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ENVIRONMENTAL NOISE REPORT

PROPOSED RESIDENTIAL DEVELOPMENT
64 TO 66 THOMAS STREET
AND 65 TANNERY STREET
CITY OF MISSISSAUGA
REGION OF PEEL

JADE ACOUSTICS

Prepared for
DeZen Realty Co. Ltd.

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SUMMARY

The proposed residential development is located at 64 to 66 Thomas Street and 65 Tannery Street in the City of Mississauga. The proposed development includes five (5) mid-rise residential buildings, four (4) of which are atop a shared podium. The site is affected by road traffic noise, rail traffic noise and by existing commercial operations.

The environmental noise guidelines NPC-300 for transportation and stationary noise sources of the Ministry of the Environment, Conservation and Parks (MOE), set out sound level limits for both the indoor (transportation sources only) and outdoor space (both transportation and stationary sources). Sound levels due to the nearby roads, rail and the existing commercial sources were determined and compared to the MOE and Region of Peel/City of Mississauga guidelines to determine the appropriate mitigation measures.

Using road traffic data obtained from the City of Mississauga and rail traffic data from CP and Metrolinx, the sound levels for various locations in the proposed residential development were determined. The analysis of the noise sources associated with the commercial developments was based on information collected by Jade Acoustics Inc. during site visits and from other similar facilities available in Jade Acoustics Inc. files.

To address road and rail traffic noise, central air conditioning, upgraded exterior wall, exterior door and window construction will be required for all proposed buildings. When final building plans are available, sound level predictions and architectural requirements should be verified, to ensure applicable guidelines are met.

The mechanical drawings and detailed information regarding the mechanical equipment associated with the proposed development, including but not limited to garage exhaust fans, rooftop mechanical systems and emergency generators were not available at the time of preparation of this noise report. Once mechanical drawings are available, additional noise analyses will need to be conducted to determine if the selected mechanical equipment requires noise mitigation measures.

Several options have previously been investigated in this preliminary report to address the stationary noise sources. This revised report has included the preferred option, as determined through review comments from the City on the previous iterations of the report. Section 5.2 provides details.

The proposed residential development was evaluated using the MOE noise criteria for stationary sources applicable to both a Class 1 area and a Class 4 area. Based on review comments from the City of Mississauga on the previous reports prepared for this development, the city's preferred option is the designation of the subject site as a Class 4 area. This updated

report therefore includes acoustic mitigation measures to meet the Class 4 area sound level limits.

Currently, the proposed site is considered to be a Class 1 area; therefore, the land use planning authority would need to approve the new classification based on the noise analysis and incorporate a Class 4 designation in a site-specific zoning by-law or alternate planning document, as determined by the city.

Where minor excesses exist and noise mitigation measures are required, future occupants will be advised through the use of warning clauses.

1.0 INTRODUCTION

Jade Acoustics Inc. was retained by DeZen Realty Co. Ltd. to prepare an Environmental Noise Report, to investigate the potential noise impact on the proposed residential development to the satisfaction of the City of Mississauga and Regional Municipality of Peel.

A Preliminary Environmental Noise Report dated July 2, 2019, revised January 21, 2022, was prepared by Jade Acoustics Inc. in support of the current development application. This revised report has been prepared to address an updated site design and review comments provided by the City of Mississauga (based on the previous site design). A copy of the applicable comments by the City and other approval authorities is found in Appendix G with associated responses.

An evaluation of the potential acoustic impact between the dwelling units and all internal acoustic matters is outside of the scope of work of this report.

The proposed site is identified as:

64 to 66 Thomas Street and
65 Tannery Street
City of Mississauga
Region of Peel

The proposed residential development is located at the north quadrant of Joymar Drive and Thomas Street. Surrounding land uses are existing and future residential and existing commercial developments.

The proposed development is not affected by aircraft traffic.

The analysis was based on:

- Site plan and preliminary architectural plans and elevations prepared by SRM Architects and Urban Designers dated and received April 12, 2024;
- Grading Plan prepared by Crozier and Associates Consulting Engineers last dated and received April 22, 2024;
- Landscape Concept Plan prepared by Strybos Barron King Landscape Architecture last dated and received March 22, 2024;
- Road traffic information provided by the City of Mississauga;
- Rail traffic information provided by CP and Metrolinx; and

- Site visits conducted by Jade Acoustics Inc. on December 20, 2018, April 25, 2019, November 29, 2021, April 4, 2022, and October 23, 2023.

A Key Plan is attached as Figure 1.

Figure 2 shows the proposed residential development which includes proposed new mid/high-rise buildings and associated outdoor amenity spaces, areas to be re-naturalized and new internal roads.

As shown in the architectural package, the development is proposed to consist of multiple phases of development. This report has considered the ultimate condition reflecting the complete build-out of the subject site.

2.0 NOISE SOURCES

2.1 Transportation Sources

2.1.1 Road and Rail

The primary ground transportation noise sources of potentially adverse impact are the road traffic on Joymar Drive, Thomas Street and Tannery Street and rail traffic on the CP Galt Subdivision.

The ultimate road traffic data for Joymar Drive, Thomas Street and Tannery Street was provided by the City of Mississauga on various dates in support of this and other nearby developments subject to the same noise sources. At the time the most recent information for Thomas Street was provided by the city in October 2023, it was indicated that updated road traffic information for Tannery Street and Joymar Drive were not available; therefore, the respective most recent ultimate road traffic information for these roadways provided by the City has been accounted for in this report.

Rail traffic information for the CP Galt Subdivision was provided by CP and Metrolinx.

The rail traffic information from CP Rail was originally provided January 2, 2019, and re-confirmed as valid on May 7, 2020. Since the time the data was confirmed to be applicable, CP Rail has indicated that they will no longer be providing information regarding their rail operations. As such, the information previously provided in support of this report has been used in this revision, as it is the best available information. The rail traffic information has been escalated to the Year 2034 (ten (10) years beyond the report date).

Updated rail traffic information was provided by Metrolinx in November 2023 in support of this updated report.

See Appendix A for correspondence regarding the road and rail traffic information and Table 1 for a summary of traffic information.

This site is not impacted by aircraft traffic or existing industrial noise sources.

2.2 Stationary Sources

2.2.1 Stationary Sources within the Development

The identified mechanical sources of noise which may acoustically impact the adjacent residential developments and the subject site itself include but may not be limited to garage

exhaust fans, rooftop mechanical systems and emergency generators. These potential noise sources will be addressed when information becomes available, through the building permit process.

2.2.2 Stationary Sources External to the Development

There are several existing commercial buildings located to the northeast of the proposed site. The commercial buildings are shown on Figures 1 and 3 to 10 and include:

- Spot Free Car Wash;
- TLK Towing;
- Limitless Motorsports;
- Mississauga Engines;
- Krown Rust Control;
- Ontario Premium Motors;
- Azul Marble and Granite; and
- Kodawari Experience.

Questionnaires were provided to the above noted businesses with potential to have an acoustical impact on the subject site, in order to gain a better understanding of their operations. Where a response was provided, the completed questionnaires have been included in Appendix F.

A site visit was conducted on April 25, 2019, by Jade Acoustics Inc. staff in order to perform sound measurements of the Spot Free Car Wash operations. The car wash sequence and the operation of vacuums were measured, and the results were used in the preparation of the acoustic model used to assess the neighbouring existing commercial operations. No changes to the general state of the car wash were observed at the time of the October 2023 site visit by Jade staff.

Information from completed questionnaires and from Jade Acoustics Inc. files for similar facilities has been used to represent the other existing commercial businesses noted above. There are other existing commercial operations located immediately west of the facilities noted above, in the vicinity of the subject site. It is our understanding based on development application information from the City of Mississauga website that these lands will be redeveloped for residential purposes; therefore, existing commercial operations to the northwest of those noted above have not been considered further in this report.

Streetsville Secondary School is adjacent to the west portion of the proposed residential development. The potential noise sources associated with the school are rooftop mechanical equipment. Existing residential dwellings are located adjacent to the school on all sides. Due to the type of use and noise sources, the school is expected to be acoustically insignificant at the proposed site and was not analyzed further.

Section 4.2 includes details of the noise assessment.

3.0 ENVIRONMENTAL NOISE CRITERIA

The environmental noise criteria used for residential developments in the City of Mississauga, Region of Peel and the Ontario Ministry of the Environment, Conservation and Parks (MOE) environmental noise criteria are contained in Appendix B and summarized below.

The Ontario Ministry of the Environment, Conservation and Parks document "Environmental Noise Guideline Stationary and Transportation Sources – Approval and Planning, Publication NPC-300", dated August 2013, released October 21, 2013, (updated final version # 22) has been used in this assessment.

3.1 Transportation Sources

3.1.1 Indoors

If the nighttime (11:00 p.m. to 7:00 a.m.) sound level in terms of Leq at the exterior face of a bedroom or living/dining room window is equal to or greater than 60 dBA and/or if the daytime (7:00 a.m. to 11:00 p.m.) sound level in terms of Leq at the exterior face of a living/dining room or bedroom window is greater than 65 dBA, means must be provided so that windows can be kept closed for noise control purposes and central air conditioning is required.

For nighttime sound levels (LeqNight) greater than 50 dBA to less than or equal to 59 dBA on the exterior face of a bedroom or living/dining room window or daytime sound levels (LeqDay) greater than 55 dBA to less than or equal to 65 dBA on the exterior face of a bedroom or living/dining room window, there need only be the provision for adding central air conditioning by the occupant at a later date. This typically involves a ducted heating system sized to accommodate the addition of central air conditioning by the occupant at a later date. A warning clause advising the occupant of the potential interference with some activities is also required.

As required by the MOE, to determine the building component requirements the indoor noise criteria for road traffic noise is 40 dBA (Leq8hour) for the bedrooms during nighttime hours, 45 dBA (Leq8hour) for the living/dining rooms during nighttime hours and 45 dBA (Leq16hour) for the living/dining rooms and bedrooms during daytime hours. These criteria are used to determine the architectural requirements. The MOE guidelines for rail noise are 5 dB more stringent to account for the low frequency component of rail noise. These criteria are used to determine the architectural requirements.

3.1.2 Outdoors

For the outdoor amenity areas, a design goal of 55 dBA daytime (7:00 a.m. to 11:00 p.m.) sound level is used for road and rail traffic. In some cases an excess not exceeding 5 dB is

considered acceptable. Where the unmitigated sound levels during the day exceed 55 dBA (Leq16hour, daytime) but are less than 60 dBA (Leq16hour, daytime), a warning clause is required and mitigation should be considered. Where the unmitigated sound levels during the daytime hours exceed 60 dBA, mitigation measures and a warning clause are required.

The definition of outdoor amenity area as defined by the MOE is given below.

"Outdoor Living Area (OLA)

> (applies to impact assessments of transportation sources) means that part of a noise sensitive land use that is:
>
> - intended and designed for the quiet enjoyment of the outdoor environment; and
> - readily accessible from the building.

The OLA includes:

- backyards, front yards, gardens, terraces or patios;
- balconies and elevated terraces (e.g. rooftops), with a minimum depth of 4 metres, that are not enclosed, provided they are the only outdoor living area (OLA) for the occupant; or
- common outdoor living areas (OLAs) associated with high-rise multi-unit buildings."

In this case all proposed balconies of the residential units are less than 4.0 m deep and as such are not considered to be noise sensitive receptors.

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

3.2 Stationary Sources

The guidelines of the Ontario Ministry of the Environment, Conservation and Parks (MOE) for stationary sources are to be used for the commercial facilities.

The MOE has recently published the document NPC-300 titled "Environmental Noise Guideline Stationary and Transportation Sources – Approval and Planning".

The MOE also has vibration guidelines with respect to stationary sources, NPC-207. These guidelines require that the peak vibration velocities not exceed 0.3 mm/s at the point of reception during the day or night.

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

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

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

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

A Class 4 designation of a proposed residential use can be used to permit higher sound levels from neighbouring stationary sources. Based on the NPC-300 guidelines, Class 4 areas can only be established in Class 1 or 2 areas in proximity to existing, lawfully established stationary sources. This is not applicable in areas with existing noise sensitive land use(s) unless they are redeveloped/rezoned/replaced with new noise sensitive land use(s). Classification of a Class 4 area is subject to formal confirmation from the land use planning authority and continues as long as the stationary source(s) can potentially operate (i.e. until change in zoning).

Class 4 does not exempt the evaluation of the noise impact of the noise sources associated with the proposed development on the noise sensitive receptors within the proposed buildings.

Sound level limits for Class 4 areas shown in NPC-300 Tables C-5, C-6, C-7 and C-8 assume closed windows together with a ventilation system which is in most situations, central air conditioning.

3.3 CP Rail/Metrolinx Guidelines

CP/Metrolinx have guidelines which apply to residential developments adjacent to their rights-of-way. In general, the railway guidelines follow the MOE guidelines for indoor and outdoor sound level limits.

The Railway Association of Canada and Federation of Canadian Municipalities (RAC/FCM) guidelines "Guidelines for New Development in Proximity to Railway Operations" dated May 2013 have been used in this assessment. The CP and Metrolinx guidelines are generally consistent with the RAC/FCM guidelines.

In addition, the railways require that for a principal main line:

- a minimum setback of 30 m from the right-of-way be maintained;
- a safety berm (minimum height 2.5 m)/sound barrier (minimum total height 5.5 m above top-of-rail) be constructed along the right-of-way;
- ground vibration transmission be assessed through site tests. If an excess exists, all residential units within 75 m of the nearest track should be protected; and
- all residential units within 300 m of the right-of-way have a warning clause placed in offers of purchase and sale, in lease agreements and in the development agreement, making future residents aware of the existence of the railway.

The scope of this report addresses the CP Rail line from a noise and vibration perspective and does not consider the feasibility, design and implementation of setback requirements or safety features required by the Municipality/CP Rail/Metrolinx/RAC/FCM.

In terms of the consideration of railway vibration, as the subject site is located more than 75 m from the rail right-of-way, ground-borne vibration measurements are not required.

4.0 NOISE IMPACT ASSESSMENT

4.1 Transportation Sources

Sound levels at the common outdoor amenity spaces and at the building envelopes of the proposed residential dwellings in terms of Leq, the energy equivalent continuous sound levels for both day (16 hours) and night (8 hours) were predicted using ORNAMENT and STEAM, the MOE Traffic Noise Prediction Models for road and rail traffic, respectively, implemented within the CadnaA computer program (Version 2023 MR2). The respective road and rail reference sound levels from STAMSON were used to calibrate the CadnaA noise source modelling in order to account for the complexity of the site geometry, while preparing the analysis using MOE approved calculation methods as the basis. See Table 2 for a detailed summary of the predicted sound levels. Appendix C contains sample calculations of the predicted sound levels.

For Tower A and B, as well as the associated podia, the unmitigated sound levels at the worst-case façade due to combined road and rail noise are predicted to be up to 63 dBA for the daytime period (16 hours) between 7:00 a.m. and 11:00 p.m. and up to 65 dBA for the nighttime period (8 hours) between 11:00 p.m. and 7:00 a.m.

The unmitigated daytime sound level at the centre of the 7th floor rooftop outdoor amenity area (R5 on Figures 2 to 10) is predicted to be 56 dBA during daytime hours. At the centre of the first floor OLA to the south of Tower B (R2 on Figures 2 to 10), the unmitigated daytime sound level is predicted to be 61 dBA. The predicted sound levels at the rooftop OLA areas do not include screening from a potential solid railing.

