2365-2379 Lakeshore Road West

Compatibility & Mitigation Study
Air Quality, Dust, Odour
Oakville, ON

SLR Project No: 241.30501.00000

March 2022

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SLR Project No.: 241.30501.00000

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EXECUTIVE SUMMARY

SLR Consulting (Canada) Ltd. (SLR), was retained by Graywood Bronte Village LP to conduct a land use compatibility assessment for the proposed development located at 2365-2379 Lakeshore Road West in Oakville, Ontario ("the Project").

The land use compatibility assessment is required by the Town of Oakville in support of a planning approval application for the development of the Project site. The proposed development is planned to include a mid-rise multi-storey, mixed use development.

The addition of "sensitive" land uses within the Project site, including residential, requires an assessment of land use compatibility with the surrounding proposed, and existing, industrial land uses.

SLR has reviewed the surrounding land uses in the area with respect to the following guidelines:

- The Provincial Policy Statement;
- The Provincial Growth Plan;
- The Ministry of the Environment, Conservation and Parks (MECP) land use compatibility guideline (D-Series) including Guideline D-6 – Compatibility Between Industrial Facilities and Sensitive Land Uses (MECP 1995);
- Ontario Regulation 419/05: *Air Pollution – Local Air Quality* and its associated air quality standards and assessment requirements;
- The MECP Draft policies on odour impacts and assessment;
- The Town of Oakville *Health Protection and Air Quality By-law 2010-035;*
- The Halton Region *Land Use Compatibility Guidelines and Air Quality Guidelines, Regional Official Plan;* and
- The Halton Region *Noise Abatement Guidelines, Regional Official Plan Guidelines.*

This assessment has considered:

- Industrial air quality, odour, and dust emissions;
- Transportation-related air pollution;
- Industrial/ commercial noise; and
- Transportation-related noise.

The assessment has included a review of air quality and noise emissions from industrial facilities in the area.

Based on the review completed, the Project site development is anticipated to be compatible with the surrounding land uses from an air quality perspective. Emissions of dust and odour at the Project site are not anticipated. The Project site is not anticipated to limit surrounding existing or future industries and the ability to obtain or maintain required MECP permits or approvals.

Based on the above information, the requirements of the ROP LUCG have been met, and as such, MECP Guideline D-6 are met. As the applicable policies and guidelines are met, the Project site is:

- Unlikely to result in increased risk of complaint and nuisance claims;
- Unlikely to result in operational constraints for the major facilities;
- Unlikely to result in constraints on major facilities to reasonably expand, intensify or introduce changes to their operations.

In addition, there are no significant sources of PM, VOCs, NOx, and SO2 emissions associated with Project site. The Project site sources are not considered to be major as defined by the Town of Oakville Health Protection and Air Quality By-Law 2010-035, therefore an application for approval to be considered by Town Council is not required.

Adverse noise impacts from commercial and industrial facilities are not anticipated at the Project. Wall and window upgrades and noise barriers are not required to address transportation noise. Residential units must have forced-air heating systems with the provision to add air conditioning systems. Noise warning clauses are required, to be included in documents registered in Title. Warning clause details are provided in Appendix D.

With the inclusion of the above, adverse noise impacts are not anticipated.

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1. INTRODUCTION

SLR Consulting (Canada) Ltd. (SLR), was retained by Graywood Bronte Village LP to conduct a landuse compatibility assessment for the proposed development located at 2365-2379 Lakeshore Road West in Oakville, Ontario ("the Project").

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- Transportation-related noise.

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2. DESCRIPTION OF DEVELOPMENT AND SURROUNDING AREA

2.1 AREA CONTEXT

Immediately surrounding the site to the south, east, and west is mixed use commercial/residential properties. To the north is primarily low-density residential facing to Sovereign Street.

A context plan of the Project site and surroundings is shown in Figure 1.

2.2 PROPOSED DEVELOPMENT

The Project site is located at 2365-2379 Lakeshore Road West. The proposed development is planned to include a mid-rise multi-storey, mixed use building.

The main access route is from of Lakeshore Road West, which will serve employee/visitor cars and residential traffic. The loading/unloading delivery area will be located at the middle of the Project site.

A copy of the current Project site plan is provided in Figures 2a and 2b.

2.2.1 LIVABLE OAKVILLE PLAN

The Town of Oakville, Livable Oakville Plan for the area can be seen in Figures 3a and 3b. The Site Area is designated as a Main Street Area on Figure 3a. Town of Oakville By-Law No. 2017-118, Official Plan Amendment No. 18, further refines the land use schedule for the Bronte Village Growth Area. The Land Use Schedule for Bronte Village is provided in Figure 3b. The Project Site is designated as Main Street 1 in the Bronte Village Land Use schedule.

2.2.2 TOWN OF OAKVILLE BY-LAW 2014-014

The Site is zoned as H1-MU1 – Holding Provision 1 (H1) – Main Street 1(MU1). The following is the zoning in the vicinity of the Project site:

- To the east and west the lands are zoned H1-MU1;
- To the south, the lands are zoned MU1; and
- To the north, the lands are zoned RL8-0 – Residential Low and RM1 – Residential Medium special provision 272.

An exert from the Town of Oakville Zoning By-Law Map is provided in Figure 4.

3. ASSESSMENT FRAMEWORK

The intent of this report is to identify any existing and potential land use compatibility issues and to identify and evaluate options to achieve appropriate design, buffering and/or separation distances between the surrounding sensitive land uses, including residential uses, and nearby Employment Areas and/or major facilities. Recommended measures intended to eliminate or mitigate negative impacts and adverse effects are provided.

The requirements of Ontario's planning regime are organized such that generic policy is informed by specific policy, guidance, and legislation, as follows:

- The Ontario Planning Act, Section 2.1 – sets the ground rules for land use planning in Ontario, whereby planning decisions have regard to matters of provincial interest including orderly development, public health, and safety; then
- The Provincial Policy Statement ("PPS") sets out goals to ensure adjacent land uses are compatible from a health and safety perspective and are appropriately buffered); then
- The Provincial Growth Plan, Section 2.2.5 – builds on the PPS to establish a unique land use planning framework for the Greater Golden Horseshoe, where the development of sensitive land uses will avoid, or where avoidance is not possible, minimize and mitigate adverse impacts on industrial, manufacturing, or other uses that are particularly vulnerable to encroachment; then
- The Ministry of the Environment, Conservation & Parks ("MECP") D-series of guidelines set out methods to determine if assessments are required (areas of influence, recommended separation distances, and the need for additional studies); then
- MECP and Municipal regulations, policies, standards, and guidelines then set out the requirements of additional air quality, noise and vibration studies and the applicable policies, standards, guidelines, and objectives to ensure that adverse effects do not occur.

3.1 ONTARIO PLANNING ACT

The Ontario Planning Act is "provincial legislation that sets out the ground rules for land use planning in Ontario. It describes how land uses may be controlled, and who may control them. The purpose of the Act is to:

- provide for planning processes that are fair by making them open, accessible, timely and efficient
- promote sustainable economic development in a healthy natural environment within a provincial policy framework
- provide for a land use planning system led by provincial policy
- integrate matters of provincial interest into provincial and municipal planning decisions by requiring that all decisions be consistent with the Provincial Policy Statement and conform/not conflict with provincial plans
- encourage co-operation and coordination among various interests
- recognize the decision-making authority and accountability of municipal councils in planning"

Section 2.1 of the Ontario Planning Act describes how approval authorities and Tribunals must have

regard to matters of provincial interest including orderly development, public health, and safety.

3.2 PROVINCIAL POLICY STATEMENT

The PPS "provides policy direction on matters of provincial interest related to land use planning and development. As a key part of Ontario's policy-led planning system, the Provincial Policy Statement sets the policy foundation for regulating the development and use of land. It also supports the provincial goal to enhance the quality of life for all Ontarians."

The PPS is a generic document, providing a consolidated statement of the government's policies on land use planning and is issued under section 3 of the Planning Act. Municipalities are the primary implementers of the PPS through policies in their local official plans, zoning by-laws, and other planning related decisions. Policy direction concerning land use compatibility is provided in Section 1.2.6 of the PPS (2020).

> "1.2.6 Land Use Compatibility
>
> 1.2.6.1 Major facilities and sensitive land uses shall be planned and developed to avoid, or if avoidance is not possible, minimize and mitigate any potential adverse effects from odour, noise, and other contaminants, minimize risk to public health and safety, and to ensure the long-term operational and economic viability of major facilities in accordance with provincial guidelines, standards, and procedures.
>
> 1.2.6.2 Where avoidance is not possible in accordance with policy 1.2.6.1, planning authorities shall protect the long-term viability of existing or planned industrial, manufacturing, or other uses that are vulnerable to encroachment by ensuring that the planning and development of proposed adjacent sensitive land uses are only permitted if the following are demonstrated in accordance with provincial guidelines, standards, and procedures:
>
> a) there is an identified need for the proposed use;
>
> b) alternative locations for the proposed use have been evaluated and there are no reasonable alternative locations;
>
> c) adverse effects to the proposed sensitive land use are minimized and mitigated; and
>
> d) potential impacts to industrial, manufacturing, or other uses are minimized and mitigated."

The goals of the PPS are implemented through Municipal and Provincial policies, as discussed below. Provided the Municipal and Provincial policies, guidelines, standards, and procedures are met, the requirements of the PPS will be met. Provincially Significant Employment Zone ("PSEZ")19 (Halton) is located approximately 1 km northwest of the Project Site. An Excerpt from the PSEZ mapping is provided in Figure 5.

3.3 HALTON REGION REGIONAL OFFICIAL PLAN GUIDELINES: LAND USE COMPATIBILITY GUIDELINES

The purpose of the Land Use Compatibility Guidelines developed by Halton Region (LUCG) is to "identify how land use compatibility issues may be addressed by municipalities during a development proposal…" The LUCG were developed by the Halton Region in consideration of the Provincial D-Series of Guidelines, prepared by the Ontario Ministry of the Environment, Conservation and Parks (MECP) in 1995 for planning guidance in evaluating land use compatibility. Section 2 of the LUCG identifies the relevant

provincial guidelines and regulations which are to be considered in conducting air quality assessments in Ontario:

"The D-Series are used for development applications that require the re-designation (Official Plan Amendment) or rezoning of land uses (Zoning By-law amendment). The MOE's D-Series are only applicable when a:

- *New sensitive land use requires a land use amendment and is proposed to be located within the influence, or potential influence, area of an impacting use, such as an existing industrial land use; or when a*
- *New industrial use requires a land use amendment and is proposed to be located near an existing sensitive residential use."*

Included in the Halton Region summary is a discussion of the "potential Areas of Influence" approach, as presented in the D-series of guidelines when assessing compatibility of industrial uses with more sensitive uses such as residences.

In preparing the LUCG, Halton Region has clarified an aspect concerning Recommended Minimum Separation Distances. In the LUCG, it is understood that Areas of Influence of various industrial processes will be site specific. Actual Areas of Influence are determined through appropriate studies allowing for industrial activities to be compatible with more sensitive land uses within the Area of Influence and within Recommended Minimum Separation Distances which are presented in Table 1 of the LUCG. Appropriate studies can provide mitigation strategies, if required.

3.3.1 D-SERIES OF GUIDELINES

The D-series of guidelines were developed by the MECP in 1995 to assess Recommended Minimum Separation Distances and other control measures for land use planning proposals to prevent or minimize 'adverse effects' from the encroachment of incompatible land uses where a facility either exists or is proposed. D-series guidelines address sources including sewage treatment (Guideline D-2), gas and oil pipelines (Guideline D3), landfills (Guideline D-4), water services (Guideline D-5) and industries (Guideline D-6).

For this project, the applicable guideline is Guideline D-6 - Compatibility *between Industrial Facilities and Sensitive Land Uses*. The guidelines specifically address issues of air quality, odour, dust, noise, and litter.

Adverse effect is a term defined in the Environmental Protection Act and "means one or more of

- impairment of the quality of the natural environment for any use that can be made of it,
- injury or damage to property or to plant or animal life,
- harm or material discomfort to any person,
- an adverse effect on the health of any person,
- impairment of the safety of any person,
- rendering any property or plant or animal life unfit for human use,
- loss of enjoyment of normal use of property, and
- interference with the normal conduct of business".

3.3.1.1 Guideline D-6 Requirements

This guideline specifically addresses issues of air quality, odour, dust, noise, and litter. To minimize the potential to cause an adverse effect, potential Areas of Influence and Recommended Minimum Separation Distances are included within the guidelines. The potential Areas of Influence and Recommended Minimum Separation Distances from the guidelines are provided in the table below.

Table 1: Guideline D-6 - Potential Influence Areas and Recommended Minimum Separation Distances for Industrial Land Uses

Industry Classification	Area of Influence	Recommended Minimum Separation Distance
Class I – Light Industrial	70 m	20 m
Class II – Medium Industrial	300 m	70 m
Class III – Heavy Industrial	1000 m	300 m

Industrial categorization criteria are supplied in Guideline D-6-2, and are shown in the following table:

Table 2: Guideline D-6 - Industrial Categorization Criteria

Category	Outputs	Scale	Process	Operations / Intensity	Possible Examples
Class I Light Industry	• Noise: Sound not audible off-property • Dust: Infrequent and not intense • Odour: Infrequent and not intense • Vibration: No ground-borne vibration on plant property	• No outside storage • Small-scale plant or scale is irrelevant in relation to all other criteria for this Class	• Self-contained plant or building which produces/ stores a packaged product • Low probability of fugitive emissions	• Daytime operations only • Infrequent movement of products and/ or heavy trucks	• Electronics manufacturing and repair • Furniture repair and refinishing • Beverage bottling • Auto parts supply • Packaging and crafting services • Distribution of dairy products • Laundry and linen supply
Class II Medium Industry	• Noise: Sound occasionally heard off-property • Dust: Frequent and occasionally intense • Odour: Frequent and occasionally intense • Vibration: Possible ground-borne vibration, but cannot be perceived off-property	• Outside storage permitted • Medium level of production allowed	• Open process • Periodic outputs of minor annoyance • Low probability of fugitive emissions	• Shift operations permitted • Frequent movements of products and/ or heavy trucks with the majority of movements during daytime hours	• Magazine printing • Paint spray booths • Metal command • Electrical production • Manufacturing of dairy products • Dry cleaning services • Feed packing plants

Category	Outputs	Scale	Process	Operations / Intensity	Possible Examples
Class III Heavy Industry	• Noise: Sound frequently audible off property • Dust: Persistent and/ or intense • Odour: Persistent and/ or intense • Vibration: Ground-borne vibration can frequently be perceived off-property	• Outside storage of raw and finished products • Large production levels	• Open process • Frequent outputs of major annoyances • High probability of fugitive emissions	• Continuous movement of products and employees • Daily shift operations permitted	• Paint and varnish manufacturing • Organic chemical manufacturing • Breweries • Solvent recovery plants • Soaps and detergent manufacturing • Metal refining and manufacturing

3.3.1.2 Requirements for Assessments

Guideline D-6 requires that studies be conducted to assess impacts where sensitive land uses are proposed within the potential Area of Influence of an industrial facility. This Addendum report is intended to fulfill this requirement.

The D-series guidelines reference previous versions of the air quality regulation (Regulation 346) and noise guidelines (Publications NPC-205 and LU-131). However, the D-Series of guidelines are still in force, still represent current MECP policy and are specifically referenced in numerous other current MECP policies. In applying the D-series guidelines, the current policies, regulations, standards, and guidelines have been used (e.g., Regulation 419, Publication NPC-300).

3.3.1.3 Requirements for Minimum Separation Distances

Guideline D-6 also *recommends* that no sensitive land use be placed within the Recommended Minimum Separation Distance. However, it should be noted that this is a recommendation, only. Section 4.10 of the Guideline allows for development within the Recommended Minimum Separation Distance, in cases of redevelopment, infilling, and transitions to mixed use, provided that the appropriate studies are conducted and that the relevant air quality and noise guidelines are met.

3.4 HALTON REGION REGIONAL OFFICIAL PLAN GUIDELINES: AIR QUALITY GUIDELINES

The Halton Region Air Quality Guidelines (AQG) were developed along with a number of other guidelines for land use planning which came out of the Halton Regional Official Plan Amendment (ROPA 38). In general terms, the AQG recommends consideration of local industrial sources and transportation features when evaluating the siting of a residential land use.

The AQG acts as a summary document of the applicable guidelines for a particular undertaking.

"2.1 Under the Region's policy 143(12), any source emission studies may only be applicable when sensitive land uses (residential, natural heritage) are proposed with these 3 conditions present:

1) *Within 30 m of a major arterial road or provincial highway or within 150 m of provincial freeway;*
2) *In proximity to an industrial use; and a*
3) *Utility use"*

SLR conducted a review of identified industrial uses and roadways/highways, as referred to in items 1) and 2) of Section 2.1 listed above. As shown on Figure 6, Ministry of Transportation Ontario Controlled

Zone[1], the Project Site is not located within 30 m of a major arterial road or provincial highway or within 150 m of a provincial freeway. Therefore air emissions from transportation sources are not considered in this study.

3.5 TOWN OF OAKVILLE – HEALTH PROTECTION AND AIR QUALITY BY-LAW 2010-035

The Oakville-Clarkson Airshed Action Plan (OCAAP) was released on June 25, 2010. The OCAAP contains 35 recommendations for actions to prevent air pollution as well as decrease emissions by every sector in the community to improve air quality in the Oakville-Clarkson airshed.

Through the action plan, the MECP confirmed that the Oakville-Clarkson airshed represents a "taxed" or compromised airshed with respect to respirable particulate matter ($PM_{2.5}$). The plan commits the MECP and the Town of Oakville to act to achieve measurable improvement to the Oakville Clarkson Airshed.

The Town of Oakville Health Protection and Air quality By-law 2010-035 requires that an application for approval be undertaken by a proposed or existing facility with the potential to be a major health-risk air pollutant emitter where major emissions mean:

> *"an emission from a facility into the air of a health-risk air pollutant that exceeds at least one of the following thresholds:*
>
> *(a) for directly emitted fine particulate matter, more than 300 kilograms per year;*
>
> *(b) for volatile organic compounds, more than 10,000 kilograms per year;*
>
> *(c) for nitrogen oxides (as NO2 equivalent), more than 20,000 kilograms per year;*
>
> *(d) for sulphur dioxide, more than 20,000 kilograms per year; or,*
>
> *(e) for ammonia, more than 10,000 kilograms per year"*

4. NEARBY INDUSTRIES

The Guideline D-6 Recommended Minimum Separation Distances from the Site Area are shown in Figures 7a and 7b. Local industries within 1 km of the Site Area were inventoried. The lands immediately surrounding the Site Area are generally comprised of commercial and residential land uses.

Within Ontario, facilities with sources of air emissions are required to obtain and maintain an Environmental Compliance Approval (an "ECA") from the MECP or submit an Environmental Activity and Sector Registry ("EASR"). The ECA/ EASR documents within 1 km of the Site Area were obtained from the MECP *Access Environment* website[2]. The Facilities within 1 km of the Site Area that holds an MECP ECA are listed below in Table 3.

[1] https://www.hcms.mto.gov.on.ca/PermitsControlledArea

[2] https://www.accessenvironment.ene.gov.on.ca/AEWeb/ae/GoSearch.action

Table 3: Identified Industries Within 1000 m of Proposed Development

Facility	Type of Operation	Environmental Compliance Approval No.	Industry Class	Area of Influence Dist (m)	Actual Distance to Site (m)	Additional Assessment Required?
ONTIM Investments	Standby Power	R-002-1602493397 (2016)	I	70	305	No
GWL Realty Advisors Inc.	HVAC and Standby Power	5508-7KWKW9 (2008)	I	70	450	No
Trans Northern Pipelines	Standby Power	R-002-9556467938 (2015)	III	1000	1005	No
	Air Emissions- Surge Tank Facility	R-010-6110478120 (2018)				
	Air Emissions-GW Pump and Treat System	3758-AARTHG (2016)				
Suncor Energy	Air Emissions Distribution Terminal	R-010-1111011958 (2020)	III	1000	1005	No
		2890-ACJPHF (2016)				

4.1 GUIDELINE D-6 CLASS III HEAVY INDUSTRIES

There is one Class III Heavy Industry (Oakville Distribution Terminal) located 1.05 km from the Project Site. This industry is located outside the potential Area of Influence and outside the Recommended Minimum Separation Distance for their industry classification. Therefore, additional analysis of the industry is not warranted.

4.2 GUIDELINE CLASS I LIGHT AND CLASS II MEDIUM INDUSTRIES

There are a few Class I Light Industries located within 1 km of the Project Site. These industries are located outside the potential Area of Influence and outside the Recommended Minimum Separation Distance for their industry classification. Therefore, additional analysis of these industries is not warranted.

Based on the above information, the Project site is anticipated to be compatible with the surrounding existing and potential land uses from an air quality perspective. Adverse emissions of fugitive dust and odour at the Project site is not anticipated. The Project site is not anticipated to limit the ability of surrounding industries to obtain or maintain required MECP permits or approvals.

4.3 FUTURE USES

A review of development applications on the Town of Oakville Active Development Applications Interactive mapping website[3] does not indicate any active applications within 500 m of the Project site. Other than the vacant lots that form part of the Project site, there are no other vacant lands nearby.

With regard to future uses in the vicinity of the Project site, the planning designations and zoning indicate that future surrounding uses will include sensitive receptors such as residential. These land uses are anticipated to be compatible with the Project site.

If industry were to start operations in the Area of Influence of the Project site, they will be required to be compatible with the existing sensitive land uses that include mixed uses with elevated sensitive residential uses. Therefore, the addition of elevated sensitive receptors at the Project site will not create a "new test" for compliance of an industrial air emission source(s).

[3] https://exploreoakville.maps.arcgis.com/apps/webappviewer/index.html?id=5638a39d701147d590bf07b554985e92

4.4 SUMMARY

No industries were identified to require further analysis as a result of the potential for fugitive air emissions.

5. AIR QUALITY, DUST AND ODOUR ASSESSMENT

5.1 INDUSTRIAL SOURCES

5.1.1 MECP GUIDELINES AND REGULATIONS

Within Ontario, facilities which emit significant amounts of contaminants to the environment are required to obtain and maintain an ECA from the MECP or submit an EASR Application. Facilities with an ECA/EASR should already meet the MECP guidelines for air quality contaminants at their property line.

5.1.1.1 Air Quality Contaminants

Under O.Reg. 419/05, a facility is required to meet prescribed standards for air quality contaminants at their property boundary line and any location off-site ground level, or elevated sensitive receptor.

5.1.1.2 Odour

There are a select few compounds that are provincially regulated from an odour perspective; however, there is no formal regulation with respect to mixed odours. Impacts from mixed odours produced by industrial facilities are generally only considered and regulated by the MECP in the presence of persistent complaints (ECO 2010).

The MECP assesses mixed odours, in Odour Units, following draft guidelines. One odour unit (1 OU) has been used as a default threshold. This is the concentration at which 50 % of the population will just detect an odour (but not necessarily identify/recognize or object to it). Recognition of an odour will typically occur between 3 and 5 odour units. The following factors may be considered:

- Frequency – How often the odour occurs. The MECP typically allows odours to exceed 1 OU with a 0.5 % frequency.
- Intensity – The strength of the odour, in odour units. 1 OU is often used in odour assessments in Ontario.
- Duration – How long the odour occurs.
- Offensiveness – How objectionable the odour is. The MECP may allow for a higher concentration of pleasant smells such as baking as opposed to off-putting smells such as rotting garbage or rancid meat.
- Location – Where the odour occurs. The MECP assesses at odours where human activity is likely to occur.

The MECP has decided to apply odour-based standards to locations “where human activities regularly occur at a time when those activities regularly occur,” which is generally accepted to be places that would be considered sensitive such as residences and public meeting places. As a guide, the MECP has provided proposed clarification of human odour receptors, as shown in the following table:

Table 4: Proposed Clarification of Human Receptors (MECP 2008)

Receptor Category	Examples	Exposure Type	Type of Assessment
Permanent potential 24-hour sensitivity	Anywhere someone could sleep including any resident or house, motels, hospitals, senior citizen homes, campgrounds, farmhouse, etc.	Individual likely to receive multiple exposures	Considered sensitive 24 hours per day
Permanent daily hours but with definite periods of shutdown/closure	Schools, daycares, community centres, soccer fields, farmland, churches, bicycle paths, hiking areas, lakes, commercial or institutional facilities (with consideration of hours of operation such as night clubs, restaurants, etc.)	Individual could receive multiple exposures	Nighttime or daytime exclusion only (consider all other hours)
Seasonal variations with clear restrictions on accessibility during the off season	Golf courses, amusement parks, ski hills, other clearly seasonal private property	Short term potential for exposure	Exclusions allowed for non-seasonal use
Transient	Open fields, roadways, easements, driveways, parking lots, pump houses	Very short-term potential for exposure, may not be a single resident exposed to multiple events	Generally, would not be included as human receptors unless otherwise specified.

Note that commercial facilities are considered to be odour sensitive points of reception, as well as community spaces and residences.

5.1.1.3 Dust

Ontario Regulation 419/05 also provides limits for dust, including limits for suspended particulates and dust fall. Under Reg. 419/05, these air quality limits must be met at the property line and all points beyond.

5.1.1.4 Cumulative Assessments

Cumulative impact assessments, examining the combined effects of individual industries, or the combined effects of industry and roadway emissions, are generally not required. Neither the PPS, the D-Series of Guidelines, Regulation 419/05, or the current MECP odour assessment protocols require an assessment of cumulative impacts.

Which is not to say that such assessments are never warranted; rather, the need to do so must be considered on a case-by-case basis, depending on the nature and intensity of the industrial operation(s), and the nature of the pollutants released. Based on the types of pollutants released by the industries in this area, cumulative effects assessments are not warranted.

5.1.2 LOCAL METEOROLOGY

Surface wind data was obtained to generate a wind rose from data collected at the Pearson International Airport in Toronto from 1986 through 2015, as shown in **Figure 8.** As can be seen in the wind rose, predominant winds are from the west and northwestern quadrants, while winds from the northeast and southeast quadrants may be the least frequent.

5.1.3 SITE VISITS AND ODOUR AND DUST OBSERVATIONS

A Project site visit was conducted to the area on March 17, 2022, by SLR personnel to identify significant sources of air quality emissions and to identify any significant sources of odour or dust in the Project neighbourhood. During the site visit, the staff members observed existing industries from the sidewalks and other publicly accessible areas. Wind conditions during the site visit were noted as:

- March 17, 2022: southerly winds, 4km/h, 8°C, 86% RH

At the Project site, no odours or fugitive dust emissions were detected during the site visit.

5.1.4 ASSESSMENT OF POTENTIAL AIR QUALITY EMISSIONS

No industries were identified to require further analysis as a result of the potential for fugitive air emissions.

5.1.5 TOWN OF OAKVILLE – HEALTH PROTECTION AND AIR QUALITY BY-LAW 2010-035

The proposed Project site operations have limited potential to emit air emissions that are regulated under the Town of Oakville Health Protection and Air Quality By-law 2010-035. Further, the facility is not considered to be a "major" emitter as defined in the By-law where major emissions mean:

> *"an emission from a facility into the air of a health-risk air pollutant that exceeds at least one of the following thresholds:*
>
> *(a) for directly emitted fine particulate matter, more than 300 kilograms per year;*
>
> *(b) for volatile organic compounds, more than 10,000 kilograms per year;*
>
> *(c) for nitrogen oxides (as NO2 equivalent), more than 20,000 kilograms per year;*
>
> *(d) for sulphur dioxide, more than 20,000 kilograms per year; or,*
>
> *(e) for ammonia, more than 10,000 kilograms per year"*

The potential sources for fine particulate matter (PM), volatile organic compounds (VOCs), nitrogen oxides (NO_x), and sulphur dioxide (SO_2) at the Project site include the HVAC units for the new multi storey building.

There are no sources anticipated to emit ammonia.

The natural gas fired HVAC sources have the potential to emit, particulate matter (PM), volatile organic compounds (VOCs), nitrogen oxides (NO_x), and sulphur dioxide (SO_2). The HVAC sources operate to provide comfort heating for the occupants of the building. These are small scale, natural gas-fired units. Because the heating input for each unit is so low, these units are exempt from the requirement to obtain an MECP permit under Regulation 524/98, Section 1. (1) 5.

Further, under the MECP Procedure for Preparing an Emission Summary and Dispersion Modelling Report (Guideline A-10 v4.1 March 2018, Section 7.1.1 Combustion of Natural Gas and Propane) "the significant contaminant from the combustion of natural gas and propane is nitrogen oxides. Other contaminants for this type of source, are generally emitted in negligible amounts."

Considering the above, there are no significant sources of PM, VOCs, NO_x, and SO_2 emissions associated with Project site. The Project site sources are not considered to be major as defined by the Town of

Oakville Health Protection and Air Quality By-Law 2010-035, therefore an application for approval to be considered by Town Council is not required.

5.2 SUMMARY OF AIR QUALITY, DUST AND ODOUR CONCLUSIONS AND RECOMMENDATIONS

The potential air quality emissions from the Project site, including dust and odour, have been assessed.

The Project site development is anticipated to be compatible with surrounding employment uses from an air quality perspective. In addition, emissions of dust, and/or odour at the Project site are not anticipated. The Project site is not anticipated to limit the ability of the surrounding industries to obtain or maintain required MECP permits and/or approvals.

There are no significant sources of PM, VOCs, NO_x, and SO_2 emissions associated with Project site. The Project site sources are not considered to be major as defined by the Town of Oakville Health Protection and Air Quality By-Law 2010-035, therefore an application for approval to be considered by Town Council is not required.

6. NOISE ASSESSMENT

6.1 INDUSTRIAL (STATIONARY) SOURCES

6.1.1 GUIDELINES

6.1.1.1 MECP Publication NPC-300 Guidelines for Stationary Noise

The applicable MECP noise guidelines for new sensitive land uses adjacent to existing industrial commercial uses are provided in MECP Publication NPC-300. NPC-300 revokes and replaces the previous noise assessment guideline, Publication LU-131 and Publication NPC-205, which was previously used for assessing noise impacts as part of Certificates of Approval / Environmental Compliance Approvals granted by the MECP for industries.

The new guideline sets out noise limits for two main types of noise sources:

- Non-impulsive, “continuous” noise sources such as ventilation fans, mechanical equipment, and vehicles while moving within the property boundary of an industry. Continuous noise is measured using 1-hour average sound exposures (L_{eq} (1-hr) values), in dBA; and
- Impulsive noise, which is a “banging” type noise characterized by rapid rise time and decay. Impulsive noise is measured using a logarithmic mean (average) level (L_{LM}) of the impulses in a one-hour period, in dBAI.

