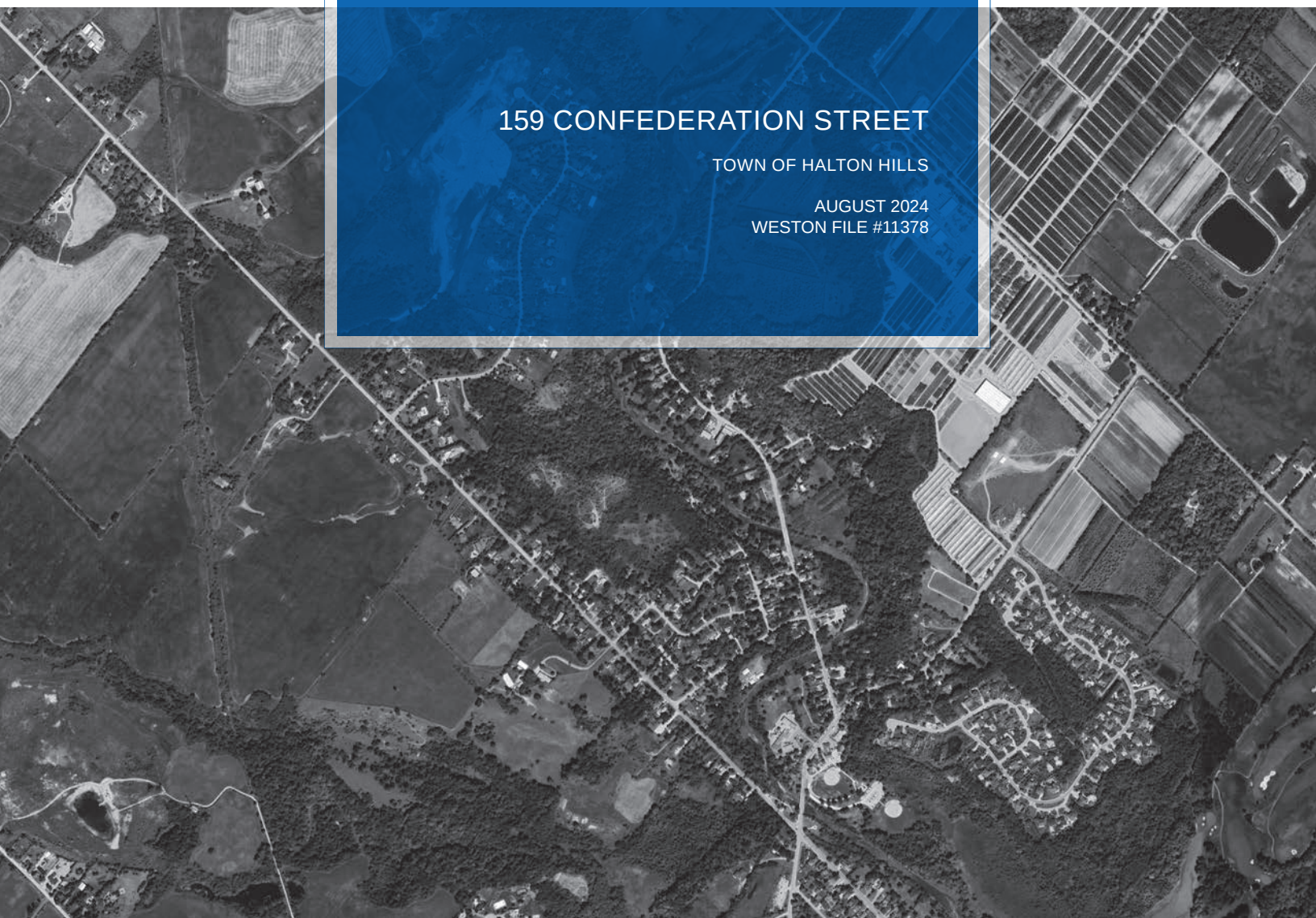
WESTON CONSULTING

# GREEN DEVELOPMENT STANDARDS

## 159 CONFEDERATION STREET

TOWN OF HALTON HILLS

AUGUST 2024
WESTON FILE #11378



# TABLE OF CONTENTS

EXECUTIVE SUMMARY . . . . . 4

1.1 summary . . . . . .5

SUMMARY CHECKLIST . . . . . 6

2.1 Energy & Water . . . . . .9
2.2 Ecology . . . . . .9
2.3 Resiliency . . . . . 10
2.4 Transportation . . . . . 11
2.5 Innovation . . . . . 11

# LIST OF TABLES

Table 1. Town of Halton Hills Green Development Standards Summary Checklist . . . . . 7

# 1

# EXECUTIVE SUMMARY

## 1.1 SUMMARY

This Green Development Standards report ('GDS') is consolidated by Weston Consulting to support a Draft Plan of Subdivision, a Zoning By-Law Amendment, and an Official Plan Amendment application to the Town of Halton Hills.

