Shadow Studies

SHADOW STUDIES
WINTER SOLSTICE
DECEMBER 21

In response to a question from the public about the impact that the proposed towers would have on the Lord Roberts Elementary School playground during the winter months, shadow studies were prepared for December 21st, the winter solstice. During the times of the day that school children would typically use the playground, at morning recess and at lunch, the proposed development casts no shadows on this area. Starting at around 2:00 PM, the shadow from the edge of the east tower starts to trace across the area. By 3:00 PM the play area is completely in shadow, with the east tower contributing to about a third of the coverage. Even without the proposed development, the existing context would cover the playground in shadow by 3:30 PM, so the effective incremental difference is only 30 minutes. Shortly thereafter everything is in shadow, with sunset arriving at 4:15 PM.

Based on data from the YVR weather station, an average December day in Vancouver is overcast or partially cloudy approximately 61% of the time, so for most days the light would be flat and there would be little or no shadowing.

During the winter months, shadows will cover the Lord Roberts Elementary School playground by approximately 3:00 PM, only a 30 minute difference from the existing condition. There is no incremental shadowing of the playground in the spring, summer or fall.
Additional views analyses were prepared to study the effect of the proposed development on private views to the east and southeast. The previous studies, focused on the primary views to the west and southwest, as these are arguably the best views of English Bay and the open waters beyond.

The proposed towers do present some incremental blockage to the east and southeast, however these views are primarily of the city, with layers of mid and high-rise buildings extending out far into the distance and steeply rising grades to the east. Only some slivers of False Creek are visible in the gaps between the tall towers to the south. To help illustrate the existing views to the east, images from Google Earth approximating these views are shown on the facing page.

**Pendrell Plaza, 1666 Pendrell Street**

View Height: 12th Storey
Incremental View Impact by Terrace Levels: 0.0°
Incremental View Impact by Towers: 12.1°

72% View Maintained
View from Pendrell Plaza Looking East

View from Pendrell Plaza Looking Southeast
To study the impact of the terrace levels, a series of analyses were prepared for the private views from the lower storeys of Pendrell Place, the residential tower to the northeast. At the 4th and 6th storeys, the views from Pendrell Place are largely uninterrupted by the terrace levels, with the dense layers of existing buildings leaving only narrow views to the water.
**VIEW STUDIES**

**TERRACE LEVELS**

At the 8th and 10th storeys, the views from Pendrell Place would be clear of the terrace levels, with only the smaller floor plates of the towers contributing any incremental view blockage.

Although it may appear from these studies that the views from the lower levels of Pendrell Place could be improved by reshaping the proposed west tower or shifting it farther to the west, this tower is constrained by a required 40' setback to the west property line and a minimum 80' separation from Pendrell Plaza. These separations are necessary to protect the privacy and livability of the surrounding residences, including the proposed development at 1188 Bidwell Street.

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**Pendrell Place, 1616 Pendrell Street**

- View Height: 8th Storey
- Incremental View Impact by Terrace Levels: 0.0°
- Incremental View Impact by Towers: 6.8°

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- Affected Building
- Proposed Building
- Proposed Building Terrace Levels
- Existing View Blockage
- Incremental View Blockage by Tower
- Incremental View Blockage by Terrace Levels
- 100° View Shed
Vernal Equinox
4:00pm

Lord Roberts Elementary