Furthermore, the guideline requires an assessment at, and provides separate guideline limits for:

- Outdoor points of reception (e.g., back yards, communal outdoor amenity areas); and
- Façade points of reception such as the plane of windows on the outdoor façade which connect onto noise sensitive spaces, such as living rooms, dens, eat-in kitchens, dining rooms and bedrooms.

The applicable noise limits at a point of reception are the higher of:

- The existing ambient sound level due to road traffic, or
- The exclusion limits set out in the guideline.

The following tables set out the exclusion limits from the guideline.

Table 5: NPC-300 Exclusion Limits for Non-Impulsive Sounds (L_{eq} (1-hr), dBA)

Time of Day	Class 1 Area		Class 4 Area	
	Plane of Windows of Noise Sensitive Spaces	Outdoor Points of Reception	Plane of Windows of Noise Sensitive Spaces	Outdoor Points of Reception
7 am to 7 pm	50	50	60	55
7 pm to 11 pm	50	50	60	55
11 pm to 7 am	45	n/a	55	n/a

Table 6: NPC-300 Exclusion Limits for Impulsive Sounds (L_{LLM}, dBAI)

Time of Day	No. of Impulses in a 1-hour Period	Class 1 Area		Class 4 Area	
		Plane of Windows of Noise Sensitive Spaces	Outdoor Points of Reception	Plane of Windows of Noise Sensitive Spaces	Outdoor Points of Reception
7 am to 11 pm	9 or more	50	50	60	55
	7 to 8	55	55	65	60
	5 to 6	60	60	70	65
	4	65	65	75	70
	3	70	70	80	75
	2	75	75	85	80
	1	80	80	90	85
11 pm to 7 am	9 or more	45	n/a	55	n/a
	7 to 8	50	n/a	60	n/a
	5 to 6	55	n/a	65	n/a
	4	60	n/a	70	n/a
	3	65	n/a	75	n/a
	2	70	n/a	80	n/a
	1	75	n/a	85	n/a

Notes:

n/a Not Applicable. Outdoor points of reception are not considered to be noise sensitive during the overnight period.

- Area classifications are: Class 1 - Urban Class 4 - Urban Redevelopment

The applicable guideline limits for infrequent events such as emergency generator set testing are +5 dB higher than the values above and are assessed separately.

There are no impulsive noise sources in the area, and therefore impulsive noise is not discussed further in this report.

6.1.2 APPLICATION OF THE NPC-300 GUIDELINES

The stationary noise guidelines apply only to residential land uses and to noise-sensitive commercial and institutional uses, as defined in NPC-300 (e.g., schools, daycares, hotels). For the Project, the stationary noise guidelines only apply to the residential portions of the development, including:

- Individual residences;
- Communal indoor amenity areas; and
- Communal outdoor amenity areas.

All of the above have been considered as noise-sensitive points of reception in the analysis.

6.1.3 SOURCES OF INTEREST

Based on the information obtained from the local industries and from our site visits, the significant sources of noise in the area of the project have been identified. These are commercial plazas along Lakeshore Road.

Noise emission rates for the equipment/ activities were determined based on property-line noise measurements and supplemented by information from SLR's in-house database. Modelled noise sources include:

- HVAC mechanical equipment;
- General exhaust fans;
- Packaged chillers; and
- Air cooled condensers.

Figure 9 shows the location of all modelled noise sources. Noise emission data used in the assessment can be found in Appendix B.

6.1.4 NOISE MODELLING AND RESULTS

Worst-case scenario noise levels from the surrounding commercial/ industrial operations were modelled using Cadna/A, a computerized version of the internationally recognized ISO 9613-2 noise propagation algorithms. This is the preferred noise modelling methodology of the MECP. The ISO 9613 equations account for:

- Source to receiver geometry
- Distance attenuation
- Atmospheric absorption
- Reflections off of the ground and ground absorption
- Reflections off of vertical walls
- Screening effects of buildings, terrain, and purpose-built noise barriers (noise walls, berms, etc.).

The following additional parameters were used in the modelling, which are consistent with providing a conservative (worst-case assessment of noise levels):

- Temperature: 10°C
- Relative Humidity: 70%
- Ground Absorption G: G=1.0 (absorptive) as default global parameter, specific reflective areas such as parking lots defined as G=0.0 (reflective).
- Reflection: An order of reflection of 2 was used (accounts for noise reflecting from walls)
- Wall Absorption Coefficients: Set to 0.20 (20 % of energy is absorbed, 80% reflected)
- Terrain: Assumed to be flat

Predicted façade sound levels are shown in Figure 10. Overall predicted sound levels are provided in the following table:

Table 7: Overall Industrial Sound Levels – Normal Operations, Non-Impulsive Noise

Floor	Use	Façade	Predicted Sound Level (L_{eq} (1-hr), dBA)		Guideline Limit (L_{eq} (1-hr), dBA)		Meets Guideline?
			Day	Night	Day	Night	
Floor 1	Amenity	N	37	33	50	45	Yes
		E	32	27	50	45	Yes
		W	38	34	50	45	Yes
Floor 2	Residential	N	44	41	50	45	Yes
		S	42	39	50	45	Yes
		E	37	31	50	45	Yes
		W	43	40	50	45	Yes
Floor 3	Residential	N	46	42	50	45	Yes
		S	42	39	50	45	Yes
		E	43	37	50	45	Yes
		W	46	42	50	45	Yes
Floor 4	Residential	N	46	42	50	45	Yes
		S	45	41	50	45	Yes
		E	44	38	50	45	Yes
		W	47	43	50	45	Yes
Floor 5	Residential	N	47	42	50	45	Yes
		S	45	41	50	45	Yes
		E	44	38	50	45	Yes
		W	48	43	50	45	Yes
Floor 6	Residential	N	48	44	50	45	Yes
		S	44	38	50	45	Yes
		E	45	40	50	45	Yes
		W	47	43	50	45	Yes
Floor 7	Residential	N	47	43	50	45	Yes
		S	46	41	50	45	Yes
		E	44	38	50	45	Yes
		W	48	44	50	45	Yes
Floor 8	Residential	N	47	43	50	45	Yes
		S	46	41	50	45	Yes
		E	44	38	50	45	Yes
		W	48	44	50	45	Yes
Floor 9	Residential	N	47	42	50	45	Yes
		S	46	41	50	45	Yes
		E	44	38	50	45	Yes
		W	48	44	50	45	Yes
Communal OLA			39	n/a	50	n/a	Yes
Private Terraces			31 to 46	n/a	50	n/a	Yes

Notes: Sound levels are L_{eq} (1-hr) sound levels, in dBA

6.1.5 REQUIRED NOISE MITIGATION MEASURES

The applicable Class 1 Area noise limits are met. Additional physical noise mitigation measures are not required.

6.1.5.1 Noise Warning Clauses

A Type E noise warning clause is recommended. See Appendix D for warning clause details. The warning clauses must be registered on Title and included in all agreements of purchase and sale or lease and all rental agreements.

6.2 TRANSPORTATION SOURCES

6.2.1 MECP PUBLICATION NPC-300 GUIDELINES FOR TRANSPORTATION SOURCES

6.2.1.1 Indoor Criteria

The following table summarizes the criteria in terms of energy equivalent sound exposure (L_{eq}) levels for specific indoor noise-sensitive locations. These indoor criteria vary with sensitivity of the space. As a result, sleep areas have more stringent criteria than Living / Dining room space.

Table 8: NPC-300 Sound Level Criteria for Road and Rail Noise

Type of Space	Time Period	Energy Equivalent Sound Exposure Level L_{eq} (dBA) [1]		Assessment Location
		Road	Rail [2]	
Criteria for Residential Units				
Living / Dining Room	Daytime (7 am to 11 pm)	45	40	Indoors
	Night-time (11 pm to 7 am)	45	40	Indoors
Sleeping Quarters	Daytime (7 am to 11 pm)	45	40	Indoors
	Night-time (11 pm to 7 am)	40	35	Indoors

Notes: [1] Road and Rail noise impacts are to be combined for assessment of impacts.
[2] Whistle/warning bell noise is excluded for OLA noise assessments and included for indoor assessments, where applicable.

6.2.1.2 Ventilation and Warning Clauses

The following table summarizes requirements for ventilation where windows potentially would have to remain closed as a means of noise control. Despite the implementation of ventilation measures where required, some occupants may choose not to use the ventilation means provided, and as such, warning clauses advising future occupants of the potential excess over the indoor guideline limits are required.

Table 9: NPC-300 Ventilation and Warning Clause Requirements

Assessment Location	Time Period	Energy Equivalent Sound Exposure Level - L_{eq} (dBA)		Ventilation and Warning Clause Requirements [2][3]
		Road	Rail [1]	
Plane of Window	Daytime (7am to 11 pm)	≤ 55		None
		56 to 65 incl.		Forced Air Heating with provision to add AC + Applicable Warning Clause(s)
		> 65		Central AC + Applicable Warning Clause(s)
	Night-time (11 pm to 7 am)	51 to 60 incl.		Forced Air Heating with provision to add AC+ Applicable Warning Clause(s)
		> 60		Central AC + Applicable Warning Clause(s)

Notes: [1] Whistle/warning bell noise is excluded.
[2] Road and Rail noise is combined for determining Ventilation and Warning Clause requirements.

6.2.1.3 Building Shell Requirements

The following table provides sound exposure (L_{eq}) thresholds which if exceeded, require the building shell and components (i.e., wall, windows) to be designed and selected accordingly to ensure that the indoor location criteria are met.

Table 10: NPC-300 Building Component Requirements

Assessment Location	Time Period	Energy Equivalent Sound Exposure Level - L_{eq} (dBA)		Component Requirements
		Road	Rail [1]	
Facade	Daytime (7am to 11 pm)	> 65	> 60	Designed/ Selected to Meet Indoor Requirements [2]
	Night-time (11 pm to 7 am)	> 60	> 55	

Notes: [1] Including whistle/warning bell noise.
[2] The resultant sound isolation parameter from Road and Rail are to be combined for determining the overall acoustic parameter.

6.2.1.4 Outdoor Sound Level Criteria

The following table summarizes criteria in terms of energy equivalent sound exposure (L_{eq}) levels for the outdoor noise-sensitive locations, with a focus of outdoor areas being amenity spaces (called Outdoor Living Areas (OLAs) per NPC-300).

Table 11: NPC-300 Outdoor Sound Level Criteria for Road and Rail Noise

Type of Space	Time Period	Energy Equivalent Sound Exposure Level L_{eq} (dBA) [1, 2]	Assessment Location
OLA	Daytime (0700-2300h)	55	Outdoors

Notes: [1] Excluding whistle/warning bell noise for OLA noise assessments
[2] Road and Rail noise impacts are to be combined for assessment of OLA impacts.

6.2.1.5 Mitigation and Warning Clauses

The following table summarizes mitigation and warning clause requirements for outdoor amenity spaces.

Table 12: NPC-300 Outdoor Living Area Mitigation & Warning Clause Requirements

Assessment Location	Time Period	Energy Equivalent Sound Exposure Level - L_{eq} [1][2] (dBA)	Mitigation and Warning Claus Requirements [3]
OLA	Daytime (0700-2300h)	≤ 55	None
		56 to 60 incl.	Noise Control Measures may be applied, **and/or** Applicable Warning Clause(s)
		> 60	Noise barrier to reduce noise to 55 dBA, **or** Noise barrier to reduce noise to 60 dBA and Applicable Warning Clause(s)

Notes: [1] Whistle/warning bell noise is excluded.
[2] Road and Rail noise is combined for determining Ventilation and Warning Clause requirements.

As indicated in NPC-300, noise control measures may be applied to reduce sound levels to 55 dBA. If measures are not provided, potential purchasers/tenants are required to be informed of potential noise problems with the applicable Warning Clause(s).

If noise impacts are predicted to be greater than 60 dBA, noise control measures are required to reduce noise levels to 55 dBA. If noise control measures are not technically feasible for meeting 55 dBA, an excess of up to 5 dBA is allowed, with the inclusion of the applicable Warning Clause(s).

6.2.2 TRAFFIC DATA AND FUTURE PROJECTIONS

Road traffic data was obtained from the Traffic Impact Study conducted for the project. Copies of all traffic data used and calculations can be found in Appendix C. The following summarizes the road traffic volumes used in the analysis.

Table 13: Summary of Road Traffic Data Used in the Analysis

Roadway Link	Future Year 2035 Traffic Volume (AADT) [1]	% Day / Night Volume Split		% Commercial Traffic Breakdown		Vehicle Speed (km/h)
		Daytime	Night-time	Medium Trucks	Heavy Trucks	
Lakeshore Road W, West of Jones	15261	90	10	2.7%	2.7%	50
Lakeshore Road W, West of Nelson	15683	90	10	2.4%	2.4%	50
Lakeshore Road W, East of Nelson	15238	90	10	2.1%	2.1%	50
Jones St, North of Lakeshore	3094	90	10	2.5%	2.5%	50
Jones St, South of Lakeshore	1739	90	10	3.6%	3.6%	50
Nelson St, North of Lakeshore	1237	90	10	1.8%	1.8%	50
Nelson St, South of Lakeshore	1229	90	10	2.2%	2.2%	50

Notes: [1] Traffic volumes were grown to the year 2035 assuming a conservative 1.5% per annum growth rate.
[2] Truck percentages provided from turning movement counts, assuming 50% medium/ 50% heavy truck ratio.

6.2.3 PROJECTED SOUND LEVELS

Road traffic sound levels at the proposed development were predicted using Cadna/A, a commercially available noise propagation modelling software. Roadways were modelled as line sources of sound, with sound emission rates calculated using the ORNAMENT algorithms, the road traffic noise model of the MECP. These predictions were validated and are equivalent to those made using the MECP's ORNAMENT or STAMSON v5.04 road traffic noise models. A comparison versus STAMSON is provided in Appendix C.

Sound levels were predicted along the façades of the proposed development using the "building evaluation" feature of Cadna/A. This feature allows for noise levels to be predicted across the entire façade of a structure.

Ground absorption was assessed as reflective surfaces, as the majority of the intervening ground is asphalt or concrete. In calculating road and rail traffic noise levels to determine façade and outdoor amenity areas, no reflections from building surfaces were accounted for, in keeping with NPC-300 requirements (order of reflection set to 0.

Total façade sound levels are provided in Figure 11 and in the following table:

Table 14: Overall Projected Sound Levels

Floor	Use	Façade	Predicted Sound Level (dBA)	
			L_{eq} Day	L_{eq} Night
Floor 1	Amenity	N	37	30
		E	35	28
		W	43	36
Floor 2	Residential	N	37	31
		S	65	58
		E	61	54
		W	60	54
Floor 3	Residential	N	39	32
		S	64	58
		E	61	54
		W	60	54
Floor 4	Residential	N	42	35
		S	64	57
		E	60	54
		W	60	54
Floor 5	Residential	N	42	36
		S	63	57
		E	60	53
		W	60	53
Floor 6	Residential	N	60	53
		S	59	53
		E	43	37
		W	63	56
Floor 7	Residential	N	43	37
		S	62	56
		E	59	52
		W	59	52
Floor 8	Residential	N	44	37
		S	58	51
		E	58	52
		W	58	52
Continued…				
Floor 9	Residential	N	44	37
		S	57	50
		E	58	51
		W	58	51

6.2.4 FAÇADE RECOMMENDATIONS

Based on the predicted sound levels ($\leq$ 65 dBA daytime, $\leq$ 60 dBA night-time), façade upgrades are not required. Wall and window constructions meeting the minimum thermal and structural requirements of the Ontario Building Code will be acoustically sufficient.

6.2.5 OUTDOOR LIVING AREA REQUIREMENTS

There is a communal outdoor amenity area at grade in the northwest corner of the development, as shown in **Figure 11**. There are also 26 private terraces. Predicted overall sound levels are provided in the following table:

Table 15: Predicted Outdoor Amenity Area Sound Levels

Amenity Area	Predicted Sound Level (dBA)	Guideline Limit [1] (dBA)	Warning Clause / Noise Mitigation Measure	Meets Guideline?
Communal Amenity Area	47	60	None / None	Yes
Rooftop Terraces	38 to 42	60	None / None	Yes

Notes: [1] Sound levels up to 60 dBA are allowed with the use of a Type A or Type B Warning Clause.

Noise walls and noise warning clauses are not required.

6.2.6 VENTILATION REQUIREMENTS

Based on the predicted sound levels, all residential units must have a forced air heating is required, with provision to add air conditioning by the future occupants should they so desire. A Type C noise warning clause is required. In reality, central air conditioning will be supplied for all units. See Appendix D for warning clause details. The warning clauses must be registered on Title and included in all agreements of purchase and sale or lease and all rental agreements.

6.3 SUMMARY OF NOISE CONCLUSIONS AND RECOMMENDATIONS

The potential for noise impacts on and the proposed development have been assessed. Based on the results of our studies:

- Adverse noise impacts from commercial and industrial facilities are not anticipated at the Project.
- Wall and window upgrades and noise barriers are not required to address transportation noise. Residential units must have forced-air heating systems with the provision to add air conditioning systems.
- Noise warning clauses are required, to be included in documents registered in Title. Warning clause details are provided in Appendix D.
- With the inclusion of the above, adverse noise impacts from stationary noise transportation noise sources are not anticipated.

7. CONCLUSIONS

SLR was retained by Graywood Bronte Village LP to conduct a land use compatibility assessment for the proposed development located at 2365-2379 Lakeshore Road West in Oakville, Ontario.

This assessment has considered:

- Industrial air quality, odour, and dust emissions;
- Transportation-related air pollution;
- Industrial/ commercial noise; and
- Transportation-related noise.

The assessment has included a review of air quality and noise emissions from industrial facilities in the area.

Based on the review completed, the Project site development is anticipated to be compatible with the surrounding land uses from an air quality perspective. Emissions of dust and odour at the Project site are not anticipated. The Project site is not anticipated to limit surrounding existing or future industries and the ability to obtain or maintain required MECP permits or approvals.

Based on the above information, the requirements of the ROP LUCG have been met, and as such, MECP Guideline D-6 are met. As the applicable policies and guidelines are met, the Project site is:

- Unlikely to result in increased risk of complaint and nuisance claims;
- Unlikely to result in operational constraints for the major facilities;
- Unlikely to result in constraints on major facilities to reasonably expand, intensify or introduce changes to their operations.

In addition, there are no significant sources of PM, VOCs, NOx, and SO_2 emissions associated with Project site. The Project site sources are not considered to be major as defined by the Town of Oakville Health Protection and Air Quality By-Law 2010-035, therefore an application for approval to be considered by Town Council is not required.

Adverse noise impacts from commercial and industrial facilities are not anticipated at the Project. Wall and window upgrades and noise barriers are not required to address transportation noise. Residential units must have forced-air heating systems with the provision to add air conditioning systems. Noise warning clauses are required, to be included in documents registered in Title. Warning clause details are provided in Appendix D.

With the inclusion of the above, adverse noise impacts are not anticipated.

8. REFERENCES

Environmental Commissioner of Ontario (ECO, 2010), *Review of Posted Decision: Developing an Odour Policy Framework*, April 2010.

Ontario Ministry of the Environment, Conservation & Parks (MECP, 1995), Guideline D-1: *Land Use Compatibility*

Ontario Ministry of the Environment, Conservation & Parks (MECP, 1996), Guideline D-2: *Compatibility Between Sewage Treatment and Sensitive Land Uses*

Ontario Ministry of the Environment, Conservation & Parks (MECP, 1994) Guideline D-3: *Environmental Considerations For Gas Or Oil Pipelines And Facilities*

Ontario Ministry of the Environment, Conservation & Parks (MECP, 1994), Guideline D-4: *Land Use On or Near Landfills and Dumps*

Ontario Ministry of the Environment, Conservation & Parks (MECP, 1996), Guideline D-5: *Planning for Sewage & Water Services*

Ontario Ministry of the Environment, Conservation & Parks (MECP, 1995), Guideline D-6: *Compatibility Between Industrial Facilities and Sensitive Land Uses*

Ontario Ministry of Municipal Affairs and Housing (MMAH, 2014). *Provincial Policy Statement* http://www.ontario.ca/document/provincial-policy-statement-2014

Ontario Ministry of Municipal Affairs and Housing (MMAH, 2019). Draft *Provincial Policy Statement.* https://prod-environmental-registry.s3.amazonaws.com/2019-07/EN_PPS Proposed Policies_July2019.pdf

Ontario Regulation 419/01 – *Local Air Quality.*

The Town of Oakville's *Health Protection and Air Quality By-law 2010-035*

The Halton Region *Air Quality Guidelines, Regional Official Plan Guidelines*

The Halton Region *Noise Abatement Guidelines, Regional Official Plan Guidelines*

9. STATEMENT OF LIMITATIONS

This report has been prepared and the work referred to in this report has been undertaken by SLR Consulting (Canada) Ltd. (SLR) for Graywood Bronte Village LP, hereafter referred to as the "Client". It is intended for the sole and exclusive use of the Client. The report has been prepared in accordance with the Scope of Work and agreement between SLR and the Client. Other than by the Client and as set out herein, copying or distribution of this report or use of or reliance on the information contained herein, in whole or in part, is not permitted unless payment for the work has been made in full and express written permission has been obtained from SLR.

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Figures

2365-2379 Lakeshore Road West

Compatibility & Mitigation Study

SLR Project No.: 241.30501.00000

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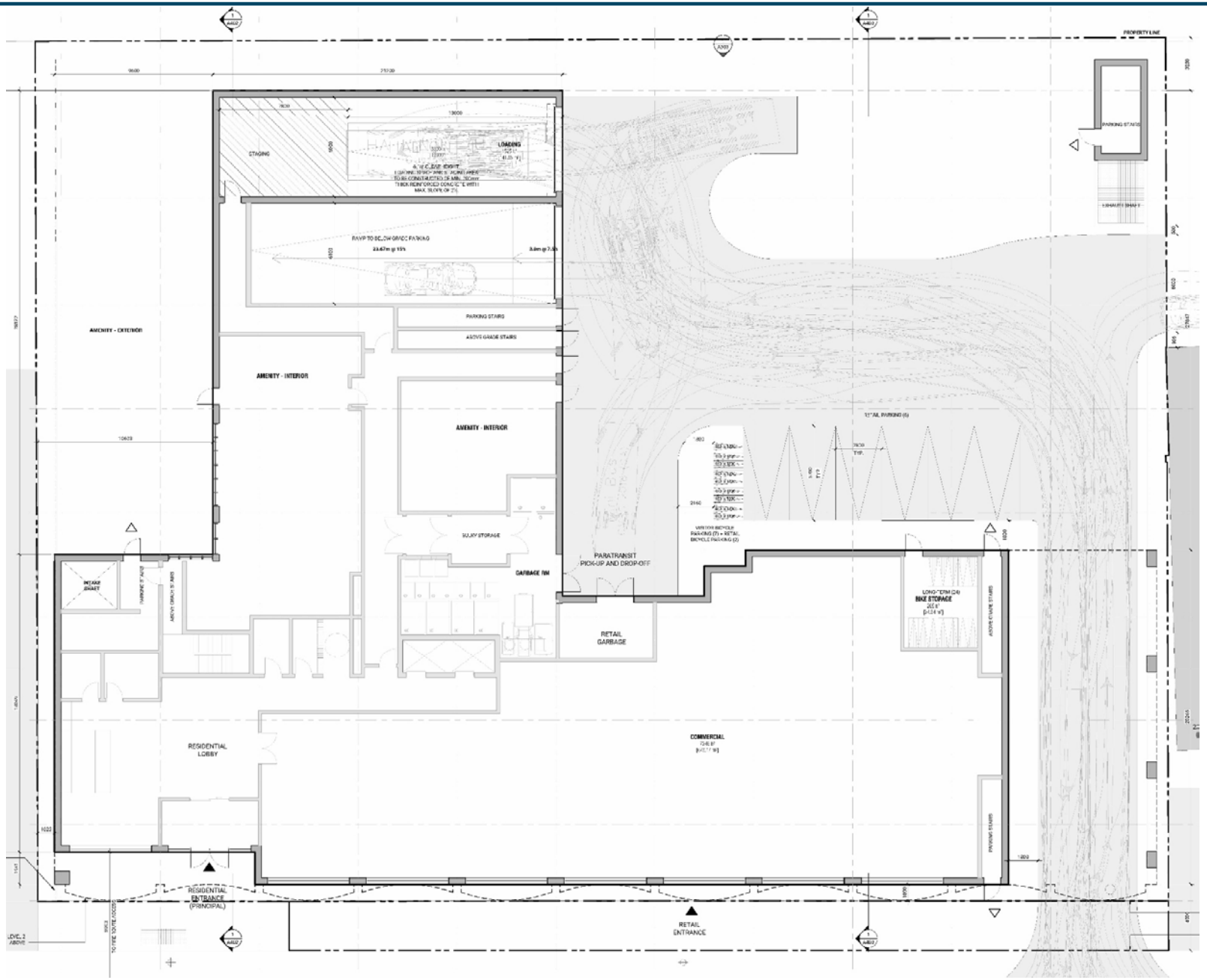
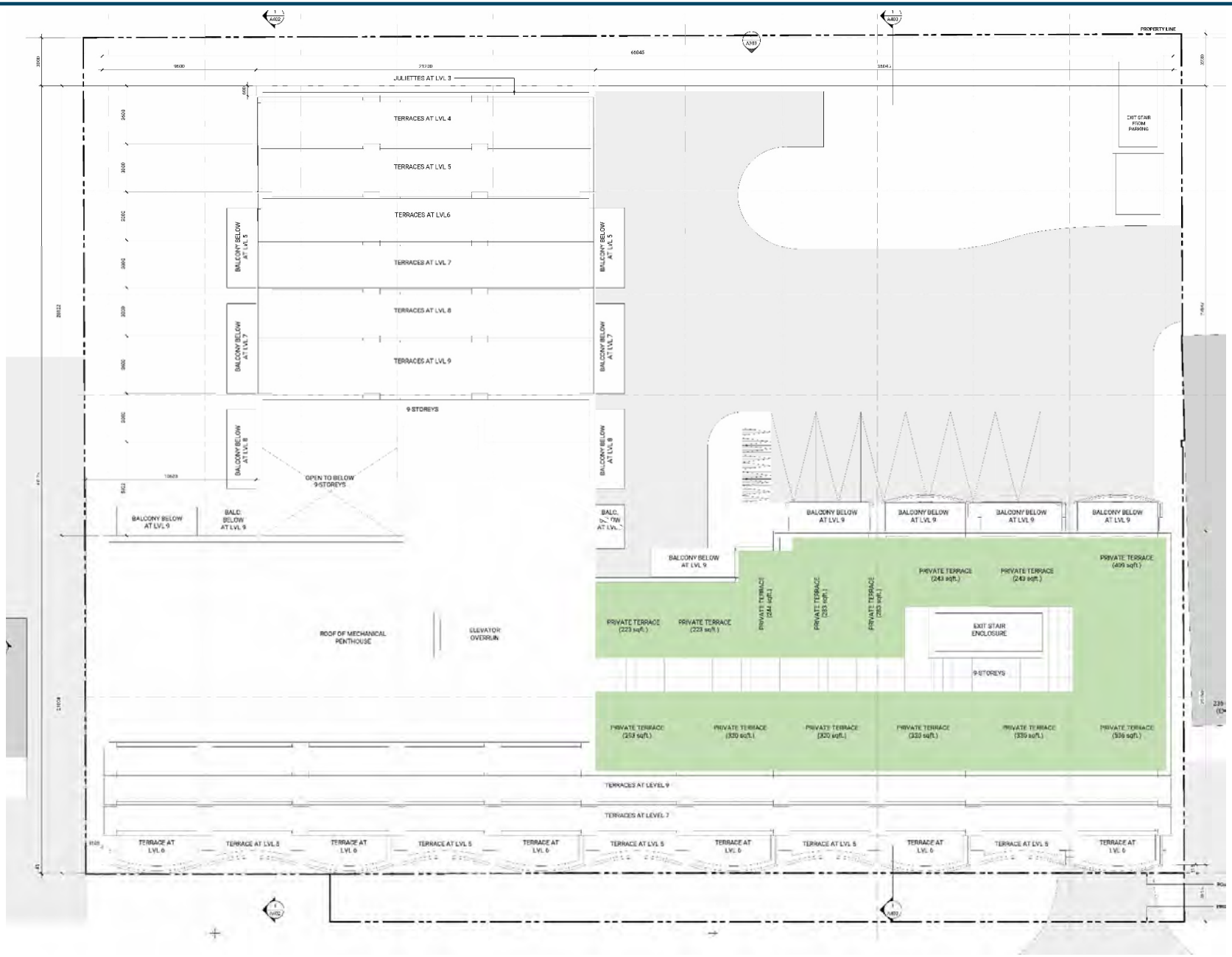
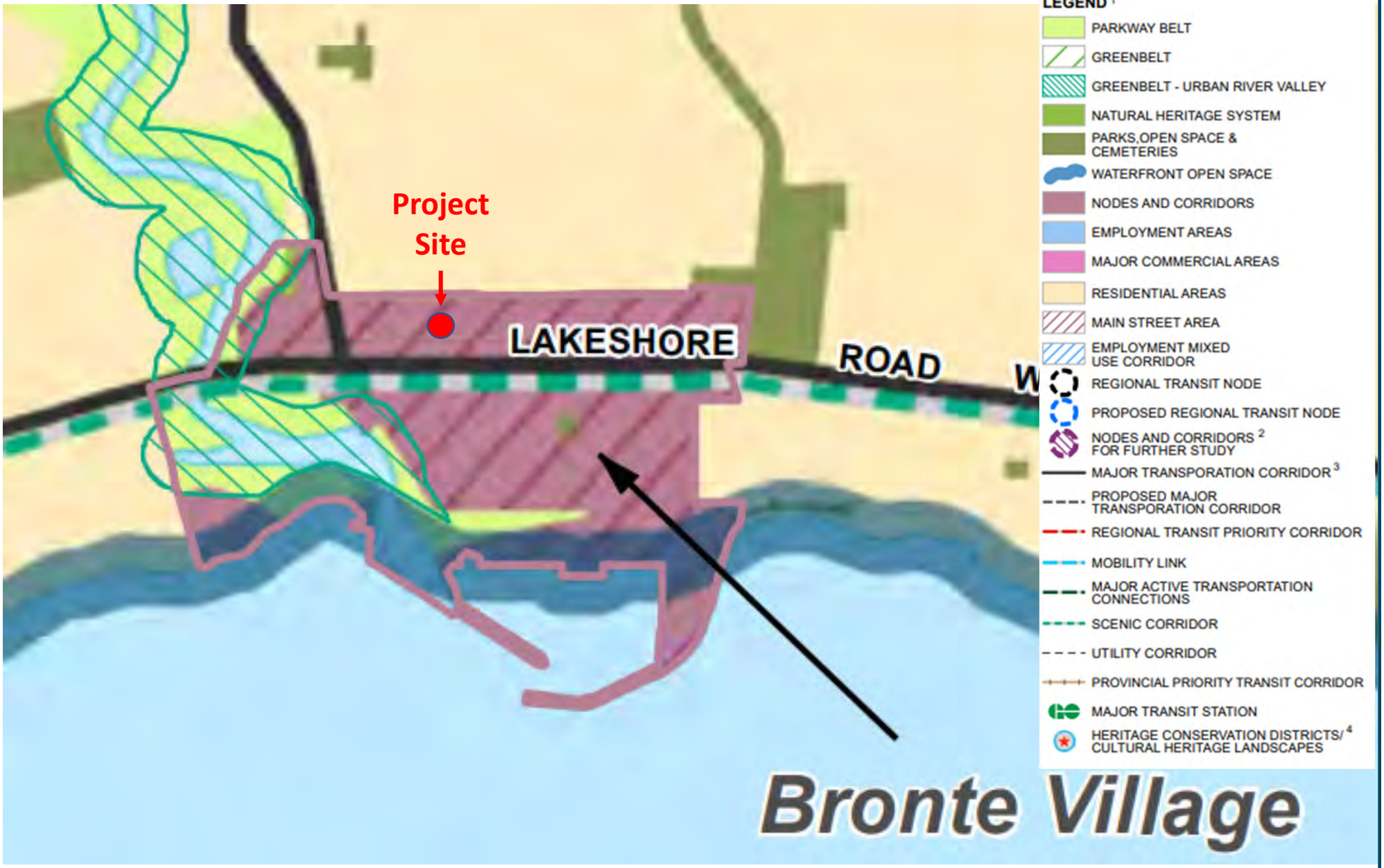
GRAYWOOD BRONTE VILLAGE LP	True North	Scale: 1:5,000	METRES	SLR global environmental solutions
2365-7379 LAKESHORE ROAD WEST		Date: Mar. 25, 2022 Rev 1.0	Figure No. **1**	
CONTEXT PLAN		Project No. 241.30501.00000		