This report should be reviewed along with other reports and studies submitted for this application. The GDS provides a summary of the checklist items contributing to the sustainability performance of the proposed development.

The checklist summary comprises five main categories including:

- Energy and Water,
- Ecology
- Resiliency
- Transportation
- Innovation

The following section provides the number of potential points to be achieved in this stage and in future detailed stages.

# 2

# SUMMARY CHECKLIST

| | Submission Requirements | Theshold & Potential Points | | | Targeted Points |
|---|---|---|---|---|---|
| **Energy & Water** | | | | | |
| 1.1: Energy Use Reduction<br>Demonstrate reduction in energy use over code minimum with an energy model reflecting the proposed design. Low-rise residential (i.e. OBC's Part 9) minimum is 10%. Minimum for everything else is 15%. | ☐ Energy report<br>☐ Energy model file<br>☐ Envelope design brief<br>☐ Mech. & elec. design brief | Part 3 | Part 9 | Pts | ***To be determined in future stages*** |
| | | 15% | 10% | 5 | |
| | | 25% | 20% | 8 | |
| | | 40% | | 11 | |
| | | Net-Zero | | 14 | |
| 1.2: Low Carbon Energy<br>Utilize low emission mechanical systems, and/or install onsite renewables, to achieve an incremental percent CO2e reduction beyond the percent energy use reduction demonstrated for measure 1.1. | ☐ All above items<br>☐ Supporting CO2e calculations<br>☐ Renewable energy calculations (if applicable) | + 5% | | 1 | ***To be determined in future stages*** |
| | | + 10% | | 2 | |
| | | + 15% | | 3 | |
| | | + 20% | | 4 | |
| 1.3: Water Use Reduction<br>Specify maximum water fixture flow rates that achieve potable water consumption reductions over OBC maximum rates. | ☐ Completed water reduction calculator | 30% | | 1 | ***To be determined in future stages*** |
| | | 40% | | 2 | |
| 1.4: Energy & Water Reporting<br>Report key performance characteristics for development. Declare that this data can be made publically accessible. | ☐ Signed declaration letter listing all performance metrics | If provided | | 1 | ***To be determined in future stages*** |
| **Ecology** | | | | | |
| 2.1: Minimum Soil Depth<br>Preserve or re-instate a minimum depth of at least 30cm of high quality topsoil across the site. | ☐ Signed narrative describing strategy | 30cm | | 1 | ***To be determined in future stages*** |
| 2.2: Minimum Planter Soil Volume<br>Provide a minimum of 30m3 of soil volume per tree. | ☐ Landscaping drawings noting strategy | 30m3 | | 1 | ***1*** |

Table 1. Town of Halton Hills Green Development Standards Summary Checklist

*(To be continued on the next page)*

| | Submission Requirements | Threshold & Potential Points | | Targeted Points |
|---|---|---|---|---|
| 2.3: Native & Drought Resistant Vegetation<br>Demonstrate that there is no need for site irrigation, or that at least 75% of vegetation will be native and/or drought-tolerant. | ☐ Landscaping drawings noting strategy | 75% | 1 | ***1*** |
| **Resiliency** | | | | |
| 3.1: Stormwater Quantity<br>Retain run-off from a minimum of 10-mm depth of rainfall from all site surfaces through infiltration, evapotranspiration, and reuse | ☐ Stormwater management plan and supporting calculations | 10mm | 2 | ***To be determined in future stages*** |
| | | 27mm | 3 | |
| 3.2: Stormwater Quality<br>Remove at least 85% of total suspended solids from run-off leaving the site. | ☐ Stormwater management plan and supporting calculations | 85% | 1 | ***To be determined in future stages*** |
| 3.3: Resiliency Checklist<br>Complete resiliency checklist to demonstrate awareness of site climate change risks. | ☐ Completed climate change resiliency checklist | If provided | 1 | ***To be determined in future stages*** |
| **Transportation** | | | | |
| 4.1: TDM Plan & Electric Vehicles<br>Demonstrate a percent reduction in fossil fuel single occupancy vehicle trips for the site through: cycling, walking, transit, and/or electric vehicle infrastructure. | ☐ Transportation demand management plan with supporting calculations | 30% | 4 | ***To be determined in future stages*** |
| | | 50% | 5 | |
| | | 70% | 6 | |
| | | 90% | 7 | |
| **Innovation** | | | | |
| 5.1: Innovation<br>Quantitively demonstrate that another strategy achieves environmental benefits equal or greater than other GDS measures. | ☐ Narrative and calculations supporting the case | Case for number of eligible points to be made by applicant | 1 | ***To be determined in future stages*** |
| | | | 2 | |
| | | | 3 | |
| | | | 4 | |
| | | | 5 | |

