Noise Feasibility Study

Proposed Residential Development, Frontenac Forest Tertiary Plan, South of Derry Road East and West of Eighth Line, Town of Milton, Ontario

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Prepared for:

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1 INTRODUCTION AND SUMMARY

HGC Noise Vibration Acoustics (HGC) was retained by Frontenac Forest Estates Inc. to conduct a noise feasibility study for a proposed residential development located south of Derry Road East, west of Eighth Line, and east of Trafalgar Road in Milton, Ontario. The study is required by the Municipality as part of the planning and approvals process.

This report has been updated to include the latest draft plan and traffic data from the Region of Halton.

The primary noise sources impacting the site were determined to be road traffic on Trafalgar Road, Derry Road East, and Eighth Line. Secondary sources of noise include Street A (east/west collector); and Street B/C, D/E, and F/G (north/south collectors). Relevant road traffic data for the Trafalgar Road and Derry Road East were obtained from the Region of Halton; and data for the interior collector roads and Eighth Line was obtained from the traffic study conducted by Tylin and was used to predict future traffic sound levels at the locations of the proposed residential dwellings. The predicted sound levels were compared to the guidelines of the Ministry of Environment, Conservation and Parks (MECP) and the Municipality.

The sound level predictions indicate that the future road traffic sound levels will exceed MECP guidelines at the dwellings closest to the roadways. Air conditioning is required for the dwellings closest to Trafalgar Road and Derry Road. Forced air ventilation with ducts sized for the future installation of air conditioning by the occupant is required for dwellings further from Trafalgar Road and Derry Road, or adjacent to collector roads. Upgraded building and glazing constructions are required for dwellings adjacent to Trafalgar Road and Derry Road. When detailed floor plans and building elevations are available for dwellings adjacent to Trafalgar Road and Derry Road, an acoustical consultant should review the drawings to refine building construction and window glazing requirements. Any building constructions meeting the minimum requirements of the Ontario Building Code will provide sufficient acoustical insulation for the







remaining dwellings. Associated acoustical requirements are specified in this report. Warning clauses are recommended to inform future residents of the road traffic noise impacts and to address sound level excesses.

There are blocks reserved for commercial uses, high density uses, and mixeduses. When the siting information is available, the acoustic requirements should be determined through a noise study.

2 SITE DESCRIPTION AND NOISE SOURCES

The proposed residential development is located South of Derry Road East, West of Eighth Line, and East of Trafalgar Road, specifically Part of Lot 10, Concession 8, New Survey, in the Town of Milton, Ontario. Figure 1 shows a key plan of the proposed site. A proposed draft plan prepared by Bousfields Inc. dated January 10, 2025 is included in Figure 2, also indicating the sound level prediction locations. The proposed development will include single detached dwellings, townhouses, back-to-back townhouses, lane-based townhouses, medium density residential blocks, neighbourhood centre blocks, along with associated roadways, a green channel, stormwater management ponds, park lands, village squares, and a school block.

HGC personnel visited the site in September 2021. The acoustical environment surrounding the site is urban in nature. The primary sources of sound impacting the site are vehicular traffic on Trafalgar Road, Derry Road, and Eighth Line. Secondary sources of noise include future interior collector roads Street A (east/west collector), Streets B/C, D/E, and F/G (north/south collectors). The surrounding lands are primarily existing agricultural lands to the north, south and east. To the southeast of the intersection of Derry Road and Eighth Line is a Union Gas Parkway Compressor Station. Figure 3 shows the location of the compressor station in relation to the site. Observations during the site visit confirmed that there are berms provided along the southwest of the compressor station equipment. There are existing dwellings located to the south of the subject site and to the north. The compressor station currently meets the MECP sound level criteria at the existing dwellings and at the proposed subdivision.







Sounds from the compressor station are not expected to be significant at the subject site, nevertheless, a noise warning clause is recommended to inform future occupants of the proximity of the exiting Union Gas gate station. There are no other significant sources of stationary noise within 500 m of the subject site.

3 ROAD 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].

Table 1: Road Traffic Noise Criteria

Space	Daytime L _{EQ(16 hour)} Road	Nighttime L _{EQ(8 hour)} 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 MECP guidelines allow the daytime sound levels 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 recommended to reduce the OLA sound







level to below 60 dBA and as close to 55 dBA as technically, economically and administratively feasible. The Town of Milton has a maximum fence height of 2.4 m along major roadways. The remainder of the required barrier height can be made up with an earth berm.

A central air conditioning system as an alternative means of ventilation to open windows is required for dwellings where nighttime sound levels outside bedroom or living/dining room windows exceed 60 dBA or daytime sound levels outside bedroom or living/dining room windows exceed 65 dBA. Forced air ventilation with ducts sized to accommodate the future installation of air conditioning is required when nighttime sound levels at bedroom or living/dining room windows are in the range of 51 to 60 dBA or when daytime sound levels at bedroom or living/dining room windows 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 plane of window nighttime sound level is greater than 60 dBA or the daytime sound level is greater than 65 dBA due to road traffic noise.

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

3.2 Traffic Sound Level Assessment

3.2.1 Road Traffic Data

Road traffic volumes for Trafalgar Road and Derry Road were obtained from the Region of Halton in the form of ultimate traffic volumes. For Trafalgar Road a posted speed limit of 70 km/h was used. For Derry Road a posted speed limit of 80 km/h was used. A commercial vehicle percentage of 6.0% split into 3.0% medium trucks and 3.0% heavy trucks was provided.

Road traffic volumes for Eighth Line, Street A, Street B/C, Street D/E, and Street F/G, were obtained from the traffic study conducted by Tylin dated April







2025. Road traffic volumes were provided in the form of annual average daily traffic (AADT) for the year 2041. The data was further projected to the year 2035 with a 2.5%/year growth rate. AADTs provided were applied to the roadways in conjunction with a day/night split of 90%/10%.

For Eighth Line a posted speed limit of 70 km/h was used. A commercial vehicle percentage of 4.5% split into 1.7% medium trucks and 2.8% heavy trucks was calculated from the turning movement counts provided.

For Street A, a speed limit of 50 km/h was assumed. A commercial vehicle percentage of 3.0% split into 2.0% medium trucks and 1.0% heavy trucks was assumed.

For Street B/C, a speed limit of 50 km/h was assumed. A commercial vehicle percentage of 3.0% split into 2.0% medium trucks and 1.0% heavy trucks was assumed.

For Street D/E, a speed limit of 50 km/h was assumed. A commercial vehicle percentage of 3.0% split into 2.0% medium trucks and 1.0% heavy trucks was assumed.

For Street F/G, a speed limit of 50 km/h was assumed. A commercial vehicle percentage of 3.0% split into 2.0% medium trucks and 1.0% heavy trucks was assumed.

Table 2 summarizes the traffic volume data used in this study. Road traffic data is included in Appendix A. The remaining internal roadways in the subdivision are low volume roadways and therefore were not considered in the analysis.







Table 2: Future Road Traffic Data

Roadway	AADT	Day / Night Split	Trucks Pe (%		Speed Limit
Roddway		[%]	Medium	Heavy	[km/h]
Trafalgar Road <i>Ultimate</i>	51,000	90 / 10	3.0	3.0	70
Derry Road <i>Ultimate</i>	51,000	90 / 10	3.0	3.0	80
Eighth Line 2035 Projected	6,904	90 / 10	1.7	2.8	70
Street A 2041 Projected	5,001	90 / 10	2.0	1.0	50
Street B/C 2041 Projected	3,851	90 / 10	2.0	1.0	50
Street D/E 2041 Projected	1,862	90 / 10	2.0	1.0	50
Street F/G 2041 Projected	2,701	90 / 10	2.0	1.0	50

3.2.2 Road Traffic 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.

Future daytime sound levels were predicted at 1.5 m above ground level in outdoor living areas to determine whether noise barriers will be necessary. A 6 m front yard setback, a 7 m rear yard setback, a 4.5 m exterior side yard setback for lots flanking major roadways and a 1.5 m setback for interior side yards were used in the analysis. Sound levels were also predicted at the façades during daytime and nighttime hours to investigate ventilation requirements.

