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Re: 3085 Hurontario Low Impact Design Features for Site & Building

3XN (on behalf of Equity Three Holdings Inc.) is pleased to submit the Low Impact Development (LID) strategy for our proposed mixed-use high-rise development at 3085 Hurontario Street. This project, strategically located near the Hurontario LRT, presents a prime opportunity to implement sustainable design solutions that align with the City of Mississauga's environmental objectives and support the evolving needs of an urban, transit-oriented community.

In recognition of the City's strong commitment to stormwater management and sustainability, our design integrates LID techniques aimed at managing stormwater on-site, mitigating urban heat island effects, and enhancing environmental quality. The development is designed to comply with the Mississauga Green Development Standards (MGDS) Tier 1, with a targeted ambition of achieving MGDS Tier 2. Outlined below are the LID measures incorporated into the design of this development:

SITE OPPORTUNITES

SITE SELECTION

The site at 3085 Hurontario is currently a low-density low-rise commercial strip mall with surface parking. Given its location, adjacent a major road artery and within walking distance of a transit hub, the site can support the proposed high-density development.

DEVELOPMENT DENSITY

The proposed development optimizes the proposed density on the site to both leverage and support considerable transit infrastructure investment at the heart of a community planned for growth.

TRANSPORTATION ACCESS

The development will deliver a new public right-of-way, known as 'Street C' along the length of the southern portion of the site, which allows porosity to the mid-block, consistent with the City of Mississauga Official Plan. An additional private multi-use road running generally parallel to Hurontario allows further access for private vehicles through the site to Kirwin and Hurontario.

WALKABILITY

The proposed development is located within in a transit-oriented neighborhood and within 600 meters of the Cooksville GO, two future Hazel McCallion LRT stops, and the proposed Dundas BRT. Hurontario is also being improved with updated sidewalks and dedicated bike lanes. Additionally, there is a large variety of grocery stores, restaurants, small

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retail and personal services, bank, and educational uses within a 600-metre radius of the subject site. The pedestrian network within 3085 Hurontario Street will have direct and convenient connections to the Kirwin Street through a multi-use private road and through a hard-paved public plaza to Hurontario.

PEDESTRIAN COMFORT

The proposed development prioritizes pedestrian comfort by incorporating design elements that enhance accessibility and safety. Shade trees will be planted along walkways and in amenity spaces to provide protection from the sun during warmer months.

Pedestrian walkways within and around the site are designed to not only meet but exceed standards, maximizing space where possible while considering the right-of-way (ROW) and the needs of other road users. These walkways are continuous, accessible, and barrier-free, ensuring easy movement for all users, including those with disabilities. All building entrances are level with pedestrian pathways to improve accessibility.

For safety, the private road includes gentle curves to slow traffic, and different paving materials are used to create a pedestrian-friendly environment. Benches and landscaping are placed throughout the site to support pedestrians and encourage more walking trips.

CYCLIST COMFORT

Cycling comfort has also been prioritized in the design. Bike storage areas are conveniently located near building entrances and key points throughout the development to encourage cycling as a primary mode of transportation. Where cycling lanes cannot be accommodated, traffic-calming measures and shared street designs are implemented to maintain cyclist safety. In addition, landscaping features and shade trees along cycling routes contribute to a more pleasant and comfortable riding experience.

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BUILDING OPPORTUNITIES
CLIMATE IMPACTS

CAR SHARE & ELECTRIC VEHICLE CHARGING INFRASTRUCTURE

As part of Mattamy's commitment to sustainable transportation solutions, the development will contemplate car-sharing initiatives. This approach not only enhances mobility options for residents but also allows for a corresponding reduction in the underground parking area. This reduction leads to decreased material use and lowers both embodied and operational carbon emissions.

