

Heron Gate Village Master Plan Sun Shadow Study

February 2020

February 6, 2020

Mélanie Gervais MCIP, RPP
 Planner / Urbaniste
 Development Review /
 Examen des demandes d'aménagement
 Planning, Infrastructure and Economic Development Department /
 Services de la planification, de l'infrastructure et du développement économique
 City of / Ville d'Ottawa
 Tel. : 613-580-2424 ext. 24025

Re: Technical Circulation Comments
Official Plan Amendment Application: Heron Gate
Your File No.: D01-01-19-0010

On behalf of Mustang Equities & TC Core LP the owners of the Heron Gate site, we present the following shadow study in support of the above noted Official Plan Amendment Application.

The shadow study has been prepared according to the terms of reference provided by the City of Ottawa through the Technical Circulation Comments issued Aug 27, 2019. As shown on the enclosed shadow study drawings, the proposed building shadow has been compared to an as-of-right building shadow, and current shadows from existing buildings. The net new shadow has been shown through a dashed red outline.

The shadow study was prepared via a Revit model for the proposed development, with the context modeled from available City of Ottawa open source data, and extrapolations from Google Earth imagery. The following provides a summary of any shadow impacts, the locations, and the type of shadow sensitive use where any impact occurs.

It should be noted that this study provides a review of the shadow impacts of a preliminary demonstration massing for the proposed development, and does not represent a formal building design. As part of future site plan review and approval, it is anticipated that further shadow study for given development blocks will be undertaken on a site by site basis to analyze and address any potential impacts.

Public Spaces

Definition: Plazas, open spaces, parks and cemeteries.

Criteria: The new net shadow must not result in an average of 50% of any public space being cast in shadow for 5 or more hourly interval times during the September test date only.

Analysis: Public spaces have been identified on the study in light green. The proposed development will generate limited net new shadows onto Heron-Walkley Park in the early morning period, having moved off completely by 12:00pm. The proposed public park will experience shadows at the 8:00am time period, with these largely moving off by 9:00am, and only minor shadows cast over the park for the remainder of the test time. The proposed POPS space south of Sandalwood Drive, west of Baycrest Drive is largely shadowed by the as-of-right, with some additional shading from net new shadows at 3:00pm, moving off by 4:00pm. Net new shadow on the proposed POPS south of Sandalwood Drive and east of Baycrest Drive meet the evaluation criteria of 50% not cast in shadow for 5 hours or more.

There are limited net new shadows being cast onto Sandalwood Park, however there is no net new shadow resulting in a shadow being cast over 50% of the space for 5 or more hours during the test times, as per the evaluation criteria.

The study demonstrates that the proposal meets the standards of the evaluation criteria for public spaces.

Communal Amenity Areas

Definition: School yards, public outdoor pools, daycare outdoor play areas, communal private rooftop patios and communal areas associated with commercial and employment areas.

Criteria: The new net shadow must allow for an average of 50% of any communal amenity area being exposed to sun light during two consecutive hourly interval times per day between 11am and 3pm (both are inclusive) during all three test dates (with the exception of pools and rooftop patios which only have to meet the criteria for June and Sept).

Analysis: Communal Amenity Areas have been identified in seafoam green. For the study area, these are limited to the sports fields of St. Patrick's and Ridgemount High Schools, located to the west. The sole net new shadow generated over this space is over a small southern portion at 8:00am during the March/September test time, moving off by 9:00am.

Arterial Mainstreets

Definition: Streets with a Traditional or Arterial Mainstreet land use designation as per the Official Plan.

Criteria: No new net shadow in any one spot for more than 3 consecutive hourly test times of the sidewalk on the opposite side of the street, being cast in shadow during the September test date only.

Analysis: Under the City of Ottawa's Official Plan, Walkley Road is identified as an Arterial Mainstreet, and is identified in purple on the shadow study. Walkley Road briefly experiences a small net new shadow on the southern side of the street (opposite the proposed development) at the 5:00pm – 6:00pm test time for March/September 21. This impact is limited to a very small portion of the street, and is below the 3 consecutive hour evaluation criteria.

Ground Level Residential Private Outdoor Amenity Space

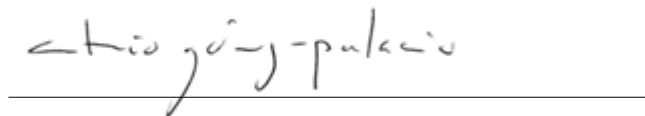
Definition: Are considered rear yards to low rise residential use buildings. The no impact zone is the area measured from the exterior rear wall (or other appropriate exterior wall of the dwelling that abuts a private amenity area) outward 7.5 meters or to the property line, whichever is less.

Criteria: No new net shadow within the no impact zone of any residential private outdoor amenity space being cast in shadow for more than two consecutive hourly test times during the June and September test date only.

Analysis: The no-impact zones are highlighted in orange, for the test times of March/September and June. There are modest impacts to rear yards south of Walkley Road, between 5:00pm-6:00pm, with the rear yards consumed by the as-of-right by 7:00pm, resulting in less than two hours impact to the no-impact zone, as per the evaluation criteria.

Summary

In review of the projected shadows being cast by the proposed development, the net new shadow impacts onto adjacent areas above the as-of-right are minimal and limited to brief periods of the day. The net new impacts across the site also conform to the City of Ottawa's Shadow Study evaluation criteria. In conclusion, the anticipated shadows from the proposed development are acceptable, and will enable the development and adjacent areas to continue to receive consistent sun exposure.



ANTONIO GOMEZ-PALACIO, PRINCIPAL, ARQ, MES, RPP, MCIP, MRAIC
DIALOG ONTARIO INC.

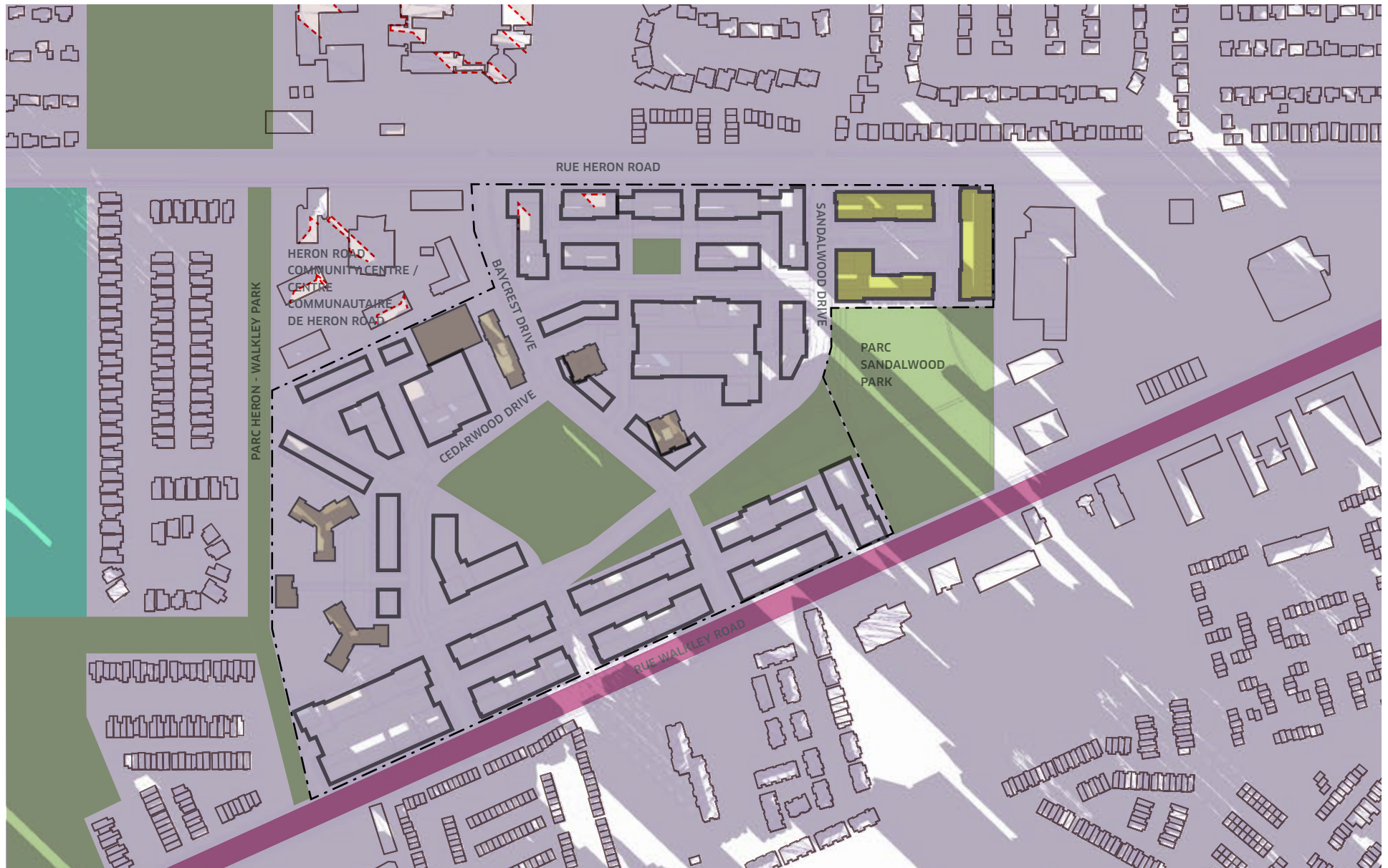
Test Times:

Test Dates and Times (displayed in hourly increments):

Equinox: September 21st, 8am – 6pm

Solstice: December 21st, 9am – 3pm and June 21st, 8am – 8pm

DECEMBER 21 9:00AM

**Legend**

---	Property Line		Approved Development		Residential Private Outdoor
	Proposed Shadow Extent		Existing Development on Site		Amenity Area (no-impact zone -
	As-of-Right Shadow Outline		Public Spaces		June-September/March only)
---	New Net Shadow		Communal Amenity Areas		
	Proposed Development		Arterial Main Street		



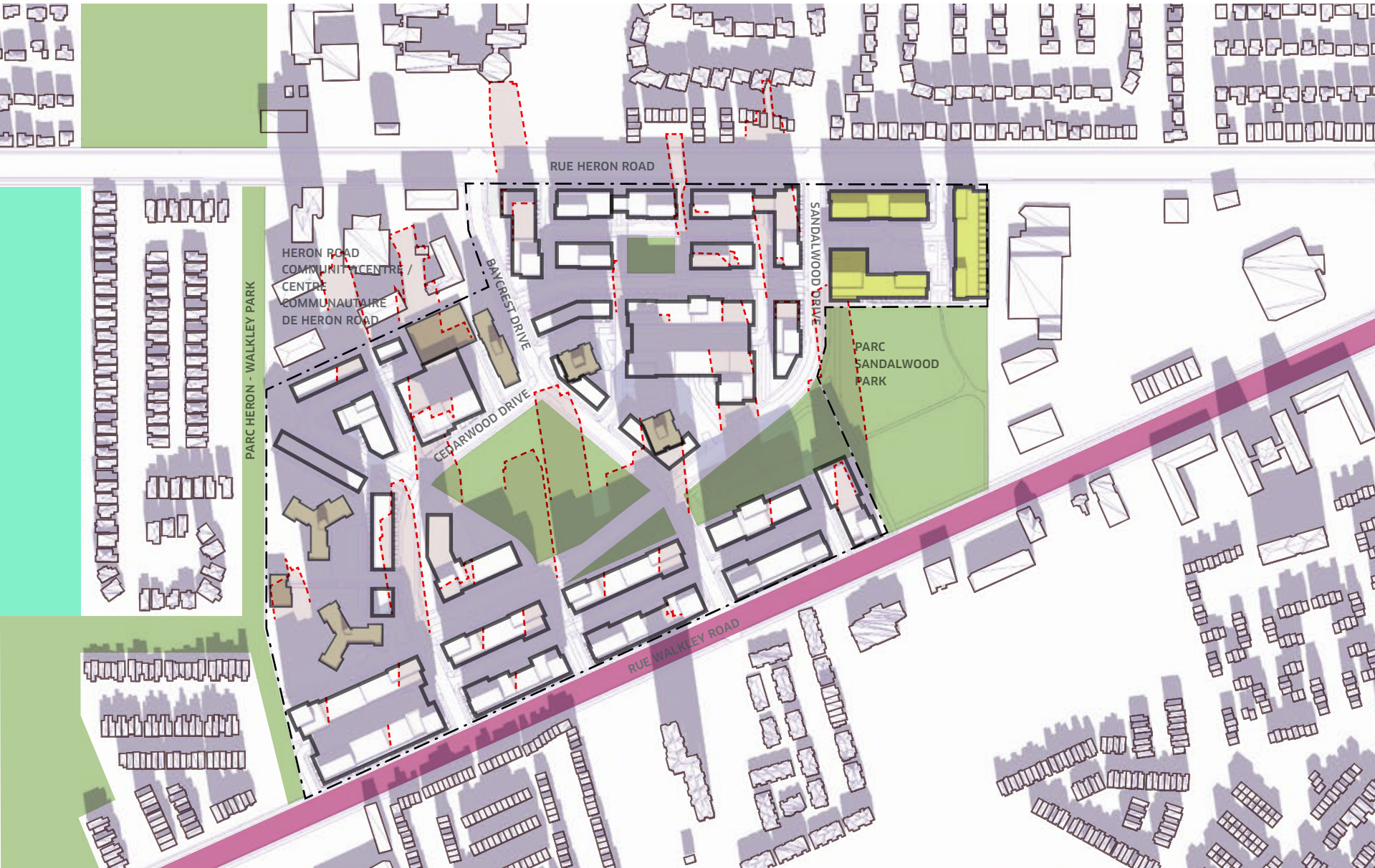
Legend

- | | | | |
|---------------|----------------------------|------------------------------|--------------------------------|
| --- -- | Property Line | Approved Development | Residential Private Outdoor |
| Light Blue | Proposed Shadow Extent | Existing Development on Site | Amenity Area (no-impact zone - |
| Dark Blue | As-of-Right Shadow Outline | Public Spaces | June-September/March only) |
| Red Dashed | New Net Shadow | Communal Amenity Areas | |
| Black Outline | Proposed Development | Arterial Main Street | |

DECEMBER 21 11:00AM

**Legend**

- | | | | | | |
|-------|----------------------------|--|------------------------------|--|--------------------------------|
| --- | Property Line | | Approved Development | | Residential Private Outdoor |
| | Proposed Shadow Extent | | Existing Development on Site | | Amenity Area (no-impact zone - |
| | As-of-Right Shadow Outline | | Public Spaces | | June-September/March only) |
| - - - | New Net Shadow | | Communal Amenity Areas | | |
| | Proposed Development | | Arterial Main Street | | |