Prediction locations were chosen around the residential site, as shown in Figure 2, to obtain a good representation of the future sound levels at various blocks with exposure to the roadways. The results of these predictions are summarized in Table 3.







Table 3: Future Road Traffic Sound Levels, [dBA], Without Mitigation

Prediction Location	Description	Daytime in OLA LEQ(16 hour)	Daytime at Façade L _{EQ(16 hour)}	Nighttime at Façade L _{EQ(8 hour)}
[A]	Dual frontage street townhouses with exposure to Trafalgar Road		73	66
[B]	Dual frontage street townhouses with exposure to Trafalgar Road and Street A		67	61
[C]	Dual frontage street townhouses with exposure to Street A and some exposure to Trafalgar Road		64	57
[D]	Dual frontage townhouses with exposure to Trafalgar Road and Derry Road		69	62
[E]	Dual frontage street townhouses with exposure to Derry Road, Trafalgar Road, and Street B/C		69	62
[F]	Dual frontage street townhouses with exposure to Street B/C and Street A		66	61
[G]	Dual frontage street townhouses with exposure to Trafalgar Road, Street B/C, and Street A		64	57
[H]	Lane access townhouses with exposure to Derry Road		75	68
[I]	Lane access townhouses with exposure to Derry Road and Street D/E		70	64
[J]	Street townhouses with exposure to Street A and Street D/E	<55	60	53
[K]	Second row of lane access townhouses from Derry Road		59	52
[L]	Semi-detached dwelling with flanking exposure to Street A	55	59	53
[M]	Street townhouses with exposure to Street A and Street F/G	56	59	52
[N]	Lane access townhouses with exposure to Derry Road and Eighth Line		63	57
[0]	Dual frontage street townhouses with exposure to Eighth Line		59	52
[P]	Lane access townhouses with some exposure to Eighth Line		<55	<50

Note: No OLAs for dual frontage street townhouses and lane access townhouses







3.3 Traffic Noise Recommendations

With no mitigation, there will be sound level excesses at some of the proposed dwellings near the major roadways and collector roads. The following discussion outlines recommendations for ventilation requirements, upgraded building façade constructions, and warning clauses to achieve the noise criteria stated in Table 1.

3.3.1 Outdoor Living Areas

a) <u>Dwellings with flanking exposure onto Collector Roads</u>

The predicted daytime sound levels in the OLAs of the end units of the lots flanking onto Street A, Street D/E, or Street F/G (prediction locations [J], [L], and [M]) will be up to 56 dBA, 1 dBA in excess of the MECP limit of 55 dBA. The 1 dBA sound level excess is acceptable to the MECP with the use of a noise warning clause if it is acceptable to the municipality. No further mitigation is required.

b) <u>Dual frontage street townhouses and lane access townhouses</u>

Dual frontage street townhouses and lane access townhouse units do not include rear yards and physical mitigation is not required.

c) <u>Medium Density Residential (Blocks 568, 569, and 570) and Neighbourhood</u> <u>Centre Mixed Use (Block 565 and 567)</u>

The Medium Density Residential Blocks and Neighbourhood Centre Mixed use with direct exposure to Trafalgar Road, Derry Road, or Eighth Line have not been considered in this analysis, because the land use has not been specified. A detailed noise study should be conducted to determine the acoustic requirements such as acoustic barriers, ventilation requirements and to specify building components when the siting, grading information is available. The noise study should be completed in accordance with NPC-300.







d) Village Squares (Blocks 571 and 572)

The uses of the village squares are not known at this time. Residential blocks near these future blocks may be impacted by the activities associated with uses proposed for the blocks. Noise studies are required for these blocks by their developer during the approvals process and at the time of Site Plan approval when the siting plans including building elevations and potential uses are available to determine the impact of their activities on the existing and future residential uses nearby. Typically, noisy sources such as rooftop mechanical equipment, compressor or condenser units, rooftop cooling towers or trucking activities along with loading areas will need to be considered. A noise study is required to ensure that the noise emissions from the commercial/business facilities complies with MECP guidelines limits contained in NPC 300.

e) Future School (Block 573)

There is future school proposed on the subject lands. A detailed noise study should be conducted for the school block by the developer of the school when siting and mechanical equipment information is known to determine the specific rooftop screening requirements, acoustic barrier requirements, and ventilation requirements for the building along with envelope construction

3.3.2 Indoor Living Areas

Central Air Conditioning

The predicted sound levels outside the top storey bedroom/living/dining room windows of lots closest to Trafalgar Road and Derry Road will be greater than 65 dBA during the day and greater than 60 dBA during the nighttime hours. To address these excesses, the MECP guidelines recommend that the dwelling units be equipped with central air conditioning systems, so that the windows can be closed.







Provision for the Future Installation of Air Conditioning

The predicted sound levels at the plane of the facades of the future dwellings with exposure to Eighth Line or the collector roads, will be between 56 and 65 dBA during the daytime hours and between 51 and 60 dBA during the nighttime hours. To address these excesses, the MECP guidelines recommend that these dwelling units be equipped with forced air ventilation systems with ducts sized to accommodate the future installation of air conditioning by the occupant.

Figure 4 shows the ventilation requirements for the development. Window or through-the-wall air conditioning units are not recommended for any commercial or residential units because of the noise they produce and because the units penetrate through the exterior wall which degrades the overall noise insulating properties of the envelope. The location, installation and sound ratings of the outdoor air conditioning devices should minimize noise impacts and comply with criteria of MECP publication NPC-216. The guidelines also recommend warning clauses for all units with ventilation requirements.

For the remainder of lots further into the subdivision, there are no specific ventilation requirements.

3.3.3 Building Façade Constructions

Future traffic sound levels at the future dwellings with exposure to Trafalgar Road and/or Derry Road will exceed 60 dBA at night and 65 dBA during the daytime. MECP guidelines recommend that the windows, walls and doors be designed so that the indoor sound levels comply with MECP noise criteria.

The required building components are selected based on the Acoustical Insulation Factor (AIF) value for road traffic. To do so, calculations were performed to determine the acoustical insulation factors to maintain indoor sound levels within MECP guidelines. The calculation methods were developed by the National Research Council (NRC). They are based on the predicted future sound levels at the building facades, and the anticipated area ratios of the







facade components (windows, walls and doors) and the floor area of the adjacent room.

Acoustical Requirements for Glazing

At the time of this report, detailed floor plans and elevations are under development. Assuming a typical window to floor area of 50% (40% fixed and 10% operable) for the living/dining/family rooms and 40% (30% fixed and 10% operable) for the bedrooms, the minimum acoustical requirement for the basic window glazing, including glass in fixed sections, swing or sliding doors, and operable windows, is provided in Table 4.







Table 4: Preliminary Minimum Glazing Requirements

Prediction Location	Description	^{1,2} Minimum STC Requirements for Glazing
[A]	Dual frontage street townhouses with exposure to Trafalgar Road	*STC-37
[B]	Dual frontage street townhouses with exposure to Trafalgar Road and Street A	#STC-30
[C]	Dual frontage street townhouses with exposure to Street A and some exposure to Trafalgar Road	#OBC
[D]	Dual frontage townhouses with exposure to Trafalgar Road and Derry Road	#STC-32
[E]	Dual frontage street townhouses with exposure to Derry Road, Trafalgar Road, and Street B/C	#STC-32
[F]	Dual frontage street townhouses with exposure to Street B/C and Street A	#STC-29
[G]	Dual frontage street townhouses with exposure to Trafalgar Road, Street B/C, and Street A	#OBC
[H]	Lane access townhouses with exposure to Derry Road	^STC-37
[I]	Lane access townhouses with exposure to Derry Road and Street D/E	#STC-35
[J]	Street townhouses with exposure to Street A and Street D/E	#OBC
[K]	Second row of lane access townhouses from Derry Road	#OBC
[L]	Semi-detached dwelling with flanking exposure to Street A	#OBC
[M]	Street townhouses with exposure to Street A and Street F/G	#OBC
[N]	Lane access townhouses with exposure to Derry Road and Eighth Line	#OBC
[0]	Dual frontage street townhouses with exposure to Eighth Line	#OBC
[P]	Lane access townhouses with some exposure to Eighth Line	#OBC

Note: ¹STC requirement refers to fixed glazing. Small leaks through operable doors and windows are assumed, however, tight weather seals should be provided to reduce such leakage to the extent feasible.

