



# EMGO III CORPORATION

## TREE CANOPY COVERAGE ANALYSIS

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# 1.0 INTRODUCTION

## 1.1 Purpose of the Analysis

The proposed EMGO III Corporation Tree Canopy Coverage Analysis represents a general assessment of the projected tree canopy coverage for these lands within North Oakville. The proposed development is planned as a future Public Elementary School and portion of a Neighbourhood Park, with adjacent townhouse and single detached residential development to the east and south, directly influenced by the structure of the adjacent communities through the continuation of the surrounding street network.

The analysis will determine how these land uses can contribute to the tree canopy coverage and will estimate the projected coverage for streets, and open space blocks, in part, on standard calculation methods outlined in the North Oakville Urban Forest Strategic Management Plan (NOUFSMP - Natural Resource Solutions Inc. & Dillon Consulting Limited, November 2011). It will also address potential measures within the Putica study area that will help meet the criteria established by the NOUFSMP for achieving the Town of Oakville's long term objective of a 40% urban forest canopy cover, including criteria related to soil volume, tree health and tree spacing.

This analysis will be informed by the current land use plan available, with future driveway, parking layouts and utility constraints considered as an average based on similarly developed residential streetscapes in the surrounding communities.

## 1.2 Study Area

The development site for EMGO III Corporation is situated north of Dundas St., south of Burnhamthorpe Rd, and east of Sixth Line, comprising 6.61 hectares (16.3 ac.) of land that will be an integrated part of the surrounding future community. The existing topography and vegetation of the subject lands is that of gently rolling farmland, hedgerows, and wooded areas. There are no NHS lands or significant natural features within this development site.

The EMGO III Corporation lands are bounded by Sixth Line to the west, with future residential land uses immediately to the north, east, and south. NHS lands are located on the west side of Sixth Line, adjacent to the proposed Neighbourhood Park in EMGO III Corporation. To the south of the site, the recently developed lands consist of low and medium density residential uses. Existing homes in the neighbourhood are generally traditional-inspired residential architecture in a variety of single detached homes and townhouses.



Fig. 1.2a - A parkette located on Squire Crescent in the new development south of EMGO III Corporation lands

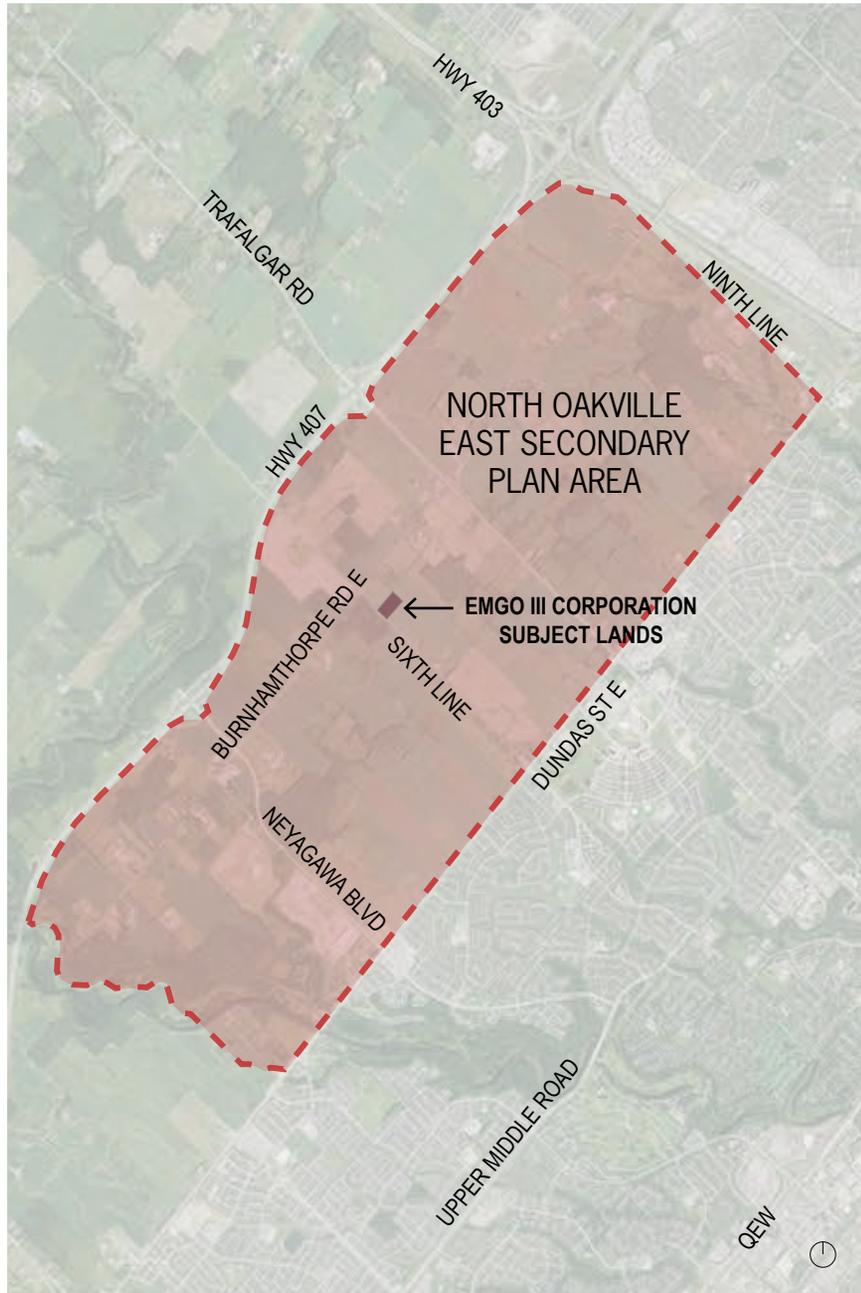


Fig. 1.2b - The EMGO III Corporation lands within the North Oakville East Secondary Plan Area



