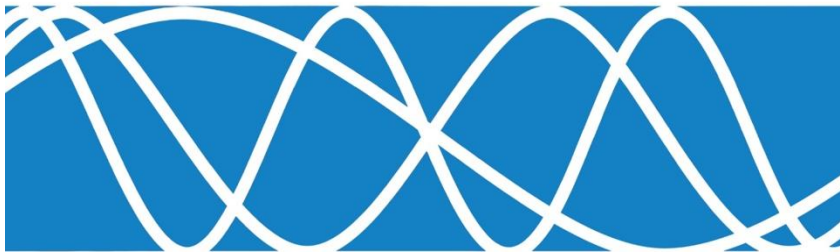


Noise Feasibility Study

Wateridge Village Block 3
370 Codd's Road and 800
Winisik Street
Ottawa, Ontario

July 21, 2026
HGC Project #: 02600070



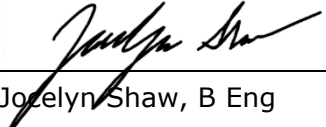
Prepared for:

Ottawa Co-operative Village Inc.
c/o Figurr Architects Collective
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Ottawa, Ontario
K2P 1B9

Version Control
**Noise Feasibility Study, Wateridge Village, Block 3, 370 Codd's & 800 Winisik Street,
Ottawa, Ontario**

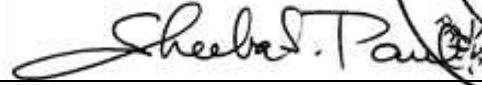
Ver.	Date	Version Description	Prepared By
1.0	July 21, 2026	Noise Feasibility Study, Wateridge Village, Block 3, 370 Codd's & 800 Winisik Street, Ottawa, Ontario-	J Shaw / S. Paul
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1 INTRODUCTION AND SUMMARY

HGC Noise Vibration Acoustics was retained by New Commons Development to conduct a noise feasibility study for a proposed residential development to be located at 370 Codd's Road and 800 Winisik Street in the City of Ottawa, Ontario. Block 3 of the proposed development will include three 6-storey residential buildings. The surrounding lands are existing residential with mixed use buildings to the southeast. LCol William G. Barer VC Park is located to the east and Alliance Park the south of the subject site. The study is required by the City of Ottawa as part of the development approval process.

The primary noise sources impacting the site were determined to be road traffic on this Codd's Road and Hemlock Road. Secondary sources of noise include air traffic from Rockcliffe Airport and road traffic on Promenade Sir-George-Etienne-Cartier road. The predicted sound levels were compared to the guidelines of the Ministry of the Environment, Conservation and Parks (MECP), and the Municipality.

The results of this study indicate that with suitable noise control measures integrated into the design of the dwellings/buildings, it is feasible to achieve the indoor MECP guidelines sound levels from the various transportation sources. Provision of air conditioning is recommended for the proposed buildings. Inclusion of air conditioning will meet and exceed the requirements. Building Construction meeting the minimum requirements of the Ontario Building Code will provide sufficient acoustical insulation. In addition, an acoustical consultant should review the mechanical drawings and details of demising constructions, when available, to help ensure that the noise impact of the development on the environment, and of the development on itself, are maintained within acceptable levels.

Noise warning clauses are also required to inform future occupants of the road and potential air traffic sound level excesses, and the proximity of the nearby airport.

2 SITE DESCRIPTION AND NOISE SOURCES

Figure 1 shows a key plan which identifies the location of the proposed development. The residential development is located 370 Codd's Road and 800 Winisik Street. The preliminary site plan prepared by Figurr architects dated January 20, 2026 is included as Figure 2, also showing prediction locations. T The proposed development will include three 6-storey residential buildings along with associated roadways.

The primary sources of noise are road traffic noise from Codd's Road and Hemlock Road. Secondary sources of noise include air traffic form Rockcliffe airport and road traffic on Promenade Sir-George-Etienne-Cartier located north of the site. Surrounding lands consist of existing residential with LCol William G. Barker VC Park to the east and Alliance Park the south. Northwest of the site is a Canadian Aviation and Space Museum and Rockcliffe Airport to the further north. Rockcliffe Airport, a former military base, is located south of the Ottawa River. The airport is the home of the Canada Aviation and Space Museum, which owns the field, and is used and maintained by the Rockcliffe Flying Club. Flight instruction and aircraft rental are provided to military personnel and civilians.. Southeast of the site are mixed use buildings with commercial uses on the ground floor. Sounds from these uses are not expected to be audible at the subject site over traffic sounds, nevertheless, a noise warning clause is recommended in Section 4 to inform the future occupants of the presence of the existing uses.