²With assumed window to floor area ratios of 50% (40% fixed and 10% operable) for living/dining rooms and 40% (30% fixed and 10% operable) for bedrooms

Note that acoustic performance varies with manufacturer's construction details, and these are only guidelines to provide some indication of the type of glazing likely to be required. Acoustical test data for the selected assemblies should be requested from the suppliers, to ensure that the stated acoustic performance levels will be achieved by their assemblies. Operable sections, including doors and operable windows, must be well-fitted and weather-stripped in order to







[^] Assumed 30% wall to floor area ratios

^{*} Assumed 80% wall to floor area ratios

[#] Assumed 150% wall to floor area ratios

achieve the upper range of target STC values. As a note, if brick exterior constructions are included for the façades of the proposed dwellings, the required window glazing STC is likely to be reduced.

Further Review

When detailed floor plans and building elevations are available for the dwelling closest to Trafalgar Road and/or Derry Road, the building construction and glazing requirements should be refined based on actual window to floor area ratios.

4 WARNING CLAUSES

The MECP guidelines recommend that warning clauses be included in the property and tenancy agreements for all the dwellings with anticipated traffic noise sound level excesses. The following noise warning clauses are required for specific units as indicated in Table 5.

A suggested wording for future dwellings with sound level excesses of the MECP criteria but do not require physical mitigation measures is given below.

Type A:

Purchasers/tenants are advised that sound levels due to increasing road 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 dwellings requiring the provision for adding central air conditioning at the occupant's discretion is given below.

Type C:

This dwelling unit has been designed with the provision for adding central air conditioning at the occupant's discretion. Installation of central air conditioning by the occupant in low and medium density







developments will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound limits of the Municipality and the Ministry of the Environment.

A suggested wording for future dwellings requiring 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.

A suggested wording to identify the proximity of the proposed neighbourhood centre, proposed village squares, proposed school, and/or Parkway West Compressor Station is given below.

Type E:

Purchasers/tenants are advised that due to the proximity of the adjacent commercial, institutional facilities, and Parkway West Compressor Station, noise from these facilities may at times be audible.

These sample clauses are provided by the MECP as examples and can be modified by the Municipality as required.







5 SUMMARY

The following list as well as Table 5 summarize the recommendations made in this report. The reader is referred to Figure 4, as well as previous sections of the report where these recommendations are applied and discussed in more detail.

- Air conditioning is required for dwellings closest to Trafalgar Road and Derry Road. Forced air ventilation with ducts sized for the future installation of air conditioning by the occupant is required for dwellings further from Trafalgar Road and Derry Road, and along the collector roads.
- 2. Upgraded building constructions are required for dwellings closest to Trafalgar Road and Derry Road. When detailed floor plans and building elevations are available for these dwellings, the drawings should be reviewed to refine building construction and window glazing requirements. Any building constructions meeting the minimum requirements of the Ontario Building Code will provide sufficient acoustical insulation for the dwelling units.
- Noise warning clauses are required for dwellings with sound level excesses and to notify future occupants of nearby institutional, commercial blocks, and the Parkway West Compressor Station.
- 4. Commercial blocks and school blocks are proposed for the site. Some dwellings near these blocks may be impacted by the activities of the blocks. A noise study is required for the commercial blocks and school block as part of the approvals process and at the time of Site Plan approval when the siting plans including building elevations and potential uses are available to determine the impact of its activities on the existing and future residential uses nearby. Typically, noisy sources such as rooftop mechanical equipment, compressor or condenser units, or rooftop cooling towers will need to be considered. The buildings should be







appropriately designed to consider the proposed residences. A noise study is required to ensure that the noise emissions from the facilities on the innovation blocks comply with MECP guidelines limits contained in NPC 300.

The reader is referred to the previous sections of the report where these recommendations are discussed in more detail.

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

Prediction Location	Lot/Block No.	Acoustic Barrier	*Ventilation Requirements	Type of Warning Clause	Minimum Required Window STC
[A]	Blks 480 (western end unit), 481, 482 (western end unit)		Air Conditioning	A, D	~STC-37
[B]	Blks 482 (remaining units), 483, 484 (4 western units)		Air Conditioning	A, D	#STC-30
[C]	Blks 479, 480 (remaining units), 484 (eastern end unit)		Provision for A/C	A, C	#OBC
[D], [G]	Blks 475, 477 (western end unit)		Air Conditioning	A, D	#STC-32
[E]	Blk 476		Air Conditioning	A, D	#STC-32
	Blk 478 (eastern end unit)		Air Conditioning	A, D	#STC-29
[F]	Blks 446 - 449, 477 (remaining units), 478 (remaining units), 496 - 498 (western units)		Provision for A/C	А, С	ОВС
	Blks 511 (western end unit), 539 (western end unit), 549 (eastern end unit)		Air Conditioning	A, D, E	^STC-37
[H]	Blks 511 (remaining units), 512 – 514, 519 (western end unit), 521, 522, 525 – 527, 531 – 533, 545 – 548, 549 (remaining units)		Air Conditioning	A, D	^STC-37

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.

⁺ With assumed window to floor area ratios of 50% (40% fixed and 10% operable) for living/dining rooms and 40% (30% fixed and 10% operable) for bedrooms. When detailed floor plans and building elevations are available, the glazing requirements should be refined based on actual window to floor area ratios.

[^] Assumed 30% wall to floor area ratios

 $[\]sim$ Assumed 80% wall to floor area ratios

[#] Assumed 150% wall to floor area ratios

Table 5: Summary of Noise Control Requirements and Noise Warning Clauses (cont'd)

Prediction Location	Lot/Block No.	Acoustic Barrier	*Ventilation Requirements	Type of Warning Clause	Minimum Required Window STC
[1]	Blks 515 (northern unit), 520 (northern unit), 534 (northern unit), 544 (northern unit)		Air Conditioning	A, D	#STC-35
[J], [L], [M]	Lots 1, 100 – 105, 126, 167, 201 – 209, 242 – 258, 288, 292 – 306, 332, 333, 409 – 421, 435, Blks 443 – 445, 450 – 452, 453 (southern end unit), 463 (western end unit), 466, 467, 468 (remaining units), 469 (remaining units), 470, 471, 472 (northern end unit), 485 (western end units), 486 – 489 (southern units), 490 – 492 (northern units), 538 – 540, 554, 555		Provision for A/C	A, C	#OBC
	56, 75 - 88, 127 - 132, 162 - 166, 259, Blks 468 (western end unit), 469 (western end unit)		Provision for A/C	A, C, E	#OBC
[K]	Blks 515 (remaining units), 516 – 518, 519 (remaining units), 523, 524, 528 – 530, 535 – 537, 550 (remaining units), 551 – 553		Provision for A/C	А, С	#OBC
	Blk 550 (eastern end unit)		Provision for A/C	A, C, E	#OBC
[N]	Blks 508 - 510 (eastern units)		Provision for A/C	A, C, E	#OBC
[0]	Blks 473, 474, 558		Provision for A/C	A, C, E	#OBC
	Lots 12 - 23, 260 - 262 271, 272, Blks 454 (northern end unit), 559, 561			Е	#OBC
	Remaining dwellings				#OBC
	565, 566, 568 - 570	0	0	0	0
	567, 571, 572	0	0	0	0
	573	0	0	0	0

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.

