
Shining Hill Central Aurora

Green Development Standards Report

**162, 306, 370, 434 & 488 St. John's Sideroad
Aurora, ON**

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1.0

Introduction

The Shining Hill Estates community will meet the green building and development vision and objectives of the Town of Aurora through a variety of sustainable initiatives as described in this report.

There are many challenges facing our communities today. Climate change, traffic congestion, environmental protection, water quality and quantity, energy cost and shortages, safety, food production, public health, equality, affordability, and cultural preservation are just a few of the issues most of the world's communities are grappling with today. All these challenges have influenced a new movement in terms of planning for more sustainable communities.

Planning for more sustainable communities is about finding a balance between the social, economic, and environmental goals of a community through a whole system, integrated approach (Figure 1). Sustainable initiatives include reducing energy and emissions through a balanced and more active transportation system, protecting and restoring environmental features, improving the quality of life and livability of communities, and strengthening their economic competitiveness. Most levels of government have already or are in the process of adopting policies and legislation that will require the development of more sustainable new communities.

Figure 1 Sustainable Planning Framework



1.1 Building a Greener Community

The vision for the Town of Aurora includes the implementation of development standards that are intended to reduce energy consumption and road congestion by facilitating active transportation nodes. This will be achieved through transit supportive densities and development patterns, green building technologies and other sustainable design options. These measures will help the Town realize its objective of building healthy, vibrant and sustainable communities.

1.2 Purpose of This Report

This Green Development and Design Report identifies the green development and design vision and policies of the Aurora Official Plan and describes how the Shining Hill Central Aurora development will meet this vision and requirements. The Report details how the various sustainable objectives of the Official Plan Section 5.2 can be applied and/or identifies an equivalent alternative approach or standard.

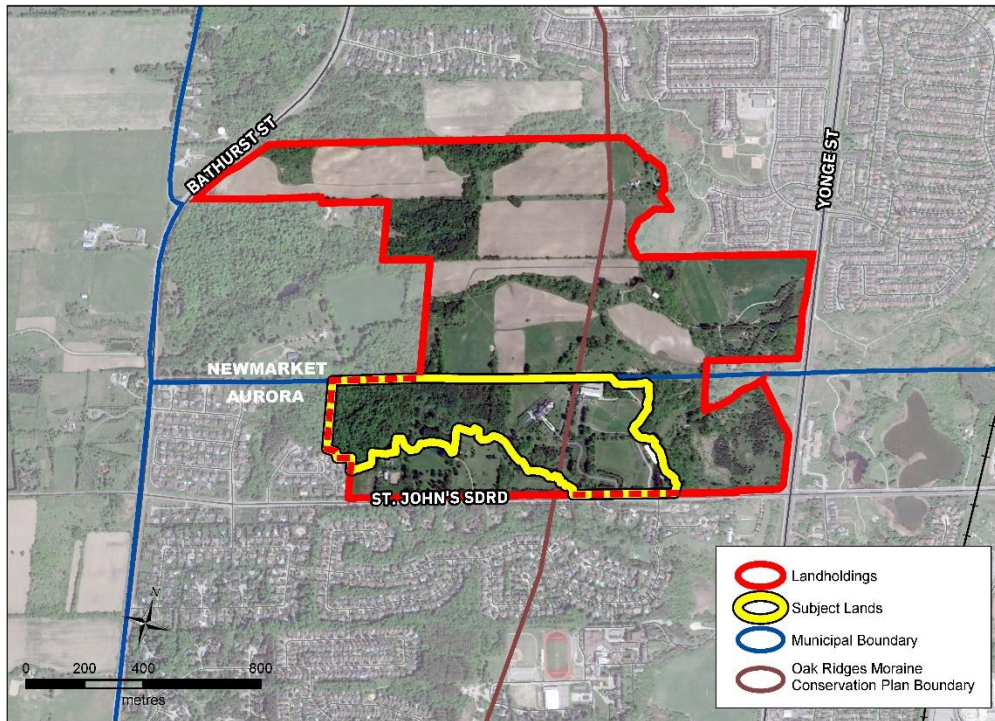
1.3 Subject Site

The Subject Lands are located on the north side of St. John’s Sideroad, west of Yonge Street in the Town of Aurora and are municipally known as 162, 306, 370, 434 & 488 St. Johns Sideroad. The full legal description is provided in Table 1.1. It should be noted the southwestern portion of the parcels is not subject to this application and is part of the approved Shining Hill Phase 2 application.