For the south building, the predicted unmitigated daytime and nighttime sound levels at the worst-case façade are predicted to be up to 65 dBA in both time frames due to road and rail noise.

There are several at-grade common outdoor amenity areas shown on the site plan. As shown on Figure 6, the predicted unmitigated daytime sound levels in these general areas are predicted to range from 51 dBA to 62 dBA, depending on the exposure to the noise sources.

In addition to the ground-level OLAs shown on Figures 2 to 10, there is a proposed common outdoor amenity area proposed under the Tower B canopy, as shown in the architectural set. Based on the location and relative to the transportation sources, the predicted daytime sound level is anticipated to be similar to that predicted at Location R4 shown on the figures.

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

Due to the distance separation from the CP Galt Subdivision of over 150 m with intervening developments, ground-borne railway vibration investigation was not warranted, as noted in Section 3.3.

4.2 Stationary Sources

In support of this report, contact with the neighbouring commercial businesses was completed and investigation into associated noise sources was conducted. Sound measurements of the operations at Spot Free Car Wash were conducted. The noise sources and approach to modelling are based on the sound measurements completed as well as information collected through questionnaires and information from Jade Acoustics Inc. files. As noted in Section 2.2, questionnaires were provided to the existing neighbouring businesses.

Potentially significant noise sources associated with the neighbouring commercial businesses included in the analysis are:

- rooftop HVAC units;
- auto mechanic bays;
- non-refrigerated tractor trailer manoeuvring;
- stone cutting;
- car wash bays; and
- car wash vacuums.

Appendix D includes information regarding the sound power levels used in the calculations.

Figures 3 and 7 show the location of the commercial buildings and noise sources analyzed.

For the rooftop HVAC units, duty cycles of 100% (daytime), 70% (evening) and 40% (nighttime) were accounted for in the analysis.

For the car wash vacuums, a duty cycle of fifteen (15) minutes (daytime), ten (10) minutes (evening) and five (5) minutes (nighttime) of a full hour were accounted for in the analysis; the sound power level of each vacuum was penalized by 5 dB in order to account for the tonality of the noise sources.

For the car wash bays, a duty cycle of forty-five (45) minutes (daytime), twenty-five (25) minutes (evening) and ten (10) minutes (nighttime) of a full hour were accounted for in the analysis; the sound power level of the bays was also penalized by 5 dB in order to account for the tonality of the noise source.

The previous versions of this report have considered both Class 1 and Class 4 area sound level limits and presented physical mitigation options to achieve compliance in both cases. Based on review comments from the City of Mississauga on the January 14, 2022 revised report prepared by Jade Acoustics Inc., a Class 4 designation of the subject site has been identified as the preferred option for this development; therefore, the predicted sound levels due to the stationary sources were compared with the MOE exclusion sound level limits of

60 dBA (daytime and evening hours) and 55 dBA (nighttime hours) applicable at the façade of a dwelling to assess compliance with the Class 4 requirements. The Class 4 sound level limit during daytime and evening hours at the common OLA is 55 dBA.

The unmitigated sound levels in terms of one-hour Leq due to continuous stationary noise sources were calculated for the façades (and relevant outdoor amenity areas) of all proposed buildings using the CadnaA 2023 MR2 computer program, which uses International Standard Analytical Code ISO 9613-2.

Table A was prepared showing the results of the analysis at the worst-case building façades, for each of the proposed buildings. Figure 3 shows the predicted unmitigated sound levels at all building façades and common outdoor amenity spaces due to continuous stationary noise sources. Based on the sound level predictions during daytime and evening hours at the northeast façade of Tower B (worse-case relative to the ground-level OLA), it is predicted that the Class 4 sound level limits will be met at the ground-level OLA.

As shown in Table A, the predicted sound levels at the proposed building façades and plane of windows are within the Class 4 sound level limits; therefore, mitigation measures are not required to address the façades.

An exceedance above the Class 4 sound level limits is predicted at certain common OLA locations; therefore, physical mitigation measures will be required to address the stationary noise at the specific locations (R1 and R2 as shown on Figure 6). Specific mitigation measures recommendations to address these limited areas have been provided in Section 5.2.

Due to the configuration of the buildings in the neighbouring commercial site, nature of the businesses and based on the information provided in completed questionnaires, impulsive noise sources were considered at this time to be acoustically insignificant and not investigated further.

TABLE A

SUMMARY OF PREDICTED SOUND LEVELS DUE TO CONTINUOUS NOISE SOURCES WITHOUT MITIGATION MEASURES

Worst Case Receptor* On	Predicted Sound Level (dBA)								
	Daytime (7:00 a.m. to 7:00 p.m.)			Evening (7:00 p.m. to 11:00 p.m.)			Nighttime (11:00 p.m. to 7:00 a.m.)		
	Predicted	Limit**	Exceedance	Predicted	Limit**	Exceedance	Predicted	Limit**	Exceedance
Tower A	51	60	No	49	60	No	46	55	No
8-Storey Tower A Podium	51	60	No	49	60	No	46	55	No
Tower B	56	60	No	54	60	No	51	55	No
8-Storey Tower B Podium	56	60	No	54	60	No	51	55	No
Tower A/B 7-Storey Podium	56	60	No	54	60	No	51	55	No
7-Storey Podium Rooftop OLA (R5)	26	55	No	24	55	No	N/A***	N/A***	N/A***
Southern Building (12-Storey)	56	60	No	55	60	No	51	55	No
At-Grade OLA (R1)	58	55	Yes	56	55	Yes	N/A***	N/A***	N/A***
P-1 Rooftop OLA (R2)	56	55	Yes	54	55	No	N/A***	N/A***	N/A***
At-Grade OLA (R3)	44	55	No	42	55	No	N/A***	N/A***	N/A***
At-Grade OLA (R4)	46	55	No	45	55	No	N/A***	N/A***	N/A***

* Building façade receptors except as noted.

** Class 4 area exclusion sound level limit.

*** There are no nighttime sound level limits for outdoor living areas.

5.0 NOISE ABATEMENT MEASURES

5.1 Transportation Sources

5.1.1 Indoors

Architectural Component Requirements

Indoor sound level criteria for road and rail traffic can be achieved in all cases by using appropriate architectural elements for external wall, roof, window and exterior door construction. MOE indoor criteria for road traffic noise are 40 dBA (Leq8hour) for the bedrooms during nighttime hours, 45 dBA (Leq8hour) for the living/dining rooms during nighttime hours and 45 dBA (Leq16hour) for the living/dining rooms and bedrooms during daytime hours. As noted in Section 3.1.1, the MOE guidelines for rail noise are 5 dB more stringent. These criteria have been used in this report. The characteristic spectra for the noise sources have been accounted for in the determination of the architectural components. Appendix E contains a sample calculation of architectural component selection.

Once final dwelling plans become available, the noise control requirements should be re-evaluated.

In determining the architectural requirements, it is assumed that the worst-case residential condition would involve a corner bedroom. The exterior walls would be 20% and the windows 60% of the associated floor area for both the wall perpendicular to the noise source and the wall parallel to the noise source.

Based on the preliminary analysis, for the worst-case receptors, windows and exterior doors need to be up to STC 40 and exterior walls need to be up to STC 45 to provide the acoustic mitigation required for noise due to road, and rail traffic.

An STC 40 rating for windows and exterior doors and an STC 45 rating for exterior walls are upgrades above the minimum structural and safety requirements of standard construction.

Based on the exposure to the transportation noise sources and due to the window and exterior door requirements for some façades, alternative measures to reduce the performance requirements can be explored, including, but not limited to reducing the window/door-to-floor areas into noise sensitive spaces, and upgrade the exterior wall construction. Limiting the sensitive spaces with glazing openings facing the railway (significant noise source, especially during nighttime hours) should be considered in the building design.

The acoustical performance of a window as a whole depends on glass configuration/thickness, air space, material used for frames and construction details including seals. Therefore, the acoustical performance of the glass configuration alone expressed as a sound transmission class (STC) rating, generally available in the literature, does not address the STC rating of the whole window. Glass configurations with different frame materials and/or construction details often produce different STC ratings. Therefore, it is recommended that prior to installation the window manufacturers provide proof (STC test results of window configuration from an accredited laboratory) that their windows meet the required STC ratings.

Ventilation Requirements

Where the sound level is equal to or greater than 60 dBA (at night) at the outside face of a bedroom window or living/dining room window or exceeds 65 dBA (during the day) on the outside face of a bedroom window or living/dining room window, the indoor noise criteria would not be met with open windows and provisions must be made to permit the windows to remain closed. The MOE requires central air conditioning. In addition, a warning clause is needed. Based on the analysis, many dwelling units require central air conditioning. See Table 3 and Figure 2.

Where the sound level is exceeded by 1 dB to 10 dB (i.e. LeqNight greater than 50 dBA to less than or equal to 59 dBA and LeqDay greater than 55 dBA to less than or equal to 65 dBA), the provision for adding central air conditioning by the occupants and a warning clause is required. Based on the calculations, provision for adding central air conditioning is required for the dwelling units not requiring mandatory central air conditioning. See Table 3, Notes to Table 3, and Figure 2.

The proponent has indicated that all residential units will be provided with central air conditioning; thereby, satisfying the acoustical requirements.

Warning clauses will also be required to be placed in offers of purchase and sale, lease agreements and included in the subdivision agreement for all relevant dwelling units to make future occupants aware of the potential noise situation. All blocks (units) within 300 m of the CP Galt Subdivision will also require a warning clause to advise of the proximity to the rail line, regarding the separate CP Rail and Metrolinx operations. See Table 3 for details.

See Table 3 and Notes to Table 3 for details of minimum noise abatement measures required.

5.1.2 Outdoors

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

A daytime sound level of less than 60 dBA is predicted at some of the proposed common outdoor amenity areas as noted in Section 4.1 and Table 2 (R3 to R5, inclusive). As the predicted sound levels at these common outdoor amenity areas are less than 60 dBA, no mitigation measures are proposed for these areas to address transportation sources.

Based on the analysis, an exceedance above 60 dBA is predicted at the other modelled OLA locations (i.e. R1 and R2). Typically, as the analysis demonstrates compliance with the sound level limits within at least one common OLA, that would be sufficient to address the overall development; however, based on the location of R1 and R2 relative to many dwelling units where another common OLA is not directly accessible, mitigation measures have been considered for these areas. In order to achieve a predicted daytime sound level of 60 dBA or less in these areas, a 1.6 m high roof edge acoustic barrier would be needed for R2, while a 2.0 m high acoustic barrier would be needed for R1. The relevant locations of the respective acoustic barriers are shown on Figures 7 to 10.

Based on the required acoustic barrier location adjacent to Thomas Street and along the rooftop edge, it should be noted that the acoustic barrier construction is not limited to commonly used materials, such as wood or concrete. Further to the review and approval by an acoustical engineer, the required acoustic barriers may take alternate forms, such as for example transparent barriers or decorative planter boxes. The proposed design must however meet the performance requirements of an acoustic barrier, i.e. is gapless to the required height and meets a minimum surface density of 10 kg/m^2 for rooftop applications or 20 kg/m^2 for at-grade applications.

Where an excess will remain or where mitigation measures are required, a warning clause should be placed in offers of purchase and sale and/or lease agreements and in the development agreement. Warning clause requirements are listed in Table 3 and specific wording is included in the Notes to Table 3.

5.2 Stationary Sources

As discussed in Section 4.2, based on the stationary noise source review, noise mitigation measures are required to achieve the MOE sound level limits at certain common OLA locations.

As previously noted, based on comments from the City of Mississauga, the analysis has considered mitigation measures required to achieve the Class 4 area sound level limits of the MOE.

Based on the analysis, the Class 4 sound level limits are not predicted to be met without the use of physical mitigation measures; therefore, the required physical mitigation has been assessed, which includes the designation of the new residential development as Class 4 and the use of the physical mitigation measures needed to meet transportation noise guidelines at these areas. This mitigation is in the form of a 2.0 m high acoustic barrier at the at-grade outdoor amenity area location adjacent to Thomas Street and a 1.6 m high acoustic barrier along the P-1 roof edge to the southeast of Tower B, as shown on Figures 7 to 10.

With the implementation of the recommended acoustic barriers, compliance with the Class 4 sound level limits due to stationary noise is predicted at all modelled common OLA locations shown on the site plan.

Based on the MOE NPC-300 guidelines, Class 4 designation can be used for new sensitive land uses adjacent to lawfully established stationary sources if approved by the municipality. Mandatory central air conditioning would also be required to satisfy the Class 4 requirements.

Currently, the proposed site is considered to be a Class 1 area; therefore, the land use planning authority would need to approve the new classification based on the noise analysis and incorporate Class 4 designation in a site-specific zoning by-law or alternative planning document that remains registered, as approved by the City of Mississauga. As previously discussed, the City has expressed support of the Class 4 designation through application review comments on the previous noise reports.

Due to their proximity to the existing commercial buildings, all proposed dwelling units should be provided with a proximity warning clause notifying the purchasers/tenants that the activities and/or equipment associated with the commercial buildings may at times be audible. See Table 3 and Notes to Table 3.

Table B, below, shows the results of the sound level predictions with the incorporation of physical mitigation measures to meet Class 4 area sound level limits.

TABLE B

SUMMARY OF PREDICTED SOUND LEVELS DUE TO CONTINUOUS NOISE SOURCES WITH MITIGATION MEASURES

Worst Case Receptor* On	Predicted Sound Level (dBA)								
	Daytime (7:00 a.m. to 7:00 p.m.)			Evening (7:00 p.m. to 11:00 p.m.)			Nighttime (11:00 p.m. to 7:00 a.m.)		
	Predicted	Limit**	Exceedance	Predicted	Limit**	Exceedance	Predicted	Limit**	Exceedance
Tower A	51	60	No	49	60	No	46	55	No
8-Storey Tower A Podium	51	60	No	49	60	No	46	55	No
Tower B	56	60	No	54	60	No	51	55	No
8-Storey Tower B Podium	56	60	No	54	60	No	51	55	No
Tower A/B 7-Storey Podium	56	60	No	54	60	No	51	55	No
7-Storey Podium Rooftop OLA (R5)	26	55	No	24	55	No	N/A***	N/A***	N/A***
Southern Building (12-Storey)	56	60	No	55	60	No	51	55	No
At-Grade OLA (R1)	51	55	No	49	55	No	N/A***	N/A***	N/A***
P-1 Rooftop OLA (R2)	49	55	No	47	55	No	N/A***	N/A***	N/A***
At-Grade OLA (R3)	44	55	No	42	55	No	N/A***	N/A***	N/A***
At-Grade OLA (R4)	46	55	No	45	55	No	N/A***	N/A***	N/A***

* Building façade receptors except as noted.

** Class 4 exclusion sound level limit.

*** There are no nighttime sound level limits for outdoor living areas.

6.0 RECOMMENDATIONS

1. The requirements as stipulated in Table 3 should be incorporated in the development.

2. The acoustic barriers as required to meet the Class 4 limits at the locations shown on Figures 7 to 10 should be included in the development.

3. An analysis of the proposed mechanical equipment and final architectural façade requirements will need to be prepared once the final site plan, architectural plans, mechanical plans and grading plan are available to ensure the appropriate criteria are achieved. This can be done through the building permit process.

7.0 CONCLUSIONS

Based on the acoustical analysis, with the incorporation of the appropriate acoustical abatement measures, it is feasible to develop these lands for residential use. In accordance with City, CP Rail, Metrolinx and Ministry implementation guidelines, where mitigation is required, future purchasers will be advised through the use of warning clauses.