⁺ With assumed window to floor area ratios of 50% (40% fixed and 10% operable) for living/dining rooms and 40% (30% fixed and 10% operable) for bedrooms. When detailed floor plans and building elevations are available, the glazing requirements should be refined based on actual window to floor area ratios.

[^] Assumed 30% wall to floor area ratios

[~] Assumed 80% wall to floor area ratios

[#] Assumed 150% wall to floor area ratios

O – When siting information is available for these blocks, a detailed noise study should be conducted to determine the acoustic requirements (acoustic barriers, ventilation, and building façade construction) when siting, grading, building elevations and floor plans are available and in the case of the innovation district/mixed use blocks, to ensure compliance with NPC-300.

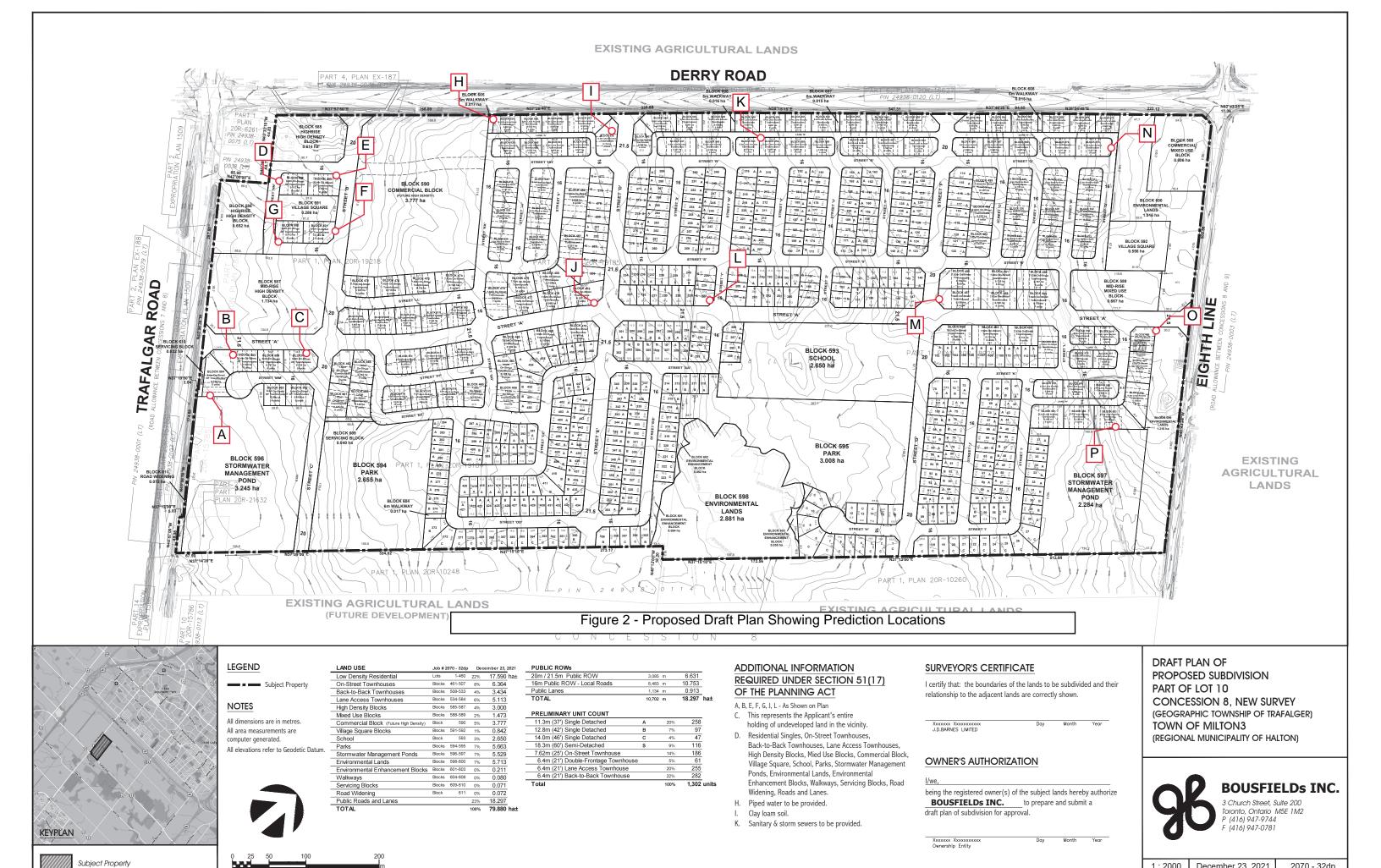


Figure 1 - Key Plan









1 : 2000 December 23, 2021

2070 - 32dp rawing Number



Figure 3 - Aerial Photo Showing Surrounding Land Uses







EXISTING AGRICULTURAL LANDS DERRY ROAD PART 4, PLAN EX-187 COMMERCIA MIXED USE BLOCK 0.806 ha BLOCK 590 MMERCIAL BLOCK BLOCK 491 7.62m (hy-Sireet) Countrouses 0.135 ha 6 dries ROAD LINE 77 STREET A STREET 'A' STREET 'A' GAR EIGHTH STREET 'A' BLOCK 593 TRAFALO SCHOOL 2.650 ha STREET MM. 6 BLOCK 595 BLOCK 596 **EXISTING** BLOCK 594 STORMWATER MANAGEMENT PARK **AGRICULTURAL** BLOCK 597 POND STORMWATER LANDS 3.245 ha POND 2.284 ha BLOCK 598 ENVIRONMENTAL LANDS 2.881 ha LEGEND Central air conditioning is required Forced air ventilation with ducts sized for the future installation of air PART 1, PLAN 20R-10260 conditioning is required **EXISTING AGRICULTURAL LANDS** (FUTURE DEVELOPMENT) Figure 4 - Proposed Draft Plan Showing Ventilation Requirements DRAFT PLAN OF LEGEND LAND USE PUBLIC ROWs ADDITIONAL INFORMATION SURVEYOR'S CERTIFICATE 20m / 21.5m Public ROW 16m Public ROW - Local Roads PROPOSED SUBDIVISION Low Density Residential 1-460 22% 17.590 ha± **REQUIRED UNDER SECTION 51(17)** Blocks 461-507 8% 6.364 Subject Property 6,483 m I certify that: the boundaries of the lands to be subdivided and their PART OF LOT 10 Blocks 508-533 4% 3.434 Public Lanes TOTAL OF THE PLANNING ACT Back-to-Back Townhouses relationship to the adjacent lands are correctly shown. Lane Access Townhouses Blocks 534-584 6% 5.113 18.297 ha± CONCESSION 8, NEW SURVEY NOTES A, B, E, F, G, J, L - As Shown on Plan High Density Blocks Blocks 585-587 4% 3.000 PRELIMINARY UNIT COUNT (GEOGRAPHIC TOWNSHIP OF TRAFALGER) C. This represents the Applicant's entire Mixed Use Blocks All dimensions are in metres. 11.3m (37') Single Detached 12.8m (42') Single Detached Commercial Block (Future High I Block 590 5% 3.777 holding of undeveloped land in the vicinity. **TOWN OF MILTON3** All area measurements are Blocks 591-592 1% 0.842 Village Square Blocks D. Residential Singles, On-Street Townhouses, (REGIONAL MUNICIPALITY OF HALTON) Block 593 3% 2.650 14.0m (46') Single Detached computer generated. Back-to-Back Townhouses, Lane Access Townhouses, 18.3m (60') Semi-Detached Blocks 594-595 7% 5.663 All elevations refer to Geodetic Datum. 7.62m (25') On-Street Townhouse 6.4m (21') Double-Frontage Townhouse 6.4m (21') Lane Access Townhouse Blocks 596-597 7% 5.529 High Density Blocks, Mied Use Blocks, Commercial Block, Stormwater Management Ponds OWNER'S AUTHORIZATION Environmental Lands Blocks 598-600 7% 5.713 Village Square, School, Parks, Stormwater Management 20% Environmental Enhancement Blocks Blocks 601-603 0% 0.211 Ponds, Environmental Lands, Environmental Walkways Blocks 604-608 0% 0.080 6.4m (21') Back-to-Back Townhouse 1,302 units Enhancement Blocks, Walkways, Servicing Blocks, Road Servicing Blocks Blocks 609-610 0% 0.071 Block 611 0% 0.072 **BOUSFIELDS INC.** Widening, Roads and Lanes. being the registered owner(s) of the subject lands hereby authorize Road Widening Public Roads and Lanes 3 Church Street, Suite 200 Toronto, Ontario M5E 1M2 **BOUSFIELDS INC.** to prepare and submit a H. Piped water to be provided. 100% 79.880 has I. Clay loam soil. draft plan of subdivision for approval. (416) 947-9744 K. Sanitary & storm sewers to be provided. (416) 947-0781 KEYPLAN Month

