



Road Traffic and Stationary Noise Impact Study

1949 Gerber Road, Wellesley, Ontario

JJ-00809-NIS1





May 6, 2026,

Reference No. JJ-00809-NIS1

Victoria Gignac, BES, MCIP, RPP
Senior Planner
MHBC Planning Urban Design & Landscape Architecture
540 Bingemans Centre Drive, Suite 200,
Kitchener ON N2B 3X9

Dear Ms. Gignac:

**Re: Road Traffic Noise Impact Study
1949 Gerber Road, Wellesley, Ontario**

1. Introduction

JJ Acoustic Engineering Ltd. (JJAE) was retained to complete a Road Traffic Noise Impact Study (Study) for the residential/commercial development located at 1949 Gerber Road in Wellesley, Ontario (Site). The Site will contain single-detached buildings, street townhouse buildings and commercial/mixed use buildings. JJAE has provided a copy of the most up-to-date Site Plan in Attachment A.

The Study was prepared consistent with Ontario Ministry of the Environment, Conservation and Parks (MOECP) NPC 300, "Environmental Noise Guideline, Stationary and Transportation Sources—Approval and Planning" dated August 2013 and The Regional Municipality of Waterloo Noise Policy Implementation Guideline dated October 22, 2019.

This Study has determined that the potential environmental noise impact from road traffic noise is not significant. JJAE and the client require central air-conditioning for each unit. Road traffic noise control requirements for the Site were determined based on road traffic volumes provided by the Region of Waterloo (Region) and forecasted to 10 years from the date of this study.

JJ Acoustic Engineering Ltd.
joey@jjae.ca
226-346-6473

The following attachments were included with this Study:

- Attachment A – Site Plan
- Attachment B – Traffic Data Summary Table & Sample Stamson Traffic Model Outputs
- Attachment C – Calibration Figures & Source Data
- Attachment D – Owners Statement
- Attachment E – Consultant's Declaration

2. Road Traffic Analysis

2.1 Road Traffic Noise Modeling Methodology

The road traffic noise impact was conducted using STAMSON, the MOECP's computerized model of ORNAMENT. The Application of the model for the site was consistent with the ORNAMENT technical documents. The computer model input parameters include, among other data, the number of road segments, number of house rows, the positional relationship of the receptor to a noise source or barrier in terms of distance, elevation and angle of exposure to the source, the basic site topography, the ground surface type, traffic volumes, traffic composition and speed limit.

The predicted sound level is based on the 1-hour equivalent sound level, designated as Leq, and is adjusted by the STAMSON program to the 16-hour daytime and the 8-hour nighttime equivalent sound level. The applicable noise criteria for noise sensitive spaces are specified in terms of the 16-hour daytime period (7:00 a.m. to 11:00 p.m.) and 8-hour nighttime period (11:00 p.m. to 7:00 a.m.) enabling a direct comparison between the STAMSON model output and the noise limits.

Once the calibration point(s) was calculated in Stamson, a model was created in an acoustic modelling software (Cadna A), which is based on the ISO 9613-2 standard. A line source was used to emulate the road sources in Stamson and using the calibration point(s) the model was tuned to match that of STAMSON's outputs. This allows the model to be more accurate, allowing for buildings to provide line of sight obstructions from roadways at certain angles. Cadna A uses a 1-hour Leq representation of the noise model and our calibration point uses a day/night calculation method. Although these methods are not similar in design, incorporating the day/night values from Stamson into Cadna A will provide a conservative worst-case scenario for our analysis. Calibration points for day/night times have been shown in Attachment C. Where there are multiple sources of noise, such as road and rail, JJAЕ evaluated noise control measures by combining both road and rail sources and applying measures as described in Section C7.3 of NPC 300.

The steady-state Line Noise Sources include:

- Gerber Road

A summary of the road noise sources used in our modelling is provided in Attachment C.

Assumptions for the OLA calculations included are as follows:

- JJAЕ has modeled the noise impact from the Gerber Road traffic noise impact into STAMSON for the daytime and used this input as a steady line noise source in Cadna. The STAMSON results are shown in Attachment B and the calibration point is shown in Attachment C, Figure 1.

