ENVIRONMENTAL NOISE FEASIBILITY

JOHN STREET AND ONTARIO STREET

Proposed Mixed-use Development
1–21 John Street and 46–50 Ontario Street
Town of Grimsby

APRIL 23, 2026

PROJECT: 0257210.0029

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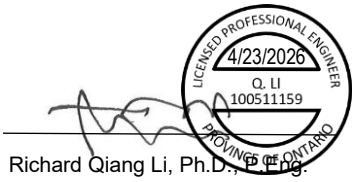
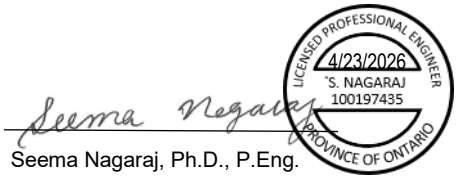
Prepared by	 Richard Qiang Li, Ph.D., P.Eng.
Reviewed by	 Seema Nagaraj, Ph.D., P.Eng.

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EXECUTIVE SUMMARY

Trinity Consultants Canada Inc. / Valcoustics was retained to prepare an Environmental Noise Feasibility Study to support the Official Plan Amendment (OPA) / Zoning By law Amendment (ZBA) application submission to the Town of Grimsby. The proposed development will consist of a 16-storey mixed-use building. The northern portion of the podium is five-storeys and will contain above-grade parking spaces on all levels. The south/west portion of the podium will be six storeys and will have commercial/retail and amenity uses on the ground floor, office uses on the second floor, and residential uses on the 2nd floor and above. The tower will have residential suites. Common indoor and outdoor amenity spaces will be provided on the 6th and 7th floors. A grade-level common outdoor amenity area will also be provided at the west side of the building, adjacent to Ontario Street.

The transportation noise sources in the vicinity of the site with potential impact on the proposed development are rail traffic on Canadian National Railway (CN) Grimsby Subdivision / GO Transit Lakeshore West corridor, as well as road traffic on Queen Elizabeth Way (QEW), Ontario Street, Clarke Street and Maple Avenue.

Sound levels at the site have been assessed and compared with the applicable Ministry of the Environment, Conservation and Parks (MECP) noise guideline limits to determine the need for mitigation measures.

To meet the applicable transportation noise source guideline limits:

- All residential units require air conditioning to allow windows to remain closed for noise control purposes.
- Upgraded exterior wall construction meeting a minimum Sound Transmission Class (STC) 54 is required.

- Accounting for the upgraded exterior walls, upgraded windows with ratings up to STC 43 would be required to meet the indoor noise criteria. Methods to decrease the window STC requirements are discussed in Section 4.3.1.1.

- The unmitigated daytime sound level at the grade-level common outdoor amenity space is predicted to meet the applicable MECP criteria. Special warning clauses are recommended for the Level 6 and Level 7 common outdoor amenity terraces.

The stationary sources in the vicinity of the site are not expected to have a significant noise impact at the subject development.

1.0 INTRODUCTION

Trinity Consultants Canada Inc. / Valcoustics was retained to prepare an Environmental Noise Feasibility report for the Official Plan Amendment (OPA) / Zoning By law Amendment (ZBA) application submission to the Town of Grimsby. This report outlines the predicted sound levels and the noise mitigation measures required for compliance with MECP guidelines.

1.1 THE SITE AND THE SURROUNDING AREA

The site is located at the northeast corner of the intersection of Ontario Street and John Street in the Town of Grimsby. The site is bounded by:

- The CN Grimsby Subdivision / GO Transit Lakeshore West, with Clarke Street beyond, to the north;

- Future residential development, with Robinson Street North and existing residential dwellings beyond, to the east;

- John Street, with existing residential development beyond, to the south; and

- An existing restaurant and Ontario Street, with a VIA train station, a child care facility/school and existing residential uses beyond, to the west.

A Key Plan is included as Figure 1.

1.2 THE PROPOSED DEVELOPMENT

The proposed development comprises an “L”-shaped 16-storey building with a podium. The northern portion of the podium is five-storeys and will contain above-grade parking spaces on all levels. The south/west portion of the podium will be six storeys and will have commercial/retail and amenity uses on the ground floor, office uses on the second floor, and residential uses on the 2nd floor and above. The tower will have residential suites. Amenity spaces will also be provided on the 6th and 7th floors. A public green space will be provided at grade on the west side of the podium.

This report was prepared using architectural drawings by Caricari Lee Architects Inc., dated April 15, 2026. The drawings are included as Appendix A. Figure 2 shows the site plan from the architectural drawings.

2.0 NOISE SOURCES

2.1 TRANSPORTATION SOURCES

The transportation noise sources with the potential for impact on the proposed development are: rail traffic on the CN Grimsby Subdivision / GO Transit Lakeshore West corridor, and road traffic on the QEW, Ontario Street, Clarke Street and Maple Avenue. Correspondence related to the traffic data is included in Appendix B.

2.1.1 Rail Traffic

The rail corridor to the north of the site is the CN Grimsby Subdivision, which is also used by Metrolinx for the GO Transit Lakeshore West line.

2.1.1.1.1 *CN Grimsby Subdivision*

Rail traffic on the CN Grimsby Subdivision includes freight and passenger (VIA) trains during the daytime hours only.

Traffic data in the vicinity of the subject site was requested but not received from CN by the time this report was written. Rail data provided by CN for the Grimsby Subdivision at a location east of the subject site was therefore used in the analysis. The year 2023 traffic data was escalated to the 2036 design condition using a growth rate of 2.5% compounded annually, as recommended by the railway authorities.

Details are summarized in Table 1.

2.1.1.1.2 *GO Lakeshore West*

Planned rail traffic on the GO Lakeshore West line (minimum 10-year horizon, i.e., 2036) was obtained from Metrolinx on February 13, 2026.

GO Lakeshore West traffic will consist of commuter trains powered by either diesel locomotives. The trains will have one locomotive and 10 passenger cars.

Rail traffic data is summarized in Table 1.

TABLE 1: RAIL TRAFFIC DATA

Source of Rail Traffic	Time Period	Train Type	# of Trains	Max # of Cars/Train	Max # of Locos/Train	Max Speed (kph)
CN Grimsby Subdivision	Daytime (0700 to 2300)	Freight(1)	4 (5.5) (3)	140	4	97
		Passenger(1)	2 (2.8) (3)	10	2	105
		GO Commuter(2)	12	10	1	97
	Night (2300 to 0700)	Freight(1)	0	140	4	97
		Passenger(1)	0	10	2	105
		GO Commuter(2)	2	10	1	97

Notes:

(1) Provided by CN for the year 2023 at a location to the east of the subject site.

(2) The planned (minimum 10-year forecast, or 2036) obtained directly from Metrolinx on February 13, 2026.

(3) The data shown in brackets is projected to the year 2036 with a 2.5% growth rate, compounded annually.

2.1.2 Road Traffic

Table 2 shows the road traffic data used in the assessment.

2.1.2.1 QEW

Ultimate road traffic data and overall truck percentages for the QEW were obtained from the Ministry of Transportation (MTO). Both the Summer Average Daily Traffic (SADT) and Annual Average Daily Traffic (AADT) volumes were provided. To be conservative, the higher volume (the SADT) was used in this assessment.

The medium/heavy truck percentages were assumed to be 25%/75% of the total truck volume, as recommended by the MTO for freeways. The day/night split was assumed to be 67%/33%.

2.1.2.2 Ontario Street, Clarke Street and Maple Avenue

Year 2040 forecasts for Ontario Street, Clarke Street and Maple Avenue were provided by BA Group, the traffic consultants for this project, in the form of AM and PM peak hour Turning Movement Counts (TMCs). The 24-hour volume was obtained by multiplying the higher of the AM or PM peak volume by 10.

Future truck percentages were not included. The future truck percentages were therefore assumed to be the same as the current truck percentages. The current truck percentages were obtained from the year 2025 TMC data provided by BA Group. Medium and heavy trucks were assumed to be 60% and 40%, respectively, of the total truck volume.

A day/night traffic split of 90%/10% was assumed, which is typical for roadways of this type.

TABLE 2: ROAD TRAFFIC DATA

Road	Year	AADT / SADT (1)	Trucks (%)		Day/Night Split (%)	Speed (km/hr)
			Medium	Heavy		
QEW(2)	Ultimate	250 300	2	6	67/33	110
Ontario Street (3)	2040	5 900	2	1.3	90/10	50
Clarke Street (3)	2040	7 050	1.5	1	90/10	50
Maple Avenue(3)	2040	5 200	0.6	0.4	90/10	50

Notes:

(1) AADT – Annual Average Daily Traffic; SADT – Summer Average Daily Traffic volume.

(2) Ultimate SADT obtained from the MTO. The truck percentage was assumed to split 75%/25% heavy/medium, as recommended by the MTO for freeways.

(3) Year 2040 AM and PM peak volumes were provided by BA Group. The 24-hour volumes were obtained by multiplying the higher of the AM or PM peak hour by 10. The truck percentages were calculated from the year 2025 TMCs. The day/night split was assumed.

2.2 STATIONARY SOURCES

The stationary sources in the vicinity of the subject site are:

- The Rikochez Pub & Eatery located at 54 Ontario Street, directly to the north of the northwestern portion of the podium. The main noise source associated with this restaurant is the kitchen exhaust fan at the east side of the building. Due to the high level of ambient road traffic noise from the QEW, noise from this facility is not expected to have a significant impact at the subject site.

- Trail Ridge Montessori – Junior Campus located at 53 Ontario Street, to the northwest of the site beyond Ontario Street. The main noise source associated with the school is HVAC equipment located at ground level on the west side of the building. Due to the screening provided by the school building and separation distance, noise from this facility is not expected to have a significant impact on the subject site.

- Surrounding Development: The remaining existing and planned developments surrounding the site consist primarily of residential uses and are not expected to have a significant impact on the subject site.

During the site visit by Valcoustics staff on February 26, 2026, it was confirmed that noise from these facilities was not audible at the subject site over the ambient road traffic noise.

3.0 ENVIRONMENTAL NOISE GUIDELINES

3.1 MECP-NPC-300 – TRANSPORTATION SOURCES

The applicable noise guidelines for new residential development are those in MECP Publication NPC-300, "Environmental Noise Guideline, Stationary, and Transportation Sources – Approval and Planning".

The environmental noise guidelines of the MECP, as provided in Publication NPC-300, are discussed briefly below and summarized in Appendix C.

3.1.1 Architectural Elements

In the daytime, the indoor criterion for road noise is $L_{eq\ Day}$(1)of 45 dBA for sensitive spaces such as living/dining rooms, dens and bedrooms. At night, the indoor criterion for road noise is $L_{eq\ Night}$(2) of 45 dBA for sensitive spaces such as living/dining rooms and dens and 40 dBA for bedrooms. The indoor criteria for rail noise are 5 dBA more stringent (i.e. lower) than those for the road; that is 40 dBA for living/dining rooms, dens and bedrooms during the daytime and nighttime periods except for bedrooms where the nighttime indoor criterion is 35 dBA.

The architectural design of the building envelope (walls, windows, etc.) must provide adequate sound isolation to achieve these indoor sound level limits, based on the applicable outdoor sound level on the facades.

In addition, the MECP requires brick veneer exterior wall construction or masonry equivalent construction from the foundation to the rafters for the first row of dwellings provided they are within 100 m of the rail line and the $L_{eq\ 24}$ is greater than 60 dBA.

3.1.2 Ventilation

In accordance with the MECP noise guideline for road traffic sources, if the daytime sound level, $L_{eq\ Day}$, at the exterior face of a noise sensitive 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 daytime sound levels between 56 dBA and 65 dBA inclusive, there need only be the provision for adding air conditioning at a later date. A warning clause advising the occupant of the potential interference with some activities is also required. At nighttime, air conditioning would be required when the sound level exceeds 60 dBA ($L_{eq\ Night}$) at a noise sensitive window (provision for adding air conditioning is required when greater than 50 dBA).

(1) 16-hour energy equivalent sound level (0700-2300 hours).
(2) 8-hour energy equivalent sound level (2300-0700 hours).

3.1.3 Outdoors

For outdoor amenity areas ("Outdoor Living Areas" – OLAs), the guideline is $L_{eq\ Day}$ of 55 dBA, with an excess not exceeding 5 dBA considered acceptable if it is technically not practicable to achieve the 55 dBA objective, providing warning clauses are registered on title.

Note, a balcony or elevated terrace is not considered an OLA, unless it is:

- the only OLA for the occupant;
- at least 4 m in depth; and
- unenclosed.

3.2 FEDERATION OF CANADIAN MUNICIPALITIES (FCM) AND RAILWAY ASSOCIATION OF CANADA (RAC)

The railway authorities adhere to the standard noise mitigation measures recommended jointly by the Federation of Canadian Municipalities and the Railway Association of Canada (FCM/RAC) in the guidelines of Reference 5. These are as follows:

- a minimum setback of 30 m from the edge of the railway right-of-way to the closest dwelling facade;
- a safety berm at least 2.5 m above grade at the property line;
- an approximately 3.0 m high acoustic fence atop the safety berm (to achieve a total height of 5.5 m above the top of the rail);
- upgraded exterior wall construction (such as brick veneer), where needed; and
- warning clauses specific to the railway for all dwellings within 300 m of the right-of-way.

Aside from the "standard" requirements regarding the setback of dwellings and safety berm/sound barrier configuration, the sound level design objectives of the FCM/RAC guidelines are similar to those of the MECP. See Appendix C. The FCM/RAC guidelines also permit modifications to their standard requirements where substantiated by a detailed noise impact assessment.

The proposed development used modifications to the standard mitigation measures as part of their design. As part of mitigation, a crash wall will be integrated into the north portion of the building. Note that rail safety is outside the purview of our expertise and any comment or design guidance on safety berm/crash walls is not within the scope of the noise study.

4.0 NOISE IMPACT ASSESSMENT

4.1 ANALYSIS METHOD

Using the rail and road traffic data presented in Tables 1 and 2, sound levels, in terms of $L_{eq\ Day}$ and $L_{eq\ Night}$, were determined using STAMSON V5.04 – ORNAMENT/STEAM, the MECP computerized road/rail traffic noise prediction models.

The receptor locations used in the noise assessment are shown in Figure 2.

The sound levels at the building facades of the 16-storey tower were assessed at a height of 53.2 m above grade. The sound levels at the building facades of the 6-storey podium were assessed at a height of 20.0 m above grade. These heights represent the top floor of the tower and the podium, the worst case locations.

The daytime OLA sound levels at the common outdoor amenity terraces on Levels 6 and 7 were assessed at the centre of each amenity area, at a height of 1.5 m above the surface of the terraces. The daytime OLA sound level at the grade-level common green space was assessed at a height of 1.5 m above grade, at the centre of the amenity space.

It is noted that there are a number of private terraces that are greater than 4 m in depth. However, since these are not the only OLAs provided for the residents, they do not strictly qualify as OLAs under the MECP guidelines. Thus, these private terraces were not considered further in this assessment.

Inherent acoustical screening due to the orientation of the building relative to the noise sources was included in the assessment. Screening from off-site buildings was not included in the calculations.

4.2 SOUND LEVEL PREDICTION

Table 3 summarises the predicted outdoor sound levels at the receptor locations.

The highest unmitigated daytime/nighttime sound levels of 76 dBA/74 dBA are predicted to occur at the north façade of the tower.

The highest unmitigated daytime OLA sound level at the common outdoor amenity terraces is predicted to be of 73 dBA, occurring at the Level 6 terrace on the north side of the tower.

A sample sound level calculation is included in Appendix D.

TABLE 3: PREDICTED SOUND LEVELS – TRANSPORTATION SOURCES

Location[1]	Source	Distance (m)[2]	$L_{eq\ Day}$ (dBA)	$L_{eq\ Night}$ (dBA)
Tower Northwest Corner North Facade	QEW Eastbound	217	71	71
	QEW Westbound	237	71	71
	Ontario Street	98	50	44
	Clarke Street	73	54	47
	Maple Avenue	179	44	38
	CN Grimsby Subdivision	30	71	58
	TOTAL	**–**	**76**	**74**

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TABLE 3: PREDICTED SOUND LEVELS – TRANSPORTATION SOURCES (continued)

Location[1]	Source	Distance (m)[2]	$L_{eq\ Day}$ (dBA)	$L_{eq\ Night}$ (dBA)
Tower Northwest Corner West Facade	QEW Eastbound	217	68	68
	QEW Westbound	237	68	68
	Ontario Street	98	52	46
	Clarke Street	73	50	44
	CN Grimsby Subdivision	30	68	55
	TOTAL	**–**	**73**	**71**
Tower Northeast Corner East Facade	QEW Eastbound	214	68	68
	QEW Westbound	233	68	68
	Clarke Street	65	52	45
	Maple Avenue	153	48	41
	CN Grimsby Subdivision	30	68	55
	TOTAL	**–**	**73**	**71**
Tower Southwest Corner West Facade	QEW Eastbound	277	67	67
	QEW Westbound	297	67	67
	Ontario Street	116	52	45
	Clarke Street	132	48	41
	CN Grimsby Subdivision	90	63	50
	TOTAL	**–**	**71**	**70**
Tower Southwest Corner South Facade	Ontario Street	116	48	41
	Maple Avenue	184	44	38
	TOTAL	**–**	**49**	**43**
6-Storey Podium Northwest Corner North Facade	QEW Eastbound	256	68	68
	QEW Westbound	276	68	68
	Ontario Street	19	57	50
	Clarke Street	129	49	53
	CN Grimsby Subdivision	64	66	54
	TOTAL	**–**	**73**	**71**

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TABLE 3: PREDICTED SOUND LEVELS – TRANSPORTATION SOURCES (continued)

Location[1]	Source	Distance (m)[2]	$L_{eq\ Day}$ (dBA)	$L_{eq\ Night}$ (dBA)
6-Storey Podium Northwest Corner West Facade	QEW Eastbound	256	66	66
	QEW Westbound	276	65	65
	Ontario Street	19	59	53
	Clarke Street	129	46	40
	CN Grimsby Subdivision	64	63	51
	TOTAL	**–**	**70**	**69**
Common Outdoor Amenity Terrace Level 6 on North Side of Tower	QEW Eastbound	210	70	–
	QEW Westbound	230	69	–
	Ontario Street	108	39	–
	Clarke Street	64	53	–
	CN Grimsby Subdivision	24	57	–
	TOTAL	**–**	**73**	**–**
Common Outdoor Amenity Terrace Level 7 on Podium	QEW Eastbound	268	69	–
	QEW Westbound	287	68	–
	Ontario Street	73	41	–
	Clarke Street	130	44	–
	CN Grimsby Subdivision	79	57	–
	TOTAL	**–**	**72**	**–**
Public Green Space at Grade	QEW Eastbound	277	52	–
	QEW Westbound	298	52	–
	Ontario Street	18	57	–
	CN Grimsby Subdivision	82	53	–
	TOTAL	**–**	**60**	**–**

Notes:

(1) See Figure 2.

(2) Distance indicated is taken from the centreline of the noise source to the point of reception

4.3 NOISE CONTROL MEASURES

The noise control measures can generally be classified into two categories which are interrelated, but which can be treated separately for the most part:

a) Architectural elements to achieve acceptable indoor noise guidelines for transportation sources; and

b) Design features to protect the OLAs.

Noise abatement requirements are summarised in Table 4 and notes to Table 4.

4.3.1 Indoors

4.3.1.1 Exterior Wall and Window Construction

Floor plans showing the suite layouts have not yet been developed. The STC requirements were therefore calculated assuming exterior walls and windows to have surface areas equalling 20% and 80% of the associated floor area, respectively, at each façade of a corner room with both facades exposed to the road and/or rail traffic noise sources.

In high-rise construction, a “brick veneer or masonry equivalent” exterior wall construction is often impractical to implement. An alternative is to use an exterior wall construction with an STC rating similar or greater than that of brick or masonry exterior wall, which is at least STC 54.

For this development, due to the close proximity the rail corridor and the QEW, the predicted sound levels are very high. To meet the indoor sound level requirements, exterior wall construction of at least STC 54 is recommended on the north, east and west facades (i.e. the facades with exposure to the rail line and highway).

Upgrade windows are also required. Accounting for exterior walls meeting STC 54, window requirements are as follows:

- North facade:
  - Up to STC 43 at northeast and northwest corner rooms.
  - Up to STC 41 at non-corner rooms.
- East and west facades:
  - Up to STC 38.

For south facade, the analysis shows that with exterior wall construction of at least STC 54, windows meeting the minimum non-acoustical requirements of the Ontario Building Code will be sufficient to meet the indoor noise criteria.

Note, the window frames themselves must also be designed to ensure that the overall sound isolation performance for the entire window assembly meets the sound isolation requirement. The ratings of the window assemblies must be confirmed by the window manufacturer through the submission of acoustical test data.

The window requirements may be somewhat reduced through proper space design. Consideration should be given to:

- Reducing the size of the windows or ensuring that the exterior window area is small relative to the floor area of the associated space.
- Designing suites so that rooms at the corners of the building have windows on only one facade.
- Designing suites such that there are no bedrooms at the northeast and northwest corners of the building.
- Having non-noise sensitive spaces, such as walk-in closets or washrooms, at the corners of the building.