GRAYWOOD BRONTE VILLAGE LP	True North	Scale: N.T.S.	METRES	SLR global environmental solutions
2365-7379 LAKESHORE ROAD WEST		Date: Mar. 25, 2022 Rev 1.0	Figure No. **2a**	
EXCERPTS FROM ROOF PLAN (ORIGINAL FROM DIAMOND SCHMITT DRAWING A013)		Project No. 241.30501.00000		

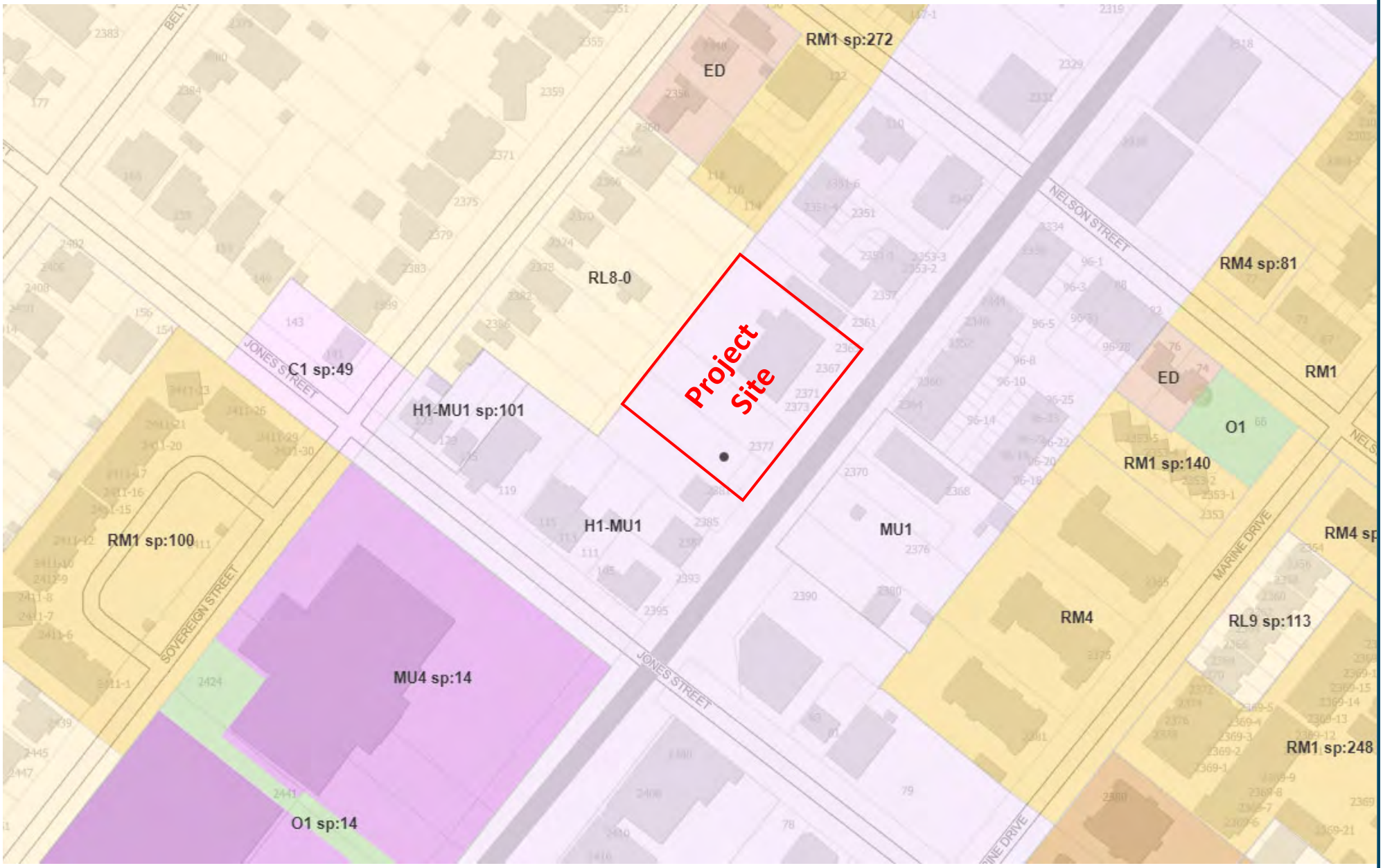


GRAYWOOD BRONTE VILLAGE LP	True North	Scale: N.T.S.	METRES	SLR global environmental solutions
2365-7379 LAKESHORE ROAD WEST		Date: Mar. 25, 2022 Rev 1.0	Figure No. **2b**	
EXCERPTS FROM ROOF PLAN (ORIGINAL FROM DIAMOND SCHMITT DRAWING A111)		Project No. 241.30501.00000		

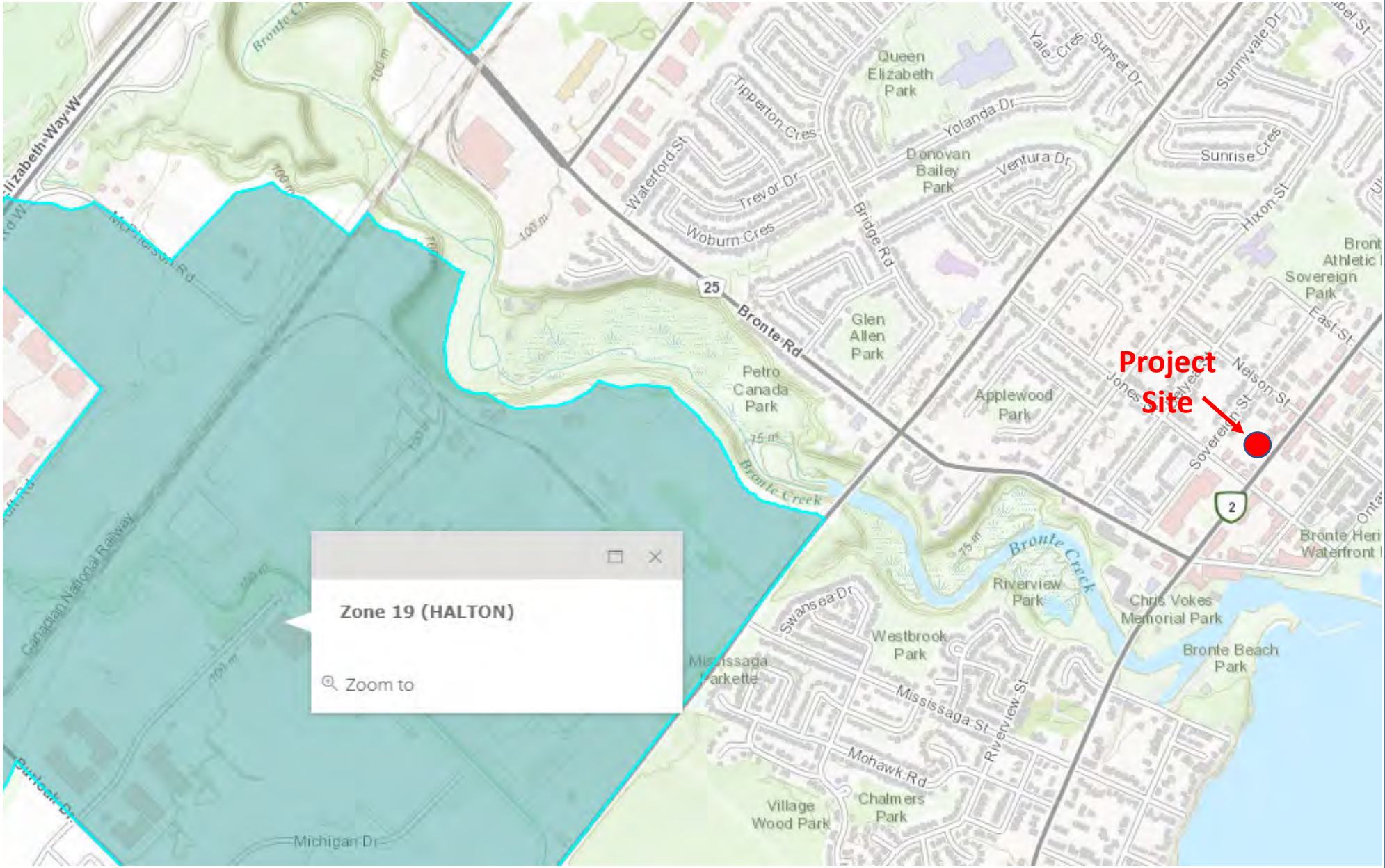


GRAYWOOD BRONTE VILLAGE LP	True North	Scale: N.T.S.	METRES	SLR global environmental solutions
2365-7379 LAKESHORE ROAD WEST		Date: Mar. 25, 2022 Rev 1.0	Figure No. **3a**	
EXCERPT FROM LIVEABLE OAKVILLE PLAN		Project No. 241.30501.00000		

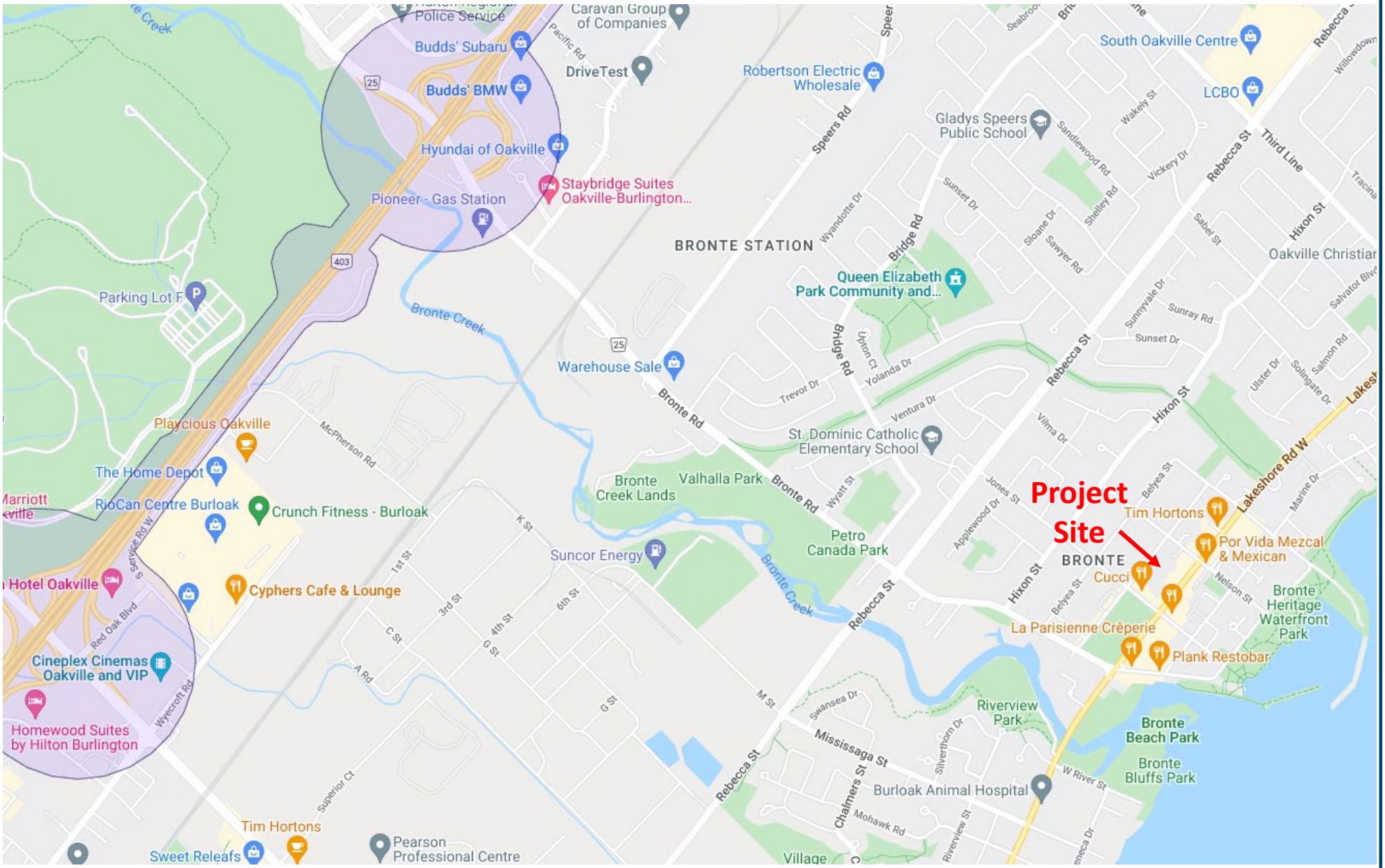
GRAYWOOD BRONTE VILLAGE LP	True North	Scale: N.T.S.	METRES	SLR global environmental solutions
2365-7379 LAKESHORE ROAD WEST		Date: Mar. 25, 2022 Rev 1.0	Figure No. **3b**	
BRONTE VILLAGE GROWTH AREA		Project No. 241.30501.00000		



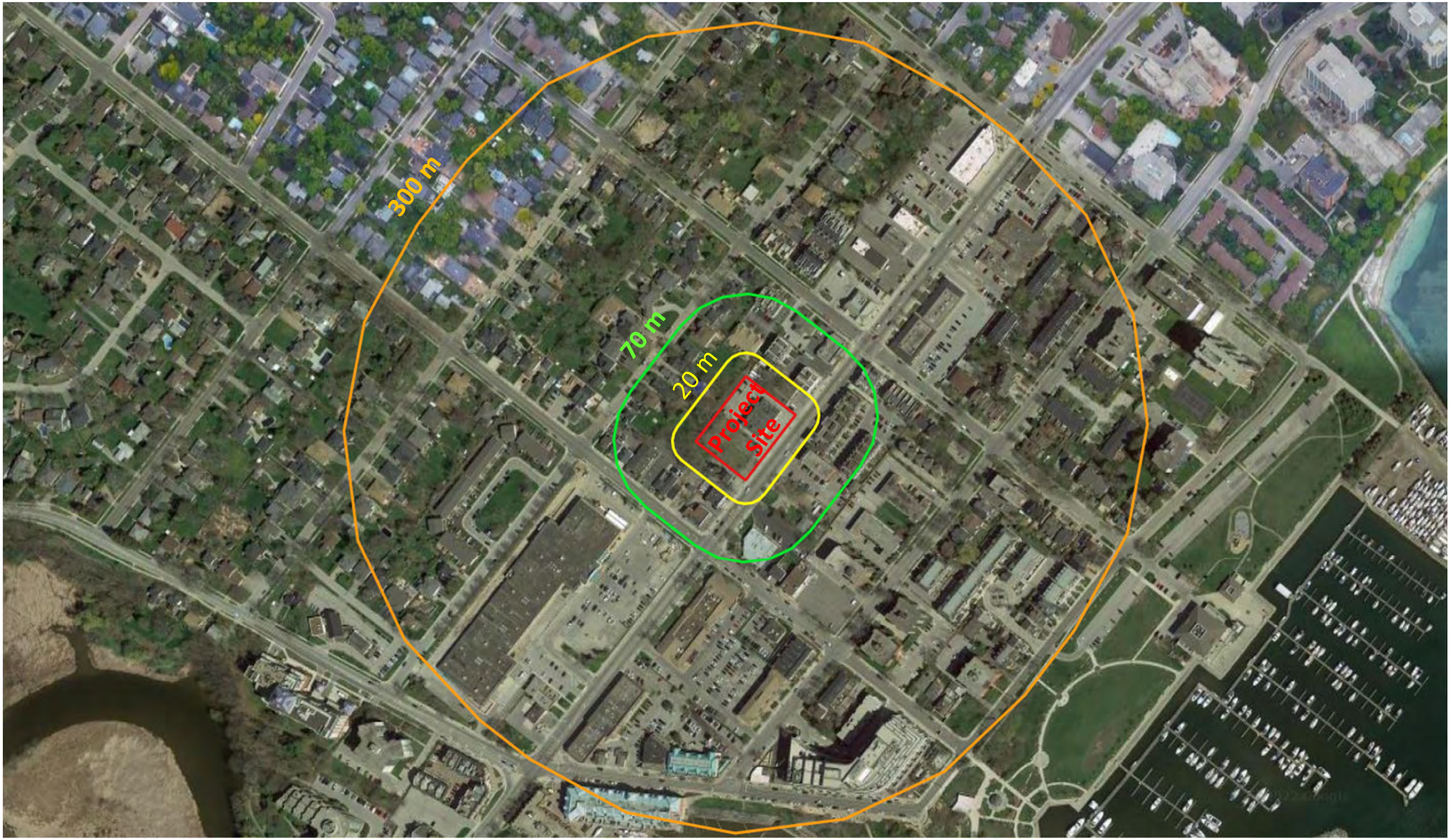
GRAYWOOD BRONTE VILLAGE LP	True North	Scale: N.T.S.	METRES	SLR global environmental solutions
2365-7379 LAKESHORE ROAD WEST		Date: Mar. 25, 2022 Rev 1.0	Figure No. **4**	
EXCERPT FROM TOWN OF OAKVILLE ZONING MAP		Project No. 241.30501.00000		



GRAYWOOD BRONTE VILLAGE LP	True North	Scale: N.T.S.	METRES	SLR global environmental solutions
2365-7379 LAKESHORE ROAD WEST		Date: Mar. 25, 2022 Rev 1.0	Figure No. **5**	
EXCERPT FROM PROVINCIALLY SIGNIFICANT EMPLOYMENT ZONE MAPPING		Project No. 241.30501.00000		

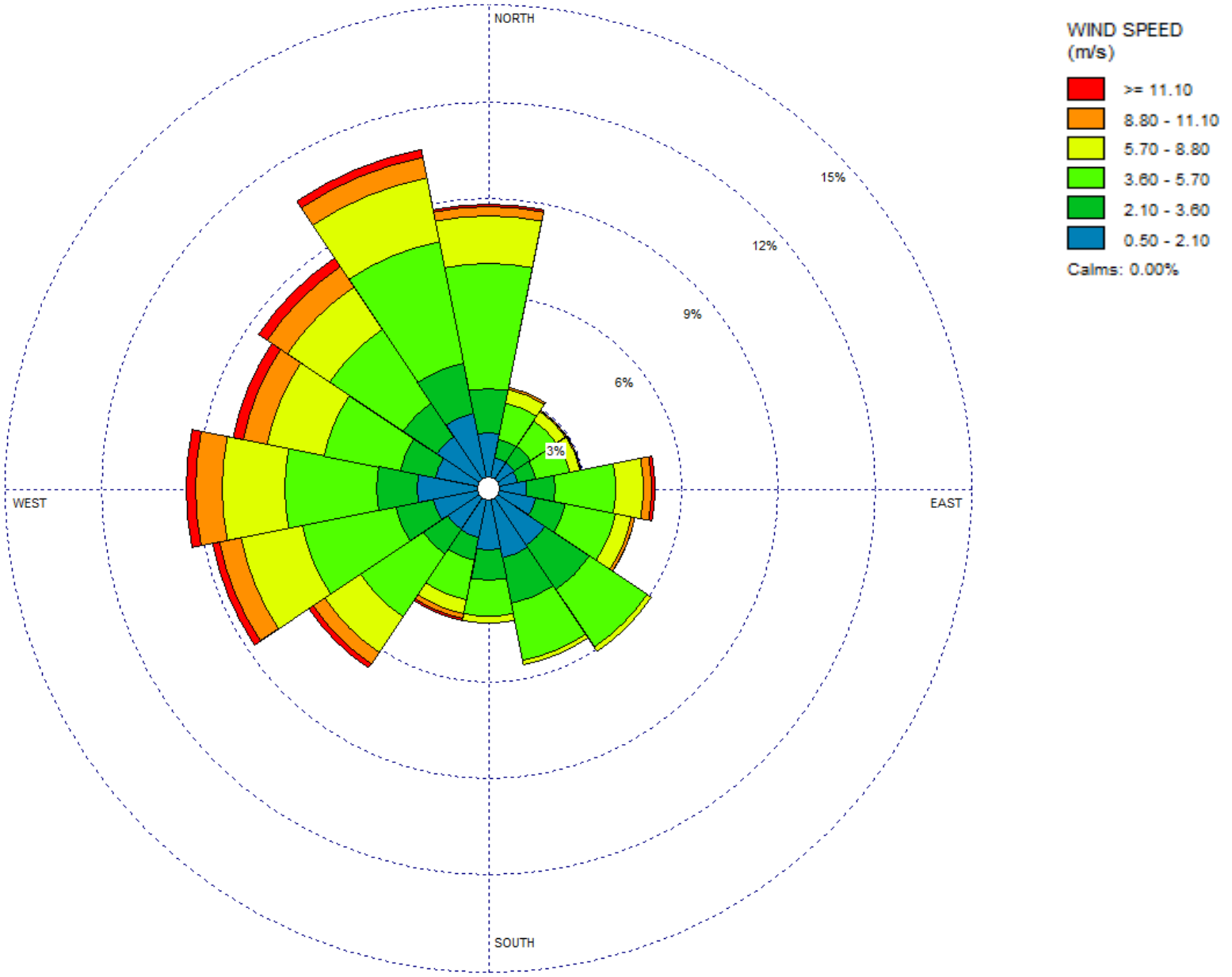


GRAYWOOD BRONTE VILLAGE LP	True North	Scale: N.T.S.	METRES	SLR global environmental solutions
2365-7379 LAKESHORE ROAD WEST		Date: Mar. 25, 2022 Rev 1.0	Figure No. **6**	
EXCERPT FROM MTO CONTROLLED AREAS		Project No. 241.30501.00000		

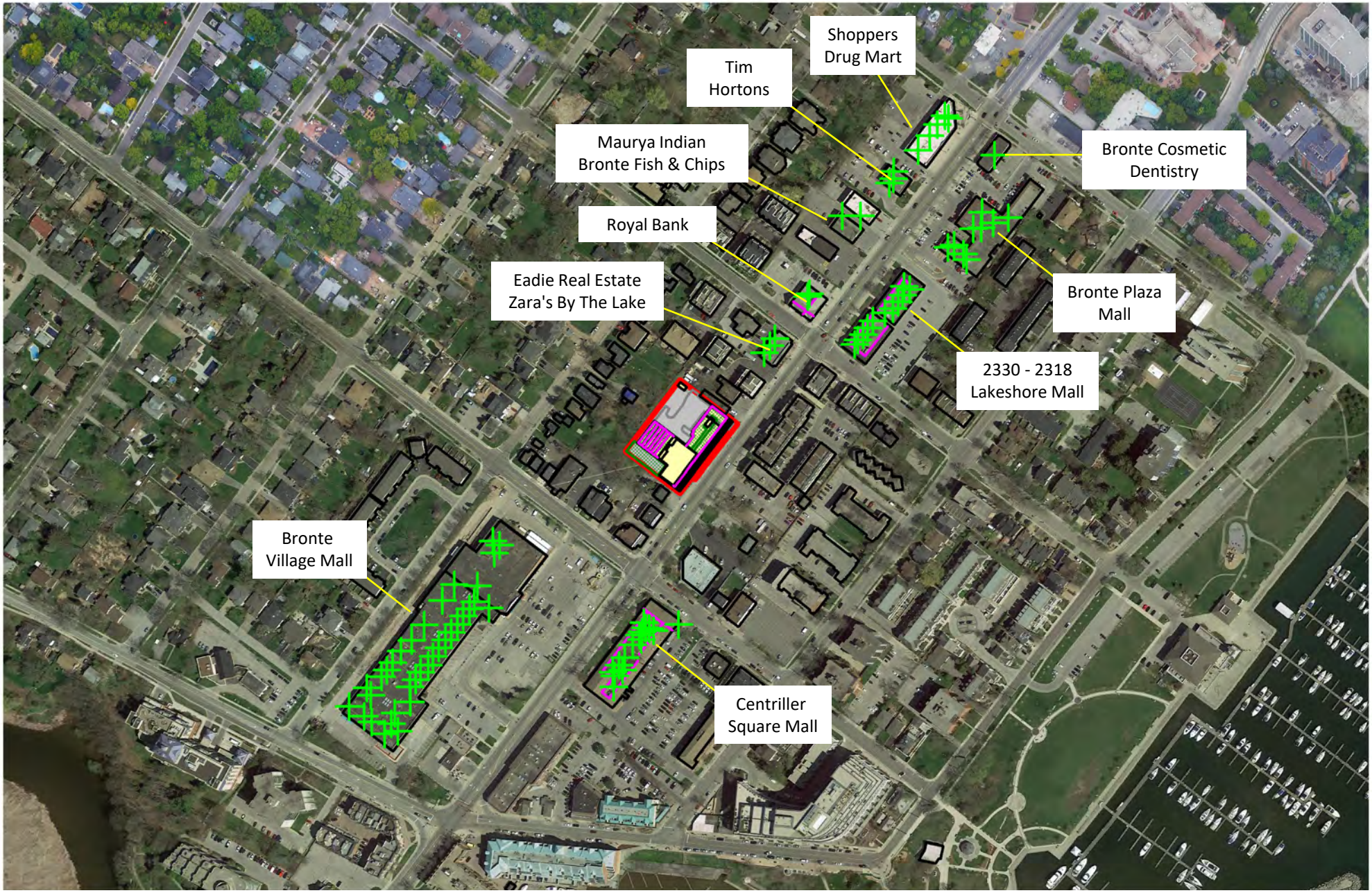


GRAYWOOD BRONTE VILLAGE LP	True North	Scale: 1:5,000	METRES	SLR global environmental solutions
2365-7379 LAKESHORE ROAD WEST		Date: Mar. 25, 2022 Rev 1.0	Figure No. **7a**	
CLASS I & CLASS II D-6 AREAS OF INFLUENCE		Project No. 241.30501.00000		

GRAYWOOD BRONTE VILLAGE LP	True North	Scale: 1:15,000	METRES	SLR global environmental solutions
2365-7379 LAKESHORE ROAD WEST		Date: Mar. 25, 2022 Rev 1.0	Figure No. **7b**	
CLASS III D-6 AREA OF INFLUENCE		Project No. 241.30501.00000		



GRAYWOOD BRONTE VILLAGE LP	True North	Scale: 1:8,000	METRES	SLR global environmental solutions
2365-7379 LAKESHORE ROAD WEST		Date: Mar. 25, 2022 Rev 1.0	Figure No. **8**	
TORONTO INTERNATIONAL AIRPORT WIND FREQUENCY DISTRIBUTION		Project No. 241.30501.00000		



