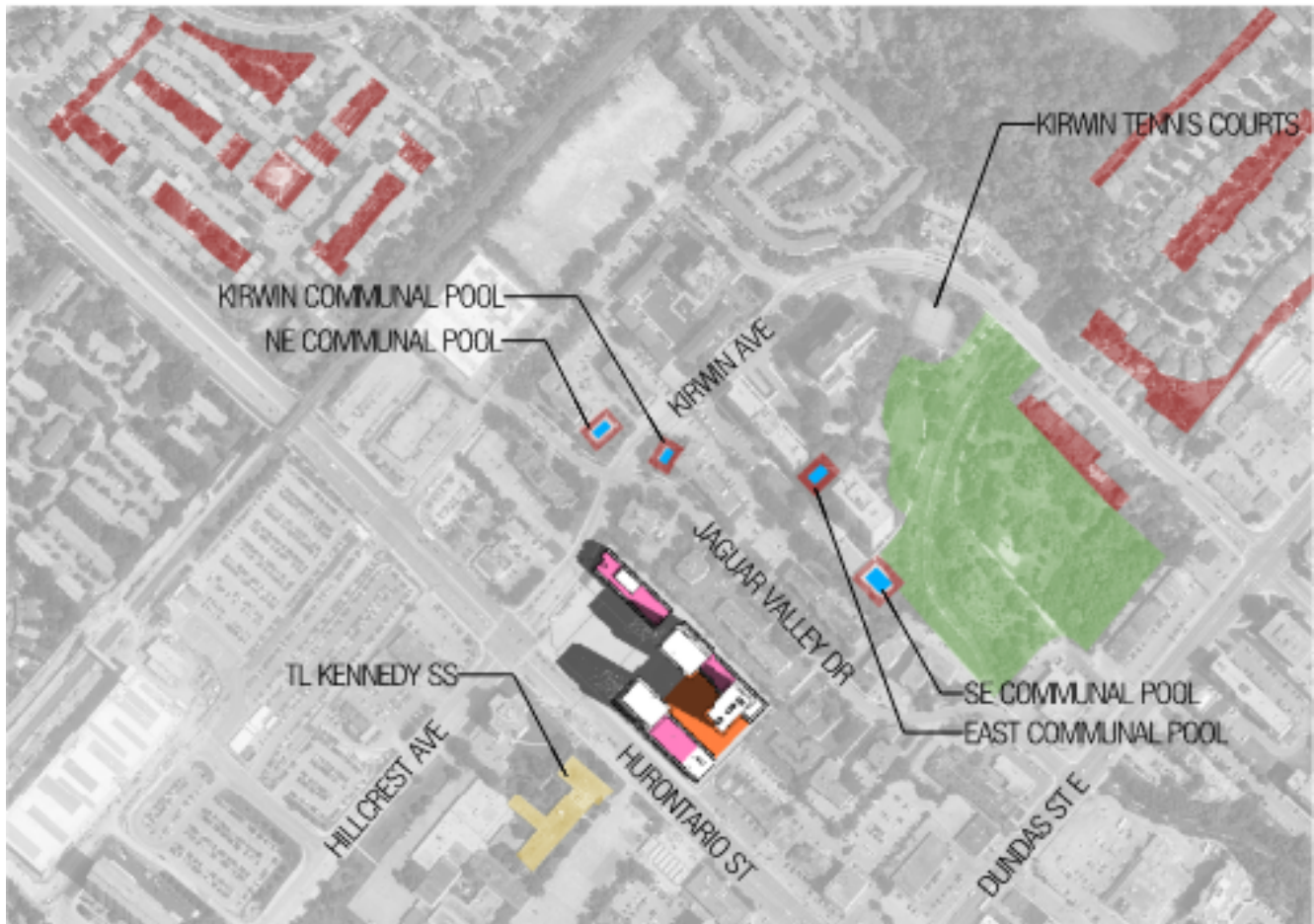


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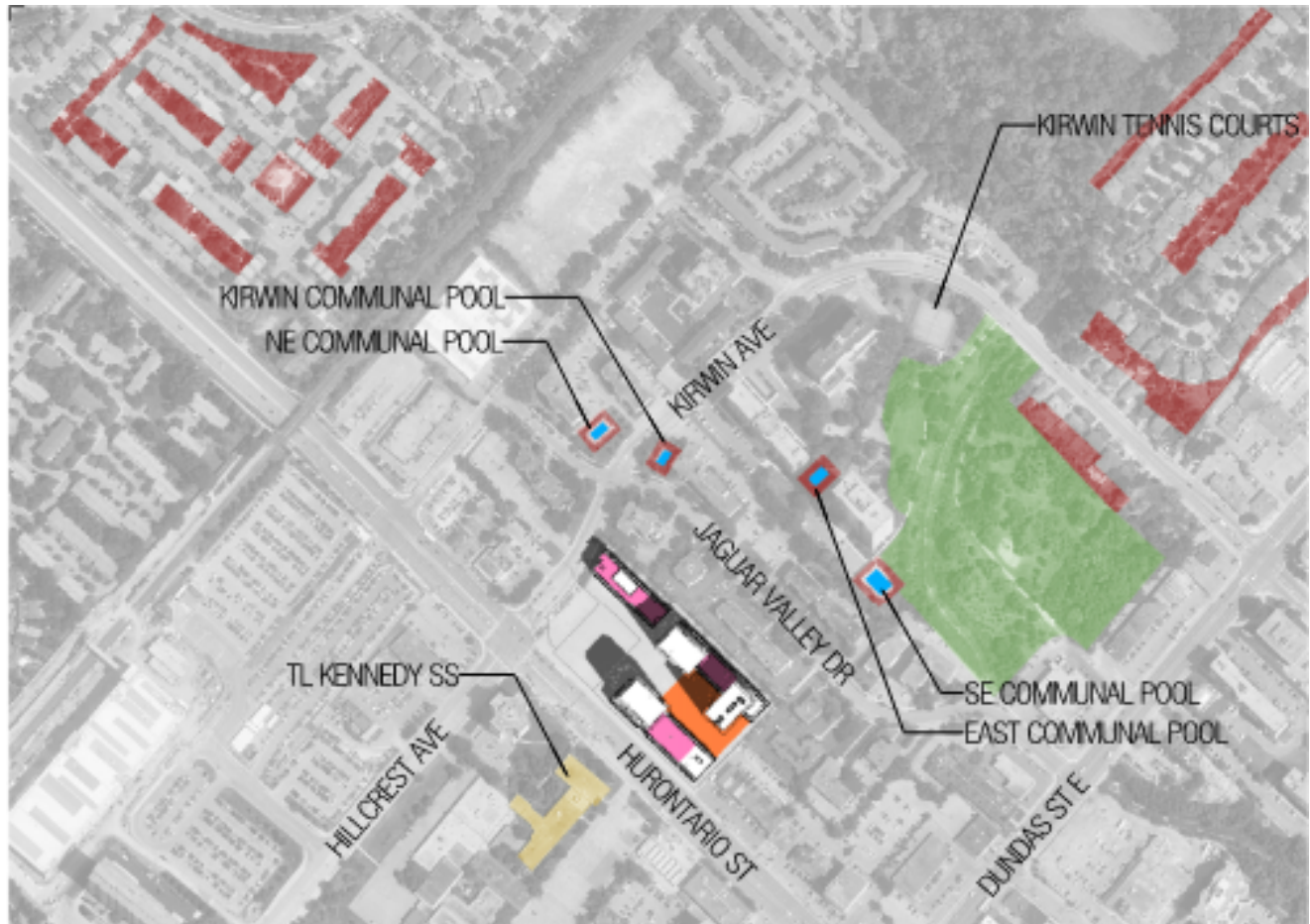
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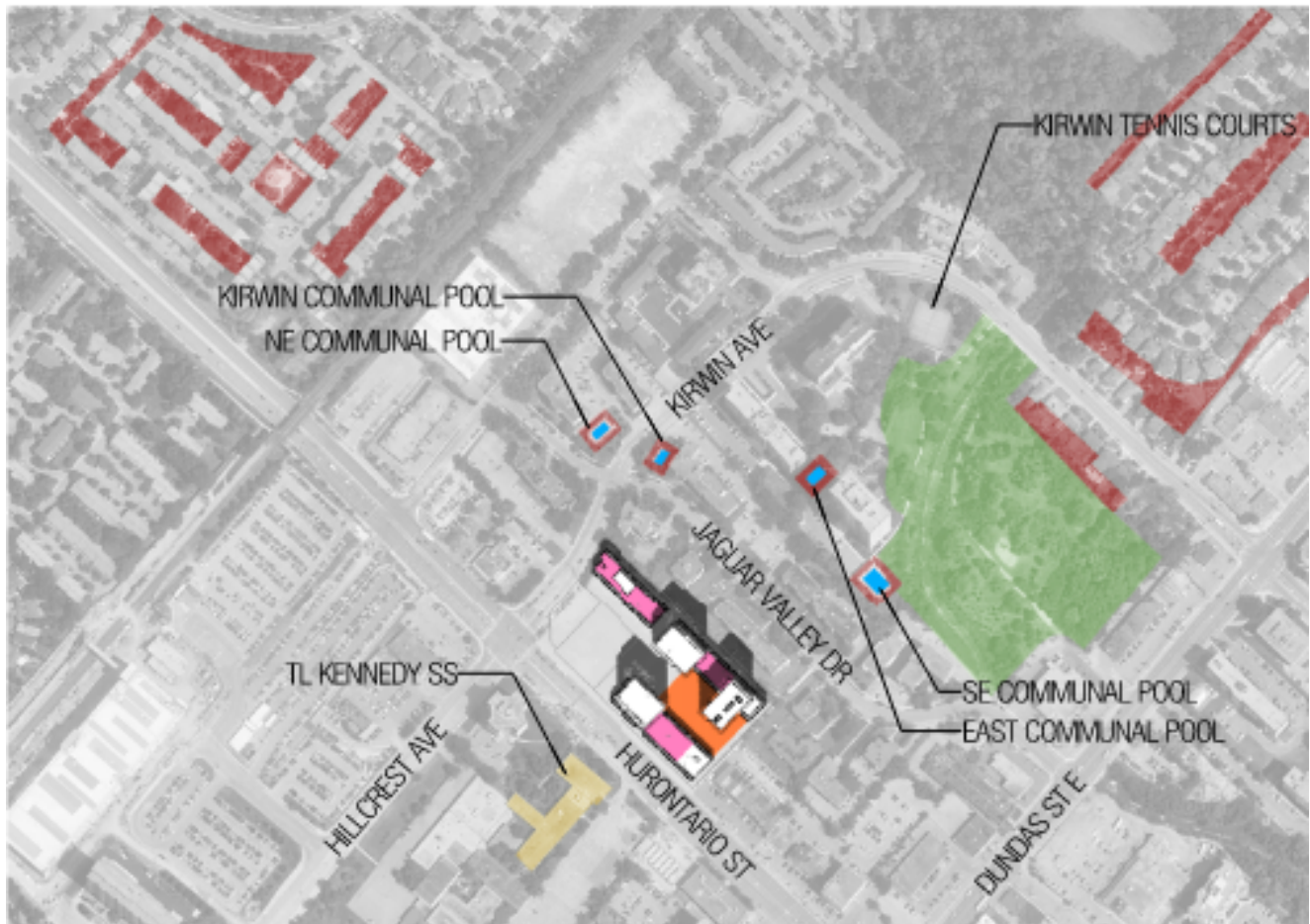
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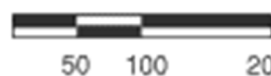
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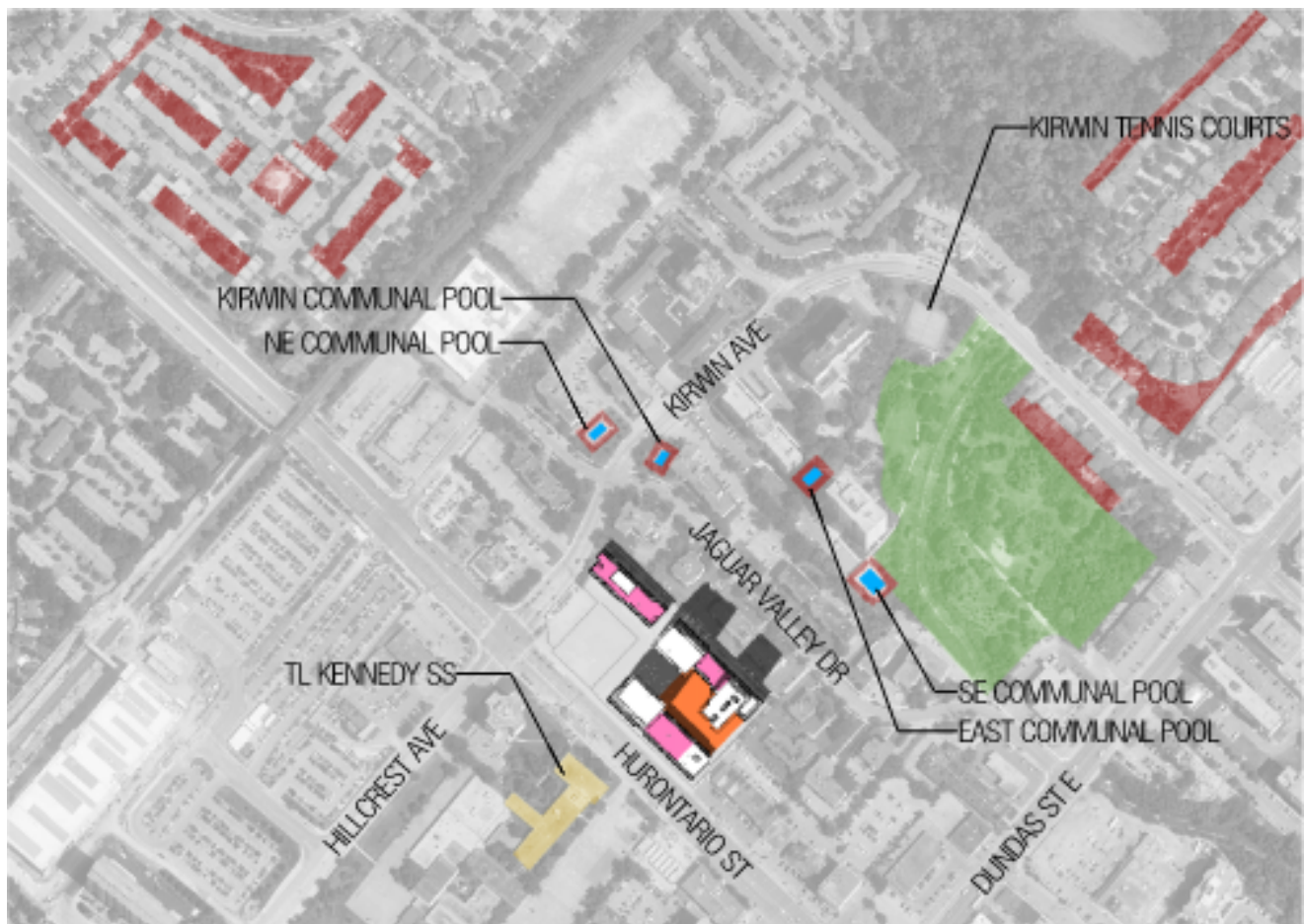
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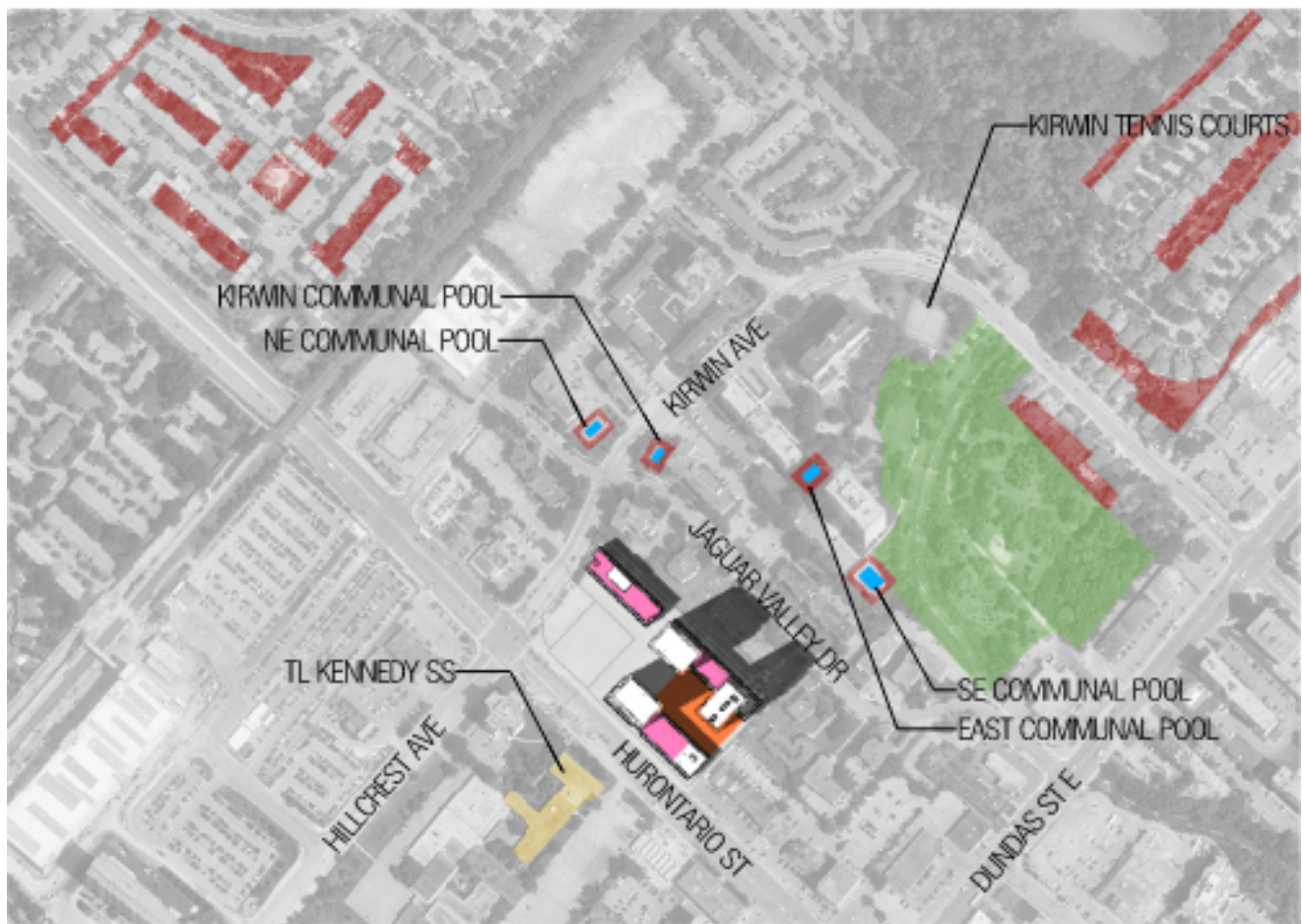
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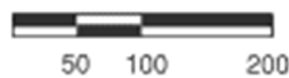