Respectfully submitted,

JADE ACOUSTICS INC.

Per: _____
Michael Bechbache, P.Eng.

Per: _____
Chris B. Kellar P.Eng.

MB/CK/jg
L:\Reports\18-185 Apr 26-24 64 to 66 Thomas Street & 65 Tannery Street (ENR).doc

8.0 REFERENCES

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

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

3. "STEAM" – Sound from Trains Environmental Analysis Method", Ontario Ministry of the Environment, July, 1990.

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

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

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

7. "General Guidelines for the Preparation of Acoustical Reports in the Region of Peel", Region of Peel, November, 2012 (Updated August 2020).

8. "Guidelines for New Development in Proximity to Railway Operations", Railway Association of Canada and Federation of Canadian Municipalities, May 2013.

9. "Preliminary Environmental Noise Report", Jade Acoustics Inc., July 2, 2019, revised January 14, 2022.

TABLE 1

PROPOSED RESIDENTIAL DEVELOPMENT

64 TO 66 THOMAS STREET

AND 65 TANNERY STREET

CITY OF MISSISSAUGA

SUMMARY OF TRAFFIC INFORMATION

A. Road Traffic

ROAD	TANNERY STREET	THOMAS STREET	JOYMAR DRIVE
AADT* (Ultimate)	5,000	23,000	5,000
No. of Lanes	2	4	2
Speed (km/hr)	50	50	40
Medium Trucks (%)	1.65	1.65	1.10
Heavy Trucks (%)	1.35	1.35	0.90
Gradient (%)	<2	<2	<2
Day/Night Split (%)	90/10	90/10	90/10

* AADT: Annual Average Daily Traffic.

B. Rail Traffic (Galt Subdivision)

CP GALT SUBDIVISION	FREIGHT#		GO##	
	DAY	NIGHT	DAY	NIGHT
No. of Trains	9	8	20	2
Average No. of Locomotives	4	4	1	1
Average No. of Cars	151	151	10	10
Speed (km/h)	80	80	80	80

\# This data has been escalated by 2.5% annually to the Year 2034 for use in the analysis.

\## Projected data. No escalation factor used in the analysis.

TABLE 2

PROPOSED RESIDENTIAL DEVELOPMENT

64 TO 66 THOMAS STREET

AND 65 TANNERY STREET

CITY OF MISSISSAUGA

PREDICTED UNMITIGATED SOUND LEVELS
OUTDOORS DUE TO ROAD AND RAIL TRAFFIC

Building	Location*	Source	Approximate Distance (m)	Leq (dBA)			
				Day (7:00 a.m. to 11: 00 p.m.)		Night (11:00 p.m. to 7:00 a.m.)	
				Separate	Combined	Separate	Combined
Tower A	Northeast Façade	Road	Various	48	63	41	65
		Rail	170	63		65	
8-Storey Tower A Podium	Northeast Façade	Road	Various	55	61	49	62
		Rail	170	60		62	
Tower B	Northeast Façade	Road	Various	48	63	42	65
		Rail	170	63		65	
8-Storey Podium Tower B Podium	Northeast Façade	Road	Various	50	62	43	64
		Rail	170	61		63	
Tower A/B 7-Storey Podium	Northeast Façade	Road	Various	41	57	35	59
		Rail	200	57		59	
Tower A/B 7-Storey Podium Rooftop OLA (R5)	Rooftop OLA	Road	Various	43	57	--	--
		Rail	210	56		--	

* Wall receiver is worst-case residential storey. The OLA receiver is located at a height of 1.5 m above the ground/roof surface.

TABLE 2 - Continued

PROPOSED RESIDENTIAL DEVELOPMENT

64 TO 66 THOMAS STREET

AND 65 TANNERY STREET

CITY OF MISSISSAUGA

PREDICTED UNMITIGATED SOUND LEVELS
OUTDOORS DUE TO ROAD AND RAIL TRAFFIC

Building	Location*	Source	Approximate Distance (m)	Leq (dBA)			
				Day (7:00 a.m. to 11: 00 p.m.)		Night (11:00 p.m. to 7:00 a.m.)	
				Separate	Combined	Separate	Combined
South Building (12-Storey)	Northeast Façade	Road	Various	60	64	54	64
		Rail	190	62		64	
N/A	At-Grade Common OLA (R1)	Road	Various	59	62	--	--
		Rail	185	60		--	
N/A	P-1 Rooftop Common OLA (R2)	Road	Various	48	61	--	--
		Rail	185	61		--	
N/A	At-Grade Common OLA (R3)	Road	Various	35	51	--	--
		Rail	190	51		--	
N/A	At-Grade Common OLA (R4)	Road	Various	46	58	--	--
		Rail	165	58		--	

* Wall receiver is worst-case residential storey. The OLA receiver is located at a height of 1.5 m above the ground/roof surface.

TABLE 3

PROPOSED RESIDENTIAL DEVELOPMENT

64 TO 66 THOMAS STREET

AND 65 TANNERY STREET

CITY OF MISSISSAUGA

SUMMARY OF MINIMUM NOISE ABATEMENT MEASURES
DUE TO TRANSPORTATION NOISE SOURCES

Buildings (Units)	Air Conditioning[1]	Exterior Wall STC Rating[2]	Window STC Rating[3]	Sound Barrier[4]	Warning Clause[5]
All Buildings (Units)	Mandatory*	Up to STC 45**	Up to STC 40**	Yes***	A, B, C, D, E, F

* See Section 5.1.1 for details. All dwelling designs will include central air conditioning, as confirmed by the proponent. Mandatory central air conditioning would be required as a condition of the Class 4 designation.

** Denotes construction that exceeds minimum structural and safety requirements of standard construction to address transportation sources.

*** An acoustic barrier is required for some common outdoor amenity areas. See Sections 5.1.2 and 5.2 for details regarding the sound barriers.

See Notes to Table 3 on following pages. See Section 5.2 for discussions regarding noise mitigation measures required to address stationary noise sources.

NOTES TO TABLE 3

1. Means must be provided to allow windows to remain closed for noise control purposes.

2. STC – Sound Transmission Class Rating (Reference ASTM-E413). Values shown are based on preliminary calculations using standard assumptions. See text for details.

3. STC – Sound Transmission Class Rating (Reference ASTM-E413). Values shown are based on preliminary calculations using standard assumptions. See text for details. A sliding glass walkout door should be considered as a window and be included in the percentage of glazing. Requirements are to be finalized once building plans are available.

4. Acoustic barriers must be of a solid construction with no gaps and have a minimum surface density of 20 kg/m^2. See Sections 5.1.2 and 5.2 for details.

5. Suggested warning clauses to be included in the development agreement and to be included in offers of purchase and sale or lease agreements on designated buildings (units):

   A. "Purchasers/tenants are advised that despite the inclusion of noise control features in this development area and within the dwelling units, noise due to increasing road and rail traffic may continue to be of concern, occasionally interfering with the activities of the occupants as the sound level may exceed the noise criteria of the Municipality and the Ontario Ministry of the Environment, Conservation and Parks. I, the purchaser hereby agree to place this clause in all subsequent offers of purchase and sale when I sell the property."

   B. "Purchasers/tenants are advised that the dwelling unit was fitted with a central air conditioning system in order to permit closing of windows for noise control."

   C. "Purchasers/tenants are advised that this residential unit is in proximity to the existing commercial buildings whose activities may at times be audible."

   D. "Warning: Canadian Pacific Railway Company or its assigns or successors in interest has or have a right-of-way and facilities within 300 m 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). CP Rail will not be responsible for any complaints or claims arising from use of such facilities and/or operations on, over or under the aforesaid facility and right-of-way".

E. "Metrolinx, carrying on business as GO Transit, and its assigns and successors in interest operate commuter transit service within 300 metres from the land which is the subject hereof. In addition to the current use of these lands, there may be alterations to or expansions of the rail and other facilities on such lands in the future including the possibility that GO Transit or any railway entering into an agreement with GO Transit or any railway assigns or successors as aforesaid may expand their 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. Metrolinx will not be responsible for any complaints or claims arising from use of such facilities and/or operations on, over or under these lands."

F. "Purchasers/tenants are advised that sound levels due to the adjacent commercial buildings are required to comply with sound level limits that are protective of indoor areas and are based on the assumption that windows and exterior doors are closed. This dwelling unit has been supplied with a central air conditioning system which will allow windows and exterior doors to remain closed. The residential area has been designated Class 4 as defined by the Ministry of the Environment, Conservation and Parks guidelines."

N.T.S.

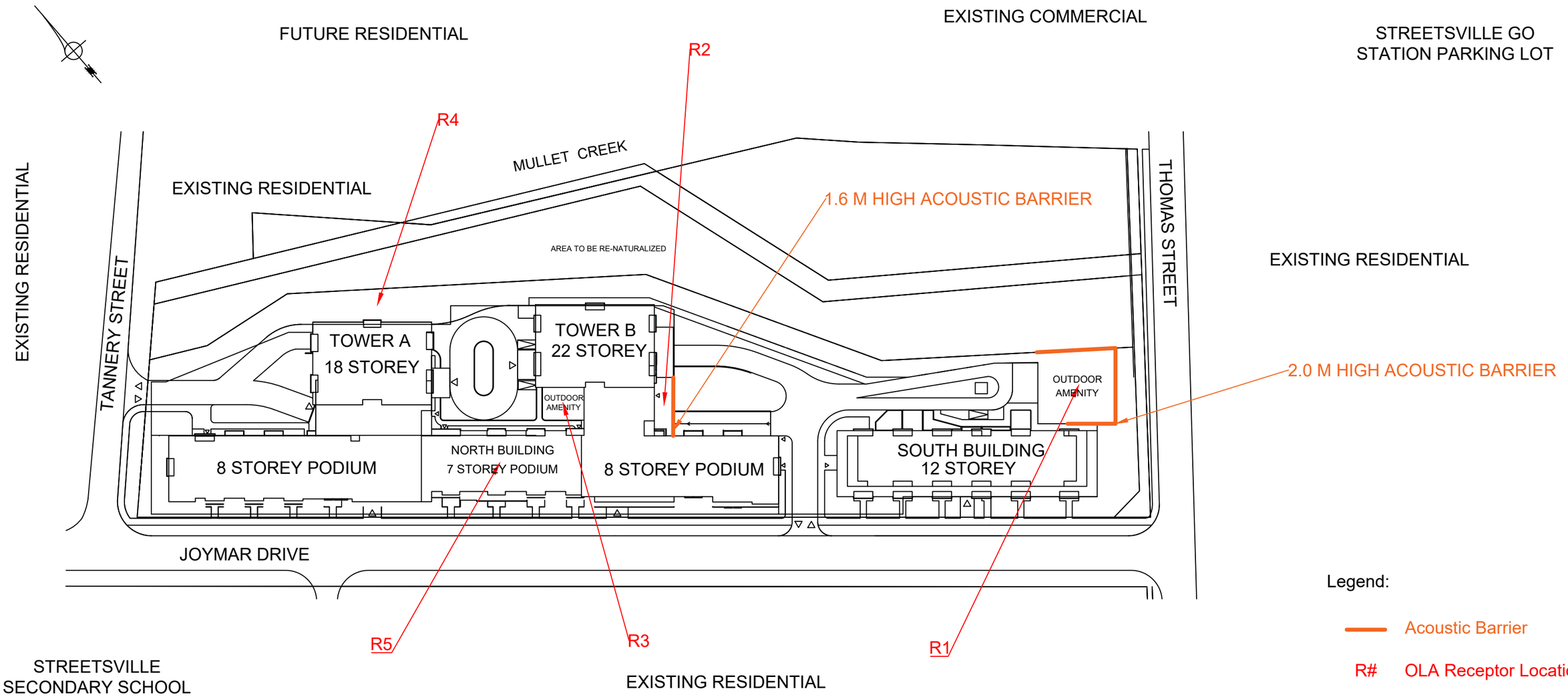
Proposed Residential Development
64 to 66 Thomas Street and 65 Tannery Street
City of Mississauga

Date: April 2024 **File: 18-185**

KEY PLAN

FIGURE 1

JADE ACOUSTICS



Legend:

Acoustic Barrier

R# OLA Receptor Location

N.T.S.

NOTES: All buildings/dwelling units require proximity Warning Clauses C, D, and E (See text, Table 3 and Notes to Table 3 for details)

All dwelling units will require mandatory central air conditioning and Warning Clause F if the development is designated Class 4.

It is anticipated that all dwelling units will be provided with central air conditioning, thereby satisfying the ventilation requirements due to transportation noise.

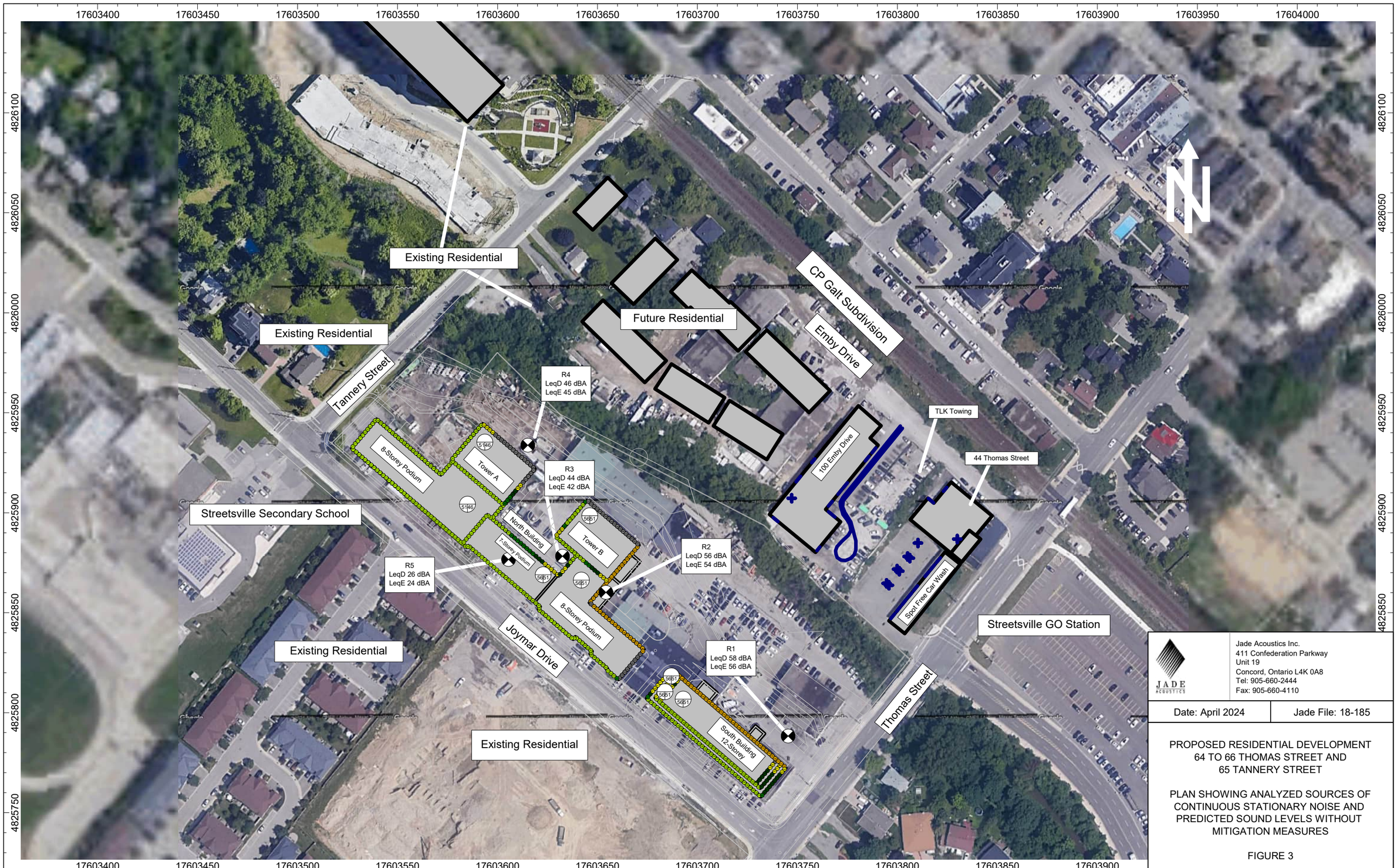
Proposed Residential Development
64 to 66 Thomas Street and 65 Tannery Street
City of Mississauga