Subject Property

1: 2000 December 23, 2021 2070 - 32dp

Appendix A Road Traffic Data







Victor Garcia

From: Loro, Darren < Darren.Loro@halton.ca>

Sent: January 30, 2025 1:43 PM

To: Victor Garcia

Subject: RE: Road Traffic Data Request - Tremaine Road

Hi Victor,

Hope you're doing well!

The following future traffic data inputs should be applied in the Noise Study analysis for Derry Road and Trafalgar Road:

Derry Road (2035) AADT: 51,000 veh/day

Trucks: 3% medium/3% heavy

Lanes: 6

Trafalgar Road (2035) AADT: 51,000 veh/day

Trucks: 3% medium/3% heavy

Lanes: 6

Existing TMC, AADT and 24-hour count data can be requested from accesshalton@halton.ca if needed.

Eighth Line is under the Town's jurisdiction and thus existing and future traffic data for this roadway would have to be requested from Town staff.

Hope this helps! Let me know if you have any questions or wish to discuss further.

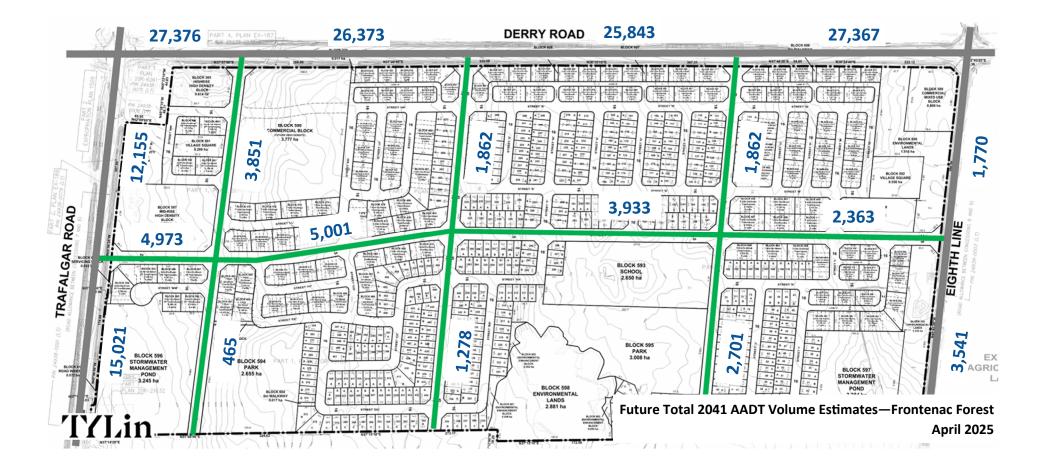
Cheers, Darren

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



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Turning Movement Count Location Name: DERRY RD & EIGHTH LINE Date: Tue, Sep 28, 2021 Deployment Lead: Theo Daglis

The Municipal Infrastructure Group SUITE 200 8800 DUFFERIN ST VAUGHAN ONTARIO, L4K 0C5 CANADA

											Turnin	g Movement Co	unt (2 . I	DERRY	RD & E	IGHTH	LINE)									
				N Appro						E Approa	ch RD					S Approac						W Approa	ach RD		Int. Total (15 min)	Int. Total (1 hr)
Start Time	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
06:00:00	0	0	0	0	0	0	0	69	1	0	0	70	2	0	1	0	0	3	3	146	0	0	0	149	222	
06:15:00	0	0	2	0	0	2	0	58	4	0	0	62	1	0	0	0	0	1	5	154	0	0	0	159	224	
06:30:00	0	0	0	0	0	0	0	130	13	0	0	143	2	0	2	0	0	4	6	258	0	0	0	264	411	
06:45:00	0	0	0	0	0	0	0	126	9	0	0	135	8	0	3	0	0	11	11	214	0	0	0	225	371	1228
07:00:00	0	0	0	0	0	0	0	113	4	0	0	117	5	0	4	0	0	9	8	281	0	0	0	289	415	1421
07:15:00	0	0	0	0	0	0	0	130	14	0	0	144	11	0	4	0	0	15	16	336	0	0	0	352	511	1708
07:30:00	0	0	0	0	0	0	0	192	22	0	0	214	8	0	7	0	0	15	8	365	0	0	0	373	602	1899
07:45:00	0	0	0	0	0	0	2	159	9	0	0	170	9	0	10	0	0	19	14	387	0	0	0	401	590	2118
08:00:00	0	0	0	0	0	0	0	171	13	0	0	184	12	0	5	1	0	18	17	378	0	0	0	395	597	2300
08:15:00	1	0	1	0	0	2	1	176	13	0	0	190	11	0	10	0	0	21	9	315	0	0	0	324	537	2326
08:30:00	0	0	0	0	0	0	0	202	14	0	0	216	12	0	1	0	0	13	13	325	0	0	0	338	567	2291
08:45:00	0	0	0	0	0	0	0	170	7	0	0	177	10	0	8	0	0	18	8	213	0	0	0	221	416	2117
***BREAK	**	p																								
16:00:00	0	0	0	0	0	0	0	344	6	0	0	350	16	0	8	0	0	24	7	281	0	0	0	288	662	
16:15:00	0	0	0	0	0	0	0	331	13	0	0	344	14	0	7	0	0	21	12	276	0	1	0	289	654	
16:30:00	1	0	0	0	0	1	1	346	11	0	0	358	6	0	3	0	0	9	12	293	1	0	0	306	674	
16:45:00	0	0	0	0	0	0	0	332	10	1	0	343	11	0	8	0	0	19	14	258	0	0	0	272	634	2624
17:00:00	0	0	0	0	0	0	0	342	12	0	0	354	14	0	7	0	1	21	10	297	0	0	0	307	682	2644
17:15:00	0	0	0	0	0	0	0	327	12	0	0	339	12	0	10	0	0	22	23	295	0	0	0	318	679	2669
17:30:00	0	0	0	0	0	0	0	349	10	0	0	359	7	0	7	0	0	14	11	244	0	0	0	255	628	2623
17:45:00	0	0	0	0	0	0	0	280	9	0	0	289	10	0	4	0	0	14	10	235	0	0	0	245	548	2537
18:00:00	0	0	0	0	0	0	0	269	9	0	0	278	17	0	5	0	0	22	15	210	0	0	0	225	525	2380
18:15:00	0	0	0	0	0	0	0	202	4	0	0	206	6	0	3	0	0	9	2	234	1	0	0	237	452	2153
18:30:00	1	0	2	0	0	3	0	198	3	0	0	201	9	2	3	0	0	14	10	200	0	0	0	210	428	1953
18:45:00	1	1	0	0	0	2	0	203	8	0	0	211	4	0	7	0	0	11	13	170	1	0	0	184	408	1813
Grand Total	4	1	5	0	0	10	4	5219	230	1	0	5454	217	2	127	1	1	347	257	6365	3	1	0	6626	12437	-
Approach%	40%	10%	50%	0%		-	0.1%	95.7%	4.2%	0%		-	62.5%	0.6%	36.6%	0.3%		-	3.9%	96.1%	0%	0%		-	-	-
Totals %	0%	0%	0%	0%		0.1%	0%	42%	1.8%	0%		43.9%	1.7%	0%	1%	0%		2.8%	2.1%	51.2%	0%	0%		53.3%	-	-
Heavy	0	0	0	0		-	0	155	3	0		-	6	0	4	0		-	7	172	0	0		-	-	-
Heavy %	0%	0%	0%	0%		-	0%	3%	1.3%	0%		-	2.8%	0%	3.1%	0%		-	2.7%	2.7%	0%	0%		-	-	-
Bicycles	-	-	-	-		-	-	-	-			-	-	-	-	-		-	-	-	-	-		-	-	-
Bicycle %	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-