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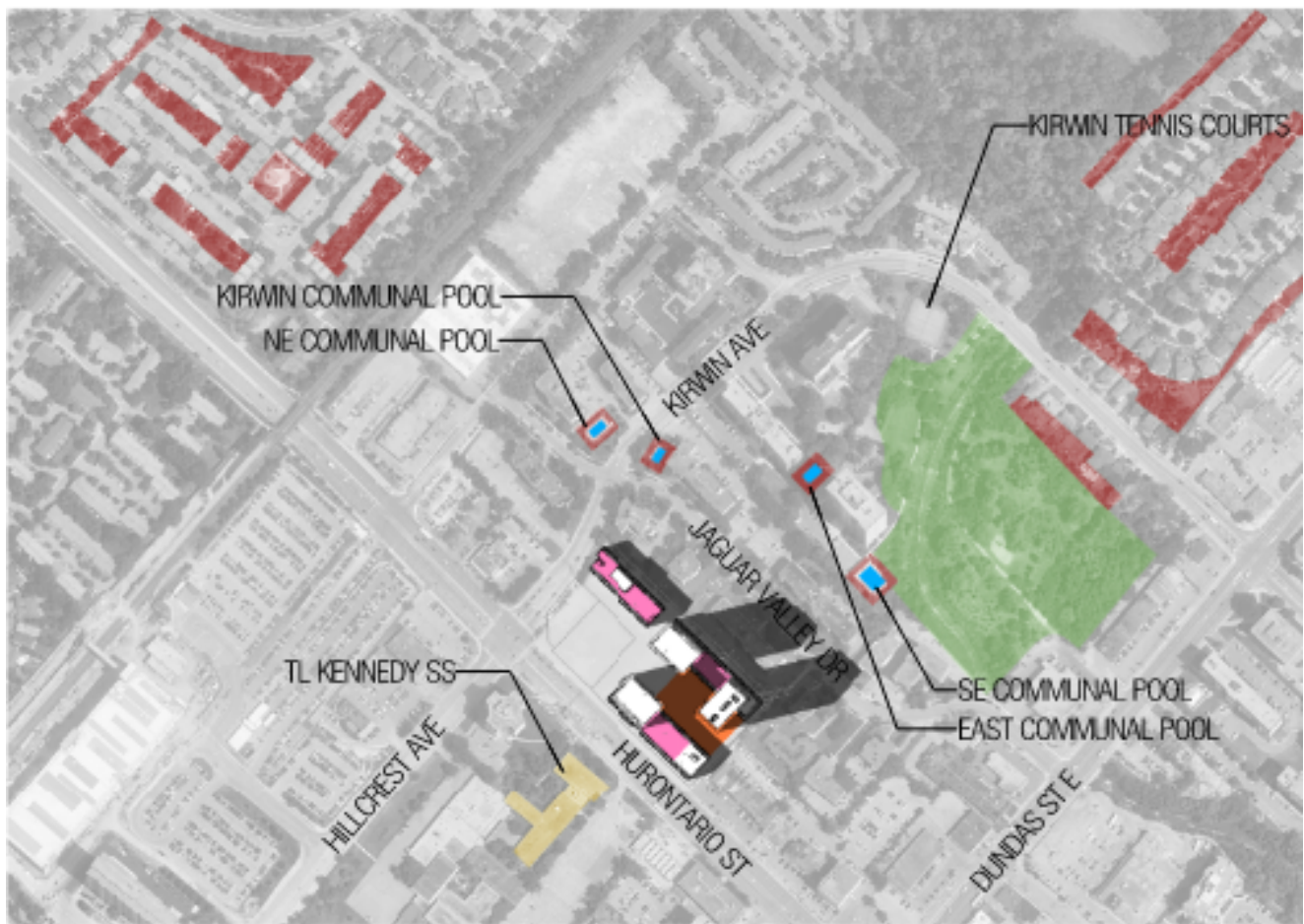
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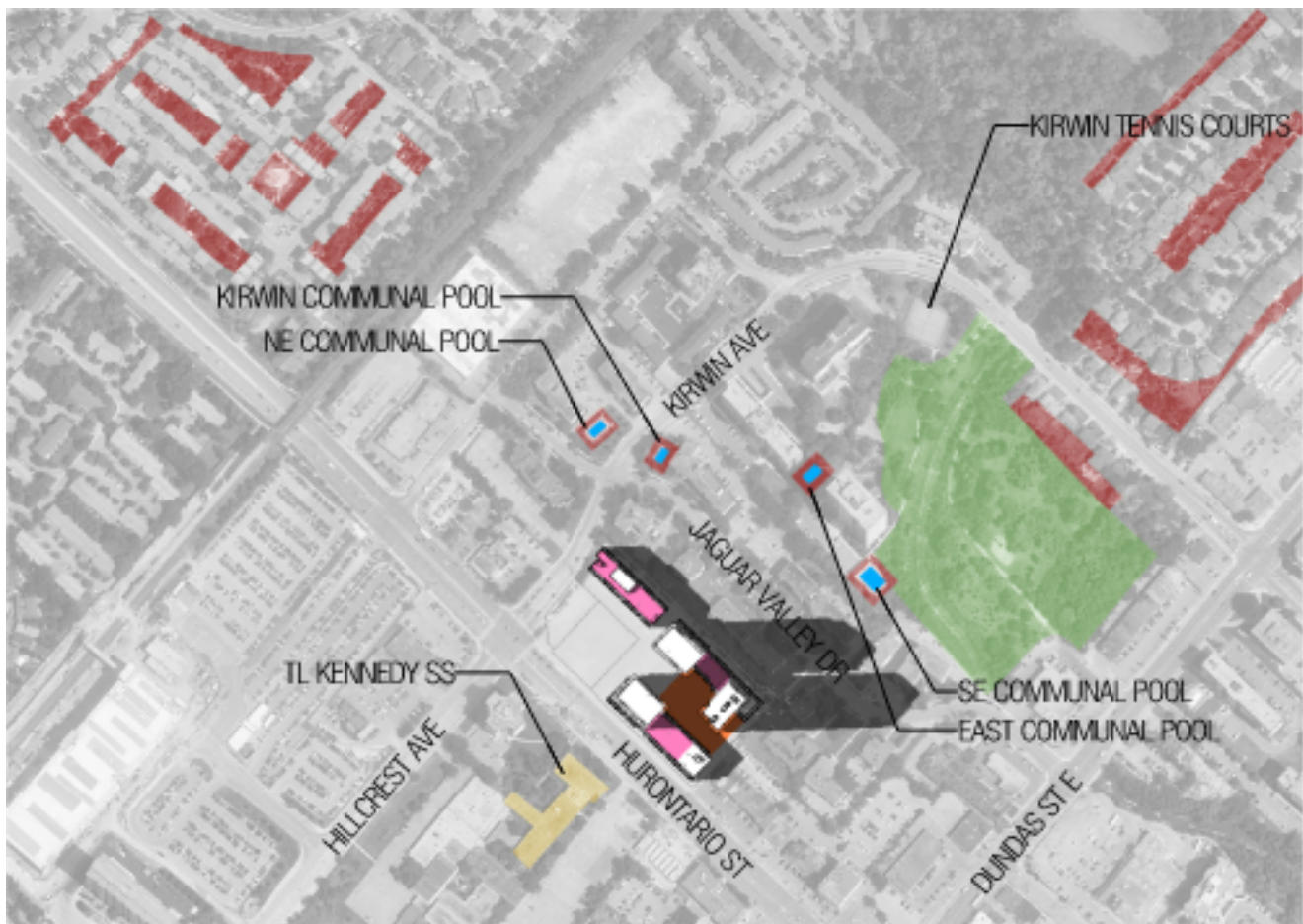
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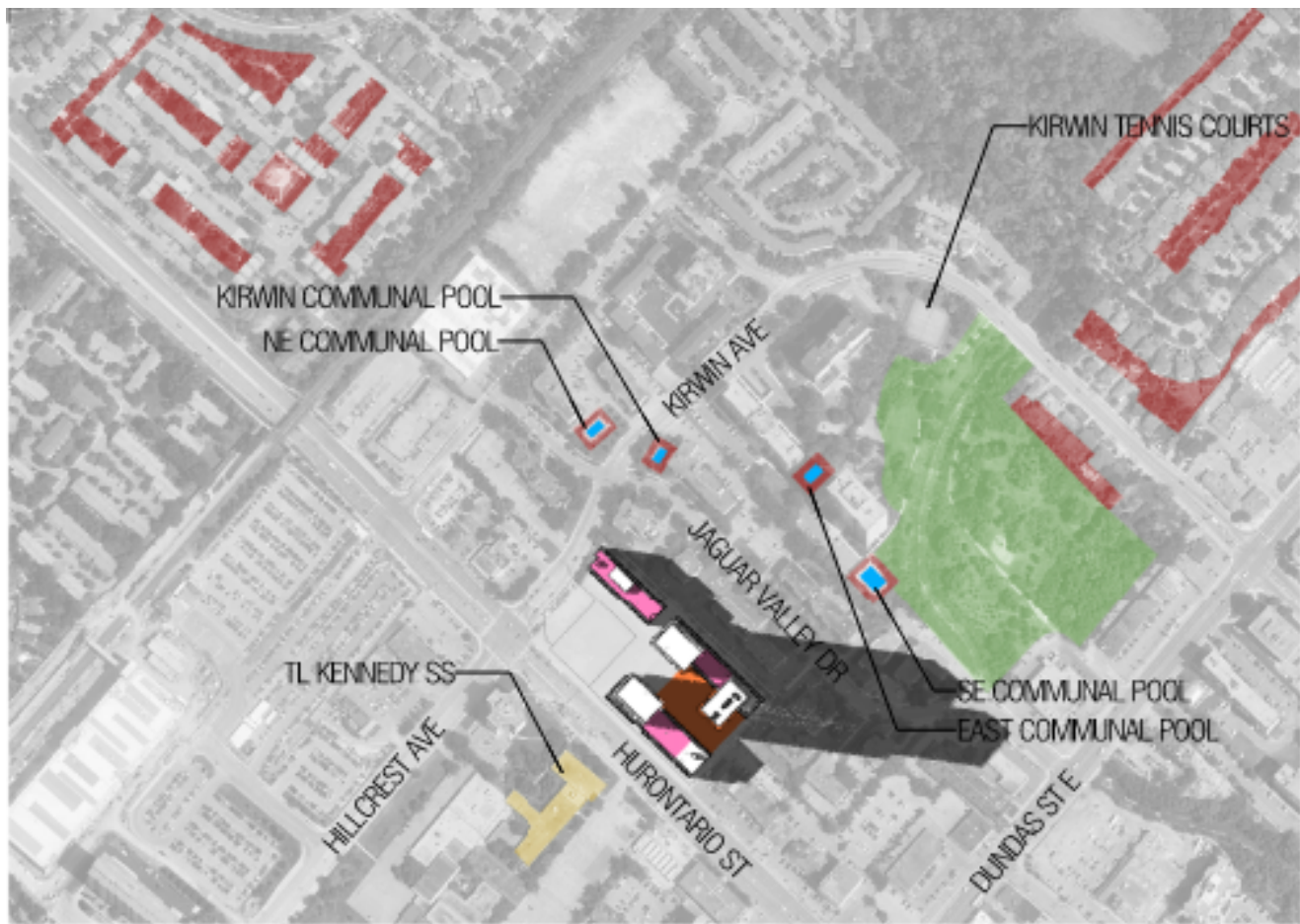
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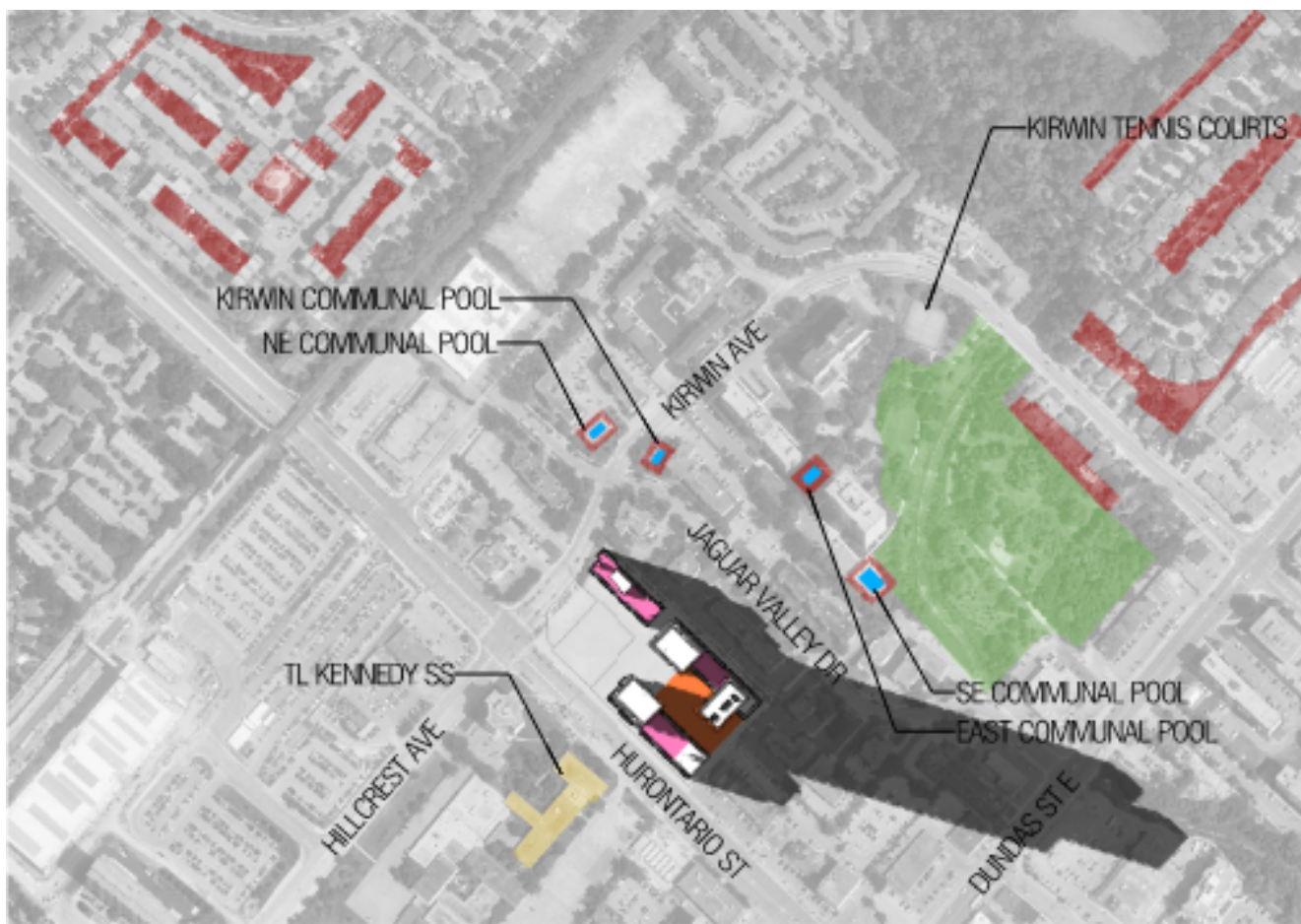
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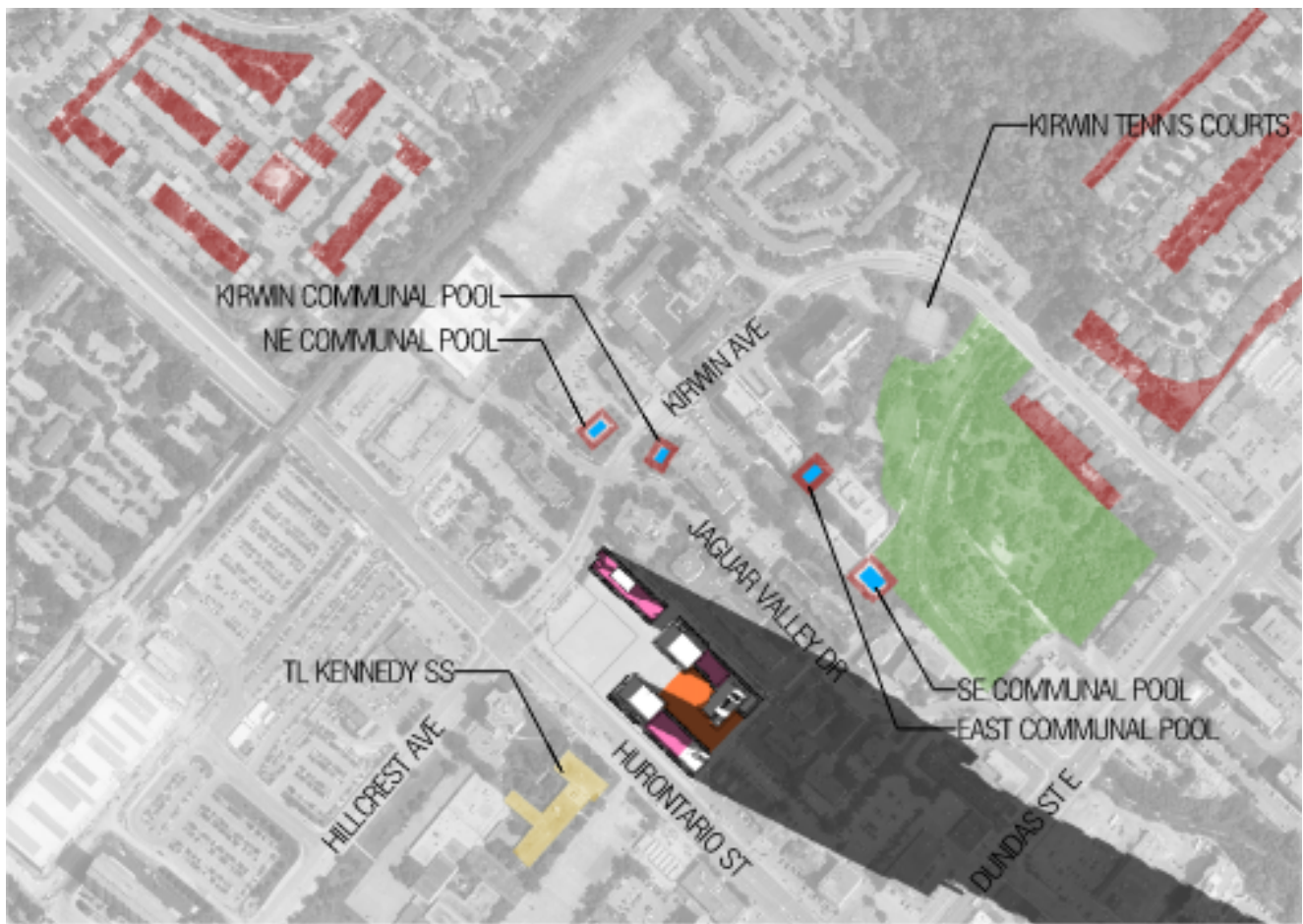
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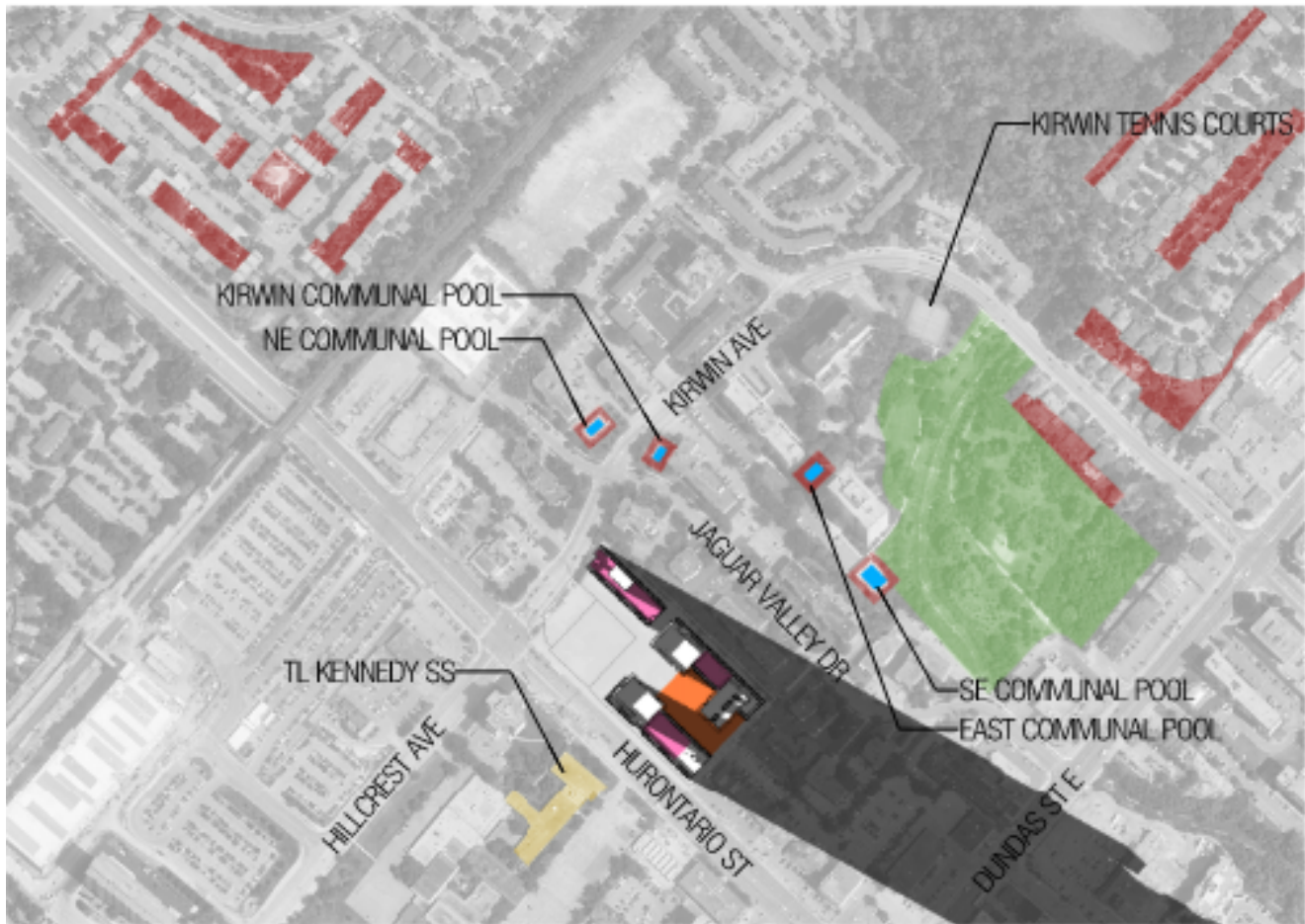
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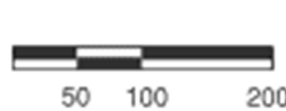


