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PRELIMINARY
ENVIRONMENTAL NOISE REPORT

PROPOSED MIXED-USE RESIDENTIAL DEVELOPMENT
6252 EIGHTH LINE (88 ACRES)
TOWN OF MILTON

JADE ACOUSTICS

PREPARED FOR
REMINGTON TRAFALGAR INC.

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SUMMARY

The proposed development is located on the east side of Trafalgar Road, between Britannia Road and Derry Road in the Town of Milton. It is subject to road traffic noise from Trafalgar Road and multiple internal collector roads.

The environmental noise guidelines of the Town of Milton, the Region of Halton and the Ontario Ministry of the Environment, Conservation and Parks (MECP) set out sound level limits for both indoor and outdoor space. Sound levels due to the adjacent roads were determined using ORNAMENT, the MECP noise prediction model for road traffic.

Using the road traffic data obtained from the Region of Halton and TYLin, the sound levels for various locations within the residential development were determined.

As there is limited information on some blocks within this development, the proponent will need a revised noise report or separate noise reports for the relevant blocks once details become available. With the currently available plans, it was found that with appropriate mitigative measures, all analysed lots and blocks (units) in the development will meet the noise guidelines.

All lots and blocks located within 230 m from the Trafalgar Road centreline and along Street A (Louis St. Laurent Avenue), Street B, and Street C will require provision for adding central air conditioning and a warning clause. Central air conditioning is not mandatory for any of the proposed lots and blocks (units). Table 3 and Figure 2 show the central air conditioning requirements.

For Lots 44 to 52 and 117, a 2.0 m high acoustic fence is required to achieve a mitigated daytime sound level below 55 dBA in the rear yards.

Standard exterior wall, exterior door and window construction is acoustically sufficient for all proposed lots and blocks (units), based on the preliminary analysis. Prior to issuance of building permits, the acoustical requirements should be reviewed to ensure compliance with the applicable guidelines.

Where minor excesses exist or mitigation is required, future occupants will be advised through the use of warning clauses.

1.0 INTRODUCTION

Jade Acoustics Inc. was retained to prepare a Preliminary Environmental Noise Report to investigate the potential impact of noise on the proposed development to the satisfaction of the Town of Milton and the Region of Halton.

The proposed site is identified as:

Part of Lot 8, Concession 8, New Survey
Town of Milton
Regional Municipality of Halton

The site is bounded by future residential and mixed-use developments to the north-west and north-east, Trafalgar Road to the south-west and an existing Natural Heritage System to the south-east.

Surrounding land uses include existing commercial/industrial uses, existing and future residential and mixed-use developments, existing agricultural uses, and golf courses.

A Key Plan is attached as Figure 1.

The proposed development is comprised of detached residential lots, street townhouse blocks, back-to-back townhouse blocks, mixed-use and medium density residential blocks (future developments), an elementary school block, a neighbourhood park block, Natural Heritage Systems (NHS) blocks, stormwater management pond blocks, walkway blocks, a servicing block, and new internal roadways.

Details for several blocks within the development were limited to a concept plan or unavailable at the time of preparation of this report. These blocks represent future intervening land uses that would provide screening for the analysed blocks (units) and lots from Trafalgar Road and Street A. The concept plans for Block 266 and 267 ("Neighbourhood Centre Mixed Use II") were considered in this analysis as they act as intervening land uses, however these blocks are subject to a separate Preliminary Environmental Noise Report, prepared under separate cover at this time. Detailed information was not available at the time of analysis for Blocks 264 and 265 ("Medium Density Residential II") and Block 268 (Elementary School). A noise report will be required to be prepared by the proponent of the uses once detailed information for these blocks becomes available.

Figure 2 shows the plan of the proposed subdivision. Detached residential and townhouse dwellings are expected to be two- and three-storey buildings, respectively.

The analysis was based on:

- Draft Plan of Subdivision (preliminary) dated April 3, 2025, prepared by Korsiak Urban Planning, received on April 17, 2025;
- Concept Plan of Neighbourhood Centre Mixed Use II Area Blocks 266 & 267 dated May 9, 2025, prepared by Korsiak Urban Planning, received on May 9, 2025;
- Preliminary grading plan (Trafalgar Secondary Plan Area Phase 1) dated May 2025, provided by The Remington Group Inc., received May 16, 2025;
- Road traffic information provided by the Region of Halton on May 22, 2025 and June 10, 2025 (see Appendix A);
- Future Total 2041 AADT volumes and speed limits for the internal road network dated July 2025, prepared by TYLin, received July 21, 2025 (see Appendix A);
- Site visit conducted by Jade Acoustics Inc. on May 20, 2025; and
- Acoustic Assessment Report (AAR) summary (excerpt of complete document as provided through Enbridge's website) for the Enbridge D60 "Parkway West Gate Station", prepared by HGC Engineering, accessed June 6, 2025.

2.0 NOISE SOURCES

2.1 Transportation Sources

The road traffic on Trafalgar Road, Street A (Louis St. Laurent Avenue), Street B, and Street C are the noise sources with a potential impact on the proposed development.

Derry Road, Britannia Road and Eighth Line are located approximately 1,210 m, 1,270 m and 680 m, respectively from the proposed residential lots and blocks (units). Due to the separation distance, the road traffic on these three (3) roads is expected to be acoustically insignificant at the proposed lots and blocks (units). As such, Derry Road, Britannia Road and Eighth Line were not considered further in this report.

All proposed internal roads, excluding Street A, Street B and Street C, will be local roads with low traffic volumes, and therefore with insignificant acoustical impact on the proposed residential units. As such, these roads were not considered further in this report.

The 2035 horizon year ultimate road traffic data for Trafalgar Road was obtained from the Region of Halton on May 22, 2025, with further information provided on June 10, 2025. Notably the Region pointed to Halton Region's Transportation Master Plan (TMP) which identified the need to widen Trafalgar Road from four (4) to six (6) lanes from Highway 407 to Steeles Avenue, with the segment north of Britannia Road having an expected construction start date of 2029 per Halton Region's 2025 Budget and Business Plan.

In order to determine truck percentages, the ATR data recorded on October 29 2024, provided by the Region of Halton on June 10, 2025 were used.

The 2041 AADT volumes and proposed speed limits for internal roads were provided by TYLin on July 21, 2025 and considered in this report.

Road traffic information is summarized in Table 1. Correspondence regarding the road traffic information is included in Appendix A.

The site is not affected by rail traffic or aircraft traffic.

2.2 Stationary Sources

Based on the site visit conducted by Jade Acoustics Inc. staff, no existing significant stationary noise sources were observed in the vicinity of the subject site.

To the west of the subject site, on the west side of Trafalgar Road, are two (2) residential lots that appear to include some commercial activities at the rear of the properties (see Figure 1). As these potential sources would need to achieve sound level compliance at the respective existing neighbouring noise sensitive receptor location, which represent the worst-case receptors, this implies that compliance would also be achieved at the subject site. Furthermore, no significant noise sources were observed in the area, and none are expected to be acoustically significant, therefore, no further assessment was conducted.

There is additionally the existing Arbor Garden Centre and Nursey located over 250 m to the northwest of the subject site, on the west side of Trafalgar Road. Based on the type of use, separation distance, and intervening roadway, potential noise generated from this use is not anticipated to be acoustically significant at the subject site. Further, there are existing residential dwellings located around the garden centre at closer distances than the subject site where sound level limit compliance is required, which subsequently results in compliance at the subject site. All considered, this use has not been considered further in this report.

To the north of the subject site is the Enbridge Gas Parkway West Gate Station. Based on information located through their website, Enbridge previously retained another acoustical consulting firm to prepare an Acoustic Assessment Report (AAR) for the facility, which outlined the sound emissions produced by the site. Based on their assessment, the subject site is well beyond the distance at which noise impacts would be a concern. As such, this Enbridge facility was not assessed further.

Based on information provided by the client, there will be mixed-use developments located on the west side of the development near Trafalgar Road. Specific details regarding proposed mechanical systems and detailed design information for the future mixed-use blocks are not available at this time. Once details are known, a noise report to ensure the applicable sound level limits are met at all relevant noise sensitive receptor locations, including within subject site is required to be prepared by the proponent of the future uses.

3.0 ENVIRONMENTAL NOISE CRITERIA

The MECP document "Environmental Noise Guideline Stationary and Transportation Sources – Approval and Planning, Publication NPC-300", dated August, 2013, released October 21, 2013 (updated final version # 22) was used in the analysis. A brief summary of the NPC-300 guidelines is given in Appendix B. The guidelines are also summarized below.

3.1 Transportation Sources

3.1.1 Indoors

If the nighttime (11:00 p.m. to 7:00 a.m.) sound level in terms of Leq at the exterior face of a bedroom or living/dining room window is greater than 60 dBA or if the daytime (7:00 a.m. to 11:00 p.m.) sound level in terms of Leq at the exterior face of a bedroom or living/dining room window is greater than 65 dBA, means must be provided so that windows can be kept closed for noise control purposes and central air conditioning is required. For nighttime sound levels (LeqNight) greater than 50 dBA to less than or equal to 60 dBA on the exterior face of a bedroom or living/dining room window or daytime sound levels (LeqDay) greater than 55 dBA to less than or equal to 65 dBA on the exterior face of a bedroom or living/dining room window, there need only be the provision for adding central air conditioning by the occupant at a later date. This typically involves a ducted heating system sized to accommodate the addition of central air conditioning by the occupant at a later date. A warning clause advising the occupant of the potential interference with some activities is also required.