Table 1.1 Legal Description

#	Legal Description of Property	Municipal Address
1	PT LT 86, CON 1 (KING), PT 1, PL 65R26049; AURORA	162 St. John’s Sideroad
2	PT LOT 86, CON 1 KING, PART 2, PLAN 65R37588 TOWN OF AURORA	306 St. John’s Sideroad
3	PT LT 86 CON 1 KING PART 2 ON 65R36724 TOWNSHIP OF KING	370 St. John’s Sideroad
4	PT LT 86 CON 1 KING PT 1, PLAN 65R37588 TOWN OF AURORA	434 St. John’s Sideroad
5	PT LT 86 CON 1 (K) PT 1 ON 65R36724 TOWNSHIP OF KING	488 St. John’s Sideroad

Figure 2 Subject Lands and Surrounding Context



1.4 Proposed Development

The proposed Draft Plan of Subdivision, as illustrated in Figure 3, proposes to develop the Subject Lands to accommodate approximately 108 dwelling units (87 single-detached dwellings and 21 townhouse dwellings), the St. Anne's All-Girls Private School, a neighbourhood park and a natural heritage system.

The 87 single detached residential units will range in frontage from 12.2m (40') to 15.24m (50'), with 9 single detached dwellings accessed through a rear lane. Based on the net developable area (excluding the natural heritage system), the proposed density of the development will be approximately 8 units per gross developable hectare.

St. Anne's All-Girls School will be located on the western portion of the Subject Lands (located on a 4.28ha block). The school will adaptively re-use the existing Dunin Estate home with the addition of temporary portables and utilize the existing infrastructure as part of its initial Phase 1 opening plan. St. Anne's School will serve girls from all over York Region and its neighbouring regions with classes offered in Grades 5 through 9 in its first year and adding a grade in each subsequent year of operation until reaching Grade 12. The school will offer a day program at the outset with plans for a boarding program in the future. The school will operate under the St. Andrew's College umbrella. St. Andrews is located approximately 1 kilometre to the south and has established itself over the past 120 years as an internationally recognized institution.

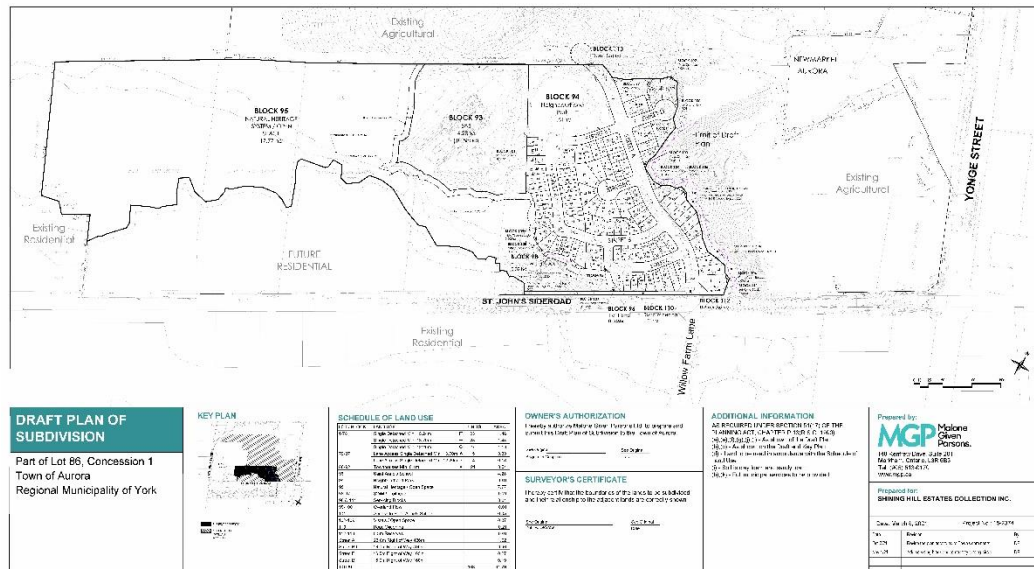
The overall master plan for St. Anne’s School includes the following:

- **Recreation Centre** – this building is planned to be located along the Newmarket frontage and is proposed to contain sports courts and training areas.
- **Academic Building** – an additional building for classrooms is planned to be built at the southern portion of the property and will be connected to the main campus building
- **Dormitories** – multiple dormitories are planned to be built along the western portion of the property overlooking the quad. It is anticipated approximately 100 students will live here at ultimate build-out

Additional components of the proposed development include a 1.61 hectare neighbourhood park, and a 17.7 hectare natural heritage / open space area, which will be conveyed to the Town and provide opportunities to enhance the Towns trail system. The neighbourhood park will be programmed with the assistance of St. Anne’s School, which will have a shared operations agreement with the Town. Bleachers are planned to be located on the St. Anne’s block to provide seating for spectators to watch sports games taking place at the park.