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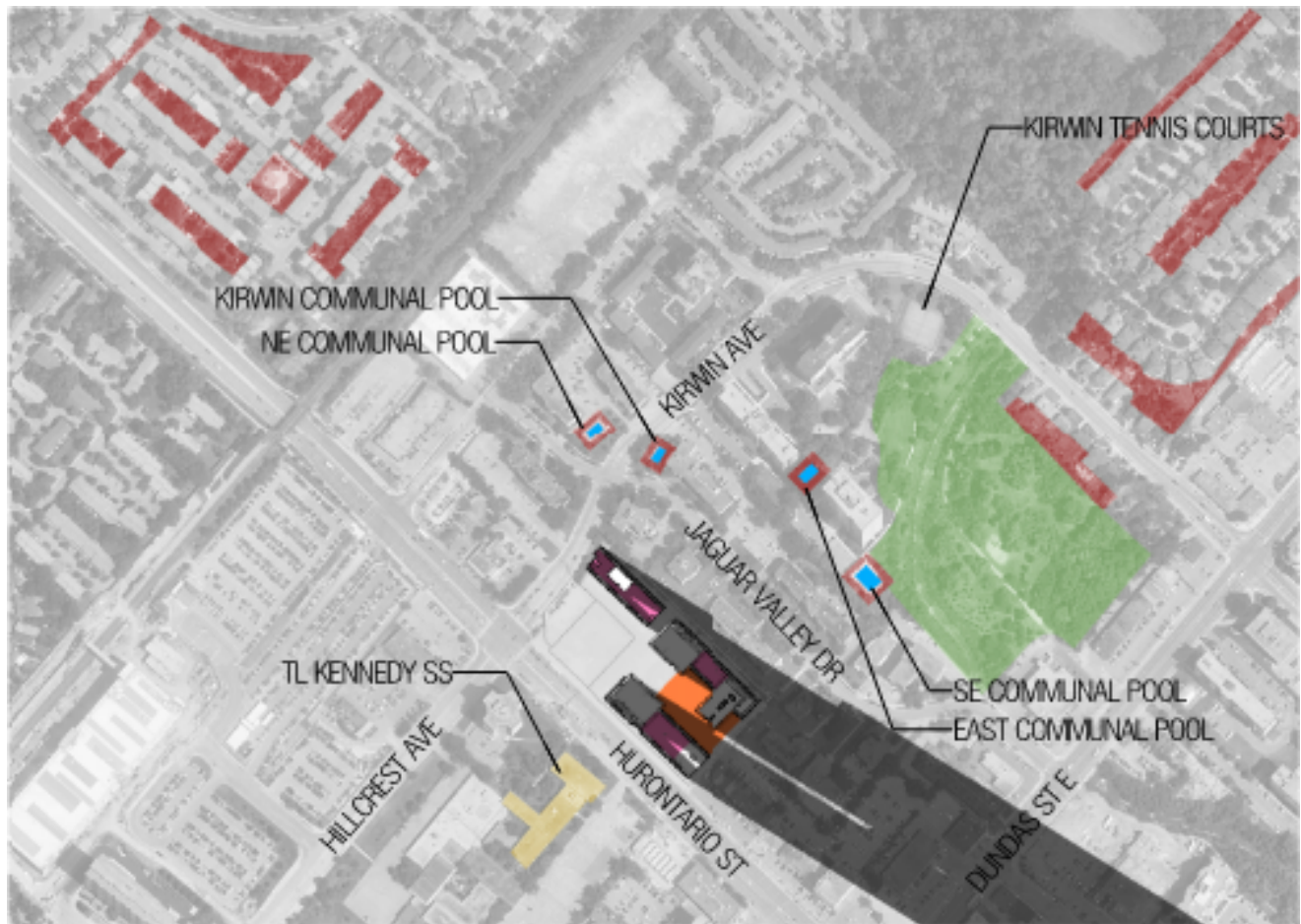


