



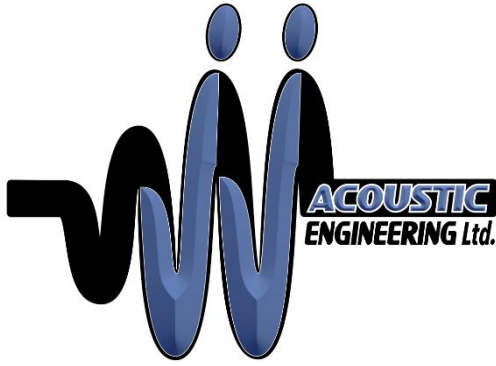
## **Road/Rail Traffic and Stationary Noise Impact Study**

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1103 Drouillard Road, Windsor, Ontario

**JJ-00820 NIS1**





June 3, 2026,

Reference No. JJ-00820-NIS1

Michael Dworczak, P.Eng | Principal  
MDT Urban Traffic Solutions Ltd.  
[michael@mdtconsulting.ca](mailto:michael@mdtconsulting.ca)

Dear Mr. Dworczak:

**Re: Road/Rail Traffic and Stationary Noise Impact Study  
1103 Drouillard Road, Windsor, Ontario**

## **1. Introduction**

JJ Acoustic Engineering Ltd. (JJAEE) was retained to complete a Road/Rail Traffic and Stationary Noise Impact Study (Study) for the mixed-use development located at 1103 Drouillard Road in Windsor, Ontario (Site). The Site will be developed into a 3-storey commercial/residential building. JJAEE has provided a copy of the most up-to-date Site Plan in Attachment A.

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

This Study has determined that the potential environmental noise impact from road traffic noise is significant. The proposed development will need the following: a requirement for central air-conditioning, noise warning clauses and special building components. Road traffic noise control requirements for the Site were determined based on road traffic volumes provided by the City of Windsor (City) and forecasted to 10 years from the date of this study.

JJ Acoustic Engineering Ltd.  
[joey@jjae.ca](mailto:joey@jjae.ca)  
226-346-6473

The following attachments were included with this Study:

- Attachment A – Site Plan
- Attachment B – Traffic Data Summary Table & Sample Stamson Traffic Model Outputs
- Attachment C – Stationary Noise Impact Figures
- Attachment D – Stationary Noise Impact Source Table

## **2. Road/Rail Traffic Analysis**

### **2.1 Road Traffic Noise Modeling Methodology**

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

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

Where there are multiple sources of noise, such as road and rail, JJAЕ evaluated noise control measures by combining both road and rail sources and applying measures as described in Section C7.3 of NPC 300.

### **2.2 Road and Rail Traffic Model Input Parameters**

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

The Site has one significant roadway in the vicinity of the development: Drouillard Rd approximately 15 meters to the East Façade of the building. Where there are intervening and off-site structures that provide line-of-sight obstruction to the roads, JJAЕ did not include line-of-sight obstruction in our analysis as to calculate worst-case noise impact.

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

### 2.2.1 Road Traffic Parameters

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

#### ***Drouillard Road:***

- Current AADT (2017): 5,100
- Forecast AADT (2036): 6,528
- Commercial Vehicle Rates: 5% medium trucks and 15% heavy trucks
- Posted Speed Limit: 50 km/h
- Day Night Splits: 90% day and 10% night

The traffic data is the foundation of this analysis and the Study will be updated if the values change. JJAЕ assumed 2.5% annual growth to forecast AADT. Traffic data was supplied by the City. JJAЕ assumed a conservative 5% and 15% for the medium trucks and heavy trucks, respectively. This percentage assumption more than quadruples the number of trucks counted in a study written by Arcadis titled “*Draft Report Phase 2: Truck Route Network Development City of Windsor Truck Route Study*” dated April 12, 2024 on page 25. A copy of this study has been supplied in Attachment B.

The City’s AADT report for this Noise Studies report has been supplied in Attachment B.

### 2.2.2 Rail Traffic Parameters

JJAЕ was provided with the Rail Traffic Data for the ETR from a 2026 project and VIA Rail data from 2022, which have been summarized below. Future traffic volumes were projected using a 2.5% annual growth rate over a 10-year period, based on the existing combined two-way rail traffic conditions.

| ETR                | VIA Passenger      | VIA Freight        |
|--------------------|--------------------|--------------------|
| 4 Daytime Trains   | 6 Daytime Trains   | 1 Daytime Trains   |
| 0 Nighttime Trains | 2 Nighttime Trains | 1 Nighttime Trains |
| 4 Locomotives      | 2 Locomotives      | 4 Locomotives      |
| 50 Cars            | 8 Cars             | 140 Cars           |
| Speed of 17km/h    | Speed of 129km/h   | Speed of 97km/h    |

## 2.3 Road Traffic and Rail Noise Modeling Results

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

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

## 2.4 Road Traffic Modeling Discussion

Noise control requirements will be defined based on NPC 300.

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

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

The Site does not have any feasible location for an OLA and thus, JJAЕ has not provided any calculations for an OLA at the Site.

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

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

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

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

Table B.1 summarizes the predicted worst-case sound levels and the requirements for the units. The following warning clause is required:

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

At minimum, the building must be constructed to standard Ontario Building Code requirements. Improved building components are required and summarized in Table B.1. JJAЕ has assumed 35% window to floor area coverage and that windows are thick and operable. In addition, exterior wall compositions must be a minimum of STC 46.

### 3. Stationary Noise Impact Analysis

#### 3.1 Stationary Noise Impact Sound Level Criteria

The general criteria for stationary noise sources are defined by NPC 300. The criteria defined in Table C-5 and C-6, "Exclusion Limit Values of One-Hour Equivalent Sound Level (Leq, dBA) Outdoor Points of Reception" and "Exclusion Limit Values of One-Hour Equivalent Sound Level (Leq, dBA) Plane of Window of Noise Sensitive Spaces" are used to evaluate the noise impact at the proposed development.

The criteria for a Class 1 area have been summarized below:

| Receiver Category         | Time Period              | Stationary Noise Criteria |
|---------------------------|--------------------------|---------------------------|
| Outdoor Living Area (OLA) | Day = 07:00 to 19:00     | Leq = 50 dBA              |
|                           | Evening = 19:00 to 23:00 | Leq = 45 dBA              |
| Plane of Window (POW)     | Day = 07:00 to 23:00     | Leq = 50 dBA              |
|                           | Night = 23:00 to 07:00   | Leq = 45 dBA              |

#### 3.2 Modelling Methodology

The stationary noise impact was evaluated using the CADNA A acoustic modelling software that is based on the ISO 9613-2 standard. The data for all potential stationary noise sources was summarized in Attachment D.

- **Ground Absorption:** Default ground absorption coefficient of 0.7 was used.
- **Temperature:** 10°C
- **Humidity:** 70%
- **Building Reflection Coefficient:** Absorption Coefficient Alpha of 0.37 (Reflection Loss of 2dB, Structured Façade) was used.
- **Time-Weighted Adjustment:** where sources operate non-continuously JJAEE has provided operating times and as shown in Sections 4 and 5.
- **Tonality:** A 5 dBA tonal penalty was applied to all tonal sources, where applicable. JJAEE has provided a (T) for sources identified as tonal in Sections 4 and 5.
- **Reflection Order:** A maximum reflection order of 1 was used to evaluate indirect noise impact.

## 4. Noise Impact Summary – From Site to Environment

The mechanical equipment for these buildings is similar to that of a single-family home and considered to be environmentally insignificant. Therefore, the noise impact from the Site to the neighboring buildings is considered to be environmentally insignificant.

## 5. Noise Impact Summary – From Environment to Site

There are several buildings near the site. JJAЕ has identified several potential stationary noise sources including:

- Single-Fan HVAC Units (60 minutes daytime, 30 minutes nighttime)
- Representative MUA (Steady-State)
- Representative Wet Scrubber
- Heavy Trucks (3 movements/per hour, Speed of 10 km/hr.)
- Heavy Truck Idling (60 minutes per hour during the daytime)

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

JJAЕ modelled the noise impact from all significant noise sources to the Site. The results are summarized in the table below and illustrated on Figure 1.

| Site<br>Façades | Worst Case<br>Daytime Sound<br>Level (dBA) | Daytime<br>Noise Limit<br>(dBA) | Worst Case<br>Nighttime Sound<br>Level (dBA) | Nighttime<br>Noise Limit<br>(dBA) | Limits<br>met |
|-----------------|--------------------------------------------|---------------------------------|----------------------------------------------|-----------------------------------|---------------|
| North           | 48                                         | 50                              | 45                                           | 45                                | Yes           |
| East            | 50                                         | 50                              | 45                                           | 45                                | Yes           |
| South           | 48                                         | 50                              | 42                                           | 45                                | Yes           |
| West            | 38                                         | 50                              | 33                                           | 45                                | Yes           |

From the table above it can be seen that all façades are below the noise limits.

### 5.1 Ford Windsor Engine Plant (Henry Ford Centre Drive)

JJAЕ has made the following conservative assumptions in assessing potential noise impacts from truck-related activities at the facility:

- Each group of loading/unloading bay doors receives up to three heavy truck movements per hour during the daytime period;
- Heavy truck speeds are assumed to be 10 km/h;
- One heavy truck is assumed to be continuously idling at each group of bay doors during daytime hours.

The Ford Windsor Engine Plant, located at approximately 1000 Henry Ford Centre Drive, is situated roughly 160 m from the Site and was reviewed as part of this assessment. The facility is a large

industrial operation primarily consisting of engine machining and assembly processes. A review of available aerial imagery and observed site conditions indicates the presence of typical rooftop mechanical equipment, including HVAC units and ventilation systems, which represent the most likely sources of stationary noise emissions.

Industrial facilities of this nature are regulated under the Ontario Ministry of the Environment, Conservation and Parks (MOECP) Environmental Compliance Approval (ECA) framework, which requires that sound emissions from stationary sources comply with NPC-300 exclusion limits at nearby points of reception.

JJAE attempted to contact representatives of the Ford Windsor Engine Plant to obtain detailed information regarding truck delivery schedules, frequencies, and operational characteristics; however, no information was made available at the time of this Study.

To supplement the desktop review, JJAE conducted a site visit on Tuesday, June 2, 2026, during which field observations were carried out along Henry Ford Centre Drive between approximately 11:30 AM and 12:30 PM, representing typical daytime operating conditions. During this site inspection:

- No dominant or clearly distinguishable noise sources attributable to the Ford Windsor Engine Plant were identified at or near the Site;
- Ambient sound levels were primarily influenced by local road traffic and general urban activity;
- Noise from rooftop mechanical equipment, if present, was not perceptible above the ambient sound environment;
- No significant truck activity or associated noise was observed or audible during the monitoring period.

In addition, the portion of the plant façade facing the Site includes a single door bay, which was observed to be closed at the time of the site visit. This façade is further separated from the Site by approximately 170 m and is screened by intervening residential dwellings (two rows of houses) and mature vegetation, providing additional attenuation and visual shielding.