Primary access to the development is provided off a proposed north-south collector road that will connect to St. John’s Sideroad opposite Willow Farm Lane. This future collector road will additionally provide access to the Newmarket portion of the Shining Hill overall development. Internal vehicular circulation for the proposed development will be provided via a collection of public roads ranging in ROWs of 15.0m to 23.0m.

Figure 3: Proposed Draft Plan of Subdivision



Prepared by MGP Ltd., 2023

2.0

Policy Overview

As part of the Official Plan Amendment and Zoning Bylaw Amendment applications, the Town requires a Green Development Standards Report. The Owner shall prepare a Green Building and Development report for the development of the Lands related to Environmental Protection, Energy Efficiency, Solar Gain, Energy Technologies, Water Conservation, Green Materials and Waste Reduction, Reduction of Noise Pollution, Indoor Air Quality and Residential Information/ Education Package.

2.1 Section 5.0 of the Aurora Official Plan

The Town has requested a report on the basis that development applications are encouraged to demonstrate a commitment to achieving the Town's objectives for "Building a Greener Community" as summarized below.

Section 5.0 of the Aurora Official Plan 'Building a Greener Community' outlines a set of objectives which provide guidance for development with the aim of supporting the Town's goals for a healthy, vibrant and sustainable community. The following objectives are found in section 5.1:

- a) *Demonstrate leadership in sustainable forms of development and green technologies.*
- b) *Encourage development proposals that include energy efficient neighbourhood and/or building design and practices in all new development.*
- c) *Establish made-in-Aurora green development and design standards that apply to all public and private sector developments.*
- d) *Control and, where possible, eliminate water, soil, noise and air pollution to safeguard the natural and human environment.*
- e) *Reduce per-capita consumption of energy, water, land and other non-renewable resources.*
- f) *Reduce per-capita generation of stormwater run-off, sanitary sewage and solid and hazardous waste.*

- g) Develop policies and programs designed to reduce per-capita greenhouse gas emissions by two-thirds by 2031.*
- h) Develop policies and programs designed to reduce greenhouse gas emissions in industrial, commercial and institutional sectors.*

Section 5.2 f) of the Aurora Official Plan identifies the following elements and initiatives outline the Green Development and Design Standards that contribute to sustainable community design and green development:

- i. Minimum standards for energy efficiency in building design;*
- ii. standards for community design, including but not limited to, compact forms of Development, transit oriented Development and active transportation, in accordance with the vision and policies of this Plan;*
- iii. design standards to maximize solar gains and facilitate future on-site solar energy technologies;*
- iv. design measures to facilitate future on-site renewable energy and/or energy recovery systems;*
- v. minimum standards for water conservation, including rainwater harvesting, in all buildings and landscaping;*
- vi. green building material requirements to promote durability, resource reuse and renewable resource use;*
- vii. design measures to facilitate the future installation of plugins/ outlets for electric vehicles;*
- viii. requirements for green and/or white roofs into building design;*
- ix. requirements for Dark Sky compliant practices for exterior lighting;*
- x. minimum standards for waste reduction and diversion in the construction process;*
- xi. design standards for permeable surfaces, including permeable driveways and parking areas; and,*
- xii. landscape design standards to promote water efficient, drought resistant landscaping and the elimination of pesticide/herbicide use, including the use of native plants and xeriscaping.*

Section 3 of this Report explains how a number of these elements or their alternatives are to be applied through the subject lands.

2.2 York Region Servicing Incentive Program

York Region has introduced the ‘Servicing Incentive Program’ (SIP) which offers additional servicing capacity assignment credits to the local municipality as an incentive to encourage more sustainable grade-related development. The SIP program promotes water efficiency and reduce wastewater flow from residential grade-related developments. By meeting all the program criteria, residential projects may qualify for servicing capacity assignment credits of up to 20%.

The following are the program requirements.

2.2.1 Water Efficiency

- Install only WaterSense labelled/certified high efficiency toilets within the development;
- All units shall be equipped with one of the following options:
 - Rough-in of an ON-DEMAND hot water recirculation system; or,
 - ON-DEMAND hot water recirculation system connected to one of either the second-floor master ensuite bathroom or second floor main bathroom or main floor bathroom for a bungalow
- Submit peer review verification that each unit in the development has been inspected and meets the Region’s water conservation requirements. Verification of toilet fixtures will be satisfied by providing the Region with invoices/purchase orders of the toilets purchased for the development/phase or other suitable documentation acceptable to the Region.