In all cases, the air cooled condenser units must not exceed the limits included in NPC-216. The air cooled condenser units must be sited in accordance with the zoning by-laws with respect to setbacks as well as location.

As required by the MECP, the indoor noise criteria for road traffic noise is 40 dBA (Leq8hour) for the bedrooms during nighttime hours, 45 dBA (Leq8hour) for the living/dining rooms during nighttime hours and 45 dBA (Leq16hour) for the living/dining rooms and bedrooms during daytime hours. These criteria are used to determine the architectural requirements.

3.1.2 Outdoors

For the outdoor amenity areas, a design goal of 55 dBA for the daytime period between 7:00 a.m. to 11:00 p.m. is used for road traffic. In some cases an excess not exceeding 5 dBA is considered acceptable. Where the unmitigated sound levels during the day exceed 55 dBA (Leq16hour, daytime) but are less than 60 dBA (Leq16hours, daytime), a warning clause is required and mitigation should be considered. Where the unmitigated daytime sound levels exceed 60 dBA,

sound barriers and warning clauses are generally required to achieve as close to 55 dBA as is technically, economically and administratively feasible.

Based on the Town of Milton's Engineering and Parks Standards dated September, 2024, the maximum acoustic fence height is 2.4 m, although greater heights can be obtained using a combination of berm and acoustic fence.

For both indoor and outdoor conditions where the acoustic criteria are exceeded, warning clauses must be placed in offers of purchase and sale or lease agreements and included in the subdivision agreement.

3.2 Town of Milton's Noise By-law

The Town of Milton has By-law No. 133-2012 dated October 29, 2012, amended by By-law 083-2021 dated September 13, 2021, which regulates noise likely to disturb the inhabitants of the Town. It regulates sound ratings and locations of installation of air cooled condenser units by setting sound level limits at adjacent residential properties (MECP Publication NPC-216). It also provides qualitative and quantitative information with respect to other noise sources. Prohibitions by time and place are included in the by-law.

3.3 Stationary Sources

The NPC-300 guidelines of the Ontario Ministry of the Environment, Conservation and Parks (MECP) for stationary sources are to be used for the commercial/industrial facilities.

The MECP recognizes the need for back-up beepers/alarms as safety devices and as such does not have any guidelines or criteria to address these sources.

It should be noted that the MECP guidelines do not require that the source be inaudible, but rather that specific sound level limits be achieved.

With respect to stationary sources of noise in urban areas, the MECP guidelines require that the sound level due to the stationary source at the building façade and outdoor amenity spaces not exceed the sound level due to road traffic and in certain situations due to rail traffic in any hour of source operation, subject to specific exclusions. Tables C-5, C-6, C-7 and C-8 of NPC-300 included in Appendix B provided the exclusion limit values of one-hour equivalent sound level (Leq,dBA) and impulsive sound level (L_{lm},dBAI).

The sound level limits for noise produced by emergency equipment operating in non-emergency situations, are 5 dB greater with respect to the sound level limits generally used for stationary sources.

In addition, the MECP guidelines require that most industries have a valid Environmental Compliance Approval (ECA) or its precursor, a Certificate of Approval (C of A) to operate.

In general, if the criteria for a stationary source of noise are exceeded, the MECP recommends that control be implemented at the source rather than at the receiver. Alternatively, if the receiver is set back from the source or if a physical barrier is constructed so that the criteria can be met at the receiver, no additional mitigative measures are required. In addition, a warning clause in offers of purchase and sale and/or lease agreement noting the proximity of houses to such a source should be considered. Treatment of the receptor building by the use of suitable wall and window construction and central air conditioning to keep windows closed is not an acceptable solution to the MECP in Class 1 and 2 areas (urban).

4.0 NOISE IMPACT ASSESSMENT

4.1 Transportation Sources

For road traffic noise, the sound levels in terms of Leq, the energy equivalent continuous sound levels for both day (Leq16hour, daytime) and night (Leq8hour, nighttime) were determined using the MECP Traffic Noise Prediction Model, ORNAMENT.

The topography between the source and the receiver has been taken into account. Shielding provided by the buildings within the subject site, where detailed information is available, as well as from Blocks 266 and 267 (which are subject to a separate Preliminary Environmental Noise Report), have also been accounted for. The rear yard receiver was considered to be 3.0 m from the centre of the rear wall of the house.

Where applicable, the sound levels were calculated using an absorption coefficient of 0.33 to account for the reduced absorption of the ground area across the stormwater management pond, valley-like topography, and existing NHS valley lands south-west of the proposed site. This absorption coefficient is often used where there is a combination of acoustically reflective and absorptive areas of ground.

The highest sound levels are predicted for the residential lots and blocks (units) with exposure to Trafalgar Road, and/or fronting Street A, Street B, and Street C.

Lot 44, which has exposure to Trafalgar Road, is predicted to have an unmitigated daytime sound level in the rear yard of 57 dBA.

Lot 48, which has exposure to Trafalgar Road, is predicted to have an unmitigated daytime sound level in the rear yard of 59 dBA.

Lot 51, which has exposure to Trafalgar Road and Street B, is predicted to have an unmitigated daytime sound level in the rear yard of 59 dBA. The sound level at the rear wall (second storey) is predicted to be 59 dBA (daytime) and 52 dBA (nighttime).

Lot 52, which has exposure to Trafalgar Road and Street B, is predicted to have an unmitigated daytime sound level in the rear yard of 57 dBA.

Lot 117, which has exposure to Trafalgar Road, Street B and Street C is predicted to have an unmitigated daytime sound level in the rear yard of 59 dBA.

Block 239, which has exposure to Trafalgar Road, Street B and Street C is predicted to have an unmitigated daytime sound level in the rear yard of 53 dBA. The daytime sound level at the front wall and side wall (third storey) is expected to be 61 dBA and 59 dBA respectively, and the nighttime sound levels are expected to be 54 dBA and 53 dBA respectively.

Block 258, which has exposure to Street A is predicted to have an unmitigated daytime sound level in the rear yard of 55 dBA. The sound level at the side wall (third storey) is predicted to be 58 dBA (daytime) and 51dBA (nighttime).

Table 2 provides a summary of the predicted sound levels outdoors due to road traffic at specific locations without any mitigative measures. Appendix C gives sample calculations.

Where the sound level limits are expected to be exceeded, mitigative measures and warning clauses are required.

4.2 Stationary Sources

As discussed in Section 2.2, the stationary sources of noise external to the subject site are not expected to be acoustically significant at the subject site and have not been considered further in this report.

5.0 NOISE ABATEMENT REQUIREMENTS

The noise mitigation requirements for both the indoor and outdoor locations are detailed below. Table 3 and Figure 2 provide a summary of the acoustical mitigative requirements for the lots and blocks in this development.

5.1 Transportation Sources

5.1.1 Indoors

Architectural Requirements

The indoor sound level criteria for road traffic can be achieved in all cases by using appropriate architectural elements for external walls, windows, exterior doors, and roof construction. The indoor sound level limit for road traffic noise is 40 dBA (Leq8hour) for the bedrooms during nighttime hours, 45 dBA (Leq8hour) for the living/dining rooms during nighttime hours and 45 dBA (Leq16hour) for the living/dining rooms and bedrooms during daytime hours. These criteria have been used in this analysis. The characteristic spectrum for road has been accounted for in the determination of the architectural components. Appendix D contains a sample calculation of the architectural component selection.

In determining the architectural requirements, it is assumed that the bedrooms located on the upper level of a two- or three-storey house will be the worst case noise sensitive receptor during daytime hours because the day/night traffic split results in more than 5 dBA difference between the predicted daytime and nighttime sound levels. This difference is more than the difference between the MECP indoor criteria for road traffic for daytime and nighttime hours; therefore, the daytime sound level at the corner bedroom was used for the analysis. The exterior walls were taken to be 55% of the associated floor area for the wall parallel and wall perpendicular to the noise source. The windows would be 25% of the associated floor area and located on the walls parallel and perpendicular to the noise source.

For the worst case Block 239 which is exposed to road traffic noise generated by vehicle passbys on Trafalgar Road, Street B, and Street C assuming a corner bedroom with two (2) exterior walls, the windows and exterior doors need to be STC 22 and the exterior wall need to be STC 30. These STC ratings are satisfied by construction practices which satisfy the minimum structural and safety requirements of standard construction.

For all proposed lots and blocks (units), standard window, exterior door and exterior wall construction will satisfy the above acoustic requirements. An STC 54 rating for the roof, normally

met by most residential roof constructions with ventilated attic space, would be acoustically acceptable.

Since house plans are not yet available, the final architectural choices cannot be made. Once house plans are available, the noise control requirements should be re-evaluated.

Ventilation Requirements

Where the sound level from road traffic is greater than 60 dBA (LeqNight) or greater than 65 dBA (LeqDay) on the outside face of a bedroom or living/dining room window, the indoor sound level criteria would not be met with open windows and provisions must be met to permit the windows to remain closed. The MECP guidelines require central air conditioning. Based on the analysis, no lots or blocks (units) require central air conditioning. All lots and blocks (units) located within 230 m from the Trafalgar Road centreline, as well as those along Street A (Louis St. Laurent Avenue), Street B, and Street C, require provision for adding central air conditioning and a warning clause due to the road traffic. See Table 3 and Figure 2 for details.

The outdoor air conditioning condenser units must be sited in accordance with the Town's zoning by-laws and they must comply with NPC-216.