Date: April 2024 Our File: 18-185

JADE ACOUSTICS

PLAN OF DEVELOPMENT

FIGURE 2



JADE ACOUSTICS

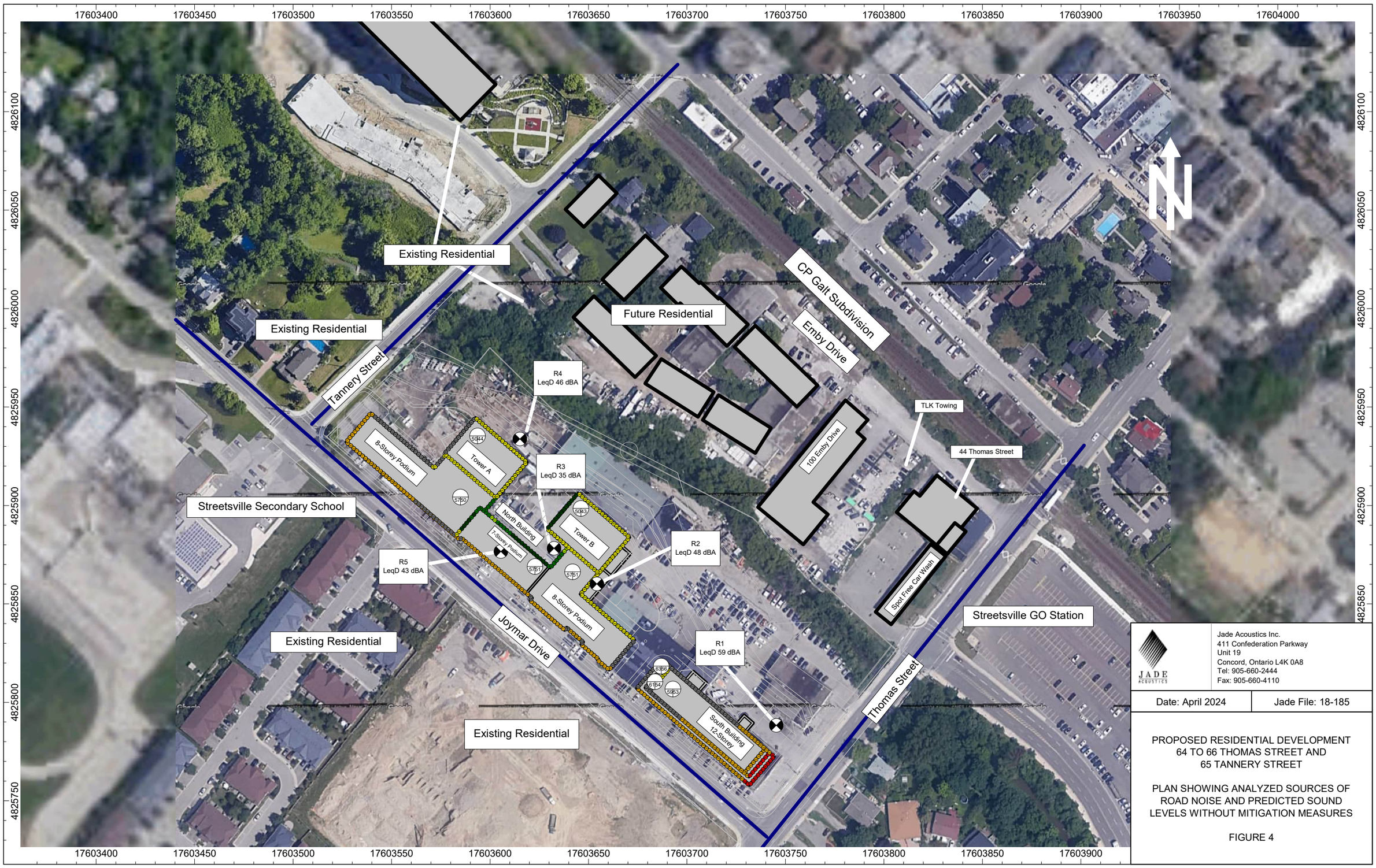
Jade Acoustics Inc.
411 Confederation Parkway
Unit 19
Concord, Ontario L4K 0A8
Tel: 905-660-2444
Fax: 905-660-4110

Date: April 2024 | Jade File: 18-185

PROPOSED RESIDENTIAL DEVELOPMENT
64 TO 66 THOMAS STREET AND
65 TANNERY STREET

PLAN SHOWING ANALYZED SOURCES OF CONTINUOUS STATIONARY NOISE AND PREDICTED SOUND LEVELS WITHOUT MITIGATION MEASURES

FIGURE 3



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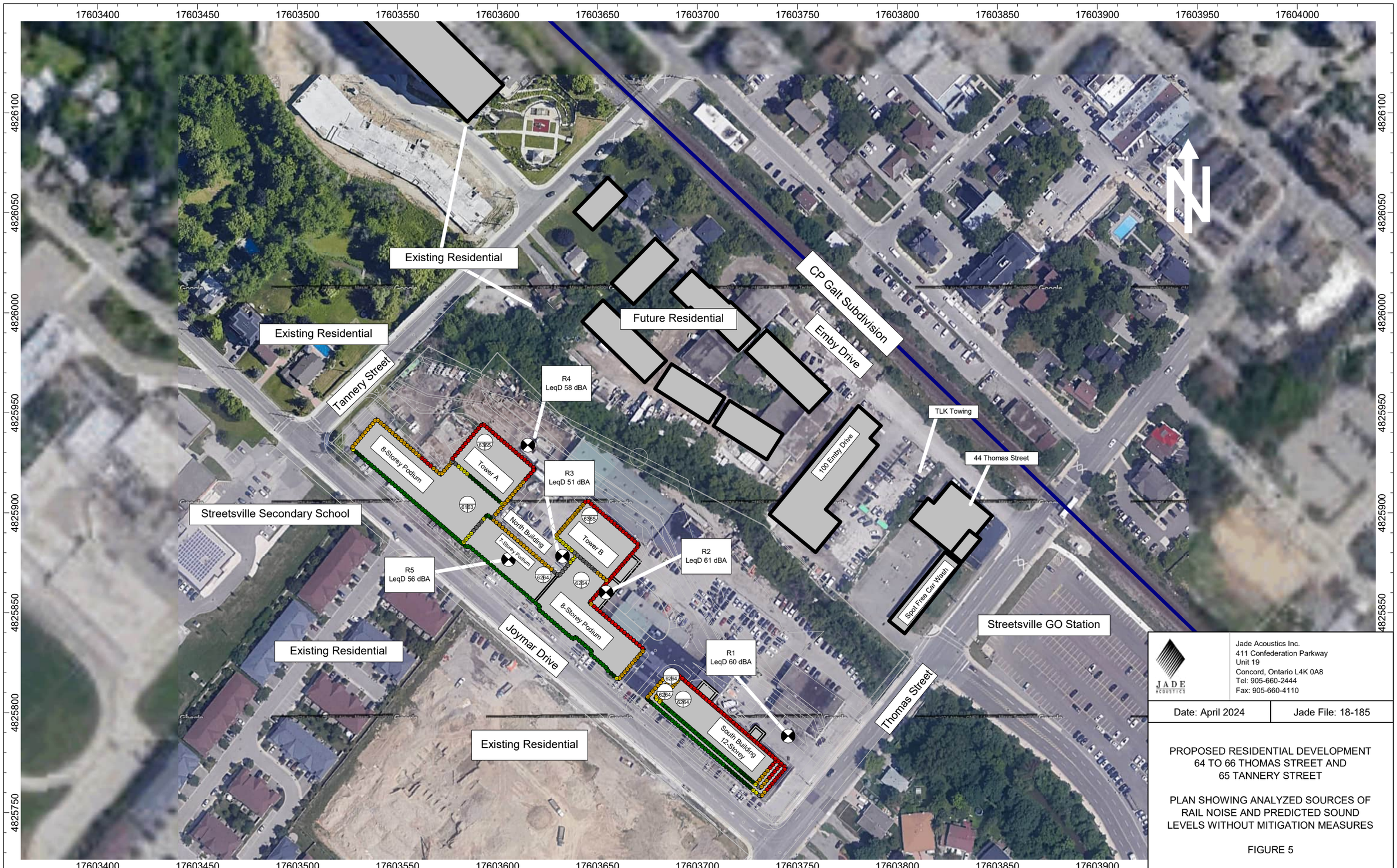
PROPOSED RESIDENTIAL DEVELOPMENT
64 TO 66 THOMAS STREET AND
65 TANNERY STREET

PLAN SHOWING ANALYZED SOURCES OF ROAD NOISE AND PREDICTED SOUND LEVELS WITHOUT MITIGATION MEASURES

FIGURE 4



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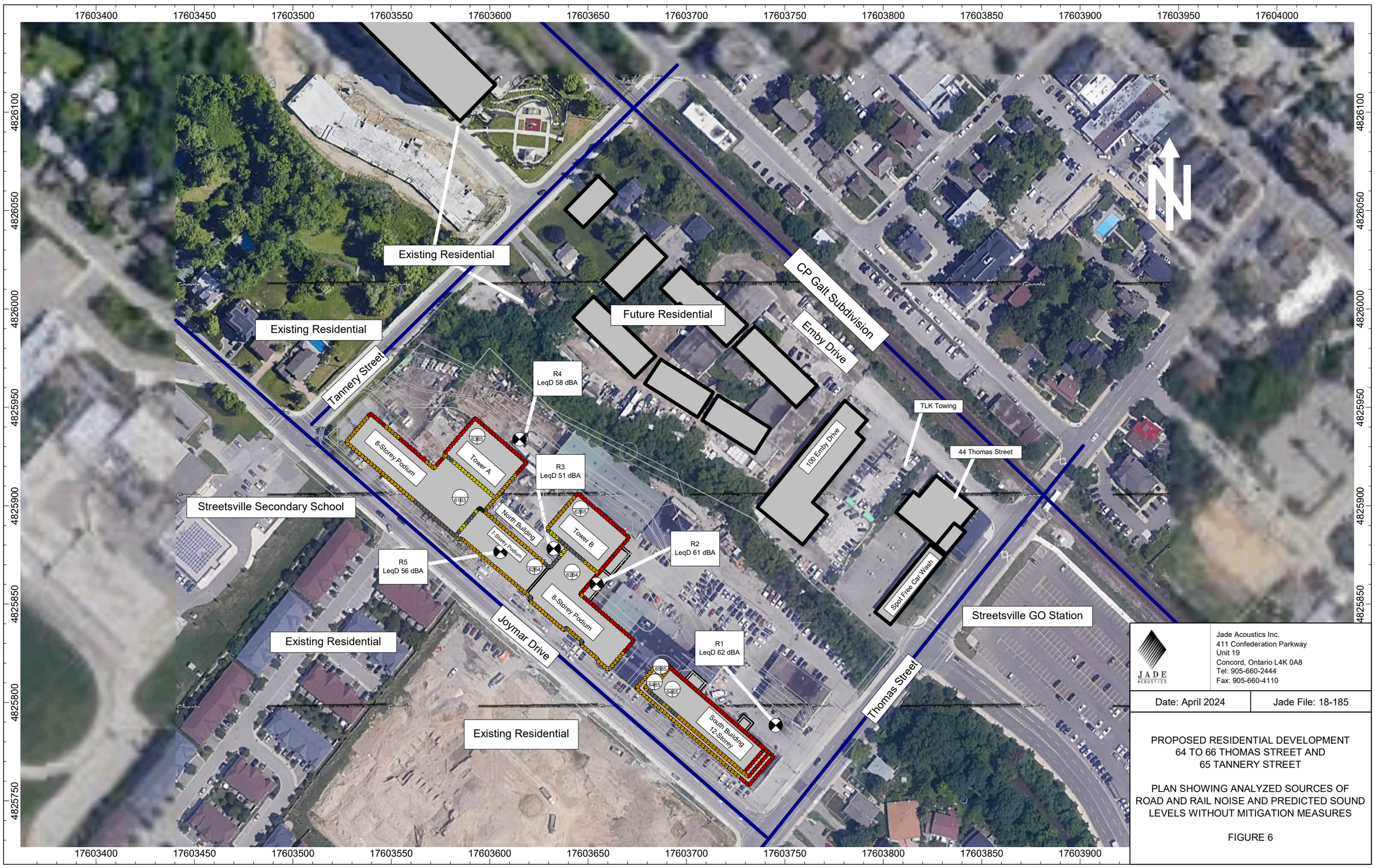
Date: April 2024	Jade File: 18-185