2.2 Road Traffic Model Input Parameters

This section describes the STAMSON model input parameters used to predict road traffic noise impact for the Site.

The Site has one significant roadway in the vicinity of the development: Gerber Road approximately 180 meters to the South of Block 8. Where there are intervening and off-site structures that provide line-of-sight obstruction to the roads, JJAЕ did not include line-of-sight obstruction in our analysis as to calculate worst-case noise impact.

JJAЕ reviewed other surrounding roadways in the vicinity of the Site and only the significant roadways were used in our modeling, other roadways were considered to be insignificant or beyond our red flag zone.

2.2.1 Road Traffic Parameters

The traffic data provided by the Region has been summarized below:

Gerber Road:

- Current AADT (2026): 3,400
- Forecast AADT (2036): 4,100
- Commercial Vehicle Rates: 3% medium trucks and 3% heavy trucks
- Posted Speed Limit: 60 km/h
- Day Night Splits: 90% day and 10% night

The traffic data is the foundation of this analysis and the Study will be updated if the values change. Traffic data was supplied by the Region. The Region's AADT report for this Noise Studies report has been supplied in Attachment B.

2.3 Road Traffic Noise Modeling Results

JJAЕ calculated the Plane of Window (POW) noise exposure for each floor at the Site for the separate daytime and nighttime periods.

The STAMSON road traffic model outputs are provided in Attachment B.

2.4 Road Traffic Modeling Discussion

Noise control requirements will be defined based on NPC 300.

Daytime Outdoor Living Area Assessment (NPC 300, Section C7.1.1)

NPC 300 section A5 (pages 13-14) defines an Outdoor Living Area (OLA). As part of this definition, a balcony or terrace is considered an OLA if it has a minimum depth of 4 meters. All balconies are less than 4 m in depth and therefore will not be considered as OLAs.

JJAE has identified the OLA. The OLA is located approximately 20 meters from the South façade of Block 5. JJAE has calculated the road traffic noise impact to be 52 dBA. OLA location is indicated in Attachment A – Site Plan.

Plane of a Window – Ventilation Requirements (NPC 300, Section C7.1.2)

The predicted daytime and nighttime Plane of Window (POW) noise impact assumes a worst-case and direct line of sight noise exposure to both roads, unless the building itself blocks line-of-sight (full or partial).

JJAE has used the following criteria, which is a summary of NPC 300 requirements, to evaluate the Site noise impacts from road traffic noise:

Daytime Level (dBA)	Nighttime Level (dBA)	Ventilation Requirements and Warning Clauses	Special Building Components
55	50	Not Required	Not Required
55 – 65	50 – 60	Yes, with Type C Warning Clause	Not Required
66 or more	61 or more	Yes, with Type D Warning Clause	Yes

Indoor Living Areas – Building Components (NPC 300, Section C7.1.3)

At minimum, the building must be constructed to standard Ontario Building Code requirements.

3. Recommendations

3.1 Road Traffic Impact Recommendations

The road traffic noise impacts were below the NPC 300 requirements.

- JJAE and the client require air conditioning for all units.

4. Conclusions

The results of this Study indicate that the potential environmental impact from road traffic noise sources are not significant. Mitigation measures will not be required. JJAЕ and the client require ventilation for each unit. There will be minimal noise impact from the surrounding roadways to the Site.

Should you have any questions on the above, please do not hesitate to contact us.

Yours truly,

Written by:

Reviewed by:

May 6, 2026



Emmanuel Ghiorghis,
Acoustic Technician



Joey Jraige, P.Eng., B.A.Sc.
President

ATTACHMENT A

DRAFT PLAN OF SUBDIVISION

LEGAL DESCRIPTION

Part of Lot 11, Concession 1, East Section
Township of Wellesley
Regional Municipality of Waterloo

OWNER'S CERTIFICATE

I HEREBY AUTHORIZE MACNAUGHTON HERMSEN BRITTON CLARKSON PLANNING LIMITED
TO SUBMIT THIS PLAN FOR APPROVAL.