Note that the wall and window requirements are based on assumed areas and the assessment should be updated once more detailed plans, suite layout drawings and elevation drawings become available.

4.3.1.2 Ventilation Requirements

All dwelling units in the development require central air conditioning to allow windows to be closed for noise control purposes.

4.3.2 Outdoors

The unmitigated daytime OLA sound level at the grade-level common outdoor amenity area is predicted to be 60 dBA. This is within the maximum permitted under the MECP guidelines, provided warning clauses are registered on title. Thus, sound barriers are not required at this location.

The unmitigated daytime OLA sound level at the common outdoor amenity terraces on Levels 6 and 7 are predicted to exceed the 60 dBA upper limit of the MECP noise guidelines. To meet the 60 dBA maximum permitted under the MECP noise guidelines, 4.8 m and 3.7 m high sound barriers would be required at the Level 6 and 7 terraces, respectively. This is not considered feasible due to structural and aesthetic reasons. It is recommended that special warning clauses informing residents of potential elevated sound levels at these locations are included (see Table 4).

4.3.3 Warning Clauses

Warning clauses are a tool to inform prospective owners/occupants of potential annoyance due to existing noise sources. Where the guideline sound level limits are exceeded, appropriate warning clauses should be registered on title or included in the development agreement that is registered on title. The warning clauses should also be included in agreements of Offers of Purchase and Sale and lease/rental agreements to make future occupants aware of the potential noise situation.

Table 4 and the notes to Table 4 summarize the warning clauses for the site.

TABLE 4: MINIMUM NOISE ABATEMENT MEASURES

Location	Air Conditioning[1]	Exterior Wall[2]	Window STC Rating[2]	Sound Barrier[3]	Warning Clauses[4]
Units along north facade of building	Mandatory	STC 54	Up to STC 43	N/A	A + B + C + D + E + F
Units along west and east facades	Mandatory	STC 54	Up to STC 38	N/A	A + B + C + D + E + F
Units along the south façade	Mandatory	STC 54	No special acoustical requirements	N/A	A + B + C + D + E + F

Notes:

(1) Where methods must be provided to allow windows to remain closed for noise control purposes, a commonly used technique for is the use of air conditioning.

(2) STC - Sound Transmission Class Rating (Reference ASTM-E413). Analyses were based upon the assumption that wall and window areas are as indicated in Section 4.3.1.1 of this report. Requirements should be checked once floor plans have been finalized and exterior wall construction details are defined.

(3) Sound barriers must be of solid construction with no gaps, cracks, or holes, and must meet a minimum surface density of 20 kg/m². Suitable material can include wood, concrete metal sandwich panel, glazing or a combination of these.

(4) The warning clauses to be registered on title and be included in Offers of Purchase and Sale for designated lots:

A. "Purchasers/tenants are advised that despite the inclusion of noise control features in the development and within the building units, sound levels due to increasing road and rail traffic may on occasions interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the Municipality and the Ministry of the Environment, Conservation and Parks."

B. "This dwelling has been supplied with a central air conditioning system which will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the noise criteria of the municipality and the Ministry of the Environment."

C. "Canadian National Railway or its affiliated railway companies has or have a railway right-of-way within 300 m from this dwelling unit. There may be alterations to or expansions of the railway facilities of such right-of-way in the future, including the possibility that Canadian National Railway or its affiliated railway companies as aforesaid, or their assigns or successors may expand their business operations. Such expansion may affect the living and business environment of the residents, tenants and their visitors, employees, customers and patients in the vicinity, notwithstanding the inclusion of any noise and vibration attenuating features in the design of the development. Canadian National Railway, its affiliated railway companies and their successors and assigns will not be responsible for any complaints or claims arising from use of such facilities and/or operations on, over or under the aforesaid right-of-way."

D. "Metrolinx and its assigns and successors in interest operate commuter transit service within 300 metres from the subject land. 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 Metrolinx or any railway entering into an agreement with Metrolinx or any railway assigns or successors as aforesaid may expand their operations, which expansion may affect the environment of the occupants in the vicinity, notwithstanding the inclusion of any noise and vibration attenuating measures in the design of the development and individual units. 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."

E. "Purchasers/occupants are advised that due to the proximity to the neighbouring restaurant, sound from this facility may, at times, be audible."

F. "Purchasers/tenants are advised that the Level 6 and Level 7 common outdoor amenity terraces have not been designed to meet the sound level limits of the Ministry of the Environment, Conservation and Parks. Sound levels due to road and rail traffic may on occasions interfere with some activities of the occupants as the sound levels exceed the sound level limits of the Municipality and the Ministry of the Environment, Conservation and Parks."

(5) All exterior doors shall be fully weather-stripped.

5.0 THE EFFECT OF THE PROJECT ON THE NEIGHBOURHOOD

The main source of noise associated with this development, with the potential for significant impact on surrounding buildings, is the mechanical equipment.

Mechanical equipment interfacing to the outdoors must comply with the MECP noise guideline limits in NPC-300. By proper engineering design, all requirements can be met, and no significant noise impact would be created for surrounding uses. Appropriate choice of location, equipment type, and noise control features should be considered during detailed design for such items as rooftop equipment and air intakes and exhausts, including underground parking garage ventilation systems (if included in the building design). The noise emissions from parking garage air shafts located immediately adjacent to residential uses can be designed to comply with the noise guideline limits by acoustically lining the shaft and/or providing silencers.

For any emergency generators, appropriate steps should be taken to ensure that the equipment placement, treatment, and the routine testing schedule will not generate significant noise impact on neighbouring properties. The generator will require silencers on the intake and exhaust cooling air paths, as well as a muffler on the combustion exhaust.

The additional road traffic generated by this project will be small relative to existing traffic volumes within the general area and is not expected to create significant additional noise impact.

6.0 THE EFFECT OF THE PROJECT ON ITSELF

Consideration should be given to the control of airborne and/or structure-borne noise generated within the building as part of the detailed design. The major items requiring attention are the common boundaries and building services.

The common boundaries, in general, are those between adjacent noise sensitive areas (such as two adjacent residential units) and between noise sensitive areas and noisy service areas (such as a residential unit and a mechanical space). Building services that will need to be addressed during the design of these buildings include mechanical equipment, plumbing and electrical equipment. A suitable environment can be provided for the future occupants through the proper building design.

6.1 COMMON BOUNDARIES

The Ontario Building Code (OBC) has requirements for airborne sound isolation of residential units. The requirements apply to both separating partitions between spaces (direct path) as well as flanking partitions (i.e., any path, other than the direct path, that allows the transmission of sound between spaces). The requirements are:

The demising partition separating a *dwelling unit* from an elevator shaft or a refuse chute must have an *STC* rating not less than 55.

A *dwelling unit* shall be separated from every other space in a *building* in which noise may be generated by:

- a separating assembly and adjoining construction, which, together, provide an *apparent sound transmission class (ASTC) rating not* less than 47 (note that the ASTC accounts for all flanking sound paths); or
- a separating assembly that provides an STC rating not less than 50 and adjoining construction that conforms to prescribed methods outlined in the OBC.

There are no requirements for impact noise control in the OBC. However, a minimum Impact Insulation Class (IIC) rating for floors between two sensitive spaces of 50 to 55 is recommended. This rating procedure, the IIC, is deliberately configured so that the significance of the IIC number is similar to the STC rating system for airborne sound.

Adequate sound isolation can be achieved if pertinent details of design and construction are followed consistently. Included in these details, for example, is careful closure of all cracks by caulking or equivalent, and the sealing of all wall penetrations, including electrical outlets. Attention must be paid to items which can degrade the performance of the boundaries such as services passing through or mounted to the walls or floors/ceilings (e.g., plumbing). Electrical boxes serving two different units should not be within the same stud space or masonry cavity.

During design, consideration should be given to the noise impact at the noise sensitive spaces in the vicinity of potentially noisy areas. High sound isolation construction may be required to adequately mitigate any potential noise impacts. Secondary sound isolation ceilings, floating floors, and cavity walls are some examples of high sound isolation construction.

A satisfactory environment is readily achievable with proper design and construction.

6.2 BUILDING SERVICES

There will be insignificant effect of the building services on the occupants, except potentially in close proximity to any mechanical equipment areas and in those areas affected by sound transmitted by ducts and other paths, from mechanical equipment. Here, the isolation of sound will be a matter of design of the mechanical system and of the sound control associated with it. A satisfactory environment is readily achievable with proper design.

7.0 CONCLUSIONS

With the incorporation of the recommended noise mitigation measures, the indoor and outdoor transportation noise guidelines can be met. Future occupants will be made aware of potential noise situation through warning clauses, as per MECP guidelines.

The approvals and administrative procedures are available to ensure that the noise requirements are implemented.

8.0 REFERENCES

1. PC STAMSON 5.04, “Computer Program for Road Traffic Noise Assessment”, Ontario Ministry of the Environment.

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

3. “Sound Level Limits for Stationary Sources in Class 1 and 2 Areas (URBAN)”, Ontario Ministry of the Environment, Publication NPC-205, October 1995.

4. “Environmental Noise Guideline, Stationary and Transportation Sources – Approval and Planning”, Ontario Ministry of the Environment, Publication NPC-300, August 2013

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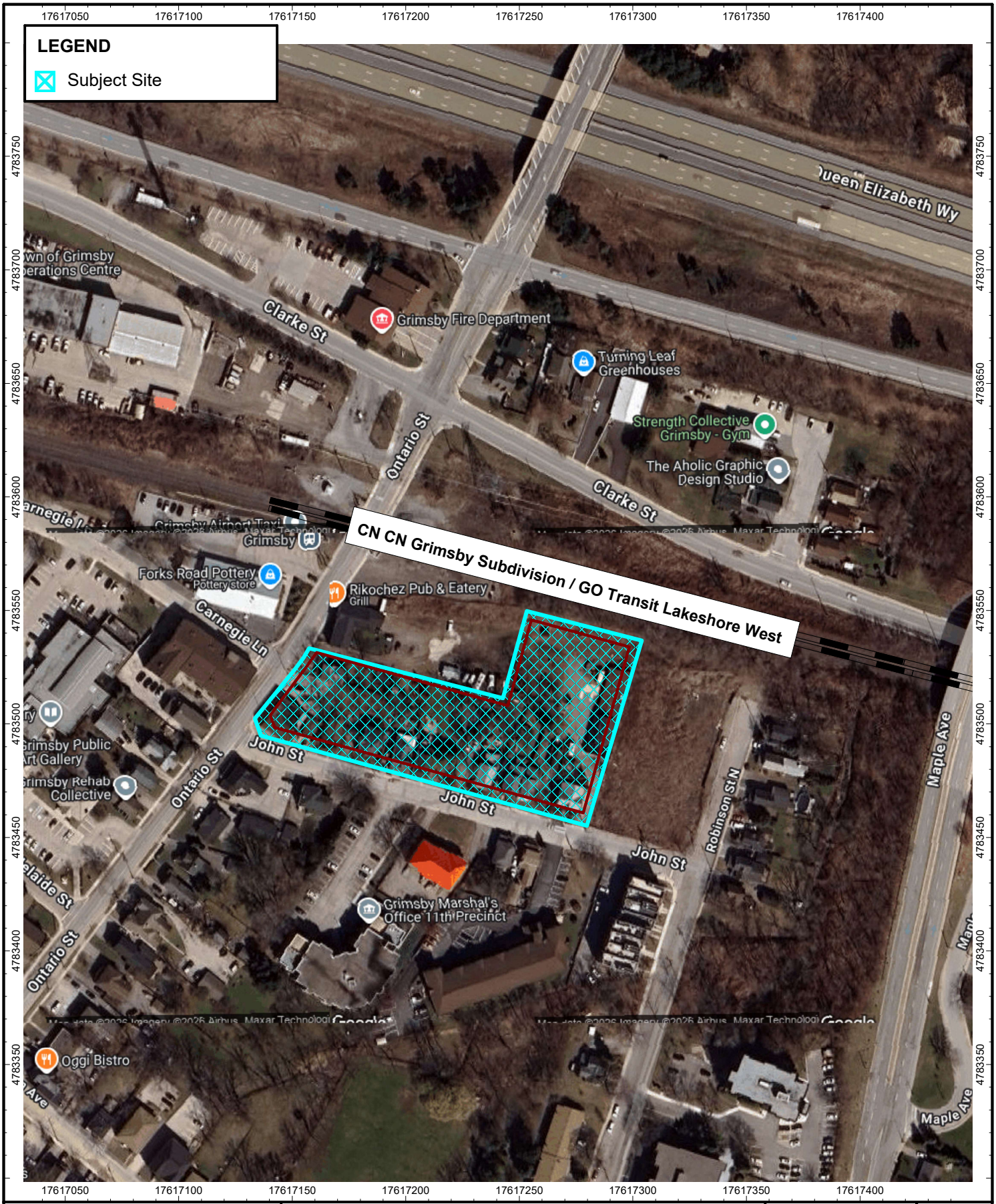
John Street & Ontario Street, Grimsby Noise v1_0.docx



Trinity Consultants / VALCOUSTICS CANADA	Title: **Key Plan**	Date: **2026-02-26**	Figure: **1**
	Project Name: **John Street & Ontario Street, Grimsby**	Project No.: **0257210.0029**	

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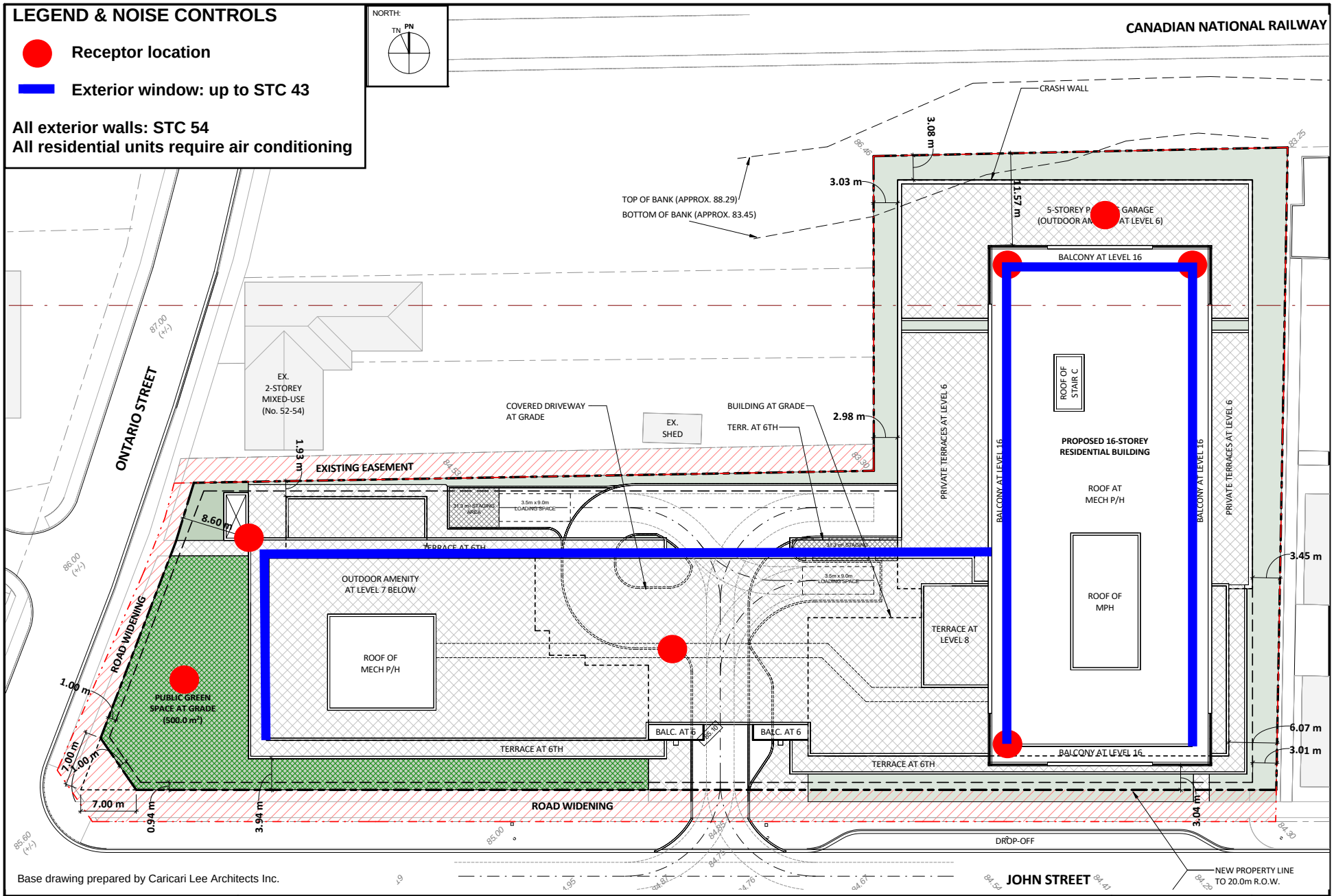
Date Plotted: 04.03.26



Base drawing prepared by Caricari Lee Architects Inc.

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Title	**Site Plan**
Project Name	**John Street and Ontario Street, Grimsby**
Date	**April 21, 2026**
Project No.	**0257210.0029**
Figure	**2**

APPENDIX A

ARCHITECTURAL DRAWINGS

GFA (RESIDENTIAL)

Level	Area
P1	6,871.48 m²
LEVEL 1	2,311.68 m²
LEVEL 2	2,311.68 m²
LEVEL 3	2,311.68 m²
LEVEL 4	2,311.68 m²
LEVEL 5	2,311.68 m²
EXCLUDED	18,429.88 m²

LEVEL 1	1,377.40 m²
LEVEL 2	1,078.80 m²
LEVEL 3	2,719.56 m²
LEVEL 4	2,719.56 m²
LEVEL 5	2,719.56 m²
LEVEL 6	3,719.76 m²
LEVEL 7	1,725.88 m²
LEVEL 8	1,416.64 m²
LEVEL 9	1,416.64 m²
LEVEL 10	1,416.64 m²
LEVEL 11	1,416.64 m²
LEVEL 12	1,416.64 m²
LEVEL 13	1,416.64 m²
LEVEL 14	1,416.64 m²
LEVEL 15	1,416.64 m²
LEVEL 16	1,416.64 m²
MECH P/H	179.60 m²
GFA	28,989.89 m²
TOTAL FLOOR AREA	47,419.77 m²

GFA (COMMERCIAL / RETAIL)

Level	Area
LEVEL 1	708.06 m²
TOTAL GFA	708.06 m²

GFA (OFFICE)

Level	Area
LEVEL 1	55.42 m²
LEVEL 2	1,123.06 m²
TOTAL GFA	1,178.48 m²

TOTAL FLOOR AREA (TFA/GCA)

Building	Area
PARKING GARAGE	18,429.88 m²
EXCLUDED	18,429.88 m²

COMMERCIAL / RETAIL	708.06 m²
OFFICE	1,178.48 m²
RESIDENTIAL	28,989.89 m²
GFA	30,876.44 m²
TOTAL FLOOR AREA	49,306.31 m²

UNIT COUNT

Unit Type	Unit Count
1B	152
2B	107
3B	46
TOTAL UNITS	305

AMENITY AREA

Level	Area
Indoor Amenity	
LEVEL 1	555.55 m²
LEVEL 6	200.06 m²
LEVEL 7	254.84 m²
Indoor Amenity	1,010.45 m²
Outdoor Amenity	
LEVEL 6	591.36 m²
LEVEL 7	1,651.11 m²
Outdoor Amenity	2,242.47 m²
TOTAL AMENITY AREA	3,252.92 m²

SITE STATISTICS:

SITE AREA	(0.778775 ha) 7,787.75 m²
GROSS FLOOR AREA (GFA)	30,876.44 m²
FLOOR SPACE INDEX (FSI)	3.97
UNIT COUNT	305
DENSITY (UPH)	391.65

PARKING PROVIDED	RESIDENTIAL	COMMERCIAL	TOTAL
LEVEL P1	98	75	173
LEVEL 1	2	45	47
LEVEL 2	52	0	52
LEVEL 3	52	0	52
LEVEL 4	52	0	52
LEVEL 5	52	0	52
TOTAL PARKING PROVIDED	**308**	**120**	**428**

**6 COMMERCIAL + 8 RES. OF THE TOTAL SPACES PROVIDED = BARRIER-FREE.*

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COVER + STATISTICS

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CANADIAN NATIONAL RAILWAY

ONTARIO STREET

CARNEGIE LANE

ROBINSON STREET NORTH

JOHN STREET

EX.
1.5-STOREY
COMMERCIAL
(No. 53)

EX.
2-STOREY
MIXED-USE
(No. 52-54)

EX.
2-STOREY LOFTS
(No. 49)

EX.
2-STOREY
COMMERCIAL
(No. 45)

EX.
2-STOREY
HOUSE
(No. 41)

EX.
2-STOREY
COMMERCIAL
(No. 42)

EX. 2-STOREY SEMI-
DETACHED HOUSES
(No. 4-6)

SITE OF EXISTING 4-STOREY
APARTMENT BUILDING
(No. 10)

EXISTING 3-STOREY
APARTMENT BUILDING
(No. 14)

EX.
2-STOREY
HOUSE
(No. 16)

EX.
2-STOREY
HOUSE
(No. 18)

SITE OF EXISTING 3-STOREY
APARTMENT BUILDING
(No. 20)

EX.
3-STOREY
TOWNHOUSES

SITE OF EXISTING
6-STOREY APARTMENT
BUILDING

EX.
2-STOREY HOUSE
(No. 50)

EX.
2-STOREY HOUSE
(No. 48)

EX. 2-STOREY
HOUSE (No. 46)

EX.
1-STOREY HOUSE
(No. 42)

EX.
2-STOREY
HOUSE
(No. 40)

EX.
2-STOREY HOUSE
(No. 38)

FUTURE
3-STOREY
TOWNHOUSES

FUTURE
3-STOREY
TOWNHOUSES

FUTURE
3-STOREY
TOWNHOUSES

CRASH WALL

APPROXIMATE SETBACK TO
RESIDENTIAL FROM CRASH
WALL

TOP OF BANK (APPROX. 88.29)
BOTTOM OF BANK (APPROX. 83.45)

3.08 m

3.03 m

11.57 m

5-STOREY PARKING GARAGE
(OUTDOOR AMENITY AT LEVEL 6)

BALCONY AT LEVEL 16

ROOF OF
STAIR C

PROPOSED 16-STOREY
RESIDENTIAL BUILDING

ROOF AT
MECH P/H

ROOF OF
MPH

PRIVATE TERRACES AT LEVEL 6

BALCONY AT LEVEL 16

BALCONY AT LEVEL 16

PRIVATE TERRACES AT LEVEL 6

COVERED DRIVEWAY
AT GRADE

EX.
SHED

BUILDING AT GRADE

TERR. AT 6TH

2.98 m

1.93 m

EXISTING EASEMENT

8.60 m

31.3 m² STAGING
AREA

3.5m x 9.0m
LOADING SPACE

TERRACE AT 6TH

31.3 m² STAGING
AREA

3.5m x 9.0m
LOADING SPACE

OUTDOOR AMENITY
AT LEVEL 7 BELOW

ROOF OF
MECH P/H

TERRACE AT
LEVEL 8

ROAD WIDENING

PUBLIC GREEN
SPACE AT GRADE
(500.0 m²)

1.00 m

7.00 m

1.00 m

7.00 m

0.94 m

3.94 m

ROAD WIDENING

BALC. AT 6

BALC. AT 6

TERRACE AT 6TH

TERRACE AT 6TH

BALCONY AT LEVEL 16

3.45 m

6.07 m

3.01 m

3.04 m

DROP-OFF

NEW PROPERTY LINE
TO 20.0m R.O.W.