GRAYWOOD BRONTE VILLAGE LP

2365-7379 LAKESHORE ROAD WEST

MODELLED STATIONARY NOISE SOURCE LOCATIONS

True North

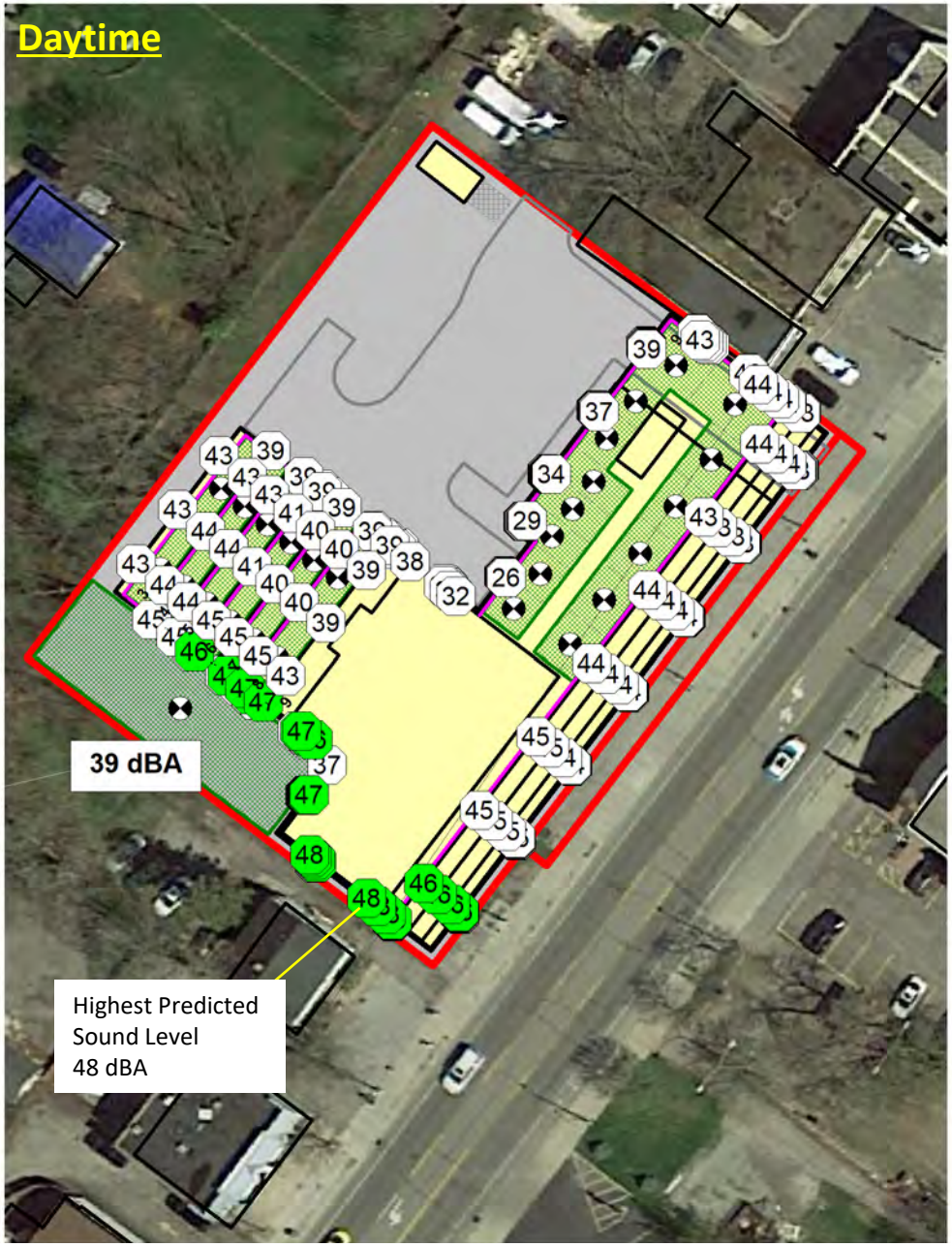
Scale: 1:750 METRES

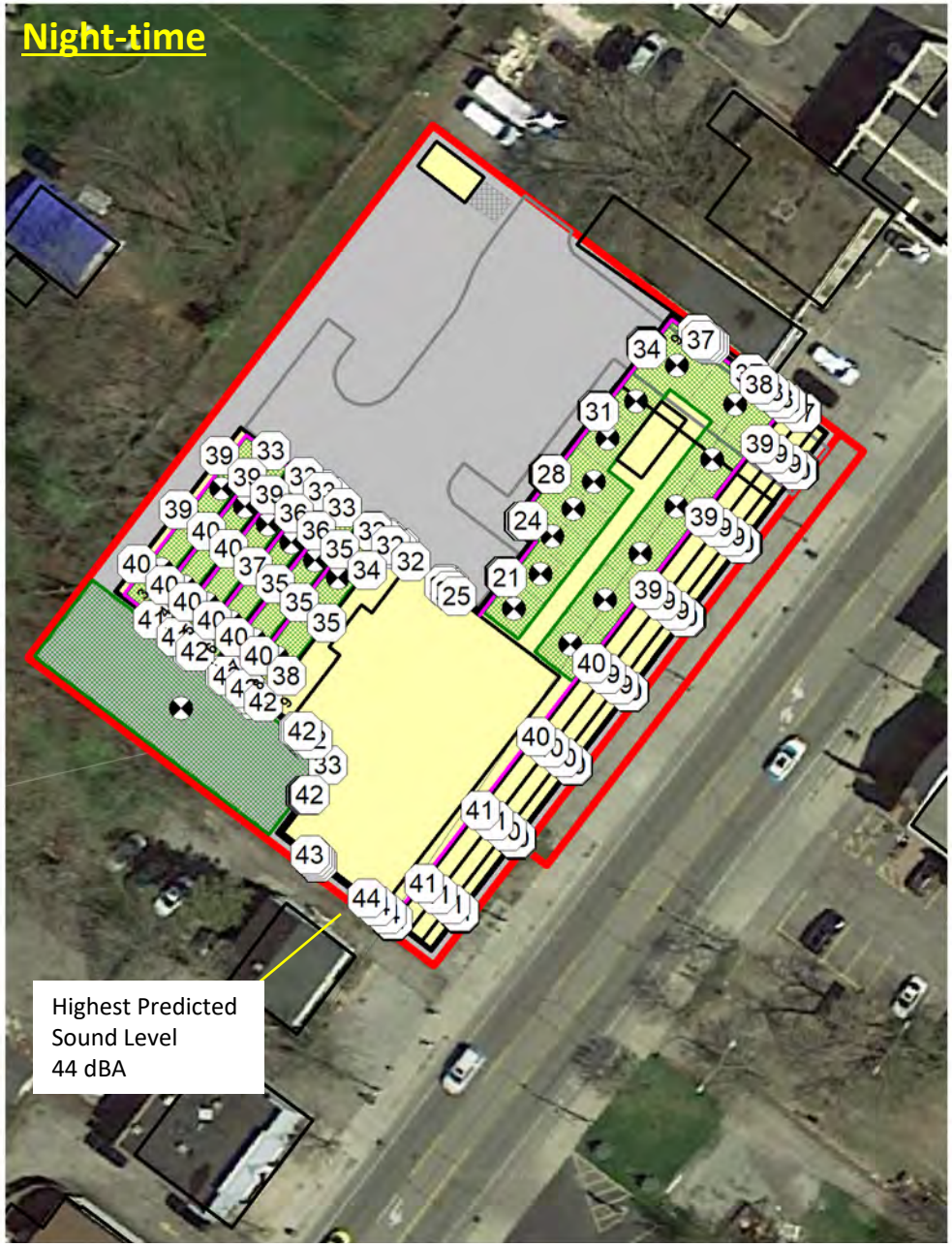
Date: Mar. 25, 2022 Rev 1.0

Project No. 241.30501.00000

Figure No. **9**

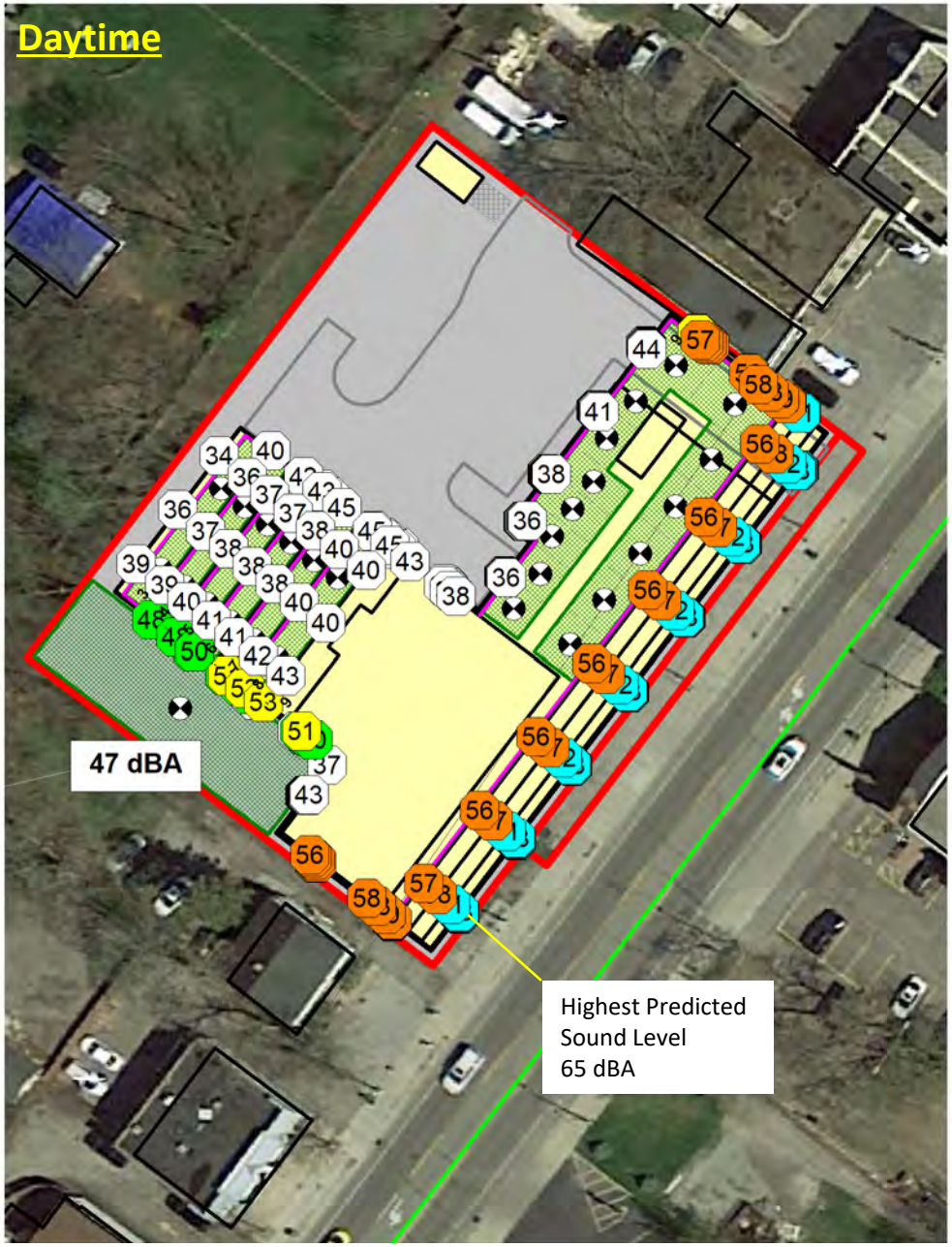
SLR global environmental solutions

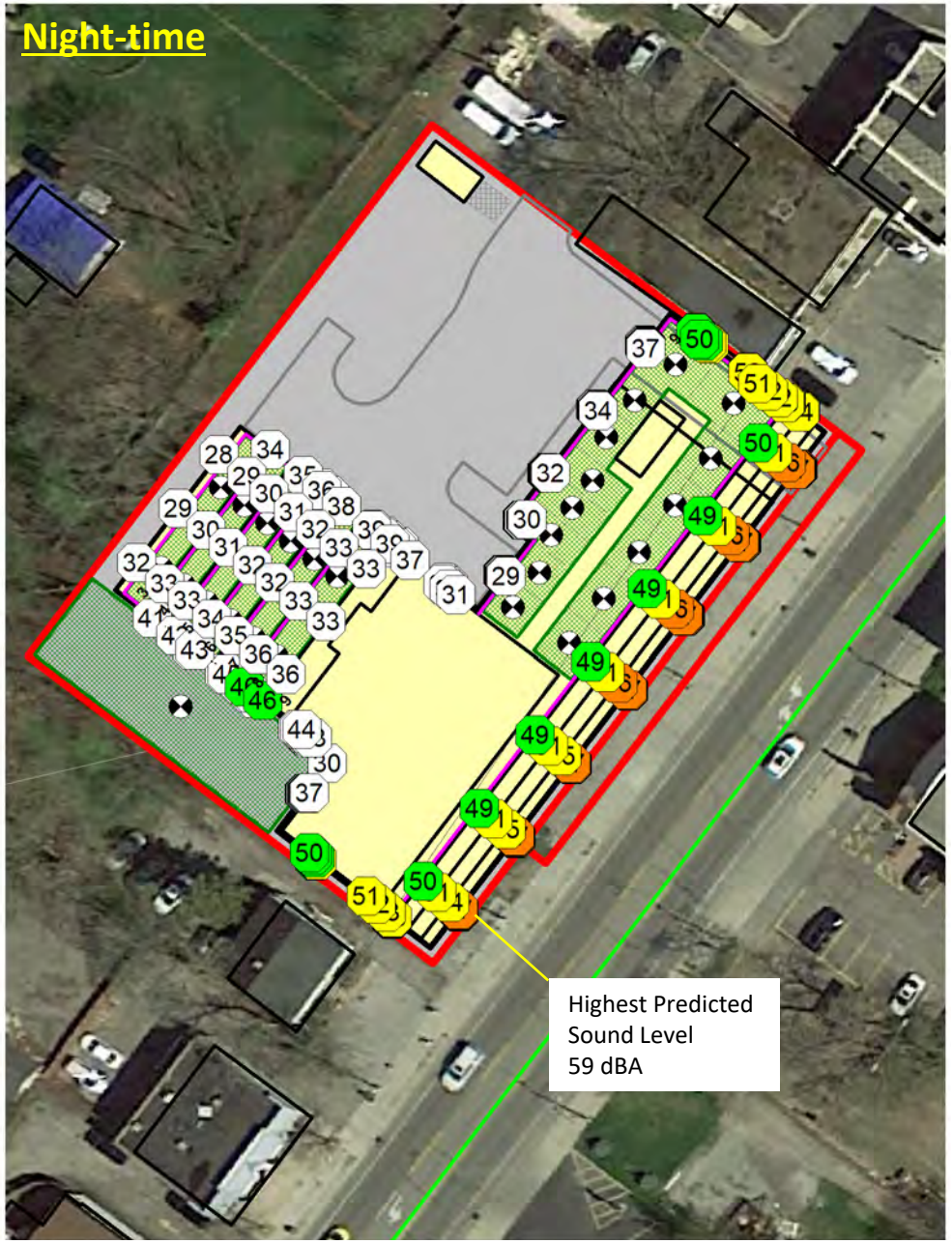




GRAYWOOD BRONTE VILLAGE LP	True North	Scale: 1:750	METRES	
2365-7379 LAKESHORE ROAD WEST		Date: Mar. 25, 2022 Rev 1.0	Figure No. **10**	
PREDICTED STATIONARY SOURCE SOUND LEVELS		Project No. 241.30501.00000		

SLR global environmental solutions





GRAYWOOD BRONTE VILLAGE LP

2365-7379 LAKESHORE ROAD WEST

PREDICTED TRANSPORTATION SOURCE SOUND LEVELS

True North

Scale: 1:750 METRES

Date: Mar. 25, 2022 Rev 1.0

Project No. 241.30501.00000

Figure No. **11**

SLR global environmental solutions

Appendix A
Industrial Information

2365-2379 Lakeshore Road West

Compatibility & Mitigation Study

SLR Project No.: 241.30501.00000

Appendix A.01
Trans Northern Pipeline
MECP Permits

2365-2379 Lakeshore Road West

Compatibility & Mitigation Study

SLR Project No.: 241.30501.00000

Ministry of the Environment and Climate Change
Operations Division

Confirmation of Registration

Registration Number: R-010-6110478120
Version Number: 001
Date Registration Filed: May 30, 2018 11:53:24 AM

Dear Sir/Madam,

TRANS-NORTHERN PIPELINES INC./

45 VOGELL ROAD STE 310
RICHMOND HILL ON L4B 3P6

You have registered, in accordance with Section 20.21(1) (a) of the *Environmental Protection Act*, the use, operation, construction, alteration, extension or replacement of any plant, structure, equipment, apparatus, mechanism or thing that is located at the facility noted below, or the alteration of a process or rate of production at the facility, including the activities set out in schedule 'A'.

3275 REBECCA Street OAKVILLE ON L6L 6N5

Please note that the facility noted above is subject to the applicable provisions of O. Reg. 245/11, and O. Reg.1/17.

The activity related information provided during the registration process is included as part of the confirmation of registration as schedule 'A'.

Dated on May 30, 2018

Director
Environmental Approvals Access and Service Integration Branch
Ministry of the Environment and Climate Change
135 St. Clair Avenue West, 1st Floor
Toronto ON M4V 1P5

Any questions related to this registration and the Environmental Activity and the Sector Registry should be directed to:

Ministry of the Environment and Climate Change

Customer Service Representative

Environmental Approvals Access and Service Integration Branch

Phone:(416) 314-8001

Toll free: 1-800-461-6290

Schedule 'A'

Part 3 - Activity Information

3.1 Industry Eligibility Check

a. Please select the facility's primary North American Industry Classification System (NAICS) code.	486910	
b. Does the facility have any other applicable NAICS codes?	☐ Yes	☑ No
b. i. If yes, please select the facility's secondary NAICS code(s), and confirm any other applicable NAICS code(s).		
c. Are you engaged in an activity at the facility that may discharge or from which may be discharged a contaminant into any part of the natural environment other than water?	☑ Yes	☐ No
d. Is the activity exempt from requiring an Environmental Compliance Approval (ECA) under section 9 (1) of the Environmental Protection Act (EPA) other than an activity that has been prescribed by an EASR regulation under Part II.2 of the Act?	☐ Yes	☑ No
e. Are the only activities engaged in at the facility, other than activities described in question 3.1d above, prescribed under a single other EASR regulation?	☐ Yes	☑ No
f. Is an alternative low-carbon fuel site within the meaning of Ontario Regulation (O. Reg.) 79/15 (Alternative Low-Carbon Fuels) operated at the facility?	☐ Yes	☑ No
g. Is the activity a renewable energy project as defined in the EPA?	☐ Yes	☑ No
h. Is an end-of-life vehicle waste disposal site within the meaning of O. Reg. 85/16 operated at the facility?	☐ Yes	☑ No

3.2 Facility Related Information

a. Has a site-specific air standard ever been set for a contaminant discharged from the facility? (section 35 of O. Reg. 419/05 (Air Pollution -- Local Air Quality))	☐ Yes	☑ No
b. Has a person ever been registered in the Ministry's Technical Standards Registry – Air Pollution under section 39 of O. Reg. 419/05 (Air Pollution – Local Air Quality) in respect of the facility?	☐ Yes	☑ No
c. Do all of the activities to be registered occur exclusively at the site? *Please Note: Discrete activities that involve the use of equipment that is intended to be moved from one site to another to perform the same function (such as the use of mobile rock crushing equipment or mobile PCB destruction equipment) are not prescribed for the purpose of the Environmental Activity and Sector Registry, and an Environmental Compliance Approval may be required.*	☑ Yes	☐ No
d. Is the facility located on a property that has been deemed a single property under subsection 4 (2) of O. Reg. 419/05?	☐ Yes	☑ No
e. Is the facility located in an area of development control within the Niagara Escarpment Planning Area?	☐ Yes	☑ No
e. i. If yes, has a development permit required under section 24 of the Niagara Escarpment Planning and Development Act (NEPDA) in respect of the facility been issued?	☐ Yes	☐ No
f. Is there a landfilling site that is no longer permitted to accept waste for disposal located on the site on which the facility is located?	☐ Yes	☑ No
g. Is the activity part of an undertaking to which the Environmental Assessment Act applies?	☐ Yes	☑ No
g. i. If yes, is one or more of the following conditions met: - All class EA requirements have been completed, including decisions on any Part II order requests; OR - The facility has received approval to proceed with the undertaking.	☐ Yes	☐ No

h. Please provide a description of the facility. The description should include a summary of operations and activities at the facility that discharge contaminants, as well as what is produced, if applicable.

Surge tank for emergency purposes.

i. Please enter the date on which the facility commenced or will commence operations.	2018-09-28

j. Is the facility located in a multi-tenant building?	☐ Yes	☑ No

3.3 Activity Related Information

a. Does the land disposal of waste as defined in Regulation 347 General – Waste Management occur at the facility?	☐ Yes	☑ No
b. Does the facility process or dispose of waste by way of thermal treatment, other than the thermal treatment of wood fuel that meets the specifications in Chapter 5 of the EASR publication in a wood-fired combustor?	☐ Yes	☑ No
c. Does the facility use a wood-fired combustor?	☐ Yes	☑ No
c. i. If yes, does the wood-fired combustor have a nominal load heat input capacity of less than 3 megawatts?	☐ Yes	☐ No
c. ii. If yes, was the wood-fired combustor installed at the facility on or after January 31, 2017?	☐ Yes	☐ No
c. iii. If yes, does the wood-fired combustor exclusively use one or more of the following as fuel: - Wood chips that meet the specifications set out in Chapter 5 of the EASR publication. - Wood briquettes that meet the specifications set out in Chapter 5 of the EASR publication. - Wood pellets that meet the specifications set out in Chapter 5 of the EASR publication.	☐ Yes	☐ No
d. Does the facility have any plating processes that use cadmium, cyanide, chromium or nickel, including chrome plating, electroplating or electroless plating?	☐ Yes	☑ No
e. Is an electrolytic stripping process that removes cadmium, chromium or nickel from an object used at the facility?	☐ Yes	☑ No
f. Are metals processed outdoors at the facility, including torching, shearing, shredding or plasma cutting, other than for the purpose of routine maintenance carried out at the facility on any plant, structure, equipment, apparatus or thing?	☐ Yes	☑ No
g. Is a fossil-fuel electric power generation facility with a maximum electrical power output capacity equal to or greater than 25 megawatts operated at the facility?	☐ Yes	☑ No
h. Is a combustion source that uses biogas, biomass, coal, petroleum coke or waste as a fuel, or that uses a fuel derived from biogas, biomass, coal, petroleum coke or waste other than a small wood-fired combustor operated at the facility?	☐ Yes	☑ No
i. Is a combustion turbine used at the facility?	☐ Yes	☑ No

Part 4 - Operational Information

4.1 Air

a. Does the EASR Emission Summary and Dispersion Modelling (ESDM) Report provide for modifications that have not yet been implemented at the facility? ☐ Yes ☑ No

a. i. If yes, please provide the date on which the modifications will be completed.

b. Has an instrument under O. Reg. 419/05 been issued in respect of the facility? ☐ Yes ☑ No

b. i. If yes, what type(s) of instruments (including any notices, orders or approvals) has (have) been issued? (select all that apply)

ss. 7(1) Specified Dispersion Models	☐
ss. 8(2) Negligible Sources	☐
ss. 10(2) Operating Conditions	☐
ss. 11(2) Refined Emission Rates	☐
ss. 13.1 Value of Dispersion Modelling Parameters	☐
ss. 13(1) Meteorological Data	☐
ss. 14(6) Area of Modelling Coverage	☐
ss. 20(5) Speed-up Order	☐
Other	☐

List all that have been issued

c. To what standard did the licensed engineering practitioner assess compliance of the facility's emissions (please select the applicable box(es)):

Section 19 of O. Reg. 419/05 (Schedule 2)	☐
Section 20 of O. Reg. 419/05 (Schedule 3)	☑
N/A – The amount of any contaminant discharged from the site is negligible	☐
N/A – Source(s) discharge only sound as a contaminant	☐
N/A – Source(s) discharge sound as a contaminant and the amount of any other contaminant discharged is negligible	☐

d. Please select all applicable boxes that apply to a discharge of a contaminant(s) to air from the facility:

Contaminant(s) belonging to Benchmark 1 category of ACB list is at or below the concentration for each specified averaging period set out for the contaminant	☑
Contaminant(s) belonging to Benchmark 2 category of ACB list is at or below the concentration for each specified averaging period set out for the contaminant	☐
Contaminant(s) belonging to Benchmark 2 category of ACB list is above the concentration for a specified averaging period set out for the contaminant	☐
The concentration of the contaminant(s) does not have a Ministry standard, guideline, or screening level set out for the contaminant	☐

N/A – The amount of any contaminant discharged from the site is negligible	☐
N/A – Source(s) discharge only sound as a contaminant	☐
N/A – Source(s) discharge sound as a contaminant and the amount of any other contaminant discharged is negligible	☐

e. Does the facility operate a generator for non-emergency purposes?	☐ Yes	☑ No
f. Does the facility use or operate a large boiler or heater greater than 10.5 gigajoules per hour?	☐ Yes	☑ No
g. Will an Emissions Summary Table be uploaded? *Please Note: An Emissions Summary Table is required to be uploaded at the time of registration. An Emissions Summary Table is also required to be uploaded if any modifications to the facility require an update to the EASR ESDM. Additionally, as part of the 10 year review required by O. Reg. 1/17, an updated Emissions Summary Table is required to be uploaded.*	☑ Yes	☐ No

h. Please provide the Name(s) and Licence Number(s) of the Licensed Engineering Practitioner(s) that signed and sealed the EASR ESDM Report and made statements in the EASR ESDM Report Supplement and the date signed.

First Name	Last Name	Licence Number(s)	Date Signed
Stephen	Kuchma	100014750	2018-04-19

4.2 Fugitive Dust Control

a. Does the EASR ESDM Report prepared for the facility identify a source of fugitive dust?	☐ Yes	☑ No
a. i. If yes, has a licensed engineering practitioner signed and sealed a Best Management Practice Plan (BMPP) for fugitive dust control?	☐ Yes	☐ No
b. Has a BMPP for fugitive dust control been prepared as a result of a written notice from the Director issued under O. Reg. 1/17?	☐ Yes	☑ No

c. Please provide the Name(s) and Licence Number(s) of the Licensed Engineering Practitioner(s) that signed and sealed the BMPP for fugitive dust control and the date signed and sealed.

First Name	Last Name	Licence Number(s)	Date Signed

4.3 Noise

a. Please select the noise assessment method that was completed for the facility:

The facility meets the 1000m setback distance	☑
Primary Noise Screening Method	☐
Secondary Noise Screening Method	☐
Acoustic Assessment Report	☐

a. i. If the Primary Noise Screening Method was used, is the actual separation distance from the facility to the closest Point of Noise Reception equal to or greater than the minimum separation distance as determined by the Primary Noise Screening Method?	☐ Yes	☐ No
a. ii. If the Secondary Noise Screening Method was used, is the combined sound level from the facility at each affected Point of Noise Reception as determined by the Secondary Noise Screening Method less than or equal to the applicable sound level limit set out in Chapter 3 of the EASR publication?	☐ Yes	☐ No
a. iii. If an acoustic assessment was completed, did the acoustic assessment determine that the combined sound level from the facility at each affected Point of Noise Reception less than or equal to of the applicable sound level limit set out in Chapter 3 of the EASR publication?	☐ Yes	☐ No

a. iii. a) If no, has a Noise Abatement Action Plan been developed for the facility? ☐ Yes ☐ No

a. iii. b) If yes, please provide the title of the Noise Abatement Action Plan and the date it was prepared.

Name of NAAP	Date Prepared

b. Has an Acoustic Audit Report been prepared as a result of a written notice from the Director? ☐ Yes ☑ No

b. i. If yes, please provide the Name(s) and Licence Number(s) of the Licensed Engineering Practitioner(s) that signed and sealed the acoustic audit report, and the date signed and sealed.

First Name	Last Name	Licence Number(s)	Date Signed

c. Will an Acoustic Assessment Summary Table be uploaded? ☑ Yes ☐ No
Please Note: An Acoustic Assessment Summary Table is required to be uploaded at the time of registration if an Acoustic Assessment was completed for the facility. An Acoustic Assessment Summary Table is also required to be uploaded if any modifications to the facility require an update to the facility's noise report. Additionally, as part of the 10 year review required by O. Reg. 1/17, an updated Acoustic Assessment Summary Table is required to be uploaded.

d. Please provide the Name(s) and Licence Number(s) of the Licensed Engineering Practitioner(s) that signed and sealed the noise report, and the date signed and sealed.

First Name	Last Name	Licence Number(s)	Date Signed
Stephen	Kuchma	100014750	2018-05-30

4.4 Odour

a. Did the Odour Screening Report indicate that a circumstance which requires a BMPP for odour to be prepared exists at the facility? ☐ Yes ☑ No

b. Did the Odour Screening Report indicate that a circumstance which requires an Odour Control Report (OCR) to be prepared exists at the facility? ☐ Yes ☐ No

b. i. If yes, please provide the Name(s) and Licence Number(s) of the Licensed Engineering Practitioner(s) that signed and sealed the Odour Control Report and the date signed and sealed.

First Name	Last Name	Licence Number(s)	Date Signed

c. Has a BMPP for odour been prepared as a result of a written notice from the Director issued under O. Reg. 1/17? ☐ Yes ☑ No

d. Please provide the Name(s) and Licence Number(s) of the Licensed Engineering Practitioner(s) that signed and sealed the BMPP for odour and the date signed and sealed.

First Name	Last Name	Licence Number(s)	Date Signed

Table E.1 Emission Summary Table for the Oakville Surge Tank Facility

Contaminant Name	CAS #	Maximum Emissions (g/s)	Model Used	Maximum POI [1] (µg/m3)	Averaging Period	MOE POI Limit (µg/m3)	Limiting Effect	Regulation Schedule No.	Percentage of MOE POI Limit (%)
Naphthalene	91-20-3	0.000019503	SCREEN3	0.022	1/2 hr	36	Odour	B1	0.061
				0.007	24 hr	22.5	Health	B1	0.031
Methyl Tert Butyl Ether	1634-04-04	0.020407857	SCREEN3	21.689	1/2 hr	2200	Odour	B1	0.986
				7.230	24 hr	7000	Health	B1	0.103
Ethyl Alcohol	64-17-5	0.002567439	SCREEN3	2.730	1/2 hr	19000	Odour	B1	0.014
				0.910	1 hr	19000	Odour	B1	0.005
Benzene	71-43-2	0.009790813	SCREEN3	10.407	1/2 hr	7	Health	B1	148.671
				0.00099	Annual	0.45	Health	B1	0.220
Cumene (Isopropyl Benzene)	98-82-8	0.000493087	SCREEN3	0.525	1/2 hr	100	Odour	B1	0.525
				0.175	24 hr	400	Health	B1	0.044
Cyclohexane	110-82-7	0.010935277	SCREEN3	11.623	1/2 hr	18300	Health	B1	0.064
				3.874	24 hr	6100	Health	B1	0.064
Ethyl Benzene	100-41-4	0.003194988	SCREEN3	3.399	1/2 hr	1400	Odour	B1	0.243
				1.133	24 hr	1000	Health	B1	0.113
Hexane	110-54-3	0.056478817	SCREEN3	60.027	1/2 hr	7500	Health	B1	0.800
				20.009	24 hr	2500	Health	B1	0.800
Toluene	108-88-3	0.046168656	SCREEN3	49.087	1/2 hr	2000	Odour	B1	2.454
				16.362	24 hr	2000	Odour	B1	0.818
Xylenes	1330-20-7	0.015274837	SCREEN3	16.256	1/2 hr	2200	Health	B1	0.739
				5.419	24 hr	730	Health	B1	0.742

1 The 1/2 hr standards or guidelines are for Schedule 2 compliance before 2020, and the 1hr, 24 hr and Annual are for the Schedule 3 compliance.

Ontario

Ministry of the Environment and Climate Change
Ministère de l'Environnement et de l'Action en matière de changement climatique

ENVIRONMENTAL COMPLIANCE APPROVAL
NUMBER 3758-AARTHG
Issue Date: June 10, 2016

Trans-Northern Pipelines Inc.
45 Vogell Road, No. 310
Richmond Hill, Ontario
L4B 3P6

Site Location: 3275 Rebecca Street
Town of Oakville, Regional Municipality of Halton

You have applied under section 20.2 of Part II.1 of the Environmental Protection Act , R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

- one (1) groundwater pump and treat system operating with a maximum flow rate of 35,100 litres per hour to treat groundwater containing dissolved phase petroleum hydrocarbons;

all in accordance with the Environmental Compliance Approval Application submitted by Trans-Northern Pipelines Inc., dated June 19, 2015 and signed by Farhad Seif, Manager; and the supporting information, including the Emission Summary and Dispersion Modelling Report, submitted by Stantec Consulting Ltd., dated June 19, 2015 and signed by Toni Zbieranowski; and emails dated May 19, 2016 and June 9, 2016 from Kim Ireland of Stantec Consulting Ltd.

