FINAL REPORT

51-55 DUNDAS ST W & 60-76 AGNES ST

MISSISSAUGA, ONTARIO

NOISE AND VIBRATION IMPACT STUDY

RWDI # 2509046

August 13, 2025

SUBMITTED TO

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VERSION HISTORY

Index	Date	Description	Prepared by	Reviewed by
1	May 13, 2025	Initial version	Lorenzo Carboni	Kyle Hellewell

EXECUTIVE SUMMARY

RWDI was retained to prepare a Noise and Vibration Impact Study (NVIS) for the proposed mixed use condo development at 51-55 Dundas St W & 60-76 Agnes St in Mississauga, Ontario. The developer plans for a 34-storey mixed use condominium building with 3 levels of underground parking, amenity spaces on the seventh floor and a daycare center on the ground floor. This assessment was completed to support the zoning by-law amendment (ZBA) submission as required by the City of Mississauga.

The following noise control measures are recommended for the proposed development:

1. Installation of central air-conditioning so that all suites' windows can remain closed.
2. The inclusion of noise warning clauses related to transportation and stationary source sound levels.
3. Construction of perimeter noise barriers along the outdoor amenity area to the maximum required height, or to the maximum feasible height and a warning clause.
4. Minimum sound isolation performance: suite bedroom window glazing with sound isolation performance of STC-26 and STC-28, exterior doors with sound isolation performance of STC-28, and façade construction of STC-45.

There are no concerns with respect to vibration impacts from the future Metrolinx Hurontario LRT.

At this stage in design the noise levels produced by the development on itself, and its surroundings could not be quantitatively assessed. However, the effect on both the building itself and its surroundings is expected to be feasible to meet the applicable criteria. We recommend that the building design is evaluated prior to building permit to ensure that the acoustical design is adequately implemented in order to meet the applicable criteria.

Based on the results of the analysis including implementation of the recommendations included with this assessment, the proposed development is feasible from a noise and vibration perspective.

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1 INTRODUCTION

RWDI was retained to prepare a Noise and Vibration Impact Study (NVIS) for the proposed mixed use condo development at 51-55 Dundas St W & 60-76 Agnes St in Mississauga, Ontario. The developer plans for a 34-storey mixed-use condominium building with 3 levels of underground parking, outdoor amenity spaces on the eighth floor and a daycare center on the ground floor.

The site is exposed to noise from road traffic on: Dundas Street West to the east, Hurontario Street to the north, Hillcrest Avenue to the west, and Confederation Parkway to the south. The context site plan is shown in **Figure 1**.

The site is potentially exposed to noise from the future Metrolinx Hurontario LRT, which will run on Hurontario Street. The site is setback 160 meters from Hurontario, vibrations due to LRT are generally expected to be insignificant beyond a 20 m setback, therefore there are no vibration concerns associated with the future LRT.

This assessment was completed to support the zoning by-law amendment (ZBA) submission as required by the City of Mississauga. This assessment was based on design drawings dated January 15th, 2025, included in **Appendix A**.

2 APPLICABLE CRITERIA

Applicable criteria for transportation noise sources (road and rail) and stationary noise sources are adopted from the Ontario Ministry of the Environment, Conservation and Parks (MECP) NPC-300 Environmental Noise Guideline (MOE, 2013), with a summary of the applicable criteria included with **Appendix B**.

The proposed development site would be characterized as a “Class 1 Area”, which is defined according to NPC-300 as an area with an acoustical environment typical of a major population centre, where the background sound level is dominated by the activities of people, usually road traffic, often referred to as "urban hum."

3 THE EFFECTS OF THE ENVIRONMENT ON THE PROPOSED DEVELOPMENT

3.1 Transportation Source Assessment

3.1.1 Road Traffic Volume Data

The City of Mississauga provided ultimate annual daily traffic volumes (UADTs), for Hurontario Street, Dundas Street, Confederation Parkway and Hillcrest Avenue. The data provided by the city also included: day/night traffic splits, truck percentages, medium-to-heavy truck ratios, and posted speed limits, which were used for the analysis.

A summary of the traffic data used is included in **Table 1** below, and the data used for the analysis is included in **Appendix C**.

Table 1: Road Traffic Volumes

Roadway	Segment	Future Traffic (UADT)	% Day/Night	Speed Limit (km/hr)	% Trucks Med. / Heavy
Hurontario Street	Dundas Street to Queensway	31,700	90% /10%	50	2.2% / 1.8%
Dundas Street	Hurontario Street to Grenville Drive	33,200	90% /10%	50	3.3% / 2.7%
Confederation Parkway	Hillcrest Avenue to Dundas Street	19,700	90% /10%	50	1.7% / 1.4%
Hillcrest Avenue	Confederation Parkway to Hurontario Street	28,400	90% /10%	50	1.7% / 1.4%

3.1.2 Rail Traffic Volume Data

Traffic on the future Hurontario LRT was included in the assessment. The publicly available information (Mississauga 2014) indicates that the LRT will be designed for up to 5-minute interval service during peak hours. It was conservatively assumed that during the daytime a total of 96 trains will run and at nighttime 14 trains will run, averaging 10- and 15-minute service respectively, with the understanding the LRT does not operate from 1:30 AM to 5:00 AM.

Excerpts from the publicly available project documentation are included in **Appendix C**.

3.1.3 Representative Receptors

The selection of receptors affected by transportation noise sources was based on the drawings reviewed for this assessment. Using the "building evaluation" feature of Cadna/A, each façade of the residential building was assessed.

Outdoor Living Areas (OLAs) would include outdoor areas intended and designed for the quiet enjoyment of the outdoor environment and which are readily accessible from the building. OLAs may include any common outdoor amenity spaces associated with a multi-unit residential development (e.g. courtyards, roof-top terraces), and/or private backyards and terraces with a minimum depth of 4m provided they are the only outdoor living area for the occupant. Daytime sound levels were assessed at the following identified OLAs:

- OLA_01: Daycare Outdoor Play Area - At Grade
- OLA_02: Outdoor Amenity (Playground) - Level 2
- OLA_03: Outdoor Amenity (Outdoor Lounges) – Level 8
- OLA_04: Outdoor Amenity (Outdoor Fitness Area) - Level 8
- OLA_05: Outdoor Amenity (Penthouse Lounge Area South) - Level 33
- OLA_06: Outdoor Amenity (Penthouse Lounge Area Middle) - Level 33
- OLA_07: Outdoor Amenity (Penthouse Lounge Area North) - Level 33

The OLA locations are indicated in **Figure 2**.

3.1.4 Analysis and Results

Sound levels due to the adjacent transportation sources (roads and future LRT) were predicted using emission algorithms from the Ontario Road Noise Analysis Method for Environment and Transportation (ORNAMENT) guidelines (MOE, 1989) and FTA method (FTA, 2018) implemented in the Cadna/A software package. To implement ORNAMENT in Cadna/A, the ORNAMENT guidance is used to determine the sound power level for the road and sound level propagation is calculated according to the ISO 9613 (ISO, 1994 and ISO, 1996) algorithms. The FTA method is directly integrated into Cadna/A.

To assess the effect of transportation noise on suites, the maximum sound level on the plane of window of each façade was determined with the results summarized in **Table 2**. Given that the future LRT will not have diesel locomotive power the sound levels associated with it are assessed with the roads to determine further requirements.

Table 2: Predicted Transportation Source Sound Levels at the Plane of Window

Building	Façade	Road and Streetcar		Notes
		Day L_{EQ}, 16hr (dBA)	Night L_{EQ}, 8hr (dBA)	
7-Storey Podium	North	54	49	1
	East	65	59	2
	South – On Dundas	69	63	2 and 3
	South – Facing Restaurants	64	57	2
	West	67	60	2 and 3
27-Storey Tower	North	57	50	2
	East	61	54	2
	South	63	56	2
	West	61	54	2

Note(s):

1. The predicted transportation source sound level meets the NPC-300 criterion at the Plane of Window.
2. Installation of air-conditioning to allow for windows and doors to remain closed, warning clause "Type D". Refer to **Appendix D** for guidance regarding air-conditioning as a noise mitigation measure.
3. The acoustical performance of building components must be specified to meet the indoor sound level criteria.

To assess the effect of transportation noise on the qualifying OLAs for the development, predicted sound level results are summarized in **Table 3**.

Table 3: Transportation Sound Levels in Outdoor Living Areas (OLAs)

Receptor	Description	Daytime $L_{EQ, 16hr}$	Notes
OLA_01	Daycare Outdoor Play Area - At Grade	54	1
OLA_02	Outdoor Amenity (Playground) - Level 2	58	2
OLA_03	Outdoor Amenity (Outdoor Lounges) – Level 8	62	2
OLA_04	Outdoor Amenity (Outdoor Fitness Area) - Level 8	61	2
OLA_05	Outdoor Amenity (Penthouse Lounge Area West) - Level 33	56	2
OLA_06	Outdoor Amenity (Penthouse Lounge Area Middle) - Level 33	55	1
OLA_07	Outdoor Amenity (Penthouse Lounge Area East) - Level 33	56	2

Note(s):

1. The predicted transportation sound level meets the NPC-300 criterion for OLAs. Noise control measures are not required.
2. Noise control measures are recommended to meet the 55 dBA OLA sound level criterion.

3.2 Stationary Source Assessment

Stationary sources could be grouped into two categories: Those that have a permit with the Ontario Ministry of the Environment, Conservation and Parks (MECP) through an Environmental Compliance Approval (ECA) or Environmental Activity and Sector Registry (EASR); and those that are exempt from ECA or EASR permit requirements.

In the case where a stationary source has an Environmental Compliance Approval (ECA) or Environmental Activity and Sector Registry (EASR) permit with the MECP, and would be put in a position where it is no longer in compliance with the applicable sound level criteria due to the encroachment of the proposed new development, source specific mitigation and/or formal classification of the proposed development lands as a “Class 4 Area” (refer to C.4.4.2 “Class 4 Area” in NPC-300) would be required. In this case, coordination and agreements between the stationary source owner, proposed new development owner, the land-use planning authority and potentially the MECP would be needed.

In the case where a stationary source is exempt from ECA or EASR permit requirements with the MECP, the noise provisions of the applicable Municipal Code and guidance from NPC-300 would be applicable. In this case, mitigation of sound levels due to stationary sources would be from a due diligence perspective to avoid nuisance complaints from future occupants of the proposed new development. Mitigation could be in the form of mitigation at the source (with agreement from the stationary source owner) and/or mitigation at the receptor through site and building element design (building orientation, acoustical barriers, façade sound insulation design).

There are no identified permitted noise sources with an ECA/EASR in proximity to the site, therefore, stationary sources that may impact noise levels are evaluated from a due diligence perspective. The primary significant stationary sources impacting the development are the HVAC units and kitchen exhaust fans associated with the plaza at 59-77 Dundas Street West. Additional HVAC units on buildings within 70 meters of the proposed development are included in the assessment.

3.2.1 Assumed Sources and Sound Power Levels

Stationary sources of noise surrounding the proposed development were identified using a combination of site visit observations conducted on March 11th, 2025, publicly available aerial imagery and street-level imagery.

RWDI proxy data was used as the basis for the stationary source modeling. Modeled sound levels for existing sources were then adjusted such that compliance with limits at existing land uses is shown. This approach demonstrates any excess sound levels at the development that are attributable to its encroachment on the stationary source. The modeled sound power levels included in the screening level stationary source assessment are presented in **Table 4**. The locations of the sources modeled, and which sound level was used, is shown in **Figure 3**.

Table 4: Stationary Source Sound Power Levels and Duty Cycle

Source	ID[1]	Data Source	Sound Power Level (dBA)	Duty Cycle	
				Daytime and Evening (07:00h – 23:00h)	Nighttime (23:00h – 07:00h)
Small HVAC Unit	R_HVAC	Proxy Data	75	Continuous	Continuous
	R_HVAC*	Adjusted	70 [1]	Continuous	Continuous
1-Fan HVAC System	HVAC_1F	Proxy Data	82	Continuous	Continuous
Exhaust Fan	Exhaust	Proxy Data	78	Continuous	Continuous
	Exhaust*	Adjusted	73 [1]	Continuous	Continuous

Note(s):

1. Sound level from RWDI proxy data adjusted such that stationary sources meet limits at existing noise sensitive land uses. An asterisk [*] is used in the ID to signify these sources.

The sources associated with the plaza at 59-77 Dundas Street West are generally servicing restaurants that run during the daytime, evening and nighttime hours. All stationary sources in the model are conservatively modeled as operating simultaneously and continuously for all periods.

3.2.2 Representative Receptors

The worst-case receptor locations were assessed to evaluate the potential stationary source noise effects on the proposed development at each OLA (i.e. locations within the OLAs that result in the highest sound levels).

The selection of receptors affected by stationary source noise was based on the drawings reviewed for this assessment. Using the “building evaluation” feature of Cadna/A, each façade of the residential building was assessed. In this assessment the same assessment points used for OLAs are used for the Outdoor points of Reception (OPORs), with the exception of OLA_01 (the daycare) because outdoor locations associated with a noise sensitive institutional or commercial purpose are not considered to be points of reception.

3.2.3 Elevated Background Sound Levels

As road traffic is dominant in this area, elevated background sound levels due to road noise were calculated to account for the busy roadways in the area.

Traffic volumes for the quietest hour is 2.5% and 0.2% of the AADT for daytime and nighttime respectively, according to the typical hourly traffic distribution, published by the Institute of Traffic Engineers (ITE, 2010). AADT volumes were estimated from the AM Peak, PM Peak and 8-hour traffic counts. A copy of the traffic data is included in **Appendix C**.

Background sound levels are calculated for current conditions. Traffic volumes were not grown and representative of the year the count happened. The proposed LRT is not included in background sound level calculations. A summary of the data used in ambient calculations is included in **Table 5**.

Table 5: Road Traffic Volumes for Background Sound Level Calculations

Roadway	Segment	AADT	% Day/Night	Speed Limit (km/hr)	% Trucks
Hurontario Street	Dundas Street to Queensway	14,921	2.5% / 0.2%	50	1.7 % / 2.8 %
Dundas Street	Hurontario Street to Grenville Drive	21,419	2.5% / 0.2%	50	1.5 % / 2.4 %

Background sound levels were predicted at all points of the facade using the "building evaluation" feature of Cadna/A and each outdoor point of reception. The stationary noise at each point of reception was compared to the Environmental noise guideline (NPC-300) sound limits, and elevated background noise and exceedance were calculated for every point separately. The worst-case scenarios are reported in **Table 6.**

3.2.4 Analysis and Results

Stationary source noise modelling was carried out using the Cadna/A software package, a commercially available implementation of the ISO 9613 (ISO, 1994 and ISO, 1996) algorithms. The predicted sound levels are assessed against both the Class 1 and Class 4 Area limits (refer to **Appendix A**) and the elevated limits due to ambient road noise.