**Total Targeted Points:**
(minimum of 20 required)

***TBD***

## 2.1 ENERGY & WATER

A more comprehensive analysis will be added to this section to determine the obtainable target point in the next phases of design.

A draft Lighting Site Plan prepared by E-Lumen Consulting Engineers is attached to this report.

## 2.2 ECOLOGY

2.2.1 Minimum Soil Depth

According to the field investigation conducted by Sirati & Partners Geotechnical Engineer, a 150 mm to 200 mm thick topsoil layer was encountered at two borehole locations. However, it is imperative to note that the thickness of topsoil encountered at the borehole locations is not representative of the topsoil thickness at the entire site. Hence, it cannot be relied upon for topsoil removal calculations, etc.

2.2.2 Minimum Planter Soil Volume

A landscaping drawing prepared by Landscaping Planning Landscape Architects is attached to this report to indicate the tree locations, planter types, and soil quality per installation to obtain the target point 1 of this item.

Notably, there are only open soil trenches provided, as opposed to raised planters. The planting soil includes minimum 600 mm of sandy loam soil, 50-60% of sand, 20-40% of silt, 6-120% of clay, 2-5% of organics, with 6.5-7 pH.

2.2.3 Native & Drought Resistant Vegetation

The attached Landscape Plan also shows a list of species being proposed for the site with their native and drought tolerant classification, Proposed location and area of coverage of each species.

Obtaining the target point 1, a detailed plant list with 75% native species will be provided with the Site Plan application.

## 2.3 RESILIENCY

The supporting studies and drawings including Stormwater Management Plan and supporting calculations will be addressed in future phases of design.

2.3.1 Stormwater Quantity

- Stormwater Management Plan including:

a) Preliminary location for designated systems on a site plan,
b) Details on the stormwater retention measures used to retain runoff and their capacities, and
c) Calculations to verify a retention of 10mm of rainfall compared to pre-development conditions.

- Threshold for max point target is 27mm.

2.3.2 Stormwater Quality

- Stormwater Management Plan including:

a) List of filtration measures proposed to suite the existing site conditions,
b) Calculation demonstrating percent TSS removed from 25mm rainfall event based on pre-existing condition, and
c) Proposed location for these measures

- Threshold for point target is 85%.

2.3.3 Resiliency Checklist

Submit a completed Climate Change Resiliency Checklist. The checklist can be found on the Town of Halton Hill's website, and contains the following sections:

- Focused discussion: Identifying whether a designated meeting has been held to discuss climate change resiliency strategies for the development.
- Extreme temperatures: Confirming design temperatures, and identifying measures that have been taken to reduce the impacts of extreme temperatures on the development.
- Flood mitigation: Confirming the vulnerability of the site to flooding, the rainfall events that have been accommodated in the design, and listing the applicable measures taken to reduce the site's vulnerability to flooding.
- Backup Power: Identifying any on-site systems planned to reduce the development's reliance on the grid, identifying any backup power systems, and if backup power is provided - the systems that the backup power will serve.
- Summary: Summarize the development's approach to resiliency.

All parties that have contributed to the completed checklist are then expected to

## 2.4 TRANSPORTATION

The Transportation Demand Management Plan ('TDM') and supporting calculations will be addresses in future phases of design.

2.4.1 Transportation Demand Management Plan

- Provide a TDM demonstrating a strategy to reduce single-occupancy vehicle use of fossil fuel vehicles. The structure of the TDM plan will vary based on development type and location, but may employ the following strategies: Cycling, Walking, Transit, Parking, Alternative Commute Services, Way Finding and Travel Planning, Education, Promotion, and Incentives.

Given the area context, TDM would primarily focus on active transportation connections which are provided in the Site Plan, and supplying information on active transportation routes.

A draft Transportation Impact Study is attached to this report pr4epared by Nextrans Consulting Engineers.

## 2.5 INNOVATION

The acceptance of the obtained points will be determined in collaboration with the Town's Planner and the supporting rationale will be outlined in the next phases of design.


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