3 TRAFFIC NOISE ASSESSMENT

3.1 Road Traffic Noise Criteria

Guidelines for acceptable levels of road traffic noise impacting residential developments are given in the MECP publication NPC-300, "Environmental Noise Guideline Stationary and Transportation Sources – Approval and Planning", Part C release date October 21, 2013 and are listed in Table 1 below. The values in Table 1 are energy equivalent (average) sound levels [L_{EQ}] in units of A

weighted decibels [dBA]. The City of Ottawa's "Environmental Noise Control Guidelines" dated July 12, 2017 were also used.

Table 1 : Road Traffic Noise Criteria

Space	Daytime $L_{EQ}(16 \text{ hour})$	Nighttime $L_{EQ}(8 \text{ hour})$
	Road	Road
Outdoor Living Areas	55 dBA	--
Inside Living/Dining Rooms	45 dBA	45 dBA
Inside Bedrooms	45 dBA	40 dBA

Daytime refers to the period between 07:00 and 23:00, while nighttime refers to the period between 23:00 and 07:00. The term "Outdoor Living Area" (OLA) is used in reference to an outdoor patio, a backyard, a terrace or other area where passive recreation is expected to occur. Balconies that are less than 4 m in depth are not considered to be outdoor living areas under MECP guidelines.

The guidelines in the MECP publication allow the sound level in an OLA to be exceeded by up to 5 dBA, without mitigation, if warning clauses are placed in the purchase and rental agreements to the property. Where OLA sound levels exceed 60 dBA, physical mitigation is required to reduce the OLA sound level to below 60 dBA and as close to 55 dBA as technically, economically and administratively feasible.

A central air conditioning system as an alternative means of ventilation to open windows is required for dwellings where nighttime sound levels at the façade exceed 60 dBA or daytime sound levels at the façade exceed 65 dBA. The provision for the future installation of air conditioning at the occupant's discretion is required when nighttime sound levels at the façade are in the range of 51 to 60 dBA or when daytime sound levels at the façade are in the range of 56 to 65 dBA.

Building components such as walls, windows and doors must be designed to achieve indoor sound level criteria when the sound level at the façade is greater than 60 dBA during the nighttime and greater than 65 dBA during the daytime hours due to road traffic noise.

Warning clauses are required to notify future residents of possible excesses when nighttime sound levels exceed 50 dBA at the plane of the bedroom window and daytime sound levels exceed 55 dBA in the outdoor living area and at the façade due to traffic noise.

3.2 Air Traffic Noise Criteria

The guidelines indicate that warning clauses and mandatory central air conditioning is required for any dwellings located above NEF/NEP contours of 30. In addition, building components including windows, doors, walls and ceiling/roof must be designed to achieve the indoor sound level criteria.

Indoor sound limits due to air traffic are also defined in the MECP in publication NPC-300. The maximum allowable Noise Exposure Forecast (NEF) limits are summarized in Table 2.

Table 2: Air Traffic Noise Criterion

Space	Daytime NEF(16 hour)	Nighttime NEF(8 hour)
Inside Living/Dining Rooms	5	--
Inside Bedrooms	--	0

The living/dining/family rooms, dens and bedrooms of the proposed dwelling units are the sensitive receptor locations. Typically, washrooms and kitchens are considered noise insensitive areas. There are no outdoor noise criteria for aircraft noise because there is no effective means of mitigation.

For residential dwellings located between the NEF 25 and 30, the MECP requires that the dwelling be designed with the provision for central air conditioning by

the occupant. This requirement usually implies forced air heating systems with the ducts sized for future installation of central air conditioning. In addition, building components including windows, doors, walls and ceiling/roof must be designed to achieve the indoor sound level criteria. A warning clause is also required in property and tenancy agreements.

For residential dwellings located between the NEF 30 and 35, the MECP requires that central air conditioning is mandatory with warning clauses in the property and tenancy agreements. In addition, building components including windows, doors, walls and ceiling/roof must be designed to achieve the indoor sound level criteria in Table II.

According to MECP guidelines, redevelopment of existing residential uses and other sensitive land uses or infilling of residential and other sensitive land uses may be considered above 30 NEF/NEF if it has been demonstrated that there will be no negative impacts on the long-term function of the airport. This is subject to implementation of appropriate control measures including a Warning Clause.