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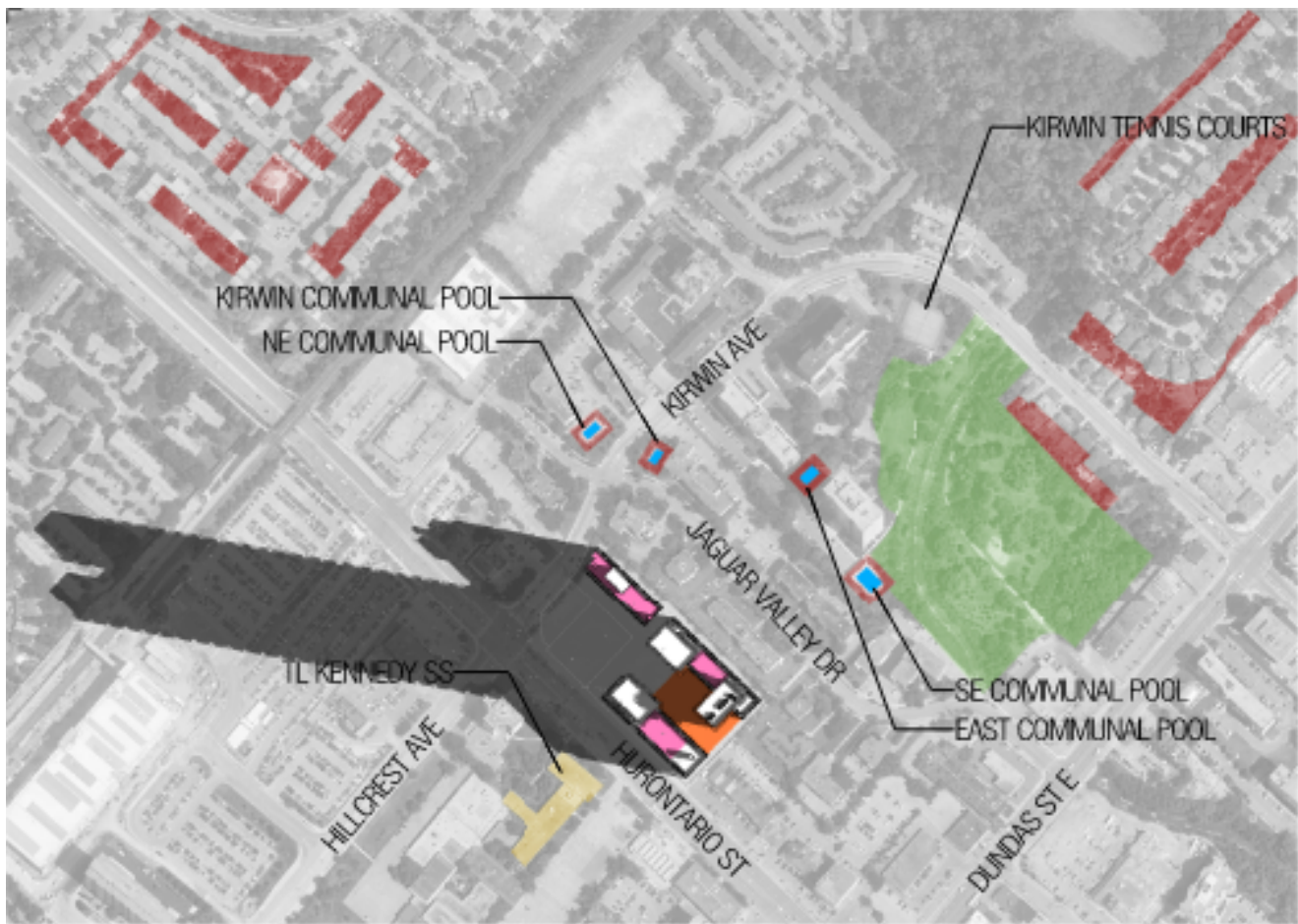
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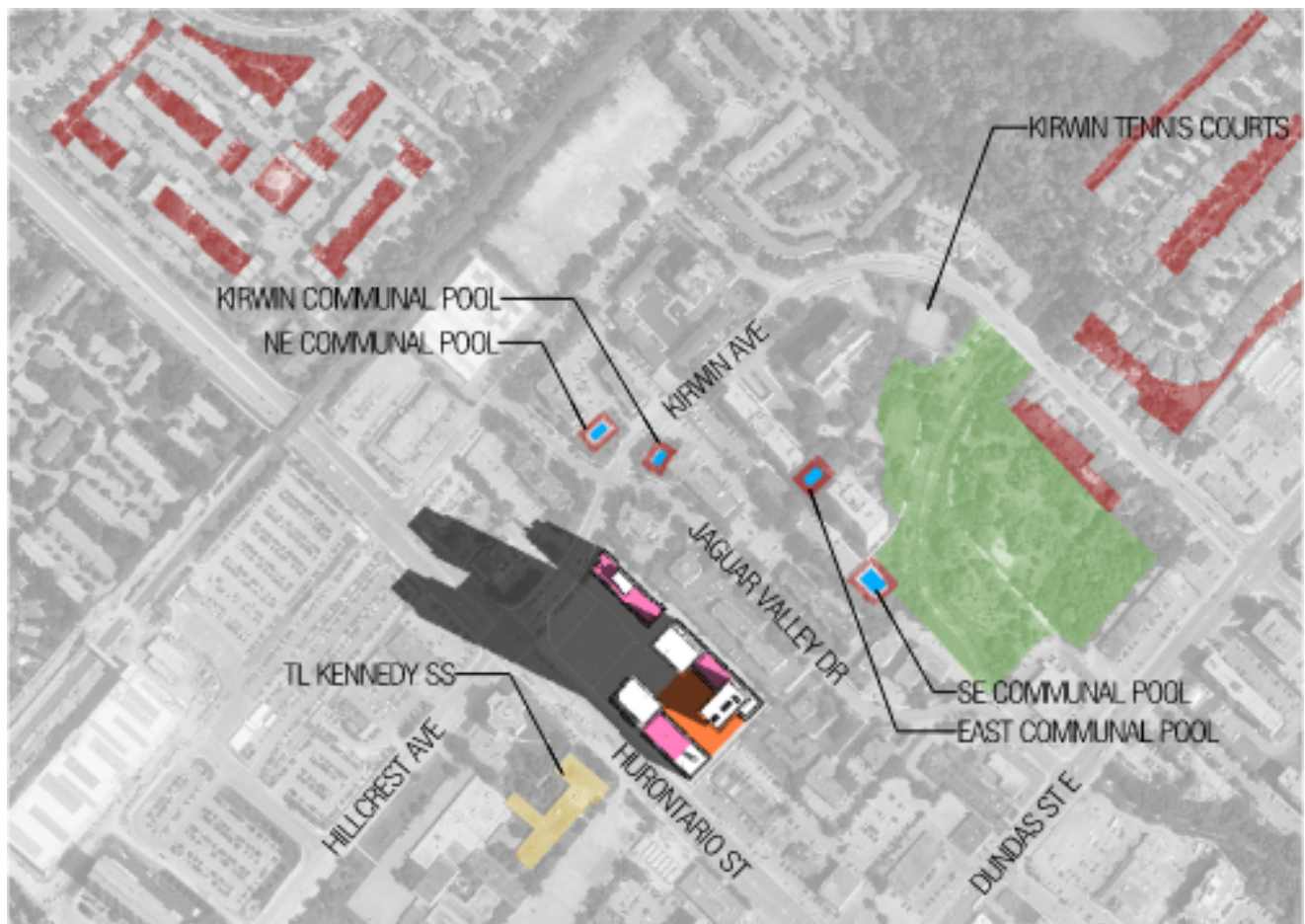


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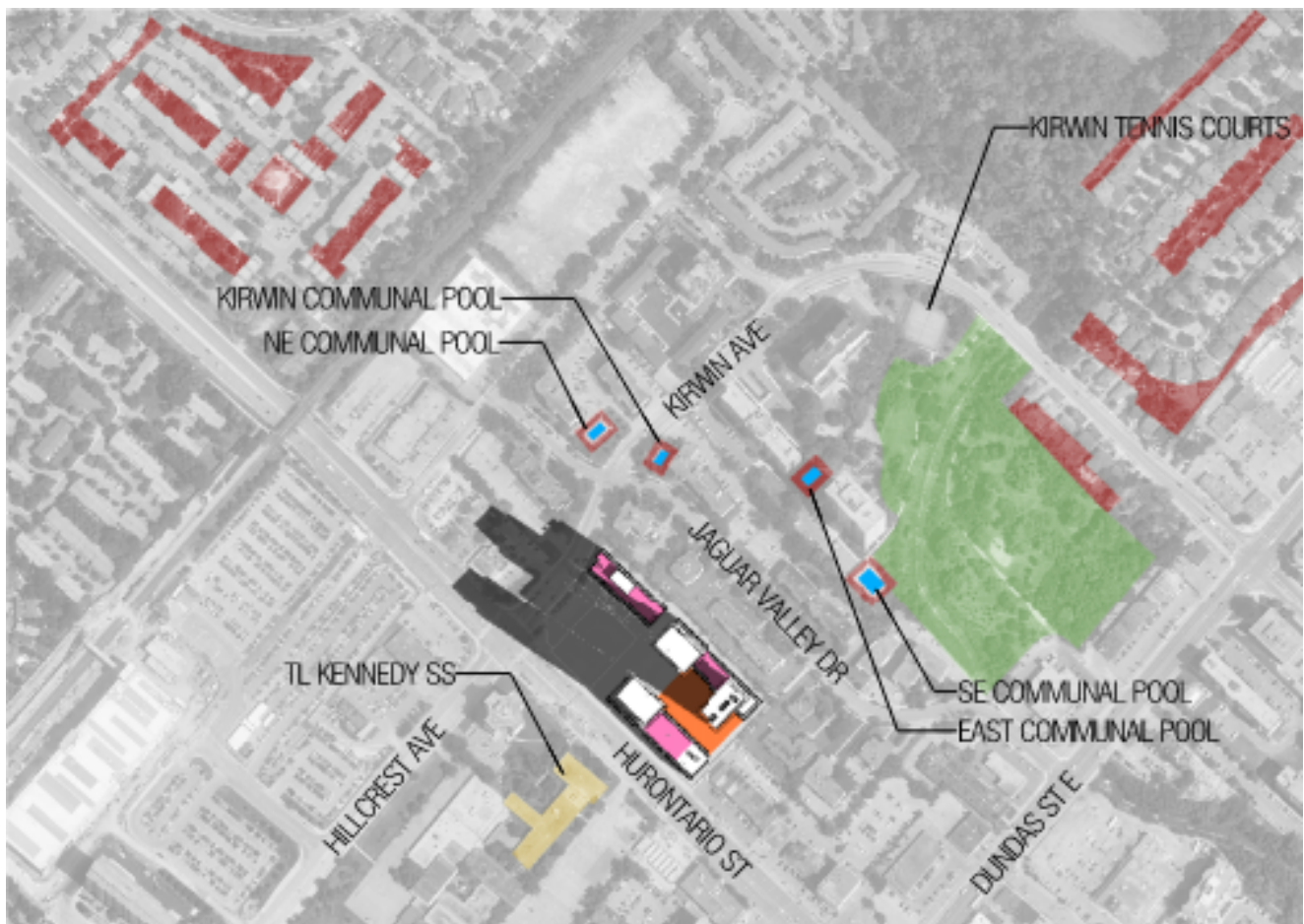
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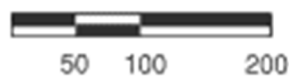
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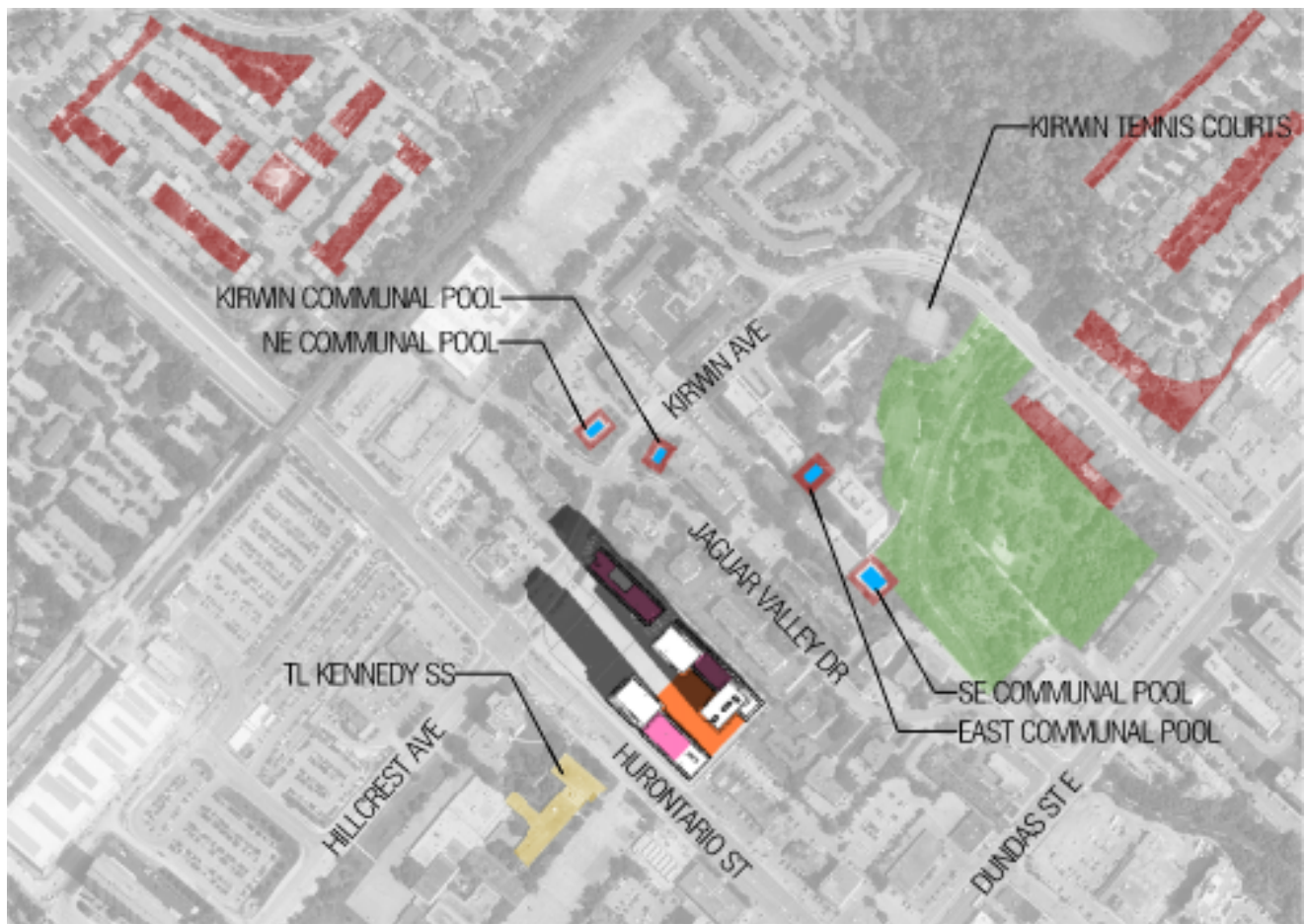
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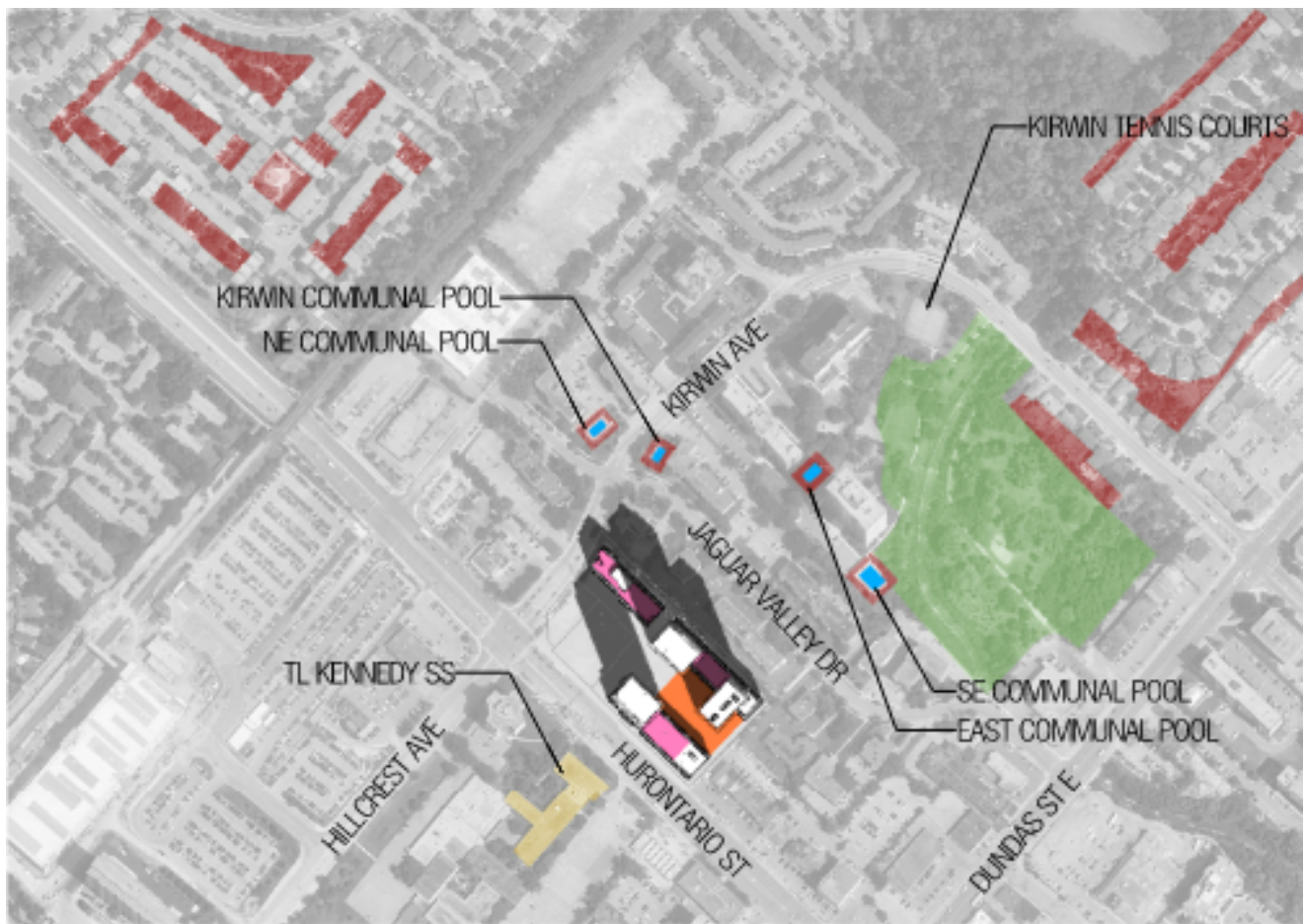
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SHADOW STUDY - SEPTEMBER 21 1112