Based on the combination of field observations and supporting assessment, the Ford Windsor Engine Plant is not expected to be a noise-significant source at the proposed development for the following reasons:

- **Distance Attenuation:** At a separation distance of approximately 160 m, sound propagation from rooftop mechanical systems and industrial activities is expected to attenuate substantially before reaching the Site;
- **Nature of Operations:** The facility consists primarily of enclosed machining and assembly processes, which inherently limit the propagation of noise beyond the building envelope;
- **Regulatory Compliance:** The facility is subject to MOECP requirements and must comply with NPC-300 sound level limits at off-site receptors;
- **Field Verification:** Site observations confirmed that the facility does not produce perceptible or dominant noise at the Site under typical daytime conditions.

Nevertheless, in the absence of confirmed operational data—particularly with respect to truck deliveries—JJAЕ has adopted a conservative approach by incorporating the truck activity assumptions outlined above into the noise model.

Furthermore, the stationary noise modelling completed for the surrounding area (refer to Section 5 and Attachment D) indicates that cumulative sound levels at all façades remain below the applicable NPC-300 limits.

Based on the combined consideration of regulatory requirements, separation distance, operational characteristics, conservative modelling assumptions, and field observations, the Ford Windsor Engine Plant is not considered a noise-significant source and is not expected to pose a risk of adverse stationary noise impacts to the proposed development.

## **6. Recommendations and Implementation**

### **6.1 Stationary Noise Impact Recommendations**

The stationary noise impacts from neighboring buildings to the Site were evaluated and the sound level predictions were determined to be below the noise limits.

The mechanical equipment for these buildings is similar to that of a single-family home and considered to be environmentally insignificant. Therefore, the noise impact from the Site to the neighboring buildings is considered to be environmentally insignificant.

### **6.2 Road/Rail Traffic Impact Recommendations**

The road traffic noise impacts were above the NPC 300 requirements. Noise mitigation measures include:

- Warning Clause Type D to be registered on Title and/or included in all agreements of purchase and sale and/or leases and/or disclosure statements and declarations for all the units.
- North Façade requires a minimum of STC 30 glazing installed with a maximum window to floor area ratio of 35% and thick operable windows. In addition, exterior wall compositions must be a minimum of STC 46.
- East Façade requires a minimum of STC 28 glazing installed with a maximum window to floor area ratio of 35% and thick operable windows. In addition, exterior wall compositions must be a minimum of STC 46.
- Essex Terminal Railway Company Warning Clause to be registered on Title and/or included in all agreements of purchase and sale and/or leases and/or disclosure statements and declarations for all the units.
- JJAЕ and the client require air conditioning for all units.

#### **Outdoor Living Area:**

The Site does not have any feasible location for an OLA and thus, JJAЕ has not provided any calculations for an OLA at the Site

These have been summarized in Attachment B under Table B1. Where there are discrepancies between this section and the results in Table B1, the recommendations in this section supersede Table B1, as this section provides worst-case solutions for the noise impact.

As the proposed residential development is located more than 75 m from the ETR right-of-way, ground-borne railway vibration measurements, analyses and/or vibration mitigation measures are not required.

### 6.3 Required Warning Clauses

**Warning Clause 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 level limits of the Municipality and the Ministry of the Environment, Conservation and Parks.”

**Warning Clause 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, Conservation and Parks.”

**Rail Company Warning Clause:** The Essex Terminal Railway or its assigns or successors in interest has or have a right-of-way within 1,000 meters from the land the subject hereof. There may be alterations to or expansions of the rail facilities on such right-of-way in the future including the possibility that the railway or its assigns or successors as aforesaid may expand its operations, which expansion may affect the living environment of the residents in the vicinity, notwithstanding the inclusion of any noise and vibration attenuating measures in the design of the development and individual dwellings(s). The Essex Terminal Railway will not be responsible for any complaints or claims arising from use of such facilities and/or operations on, over or under the aforesaid right-of-way.

## 7. Conclusions

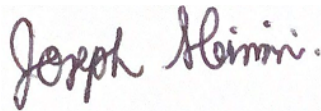
The results of this Study indicate that the potential environmental impact from road/rail traffic noise sources are significant. Mitigation measures will be required including ventilation requirements and noise warning clauses for each unit and special building components for the commercial/residential building. With the mitigation measures provided in Section 6, there will be minimal noise impact from the neighboring roads, railways, or buildings to the Site.

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

Written By:

Reviewed by:

June 10, 2026

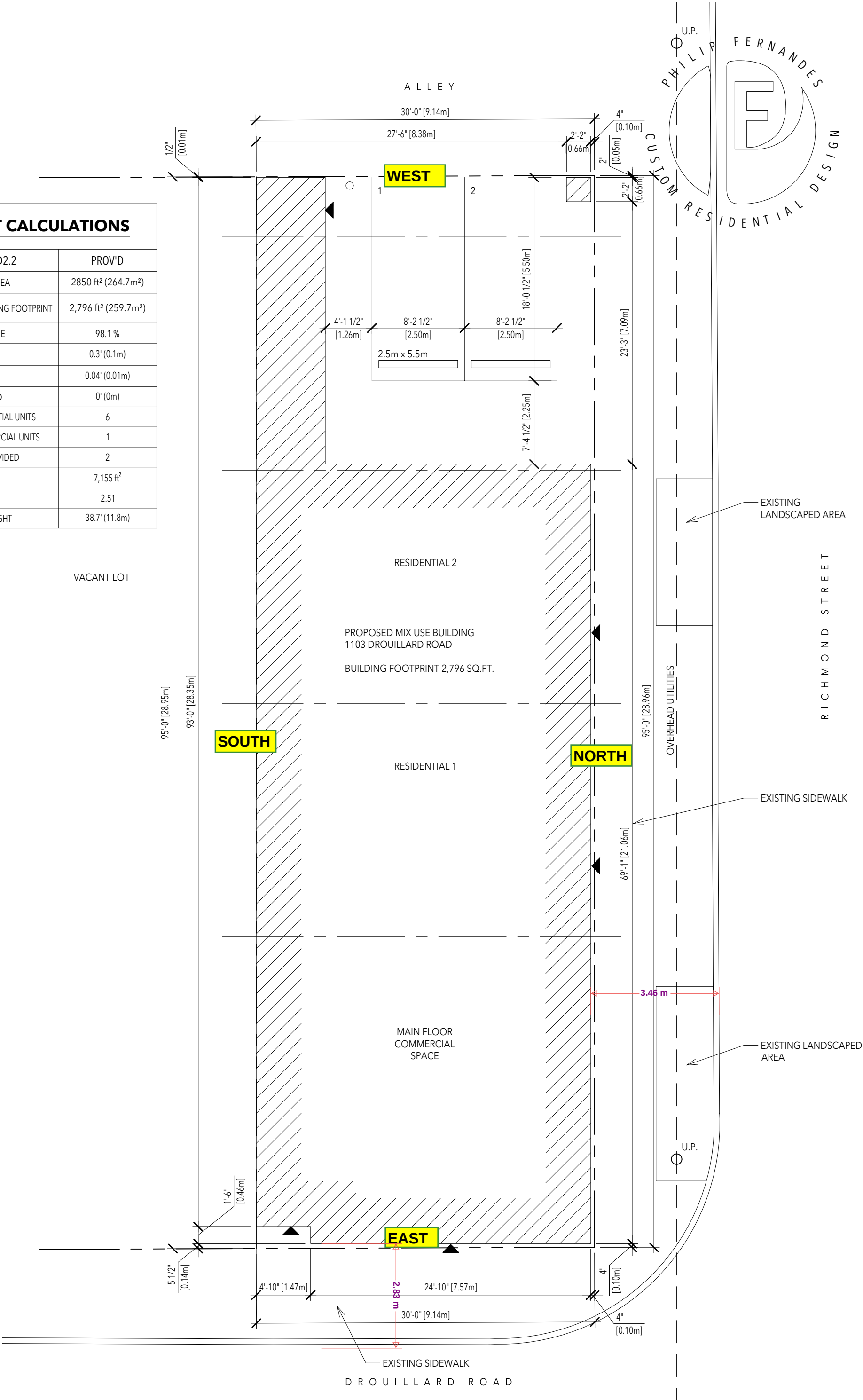
A handwritten signature in dark ink, reading "Joseph Sleiman". The signature is written in a cursive style with a horizontal line at the end.

Joseph Sleiman  
Acoustic Technician

Joey Jraige, P.Eng., B.A.Sc.  
President (Owner)

## ATTACHMENT A

| LOT CALCULATIONS         |                     |
|--------------------------|---------------------|
| ZONING - CD2.2           | PROV'D              |
| TOTAL LOT AREA           | 2850 ft² (264.7m²)  |
| TOTAL BUILDING FOOTPRINT | 2,796 ft² (259.7m²) |
| LOT COVERAGE             | 98.1 %              |
| FRONT YARD               | 0.3' (0.1m)         |
| REAR YARD                | 0.04' (0.01m)       |
| MIN SIDE YARD            | 0' (0m)             |
| # OF RESIDENTIAL UNITS   | 6                   |
| # OF COMMERCIAL UNITS    | 1                   |
| PARKING PROVIDED         | 2                   |
| GFA                      | 7,155 ft²           |
| GFA RATIO                | 2.51                |
| BUILDING HEIGHT          | 38.7' (11.8m)       |



# S I T E P L A N

SCALE: 1/8" = 1'-0"