PREVIOUS PROPERTY
BOUNDARIES

86.00 (+/-)

87.00 (+/-)

85.60 (+/-)

86.46

83.25

84.63

83.30

85.00

84.85

84.75

84.76

84.67

84.95

84.87

85.19

84.54

84.41

84.29

84.30

1 **SITE PLAN**
1 : 300

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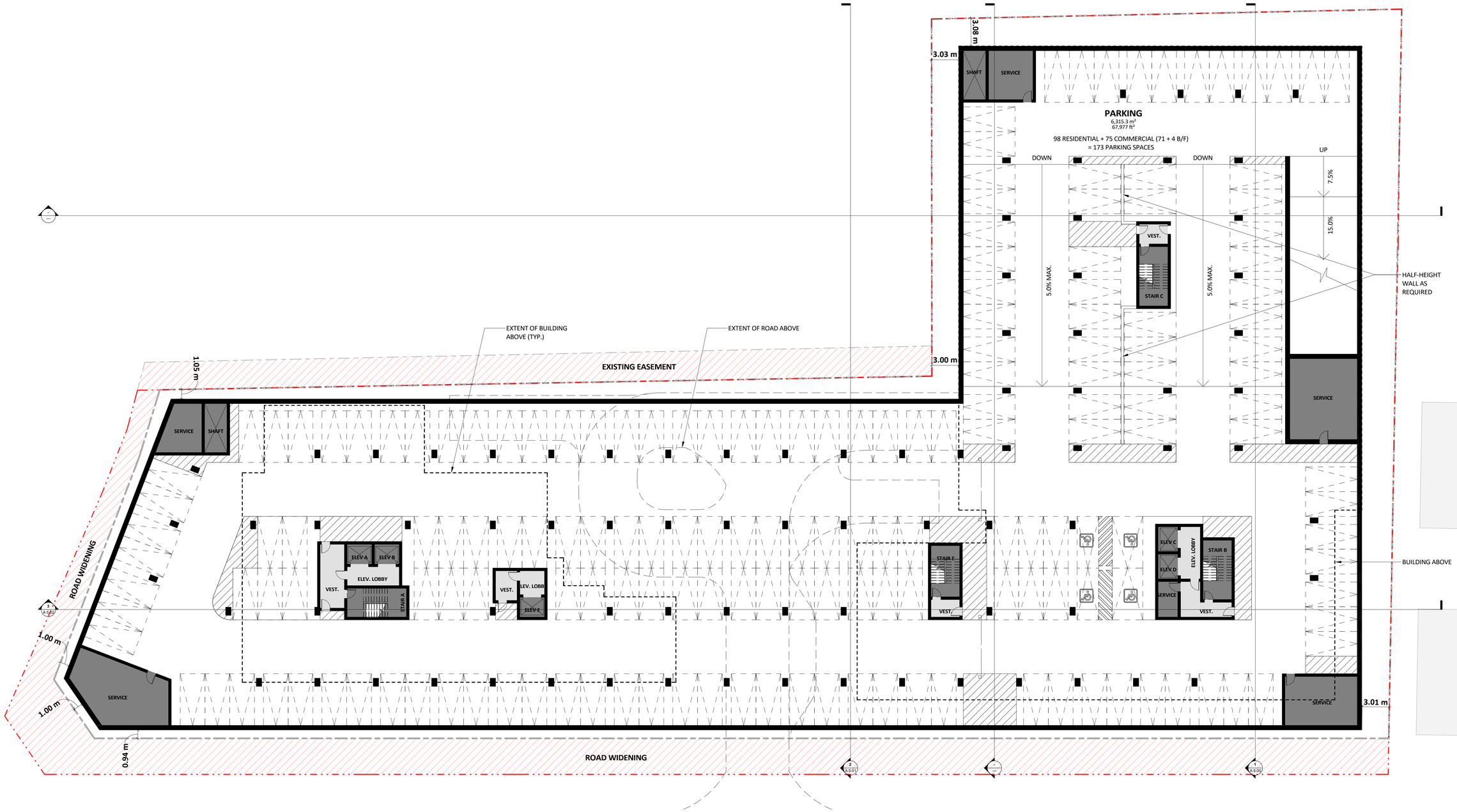

2 **P1 LEVEL**
1 : 200

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LEVEL P1

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TOP OF BANK (APPROX. 88.29)

BOTTOM OF BANK (APPROX. 83.45)

88.46

83.25

3.08 m

3.03 m

SHAFT

BIKE LOCKERS (8 COMMERCIAL)

2 RES. SPACES

PARKING
2,151.4 m²
23,157 ft²

2 RESIDENTIAL + 45 COMMERCIAL (43 + 2 B/F)
= 47 PARKING SPACES

GATE

DOWN

DOWN

UP

7.5%

15.0%

15.0%

7.5%

DOWN

5.0% MAX.

5.0% MAX.

STAIR C

BIKE LOCKERS (16 COMMERCIAL)

EXIT CORRIDOR

HALF-HEIGHT WALL AS REQUIRED

2.98 m

EXTENT OF U/G PARKING BELOW

BALCONY ABOVE (TYP.)

LEVEL 3 ABOVE

EXISTING EASEMENT

84.53

83.30

1.93 m

97.00 (+/-)

86.00 (+/-)

11.47 m

RETAIL
122.4 m²
1,318 ft²
+86.20

31.3 m² STAGING AREA

3.5m x 9.0m LOADING SPACE

PARKING GARAGE ENTRANCE

31.3 m² STAGING AREA

3.5m x 9.0m LOADING SPACE

3.45 m

RETAIL
159.8 m²
1,721 ft²
+86.20

MOVING

BIKE LOCKERS (40 RESIDENTIAL)

RETAIL GARBAGE
+85.25

LOUNGE
40.0 m²
431 ft²

ELEV A

ELEV B

VEST.
+85.25

SECONDARY RES. ENTRANCE

+85.15

MOVING

ELEV C

ELEV D

VEST.

AMENITY
75.0 m²
807 ft²

MAIL

STAIR E

GARBAGE
164.6 m²
1,771 ft²

CHUTE ABOVE

STAIR B

VEST.
+85.15

ROAD WIDENING

3
A3.00

STAIR A

RETAIL
177.1 m²
1,906 ft²
+86.20

RETAIL
106.9 m²
1,151 ft²
+85.25

ELEV E

STAIR D

LEV. LOBBY

RETAIL
117.0 m²
1,259 ft²

VEST.
+85.25

VEST.
+85.25

VEST.
+85.25

SECONDARY RES. ENTRANCE

COVERED DRIVEWAY (BUILDING ABOVE)

DROP-OFF

+85.10

CONCIERGE

PARCEL

CACF

LOUNGE
71.5 m²
770 ft²

AMENITY
134.8 m²
1,451 ft²

AMENITY
84.4 m²
909 ft²

AMENITY
149.8 m²
1,612 ft²

6.07 m

6.24 m

MAIN RES. ENTRANCE

OFFICE ENTRANCE

MAIN RES. ENTRANCE

4.29 m

14.14 m

ROAD WIDENING

HYDRO POLE + UTILITY BOX TO BE RELOCATED

HYDRO POLE TO BE RELOCATED

12.19 m

1
A3.00

86.60 (+/-)

85.00

84.85

84.30

84.75

85.19

84.95

84.87

84.76

84.67

84.54

84.41

84.29

1 **LEVEL 1**
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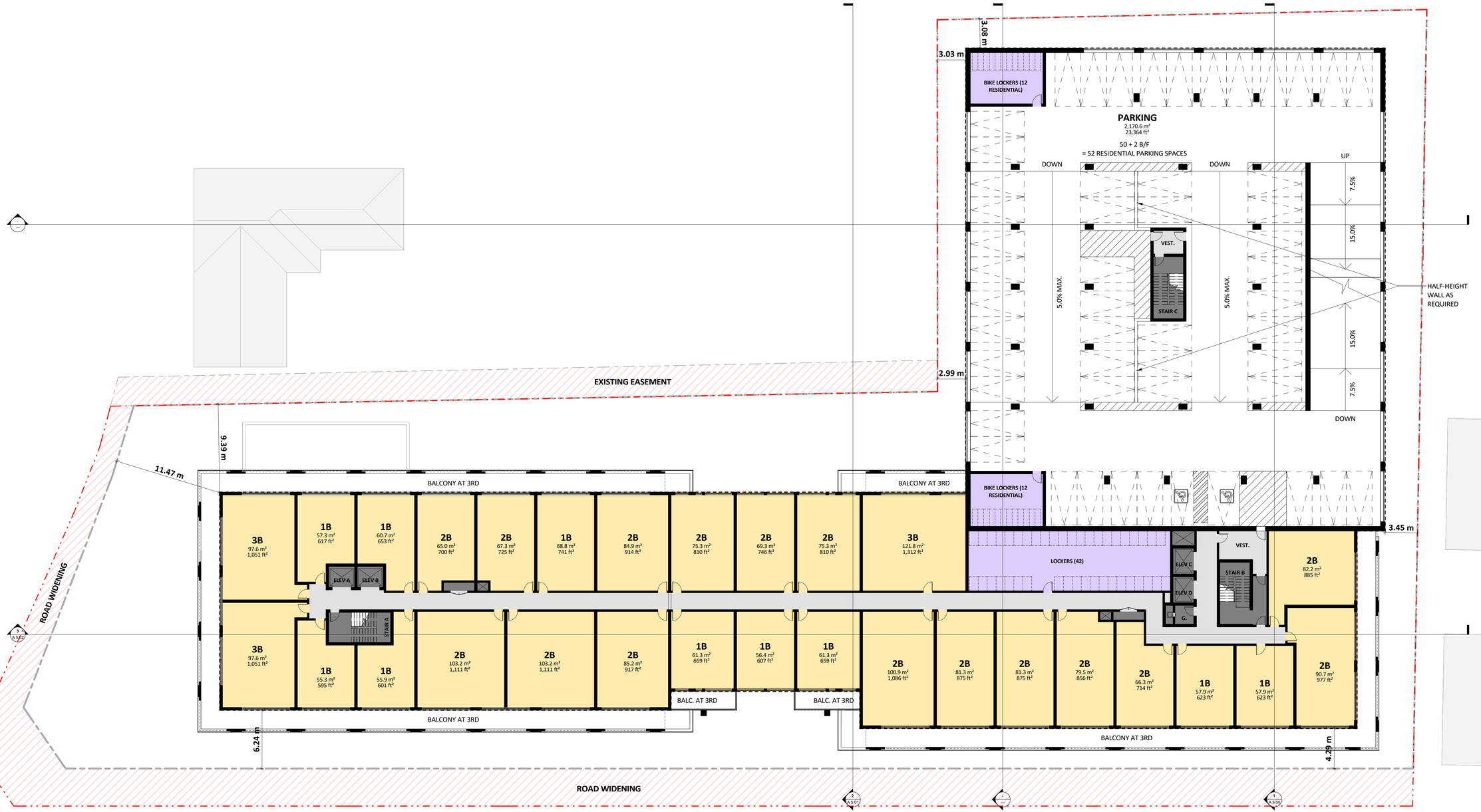

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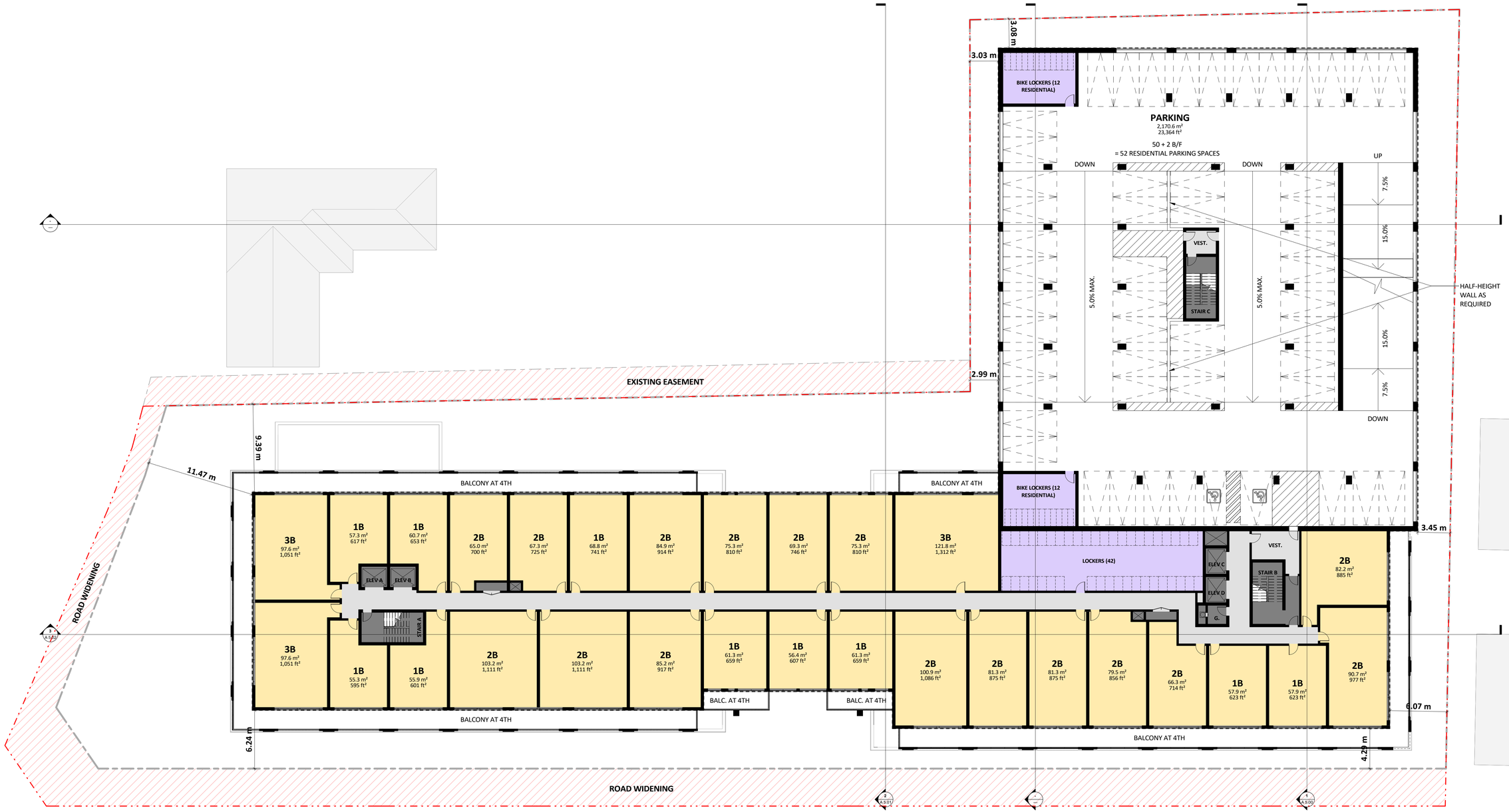

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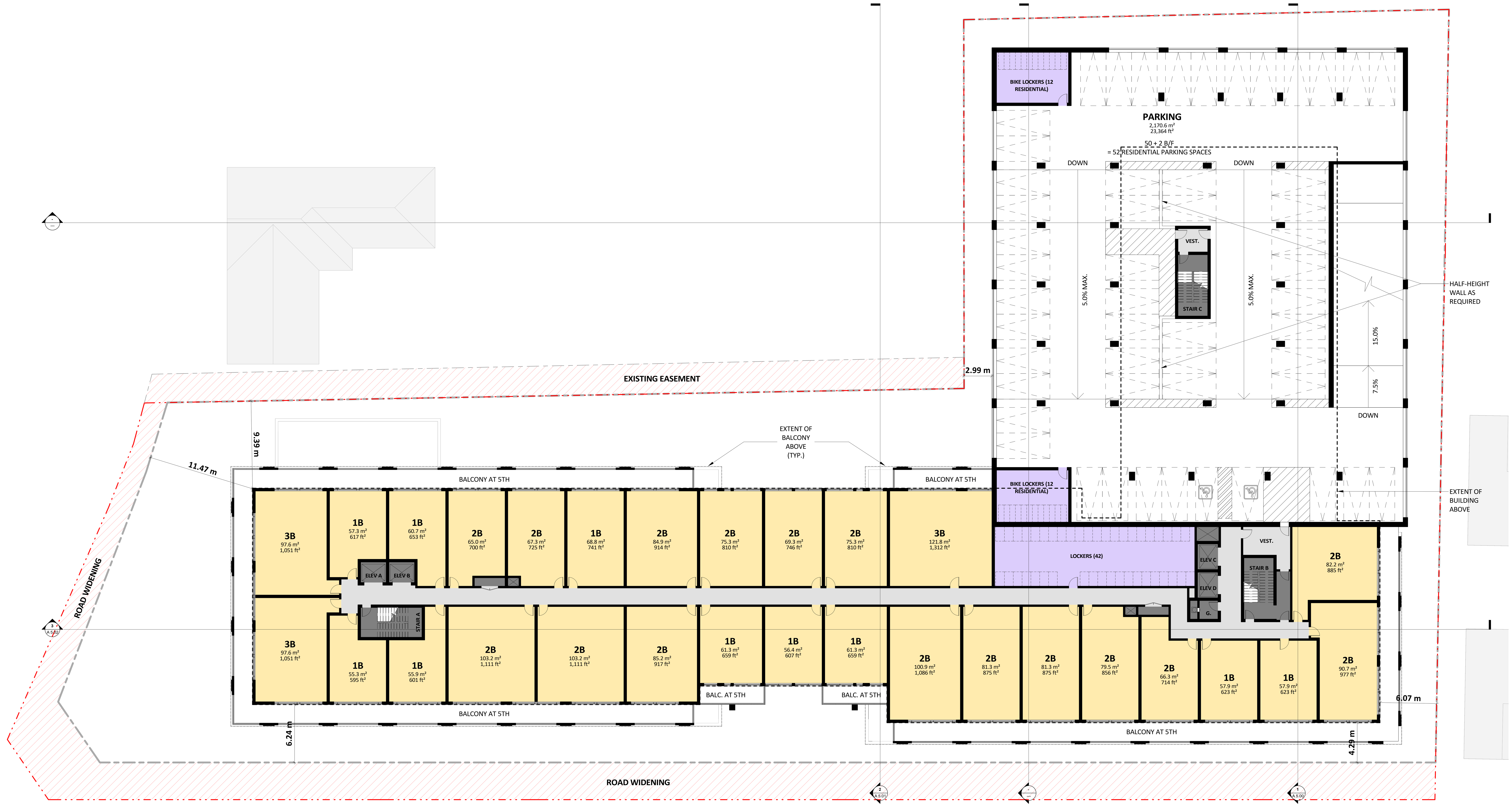