The predicted sound levels during the worst-case 1-hour from existing stationary sources are presented in **Table 6.**

Table 6: Predicted Stationary Source Sound Levels at Points of Reception

Part of Development	Façade Or ID	Stationary Source Level	Class 1 Limit	Class 4 Limit	Background Sound Level	Notes
		D, E & N [2] L_{EQ}, 1-hr (dBA)	D&E / N [2] (dBA)	D&E / N [2] (dBA)	D&E / N [2] (dBA)	
7-Storey Podium	North	35	50 / 45	60 / 55	NA [1]	Meets Class 1
	East	46			58 / 47	Meets Background
	South – On Dundas	46			62 / 51	Meets Background
	South – Facing Restaurants	50			NA [1]	D and E meet Class 1 N meets Class 4
	West	47			53 / NA [1]	D and E meet Class 1 N meets Class 4
27-Storey Tower	North	35			NA [1]	Meets Class 1
	East	41			53 / 42	Meets Class 1
	South	48			NA [1]	D and E meet Class 1 N meets Class 4
	West	43			53 / NA [1]	Meets Class 1
Outdoor Locations [3]	OLA_02	47	50 / -	55 / -	53 / -	Meets Class 1
	OLA_03	42			54 / -	Meets Class 1
	OLA_04	42			54 / -	Meets Class 1
	OLA_05	32			48 / -	Meets Class 1
	OLA_06	32			48 / -	Meets Class 1
	OLA_07	32			49 / -	Meets Class 1

Note(s):

1. Background sound levels at worst-case location on this façade are such that the default limits would apply.
2. D, meaning daytime (07:00 to 19:00). E, meaning evening (19:00 to 23:00). N, meaning nighttime (23:00 to 07:00).
3. Outdoor areas are not assessed during the nighttime period.

As shown in **Table 6**, the daytime-evening stationary source sound levels are predicted to meet the Class 1 or elevated background limits at the façade and outdoor points of reception. During the nighttime periods, at the façade, an exceedance of the default Class 1 limits of up to 5 dB is predicted, but is expected to meet the Class 4 limits.

3.3 Recommendations

Based on the noise results, the following recommendations were determined for the project.

3.3.1 Transportation Sources

The following recommendations are provided to address transportation sources.

3.3.1.1 Building Façade Components

Due to the elevated transportation sound levels in the area, acoustical design of the façade components including spandrel, window glazing, and exterior doors, are recommended to be specified for the proposed development.

To assess the development's feasibility, preliminary window glazing, and exterior balcony door sound isolation requirements were determined. These were based on following assumptions:

- Typical residential living room:
  - Glazing 60% of façade, Door: 20% of façade
  - 55% Façade to floor area Ratio
- Typical residential bedroom:
  - Glazing 80% of façade, Door: N/A
  - 81% Façade to floor area Ratio

Acoustical character of rooms: High absorption finishes/furniture for bedrooms and intermediate absorption finishes/furniture for living rooms.

Based on the predicted plane of window sound levels and the assumptions listed above, recommendations for the minimum sound insulation ratings for the building components were determined using the National Research Council of Canada "BPN-56 method" (NRCC, 1985). The reported results are in terms of Sound Transmission Class (STC) ratings as summarized in **Table 7**.

Table 7: Recommended Façade Component Minimum Sound Insulation Rating

Building	Façade	Window Glazing	Exterior Door	Façade Wall
7-Storey Podium	South	STC-28	STC-28	STC-45
	West	STC-26	STC-28	STC-45

The maximum requirement for window and door glazing was determined to be STC-28, which is considered feasible as this can be achieved by various double-glazed configurations of insulated glazing units. The required STC-ratings for façade components is expected to be achieved by constructions that meet the Ontario Building Code minimum requirements.

Taking into account the assumptions used as a basis to determine the glazing requirements, the applicable indoor transportation source sound level criteria are predicted to be achieved.

3.3.1.2 Ventilation Recommendations

Due to the transportation sound levels at the plane of the façade, central air conditioning is recommended for the proposed development to allow for windows and doors to remain closed as a noise mitigation measure. Further, prospective purchasers or tenants should be informed by a warning clause "Type D".

3.3.1.3 Outdoor Living Areas

Due to exposure to transportation sources, sound levels in OLAs are predicted to be elevated. The combined (rail and road) daytime average sound levels for the OLAs included in the assessment are in the range of 54-62 dBA. To reduce the transportation sound levels in OLAs to meet the applicable criteria, noise barriers are recommended.

The target transportation sound level in the OLAs is 55 dBA. Noise mitigation to reduce sound levels in OLAs to 55 dBA is recommended. The barrier heights needed to meet 55 dBA may not be feasible for technical, economic, or administrative reasons beyond the scope environmental noise engineering. In these cases, sound levels up to 60 dBA are allowed with the inclusion of a warning clause. The barriers required to meet 60 dBA therefore form the minimum required level of mitigation, and the barriers to meet 55 dBA form the maximum required level of mitigation. The maximum required mitigation should be followed wherever possible, and the tallest feasible barrier used where meeting the maximum specification is not feasible.

The recommended geometry of the noise barriers is included with **Figure 4** (to meet 55 dBA) and **Figure 5** (to meet 60 dBA). The barrier heights are summarized in **Table 8**. General guidance with respect to noise barrier design is included with **Appendix D**.

Table 8: Barrier Height Recommendations for OLAs

Receptor	Description	Predicted OLA Sound Level	Barrier Height (m) to Meet Sound Level Criterion	
		Daytime L_{EQ}, 16hr (dBA)	Maximum[1] (meet 55 dBA)	Minimum[2] (meet 60 dBA)
OLA_01	Daycare Outdoor Play Area - At Grade	54	-	-
OLA_02	Outdoor Amenity (Playground) - Level 2	58	1.4 m	- [4]
OLA_03	Outdoor Amenity (Outdoor Lounges) – Level 8	62	2.0 m	1.2 m [4]
OLA_04	Outdoor Amenity (Outdoor Fitness Area) - Level 8	61	1.7 m [3]	1.1 m [4]
OLA_05	Outdoor Amenity (Penthouse Lounge Area West) - Level 33	56	1.1 m [3]	- [4]
OLA_06	Outdoor Amenity (Penthouse Lounge Area Middle) - Level 33	55	-	-
OLA_07	Outdoor Amenity (Penthouse Lounge Area East) - Level 33	56	1.1 m [3]	- [4]

Note(s):

1. Refer to Figure 4 for individual barrier geometry.
2. Refer to Figure 5 for individual barrier geometry.
3. If noise control measures are not provided, a warning clause "Type A" is recommended.
4. If noise control measures below the maximum required have been implemented, a warning clause “Type B” is recommended.

3.3.2 Stationary Sources

The sources considered in the assessment are included as a due diligence exercise. Three facades on the building were identified as having an excess of applicable limits. The ventilation requirements and need to keep windows closed to address transportation sound are also expected to provide sufficient reduction to stationary source noise levels indoors. Warning clause “Type E” is recommended to was prospective occupants of the potential for audible noise from these surrounding commercial uses.

3.3.3 Warning Clauses

The following warning clauses are recommended for the proposed development:

1. NPC-300 Type A or Type B to address transportation sound levels in Outdoor Living Areas (OLAs) as applicable.
2. NPC-300 Type D to address transportation sound levels at the plane of window.
3. NPC-300 Type E to address proximity to commercial/industrial facilities.

Warning clauses are to be included in all development agreements, offers of purchase and agreements of purchase and sale or lease. Sample wording of the recommended warning clauses is included with **Appendix E**.

4 THE EFFECTS OF THE PROPOSED DEVELOPMENT ON ITS SURROUNDINGS AND ON ITSELF

Within the development itself the main sources of noise that are likely to affect the uses of the building are the mechanical systems. Provided that best practices for the acoustical design of the building, noise from the development are expected to be feasible to meet the applicable sound level criteria due to the nature of the proposed development.

We recommend that the potential noise effect of the proposed development is reviewed during detailed design to ensure the applicable sound level criteria will be achieved.

5 CONCLUSIONS

RWDI was retained to prepare a Noise and Vibration Impact Study (NVIS) for the proposed mixed use condo development at 51-55 Dundas St W & 60-76 Agnes St in Mississauga, Ontario

The following noise control measures are recommended for the proposed development:

1. Installation of central air-conditioning so that all suites' windows can remain closed;
2. The inclusion of noise warning clauses related to transportation and stationary source sound levels;
3. Amenity area barriers are recommended. Barrier height should be chosen to meet the maximum required mitigation wherever possible, and the tallest feasible barrier used where meeting the maximum specification is not feasible; and
4. Minimum sound isolation performance: suite bedroom window glazing with sound isolation performance of STC-26 and STC-28, exterior doors with sound isolation performance of STC-28, and façade construction of STC-45.

Based on the noise modeling results and setback distances, the land use compatibility of the proposed development with respect to the nearby industrial land-uses is considered acceptable from the noise assessment perspective.

At this stage in design the noise levels produced by the development on itself, and its surroundings could not be quantitatively assessed. However, the effect on both the building itself and its surroundings is expected to be feasible to meet the applicable criteria. We recommend that the building design is evaluated prior to building permit to ensure that the acoustical design is adequately implemented in order to meet the applicable criteria.

Based on the results of the analysis including implementation of the recommendations included with this assessment, the proposed development is feasible from a noise and vibration perspective.

6 REFERENCES

1. Ontario Ministry of the Environment (MOE), August 2013, Publication NPC-300, Environmental Noise Guideline Stationary and Transportation Sources – Approval and Planning (MOE, 2013).
2. Ontario Ministry of the Environment (MOE), 1989, ORNAMENT Ontario Road Noise Analysis Method for Environment and Transportation, Technical Publication (MOE, 1989).
3. The U.S. Department of Transportation - Federal Transit Authority Document *Transit Noise and Vibration Impact Assessment*, (FTA 2006).
4. Ontario Ministry of the Environment (MOE) Publication Guideline D-6, "Compatibility Between Industrial Facilities and Sensitive Land Uses", July 1995 (MOE, 1995).
5. Controlling Sound Transmission into Buildings (BPN-56), National Research Council Canada (NRCC, 1985).
6. Institute of Transportation Engineers (ITE), 2010, *Traffic Engineering Handbook, 6th Edition* (ITE, 2010)
7. International Organization for Standardization (ISO), 1994b, International Standard ISO 9613-1:1994, Acoustics – Attenuation of Sound during propagation outdoors. Part 1: Calculation of the absorption of sound by the atmosphere. (ISO, 1994)
8. International Organization for Standardization (ISO), 1996, International Standard ISO 9613-2:1996, Acoustics – Attenuation of sound during propagation outdoors – Part 2: General method of calculation (ISO, 1996)

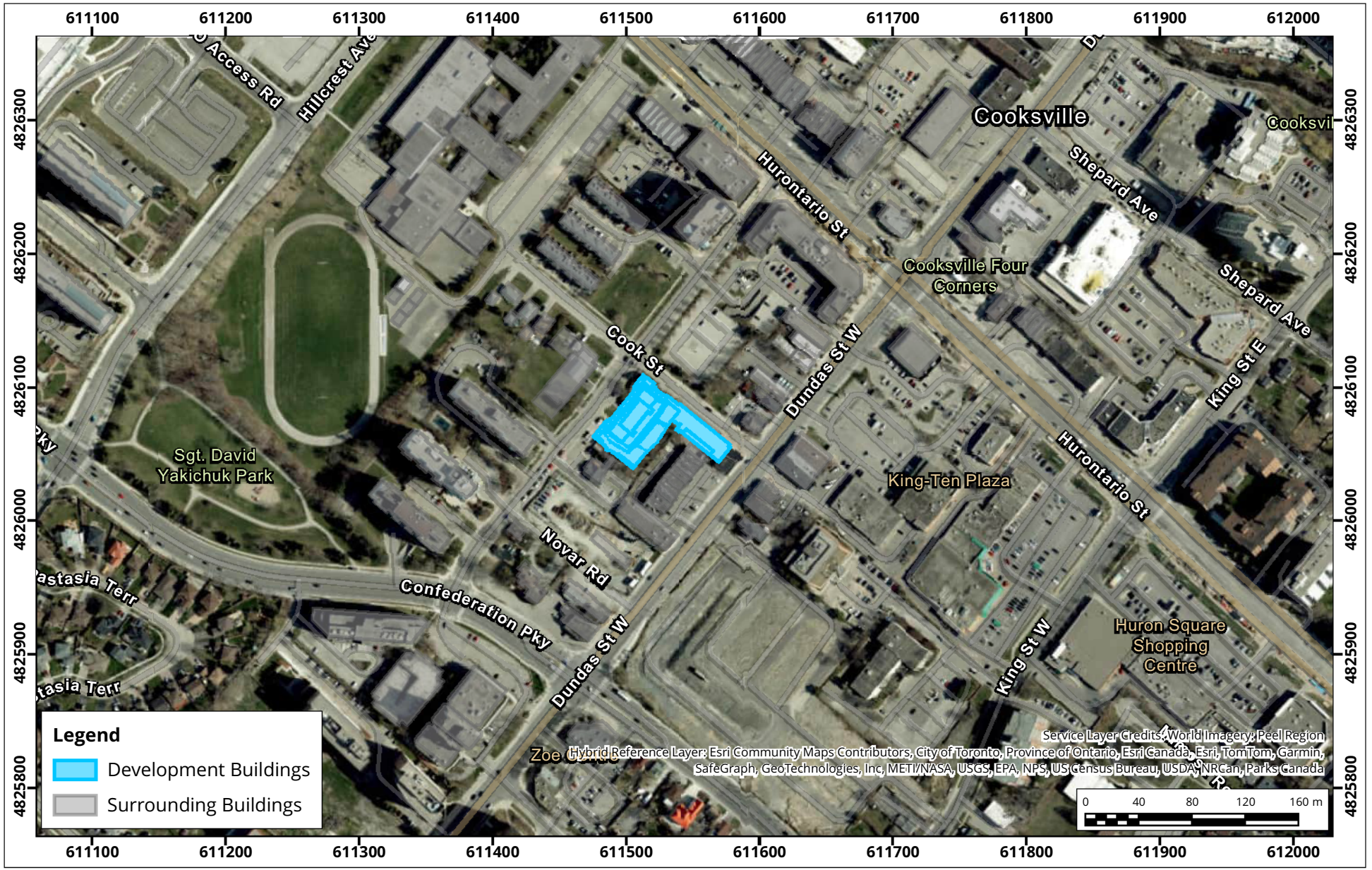
7 STATEMENT OF LIMITATIONS

This report entitled *51-55 Dundas St W & 60-76 Agnes St Noise and Vibration Impact Study* was prepared by RWDI AIR Inc. ("RWDI") for Sajecki Planning Inc. ("Client"). The findings and conclusions presented in this report have been prepared for the Client and are specific to the project described herein ("Project"). The conclusions and recommendations contained in this report are based on the information available to RWDI when this report was prepared. Because the contents of this report may not reflect the final design of the Project or subsequent changes made after the date of this report, RWDI recommends that it be retained by Client during the final stages of the project to verify that the results and recommendations provided in this report have been correctly interpreted in the final design of the Project.