2.2.2 Wastewater Flow Reduction

- Achieve the wastewater inflow and infiltration (I and I) control requirements through meeting the Sewer Installation / Performance Testing Specification (New Construction);
- Prior to plan registration, submit the following items along with the Program Conformity Plan:
 - i. Proposed engineering plans and specifications to achieve the sewer installation / performance testing requirements
 - ii. A flow monitoring plan showing the location and types of meters to be used and data collection and reporting strategies
 - iii. A verification plan including the list of professional engineers to be employed
 - iv. A contingency remedial plan should performance requirements not be met after construction
- Submit peer review verification as part of the Conformity Report

We have referenced this document to provide guidance on sustainable development measures that may be applicable to the Shining Hill Central Aurora community.

3.0

Green Development Standards

The Shining Hill Central Aurora community will achieve green development and design through a number of initiatives related to environmental protection, community design, energy efficiency, water conservation, solar gains/energy, waste reduction, noise reduction, improved indoor air quality, and resident education.

This Section outlines how the various objectives outlined in Section 2 can be implemented in the Shining Hill subdivision in order to create a healthy, compact and sustainable community.

3.1 Environmental Protection

The Shining Hill neighbourhood will be a model for enhanced environmental protection in accordance with the following measures:

- The lands identified for Natural Heritage System / Open Space block will protect and enhance key natural heritage features and functions.
- Appropriate buffers from key natural heritage features are being included in the EPA and where necessary, buffers will be restored and/or managed to provide an appropriate transition between the built and natural environment.
- Water quality and quantity throughout the subdivision will be maintained through the provision of an underground stormwater management tank and a series of low impact development techniques.
- Ground water resources and levels will be protected and maintained to pre-development conditions through the use of low impact development techniques such as extra depth topsoil and biofiltration trenches.
- All vegetation in the developable area has been reviewed in order to identify any species of significance.
- Soil erosion will be prevented in accordance with the requirement of a permit under the Aurora Topsoil Preservation By-law.

3.2 Neighbourhood Design

The Shining Hill neighbourhood will be a model for leadership in community design and energy efficient neighbourhood design through the following:

- A park is provided within a reasonable walk for the majority of residents. This park and other open space areas provide for both active and passive recreation opportunities to support healthy, active lifestyles.
- There is a Natural Heritage System on the western end of the development that includes a wetland feature, which will all be protected
- The primary objective of the Natural Heritage System is to preserve the existing natural environment to achieve multiple objectives and targets related to wildlife habitat, habitat connectivity, community diversity, water management, etc., that will be balanced and implementable.
- Appropriate buffers have been provided within the Natural Heritage System features to ensure their preservation and protection.
- The conveyance of 61% (19.4 ha) of land to protect natural heritage features and maintain and formalize the public use of these lands for walking, recreation and enjoyment of nature, centred with a central park and environmental area.
- The opportunity to enhance a trail system within Block 95 of the Draft Plan that connects to the proposed residential development is being explored as part of this application. A public park is proposed and will be centrally located and accessible to residents. In combination with the NHS block, this public open space provides both active and passive recreation opportunities to support healthy, active lifestyles.
- The opportunity to connect into this off-street trail system – particularly the Aurora Willow Farm, Lakeview, and Wimpey Trail System as well as the Nokiidaa Trail, which runs between Aurora, Newmarket, and East Gwillimbury. The proposed road network layout includes sidewalks on at least one side of local roads and has been designed to ensure enhanced connectivity within and beyond the neighbourhood.
- Development will have regard for the Province’s Accessible Built Environment Standard as it evolves and strives to incorporate accessible sidewalks and trails throughout the communities.

3.3 Energy Efficiency

The Shining Hill neighbourhood will be more energy efficient through the implementation of the following provisions:

- Homes to be built to achieve Energy Star standard or equivalent. The homes will be designed and evaluated by a third party certified rater. Upon closing the homeowner will be presented with a document to verify compliance;
- A Transportation Demand Management plan is proposed to promote transit use and reduce single occupancy vehicles; and
- LED streetlighting will be explored, which can be about 10 times more energy efficient than normal incandescent bulbs.

3.4 Maximize Solar Gains/Energy Technologies

The Shining Hill neighbourhood will maximize solar opportunities through the following

venues:

- Where possible, sidewalks have been placed on the north and east side of the roads to maximize solar access which reduces snow and ice removal costs and improves the pedestrian environment during the cold winter months.
- Given the orientation of the blocks and lots, many of the units will have western and/or southern exposure providing for significant passive solar gain opportunities.
- A conduit from the roof to the mechanical room will be provided to enable a retrofit to solar energy.