Warning clauses will also be required to be placed in offers of purchase and sale, lease agreements, and in the subdivision agreement for all relevant lots and blocks to make future occupants are aware of the potential noise situation. See Table 3 for details.

5.1.2 Outdoors

The outdoor amenity area is required to be exposed to a sound level of 55 dBA or less during the day. A 5 dBA increase is considered acceptable in certain situations. Typically, if the sound level is above 55 dBA, some form of mitigation is recommended and warning clauses are required. Where the sound levels exceed 60 dBA, mitigation is required.

Sound barrier requirements are given in Table 3 and discussed below. The sound barrier locations and heights are shown on Figure 2.

For Lots 44 to 52 and 117, a 2.0 m high acoustic fence is predicted to achieve daytime sound levels below 55 dBA in the rear yards.

Sample calculations of the sound barrier analysis are included as Appendix E.

Based on the Town of Milton's Engineering and Parks Standard dated September, 2024, No. 1 grade western cedar should be used for the construction of the acoustic fence. The Town of Milton requires 54 mm thick tongue and groove vertical boards. Appendix F includes Standard Drawing 10-03.02 from the Town of Milton's Engineering and Parks Standard. Appropriate treatment of the sound barrier at all discontinuities and points of termination would be required to ensure that the sound barrier is effective. This would involve extending the sound barrier to the front property line; returning to the side wall of the house or extending the sound barrier for a minimum of 3 times the distance between the side wall and sound barrier, past the rear wall of the house.

Note that any openings under the acoustic fence for drainage must be kept to a minimum. If drainage under the acoustic fence is intended, an acoustical engineer should be consulted.

Where an excess will remain or where mitigation is required, a warning clause should be placed in offers of purchase and sale or lease agreements and in the subdivision agreement.

5.2 Stationary Sources

As stated in Section 4.2, external existing stationary noise sources are not expected to acoustically impact the subject site; therefore, noise mitigation measures are not required for any of the proposed lots and blocks (units).

6.0 CONCLUSIONS

With the incorporation of the items discussed (see Table 3, Notes to Table 3 and Figure 2), the sound levels will be within the appropriate MECP, the Region of Halton and the Town of Milton environmental noise criteria. In accordance with Town and Ministry implementation guidelines where mitigation is required, future occupants will be advised through the use of warning clauses.

A detailed environmental noise report will need to be prepared once detailed architectural and grading plans for the subject development are available to ensure the appropriate criteria are achieved.

A noise report will be required for the developments within Block 263 (Medium Density Residential I); and Blocks 264 and 265 (Medium Density Residential II) once detailed information on these developments are available.

A Preliminary Environmental Noise Report is being prepared under separate cover for the proposed development in Blocks 266 and 267 (Neighbourhood Centre Mixed Use II).

Prior to issuance of building permits, the acoustical requirements should be reviewed by an acoustical consultant to ensure compliance with the applicable guidelines.

Prior to issuance of occupancy permits, an acoustical consultant shall confirm that the acoustical requirements are in compliance with the acoustical report.

Respectfully submitted,

JADE ACOUSTICS INC.

Per: _____
Jake McLellan, B.Eng

Per: _____
Chris B. Kellar, P.Eng.

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7.0 REFERENCES

1. "Model Municipal Noise Control By-Law" Final Report, by the Ontario Ministry of the Environment, August, 1978.

2. "ORNAMENT – Ontario Road Noise Analysis Method for Environment and Transportation", Ontario Ministry of the Environment, October, 1989.

3. "Building Practice Note No. 56: Controlling Sound Transmission into Buildings", by J.D. Quirt, Division of Building Research, National Research Council of Canada, September, 1985.

4. "Environmental Noise Guideline Stationary and Transportation Sources – Approval and Planning", Ontario Ministry of the Environment, Publication NPC-300, August, 2013, released October 21, 2013 (updated final version # 22).

5. "Impulse Vibration in Residential Buildings", Ontario Ministry of the Environment, Publication NPC-207 (Draft), November, 1983.

6. Town of Milton's By-law Number 133-2012, October 29, 2012, amended by By-law 083-2021, September 13, 2021.

7. Town of Milton's "Engineering and Parks Standards" dated September, 2024.

TABLE 1

PROPOSED MIXED-USE RESIDENTIAL DEVELOPMENT

6252 EIGHTH LINE (88 ACRES)

TOWN OF MILTON

SUMMARY OF ROAD TRAFFIC DATA

ROAD		TRAFALGAR ROAD	STREET A (LOUIS ST. LAURENT AVENUE)	STREET B	STREET C
AADT*	Daytime	45,900	7,065	3,870#	4,725
	Nighttime	5,100	785	430	525
	Total	51,000	7,850	4,300	5,250
Day/Night Split (%)**		90/10	90/10	90/10	90/10
Cars		47,430 (93%)	7,694 (98%)	4214 (98%)	5,145 (98%)
Medium Trucks		1,683 (3.3%)	78 (1%)	43 (1%)	52 (1%)
Heavy Trucks		1,887 (3.7%)	78 (1%)	43 (1%)	53 (1%)
No. of Lanes		6	--##	--##	--##
Posted Speed		60	50	50	50
Gradient (%)***		Up to 3%	Up to 4%	Up to 6%	Up to 1%
R.O.W. Width (m)		47	22###	12.75###	11.25###

* AADT: Annual Average Daily Traffic. 2035 AADT for Trafalgar Road obtained from the Region of Halton and 2041 for Streets A, B and C obtained from TYLin.

** Typical day/night split.

*** Grade varies. Road gradient is based on the preliminary grading plan as it could not be provided by the Region.

Volume reflects the highest value road segment used where applicable. See Appendix A for full detailed road volumes.

This information is not known at this time.

R.O.W. width of the internal roadways were approximated based on the Draft Plan.

TABLE 2

PROPOSED MIXED-USE RESIDENTIAL DEVELOPMENT

6252 EIGHTH LINE (88 ACRES)

TOWN OF MILTON

SAMPLE OF PREDICTED UNMITIGATED SOUND LEVELS OUTDOORS DUE TO ROAD TRAFFIC

Lots/Blocks (Units)*	Location**	Source	Distance (m)	Leq (dBA)			
				Day 7:00 a.m. to 11:00 p.m.		Night 11:00 p.m. to 7:00 a.m.	
				Separate	Combined	Separate	Combined
Lot 44	Rear Yard	Trafalgar Rd. SB	215.25	54	57	--	--
		Trafalgar Rd. NB	191.75	54		--	
Lot 48	Rear Yard	Trafalgar Rd. SB	188.50	55	59	--	--
		Trafalgar Rd. NB	165.00	56		--	
Lot 51	Rear Yard	Trafalgar Rd. SB	182.50	56	59	--	--
		Trafalgar Rd. NB	159.00	56			
	Rear Wall	Trafalgar Rd. SB	184.75	56	59	49	52
		Trafalgar Rd. NB	161.25	56		50	
Lot 52	Rear Yard	Trafalgar Rd. SB	205.50	53	57	--	--
		Trafalgar Rd. NB	182.00	54		--	
		Street B	105.25	45		--	
Lot 117	Rear Yard	Trafalgar Rd. SB	261.00	52	59	--	--
		Trafalgar Rd. NB	237.50	53		--	
		Street B	19.75	55		--	
		Street C	27.00	46		--	

* See Figure 2 for lots and blocks (units) locations.

** Rear yard location taken 3 m from middle of the rear wall and 1.5 m above ground. Wall locations were taken at 4.5 m above ground for daytime and nighttime for two-storey dwellings and at 7.5 m above ground for three-storey dwellings.

TABLE 2 - Continued

PROPOSED MIXED-USE RESIDENTIAL DEVELOPMENT

6252 EIGHTH LINE (88 ACRES)

TOWN OF MILTON

SAMPLE OF PREDICTED UNMITIGATED SOUND LEVELS OUTDOORS DUE TO ROAD TRAFFIC

Lots/Blocks (Units)*	Location**	Source	Distance (m)	Leq (dBA)			
				Day 7:00 a.m. to 11:00 p.m.		Night 11:00 p.m. to 7:00 a.m.	
				Separate	Combined	Separate	Combined
Block 239 (South Unit)	Front Wall	Trafalgar Rd. SB	245.00	53	61	47	54
		Trafalgar Rd. NB	221.50	54		47	
		Street B	18.00	54		47	
		Street C	16.00	57		50	
	Rear Yard	Street B	21.50	53	--	--	--
Block 258 (North Unit)	Rear Yard	Street A (Louis St. Laurent Avenue)	24.50	55	--	--	--
	Side Wall	Street A (Louis St. Laurent Avenue)	21.00	58	--	51	--

* See Figure 2 for lots and blocks (units) locations.

** Rear yard location taken 3 m from middle of the rear wall and 1.5 m above ground. Wall locations were taken at 4.5 m above ground for daytime and nighttime for two-storey dwellings and at 7.5 m above ground for three-storey dwellings.

TABLE 3

PROPOSED MIXED-USE RESIDENTIAL DEVELOPMENT

6252 EIGHTH LINE (88 ACRES)

TOWN OF MILTON

SUMMARY OF MINIMUM NOISE ABATEMENT MEASURES

Lots/Blocks (Units)	Air Conditioning[1]	Exterior Wall[2]	Window STC Rating[3]	Sound Barrier[4]	Warning Clause[5]
Lots 44 to 52 and 117	Provision for Adding	Standard	Standard	2.0 m*	A, B, C, D
Lots 53 to 55	Provision for Adding	Standard	Standard	No	A, B, D
Lots 1, 42, 43, 58, 59, 62, 63, 118 to 137, 175 to 189, and 221 to 238 and Blocks (all units) 239, 240, 249, 258 and 259	Provision for Adding	Standard	Standard	No	A, B
Lots 56, 57, and 109 to 116	No	Standard	Standard	No	D
All other lots and blocks (units)	No Special Requirements				

* 2.0 m high acoustic fence. See Figure 2 and text for details.