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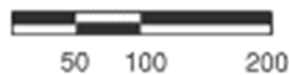
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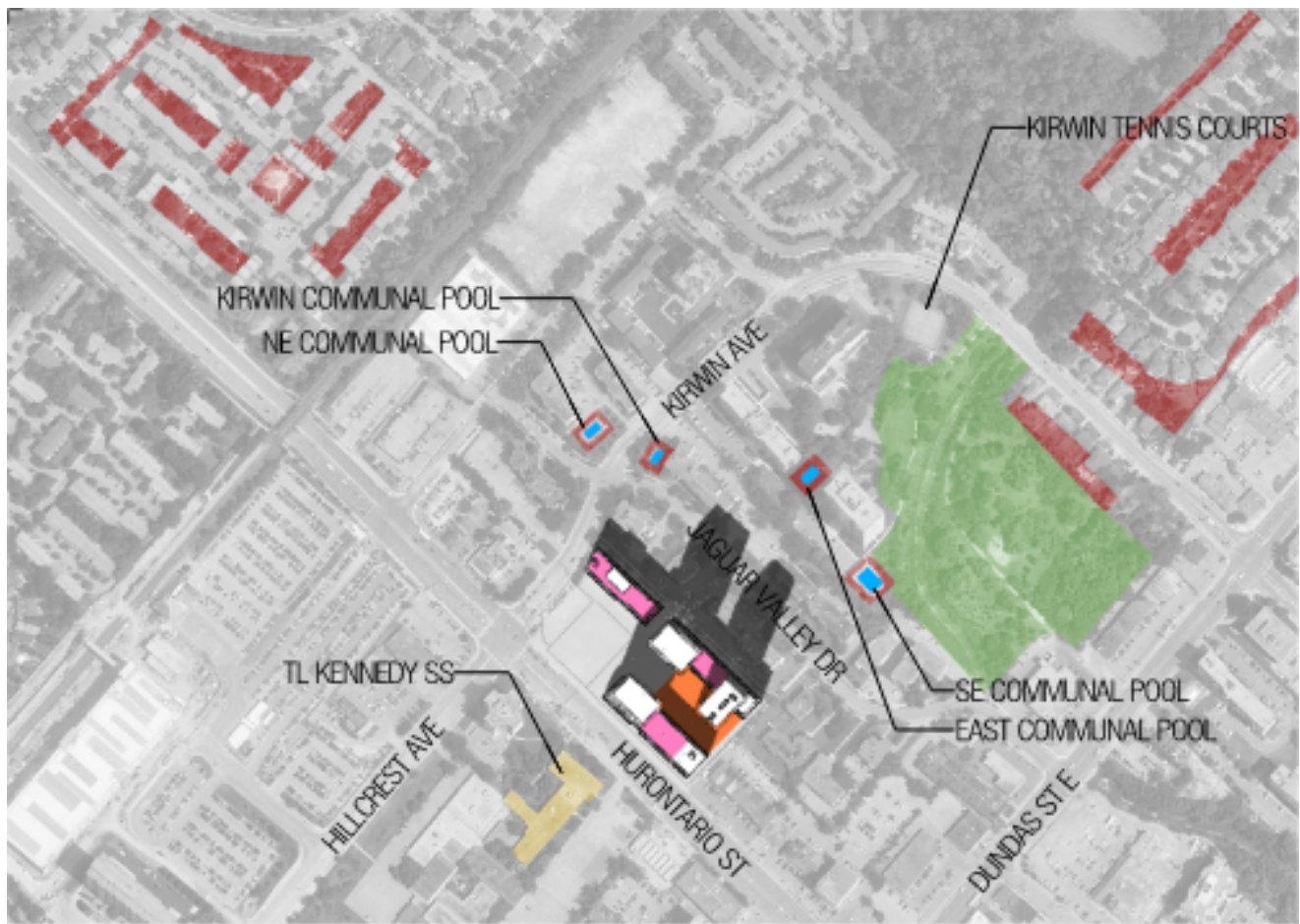


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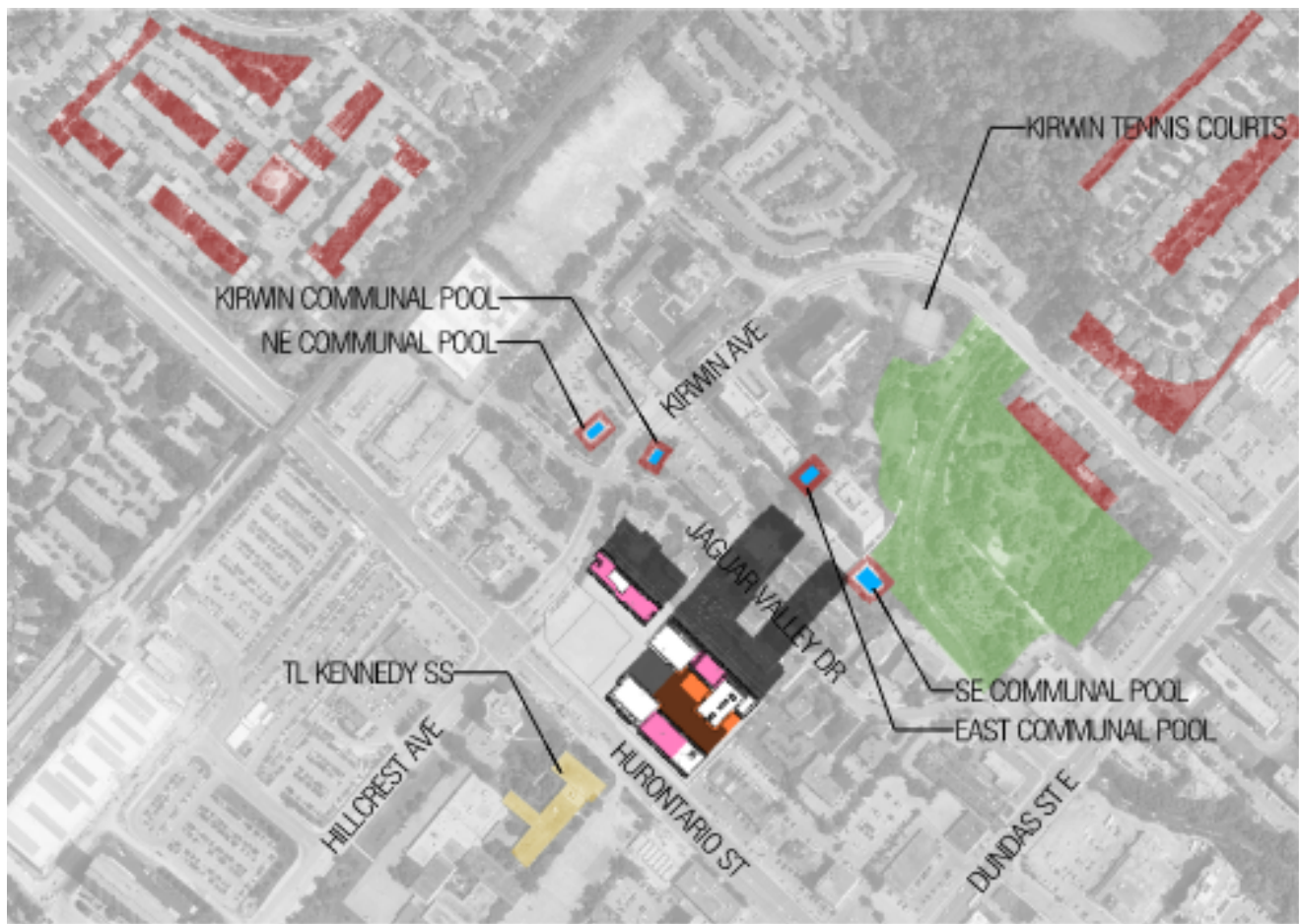
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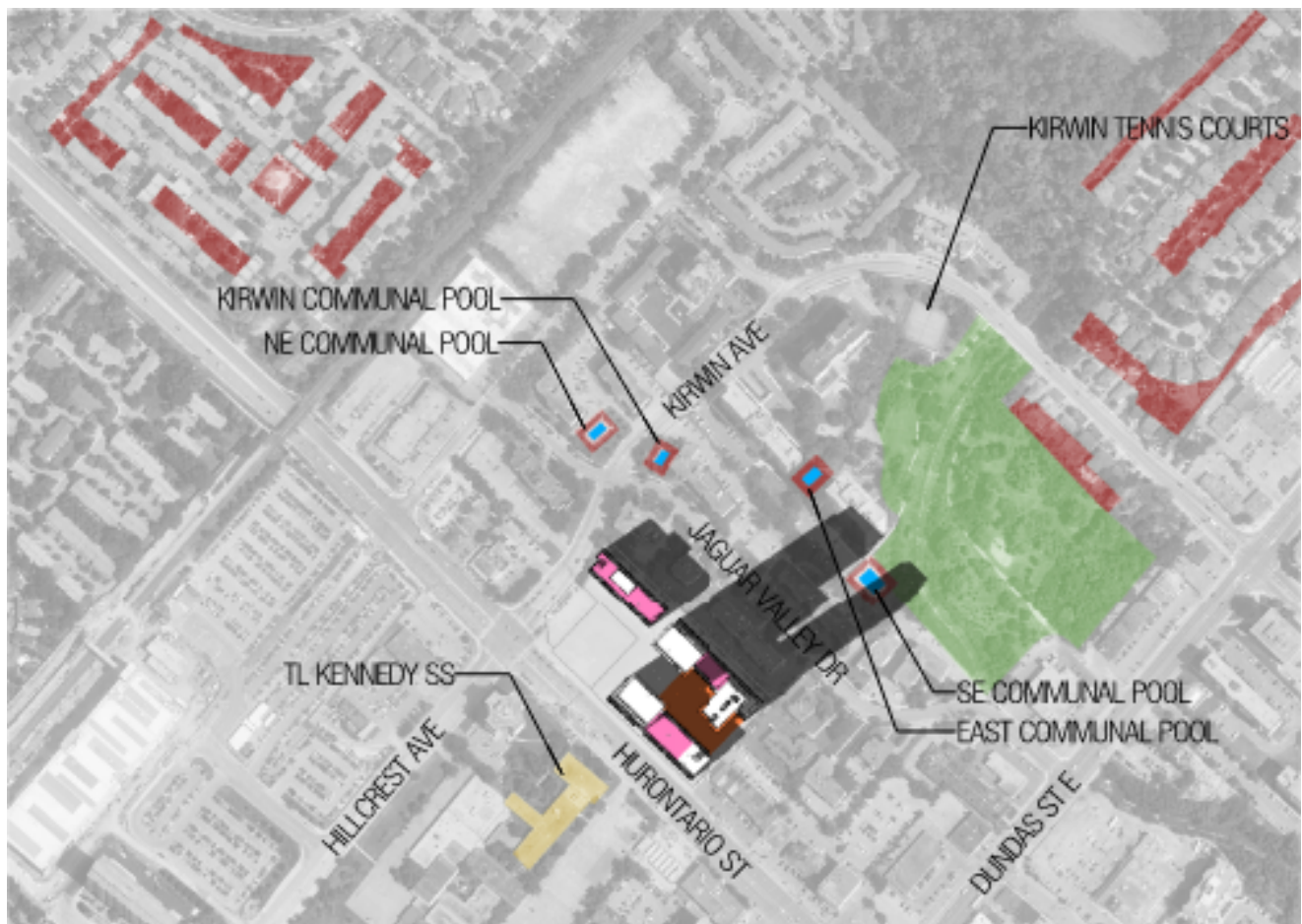