Legend

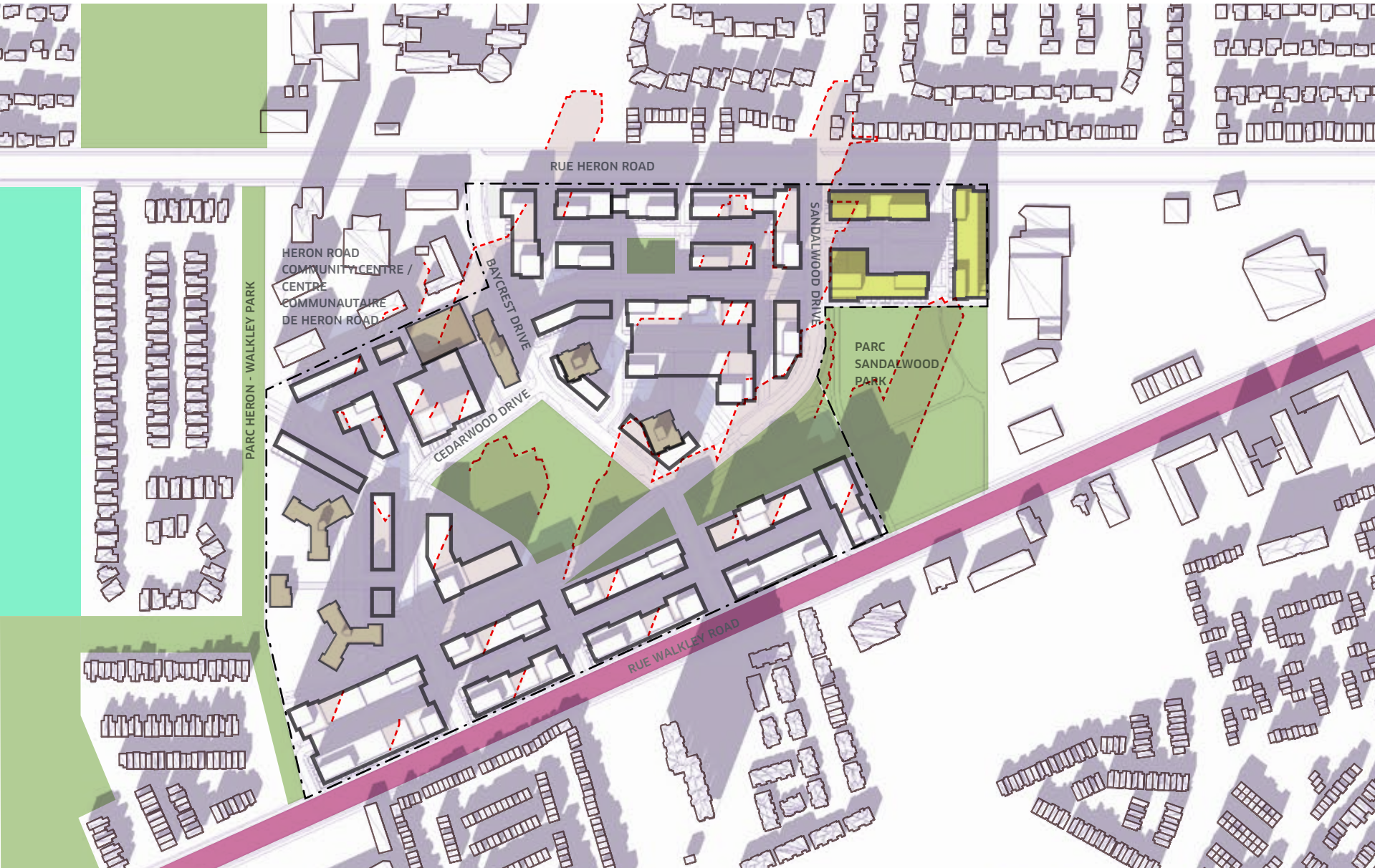
- | | | | | | |
|-------|----------------------------|--|------------------------------|--|--------------------------------|
| --- | Property Line | | Approved Development | | Residential Private Outdoor |
| | Proposed Shadow Extent | | Existing Development on Site | | Amenity Area (no-impact zone - |
| | As-of-Right Shadow Outline | | Public Spaces | | June-September/March only) |
| - - - | New Net Shadow | | Communal Amenity Areas | | |
| | Proposed Development | | Arterial Main Street | | |

DECEMBER 21 1:00PM



Legend

- | | | | | | |
|-------|----------------------------|--|------------------------------|--|--------------------------------|
| --- | Property Line | | Approved Development | | Residential Private Outdoor |
| | Proposed Shadow Extent | | Existing Development on Site | | Amenity Area (no-impact zone - |
| | As-of-Right Shadow Outline | | Public Spaces | | June-September/March only) |
| - - - | New Net Shadow | | Communal Amenity Areas | | |
| | Proposed Development | | Arterial Main Street | | |



Legend

- | | | | | | |
|---------|----------------------------|--|------------------------------|--|---|
| - - - - | Property Line | | Approved Development | | Residential Private Outdoor Amenity Area (no-impact zone - June-September/March only) |
| | Proposed Shadow Extent | | Existing Development on Site | | |
| | As-of-Right Shadow Outline | | Public Spaces | | |
| - - - - | New Net Shadow | | Communal Amenity Areas | | |
| | Proposed Development | | Arterial Main Street | | |

DECEMBER 21 3:00PM



Legend

---	Property Line		Approved Development		Residential Private Outdoor Amenity Area (no-impact zone - June-September/March only)
	Proposed Shadow Extent		Existing Development on Site		
	As-of-Right Shadow Outline		Public Spaces		
- - -	New Net Shadow		Communal Amenity Areas		
	Proposed Development		Arterial Main Street		

JUNE 21 8:00AM



Legend

- | | | | | | |
|-----|----------------------------|--|------------------------------|--|---|
| --- | Property Line | | Approved Development | | Residential Private Outdoor
Amenity Area (no-impact zone -
June-September/March only) |
| | Proposed Shadow Extent | | Existing Development on Site | | |
| | As-of-Right Shadow Outline | | Public Spaces | | |
| --- | New Net Shadow | | Communal Amenity Areas | | |
| | Proposed Development | | Arterial Main Street | | |

JUNE 21 9:00AM

**Legend**

- | | | | | | |
|-----|----------------------------|--|------------------------------|--------------------------------|-----------------------------|
| --- | Property Line | | Approved Development | | Residential Private Outdoor |
| | Proposed Shadow Extent | | Existing Development on Site | Amenity Area (no-impact zone - | |
| | As-of-Right Shadow Outline | | Public Spaces | June-September/March only) | |
| --- | New Net Shadow | | Communal Amenity Areas | | |
| | Proposed Development | | Arterial Main Street | | |



Legend

- | | | | | | |
|-----------------|----------------------------|------------|------------------------------|------------|---|
| --- -- | Property Line | Yellow box | Approved Development | Orange box | Residential Private Outdoor Amenity Area (no-impact zone - June-September/March only) |
| Brown box | Proposed Shadow Extent | Brown box | Existing Development on Site | | |
| Purple box | As-of-Right Shadow Outline | Green box | Public Spaces | | |
| Red dashed line | New Net Shadow | Cyan box | Communal Amenity Areas | | |
| Black outline | Proposed Development | Pink line | Arterial Main Street | | |




JUNE 21 11:00AM

**Legend**

- | | | | |
|---------------|----------------------------|------------------------------|---|
| --- | Property Line | Approved Development | Residential Private Outdoor Amenity Area (no-impact zone - June-September/March only) |
| Light Brown | Proposed Shadow Extent | Existing Development on Site | |
| Light Purple | As-of-Right Shadow Outline | Public Spaces | |
| Red Dashed | New Net Shadow | Communal Amenity Areas | |
| Black Outline | Proposed Development | Arterial Main Street | |



— • — •

- | | | | | | |
|---|----------------------------|---|------------------------------|--|--|
|  | Property Line |  | Approved Development |  | Residential Private Outdoor
Amenity Area (no-impact zone) |
|  | Proposed Shadow Extent |  | Existing Development on Site | | |
|  | As-of-Right Shadow Outline |  | Public Spaces | | |
|  | New Net Shadow |  | Communal Amenity Areas | | |
|  | Proposed Development |  | Arterial Main Street | | |