See Notes to Table 3 on following pages.

NOTES TO TABLE 3

1. Provision for adding central air conditioning would involve a ducted heating system sized to accommodate the addition of central air conditioning by the occupant at a later date. The air cooled condenser unit should be placed in a noise insensitive location which complies with municipal by-laws and comply with NPC-216.

2. STC – Sound Transmission Class Rating (Reference ASTM-E413). See Section 5.1.1 for details.

3. STC – Sound Transmission Class Rating (Reference ASTM-E413). See Section 5.1.1 for details.

4. Sound barriers must be of solid construction with no gaps and have a minimum surface density of 20 kg/m^2. No. 1 grade western cedar should be used for the construction of the acoustic fence. Earthen berms, solid walls/fences of adequate density or combinations of berms and walls/fences may be used. See text for details.

5. Warning Clauses to be placed in the subdivision agreement and to be included in offers of purchase and sale or lease agreements on designated lots and blocks (units). Suggested warning clauses are summarized below:

   A. "Purchasers and/or tenants are advised that despite the inclusion of noise control features in this development area and within the dwelling units, noise due to increasing road traffic may continue to be of concern, occasionally interfering with the activities of the dwelling occupants as the noise levels may exceed the noise criteria of the Municipality and the Ontario Ministry of the Environment, Conservation and Parks."

   B. "Purchasers and/or tenants are advised that this dwelling unit was fitted with a forced air heating systems and ducting etc. sized to accommodate a central air conditioning unit. Air conditioning can be installed at the purchasers' option and cost. (Note: locate air cooled condenser unit in a noise insensitive area which complies with municipal by-laws and ensure that the unit has an AHRI sound rating that does not exceed the requirements of NPC-216.)"

   C. "Purchasers and/or tenants are advised that the portion of the acoustic fence installed on public property shall be maintained, repaired or replaced by the Town of Milton. Purchasers are advised that the fence will be constructed of No. 1 grade western cedar. The portion of the acoustic fence installed on private property shall be maintained, repaired, and/or replaced by the purchaser. Any maintenance, repair and/or replacement shall be with the same material, to the same standards, and having the same colour and appearance in accordance with the Town of Milton Engineering and Parks Standard Manual."

D. “Purchasers and/or tenants are advised that this development has frontage/is adjacent to a Regional major arterial roadway. Halton Region is not responsible for the design/construction of any noise/safety/privacy infrastructure (fencing, etc,.) that was not identified as part of the overall development review. Any request for additional fencing is subject to local municipality guidelines, shall only be erected on private property, and is the sole responsibility of the property owner.”

6. Conventional ventilated attic roof construction meeting typical construction practices is satisfactory in all cases.

N.T.S.

Proposed Mixed-Use Residential Development
6252 Eighth Line (88 Acres)
Town of Milton

Date: August 2025 **File: 25-060**

KEY PLAN

FIGURE 1

JADE ACOUSTICS

Existing Nursery
Future Residential

Future Residential

Noise Report Prepared Under Separate Cover

Existing Residential

STREET 'A' (LOUIS ST. LAURENT AVENUE)

Existing Residential with Potential Commercial Use

BLOCK 266
Neighbourhood Centre Mixed Use II
1.62 ha
(Other Lands Owned by Applicant Subject to Separate Report)

BLOCK 267
Neighbourhood Centre Mixed Use II
1.48 ha
(Other Lands Owned by Applicant Subject to Separate Report)

STREET 'C'

STREET 'D'

STREET 'H'

BLOCK 259 B2B TH 10 Units | BLOCK 260 B2B TH 12 Units | BLOCK 261 B2B TH 12 Units | BLK 262 B2B TH 10 Units

STREET 'E'

BLOCK 249 Street TH 5 Units | BLOCK 250 Street TH 6 Units | BLOCK 251 Street TH 6 Units | BLOCK 252 Street TH 7 Units | BLOCK 253 Street TH 6 Units | BLOCK 254 Street TH 6 Units | BLOCK 255 Street Townhouse 7 Units

STREET 'F'

BLOCK 240 Street TH 5 Units | BLK 241 Street TH 4 Units | BLK 242 Street TH 5 Units | BLK 243 Street TH 5 Units | BLK 244 Street TH 5 Units | BLK 245 Street TH 4 Units | BLK 246 Street TH 5 Units | BLK 247 Street TH 5 Units | BLK 248 Street TH 5 Units

STREET 'G'

BLOCK 239 Street TH 6 Units

BLOCK 258 Street TH 6 Units

BLOCK 257 Street TH 6 Units

BLOCK 256 Street TH 7 Units

BLOCK 276
Walkway Block
0.01 ha

BLOCK 268
Elementary School
2.83 ha

BLOCK 263
Medium Density Residential I
1.03 ha

Future SWM Pond

Future Residential

BLOCK 269
Neighbourhood Park
2.50 ha

BLOCK 270
Natural Heritage System
2.34 ha

BLOCK 264
Medium Density Residential II
1.64 ha

STREET 'B'

STREET 'B'

TRAFALGAR ROAD

Existing Golf Course

BLOCK 265
Medium Density Residential II
0.40 ha

BLOCK 274
Stormwater Management Pond Block
1.64 ha

2.0m High Acoustic Barrier

STREET 'I'

STREET 'J'

STREET 'K'

STREET 'L'

STREET 'L'

STREET 'L'

BLOCK 277
Servicing Block
0.02 ha

BLOCK 273
Stormwater Management Pond Block
2.87 ha

BLOCK 272
Natural Heritage System
2.58 ha

BLOCK 271
Natural Heritage System
2.06 ha

BLOCK 275
Walkway Block
0.03 ha

Future Park

Future Residential

Natural Heritage System

Legend:

- Provision for Central Air Conditioning and Warning Clause (See Text, Table 3, and Notes to Table 3 for details)
- Analyzed Receptor Location

Notes: (See Text, Table 3, and Notes to Table 3 for details)

- Acoustic Barrier (See Text, Table 3, and Notes to Table 3 for details)

N.T.S.

Proposed Mixed-Use Residential Development
6252 Eighth Line (88 Acres)
Town of Milton

Date: August 2025 Our File: 25-060

JADE ACOUSTICS

PLAN OF DEVELOPMENT SHOWING NOISE ABATEMENT MEASURES

FIGURE 2

APPENDIX A

CORRESPONDENCE REGARDING ROAD TRAFFIC

Jake McLellan

From: Loro, Darren <Darren.Loro@halton.ca>
Sent: May 22, 2025 11:36 PM
To: Jake McLellan
Cc: Michael Bechbache
Subject: RE: Ultimate Road Traffic Request – Trafalgar Road (JAI File: 25-060)

Hi Jake,

Thanks for your patience with my reply!

The parameters I'm able to provide are noted below in red. The other data can be requested from accesshalton@halton.ca.

Cheers,
Darren

From: Jake McLellan jake.m@jadeacoustics.com
Sent: Tuesday, May 13, 2025 3:52 PM
To: Loro, Darren Darren.Loro@halton.ca
Cc: Michael Bechbache michael@jadeacoustics.com
Subject: Ultimate Road Traffic Request – Trafalgar Road (JAI File: 25-060)

Hi Darren,

I hope this email finds you well. Jade Acoustics Inc. has been retained to prepare an Environmental Noise Report for a proposal development near Trafalgar Road in the Town of Milton. The section of roadway near the proposed site and of concern is Trafalgar Rd between Derry Rd and Britannia Rd.

Please see the attached image for the requested roadway section.

The specific traffic data being requested for the roadway is summarized below.

1. ultimate AADT (Average Annual Daily Traffic volume); 51,000 veh/day (2035 analysis horizon)
2. projected growth if available; Use ultimate AADT threshold as noted above.
3. number of lanes; Halton Region's Transportation Master Plan (TMP) identified the need to widen Trafalgar Road to **six** lanes from Highway 407 to Steeles Avenue, with the segment north of Britannia Road having an expected construction start date of 2029 per Halton Region's 2025 Budget and Business Plan. The Municipal Class Environmental Assessment (MCEA) for this Improvement Project has commenced – more information is available online at https://www.halton.ca/For-Residents/Roads-Construction/Municipal-Class-Environmental-Assessment-Studies/Trafalgar-Road-Corridor-Study-%E2%80%93-Highway-407-(E-(1).
4. percentage of trucks;
5. ratio of medium trucks to heavy trucks; Use the existing medium and heavy truck percentages from existing traffic data. If the ratio is not available from existing traffic data, then assume a 50%/50% ratio of medium trucks to heavy trucks.
6. day/night traffic split; 90% day/10% night
7. posted speed limit; Current posted speed limit is 60 km/h. The future posted speed limit will be determined through the MCEA and Detail Design project for the road widening, but for analysis purposes, assume the existing speed limit.
8. 85th percentile speeds;