The conclusions and recommendations contained in this report have also been made for the specific purpose(s) set out herein. Should the Client or any other third party utilize the report and/or implement the conclusions and recommendations contained therein for any other purpose or project without the involvement of RWDI, the Client or such third party assumes any and all risk of any and all consequences arising from such use and RWDI accepts no responsibility for any liability, loss, or damage of any kind suffered by Client or any other third party arising therefrom.

Finally, it is imperative that the Client and/or any party relying on the conclusions and recommendations in this report carefully review the stated assumptions contained herein and to understand the different factors which may impact the conclusions and recommendations provided.

FIGURES



Site Context Plan

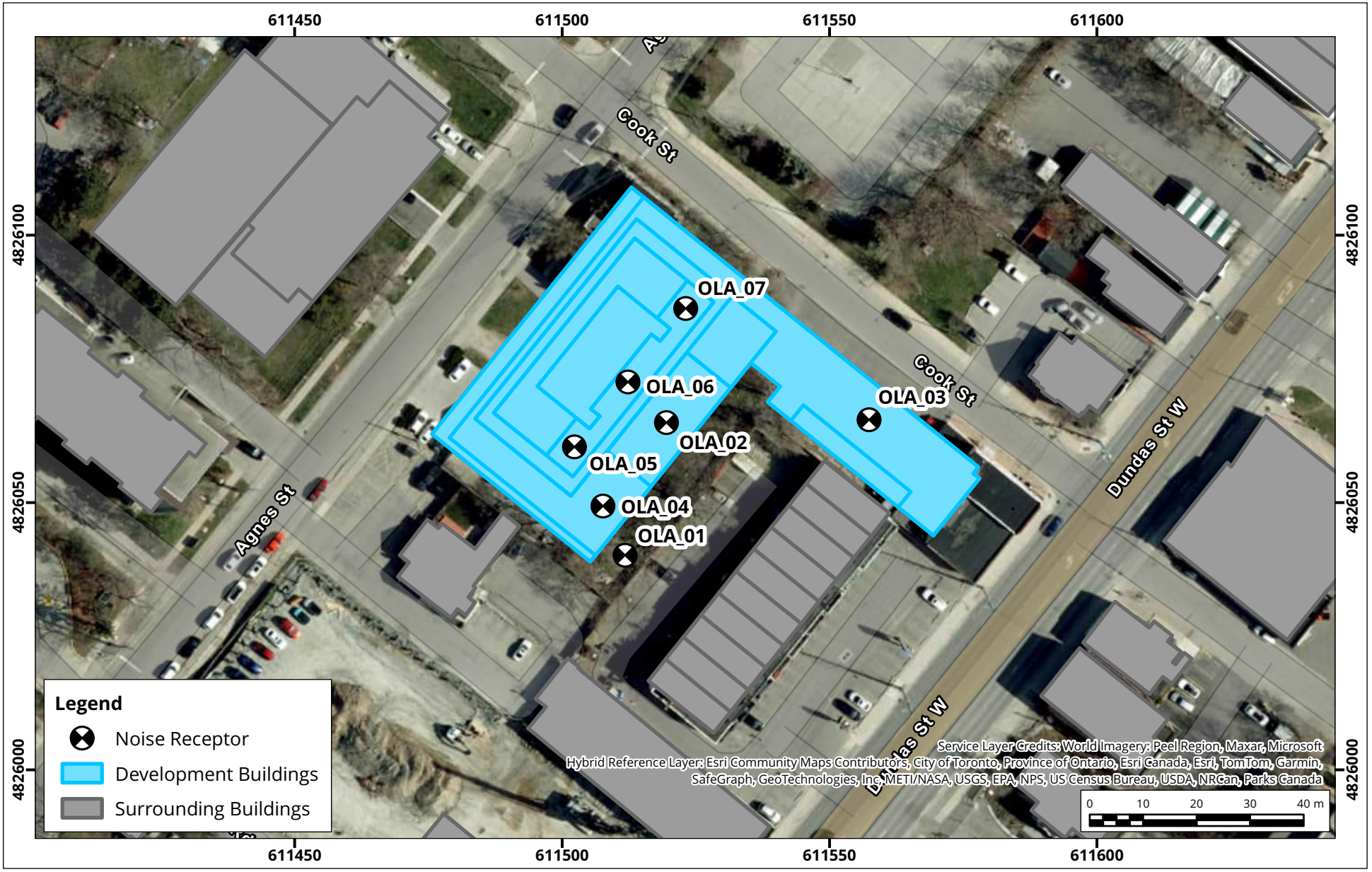
True North

Drawn by: OTH	Figure: 1
Approx. Scale:	1:4,000
Date Revised:	Apr 22, 2025

Map Projection: NAD 1983 UTM Zone 17N

55 Dundas Street - Mississauga, Ontario

Project #: 2509047



Outdoor Living Areas (OLAs) Locations

Location of Common Outdoor Amenity Areas

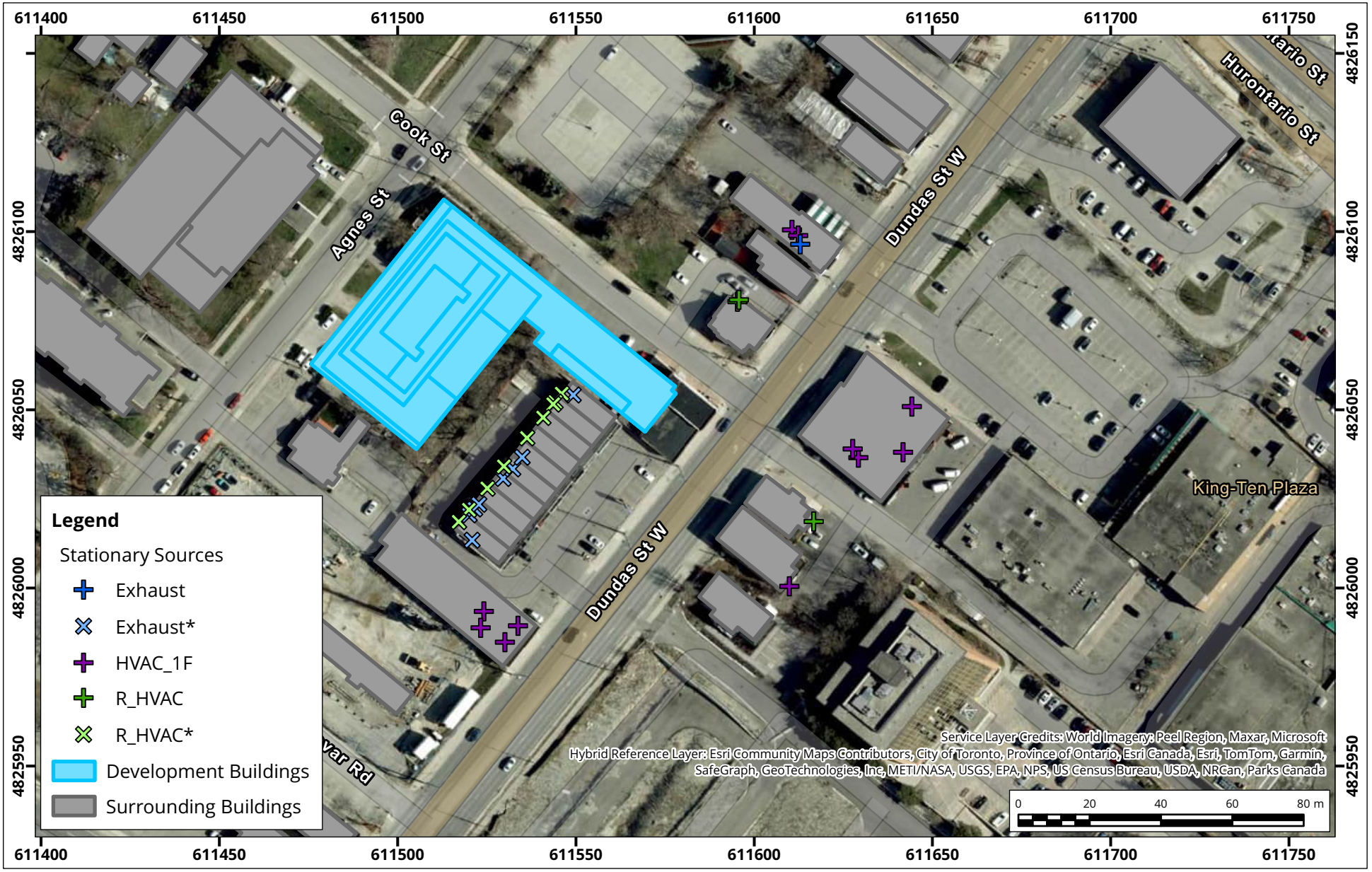
Map Projection: NAD 1983 UTM Zone 17N

55 Dundas Street - Mississauga, Ontario

True North

Project #: 2509047

Drawn by: OTH	Figure: 2
Approx. Scale:	1:1,000
Date Revised:	May 5, 2025



Stationary Sources

Location of Stationary Sources in Relation to the Proposed Development

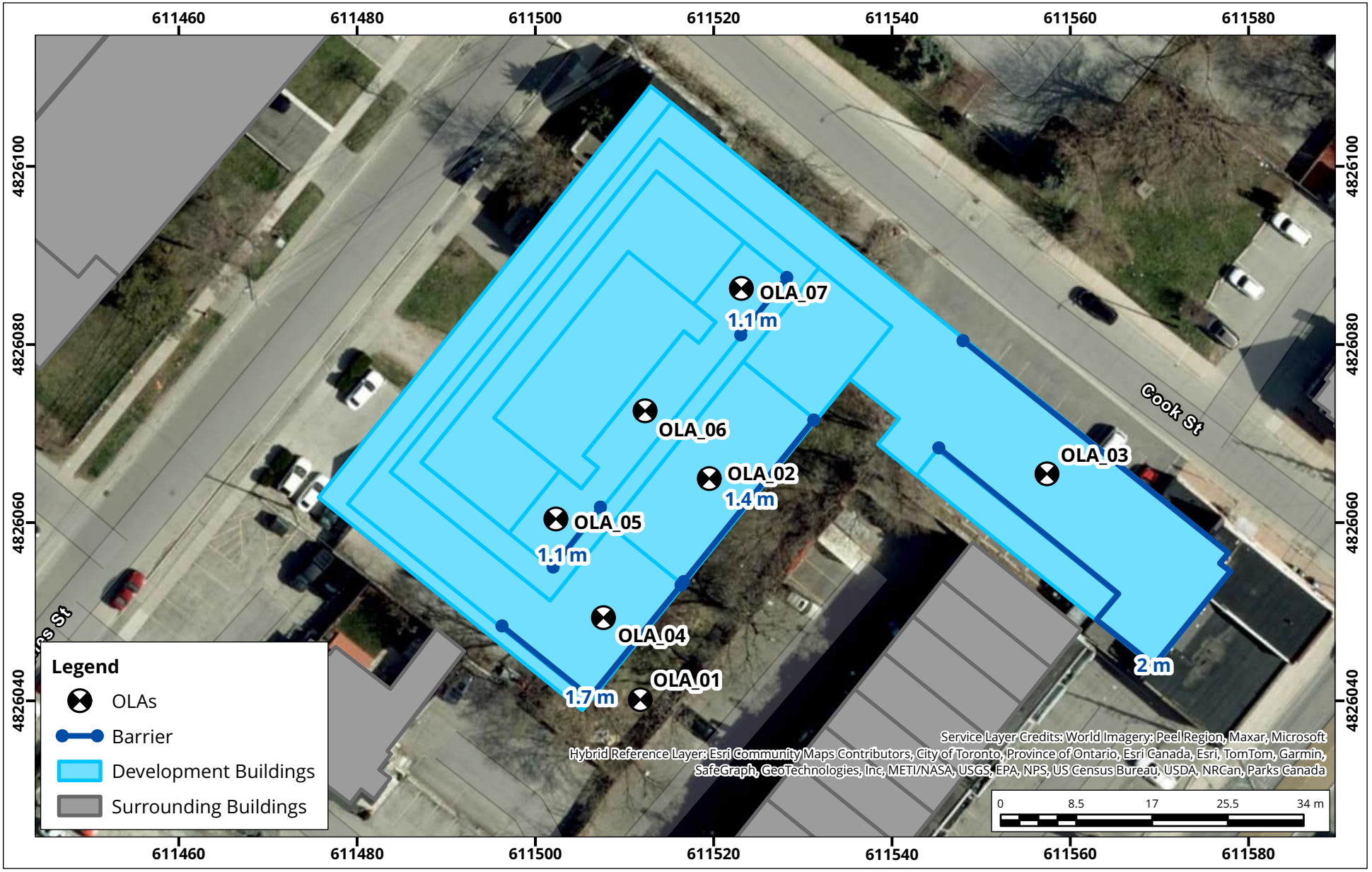
Map Projection: NAD 1983 UTM Zone 17N

55 Dundas Street - Mississauga, Ontario

True North

Project #: 2509047

Drawn by: LRC	Figure: 3
Approx. Scale:	1:1,500
Date Revised:	May 5, 2025



Outdoor Living Areas (OLAs) Maximum Mitigation Required

Recommended Barrier Geometry and Height to meet 55 dBA

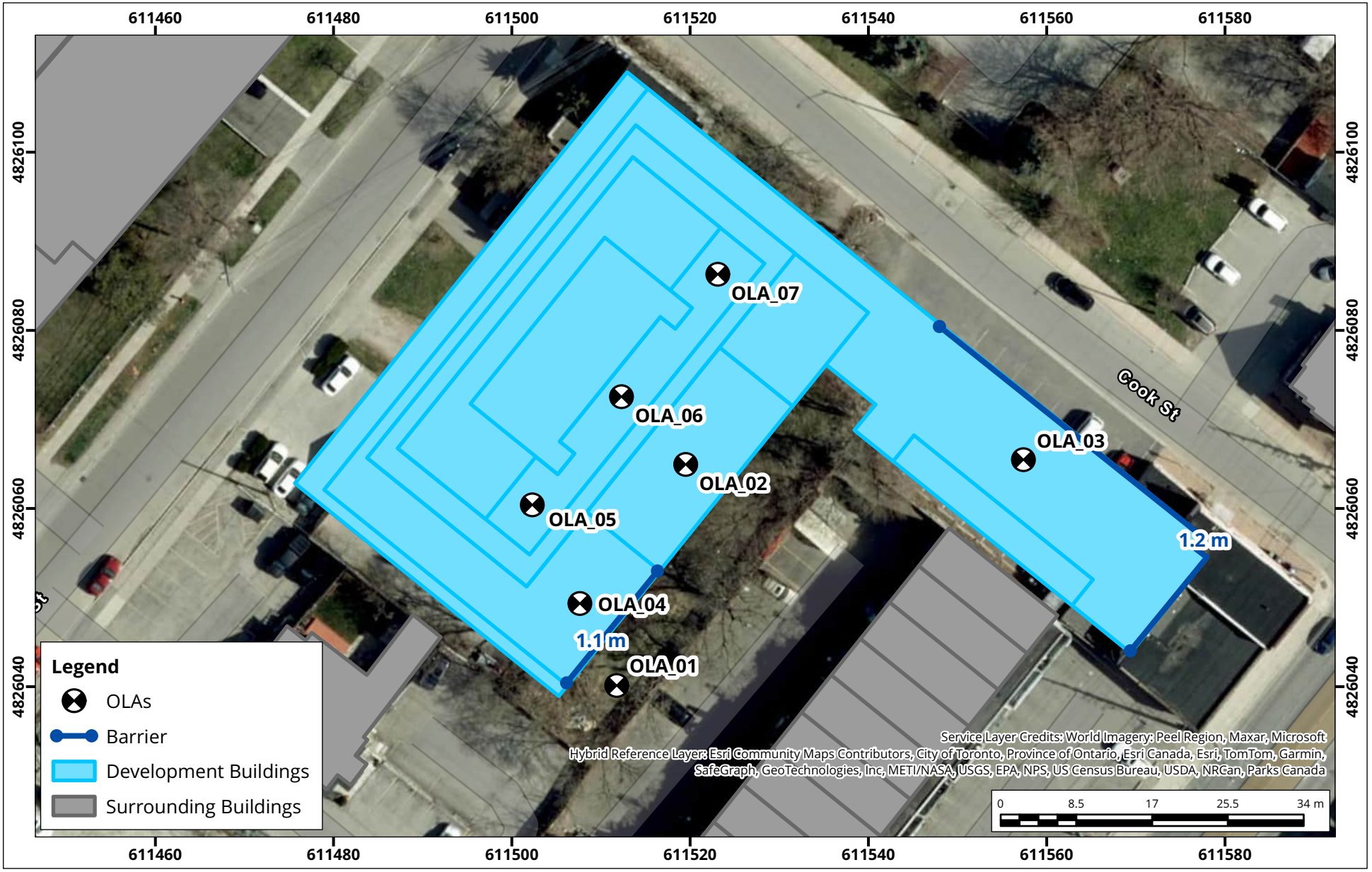
Map Projection: NAD 1983 UTM Zone 17N

55 Dundas Street - Mississauga, Ontario

True North

Project #: 2509047

Drawn by: OTH	Figure: 4
Approx. Scale:	1:600
Date Revised:	May 5, 2025



Outdoor Living Areas (OLAs) Minimum Mitigation Required

Recommended Barrier Geometry and Height to meet 60 dBA

Map Projection: NAD 1983 UTM Zone 17N

55 Dundas Street - Mississauga, Ontario

True North

Project #: 2509047

Drawn by: OTH	Figure: 5
Approx. Scale:	1:600
Date Revised:	May 5, 2025

APPENDIX A

Mixed-use Development
34 Storey- One Tower

51=55 Dundas St.W., 60-66 Agnes St.
Mississauga, ON L5B1J7

Project No:	*24018*
Date:	2025-03-05
Issued for:	**DESIGN COORDINATION**

ARCHITECT

RA LUMBAO ARCHITECTS INC.

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121 Lebovic Avenue Unit C04, Toronto ON M1L 0J2

DRAWING INDEX

ARCHITECTURAL	
No.	Title
C1	COVER, INDEX
C2	DEVELOPMENT PERSPECTIVE
C3	DEVELOPMENT PERSPECTIVE
C4	DEVELOPMENT PERSPECTIVE
C5	DEVELOPMENT PERSPECTIVE
C6	DEVELOPMENT PERSPECTIVE
C7	DEVELOPMENT PERSPECTIVE
G1	PROJECT STATISTICS AND CONTEXT PLAN
SP100	EXISTING SITE PLAN
SP101	CONCEPT SITE PLAN
SP102	GROUND FLOOR SITE PLAN
A100	UNDERGROUND PARKING LEVEL 2
A101	UNDERGROUND PARKING LEVEL 1
A102	LEVEL 1 GROUND FLOOR PLAN
A103	LEVEL 2 FLOOR PLAN
A104	LEVEL 3-7 FLOOR PLAN
A105	LEVEL 8- FLOOR PLAN
A106	LEVEL 9-17 FLOOR PLAN
A107	LEVEL 18-32 FLOOR PLAN
A108	LEVEL 33 PENT HOUSE FLOOR PLAN
A108	LEVEL 34 PENT HOUSE FLOOR PLAN
A110	ROOF PLAN
A200	ELEVATION PART 1
A201	ELEVATION PART 2
A202	ELEVATION PART 3
A300	SECTIONAL ELEVATION PART 1
A301	SECTIONAL ELEVATION PART 2

PERSPECTIVE VIEW FROM DUNDAS ST.,W

ARTIST IMPRESSION

VIEW FROM AGNES ST.

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SEAL

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Rev	Issued For	Date	Initials
0	DARC SUBMISSION	2024-10-07	MP
1	DESIGN COORDINATION	2024-12-10	MP
2	DESIGN COORDINATION	2025-01-15	MP
3	DESIGN COORDINATION	2025-02-21	MP
4	DESIGN COORDINATION	2025-02-26	MP
5	DESIGN COORDINATION	2025-03-05	MP

CLIENT

D-STILLWATERS DEVELOPMENTS INC.
OA BLUEKRESCENT DEV.

Project North | *True North*

PROJECT TITLE:

Mixed Use Condo Development

51-55 Dundas St.W.,60-70 Agnes St, Mississauga, ON L5B 1J7

PROJECT NO. *24018*

DRAWING ISSUE:

DESIGN COORDINATION

DRAWING TITLE:

DEVELOPMENT PERSPECTIVES

Drawn By	RG/MP	Scale
Checked By	RL	As Indicated
Plot Date	2025-03-05	

SHEET NO. *C2*

REVISION

VIEW FROM AGNES ST.

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4	DESIGN COORDINATION	2025-02-26	MP
5	DESIGN COORDINATION	2025-03-05	MP

CLIENT

D-STILLWATERS DEVELOPMENTS INC.
OA BLUEKRESCENT DEV.

Project North | *True North*