CLIENT: NC CAPITAL  
PROJECT: 23-1191  
DATE: 2026 01 30

## ATTACHMENT B

Table B1.A

**Road Traffic Noise Levels and Mitigation Measures Summary**  
**1103 Drouillard Road, Windsor, Ontario**

| <b>Point of Reception</b> | <b>Road Sound Level<br/>Daytime (dBA)</b> | <b>Road Sound Level<br/>Nighttime (dBA)</b> | <b>Rail Sound Level<br/>Daytime (dBA)</b> | <b>Rail Sound Level<br/>Nighttime (dBA)</b> | <b>Combined<br/>Daytime (dBA)</b> | <b>Combined<br/>Nighttime (dBA)</b> | <b>Ventilation<br/>Requirements NPC 300</b> | <b>Warning Clauses<br/>From NPC 300</b> | <b>Special Building Components</b>    |
|---------------------------|-------------------------------------------|---------------------------------------------|-------------------------------------------|---------------------------------------------|-----------------------------------|-------------------------------------|---------------------------------------------|-----------------------------------------|---------------------------------------|
| <b>North Façade</b>       |                                           |                                             |                                           |                                             |                                   |                                     |                                             |                                         |                                       |
| Plane of Window Level 1   | 64 (dBA)                                  | 57 (dBA)                                    | 56 (dBA)                                  | 59 (dBA)                                    | 65 (dBA)                          | 62 (dBA)                            | Requirement for Air Conditioning            | Type D                                  | Minimum Window STC Rating of 30       |
| Plane of Window Level 2   | 64 (dBA)                                  | 57 (dBA)                                    | 56 (dBA)                                  | 59 (dBA)                                    | 64 (dBA)                          | 61 (dBA)                            | Requirement for Air Conditioning            | Type D                                  | Minimum Window STC Rating of 29       |
| Plane of Window Level 3   | 64 (dBA)                                  | 57 (dBA)                                    | 56 (dBA)                                  | 59 (dBA)                                    | 64 (dBA)                          | 61 (dBA)                            | Requirement for Air Conditioning            | Type D                                  | Minimum Window STC Rating of 29       |
| <b>East Façade</b>        |                                           |                                             |                                           |                                             |                                   |                                     |                                             |                                         |                                       |
| Plane of Window Level 1   | 68 (dBA)                                  | 62 (dBA)                                    | 54 (dBA)                                  | 54 (dBA)                                    | 68 (dBA)                          | 62 (dBA)                            | Requirement for Air Conditioning            | Type D                                  | Minimum Window STC Rating of 26       |
| Plane of Window Level 2   | 68 (dBA)                                  | 61 (dBA)                                    | 54 (dBA)                                  | 54 (dBA)                                    | 68 (dBA)                          | 62 (dBA)                            | Requirement for Air Conditioning            | Type D                                  | Minimum Window STC Rating of 26       |
| Plane of Window Level 3   | 68 (dBA)                                  | 61 (dBA)                                    | 54 (dBA)                                  | 54 (dBA)                                    | 68 (dBA)                          | 62 (dBA)                            | Requirement for Air Conditioning            | Type D                                  | Minimum Window STC Rating of 26       |
| <b>South Façade</b>       |                                           |                                             |                                           |                                             |                                   |                                     |                                             |                                         |                                       |
| Plane of Window Level 1   | 64 (dBA)                                  | 57 (dBA)                                    | 53 (dBA)                                  | 00 (dBA)                                    | 64 (dBA)                          | 57 (dBA)                            | Requirement for Air Conditioning            | Type C                                  | Compliance with Ontario Building Code |
| Plane of Window Level 2   | 64 (dBA)                                  | 57 (dBA)                                    | 53 (dBA)                                  | 00 (dBA)                                    | 64 (dBA)                          | 57 (dBA)                            | Requirement for Air Conditioning            | Type C                                  | Compliance with Ontario Building Code |
| Plane of Window Level 3   | 64 (dBA)                                  | 57 (dBA)                                    | 53 (dBA)                                  | 00 (dBA)                                    | 64 (dBA)                          | 57 (dBA)                            | Requirement for Air Conditioning            | Type C                                  | Compliance with Ontario Building Code |
| <b>West Façade (1)</b>    |                                           |                                             |                                           |                                             |                                   |                                     |                                             |                                         |                                       |
| Plane of Window Level 1   | 58 (dBA)                                  | 57 (dBA)                                    | 53 (dBA)                                  | 54 (dBA)                                    | 59 (dBA)                          | 59 (dBA)                            | Requirement for Air Conditioning            | Type C                                  | Compliance with Ontario Building Code |
| Plane of Window Level 2   | 58 (dBA)                                  | 57 (dBA)                                    | 53 (dBA)                                  | 54 (dBA)                                    | 59 (dBA)                          | 59 (dBA)                            | Requirement for Air Conditioning            | Type C                                  | Compliance with Ontario Building Code |
| Plane of Window Level 3   | 58 (dBA)                                  | 57 (dBA)                                    | 53 (dBA)                                  | 54 (dBA)                                    | 59 (dBA)                          | 59 (dBA)                            | Requirement for Air Conditioning            | Type C                                  | Compliance with Ontario Building Code |

**Notes**

(1) The West Façade is shielded by the building from the Road. JJAEE has assumed a conservative 10 dBA reduction in sound level from the East Façade for the West Façade

Outdoor Sound Level

Indoor Sound Level

Noise Reduction

Day/Night

Road/Rail

Angle of Sound

Angle Correction

Sum

|                                   |                                                                    |         |                                 |
|-----------------------------------|--------------------------------------------------------------------|---------|---------------------------------|
| Component                         | <input type="text" value="Window"/>                                | Sum     | <input type="text" value="30"/> |
| Sound Energy Transmitted          | <input type="text" value="100"/> %                                 | Table 3 | <input type="text" value="0"/>  |
| Component Area                    | <input type="text" value="35"/> m <sup>2</sup>                     |         |                                 |
| Room Floor Area                   | <input type="text" value="100"/> m <sup>2</sup>                    |         |                                 |
| % Floor Area                      | <input type="text" value="31"/> %                                  |         |                                 |
| Room Absorption Category          | <input type="text" value="Intermediate"/>                          | Table 4 | <input type="text" value="-4"/> |
| Noise Spectrum Type               | <input type="text" value="Mixed Road Traffic, Distance Aircraft"/> |         |                                 |
| Component Category                | <input type="text" value="Openable Thick Window"/>                 | Table 5 | <input type="text" value="4"/>  |
| <b>REQUIRED STC FOR COMPONENT</b> |                                                                    |         | <input type="text" value="30"/> |

|                                   |                                                                    |         |                                 |
|-----------------------------------|--------------------------------------------------------------------|---------|---------------------------------|
| Component                         | <input type="text" value="Exterior Wall"/>                         | Sum     | <input type="text" value="30"/> |
| Sound Energy Transmitted          | <input type="text" value="10"/> %                                  | Table 3 | <input type="text" value="10"/> |
| Component Area                    | <input type="text" value="65"/> % Floor Area                       |         |                                 |
| Room Floor Area                   | <input type="text" value="100"/> <input type="text" value="63"/>   |         |                                 |
| Room Absorption Category          | <input type="text" value="Intermediate"/>                          | Table 4 | <input type="text" value="-1"/> |
| Noise Spectrum Type               | <input type="text" value="Mixed Road Traffic, Distance Aircraft"/> |         |                                 |
| Component Category                | <input type="text" value="Exterior Wall"/>                         | Table 5 | <input type="text" value="7"/>  |
| <b>REQUIRED STC FOR COMPONENT</b> |                                                                    |         | <input type="text" value="46"/> |

## Joseph Sleiman

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**From:** Transportation Development Application <tda@citywindsor.ca>  
**Sent:** Friday, May 8, 2026 2:53 PM  
**To:** Joseph Sleiman  
**Cc:** Joey Jraige; engineeringdept; Traffic Control Plan  
**Subject:** Re: Traffic Data for surrounding roadways 1103 Drouillard Rd, Windsor

Hi Joseph,

Truck percentages (medium and heavy) can be referenced from [Windsor Truck Route Study](#) or best engineering judgement for the growth rate.

Kind Regards,  
AASHVI SARVAIYA | TRANSPORTATION PLANNER 1



Traffic operations  
1266 McDougall St | Windsor, ON | N8X 3M7  
(519)-255-6100 ext. 6831  
[www.citywindsor.ca](http://www.citywindsor.ca)

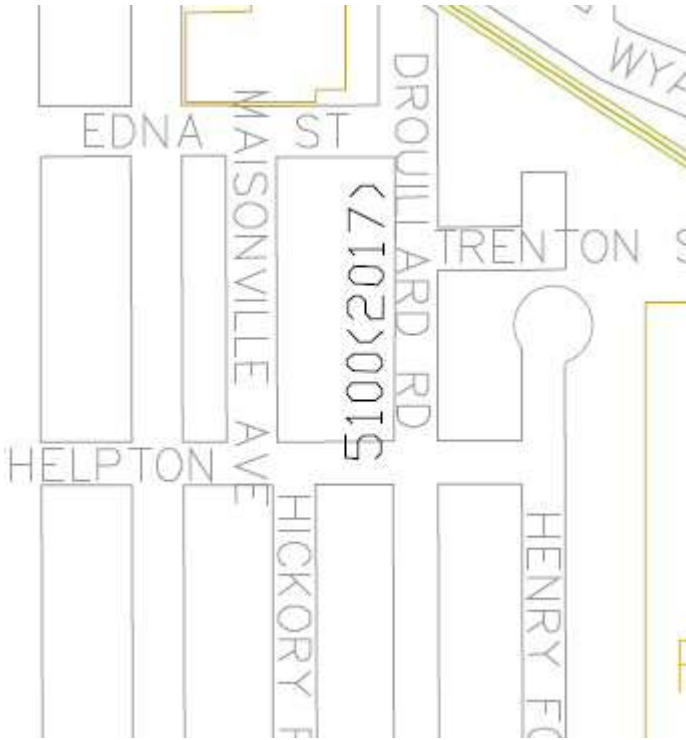
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**From:** Traffic Control Plan <tcp@citywindsor.ca>  
**Sent:** Friday, May 8, 2026 9:25 AM  
**To:** Joseph Sleiman <Joseph@jjae.ca>; Traffic Control Plan <tcp@citywindsor.ca>  
**Cc:** Joey Jraige <joey@jjae.ca>; engineeringdept <engineeringdept@citywindsor.ca>; Transportation Development Application <tda@citywindsor.ca>  
**Subject:** Re: Traffic Data for surrounding roadways 1103 Drouillard Rd, Windsor

Hi Joseph,

The most recent available ADT on Drouillard Rd south of Edna St is attached below. The speed limit on Drouillard Rd is 50 km/h north and south of Whelpton St. The speed limit on Whelpton St is 50 km/h east and west of Drouillard Rd.

Please contact Transportation Planning regarding the growth percentage and truck percentage (cc'd in this email).



Please let me know if you require more information.

Thank you,  
Ajay Kumar | Traffic Technician (A)  
Public Works - Transportation Department  
(519)-255-6380 ext. 6830



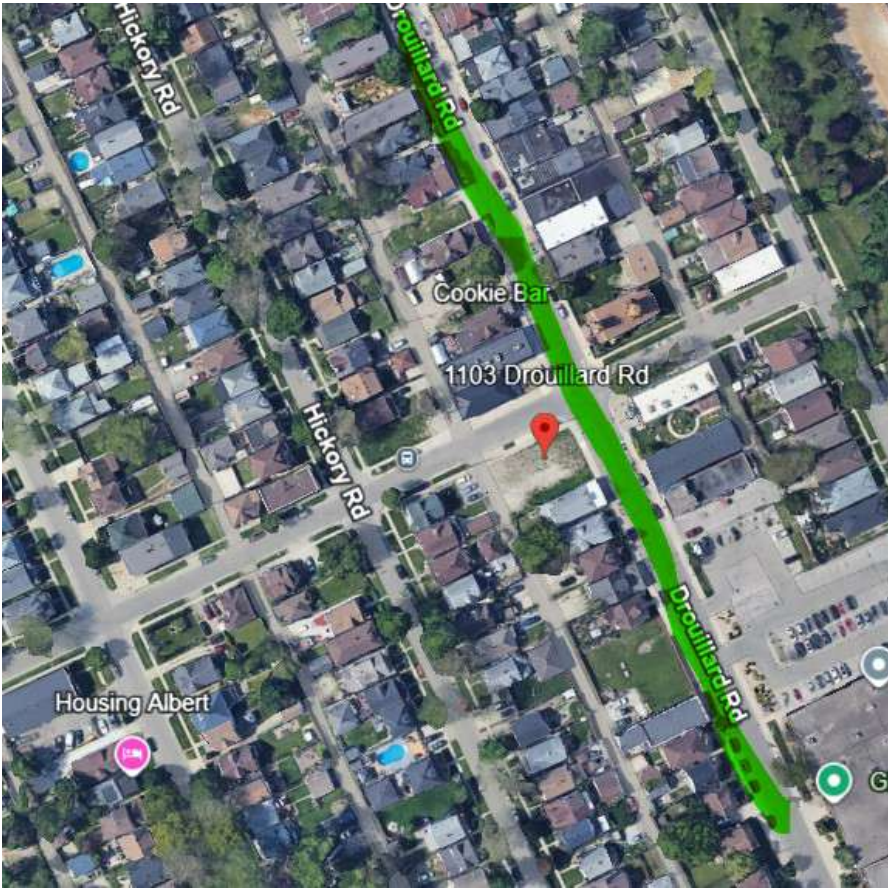
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**From:** Joseph Sleiman <Joseph@jjae.ca>  
**Sent:** Thursday, May 7, 2026 4:24 PM  
**To:** Traffic Control Plan <tcp@citywindsor.ca>  
**Cc:** Joey Jraige <joey@jjae.ca>; engineeringdept <engineeringdept@citywindsor.ca>; Italiya, Ankit <AItaliya@citywindsor.ca>  
**Subject:** Traffic Data for surrounding roadways 1103 Drouillard Rd, Windsor

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hello, Ajay.