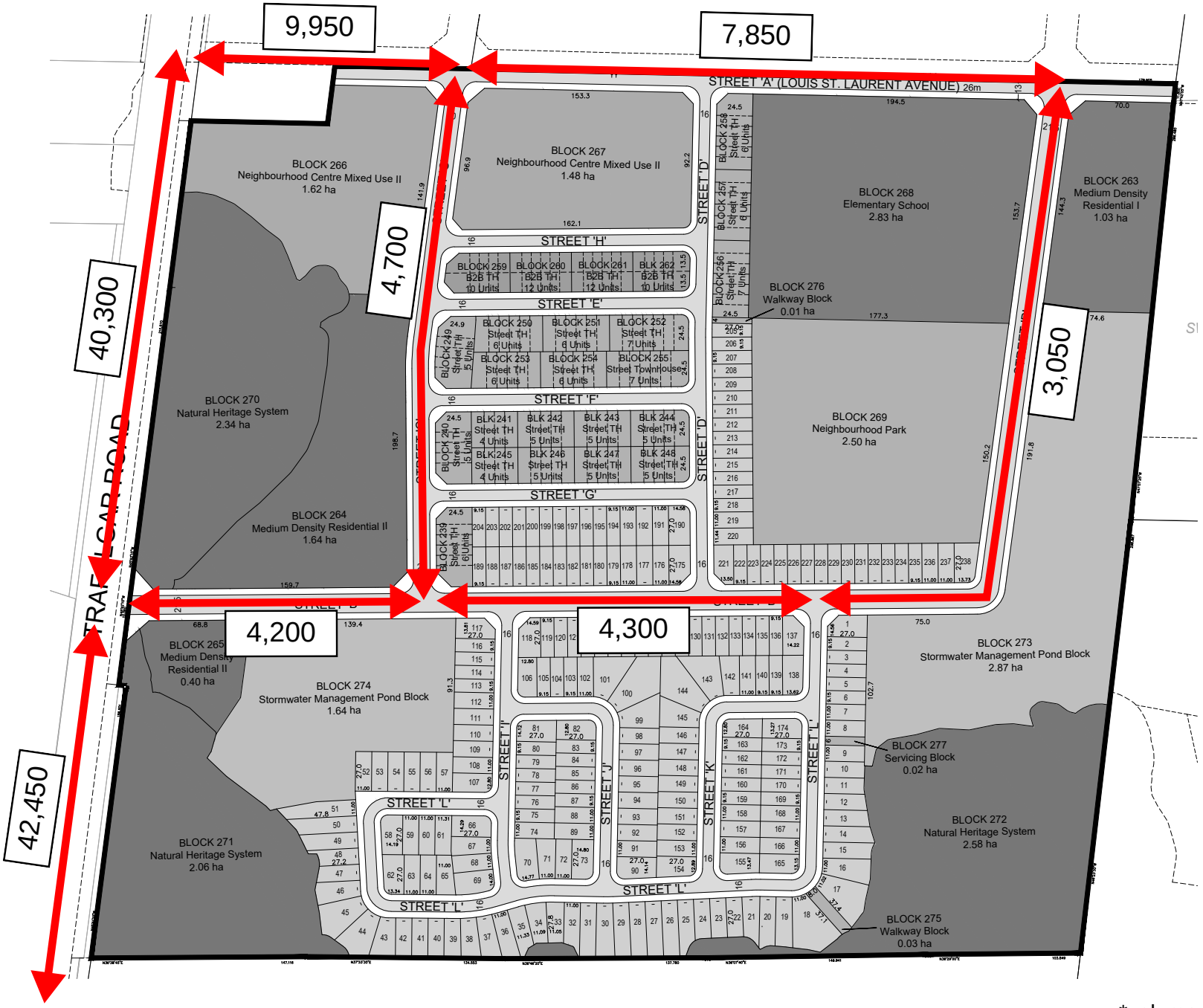
9. gradient of the road;
10. right-of-way width (R.O.W.); and Halton Region's TMP identified the need for an ultimate 47-metre right-of-way for Trafalgar Road. The final right-of-way will be confirmed through the MCEA and Detail Design project, but for analysis purposes, assume 47 metres.
11. any other pertinent information.

Thank you in advance for your time and efforts.

Regards,

Jake McLellan, B.Eng.
Jade Acoustics Inc.
411 Confederation Parkway, Unit 19
Concord, Ontario
L4K0A8
Direct: 647-249-5336
Office: 905-660-2444 x227
Fax: 905-660-4110
Email: jake.m@jadeacoustics.com
Website: www.jadeacoustics.com

Darren Loro, C.E.T.
Project Manager I – Transportation Development Review
Development Services
Public Works
Halton Region
905-825-6000, ext. 2694 | 1-866-442-5866



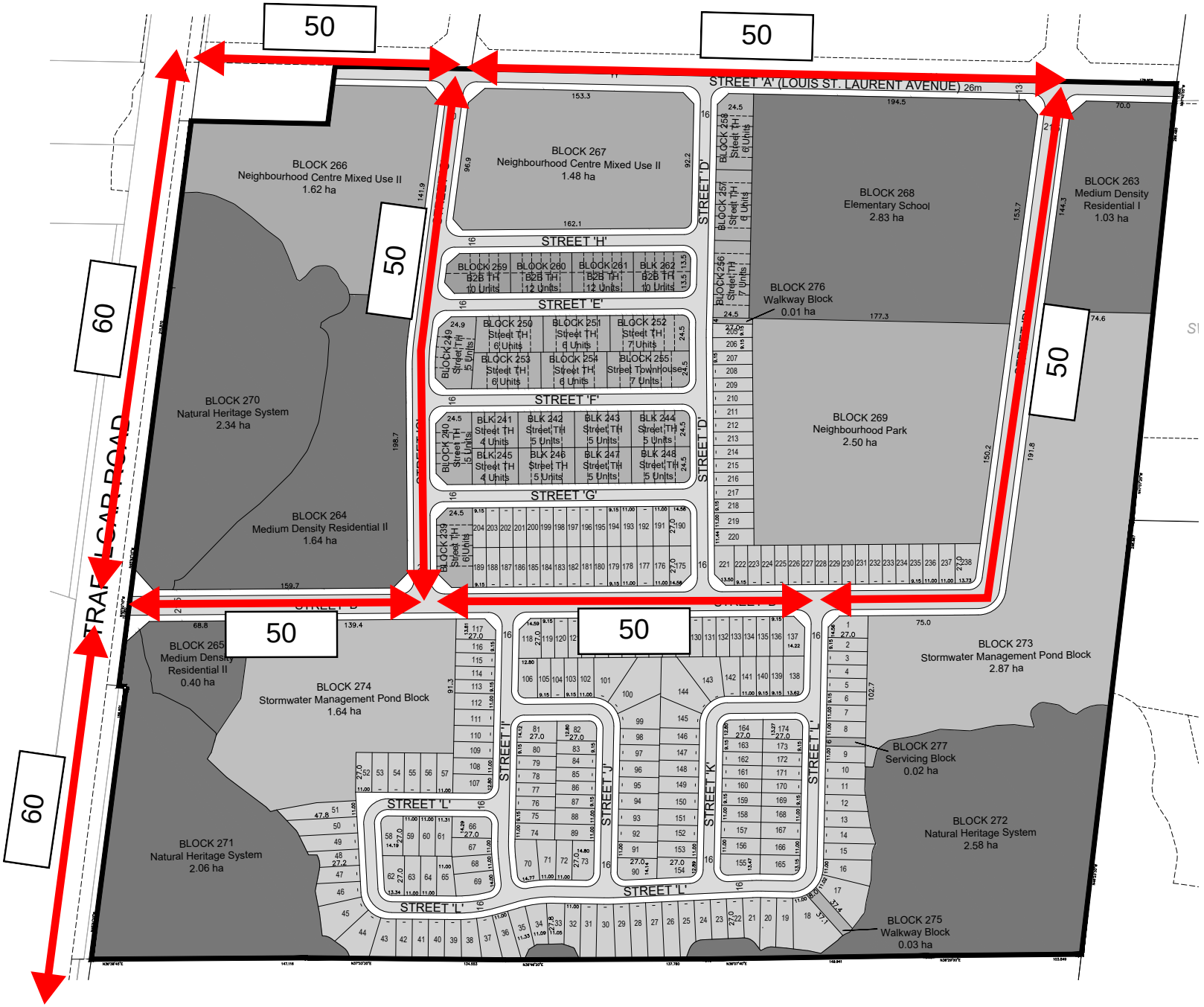
*volume rounded up to 50

TYLin

FUTURE TOTAL 2041 AADT VOLUME ESTIMATES (veh)

REMINGTON SUBDIVISION DRAFT PLAN

JUL 2025



TYLin

FUTURE SPEED LIMIT ON PROPOSED ROAD LINKS (km/h)

REMINGTON SUBDIVISION DRAFT PLAN

JUL 2025

APPENDIX B

ENVIRONMENTAL NOISE CRITERIA

ONTARIO MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PARKS (MECP)

Reference: "Environmental Noise Guidelines Stationary and Transportation Sources – Approval and Planning", Publication NPC-300, August, 2013, released October 21, 2013 (updated final version # 22).