For the purpose of this environmental compliance approval, the following definitions apply:

1. "Approval" means this Environmental Compliance Approval, including the application and supporting documentation listed above;
2. "Company" means Trans-Northern Pipelines Inc., that is responsible for the construction or operation of the Facility and includes any successors and assigns;

3. "District Manager" means the District Manager of the appropriate local district office of the Ministry, where the Facility is geographically located;

4. "EPA" means the Environmental Protection Act, R.S.O. 1990, c.E.19.;

5. "Equipment" means the equipment associated with the Process described in the Company's application, this Approval, and in the supporting documentation submitted with the application, to the extent approved by this Approval;

6. "Facility" means the entire operation on the property where the Equipment is located.

7. "Manual" means a document or a set of documents that provide written instructions to staff of the Company;

8. "Ministry" means the ministry of the government of Ontario responsible for the EPA and includes all officials, employees, or other persons acting on its behalf;

9. "Process" means the groundwater pump and treat system described in the Company's application,

this Approval, and in the supporting documentation submitted with the application, to the extent approved by this Approval;

10. "Publication NPC-300" means the Ministry Publication NPC-300, "Environmental Noise Guideline, Stationary and Transportation Sources – Approval and Planning, Publication NPC-300", August, 2013, as amended.

11. "Remedial Work Plan" means the overall plan, developed for the Site, that contains as a minimum the remedial objectives, an overview of the extent of contamination at the Site, and closure conditions to remove the Equipment from the Site;

12. "Site" means the property located at 3275 Rebecca Street, Oakville, Ontario;

13. "Soil, Groundwater and Sediment Standards" means the Ministry publication "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act dated April 15, 2011", as amended;

14. "Supporting Documents" means the Ministry publications that accompany the Soil, Groundwater and Sediment Standards including "Guide for Completing Phase II Environmental Site Assessment under Ontario Regulation 153/04" dated June 2011, as amended; and

15. "Target Compounds" means the Volatile Organic Compounds (VOC) and Petroleum Hydrocarbons as described in the Company's application, this Approval, and in the supporting documentation submitted with the application, to the extent approved by this Approval, that the Process is designed to treat as part of the Remedial Work Plan.

You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

Performance Requirements

1. The Company shall, at all times, design and operate the Equipment with the intent to reduce the groundwater concentrations of the Target Compounds to comply with the appropriate criteria provided in the Soil, Groundwater and Sediment Standards, appropriate worker health and safety criteria, or Site specific criteria developed in accordance with the Supporting Documents.

2. The Company shall, before commencement of operation of the Process at the Site, prepare a Remedial Work Plan for the Site.

3. The Company shall, at all times, ensure that the noise emissions from the Facility comply with the limits set out in Ministry Publication NPC-300.

Operating Procedures and Maintenance Manual

4. The Company shall, before commencement of operation of the Process at the Site, prepare and implement an Operating Procedures and Maintenance Manual for the Equipment. The Manual shall specify, as a minimum:

(a) frequency of inspections and scheduled preventative maintenance;

(b) procedures to prevent upset conditions and contingency measures;

(c) procedures related to health and safety;

(d) procedures to prevent and/or minimize noise and/or odorous emissions; and

(e) procedures to record and respond to environmental complaints;

Monitoring Plan

5. The Company shall, before commencement of operation of the Process at the Site, design and implement a Monitoring Plan, in accordance with the Supporting Documents, for the groundwater at the Site to document that the Performance Requirements outlined above are not exceeded and that the Remedial Work Plan objectives are met. The Monitoring Plan shall specify, as a minimum:

(a) Monitoring Plan objectives;

(b) list of analytical parameters;

(c) monitoring locations and frequency;

(d) sampling methodology and QA/QC procedures;

(e) Remedial Work Plan objectives for discontinuation of the Process.

Record Keeping Requirements

6. The Company shall retain for a minimum of two (2) years from the date of their creation, all reports, records and information as described in this Approval, related to or resulting from the operation of the Process and shall include, but not be limited to:

(a) the Remedial Work Plan;

(b) records on the inspection, maintenance and repair of the Equipment related to the Process;

(c) all monitoring results including the verification sampling to demonstrate that the Remedial Work Plan objectives are met;

(d) records on the environmental complaints; including:

(1) a description, time and date of each incident to which the complaint relates;

(2) wind direction at the time of the incident to which the complaint relates;

(3) a description of the measures taken to address the cause of the incident to which the complaint relates and to prevent a similar occurrence in the future.

These records shall be made available, upon request, to Ministry personnel, or Ministry authorized representative(s), upon presentation of credentials.

Notification Requirements

7. The Company shall notify the District Manager, in writing, if the Process is not operated in accordance with the Performance Requirements or the Operating Procedures and Maintenance Manual or the Monitoring Plan outlined above.

8. The Company shall notify the District Manager, in writing, of each environmental complaint within two (2) business days of the complaint. The notification shall include:

(1) a description of the nature of the complaint; and

(2) the time and date of the incident to which the complaint relates.

The reasons for the imposition of these terms and conditions are as follows:

1. Conditions 1, 2, and 3 are included to outline the minimum performance requirements considered necessary to prevent an adverse effect resulting from the operation of the Process.
2.
3. Condition 4 is included to emphasize that the Equipment must be operated according to a procedure that will result in compliance with the EPA, the regulations, and this Approval.
4.
5. Condition 5 is included to require the Company to gather accurate information so that the environmental impact and subsequent compliance with the EPA, the regulations, and this Approval can be verified.
6.
7. Condition 6 is included to require the Company to retain records and provide information to the Ministry so that the environmental impact and subsequent compliance with the EPA, the regulations, and this Approval can be verified.
8.
9. Conditions 7 and 8 are included to require the Company to notify the Ministry so that the environmental impact and subsequent compliance with the EPA, the regulations, and this Approval can be verified.

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me, the Environmental Review Tribunal and in accordance with Section 47 of the Environmental Bill of Rights, 1993 , S.O. 1993, c. 28 (Environmental Bill of Rights), the Environmental Commissioner, within 15 days after receipt of this Notice, require a hearing by the Tribunal. The Environmental Commissioner will place notice of your appeal on the Environmental Registry. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:

1. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The environmental compliance approval number;
6. The date of the environmental compliance approval;
7. The name of the Director, and;
8. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary* Environmental Review Tribunal 655 Bay Street, Suite	AND	The Environmental Commissioner 1075 Bay Street, Suite 605	AND	The Director appointed for the purposes of Part II.1 of the Environmental Protection Act Ministry of the Environment and

1500
Toronto, Ontario
M5G 1E5

Toronto, Ontario
M5S 2B1

Climate Change
135 St. Clair Avenue West, 1st Floor
Toronto, Ontario
M4V 1P5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 326-5370 or www.ert.gov.on.ca**

This instrument is subject to Section 38 of the Environmental Bill of Rights, 1993, that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek leave to appeal within 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry at www.ebr.gov.on.ca , you can determine when the leave to appeal period ends.

The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

DATED AT TORONTO this 10th day of June, 2016

Rudolf Wan, P.Eng.
Director
appointed for the purposes of Part II.1 of the *Environmental Protection Act*

BR/
c: District Manager, MOECC Halton-Peel
Toni Zbieranowski, Stantec Consulting Ltd.

Ministry of the Environment and Climate Change
Operations Division

Confirmation of Registration

Registration Number:R-002-9556467938
Version Number: 001
Date Registration Filed:Dec 14, 2015 16:54:06 PM

Dear Sir/Madam,

TRANS-NORTHERN PIPELINES INC./
45 VOGELL ROAD STE 310
RICHMOND HILL ON L4B 3P6

You have registered, in accordance with Section 20.21(1)(a) of the *Environmental Protection Act* , the use, operation, construction, alteration, extension or replacement of a Standby Power located at:

3275 REBECCA Street OAKVILLE ON L6L 6N5

Please note that the Standby Power is subject to the applicable provisions of O.Reg 245/11 and O. Reg. 346/12. Environmental Protection Act.
The activity related information provided during the registration process is included as part of the confirmation of registration as schedule 'A'
Dated on Dec 14, 2015

Director
Environmental Approvals Branch
Ministry of the Environment and Climate Change
135 St. Clair W,1st Floor
Toronto ON M4V 1P5

Any questions related to this registration and the Environmental Activity and the Sector Registry should be directed to:

Ministry of the Environment and Climate Change
Customer Service Representative
Environmental Approvals Access and Service Integration Branch

Phone:(416) 314-8001
Toll free: 1-800-461-6090

Schedule 'A'

Part 3 . Activity Information

3.1 Registration Information

This form is to be used to register the use, operation, construction, alteration, extension, or replacement of the standby power system. Please confirm that you will be engaging in one or more of these activities.	☑ Yes	☐ No

3.2 Activity Design-Related Information

(a) Is the standby power system intended to be used only for the provision of electrical power during power outages or involuntary power reductions?	☑ Yes	☐ No
(b) Is the rated capacity of each generator unit that is part of the standby power system 700 kilowatts or less?	☑ Yes	☐ No
(c) Does the standby power system only use one or more of the following as fuel: - biodiesel; - diesel; - natural gas; or - propane?	☑ Yes	☐ No
(d) Is the wastewater from the standby power system, if any: - transferred to a waste management system that is subject to an Environmental Compliance Approval or is registered in the Environmental Activity and Sector Registry; - discharged to a sewage works that is subject to an Environmental Compliance Approval; or - discharged to a municipal sanitary sewer?	☑ Yes	☐ No

3.3 Environmental Activity and Sector Registration Exemptions

(a) Is the standby power system used to generate electricity at a renewable energy generation facility and is operated in the circumstances described in subsection 7(1) of Ontario Regulation 359/09 (Renewable Energy Approvals under Part V.0.1 of the Environmental Protection Act)?	☐ Yes	☑ No
(b) Is the standby power system associated with a building or structure that contains one or more dwellings and is used by the occupants of not more than three dwellings in the building or structure?	☐ Yes	☑ No
(c) Is the standby power system used in agriculture?	☐ Yes	☑ No
(d) Is the standby power system used solely to mitigate the effects of an emergency declared to exist under the Emergency Management and Civil Protection Act?	☐ Yes	☑ No
(e) Is the standby power system part of a large municipal residential system or small municipal residential system, as those systems are defined in Ontario Regulation 170/03 (Drinking Water Systems) made under the Safe Drinking Water Act, 2002?	☐ Yes	☑ No

Appendix A.02
Suncor Energy
MECP Permits

2365-2379 Lakeshore Road West

Compatibility & Mitigation Study

SLR Project No.: 241.30501.00000

Ontario

Ministry of the Environment, Conservation and Parks
Operations Division

Confirmation of Registration

Registration Number: R-010-1111011958
Version Number: 005
Update Date: Aug 27, 2020 16:06:43 PM

Dear Sir/Madam,

SUNCOR ENERGY PRODUCTS

150 - 6TH AVE SW, 49TH
CALGARY AB T2P 3E3

You have registered, in accordance with Section 20.21(1) (a) of the *Environmental Protection Act*, the use, operation, construction, alteration, extension or replacement of any plant, structure, equipment, apparatus, mechanism or thing that is located at the facility noted below, or the alteration of a process or rate of production at the facility, including the activities set out in schedule 'A'.

3275 Rebecca Street Oakville ON L6L 6N5

Please note that the facility noted above is subject to the applicable provisions of O. Reg. 245/11, and O. Reg.1/17.

The activity related information provided during the registration process is included as part of the confirmation of registration as schedule 'A'.

Dated on Aug 27, 2020

Director
Environmental Approvals Access and Service Integration Branch
Ministry of the Environment, Conservation and Parks
135 St. Clair Avenue West, 1st Floor
Toronto ON M4V 1P5

Any questions related to this registration and the Environmental Activity and the Sector Registry should be directed to:

Ministry of the Environment, Conservation and Parks

Customer Service Representative

Environmental Approvals Access and Service Integration Branch

Phone:(416) 314-8001

Toll free: 1-800-461-6290

Schedule 'A'

Part 3 - Activity Information

3.1 Industry Eligibility Check

a. Please select the facility's primary North American Industry Classification System (NAICS) code.	412110	
b. Does the facility have any other applicable NAICS codes?	☐ Yes	☑ No
b. i. If yes, please select the facility's secondary NAICS code(s), and confirm any other applicable NAICS code(s).		
c. Are you engaged in an activity at the facility that may discharge or from which may be discharged a contaminant into any part of the natural environment other than water?	☑ Yes	☐ No
d. Is the activity exempt from requiring an Environmental Compliance Approval (ECA) under section 9 (1) of the Environmental Protection Act (EPA) other than an activity that has been prescribed by an EASR regulation under Part II.2 of the Act?	☐ Yes	☑ No
e. Are the only activities engaged in at the facility, other than activities described in question 3.1d above, prescribed under a single other EASR regulation?	☐ Yes	☑ No
f. Is an alternative low-carbon fuel site within the meaning of Ontario Regulation (O. Reg.) 79/15 (Alternative Low-Carbon Fuels) operated at the facility?	☐ Yes	☑ No
g. Is the activity a renewable energy project as defined in the EPA?	☐ Yes	☑ No
h. Is an end-of-life vehicle waste disposal site within the meaning of O. Reg. 85/16 operated at the facility?	☐ Yes	☑ No

3.2 Facility Related Information

a. Has a site-specific air standard ever been set for a contaminant discharged from the facility? (section 35 of O. Reg. 419/05 (Air Pollution -- Local Air Quality))	☐ Yes	☑ No
b. Has a person ever been registered in the Ministry's Technical Standards Registry – Air Pollution under section 39 of O. Reg. 419/05 (Air Pollution – Local Air Quality) in respect of the facility?	☐ Yes	☑ No
c. Do all of the activities to be registered occur exclusively at the site? *Please Note: Discrete activities that involve the use of equipment that is intended to be moved from one site to another to perform the same function (such as the use of mobile rock crushing equipment or mobile PCB destruction equipment) are not prescribed for the purpose of the Environmental Activity and Sector Registry, and an Environmental Compliance Approval may be required.*	☑ Yes	☐ No
d. Is the facility located on a property that has been deemed a single property under subsection 4 (2) of O. Reg. 419/05?	☐ Yes	☑ No
e. Is the facility located in an area of development control within the Niagara Escarpment Planning Area?	☐ Yes	☑ No
e. i. If yes, has a development permit required under section 24 of the Niagara Escarpment Planning and Development Act (NEPDA) in respect of the facility been issued?	☐ Yes	☐ No
f. Is there a landfilling site that is no longer permitted to accept waste for disposal located on the site on which the facility is located?	☐ Yes	☑ No
g. Is the activity part of an undertaking to which the Environmental Assessment Act applies?	☐ Yes	☑ No
g. i. If yes, is one or more of the following conditions met: - All class EA requirements have been completed, including decisions on any Part II order requests; OR - The facility has received approval to proceed with the undertaking.	☐ Yes	☐ No

h. Please provide a description of the facility. The description should include a summary of operations and activities at the facility that discharge contaminants, as well as what is produced, if applicable.

The EASR registration filed on February 15, 2019 for the Oakville Distribution Terminal is to amend their current Environmental Compliance Approval (ECA) with Limited Operational Flexibility (LOF) #2890-ACJPHF, for the addition of rail-car offloading operations for diesel at the Facility. This EASR registration has been updated for the proposed addition of rail car offloading operations for diesel via loading racks. The Facility has the following air emission sources (current and proposed):

offloading diesel delivered by rail cars to tanks;

i. Please enter the date on which the facility commenced or will commence operations.

j. Is the facility located in a multi-tenant building?	☐ Yes	☐ No

3.3 Activity Related Information

a. Does the land disposal of waste as defined in Regulation 347 General – Waste Management occur at the facility?	☐ Yes	☐ No
b. Does the facility process or dispose of waste by way of thermal treatment, other than the thermal treatment of wood fuel that meets the specifications in Chapter 5 of the EASR publication in a wood-fired combustor?	☐ Yes	☐ No
c. Does the facility use a wood-fired combustor?	☐ Yes	☐ No
c. i. If yes, does the wood-fired combustor have a nominal load heat input capacity of less than 3 megawatts?	☐ Yes	☐ No
c. ii. If yes, was the wood-fired combustor installed at the facility on or after January 31, 2017?	☐ Yes	☐ No
c. iii. If yes, does the wood-fired combustor exclusively use one or more of the following as fuel: - Wood chips that meet the specifications set out in Chapter 5 of the EASR publication. - Wood briquettes that meet the specifications set out in Chapter 5 of the EASR publication. - Wood pellets that meet the specifications set out in Chapter 5 of the EASR publication.	☐ Yes	☐ No
d. Does the facility have any plating processes that use cadmium, cyanide, chromium or nickel, including chrome plating, electroplating or electroless plating?	☐ Yes	☐ No
e. Is an electrolytic stripping process that removes cadmium, chromium or nickel from an object used at the facility?	☐ Yes	☐ No
f. Are metals processed outdoors at the facility, including torching, shearing, shredding or plasma cutting, other than for the purpose of routine maintenance carried out at the facility on any plant, structure, equipment, apparatus or thing?	☐ Yes	☐ No
g. Is a fossil-fuel electric power generation facility with a maximum electrical power output capacity equal to or greater than 25 megawatts operated at the facility?	☐ Yes	☐ No
h. Is a combustion source that uses biogas, biomass, coal, petroleum coke or waste as a fuel, or that uses a fuel derived from biogas, biomass, coal, petroleum coke or waste other than a small wood-fired combustor operated at the facility?	☐ Yes	☐ No
i. Is a combustion turbine used at the facility?	☐ Yes	☐ No

Part 4 - Operational Information

4.1 Air

a. Does the EASR Emission Summary and Dispersion Modelling (ESDM) Report provide for modifications that have not yet been implemented at the facility? ☐ Yes ☑ No

a. i. If yes, please provide the date on which the modifications will be completed.

b. Has an instrument under O. Reg. 419/05 been issued in respect of the facility? ☐ Yes ☑ No

b. i. If yes, what type(s) of instruments (including any notices, orders or approvals) has (have) been issued? (select all that apply)

ss. 7(1) Specified Dispersion Models	☐
ss. 8(2) Negligible Sources	☐
ss. 10(2) Operating Conditions	☐
ss. 11(2) Refined Emission Rates	☐
ss. 13.1 Value of Dispersion Modelling Parameters	☐
ss. 13(1) Meteorological Data	☐
ss. 14(6) Area of Modelling Coverage	☐
ss. 20(5) Speed-up Order	☐
Other	☐

List all that have been issued

c. To what standard did the licensed engineering practitioner assess compliance of the facility's emissions (please select the applicable box(es)):

Section 19 of O. Reg. 419/05 (Schedule 2)	☐
Section 20 of O. Reg. 419/05 (Schedule 3)	☑
N/A – The amount of any contaminant discharged from the site is negligible	☐
N/A – Source(s) discharge only sound as a contaminant	☐
N/A – Source(s) discharge sound as a contaminant and the amount of any other contaminant discharged is negligible	☐

d. Please select all applicable boxes that apply to a discharge of a contaminant(s) to air from the facility:

Contaminant(s) belonging to Benchmark 1 category of ACB list is at or below the concentration for each specified averaging period set out for the contaminant	☑
Contaminant(s) belonging to Benchmark 1 category of ACB list is above the concentration for a specified averaging period set out for the contaminant By exceeding a Benchmark 1 contaminant limit(s), you must also notify your local District Office and take appropriate action in accordance with Reg. 419/05. Please see https://www.ontario.ca/page/rules-air-quality-and-pollution#section-4 for more details under "Notification of Exceedances".	☐
Contaminant(s) belonging to Benchmark 2 category of ACB list is at or below the concentration for each specified averaging period set out for the contaminant	☑

Contaminant(s) belonging to Benchmark 2 category of ACB list is above the concentration for a specified averaging period set out for the contaminant	☐
The concentration of the contaminant(s) does not have a Ministry standard, guideline, or screening level set out for the contaminant	☐
N/A – The amount of any contaminant discharged from the site is negligible	☐
N/A – Source(s) discharge only sound as a contaminant	☐
N/A – Source(s) discharge sound as a contaminant and the amount of any other contaminant discharged is negligible	☐

e. Does the facility operate a generator for non-emergency purposes?	☐ Yes	☑ No
f. Does the facility use or operate a large boiler or heater greater than 10.5 gigajoules per hour?	☑ Yes	☐ No
g. Will an Emissions Summary Table be uploaded? *Please Note: An Emissions Summary Table is required to be uploaded at the time of registration. An Emissions Summary Table is also required to be uploaded if any modifications to the facility require an update to the EASR ESDM. Additionally, as part of the 10 year review required by O. Reg. 1/17, an updated Emissions Summary Table is required to be uploaded.*	☑ Yes	☐ No

h. Please provide the Name(s) and Licence Number(s) of the Licensed Engineering Practitioner(s) that signed and sealed the EASR ESDM Report and made statements in the EASR ESDM Report Supplement and the date signed.

First Name	Last Name	Licence Number(s)	Date Signed
Scott	Manser	90529553	2020-08-20

4.2 Fugitive Dust Control

a. Does the EASR ESDM Report prepared for the facility identify a source of fugitive dust?	☐ Yes	☑ No
a. i. If yes, has a licensed engineering practitioner signed and sealed a Best Management Practice Plan (BMPP) for fugitive dust control?	☐ Yes	☐ No
b. Has a BMPP for fugitive dust control been prepared as a result of a written notice from the Director issued under O. Reg. 1/17?	☐ Yes	☑ No

c. Please provide the Name(s) and Licence Number(s) of the Licensed Engineering Practitioner(s) that signed and sealed the BMPP for fugitive dust control and the date signed and sealed.

First Name	Last Name	Licence Number(s)	Date Signed

4.3 Noise

a. Please select the noise assessment method that was completed for the facility:

The facility meets the 1000m setback distance	☐
Primary Noise Screening Method	☐
Secondary Noise Screening Method	☐
Acoustic Assessment Report	☑

a. i. If the Primary Noise Screening Method was used, is the actual separation distance from the facility to the closest Point of Noise Reception equal to or greater than the minimum separation distance as determined by the Primary Noise Screening Method?	☐ Yes	☐ No
a. ii. If the Secondary Noise Screening Method was used, is the combined sound level from the facility at each affected Point of Noise Reception as determined by the Secondary Noise Screening Method less than or equal to the applicable sound level limit set out in Chapter 3 of the EASR publication?	☐ Yes	☐ No

a. iii. If an acoustic assessment was completed, did the acoustic assessment determine that the combined sound level from the facility at each affected Point of Noise Reception less than or equal to of the applicable sound level limit set out in Chapter 3 of the EASR publication? ☑ Yes ☐ No

a. iii. a) If no, has a Noise Abatement Action Plan been developed for the facility? ☐ Yes ☐ No

a. iii. b) If yes, please provide the title of the Noise Abatement Action Plan and the date it was prepared.

Name of NAAP	Date Prepared

b. Has an Acoustic Audit Report been prepared as a result of a written notice from the Director? ☐ Yes ☑ No

b. i. If yes, please provide the Name(s) and Licence Number(s) of the Licensed Engineering Practitioner(s) that signed and sealed the acoustic audit report, and the date signed and sealed.

First Name	Last Name	Licence Number(s)	Date Signed

c. Will an Acoustic Assessment Summary Table be uploaded? ☑ Yes ☐ No
Please Note: An Acoustic Assessment Summary Table is required to be uploaded at the time of registration if an Acoustic Assessment was completed for the facility. An Acoustic Assessment Summary Table is also required to be uploaded if any modifications to the facility require an update to the facility's noise report. Additionally, as part of the 10 year review required by O. Reg. 1/17, an updated Acoustic Assessment Summary Table is required to be uploaded.

d. Please provide the Name(s) and Licence Number(s) of the Licensed Engineering Practitioner(s) that signed and sealed the noise report, and the date signed and sealed.

First Name	Last Name	Licence Number(s)	Date Signed
Corey	Kinart	100079328	2020-03-06

4.4 Odour

a. Did the Odour Screening Report indicate that a circumstance which requires a BMPP for odour to be prepared exists at the facility? ☐ Yes ☑ No

b. Did the Odour Screening Report indicate that a circumstance which requires an Odour Control Report (OCR) to be prepared exists at the facility? ☐ Yes ☐ No

b. i. If yes, please provide the Name(s) and Licence Number(s) of the Licensed Engineering Practitioner(s) that signed and sealed the Odour Control Report and the date signed and sealed.

First Name	Last Name	Licence Number(s)	Date Signed

c. Has a BMPP for odour been prepared as a result of a written notice from the Director issued under O. Reg. 1/17? ☐ Yes ☑ No

d. Please provide the Name(s) and Licence Number(s) of the Licensed Engineering Practitioner(s) that signed and sealed the BMPP for odour and the date signed and sealed.

First Name	Last Name	Licence Number(s)	Date Signed

ORTECH a Kontrol Energy Company

Table 1: Emission Summary Table

Contaminant Name	CAS #	Facility-Wide Emission Rate (g/s)	Air Dispersion Model Used	Maximum POI Concentration [1] (µg/m^3)	Averaging Period (hours)	MECP POI Limit [2] (µg/m^3)	Limiting Effect	POI Limit Reference	Percent of MECP POI Limit (%)
Gasoline	86290-81-5	1.91	AERMOD (19191)	92.7	24	175	Health	B2	53%
Diesel	68334-30-5	0.96	AERMOD (19191)	69.7	24	350	Health	B2	20%
Benzene	71-43-2	8.55E-04	AERMOD (19191)	0.01	Annual	0.45	Health	B1	2%
		1.46E-03	AERMOD (19191)	0.07	24	100	-	URT	<0.1%
		1.46E-03	AERMOD (19191)	0.02	Annual	4.5	-	AAV	0.4%
Butane	106-97-8	1.44	AERMOD (19191)	67.1	24	3600	Health	B2	2%
Light vacuum gas oils (petroleum)	64741-58-8	0.90	AERMOD (19191)	95.0	24	175	Health	B2	54%
Nitrogen oxides	10102-44-0	0.61	AERMOD (19191)	14.5	1	400	Health	B1	4%
Nitrogen oxides	10102-44-0	0.61	AERMOD (19191)	6.7	24	200	Health	B1	3%
Nitrogen oxides (Non-Sensitive Receptor)	10102-44-0	3.21E+00	AERMOD (19191)	586.7	0.5	1880	-	Emergency Generator Checklist	31%
Nitrogen oxides (Sensitive Receptor)	10102-44-0	3.21E+00	AERMOD (19191)	33.7	0.5	500	-	Emergency Generator Checklist	7%

Notes:

[1] Meteorological outliers have been removed from the results in accordance with Section 6.5 of the ADMGO.

[2] "Air Contaminants Benchmarks (ACB) List: Standards, guidelines and screening levels for assessing point of impingement concentrations of air contaminants, April 2018, Version 2.0" (Ministry POI Limits).

Table A3a: Acoustic Assessment Summary Table - Steady with CN Rail Locomotive

Point of Reception	Point of Reception Description	Sound Level at Point of Reception, LEQ [dBA]			Performance Limit, LEQ [dBA]			Compliance with Performance Limit	Acoustical Classification Area	Verified by Acoustic Audit
		Day	Eve	Night	Day	Eve	Night			
R1	North Residence	45	45	45	50	50	45	Yes	Class 1	No
R2	East Residence	37	37	37	50	50	45	Yes	Class 1	No
R3	Southeast Residence	42	42	42	50	50	45	Yes	Class 1	No
R4	South Residence	34	34	34	50	50	45	Yes	Class 1	No
R5	Northwest Residence	39	39	39	50	50	45	Yes	Class 1	No

Table A3b: Acoustic Assessment Summary Table - Steady with Trackmobile

Point of Reception	Point of Reception Description	Sound Level at Point of Reception, LEQ [dBA]			Performance Limit, LEQ [dBA]			Compliance with Performance Limit	Acoustical Classification Area	Verified by Acoustic Audit
		Day	Eve	Night	Day	Eve	Night			
R1	North Residence	40	40	40	50	50	45	Yes	Class 1	No
R2	East Residence	36	36	36	50	50	45	Yes	Class 1	No
R3	Southeast Residence	42	42	42	50	50	45	Yes	Class 1	No
R4	South Residence	34	34	34	50	50	45	Yes	Class 1	No
R5	Northwest Residence	38	38	38	50	50	45	Yes	Class 1	No

Table A3c: Acoustic Assessment Summary Table - Impulsive Sources

Point of Reception	Point of Reception Description	Sound Level at Point of Reception, LLM [dBAI]			Performance Limit, LLM [dBAI]			Compliance with Performance Limit	Acoustical Classification Area	Verified by Acoustic Audit
		Day	Eve	Night	Day	Eve	Night			
R1	North Residence	51	51	51	60	60	55	Yes	Class 1	No
R2	East Residence	44	44	44	60	60	55	Yes	Class 1	No
R3	Southeast Residence	41	41	41	60	60	55	Yes	Class 1	No
R4	South Residence	35	35	35	60	60	55	Yes	Class 1	No
R5	Northwest Residence	39	39	39	60	60	55	Yes	Class 1	No

Table A3d: Acoustic Assessment Summary Table - Emergency Sources

Point of Reception	Point of Reception Description	Sound Level at Point of Reception, LEQ [dBA]			Performance Limit, LEQ [dBA]			Compliance with Performance Limit	Acoustical Classification Area	Verified by Acoustic Audit
		Day	Eve	Night	Day	Eve	Night			
R1	North Residence	11	11	11	55	--	--	Yes	Class 1	No
R2	East Residence	25	25	25	55	--	--	Yes	Class 1	No
R3	Southeast Residence	33	33	33	55	--	--	Yes	Class 1	No
R4	South Residence	24	24	24	55	--	--	Yes	Class 1	No
R5	Northwest Residence	14	14	14	55	--	--	Yes	Class 1	No

Content Copy Of Original

Ontario

Ministry of the Environment and Climate Change
Ministère de l'Environnement et de l'Action en matière de changement climatique

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL
NUMBER 2890-ACJPHF
Issue Date: October 28, 2016

Suncor Energy Products Partnership Inc.
3275 Rebecca Street
Oakville, Ontario
L6L 6N5

Site Location: Suncor Oakville Distribution Terminal
3275 Rebecca Street
Oakville Town, Regional Municipality of Halton
L6L 6N5

You have applied under section 20.2 of Part II.1 of the Environmental Protection Act, R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

A distillate distribution terminal facility, consisting of the following processes and support units:

- tanks receiving:

- distillate via pipeline;
- ethanol from trucks;
- vacuum gas oil from rail car tanks;
- distillate via ships;

- truck loading;

- distillate from tanks;
- vacuum gas oil from tanks;

- ship loading gasoline from tanks;
- natural gas-fired steam boilers;
- storm water management system;
- maintenance - painting of tanks;
- diesel-fired emergency power generator;
- diesel-fired emergency fire pumps;

- one (1) John Zinc, Model No. AAT-X-1650-12-10-12-3/2-X-Canada, or equivalent, vapour recovery unit to control hydrocarbon emissions from the bottom-loading of a maximum of 9.5 million litres of petroleum products per day, and consisting of the following major components:

- two (2) carbon adsorption vessels, each containing approximately 4,490 kilograms of activated carbon and each discharging to the air at a maximum volumetric flow rate of 0.75 normal cubic metre per second, through stack with an exit diameter of 0.25 metre, at a height of 9.0 metres above grade;

- two (2) liquid ring vacuum pumps using an aqueous solution of ethylene glycol as a sealing fluid;

- one (1) shell and tube heat exchanger to cool the sealing fluid;

- one (1) three-phase separator to separate the sealing fluid from condensed hydrocarbons and uncondensed hydrocarbon vapour; and

- one (1) absorber column packed with 38.1 millimetres aluminum flex ring packing, circulating gasoline as the scrubbing solution at a rate of 23.8 litres per second, or equivalent;

including the *Equipment* and any other ancillary and support processes and activities, operating at a *Facility Production Limits* as listed in below, discharging to the air as described in the *Original ESDM Report.*

Facility Production Limits

Product	Production Limit (in litres per year)
distillate	868,757,500
ethanol	235,114,500
vacuum gas oil	547,500,000

For the purpose of this environmental compliance approval, the following definitions apply:

1. " *Acceptable Point of Impingement Concentration"* means a concentration accepted by the *Ministry* as not likely to cause an adverse effect for a *Compound of Concern* that,

(a) has no *Ministry Point of Impingement Limit* and no *Jurisdictional Screening Level,* or

(b) has a concentration at a *Point of Impingement* that exceeds the *Jurisdictional Screening Level.*

With respect to the *Original ESDM Report,* the *Acceptable Point of Impingement Concentration* for a *Compound of Concern* mentioned above is the concentration set out in the *Original ESDM Report.*

2. "*Acoustic Assessment Report"* means the report, prepared in accordance with *Publication NPC-233* and Appendix A of the *Basic Comprehensive User Guide,* by Stantec Consulting Ltd., dated 8 August 2016 and signed by Cris delos Santos, M.Eng., P.Eng. submitted in support of the application, that documents all sources of noise emissions and *Noise Control Measures* present at the *Facility,* as updated in accordance with Condition 5 of this *Approval.*

3. "*Acoustic Assessment Summary Table"* means a table prepared in accordance with the *Basic Comprehensive User Guide* summarising the results of the *Acoustic Assessment Report,* as updated in accordance with Condition 5 of this *Approval.*

4. "*Approval"* means this entire Environmental Compliance Approval and any *Schedules* to it.