We are working on a proposed development located on 1103 Drouillard Rd, Windsor, and we need information about the traffic data for the surrounding roadways. Namely: Drouillard Road. Please see a Google Earth Snip below for reference.



Please provide:

1. "Future AADT 10 years or Current AADT with a growth % most commonly used by the City of Windsor.
2. % Medium Trucks (or estimations as deemed acceptable by the City of Windsor)?
3. % Heavy trucks (or estimations as deemed acceptable by the City of Windsor)?
4. Speed limits for roadways."

Any information you have helps.

Thank you very much for your time.

We accept any fee please bill to JJ ACOUSTIC ENGINEERING LTD.

*Regards,*

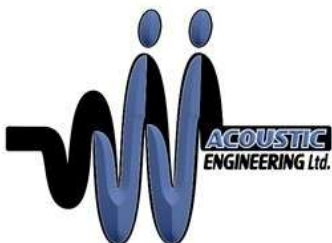
*Joseph C. Sleiman*

*JJ Acoustic Engineering Ltd.*

*Tel: (226)344-8911*

*Available 24 hrs/day - 7 days/week*

*[joseph@jjae.ca](mailto:joseph@jjae.ca)*



**Draft Report**

## **Phase 1: Needs and Opportunities**

---

City of Windsor  
Truck Route Study

**Date**

April 4, 2024

**Prepared for**

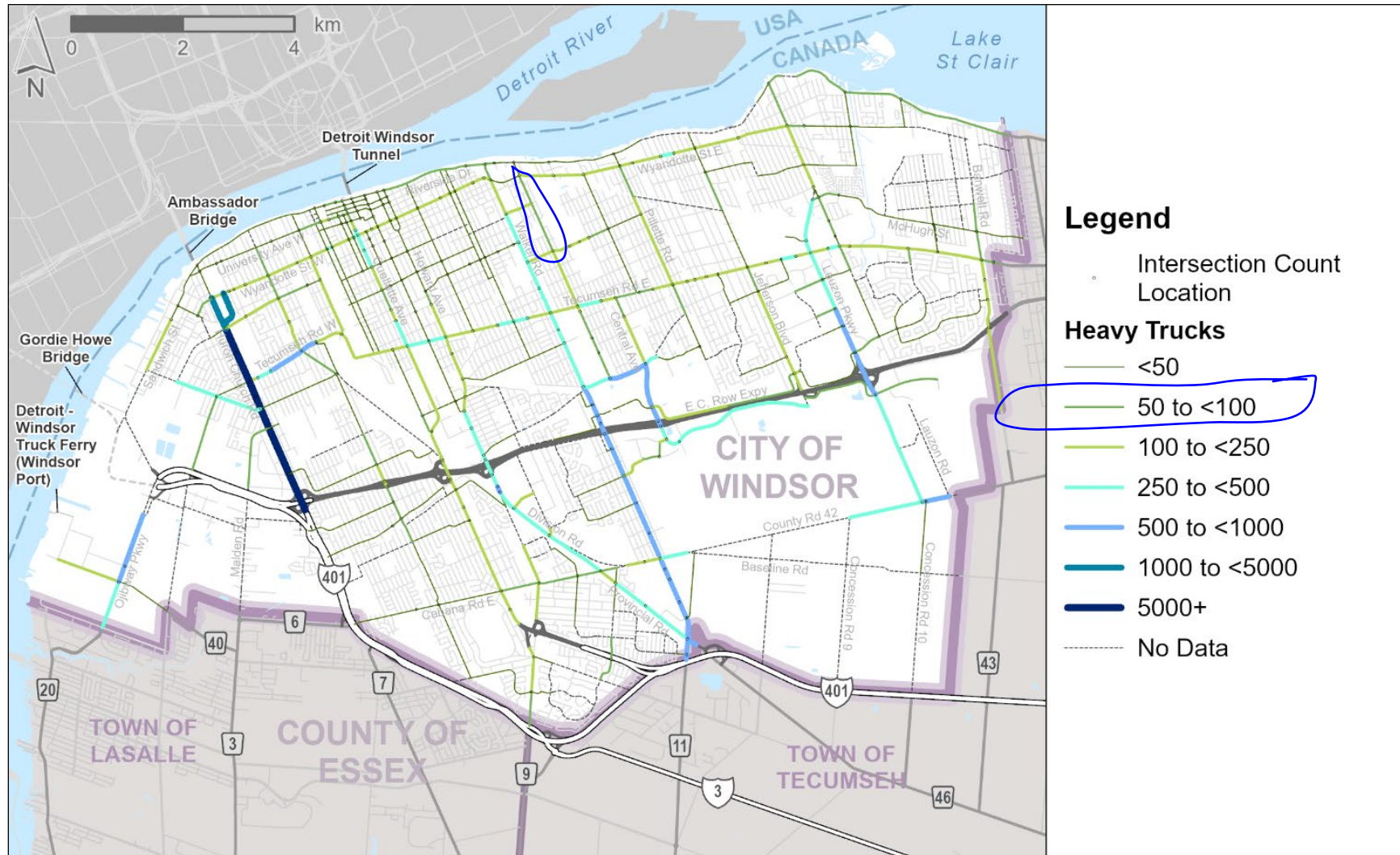
The City of Windsor

**Prepared by**

Arcadis  
in association with  
David Kriger Consultants Inc.  
and GLPi



Exhibit 4.2: Current Weekday (11-hour) Heavy Truck Volumes in the City of Windsor



Note: Figures are 7 a.m.–6 p.m. weekday totals based on the most recent weekday counts per site (2020 to 2023).

## Joseph Sleiman

---

**From:** Drag Cvetkovski <dcvetkovski@etr.ca>  
**Sent:** Monday, February 2, 2026 10:47 AM  
**To:** Joseph Sleiman  
**Cc:** Joey Jraige; Jack Weston  
**Subject:** RE: Rail Noise Impact Study - Drouillard Rd, Windsor

Hi Joseph,

Good morning. I apologize for the late reply. See my answers below. As communicated before, our frequencies and volumes can change at anytime as we are a 24hr 7 days a week operation.

Regards,

## Drag Cvetkovski

Superintendent

1600 Tecumseh Road East | Windsor, ON | N8W 1C5

**P:** (519) 973-8222 ext. 2270 | **C:** (519) 890-1497

**E:** dcvetkovski@etr.ca | [www.etr.ca](http://www.etr.ca)



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IN PORT WINDSOR 

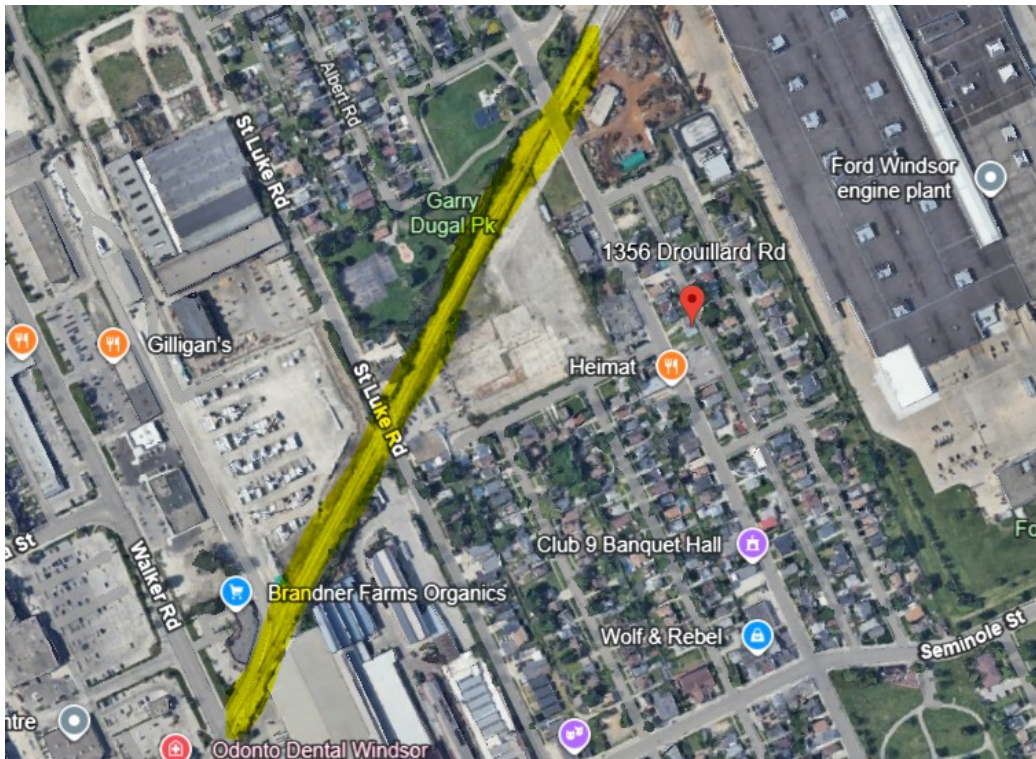
CONNECTING WITH:   

---

**From:** Joseph Sleiman <Joseph@jjae.ca>  
**Sent:** January 26, 2026 2:31 PM  
**To:** Drag Cvetkovski <dcvetkovski@etr.ca>  
**Cc:** Joey Jraige <joej@jjae.ca>; Jack Weston <jweston@etr.ca>  
**Subject:** Rail Noise Impact Study - Drouillard Rd, Windsor

Hello, Drag, I hope all is good.

I am completing a road & rail noise impact study for a site located at 1356 Drouillard Rd, Windsor, Ontario. I would need the following information for the rail line Essex Terminal Railway that goes through the St Luke Road in Windsor. Please refer to attached image for your reference:



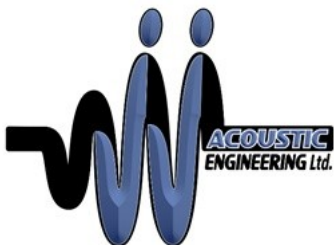
1. Maximum number of Locomotives? 4
2. Maximum number of Cars? 50
3. Is this area a whistle zone? Yes
4. Is the rail line welded? No, jointed rail
5. Speed in km/hr of the train? 10 mph
6. How many trains pass by in a day (7am-11pm)? 2-4
7. Are there any trains that pass by in the nighttime (11pm-7am)? No, not currently, but that's subject to customer needs and traffic volume changes.