1 LEVEL 5
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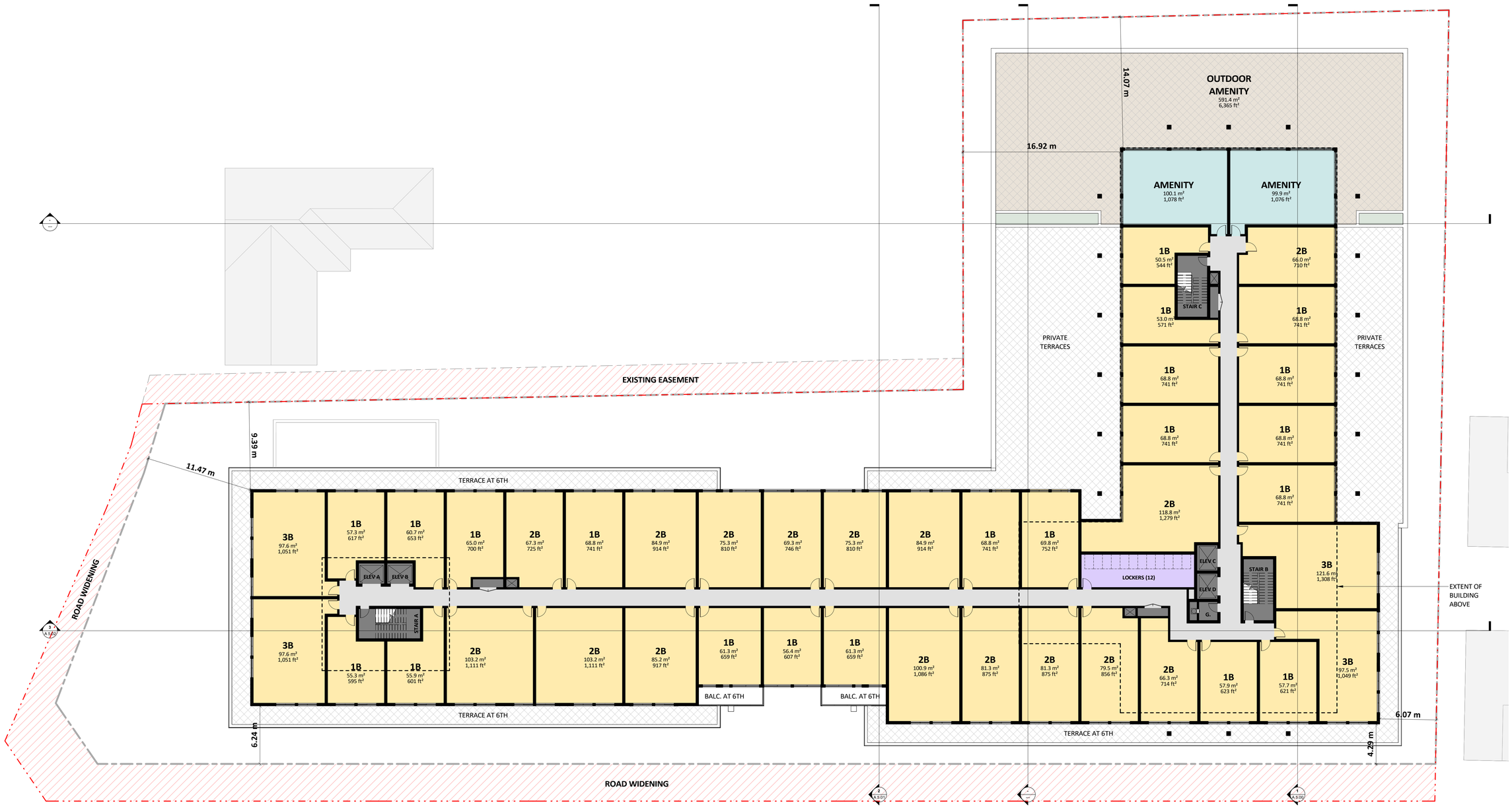

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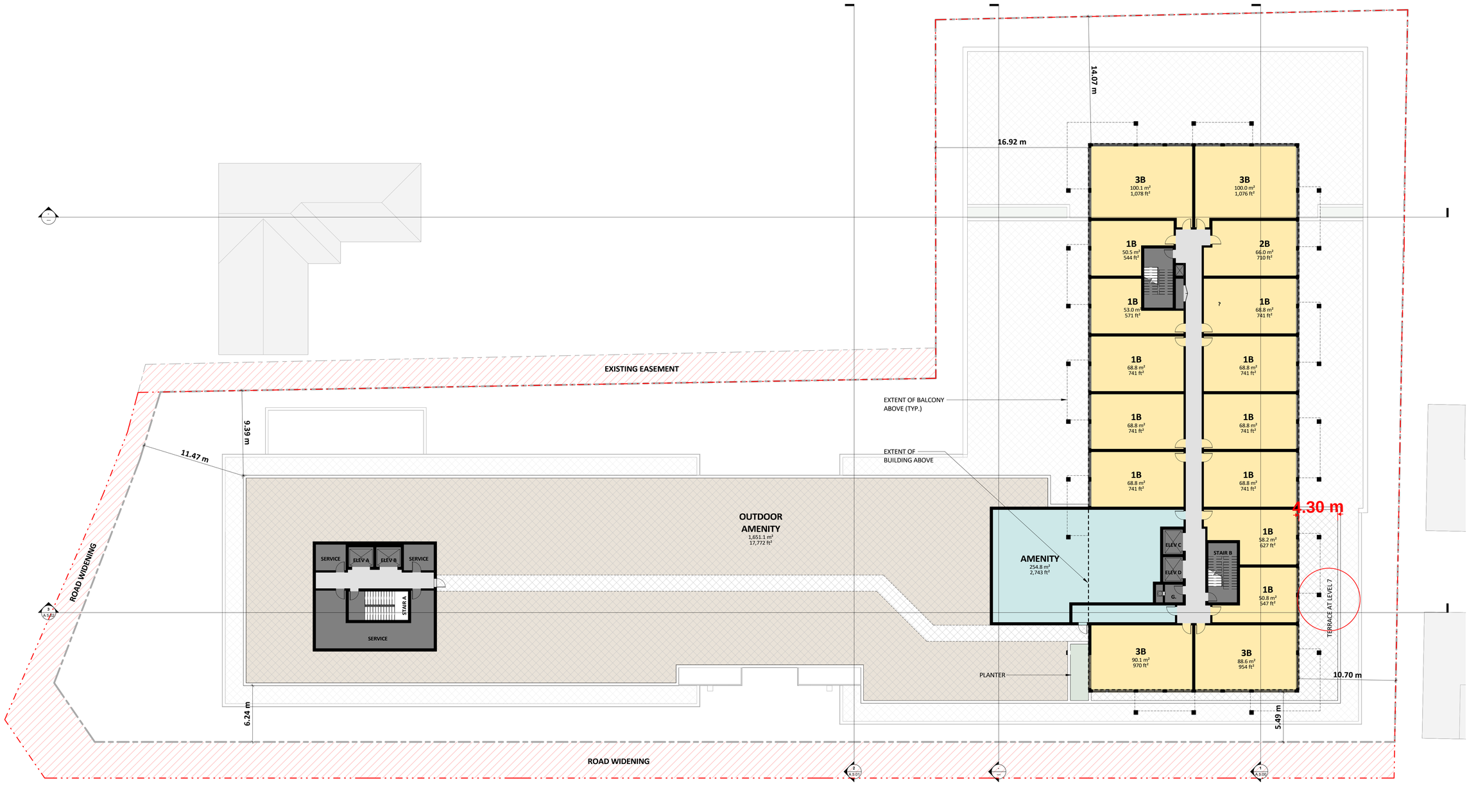

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DRAWING TITLE
LEVEL 7

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SCALE	1 : 200
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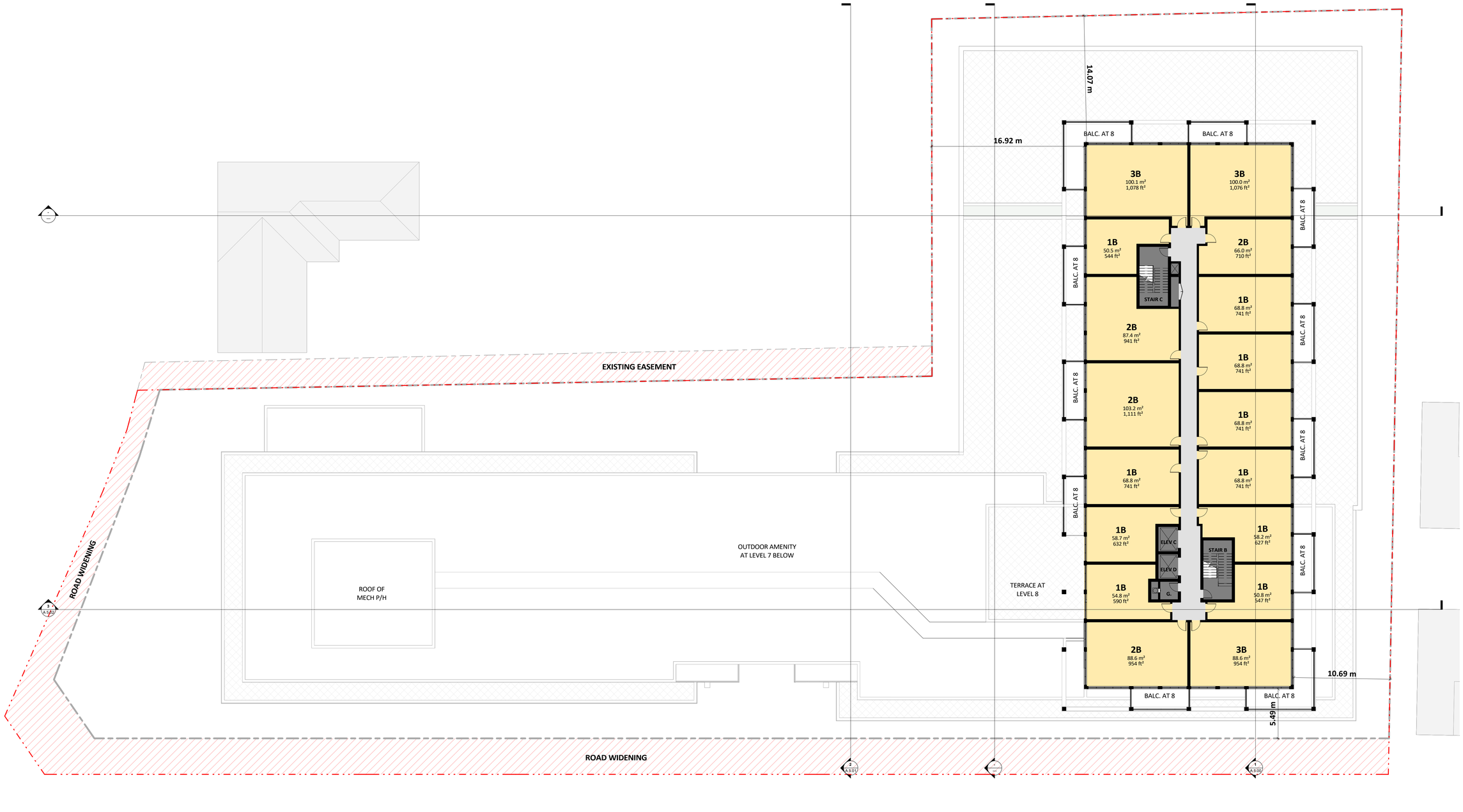

1 **LEVEL 8**
1 : 200

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THE COOPERHAUS
46, 48 + 50 ONTARIO STREET, AND 1, 3, 5, 7, 11, 13, 15, 17 + 21 JOHN STREET, GRIMSBY, ON

DRAWING TITLE
LEVEL 8

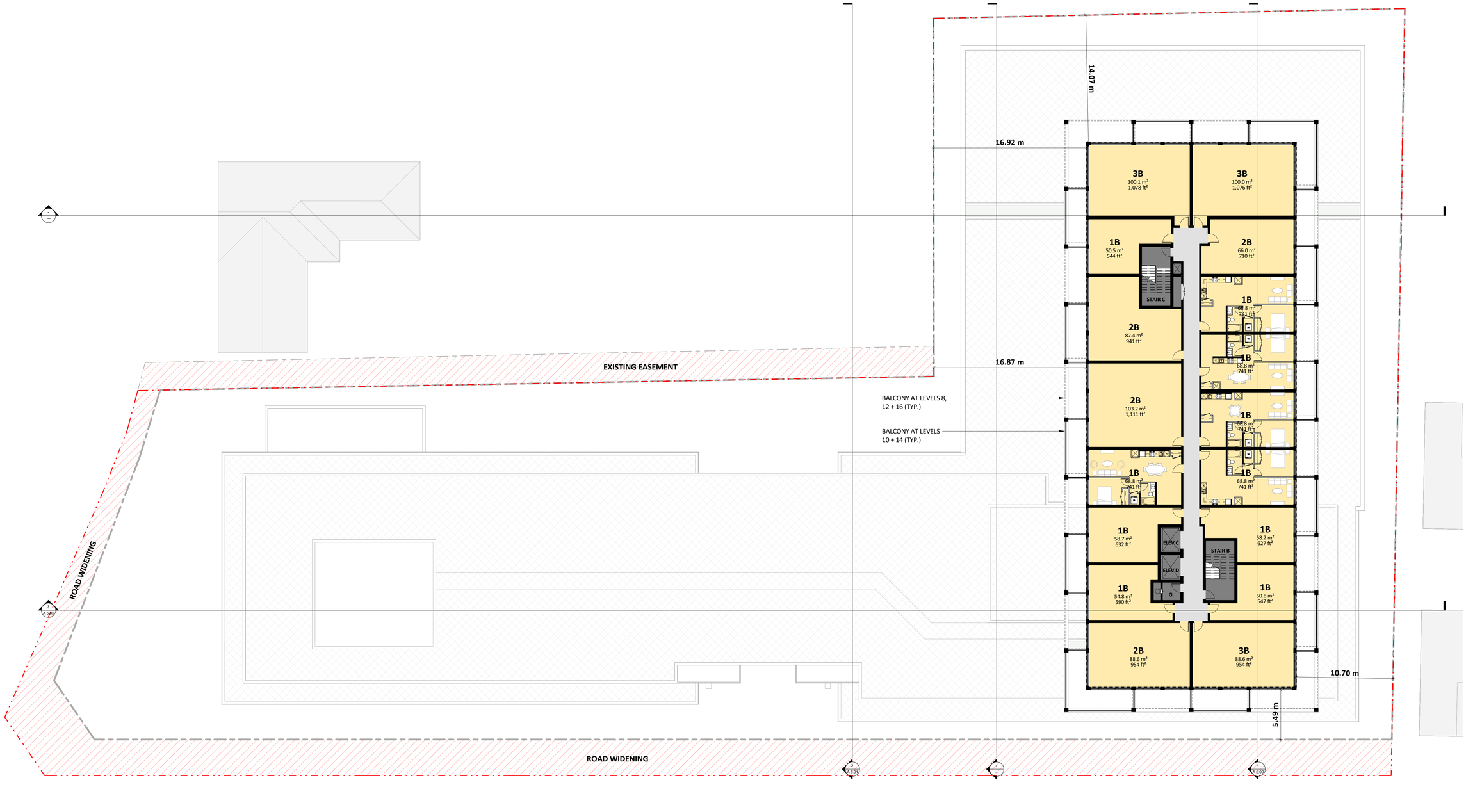
No.	Date:	Issued / Revision:	By:

SCALE	1 : 200
PROJECT NO.	21033
DATE	APR 2026
DRAWN BY	MNG
CHECKED BY	JC

NORTH: TN PN

DRAWING NO.
A 2.18

11/5/2026 10:41:45 AM



1 **LEVEL 9 - 16**
1 : 200

CARICARI LEE ARCHITECTS
133 Miranda Avenue
Toronto, ON M6B 3W8
t/ 416 962 9670 f/ 416 962 9671
e/ info@caricarilee.com
www.caricarilee.com

PROJECT NAME
THE COOPERHAUS
46, 48 + 50 ONTARIO STREET, AND 1, 3, 5, 7, 11, 13, 15, 17 + 21 JOHN STREET, GRIMSBY, ON

DRAWING TITLE
LEVEL 9 - 16

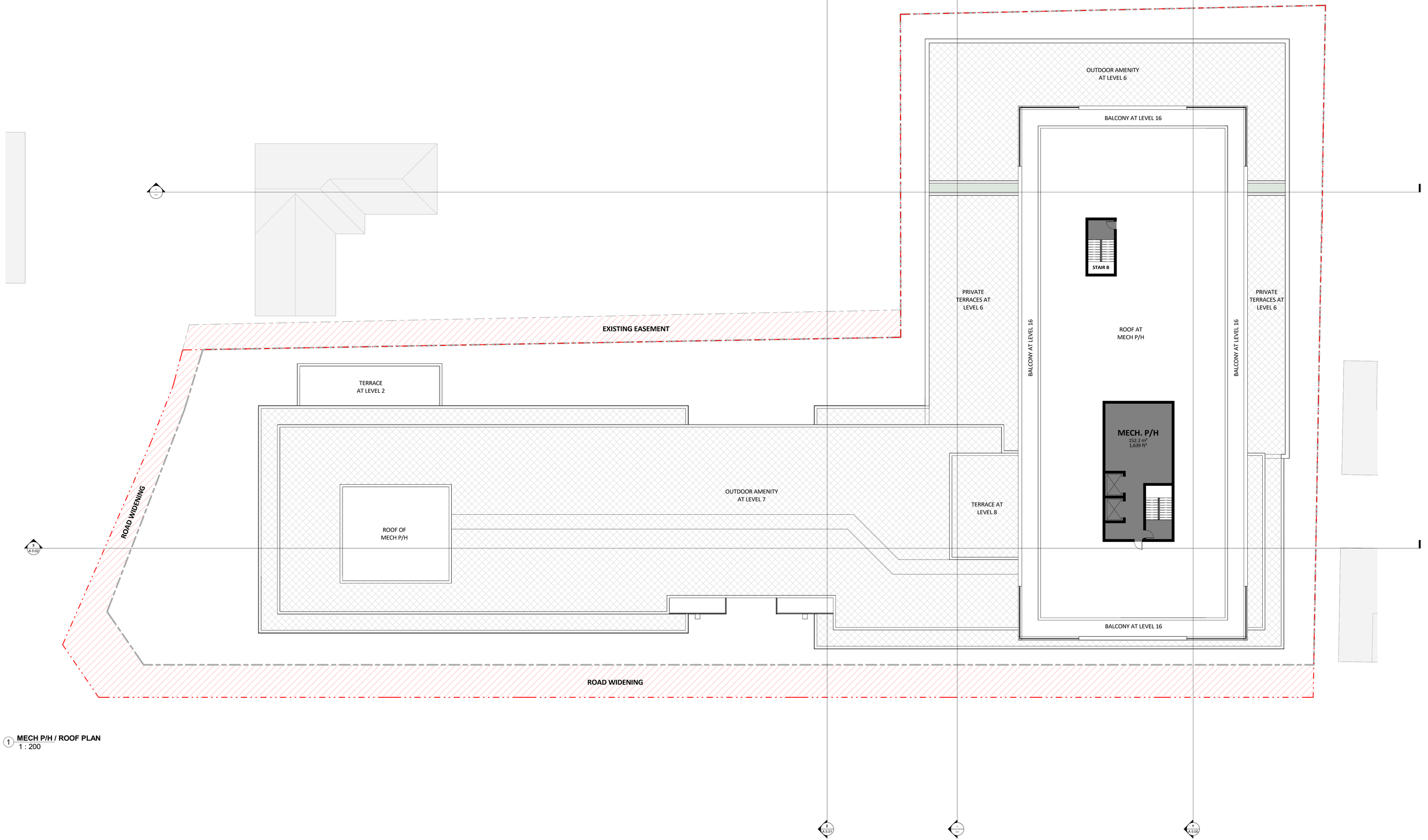
No.	Date:	Issued / Revision:	By:

SCALE	1 : 200
PROJECT NO.	21033
DATE	APR 2026
DRAWN BY	Author
CHECKED BY	Checker

NORTH: TN PN

DRAWING NO.
A 2.19

4/15/2026 10:41:51 AM



1 **MECH P/H / ROOF PLAN**
1 : 200

CÁRIÇÁRI LEE ÁRCHITECTS
113 Miranda Avenue
Toronto, ON M6B 3W8
t/ 416 962 9670 f/ 416 962 9671
e/ info@caricarilee.com
www.caricarilee.com

PROJECT NAME
THE COOPERHAUS
46, 48 + 50 ONTARIO STREET, AND 1, 3, 5, 7, 11, 13, 15, 17 + 21 JOHN STREET, GRIMSBY, ON

DRAWING TITLE
MECH P/H

No.	Date:	Issued / Revision:	By:

CONTRACTOR TO VERIFY ALL DIMENSIONS ON THE SITE AND REPORT ANY DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.

THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNTIL COUNTERSIGNED.

SCALE	1 : 200
PROJECT NO.	21033
DATE	APR 2026
DRAWN BY	MNG
CHECKED BY	JC

NORTH: TN / PN

DRAWING NO.
A 2.22

4/15/2026 10:41:57 AM

APPENDIX B

TRAFFIC DATA

From: Vera, Andrea (MTO) <Andrea.Vera@ontario.ca>
Sent: February 24, 2026 6:03 PM
To: Kathy Katsiroumpas <kathy@valcoustics.com>
Subject: RE: Traffic Data Request - John Street & Ontario Street\Grimsby-N&V 0257210.0029

Hi Kathy,

In response to your request please find below the information available from this office for QEW near Christie St, in Grimsby.

2021 AADT: 97,900
2021 SADT: 112,600
Number of Lanes: 6
Ultimate AADT: 217,600
Ultimate SADT: 250,300
Ultimate Number of Lanes: 8
Posted Speed: 110 km/h (starting 2022)
Percentage of Trucks: 8% (based on 2021)

Please note that the above information is estimated based upon our current knowledge of the area, which may be subject to change in the future.

Regards,

Andrea Vera Horta (she/her)
Planner - Systems Analysis and Forecasting Office
System Planning Branch | Integrated Policy and Planning Division
Ministry of Transportation Ontario
Direct: (437) 688-7533 | Andrea.Vera@ontario.ca

From: Kathy Katsiroumpas <kathy@valcoustics.com>
Sent: February 2, 2026 9:09 AM
To: Vera, Andrea (MTO) <Andrea.Vera@ontario.ca>
Subject: Traffic Data Request - John Street & Ontario Street\Grimsby-N&V 0257210.0029

Hi Andrea,

We are working on a noise study for a proposed residential development located at 1-21 John Street and 46-50 Ontario Street in Grimsby (please see below).

Can you please provide ultimate traffic volumes for the QEW in the vicinity of the site?

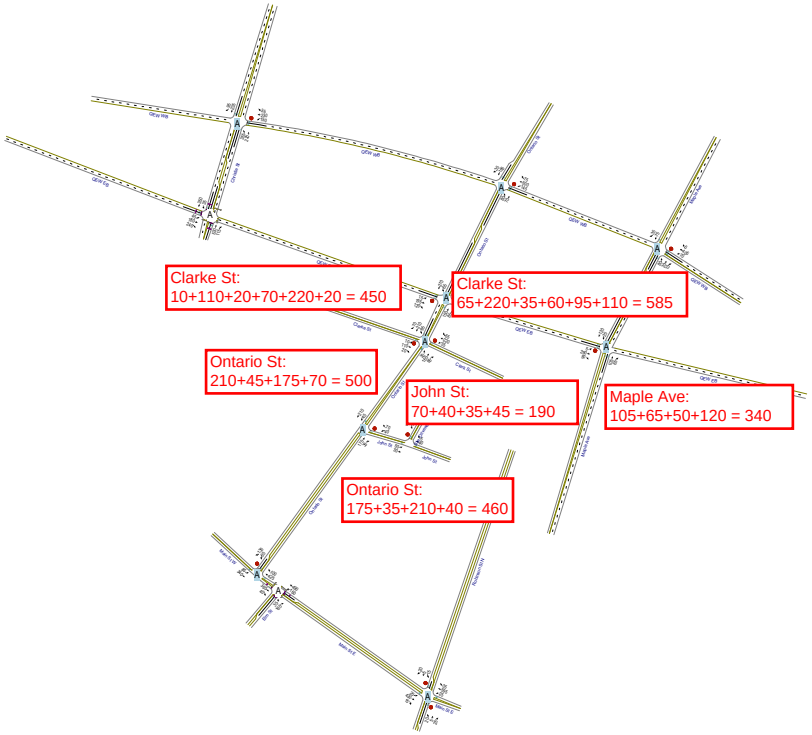
Regards,

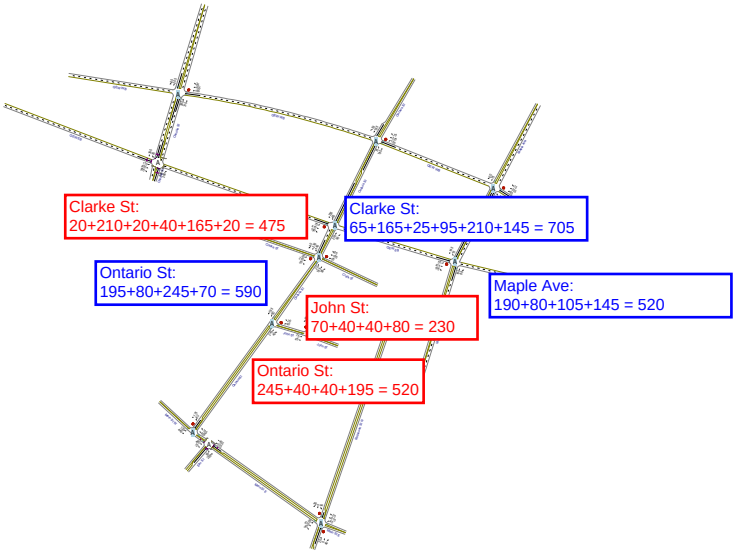
Kathy

Kathryn Katsiroumpas, P.Eng.
Principal

A Trinity Consultants Canada Team
WorkingBuildings | Cerami | Longman Lindsey | Valcoustics | Jaffe Holden | JB&B
Consultants in Acoustics, AV, IT & Security, Commissioning, Sustainability, and MEP

30 Wertheim Court, Richmond Hill, Ontario, L4B 1B9
kathy@valcoustics.com| 905.764.5223 x224
Trinity Consultants | Built Environment


Clarke St:
10+110+20+70+220+20 = 450
Clarke St:
65+220+35+60+95+110 = 585
Ontario St:
210+45+175+70 = 500
John St:
70+40+35+45 = 190
Maple Ave:
105+65+50+120 = 340
Ontario St:
175+35+210+40 = 460


Clarke St:
20+210+20+40+165+20 = 475
Clarke St:
65+165+25+95+210+145 = 705
Ontario St:
195+80+245+70 = 590
Maple Ave:
190+80+105+145 = 520
John St:
70+40+40+80 = 230
Ontario St:
245+40+40+195 = 520

Spectrum

Turning Movement Count
Location Name: ONTARIO ST & CLARKE ST
Date: Thu, Dec 04, 2025 Deployment Lead: Rey Fernandez

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Turning Movement Count (6 . ONTARIO ST & CLARKE ST)

Start Time	N Approach ONTARIO ST						E Approach CLARKE ST						S Approach ONTARIO ST						W Approach CLARKE ST						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
2025-12-04 07:00:00	9	12	7	0	0	28	5	24	3	0	0	32	4	4	1	0	0	9	0	7	1	0	0	8	77	
2025-12-04 07:15:00	5	9	12	0	0	26	5	34	2	0	0	41	2	9	2	0	0	13	1	17	6	0	0	24	104	
2025-12-04 07:30:00	22	19	21	0	0	62	12	47	5	0	0	64	2	8	5	0	0	15	5	19	4	0	1	28	169	
2025-12-04 07:45:00	26	39	21	0	0	86	11	57	8	0	0	76	6	19	7	0	0	32	2	29	5	0	1	36	230	580
2025-12-04 08:00:00	14	22	25	0	0	61	24	50	4	0	1	78	8	18	2	0	0	28	4	25	7	0	1	36	203	706
2025-12-04 08:15:00	14	31	24	0	0	69	13	38	8	0	0	59	11	23	7	0	0	41	4	21	2	0	0	27	196	798
2025-12-04 08:30:00	20	38	24	0	0	82	17	52	13	0	0	82	14	17	2	0	0	33	5	24	2	0	0	31	228	857
2025-12-04 08:45:00	22	36	20	0	0	78	13	44	10	0	0	67	22	39	4	0	0	65	4	27	1	0	0	32	242	869
2025-12-04 09:00:00	11	24	9	0	0	44	15	42	6	0	0	63	9	22	5	0	0	36	2	36	3	0	0	41	184	850
2025-12-04 09:15:00	9	29	12	0	0	50	11	42	8	0	0	61	6	18	3	0	0	27	0	33	4	0	1	37	175	829
2025-12-04 09:30:00	6	22	18	0	0	46	15	36	3	0	1	54	6	17	1	0	0	24	2	35	4	0	0	41	165	766
2025-12-04 09:45:00	15	17	18	0	0	50	13	37	7	0	1	57	14	20	3	0	0	37	4	38	3	0	0	45	189	713
2025-12-04 10:00:00	5	16	18	0	0	39	10	32	7	0	0	49	12	19	4	0	0	35	0	36	3	0	1	39	162	691
2025-12-04 10:15:00	10	12	16	0	0	38	11	28	11	0	0	50	12	31	1	0	0	44	5	24	5	0	0	34	166	682
2025-12-04 10:30:00	12	12	21	0	0	45	9	34	6	0	0	49	13	18	6	0	0	37	6	35	3	0	0	44	175	692
2025-12-04 10:45:00	8	20	21	0	0	49	14	34	3	0	1	51	8	16	5	0	0	29	4	38	2	0	0	44	173	676
2025-12-04 11:00:00	5	19	17	0	0	41	10	41	7	0	2	58	13	26	4	0	0	43	1	25	7	0	0	33	175	689
2025-12-04 11:15:00	6	18	17	0	0	41	9	32	3	0	1	44	15	22	2	0	0	39	2	42	4	0	0	48	172	695
2025-12-04 11:30:00	8	25	18	0	0	51	20	38	8	0	0	66	8	29	9	0	0	46	5	44	4	0	0	53	216	736
2025-12-04 11:45:00	4	25	22	0	0	51	9	41	9	0	1	59	14	20	4	0	0	38	6	32	2	0	2	40	188	751
2025-12-04 12:00:00	8	29	14	0	0	51	10	42	11	0	0	63	17	29	6	0	0	52	4	44	8	0	0	56	222	798
2025-12-04 12:15:00	9	13	24	0	0	46	12	38	12	0	0	62	23	19	7	0	0	49	2	35	4	0	1	41	198	824
2025-12-04 12:30:00	13	21	14	0	0	48	11	38	9	0	1	58	18	19	6	0	0	43	3	44	7	0	0	54	203	811
2025-12-04 12:45:00	9	23	30	0	0	62	8	34	5	0	1	47	18	26	4	0	0	48	9	41	3	0	0	53	210	833
2025-12-04 13:00:00	8	22	16	0	0	46	11	31	7	0	0	49	18	19	5	0	0	42	4	41	6	0	1	51	188	799
2025-12-04 13:15:00	3	26	20	0	0	49	9	27	5	0	0	41	13	24	7	0	0	44	2	42	4	0	1	48	182	783
2025-12-04 13:30:00	6	23	24	0	0	53	9	31	7	0	0	47	12	29	6	0	0	47	7	36	7	0	0	50	197	777
2025-12-04 13:45:00	9	25	26	0	0	60	14	48	5	0	0	67	21	24	4	0	0	49	5	41	6	0	0	52	228	795
2025-12-04 14:00:00	14	23	15	0	0	52	20	47	5	0	1	72	18	27	5	0	0	50	4	45	5	0	0	54	228	835
2025-12-04 14:15:00	5	20	22	0	0	47	16	42	5	0	0	63	13	26	5	0	0	44	1	67	5	0	0	73	227	880
2025-12-04 14:30:00	4	19	28	0	0	51	18	43	7	0	0	68	17	31	4	0	0	52	3	52	3	0	0	58	229	912
2025-12-04 14:45:00	11	15	29	0	0	55	16	50	6	0	0	72	16	23	6	0	0	45	2	35	3	0	1	40	212	896
2025-12-04 15:00:00	8	32	18	0	0	58	12	40	10	0	0	62	19	32	6	0	0	57	5	43	3	0	0	51	228	896
2025-12-04 15:15:00	7	25	25	0	0	57	5	44	5	0	0	54	25	38	7	0	0	70	4	41	2	0	0	47	228	897
2025-12-04 15:30:00	9	31	31	0	0	71	15	41	8	0	2	64	34	34	6	0	0	74	0	37	6	0	0	43	252	920
2025-12-04 15:45:00	8	25	45	0	0	78	14	33	5	0	0	52	25	34	8	0	0	67	2	46	5	0	0	53	250	958
2025-12-04 16:00:00	13	32	43	0	0	88	11	31	7	0	0	49	19	35	5	0	0	59	3	47	2	0	1	52	248	978
2025-12-04 16:15:00	16	31	33	0	0	80	11	32	6	0	0	49	23	39	2	0	0	64	4	36	3	0	1	43	236	986
2025-12-04 16:30:00	7	32	35	0	0	74	17	31	6	0	0	54	18	34	2	0	0	54	1	60	5	0	0	66	248	982
2025-12-04 16:45:00	8	24	43	0	0	75	18	36	7	0	0	61	24	14	8	0	0	46	6	37	4	0	1	47	229	961
2025-12-04 17:00:00	9	33	34	0	0	76	20	41	6	0	0	67	22	33	7	0	0	62	2	40	9	0	0	51	256	969
2025-12-04 17:15:00	12	29	27	0	0	68	17	30	4	0	0	51	19	34	5	0	0	58	3	48	6	0	0	57	234	967
2025-12-04 17:30:00	11	27	24	0	0	62	19	30	5	0	1	54	18	20	3	0	0	41	4	33	4	0	0	41	198	917
2025-12-04 17:45:00	14	47	34	0	0	95	16	38	3	0	0	57	15	32	3	0	0	50	5	41	1	0	0	47	249	937
2025-12-04 18:00:00	12	17	28	0	0	57	11	36	7	0	0	54	9	30	0	0	0	39	4	38	6	0	1	48	198	879

Start Time	N Approach ONTARIO ST						E Approach CLARKE ST						S Approach ONTARIO ST						W Approach CLARKE ST						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
2025-12-04 18:15:00	14	22	28	0	0	64	7	25	6	0	4	38	10	24	1	0	0	35	1	26	1	0	0	28	165	810
2025-12-04 18:30:00	6	14	31	0	0	51	17	17	9	0	0	43	9	26	1	0	0	36	2	40	4	0	0	46	176	788
2025-12-04 18:45:00	2	17	15	0	0	34	12	22	3	0	0	37	9	18	1	0	0	28	2	25	4	0	0	31	130	669
Grand Total	486	1142	1117	0	0	2745	622	1781	312	0	18	2715	701	1168	207	0	0	2076	156	1748	198	0	15	2102	**9638**	-
Approach%	17.7%	41.6%	40.7%	0%		-	22.9%	65.6%	11.5%	0%		-	33.8%	56.3%	10%	0%		-	7.4%	83.2%	9.4%	0%		-	-	-
Totals %	5%	11.8%	11.6%	0%		28.5%	6.5%	18.5%	3.2%	0%		28.2%	7.3%	12.1%	2.1%	0%		21.5%	1.6%	18.1%	2.1%	0%		21.8%	-	-
Heavy	23	7	28	0		-	8	59	3	0		-	13	13	16	0		-	10	44	8	0		-	-	-
Heavy %	4.7%	0.6%	2.5%	0%		-	1.3%	3.3%	1%	0%		-	1.9%	1.1%	7.7%	0%		-	6.4%	2.5%	4%	0%		-	-	-
Bicycles	0	3	0	0		-	0	0	0	0		-	1	0	0	0		-	0	0	0	0		-	-	-
Bicycle %	0%	0.3%	0%	0%		-	0%	0%	0%	0%		-	0.1%	0%	0%	0%		-	0%	0%	0%	0%		-	-	-

Clarke St, east of Ontario St:

.

Total = 1117+622+1781+312+701+1748 = 6281

Heavy = 28+8+59+3+13+44 = 155 (2.5%)

Spectrum

Turning Movement Count
Location Name: ONTARIO ST & CLARKE ST
Date: Thu, Dec 04, 2025 Deployment Lead: Rey Fernandez

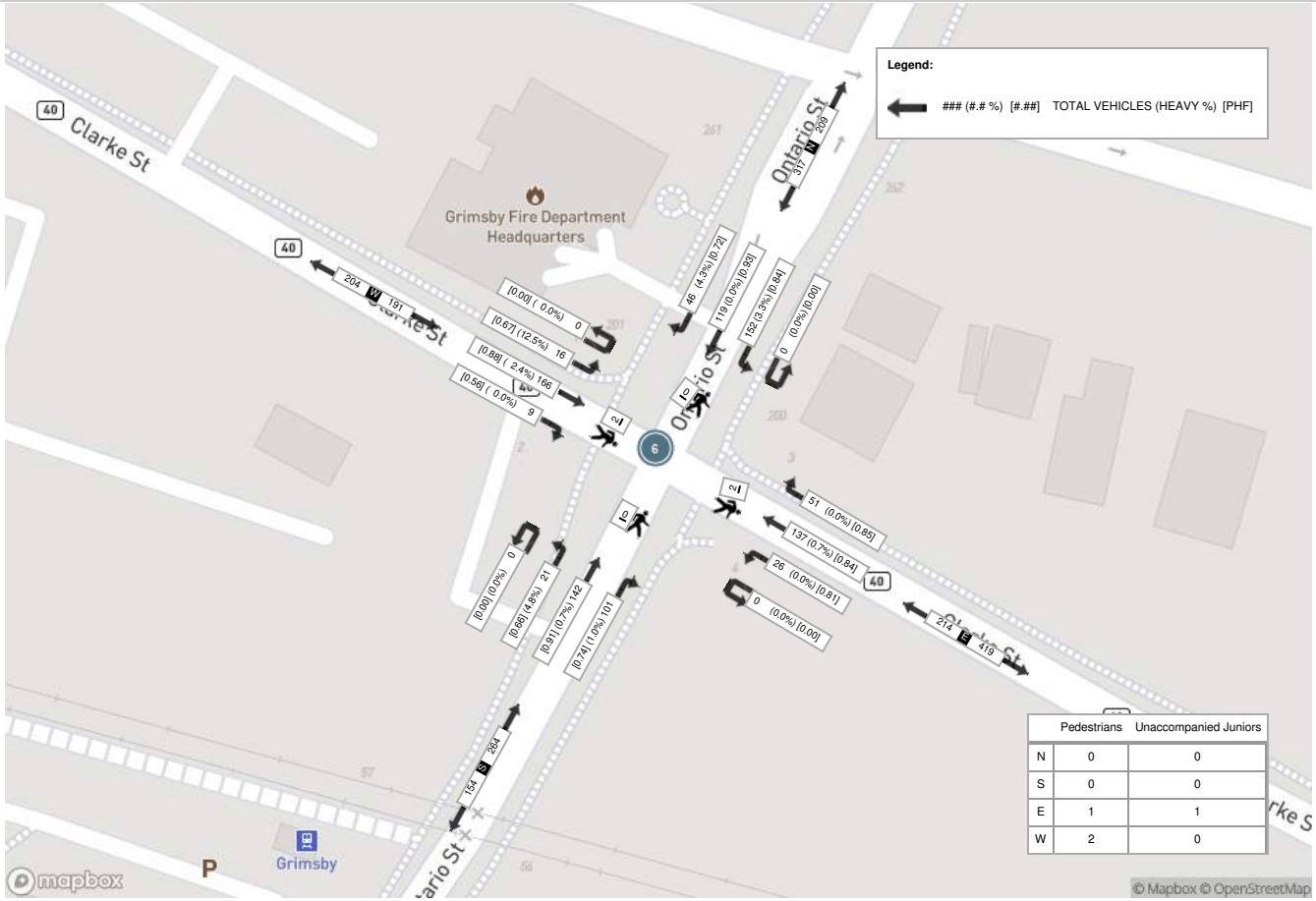
BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Peak Hour: 03:30 PM - 04:30 PM Weather: Overcast Clouds (-2 °C)