PROJECT TITLE:

Mixed Use Condo Development

51-55 Dundas St.W.,60-70 Agnes St, Mississauga, ON L5B 1J7

PROJECT NO. **24018**

DRAWING ISSUE:

DESIGN COORDINATION

DRAWING TITLE:

DEVELOPMENT PERSPECTIVES

Drawn By	RG/MP	Scale
Checked By	RL	As Indicated
Plot Date	2025-03-05	

SHEET NO. **C3**

REVISION

AERIAL VIEW

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CONSULTANT

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3	DESIGN COORDINATION	2025-02-21	MP
4	DESIGN COORDINATION	2025-02-26	MP
5	DESIGN COORDINATION	2025-03-05	MP

CLIENT

D-STILLWATERS DEVELOPMENTS INC.
OA BLUEKRESCENT DEV.

Project North | *True North*

PROJECT TITLE:

Mixed Use Condo Development

51-55 Dundas St.W.,60-70 Agnes St, Mississauga, ON L5B 1J7

PROJECT NO. **24018**

DRAWING ISSUE:

DESIGN COORDINATION

DRAWING TITLE:

DEVELOPMENT PERSPECTIVES

Drawn By	RG/MP	Scale
Checked By	RL	As Indicated
Plot Date	2025-03-05	

SHEET NO. **C4**

REVISION

AERIAL VIEW

RA LUMBAO ARCHITECTS INC.

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SEAL

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4	DESIGN COORDINATION	2025-02-26	MP
5	DESIGN COORDINATION	2025-03-05	MP

CLIENT

D-STILLWATERS DEVELOPMENTS INC. OA BLUEKRESCENT DEV.

Project North | *True North*

PROJECT TITLE:

Mixed Use Condo Development

51-55 Dundas St.W.,60-70 Agnes St, Mississauga, ON L5B 1J7

PROJECT NO. **24018**

DRAWING ISSUE:

DESIGN COORDINATION

DRAWING TITLE:

DEVELOPMENT PERSPECTIVES

Drawn By	RG/MP	Scale
Checked By	RL	As Indicated
Plot Date	2025-03-05	

SHEET NO. **C5**

REVISION

DEVELOPMENT STATISTICS

PROJECT DATA

Proposed Mixed-use Condominium Development

MUNICIPAL ADDRESS : *60-70 Agnes St., Mississauga, Ontario L5B 1J7*
ZONING: D-1 Res High Density
MUNICIPAL ADDRESS : *51-55 Dundas St. W, Mississauga, Ontario L5B 1J7*
ZONING: C4 Mainstreet Commercial

LOT INFORMATION	m2	sq ft	ha	ac
SITE AREA (EXISTING) (APPROX.)	**4,371.00 m2**	**47,049 SF**	0.44	1.08
LAND DEDICATED (ROAD WIDENING) (APPROX.)	167.00 m2	1,798 SF	0.02	0.04
NET DEVELOPMENT AREA	**4,204.00 m2**	**45,251 SF**	**0.42**	**1.04**
LOT FRONTAGE (COOK Street)	93.32 m	306.09 ft		
LOT DEPTH (AGNES Street)	65.97 m	216.38 ft		
PROPOSED FSI (GROSS)	**8.21**			
PROPOSED FSI (NET)	**8.53**			

	m2	sq ft
PROPOSED RESIDENTIAL (GFA)	**34,751.67 m2**	**374,064 SF**
PARKING LEVEL-1-2	112.22 m2	1,208 SF
GROUND FLOOR	862.09 m2	9,279 SF
PODIUM LEVEL 2	1,503.46 m2	16,183 SF
PODIUM LEVEL 3	2,082.92 m2	22,420 SF
PODIUM LEVEL 4	2,082.92 m2	22,420 SF
PODIUM LEVEL 5	2,082.92 m2	22,420 SF
PODIUM LEVEL 6	2,082.92 m2	22,420 SF
PODIUM LEVEL 7	2,082.92 m2	22,420 SF
PODIUM LEVEL 8 (Amenity Floor)	660.95 m2	7,114 SF
TOWER LEVEL 9-17	9,302.04 m2	100,126 SF
TOWER LEVEL 18-32	10,913.55 m2	117,472 SF
TOWER LEVEL 33-34	982.76 m2	10,578 SF
PROPOSED COMMERCIAL (GFA)	**1,128.67 m2**	**12149 SF**
GROUND FLOOR -7 CRU,	663.14 m2	7138 SF
SECOND FLOOR - 6 CRU/ OFFICE SPACES	465.53 m2	5011 SF
DAYCARE (NON-GFA)	288.40 m2	3104 SF
PROPOSED TOTAL (GFA) COMBINED (RES + RETAIL)	**35,880.34 m2**	**386,212 SF**
PROPOSED LOT COVERAGE	**69%**	

BUILDING HEIGHT	PROPOSED NO. OF STOREY		TOP OF RESIDENTIAL ROOF	
TOWER "A"	34 STOREY		104.45	m
PODIUM	7 STOREY		25.64	m

BUILDING SETBACKS	PROPOSED
FRONT YARD SETBACK (COOK ST.) (EAST)	3.00 m
SIDE YARD SETBACK (AGNES) (NORTH)	5.50 m
SIDE YARD SETBACK (DUNDAS) (SOUTH)	3.00 m
REAR YARD SETBACK (WEST)	3.00 m

SITE COVERAGE / LANDSCAPE AREAS	m2	sq ft	% OF COVERAGE
BUILDING AREA (Level 2)	2,935.71 m2	31,600 SF	70% BUILDING FOOTPRINT
ROAD COVERAGE AREA	350.28 m2	3,770 SF	8% DRIVEWAY/ LOADING AREA
LANDSCAPE AREA (SIDEWALKS/SOFT LANDSCAPE AREA)	918.01 m2	9,881 SF	22 % SOFT/ HARD LANDSCAPING
OTHERS (MECH/ UTILITIES)	0.00 m2	0 SF	PART OF THE BUILDING

PROPOSED RESIDENTIAL UNITS		
TOTAL NUMBER OF UNITS	**558**	**UNITS**
GROUND LEVEL- TH	5	UNITS
PODIUM 2-7	181	UNITS
LEVEL 8-17	153	UNITS
TOWER (18-34)	219	UNITS
UNITS MIX TOTALS (TENTATIVE)		
STUDIO	**42**	7.5%
1 BEDROOM	**242**	43.4%
1 BEDROOM + DEN	**168**	30.1%
2 BEDROOM	**43**	7.7%
2 BEDROOM + DEN	**29**	5.2%
3 BEDROOM	**34**	6.1%
3 BEDROOM + DEN	**0**	0.0%
TOTAL	**558**	100.0%

PROPOSED AMENITY	STANDARD		PROVIDED	
G/F-Podium 7- Tower A, B, = 590 UNITS	m2	sq ft	m2	sq ft
INDOOR (2 m2 x No. of Units)	1,116.00 m2	12013 SF	1,177.74 m2	12677 SF
OUTDOOR (2 m2 x No. of Units)	1,116.00 m2	12013 SF	1,357.43 m2	14611 SF
TOTAL	2,232.00 m2	24025 SF	**2,535.17 m2**	**27288 SF**

VEHICULAR PARKING SPACE	STANDARD	PROVIDED (PL-1/2)
RESIDENCE/ COMMERCIAL PARKING PL-1		111
RESIDENCE PARKING PL-2		120
TOTAL PARKING	-	**231**