Turning Movement Count Location Name: DERRY RD & EIGHTH LINE Date: Tue, Sep 28, 2021 Deployment Lead: Theo Daglis

The Municipal Infrastructure Group SUITE 200 8800 DUFFERIN ST VAUGHAN ONTARIO, L4K 0C5 CANADA

							Peak Hour: 07:30 AM - 08:30 AM Weather: Overcast Clouds (12.27 °C)																			
Start Time				N Approa	ach INE					E Approach	h D					S Approa	ch NE			W Approach DERRY RD						
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total		
07:30:00	0	0	0	0	0	0	0	192	22	0	0	214	8	0	7	0	0	15	8	365	0	0	0	373	602	
07:45:00	0	0	0	0	0	0	2	159	9	0	0	170	9	0	10	0	0	19	14	387	0	0	0	401	59	
08:00:00	0	0	0	0	0	0	0	171	13	0	0	184	12	0	5	1	0	18	17	378	0	0	0	395	59	
08:15:00	1	0	1	0	0	2	1	176	13	0	0	190	11	0	10	0	0	21	9	315	0	0	0	324	53	
Grand Total	1	0	1	0	0	2	3	698	57	0	0	758	40	0	32	1	0	73	48	1445	0	0	0	1493	23	
Approach%	50%	0%	50%	0%		-	0.4%	92.1%	7.5%	0%		-	54.8%	0%	43.8%	1.4%		-	3.2%	96.8%	0%	0%		-		
Totals %	0%	0%	0%	0%		0.1%	0.1%	30%	2.5%	0%		32.6%	1.7%	0%	1.4%	0%		3.1%	2.1%	62.1%	0%	0%		64.2%		
PHF	0.25	0	0.25	0		0.25	0.38	0.91	0.65	0		0.89	0.83	0	8.0	0.25		0.87	0.71	0.93	0	0		0.93		
Heavy		0	0	0		0		28	1	0		29	0	0	3	0		3	4	16	0	0		20		
Heavy %	0%	0%	0%	0%		0%	0%	4%	1.8%	0%		3.8%	0%	0%	9.4%	0%		4.1%	8.3%	1.1%	0%	0%		1.3%		
Lights	1	0	1	0		2	3	670	56	0		729	40	0	29	1		70	44	1427	0	0		1471		
Lights %	100%	0%	100%	0%		100%	100%	96%	98.2%	0%		96.2%	100%	0%	90.6%	100%		95.9%	91.7%	98.8%	0%	0%		98.5%		
ingle-Unit Trucks	0	0	0	0		0	0	19	1	0		20	0	0	3	0		3	1	9	0	0		10		
gle-Unit Trucks %	0%	0%	0%	0%		0%	0%	2.7%	1.8%	0%		2.6%	0%	0%	9.4%	0%		4.1%	2.1%	0.6%	0%	0%		0.7%		
Buses	0	0	0	0		0	0	6	0	0		6	0	0	0	0		0	3	4	0	0		7		
Buses %	0%	0%	0%	0%		0%	0%	0.9%	0%	0%		0.8%	0%	0%	0%	0%		0%	6.3%	0.3%	0%	0%		0.5%		
rticulated Trucks	0	0	0	0		0	0	3	0	0		3	0	0	0	0		0	0	3	0	0		3		
ticulated Trucks %	0%	0%	0%	0%		0%	0%	0.4%	0%	0%		0.4%	0%	0%	0%	0%		0%	0%	0.2%	0%	0%		0.2%		
Bicycles on Road	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	2	0	0		2		
cycles on Road %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0.1%	0%	0%		0.1%		
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-		

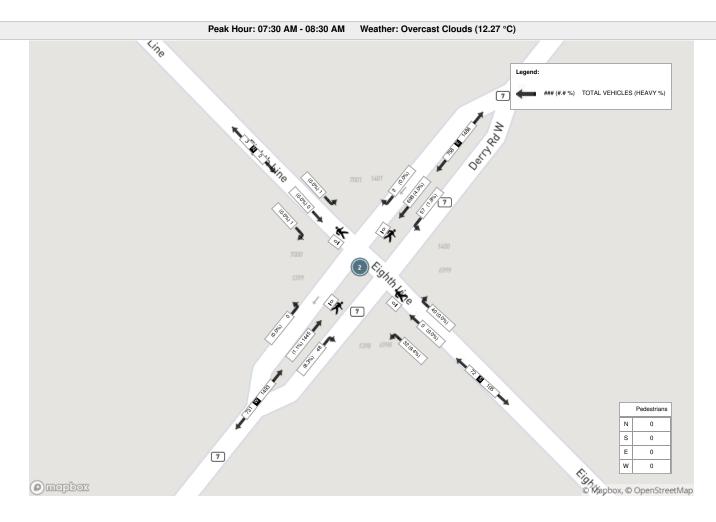
Turning Movement Count Location Name: DERRY RD & EIGHTH LINE Date: Tue, Sep 28, 2021 Deployment Lead: Theo Daglis

The Municipal Infrastructure Group SUITE 200 8800 DUFFERIN ST VAUGHAN ONTARIO, L4K 0C5 CANADA