SOUND LEVEL CRITERIA FOR ROAD AND RAIL NOISE

TABLE C-1

Sound Level Limit for Outdoor Living Areas

Road and Rail

Time Period	L_{eq} (16) (dBA)
16 hr., 07:00 - 23:00	55

TABLE C-2

Indoor Sound Level Limits
Road and Rail

Type of Space	Time Period	L_{eq} (dBA)	
		Road	Rail
Living/dining, den areas of residences, hospitals, nursing homes, schools, daycare centres, etc.	07:00 – 23:00	45	40
Living/dining, den areas of residences, hospitals, nursing homes, etc. (except schools or daycare centres)	23:00 – 07:00	45	40
Sleeping quarters	07:00 – 23:00	45	40
	23:00 – 07:00	40	35

SOUND LEVEL CRITERIA FOR AIRCRAFT NOISE

TABLE C-3

Outdoor Aircraft Noise Limit

Time Period	NEF/NEP
24-hour	30

TABLE C-4

Indoor Aircraft Noise Limit
(Applicable over 24-hour period)

Type of Space	Indoor NEF/NEP*
Living/dining/den areas of residences, hospitals, nursing/retirement homes, schools, daycare centres, etc.	5
Sleeping Quarters	0

* The indoor NEF/NEP values in Table C-4 are used to determine acoustical insulation requirements based on the NEF/NEP contour maps.

SOUND LEVEL CRITERIA FOR STATIONARY SOURCES

TABLE C-5

Exclusion Limit Values of One-Hour Equivalent Sound Level (L_{eq}, dBA)
Outdoor Points of Reception

Time of Day	Class 1 Area	Class 2 Area	Class 3 Area	Class 4 Area
07:00 – 19:00	50	50	45	55
19:00 – 23:00	50	45	40	55

TABLE C-6

Exclusion Limit Values of One-Hour Equivalent Sound Level (L_{eq}, dBA)
Plane of Window of Noise Sensitive Spaces

Time of Day	Class 1 Area	Class 2 Area	Class 3 Area	Class 4 Area
07:00 – 19:00	50	50	45	60
19:00 – 23:00	50	50	40	60
23:00 – 07:00	45	45	40	55

TABLE C-7

Exclusion Limit Values for Impulsive Sound Level (L_{LM}, dBAI)
Outdoor Points of Reception

Time of Day	Actual Number of Impulses in Period of One-Hour	Class 1 Area	Class 2 Area	Class 3 Area	Class 4 Area
07:00 – 23:00	9 or more	50	50	45	55
	7 to 8	55	55	50	60
	5 to 6	60	60	55	65
	4	65	65	60	70
	3	70	70	65	75
	2	75	75	70	80
	1	80	80	75	85

TABLE C-8

Exclusion Limit Values of Impulsive Sound Level (L_{LM}, dBAI)
Plane of Window - Noise Sensitive Spaces (Day/Night)

Actual Number of Impulses in Period of One-Hour	Class 1 Area (07:00-23:00)/ (23:00-07:00)	Class 2 Area (07:00-23:00)/ (23:00-07:00)	Class 3 Area (07:00-19:00)/ (19:00-07:00)	Class 4 Area (07:00-23:00)/ (23:00-07:00)
9 or more	50/45	50/45	45/40	60/55
7 to 8	55/50	55/50	50/45	65/60
5 to 6	60/55	60/55	55/50	70/65
4	65/60	65/60	60/55	75/70
3	70/65	70/65	65/60	80/75
2	75/70	75/70	70/65	85/80
1	80/75	80/75	75/70	90/85

SUPPLEMENTARY SOUND LEVEL LIMITS

Indoor limits for transportation sources applicable to noise sensitive land uses are specified in Table C-2 and Table C-4. Table C-9 and Table C-10 are expanded versions of Table C-2 and Table C-4, and present guidelines for acceptable indoor sound levels that are extended to land uses and developments which are not normally considered noise sensitive. The specified values are maximum sound levels and apply to the indicated indoor spaces with the windows and doors closed. The sound level limits in Table C-9 and Table C-10 are presented as information, for good-practice design objectives.

TABLE C-9

Supplementary Indoor Sound Level Limits
Road and Rail

Type of Space	Time Period	L_{eq} (Time Period) (dBA)	
		Road	Rail
General offices, reception areas, retail stores, etc.	16 hours between 07:00 – 23:00	50	45
Living/dining areas of residences, hospitals, schools, nursing/retirement homes, daycare centres, theatres, places of worship, libraries, individual or semi-private offices, conference rooms, reading rooms, etc.	16 hours between 07:00 – 23:00	45	40
Sleeping quarters of hotels/motels	8 hours between 23:00 – 07:00	45	40
Sleeping quarters of residences, hospitals, nursing/retirement homes, etc.	8 hours between 23:00 – 07:00	40	35

TABLE C-10

Supplementary Indoor Aircraft Noise Limit
(Applicable over 24-hour period)

Type of Space	Indoor NEF/NEP*
General offices, reception areas, retail stores, etc.	15
Individual or semi-private offices, conference rooms, etc.	10
Living/dining areas of residences, sleeping quarters of hotels/motels, theatres, libraries, schools, daycare centres, places of worship, etc.	5
Sleeping quarters of residences, hospitals, nursing/retirement homes, etc.	0

* The indoor NEF/NEP values in Table C-10 are not obtained from NEF/NEP contour maps. The values are representative of the indoor sound levels and are used as assessment criteria for the evaluation of acoustical insulation requirements.

APPENDIX C

SAMPLE CALCULATION OF PREDICTED UNMITIGATED SOUND LEVELS

APPENDIX C-1
SAMPLE CALCULATION OF PREDICTED SOUND LEVELS

FILE: 25-060
NAME: 6252 Eighth Line (88 Acres)
REFERENCE DRAWINGS: Draft Plan
LOCATION: Lot 51, 4.5 m above grade, rear wall

Noise Source:	Trafalgar Road (SB)	Trafalgar Road (NB)
Angle of Exposure:	-90 to 90	-90 to 90
Time Period:	16 hr. (day)	16 hr. (day)
Distance (m):	184.75	161.25

CALCULATION OF PREDICTED SOUND LEVELS*

Reference Leq (dBA)*:	70.93	70.93
Height and/or Distance Correction (dBA):	-14.50	-13.72
Finite Element Correction (dBA):	-0.83	-0.83
Allowance for Screening (dBA):	0.00.	0.00.
Allowance for Future Growth (dBA):	incl.	incl.
LeqDay (dBA):	55.59	56.38
Combined LeqDay (dBA)	59.01	

* Leq determined using the computerized model of the Ontario Ministry of the Environment, Conservation and Parks Noise Assessment Guidelines, STAMSON Version 5.04 (ORNAMENT). See attached printouts.

APPENDIX C-2
SAMPLE CALCULATION OF PREDICTED SOUND LEVELS

FILE: 25-060
NAME: 6252 Eighth Line (88 Acres)
REFERENCE DRAWINGS: Draft Plan
LOCATION: Lot 51, 4.5 m above grade, rear wall

Noise Source:	Trafalgar Road (SB)	Trafalgar Road (NB)
Angle of Exposure:	-90 to 90	-90 to 90
Time Period:	8 hr. (night)	8 hr. (night)
Distance (m):	184.75	161.25

CALCULATION OF PREDICTED SOUND LEVELS*

Reference Leq (dBA)*:	64.39	64.39
Height and/or Distance Correction (dBA):	-14.50	-13.72
Finite Element Correction (dBA):	-0.83	-0.83
Allowance for Screening (dBA):	0.00.	0.00.
Allowance for Future Growth (dBA):	incl.	incl.
LeqNight (dBA):	49.05	49.84
Combined LeqNight (dBA)	52.47	

* Leq determined using the computerized model of the Ontario Ministry of the Environment, Conservation and Parks Noise Assessment Guidelines, STAMSON Version 5.04 (ORNAMENT). See attached printouts.

```
STAMSON 5.0        NORMAL REPORT        Date: 30-07-2025 14:21:21
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: 51rfac.te            Time Period: Day/Night 16/8 hours
Description: Lot 51 rear facade

Road data, segment # 1: Trafalgar SB (day/night)
-----------------------------------------------
Car traffic volume  : 21344/2372  veh/TimePeriod  *
Medium truck volume :   757/84    veh/TimePeriod  *
Heavy truck volume  :   849/94    veh/TimePeriod  *
Posted speed limit  :    60 km/h
Road gradient       :     1 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):  25500
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   3.30
    Heavy Truck  % of Total Volume     :   3.70
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Trafalgar SB (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  : 184.75 / 184.75 m
Receiver height           :   4.50 / 4.50   m
Topography                :      0       (Define your own alpha.)
Barrier angle1            : -90.00 deg   Angle2 : 90.00 deg
Barrier height            :   0.00 m
Barrier receiver distance :   0.01 / 0.01   m
Source elevation          : 184.79 m
Receiver elevation        : 187.14 m
Barrier elevation         : 187.14 m
Alpha                     :   0.33
Reference angle           :   0.00

Road data, segment # 2: Trafalgar NB (day/night)
-----------------------------------------------
Car traffic volume  : 21344/2372  veh/TimePeriod  *
Medium truck volume :   757/84    veh/TimePeriod  *
Heavy truck volume  :   849/94    veh/TimePeriod  *
Posted speed limit  :    60 km/h
Road gradient       :     1 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):  25500
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   3.30
    Heavy Truck  % of Total Volume     :   3.70
    Day (16 hrs) % of Total Volume     :  90.00
```

```
Data for Segment # 2: Trafalgar NB (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  : 161.25 / 161.25 m
Receiver height           :   4.50 / 4.50   m
Topography                :      0       (Define your own alpha.)
Barrier angle1            : -90.00 deg   Angle2 : 90.00 deg
Barrier height            :   0.00 m
Barrier receiver distance :   0.01 / 0.01   m
Source elevation          : 184.79 m
Receiver elevation        : 187.14 m
Barrier elevation         : 187.14 m
Alpha                     :   0.33
Reference angle           :   0.00

Results segment # 1: Trafalgar SB (day)
---------------------------------------

Source height = 1.39 m

ROAD (0.00 + 55.59 + 0.00) = 55.59 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.33  70.93   0.00 -14.50  -0.83   0.00   0.00   0.00  55.59
-------------------------------------------------------------------------------

Segment Leq : 55.59 dBA

Results segment # 2: Trafalgar NB (day)
---------------------------------------

Source height = 1.39 m

ROAD (0.00 + 56.38 + 0.00) = 56.38 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.33  70.93   0.00 -13.72  -0.83   0.00   0.00   0.00  56.38
-------------------------------------------------------------------------------

Segment Leq : 56.38 dBA

Total Leq All Segments: 59.01 dBA

Results segment # 1: Trafalgar SB (night)
-----------------------------------------

Source height = 1.39 m

ROAD (0.00 + 49.05 + 0.00) = 49.05 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.33  64.39   0.00 -14.50  -0.83   0.00   0.00   0.00  49.05
-------------------------------------------------------------------------------

Segment Leq : 49.05 dBA
```

```
Results segment # 2: Trafalgar NB (night)
------------------------------------------

Source height = 1.39 m

ROAD (0.00 + 49.84 + 0.00) = 49.84 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.33  64.39   0.00 -13.72  -0.83   0.00   0.00   0.00  49.84
-------------------------------------------------------------------------------

Segment Leq : 49.84 dBA

Total Leq All Segments: 52.47 dBA


TOTAL Leq FROM ALL SOURCES (DAY): 59.01
                           (NIGHT): 52.47
```