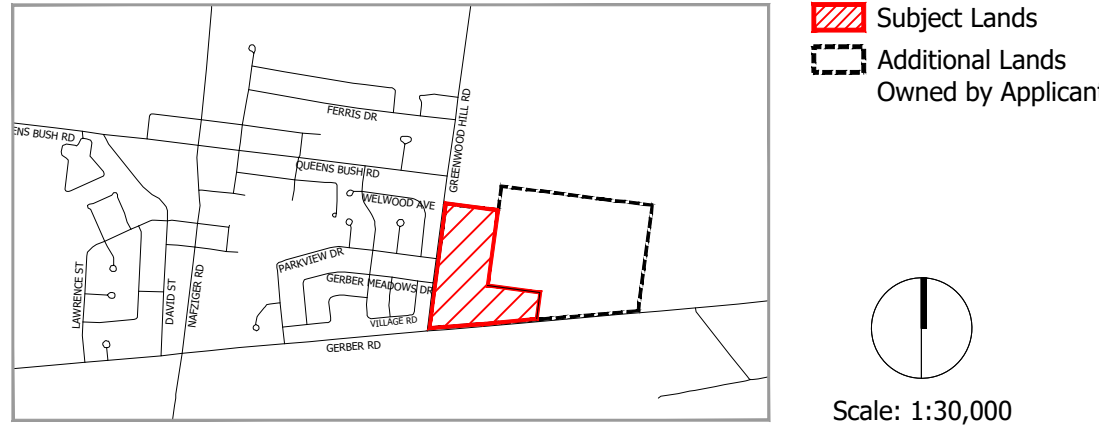
Date: Client Name
Company Name

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THE BOUNDARIES OF THE LAND TO BE SUBDIVIDED ON THIS
PLAN AND THEIR RELATIONSHIP TO THE ADJACENT LANDS ARE ACCURATELY AND
CORRECTLY SHOWN.

Date: J. Patrick Harms, Surveyor, O.L.S.
J.D. BARNES LIMITED

KEY PLAN



ADDITIONAL INFORMATION

Required Under Section 51 (17) of the Planning Act, R.S.O., 1990, c.P.13 as Amended

- | | | |
|--|----------------------------|------------------------------|
| (a) As Shown | (e) As Shown | (i) Loam |
| (b) As Shown | (f) As Shown | (j) As Shown |
| (c) As Shown | (g) As Shown | (k) All Services as Required |
| (d) Residential,
Commercial/Mixed Use | (h) Municipal Water supply | (l) As Shown |

AREA SCHEDULE

DESCRIPTION	LOTS/BLOCKS	UNITS	AREA
Residential	1-5	115-185	3.888 ha
Commercial	6		3.051 ha
Park	7		1.086 ha
Stormwater Management	8		2.900 ha
Roads			2.192 ha

Total	8	115-185	13.117 ha
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NOTES

- All dimensions are in metres unless otherwise shown.
- Survey and Topographic information provided by J.D. BARNES LTD. - Nov. 2025.
- Contains information licensed under the Open Government Licence - Ontario.

Revision No.	Date	Issued / Revision	By

Stamp	Date	May 11, 2026
	File No.	25133D
	Plan Scale	1:1250 (Arch D)
	Drawn By	SP
Project	Checked By	D.A.
	GIES 1949 Gerber Road Wellesley, ON	

File Name	Dwg No.
DRAFT PLAN OF SUBDIVISION	1 of 1



K:\25133D - 1949 Gerber Road, Wellesley\01\25133D_Draft Plan_11May2026.dwg

ATTACHMENT B

Table B1
Road Traffic Noise Levels and Mitigation Measures Summary
1949 Gerber Road, Wesley, Ontario