There are no specific requirements if the dwellings are located in the area where the NEF/NEP contours are less than 25.

3.3 Traffic Sound Level Assessment

3.3.1 Road Traffic Data

Road traffic data for Codd's Road and Hemlock Road was obtained from Appendix B of the City of Ottawa Environmental Noise Guidelines in the form of AADT and is included in Appendix A of this report. The guidelines also provided truck percentages used in the analysis. Hemlock Road and Codd's Road were assumed to be 2-lane urban collector roads, while Promenade Sir-George-Étienne-Cartier is classified as a 2-lane rural arterial road

Table 3 summarizes the road traffic volume data used in this study.

Table 3 : Ultimate Road Traffic Data

Roadway	AADT	Day / Night Split [%]	Trucks Percentage (%)		Speed Limit [km/h]
			Medium	Heavy	
Codd's Road	8 000	92 / 8	7	5	50
Hemlock Road	8 000	92 / 8	7	5	50
Promenade Sir-George-Étienne-Cartier	15 000	92 / 8	7	5	60

3.3.2 Road Noise Predictions

To assess the levels of road traffic noise which will impact the site in the future, predictions were made using STAMSON version 5.04, a computer algorithm developed by the MECP. Sample STAMSON output is included in Appendix B.

Predictions of the traffic sound levels were made at the various façades around the development site. The results of these predictions are summarized in Table 4. The acoustic requirements may be subject to modifications if the site plan is changed significantly.

Sound levels were predicted at the plane of the top storey windows during daytime and nighttime hours to investigate ventilation requirements and during the daytime in the OLAs. Building setbacks indicated on the site plan have been used in the analysis.

Table 4 : Future Traffic Sound Levels, [dBA], Without Mitigation

Prediction Location	Description	Daytime in OLA L _{EQ} (16 hour)	Daytime at Façade L _{EQ} (16 hour)	Nighttime at Façade L _{EQ} (8 hour)
A	South Façade of building 3.1	--	64	57
B	East Façade of building 3.1	--	65	57
C	West Façade of building 3.1	--	58	50
D	East Façade of building 3.3	--	61	54
E	South Façade of building 3.3	--	59	51
F	South Façade of building 3.2	--	56	48
G	North Façade of building 3.2	--	50	42

3.3.3 Air Noise Predictions

The composite noise contour for Rockcliffe Airport was unavailable at the time of this report. The airport was contacted several times however personnel would not disclose the noise contours. To predict air traffic noise at the proposed buildings, the noise contour map for a similar sized airport was used (Brampton Flying Club). Figure 3 shows the NEF of the Brampton Flying Club overlayed on the aerial map. The results suggest that the development at NEF 25 contour and may be outside of the NEF 25 contour as the contours themselves are not exact. As a conservative estimate, a warning clause is required to inform future residents of the presence of the nearby airport.

3.4 Discussions and Recommendations

3.4.1 Building Façade construction

Since the daytime and nighttime sound levels at the facades of the residential units will be equal or less than 65 dBA during the day and less than 60 dBA during the nighttime hours due to road traffic, any exterior wall, and double-glazed window construction meeting STC-32 will provide adequate sound



insulation for all the dwelling units in this development. In an urban environment such as this, we do not typically recommend less than STC-32, to address incidental noises in the environment which are not specifically modelled.

Note that this rating is a minimum for the entire assembly and test data should be provided to verify. If more glazing is incorporated, higher STC requirements may apply.

3.4.2 Indoor Living Area

Central Air Conditioning

The predicted future sound levels outside the façade of the buildings will be between 56 and 65 dBA during the daytime hours and/or between 51 and 60 dBA during the nighttime. To address this excess, the MECP guidelines recommend that dwelling units and/or buildings be equipped with the provision for the future installation of air conditioning at the occupant's discretion. However central air conditioning is recommended for all units due the urban environment. Air conditioning will allow the windows to remain closed. Installation of air conditioning will meet and exceed requirements of.

3.4.3 Outdoor Living Area

There are no proposed common amenity spaces within the proposed development

The proposed residential buildings will include balconies and terraces less than 4 meters in depth. These balconies and terraces are not considered OLAs under MECP guidelines and therefore do not require a noise assessment.

4 WARNING CLAUSES

MECP guidelines recommend that appropriate warning clauses be used in the Development Agreements and in purchase, sale and lease agreements (typically by reference to the Development Agreements), to inform future owners and

occupants about potential noise concerns from sources in the area. The following clauses are recommended:

Suggested wording for future dwellings with sound level excesses of the MECP criteria for which physical mitigation has not been provided is given below.