BICYCLE PARKING SPACE	STANDARD	PROVIDED
RESIDENTIAL		
RESIDENCE LONG-TERM PARKING (0.70 x No. of Units) 558	391	395
VISITORS SHORT -TERM PARKING (0.08 x No. of Units) 558	45	50
TOTAL RES.	**436**	**445**

LOADING SPACE	STANDARD	PROVIDED
BUILDING 1 (TOWER)		
TYPE OF LOADING SPACE REQUIRED:		
31-399 UNITS	1 TYPE G,	1 TYPE G
400+ UNITS + RETAIL LOADING	1 TYPE C	1 TYPE C

ZONING BY -LAW -GROSS FLOOR AREA CALCULATION

PROPOSED MIXED USE DEVELOPMENT

51-55 DUNDAS ST. W, MISSISSAUGA

TOWER LEVELS

	GROSS CONSTRUCTION AREA		CIRCULATION/ COMMON AREA		CRU NET SELLABLE AREA		RESIDENTIAL NET SELLABLE AREA		EFFICIENCY RATIO (ER)	GFA EXCLUSIONS		TOTAL GROSS FLOOR AREA (RES)	
LEVEL	*Area m2*	*Area SF*	*Area m2*	*Area SF*	*Area m2*	*Area SF*	*Area m2*	*Area SF*	*%*	*Area m2*	*Area SF*	*Area m2*	*Area SF*
MPH-ROOF LEVEL	263.70 m2	2,838 SF	0.00 m2	0 SF	0.00 m2	0 SF	0.00 m2	0 SF	0%	263.70 m2	2838 SF	0.00 m2	0 SF
LEVEL 34	568.20 m2	6,116 SF	59.45 m2	640 SF	0.00 m2	0 SF	431.93 m2	4649 SF	76%	76.82 m2	827 SF	491.38 m2	5,289 SF
LEVEL 33	568.20 m2	6,116 SF	59.45 m2	640 SF	0.00 m2	0 SF	431.93 m2	4649 SF	76%	76.82 m2	827 SF	491.38 m2	5,289 SF
LEVEL 32	798.00 m2	8,590 SF	56.90 m2	612 SF	0.00 m2	0 SF	670.67 m2	7219 SF	84%	70.43 m2	758 SF	727.57 m2	7,831 SF
LEVEL 31	798.00 m2	8,590 SF	56.90 m2	612 SF	0.00 m2	0 SF	670.67 m2	7219 SF	84%	70.43 m2	758 SF	727.57 m2	7,831 SF
LEVEL 30	798.00 m2	8,590 SF	56.90 m2	612 SF	0.00 m2	0 SF	670.67 m2	7219 SF	84%	70.43 m2	758 SF	727.57 m2	7,831 SF
LEVEL 29	798.00 m2	8,590 SF	56.90 m2	612 SF	0.00 m2	0 SF	670.67 m2	7219 SF	84%	70.43 m2	758 SF	727.57 m2	7,831 SF
LEVEL 28	798.00 m2	8,590 SF	56.90 m2	612 SF	0.00 m2	0 SF	670.67 m2	7219 SF	84%	70.43 m2	758 SF	727.57 m2	7,831 SF
LEVEL 27	798.00 m2	8,590 SF	56.90 m2	612 SF	0.00 m2	0 SF	670.67 m2	7219 SF	84%	70.43 m2	758 SF	727.57 m2	7,831 SF
LEVEL 26	798.00 m2	8,590 SF	56.90 m2	612 SF	0.00 m2	0 SF	670.67 m2	7219 SF	84%	70.43 m2	758 SF	727.57 m2	7,831 SF
LEVEL 25	798.00 m2	8,590 SF	56.90 m2	612 SF	0.00 m2	0 SF	670.67 m2	7219 SF	84%	70.43 m2	758 SF	727.57 m2	7,831 SF
LEVEL 24	798.00 m2	8,590 SF	56.90 m2	612 SF	0.00 m2	0 SF	670.67 m2	7219 SF	84%	70.43 m2	758 SF	727.57 m2	7,831 SF
LEVEL 23	798.00 m2	8,590 SF	56.90 m2	612 SF	0.00 m2	0 SF	670.67 m2	7219 SF	84%	70.43 m2	758 SF	727.57 m2	7,831 SF
LEVEL 22	798.00 m2	8,590 SF	56.90 m2	612 SF	0.00 m2	0 SF	670.67 m2	7219 SF	84%	70.43 m2	758 SF	727.57 m2	7,831 SF
LEVEL 21	798.00 m2	8,590 SF	56.90 m2	612 SF	0.00 m2	0 SF	670.67 m2	7219 SF	84%	70.43 m2	758 SF	727.57 m2	7,831 SF
LEVEL 20	798.00 m2	8,590 SF	56.90 m2	612 SF	0.00 m2	0 SF	670.67 m2	7219 SF	84%	70.43 m2	758 SF	727.57 m2	7,831 SF
LEVEL 19	798.00 m2	8,590 SF	56.90 m2	612 SF	0.00 m2	0 SF	670.67 m2	7219 SF	84%	70.43 m2	758 SF	727.57 m2	7,831 SF
LEVEL 18	798.00 m2	8,590 SF	56.90 m2	612 SF	0.00 m2	0 SF	670.67 m2	7219 SF	84%	70.43 m2	758 SF	727.57 m2	7,831 SF
LEVEL 17	1,104.00 m2	11,883 SF	62.65 m2	674 SF	0.00 m2	0 SF	970.91 m2	10451 SF	88%	70.44 m2	758 SF	1,033.56 m2	11,125 SF
LEVEL 16	1,104.00 m2	11,883 SF	62.65 m2	674 SF	0.00 m2	0 SF	970.91 m2	10451 SF	88%	70.44 m2	758 SF	1,033.56 m2	11,125 SF
LEVEL 15	1,104.00 m2	11,883 SF	62.65 m2	674 SF	0.00 m2	0 SF	970.91 m2	10451 SF	88%	70.44 m2	758 SF	1,033.56 m2	11,125 SF
LEVEL 14	1,104.00 m2	11,883 SF	62.65 m2	674 SF	0.00 m2	0 SF	970.91 m2	10451 SF	88%	70.44 m2	758 SF	1,033.56 m2	11,125 SF
LEVEL 13	1,104.00 m2	11,883 SF	62.65 m2	674 SF	0.00 m2	0 SF	970.91 m2	10451 SF	88%	70.44 m2	758 SF	1,033.56 m2	11,125 SF
LEVEL 12	1,104.00 m2	11,883 SF	62.65 m2	674 SF	0.00 m2	0 SF	970.91 m2	10451 SF	88%	70.44 m2	758 SF	1,033.56 m2	11,125 SF
LEVEL 11	1,104.00 m2	11,883 SF	62.65 m2	674 SF	0.00 m2	0 SF	970.91 m2	10451 SF	88%	70.44 m2	758 SF	1,033.56 m2	11,125 SF
LEVEL 10	1,104.00 m2	11,883 SF	62.65 m2	674 SF	0.00 m2	0 SF	970.91 m2	10451 SF	88%	70.44 m2	758 SF	1,033.56 m2	11,125 SF
LEVEL 9	1,104.00 m2	11,883 SF	62.65 m2	674 SF	0.00 m2	0 SF	970.91 m2	10451 SF	88%	70.44 m2	758 SF	1,033.56 m2	11,125 SF
LEVEL 8 (Amenity)	1,245.75 m2	13,409 SF	62.65 m2	674 SF	0.00 m2	0 SF	598.30 m2	6440 SF	48%	584.80 m2	6295 SF	660.95 m2	7,114 SF
TOTAL ABOVE TOWERS	**24,551.85 m2**	**264,273 SF**	**1,598.90 m2**	**17,210 SF**	**0.00 m2**	**0 SF**	**20,260.40 m2**	**218,081 SF**	**83%**	**2,692.55 m2**	**28,982 SF**	**21,859.30 m2**	**235,291 SF**

PODIUM LEVELS

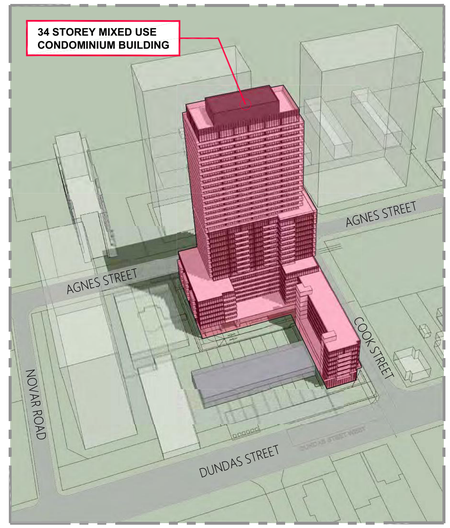
	GROSS CONSTRUCTION AREA		CIRCULATION/ COMMON AREA		CRU NET SELLABLE AREA		RESIDENTIAL NET SELLABLE AREA		EFFICIENCY RATIO (ER)	GFA EXCLUSIONS		TOTAL GROSS FLOOR AREA (RES+Comm)	
LEVEL	*Area m2*	*Area SF*	*Area m2*	*Area SF*	*Area m2*	*Area SF*	*Area m2*	*Area SF*	*%*	*Area m2*	*Area SF*	*Area m2*	*Area SF*
LEVEL 7	2,263.00 m2	24,359 SF	248.40 m2	2674 SF	0.00 m2	0 SF	1,834.52 m2	19747 SF	81%	180.08 m2	1,938 SF	2,082.92 m2	22,420 SF
LEVEL 6	2,263.00 m2	24,359 SF	248.40 m2	2674 SF	0.00 m2	0 SF	1,834.52 m2	19747 SF	81%	180.08 m2	1,938 SF	2,082.92 m2	22,420 SF
LEVEL 5	2,263.00 m2	24,359 SF	248.40 m2	2674 SF	0.00 m2	0 SF	1,834.52 m2	19747 SF	81%	180.08 m2	1,938 SF	2,082.92 m2	22,420 SF
LEVEL 4	2,263.00 m2	24,359 SF	248.40 m2	2674 SF	0.00 m2	0 SF	1,834.52 m2	19747 SF	81%	180.08 m2	1,938 SF	2,082.92 m2	22,420 SF
LEVEL 3	2,263.00 m2	24,359 SF	248.40 m2	2674 SF	0.00 m2	0 SF	1,834.52 m2	19747 SF	81%	180.08 m2	1,938 SF	2,082.92 m2	22,420 SF
LEVEL 2	2,370.23 m2	25,513 SF	257.66 m2	2773 SF	465.53 m2	5011 SF	1,245.80 m2	13410 SF	72%	401.24 m2	4,319 SF	1,968.99 m2	21,194 SF
LEVEL 1 -GROUND	2,639.00 m2	28,406 SF	503.14 m2	5416 SF	663.14 m2	7138 SF	358.95 m2	3864 SF	39%	1113.77 m2	11,988 SF	1,525.23 m2	16,417 SF
TOTAL ABOVE GRADE	**16,324.23 m2**	**175,712 SF**	**2,002.80 m2**	**21,558 SF**	**1128.67 m2**	**12,149 SF**	**10,777.35 m2**	**116006 SF**		**2,415.41 m2**	**25,999 SF**	**13,908.82 m2**	**149,713 SF**

UNDERGROUND PARKING LEVEL

	GROSS CONSTRUCTION AREA		CIRCULATION/ COMMON AREA		CRU NET SELLABLE AREA		RESIDENTIAL NET SELLABLE AREA		EFFICIENCY RATIO (ER)	GFA EXCLUSIONS		TOTAL GROSS FLOOR AREA	
LEVEL	*Area m2*	*Area SF*	*Area m2*	*Area SF*	*Area m2*	*Area SF*	*Area m2*	*Area SF*	*%*	*Area m2*	*Area SF*	*Area m2*	*Area SF*
LEVEL P1	3,926.21 m2	42,261 SF	56.11 m2	604 SF	0.00 m2	0 SF	0.00 m2	0 SF		3,870.10 m2	41,657 SF	56.11 m2	604 SF
LEVEL P2	3,926.21 m2	42,261 SF	56.11 m2	604 SF	0.00 m2	0 SF	0.00 m2	0 SF		3,870.10 m2	41,657 SF	56.11 m2	604 SF
TOTAL BELOW GRADE	**7,852.42 m2**	**84,523 SF**	**112.22 m2**	**1,208 SF**						**7,740.20 m2**	**83,315 SF**	**112.22 m2**	**1,208 SF**

	GROSS CONSTRUCTION AREA				CRU NET SELLABLE AREA		RESIDENTIAL NET SELLABLE AREA					TOTAL GROSS FLOOR AREA	
GRAND TOTAL	**48,728.50 m2**	**524,508 SF**			**1,128.67 m2**	**12,149 SF**	**31,037.75 m2**	**334,087 SF**				**35,880.34 m2**	**386,212 SF**

RES. UNIT STATISTICS	TOWER, PODIUM							
Level	{PODIUM / TOWER}							
UNIT TYPE	STUDIO A	1 BEDROOM B	1 BD + D C	2 BEDROOM D	2 BD+D E	3 BEDROOM F	3 BEDROOM+D F	Total
AVE . SIZE AREA	40 m2	50 m2	60 m2	75m2	80 m2	95 m2	115 m2	
level 1 -Ground Floor						5		5
Level 2	2	6	10	1	1	1		21
Level 3 - 7 (5 Levels)	10	80	50	10	5	5		160
Level 8 -Amenity			6	2		1		9
Level 9-17 TOWER (9 Levels)		81	27		18	18		144
Level 18-32 TOWER (15 Levels)	30	75	75	30				210
Level 33 TOWER (Penthouse)					2	2		4
Level 34 TOWER (Penthouse)					3	2		5
TOTAL	**42**	**242**	**168**	**43**	**29**	**34**	**0**	**558**
Mix Percentage	**7.5%**	**43.4%**	**30.1%**	**7.7%**	**5.2%**	**6.1%**	**0.0%**	**100.0%**



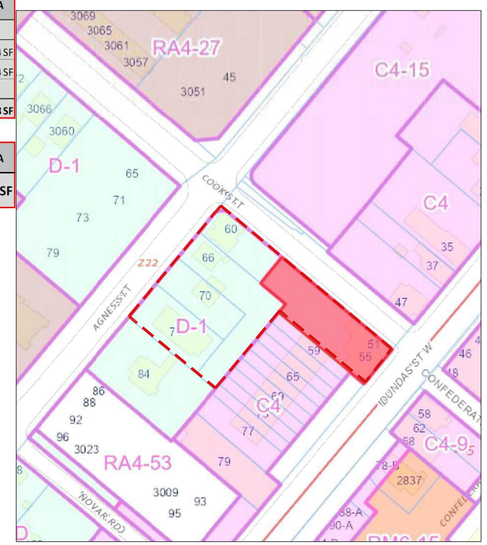
AERIAL VIEW

PROPERTY LINE IS BASE ON EXPROPRIATION PLAN OF LOTS 10 AND PART OF LOT 29 WEST OF HURONTARIO STREET PLAN TOR-12 CITY OF MISSISAUGA
BY: TARASICK McMILLAN KUBICKI LIMITED, DATE: SEPT 5, 2024
ONTARIO LAND SURVEYOR

GROSS CONSTUCTION AREA
is defined as follows:

Area taken from the outside face of exterior wall with only deductions being two-storey void spaces such as potential 2-storey loading area on ground floor, 2-storey atriums, etc. balconies, terraces and roofs are excluded from GCA.