Thank you for your time. Please let me know if there is anything you can't provide. And feel free to give me a call to discuss any.

We accept any fee please bill to JJ ACOUSTIC ENGINEERING LTD.

*Regards,*

Joseph C. Sleiman  
 JJ Acoustic Engineering Ltd.  
 Tel: (226)344-8911  
 Available 24 hrs/day - 7 days/week  
[joseph@jjae.ca](mailto:joseph@jjae.ca)





65 Front St. West,  
Union Station, Rm G-C-021  
Toronto, Ontario M5J 1E7

REAL ESTATE

**BY EMAIL**

22 February 2022

Mr. Emmanuel Ghiorghis  
JJ Acoustic Engineering Ltd.

Dear Sir:

**RE: Train Traffic Data – Mile 100.08 VIA's Chatham Subd. - City of Windsor**

---

Further to your request for train traffic information in the vicinity of Banwell Road in Windsor, please find below a summary of typical daily rail traffic.

| Train Type  | Frequency<br>Day (0700-<br>2300) | Frequency<br>Night (2300-<br>0700) | Max. Cars | Locomotives | Speed<br>(mph) |
|-------------|----------------------------------|------------------------------------|-----------|-------------|----------------|
| Passenger   | 6                                | 2                                  | 8         | 2           | 80             |
| Freight     | 1                                | 1                                  | 140       | 4           | 60             |
| Way Freight | 0                                | 0                                  | 0         | 0           | 0              |

On site observations and measurements are recommended to capture actual noise and vibration levels from pass-by train operations.

Please note that rail traffic is subject to change due to varying economic and weather conditions, track maintenance work, holiday periods and emergencies. For the purpose of noise and vibration analysis, train volumes should be escalated 2.5% per annum for a 10-year period.

VIA is in the process of replacing our corridor rail fleet with new equipment, with introduction likely in 2022-24 period. The statistics above may change as a result, but for the purposes of your study, please use the info in the chart above.

Anti-whistling by-laws are in effect throughout the City of Windsor, however all engines must sound their bells when occupying at-grade road crossings and they may still use their whistles in an emergency or to warn trespassers. It is noted that Clover Ave. and Lesperance Road level crossings are in close proximity to the subject site.

The mainline track at this location consists of continuously welded rail (CWR) while portions of the service track is bolted rail. Equipment loads are not to exceed 268,000 lbs.

VIA is not in favour of incompatible land uses such as Residential being introduced in close proximity to our busy Chatham Subdivision due to potential safety and environmental conflicts. Development adjacent to our rail corridor is not appropriate without satisfactory noise, vibration and safety mitigation measures as per the attached.

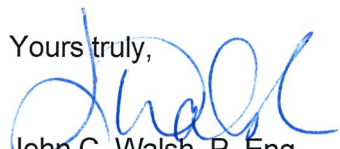
**love the way**





Should you have any questions, please feel free to contact me at 416-956-7669.

Yours truly,



John C. Walsh, P. Eng.  
Senior Property Manager  
Real Estate - Central Region

love the way



## PRINCIPAL MAIN LINE



- A. Noise berm, or combination berm and acoustic fence, adjoining and parallel to the railway right-of-way and having returns at the ends:
- (i) Minimum total height 5.5 metres above top-of-rail.
  - (ii) Acoustic fence to be constructed without openings and of a durable material weighing not less than 20 kg. per square metre (4 lb/sq. ft ) of surface area.
- Note: The Railway may consider other measures recommended by an approved Noise Consultant satisfactory to the Railway.
- B. Safety setback of dwellings from the railway right-of-way to be a minimum of 30 metres in conjunction with the safety berm noted below. In the absence of a safety berm, we require a dwelling setback of 120 metres.
- C. Ground-borne vibration transmission to be estimated through site testing and evaluation to determine if dwellings within 75 metres of the Railway right-of-way will be impacted by vibration conditions in excess of 0.14 mm/sec. RMS between 4 Hz. and 200 Hz. The monitoring system should be capable of measuring frequencies between 4 Hz and 200 Hz, +/- 3 dB with an RMS averaging time constant of 1 second. If in excess, isolation measures will be required to ensure living areas do not exceed 0.14 mm/sec. RMS on and above the first floor of the dwelling.
- D. Safety berm adjoining and parallel to the railway right-of-way with returns at the ends, 2.5 metres above grade is required despite none being required to address the Railway's noise concerns.
- E. The following clause should be inserted in all offers to purchase, agreements of sale and purchase or lease and in the title deed or lease of each dwelling; "Warning: VIA Rail Canada Inc. or its assigns or successors in interest has or have a right-of-way within 300 metres from the land the subject hereof. There may be alterations to or expansions of the rail facilities on such right-of-way in the future including the possibility that the railway or its assigns or successors as aforesaid may expand its operations, which expansion may affect the living environment of the residents in the vicinity, notwithstanding the inclusion of any noise and vibration attenuating measures in the design of the development and individual dwelling(s). VIA will not be responsible for any complaints or claims arising from use of such facilities and/or operations on, over or under the aforesaid right-of-way."
- F. Any proposed alterations to the existing drainage pattern affecting Railway property must receive prior concurrence from the Railway and be substantiated by a drainage report to the satisfaction of the Railway.
- G. The Developer shall install and maintain at his own expense, a chain link fence of minimum 1.83 metre (6 feet) height along the mutual property line, which shall be maintained by the Owner.
- H. The Owner shall through restrictive covenants to be registered on title and all agreements of purchase and sale or lease provide notice to the public that the safety berm, fencing and vibration isolation measures implemented are not to be tampered with or altered and further that the Owner shall have the sole responsibility for and shall maintain these measures to the satisfaction of VIA Rail.
- I. Pursuant to the Planning Act , the Municipality shall provide this office of the Railway with written notice of the public meeting, by-law and passing of the by-law appropriately zoning the lands hereby proposed for subdivision.
- J. The Owner enter into an Agreement stipulating how VIA Rail's concerns will be resolved and will pay VIA Rail's reasonable costs in preparing and negotiating the agreement.

STAMSON 5.0                      NORMAL REPORT                      Date: 22-05-2026 16:17:42  
 MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: b1north.te                      Time Period: Day/Night 16/8 hours  
 Description: North facade floor 1

#### Rail data, segment # 1: VIA Rail (day/night)

| Train Type     | Trains  | Speed (km/h) | # loc / Train | # Cars / Train | Eng type | Cont weld |
|----------------|---------|--------------|---------------|----------------|----------|-----------|
| * 1. Passenger | 8.5/2.8 | 129.0        | 2.0           | 8.0            | Diesel   | No        |
| * 2. Freight   | 1.4/1.4 | 97.0         | 4.0           | 140.0          | Diesel   | No        |

\* The identified number of trains have been adjusted for future growth using the following parameters:

| Train No | Train Name | Unadj. Trains | Annual % Increase | Years of Growth |
|----------|------------|---------------|-------------------|-----------------|
| 1.       | Passenger  | 6.0/2.0       | 2.50              | 14.00           |
| 2.       | Freight    | 1.0/1.0       | 2.50              | 14.00           |

#### Data for Segment # 1: VIA Rail (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               : 450.00 / 250.00 m  
 Receiver height                        :    2.00 / 2.00    m  
 Topography                            :        1        (Flat/gentle slope; no barrier)  
 No Whistle  
 Reference angle                        :    0.00

#### Results segment # 1: VIA Rail (day)

LOCOMOTIVE (0.00 + 54.77 + 0.00) = 54.77 dBA

| Angle1 | Angle2 | Alpha | RefLeq | D.Adj  | F.Adj | W.Adj | H.Adj | B.Adj | SubLeq |
|--------|--------|-------|--------|--------|-------|-------|-------|-------|--------|
| - 90   | 90     | 0.00  | 69.54  | -14.77 | 0.00  | 0.00  | 0.00  | 0.00  | 54.77  |

WHEEL (0.00 + 49.53 + 0.00) = 49.53 dBA

| Angle1 | Angle2 | Alpha | RefLeq | D.Adj  | F.Adj | W.Adj | H.Adj | B.Adj | SubLeq |
|--------|--------|-------|--------|--------|-------|-------|-------|-------|--------|
| - 90   | 90     | 0.00  | 64.30  | -14.77 | 0.00  | 0.00  | 0.00  | 0.00  | 49.53  |

-----  
Segment Leq : 55.91 dBA

Total Leq All Segments: 55.91 dBA

Results segment # 1: VIA Rail (night)  
-----

LOCOMOTIVE (0.00 + 58.08 + 0.00) = 58.08 dBA

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

-----

|      |    |      |       |        |      |      |      |      |       |
|------|----|------|-------|--------|------|------|------|------|-------|
| - 90 | 90 | 0.00 | 70.30 | -12.22 | 0.00 | 0.00 | 0.00 | 0.00 | 58.08 |
|------|----|------|-------|--------|------|------|------|------|-------|

-----

WHEEL (0.00 + 53.74 + 0.00) = 53.74 dBA

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

-----

|      |    |      |       |        |      |      |      |      |       |
|------|----|------|-------|--------|------|------|------|------|-------|
| - 90 | 90 | 0.00 | 65.96 | -12.22 | 0.00 | 0.00 | 0.00 | 0.00 | 53.74 |
|------|----|------|-------|--------|------|------|------|------|-------|

-----

Segment Leq : 59.44 dBA

Total Leq All Segments: 59.44 dBA

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

Car traffic volume : 4700/522 veh/TimePeriod \*

Medium truck volume : 294/33 veh/TimePeriod \*

Heavy truck volume : 881/98 veh/TimePeriod \*

Posted speed limit : 50 km/h

Road gradient : 0 %

Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 5100

Percentage of Annual Growth : 2.50

Number of Years of Growth : 10.00

Medium Truck % of Total Volume : 5.00

Heavy Truck % of Total Volume : 15.00

Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 1: Drouillard R (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 : 20.00 / 20.00 m  
 Receiver height : 2.00 / 2.00 m  
 Topography : 1 (Flat/gentle slope; no barrier)  
 Reference angle : 0.00

Results segment # 1: Drouillard R (day)

Source height = 1.97 m

ROAD (0.00 + 63.87 + 0.00) = 63.87 dBA

| Angle1 | Angle2 | Alpha | RefLeq | P.Adj | D.Adj  | F.Adj  | W.Adj | H.Adj | B.Adj | SubLeq |
|--------|--------|-------|--------|-------|--------|--------|-------|-------|-------|--------|
| 0      | 90     | 0.00  | 68.13  | 0.00  | - 1.25 | - 3.01 | 0.00  | 0.00  | 0.00  | 63.87  |

Segment Leq : 63.87 dBA

Total Leq All Segments: 63.87 dBA

Results segment # 1: Drouillard R (night)

Source height = 1.97 m

ROAD (0.00 + 57.35 + 0.00) = 57.35 dBA

| Angle1 | Angle2 | Alpha | RefLeq | P.Adj | D.Adj  | F.Adj  | W.Adj | H.Adj | B.Adj | SubLeq |
|--------|--------|-------|--------|-------|--------|--------|-------|-------|-------|--------|
| 0      | 90     | 0.00  | 61.61  | 0.00  | - 1.25 | - 3.01 | 0.00  | 0.00  | 0.00  | 57.35  |