JUNE 21 1:00PM









Legend

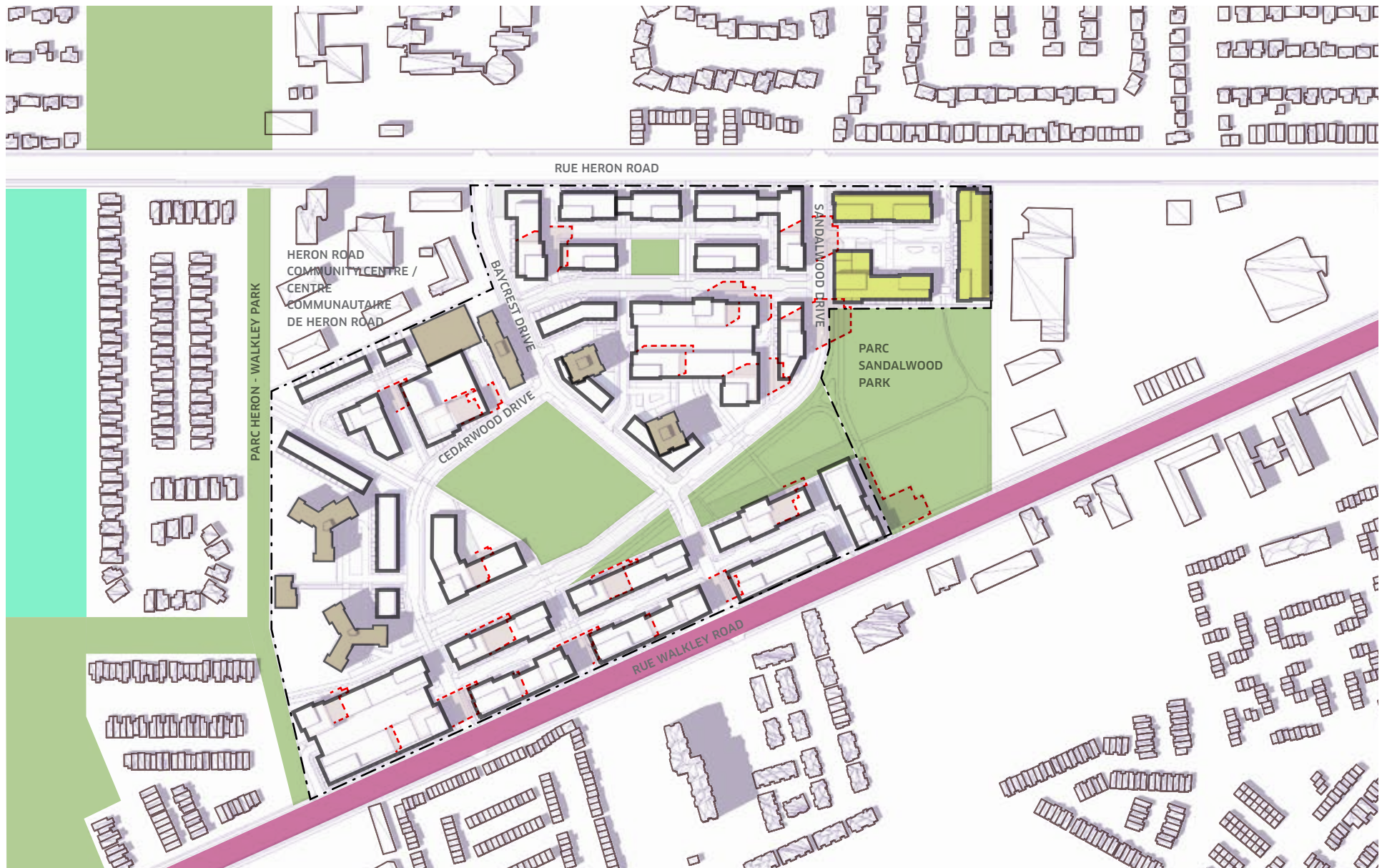
---	Property Line		Approved Development		Residential Private Outdoor Amenity Area (no-impact zone)
	Proposed Shadow Extent		Existing Development on Site		
	As-of-Right Shadow Outline		Public Spaces		
- - -	New Net Shadow		Communal Amenity Areas		
	Proposed Development		Arterial Main Street		



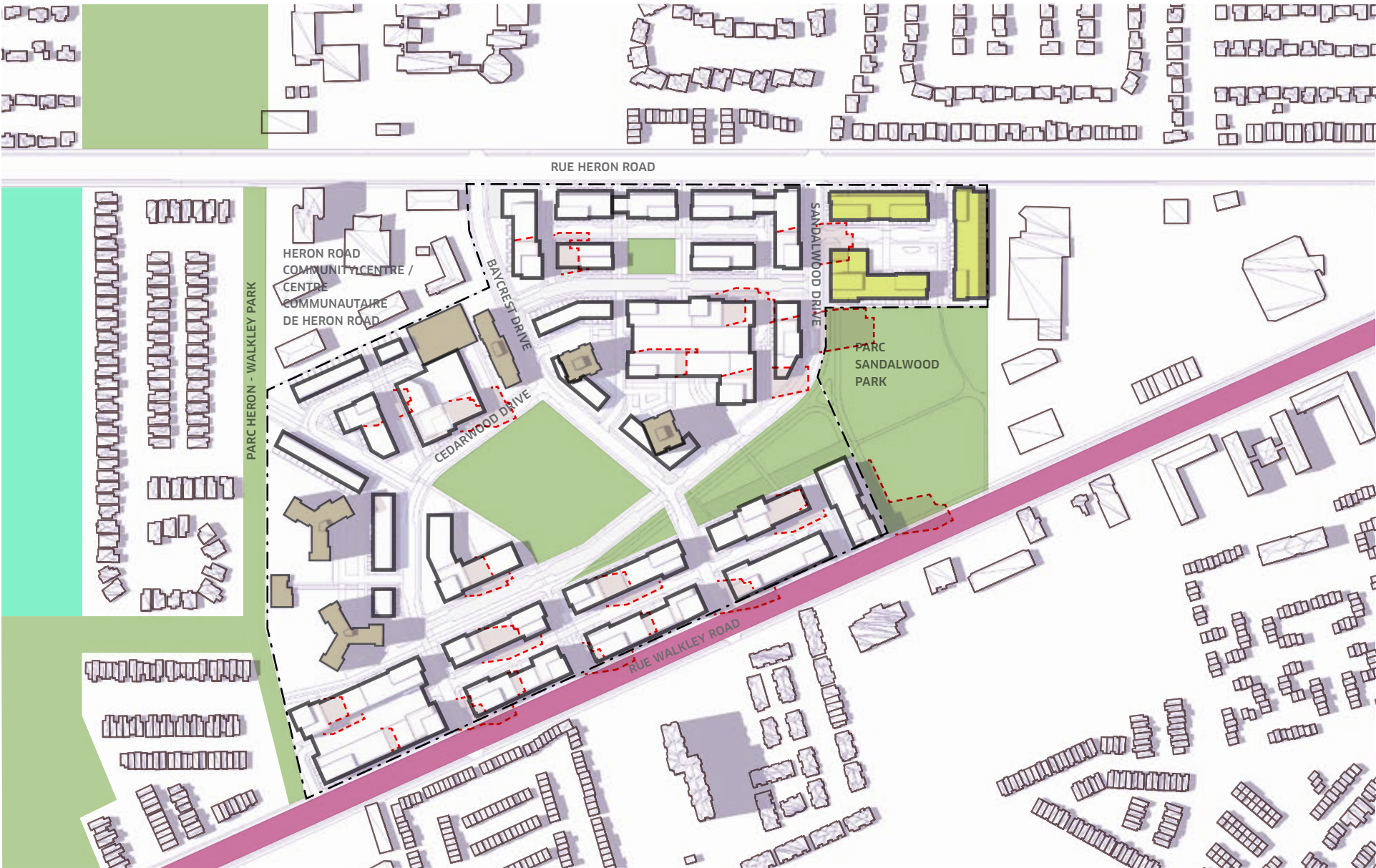
Legend

- | | | | | | |
|---|----------------------------|---|------------------------------|---|--------------------------------|
| - - - - | Property Line |  | Approved Development |  | Residential Private Outdoor |
|  | Proposed Shadow Extent |  | Existing Development on Site | | Amenity Area (no-impact zone - |
|  | As-of-Right Shadow Outline |  | Public Spaces | | June-September/March only) |
| - - - - | New Net Shadow |  | Communal Amenity Areas | | |
|  | Proposed Development |  | Arterial Main Street | | |