GROSS FLOOR AREA-APARTMENT ZONE
means the sum of the areas of each storey of a building above or below established grade, measured from the exterior of outside walls of the building including floor area occupied by interior wa11s but excluding any part of the building used for mechanical floor area, stairwells, elevators, motor vehicle parking, bicycle parking, storage lockers, below-grade storage, any enclosed area used for the collection or storage of disposable or recyclable waste generated within the building, common facilities for the use of the residents of the building, a daycare and amenity area



ZONING MAP

RA LUMBAO ARCHITECTS INC.
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5	DESIGN COORDINATION	2025-03-05	MP

CLIENT

D-STILLWATERS DEVELOPMENTS INC.
OA BLUEKRESCENT DEV.

Project North | *True North*

PROJECT TITLE:

Mixed Use Condo Development

51-55 Dundas St.W.,60-70 Agnes St, Mississauga, ON L5B 1J7

PROJECT NO. **24018**

DRAWING ISSUE:

DESIGN COORDINATION

DRAWING TITLE:

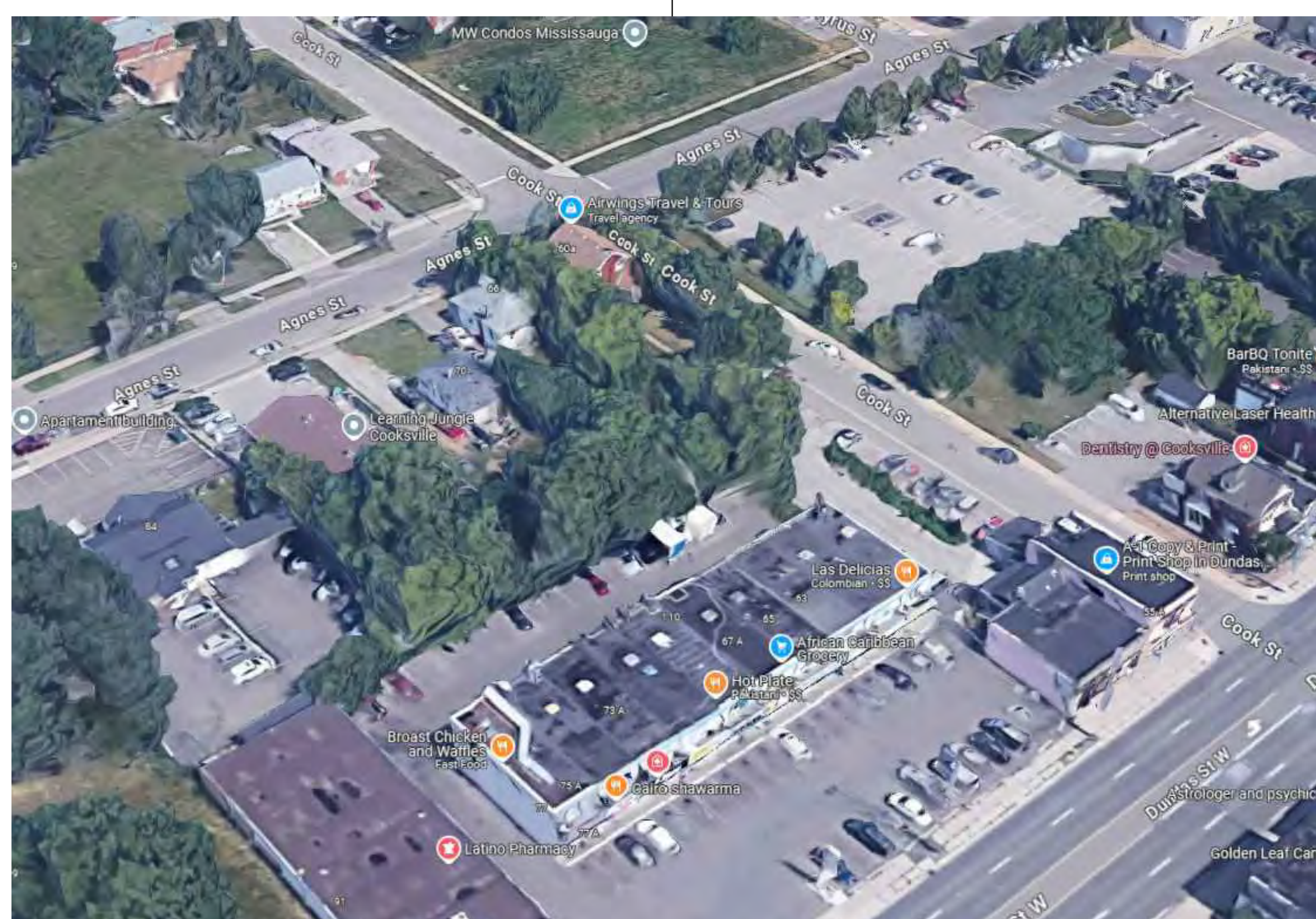
DEVELOPMENT STATISTICS

Drawn By	RG/MP	Scale
Checked By	RL	As Indicated
Plot Date	2025-03-05	

SHEET NO. **G1**

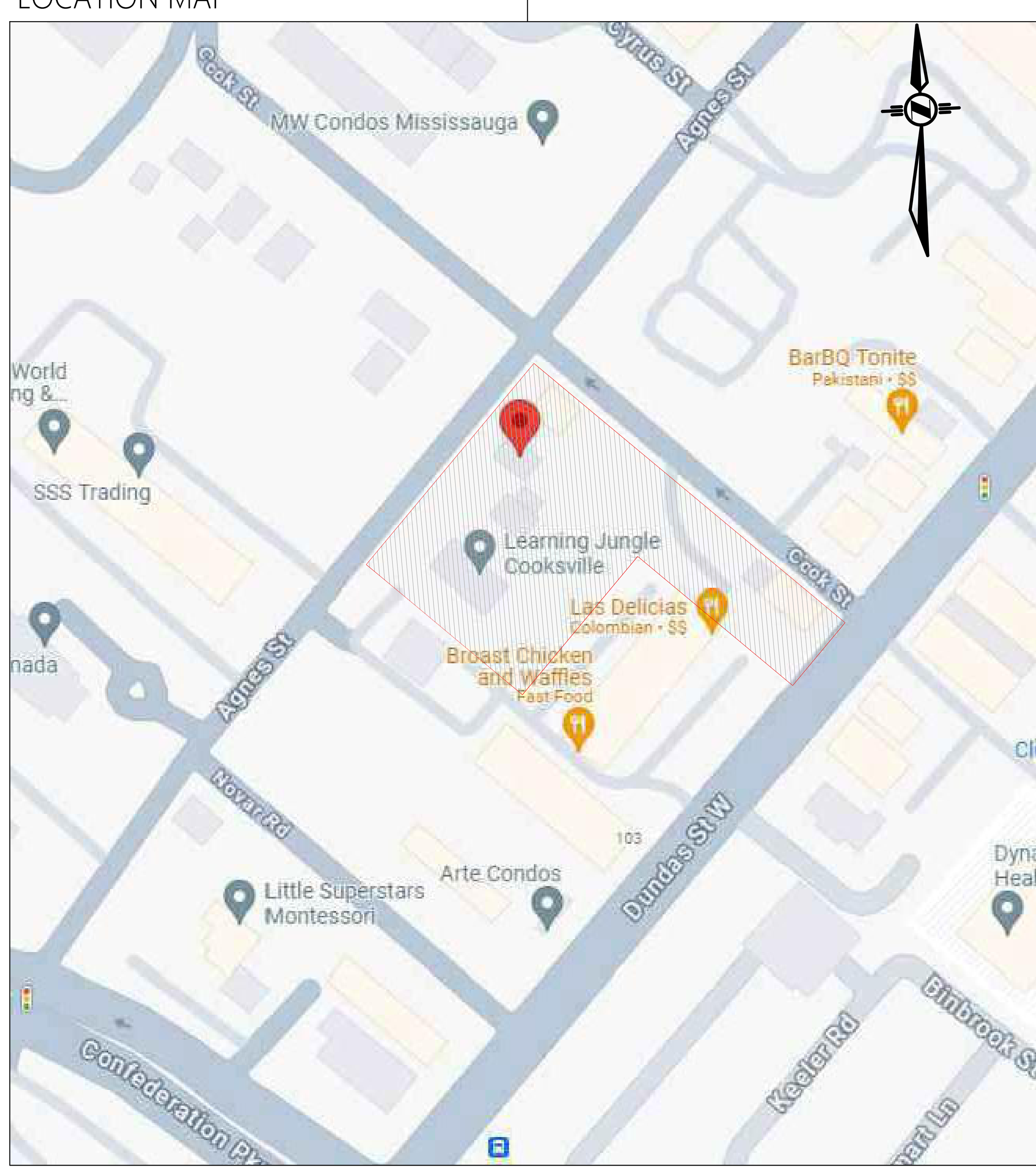
REVISION

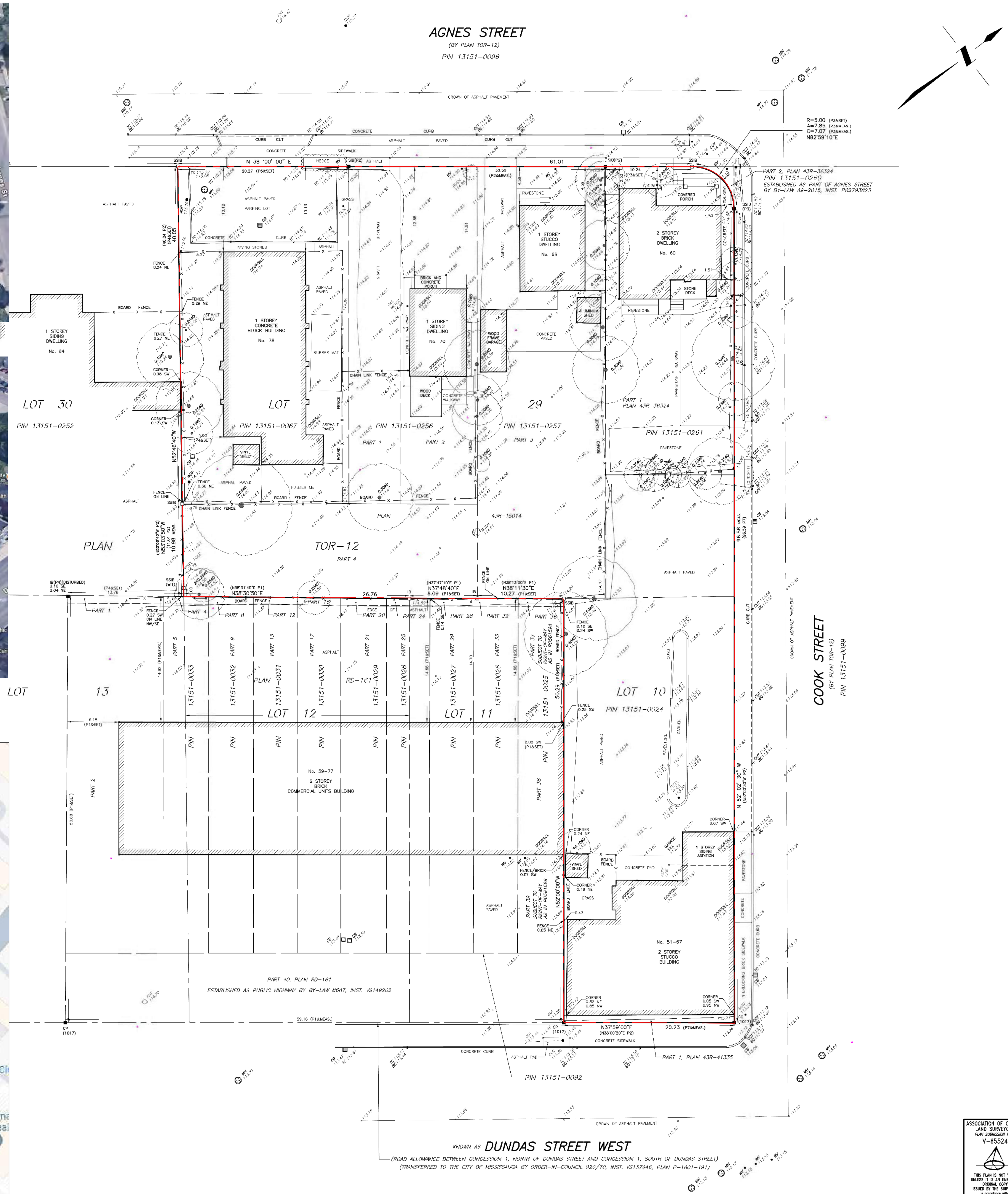
SITE IMAGE FROM NORTH-WEST SIDE



SITE IMAGE FROM SOUTH-EAST SIDE

LOCATION MAP





PLAN OF SURVEY WITH TOPOGRAPHY OF

LOT 10 AND PART OF LOT 29

WEST OF HURONTARIO STREET

PLAN TOR-12

CITY OF MISSISSAUGA

REGIONAL MUNICIPALITY OF PEEL

SCALE 1 : 200

5 0 5 10 metres

TARASICK McMILLAN KUBICKI LIMITED
ONTARIO LAND SURVEYORS

METRIC

DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

ELEVATION NOTE

ELEVATIONS ARE REFERRED TO CANADIAN GEODETIC VERTICAL DATUM-1928, AND WERE DERIVED FROM CITY OF MISSISSAUGA BENCHMARK No. 894, HAVING A PUBLISHED ELEVATION OF 117.839 metres.

BEARING NOTE

BEARINGS ARE ASTRONOMIC AND ARE REFERRED TO THE SOUTHEASTERLY LIMIT OF AGNES STREET AS SHOWN ON PLAN 43R-15014, HAVING A BEARING OF N38°00'00"E.