Start Time	N Approach ONTARIO ST						E Approach CLARKE ST						S Approach ONTARIO ST						W Approach CLARKE ST						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
2025-12-04 15:30:00	9	31	31	0	0	71	15	41	8	0	2	64	34	34	6	0	0	74	0	37	6	0	0	43	252
2025-12-04 15:45:00	8	25	45	0	0	78	14	33	5	0	0	52	25	34	8	0	0	67	2	46	5	0	0	53	250
2025-12-04 16:00:00	13	32	43	0	0	88	11	31	7	0	0	49	19	35	5	0	0	59	3	47	2	0	1	52	248
2025-12-04 16:15:00	16	31	33	0	0	80	11	32	6	0	0	49	23	39	2	0	0	64	4	36	3	0	1	43	236
Grand Total	46	119	152	0	0	317	51	137	26	0	2	214	101	142	21	0	0	264	9	166	16	0	2	191	**986**
Approach%	14.5%	37.5%	47.9%	0%		-	23.8%	64%	12.1%	0%		-	38.3%	53.8%	8%	0%		-	4.7%	86.9%	8.4%	0%		-	**-**
Totals %	4.7%	12.1%	15.4%	0%		32.2%	5.2%	13.9%	2.6%	0%		21.7%	10.2%	14.4%	2.1%	0%		26.8%	0.9%	16.8%	1.6%	0%		19.4%	**-**
PHF	0.72	0.93	0.84	0		0.9	0.85	0.84	0.81	0		0.84	0.74	0.91	0.66	0		0.89	0.56	0.88	0.67	0		0.9	0.98
Heavy	2	0	5	0		7	0	1	0	0		1	1	1	1	0		3	0	4	2	0		6	17
Heavy %	4.3%	0%	3.3%	0%		2.2%	0%	0.7%	0%	0%		0.5%	1%	0.7%	4.8%	0%		1.1%	0%	2.4%	12.5%	0%		3.1%	1.7%
Lights	44	119	147	0		310	51	136	26	0		213	100	141	20	0		261	9	162	14	0		185	969
Lights %	95.7%	100%	96.7%	0%		97.8%	100%	99.3%	100%	0%		99.5%	99%	99.3%	95.2%	0%		98.9%	100%	97.6%	87.5%	0%		96.9%	98.3%
Single-Unit Trucks	2	0	1	0		3	0	1	0	0		1	0	0	1	0		1	0	0	2	0		2	7
Single-Unit Trucks %	4.3%	0%	0.7%	0%		0.9%	0%	0.7%	0%	0%		0.5%	0%	0%	4.8%	0%		0.4%	0%	0%	12.5%	0%		1%	0.7%
Buses	0	0	4	0		4	0	0	0	0		0	1	1	0	0		2	0	4	0	0		4	10
Buses %	0%	0%	2.6%	0%		1.3%	0%	0%	0%	0%		0%	1%	0.7%	0%	0%		0.8%	0%	2.4%	0%	0%		2.1%	1%
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	2	-	**-**
Pedestrians%	-	-	-	-	0%		-	-	-	-	25%		-	-	-	-	0%		-	-	-	-	50%		**-**
Unaccompanied Juniors	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Unaccompanied Juniors%	-	-	-	-	0%		-	-	-	-	25%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Road	0	0	0	0		-	0	0	0	0		-	0	0	0	0		-	0	0	0	0		-	**-**
Bicycles on Road%	0%	0%	0%	0%			0%	0%	0%	0%			0%	0%	0%	0%			0%	0%	0%	0%			**-**

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Peak Hour: 03:30 PM - 04:30 PM Weather: Overcast Clouds (-2 °C)



Turning Movement Count (7 . ONTARIO ST & JOHN ST)

Start Time	N Approach ONTARIO ST					E Approach JOHN ST					S Approach ONTARIO ST					Int. Total (15 min)	Int. Total (1 hr)
	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	UTurn S:S	Peds S:	Approach Total		
2025-12-04 07:00:00	14	1	0	0	15	3	0	0	0	3	0	7	0	1	7	25	
2025-12-04 07:15:00	11	1	0	0	12	4	0	0	0	4	0	11	0	0	11	27	
2025-12-04 07:30:00	23	2	0	0	25	6	1	0	0	7	0	8	0	0	8	40	
2025-12-04 07:45:00	38	3	0	0	41	7	1	0	1	8	1	28	0	2	29	78	170
2025-12-04 08:00:00	32	2	0	0	34	8	2	0	0	10	3	22	0	2	25	69	214
2025-12-04 08:15:00	36	3	0	0	39	8	2	0	0	10	2	35	0	0	37	86	273
2025-12-04 08:30:00	40	3	1	1	44	2	5	0	0	7	2	22	0	0	24	75	308
2025-12-04 08:45:00	37	11	0	0	48	12	1	0	0	13	4	57	0	0	61	122	352
BREAK																	
2025-12-04 16:00:00	38	8	0	0	46	9	3	0	0	12	3	50	0	0	53	111	
2025-12-04 16:15:00	35	3	0	0	38	7	2	0	2	9	1	47	0	0	48	95	
2025-12-04 16:30:00	29	9	0	0	38	7	4	0	1	11	1	50	0	0	51	100	
2025-12-04 16:45:00	30	4	0	0	34	13	2	0	1	15	2	41	0	1	43	92	398
2025-12-04 17:00:00	35	9	0	0	44	7	3	0	1	10	8	58	0	0	66	120	407
2025-12-04 17:15:00	31	6	0	0	37	11	3	0	0	14	4	49	0	0	53	104	416
2025-12-04 17:30:00	29	3	0	0	32	5	1	0	2	6	2	41	0	0	43	81	397
2025-12-04 17:45:00	44	10	0	1	54	7	4	0	2	11	2	38	0	0	40	105	410
Grand Total	502	78	1	2	581	116	34	0	10	150	35	564	0	6	599	**1330**	-
Approach%	86.4%	13.4%	0.2%		-	77.3%	22.7%	0%		-	5.8%	94.2%	0%		-	**-**	-
Totals %	37.7%	5.9%	0.1%		43.7%	8.7%	2.6%	0%		11.3%	2.6%	42.4%	0%		45%	**-**	-
Heavy	6	1	0		-	1	1	0		-	0	11	0		-	**-**	-
Heavy %	1.2%	1.3%	0%		-	0.9%	2.9%	0%		-	0%	2%	0%		-	**-**	-
Bicycles	-	-	-		-	-	-	-		-	-	-	-		-	**-**	-
Bicycle %	-	-	-		-	-	-	-		-	-	-	-		-	**-**	-

Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (-2 °C)

Start Time	N Approach ONTARIO ST					E Approach JOHN ST					S Approach ONTARIO ST					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
2025-12-04 08:00:00	32	2	0	0	34	8	2	0	0	10	3	22	0	2	25	69
2025-12-04 08:15:00	36	3	0	0	39	8	2	0	0	10	2	35	0	0	37	86
2025-12-04 08:30:00	40	3	1	1	44	2	5	0	0	7	2	22	0	0	24	75
2025-12-04 08:45:00	37	11	0	0	48	12	1	0	0	13	4	57	0	0	61	122
Grand Total	145	19	1	1	165	30	10	0	0	40	11	136	0	2	147	**352**
Approach%	87.9%	11.5%	0.6%		-	75%	25%	0%		-	7.5%	92.5%	0%		-	-
Totals %	41.2%	5.4%	0.3%		46.9%	8.5%	2.8%	0%		11.4%	3.1%	38.6%	0%		41.8%	-
PHF	0.91	0.43	0.25		0.86	0.63	0.5	0		0.77	0.69	0.6	0		0.6	0.72
Heavy	1	1	0		2	1	0	0		1	0	8	0		8	11
Heavy %	0.7%	5.3%	0%		1.2%	3.3%	0%	0%		2.5%	0%	5.9%	0%		5.4%	3.1%
Lights	144	18	1		163	29	10	0		39	11	128	0		139	341
Lights %	99.3%	94.7%	100%		98.8%	96.7%	100%	0%		97.5%	100%	94.1%	0%		94.6%	96.9%
Single-Unit Trucks	1	0	0		1	1	0	0		1	0	4	0		4	6
Single-Unit Trucks %	0.7%	0%	0%		0.6%	3.3%	0%	0%		2.5%	0%	2.9%	0%		2.7%	1.7%
Buses	0	1	0		1	0	0	0		0	0	4	0		4	5
Buses %	0%	5.3%	0%		0.6%	0%	0%	0%		0%	0%	2.9%	0%		2.7%	1.4%
Articulated Trucks	0	0	0		0	0	0	0		0	0	0	0		0	0
Articulated Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	0%
Pedestrians	-	-	-	1	-	-	-	-	0	-	-	-	-	2	-	-
Pedestrians%	-	-	-	33.3%		-	-	-	0%		-	-	-	66.7%		-

Ontario St, south of John St:

.

Total = 145+10+11+136 = 302
Trucks = 1+0+8 = 9 (3.0%)

Ontario St, north of John St:

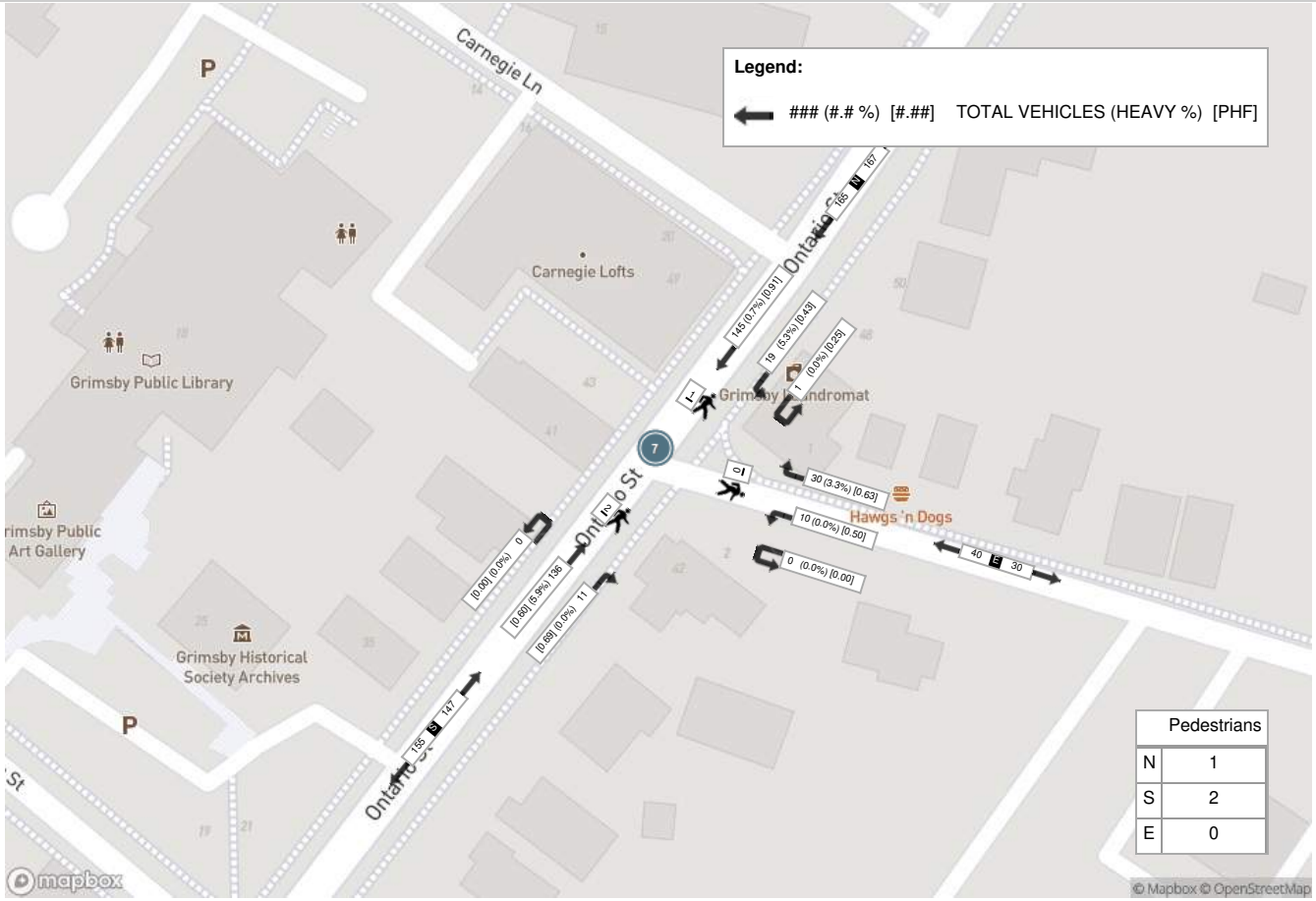
.

Total = 145+19+1+30+136 = 331
Trucks = 1+1+1+8 = 11 (3.3%)

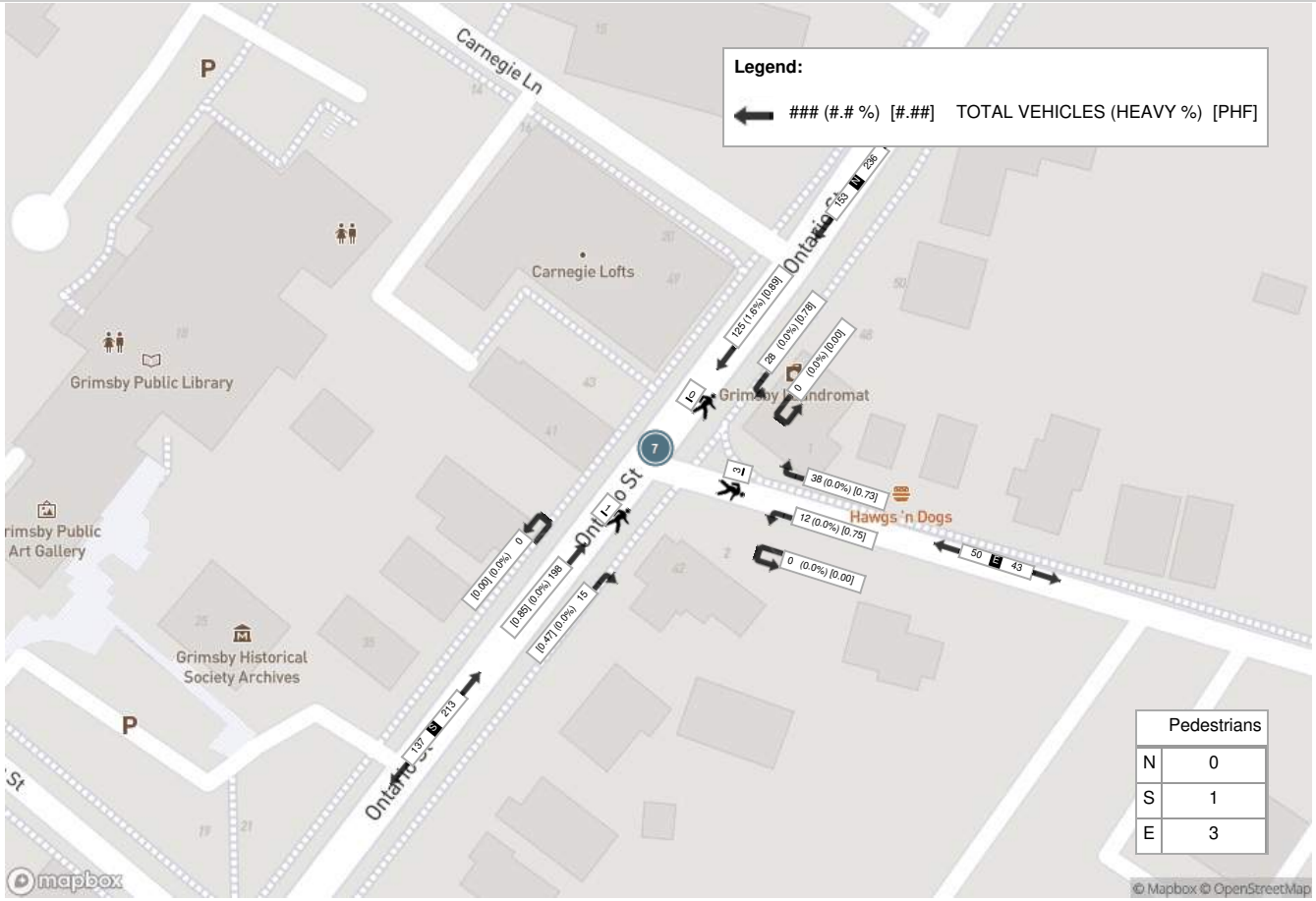
Peak Hour: 04:30 PM - 05:30 PM Weather: Scattered Clouds (-5 °C)

Start Time	N Approach ONTARIO ST					E Approach JOHN ST					S Approach ONTARIO ST					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
2025-12-04 16:30:00	29	9	0	0	38	7	4	0	1	11	1	50	0	0	51	100
2025-12-04 16:45:00	30	4	0	0	34	13	2	0	1	15	2	41	0	1	43	92
2025-12-04 17:00:00	35	9	0	0	44	7	3	0	1	10	8	58	0	0	66	120
2025-12-04 17:15:00	31	6	0	0	37	11	3	0	0	14	4	49	0	0	53	104
Grand Total	125	28	0	0	153	38	12	0	3	50	15	198	0	1	213	**416**
Approach%	81.7%	18.3%	0%		-	76%	24%	0%		-	7%	93%	0%		-	**-**
Totals %	30%	6.7%	0%		36.8%	9.1%	2.9%	0%		12%	3.6%	47.6%	0%		51.2%	**-**
PHF	0.89	0.78	0		0.87	0.73	0.75	0		0.83	0.47	0.85	0		0.81	0.87
Heavy	2	0	0		2	0	0	0		0	0	0	0		0	2
Heavy %	1.6%	0%	0%		1.3%	0%	0%	0%		0%	0%	0%	0%		0%	0.5%
Lights	123	28	0		151	38	12	0		50	15	198	0		213	414
Lights %	98.4%	100%	0%		98.7%	100%	100%	0%		100%	100%	100%	0%		100%	99.5%
Single-Unit Trucks	2	0	0		2	0	0	0		0	0	0	0		0	2
Single-Unit Trucks %	1.6%	0%	0%		1.3%	0%	0%	0%		0%	0%	0%	0%		0%	0.5%
Buses	0	0	0		0	0	0	0		0	0	0	0		0	0
Buses %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	0%
Articulated Trucks	0	0	0		0	0	0	0		0	0	0	0		0	0
Articulated Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	0%
Pedestrians	-	-	-	0	-	-	-	-	3	-	-	-	-	1	-	**-**
Pedestrians%	-	-	-	0%		-	-	-	75%		-	-	-	25%		**-**

Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (-2 °C)



Peak Hour: 04:30 PM - 05:30 PM Weather: Scattered Clouds (-5 °C)



Spectrum

Turning Movement Count
Location Name: MAPLE AVE & QEW WB RAMPS
Date: Thu, Dec 04, 2025 Deployment Lead: Rey Fernandez

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Turning Movement Count (12 . MAPLE AVE & QEW WB RAMPS)