PROPOSED RESIDENTIAL DEVELOPMENT
64 TO 66 THOMAS STREET AND
65 TANNERY STREET

PLAN SHOWING ANALYZED SOURCES OF RAIL NOISE AND PREDICTED SOUND LEVELS WITHOUT MITIGATION MEASURES

FIGURE 5



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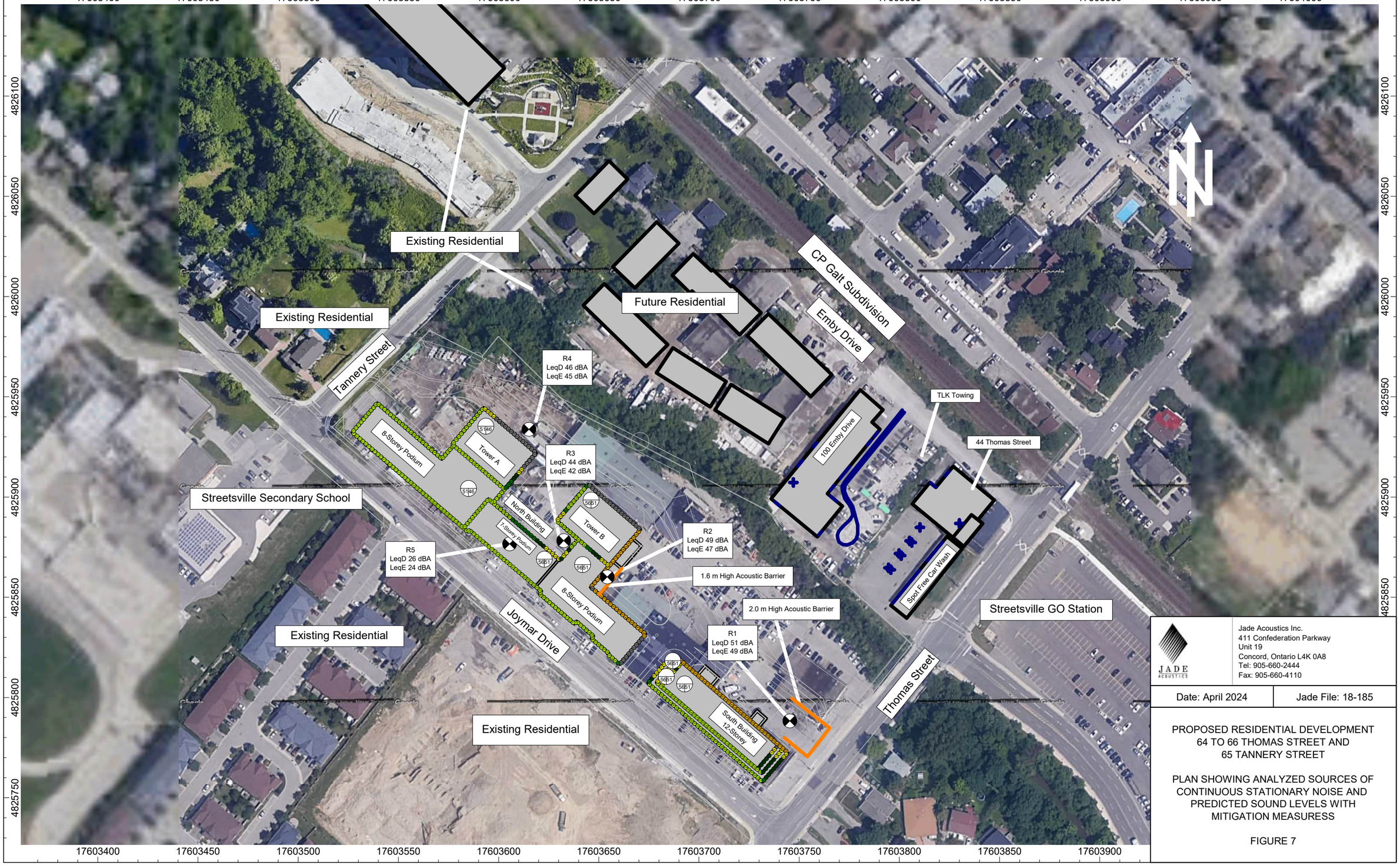
Date: April 2024 | Jade File: 18-185

PROPOSED RESIDENTIAL DEVELOPMENT
64 TO 66 THOMAS STREET AND
65 TANNERY STREET

PLAN SHOWING ANALYZED SOURCES OF ROAD AND RAIL NOISE AND PREDICTED SOUND LEVELS WITHOUT MITIGATION MEASURES

FIGURE 6



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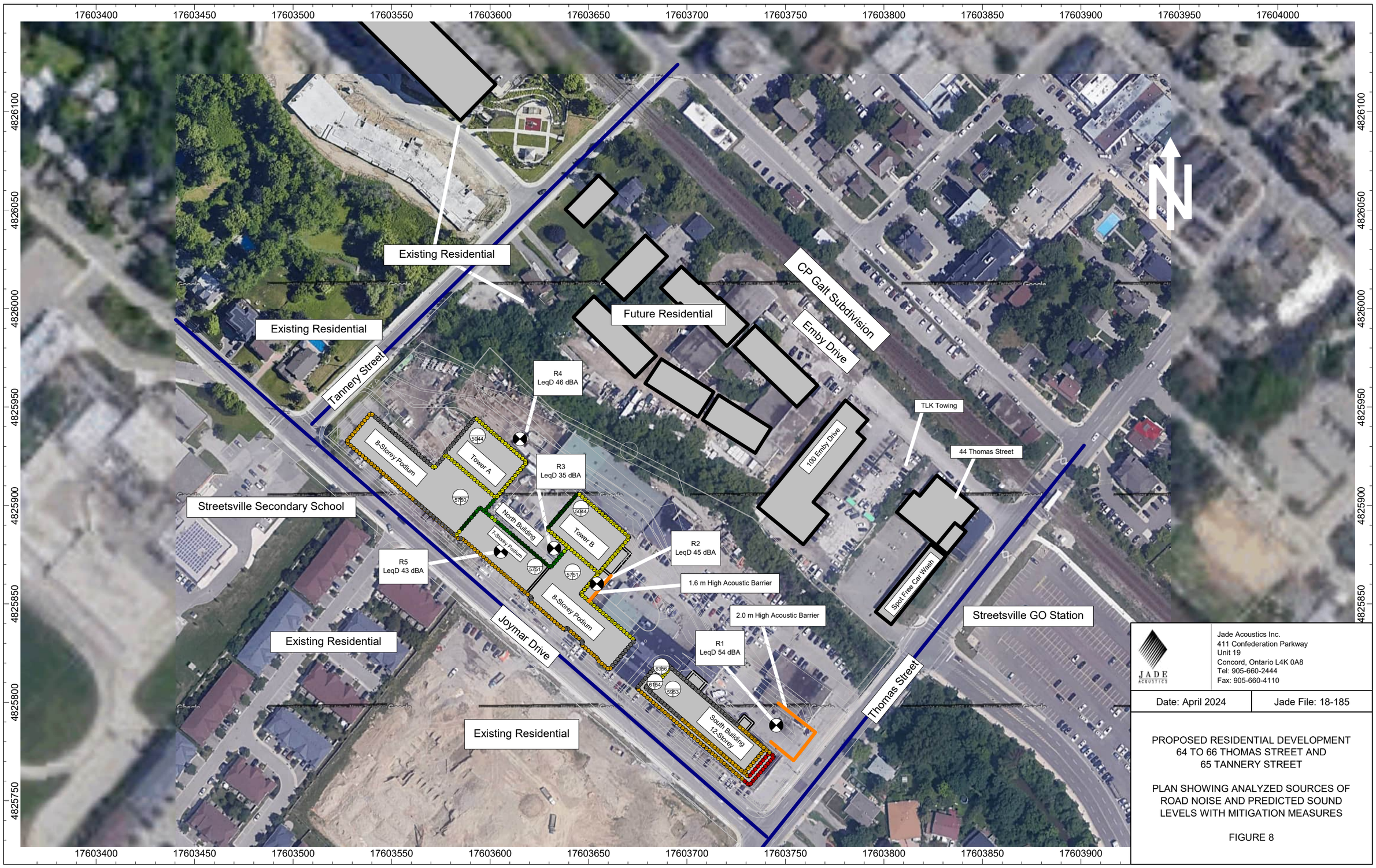
PROPOSED RESIDENTIAL DEVELOPMENT
64 TO 66 THOMAS STREET AND
65 TANNERY STREET

PLAN SHOWING ANALYZED SOURCES OF CONTINUOUS STATIONARY NOISE AND PREDICTED SOUND LEVELS WITH MITIGATION MEASURESS

FIGURE 7



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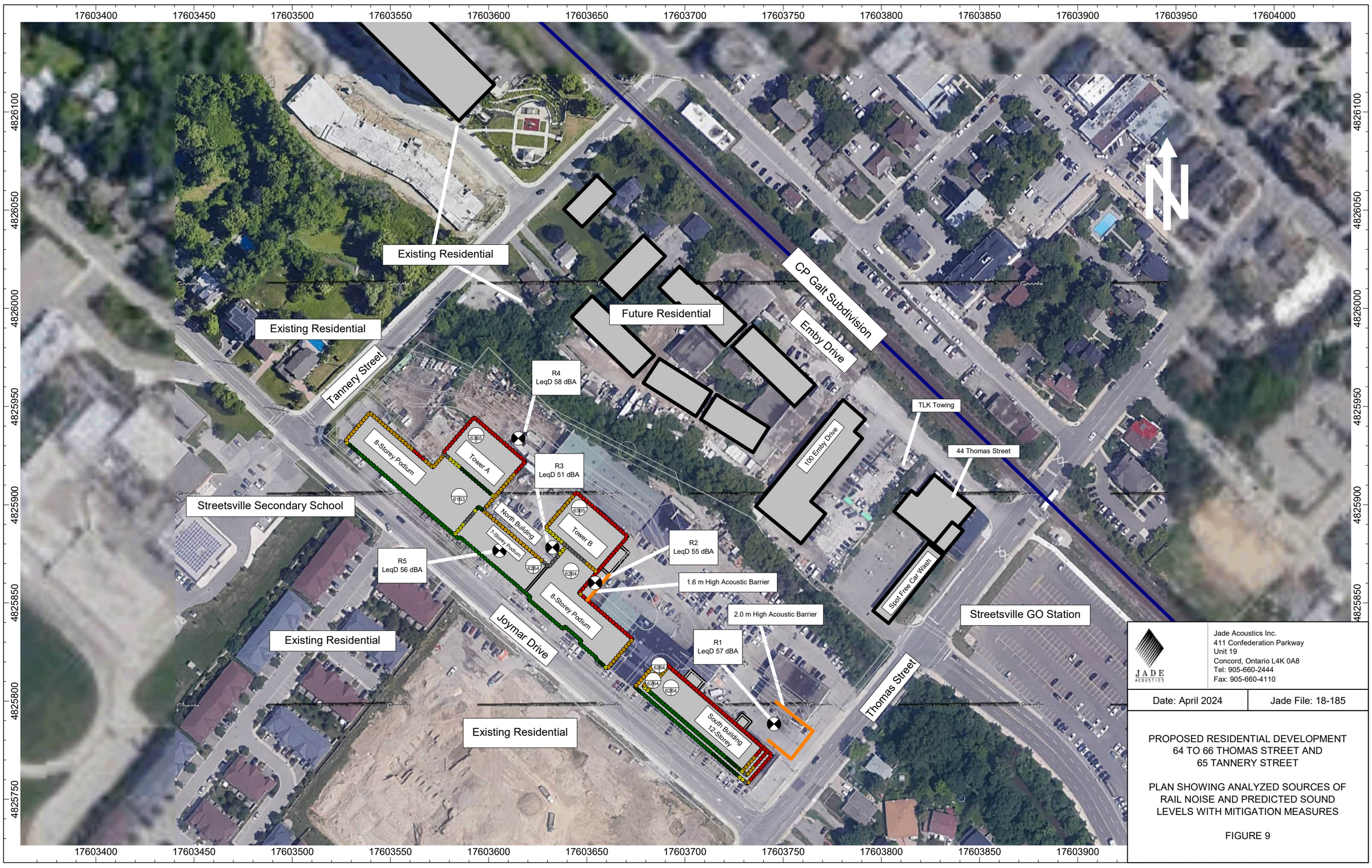
PROPOSED RESIDENTIAL DEVELOPMENT
64 TO 66 THOMAS STREET AND
65 TANNERY STREET

PLAN SHOWING ANALYZED SOURCES OF ROAD NOISE AND PREDICTED SOUND LEVELS WITH MITIGATION MEASURES

FIGURE 8



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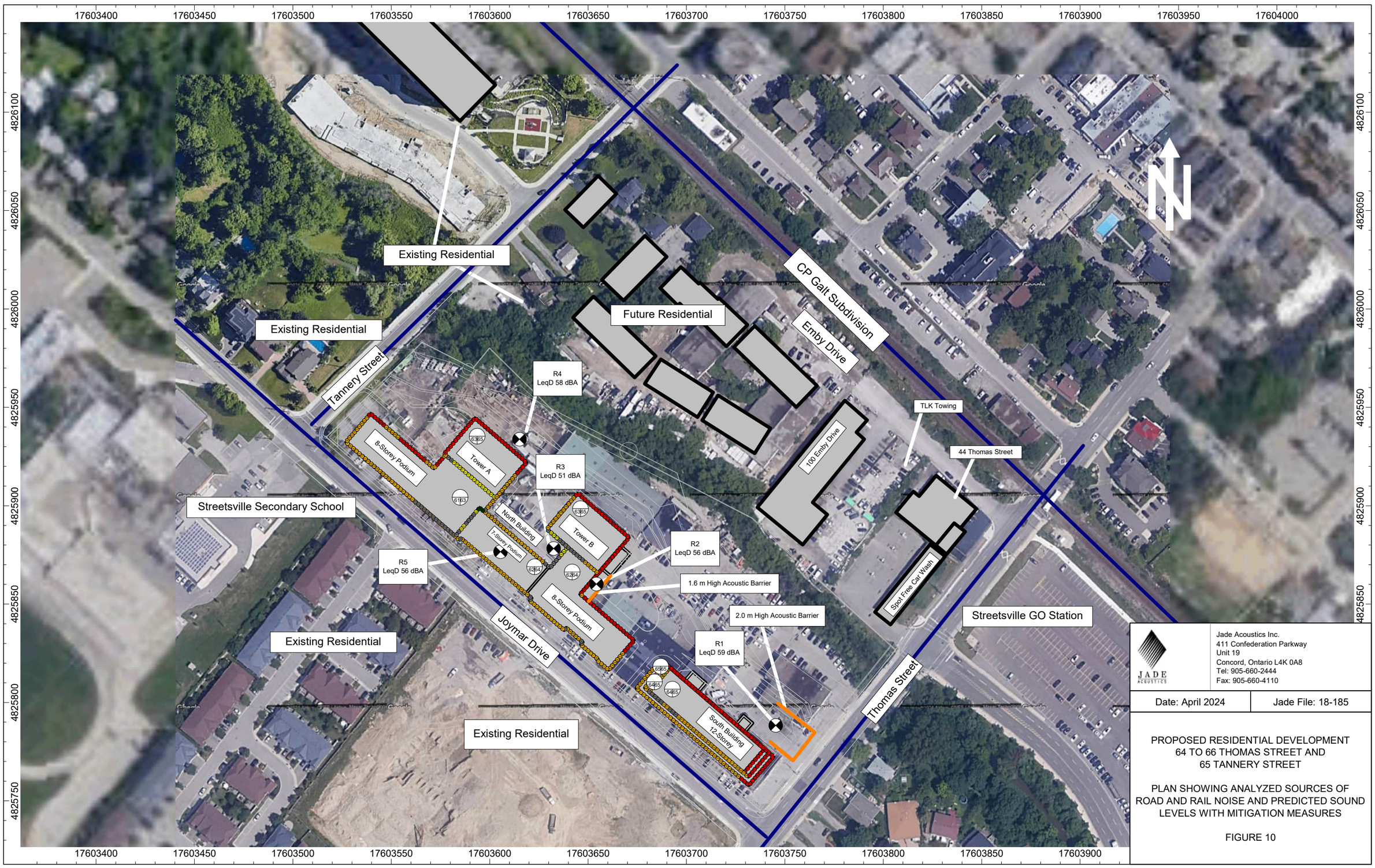
Date: April 2024 | Jade File: 18-185

PROPOSED RESIDENTIAL DEVELOPMENT
64 TO 66 THOMAS STREET AND
65 TANNERY STREET

PLAN SHOWING ANALYZED SOURCES OF RAIL NOISE AND PREDICTED SOUND LEVELS WITH MITIGATION MEASURES

FIGURE 9



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PROPOSED RESIDENTIAL DEVELOPMENT
64 TO 66 THOMAS STREET AND
65 TANNERY STREET

PLAN SHOWING ANALYZED SOURCES OF ROAD AND RAIL NOISE AND PREDICTED SOUND LEVELS WITH MITIGATION MEASURES

FIGURE 10

APPENDIX A

CORRESPONDENCE REGARDING TRAFFIC DATA

800 - 1290 Central Parkway West
Mississauga, Ontario
Canada L5C 4R3

T 905 803 3429
E josie_tomei@cpr.ca

January 2, 2019

Via email: nik@jadeacoustics.com

Nik Vogel
Jade Acoustics Inc.
411 Confederation Parkway
Unit 19
Concord, ON L4K 4H1

Dear Sir/Madam:

Re: Rail Traffic Volumes, CP Mileage 20.75, Galt Subdivision, Tannery Street at CP Tracks, Mississauga

This is in reference to your request for rail traffic data in the vicinity of Tannery Street at CP Tracks in the City of Mississauga. The study area is located at mile 20.75 of our Galt Subdivision, which is classified as a Principal Main Line line.