LEGEND

■	DENOTES	SURVEY MONUMENT FOUND
□	DENOTES	SURVEY MONUMENT PLANTED
IB	DENOTES	IRON BAR
SIB	DENOTES	STANDARD IRON BAR
SSIB	DENOTES	SHORT STANDARD IRON BAR
CC	DENOTES	CUT CROSS
CP	DENOTES	CONCRETE PIN
BC	DENOTES	BOTTOM OF CURB
CB	DENOTES	CATCH BASIN
CCT	DENOTES	CURB CUT
CLS	DENOTES	CONCRETE LIGHT STANDARD
CUP	DENOTES	CONCRETE UTILITY POLE
FHT	DENOTES	FIRE HYDRANT TOP
GUY	DENOTES	GUY ANCHOR WIRE
GV	DENOTES	GAS VALVE
MH	DENOTES	MANHOLE
TC	DENOTES	TOP OF CURB
WUP	DENOTES	WOOD UTILITY POLE
WV	DENOTES	WATER VALVE
P1	DENOTES	PLAN RD-161
P2	DENOTES	PLAN 43R-15014
P3	DENOTES	PLAN 43R-36324
P4	DENOTES	DUNNING & TAYLOR LTD., O.L.S., JULY 8, 1991
P5	DENOTES	TARASICK, McMILLAN LTD., O.L.S., MARCH 14, 2001
P7	DENOTES	PLAN 43R-41335
(1017)	DENOTES	CALLON DIETZ INC., O.L.S.
(WIT)	DENOTES	WITNESS
0.20øD	DENOTES	DECIDUOUS TREE WITH TRUNK DIAMETER
0.20øC	DENOTES	CONIFEROUS TREE WITH TRUNK DIAMETER

TREE CANOPIES ARE DRAWN TO SCALE.

SURVEYOR'S CERTIFICATE

I CERTIFY THAT :

1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT AND THE REGULATIONS MADE UNDER THEM.
2. THE SURVEY WAS COMPLETED ON SEPTEMBER 5, 2024.

SEPTEMBER 5, 2024
DATE

BORYS KUBICKI
ONTARIO LAND SURVEYOR

ASSOCIATION OF ONTARIO LAND SURVEYORS
PLAN SUBMISSION FORM
V-85524
THIS PLAN IS NOT VALID UNLESS IT IS AN EMBOSSED ORIGINAL COPY ISSUED BY THE SURVEYOR
In accordance with Regulation 1026, Section 29(3)

TARASICK McMILLAN KUBICKI LIMITED
ONTARIO LAND SURVEYORS
4181 SLADEVIEW CRESCENT, UNIT 42, MISSISSAUGA, ONTARIO L5L 5R2
TEL: (905) 569-8849 FAX: (905) 569-3160
E-MAIL: office@tmksurveyors.com

DRAWN BY: RE | FILE No. 10203-SRPR-T

01 SP100 EXISTING SURVEY PLAN (REFERENCE ONLY)
SCALE: N.T.S

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CLIENT

D-STILLWATERS DEVELOPMENTS INC.
OA BLUEKRESCENT DEV.

Project North *True North*

PROJECT TITLE:

Mixed Use Condo Development

51-55 Dundas St.W.,60-70 Agnes St, Mississauga, ON L5B 1J7

PROJECT NO. 24018

DRAWING ISSUE:

DESIGN COORDINATION

DRAWING TITLE:
EXISTING SURVEY, PLAN SITE IMAGES (REFERENCE ONLY)

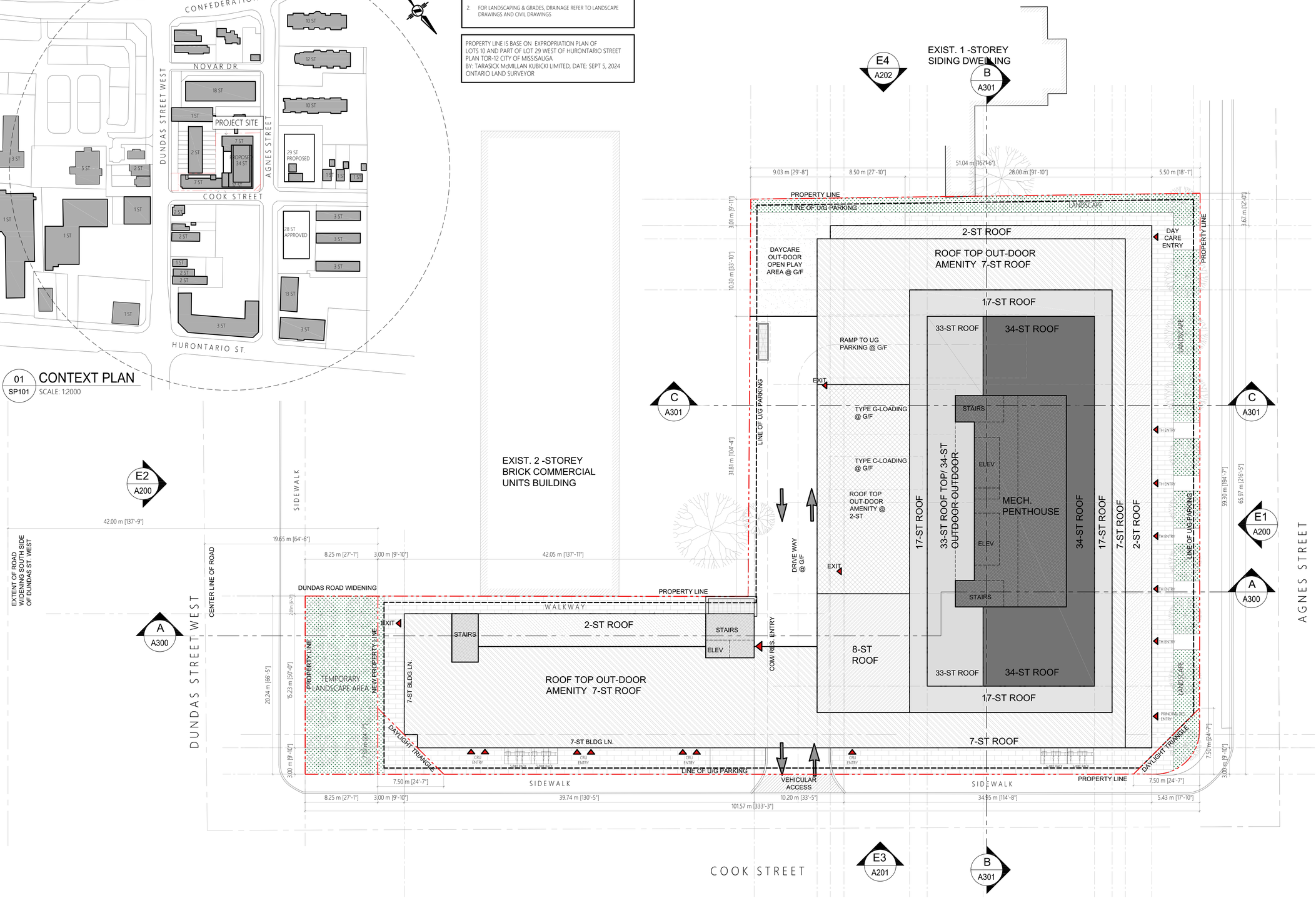
Drawn By	RG/MP	Scale	
Checked By	RL	As Indicated	
Plot Date	2025-03-05		

SHEET NO. SP100 REVISION

01 SP101 **CONTEXT PLAN**
SCALE: 1:2000

GENERAL NOTES:
1. FIRE HYDRANTS TO BE LOCATED WITHIN 90 M OF ALL POINTS OF BUILDING FACADE FACING COOK ST. AND WITHIN 45 M OF FIRE DEPARTMENT CONNECTIONS FIRE HYDRANTS TO BE LOCATED BY SIDE SERVICES AND FIRE PROTECTION AND FIRE PROTECTION ENGINEERS.
2. FOR LANDSCAPING & GRADES, DRAINAGE REFER TO LANDSCAPE DRAWINGS AND CIVIL DRAWINGS

PROPERTY LINE IS BASE ON EXPROPRIATION PLAN OF LOTS 10 AND PART OF LOT 29 WEST OF HURONTARIO STREET PLAN TOR-12 CITY OF MISSISAUGA
BY: TARASICK McMILLAN KUBICKI LIMITED, DATE: SEPT 5, 2024
ONTARIO LAND SURVEYOR



02 SP101 **CONCEPT SITE PLAN**
SCALE: 1:200

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51-55 Dundas St.W.,60-70 Agnes St, Mississauga, ON L5B 1J7

PROJECT NO. **24018**

DRAWING ISSUE:

DESIGN COORDINATION

DRAWING TITLE:

CONCEPT SITE PLAN

Drawn By	RG/MP	Scale
Checked By	RL	As Indicated
Plot Date	2025-03-05	

SHEET NO. **SP101** REVISION

SITE TOP VIEW MAP

GENERAL NOTES:

1. FIRE HYDRANTS TO BE LOCATED WITHIN 90 M OF ALL POINTS OF BUILDING FACADE FACING COOK ST. AND WITHIN 45 M OF FIRE DEPARTMENT CONNECTIONS FIRE HYDRANTS TO BE LOCATED BY SIDE SERVICES AND FIRE PROTECTION AND FIRE PROTECTION ENGINEERS.
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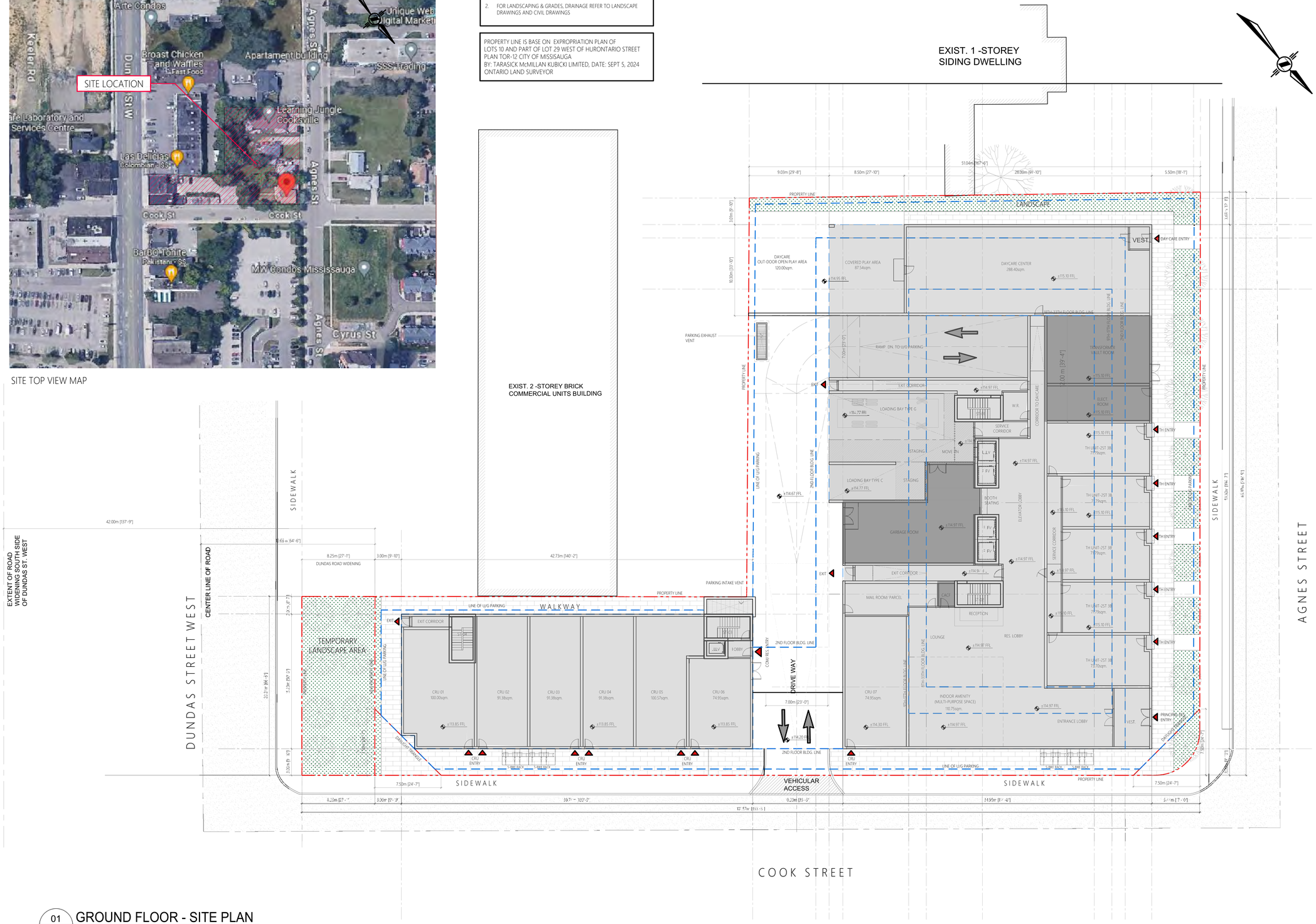

01 GROUND FLOOR - SITE PLAN
SP102 SCALE: 1:200

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CLIENT

D-STILLWATERS DEVELOPMENTS INC.
OA BLUEKRESCENT DEV.