Segment Leq : 57.35 dBA

Total Leq All Segments: 57.35 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 64.51  
 (NIGHT): 61.53

STAMSON 5.0                      NORMAL REPORT                      Date: 22-05-2026 16:17:36  
 MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: b1east.te                      Time Period: Day/Night 16/8 hours  
 Description: East facade floor 1

Rail data, segment # 1: ETR (day/night)

| Train Type | ! Trains<br>! (Left) | ! Trains<br>! (Right) | ! Speed<br>!(km/h) | !# loc<br>!/Train | !# Cars<br>!/Train | Eng<br>type | !Cont<br>!weld |
|------------|----------------------|-----------------------|--------------------|-------------------|--------------------|-------------|----------------|
| * 1. ETR   | ! 2.6/0.0            | ! 2.6/0.0             | ! 17.0             | ! 4.0             | ! 50.0             | !Diesel     | ! Yes          |

\* The identified number of trains have been adjusted for  
 future growth using the following parameters:

| Train type:<br>No Name | ! Unadj.<br>! Left | Trains<br>! Right | ! Annual %<br>! Increase | ! Years of<br>! Growth |
|------------------------|--------------------|-------------------|--------------------------|------------------------|
| 1. ETR                 | ! 2.0/0.0          | ! 2.0/0.0         | ! 2.50                   | ! 10.00                |

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

|                          |        |                     |                                 |
|--------------------------|--------|---------------------|---------------------------------|
| Angle1                   | Angle2 | : -90.00 deg        | 0.00 deg                        |
| Wood depth               |        | : 0                 | (No woods.)                     |
| No of house rows         |        | : 0 / 0             |                                 |
| Surface                  |        | : 2                 | (Reflective ground surface)     |
| Receiver source distance |        | : 330.00 / 330.00 m |                                 |
| Receiver height          |        | : 2.00 / 2.00 m     |                                 |
| Topography               |        | : 1                 | (Flat/gentle slope; no barrier) |
| Whistle Angle            |        | : 71 deg            | Track 1                         |
| Reference angle          |        | : 0.00              |                                 |

Rail data, segment # 2: VIA Rail (day/night)

| Train Type     | ! Trains  | ! Speed<br>!(km/h) | !# loc<br>!/Train | !# Cars<br>!/Train | Eng<br>type | !Cont<br>!weld |
|----------------|-----------|--------------------|-------------------|--------------------|-------------|----------------|
| * 1. Passenger | ! 8.5/2.8 | ! 129.0            | ! 2.0             | ! 8.0              | !Diesel     | ! No           |
| * 2. Freight   | ! 1.4/1.4 | ! 97.0             | ! 4.0             | !140.0             | !Diesel     | ! No           |

\* The identified number of trains have been adjusted for  
 future growth using the following parameters:

| Train type:<br>No Name | ! Unadj.<br>! Trains | ! Annual %<br>! Increase | ! Years of<br>! Growth |
|------------------------|----------------------|--------------------------|------------------------|
| 1. Passenger           | ! 6.0/2.0            | ! 2.50                   | ! 14.00                |

2. Freight ! 1.0/1.0 ! 2.50 ! 14.00 !

Data for Segment # 2: VIA Rail (day/night)

-----  
Angle1 Angle2 : -90.00 deg 0.00 deg  
Wood depth : 0 (No woods.)  
No of house rows : 0 / 0  
Surface : 2 (Reflective ground surface)  
Receiver source distance : 460.00 / 460.00 m  
Receiver height : 2.00 / 2.00 m  
Topography : 1 (Flat/gentle slope; no barrier)  
No Whistle  
Reference angle : 0.00

Results segment # 1: ETR (day)

-----  
LOCOMOTIVE (0.00 + 46.98 + 0.00) = 46.98 dBA

| Angle1 | Angle2 | Alpha | RefLeq | D.Adj  | F.Adj  | W.Adj | H.Adj | B.Adj | SubLeq |
|--------|--------|-------|--------|--------|--------|-------|-------|-------|--------|
| - 90   | 0      | 0.00  | 63.41  | -13.42 | - 3.01 | 0.00  | 0.00  | 0.00  | 46.98  |

-----

WHEEL (0.00 + 32.23 + 0.00) = 32.23 dBA

| Angle1 | Angle2 | Alpha | RefLeq | D.Adj  | F.Adj  | W.Adj | H.Adj | B.Adj | SubLeq |
|--------|--------|-------|--------|--------|--------|-------|-------|-------|--------|
| - 90   | 0      | 0.00  | 48.66  | -13.42 | - 3.01 | 0.00  | 0.00  | 0.00  | 32.23  |

-----

LEFT WHISTLE (0.00 + 0.00 + 0.00) = 0.00 dBA

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

-----  
-----

Segment Leq : 47.12 dBA

Results segment # 2: VIA Rail (day)

-----  
LOCOMOTIVE (0.00 + 51.67 + 0.00) = 51.67 dBA

| Angle1 | Angle2 | Alpha | RefLeq | D.Adj  | F.Adj  | W.Adj | H.Adj | B.Adj | SubLeq |
|--------|--------|-------|--------|--------|--------|-------|-------|-------|--------|
| - 90   | 0      | 0.00  | 69.54  | -14.87 | - 3.01 | 0.00  | 0.00  | 0.00  | 51.67  |

-----

WHEEL (0.00 + 46.42 + 0.00) = 46.42 dBA

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

-----

- 90      0    0.00   64.30 -14.87   - 3.01    0.00    0.00    0.00   46.42

Segment Leq : 52.80 dBA

Total Leq All Segments: 53.84 dBA

Results segment # 1: ETR (night)

LOCOMOTIVE (0.00 + -16.43 + 0.00) = 0.00 dBA

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

|      |   |      |      |        |        |      |      |      |        |
|------|---|------|------|--------|--------|------|------|------|--------|
| - 90 | 0 | 0.00 | 0.00 | -13.42 | - 3.01 | 0.00 | 0.00 | 0.00 | -16.43 |
|------|---|------|------|--------|--------|------|------|------|--------|

WHEEL (0.00 + -16.43 + 0.00) = 0.00 dBA

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

|      |   |      |      |        |        |      |      |      |        |
|------|---|------|------|--------|--------|------|------|------|--------|
| - 90 | 0 | 0.00 | 0.00 | -13.42 | - 3.01 | 0.00 | 0.00 | 0.00 | -16.43 |
|------|---|------|------|--------|--------|------|------|------|--------|

LEFT WHISTLE (0.00 + 0.00 + 0.00) = 0.00 dBA

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

Segment Leq : 0.00 dBA

Results segment # 2: VIA Rail (night)

LOCOMOTIVE (0.00 + 52.42 + 0.00) = 52.42 dBA

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

|      |   |      |       |        |        |      |      |      |       |
|------|---|------|-------|--------|--------|------|------|------|-------|
| - 90 | 0 | 0.00 | 70.30 | -14.87 | - 3.01 | 0.00 | 0.00 | 0.00 | 52.42 |
|------|---|------|-------|--------|--------|------|------|------|-------|

WHEEL (0.00 + 48.09 + 0.00) = 48.09 dBA

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

|      |   |      |       |        |        |      |      |      |       |
|------|---|------|-------|--------|--------|------|------|------|-------|
| - 90 | 0 | 0.00 | 65.96 | -14.87 | - 3.01 | 0.00 | 0.00 | 0.00 | 48.09 |
|------|---|------|-------|--------|--------|------|------|------|-------|

Segment Leq : 53.78 dBA

Total Leq All Segments: 53.78 dBA

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

```

-----
Car traffic volume   : 4700/522   veh/TimePeriod  *
Medium truck volume : 294/33     veh/TimePeriod  *
Heavy truck volume  : 881/98     veh/TimePeriod  *
Posted speed limit  : 50 km/h
Road gradient       : 0 %
Road pavement       : 1 (Typical asphalt or concrete)
  
```

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

```

24 hr Traffic Volume (AADT or SADT): 5100
Percentage of Annual Growth       : 2.50
Number of Years of Growth         : 10.00
Medium Truck % of Total Volume    : 5.00
Heavy Truck % of Total Volume     : 15.00
Day (16 hrs) % of Total Volume    : 90.00
  