Type A:

Purchasers/tenants are advised that sound levels due to increasing road traffic and air traffic may occasionally interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the Municipality and the Ministry of the Environment.

Suitable wording for future dwelling units requiring the inclusion of central air conditioning systems is given below.

Type D:

This dwelling unit has been supplied with a central air conditioning system which 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.

Airport:

Purchasers/tenants are advised that due to the proximity of the airport, noise from the airport and individual aircraft may at times interfere with outdoor or indoor activities.

These sample clauses are provided only as examples, and can be modified by the owner's legal representative, in consultation with the Municipality, in order to suit site-specific requirements.

5 SUMMARY OF RECOMENDATIONS

The following list summarizes the conclusions and recommendations made in this report. The reader is referred to the previous sections of the report where these recommendations are discussed in more detail:

Traffic Noise Recommendations

1. For the building envelope, upgraded glazing constructions of STC-32 are required to ensure adequate indoor sound levels from traffic noise, as outlined in Section 3.4.1.
2. Ventilation requirements in the form of the of provision for AC by the occupant is required, but inclusion of AC will meet and exceed the requirements. Details are included in Section 3.4.2 and summary table below.
3. Demising assemblies must be selected to meet the minimum requirements of the Ontario Building Code (OBC). Where B19 certification is needed, an acoustical consultant is required to review details of demising constructions and mechanical/electrical equipment, when available, to help ensure that the noise impact of the development on itself are maintained within acceptable levels. Outdoor sound emissions should also be checked to ensure that any potential impacts on adjacent properties are suitably minimized and comply with the requirements.
4. Warning clauses are required to inform future residents of the road and air traffic noise issues and of the presence of the nearby commercial facilities.

Table 5: Summary of Noise Control Requirements and Noise Warning Clauses

Prediction Location	Description	Acoustic Barrier	*Ventilation Requirements	Type of Warning Clause	STC Requirements
[A]	South Façade of building 3.1	--	Air Conditioning	A, D, Airport	STC-32
[B]	East Façade of building 3.1	--	Air Conditioning	A, D, Airport	STC-32
[C]	West Façade of building 3.1	--	Air Conditioning	A, D, Airport	STC-32
[D]	East Façade of building 3.3	--	Air Conditioning	A, D, Airport	STC-32
[E]	South Façade of building 3.3	--	Air Conditioning	A, D, Airport	STC-32
[F]	South Façade of building 3.2	--	Air Conditioning	A, D, Airport	STC-32
[G]	North Façade of building 3.2	--	Air Conditioning	A, D, Airport	STC-32

Note:

-- no specific requirement

* The location, installation and sound rating of the air conditioning condensers must be compliant with MECP Guideline NPC-300, as applicable.

6 CONCLUSIONS

The results of this study indicate that the proposed residential development at 370 Codd's Road and 800 Winisik Road is feasible from a noise perspective, with the inclusion of standard acoustical design features. Preliminary design recommendations are provided herein and can be developed in greater detail as the design proceeds through tender and construction.