Point of Reception	Road Sound Level Daytime (dBA)	Road Sound Level Nighttime (dBA)	Ventilation Requirements NPC 300	Warning Clauses From NPC 300	Special Building Components
Block #1					
Plane of Window Level 1	48 (dBA)	39 (dBA)	Not Required	Not Required	Compliance with Ontario Building Code
Plane of Window Level 2	48 (dBA)	39 (dBA)	Not Required	Not Required	Compliance with Ontario Building Code
Plane of Window Level 3	48 (dBA)	39 (dBA)	Not Required	Not Required	Compliance with Ontario Building Code
Block #2					
Plane of Window Level 1	47 (dBA)	37 (dBA)	Not Required	Not Required	Compliance with Ontario Building Code
Plane of Window Level 2	47 (dBA)	37 (dBA)	Not Required	Not Required	Compliance with Ontario Building Code
Plane of Window Level 3	47 (dBA)	37 (dBA)	Not Required	Not Required	Compliance with Ontario Building Code
Block #3					
Plane of Window Level 1	47 (dBA)	37 (dBA)	Not Required	Not Required	Compliance with Ontario Building Code
Plane of Window Level 2	47 (dBA)	37 (dBA)	Not Required	Not Required	Compliance with Ontario Building Code
Plane of Window Level 3	47 (dBA)	37 (dBA)	Not Required	Not Required	Compliance with Ontario Building Code
Block #4					
Plane of Window Level 1	53 (dBA)	43 (dBA)	Not Required	Not Required	Compliance with Ontario Building Code
Plane of Window Level 2	53 (dBA)	43 (dBA)	Not Required	Not Required	Compliance with Ontario Building Code
Plane of Window Level 3	53 (dBA)	43 (dBA)	Not Required	Not Required	Compliance with Ontario Building Code
Block #5					
Plane of Window Level 1	53 (dBA)	43 (dBA)	Not Required	Not Required	Compliance with Ontario Building Code
Plane of Window Level 2	53 (dBA)	43 (dBA)	Not Required	Not Required	Compliance with Ontario Building Code
Plane of Window Level 3	53 (dBA)	43 (dBA)	Not Required	Not Required	Compliance with Ontario Building Code
Outdoor Living Area					
OLA	53 (dBA)	N/A	N/A	N/A	N/A

STAMSON 5.0 NORMAL REPORT Date: 13-05-2026 10:57:55
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: gerber.te Time Period: Day/Night 16/8 hours
Description: Calibration Point Gerber Road

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

Car traffic volume : 3469/385 veh/TimePeriod *
Medium truck volume : 111/12 veh/TimePeriod *
Heavy truck volume : 111/12 veh/TimePeriod *
Posted speed limit : 60 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): 4100
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 3.00
Heavy Truck % of Total Volume : 3.00
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 1: Gerber Rd (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 20.00 / 20.00 m
Receiver height : 2.00 / 2.00 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Gerber Rd (day)

Source height = 1.32 m

ROAD (0.00 + 61.21 + 0.00) = 61.21 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	62.46	0.00	-1.25	0.00	0.00	0.00	0.00	61.21

Segment Leq : 61.21 dBA

Total Leq All Segments: 61.21 dBA

Results segment # 1: Gerber Rd (night)

Source height = 1.31 m

ROAD (0.00 + 54.60 + 0.00) = 54.60 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
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-90	90	0.00	55.85	0.00	-1.25	0.00	0.00	0.00	0.00	54.60
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Segment Leq : 54.60 dBA

Total Leq All Segments: 54.60 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 61.21
(NIGHT): 54.60

Region of Waterloo AADT Forecast for Noise Studies

1. Development/Location1949 Gerber Rd, Wellesley

	Gerber Rd	Greenwood Hill Rd	Queens Bush Rd
2. Current AADT (2026)	3,400	900	2,100

	Gerber Rd	Greenwood Hill Rd	Queens Bush Rd
3. Forecast AADT (2036)	4,100	1,200	2,800

4. Commercial Vehicle Rates	Gerber Rd	Greenwood Hill Rd	Queens Bush Rd
% Medium Trucks	3%	3%	3%
% Heavy Trucks	3%	3%	3%

	Gerber Rd	Greenwood Hill Rd	Queens Bush Rd
5. Posted Speed Limit	60 km/h	50 km/h	50 km/h

6. Day/Night SplitsRegional Standard 90/10 Day/Night Split

7. ExpiryDec 31 2027

8. Notes

This forecast is intended for the purpose of carrying out a noise study for 1949 Gerber Rd, Wellesley only. The above AADTs represent the traffic volumes on Gerber Rd to the south of the property, Greenwood Hill Rd to the west of the property, and Queens Bush Rd to the west of the property. As Greenwood Hill Rd and Queens Bush Rd are under the jurisdiction of Township of Wellesley, the Township of Wellesley should verify the forecast for these road segments. This forecast remains valid up to the date indicated above. The Region of Waterloo should be contacted for an updated forecast if there are plans to use this forecast beyond the above validity period.