Start Time	N Approach MAPLE AVE						E Approach QEW WB RAMPS						S Approach MAPLE AVE						W Approach QEW WB RAMPS						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
2025-12-04 07:00:00	0	9	4	0	0	13	0	0	0	0	0	0	8	16	0	0	0	24	5	18	5	0	0	28	65	
2025-12-04 07:15:00	0	14	5	0	0	19	0	0	0	0	0	0	10	13	0	0	0	23	6	23	2	0	0	31	73	
2025-12-04 07:30:00	0	19	7	0	0	26	0	0	0	0	2	0	18	18	0	0	0	36	8	32	2	0	0	42	104	
2025-12-04 07:45:00	0	16	5	0	0	21	0	0	0	0	1	0	12	24	0	0	0	36	7	40	2	0	0	49	106	348
2025-12-04 08:00:00	0	18	5	0	0	23	0	0	0	0	0	0	13	12	0	0	0	25	5	54	2	0	0	61	109	392
2025-12-04 08:15:00	0	29	5	0	0	34	0	0	0	0	1	0	10	20	0	0	0	30	7	52	1	0	0	60	124	443
2025-12-04 08:30:00	0	24	5	0	0	29	0	0	0	0	2	0	13	20	0	0	0	33	13	47	0	0	0	60	122	461
2025-12-04 08:45:00	0	31	7	0	0	38	0	0	0	0	0	0	9	21	0	0	0	30	12	31	2	0	0	45	113	468
2025-12-04 09:00:00	0	17	6	0	0	23	0	0	0	0	1	0	12	21	0	0	0	33	8	40	3	0	0	51	107	466
2025-12-04 09:15:00	0	21	5	0	0	26	0	0	0	0	0	0	10	34	0	0	0	44	8	22	1	0	0	31	101	443
2025-12-04 09:30:00	0	20	2	0	0	22	0	0	0	0	2	0	16	21	0	0	0	37	9	38	3	0	0	50	109	430
2025-12-04 09:45:00	0	28	2	0	0	30	0	0	0	0	0	0	11	22	0	0	0	33	10	25	4	0	0	39	102	419
2025-12-04 10:00:00	0	17	1	0	0	18	0	0	0	0	0	0	8	34	0	0	0	42	7	36	2	1	0	46	106	418
2025-12-04 10:15:00	0	22	1	0	0	23	0	0	0	0	1	0	6	27	0	0	0	33	5	42	3	0	0	50	106	423
2025-12-04 10:30:00	0	5	2	0	0	7	0	0	0	0	0	0	6	26	0	0	0	32	9	33	4	0	0	46	85	399
2025-12-04 10:45:00	0	22	1	0	0	23	0	0	0	0	3	0	6	24	0	0	0	30	9	28	4	0	0	41	94	391
2025-12-04 11:00:00	0	15	1	0	0	16	0	0	0	0	0	0	12	24	0	0	0	36	11	29	7	0	0	47	99	384
2025-12-04 11:15:00	0	22	8	0	0	30	0	0	0	0	0	0	11	22	0	0	0	33	10	40	2	0	0	52	115	393
2025-12-04 11:30:00	0	18	9	0	0	27	0	0	0	0	0	0	8	21	0	0	0	29	9	32	6	0	0	47	103	411
2025-12-04 11:45:00	0	17	4	0	0	21	0	0	0	0	0	0	5	30	0	0	0	35	11	29	7	0	0	47	103	420
2025-12-04 12:00:00	0	19	7	0	0	26	0	0	0	0	1	0	11	36	0	0	0	47	8	37	7	0	1	52	125	446
2025-12-04 12:15:00	0	17	3	0	0	20	0	0	0	0	0	0	9	21	0	0	0	30	12	40	4	0	1	56	106	437
2025-12-04 12:30:00	0	13	2	0	0	15	0	0	0	0	0	0	7	15	0	0	0	22	10	40	4	0	0	54	91	425
2025-12-04 12:45:00	0	19	0	0	0	19	0	0	0	0	0	0	8	29	0	0	0	37	13	32	7	0	0	52	108	430
2025-12-04 13:00:00	0	17	4	0	0	21	0	0	0	0	0	0	9	24	0	0	0	33	10	29	6	0	0	45	99	404
2025-12-04 13:15:00	0	17	4	0	0	21	0	0	0	0	0	0	11	23	0	0	0	34	12	40	10	0	0	62	117	415
2025-12-04 13:30:00	0	14	5	0	0	19	0	0	0	0	0	0	16	21	0	0	0	37	11	46	5	0	0	62	118	442
2025-12-04 13:45:00	0	14	2	0	0	16	0	0	0	0	1	0	4	21	0	0	0	25	18	37	5	0	0	60	101	435
2025-12-04 14:00:00	0	15	3	0	0	18	0	0	0	0	0	0	9	16	0	0	0	25	10	45	4	0	0	59	102	438
2025-12-04 14:15:00	0	20	4	0	0	24	0	0	0	0	0	0	10	25	0	0	0	35	11	53	8	0	0	72	131	452
2025-12-04 14:30:00	0	18	2	0	0	20	0	0	0	0	0	0	14	31	0	0	0	45	15	49	5	0	0	69	134	468
2025-12-04 14:45:00	0	17	4	0	0	21	0	0	0	0	0	0	8	22	0	0	0	30	13	43	10	0	0	66	117	484
2025-12-04 15:00:00	1	20	5	0	0	26	0	0	0	0	2	0	7	33	0	0	0	40	10	55	4	0	0	69	135	517
2025-12-04 15:15:00	0	23	3	0	0	26	0	0	0	0	4	0	8	44	0	0	0	52	23	52	7	0	0	82	160	546
2025-12-04 15:30:00	0	29	1	0	0	30	0	0	0	0	0	0	16	29	1	0	0	46	19	76	14	0	0	109	185	597
2025-12-04 15:45:00	0	16	3	0	0	19	0	0	0	0	0	0	13	33	0	0	0	46	16	52	5	0	0	73	138	618
2025-12-04 16:00:00	0	21	1	0	0	22	0	0	0	0	1	0	19	39	0	0	0	58	26	61	11	0	0	98	178	661
2025-12-04 16:15:00	0	20	2	0	0	22	0	0	0	0	0	0	13	35	0	0	0	48	26	47	8	0	0	81	151	652
2025-12-04 16:30:00	0	23	4	0	0	27	0	0	0	0	1	0	7	25	1	0	0	33	16	77	11	0	0	104	164	631
2025-12-04 16:45:00	0	25	2	0	0	27	0	0	0	0	0	0	12	47	0	0	0	59	22	65	9	0	0	96	182	675
2025-12-04 17:00:00	0	31	4	0	0	35	0	0	0	0	0	0	24	41	0	0	0	65	15	58	10	0	0	83	183	680
2025-12-04 17:15:00	0	22	2	1	0	25	0	0	0	0	0	0	15	47	0	0	0	62	21	73	11	0	0	105	192	721
2025-12-04 17:30:00	0	24	9	0	0	33	0	0	0	0	0	0	16	30	0	0	0	46	10	49	9	0	0	68	147	704
2025-12-04 17:45:00	0	23	3	0	0	26	0	0	0	0	0	0	9	29	0	0	0	38	20	37	2	0	0	59	123	645
2025-12-04 18:00:00	0	15	6	0	0	21	0	0	0	0	0	0	10	19	0	0	0	29	13	45	14	0	0	72	122	584

Start Time	N Approach MAPLE AVE						E Approach QEW WB RAMPS						S Approach MAPLE AVE						W Approach QEW WB RAMPS						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
2025-12-04 18:15:00	0	9	2	0	0	11	0	0	0	0	0	0	7	20	0	0	0	27	4	41	7	0	0	52	90	482
2025-12-04 18:30:00	0	10	6	0	0	16	0	0	0	0	0	0	12	20	0	0	0	32	20	41	5	0	0	66	114	449
2025-12-04 18:45:00	0	14	1	0	0	15	0	0	0	0	2	0	6	29	0	0	0	35	10	24	5	0	0	39	89	415
Grand Total	1	909	179	1	0	1090	0	0	0	0	25	0	514	1254	2	0	0	1770	583	2035	269	1	2	2888	**5748**	-
Approach%	0.1%	83.4%	16.4%	0.1%		-	0%	0%	0%	0%		-	29%	70.8%	0.1%	0%		-	20.2%	70.5%	9.3%	0%		-	-	-
Totals %	0%	15.8%	3.1%	0%		19%	0%	0%	0%	0%		0%	8.9%	21.8%	0%	0%		30.8%	10.1%	35.4%	4.7%	0%		50.2%	-	-
Heavy	0	5	3	0		-	0	0	0	0		-	16	10	0	0		-	11	62	6	0		-	-	-
Heavy %	0%	0.6%	1.7%	0%		-	0%	0%	0%	0%		-	3.1%	0.8%	0%	0%		-	1.9%	3%	2.2%	0%		-	-	-
Bicycles	0	2	0	0		-	0	0	0	0		-	0	1	0	0		-	0	0	0	0		-	-	-
Bicycle %	0%	0.2%	0%	0%		-	0%	0%	0%	0%		-	0%	0.1%	0%	0%		-	0%	0%	0%	0%		-	-	-

Maple Avenue

.

Total = 909+0+514+1254+2+583 = 3262

Heavy = 5+0+16+10+0+11 = 42 (1.3%)

Spectrum

Turning Movement Count
Location Name: MAPLE AVE & QEW WB RAMPS
Date: Thu, Dec 04, 2025 Deployment Lead: Rey Fernandez

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Peak Hour: 04:30 PM - 05:30 PM Weather: Overcast Clouds (-2 °C)

Start Time	N Approach MAPLE AVE						E Approach QEW WB RAMPS						S Approach MAPLE AVE						W Approach QEW WB RAMPS						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
2025-12-04 16:30:00	0	23	4	0	0	27	0	0	0	0	1	0	7	25	1	0	0	33	16	77	11	0	0	104	164
2025-12-04 16:45:00	0	25	2	0	0	27	0	0	0	0	0	0	12	47	0	0	0	59	22	65	9	0	0	96	182
2025-12-04 17:00:00	0	31	4	0	0	35	0	0	0	0	0	0	24	41	0	0	0	65	15	58	10	0	0	83	183
2025-12-04 17:15:00	0	22	2	1	0	25	0	0	0	0	0	0	15	47	0	0	0	62	21	73	11	0	0	105	192
Grand Total	0	101	12	1	0	114	0	0	0	0	1	0	58	160	1	0	0	219	74	273	41	0	0	388	**721**
Approach%	0%	88.6%	10.5%	0.9%		-	0%	0%	0%	0%		-	26.5%	73.1%	0.5%	0%		-	19.1%	70.4%	10.6%	0%		-	**-**
Totals %	0%	14%	1.7%	0.1%		15.8%	0%	0%	0%	0%		0%	8%	22.2%	0.1%	0%		30.4%	10.3%	37.9%	5.7%	0%		53.8%	**-**
PHF	0	0.81	0.75	0.25		0.81	0	0	0	0		0	0.6	0.85	0.25	0		0.84	0.84	0.89	0.93	0		0.92	0.94
Heavy	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	5	0	0		5	5
Heavy %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	1.8%	0%	0%		1.3%	0.7%
Lights	0	101	12	1		114	0	0	0	0		0	58	160	1	0		219	74	268	41	0		383	716
Lights %	0%	100%	100%	100%		100%	0%	0%	0%	0%		0%	100%	100%	100%	0%		100%	100%	98.2%	100%	0%		98.7%	99.3%
Single-Unit Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	3	0	0		3	3
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	1.1%	0%	0%		0.8%	0.4%
Buses	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	1	0	0		1	1
Buses %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0.4%	0%	0%		0.3%	0.1%
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	1	0	0		1	1
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0.4%	0%	0%		0.3%	0.1%
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	-	0%		-	-	-	-	100%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Road	0	0	0	0		-	0	0	0	0		-	0	0	0	0		-	0	0	0	0		-	**-**
Bicycles on Road%	0%	0%	0%	0%			0%	0%	0%	0%			0%	0%	0%	0%			0%	0%	0%	0%			**-**

Peak Hour: 04:30 PM - 05:30 PM **Weather: Overcast Clouds (-2 °C)**

Spectrum

Turning Movement Count
Location Name: MAPLE AVE & QEW EB RAMPS
Date: Thu, Dec 04, 2025 Deployment Lead: Rey Fernandez

BA Group
1000 95 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1N6
CANADA

Turning Movement Count (13 . MAPLE AVE & QEW EB RAMPS)

Start Time	N Approach MAPLE AVE						E Approach QEW EB RAMPS						S Approach MAPLE AVE						W Approach QEW EB RAMPS						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
2025-12-04 07:00:00	5	8	0	0	0	13	1	20	5	0	0	26	0	7	14	1	0	22	0	0	0	0	0	0	61	
2025-12-04 07:15:00	1	15	0	0	0	16	2	23	3	0	0	28	0	7	8	0	0	15	0	0	0	0	0	0	59	
2025-12-04 07:30:00	7	15	0	0	0	22	1	60	9	0	2	70	0	4	12	0	0	16	0	0	0	0	0	0	108	
2025-12-04 07:45:00	8	11	0	0	0	19	0	82	10	0	1	92	0	9	16	0	0	25	0	0	0	0	0	0	136	364
2025-12-04 08:00:00	4	12	0	0	0	16	1	64	12	0	0	77	0	5	9	0	0	14	0	0	0	0	0	0	107	410
2025-12-04 08:15:00	8	18	0	0	0	26	2	68	15	0	1	85	0	3	19	0	0	22	0	0	0	0	0	0	133	484
2025-12-04 08:30:00	4	14	0	0	0	18	1	72	14	0	2	87	0	1	15	0	0	16	0	0	0	0	0	0	121	497
2025-12-04 08:45:00	9	18	0	0	0	27	3	59	19	0	0	81	0	8	17	0	0	25	0	0	0	0	0	0	133	494
2025-12-04 09:00:00	1	13	0	0	0	14	4	46	16	0	1	66	0	14	11	0	0	25	0	0	0	0	0	0	105	492
2025-12-04 09:15:00	3	13	0	0	0	16	0	29	12	0	0	41	0	10	24	0	0	34	0	0	0	0	1	0	91	450
2025-12-04 09:30:00	8	12	0	0	0	20	3	30	13	0	2	46	0	9	15	0	0	24	0	0	0	0	0	0	90	419
2025-12-04 09:45:00	8	18	0	0	0	26	1	30	13	0	0	44	0	12	15	0	0	27	0	0	0	0	0	0	97	383
2025-12-04 10:00:00	0	9	0	0	0	9	1	16	11	0	0	28	0	14	25	0	0	39	0	0	0	0	0	0	76	354
2025-12-04 10:15:00	4	12	0	0	0	16	3	17	11	0	1	31	0	15	17	0	0	32	0	0	0	0	0	0	79	342
2025-12-04 10:30:00	3	3	0	0	0	6	0	15	4	0	0	19	0	17	13	0	0	30	0	0	0	0	0	0	55	307
2025-12-04 10:45:00	4	10	0	0	0	14	2	33	13	0	2	48	0	18	10	0	0	28	0	0	0	0	0	0	90	300
2025-12-04 11:00:00	3	8	0	0	0	11	3	28	7	0	1	38	0	14	11	0	0	25	0	0	0	0	0	0	74	298
2025-12-04 11:15:00	2	17	0	0	0	19	5	31	10	0	0	46	0	10	10	0	0	20	0	0	0	0	0	0	85	304
2025-12-04 11:30:00	2	20	0	0	0	22	3	45	10	0	0	58	0	14	16	0	0	30	0	0	0	0	0	0	110	359
2025-12-04 11:45:00	3	8	0	0	0	11	2	41	11	0	0	54	0	19	17	0	0	36	0	0	0	0	0	0	101	370
2025-12-04 12:00:00	3	15	0	0	0	18	4	37	12	0	2	53	0	18	23	0	0	41	0	0	0	0	0	0	112	408
2025-12-04 12:15:00	3	17	0	0	0	20	2	40	5	0	0	47	0	10	13	0	0	23	0	0	0	0	1	0	90	413
2025-12-04 12:30:00	3	11	0	0	0	14	4	48	5	0	0	57	0	11	10	0	0	21	0	0	0	0	0	0	92	395
2025-12-04 12:45:00	3	9	0	0	0	12	4	23	15	0	0	42	0	27	12	0	0	39	0	0	0	0	0	0	93	387
2025-12-04 13:00:00	4	12	0	0	0	16	0	40	9	0	0	49	0	15	13	0	0	28	0	0	0	0	0	0	93	368
2025-12-04 13:15:00	2	9	0	0	0	11	0	31	9	0	0	40	0	18	13	0	0	31	0	0	0	0	0	0	82	360
2025-12-04 13:30:00	1	11	0	0	0	12	3	31	8	0	1	42	1	14	15	0	0	30	0	0	0	0	0	0	84	352
2025-12-04 13:45:00	2	8	0	0	0	10	2	35	6	0	0	43	0	14	12	0	0	26	0	0	0	0	0	0	79	338
2025-12-04 14:00:00	1	9	0	0	0	10	2	37	10	0	0	49	0	12	7	0	0	19	0	0	0	0	0	0	78	323
2025-12-04 14:15:00	2	13	0	0	0	15	3	45	12	0	0	60	0	17	14	0	0	31	0	0	0	0	0	0	106	347
2025-12-04 14:30:00	6	9	0	0	0	15	6	33	14	0	0	53	0	24	13	0	0	37	0	0	0	0	0	0	105	368
2025-12-04 14:45:00	1	12	0	0	0	13	8	37	10	0	0	55	0	23	9	0	0	32	0	0	0	0	0	0	100	389
2025-12-04 15:00:00	1	19	2	0	0	22	1	42	13	0	3	56	0	20	18	0	0	38	0	0	0	0	0	0	116	427
2025-12-04 15:15:00	3	11	0	0	0	14	2	49	12	0	5	63	0	22	28	0	0	50	0	0	0	0	0	0	127	448
2025-12-04 15:30:00	2	15	0	0	0	17	2	42	16	0	0	60	0	26	14	0	0	40	0	0	0	0	0	0	117	460
2025-12-04 15:45:00	5	7	0	0	0	12	6	57	15	0	0	78	0	25	16	0	0	41	0	0	0	0	0	0	131	491
2025-12-04 16:00:00	7	6	0	0	0	13	9	63	17	0	1	89	0	31	19	0	0	50	0	0	0	0	0	0	152	527
2025-12-04 16:15:00	6	16	0	0	0	22	6	56	11	0	0	73	0	19	21	0	0	40	0	0	0	0	0	0	135	535
2025-12-04 16:30:00	5	15	0	0	0	20	6	46	16	0	1	68	0	21	20	0	0	41	0	0	0	0	0	0	129	547
2025-12-04 16:45:00	5	25	0	0	0	30	4	60	11	0	0	75	0	24	25	0	0	49	0	0	0	0	0	0	154	570
2025-12-04 17:00:00	1	15	0	0	0	16	2	57	18	0	0	77	0	29	24	1	0	54	0	0	0	0	0	0	147	565
2025-12-04 17:15:00	6	11	0	0	0	17	4	65	14	0	0	83	0	34	25	0	0	59	0	0	0	0	0	0	159	589
2025-12-04 17:30:00	2	17	0	0	0	19	2	56	16	0	0	74	0	24	17	0	0	41	0	0	0	0	0	0	134	594
2025-12-04 17:45:00	3	9	0	0	0	12	3	67	18	0	0	88	0	19	13	0	0	32	0	0	0	0	0	0	132	572
2025-12-04 18:00:00	5	12	0	0	0	17	5	28	10	0	0	43	0	18	11	0	0	29	0	0	0	0	0	0	89	514

Start Time	N Approach MAPLE AVE						E Approach QEW EB RAMPS						S Approach MAPLE AVE						W Approach QEW EB RAMPS						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
2025-12-04 18:15:00	3	9	0	0	0	12	5	43	2	0	1	50	0	19	8	0	0	27	0	0	0	0	0	0	89	444
2025-12-04 18:30:00	1	16	0	0	0	17	3	28	1	0	1	32	0	14	8	0	0	22	0	0	0	0	0	0	71	381
2025-12-04 18:45:00	1	10	0	0	0	11	0	27	6	0	2	33	0	15	17	0	0	32	0	0	0	0	0	0	76	325
Grand Total	174	602	2	0	0	778	136	2032	529	0	30	2697	1	773	732	2	0	1508	0	0	0	0	2	0	**4983**	-
Approach%	22.4%	77.4%	0.3%	0%		-	5%	75.3%	19.6%	0%		-	0.1%	51.3%	48.5%	0.1%		-	0%	0%	0%	0%		-	-	-
Totals %	3.5%	12.1%	0%	0%		15.6%	2.7%	40.8%	10.6%	0%		54.1%	0%	15.5%	14.7%	0%		30.3%	0%	0%	0%	0%		0%	-	-
Heavy	3	0	0	0		-	1	54	5	0		-	0	9	10	0		-	0	0	0	0		-	-	-
Heavy %	1.7%	0%	0%	0%		-	0.7%	2.7%	0.9%	0%		-	0%	1.2%	1.4%	0%		-	0%	0%	0%	0%		-	-	-
Bicycles	0	2	0	0		-	0	0	0	0		-	0	1	0	0		-	0	0	0	0		-	-	-
Bicycle %	0%	0.3%	0%	0%		-	0%	0%	0%	0%		-	0%	0.1%	0%	0%		-	0%	0%	0%	0%		-	-	-

Maple Avenue

.