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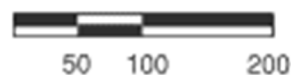
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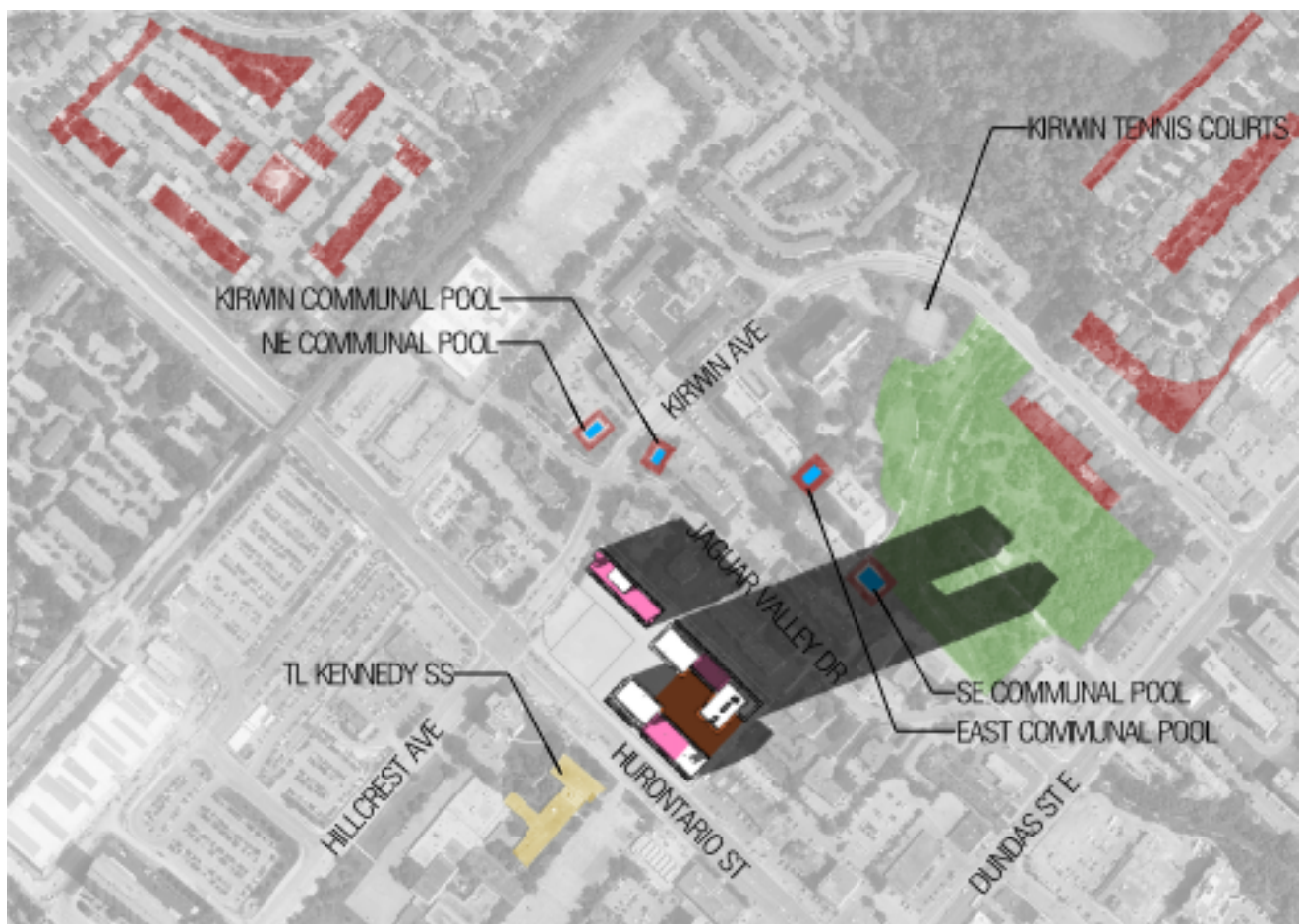
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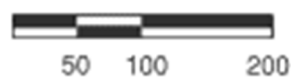
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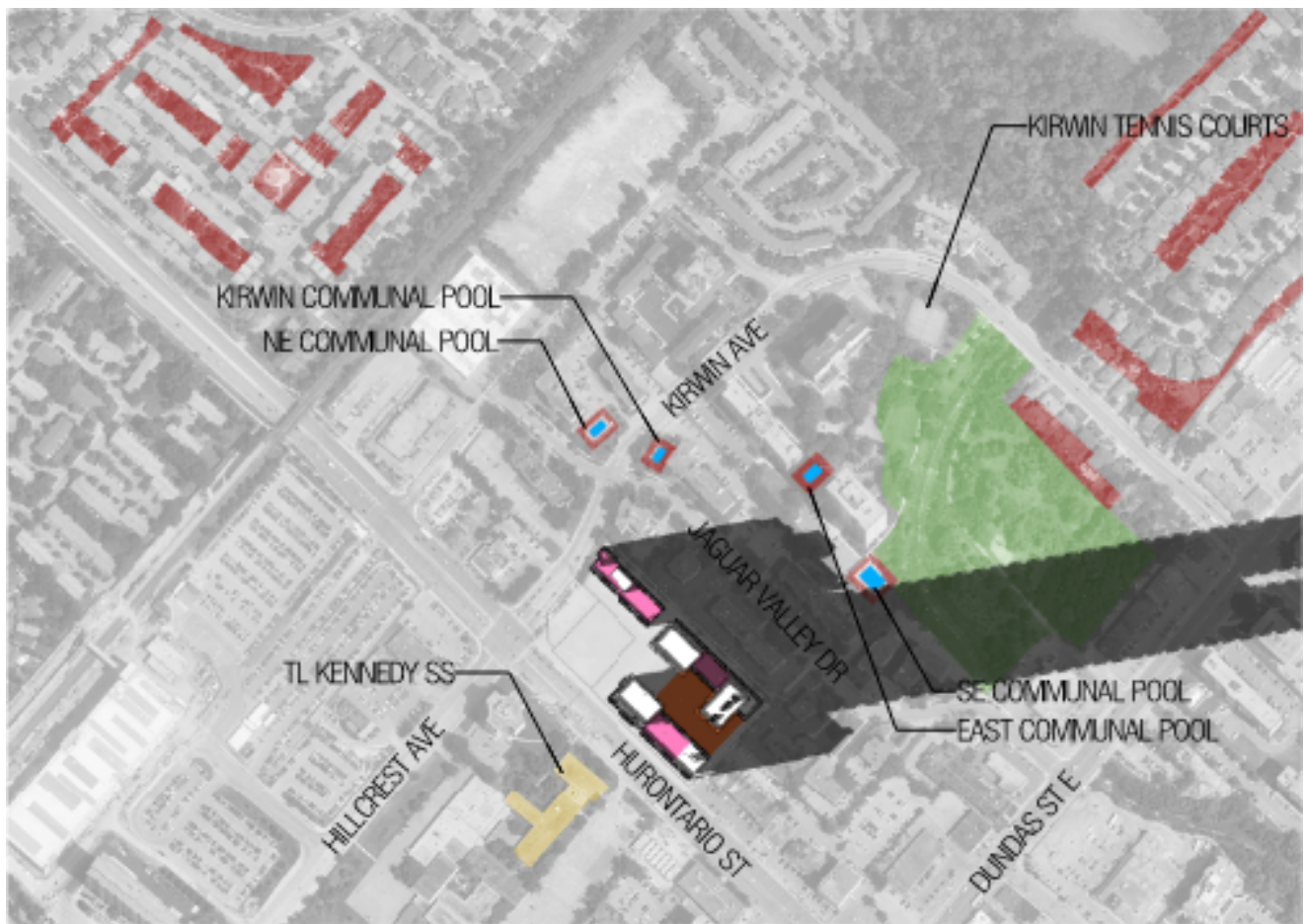
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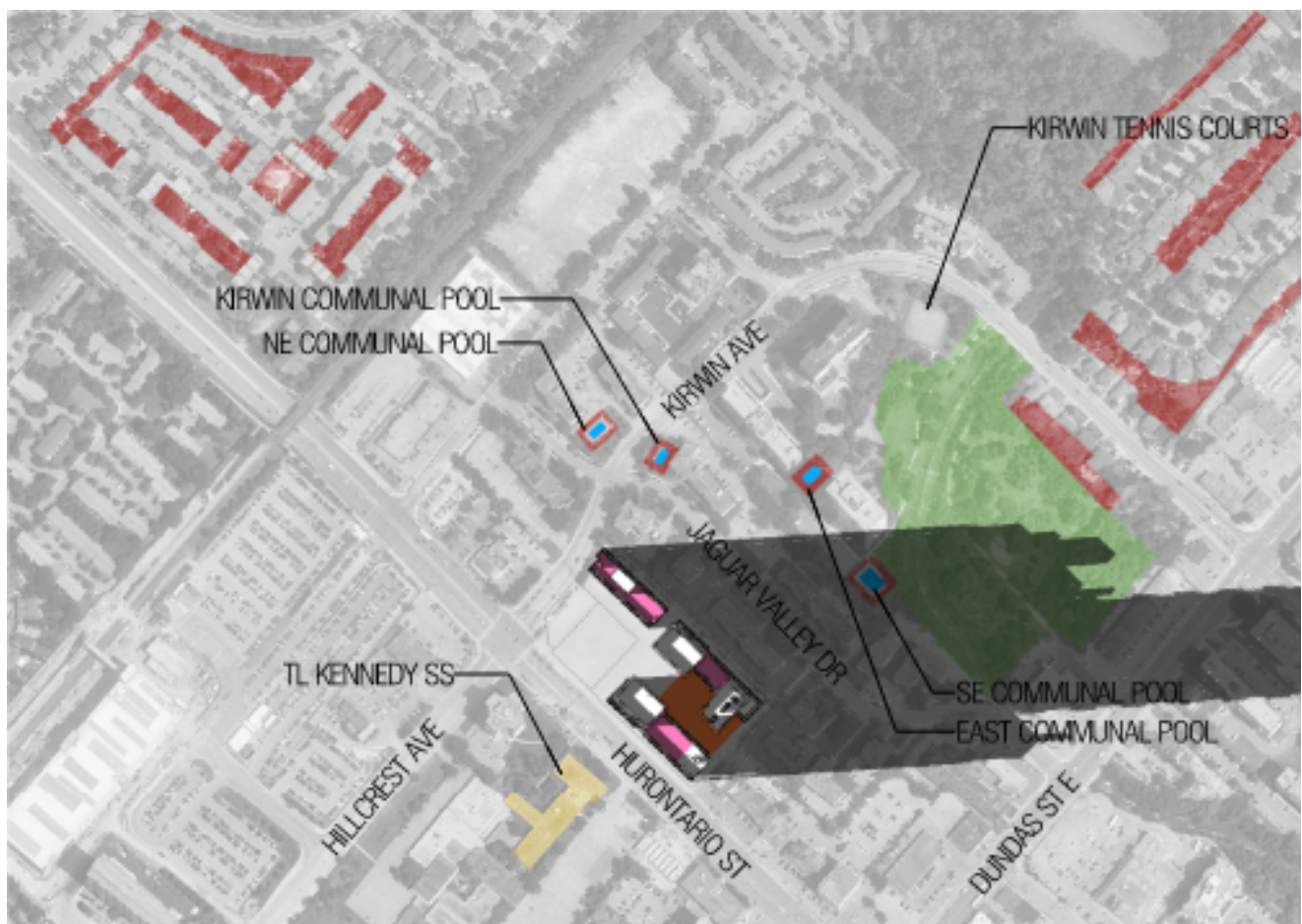
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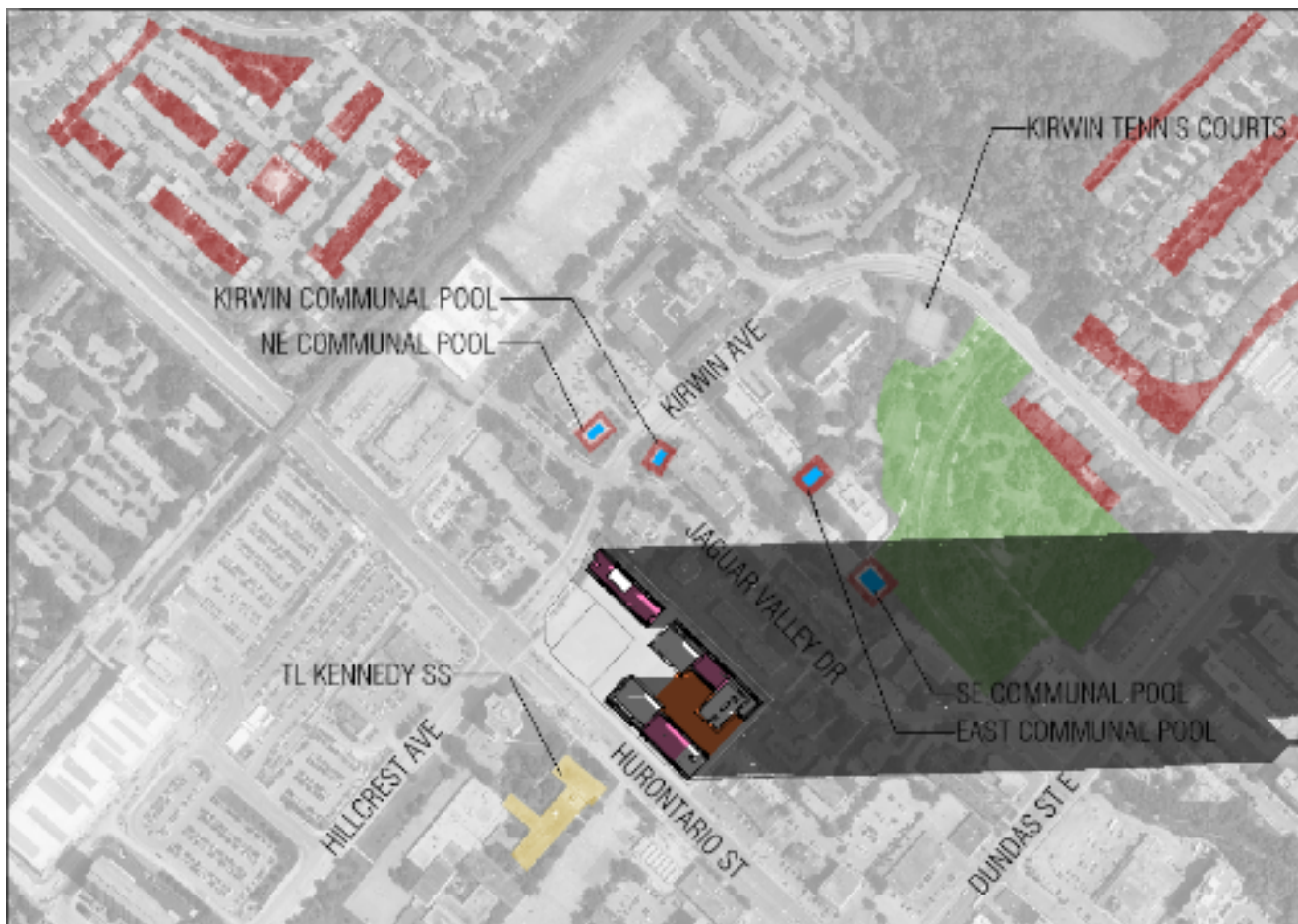