The information requested is as follows:

1. Number of freight trains between 0700 & 2300: 9
   Number of freight trains between 2300 & 0700: 8

2. Maximum cars per train freight: 151

3. Number of locomotives per train: 2 (4 max.)

4. Maximum permissible freight train speed: 50 mph

5. There are 2 public grade crossings in the study area at Thomas Street and Tannery Street. The whistle signal is prohibited approaching all public grade crossings in the area, however, the whistle may be sounded if deemed necessary by the train crew for safety reasons at any time.

6. There are 2 main line tracks at this location, both with continuously welded rail.

7. Note, the above data is for freight only. Please contact Metrolinx directly for GO traffic data.

The information provided is based on recent rail traffic. Variations of the above may exist on a day-to-day basis. Specific measurements may also vary significantly depending on customer needs.

Yours truly,

Josie Tomei SR/WA
Specialist Real Estate Sales & Acquisitions – Ontario

Michael Bechbache

From: Rail Data Requests <RailDataRequests@metrolinx.com>
Sent: Wednesday, November 1, 2023 4:21 PM
To: Michael Bechbache
Subject: RE: Request for Rail Traffic Information (JAI Job #22-039)

Good afternoon Mike,

Thanks for your patience. Further to your request dated October 12, 2023, I can confirm that the Rail-Data that was provided to you on November 23, 2021, is now outdated (we updated our Rail-Data Forecast around December 2022). Please see the updated information below:

The subject lands (in the vicinity of Joymar Drive and Thomas Street, Mississauga) are located within 300 metres of the Streetsville GO Station and the CP Galt Subdivision (which carries Milton GO rail service).

It's anticipated that GO rail service on this Subdivision will be comprised of diesel trains. The GO rail fleet combination on this Subdivision will consist of up to 1 locomotive and 10 passenger cars. The typical GO rail weekday train volume forecast near the subject lands, including both revenue and equipment trips is in the order of 22 trains. *The following Rail-Data is forecast to 2032. The planned detailed trip breakdown is listed below:

	1 Diesel Locomotive		1 Diesel Locomotive
Day (0700-2300)	20	Night (2300-0700)	2

The current track design speed near the subject lands is 50 mph (80 km/h).

There are *anti-whistling by-laws* in affect at Mississauga Rd, Thomas St, Tannery St, and Ontario St at-grade crossing.

Operational information is subject to change and may be influenced by, among other factors, service planning priorities, operational considerations, funding availability and passenger demand.

It should be noted that this information only pertains to Metrolinx rail service. It would be prudent to contact other rail operators in the area directly for rail traffic information pertaining to non-Metrolinx rail service.

I trust this information is useful. Should you have any questions or concerns, please do not hesitate to contact me.

*At this time we do not expect the frequency of trains to increase beyond 2032. It is expected the number of passenger cars may increase during peak periods to increase capacity as required. Exact numbers are unknown at this time.

Best Regards,

Farah Faroque (she/her)
Project Analyst, Third Party Projects Review
10 Bay Street | Toronto | Ontario | M5J 2N8
T: 437.900.2291

METROLINX

From: Michael Bechbache <michael@jadeacoustics.com>
Sent: October 12, 2023 12:44 PM
To: Rail Data Requests <RailDataRequests@metrolinx.com>
Subject: RE: Request for Rail Traffic Information (JAI Job #22-039)

NOISE REPORT FOR PROPOSED DEVELOPMENT

Date:

REQUESTED BY:

Name: Michael Bechbache, P.Eng.

Company: Jade Acoustics Inc.

PREPARED BY:

Name: Naveda Dukhan

Tel#: 905-615-3200 ext

Location:
1.Thomas Street - McFarren Boulevard to Queen Street South
2. Queen Street South (1) - Britannia Road West to Main Street
3. Queen Street South (2) - Main Street to Thomas Street

ID# 604

ON SITE TRAFFIC DATA

Specific	Street Names				
	1.Thomas St	2. Queen St. South	Queen St. South		
AADT:	23000	17900	18200		
# of Lanes:	4 Lanes	2 Lanes	2 Lanes		
% Trucks:	3%	1%	1%		
Medium/Heavy Trucks Ratio:	55/45	55/45	55/45		
Day/Night Split:	90/10	90/10	90/10		
Posted Speed Limit:	50 km/hr	40 km/hr	40 km/hr		
Gradient Of Road:	2%	2%	2%		
Ultimate R.O.W:	20m-26m	55m	55m		

Comments: Ultimate Traffic Only (2041)

NOISE REPORT FOR PROPOSED DEVELOPMENT

Date:	23-Apr-20

REQUESTED BY:

Name:	Mike Bechbache
Company:	Jade Acoustics

PREPARED BY:

Name:	Bertuen Mickle
Tel#:	(905) 615-3200

Location:	- Tannery Street East of Joymar Dr - Thomas Street East of Joymar Dr - Joymar Dr between Tannery Dr and Thomas Street
ID#:	466

ON SITE TRAFFIC DATA

Specific	Street Names			
[redacted]	[redacted]	Joymar Drive		
AADT:		5000		
# of Lanes:		2 lanes		
% Trucks:		2%		
Medium/Heavy Trucks Ratio:		55/45		
Day/Night Traffic Split:		90/10		
Posted Speed Limit:		40 km/h		
Gradient of Road:		2%		
Ultimate R O W:		20m		

Comments:	-Ultimate Traffic Data Only

NOISE REPORT FOR PROPOSED DEVELOPMENT

Date:	05-Apr-22

REQUESTED BY:

Name:	Michael Bechbache, P.Eng.
Company:	Jade Acoustics Inc.

PREPARED BY:

Nam	Steven Guan
Tel#:	905-615-3200 ext. 5933

MISSISSAUGA

Location: Tannery Street - Joymar Drive to Queen Street South
Thomas Street - McFarren Boulevard to Queen Street South
Queen Street South (1) - Britannia Road West to Main Street
Queen Street South (2) - Main Street to Thomas Street

ID 539

ON SITE TRAFFIC DATA

Specific	Street Names
[redacted]	Tannery St
AADT:	5,000
# of Lanes:	2 Lanes
% Trucks:	3%
Medium/Heavy Trucks Ratio:	55/45
Day/Night Split:	90/10
Posted Speed Limit:	50 km/h
Gradient Of Road:	<2%
Ultimate R.O.W:	20 m

[redacted]

Comments: Ultimate traffic data only (2041).

APPENDIX B

ENVIRONMENTAL NOISE CRITERIA

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

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

SOUND LEVEL CRITERIA FOR ROAD AND RAIL NOISE

TABLE C-1

Sound Level Limit for Outdoor Living Areas
Road and Rail

Time Period	Leq (16) (dBA)
16 hr, 07:00 – 23:00	55

TABLE C-2

Indoor Sound Level Limits
Road and Rail

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

SOUND LEVEL CRITERIA FOR AIRCRAFT NOISE

TABLE C-3

Outdoor Aircraft Noise Limit

Time Period	NEF/NEP
24-hour	30

TABLE C-4

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

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

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

SOUND LEVEL CRITERIA FOR STATIONARY SOURCES

TABLE C-5

Exclusion Limit Values of One-Hour Equivalent Sound Level (Leq, dBA)
Outdoor Points of Reception

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

TABLE C-6

Exclusion Limit Values of One-Hour Equivalent Sound Level (Leq, dBA)
Plane of Window of Noise Sensitive Spaces

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

TABLE C-7

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

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

TABLE C-8

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

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

SUPPLEMENTARY SOUND LEVEL LIMITS

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

TABLE C-9

Supplementary Indoor Sound Level Limits
Road and Rail

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

TABLE C-10

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

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

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

ENVIRONMENTAL NOISE CRITERIA

REGION OF PEEL

Reference: "General Guidelines for the Preparation of Acoustical Reports in the Region of Peel", November, 2012 (Updated August 2020).

ROAD TRAFFIC NOISE

TYPE OF SPACE	TIME PERIOD	SOUND LEVEL LIMIT Leq*
Outdoor living area	7:00 a.m. – 11:00 p.m.	Leq (16 hr.) = 55 dBA
Outside bedroom window	11:00 p.m. – 7:00 a.m.	Leq (8 hr.) = 50 dBA
Indoor (bedrooms, hospitals)	11:00 p.m. – 7:00 a.m.	Leq (8 hr.) = 40 dBA
Indoor (living rooms, hotels, private offices, reading rooms)	7:00 a.m. – 11:00 p.m.	Leq (16 hr.) = 45 dBA
Indoor (general offices, shops)	7:00 a.m. – 11:00 p.m.	Leq (16 hr.) = 50 dBA

* Leq, measured in A-weighted decibels (dBA), is the value of the constant sound level which would result in exposure to the same total sound level as would the specified time varying sound, if the constant sound level persisted over an equal time interval.

CP RAIL/METROLINX

RAILWAY NOISE GUIDELINES

Mitigation measures are required to achieve the following standards for noise for residential uses.

		Leq (dBA)	
		Day (16 hr.)	Night (8 hr.)
Noise	Sleeping Quarters	40	35
	Living Room	45	40
	Outdoor	55	N/A

.

APPENDIX C

SAMPLE CALCULATION OF PREDICTED SOUND LEVELS DUE TO ROAD AND RAIL TRAFFIC

```
STAMSON 5.0        NORMAL REPORT        Date: 01-03-2024 13:34:45
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: cadnaa.te            Time Period: Day/Night 16/8 hours
Description: STAMSON-CadnaA Calibration

Rail data, segment # 1: CP GALT (day/night)
-------------------------------------------
Train            ! Trains      ! Speed !# loc !# Cars! Eng  !Cont
Type             !             !(km/h) !/Train!/Train! type !weld
-----------------+-------------+-------+------+------+------+----
* 1.             !  13.0/11.6  !  80.0 !  4.0 !151.0 !Diesel! Yes
* 2.             !  20.0/2.0   !  80.0 !  1.0 ! 10.0 !Diesel! Yes

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

Train type:         ! Unadj. ! Annual % ! Years of !
 No  Name           ! Trains ! Increase !  Growth  !
--------------------+--------+----------+----------+
  1.                !   9.0/8.0   !    2.50  !   15.00  !
  2.                !  20.0/2.0   !    0.00  !   10.00  !

Data for Segment # 1: CP GALT (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           :  30.00 / 30.00  m
Topography                :      1       (Flat/gentle slope; no barrier)
No Whistle
Reference angle           :   0.00

Results segment # 1: CP GALT (day)
----------------------------------

LOCOMOTIVE (0.00 + 75.07 + 0.00) = 75.07 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------
   -90     90   0.00  75.07   0.00   0.00   0.00   0.00   0.00  75.07
-------------------------------------------------------------------------

WHEEL (0.00 + 68.23 + 0.00) = 68.23 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------
   -90     90   0.00  68.23   0.00   0.00   0.00   0.00   0.00  68.23
-------------------------------------------------------------------------

Segment Leq : 75.89 dBA

Total Leq All Segments: 75.89 dBA
```

```
Results segment # 1: CP GALT (night)
-----------------------------------

LOCOMOTIVE (0.00 + 77.06 + 0.00) = 77.06 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------
   -90     90   0.00  77.06   0.00   0.00   0.00   0.00   0.00  77.06
-------------------------------------------------------------------------

WHEEL (0.00 + 70.35 + 0.00) = 70.35 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------
   -90     90   0.00  70.35   0.00   0.00   0.00   0.00   0.00  70.35
-------------------------------------------------------------------------

Segment Leq : 77.90 dBA

Total Leq All Segments: 77.90 dBA

Road data, segment # 1: THOMAS (day/night)
------------------------------------------
Car traffic volume  : 20079/2231  veh/TimePeriod  *
Medium truck volume :   342/38    veh/TimePeriod  *
Heavy truck volume  :   279/31    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     2 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):  23000
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   1.65
    Heavy Truck  % of Total Volume     :   1.35
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: THOMAS (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           :  30.00 / 30.00  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 2: TANNERY (day/night)
-------------------------------------------
Car traffic volume  :  4365/485   veh/TimePeriod  *
Medium truck volume :    74/8     veh/TimePeriod  *
Heavy truck volume  :    61/7     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):   5000
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   1.65
    Heavy Truck  % of Total Volume     :   1.35
    Day (16 hrs) % of Total Volume     :  90.00
```

```
Data for Segment # 2: TANNERY (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           :  30.00 / 30.00  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 3: JOYMAR (day/night)
------------------------------------------
Car traffic volume  :  4410/490   veh/TimePeriod  *
Medium truck volume :    50/6     veh/TimePeriod  *
Heavy truck volume  :    41/5     veh/TimePeriod  *
Posted speed limit  :    40 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):   5000
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   1.10
    Heavy Truck  % of Total Volume     :   0.90
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 3: JOYMAR (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           :  30.00 / 30.00  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

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

Source height = 1.08 m

ROAD (0.00 + 66.77 + 0.00) = 66.77 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.00  66.77   0.00   0.00   0.00   0.00   0.00   0.00  66.77
-------------------------------------------------------------------------------

Segment Leq : 66.77 dBA

Results segment # 2: TANNERY (day)
----------------------------------

Source height = 1.08 m

ROAD (0.00 + 59.73 + 0.00) = 59.73 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.00  59.73   0.00   0.00   0.00   0.00   0.00   0.00  59.73
-------------------------------------------------------------------------------
Segment Leq : 59.73 dBA
```

```
Results segment # 3: JOYMAR (day)
---------------------------------

Source height = 0.98 m

ROAD (0.00 + 56.72 + 0.00) = 56.72 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.00  56.72   0.00   0.00   0.00   0.00   0.00   0.00  56.72
-------------------------------------------------------------------------------

Segment Leq : 56.72 dBA

Total Leq All Segments: 67.90 dBA

Results segment # 1: THOMAS (night)
-----------------------------------

Source height = 1.08 m

ROAD (0.00 + 60.24 + 0.00) = 60.24 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.00  60.24   0.00   0.00   0.00   0.00   0.00   0.00  60.24
-------------------------------------------------------------------------------

Segment Leq : 60.24 dBA

Results segment # 2: TANNERY (night)
-----------------------------------

Source height = 1.09 m

ROAD (0.00 + 53.24 + 0.00) = 53.24 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.00  53.24   0.00   0.00   0.00   0.00   0.00   0.00  53.24
-------------------------------------------------------------------------------

Segment Leq : 53.24 dBA

Results segment # 3: JOYMAR (night)
-----------------------------------

Source height = 1.00 m

ROAD (0.00 + 50.39 + 0.00) = 50.39 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.00  50.39   0.00   0.00   0.00   0.00   0.00   0.00  50.39
-------------------------------------------------------------------------------

Segment Leq : 50.39 dBA

Total Leq All Segments: 61.39 dBA


TOTAL Leq FROM ALL SOURCES (DAY): 76.53
                           (NIGHT): 78.00


Note the above overall Leq values do not reflect predicted sound levels. The respective
road and rail reference sound levels (with necessary corrections) are applied in CadnaA
to represent the source sound power emissions.
```