5. "*Basic Comprehensive User Guide"* means the *Ministry* document titled "Basic Comprehensive Certificates of Approval (Air) User Guide" dated March 2011, as amended.

6. "*Company"* means Suncor Energy Products Partnership Inc. that is responsible for the construction or operation of the *Facility* and includes any successors and assigns in accordance with section 19 of the *EPA.*

7. "*Compound of Concern"* means a contaminant described in paragraph 4 subsection 26 (1) of *O. Reg. 419/05,* namely, a contaminant that is discharged from the *Facility* in an amount that is not negligible.

8. "*Description Section"* means the section on page one of this *Approval* describing the

Company's operations and the *Equipment* located at the *Facility* and specifying the *Facility Production Limit* for the *Facility.*

9. "*Director"* means a person appointed for the purpose of section 20.3 of the *EPA* by the *Minister* pursuant to section 5 of the *EPA.*

10. "*District Manager"* means the District Manager of the appropriate local district office of the *Ministry,* where the *Facility* is geographically located.

11. "*Emission Summary Table"* means a table described in paragraph 14 of subsection 26 (1) of *O. Reg. 419/05;* namely a table in the *ESDM Report* that compares the *Point of Impingement* concentration for each *Compound of Concern* to the corresponding *Ministry Point of Impingement Limit, Acceptable Point of Impingement Concentration,* or *Jurisdictional Screening Level.*

12. "*Environmental Assessment Act"* means the Environmental Assessment Act, R.S.O. 1990, c.E.18, as amended.

13. "*EPA"* means the Environmental Protection Act, R.S.O. 1990, c.E.19, as amended.

14. "*Equipment"* means equipment or processes described in the *ESDM Report,* this *Approval* and in the *Schedules* referred to herein and any other equipment or processes.

15. "*Equipment with Specific Operational Limits"* means *Equipment* related to the thermal oxidation of waste or waste derived fuels, fume incinerators, the John Zinc, Model No. AAT-X1650-12-10-12-3/2-X-Canada, or equivalent, vapour recovery unit or any other *Equipment* including that is specifically referenced in any published *Ministry* document that outlines specific operational guidance that must be considered by the *Director* in issuing an *Approval.*

16. "*ESDM Report"* means the most current Emission Summary and Dispersion Modelling Report that describes the *Facility.* The *ESDM Report* is based on the *Original ESDM Report* and is updated after the issuance of this *Approval* in accordance with section 26 of *O. Reg. 419/05* and the *Procedure Document.*

17. "*Facility"* means the entire operation located on the property where the *Equipment* is located.

18. "*Facility Production Limit"* means the production limit placed by the *Director* on the main product(s) or raw materials used by the *Facility.*

19. "*Jurisdictional Screening Level"* means a screening level for a *Compound of Concern* that is listed in the *Ministry* publication titled "Jurisdictional Screening Level (JSL) List, A Screening Tool for Ontario Regulation 419: Air Pollution - Local Air Quality", dated February 2008, as amended.

20. "*Log"* means a document that contains a record of each change that is required to be made to the *ESDM Report* and *Acoustic Assessment Report,* including the date on which the change occurred. For example, a record would have to be made of a more accurate emission rate for a source of contaminant, more accurate meteorological data, a more accurate value of a parameter that is related to a source of contaminant, a change to a *Point of Impingement* and all changes to information associated with a *Modification* to the *Facility* that satisfies Condition 2**.**

21. "*Minister"* means the Minister of the Environment and Climate Change or such other member of the Executive Council as may be assigned the administration of the *EPA* under the Executive Council Act.

22. "*Ministry"* means the ministry of the *Minister.*

23. "*Ministry Point of Impingement Limit"* means the applicable Standard set out in Schedule 2 or 3 of *O. Reg. 419/05* or a limit set out in the *Ministry* publication titled "Summary of Standards and Guidelines to support Ontario Regulation 419/05: Air Pollution - Local Air Quality (including Schedule 6

of *O. Reg. 419/05* on Upper Risk Thresholds", dated April 2012, as amended.

24. "*Modification"* means any construction, alteration, extension or replacement of any plant, structure, equipment, apparatus, mechanism or thing, or alteration of a process or rate of production at the *Facility* that may discharge or alter the rate or manner of discharge of a *Compound of Concern* to the air or discharge or alter noise or vibration emissions from the *Facility.*

25. "*Noise Control Measures"* means measures to reduce the noise emissions from the *Facility* and/or *Equipment* including, but not limited to, silencers, acoustic louvres, enclosures, absorptive treatment, plenums and barriers.

26. "*O. Reg. 419/05"* means Ontario Regulation 419/05, Air Pollution – Local Air Quality, as amended.

27. "*Original ESDM Report"* means the Emission Summary and Dispersion Modelling Report which was prepared in accordance with section 26 of *O. Reg. 419/05* and the *Procedure Document* by Stantec Consulting Limited and dated May 11, 2015, submitted in support of the application, and includes any changes to the report made up to the date of issuance of this *Approval.*

28. "*Point of Impingement"* has the same meaning as in section 2 of *O. Reg. 419/05.*

29. "*Point of Reception"* means Point of Reception as defined by *Publication NPC-300.*

30. "*Procedure Document"* means *Ministry* guidance document titled "Procedure for Preparing an Emission Summary and Dispersion Modelling Report" dated March 2009, as amended.

31. "*Processes with Significant Environmental Aspects"* means the *Equipment* which, during regular operation, would discharge one or more contaminants into the air in an amount which is not considered as negligible in accordance with section 26 (1) 4 of *O. Reg. 419/05* and the *Procedure Document.*

32. "*Publication NPC-207"* means the *Ministry* draft technical publication "Impulse Vibration in Residential Buildings", November 1983, supplementing the Model Municipal Noise Control By-Law, Final Report, published by the *Ministry,* August 1978, as amended.

33. "*Publication NPC-233"* means the *Ministry* Publication NPC-233, "Information to be Submitted for Approval of Stationary Sources of Sound", October, 1995, as amended.

34. "*Publication NPC-300"* means the *Ministry* Publication NPC-300, "Environmental Noise Guideline, Stationary and Transportation Sources – Approval and Planning, Publication NPC-300", August 2013, as amended.

35. "*Schedule"* means the following schedule attached to this *Approval* and forming part of this *Approval* namely:

Schedule "A" - Supporting Documentation

36. " *Toxicologist"* means a qualified professional currently active in the field of risk assessment and toxicology that has a combination of formal university education, training and experience necessary to assess contaminants.

37. "*Written Summary Form"* means the electronic questionnaire form, available on the *Ministry* website, and supporting documentation, that documents the activities undertaken at the *Facility* in the previous calendar year.

You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. GENERAL

1.1 Except as otherwise provided by this *Approval,* the *Facility* shall be designed, developed, built, operated and maintained in accordance with the terms and conditions of this *Approval* and in accordance with the following *Schedule* attached hereto:

Schedule "A" - Supporting Documentation

2. LIMITED OPERATIONAL FLEXIBILITY

2.1 Pursuant to section 20.6 (1) of the *EPA* and subject to Conditions 2.2 and 2.3 of this *Approval,* future construction, alterations, extensions or replacements are approved in this *Approval* if the future construction, alterations, extensions or replacements are *Modifications* to the *Facility* that:

(a) are within the scope of the operations of the *Facility* as described in the *Description Section* of this *Approval;*

(b) do not result in an increase of the *Facility Production Limit* above the level specified in the *Description Section* of this *Approval;* and

(c) result in compliance with the performance limits as specified in Condition 4.

2.2 Condition 2.1 does not apply to,

(a) the addition of any new *Equipment with Specific Operational Limits* or to the *Modification* of any existing *Equipment with Specific Operational Limits* at the *Facility;* or

(b) *Modifications* to the *Facility* that would be subject to the *Environmental Assessment Act.*

2.3 Condition 2.1 of this *Approval* shall expire ten (10) years from the date of this *Approval,* unless this *Approval* is revoked prior to the expiry date. The *Company* may apply for renewal of Condition 2.1 of this *Approval* by including an *ESDM Report* and an *Acoustic Assessment Report* that describes the *Facility* as of the date of the renewal application.

3. REQUIREMENT TO REQUEST AN *ACCEPTABLE POINT OF IMPINGEMENT CONCENTRATION*

3.1 Prior to making a *Modification* to the *Facility* that satisfies Condition 2.1 (a) and (b), the *Company* shall prepare a proposed update to the *ESDM Report* to reflect the proposed *Modification.*

3.2 The *Company* shall request approval of an *Acceptable Point of Impingement Concentration* for a *Compound of Concern* if the *Compound of Concern* does not have a *Ministry Point of Impingement Limit* and a proposed update to an *ESDM Report* indicates that one of the following changes with respect to the concentration of the *Compound of Concern* may occur:

(a) The *Compound of Concern* was not a *Compound of Concern* in the previous version of the *ESDM Report* and

(i) the concentration of the *Compound of Concern* is higher than the *Jurisdictional Screening Level* for the contaminant; or

(ii) there is no *Jurisdictional Screening Level* for the contaminant .

(b) The concentration of the *Compound of Concern* in the updated *ESDM Report* is higher than:

(i) the most recent *Acceptable Point of Impingement Concentration,* and

(ii) the *Jurisdictional Screening Level* if a *Jurisdictional Screening Level* exists.

3.3 The request required by Condition 3.2 shall propose a concentration for the *Compound of Concern* and shall contain an assessment, performed by a *Toxicologist,* of the likelihood of the proposed concentration causing an adverse effect at *Points of Impingement.*

3.4 If the request required by Condition 3.2 is a result of a proposed *Modification* described in Condition 3.1, the *Company* shall submit the request, in writing, to the *Director* at least 30 days prior to commencing to make the *Modification.* The *Director* shall provide written confirmation of receipt of this request to the *Company.*

3.5 If a request is required to be made under Condition 3.2 in respect of a proposed *Modification* described in Condition 3.1, the *Company* shall not make the *Modification* mentioned in Condition 3.1 unless the request is approved in writing by the *Director.*

3.6 If the *Director* notifies the *Company* in writing that the *Director* does not approve the request, the *Company* shall,

(a) revise and resubmit the request; or

(b) notify the *Director* that it will not be making the *Modification.*

3.7 The re-submission mentioned in Condition 3.6 shall be deemed a new submission under Condition 3.2.

3.8 If the *Director* approves the request, the *Company* shall update the *ESDM Report* to reflect the *Modification.*

3.9 Condition 3 does not apply if Condition 2.1 has expired.

4. PERFORMANCE LIMITS

4.1. Subject to Condition 4.2, the *Company* shall not discharge or cause or permit the discharge of a *Compound of Concern* into the air if,

(a) the *Compound of Concern* has a *Ministry Point of Impingement Limit* and the discharge results in the concentration at a *Point of Impingement* exceeding the *Ministry Point of Impingement Limit;* or

(b) the *Compound of Concern* does not have a *Ministry Point of Impingement Limit* and the discharge results in the concentration at a *Point of Impingement* exceeding the higher of,

(i) if an *Acceptable Point of Impingement Concentration* exists the most recent *Acceptable Point of Impingement Concentration,* and

(ii) the *Jurisdictional Screening Level* if a *Jurisdictional Screening Level* exists.

4.2 Condition 4.1 does not apply if the *Ministry Point of Impingement Limit* has a 10-minute averaging period and no ambient monitor indicates an exceedance at a *Point of Impingement* where human activities regularly occur at a time when those activities regularly occur.

4.3 The *Company* shall ensure that the noise emissions from the *Facility* comply with the limits set out in *Ministry Publication NPC-300.*

4.4 The *Company* shall ensure that the vibration emissions from the *Facility* comply with the limits set out in *Ministry Publication NPC-207.*

4.5 The *Company* shall operate any *Equipment with Specific Operational Limits* approved by this *Approval* in accordance with the *Original ESDM Report.*

5. **DOCUMENTATION REQUIREMENTS**

5.1. The *Company* shall maintain an up-to-date *Log.*

5.2. No later than June 30 in each year, the *Company* shall update the *Acoustic Assessment Report* and shall update the *ESDM Report* in accordance with section 26 of *O. Reg. 419/05* so that the information in the reports is accurate as of December 31 in the previous year.

5.3. The *Company* shall make the *Emission Summary Table* (see section 27 of *O. Reg. 419/05)* and *Acoustic Assessment Summary Table* available for examination by any person, without charge, by posting it on the Internet or by making it available during regular business hours at the *Facility.*

5.4 The *Company* shall, within three (3) months after the expiry of Condition 2.1 of this *Approval,* update the *ESDM Report* and the *Acoustic Assessment Report* such that the information in the reports is accurate as of the date that Condition 2.1 of this *Approval* expired.

5.5. Conditions 5.1 and 5.2 do not apply if Condition 2.1 has expired.

6. REPORTING REQUIREMENTS

6.1 Subject to Condition 6.2, the *Company* shall provide the *Director* no later than August 31 of each year, a *Written Summary Form* to be submitted through the *Ministry's* website that shall include the following:

(a) a declaration of whether the *Facility* was in compliance with section 9 of the *EPA, O. Reg. 419/05* and the conditions of this *Approval;*

(b) a summary of each *Modification* satisfying Condition 2.1 (a) and (b) that took place in the previous calendar year that resulted in a change in the previously calculated concentration at a *Point of Impingement* for any *Compound of Concern* or resulted in a change in the sound levels reported in the *Acoustic Assessment Summary Table* at any *Point of Reception.*

6.2 Condition 6.1 does not apply if Condition 2.1 has expired.

7. OPERATION AND MAINTENANCE

7.1 The *Company* shall prepare and implement, not later than three (3) months from the date of this *Approval,* operating procedures and maintenance programs for all *Processes with Significant Environmental Aspects,* which shall specify as a minimum:

(a) frequency of inspections and scheduled preventative maintenance;

(b) procedures to prevent upset conditions;

(c) procedures to minimize all fugitive emissions;

(d) procedures to prevent and/or minimize odorous emissions;

(e) procedures to prevent and/or minimize noise emissions; and

(f) procedures for record keeping activities relating to the operation and maintenance programs.

7.2 The *Company* shall ensure that all *Processes with Significant Environmental Aspects* are operated and maintained in accordance with this *Approval,* the operating procedures and maintenance programs.

8. COMPLAINTS RECORDING AND REPORTING

8.1 If at any time, the *Company* receives an environmental complaint from the public regarding the operation of the *Equipment* approved by this *Approval,* the *Company* shall take the following steps:

(a) Record and number each complaint, either electronically or in a log book. The record shall include the following information: the time and date of the complaint and incident to which the complaint relates, the nature of the complaint, wind direction at the time and date of the incident to which the complaint relates and, if known, the address of the complainant.

(b) Notify the *District Manager* of the complaint within two (2) business days after the complaint is received, or in a manner acceptable to the *District Manager.*

(c) Initiate appropriate steps to determine all possible causes of the complaint, and take the necessary actions to appropriately deal with the cause of the subject matter of the complaint.

(d) Complete and retain on-site a report written within one (1) week of the complaint date. The report shall list the actions taken to appropriately deal with the cause of the complaint and set out steps to be taken to avoid the recurrence of similar incidents.

9. RECORD KEEPING REQUIREMENTS

9.1 Any information requested by any employee in or agent of the *Ministry* concerning the *Facility* and its operation under this *Approval,* including, but not limited to, any records required to be kept by this *Approval,* shall be provided to the employee in or agent of the *Ministry,* upon request**,** in a timely manner.

9.2 Unless otherwise specified in this *Approval,* the *Company* shall retain, for a minimum of five (5) years from the date of their creation all reports, records and information described in this *Approval,* including,

(a) a copy of the *Original ESDM Report* and each updated version*;*

(b) a copy of each version of the *Acoustic Assessment Report;*

(c) supporting information used in the emission rate calculations performed in the *ESDM Reports* and *Acoustic Assessment Reports;*

(d) the records in the *Log;*

(e) copies of each *Written Summary Form* provided to the *Ministry* under Condition 6.1 of this *Approval;*

(f) records of maintenance, repair and inspection of *Equipment* related to all *Processes with Significant Environmental Aspects;* and

(g) all records related to environmental complaints made by the public as required by Condition 8 of this *Approval.*

10. REVOCATION OF PREVIOUS APPROVALS

This *Approval* replaces and revokes all Certificates of Approval (Air) issued under section 9 *EPA* and Environmental Compliance Approvals issued under Part II.1 *EPA* to the *Facility* in regards to the activities mentioned in subsection 9(1) of the *EPA* and dated prior to the date of this *Approval.*

SCHEDULE "A"

Supporting Documentation

(a) Environmental Compliance Approval Application, dated May 4, 2015, signed by Bernard Barreyre and submitted by the *Company;*

(b) Emission Summary and Dispersion Modelling Report, prepared by Stantec Consulting Limited and dated May 11, 2015;

(c) *Acoustic Assessment Report,* prepared by Stantec Consulting Ltd., dated 8 August 2016 and signed by Cris delos Santos, M.Eng., P.Eng.

The reasons for the imposition of these terms and conditions are as follows:

GENERAL

1. Condition No. 1 is included to require the *Approval* holder to build, operate and maintain the *Facility* in accordance with the Supporting Documentation in Schedule A considered by the *Director* in issuing this *Approval.*

LIMITED OPERATIONAL FLEXIBILITY, REQUIREMENT TO REQUEST AN *ACCEPTABLE POINT OF IMPINGEMENT CONCENTRATION* AND *PERFORMANCE LIMITS*

2. Conditions No. 2, 3 and 4 are included to limit and define the *Modifications* permitted by this *Approval,* and to set out the circumstances in which the *Company* shall request approval of an *Acceptable Point of Impingement Concentration* prior to making *Modifications.* The holder of the *Approval* is approved for operational flexibility for the *Facility* that is consistent with the description of the operations included with the application up to the *Facility Production Limit.* In return for the operational flexibility, the *Approval* places performance based limits that cannot be exceeded under the terms of this *Approval. Approval* holders will still have to obtain other relevant approvals required to operate the *Facility,* including requirements under other environmental legislation such as the *Environmental Assessment Act.*

DOCUMENTATION REQUIREMENTS

3. Condition No. 5 is included to require the *Company* to maintain ongoing documentation that demonstrates compliance with the *Performance Limits* of this *Approval* and allows the *Ministry* to monitor on-going compliance with these *Performance Limits.* The *Company* is required to have an up to date *ESDM Report* and *Acoustic Assessment Report* that describe the *Facility* at all times and make the *Emission Summary Table* and *Acoustic Assessment Summary Table* from these reports available to the public on an ongoing basis in order to maintain public communication with regard to the emissions from the *Facility.*

REPORTING REQUIREMENTS

4. Condition No. 6 is included to require the *Company* to provide a yearly *Written Summary Form* to the *Ministry,* to assist the *Ministry* with the review of the site's compliance with the *EPA,* the regulations and this *Approval.*

OPERATION AND MAINTENANCE

5. Condition No. 7 is included to require the *Company* to properly operate and maintain the *Processes*

with Significant Environmental Aspects to minimize the impact to the environment from these processes.

COMPLAINTS RECORDING AND REPORTING PROCEDURE

6. Condition No. 8 is included to require the *Company* to respond to any environmental complaints regarding the operation of the *Equipment,* according to a procedure that includes methods for preventing recurrence of similar incidents and a requirement to prepare and retain a written report.

RECORD KEEPING REQUIREMENTS

7. Condition No. 9 is included to require the *Company* to retain all documentation related to this *Approval* and provide access to employees in or agents of the *Ministry,* upon request, so that the *Ministry* can determine if a more detailed review of compliance with the *Performance Limits* is necessary.

REVOCATION OF PREVIOUS APPROVALS

8. Condition No. 10 is included to identify that this *Approval* replaces all Section 9 Certificate(s) of Approval and Part II.1 Approvals in regards to the activities mentioned in subsection 9(1) of the *EPA* and dated prior to the date of this *Approval.*

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 6141-6FKRKD, 6914-5B9L5R, 8-3163-91-926 issued on September 21, 2005, June 21, 2002, November 30, 1992.

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me, the Environmental Review Tribunal and in accordance with Section 47 of the Environmental Bill of Rights, 1993 , S.O. 1993, c. 28 (Environmental Bill of Rights), the Environmental Commissioner, within 15 days after receipt of this Notice, require a hearing by the Tribunal. The Environmental Commissioner will place notice of your appeal on the Environmental Registry. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:

1. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

Pursuant to subsection 139(3) of the Environmental Protection Act, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The environmental compliance approval number;
6. The date of the environmental compliance approval;
7. The name of the Director, and;
8. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5

AND

The Environmental Commissioner
1075 Bay Street, Suite 605
Toronto, Ontario
M5S 2B1

AND

The Director appointed for the purposes of Part II.1 of the Environmental Protection Act
Ministry of the Environment and Climate Change
135 St. Clair Avenue West, 1st Floor
Toronto, Ontario
M4V 1P5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 326-5370 or www.ert.gov.on.ca**

This instrument is subject to Section 38 of the Environmental Bill of Rights, 1993, that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek leave to appeal within 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry at www.ebr.gov.on.ca , you can determine when the leave to appeal period ends.

The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

DATED AT TORONTO this 28th day of October, 2016

Rudolf Wan, P.Eng.
Director
appointed for the purposes of Part II.1 of the *Environmental Protection Act*

AH/
c: District Manager, MOECC Halton-Peel
Connie Lim, Stantec Consulting Limited

Appendix B
Stationary Noise Modelling Inputs

2365-2379 Lakeshore Road West

Compatibility & Mitigation Study

SLR Project No.: 241.30501.00000

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for 2-sided printing purposes

Sound Power Levels

Name	ID	Overall A	Type	1/3 Oktave Spectrum (dB) Weig	31.5	63	125	250	500	1000	2000	4000	8000	A	lin	Source
BPN56 spectrum D (Roadway, Distant Aircraft)	roadway	-4.6	Lw		-6	-5	-4	-6	-8	-9	-12	-20	-28	-4.6	2	BPN56
HVAC Unit (5 ton)	HVAC_5ton	82.5	Lw		77	80	81	81	80	78	74	70	64	82.5	87.8	H&K calc, adj against Man Data Avg
HVAC Unit (10 ton)	HVAC_10ton	85.5	Lw		80	83	84	84	83	81	77	73	67	85.5	90.8	H&K calc, adj against Man Data Avg
HVAC Unit (15 ton)	HVAC_15ton	92.5	Lw		87	90	91	91	90	88	84	80	74	92.5	97.8	H&K calc, adj against Man Data Avg
HVAC Unit (20 ton)	HVAC_20ton	94.5	Lw		89	92	93	93	92	90	86	82	76	94.5	99.8	H&K calc, adj against Man Data Avg
Air Cooled Condenser - 8 fan	ACC_8f	97.3	Lw			99	105	99	95	91	86	80	71	97.3	107.2	SLP, based on Bronte Green Meas
Packaged Chiller/Cond. - 3 Fan (approx 90 ton cc)	PCC_3f	99.1	Lw			100	100	96	97	95	90	84	81	99.1	105.3	SLP, based on Trane Specs
Kitchen Exhaust Fan	EF_Kitchen	85	Lw		0	83	93	88	82	77	75	69	66	85	94.9	

Sound Power Levels

Name	M.	ID	Result. PWL			Lw / Li		Correction				Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Height	Coordinates		
			Day (dBA)	Evening (dBA)	Night (dBA)	Type	Value	norm. dB(A)	Day dB(A)	Evening dB(A)	Night dB(A)	R	Area (m²)		Day (min)	Special (min)	Night (min)	(dB)	(Hz)		(m)	X (m)	Y (m)	Z (m)
	~	SS	90	90	90	Lw	ACC_8f	90	0	0	0				45	45	30	0		(none)	1.2 g	604343.76	4805596.76	93.2
	~	SS	90	90	90	Lw	ACC_8f	90	0	0	0				45	45	30	0		(none)	1.2 g	604339.48	4805590.82	93.2
	~	SS	85	85	85	Lw	EF_Kitchen		0	0	0				60	60	0	0		(none)	1.2 g	604338.49	4805600.06	93.2
	~	SS	92.5	92.5	92.5	Lw	HVAC_15ton		0	0	0				60	45	15	0		(none)	1.2 g	604326.6	4805565.59	93.2
	~	SS	85.5	85.5	85.5	Lw	HVAC_10ton		0	0	0				60	45	15	0		(none)	1.2 g	604309.14	4805566.66	91.2
	~	SS	85.5	85.5	85.5	Lw	HVAC_10ton		0	0	0				60	45	15	0		(none)	1.2 g	604324.45	4805553.6	91.2
	~	SS	85.5	85.5	85.5	Lw	HVAC_10ton		0	0	0				60	45	15	0		(none)	1.2 g	604255.97	4805452.55	91.2
	~	SS	85.5	85.5	85.5	Lw	HVAC_10ton		0	0	0				60	45	15	0		(none)	1.2 g	604246.11	4805461.81	91.2
	~	SS	85.5	85.5	85.5	Lw	HVAC_10ton		0	0	0				60	45	15	0		(none)	1.2 g	604300.15	4805554.6	91.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604335.61	4805548.75	91.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604320.57	4805548.11	91.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604315.85	4805542.5	91.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604311.56	4805536.21	91.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604306.8	4805530.26	91.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604286.09	4805535.82	91.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604276.77	4805524.04	91.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604268.58	4805515.86	91.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604262.16	4805506.97	91.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604257.72	4805501.46	91.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604253.43	4805496.42	91.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604289.19	4805505.15	91.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604283.31	4805499.69	91.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604297.33	4805518.21	91.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604292.89	4805511.89	91.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604302.26	4805524.37	91.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604279.55	4805493.95	91.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604275.1	4805488.41	91.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604275.5	4805476.81	91.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604263.7	4805468.58	91.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604266.12	4805454.7	91.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604261.15	4805460.44	91.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604228.95	4805473.51	91.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604240.55	4805466.23	91.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604245.4	4805482.14	91.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604242.5	4805487.74	91.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604430.13	4805499.8	87.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604434.84	4805505.16	87.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604431.41	4805496.8	87.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604439.28	4805510.67	87.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604437.51	4805501.35	87.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604452.22	4805530.32	87.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604450.35	4805527.94	87.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604451.67	4805524.58	87.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604455.11	4805533.63	87.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604445.25	4805520.63	87.2