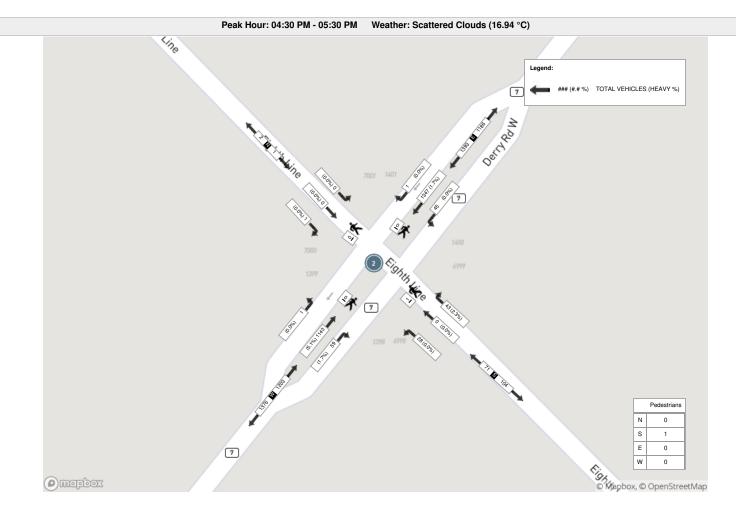
Start Time				N Appro	ach LINE					E Approac	e h D					S Approac	ch NE			W Approach DERRY RD					
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
16:30:00	1	0	0	0	0	1	1	346	11	0	0	358	6	0	3	0	0	9	12	293	1	0	0	306	6
16:45:00	0	0	0	0	0	0	0	332	10	1	0	343	11	0	8	0	0	19	14	258	0	0	0	272	6
17:00:00	0	0	0	0	0	0	0	342	12	0	0	354	14	0	7	0	1	21	10	297	0	0	0	307	
17:15:00	0	0	0	0	0	0	0	327	12	0	0	339	12	0	10	0	0	22	23	295	0	0	0	318	
Grand Total	1	0	0	0	0	1	1	1347	45	1	0	1394	43	0	28	0	1	71	59	1143	1	0	0	1203	
Approach%	100%	0%	0%	0%		-	0.1%	96.6%	3.2%	0.1%		-	60.6%	0%	39.4%	0%		-	4.9%	95%	0.1%	0%		-	
Totals %	0%	0%	0%	0%		0%	0%	50.5%	1.7%	0%		52.2%	1.6%	0%	1%	0%		2.7%	2.2%	42.8%	0%	0%		45.1%	
PHF	0.25	0	0	0		0.25	0.25	0.97	0.94	0.25		0.97	0.77	0	0.7	0		0.81	0.64	0.96	0.25	0		0.95	
Heavy	0	0	0	0		0	0	23	0	0		23	1	0	0	0		1	1	58	0	0		59	
Heavy %	0%	0%	0%	0%		0%	0%	1.7%	0%	0%		1.6%	2.3%	0%	0%	0%		1.4%	1.7%	5.1%	0%	0%		4.9%	
Lights	1	0	0	0		1	1	1321	45	1		1368	42	0	28	0		70	58	1084	1	0		1143	
Lights %	100%	0%	0%	0%		100%	100%	98.1%	100%	100%		98.1%	97.7%	0%	100%	0%		98.6%	98.3%	94.8%	100%	0%		95%	
ingle-Unit Trucks	0	0	0	0		0	0	9	0	0		9	0	0	0	0		0	1	35	0	0		36	
ngle-Unit Trucks %	0%	0%	0%	0%		0%	0%	0.7%	0%	0%		0.6%	0%	0%	0%	0%		0%	1.7%	3.1%	0%	0%		3%	
Buses	0	0	0	0		0	0	5	0	0		5	1	0	0	0		1	0	4	0	0		4	
Buses %	0%	0%	0%	0%		0%	0%	0.4%	0%	0%		0.4%	2.3%	0%	0%	0%		1.4%	0%	0.3%	0%	0%		0.3%	
rticulated Trucks	0	0	0	0		0	0	9	0	0		9	0	0	0	0		0	0	19	0	0		19	
ticulated Trucks %	0%	0%	0%	0%		0%	0%	0.7%	0%	0%		0.6%	0%	0%	0%	0%		0%	0%	1.7%	0%	0%		1.6%	
Bicycles on Road	0	0	0	0		0	0	3	0	0		3	0	0	0	0		0	0	1	0	0		1	
cycles on Road %	0%	0%	0%	0%		0%	0%	0.2%	0%	0%		0.2%	0%	0%	0%	0%		0%	0%	0.1%	0%	0%		0.1%	











Appendix B Sample STAMSON 5.04 Output







NORMAL REPORT STAMSON 5.0 Date: 25-04-2025 11:15:03 MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

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

Description: Dual frontage street townhouses with exposure to Trafalgar Road

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

Car traffic volume : 21573/2397 veh/TimePeriod Medium truck volume : 689/77 veh/TimePeriod * Heavy truck volume : 689/77 veh/TimePeriod *

Posted speed limit : 70 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): 25500 Percentage of Annual Growth : 0.00 Number of Years of Growth : 0.00 Medium Truck % of Total Volume : 3.00
Heavy Truck % of Total Volume : 3.00
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 1: Trafalgar (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 : 21.20 / 21.20 m Receiver height : 4.50 / 4.50 m

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

Reference angle : 0.00

Road data, segment # 2: Trafalgar (day/night) -----

Car traffic volume : 21573/2397 veh/TimePeriod * Medium truck volume : 689/77 veh/TimePeriod * Heavy truck volume : 689/77 veh/TimePeriod *

Posted speed limit : 70 km/h Road gradient :

0 %1 (Typical asphalt or concrete) Road pavement

* 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 : 3.00 Heavy Truck % of Total Volume : 3.00 Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 2: Trafalgar (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg Wood depth : 0 (No woods No of house rows : 0 / 0 Surface : 2 (Reflective (No woods.)

0 / 0
2 (Reflective ground surface)

Receiver source distance : 30.00 / 30.00 m Receiver height : 4.50 / 4.50

1 Topography (Flat/gentle slope; no barrier)

: 0.00 Reference angle

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

Source height = 1.32 m

ROAD (0.00 + 70.28 + 0.00) = 70.28 dBA

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

-90 90 0.00 71.78 0.00 -1.50 0.00 0.00 0.00 0.00 70.28

Segment Leq : 70.28 dBA♠

Results segment # 2: Trafalgar (day)

Source height = 1.32 m

ROAD (0.00 + 68.77 + 0.00) = 68.77 dBA

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq ______ -90 90 0.00 71.78 0.00 -3.01 0.00 0.00 0.00 0.00 68.77

Segment Leq: 68.77 dBA

Total Leq All Segments: 72.60 dBA

Results segment # 1: Trafalgar (night)

Source height = 1.32 m

ROAD (0.00 + 63.76 + 0.00) = 63.76 dBA

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







-90 90 0.00 65.26 0.00 -1.50 0.00 0.00 0.00 0.00 63.76

Segment Leq: 63.76 dBA

Results segment # 2: Trafalgar (night) _____

Source height = 1.32 m

ROAD (0.00 + 62.25 + 0.00) = 62.25 dBAAngle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -90 90 0.00 65.26 0.00 -3.01 0.00 0.00 0.00 0.00 62.25

Segment Leq: 62.25 dBA

Total Leq All Segments: 66.08 dBA

TOTAL Leg FROM ALL SOURCES (DAY): 72.60 dBA (NIGHT): 66.08 dBA





NORMAL REPORT STAMSON 5.0 Date: 25-04-2025 11:25:27

MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

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

Description: Lane access townhouses with exposure to Derry Rd

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

Car traffic volume : 21573/2397 veh/TimePeriod Medium truck volume : 689/77 veh/TimePeriod * Heavy truck volume : 689/77 veh/TimePeriod *

Posted speed limit : 80 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): 25500 Percentage of Annual Growth : 0.00 Number of Years of Growth : 0.00 Medium Truck % of Total Volume : 3.00 Heavy Truck % of Total Volume : 3.00 Day (16 hrs) % of Total Volume : 90.00

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

-----Angle1 Angle2 : -90.00 deg 90.00 deg

Wood depth : 0
No of house rows : 0 / 0
Surface : 2 (No woods.)

(Reflective ground surface)

Receiver source distance : 16.00 / 16.00 m Receiver height : 4.50 / 4.50 m

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

Reference angle : 0.00

Road data, segment # 2: Derry (day/night)

Car traffic volume : 21573/2397 veh/TimePeriod * Medium truck volume : 689/77 veh/TimePeriod * Heavy truck volume : 689/77 veh/TimePeriod *

Posted speed limit : 80 km/h 0 % Road gradient :

: 1 (Typical asphalt or concrete) Road pavement

* 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 : 3.00 Heavy Truck % of Total Volume : 3.00 Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 2: Derry (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg Wood depth : 0 (No woods No of house rows : 0 / 0 Surface : 2 (Reflective (No woods.)