JUNE 21 3:00PM

**Legend**

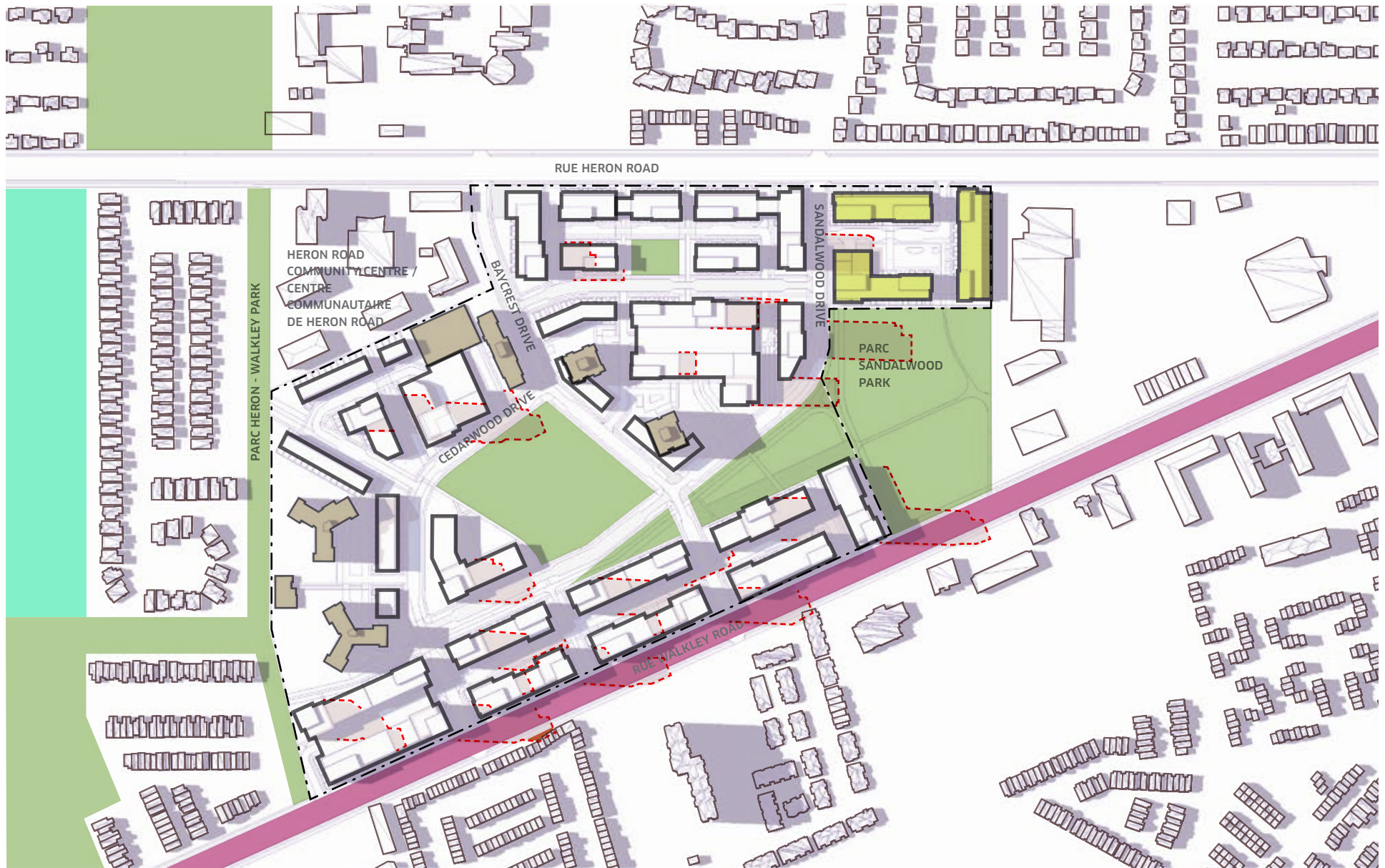
- | | | | | | |
|-----|----------------------------|--|------------------------------|--|---|
| --- | Property Line | | Approved Development | | Residential Private Outdoor Amenity Area (no-impact zone - June-September/March only) |
| | Proposed Shadow Extent | | Existing Development on Site | | |
| | As-of-Right Shadow Outline | | Public Spaces | | |
| --- | New Net Shadow | | Communal Amenity Areas | | |
| | Proposed Development | | Arterial Main Street | | |



Legend

- | | | | |
|----------------------------|------------------------------|----------------------|---|
| - - - - | Property Line | Approved Development | Residential Private Outdoor Amenity Area (no-impact zone - June-September/March only) |
| Proposed Shadow Extent | Existing Development on Site | Public Spaces | |
| As-of-Right Shadow Outline | Communal Amenity Areas | Arterial Main Street | |
| - - - - | New Net Shadow | | |
| Proposed Development | | | |

JUNE 21 5:00PM

**Legend**

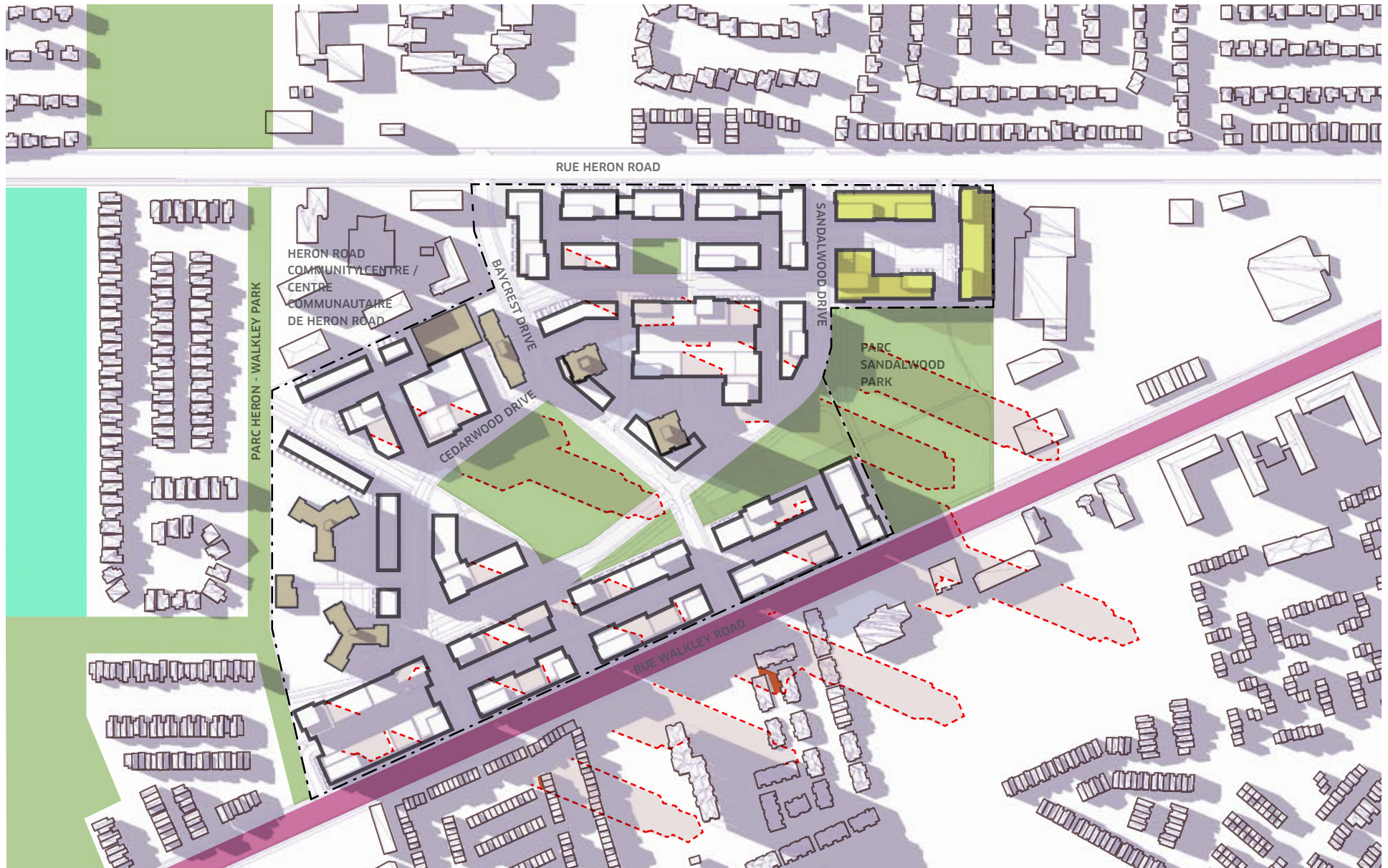
- | | | | | | |
|--------|----------------------------|--|------------------------------|--|---|
| --- -- | Property Line | | Approved Development | | Residential Private Outdoor Amenity Area (no-impact zone - June-September/March only) |
| | Proposed Shadow Extent | | Existing Development on Site | | |
| | As-of-Right Shadow Outline | | Public Spaces | | |
| --- | New Net Shadow | | Communal Amenity Areas | | |
| | Proposed Development | | Arterial Main Street | | |