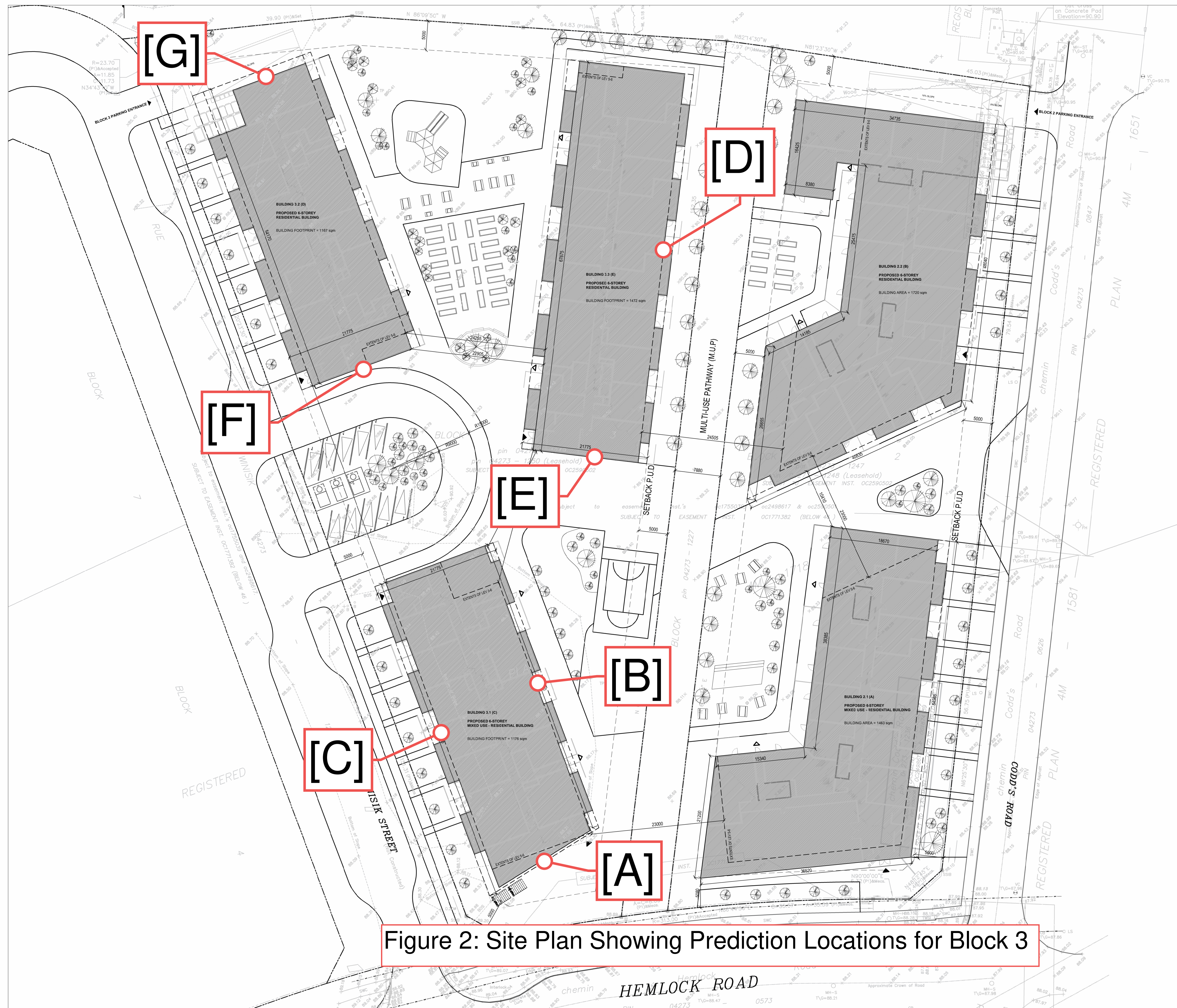
7 REFERENCES

1. *Ontario Ministry of the Environment, Conservation and Parks, Publication NPC-300, Environmental Noise Guideline – Stationary and Transportation Sources – Approval and Planning, August 2013.*
2. *Google Maps Aerial Imagery, Internet application: maps.google.*
3. *City of Ottawa, Environmental Noise Control Guidelines, July 2017.*





Figure 1: Key Plan



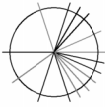
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	PROPOSED TREE	01	2025-08-20	CHDP SUBMISSION
	PICNIC TABLE	02	2026-01-06	DRAFT SCHEMATIC SITE PLAN
	RAISED PLANTER	3	2026-01-20	SCHEMATIC SITE PLAN
	MULTI-USE STAGE	--	--	--
	BIKE PARKING	--	--	--
	PRIMARY ENTRANCE	--	--	--
	SECONDARY ENTRANCE / EXIT	--	--	--
				
				
				
				
				
				
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		Scellé / Seal Note: L'entrepreneur doit vérifier toutes les dimensions et informations sur le site et aviser immédiatement l'architecte de toutes erreurs ou omissions. Contractor shall verify all information and dimensions on site and immediately report any errors or omissions to the architect.		
		Projet / Project Wateridge Village Block 2 & 3 370 Codd's Rd, Ottawa, ON K1K 3X3 800 Winisk St, Ottawa, ON K1K 3X3		
		Time / Title Site Plan		
		Dessiné par / Drawn by GS No. projet / Project number 2513 / 2514 Vérifié par / Verified by RC No. dessin / Drawing number Revision / Revision Échelle / Scale 1:300 Date de création du dessin / Drawing creation date 2026-01-20 A100		