Name	M.	ID	Result. PWL			Lw / Li		Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Height	Coordinates		
			Day (dBA)	Evening (dBA)	Night (dBA)	Type	Value	norm. dB(A)	Day dB(A)	Evening dB(A)	Night dB(A)	R	Area (m^2)		Day (min)	Special (min)	Night (min)	(dB)	(Hz)		(m)	X (m)	Y (m)	Z (m)
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604461.18	4805531.4	87.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604453.85	4805537.56	87.2
	~	SS	85.5	85.5	85.5	Lw	HVAC_10ton		0	0	0				60	45	15	0		(none)	1.2 g	604457.86	4805533.06	87.2
	~	SS	94.5	94.5	94.5	Lw	HVAC_20ton		0	0	0				60	45	15	0		(none)	1.2 g	604430.75	4805488.33	87.2
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604553.76	4805754.24	90.69
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604549.89	4805749.02	90.69
	~	SS	82.5	82.5	82.5	Lw	HVAC_5ton		0	0	0				60	45	15	0		(none)	1.2 g	604545.43	4805743.41	90.69
	~	SS	90	90	90	Lw	PCC_3f	90	0	0	0				45	45	30	0		(none)	6 r	604480.27	4805536.07	88
	~	SS	79.8	79.8	79.8	Lw	HVAC_10ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604580.03	4805788.5	90.69
	~	SS	76.8	76.8	76.8	Lw	HVAC_5ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604578.64	4805786.52	90.69
	~	SS	79.8	79.8	79.8	Lw	HVAC_10ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604614.44	4805749.78	88.2
	~	SS	79.8	79.8	79.8	Lw	HVAC_10ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604628.63	4805767.78	88.2
	~	SS	79.8	79.8	79.8	Lw	HVAC_10ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604652.33	4805794.4	88.2
	~	SS	76.8	76.8	76.8	Lw	HVAC_5ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604617.14	4805753.24	88.2
	~	SS	76.8	76.8	76.8	Lw	HVAC_5ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604621	4805757.47	88.2
	~	SS	76.8	76.8	76.8	Lw	HVAC_5ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604624.37	4805762.45	88.2
	~	SS	76.8	76.8	76.8	Lw	HVAC_5ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604637.5	4805773.87	88.2
	~	SS	76.8	76.8	76.8	Lw	HVAC_5ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604643.64	4805777.48	88.2
	~	SS	76.8	76.8	76.8	Lw	HVAC_5ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604647.83	4805782.48	88.2
	~	SS	76.8	76.8	76.8	Lw	HVAC_5ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604651.1	4805787.64	88.2
	~	SS	76.8	76.8	76.8	Lw	HVAC_5ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604656.67	4805791.92	88.2
	~	SS	79.8	79.8	79.8	Lw	HVAC_10ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604685.72	4805824.19	88.2
	~	SS	79.8	79.8	79.8	Lw	HVAC_10ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604690.51	4805825.95	88.2
	~	SS	79.8	79.8	79.8	Lw	HVAC_10ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604704.9	4805838.27	88.2
	~	SS	79.8	79.8	79.8	Lw	HVAC_10ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604711.11	4805838.95	88.2
	~	SS	79.8	79.8	79.8	Lw	HVAC_10ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604700.02	4805814.6	88.2
	~	SS	76.8	76.8	76.8	Lw	HVAC_5ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604697.59	4805819.07	88.2
	~	SS	76.8	76.8	76.8	Lw	HVAC_5ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604711.75	4805850.77	88.2
	~	SS	76.8	76.8	76.8	Lw	HVAC_5ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604720.42	4805842.7	88.2
	~	SS	76.8	76.8	76.8	Lw	HVAC_5ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604731.86	4805846.69	88.2
	~	SS	79.8	79.8	79.8	Lw	HVAC_10ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604721.36	4805894.42	88.2
	~	SS	79.8	79.8	79.8	Lw	HVAC_10ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604663.02	4805898.32	89.2
	~	SS	79.8	79.8	79.8	Lw	HVAC_10ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604671.86	4805909.59	89.2
	~	SS	79.8	79.8	79.8	Lw	HVAC_10ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604677.59	4805917.75	89.2
	~	SS	79.8	79.8	79.8	Lw	HVAC_10ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604683.19	4805924.83	89.2
	~	SS	79.8	79.8	79.8	Lw	HVAC_10ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604686.23	4805922.74	89.2
	~	SS	76.8	76.8	76.8	Lw	HVAC_5ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604644.54	4805882.08	90.69
	~	SS	79.8	79.8	79.8	Lw	HVAC_10ton		0	0	0				60	45	15	0	500	(none)	1.2 g	604644.22	4805876.61	90.69
	~	SS	78.8	78.8	78.8	Lw	EF_Kitchen		0	0	0				60	60	0	0	500	(none)	1.2 g	604640.95	4805873.13	90.69
	~	SS	78.8	78.8	78.8	Lw	EF_Kitchen		0	0	0				60	60	0	0	500	(none)	1.2 g	604618.91	4805848.03	90.69
	~	SS	78.8	78.8	78.8	Lw	EF_Kitchen		0	0	0				60	60	0	0	500	(none)	1.2 g	604605.11	4805848.07	90.69

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Appendix C
Traffic Data and Calculations

2365-2379 Lakeshore Road West

Compatibility & Mitigation Study

SLR Project No.: 241.30501.00000

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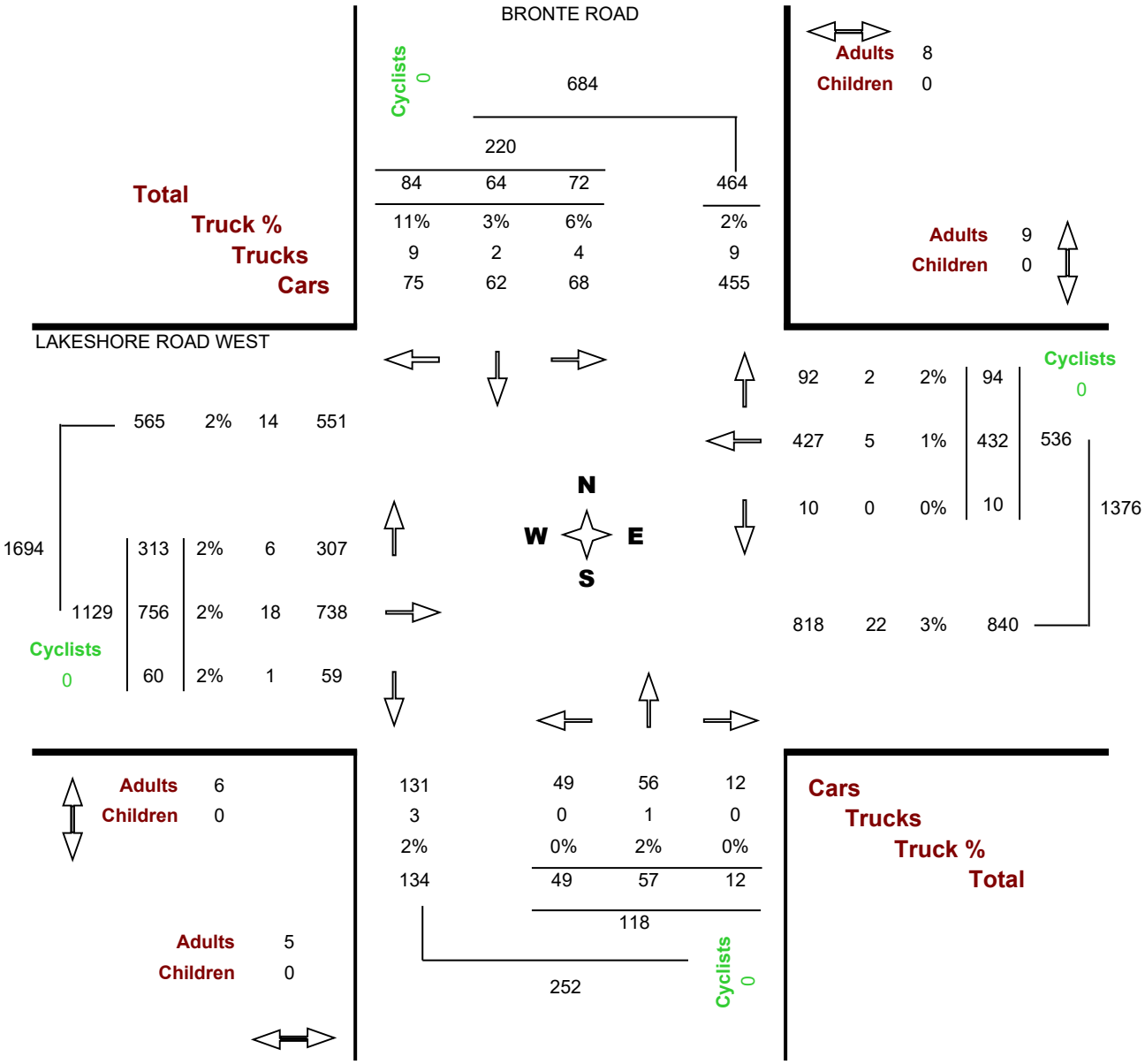
Turning Movements Report - AM Period

Location..... BRONTE ROAD @ LAKESHORE ROAD WEST
Municipality..... OAKVILLE
GeoID..... 30271101
Count Date..... Tuesday, 11 June, 2019 **Peak Hour.....** 07:45 AM — 08:45 AM

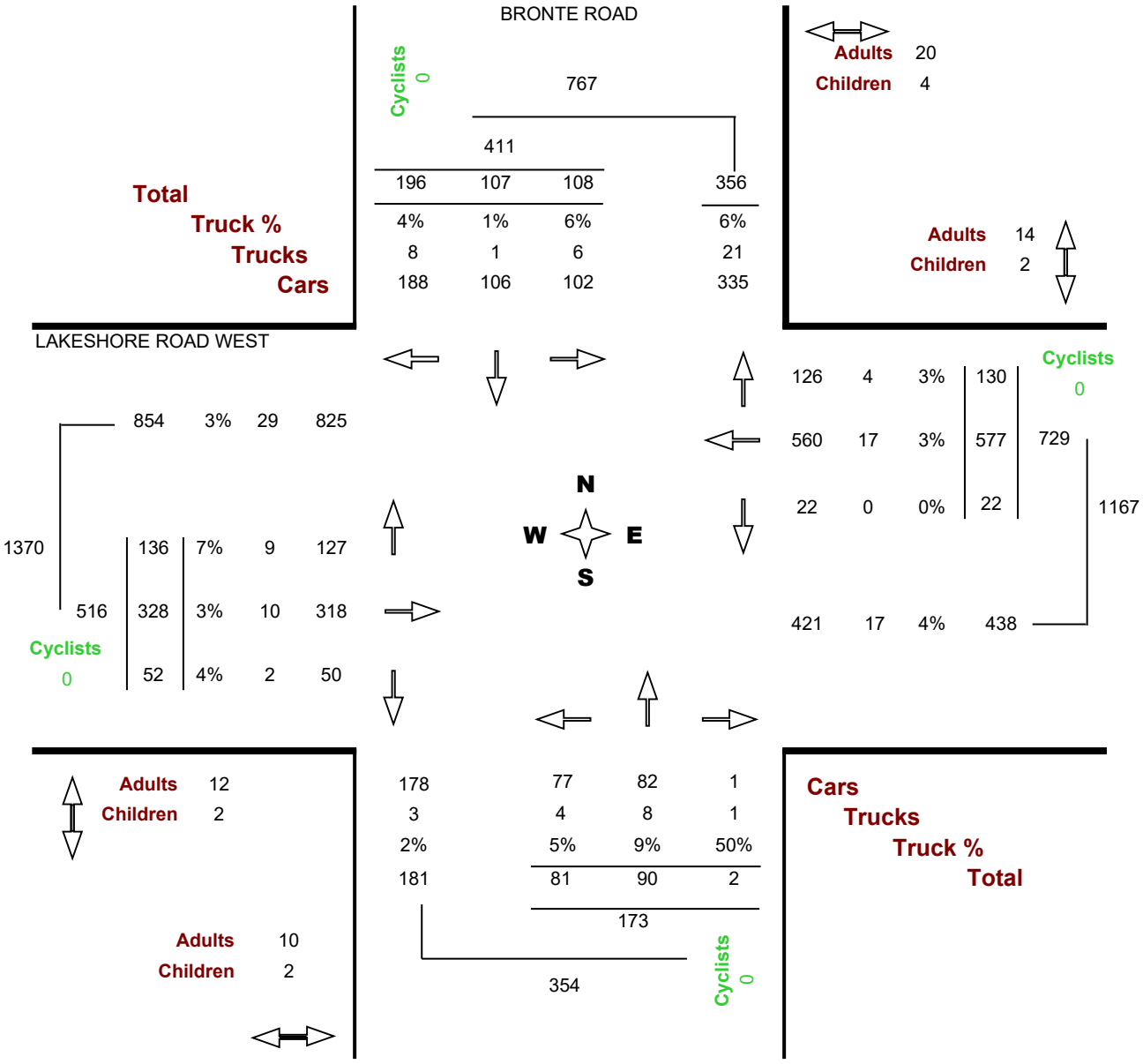


THIS INFORMATIONN IS SUPPLIED FROM OUR RECORDS AND IS NOT GUARANTEED TO BE CORRECT. WE RECOMMEND FIELD CHECKING TO VERIFY THE INFORMATION SHOWN.

In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

Turning Movements Report - PM Period

Location..... BRONTE ROAD @ LAKESHORE ROAD WEST
Municipality..... OAKVILLE
GeoID..... 30271101
Count Date..... Tuesday, 11 June, 2019 **Peak Hour.....** 03:00 PM — 04:00 PM



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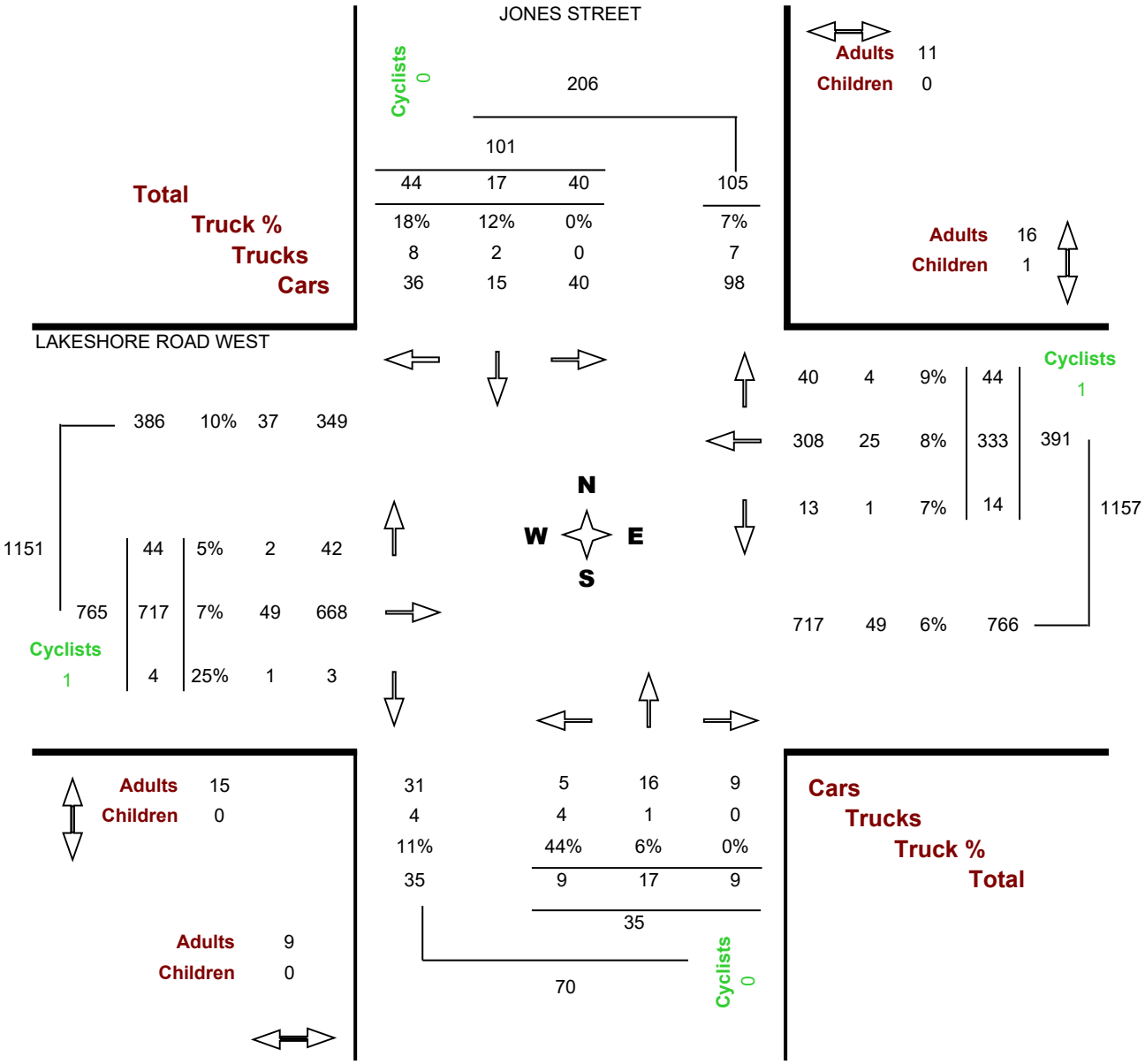
In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

Turning Movements Report - AM Period

Location..... LAKESHORE ROAD WEST @ JONES STREET
Municipality..... OAKVILLE
GeoID..... 30078501
Count Date..... Tuesday, 23 April, 2019 **Peak Hour.....** 08:00 AM — 09:00 AM

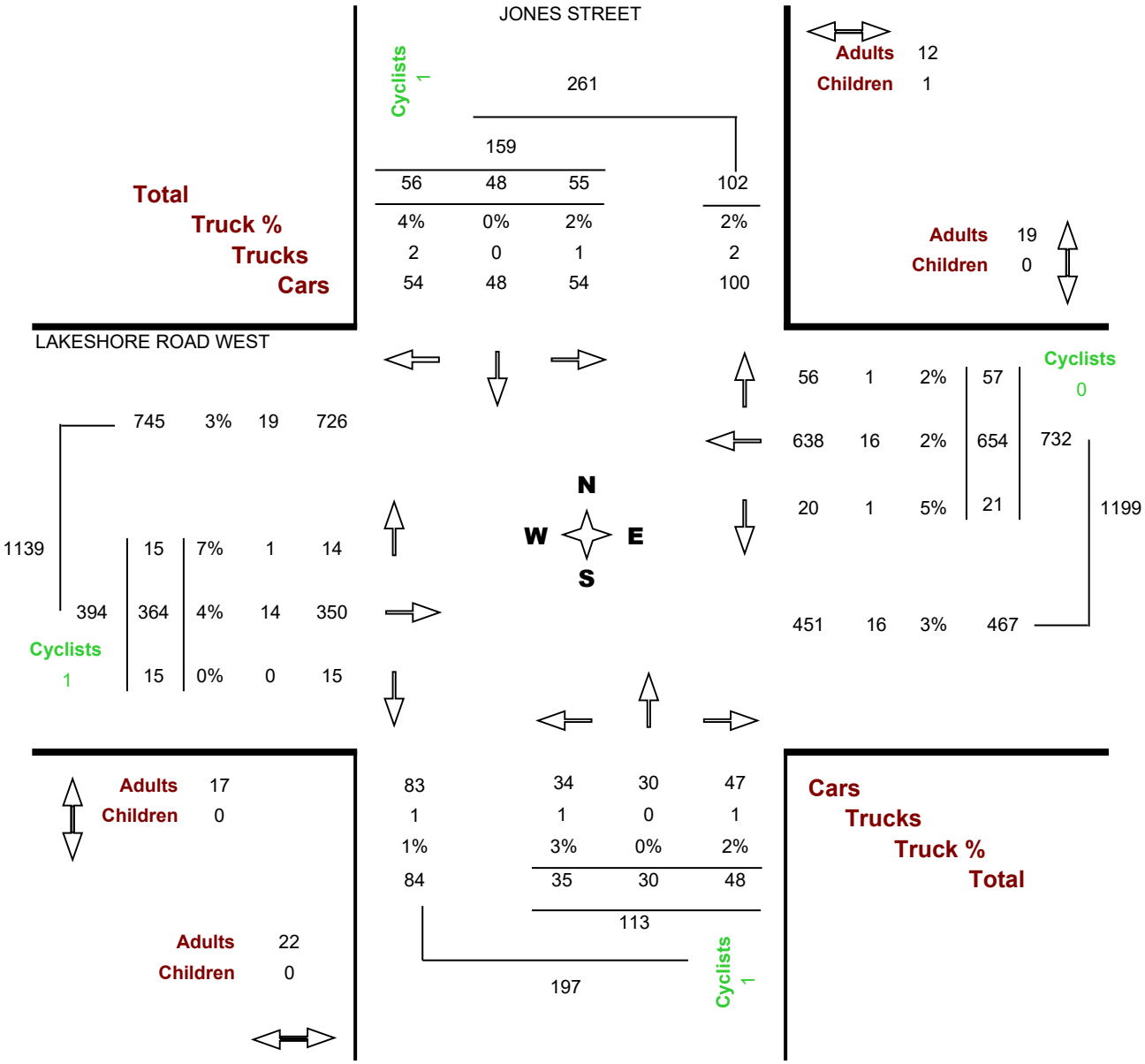


THIS INFORMATIONN IS SUPPLIED FROM OUR RECORDS AND IS NOT GUARANTEED TO BE CORRECT. WE RECOMMEND FIELD CHECKING TO VERIFY THE INFORMATION SHOWN.

In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

Turning Movements Report - PM Period

Location..... LAKESHORE ROAD WEST @ JONES STREET
Municipality..... OAKVILLE
GeoID..... 30078501
Count Date..... Tuesday, 23 April, 2019 **Peak Hour.....** 04:45 PM — 05:45 PM

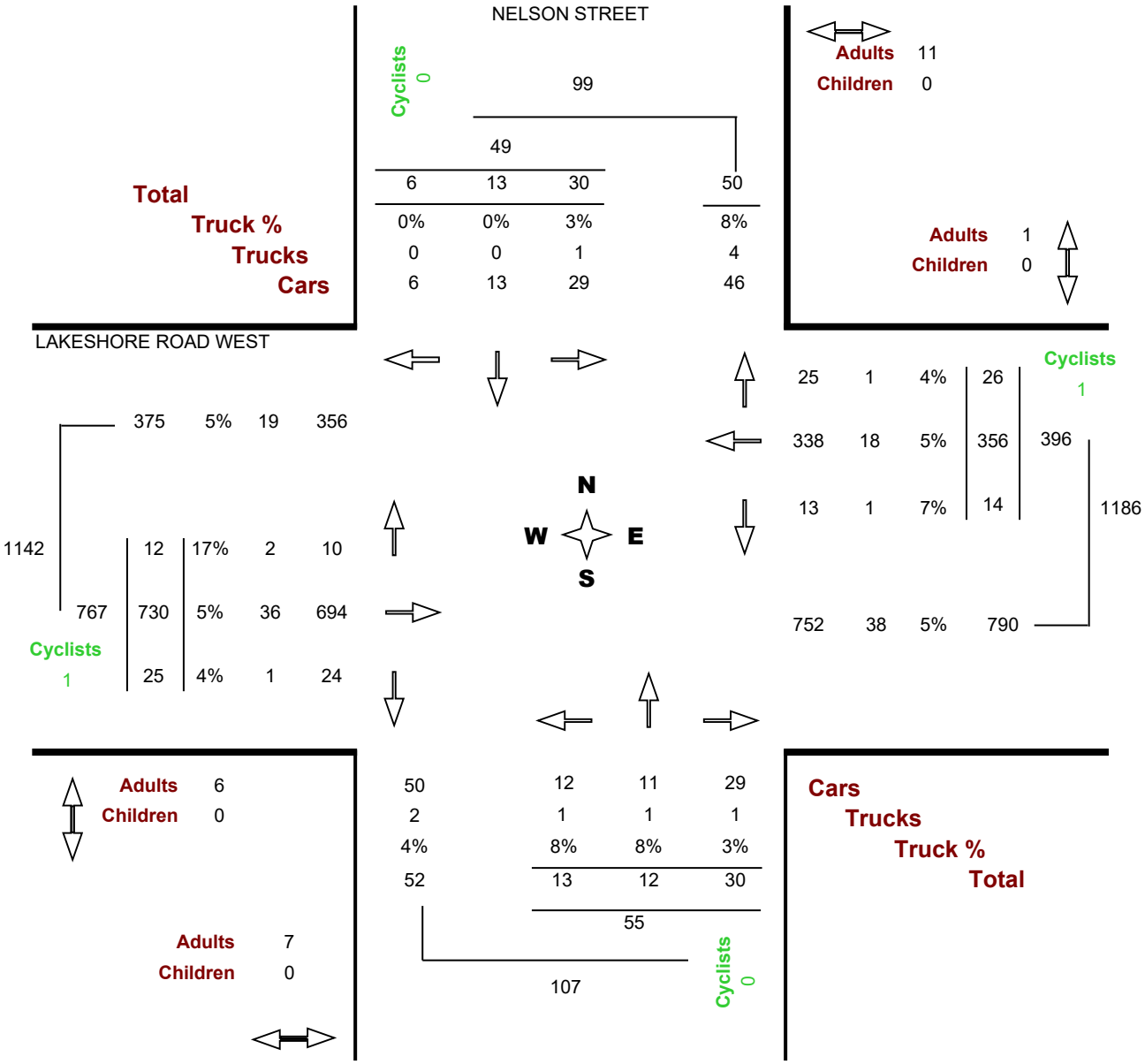


THIS INFORMATIONN IS SUPPLIED FROM OUR RECORDS AND IS NOT GUARANTEED TO BE CORRECT. WE RECOMMEND FIELD CHECKING TO VERIFY THE INFORMATION SHOWN.

In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

Turning Movements Report - AM Period

Location..... LAKESHORE ROAD WEST @ NELSON STREET
Municipality..... OAKVILLE
GeoID..... 30078601
Count Date..... Monday, 29 April, 2019 **Peak Hour.....** 08:00 AM — 09:00 AM

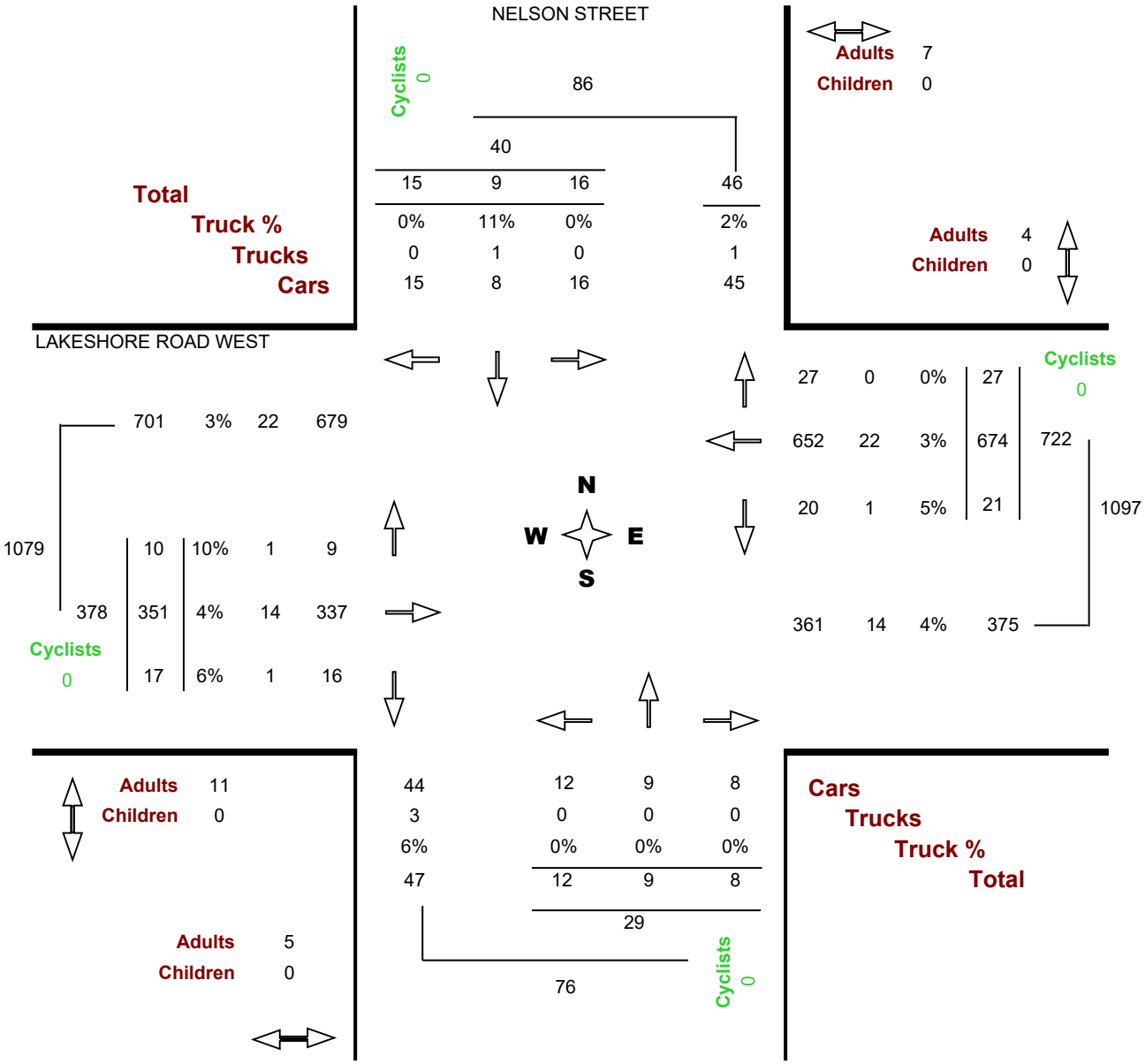


THIS INFORMATIONN IS SUPPLIED FROM OUR RECORDS AND IS NOT GUARANTEED TO BE CORRECT. WE RECOMMEND FIELD CHECKING TO VERIFY THE INFORMATION SHOWN.

In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

Turning Movements Report - PM Period

Location..... LAKESHORE ROAD WEST @ NELSON STREET
Municipality..... OAKVILLE
GeoID..... 30078601
Count Date..... Monday, 29 April, 2019 **Peak Hour.....** 04:30 PM — 05:30 PM



THIS INFORMATIONN IS SUPPLIED FROM OUR RECORDS AND IS NOT GUARANTEED TO BE CORRECT. WE RECOMMEND FIELD CHECKING TO VERIFY THE INFORMATION SHOWN.