Legend

- | | | | | | |
|---------|----------------------------|--|------------------------------|--|---|
| - - - - | Property Line | | Approved Development | | Residential Private Outdoor
Amenity Area (no-impact zone -
June-September/March only) |
| | Proposed Shadow Extent | | Existing Development on Site | | |
| | As-of-Right Shadow Outline | | Public Spaces | | |
| - - - - | New Net Shadow | | Communal Amenity Areas | | |
| | Proposed Development | | Arterial Main Street | | |

JUNE 21 7:00PM

**Legend**

- | | | | |
|-----|----------------------------|------------------------------|---|
| --- | Property Line | Approved Development | Residential Private Outdoor Amenity Area (no-impact zone - June-September/March only) |
| ■ | Proposed Shadow Extent | Existing Development on Site | |
| ■ | As-of-Right Shadow Outline | Public Spaces | |
| --- | New Net Shadow | Communal Amenity Areas | |
| ■ | Proposed Development | Arterial Main Street | |



Legend

- | | | |
|----------------------------|------------------------------|---|
| --- Property Line | Approved Development | Residential Private Outdoor Amenity Area (no-impact zone - June-September/March only) |
| Proposed Shadow Extent | Existing Development on Site | |
| As-of-Right Shadow Outline | Public Spaces | |
| --- New Net Shadow | Communal Amenity Areas | |
| Proposed Development | Arterial Main Street | |

MARCH/SEPTEMBER 21 8:00AM

**Legend**

- | | | | | | |
|-----|----------------------------|--|------------------------------|--|---|
| --- | Property Line | | Approved Development | | Residential Private Outdoor Amenity Area (no-impact zone - June-September/March only) |
| | Proposed Shadow Extent | | Existing Development on Site | | |
| | As-of-Right Shadow Outline | | Public Spaces | | |
| --- | New Net Shadow | | Communal Amenity Areas | | |
| | Proposed Development | | Arterial Main Street | | |



Legend

- | | | | | | |
|--------|----------------------------|--|------------------------------|--|---|
| --- -- | Property Line | | Approved Development | | Residential Private Outdoor Amenity Area (no-impact zone - June-September/March only) |
| | Proposed Shadow Extent | | Existing Development on Site | | |
| | As-of-Right Shadow Outline | | Public Spaces | | |
| --- | New Net Shadow | | Communal Amenity Areas | | |
| | Proposed Development | | Arterial Main Street | | |

MARCH/SEPTEMBER 21 10:00AM



Legend

- | | | | |
|----------------------------|------------------------------|----------------------|---|
| --- | Property Line | Approved Development | Residential Private Outdoor Amenity Area (no-impact zone - June-September/March only) |
| Proposed Shadow Extent | Existing Development on Site | Public Spaces | |
| As-of-Right Shadow Outline | Communal Amenity Areas | Arterial Main Street | |
| New Net Shadow | | | |
| Proposed Development | | | |



Legend

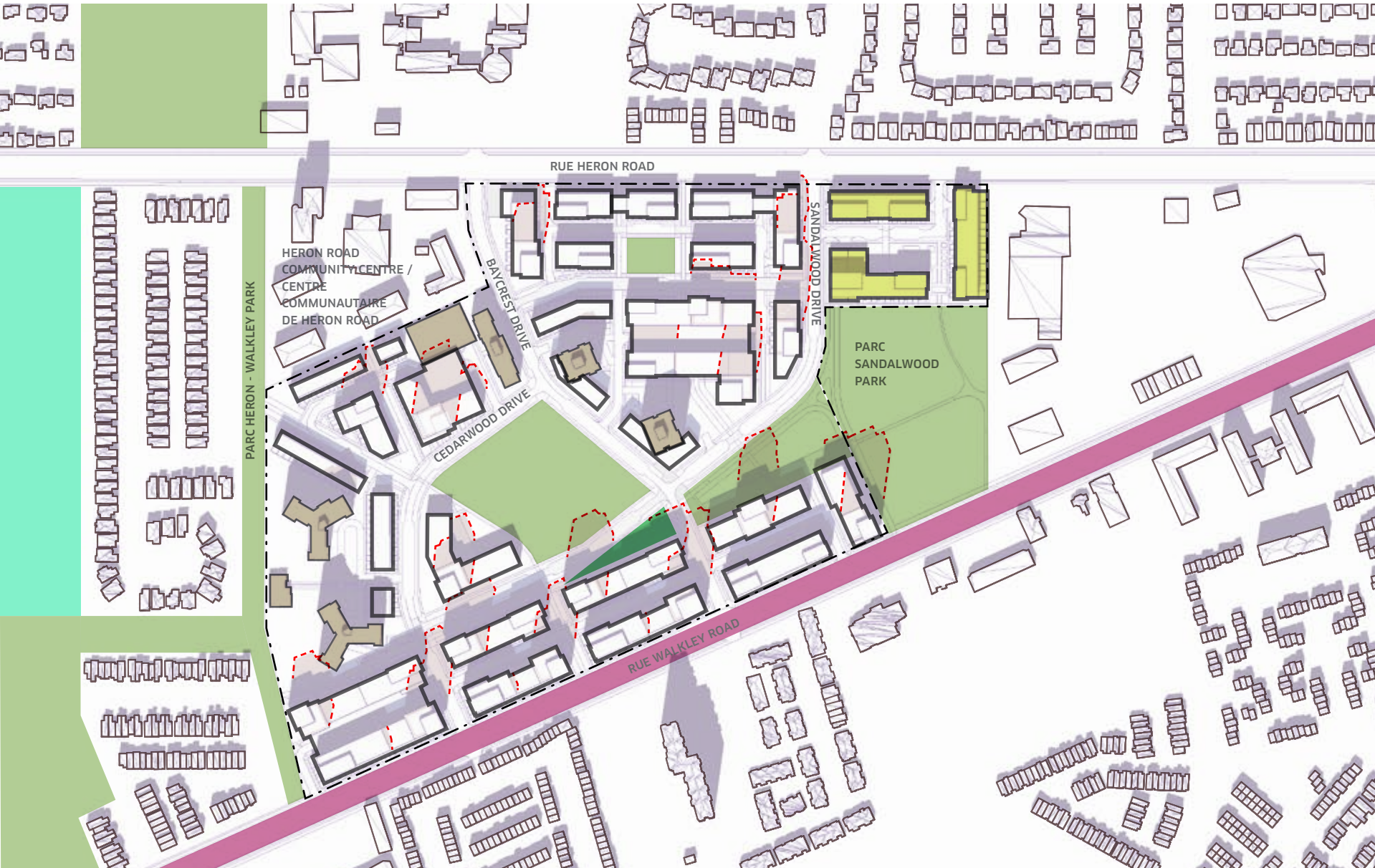
- | | | | | | |
|---------|----------------------------|--|------------------------------|--|---|
| - - - - | Property Line | | Approved Development | | Residential Private Outdoor Amenity Area (no-impact zone - June-September/March only) |
| | Proposed Shadow Extent | | Existing Development on Site | | |
| | As-of-Right Shadow Outline | | Public Spaces | | |
| - - - - | New Net Shadow | | Communal Amenity Areas | | |
| | Proposed Development | | Arterial Main Street | | |