3.5 Water Conservation

The Shining Hill community will promote water conservation through the implementation options for:

- Low flow and high efficiency single flush toilets shall be installed in bathrooms;
- Low flow lavatory faucets;
- Where offered, optional water efficient dishwashers will be installed (≤ 20.0 litres per cycle);
- Where offered, optional water efficient clothes washers will be installed (Water Factor of ≤ 7.5);
- Hot Water Recirculation System;
- Where offered, optional humidifiers will be energy saving;
- A minimum requirement of 6 inches of topsoil provided throughout the subject lands;
- Other Low Impact Development techniques will be employed as identified in the Functional Servicing and Stormwater Management Report to maintain or potentially enhance the post-development water balance (i.e. roof leader to rear and side yards, boulevards, parks, other open space grass swales, and additional depth topsoil that increases filtration).
- Water-efficient, drought resistant and native plantings will be incorporated in street tree and restoration areas, subject to municipal approval.

3.6 Green Materials and Waste Reduction

- The homeowners' resident information package will include detailed information on waste, recycling and compost collection in the Town of Aurora and the benefits of recycling and composting;
- Builders will explore the use of green building materials and recycled and/or environmentally preferred products such as those that promote durability, resource reuse and renewable resource use; and,
- During the construction process, waste will be diverted and/or reduced, where feasible.

3.7 Reduction of Noise Pollution

The community design, building and lot placements have thoroughly considered noise mitigation from boundary roads to the MOE standard of 55 dBA. Where necessary, noise abatement measures such as sound attenuating fencing, berms, double or triple glazed windows and central air conditioning will be incorporated.

3.8 Improvement of Indoor Air Quality

To improve indoor air quality, home options will include:

- Install water-resistant, hard-surface flooring in kitchens, bathrooms, entryways, laundry areas and utility rooms to minimize opportunities for harmful mold growth and reduce of gases from soft surfaces such as carpets;
- Use low VOC paints, varnishes, stains and sealers;
- Be provided the option to install heat recovery ventilation systems; and
- Be provided the option to install HVAC systems which reduce exposure to indoor air pollutants by ventilating with outdoor air.

3.9 Residential Information/Education Package

Homeowners will be provided a detailed resident package which includes:

- Information/education about the location and importance of the Environmental Protection Areas and activities which are prohibited in the EPA and their buffers;
- A map and details that clearly identifies the transit routes, fees and scheduling available;
- A map and details that clearly identifies the walking and cycling trails and the location of other community amenities;
- Information on carpooling opportunities and resources;
- The importance and maintenance of the low-flow faucets and appliances;
- The importance and maintenance of the energy efficient, Energy Star® appliances;
- Details and information on waste and recycling options in Aurora in order to assist and encourage residents' efforts to compost, reduce, reuse, repair and recycle.
- Details and information to increase public awareness on the effects of and the need to reduce the use of pesticides, insecticides, fertilizers, and de-icing agents in private and public open spaces.
- Details and information on the regulation and prohibition of the placing or dumping of fill and alterations to the grade of the land in accordance with the Town's Fill By-law and Ontario Regulation 179/06 under the Conservation Authority Act.
- Other details on the use and maintenance of the sustainability features incorporated into the home.

3.10 Minimizing Impervious Surfaces

In an effort to mitigate the negative impacts of urbanization on stormwater runoff, new lots within the Shining Hill Central Aurora subdivision will be required to promote on-lot stormwater infiltration. In accordance with policies of the Official Plan, each lot shall be required to minimize impervious surfaces by preserving a minimum of 40% of its lot area in an open, landscaped or natural condition.

The Shining Hill Central Aurora neighbourhood will minimize impervious surfaces through the implementation of extra depth topsoil should be considered on private lots to enhance absorption of rainfall and promote plant growth. Other methods will be considered through the detailed design process.

4.0

Conclusion

The proposed development helps achieve the Town's vision of a complete community that protects the environment and includes well-designed residential neighbourhoods.

4.1 Sustainable Community Design and Green Development

As described through this report, the Shining Hill Central Aurora community will implement a number of green development and design features that meet the Town's objectives and policies aimed at the creation of a healthy, vibrant and sustainable community. The proposed development helps protect the environment through well-designed residential neighbourhoods and construction best practices.

The initiatives proposed in the Shining Hill subdivision achieve the following:

1. Demonstrate leadership in sustainable forms of development and green technologies.
2. Provide for an energy efficient neighbourhood form.
3. Protect water resources and reduce soil, noise and air pollution.
4. Reduce per-capita consumption of energy, water, land and other non-renewable resources.
5. Reduce per-capita generation of storm water run-off through the use of Low Impact Development measures.