```

## Data for Segment # 1: Drouillard R (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  : 2.00 / 2.00 m
Topography       : 1          (Flat/gentle slope; no barrier)
Reference angle  : 0.00
  
```

## Results segment # 1: Drouillard R (day)

Source height = 1.97 m

ROAD (0.00 + 68.13 + 0.00) = 68.13 dBA

| Angle1 | Angle2 | Alpha | RefLeq | P.Adj | D.Adj | F.Adj | W.Adj | H.Adj | B.Adj | SubLeq |
|--------|--------|-------|--------|-------|-------|-------|-------|-------|-------|--------|
| - 90   | 90     | 0.00  | 68.13  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 68.13  |

Segment Leq : 68.13 dBA

Total Leq All Segments: 68.13 dBA

## Results segment # 1: Drouillard R (night)

Source height = 1.97 m

ROAD (0.00 + 61.61 + 0.00) = 61.61 dBA

| Angle1 | Angle2 | Alpha | RefLeq | P.Adj | D.Adj | F.Adj | W.Adj | H.Adj | B.Adj | SubLeq |
|--------|--------|-------|--------|-------|-------|-------|-------|-------|-------|--------|
| - 90   | 90     | 0.00  | 61.61  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 61.61  |

Segment Leq : 61.61 dBA

Total Leq All Segments: 61.61 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 68.29  
(NIGHT): 62.27

STAMSON 5.0                      NORMAL REPORT                      Date: 22-05-2026 16:17:49  
 MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: b1south.te                      Time Period: Day/Night 16/8 hours  
 Description: South facade floor 1

Rail data, segment # 1: ETR (day/night)

| Train Type | ! Trains (Left) | ! Trains (Right) | ! Speed (km/h) | !# loc /Train | !# Cars /Train | ! Eng type | !Cont weld |
|------------|-----------------|------------------|----------------|---------------|----------------|------------|------------|
| * 1. ETR   | ! 2.6/0.0       | ! 2.6/0.0        | ! 17.0         | ! 4.0         | ! 50.0         | !Diesel    | ! Yes      |

\* The identified number of trains have been adjusted for future growth using the following parameters:

| Train No | Train Name | ! Unadj. Trains Left | ! Annual % Increase | ! Years of Growth |
|----------|------------|----------------------|---------------------|-------------------|
| 1.       | ETR        | ! 2.0/0.0            | ! 2.0/0.0           | ! 2.50 10.00      |

Data for Segment # 1: ETR (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 : 330.00 / 330.00 m  
 Receiver height : 2.00 / 2.00 m  
 Topography : 1 (Flat/gentle slope; no barrier)  
 Whistle Angle : 71 deg Track 1  
 Reference angle : 0.00

Results segment # 1: ETR (day)

LOCOMOTIVE (0.00 + 49.99 + 0.00) = 49.99 dBA

| Angle1 | Angle2 | Alpha | RefLeq | D.Adj  | F.Adj | W.Adj | H.Adj | B.Adj | SubLeq |
|--------|--------|-------|--------|--------|-------|-------|-------|-------|--------|
| - 90   | 90     | 0.00  | 63.41  | -13.42 | 0.00  | 0.00  | 0.00  | 0.00  | 49.99  |

WHEEL (0.00 + 35.24 + 0.00) = 35.24 dBA

| Angle1 | Angle2 | Alpha | RefLeq | D.Adj  | F.Adj | W.Adj | H.Adj | B.Adj | SubLeq |
|--------|--------|-------|--------|--------|-------|-------|-------|-------|--------|
| - 90   | 90     | 0.00  | 48.66  | -13.42 | 0.00  | 0.00  | 0.00  | 0.00  | 35.24  |

LEFT WHISTLE (0.00 + 48.17 + 0.00) = 48.17 dBA

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

|    |    |      |       |        |        |      |      |      |       |
|----|----|------|-------|--------|--------|------|------|------|-------|
| 59 | 71 | 0.00 | 73.51 | -13.42 | -11.91 | 0.00 | 0.00 | 0.00 | 48.17 |
|----|----|------|-------|--------|--------|------|------|------|-------|

RIGHT WHISTLE (0.00 + 44.81 + 0.00) = 44.81 dBA

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

|    |    |      |       |        |        |      |      |      |       |
|----|----|------|-------|--------|--------|------|------|------|-------|
| 71 | 76 | 0.00 | 73.51 | -13.42 | -15.27 | 0.00 | 0.00 | 0.00 | 44.81 |
|----|----|------|-------|--------|--------|------|------|------|-------|

Segment Leq : 52.99 dBA

Total Leq All Segments: 52.99 dBA

Results segment # 1: ETR (night)

LOCOMOTIVE (0.00 + -13.42 + 0.00) = 0.00 dBA

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

|      |    |      |      |        |      |      |      |      |        |
|------|----|------|------|--------|------|------|------|------|--------|
| - 90 | 90 | 0.00 | 0.00 | -13.42 | 0.00 | 0.00 | 0.00 | 0.00 | -13.42 |
|------|----|------|------|--------|------|------|------|------|--------|

WHEEL (0.00 + -13.42 + 0.00) = 0.00 dBA

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

|      |    |      |      |        |      |      |      |      |        |
|------|----|------|------|--------|------|------|------|------|--------|
| - 90 | 90 | 0.00 | 0.00 | -13.42 | 0.00 | 0.00 | 0.00 | 0.00 | -13.42 |
|------|----|------|------|--------|------|------|------|------|--------|

LEFT WHISTLE (0.00 + 48.17 + 0.00) = 0.00 dBA

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

|    |    |      |      |        |        |      |      |      |       |
|----|----|------|------|--------|--------|------|------|------|-------|
| 59 | 71 | 0.00 | 0.00 | -13.42 | -11.91 | 0.00 | 0.00 | 0.00 | 48.17 |
|----|----|------|------|--------|--------|------|------|------|-------|

Segment Leq : 0.00 dBA

Total Leq All Segments: 0.00 dBA

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

|                     |   |          |                |   |
|---------------------|---|----------|----------------|---|
| Car traffic volume  | : | 4700/522 | veh/TimePeriod | * |
| Medium truck volume | : | 294/33   | veh/TimePeriod | * |
| Heavy truck volume  | : | 881/98   | veh/TimePeriod | * |
| Posted speed limit  | : | 50 km/h  |                |   |
| Road gradient       | : | 0 %      |                |   |

Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 5100  
Percentage of Annual Growth : 2.50  
Number of Years of Growth : 10.00  
Medium Truck % of Total Volume : 5.00  
Heavy Truck % of Total Volume : 15.00  
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 1: Drouillard R (day/night)

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

Results segment # 1: Drouillard R (day)

-----  
Source height = 1.97 m

ROAD (0.00 + 63.87 + 0.00) = 63.87 dBA

| Angle1 | Angle2 | Alpha | RefLeq | P.Adj | D.Adj  | F.Adj  | W.Adj | H.Adj | B.Adj | SubLeq |
|--------|--------|-------|--------|-------|--------|--------|-------|-------|-------|--------|
| - 90   | 0      | 0.00  | 68.13  | 0.00  | - 1.25 | - 3.01 | 0.00  | 0.00  | 0.00  | 63.87  |

-----

Segment Leq : 63.87 dBA

Total Leq All Segments: 63.87 dBA

Results segment # 1: Drouillard R (night)

-----  
Source height = 1.97 m

ROAD (0.00 + 57.35 + 0.00) = 57.35 dBA

| Angle1 | Angle2 | Alpha | RefLeq | P.Adj | D.Adj  | F.Adj  | W.Adj | H.Adj | B.Adj | SubLeq |
|--------|--------|-------|--------|-------|--------|--------|-------|-------|-------|--------|
| - 90   | 0      | 0.00  | 61.61  | 0.00  | - 1.25 | - 3.01 | 0.00  | 0.00  | 0.00  | 57.35  |

-----

Segment Leq : 57.35 dBA

Total Leq All Segments: 57.35 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 64.21  
(NIGHT): 57.35

Filename: b1west.te                      Time Period: Day/Night 16/8 hours  
 Description: West facade floor 1

Rail data, segment # 1: ETR (day/night)

| Train Type | ! Trains<br>! (Left) | ! Trains<br>! (Right) | ! Speed<br>!(km/h) | !# loc<br>!/Train | !# Cars<br>!/Train | Eng<br>type | !Cont<br>!weld |
|------------|----------------------|-----------------------|--------------------|-------------------|--------------------|-------------|----------------|
| * 1. ETR   | ! 2.6/0.0            | ! 2.6/0.0             | ! 17.0             | ! 4.0             | ! 50.0             | !Diesel     | ! Yes          |

\* The identified number of trains have been adjusted for  
 future growth using the following parameters:

| Train type:<br>No Name | ! Unadj.<br>! Left | ! Trains<br>! Right | ! Annual %<br>! Increase | ! Years of<br>! Growth |
|------------------------|--------------------|---------------------|--------------------------|------------------------|
| 1. ETR                 | ! 2.0/0.0          | ! 2.0/0.0           | ! 2.50                   | ! 10.00                |

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

|                          |        |                     |                                 |
|--------------------------|--------|---------------------|---------------------------------|
| Angle1                   | Angle2 | : -90.00 deg        | 0.00 deg                        |
| Wood depth               |        | : 0                 | (No woods.)                     |
| No of house rows         |        | : 0 / 0             |                                 |
| Surface                  |        | : 2                 | (Reflective ground surface)     |
| Receiver source distance |        | : 450.00 / 450.00 m |                                 |
| Receiver height          |        | : 2.00 / 2.00 m     |                                 |
| Topography               |        | : 1                 | (Flat/gentle slope; no barrier) |
| Whistle Angle            |        | : 71 deg            | Track 1                         |
| Reference angle          |        | : 0.00              |                                 |

Rail data, segment # 2: VIA Rail (day/night)

| Train Type     | ! Trains  | ! Speed<br>!(km/h) | !# loc<br>!/Train | !# Cars<br>!/Train | Eng<br>type | !Cont<br>!weld |
|----------------|-----------|--------------------|-------------------|--------------------|-------------|----------------|
| * 1. Passenger | ! 8.5/2.8 | ! 129.0            | ! 2.0             | ! 8.0              | !Diesel     | ! No           |
| * 2. Freight   | ! 1.4/1.4 | ! 97.0             | ! 4.0             | !140.0             | !Diesel     | ! No           |

\* The identified number of trains have been adjusted for  
 future growth using the following parameters:

| Train type:<br>No Name | ! Unadj.<br>! Trains | ! Annual %<br>! Increase | ! Years of<br>! Growth |
|------------------------|----------------------|--------------------------|------------------------|
| 1. Passenger           | ! 6.0/2.0            | ! 2.50                   | ! 14.00                |

2. Freight ! 1.0/1.0 ! 2.50 ! 14.00 !

Data for Segment # 2: VIA Rail (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 : 460.00 / 460.00 m  
Receiver height : 2.00 / 2.00 m  
Topography : 1 (Flat/gentle slope; no barrier)  
No Whistle  
Reference angle : 0.00

Results segment # 1: ETR (day)

-----  
LOCOMOTIVE (0.00 + 45.63 + 0.00) = 45.63 dBA

| Angle1 | Angle2 | Alpha | RefLeq | D.Adj  | F.Adj  | W.Adj | H.Adj | B.Adj | SubLeq |
|--------|--------|-------|--------|--------|--------|-------|-------|-------|--------|
| - 90   | 0      | 0.00  | 63.41  | -14.77 | - 3.01 | 0.00  | 0.00  | 0.00  | 45.63  |

-----

WHEEL (0.00 + 30.88 + 0.00) = 30.88 dBA

| Angle1 | Angle2 | Alpha | RefLeq | D.Adj  | F.Adj  | W.Adj | H.Adj | B.Adj | SubLeq |
|--------|--------|-------|--------|--------|--------|-------|-------|-------|--------|
| - 90   | 0      | 0.00  | 48.66  | -14.77 | - 3.01 | 0.00  | 0.00  | 0.00  | 30.88  |

-----

LEFT WHISTLE (0.00 + 48.17 + 0.00) = 0.00 dBA

| Angle1 | Angle2 | Alpha | RefLeq | D.Adj | F.Adj  | W.Adj | H.Adj | B.Adj | SubLeq |
|--------|--------|-------|--------|-------|--------|-------|-------|-------|--------|
| 64     | 0      | 0.00  | 73.51  | 0.00  | -11.91 | 0.00  | 0.00  | 0.00  | 48.17  |

-----

Segment Leq : 45.77 dBA

Results segment # 2: VIA Rail (day)

-----  
LOCOMOTIVE (0.00 + 51.67 + 0.00) = 51.67 dBA

| Angle1 | Angle2 | Alpha | RefLeq | D.Adj  | F.Adj  | W.Adj | H.Adj | B.Adj | SubLeq |
|--------|--------|-------|--------|--------|--------|-------|-------|-------|--------|
| 0      | 90     | 0.00  | 69.54  | -14.87 | - 3.01 | 0.00  | 0.00  | 0.00  | 51.67  |

-----

WHEEL (0.00 + 46.42 + 0.00) = 46.42 dBA

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

|   |    |      |       |        |        |      |      |      |       |
|---|----|------|-------|--------|--------|------|------|------|-------|
| 0 | 90 | 0.00 | 64.30 | -14.87 | - 3.01 | 0.00 | 0.00 | 0.00 | 46.42 |
|---|----|------|-------|--------|--------|------|------|------|-------|

Segment Leq : 52.80 dBA

Total Leq All Segments: 53.59 dBA

Results segment # 1: ETR (night)

LOCOMOTIVE (0.00 + -17.78 + 0.00) = 0.00 dBA

| Angle1 | Angle2 | Alpha | RefLeq | D.Adj  | F.Adj  | W.Adj | H.Adj | B.Adj | SubLeq |