Figure 3: NEF Contour Overlay

Appendix A

Traffic Data



NOISE



VIBRATION



ACOUSTICS

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Appendix B: Table of Traffic and Road Parameters To Be Used For Sound Level Predictions

Table B1 Traffic And Road Parameters To Be Used For Sound Level Predictions

Row Width (m)	Implied Roadway Class	AADT Vehicles/Day	Posted Speed Km/Hr	Day/Night Split %	Medium Trucks %	Heavy Trucks % ¹
NA ²	Freeway, Queensway, Highway	18,333 per lane	100	92/8	7	5
37.5-44.5	6-Lane Urban Arterial-Divided (6 UAD)	50,000	50-80	92/8	7	5
34-37.5	4-Lane Urban Arterial-Divided (4-UAD)	35,000	50-80	92/8	7	5
23-34	4-Lane Urban Arterial-Undivided (4-UAU)	30,000	50-80	92/8	7	5
23-34	4-Lane Major Collector (4-UMCU)	24,000	40-60	92/8	7	5
30-35.5	2-Lane Rural Arterial (2-RAU)	15,000	50-80	92/8	7	5
20-30	2-Lane Urban Arterial (2-UAU)	15,000	50-80	92/8	7	5
20-30	2-Lane Major Collector (2-UMCU)	12,000	40-60	92/8	7	5
30-35.5	2-Lane Outer Rural Arterial (near the extremities of the City) (2-RAU)	10,000	50-80	92/8	7	5
20-30	2-Lane Urban Collector (2-UCU)	8,000	40-50	92/8	7	5

¹ The MOE Vehicle Classification definitions should be used to estimate automobiles, medium trucks and heavy trucks.

² The number of lanes is determined by the future mature state of the roadway.

Appendix B

Sample STAMSON Calculations



NOISE



VIBRATION



ACOUSTICS

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STAMSON 5.0 NORMAL REPORT Date: 21-07-2026 11:06:12

MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: a.te Time Period: Day/Night 16/8 hours

Description: Prediction Location A

Road data, segment # 1: Codd's (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *

Medium truck volume : 515/45 veh/TimePeriod *

Heavy truck volume : 368/32 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): 8000

Percentage of Annual Growth : 2.50

Number of Years of Growth : 0.00

Medium Truck % of Total Volume : 7.00

Heavy Truck % of Total Volume : 5.00

Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Codd's (day/night)

Angle1 Angle2 : -20.00 deg 90.00 deg

Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 79.40 / 79.40 m
Receiver height : 16.50 / 16.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00
Road data, segment # 2: Hemlock (day/night)

Car traffic volume : 6477/563 veh/TimePeriod *
Medium truck volume : 515/45 veh/TimePeriod *
Heavy truck volume : 368/32 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): 8000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Hemlock (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 : 25.30 / 23.50 m

Receiver height : 16.50 / 16.50 m

Topography : 1 (Flat/gentle slope; no barrier)

Reference angle : 0.00

Results segment # 1: Codd's (day)

Source height = 1.50 m

ROAD (0.00 + 56.37 + 0.00) = 56.37 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	-------	--------

-20	90	0.00	65.75	0.00	-7.24	-2.14	0.00	0.00	0.00	56.37
-----	----	------	-------	------	-------	-------	------	------	------	-------

Segment Leq : 56.37 dBA

Results segment # 2: Hemlock (day)

Source height = 1.50 m

ROAD (0.00 + 63.48 + 0.00) = 63.48 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	-------	--------

-90	90	0.00	65.75	0.00	-2.27	0.00	0.00	0.00	0.00	63.48
-----	----	------	-------	------	-------	------	------	------	------	-------

Segment Leq : 63.48 dBA

Total Leq All Segments: 64.25 dBA

Results segment # 1: Codd's (night)

Source height = 1.50 m

ROAD (0.00 + 48.78 + 0.00) = 48.78 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	-------	--------

-20	90	0.00	58.16	0.00	-7.24	-2.14	0.00	0.00	0.00	48.78
-----	----	------	-------	------	-------	-------	------	------	------	-------

Segment Leq : 48.78 dBA

Results segment # 2: Hemlock (night)

Source height = 1.50 m

ROAD (0.00 + 56.21 + 0.00) = 56.21 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	-------	--------

-90	90	0.00	58.16	0.00	-1.95	0.00	0.00	0.00	0.00	56.21
-----	----	------	-------	------	-------	------	------	------	------	-------

Segment Leq : 56.21 dBA

Total Leq All Segments: 56.93 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 64.25

(NIGHT): 56.93