APPENDIX C-3
SAMPLE CALCULATION OF PREDICTED SOUND LEVELS

FILE: 25-060
NAME: 6252 Eighth Line (88 Acres)
REFERENCE DRAWINGS: Draft Plan
LOCATION: Lot 51, 1.5 m above grade, rear yard

Noise Source:

	Trafalgar Road (SB)	Trafalgar Road (NB)
Angle of Exposure:	-90 to 90	-90 to 90
Time Period:	16 hr. (day)	16 hr. (day)
Distance (m):	182.50	159.00

CALCULATION OF PREDICTED SOUND LEVELS*

Reference Leq (dBA)*:	70.93	70.93
Height and/or Distance Correction (dBA):	-14.43	-13.64
Finite Element Correction (dBA):	-0.83	-0.83
Allowance for Screening (dBA):	0.00	0.00
Allowance for Future Growth (dBA):	incl.	incl.
LeqDay (dBA):	55.66	56.46
Combined LeqDay (dBA)	59.09	

* Leq determined using the computerized model of the Ontario Ministry of the Environment, Conservation and Parks Noise Assessment Guidelines, STAMSON Version 5.04 (ORNAMENT). See attached printouts.

```
STAMSON 5.0        NORMAL REPORT        Date: 04-08-2025 15:59:54
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: 51ry.te              Time Period: Day 16 hours
Description: Lot 51 rear yard OLA

Road data, segment # 1: Trafalgar SB (day)
-----------------------------------------
Car traffic volume  : 21344     veh/TimePeriod  *
Medium truck volume :   757     veh/TimePeriod  *
Heavy truck volume  :   849     veh/TimePeriod  *
Posted speed limit  :    60 km/h
Road gradient       :     1 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):  25500
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   3.30
    Heavy Truck  % of Total Volume     :   3.70
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Trafalgar SB (day)
----------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 182.50 m
Receiver height           :   1.50 m
Topography                :      0       (Define your own alpha.)
Barrier angle1            : -90.00 deg   Angle2 : 90.00 deg
Barrier height            :   0.01 m
Barrier receiver distance :  31.75 m
Source elevation          : 184.79 m
Receiver elevation        : 187.14 m
Barrier elevation         : 186.97 m
Alpha                     :   0.33
Reference angle           :   0.00

Road data, segment # 2: Trafalgar NB (day)
-----------------------------------------
Car traffic volume  : 21344     veh/TimePeriod  *
Medium truck volume :   757     veh/TimePeriod  *
Heavy truck volume  :   849     veh/TimePeriod  *
Posted speed limit  :    60 km/h
Road gradient       :     1 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):  25500
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   3.30
    Heavy Truck  % of Total Volume     :   3.70
    Day (16 hrs) % of Total Volume     :  90.00
```

```
Data for Segment # 2: Trafalgar NB (day)
----------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 159.00 m
Receiver height           :   1.50 m
Topography                :      0       (Define your own alpha.)
Barrier angle1            : -90.00 deg   Angle2 : 90.00 deg
Barrier height            :   0.01 m
Barrier receiver distance :  31.75 m
Source elevation          : 184.79 m
Receiver elevation        : 187.14 m
Barrier elevation         : 186.97 m
Alpha                     :   0.33
Reference angle           :   0.00

Results segment # 1: Trafalgar SB (day)
----------------------------------------

Source height = 1.39 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.39 !        1.50 !        1.24 !       188.21

ROAD (0.00 + 55.66 + 0.00) = 55.66 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.33  70.93   0.00 -14.43  -0.83   0.00   0.00  -3.88  51.78*
   -90     90   0.33  70.93   0.00 -14.43  -0.83   0.00   0.00   0.00  55.66
-------------------------------------------------------------------------------

 * Bright Zone !

Segment Leq : 55.66 dBA

Results segment # 2: Trafalgar NB (day)
----------------------------------------

Source height = 1.39 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.39 !        1.50 !        1.18 !       188.15

ROAD (0.00 + 56.46 + 0.00) = 56.46 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.33  70.93   0.00 -13.64  -0.83   0.00   0.00  -3.97  52.49*
   -90     90   0.33  70.93   0.00 -13.64  -0.83   0.00   0.00   0.00  56.46
-------------------------------------------------------------------------------

 * Bright Zone !

Segment Leq : 56.46 dBA

Total Leq All Segments: 59.09 dBA
```

APPENDIX D

SAMPLE CALCULATION OF ARCHITECTURAL COMPONENT SELECTION

APPENDIX D-1
SAMPLE CALCULATION OF ARCHITECTURAL COMPONENT SELECTION*

FILE: 25-060
NAME: 6252 Eighth Line (88 Acres)
REFERENCE DRAWINGS: Draft Plan
LOCATION: Block 239, South Unit, corner bedroom, daytime

ROAD

Wall area as a percentage of floor area:	Front:	55%
	Side:	55%
Window area as a percentage of floor area:	Front:	25%
	Side:	25%
Number of components:	4	
Outdoor Leq:	Front:	61 (+3 for reflections) = 64 dBA
	Side:	59 (+3 for reflections) = 62 dBA
Indoor Leq:	45	
Noise Reduction (dBA):	Front:	19
	Side:	17
Noise Spectrum:	Road or Distant Aircraft	Angle Correction: 0
Absorption:	Medium	

APPROPRIATE ELEMENTS

		STC Rating
Exterior Wall	Front	STC 30**
	Side	STC 28**
Window	Front	STC 22**
	Side	STC 20**

* Based upon “Controlling Sound Transmission into Buildings”, Building Practice Note 56 by National Research Council of Canada, September, 1985.

** Satisfied by construction which meets the structural and safety requirements of standard construction practices.

APPENDIX E

SAMPLE CALCULATION OF SOUND BARRIER ANALYSES

```
STAMSON 5.0        NORMAL REPORT        Date: 04-08-2025 15:59:54
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: 51ry.te              Time Period: Day 16 hours
Description: Lot 51 rear yard OLA

Road data, segment # 1: Trafalgar SB (day)
----------------------------------------
Car traffic volume  : 21344      veh/TimePeriod  *
Medium truck volume :   757      veh/TimePeriod  *
Heavy truck volume  :   849      veh/TimePeriod  *
Posted speed limit  :    60 km/h
Road gradient       :     1 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):  25500
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   3.30
    Heavy Truck  % of Total Volume     :   3.70
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Trafalgar SB (day)
----------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 182.50 m
Receiver height           :   1.50 m
Topography                :      0       (Define your own alpha.)
Barrier angle1            : -90.00 deg   Angle2 : 90.00 deg
Barrier height            :   0.01 m
Barrier receiver distance :  31.75 m
Source elevation          : 184.79 m
Receiver elevation        : 187.14 m
Barrier elevation         : 186.97 m
Alpha                     :   0.33
Reference angle           :   0.00

Road data, segment # 2: Trafalgar NB (day)
----------------------------------------
Car traffic volume  : 21344  veh/TimePeriod  *
Medium truck volume :   757    veh/TimePeriod  *
Heavy truck volume  :   849    veh/TimePeriod  *
Posted speed limit  :    60 km/h
Road gradient       :     1 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):  25500
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   3.30
    Heavy Truck  % of Total Volume     :   3.70
    Day (16 hrs) % of Total Volume     :  90.00
```

```
Data for Segment # 2: Trafalgar NB (day)
----------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 159.00 m
Receiver height           :   1.50 m
Topography                :      0       (Define your own alpha.)
Barrier angle1            : -90.00 deg   Angle2 : 90.00 deg
Barrier height            :   0.01 m
Barrier receiver distance :  31.75 m
Source elevation          : 184.79 m
Receiver elevation        : 187.14 m
Barrier elevation         : 186.97 m
Alpha                     :   0.33
Reference angle           :   0.00

Results segment # 1: Trafalgar SB (day)
----------------------------------------

Source height = 1.39 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.39 !        1.50 !        1.24 !       188.21

ROAD (0.00 + 55.66 + 0.00) = 55.66 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.33  70.93   0.00 -14.43  -0.83   0.00   0.00  -3.88  51.78*
   -90     90   0.33  70.93   0.00 -14.43  -0.83   0.00   0.00   0.00  55.66
-------------------------------------------------------------------------------

 * Bright Zone !

Segment Leq : 55.66 dBA

Results segment # 2: Trafalgar NB (day)
----------------------------------------

Source height = 1.39 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.39 !        1.50 !        1.18 !       188.15

ROAD (0.00 + 56.46 + 0.00) = 56.46 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.33  70.93   0.00 -13.64  -0.83   0.00   0.00  -3.97  52.49*
   -90     90   0.33  70.93   0.00 -13.64  -0.83   0.00   0.00   0.00  56.46
-------------------------------------------------------------------------------

 * Bright Zone !

Segment Leq : 56.46 dBA

Total Leq All Segments: 59.09 dBA
```