|--------|--------|-------|--------|--------|--------|-------|-------|-------|--------|
| - 90   | 0      | 0.00  | 0.00   | -14.77 | - 3.01 | 0.00  | 0.00  | 0.00  | -17.78 |

WHEEL (0.00 + -17.78 + 0.00) = 0.00 dBA

| Angle1 | Angle2 | Alpha | RefLeq | D.Adj  | F.Adj  | W.Adj | H.Adj | B.Adj | SubLeq |
|--------|--------|-------|--------|--------|--------|-------|-------|-------|--------|
| - 90   | 0      | 0.00  | 0.00   | -14.77 | - 3.01 | 0.00  | 0.00  | 0.00  | -17.78 |

LEFT WHISTLE (0.00 + 48.17 + 0.00) = 0.00 dBA

| Angle1 | Angle2 | Alpha | RefLeq | D.Adj | F.Adj  | W.Adj | H.Adj | B.Adj | SubLeq |
|--------|--------|-------|--------|-------|--------|-------|-------|-------|--------|
| 64     | 0      | 0.00  | 0.00   | 0.00  | -11.91 | 0.00  | 0.00  | 0.00  | 48.17  |

Segment Leq : 0.00 dBA

Results segment # 2: VIA Rail (night)

LOCOMOTIVE (0.00 + 52.42 + 0.00) = 52.42 dBA

| Angle1 | Angle2 | Alpha | RefLeq | D.Adj  | F.Adj  | W.Adj | H.Adj | B.Adj | SubLeq |
|--------|--------|-------|--------|--------|--------|-------|-------|-------|--------|
| 0      | 90     | 0.00  | 70.30  | -14.87 | - 3.01 | 0.00  | 0.00  | 0.00  | 52.42  |

WHEEL (0.00 + 48.09 + 0.00) = 48.09 dBA

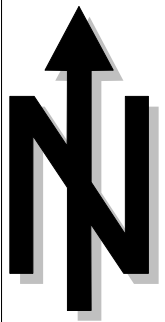
| Angle1 | Angle2 | Alpha | RefLeq | D.Adj  | F.Adj  | W.Adj | H.Adj | B.Adj | SubLeq |
|--------|--------|-------|--------|--------|--------|-------|-------|-------|--------|
| 0      | 90     | 0.00  | 65.96  | -14.87 | - 3.01 | 0.00  | 0.00  | 0.00  | 48.09  |

Segment Leq : 53.78 dBA

Total Leq All Segments: 53.78 dBA

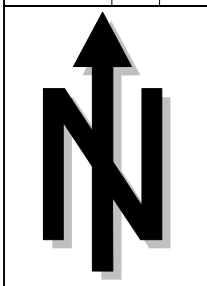
TOTAL Leq FROM ALL SOURCES (DAY): 53.59  
(NIGHT): 53.78

## ATTACHMENT C



STATIONARY NOISE IMPACT  
1103 DROUILLARD RD,  
WINDSOR, ONTARIO

FIGURE 1a  
NOISE IMPACT FROM  
NEIGHBORING BUILDINGS  
TO THE SITE  
ZOOMED-OUT



STATIONARY NOISE IMPACT  
1103 DROUILLARD RD, WINDSOR, ONTARIO

FIGURE 1b  
NOISE IMPACT FROM NEIGHBORING BUILDINGS TO THE SITE  
ZOOMED-IN

## ATTACHMENT D

**Table C1**  
**Stationary Noise Impact Source Data**  
**Point Sources**  
**1103 Drouillard Rd, Windsor, Ontario**

| Noise Source Description | Cadna ID           | Total<br>SWL<br>(dBA) | Data Source<br>or<br>Representative Data | Height<br>Absolute<br>(m) | Above Roof<br>(m) | Operating Time |                | x        | y       |
|--------------------------|--------------------|-----------------------|------------------------------------------|---------------------------|-------------------|----------------|----------------|----------|---------|
|                          |                    |                       |                                          |                           |                   | Day<br>(min)   | Night<br>(min) |          |         |
| S01                      | HVAC_1FAN          | 81.7                  | HVAC_1FAN                                | 7.25                      | 1.25              | 60             | 30             | 17335365 | 4687136 |
| S02                      | HVAC_1FAN          | 94                    | Condensing_Unit                          | 7.25                      | 1.25              | 60             | 30             | 17335352 | 4687140 |
| S03                      | HVAC_1FAN          | 81.7                  | HVAC_1FAN                                | 7.25                      | 1.25              | 60             | 30             | 17335347 | 4687131 |
| S04                      | HVAC_1FAN          | 81.7                  | HVAC_1FAN                                | 7.25                      | 1.25              | 60             | 30             | 17335332 | 4687130 |
| S05                      | HVAC_1FAN          | 81.7                  | HVAC_1FAN                                | 7.25                      | 1.25              | 60             | 30             | 17335341 | 4687123 |
| S06                      | HVAC_1FAN          | 81.7                  | HVAC_1FAN                                | 7.25                      | 1.25              | 60             | 30             | 17335351 | 4687121 |
| S07                      | HVAC_1FAN          | 81.7                  | HVAC_1FAN                                | 7.25                      | 1.25              | 60             | 30             | 17335356 | 4687129 |
| S08                      | HVAC_1FAN          | 81.7                  | HVAC_1FAN                                | 7.25                      | 1.25              | 60             | 30             | 17335364 | 4687122 |
| S09                      | HVAC_1FAN          | 81.7                  | HVAC_1FAN                                | 7.25                      | 1.25              | 60             | 30             | 17335377 | 4687134 |
| S10                      | HVAC_1FAN          | 81.7                  | HVAC_1FAN                                | 7.25                      | 1.25              | 60             | 30             | 17335372 | 4687143 |
| S11                      | Representative_MUA | 80.6                  | Representative_MUA                       | 7.5                       | 1.5               | 60             | 60             | 17335364 | 4687093 |
| S12                      | Representative_MUA | 80.6                  | Representative_MUA                       | 7.5                       | 1.5               | 60             | 60             | 17335371 | 4687106 |
| S13                      | HVAC_1FAN          | 81.7                  | HVAC_1FAN                                | 7.25                      | 1.25              | 60             | 30             | 17335386 | 4687087 |
| S14                      | Representative_MUA | 80.6                  | Representative_MUA                       | 7.5                       | 1.5               | 60             | 60             | 17335381 | 4687103 |
| S15                      | HVAC_1FAN          | 81.7                  | HVAC_1FAN                                | 7.25                      | 1.25              | 60             | 30             | 17335235 | 4687247 |
| S16                      | HVAC_1FAN          | 81.7                  | HVAC_1FAN                                | 7.25                      | 1.25              | 60             | 30             | 17335239 | 4687250 |
| S17                      | HVAC_1FAN          | 81.7                  | HVAC_1FAN                                | 7.25                      | 1.25              | 60             | 30             | 17335245 | 4687253 |
| S18                      | HVAC_1FAN          | 81.7                  | HVAC_1FAN                                | 9.25                      | 1.25              | 60             | 30             | 17335286 | 4687234 |
| S19                      | HVAC_1FAN          | 81.7                  | HVAC_1FAN                                | 9.25                      | 1.25              | 60             | 30             | 17335290 | 4687235 |
| S20                      | HVAC_1FAN          | 81.7                  | HVAC_1FAN                                | 9.25                      | 1.25              | 60             | 30             | 17335299 | 4687240 |
| S21                      | Rep_Chiller        | 91                    | Rep_Chiller                              | 9.5                       | 1.5               | 60             | 30             | 17335554 | 4687169 |
| S22                      | Rep_Wet_Scrubber   | 90                    | Rep_Wet_Scrubber                         | 10.75                     | 1.75              | 60             | 60             | 17335276 | 4687572 |
| S23                      | Rep_Chiller        | 91                    | Rep_Chiller                              | 11.5                      | 1.5               | 60             | 30             | 17335443 | 4687588 |
| S24                      | Rep_Chiller        | 91                    | Rep_Chiller                              | 11.5                      | 1.5               | 60             | 30             | 17335441 | 4687595 |
| S25                      | Rep_Chiller        | 91                    | Rep_Chiller                              | 11.5                      | 1.5               | 60             | 30             | 17335438 | 4687602 |
| S26                      | Rep_Chiller        | 91                    | Rep_Chiller                              | 11.5                      | 1.5               | 60             | 30             | 17335434 | 4687609 |
| S27                      | Rep_Chiller        | 91                    | Rep_Chiller                              | 11.5                      | 1.5               | 60             | 30             | 17335432 | 4687615 |
| S28                      | Heavy_Truck_Idling | 100                   | Heavy_Truck_Idling                       | 2                         | 2                 | 60             | 0              | 17335499 | 4687095 |
| S29                      | Heavy_Truck_Idling | 100                   | Heavy_Truck_Idling                       | 2                         | 2                 | 60             | 0              | 17335457 | 4687171 |
| S30                      | Heavy_Truck_Idling | 100                   | Heavy_Truck_Idling                       | 2                         | 2                 | 60             | 0              | 17335475 | 4687163 |
| S31                      | Heavy_Truck_Idling | 100                   | Heavy_Truck_Idling                       | 2                         | 2                 | 60             | 0              | 17335600 | 4687234 |
| S32                      | Heavy_Truck_Idling | 100                   | Heavy_Truck_Idling                       | 2                         | 2                 | 60             | 0              | 17335379 | 4687620 |
| S33                      | Heavy_Truck_Idling | 100                   | Heavy_Truck_Idling                       | 2                         | 2                 | 60             | 0              | 17335269 | 4687604 |
| S34                      | Heavy_Truck_Idling | 100                   | Heavy_Truck_Idling                       | 2                         | 2                 | 60             | 0              | 17335317 | 4687625 |

**1103 Drouillard Rd, Windsor, Ontario**

|                          |                   | Total<br>SWL<br>(dBA) | Data Source<br>or<br>Representative Data | Height<br>Absolute<br>(m) | Operating Time |       | Moving Pt. Src |       |        | x        | y       |
|--------------------------|-------------------|-----------------------|------------------------------------------|---------------------------|----------------|-------|----------------|-------|--------|----------|---------|
| Noise Source Description | Cadna ID          |                       |                                          |                           | Day            | Night | Number         |       | Speed  |          |         |
|                          |                   |                       |                                          |                           | (min)          | (min) | Day            | Night | (km/h) |          |         |
| L1                       | Heavy_truck_10kph | 95.2                  | Heavy_truck_10kph                        | 2.5                       | 60             | 0     | 3              | 0     | 10     | 17335331 | 4687636 |
| L2                       | Heavy_truck_10kph | 94.9                  | Heavy_truck_10kph                        | 2.5                       | 60             | 0     | 3              | 0     | 10     | 17335482 | 4687033 |
| L3                       | Heavy_truck_10kph | 89.3                  | Heavy_truck_10kph                        | 2.5                       | 60             | 0     | 3              | 0     | 10     | 17335492 | 4687086 |
| L4                       | Heavy_truck_10kph | 95.4                  | Heavy_truck_10kph                        | 2.5                       | 60             | 0     | 3              | 0     | 10     | 17335567 | 4687154 |
| L5                       | Heavy_truck_10kph | 86.3                  | Heavy_truck_10kph                        | 2.5                       | 60             | 0     | 3              | 0     | 10     | 17335258 | 4687617 |
| L6                       | Heavy_truck_10kph | 86                    | Heavy_truck_10kph                        | 2.5                       | 60             | 0     | 3              | 0     | 10     | 17335312 | 4687641 |