In all counts dated before 2018 - Adult pedestrian numbers include seniors, and the senior count = 0

241.30501.00000 2365-2379 Lakeshore Compatibility

Bronte Roas @ Lakeshore Road West

Jun-19

AM Peak

AADT Conversion

PM Peak to AADT	10
AM Peak to AADT	11
8-Hour to AADT	2
to use:	11

SUMMARY	Ratio	M	H
		1	1

Link	Cars	Trucks	Total	% Med	% Heavy	% Comm	Current AADT	Growth Rate	No. of Years	Future AADT		
North	660	24	684	1.8%	1.8%	3.5%	7524	1.5%	16	9548	1.8%	1.8%
South	248	4	252	0.8%	0.8%	1.6%	2772	1.5%	16	3518	0.8%	0.8%
West	1655	39	1694	1.2%	1.2%	2.3%	18634	1.5%	16	23646	1.2%	1.2%
East	1347	29	1376	1.1%	1.1%	2.1%	15136	1.5%	16	19207	1.1%	1.1%

SOUTHBOUND

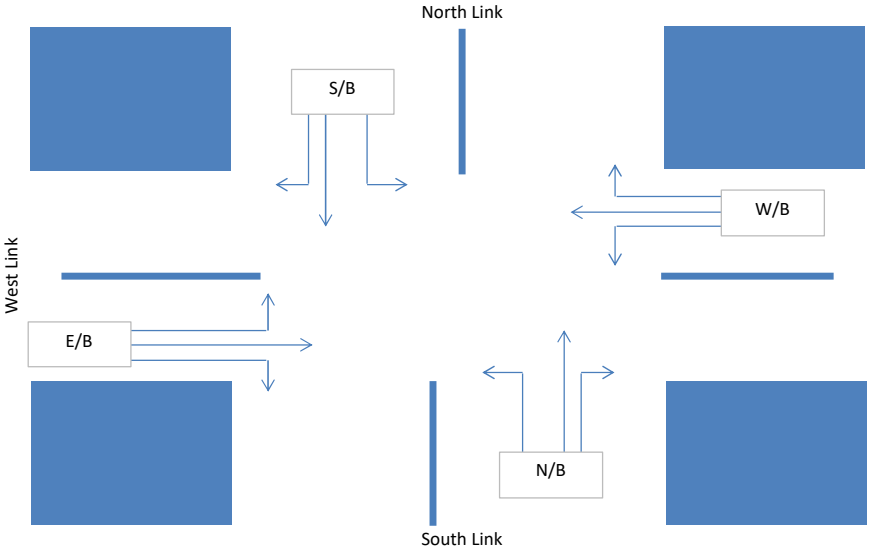
	Right	Thru	Left	Totals
				0
Trucks	9	2	4	15
Cars	75	62	68	205
Totals	84	64	72	

TOTAL NORTH LINK

Cars	Trucks	Heavys	TOTAL
660	24	0	684

WESTBOUND

	Cars	Trucks		Totals
Right	92	2		94
Thru	427	5		432
Left	10	0		10
	529	7	0	



TOTAL WEST LINK

Cars	Trucks	Heavys	TOTAL
1655	39	0	1694

TOTAL EAST LINK

Cars	Trucks	Heavys	TOTAL
1347	29	0	1376

EASTBOUND

		Trucks	Cars	Totals
Left		6	307	313
Thru		18	738	756
Right		1	59	60
	0	25	1104	

TOTAL SOUTH LINK

Cars	Trucks	Heavys	TOTAL
248	4	0	252

NORTHBOUND

	Left	Thru	Right	Totals
Cars	49	56	12	117
Trucks	0	1	0	1
				0
	49	57	12	

241.30501.00000 2365-2379 Lakeshore Compatibility

Bronte Roas @ Lakeshore Road West

Jun-19

PM Peak

AADT Conversion

PM Peak to AADT	10
AM Peak to AADT	11
8-Hour to AADT	2
to use:	10

SUMMARY

	M	H
Ratio	1	1

Link	Cars	Trucks	Total	% Med	% Heavy	% Comm	Current AADT	Growth Rate	No. of Years	Future AADT		
North	731	36	767	2.3%	2.3%	4.7%	7670	1.5%	16	9733	2.3%	2.3%
South	338	16	354	2.3%	2.3%	4.5%	3540	1.5%	16	4492	2.3%	2.3%
West	1320	50	1370	1.8%	1.8%	3.6%	13700	1.5%	16	17385	1.8%	1.8%
East	1129	38	1167	1.6%	1.6%	3.3%	11670	1.5%	16	14809	1.6%	1.6%

SOUTHBOUND

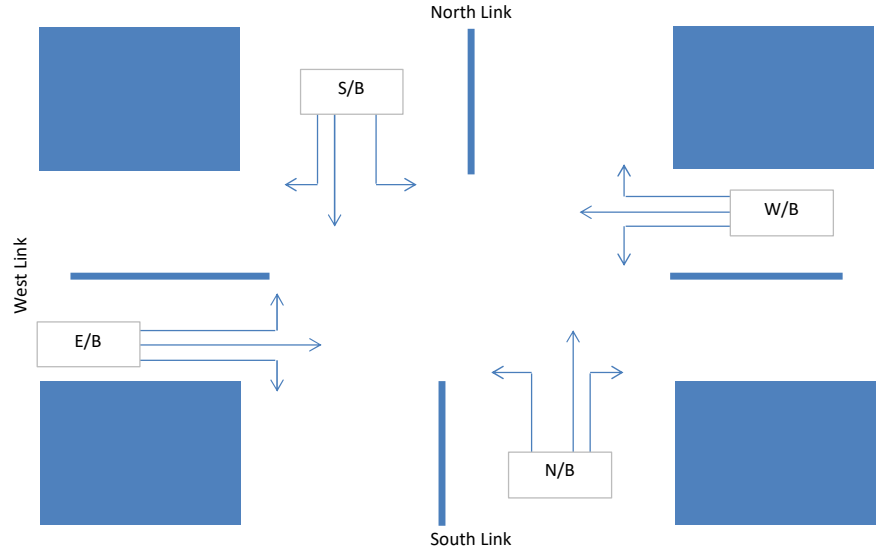
	Right	Thru	Left	Totals
				0
Trucks	8	1	6	15
Cars	188	106	102	396
Totals	196	107	108	

TOTAL NORTH LINK

Cars	Trucks	Heavys	TOTAL
731	36	0	767

WESTBOUND

	Cars	Trucks		Totals
Right	126	4		130
Thru	560	17		577
Left	22	0		22
	708	21	0	



TOTAL WEST LINK

Cars	Trucks	Heavys	TOTAL
1320	50	0	1370

TOTAL EAST LINK

Cars	Trucks	Heavys	TOTAL
1129	38	0	1167

EASTBOUND

	Trucks	Cars	Totals
Left	9	127	136
Thru	10	318	328
Right	2	50	52
0	21	495	

TOTAL SOUTH LINK

Cars	Trucks	Heavys	TOTAL
338	16	0	354

NORTHBOUND

	Left	Thru	Right	Totals
Cars	77	82	1	160
Trucks	4	8	1	13
				0
	81	90	2	

241.30501.00000 2365-2379 Lakeshore Compatibility

Lakeshore Road West @ Jones Street

Jun-19

AM Peak

AADT Conversion

PM Peak to AADT	10
AM Peak to AADT	11
8-Hour to AADT	2
to use:	11

SUMMARY

	M	H
Ratio	1	1

Link	Cars	Trucks	Total	% Med	% Heavy	% Comm	Current AADT	Growth Rate	No. of Years	Future AADT		
North	189	17	206	4.1%	4.1%	8.3%	2266	1.5%	16	2876	4.1%	4.1%
South	61	9	70	6.4%	6.4%	12.9%	770	1.5%	16	977	6.4%	6.4%
West	1062	89	1151	3.9%	3.9%	7.7%	12661	1.5%	16	16067	3.9%	3.9%
East	1078	79	1157	3.4%	3.4%	6.8%	12727	1.5%	16	16150	3.4%	3.4%

SOUTHBOUND

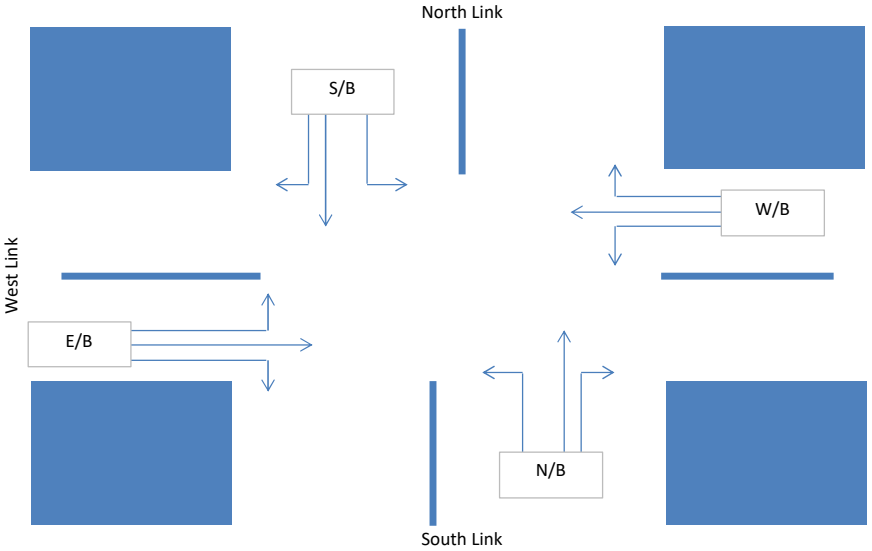
	Right	Thru	Left	Totals
				0
Trucks	8	2	0	10
Cars	36	15	40	91
Totals	44	17	40	

TOTAL NORTH LINK

Cars	Trucks	Heavys	TOTAL
189	17	0	206

WESTBOUND

	Cars	Trucks		Totals
Right	40	4		44
Thru	308	25		333
Left	13	1		14
	361	30	0	



TOTAL WEST LINK

Cars	Trucks	Heavys	TOTAL
1062	89	0	1151

TOTAL EAST LINK

Cars	Trucks	Heavys	TOTAL
1078	79	0	1157

EASTBOUND

	Trucks	Cars	Totals
Left	2	42	44
Thru	49	668	717
Right	1	3	4
0	52	713	

TOTAL SOUTH LINK

Cars	Trucks	Heavys	TOTAL
61	9	0	70

NORTHBOUND

	Left	Thru	Right	Totals
Cars	5	16	9	30
Trucks	4	1	0	5
				0
	9	17	9	

241.30501.00000 2365-2379 Lakeshore Compatibility

Lakeshore Road West @ Jones Street

Jun-19

PM Peak

AADT Conversion

PM Peak to AADT	10
AM Peak to AADT	11
8-Hour to AADT	2
to use:	10

SUMMARY

	M	H
Ratio	1	1

Link	Cars	Trucks	Total	% Med	% Heavy	% Comm	Current AADT	Growth Rate	No. of Years	Future AADT		
North	256	5	261	1.0%	1.0%	1.9%	2610	1.5%	16	3312	1.0%	1.0%
South	194	3	197	0.8%	0.8%	1.5%	1970	1.5%	16	2500	0.8%	0.8%
West	1105	34	1139	1.5%	1.5%	3.0%	11390	1.5%	16	14454	1.5%	1.5%
East	1165	34	1199	1.4%	1.4%	2.8%	11990	1.5%	16	15215	1.4%	1.4%

SOUTHBOUND

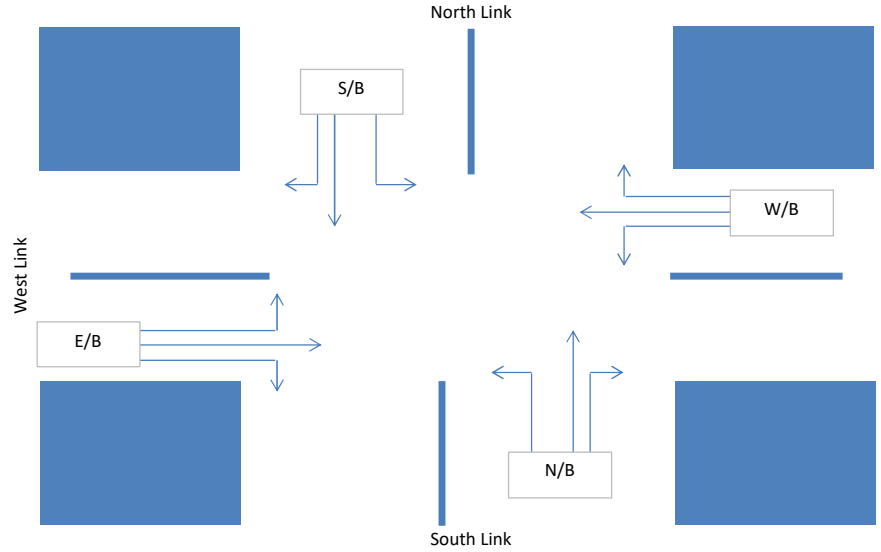
	Right	Thru	Left	Totals
				0
Trucks	2	0	1	3
Cars	54	48	54	156
Totals	56	48	55	

TOTAL NORTH LINK

Cars	Trucks	Heavys	TOTAL
256	5	0	261

WESTBOUND

	Cars	Trucks		Totals
Right	56	1		57
Thru	638	16		654
Left	20	1		21
	714	18	0	



TOTAL WEST LINK

Cars	Trucks	Heavys	TOTAL
1105	34	0	1139

TOTAL EAST LINK

Cars	Trucks	Heavys	TOTAL
1165	34	0	1199

EASTBOUND

	Trucks	Cars	Totals
Left	1	14	15
Thru	14	350	364
Right	0	15	15
0	15	379	

TOTAL SOUTH LINK

Cars	Trucks	Heavys	TOTAL
194	3	0	197

NORTHBOUND

	Left	Thru	Right	Totals
Cars	34	30	47	111
Trucks	1	0	1	2
				0
	35	30	48	

241.30501.00000 2365-2379 Lakeshore Compatibility

Lakeshore Road West @ Nelson Street

Jun-19

AM Peak

AADT Conversion

PM Peak to AADT	10
AM Peak to AADT	11
8-Hour to AADT	2
to use:	11

SUMMARY	Ratio	M	H
		1	1

Link	Cars	Trucks	Total	% Med	% Heavy	% Comm	Current AADT	Growth Rate	No. of Years	Future AADT		
North	94	5	99	2.5%	2.5%	5.1%	1089	1.5%	16	1382	2.5%	2.5%
South	102	5	107	2.3%	2.3%	4.7%	1177	1.5%	16	1494	2.3%	2.3%
West	1084	58	1142	2.5%	2.5%	5.1%	12562	1.5%	16	15941	2.5%	2.5%
East	1128	58	1186	2.4%	2.4%	4.9%	13046	1.5%	16	16555	2.4%	2.4%

SOUTHBOUND

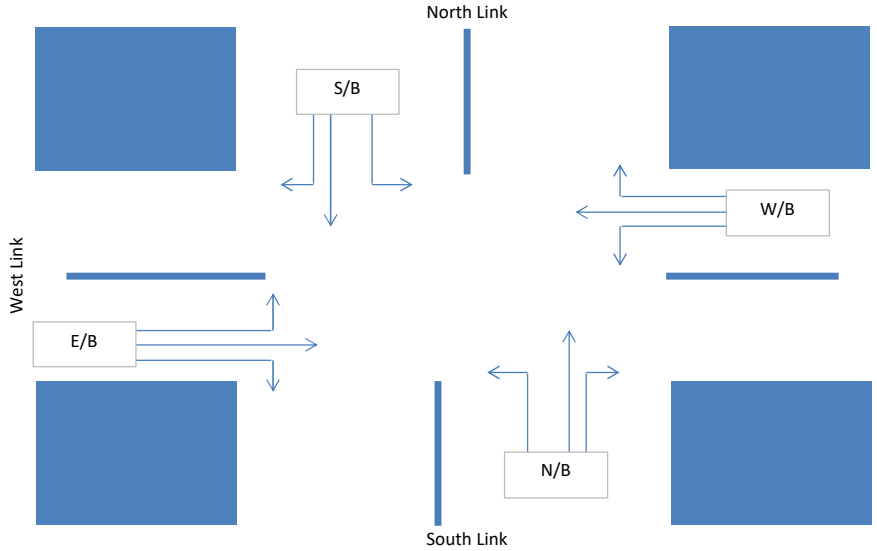
	Right	Thru	Left	Totals
				0
Trucks	0	0	1	1
Cars	6	13	29	48
Totals	6	13	30	

TOTAL NORTH LINK

Cars	Trucks	Heavys	TOTAL
94	5	0	99

WESTBOUND

	Cars	Trucks		Totals
Right	25	1		26
Thru	338	18		356
Left	13	1		14
	376	20	0	



TOTAL WEST LINK

Cars	Trucks	Heavys	TOTAL
1084	58	0	1142

TOTAL EAST LINK

Cars	Trucks	Heavys	TOTAL
1128	58	0	1186

EASTBOUND

		Trucks	Cars	Totals
Left		2	10	12
Thru		36	694	730
Right		1	24	25
	0	39	728	

TOTAL SOUTH LINK

Cars	Trucks	Heavys	TOTAL
102	5	0	107

NORTHBOUND

	Left	Thru	Right	Totals
Cars	12	11	29	52
Trucks	1	1	1	3
				0
	13	12	30	

241.30501.00000 2365-2379 Lakeshore Compatibility

Lakeshore Road West @ Nelson Street

Jun-19

PM Peak

AADT Conversion

PM Peak to AADT	10
AM Peak to AADT	11
8-Hour to AADT	2
to use:	10

SUMMARY		M	H
	Ratio	1	1

Link	Cars	Trucks	Total	% Med	% Heavy	% Comm	Current AADT	Growth Rate	No. of Years	Future AADT		
North	84	2	86	1.2%	1.2%	2.3%	860	1.5%	16	1091	1.2%	1.2%
South	73	3	76	2.0%	2.0%	3.9%	760	1.5%	16	964	2.0%	2.0%
West	1041	38	1079	1.8%	1.8%	3.5%	10790	1.5%	16	13692	1.8%	1.8%
East	1060	37	1097	1.7%	1.7%	3.4%	10970	1.5%	16	13921	1.7%	1.7%

SOUTHBOUND

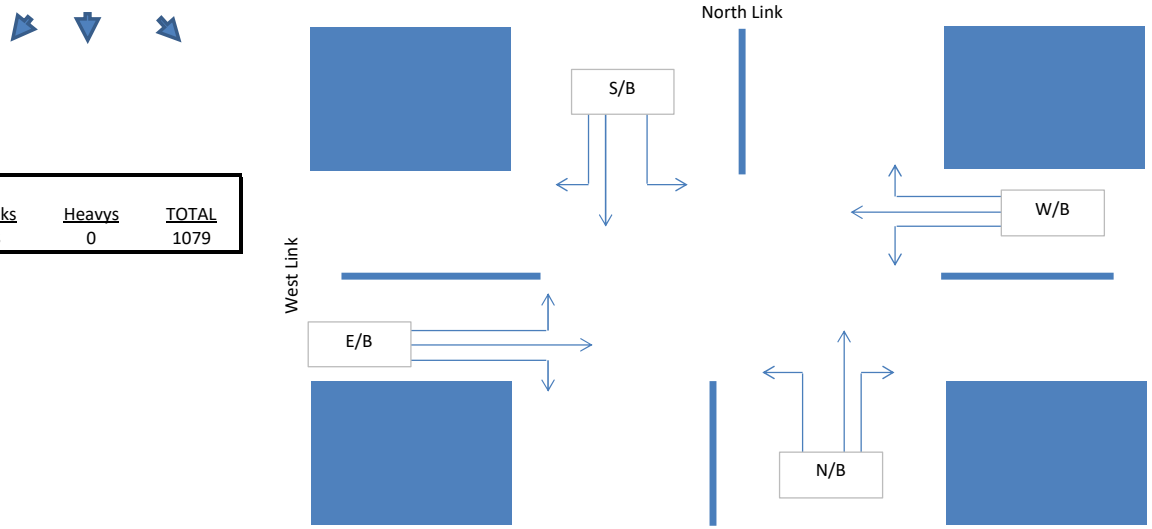
	Right	Thru	Left	Totals
				0
Trucks	0	1	0	1
Cars	15	8	16	39
Totals	15	9	16	

TOTAL NORTH LINK

Cars	Trucks	Heavys	TOTAL
84	2	0	86

WESTBOUND

	Cars	Trucks		Totals
Right	27	0		27
Thru	652	22		674
Left	20	1		21
	699	23	0	



TOTAL WEST LINK

Cars	Trucks	Heavys	TOTAL
1041	38	0	1079

TOTAL EAST LINK

Cars	Trucks	Heavys	TOTAL
1060	37	0	1097

EASTBOUND

	Trucks	Cars	Totals
Left	1	9	10
Thru	14	337	351
Right	1	16	17
	16	362	

TOTAL SOUTH LINK

Cars	Trucks	Heavys	TOTAL
73	3	0	76

NORTHBOUND

	Left	Thru	Right	Totals
Cars	12	9	8	29
Trucks	0	0	0	0
				0
	12	9	8	

Summary of Traffic Data

	AADT	Med	Heavy
AM	9548	1.8%	1.8%
PM	9733	2.3%	2.3%
Avg	9641	2.1%	2.1%

Bronte

	AADT	Med	Heavy
AM	2876	4.1%	4.1%
PM	3312	1.0%	1.0%
Avg	3094	2.5%	2.5%

Jones

	AADT	Med	Heavy
AM	1382	2.5%	2.5%
PM	1091	1.2%	1.2%
Avg	1237	1.8%	1.8%

Nelson

	AADT	Med	Heavy
AM	19207	1.1%	1.1%
PM	14809	1.6%	1.6%
Avg	17008	1.3%	1.3%

	AADT	Med	Heavy
AM	16150	3.4%	3.4%
PM	15215	1.4%	1.4%
Avg	15683	2.4%	2.4%

	AADT	Med	Heavy
AM	16555	2.4%	2.4%
PM	13921	1.7%	1.7%
Avg	15238	2.1%	2.1%

Lakeshore **Lakeshore**

	AADT	Med	Heavy
AM	23646	1.2%	1.2%
PM	17385	1.8%	1.8%
Avg	20516	1.5%	1.5%

	AADT	Med	Heavy
AM	16067	3.9%	3.9%
PM	14454	1.5%	1.5%
Avg	15261	2.7%	2.7%

	AADT	Med	Heavy
AM	15941	2.5%	2.5%
PM	13692	1.8%	1.8%
Avg	14817	2.2%	2.2%

	AADT	Med	Heavy
AM	3518	0.8%	0.8%
PM	4492	2.3%	2.3%
Avg	4005	1.5%	1.5%

	AADT	Med	Heavy
AM	977	6.4%	6.4%
PM	2500	0.8%	0.8%
Avg	1739	3.6%	3.6%

	AADT	Med	Heavy
AM	1494	2.3%	2.3%
PM	964	2.0%	2.0%
Avg	1229	2.2%	2.2%

O R N A M E N T - Sound Power Emissions & Source Heights

Ontario Road Noise Analysis Method for Environment and Transportation

Transportation Noise

Road Segment ID	AADT	Percent Traffic In Period	Period (h)	Total Traffic Volumes (Period)	Speed (kph)	Auto %	Med %	Hvy %	Auto	Med	Heavy	Road Gradient (%)	Cadna/A Ground Absorption G	PWL (dBA)	Source Height, s (m)
Day (7am to 11pm)															
Lakeshore Road W, West of Jones	15261	90%	16	13734	50	94.6%	2.7%	2.7%	12998	368	368	0	0.00	**81.3**	**1.3**
Lakeshore Road W, West of Nelson	15683	90%	16	14114	50	95.2%	2.4%	2.4%	13432	341	341	0	0.00	**81.1**	**1.2**
Lakeshore Road W, East of Nelson	15238	90%	16	13714	50	95.9%	2.1%	2.1%	13148	283	283	0	0.00	**80.6**	**1.2**
Jones St, North of Lakeshore	3094	90%	16	2785	50	94.9%	2.5%	2.5%	2643	71	71	0	0.00	**74.2**	**1.3**
Jones St, South of Lakeshore	1739	90%	16	1565	50	92.8%	3.6%	3.6%	1452	56	56	0	0.00	**72.8**	**1.4**
Nelson St, North of Lakeshore	1237	90%	16	1113	50	96.3%	1.8%	1.8%	1072	21	21	0	0.00	**69.4**	**1.2**
Nelson St, South of Lakeshore	1229	90%	16	1106	50	95.7%	2.2%	2.2%	1058	24	24	0	0.00	**69.8**	**1.2**
Night (11pm to 7am)															
Lakeshore Road W, West of Jones	15261	10.0%	8	1526	50	94.6%	2.7%	2.7%	1444	41	41	0	0.00	**74.8**	**1.3**
Lakeshore Road W, West of Nelson	15683	10.0%	8	1568	50	95.2%	2.4%	2.4%	1492	38	38	0	0.00	**74.6**	**1.2**
Lakeshore Road W, East of Nelson	15238	10.0%	8	1524	50	95.9%	2.1%	2.1%	1461	31	31	0	0.00	**74.0**	**1.2**
Jones St, North of Lakeshore	3094	10.0%	8	309	50	94.9%	2.5%	2.5%	294	8	8	0	0.00	**67.7**	**1.3**
Jones St, South of Lakeshore	1739	10.0%	8	174	50	92.8%	3.6%	3.6%	161	6	6	0	0.00	**66.2**	**1.4**
Nelson St, North of Lakeshore	1237	10.0%	8	124	50	96.3%	1.8%	1.8%	119	2	2	0	0.00	**62.8**	**1.2**
Nelson St, South of Lakeshore	1229	10.0%	8	123	50	95.7%	2.2%	2.2%	118	3	3	0	0.00	**63.2**	**1.2**

Ambient Noise

Road Segment ID	AADT	Percent Traffic In Period	Period (h)	Total Traffic Volumes (Period)	Speed (kph)	Auto %	Med %	Hvy %	Auto	Med	Heavy	Road Gradient (%)	Cadna/A Ground Absorption G	PWL (dBA)	Source Height, s (m)
Day															
Lakeshore Road W, West of Jones	12026	5%	1	601	50	94.6%	2.7%	2.7%	569	16	16	0	0.00	**79.8**	**1.3**
Lakeshore Road W, West of Nelson	12359	5%	1	618	50	95.2%	2.4%	2.4%	588	15	15	0	0.00	**79.6**	**1.2**
Lakeshore Road W, East of Nelson	12008	5%	1	600	50	95.9%	2.1%	2.1%	576	12	12	0	0.00	**79.0**	**1.2**
Jones St, North of Lakeshore	2438	5%	1	122	50	94.9%	2.5%	2.5%	116	3	3	0	0.00	**72.7**	**1.3**
Jones St, South of Lakeshore	1370	5%	1	69	50	92.8%	3.6%	3.6%	64	2	2	0	0.00	**71.2**	**1.4**
Nelson St, North of Lakeshore	975	5%	1	49	50	96.3%	1.8%	1.8%	47	1	1	0	0.00	**67.8**	**1.2**
Nelson St, South of Lakeshore	969	5%	1	48	50	95.7%	2.2%	2.2%	46	1	1	0	0.00	**68.2**	**1.2**
Evening															
Lakeshore Road W, West of Jones	12026	2.5%	1	301	50	94.6%	2.7%	2.7%	285	8	8	0	0.00	**76.7**	**1.3**
Lakeshore Road W, West of Nelson	12359	2.5%	1	309	50	95.2%	2.4%	2.4%	294	7	7	0	0.00	**76.6**	**1.2**
Lakeshore Road W, East of Nelson	12008	2.5%	1	300	50	95.9%	2.1%	2.1%	288	6	6	0	0.00	**76.0**	**1.2**
Jones St, North of Lakeshore	2438	2.5%	1	61	50	94.9%	2.5%	2.5%	58	2	2	0	0.00	**69.7**	**1.3**
Jones St, South of Lakeshore	1370	2.5%	1	34	50	92.8%	3.6%	3.6%	32	1	1	0	0.00	**68.2**	**1.4**
Nelson St, North of Lakeshore	975	2.5%	1	24	50	96.3%	1.8%	1.8%	23	0	0	0	0.00	**64.8**	**1.2**
Nelson St, South of Lakeshore	969	2.5%	1	24	50	95.7%	2.2%	2.2%	23	1	1	0	0.00	**65.2**	**1.2**
Night															
Lakeshore Road W, West of Jones	12026	0.4%	1	48	50	94.6%	2.7%	2.7%	46	1	1	0	0.00	**68.8**	**1.3**
Lakeshore Road W, West of Nelson	12359	0.4%	1	49	50	95.2%	2.4%	2.4%	47	1	1	0	0.00	**68.6**	**1.2**
Lakeshore Road W, East of Nelson	12008	0.4%	1	48	50	95.9%	2.1%	2.1%	46	1	1	0	0.00	**68.1**	**1.2**
Jones St, North of Lakeshore	2438	0.4%	1	10	50	94.9%	2.5%	2.5%	9	0	0	0	0.00	**61.7**	**1.3**
Jones St, South of Lakeshore	1370	0.4%	1	5	50	92.8%	3.6%	3.6%	5	0	0	0	0.00	**60.2**	**1.4**
Nelson St, North of Lakeshore	975	0.4%	1	4	50	96.3%	1.8%	1.8%	4	0	0	0	0.00	**56.9**	**1.2**
Nelson St, South of Lakeshore	969	0.4%	1	4	50	95.7%	2.2%	2.2%	4	0	0	0	0.00	**57.2**	**1.2**

STAMSON 5.0 NORMAL REPORT Date: 28-03-2022 16:35:23
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: Time Period: Day/Night 16/8 hours
Description: 2365-2379 Lakeshore worst-case location

Road data, segment # 1: Lakeshore (day/night)

Car traffic volume : 13437/1493 veh/TimePeriod *
Medium truck volume : 339/38 veh/TimePeriod *
Heavy truck volume : 339/38 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 15683
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 2.40
Heavy Truck % of Total Volume : 2.40
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 1: Lakeshore (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 15.00 / 15.00 m
Receiver height : 4.50 / 4.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Lakeshore (day)

Source height = 1.24 m

ROAD (0.00 + 64.72 + 0.00) = 64.72 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.58	66.04	0.00	0.00	-1.32	0.00	0.00	0.00	64.72

Segment Leq : 64.72 dBA

Total Leq All Segments: 64.72 dBA

↟
Results segment # 1: Lakeshore (night)

Source height = 1.25 m

ROAD (0.00 + 58.22 + 0.00) = 58.22 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.58	59.53	0.00	0.00	-1.32	0.00	0.00	0.00	58.22

Segment Leq : 58.22 dBA

Total Leq All Segments: 58.22 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 64.72
(NIGHT): 58.22

↟
↟


604400
604420
604440
604460
604480
604500
604520
604540
604560
4805720
4805700
4805680
4805660
4805640
4805620
65
65
65
65
65
65
CADNA STAMSON
Day: 64.8 64.7 dBA
Night: 58.3 58.2 dBA
15.0 m

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Appendix D
Mitigation and Warning Clause Summary

2365-2379 Lakeshore Road West

Compatibility & Mitigation Study

SLR Project No.: 241.30501.00000

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SUMMARY OF MITIGATION MEASURES AND WARNING CLAUSES

Warning Clauses

Warning Clauses may be used individually or in combination. The following Warning Clauses should be included in agreements registered on Title for the residential units, and included in all agreements of purchase and sale or lease, and all rental agreements:

Transportation Sources (Road and Rail)

MECP Type C Warning Clause(All Residential Units)

"This dwelling unit has been designed with the provision for adding central air conditioning at the occupant's discretion. Installation of central air conditioning by the occupant in low and medium density developments will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the Municipality and the Ministry of the Environment."

Industrial Sources

MECP Type E Warning Clause (All Residential Units)

"Purchasers/tenants are advised that due to the proximity of adjacent industries, noise from these facilities may at times be audible."

Receptor-Based Physical Mitigation Measures

Ventilation System Design

Forced Air Heating Systems / Future Air Conditioning (All Residential Units)

The above listed unit should be designed with a provision for the installation of central air conditioning in the future, at the occupant's discretion.

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