Barrier table for segment # 1: Trafalgar SB (day)

Barrier Height	Elev of Barr Top	Road dBA	Tot Leq dBA
0.50	187.47	55.66	55.66
0.60	187.57	55.66	55.66
0.70	187.67	55.66	55.66
0.80	187.77	55.66	55.66
0.90	187.87	55.66	55.66
1.00	187.97	55.66	55.66
1.10	188.07	55.66	55.66
1.20	188.17	55.66	55.66
1.30	188.27	50.66	50.66
1.40	188.37	50.65	50.65
1.50	188.47	50.62	50.62
1.60	188.57	50.58	50.58
1.70	188.67	50.53	50.53
1.80	188.77	50.47	50.47
1.90	188.87	50.39	50.39
2.00	188.97	50.31	50.31
2.10	189.07	50.21	50.21
2.20	189.17	50.11	50.11
2.30	189.27	50.00	50.00
2.40	189.37	49.88	49.88

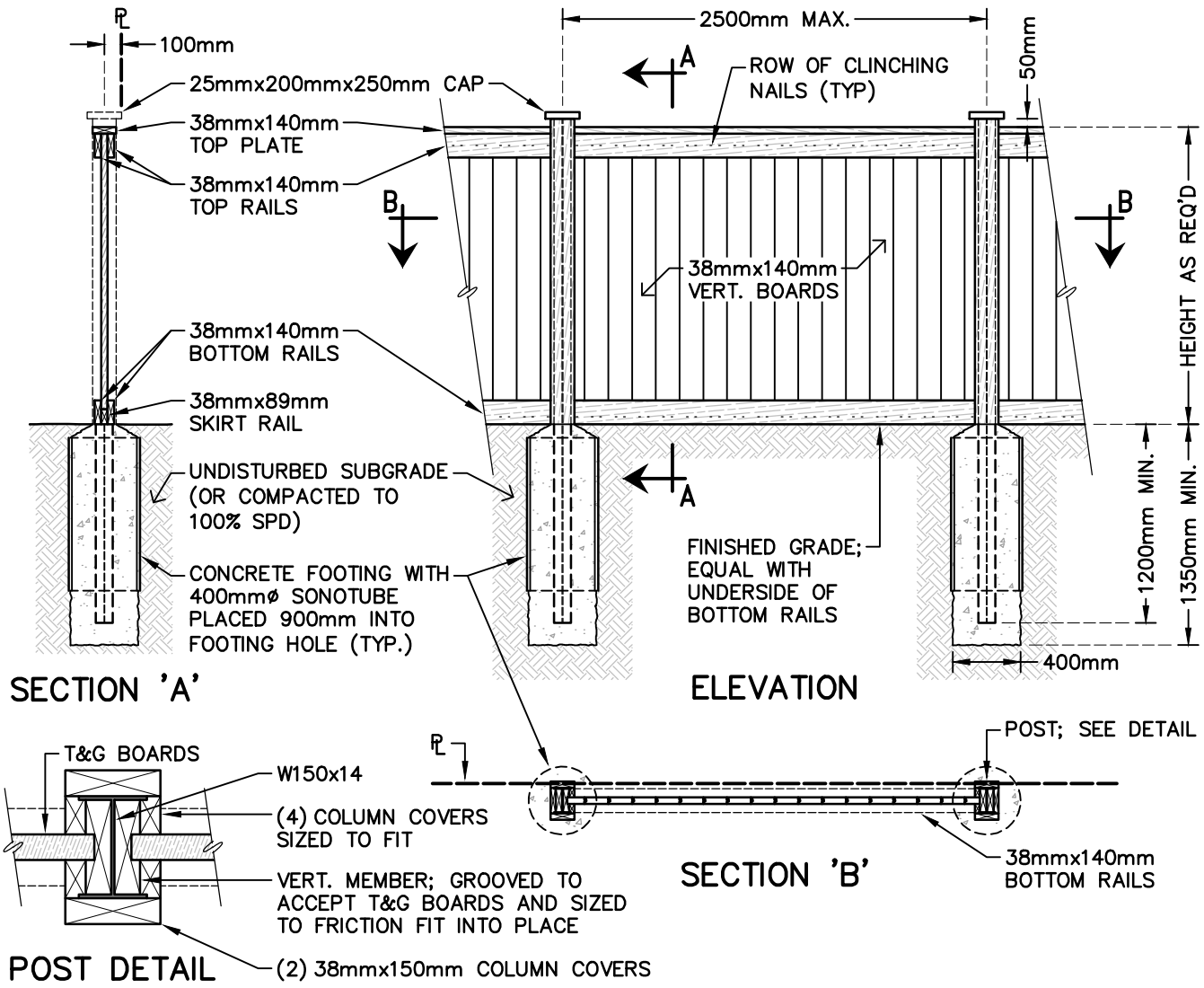
Barrier table for segment # 2: Trafalgar NB (day)

Barrier Height	Elev of Barr Top	Road dBA	Tot Leq dBA
0.50	187.47	56.46	56.46
0.60	187.57	56.46	56.46
0.70	187.67	56.46	56.46
0.80	187.77	56.46	56.46
0.90	187.87	56.46	56.46
1.00	187.97	56.46	56.46
1.10	188.07	56.46	56.46
1.20	188.17	51.46	51.46
1.30	188.27	51.45	51.45
1.40	188.37	51.43	51.43
1.50	188.47	51.39	51.39
1.60	188.57	51.34	51.34
1.70	188.67	51.28	51.28
1.80	188.77	51.21	51.21
1.90	188.87	51.13	51.13
2.00	188.97	51.03	51.03
2.10	189.07	50.93	50.93
2.20	189.17	50.82	50.82
2.30	189.27	50.70	50.70
2.40	189.37	50.57	50.57

Combined LeqDay accounting for a 2.0 m high acoustic barrier = 53.70 dBA

APPENDIX F

WOOD ACOUSTIC FENCE DETAIL – TOWN OF MILTON



NOTES:

1. ALL MATERIALS, COMPONENTS, AND CRAFTSMANSHIP SHALL CONFORM TO THE ONTARIO BUILDING CODE AND ALL APPLICABLE LOCAL BY-LAWS.
2. METAL POSTS TO BE GALVANIZED W150x14 MEMBERS FACTORY CUT/MANUFACTURED TO LENGTH.
3. ALL WOOD SHALL BE No. 1 GRADE WESTERN CEDAR, SELECTED FOR GOOD APPEARANCE AND FREE OF WANE AND BARK POCKETS. ALL TORN GRAIN SHALL BE ELIMINATED BY SANDING AND PLANING. MEMBERS EXHIBITING MODERATE TO HEAVY KNOTS SHALL BE WELL DISTRIBUTED THROUGHOUT THE INSTALLATION.
4. FENCE BOARDS SHALL BE TONGUE & GROOVE SELECT (SOUND) TIGHT KNOT NGLA PATTERN 18-(200) MODIFIED 54mm (2 1/8") DRESSED WITH BEVELED EDGE ON BOTH SIDES.
5. RAILS & TOP PLATE TO BE DRESSED TO PATTERN. GRADE TO BE HGLA 1318 STRUCTURAL POST & TIMBER.
6. FINISH ALL WOOD WITH CLEAR STAIN. APPLICATION: APPLY 2 COATS ON CLEAN DRY WOOD AT 5°C TO 21°C.
7. ALL FASTENERS SHALL BE SCREWS OR NAILS PENETRATING EACH BOARD BY A MINIMUM OF 15mm.
8. COUNTER-SINK ALL SCREWS AND DRIVE ALL NAIL HEADS BELOW SURFACE OF WOOD. USE SUFFICIENT SIZE AND QUANTITY OF NAILS TO ENSURE A STABLE AND SECURE STRUCTURE.
9. MAINTAIN FINISHED GRADE PARALLEL WITH BOTTOM OF FENCE MEMBER.
10. FENCE PANELS SHALL BE STEPPED A MAXIMUM OF 150mm AS REQUIRED BY GRADE CONDITIONS.
11. ALL LUMBER SIZES SHOWN ARE ACTUAL (RATHER THAN NOMINAL).
12. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 30MPa AT 28 DAYS WITH 5% TO 7% AIR ENTRAINMENT.

Title

WOOD ACOUSTIC FENCING (WITH METAL POST)

Scale	1:40
Rev. Date	2024/SEP
Standard No.	10-03.02

MILTON