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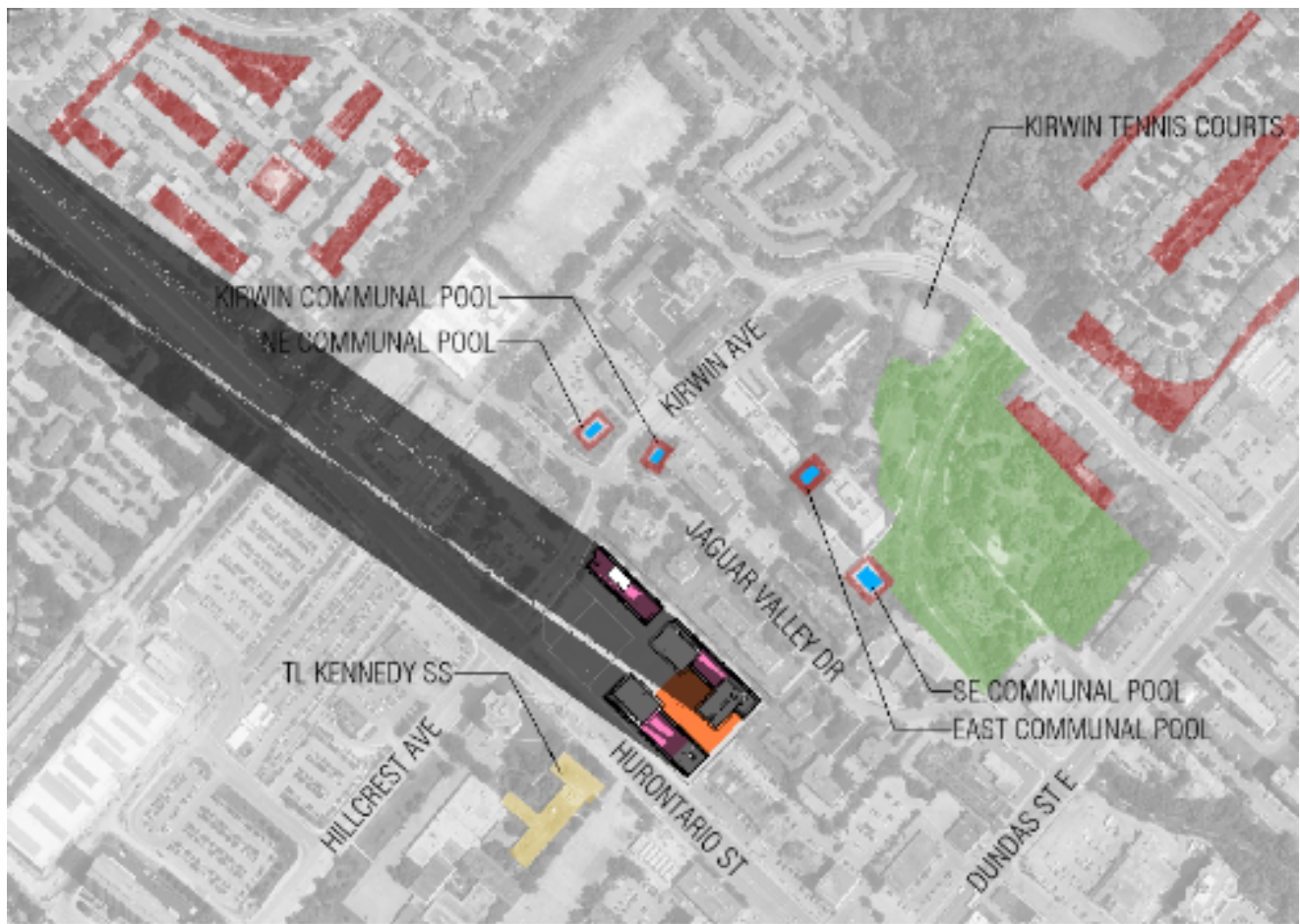


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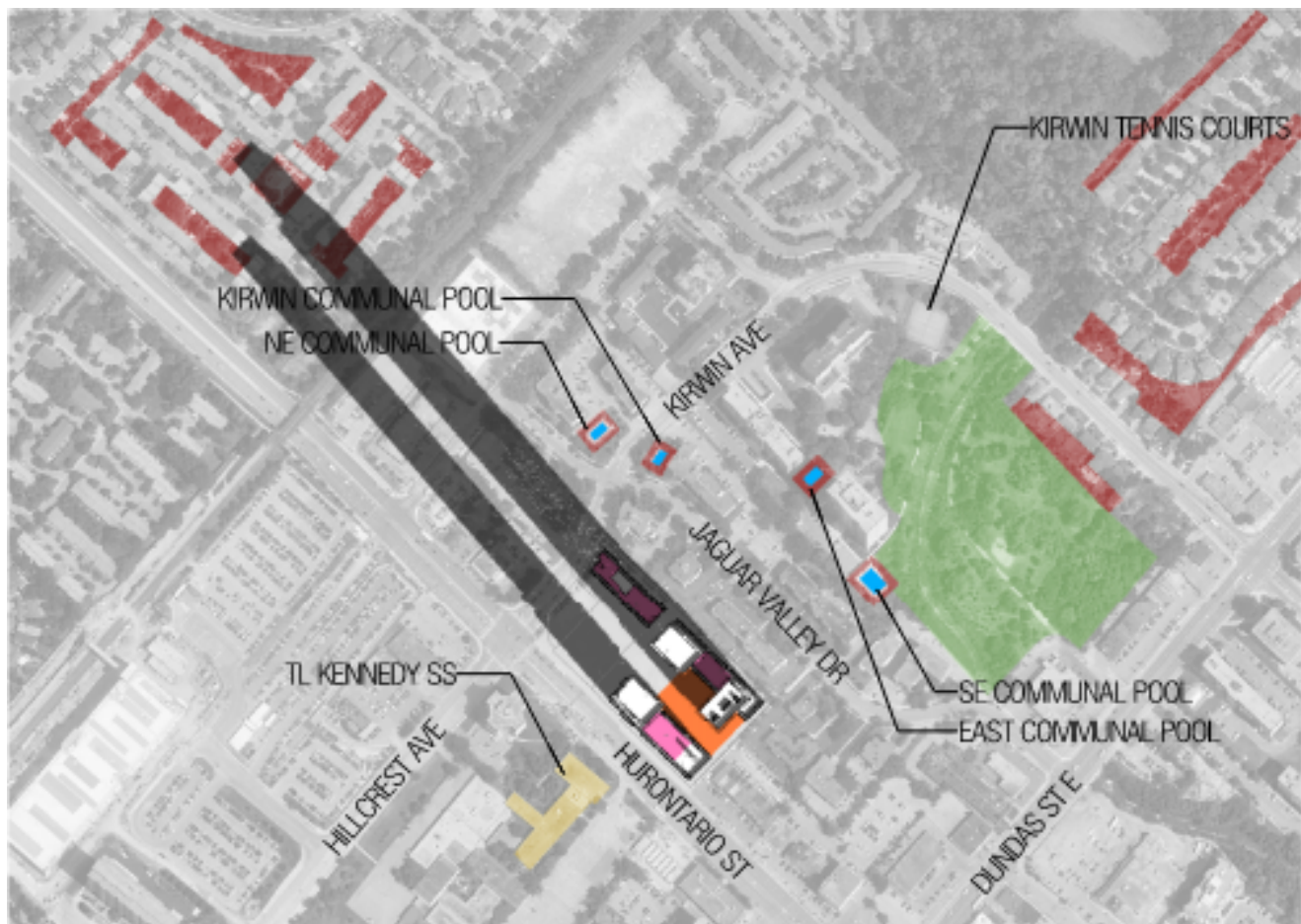


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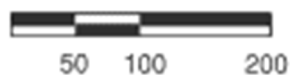
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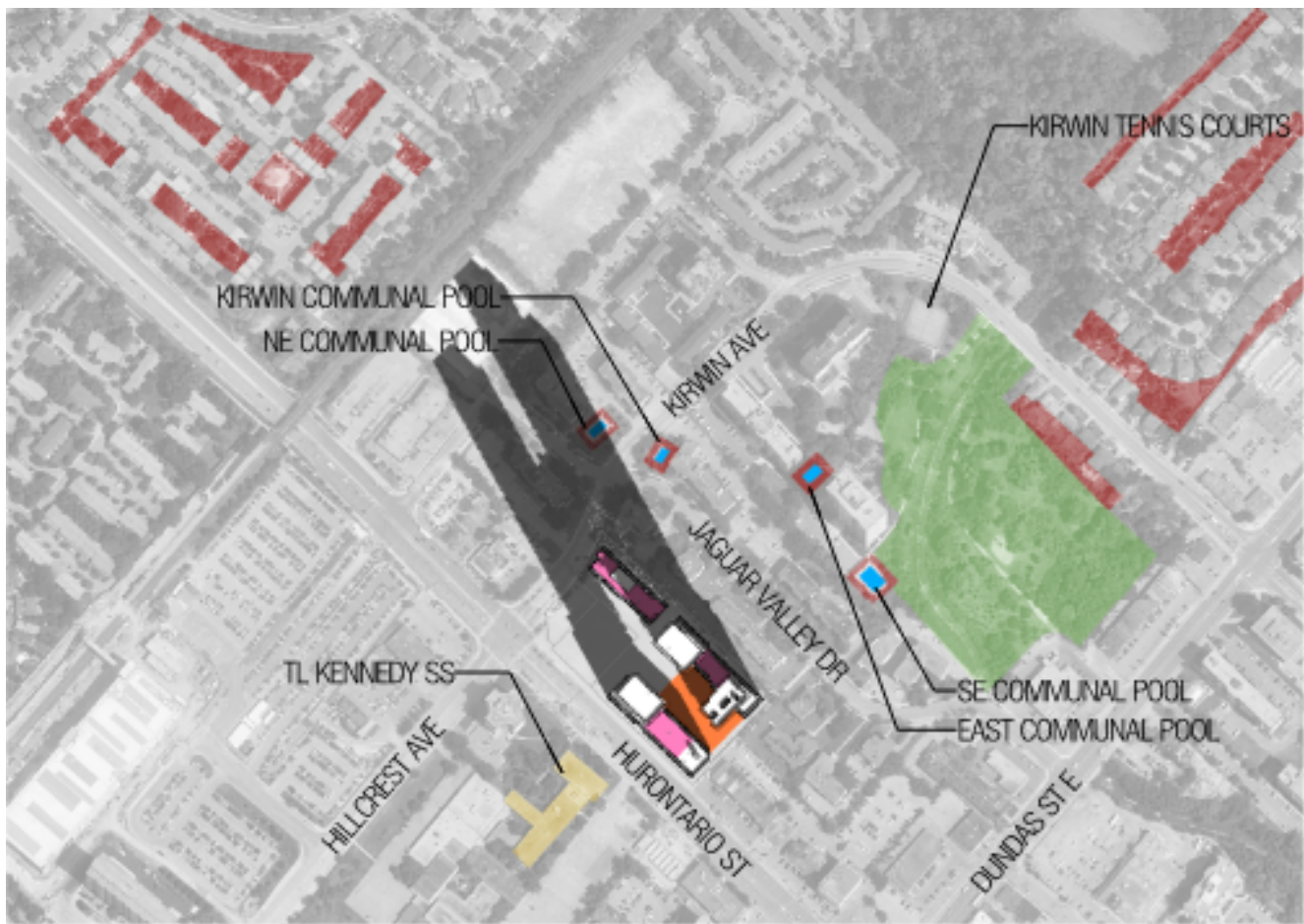
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SHADOW STUDY - DECEMBER 21 1017