Line sources

Name	Sel.	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Moving Pt. Src			
				Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night				Number			Speed
				(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m^2)		(min)	(min)	(min)	(dB)	(Hz)		Day	Evening	Night	(km/h)
Tannery Street			!000200!	98.8	98.8	92.3	74.7	74.7	68.2	Lw'	74.66		0	0	-6.5							0	500	(none)				
Thomas Street			!000200!	107.9	107.9	101.4	81.7	81.7	75.2	Lw'	81.7		0	0	-6.5							0	500	(none)				
Joymar Drive			!000200!	97.7	97.7	91.4	71.6	71.6	65.3	Lw'	71.65		0	0	-6.3							0	500	(none)				

Receivers

Name	Sel.	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates		
				Day	Night	Evening	Day	Night	Evening	Type	Auto	Noise Type			X	Y	Z
				(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(m)		(m)	(m)	(m)
R1			!01!	54.3		54.3	0	0	0		x	Total	1.5	r	17603745.3	4825788.31	156.05
R3			!01!	34.6		34.6	0	0	0		x	Total	1.5	r	17603632.5	4825878.26	158.47
R4			!01!	46.1		46.1	0	0	0		x	Total	1.5	r	17603615.2	4825933.77	158.13
R5			!01!	43.5		43.5	0	0	0		x	Total	1.5	g	17603605.5	4825876.6	183.5
R2			!01!	45.4		45.4	0	0	0		x	Total	1.5	g	17603654.2	4825860.18	158.5

Barriers

Name	Sel.	M.	ID	Absorption		Z-Ext.	Cantilever		Height			
				left	right		horz.	vert.	Begin		End	
						(m)	(m)	(m)	(m)		(m)	
OLA Mitigation Barrier			!0301!	0.21	0.21				2	r		
Roof Edge Barrier			!0301!	0.21	0.21				1.6	g		

Line sources

Name	Sel.	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Moving Pt. Src			
				Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night				Number			Speed
				(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m^2)		(min)	(min)	(min)	(dB)	(Hz)		Day	Evening	Night	(km/h)
Rail (Metorlinx + CP)			!000201!	122.4	122.4	124.4	90.8	90.8	92.8	Lw'	90.82		0	0	2							0	500	(none)				

Receivers

Name	Sel.	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates		
				Day	Night	Evening	Day	Night	Evening	Type	Auto	Noise Type			X	Y	Z
				(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(m)		(m)	(m)	(m)
R1			!01!	56.7		56.7	0	0	0		x	Total	1.5	r	17603745.3	4825788.31	156.05
R3			!01!	50.8		50.8	0	0	0		x	Total	1.5	r	17603632.5	4825878.26	158.47
R4			!01!	58		58	0	0	0		x	Total	1.5	r	17603615.2	4825933.77	158.13
R5			!01!	56.2		56.2	0	0	0		x	Total	1.5	g	17603605.5	4825876.6	183.5
R2			!01!	55.1		55.1	0	0	0		x	Total	1.5	g	17603654.2	4825860.18	158.5

Barriers

Name	Sel.	M.	ID	Absorption		Z-Ext.	Cantilever		Height			
				left	right		horz.	vert.	Begin		End	
						(m)	(m)	(m)	(m)		(m)	
OLA Mitigation Barrier			!0301!	0.21	0.21				2	r		
Roof Edge Barrier			!0301!	0.21	0.21				1.6	g		

Line sources

Name	Sel.	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Moving Pt. Src			
				Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night				Number			Speed
				(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m^2)		(min)	(min)	(min)	(dB)	(Hz)		Day	Evening	Night	(km/h)
Rail (Metorlinx + CP)			!000201!	122.4	122.4	124.4	90.8	90.8	92.8	Lw'	90.82		0	0	2							0	500	(none)				
Tannery Street			!000200!	98.8	98.8	92.3	74.7	74.7	68.2	Lw'	74.66		0	0	-6.5							0	500	(none)				
Thomas Street			!000200!	107.9	107.9	101.4	81.7	81.7	75.2	Lw'	81.7		0	0	-6.5							0	500	(none)				
Joymar Drive			!000200!	97.7	97.7	91.4	71.6	71.6	65.3	Lw'	71.65		0	0	-6.3							0	500	(none)				

Receivers

Name	Sel.	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates		
				Day	Night	Evening	Day	Night	Evening	Type	Auto	Noise Type			X	Y	Z
				(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(m)		(m)	(m)	(m)
R1			!01!	58.7		58.7	0	0	0		x	Total	1.5	r	17603745.3	4825788.31	156.05
R3			!01!	50.9		50.9	0	0	0		x	Total	1.5	r	17603632.5	4825878.26	158.47
R4			!01!	58.3		58.3	0	0	0		x	Total	1.5	r	17603615.2	4825933.77	158.13
R5			!01!	56.4		56.4	0	0	0		x	Total	1.5	g	17603605.5	4825876.6	183.5
R2			!01!	55.5		55.5	0	0	0		x	Total	1.5	g	17603654.2	4825860.18	158.5

Barriers

Name	Sel.	M.	ID	Absorption		Z-Ext.	Cantilever		Height			
				left	right		horz.	vert.	Begin		End	
						(m)	(m)	(m)	(m)		(m)	
OLA Mitigation Barrier			!0301!	0.21	0.21				2	r		
Roof Edge Barrier			!0301!	0.21	0.21				1.6	g		

APPENDIX D

SAMPLE CALCULATION OF SOUND LEVELS DUE TO STATIONARY SOURCES - CADNAA

Point sources

Name	Sel.	M.	ID	Result. PWL			Lw / Li			Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Height		Coordinates		
				Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night						X	Y	Z
				(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m^2)		(min)	(min)	(min)	(dB)	(Hz)		(m)		(m)	(m)	(m)
Car Wash Vacuum			!000000!	103.2	103.2	103.2	Lw	VAC+5		0	0	0				15	10	5	0		(none)	1.5	r	17603794.6	4825864.72	156.35
Car Wash Vacuum			!000000!	103.2	103.2	103.2	Lw	VAC+5		0	0	0				15	10	5	0		(none)	1.5	r	17603799.8	4825871.82	156.37
Car Wash Vacuum			!000000!	103.2	103.2	103.2	Lw	VAC+5		0	0	0				15	10	5	0		(none)	1.5	r	17603805.1	4825878.1	156.43
Car Wash Vacuum			!000000!	103.2	103.2	103.2	Lw	VAC+5		0	0	0				15	10	5	0		(none)	1.5	r	17603810.3	4825884.87	156.49
Car Wash Vacuum			!000000!	103.2	103.2	103.2	Lw	VAC+5		0	0	0				15	10	5	0		(none)	1.5	r	17603795.8	4825863.69	156.33
Car Wash Vacuum			!000000!	103.2	103.2	103.2	Lw	VAC+5		0	0	0				15	10	5	0		(none)	1.5	r	17603800.9	4825870.75	156.36
Car Wash Vacuum			!000000!	103.2	103.2	103.2	Lw	VAC+5		0	0	0				15	10	5	0		(none)	1.5	r	17603806.2	4825877.31	156.42
100 Emby RTU			!000000!	81.4	81.4	81.4	Lw	LGH060072		0	0	0				60	42	24	0		(none)	1.2	g	17603747.1	4825907.24	161.7
44 Thomas RTU			!000000!	81.4	81.4	81.4	Lw	LGH060072		0	0	0				60	42	24	0		(none)	1.2	g	17603829.9	4825886.83	160.15

Line sources

Name	Sel.	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Moving Pt. Src			
				Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night				Number			Speed
				(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m^2)		(min)	(min)	(min)	(dB)	(Hz)		Day	Evening	Night	(km/h)
100 Emby Truck Route			!000001!	81.1	81.1	81.1	58.9	58.9	58.9	PWL-Pt	TP		0	0	0							0		(none)	1	1	1	10

Receivers

Name	Sel.	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates		
				Day	Night	Evening	Day	Night	Evening	Type	Auto	Noise Type			X	Y	Z
				(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(m)		(m)	(m)	(m)
R1			!01!	50.7	45.7	48.8	0	0	0		x	Total	1.5	r	17603745.3	4825788.31	156.05
R3			!01!	44.3	39.4	42.4	0	0	0		x	Total	1.5	r	17603632.5	4825878.26	158.47
R4			!01!	46.5	41.5	44.5	0	0	0		x	Total	1.5	r	17603615.2	4825933.77	158.13
R5			!01!	26.2	21.2	23.8	0	0	0		x	Total	1.5	g	17603605.5	4825876.6	183.5
R2			!01!	49.4	44.4	47.5	0	0	0		x	Total	1.5	g	17603654.2	4825860.18	158.5

Barriers

Name	Sel.	M.	ID	Absorption		Z-Ext.	Cantilever		Height			
				left	right		horz.	vert.	Begin		End	
						(m)	(m)	(m)	(m)		(m)	
OLA Mitigation Barrier			!0301!	0.21	0.21				2	r		
Roof Edge Barrier			!0301!	0.21	0.21				1.6	g		

Buildings

Name	Sel.	M.	ID	RB	Residents	Absorption	Height	
							Begin	
							(m)	
100 Emby			!0202!		0	0.37	4	r
56 Thomas Car Wash			!0202!		0	0.37	4	g
44 Thomas Vacant			!0202!		0	0.37	3.5	g
44 Thomas High Roof Vacant			!0202!		0	0.37	2.5	g
Site to North			!0200!		0	0.37	10.5	r
Site to North			!0200!		0	0.37	10.5	r
Site to North			!0200!		0	0.37	10.5	r
Site to North			!0200!		0	0.37	10.5	r
Site to North			!0200!		0	0.37	10.5	r
Site to North			!0200!		0	0.37	10.5	r
Site to North			!0200!		0	0.37	10.5	r
Existing Seniors Res.			!0200!		0	0.37	25	r
Proposed P1			!0200!	x	0	0.37		
Proposed 1ST			!0200!	x	0	0.37		
Proposed 7ST			!0200!	x	0	0.37	23.8	r
Proposed 8ST			!0200!	x	0	0.37	27.4	r
Proposed 8ST			!0200!	x	0	0.37	27.4	r
Proposed 18ST			!0200!	x	0	0.37	59.4	r
Proposed 22ST			!0200!	x	0	0.37	72.2	r
Proposed 2ST			!0200!	x	0	0.37	7.8	r
Proposed 5ST			!0200!	x	0	0.37	17.9	r
Proposed 9ST			!0200!	x	0	0.37	30.7	r
Proposed 12ST			!0200!	x	0	0.37	40.7	r
Proposed 22ST			!0200!	x	0	0.37		

APPENDIX E

SAMPLE CALCULATION OF ARCHITECTURAL COMPONENT SELECTION

APPENDIX E-1
SAMPLE CALCULATION OF ARCHITECTURAL COMPONENT SELECTION*

FILE: 18-185
NAME: 64 to 66 Thomas Street and 65 Tannery Street
REFERENCE DRAWINGS: Site Plan
LOCATION: Tower B, Southeast Corner, representative residential floor, nighttime

ROAD

Room: Corner Bedroom

Wall area as a percentage of floor area:	Southeast:	30%
	Northeast:	30%
Window area as a percentage of floor area:	Southeast:	50%
	Northeast:	50%
Number of components:	4	
Outdoor Daytime Leq:	Southeast:	43 (+3 for reflections) = 46 dBA
	Northeast:	42 (+3 for reflections) = 45 dBA
Indoor Leq:	40	
Noise Reduction (dBA):	Southeast:	6
	Northeast:	5
Noise Spectrum:	**Mixed Road and Distant Aircraft**	
Absorption:	Intermediate	

APPROPRIATE ELEMENTS

		STC Rating
		STC Rating
Exterior Wall	Southeast	STC 15
	Northeast	STC 14
Window	Southeast	STC 12
	Northeast	STC 11

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

APPENDIX E-2
SAMPLE CALCULATION OF ARCHITECTURAL COMPONENT SELECTION*

FILE: 18-185
NAME: 64 to 66 Thomas Street and 65 Tannery Street
REFERENCE DRAWINGS: Site Plan
LOCATION: Tower B, Southeast Corner, representative residential floor, nighttime

RAIL

Room: Corner Bedroom

Wall area as a percentage of floor area:	Southeast:	30%
	Northeast:	30%
Window area as a percentage of floor area:	Southeast:	50%
	Northeast:	50%
Number of components:	4	
Outdoor Daytime Leq:	Southeast:	64 (+3 for reflections) = 67 dBA
	Northeast:	65 (+3 for reflections) = 68 dBA
Indoor Leq:	35	
Noise Reduction (dBA):	Southeast:	32
	Northeast:	33
Noise Spectrum:	**Diesel Locomotive**	
Absorption:	Intermediate	

APPROPRIATE ELEMENTS

		STC Rating
Exterior Wall	Southeast	STC 44
	Northeast	STC 45
Window	Southeast	STC 39
	Northeast	STC 40

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

APPENDIX E-3

SUMMARY OF COMBINED STC RATING REQUIREMENTS

TOWER B SOUTHEAST CORNER

CORNER BEDROOM

COMBINED	REQUIRED STC BASED ON ROAD TRAFFIC ONLY	REQUIRED STC BASED ON RAIL TRAFFIC ONLY	COMBINED REQUIRED STC RATING*
Southeast Wall	15	44	44
Northeast Wall	14	45	45
Southeast Window	12	39	39
Northeast Window	11	40	40

* An STC 40 rating for the windows and exterior doors and an STC 45 rating for the exterior wall construction are better than constructions complying with standard construction practices.

APPENDIX F

COMPLETED QUESTIONNAIRES BY NEIGHBOURING BUSINESSES

Jade Acoustics Inc. | Consulting Engineers | 411 Confederation Parkway Unit 19 Concord, Ontario L4K 0A8 | Tel: (905) 660-2444 Fax: (905) 660-4110

January 24, 2019

Spot Free Car Wash
56 Thomas Street
Mississauga, Ontario
L5M 1Y7

To Whom It May Concern:

Re: Information Request
Proposed Residential Development
65 to 95 Joymar Drive
City of Mississauga
Our File: 18-185

As requested by the owner of the property west of Mullet Creek and required by the City of Mississauga, we are conducting a noise study for the above mentioned development, which is proposed for residential re-development. As part of the noise study, we are required by the Ministry of the Environment, Conservation and Parks to identify and quantify all potential noise sources. In order to do this adequately we have summarized the information we require regarding your operations. Please complete and return this form by fax or email. We will then contact you regarding a time and date to complete sound measurements (if required).

1. What is the primary function of your company? SELF SERVE CAR WASH

2. What are your hours of operation? 24 HRS.
How many days per week? 7 DAYS

3. Is your operation seasonal? If so, describe the operations associated with different seasons. NO

4. Are you currently operating at full capacity? If so, will you be operating at this level for the next several weeks? NO

5. If not, when do you anticipate being at full operating capacity? DEC - MARCH

6. What noise producing equipment do you have located: VACUUMS

(a) internally? _____

(b) internally but exhausting/intaking to the exterior? _____

(c) externally? VACUUMS

7. Does your company have any outside storage? If so, are there any activities such as forklifts or transport trucks which access the storage area? NO

8. How many trucks use the shipping area during the day and at night? N/A

9. Are shipping doors left open during the summer? Where are they located?
N/A.

10. Are there any planned modifications/expansions to your facility? NO

11. Does your company have a valid Certificate of Approval (C of A) or Environmental Compliance Approval (ECA) from the Ministry of the Environment and Climate Change which includes a noise assessment and noise mitigation measures, if required? If yes, please provide us with a copy of the Approvals documentation and copy of the noise assessment report. NO

12. Other information _____

13. Contact Information

Name: PAUL URSINI

Position: OWNER

Telephone No.: 416 949 5195

Fax No.:

E-mail: KNEWT55@GMAIL.COM

JADE ACOUSTICS

If you have any questions, please contact the undersigned. Thank you in advance for your assistance.