In terms of electric vehicle (EV) charging infrastructure, 25% of resident parking will be equipped with Level 2 Electric Vehicle Supply Equipment (EVSE), while the remaining spaces will feature energized outlets adjacent to the parking spaces, making them EV-ready. Additionally, a minimum of one visitor space will be equipped with Level 2 EVSE to accommodate guests and further promote the use of electric vehicles.

CONSTRUCTION WASTE MANAGEMENT

The project aims to implement a construction waste management strategy that diverts at least 75% of total construction and demolition materials from landfills. This will be achieved through a combination of waste reduction, reuse, and recycling practices.

BICYCLE PARKING

A total of 85 short-term outdoor bicycle parking spaces will be distributed around each building on the site to encourage cycling as a viable mode of transportation. Indoor bicycle parking will be available above grade in Buildings 2 and 3, while Buildings 1 and 4 will feature below-grade bicycle parking. Additionally, all buildings will include stairs equipped with bike ramps to facilitate easy access for cyclists, ensuring convenience and safety when transitioning between different levels.

EROSION + SEDIMENT CONTROL

The erosion and sediment control plan for the site during construction will adhere to the guidelines set forth by the City of Mississauga and the Credit Valley Conservation Authority. Our construction management strategy will specifically address erosion and sediment control measures, along with the requirements outlined in the grading plan. These measures will be implemented to prevent the loss of topsoil and to effectively contain dust within the site, ensuring minimal environmental impact throughout the construction process.

HEAT ISLAND EFFECT (NON-ROOF AND ROOF)

Roofs and site surface materials will be selected for high-reflectance properties to minimize the effect of heat islands.

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CLIMATE RESILIENCY

EMISSIONS FREE ENERGY

In-suite heating and cooling will be provided by a geothermal system.

REFUGE AND BACK-UP POWER GENERATION

Refuge areas with 48 hours of backup power will be provided for heating, cooling, lighting, and potable water will be provided in accordance with MGDS Tier 2 requirements.

NATURAL SYSTEMS

RAINWATER HARVESTING & STORMWATER RETENTION

The proposed development includes the implementation of rainwater harvesting systems designed to intercept, convey, and store rainfall for irrigation purposes. These systems will capture rainwater from rooftops and other surfaces, effectively reducing stormwater runoff and alleviating pressure on the municipal drainage system.

GREEN ROOFS

All non-amenity roof areas will be designed with intensive green roof systems where feasible to reduce the amount of stormwater entering the municipal system. Outdoor rooftop amenity areas will be designed with raised planting beds and high albedo paved surfaces to reduce heat island effect.

NEW TREES

Proposed trees will be planted in raised softscape beds, or in below grade planting beds with a minimum volume of 30 cubic meters of high-quality soil per each large shade **tree**, or 15 cubic metres each for shared tree planting beds of 2 or more trees.

These planting beds will be strategically located throughout the development, including along street frontages and within the Public Plaza, enhancing the site's overall aesthetic and ecological value.

NATIVE VEGETATION + SHADE

A target of 75% of all proposed planting will be native, where feasible. Shade trees, approximately 6-8 meters apart, will be provided along all street frontages and public walkways with sufficient soil volume.

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BUILDING DESIGN

BIRD FRIENDLY GLAZING

Bird-friendly glazing types will be examined in the subsequent design phases.

TARGET WINDOW-TO-WAL RATIO

The development is targeting 40% window-to-wall ratio to improve the energy performance needs of the buildings.

SITE AND BUILDING LIGHTING

Exterior lighting will be designed to point downwards and shielded to prevent glare and keep light from trespassing to neighboring properties.

INDOOR WATER USE REDUCTION

High-efficiency toilets and plumbing fixtures will be used to reduce water consumption.

BI-SORTER RECYCLING

A bi-sorter system will be used to allow residents to separate waste, organics, and recyclables.

REGIONAL AND LOW CARBON MATERIALS

Where possible, construction materials will be chosen for their low carbon footprint and sourced responsibly to reduce carbon footprint of the shipment of materials.