- 7.5m RESIDENTIAL PRIVATE OUTDOOR AMENITY AREAS
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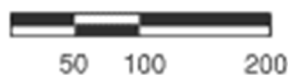
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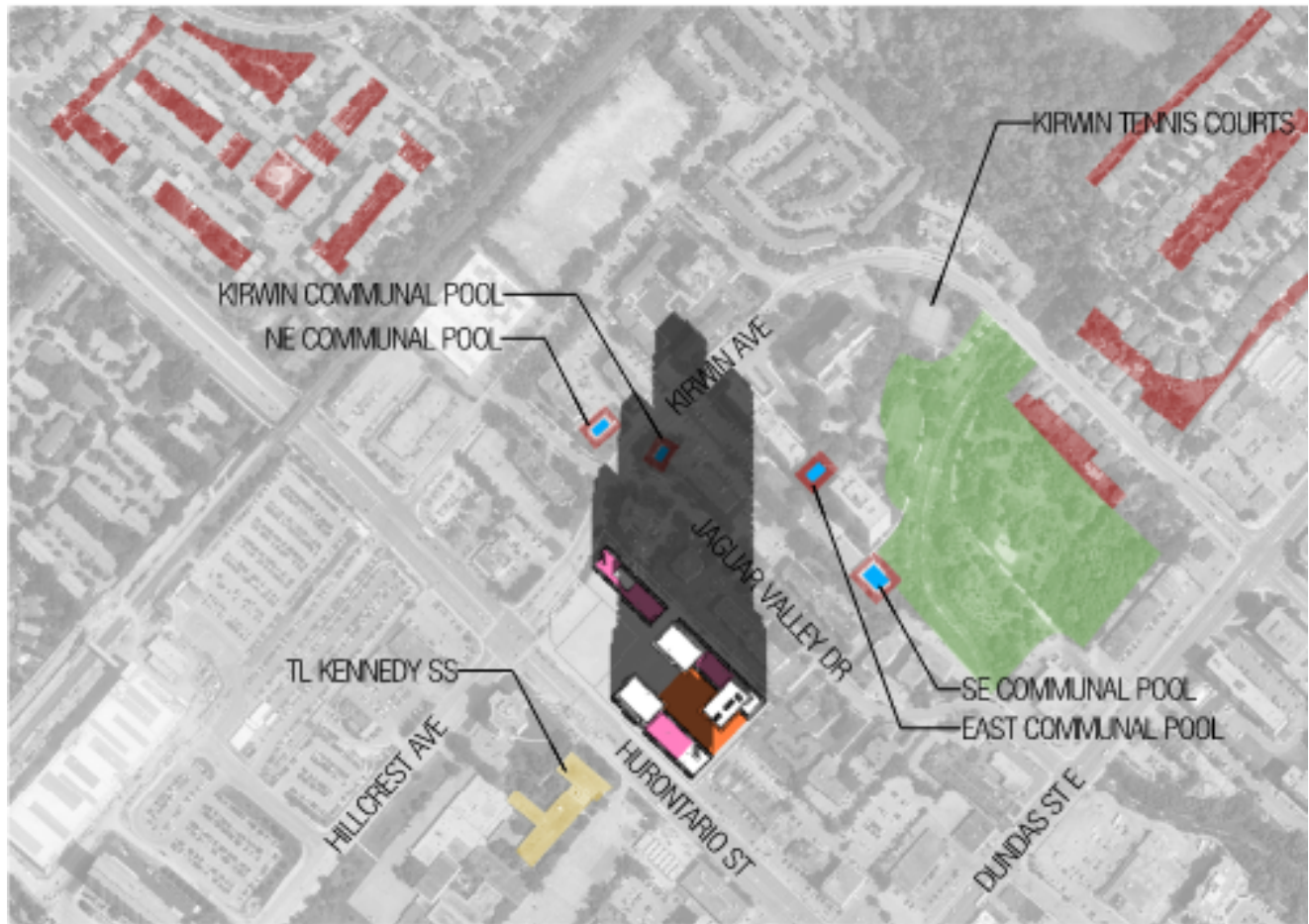
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SHADOW STUDY - DECEMBER 21 1317

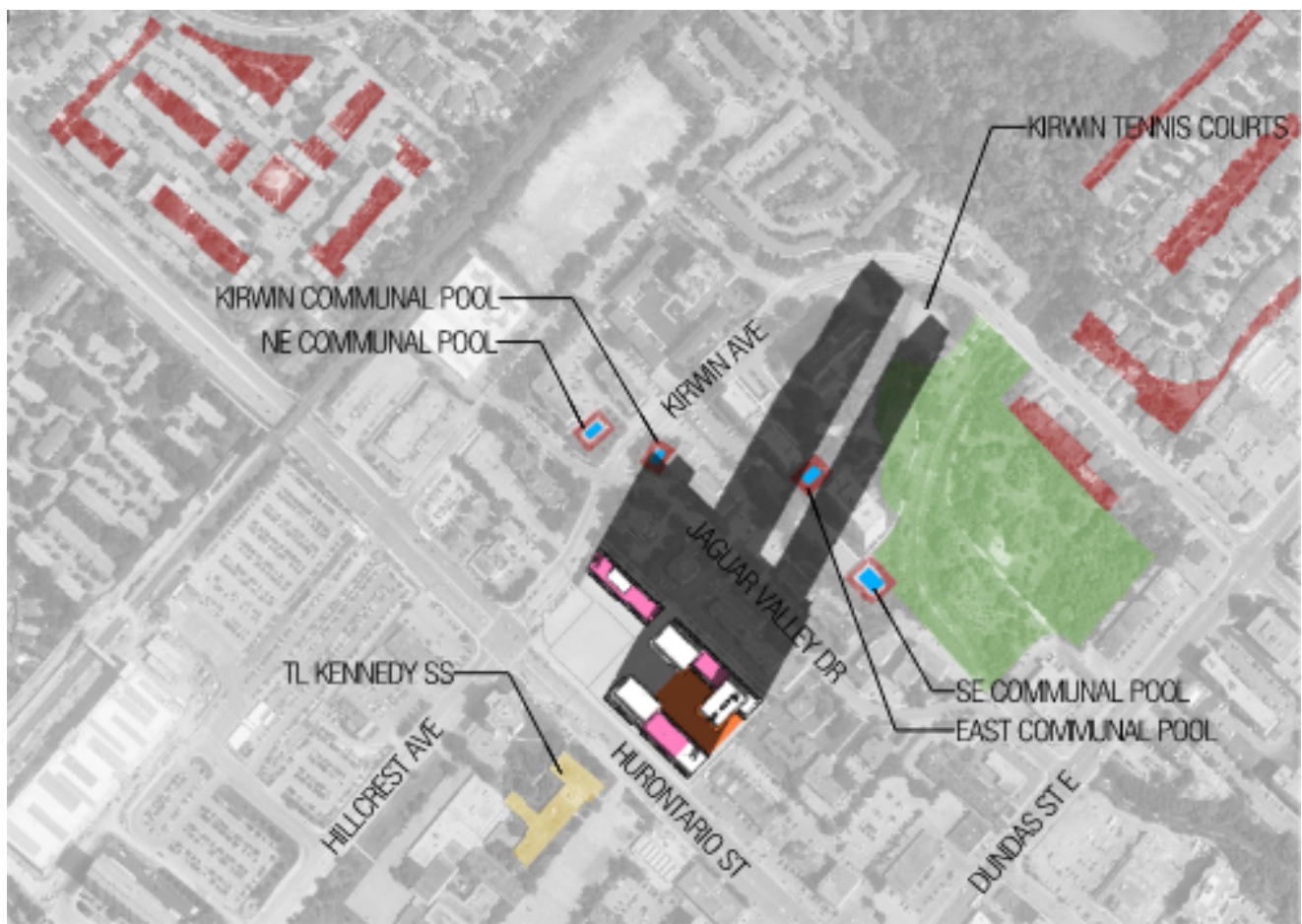
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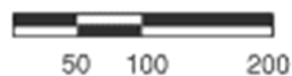
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SHADOW STUDY - DECEMBER 21 1417

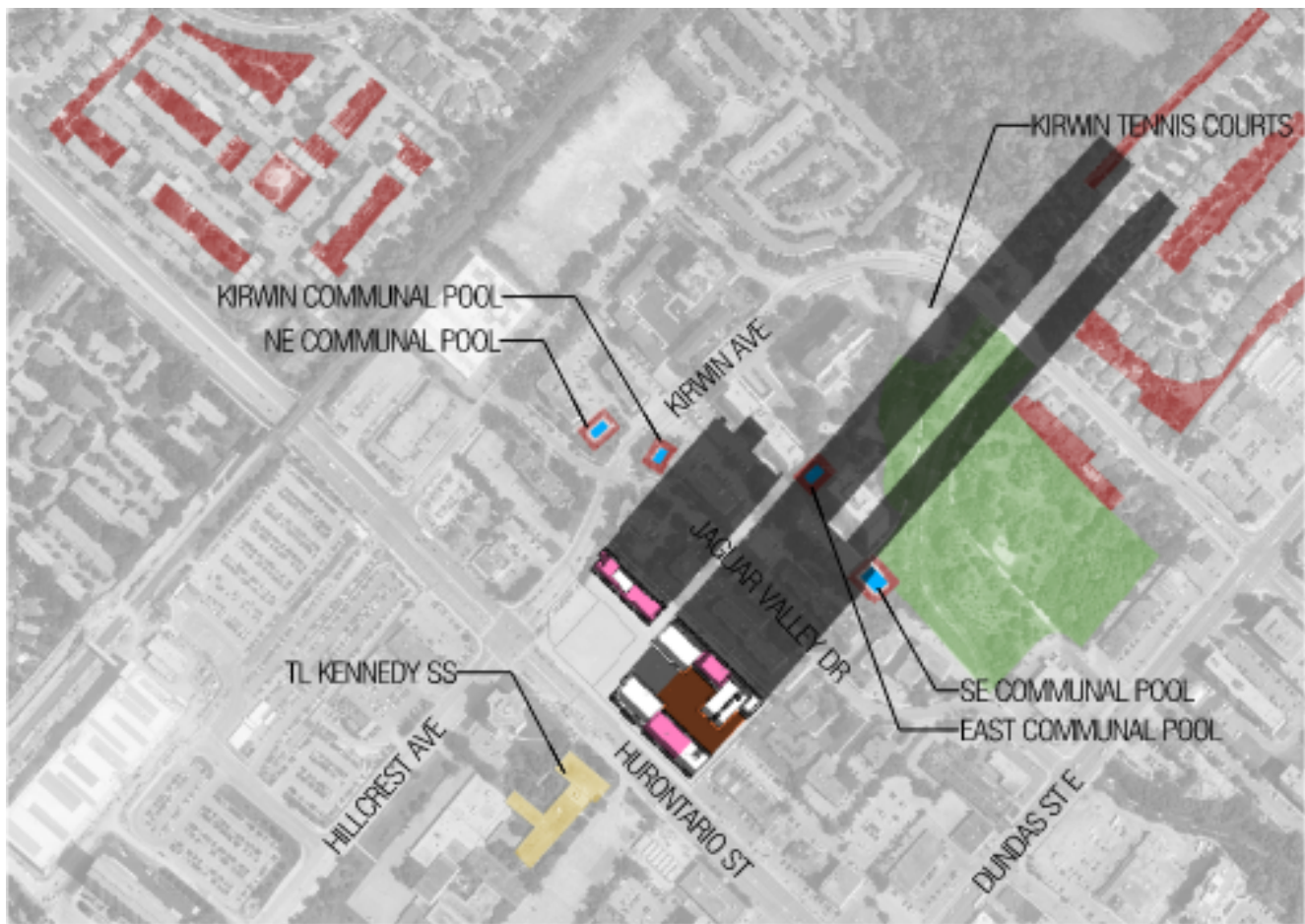
- 7.5m RESIDENTIAL PRIVATE OUTDOOR AMENITY AREAS
- DEVELOPMENT SITE AMENITY
- DEVELOPMENT ROOFTOP AMENITY



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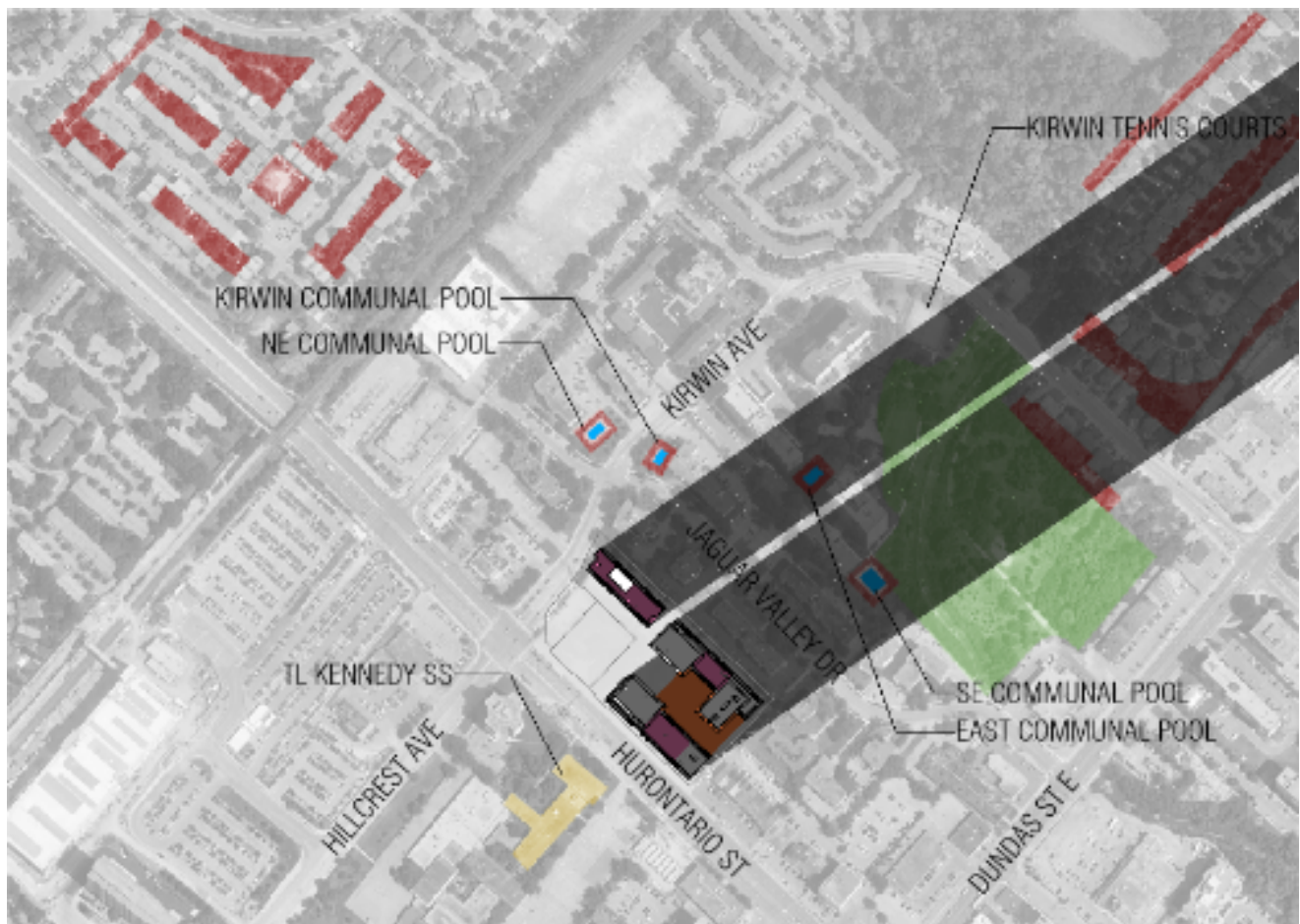
SHADOW STUDY - DECEMBER 21 1515

- 7.5m RESIDENTIAL PRIVATE OUTDOOR AMENITY AREAS
- DEVELOPMENT SITE AMENITY
- DEVELOPMENT ROOFTOP AMENITY

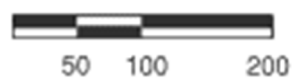


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