MARCH/SEPTEMBER 21 12:00PM



Legend

- | | | | | |
|-----|----------------------------|----------------------|------------------------------|---|
| --- | Property Line | Approved Development | Existing Development on Site | Residential Private Outdoor Amenity Area (no-impact zone - June-September/March only) |
| | Proposed Shadow Extent | Public Spaces | Communal Amenity Areas | |
| | As-of-Right Shadow Outline | Arterial Main Street | | |
| --- | New Net Shadow | | | |
| | Proposed Development | | | |



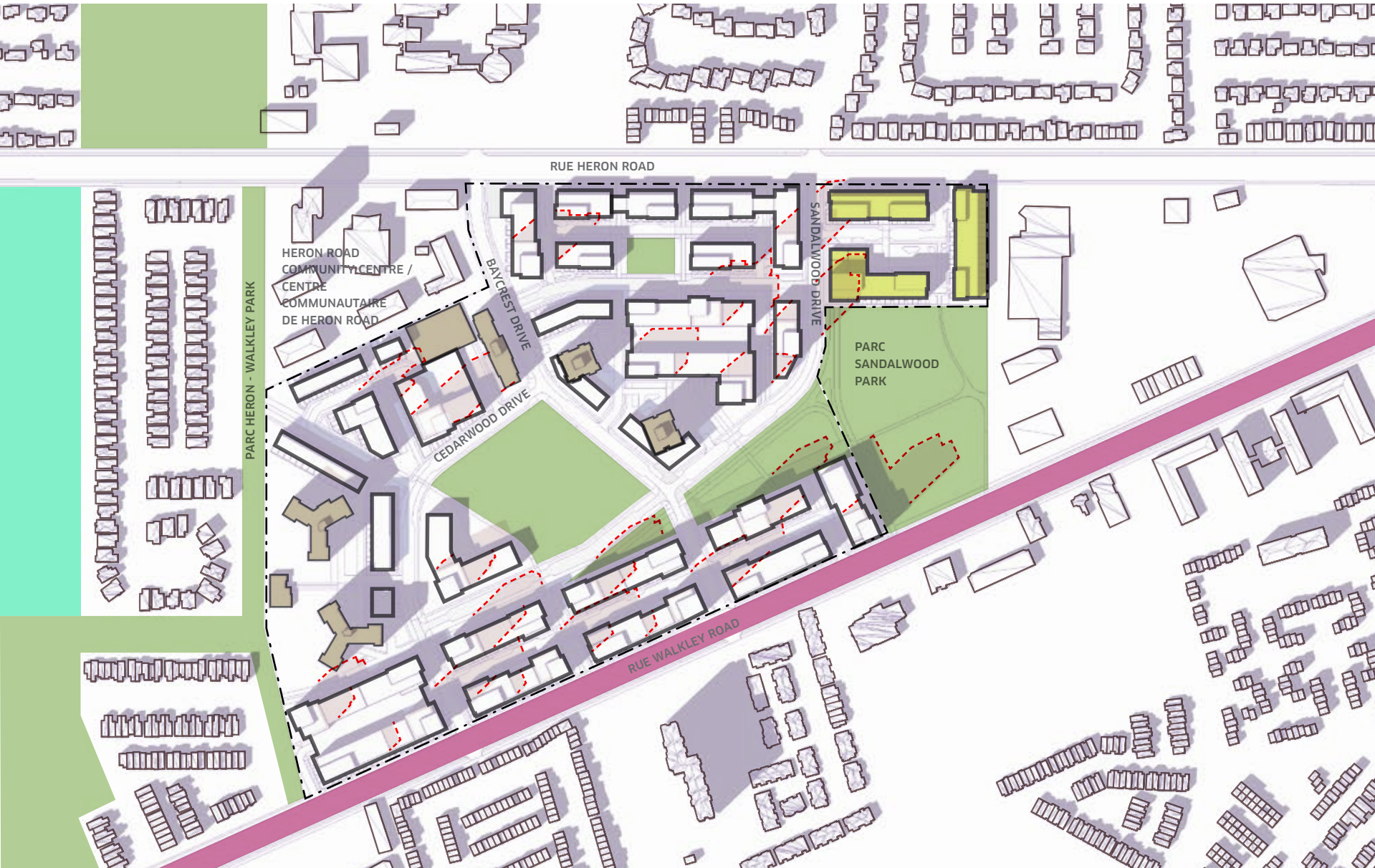
Legend

- | | | |
|----------------------------|------------------------------|--------------------------------|
| --- Property Line | Approved Development | Residential Private Outdoor |
| Proposed Shadow Extent | Existing Development on Site | Amenity Area (no-impact zone - |
| As-of-Right Shadow Outline | Public Spaces | June-September/March only) |
| New Net Shadow | Communal Amenity Areas | |
| Proposed Development | Arterial Main Street | |









MARCH/SEPTEMBER 21 2:00PM

**Legend**

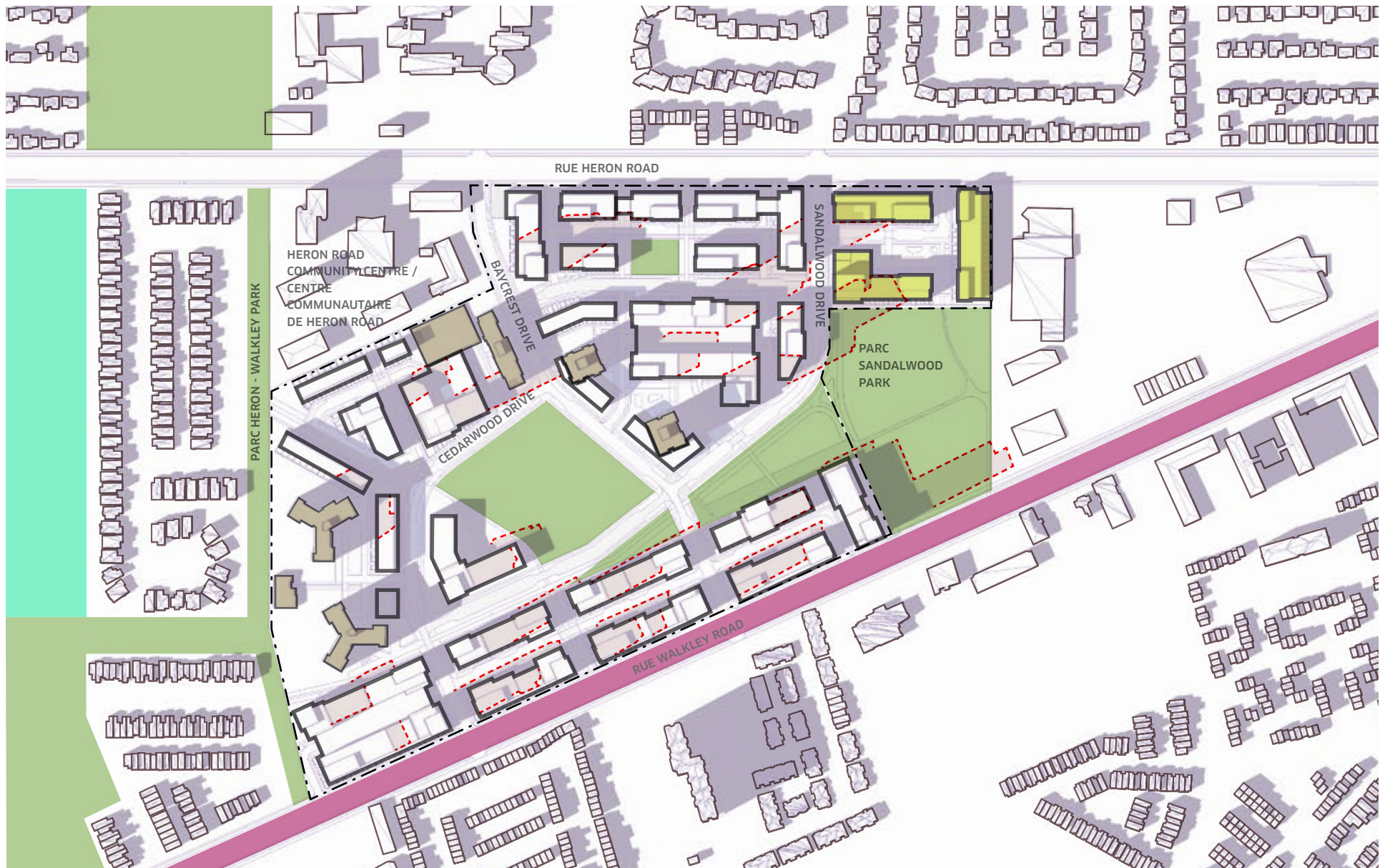
- | | | | | | |
|-------|----------------------------|--|------------------------------|--|--------------------------------|
| --- | Property Line | | Approved Development | | Residential Private Outdoor |
| | Proposed Shadow Extent | | Existing Development on Site | | Amenity Area (no-impact zone - |
| | As-of-Right Shadow Outline | | Public Spaces | | June-September/March only) |
| - - - | New Net Shadow | | Communal Amenity Areas | | |
| | Proposed Development | | Arterial Main Street | | |