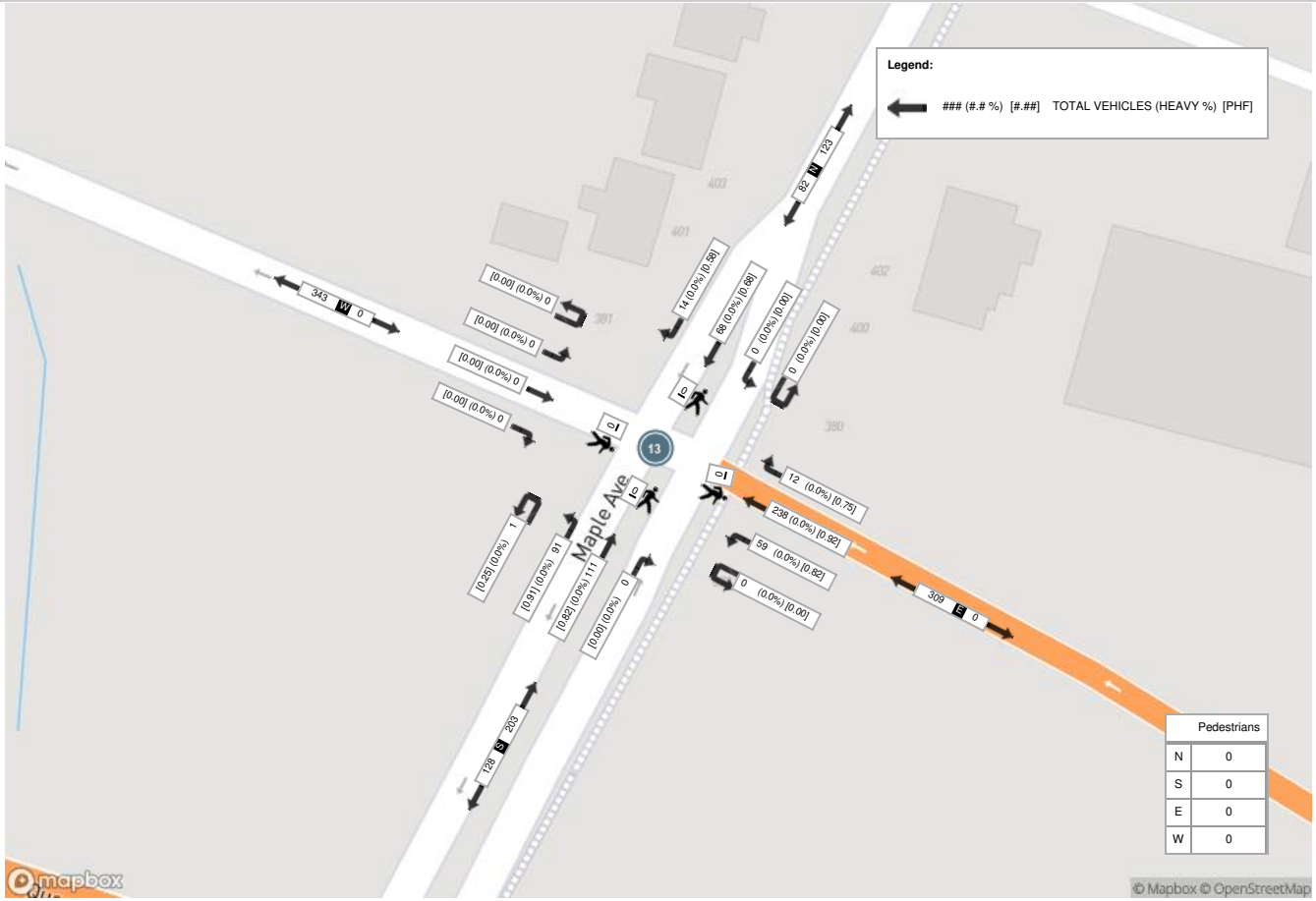
Total = 602+529+1+773+732+0 = 2637

Heavy = 0+5+0+9+10+0 = 24 (0.9%)

Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (-2 °C)

Start Time	N Approach MAPLE AVE						E Approach QEW EB RAMPS						S Approach MAPLE AVE						W Approach QEW EB RAMPS						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
2025-12-04 16:45:00	5	25	0	0	0	30	4	60	11	0	0	75	0	24	25	0	0	49	0	0	0	0	0	0	154
2025-12-04 17:00:00	1	15	0	0	0	16	2	57	18	0	0	77	0	29	24	1	0	54	0	0	0	0	0	0	147
2025-12-04 17:15:00	6	11	0	0	0	17	4	65	14	0	0	83	0	34	25	0	0	59	0	0	0	0	0	0	159
2025-12-04 17:30:00	2	17	0	0	0	19	2	56	16	0	0	74	0	24	17	0	0	41	0	0	0	0	0	0	134
Grand Total	14	68	0	0	0	82	12	238	59	0	0	309	0	111	91	1	0	203	0	0	0	0	0	0	**594**
Approach%	17.1%	82.9%	0%	0%		-	3.9%	77%	19.1%	0%		-	0%	54.7%	44.8%	0.5%		-	0%	0%	0%	0%		-	**-**
Totals %	2.4%	11.4%	0%	0%		13.8%	2%	40.1%	9.9%	0%		52%	0%	18.7%	15.3%	0.2%		34.2%	0%	0%	0%	0%		0%	**-**
PHF	0.58	0.68	0	0		0.68	0.75	0.92	0.82	0		0.93	0	0.82	0.91	0.25		0.86	0	0	0	0		0	0.93
Heavy	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Heavy %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%
Lights	14	68	0	0		82	12	238	59	0		309	0	111	91	1		203	0	0	0	0		0	594
Lights %	100%	100%	0%	0%		100%	100%	100%	100%	0%		100%	0%	100%	100%	100%		100%	0%	0%	0%	0%		0%	100%
Single-Unit Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%
Buses	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Buses %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Road	0	0	0	0		-	0	0	0	0		-	0	0	0	0		-	0	0	0	0		-	**-**
Bicycles on Road%	0%	0%	0%	0%			0%	0%	0%	0%			0%	0%	0%	0%			0%	0%	0%	0%			**-**

Peak Hour: 04:45 PM - 05:45 PM **Weather: Overcast Clouds (-2 °C)**



System Engineering
Engineering Services

1 Administration Road
Concord, ON, L4K 1B9
T: 905.669.3264
F: 905.760.3406

Train Count Data

TRANSMITTAL

To: *Destinataire :*	Valcoustics Canada Limited 30 Wertheim Court, Unit 25, Richmond Hill ON L4B 1B9	*Project :*	GRM-9.63- Merritt Street St. Catharines, ON
Att'n:	Brett Lipson	*Routing:*	blipson@valcoustics.com
From: *Expéditeur :*	Umair Naveed	*Date:*	2023/11/27
Cc:	Adjacent Development CN via e-mail		

☐ Urgent ☐ For Your Use ☐ For Review ■ For Your Information ☐ Confidential

Re: Train Traffic Data – CN Grimsby Subdivision near Merritt Street in St. Catharine's ON

Please find attached the requested Train Traffic Data; this data does not reflect GO Metrolinx Traffic. The application fee in the amount of **$500.00** +HST will be invoiced.

Should you have any questions, please do not hesitate to contact the undersigned at permits.gld@cn.ca.

Sincerely,

Umair Naveed

Umair Naveed
Officer Public Works- Eastern Canada
permits.gld@cn.ca

Dear Brett:

Re: Train Traffic Data – CN Grimsby Subdivision near Merritt Street in St. Catharine's ON

The following is provided in response to Brett's 2023/09/19 request for information regarding rail traffic in the vicinity of Merritt Street in St Catharine's at approximately Mile 9.63 on CN's Grimsby Subdivision.

Typical daily traffic volumes are recorded below. However, traffic volumes may fluctuate due to overall economic conditions, varying traffic demands, weather conditions, track maintenance programs, statutory holidays and traffic detours that when required may be heavy although temporary. For the purpose of noise and vibration reports, train volumes must be escalated by 2.5% per annum for a 10-year period.

Typical daily traffic volumes at this site location are as follows:

***Maximum train speed is given in Miles per Hour**

	0700-2300			
Type of Train	Volumes	Max.Consist	Max. Speed	Max. Power
Freight	4	140	60	4
Way Freight	0	25	60	4
Passenger	2	10	65	2

	2300-0700			
Type of Train	Volumes	Max.Consist	Max. Speed	Max. Power
Freight	0	140	60	4
Way Freight	0	25	60	4
Passenger	0	10	65	2

The volumes recorded reflect westbound and eastbound freight and passenger operations on CN's Grimsby Subdivision.

Except where anti-whistling bylaws are in effect, engine-warning whistles and bells are normally sounded at all at-grade crossings. There are two (2) at-grade crossings in the immediate vicinity of the study area at Mile 9.24 Glendale Ave. and Mile 9.89 Moffatt St. (Pedestrian) Xing. Anti-whistling bylaws are in effect at Mile 9.24 Glendale Ave. crossing. Please note that engine warning whistles may be sounded in cases of emergency, as a safety and or warning precaution at station locations and pedestrian crossings and occasionally for operating requirements.

With respect to equipment restrictions, the gross weight of the heaviest permissible car is 286,000 lbs.

The double mainline track is considered to be continuously welded rail throughout the study area.
The Canadian National Railway continues to be strongly opposed to locating developments near railway facilities and rights-of-way due to potential safety and environmental conflicts. Development adjacent to the Railway Right-of-Way is not

appropriate without sound impact mitigation measures to reduce the incompatibility. For confirmation of the applicable rail noise, vibration and safety standards, Adjacent Development, Canadian National Railway Properties at Proximity@cn.ca should be contacted directly.

I trust the above information will satisfy your current request.

Sincerely,

Umair Naveed

Umair Naveed
Officer Public Works- Eastern Canada
permits.gld@cn.ca

From: Rail Data Requests <RailDataRequests@metrolinx.com>
Sent: February 13, 2026 4:34 PM
To: Kathy Katsiroumpas <kathy@valcoustics.com>
Subject: RE: 0257210.0029 - John Street & Ontario Street\Grimsby-N&V

Good afternoon,

Further to your request dated February 2, 2026, the subject lands (21 John Street + 46-50 Ontario Street, Grimsby) are located within 300 metres of the Canadian National (CN) Grimsby Subdivision (which carries Lakeshore West GO rail service).

It's anticipated that GO rail service on this Subdivision will be comprised of diesel trains only. 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 14 trains. The planned detailed trip breakdown is listed below:

	1 Diesel Locomotive		1 Diesel Locomotive
Day (0700-2300)	12	Night (2300-0700)	2

The current track design speed near the subject lands is 65 mph (97 km/h).

There are *anti-whistling by-laws* in affect near the subject lands at Nelles Rd, Ontario St, and Kerman Ave at railway 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.

Best Regards,

Jenna Auger (She/Her)
Project Analyst, Adjacent Construction Review (ACR)
Integrated Delivery Division
T: (416)-881-0579
20 Bay Street | Toronto | Ontario | M5J 2W3

METROLINX

From: Kathy Katsiroumpas <kathy@valcoustics.com>
Sent: February 2, 2026 8:07 AM
To: Rail Data Requests <RailDataRequests@metrolinx.com>
Subject: 0257210.0029 - John Street & Ontario Street\Grimsby-N&V

We are preparing a noise study for a development located at 1-21 John Street and 46-50 Ontario Street in Grimsby. See below. Could you please provide rail data on the CN Grimsby Subdivision in this vicinity? Thank you.

Regards,

Kathy

Kathryn Katsiroumpas, P.Eng.
Principal

Trinity Consultants
VALCOUSTICS
CANADA

APPENDIX C

ENVIRONMENTAL NOISE GUIDELINES

APPENDIX C

ENVIRONMENTAL NOISE GUIDELINES

MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PARKS (MECP)

Reference: MECP Publication NPC-300, October 2013: *"Environmental Noise Guideline, Stationary and Transportation Source – Approval and Planning"*.

SPACE	SOURCE	TIME PERIOD	CRITERION
Living/dining, den areas of residences, hospitals, nursing homes, schools, daycare centres, etc.	Road	07:00 to 23:00	45 dBA
	Rail	07:00 to 23:00	40 dBA
	Aircraft	24-hour period	NEF/NEP 5
Living/dining, den areas of residences, hospitals, nursing homes, etc. (except schools or daycare centres)	Road	23:00 to 07:00	45 dBA
	Rail	23:00 to 07:00	40 dBA
	Aircraft	24-hour period	NEF/NEP 5
Sleeping quarters	Road	07:00 to 23:00	45 dBA
	Rail	07:00 to 23:00	40 dBA
	Aircraft	24-hour period	NEF/NEP 0
Sleeping quarters	Road	23:00 to 07:00	40 dBA
	Rail	23:00 to 07:00	35 dBA
	Aircraft	24-hour period	NEF/NEP 0
Outdoor Living Areas	Road and Rail	07:00 to 23:00	55 dBA

Outdoor Point of Reception	Aircraft	24-hour period	NEF/NEP 30#
	Stationary Source		
	Class 1 Area	07:00 to 19:00(1)	50* dBA
		19:00 to 23:00(1)	50* dBA
	Class 2 Area	07:00 to 19:00(2)	50* dBA
		19:00 to 23:00(2)	45* dBA
	Class 3 Area	07:00 to 19:00(3)	45* dBA
		19:00 to 23:00(3)	40* dBA
	Class 4 Area	07:00 to 19:00(4)	55* dBA
		19:00 to 23:00(4)	55* dBA

SPACE	**SOURCE**	**TIME PERIOD**	**CRITERION**
Plane of a Window of	Stationary Source		
Noise Sensitive Spaces	Class 1 Area	07:00 to 19:00(1)	50* dBA
		19:00 to 23:00(1)	50* dBA
		23:00 to 07:00(1)	45* dBA
	Class 2 Area	07:00 to 19:00(2)	50* dBA
		19:00 to 23:00(2)	50* dBA
		23:00 to 07:00(2)	45* dBA
	Class 3 Area	07:00 to 19:00(3)	45* dBA
		19:00 to 23:00(3)	45* dBA
		23:00 to 07:00(3)	40* dBA
	Class 4 Area	07:00 to 19:00(4)	60* dBA
		19:00 to 23:00(4)	60* dBA
		23:00 to 07:00(4)	55* dBA

may not apply to in-fill or re-development.
* or the minimum hourly background sound exposure Leq(1), due to road traffic, if higher.
(1) Class 1 Area: Urban.
(2) Class 2 Area: Urban during day; rural-like evening and night.
(3) Class 3 Area: Rural.
(4) Class 4 Area: Subject to land use planning authority's approval.

Reference: MECP Publication ISBN 0-7729-2804-5, 1987: *"Environmental Noise Assessment in Land-Use Planning"*.

EXCESS ABOVE RECOMMENDED SOUND LEVEL LIMITS (dBA)	CHANGE IN SUBJECTIVE LOUDNESS ABOVE	MAGNITUDE OF THE NOISE PROBLEM	NOISE CONTROL MEASURES (OR ACTION TO BE TAKEN)
No excess (<55 dBA)	—	No expected noise problem	None
1 to 5 inclusive (56 to 60 dBA)	Noticeably louder	Slight noise impact	If no physical measures are taken, then prospective purchasers or tenants should be made aware by suitable warning clauses.
6 to 10 inclusive (61 - 65 dBA)	Almost twice as loud	Definite noise impact	Recommended.
11 to 15 inclusive (66 - 70 dBA)	Almost three times as loud	Serious noise impact	Strongly Recommended.
16 and over (>70 dBA)	Almost four times as loud	Very serious noise impact	Strongly Recommended (may be mandatory).

APPENDIX D

SAMPLE SOUND LEVEL CALCULATION

```
STAMSON 5.04               NORMAL REPORT        Date: 23-04-2026 12:36:32
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: t_nw_nf.te           Time Period: Day/Night 16/8 hours
Description: Predicted Sound Levels - Tower, North Facade


Rail data, segment # 1: CN Grimsby (day/night)
-----------------------------------------------
Train            ! Trains      ! Speed !# loc !# Cars! Eng  !Cont
Type             !             !(km/h) !/Train!/Train! type !weld
-----------------+-------------+-------+------+------+------+----
* 1. Freight     !   5.5/0.0   !  97.0 !  4.0 !140.0 !Diesel! Yes
* 2. Passenger   !   2.8/0.0   ! 105.0 !  2.0 ! 10.0 !Diesel! Yes
* 3. GO Commuter !  12.0/2.0   !  97.0 !  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. Freight        !   4.0/0.0   !    2.50  !   13.00  !
  2. Passenger      !   2.0/0.0   !    2.50  !   13.00  !
  3. GO Commuter    !  12.0/2.0   !    2.50  !    0.00  !

Data for Segment # 1: CN Grimsby (day/night)
---------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  30.00 / 30.00  m
Receiver height           :  53.20 / 53.20  m
Topography                :      1       (Flat/gentle slope; no barrier)
No Whistle
Reference angle           :   0.00

Results segment # 1: CN Grimsby (day)
-------------------------------------

LOCOMOTIVE (0.00 + 69.69 + 0.00) = 69.69 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------
   -90     90   0.00  72.70  -3.01   0.00   0.00   0.00   0.00  69.69
-------------------------------------------------------------------------

WHEEL (0.00 + 62.87 + 0.00) = 62.87 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------
   -90     90   0.00  65.89  -3.01   0.00   0.00   0.00   0.00  62.87
-------------------------------------------------------------------------

Segment Leq : 70.51 dBA

Total Leq All Segments: 70.51 dBA
```

```
Results segment # 1: CN Grimsby (night)
----------------------------------------

LOCOMOTIVE (0.00 + 57.29 + 0.00) = 57.29 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------
   -90     90   0.00  60.30  -3.01   0.00   0.00   0.00   0.00  57.29
-------------------------------------------------------------------------

WHEEL (0.00 + 49.48 + 0.00) = 49.48 dBA
Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------
   -90     90   0.00  52.49  -3.01   0.00   0.00   0.00   0.00  49.48
-------------------------------------------------------------------------

Segment Leq : 57.96 dBA

Total Leq All Segments: 57.96 dBA

Road data, segment # 1: QEW EB (day/night)
------------------------------------------
Car traffic volume  : 76763/38375 veh/TimePeriod  *
Medium truck volume :  1669/834   veh/TimePeriod  *
Heavy truck volume  :  5006/2503  veh/TimePeriod  *
Posted speed limit  :   110 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): 125150
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   6.00
    Day (16 hrs) % of Total Volume     :  66.67

Data for Segment # 1: QEW EB (day/night)
----------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 217.00 / 217.00 m
Receiver height           :  53.20 / 53.20  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 2: QEW WB (day/night)
------------------------------------------
Car traffic volume  : 76763/38375 veh/TimePeriod  *
Medium truck volume :  1669/834   veh/TimePeriod  *
Heavy truck volume  :  5006/2503  veh/TimePeriod  *
Posted speed limit  :   110 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): 125150
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   6.00
    Day (16 hrs) % of Total Volume     :  66.67
```

```
Data for Segment # 2: QEW WB (day/night)
-----------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 237.00 / 237.00 m
Receiver height           :  53.20 / 53.20  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 3: Ontario St (day/night)
-----------------------------------------------
Car traffic volume  :  5135/571   veh/TimePeriod  *
Medium truck volume :   106/12    veh/TimePeriod  *
Heavy truck volume  :    69/8     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):   5900
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   1.30
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 3: Ontario St (day/night)
-----------------------------------------
Angle1   Angle2           : -15.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  98.00 / 98.00  m
Receiver height           :  53.20 / 53.20  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 4: Clarke St (day/night)
-----------------------------------------------
Car traffic volume  :  6186/687   veh/TimePeriod  *
Medium truck volume :    95/11    veh/TimePeriod  *
Heavy truck volume  :    63/7     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):   7050
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   1.50
    Heavy Truck  % of Total Volume     :   1.00
    Day (16 hrs) % of Total Volume     :  90.00
```

```
Data for Segment # 4: Clarke St (day/night)
-------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  73.00 / 73.00  m
Receiver height           :  53.20 / 53.20  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 5: Maple Ave (day/night)
-------------------------------------------
Car traffic volume  :  4633/515   veh/TimePeriod  *
Medium truck volume :    28/3     veh/TimePeriod  *
Heavy truck volume  :    19/2     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):   5200
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   0.60
    Heavy Truck  % of Total Volume     :   0.40
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 5: Maple Ave (day/night)
-------------------------------------------
Angle1   Angle2           : -90.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 179.00 / 179.00 m
Receiver height           :  53.20 / 53.20  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Results segment # 1: QEW EB (day)
---------------------------------

Source height = 1.57 m

ROAD (0.00 + 71.14 + 0.00) = 71.14 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.00  82.74   0.00 -11.60   0.00   0.00   0.00   0.00  71.14
-------------------------------------------------------------------------------

Segment Leq : 71.14 dBA
```

Results segment # 2: QEW WB (day)

Source height = 1.57 m

ROAD (0.00 + 70.76 + 0.00) = 70.76 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	82.74	0.00	-11.99	0.00	0.00	0.00	0.00	70.76

Segment Leq : 70.76 dBA

Results segment # 3: Ontario St (day)

Source height = 1.07 m

ROAD (0.00 + 49.99 + 0.00) = 49.99 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-15	90	0.00	60.48	0.00	-8.15	-2.34	0.00	0.00	0.00	49.99

Segment Leq : 49.99 dBA

Results segment # 4: Clarke St (day)

Source height = 1.00 m

ROAD (0.00 + 53.80 + 0.00) = 53.80 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	60.68	0.00	-6.87	0.00	0.00	0.00	0.00	53.80

Segment Leq : 53.80 dBA

Results segment # 5: Maple Ave (day)

Source height = 0.80 m

ROAD (0.00 + 44.23 + 0.00) = 44.23 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	58.01	0.00	-10.77	-3.01	0.00	0.00	0.00	44.23

Segment Leq : 44.23 dBA

Total Leq All Segments: 74.03 dBA

Trinity Consultants VALCOUSTICS CANADA

Results segment # 1: QEW EB (night)

Source height = 1.57 m

ROAD (0.00 + 71.14 + 0.00) = 71.14 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	82.74	0.00	-11.60	0.00	0.00	0.00	0.00	71.14

Segment Leq : 71.14 dBA

Results segment # 2: QEW WB (night)

Source height = 1.57 m

ROAD (0.00 + 70.76 + 0.00) = 70.76 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	82.74	0.00	-11.99	0.00	0.00	0.00	0.00	70.76

Segment Leq : 70.76 dBA

Results segment # 3: Ontario St (night)

Source height = 1.08 m

ROAD (0.00 + 43.54 + 0.00) = 43.54 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-15	90	0.00	54.03	0.00	-8.15	-2.34	0.00	0.00	0.00	43.54

Segment Leq : 43.54 dBA

Results segment # 4: Clarke St (night)

Source height = 1.00 m

ROAD (0.00 + 47.29 + 0.00) = 47.29 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	54.16	0.00	-6.87	0.00	0.00	0.00	0.00	47.29

Segment Leq : 47.29 dBA

Results segment # 5: Maple Ave (night)

Source height = 0.79 m

ROAD (0.00 + 37.64 + 0.00) = 37.64 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	51.42	0.00	-10.77	-3.01	0.00	0.00	0.00	37.64

Segment Leq : 37.64 dBA

Total Leq All Segments: 73.98 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 75.63
(NIGHT): 74.09