ATTACHMENT C







Name	Level Lr		Height	Coordinates	
	Day	Night		X	Y
	(dBA)	(dBA)	(m)	(m)	(m)
Cal1	64.2	54.6	1.50	17520751.97	4813222.39
OLA	53.1	43.5	1.50	17520070.32	4813349.19

Table C1
Road Traffic Noise Impact Source Data
1949 Gerber Road, Wellesley, Ontario

Noise Source Description	Cadna ID	Total SWL (dBA)	Data Source or Representative Data	Height Absolute (m)		
					x	y
Gerber Road	Gerber_Road	114	104.4	1.5	17520495	4813179

ATTACHMENT D

Owner's Name: James Gies Construction Limited

Owner's Address: _____

Re: Addendum Stationary Noise Impact Study 1949 Gerber Road, Wellesley, Ontario

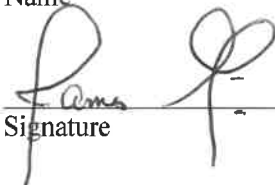
OWNER'S STATEMENT

I am the owner of the property, or the owner's agent, and that I understand and agree with the noise assessment and potential attenuation measures detailed in the study entitled Stationary Noise Impact Study, 1949 Gerber Road, Wellesley, Ontario, dated May 6, 2026.

The application has been designed to avoid the use of berms or walls as noise attenuation features where feasible. Where berms or walls are recommended, the Noise Study provides economic, planning and engineering justification.

If the application is changed in a way that may affect the noise level calculations, I will have a revised noise study submitted to the Region of Waterloo.

Jim Gies
Name


Signature

JUNE 2, 2026
Date

ATTACHMENT E

CANADA

PROVINCE OF ONTARIO

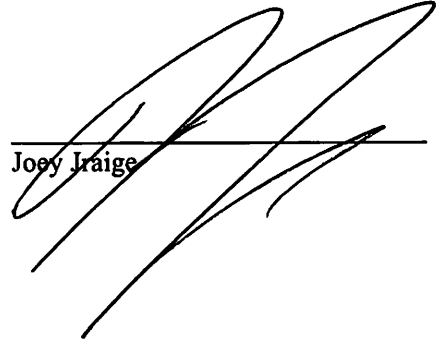
) In the Matter of the
) *Environmental Protection*
) *Act and the Planning Act*
)
)
) And in the Matter of
) 1949 Gerber Road, Wellesley,
Ontario in the Regional
Municipality of Waterloo

I, Joey Jraige, of JJ Acoustic Engineering Ltd., of the Town of Wheatley, SOLEMNLY DECLARE
THAT:

1. I am a Professional Engineer employed by JJ Acoustic Engineering Ltd. which holds a Certificate of Authorization and have personal knowledge of the matters set out below.
2. I was retained or employed as the principal consultant to undertake the assessment of noise impacts and recommendation of noise mitigation measures for the property described as 1949 Gerber Road, Wellesley, Ontario.
3. I have the expertise required to perform these services. Any assessment activities or recommendations requiring the application of engineering principles have been undertaken or supervised by an engineer qualified to perform such services.
4. The information used in the letter report entitled "Road Traffic Noise Impact Study" dated May 11, 2026, is the best available information as of the date of the study.
5. The noise level calculations, the interpretation of noise attenuation requirements and the recommended measures are in accordance with the Ministry of Environment Conservation and Parks Guidelines, Region of Waterloo policies, and any applicable policy or guidelines of the Area Municipality, and any other applicable policy or guideline.
6. The physical noise attenuation measures proposed in this study are feasible to implement and will provide the level of attenuation indicated in the study.
7. I acknowledge that this study may be subject to a peer review conducted at my cost.
8. I acknowledge that public authorities and future owners, occupants and others may rely on this statement.

AND I make this solemn Declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath.

DECLARED before me in the Town
of Tilbury, in the Municipality
of Chatham-Kent
this 11th day of May 2026

)
)
)
) 
Joey Jraige


A Commissioner, etc.

**Mona Jraige, a Commissioner, etc.,
Province of Ontario, for Taylor Delrue,
Barristers and Solicitors.
Expires October 24, 2028.**