Legend

- | | | | | | |
|---|----------------------------|---|------------------------------|---|---|
| - - - - | Property Line |  | Approved Development |  | Residential Private Outdoor Amenity Area (no-impact zone - June-September/March only) |
|  | Proposed Shadow Extent |  | Existing Development on Site | | |
|  | As-of-Right Shadow Outline |  | Public Spaces | | |
| - - - - | New Net Shadow |  | Communal Amenity Areas | | |
|  | Proposed Development |  | Arterial Main Street | | |

MARCH/SEPTEMBER 21 4:00PM



Legend

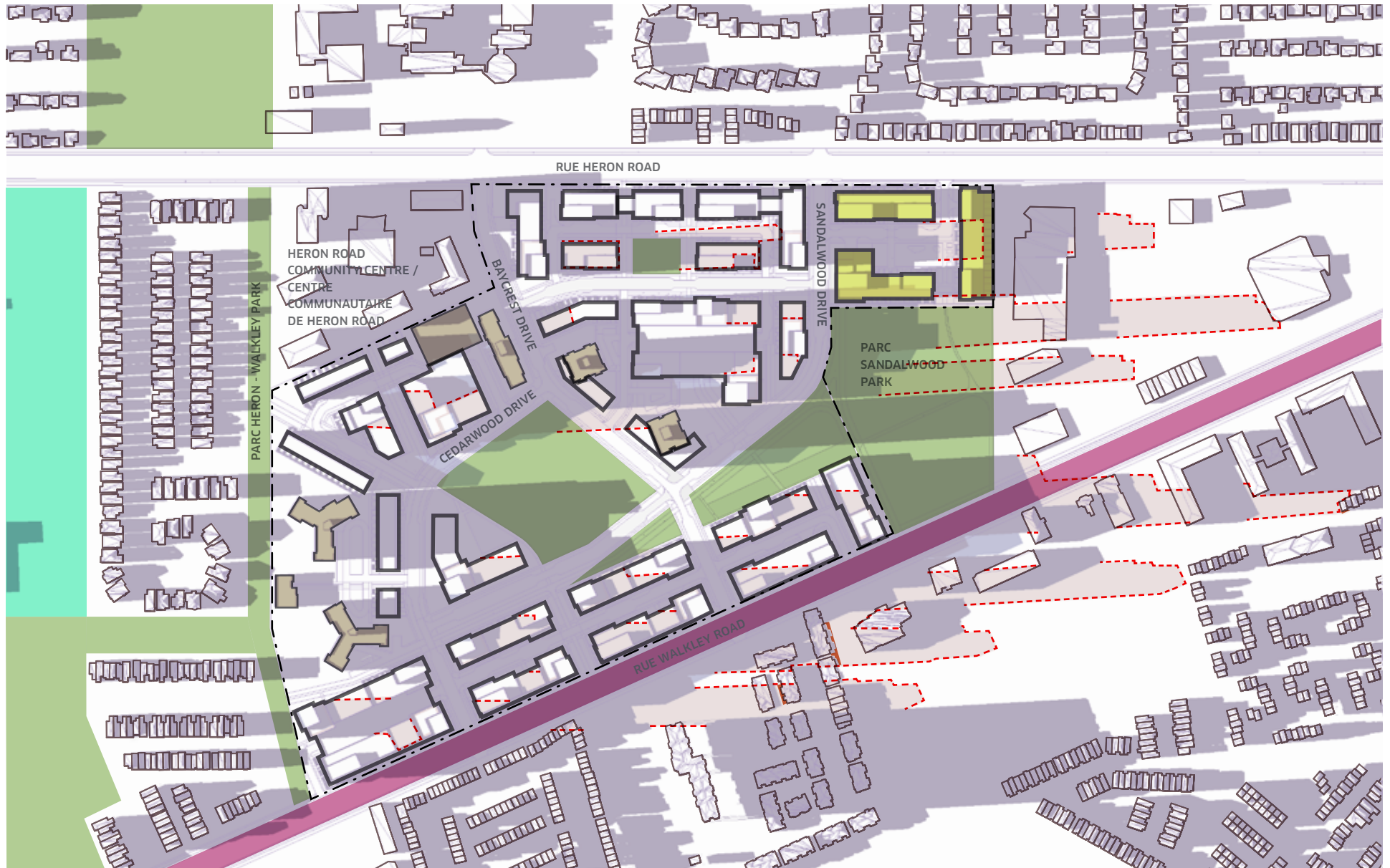
- | | | | | | |
|-----|----------------------------|--|------------------------------|--|---|
| --- | Property Line | | Approved Development | | Residential Private Outdoor Amenity Area (no-impact zone - June-September/March only) |
| | Proposed Shadow Extent | | Existing Development on Site | | |
| | As-of-Right Shadow Outline | | Public Spaces | | |
| --- | New Net Shadow | | Communal Amenity Areas | | |
| | Proposed Development | | Arterial Main Street | | |



Legend

- | | | | |
|----------------------------|------------------------------|----------------------|--------------------------------|
| --- -- | Property Line | Approved Development | Residential Private Outdoor |
| Proposed Shadow Extent | Existing Development on Site | Public Spaces | Amenity Area (no-impact zone - |
| As-of-Right Shadow Outline | Communal Amenity Areas | Arterial Main Street | June-September/March only) |
| --- -- | New Net Shadow | | |
| Proposed Development | | | |

MARCH/SEPTEMBER 21 6:00PM



Legend

- | | | | |
|-----|----------------------------|------------------------------|--------------------------------|
| --- | Property Line | Approved Development | Residential Private Outdoor |
| ■ | Proposed Shadow Extent | Existing Development on Site | Amenity Area (no-impact zone - |
| ■ | As-of-Right Shadow Outline | Public Spaces | June-September/March only) |
| --- | New Net Shadow | Communal Amenity Areas | |
| ■ | Proposed Development | Arterial Main Street | |