Fig. 1.2c - EMGO III Corporation Subject Lands

## 1.3 North Oakville Urban Forest Strategic Management Plan (NOUFSMP)

The North Oakville Urban Forest Strategic Management Plan is a high level strategy and planning study prepared to provide the Town of Oakville with recommendations and guidelines for achieving a sustainable, healthy urban forest for the North Oakville lands. This strategy is an extension of the Town's long term vision to achieve its 40% tree canopy coverage target.

North Oakville comprises approximately 4,000 hectares of land, with roughly 1,600 hectares of tree canopy coverage required to achieve the 40% target. The designated Natural Heritage System (NHS), which includes native forests, cultural woodlands, shrub lands and agricultural hedgerows, accounts for approximately 1,200 hectares of North Oakville's land area, making it a significant contributor to achieving the 40% target. The remaining approximately 400 hectares of coverage is expected to be achieved through land development (residential, employment/industrial, institutional and commercial), including streetscapes, parks, buffers, cemeteries, stormwater management facilities, parking lots, etc.

The following is a brief summary of some of the targets, recommendations and measuring criteria described in the NOUFSMP that are pertinent to assessing the ultimate long term tree canopy coverage within the EMGO III Corporation study area.

### 1.3.1 Tree Classification and Sizing

The canopy coverage plan shall comply with the following guidelines -

- large stature trees (14m spread) = 154 sq.m and shown as 14m dia.

### 1.3.2 Projected Street Tree Canopy Coverage (Residential)

As a general proposed standard, the NOUFSMP recommends achieving a 20% street tree canopy coverage for residential developments. However, it is noted that trees will not reach their full genetic size potential within most streetscape environments unless enhanced rooting techniques are employed to achieve the growing environment necessary to support good quality canopy coverage. This is particularly important within a more dense, compact and transit-oriented environment where the utilization of enhanced rooting techniques, such as rooting break-out zones below sidewalks and driveways within engineered soil systems, may be required to achieve the 30 cu.m soil volume requirement.

# 3.0 COMMUNITY TREE COVERAGE

Within the EMGO III Corporation study area, the canopy coverage contribution will be achieved through the proposed streetscape treatment. Although not measured specifically in this analysis, a secondary contribution may be considered through front and rear yard landscape treatment for dwellings. This can account for approximately 1-2% coverage and is typically derived from smaller stature trees.

## 2.1 Street Tree Canopy Coverage

The street tree canopy coverage calculation for the EMGO III Corporation study area is a preliminary estimate based on a conceptual land use plan primarily characterized by a Neighbourhood Park and Public Elementary School, corresponding with the Town's planning designations for these lands. Along the eastern and southern boundaries of the site, three (3) blocks of residential development are designated as a Neighbourhood Centre Area and will consist predominantly of rear lane townhouses, with three (3) single detached units. Considering the type of residential development intended for the community, it is not expected that engineered soils (e.g. structural soils or cell support structures) will be utilized. The street tree canopy coverage corresponds with the proposed road hierarchy and all trees to be planted within grass boulevards.

Street trees have been indicated, on average, at approximately one tree per lot. The street trees in this assessment have been designated as large stature, until such time a more comprehensive streetscape plan can be undertaken as part of a detailed landscape plan review process.

The preliminary tree canopy coverage results are as follows (refer to figure 2.1):

- Total EMGO III Corporation TCCA Applicable Land Area - approx. 19,330 sq.m (not including the park and school).
- Total Street Tree Canopy Coverage Area (based on large stature trees) - approx. 7,854 sq.m (not including the park and school).
- **EMGO III Corporation Street Tree Canopy Coverage = 40.6%** (7,854/19,330)



Fig. 2.1 - Conceptual Street Tree Canopy Coverage Plan for the EMGO III Corporation Subject Lands

## 2.2 Open Spaces

### *Neighbourhood Park*

The Neighbourhood Park site is partially located within the EMGO III Corporation subject lands (2.49 ha. of 3.48 ha.), with the remainder situated in the future development lands to the north and south. The tree canopy coverage will be calculated based on the amount of landscape area that could possibly be covered by canopy, with the exclusion of hard landscape features, structures and parking areas.

### *Public Elementary School*

The Public Elementary School is mostly located within the EMGO III Corporation subject lands (2.20 ha. of 2.40 ha.). The tree canopy coverage will be calculated based on the amount of landscape area that could possibly be covered by canopy, with the exclusion of hard landscape features, parking areas, buildings and sports fields.

## 2.3 Conclusion

There are many factors that will contribute to the health and long term sustainability of the tree canopy within EMGO III Corporation lands and the surrounding development areas. In addition to maximizing tree planting opportunities, resolving issues related to soil compaction, soil quality, soil volumes and tree species selection in an increasingly urban environment will be fundamental to reaching the overall 40% tree canopy coverage targeted for the Town of Oakville. These issues can be considered in a more comprehensive depth during the detailed landscape design process.