

## 359 Kent Street Sustainability Strategy

**Version Date: March 17<sup>th</sup>, 2023**

The criteria of the Landmark Building policy in Ottawa's Centretown Secondary Plan Section 4.4.9(55) requires the 359 Kent Street development to "demonstrate leadership and advances in sustainable design and energy efficiency". As such, the following commitments are proposed to demonstrate sustainability leadership in the 359 Kent Street re-zoning and official plan amendment application approval:

- The project will meet or exceed the 12 site plan metrics as defined under the Tier 1 requirements of the City of Ottawa's High Performance Development Standard (HPDS)<sup>1</sup> at the time of Site Plan Control application
- Taggart Realty Management will commit the building to participate in the Better Buildings Ottawa<sup>2</sup> program
- The project team will complete a Material Emissions Assessment for the building structure and envelope in accordance with the CaGBC Zero Carbon Building Standard methodology
- The project team will implement a construction waste management strategy and plan to enable waste diversion and overall quantification of waste materials generated during the construction phase, with data to be shared with the City of Ottawa

### 1 OTTAWA HIGH PERFORMANCE DEVELOPMENT STANDARD TIER 1

The 359 Kent Street project will be designed to be compliant with the Tier 1 requirements of the City of Ottawa's High Performance Development Standard (HPDS) effective at the time of Site Plan Control application. There are currently 12 Tier 1 metrics, with the energy performance metric requirements representing the most significant potential influence on the continuing design and development of the project. Per the City of Ottawa, the following absolute performance targets have been established for this building typology:

Building Type	Total Energy Use Intensity (kWh/m <sup>2</sup> /yr)	Thermal Energy Demand Intensity (kWh/m <sup>2</sup> /yr)	Greenhouse Gas Intensity (kg CO <sub>2</sub> e/m <sup>2</sup> /yr)
<b>MURB 4 Storeys</b>	142	52	19

An energy model will be prepared consistent with ASHRAE 90.1 2010 to demonstrate the approach to achieving building performance that is below these maximum intensities. It is expected that the final building design will incorporate some or all of the following strategies to meet or exceed the energy performance requirements (as applicable):

- Energy-efficient building systems and equipment

<sup>1</sup> City of Ottawa: [https://engage.ottawa.ca/ottawa-high-performance-development-standard1/news\\_feed/hpds-requirements-site-plan](https://engage.ottawa.ca/ottawa-high-performance-development-standard1/news_feed/hpds-requirements-site-plan)

<sup>2</sup> City of Ottawa: <https://ottawa.ca/en/living-ottawa/environment-conservation-and-climate/climate-change-and-energy/better-buildings-ottawa>

- Improved building envelope performance
- Building control and automation systems
- On-site renewable energy generation
- Low carbon construction materials

## 2 BETTER BUILDINGS OTTAWA BENCHMARKING

The High-Performance Development Standard v1.2 is slated to come into effect on June 1<sup>st</sup>, 2023. Therefore, the project will be one of the first to be committed to be subject to the revised requirements of the HPDS. As such, the project provides an opportunity to advance knowledge and understanding within the City of Ottawa design and construction community.

Taggart Realty Management will commit to enrolling 359 Kent Street in the Better Buildings Ottawa program. At minimum, the utility data and associated information for the **first 24-months** of the occupancy phase will be reported under the Better Buildings Ottawa energy benchmarking program. The intent of providing this information is to provide real-world data to support the case for the development of more sustainable landmark buildings within the city, and to share best practices and sustainable design approaches with the development community at large.

## 3 LIFE-CYCLE ASSESSMENT

Limited information is currently available on the emissions impact of the construction materials used in the City of Ottawa. The project team will complete a Material Emissions Assessment for the building structure and envelope in accordance with the CaGBC Zero Carbon Building Standard Version 2 methodology for the upfront carbon lifecycle stage (e.g., product and construction process stages A1-A5) and identify options for pursuing lower-carbon material alternatives.

It is expected that the following materials would be included in this assessment:

- Envelope and structural elements including footings and foundations
- Complete structural wall assemblies (cladding, interior finishes, including basement)
- Structural floors and ceilings (excluding finishes)
- Roof assemblies
- Stairs
- Parking Structures

The following materials are expected to be excluded from the assessment:

- Excavation and site work
- Partitions
- Building services (e.g., electrical, mechanical, fire detection, alarm, and elevator systems, etc.)
- Fixtures and fittings
- Building site improvements (e.g., landscaping elements)

The project team will integrate considerations for the procurement of lower-carbon materials identified through the life-cycle assessment into the project specifications with the intent of procuring lower-carbon material alternatives where locally available.

#### **4 CONSTRUCTION WASTE MANAGEMENT**

The contractor will be required to implement a Construction Demolition and Waste Management Plan during the construction phase. The Plan will establish a non-binding target for waste diversion based on the percentage of materials diverted from landfill. The Plan will include the following information once the general contractor and waste hauler have been confirmed:

- The non-binding waste diversion goal for the project
- Units of measurement for waste tracking (e.g., volume or weight)
- Identification of materials targeted for diversion (minimum of 5 material streams)
- Clarification on whether materials will be separated on-site or commingled
- Description of the source-reduction, on-site diversion, and off-site diversion strategies that will be implemented
- Identification of the location where materials will be transported off-site

The Construction Demolition and Waste Management Plan will be developed to align with the LEEDv4.1 for Building Design and Construction Materials and Resources credit requirements, and with other existing best practices.

Upon completion of the construction phase, a final waste management summary report will be generated detailing the weight or volume of waste generated, disposal, and diversion rates for the project. Excavated soil and land-clearing debris will be excluded from the calculations in this report. The final waste management summary report will be shared with the City of Ottawa to help advance knowledge of construction waste generation and management within the local context.

#### **5 CLOSING**

Pratus Group looks forward to continuing to collaborate with the applicant team and the City of Ottawa to ensure that the planned development meets its sustainable design and energy efficiency objectives.