0 / 0
2 (Reflective ground surface)

Receiver source distance : 29.00 / 29.00 m Receiver height : 4.50 / 4.50 Topography : 1 (F)

(Flat/gentle slope; no barrier)

Reference angle : 0.00

Results segment # 1: Derry (day)

Source height = 1.32 m

ROAD (0.00 + 72.74 + 0.00) = 72.74 dBA

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

-90 90 0.00 73.02 0.00 -0.28 0.00 0.00 0.00 0.00 72.74

Segment Leq: 72.74 dBA

Results segment # 2: Derry (day)

Source height = 1.32 m

ROAD (0.00 + 70.15 + 0.00) = 70.15 dBA

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

______ -90 90 0.00 73.02 0.00 -2.86 0.00 0.00 0.00 0.00 70.15

Segment Leq: 70.15 dBA

Total Leq All Segments: 74.65 dBA

Results segment # 1: Derry (night)

Source height = 1.32 m

ROAD (0.00 + 66.22 + 0.00) = 66.22 dBA

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







-90 90 0.00 66.50 0.00 -0.28 0.00 0.00 0.00 0.00 66.22

Segment Leq: 66.22 dBA

Results segment # 2: Derry (night)

Source height = 1.32 m

ROAD (0.00 + 63.64 + 0.00) = 63.64 dBA

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

-90 90 0.00 66.50 0.00 -2.86 0.00 0.00 0.00 0.00 63.64

Segment Leq: 63.64 dBA

Total Leq All Segments: 68.13 dBA

TOTAL Leg FROM ALL SOURCES (DAY): 74.65 dBA

(NIGHT): 68.13 dBA







NORMAL REPORT Date: 25-04-2025 11:25:41 STAMSON 5.0

MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: 1.te Time Period: Day/Night 16/8 hours

Description: Semi-detached dwelling with flanking exposure to Street A

Road data, segment # 1: Street A (day/night) -----

Car traffic volume : 4366/485 veh/TimePeriod * Medium truck volume: 90/10 veh/TimePeriod *
Heavy truck volume: 45/5 veh/TimePeriod *
Posted speed limit: 50 km/h

0 % Road gradient :

Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 5001 Percentage of Annual Growth : 0.00 Number of Years of Growth : 0.00 Medium Truck % of Total Volume : 2.00
Heavy Truck % of Total Volume : 1.00
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 1: Street A (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 : 15.00 / 15.00 m Receiver height : 4.50 / 4.50 m

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

Reference angle : 0.00

Results segment # 1: Street A (day)

Source height = 1.00 m

ROAD (0.00 + 59.36 + 0.00) = 59.36 dBA

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

-90 90 0.00 59.36 0.00 0.00 0.00 0.00 0.00 59.36 ______

Segment Leq: 59.36 dBA

Total Leq All Segments: 59.36 dBA







Results segment # 1: Street A (night)

Source height = 1.00 m

ROAD (0.00 + 52.82 + 0.00) = 52.82 dBAAngle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq ______ -90 90 0.00 52.82 0.00 0.00 0.00 0.00 0.00 0.00 52.82

Segment Leq: 52.82 dBA

Total Leq All Segments: 52.82 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 59.36 dBA

(NIGHT): 52.82 dBA







NORMAL REPORT STAMSON 5.0 Date: 25-04-2025 11:29:41

MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: lola.te Time Period: 16 hours

Description: OLA of semi-detached dwelling with flanking exposure to Street A

Road data, segment # 1: Street A _____

Car traffic volume : 4366 veh/TimePeriod * Medium truck volume : 90 veh/TimePeriod *
Heavy truck volume : 45 veh/TimePeriod *

Posted speed limit : 50 km/h Road gradient : 0 %

Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Street A

Angle1 Angle2 : -90.00 deg Wood depth : 0 -45.00 deg (No woods.)

No of house rows : 0

Surface (Absorptive ground surface) 1

Receiver source distance : 20.60 m Receiver height : 1.50 m

Topography (Flat/gentle slope; with barrier)

Angle2 : -45.00 deg

: 2 : -90.00 deg : 7.00 m Barrier angle1 Barrier height Barrier receiver distance : 3.00 m Source elevation : 0.00 m : 0.00 m Receiver elevation Barrier elevation : 0.00 m : 0.00 Reference angle

Road data, segment # 2: Street A

Car traffic volume : 4366 veh/TimePeriod * Medium truck volume : 90 veh/TimePeriod *
Heavy truck volume : 45 veh/TimePeriod *
Posted speed limit : 50 km/h

Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: Street A

Angle1 Angle2 : -45.00 deg Wood depth : 0 90.00 deg No of house rows : 0
Surface (No woods.)

(Absorptive ground surface)

Receiver source distance : 20.60 m Receiver height : 1.50 m







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

Reference angle : 0.00

Results segment # 1: Street A

Source height = 1.00 m

Barrier height for grazing incidence

ROAD (0.00 + 34.27 + 0.00) = 34.27 dBA

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq
-90 -45 0.26 59.36 0.00 -1.73 -7.32 0.00 0.00 -16.04 34.27

Segment Leq: 34.27 dBA

Results segment # 2: Street A

Source height = 1.00 m

ROAD (0.00 + 54.78 + 0.00) = 54.78 dBA

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

-45 90 0.66 59.36 0.00 -2.29 -2.29 0.00 0.00 0.00 54.78

Segment Leq: 54.78 dBA

Total Leq All Segments: 54.82 dBA

TOTAL Leq FROM ALL SOURCES: 54.82 dBA







NORMAL REPORT STAMSON 5.0 Date: 25-04-2025 11:26:05

MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

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

Description: Dual frontage street townhouses with exposure to Eighth Line

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

Car traffic volume : 5934/659 veh/TimePeriod Medium truck volume : 106/12 veh/TimePeriod * Heavy truck volume : 174/19 veh/TimePeriod *

Posted speed limit : 70 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): 6255 Percentage of Annual Growth : 2.50 Number of Years of Growth : 4.00 Medium Truck % of Total Volume : 1.70 Heavy Truck % of Total Volume : 2.80 Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 1: Eighth (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 : 54.00 / 54.00 m Receiver height : 4.50 / 4.50 m

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

Reference angle : 0.00

Road data, segment # 2: Street A (day/night) -----

Car traffic volume : 4366/485 veh/TimePeriod *

Medium truck volume : 90/10 veh/TimePeriod * Heavy truck volume : 45/5 veh/TimePeriod *

Posted speed limit : 50 km/h Road gradient : 0 %

: 1 (Typical asphalt or concrete) Road pavement

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

24 hr Traffic Volume (AADT or SADT): 5001 Percentage of Annual Growth : 0.00 Number of Years of Growth : 0.00







Medium Truck % of Total Volume : 2.00 Heavy Truck % of Total Volume : 1.00 Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 2: Street A (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)

Receiver source distance : 15.00 / 15.00 m Receiver height : 4.50 / 4.50
Topography : 1 (F)

(Flat/gentle slope; no barrier)

Reference angle : 0.00

Results segment # 1: Eighth (day) -----

Source height = 1.29 m

ROAD (0.00 + 55.61 + 0.00) = 55.61 dBA

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

-90 90 0.58 65.69 0.00 -8.77 -1.31 0.00 0.00 0.00 55.61 ______

Segment Leq: 55.61 dBA

Results segment # 2: Street A (day)

Source height = 1.00 m

ROAD (0.00 + 56.35 + 0.00) = 56.35 dBA

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

______ 0 90 0.00 59.36 0.00 0.00 -3.01 0.00 0.00 0.00 56.35

Segment Leq: 56.35 dBA

Total Leq All Segments: 59.01 dBA

Results segment # 1: Eighth (night)

Source height = 1.29 m

ROAD (0.00 + 49.04 + 0.00) = 49.04 dBA

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







-90 90 0.58 59.13 0.00 -8.77 -1.31 0.00 0.00 0.00 49.04

Segment Leq: 49.04 dBA

Results segment # 2: Street A (night)

Source height = 1.00 m

ROAD (0.00 + 49.81 + 0.00) = 49.81 dBA

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

0 90 0.00 52.82 0.00 0.00 -3.01 0.00 0.00 0.00 49.81

Segment Leq: 49.81 dBA

Total Leq All Segments: 52.45 dBA

TOTAL Leg FROM ALL SOURCES (DAY): 59.01 dBA

(NIGHT): 52.45 dBA