Yours truly,

JADE ACOUSTICS INC.

Per: _____

Michael Bechbache, E.I.T.
michael@jadeacoustics.com

MB/CK/jg
J:\Letters\2018\18-185 Jan 24-19 65 to 95 Joymar Drive (Spot Free Carwash).doc

Jade Acoustics Inc. | Consulting Engineers | 411 Confederation Parkway, Unit 19, Concord, Ontario, L4K 0A8 | Tel: (905) 660-2444 | Fax: (905) 660-4110

January 24, 2019

TLK Towing and Storage
100 Emby Drive
Mississauga, Ontario
L5M 1H6

To Whom It May Concern:

Re: Information Request
Proposed Residential Development
65 to 95 Joymar Drive
City of Mississauga
Our File: 18-185

JADE ACOUSTICS

As requested by the owner of the property west of Mullet Creek and required by the City of Mississauga, we are conducting a noise study for the above mentioned development, which is proposed for residential re-development. As part of the noise study, we are required by the Ministry of the Environment, Conservation and Parks to identify and quantify all potential noise sources. In order to do this adequately we have summarized the information we require regarding your operations. Please complete and return this form by fax or email. We will then contact you regarding a time and date to complete sound measurements (if required).

1. What is the primary function of your company? TOWING & VEHICLE IMPOUND FACILITY

2. What are your hours of operation? 24/7
How many days per week? "

3. Is your operation seasonal? If so, describe the operations associated with different seasons.

4. Are you currently operating at full capacity? If so, will you be operating at this level for the next several weeks? NOT AT CAPACITY - CAN NOT PREDICT DATES

5. If not, when do you anticipate being at full operating capacity? _____

6. What noise producing equipment do you have located: TOW TRUCKS

(a) internally? _____

(b) internally but exhausting/intaking to the exterior? _____

(c) externally? GAURD DOG

7. Does your company have any outside storage? If so, are there any activities such as forklifts or transport trucks which access the storage area? YES

8. How many trucks use the shipping area during the day and at night? CAN NOT PREDICT

9. Are shipping doors left open during the summer? Where are they located?

10. Are there any planned modifications/expansions to your facility? _____

11. Does your company have a valid Certificate of Approval (C of A) or Environmental Compliance Approval (ECA) from the Ministry of the Environment and Climate Change which includes a noise assessment and noise mitigation measures, if required? If yes, please provide us with a copy of the Approvals documentation and copy of the noise assessment report. _____

JADE ACOUSTICS

12. Other information _____

13. Contact Information

Name: TODD KEELY

Position:

Telephone No.: 647-999-3366 — 905-812-1445

Fax No.:

E-mail: tlktowing@hotmail.com

JADE ACOUSTICS

If you have any questions, please contact the undersigned. Thank you in advance for your assistance.

Yours truly,

JADE ACOUSTICS INC.

Per: _____

Michael Bechbache, E.I.T.
michael@jadeacoustics.com

MB/CK/jg
J:\Letters\2018\18-185 Jan 24-19 65 to 95 Joymar Drive (TLK Towing & Storage).doc

Jade Acoustics Inc. | Consulting Engineers | 411 Confederation Parkway, Unit 19, Concord, Ontario, L4K 0A8 | Tel: (905) 660-2444 | Fax: (905) 660-4110

July 15, 2020

Kodawari Collective
100 Emby Drive, Unit A
Mississauga, Ontario
L5M 1H6

To Whom It May Concern:

Re: Information Request
Proposed Residential Development
65 to 95 Joymar Drive
City of Mississauga
Our File: 18-185

As requested by the owner of the property west of Mullet Creek and required by the City of Mississauga, we are conducting a noise study for the above mentioned development, which is proposed for residential re-development. As part of the noise study, we are required by the Ministry of the Environment, Conservation and Parks (MOE) to identify and quantify all potential noise sources. In order to do this adequately we have summarized the information we require regarding your operations. Please complete and return this form by fax or email. We will then contact you regarding a time and date to complete sound measurements (if required).

1. What is the primary function of your company? Automotive retail

2. What are your hours of operation? 10 am to 6 pm
How many days per week? _____

3. Is your operation seasonal? If so, describe the operations associated with different seasons. No

4. Are you currently operating at full capacity? If so, will you be operating at this level for the next several weeks? We are currently under COVID restrictions
Customers are by appointment only

5. If not, when do you anticipate being at full operating capacity? _____

6. What noise producing equipment do you have located: _____

(a) internally? Air compressor

(b) internally but exhausting/intaking to the exterior? _____

(c) externally? _____

JADE ACOUSTICS

7. Does your company have any outside storage? If so, are there any activities such as forklifts or transport trucks which access the storage area? No

8. How many trucks use the shipping/receiving areas during the day and at night? Where are they located? 1-2 trucks during working hours to garage door

9. Are shipping/receiving/other bay doors left open during the summer? Where are they located?
No. Garage door is located on southside of the unit

10. Are there any planned modifications/expansions to your facility? No

11. Does your company have a valid Certificate of Approval (C of A) or Environmental Compliance Approval (ECA) from the Ministry of the Environment and Climate Change which includes a noise assessment and noise mitigation measures, if required? If yes, please provide us with a copy of the Approvals documentation and copy of the noise assessment report. No

12. Other information _____

13. Contact Information

Name: Sherry Luc
Position: Operations Manager
Telephone No.: 647-339-8822
Fax No.:
E-mail: sher.luc22@gmail.com

If you have any questions, please contact the undersigned. Thank you in advance for your assistance.

Yours truly,

JADE ACOUSTICS INC.

Per: _____

Michael Bechbache, P.Eng.
michael@jadeacoustics.com

MB/CK/jg
J:\Letters\2018\18-185 Jul 15-20 65 to 95 Joymar Drive (Kodawari Collective).doc

APPENDIX G

RESPONSES TO CITY OF MISSISSAUGA REVIEW COMMENTS

RESPONSES TO CITY OF MISSISSAUGA REVIEW COMMENTS

Jade Acoustics Inc. is providing responses to the review comments of the City of Mississauga related to the Preliminary Environmental Noise Report dated July 2, 2019, revised January 14, 2022, prepared by Jade Acoustics Inc. The City review comments were issued in the Planning Application Status Report (File: OZ/OPA 19 11; Web ID Access Number 6DV74NT0).

For consistency and completeness, we have reiterated the comments along with Jade's response. Only responses pertinent to comments on the Preliminary Environmental Noise Report dated July 2, 2019, have been included.

Urban Designer

Comment #8:

"2022/02/18 - Awaiting further information from applicant and other staff reviewers. As part of the processing of the application a noise concern was identified by the Development and Design Division due to noise levels from Stationary Noise sources. A Preliminary Noise Report was prepared by Jade Acoustics dated July 2, 2019. Two options are offered. Option 2 is the preferred solution and the recommendations should be demonstrated on the concept plan during the rezoning process. We will require that, as a condition of site plan approval, an Acoustical Consultant certify that the site design and acoustical barrier requirements are in conformity with the recommendations of this Report."

Response:

This revised report provides updated conclusions regarding the required acoustical mitigation measures in consideration of the Class 4 area sound level limits based on the updated site design.

Comment #9:

"2022/02/18 - Milestone revised to Development Agreement UD9 - Noise Warnings - Refer to Chapter 6.0 Recommendations in the Preliminary Noise Report prepared by Jade Acoustics dated July 2, 2019. Prior to final approval the requirements stipulated in table 3 and a detailed environmental noise report should be provided. Prior to final approval we wish to review copies of standard agreements of purchase and sale or lease related to transactions on the subject lands so as to insure that any recommended warning clauses have been included in the documents. Please see T&W Comments for more information on Noise Warning Clauses."

Response:

Jade Acoustics Inc. is not involved in the preparation of legal documents and has no further comment to this effect. It should however be noted that the required Warning Clauses have been updated in this revised report based on the city comments indicating the Class 4 designation as the preferred option and associated mitigation to be reflected on the plans.

Development Engineering Review

Comment #4:

"Circulation date Feb 28, 2022 PRELIMINARY NOISE REPORT (revised)-Prepared by Jade Acoustics dated Jan 21, 2022. The report states that (Option 2) would require the incorporation of the Class 4 designation at the site. This department concurs with the City's Planning Dept. that this option is the preferred option. Additional warning clauses will also be required when this option is used as identified in the report. The report must be revised to include the following; (i) Provide an analysis and table for the OLA (adjacent Block 9) indicating mitigation requirements (various barrier heights) and corresponding noise levels to reduce noise levels to 55 dBa. (ii) include a detail and description of the proposed parapet/railing design for the proposed units. Design is to ensure mitigated noise levels are in conformance with all applicable noise guidelines. Note that the Planning Dept (Urban Design) is to review/approve design elements. PREVIOUS COMMENTS: Circulation date Sept 18, 2019 PRELIMINARY NOISE REPORT-Prepared by Jade Acoustics dated July 2, 2019 The report indicates that the proposed development is affected by traffic noise, rail noise and existing commercial operations and that noise mitigation measures and warning clauses will be a requirement for this development. The report concludes that external noise mitigation measures (7.0m high acoustic barrier) will be required on an existing adjacent car wash facility (Option 1). Confirmation of satisfactory arrangements between the applicant and the car wash facility owner will be required to ensure noise mitigation measures in support of the development are addressed prior to rezoning approval. The report also provides another option (Option 2) that would require the incorporation of the Class 4 designation at the site. This option would require noise mitigation measures which are outlined in this report. Additional warning clauses will also be required if this option is used. Clarification regarding the "Summary of Noise Abatement Measures" (Table 3) is required. The report is to provide 2 separate tables, one for noise mitigation measures required for Option 1 and a table for Option 2. The report is to be revised to include noise analysis for the private below grade patios located at the rear of all the proposed blocks. Analysis is to consider the noise levels generated by the individual air conditioner units that appear to be located in the individual private patio areas. It should be noted that the report is a preliminary assessment only and that a detailed noise report by an Acoustical Consultant will be required for the proposed development prior to Site Plan approval to the satisfaction of the Planning and Building

Department as and when final detailed architectural, mechanical and grading plans are available. The applicant is to contact the Development and Design Division of the Planning and Building department with respect to their requirements for barrier heights to mitigate noise levels to 55 dBA. The appropriate warning clauses and implementation requirements to address all noise impacts are to be included in Schedules `B' and `C' of the Development Agreement and are provided below."

Response:

It is our understanding that this comment was resolved through recent discussions between the developer and the city further to submission of the revised January 14, 2022 report. The proposed acoustical mitigation for select common OLA as shown on Figures 2 and 7 to 10 reflect a barrier configuration understood to be acceptable to the city based on the previous resolution.

Comment #5:

"Circulation date Feb 28, 2022 Upon review of the revised submission material, Option 2 is the preferred option as identified in the noise report. Previous comments: In the event that Noise mitigation (Option 1) as identified in the Noise Report is used, the Owner will be required to submit a letter to this Section confirming arrangements have been made with the owner of the adjacent car wash facility to ensure that noise mitigation measures identified in the acoustical report are installed on the adjacent commercial facility as required. Details including a cost estimate and letter of undertaking for the above noted must be provided to the satisfaction of the City of Mississauga. The extent of mitigation and an associated cost estimate are to be provided. NOTE: The securities required for off-site mitigation will be required as a condition of the Site Plan application."

Response:

Noted. This revised report accounts for acoustical mitigation measures to achieve the Class 4 sound level limits.

Canadian Pacific Railway

Comment #1:

"The proposed development is located in close proximity to our Galt Subdivision, which is classified as a Principal main line. Canadian Pacific Railway is not in favour of residential developments adjacent to or near our right-of-way as this land use is not compatible with railway operations. The health, safety and welfare of future residents could be adversely affected by railway activities. However, to ensure the safety and comfort of adjacent residents and to mitigate as much as possible the inherent adverse environmental factors, we request that the following requirements be included as Conditions of Approval: 1. Dwellings must be constructed such that the interior noise levels meet MOE criteria. A noise study should be carried out by a professional noise consultant to determine what impact, if any, railway noise would have on residents of proposed subdivisions and to recommend mitigation measures if required. The Railway may consider other measures recommended by the study. 2. In addition to the warning clauses indicated in the noise report, a clause should be inserted in all offers to purchase, agreements of purchase and sale or lease and in the title deed or lease of each dwelling within 300m of the railway right-of-way, warning prospective purchasers or tenants of the existence of the Railway's operating right-of-way; the possibility of alterations including the possibility that the Railway may expand its operations, which expansion may affect the living environment of the residents notwithstanding the inclusion of noise and vibration attenuating measures in the design of the subdivision and individual units, and that the Railway will not be responsible for complaints or claims arising from the use of its facilities and/or operations. CONTACT: Josie Tomei Specialist Real Estate Sales & Acquisitions 905-803-3429 800-1290 Central Parkway West Mississauga, ON L5C 4R3 CP_Proximity-Ontario@cpr.ca"

Response:

Noted. The appropriate Warning Clause has been included in the noise report, both the original and revised versions.

GO Transit

Comment #1:

"Metrolinx provided the following comments on your development applications: March 2022 Update: Metrolinx is in receipt of the Preliminary Environmental Noise Report dated January 21, 2022 and prepared by Jade Acoustics. The rail analysis reflects the most current data. Metrolinx has no further comments on the report. Further to the circulation for 64 & 66 Thomas Street and 65 Tannery Street, retrieved from the City of Mississauga website (linked

below), I note that the aforementioned subject lands are adjacent to Canadian Pacific Railway's (CPR) Galt Subdivision, which carries Milton GO Service, and is within 300 metres of Streetsville GO Station. As the owner of the railway, CPR is the primary commenting agency in this regard. However, Metrolinx does have interests with respect to noise abatement for the subject development. My comments are set out below: 1. I am in receipt of the subject Preliminary Environmental Noise Report, prepared by Jade Acoustics, dated July 2, 2019. The GO commuter train traffic data contemplated in the report reflects the most up to date information on existing and planned future service. I have no further comments in this regard. That being said, the report recommends that a more detailed noise study be prepared based on the future site plan. I request that the detailed noise study be provided to Metrolinx for review prior to Site Plan approval."

Response:

Noted.

Comment #2:

"The following warning clause shall be inserted in all development agreements, offers to purchase and agreements of Purchase and Sale or Lease of each dwelling unit within 300 metres of the railway right-of-way: Warning: Metrolinx, carrying on business as GO Transit, and its assigns and successors in interest operate commuter transit service within 300 metres from the land which is the subject hereof. In addition to the current use of these lands, there may be alterations to or expansions of the rail and other facilities on such lands in the future including the possibility that GO Transit or any railway entering into an agreement with GO Transit or any railway assigns or successors as aforesaid may expand their 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. Metrolinx will not be responsible for any complaints or claims arising from use of such facilities and/or operations on, over or under these lands."

Response:

This Warning Clause has been included in the revised report.