Project North | *True North*

PROJECT TITLE:

Mixed Use Condo Development

51-55 Dundas St.W.,60-70 Agnes St, Mississauga, ON L5B 1J7

PROJECT NO. **24018**

DRAWING ISSUE:

DESIGN COORDINATION

DRAWING TITLE:

GROUND FLOOR SITE PLAN

Drawn By	RG/MP	Scale
Checked By	RL	As Indicated
Plot Date	2025-03-05	

SHEET NO. **SP102** REVISION

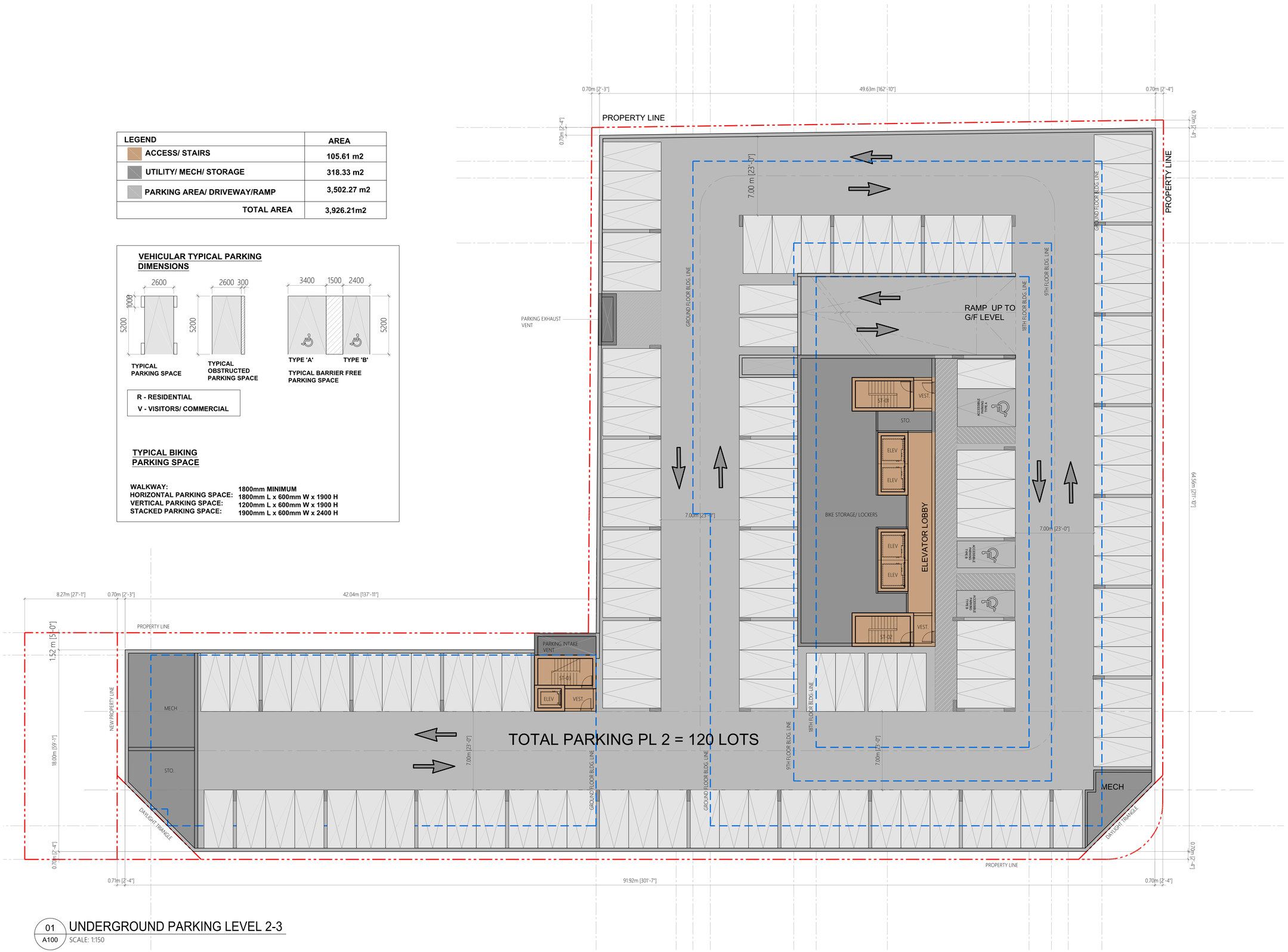
LEGEND	AREA
ACCESS/ STAIRS	105.61 m2
UTILITY/ MECH/ STORAGE	318.33 m2
PARKING AREA/ DRIVEWAY/RAMP	3,502.27 m2
TOTAL AREA	3,926.21m2

VEHICULAR TYPICAL PARKING DIMENSIONS

R - RESIDENTIAL
V - VISITORS/ COMMERCIAL

TYPICAL BIKING PARKING SPACE

WALKWAY:	1800mm MINIMUM
HORIZONTAL PARKING SPACE:	1800mm L x 600mm W x 1900 H
VERTICAL PARKING SPACE:	1200mm L x 600mm W x 1900 H
STACKED PARKING SPACE:	1900mm L x 600mm W x 2400 H



01 A100 UNDERGROUND PARKING LEVEL 2-3
SCALE: 1:150

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CLIENT

D-STILLWATERS DEVELOPMENTS INC.
OA BLUEKRESCENT DEV.

Project North | *True North*

PROJECT TITLE:

Mixed Use Condo Development

51-55 Dundas St.W.,60-70 Agnes St, Mississauga, ON L5B 1J7

PROJECT NO. **24018**

DRAWING ISSUE:

DESIGN COORDINATION

DRAWING TITLE:

UNDERGROUND PARKING LEVEL 2

Drawn By	RG/MP	Scale
Checked By	RL	As Indicated
Plot Date	2025-03-05	

SHEET NO. **A100**

REVISION

LEGEND	AREA
ACCESS/ STAIRS	105.61 m2
UTILITY/ MECH/ STORAGE	336.47 m2
PARKING AREA/ DRIVEWAY/RAMP	3,484.13 m2
TOTAL AREA	3,926.21 m2

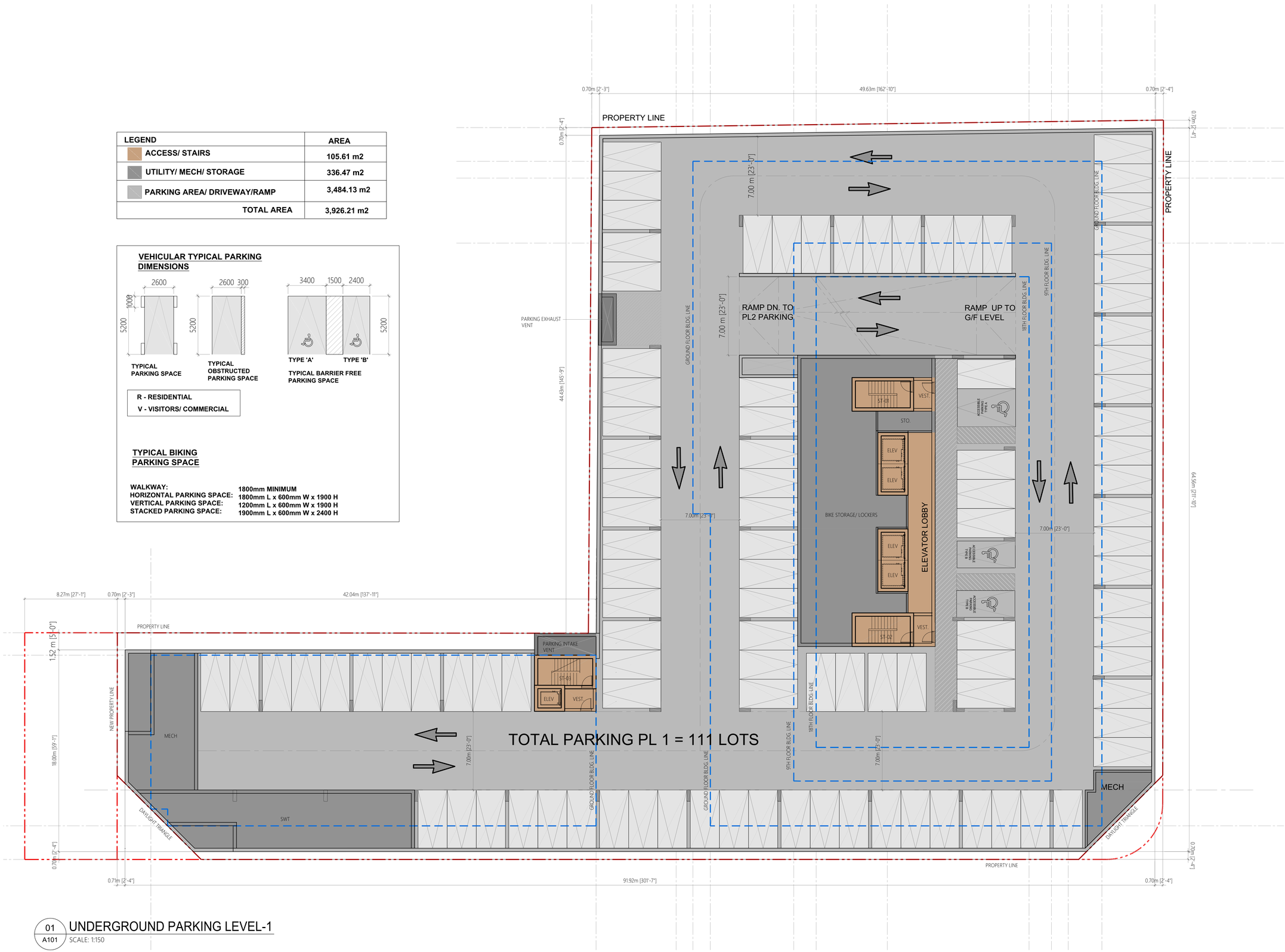
VEHICULAR TYPICAL PARKING DIMENSIONS

R - RESIDENTIAL

V - VISITORS/ COMMERCIAL

TYPICAL BIKING PARKING SPACE

WALKWAY:	1800mm MINIMUM
HORIZONTAL PARKING SPACE:	1800mm L x 600mm W x 1900 H
VERTICAL PARKING SPACE:	1200mm L x 600mm W x 1900 H
STACKED PARKING SPACE:	1900mm L x 600mm W x 2400 H



01 A101 UNDERGROUND PARKING LEVEL-1

SCALE: 1:150

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DRAWING ISSUE:

DESIGN COORDINATION

DRAWING TITLE:

UNDERGROUND PARKING LEVEL 1

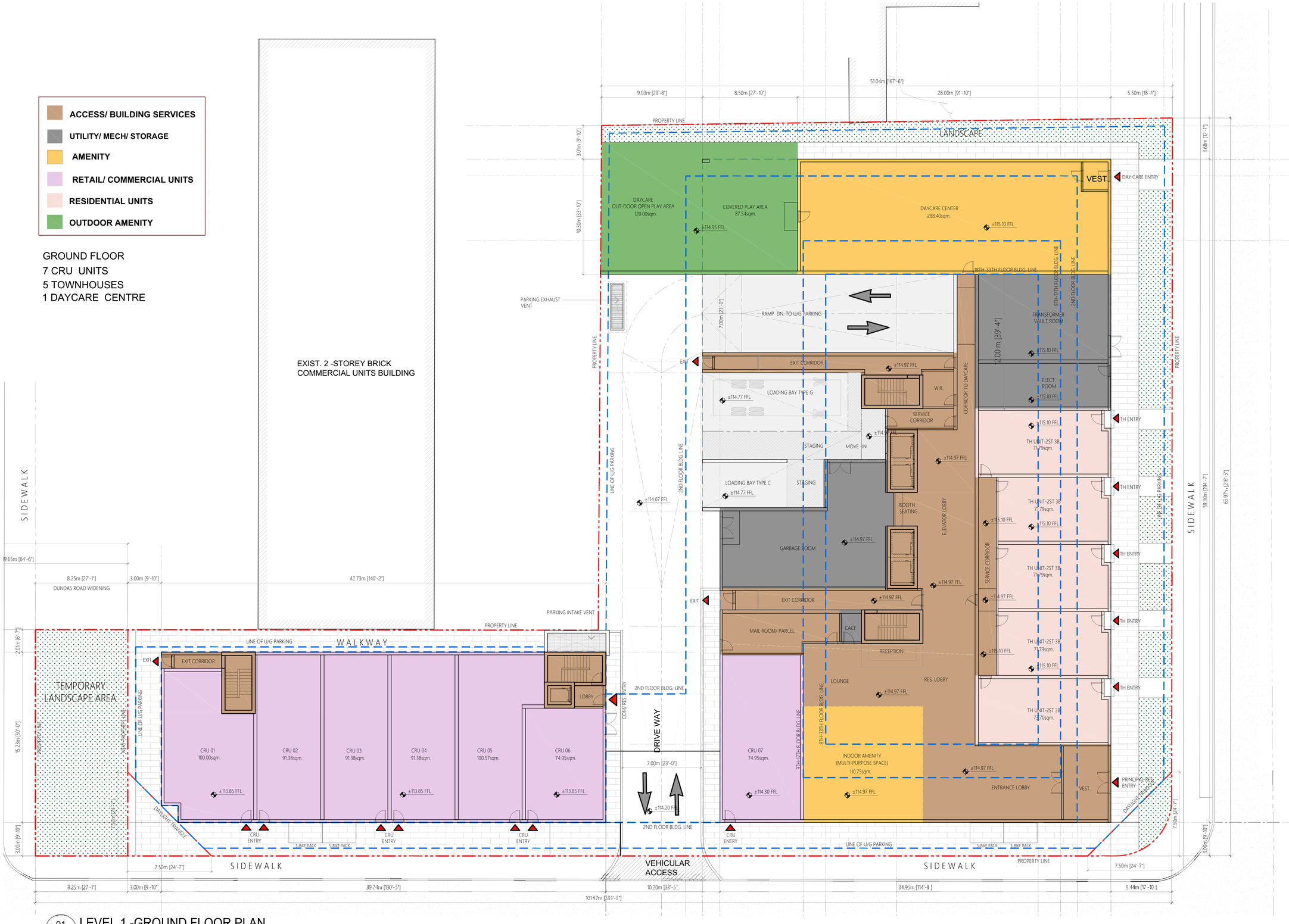
Drawn By	RG/MP	Scale
Checked By	RL	As Indicated
Plot Date	2025-03-05	

SHEET NO. **A101**

REVISION

- ACCESS/ BUILDING SERVICES
- UTILITY/ MECH/ STORAGE
- AMENITY
- RETAIL/ COMMERCIAL UNITS
- RESIDENTIAL UNITS
- OUTDOOR AMENITY

GROUND FLOOR
7 CRU UNITS
5 TOWNHOUSES
1 DAYCARE CENTRE



01 LEVEL 1 -GROUND FLOOR PLAN
A102 SCALE: 1:150

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CLIENT

D-STILLWATERS DEVELOPMENTS INC. OA BLUEKRESCENT DEV.

Project North *True North*

PROJECT TITLE:

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51-55 Dundas St.W.,60-70 Agnes St, Mississauga, ON L5B 1J7

PROJECT NO. **24018**

DRAWING ISSUE:

DESIGN COORDINATION

DRAWING TITLE:

LEVEL 1 - GROUND FLOOR PLAN

Drawn By	RG/MP	Scale
Checked By	RL	As Indicated
Plot Date	2025-03-05	

SHEET NO. **A102**

REVISION

ACCESS/ BUILDING SERVICES

UTILITY/ MECH/ STORAGE

AMENITY

RETAIL/ COMMERCIAL UNITS

RESIDENTIAL UNITS

OUTDOOR AMENITY

2ND- FLOOR

COMMERCIAL/ OFFICE = 6 UNITS

RESIDENTIAL = 21 UNITS

01 A103 LEVEL 2 - FLOOR PLAN

SCALE: 1:150

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CLIENT

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OA BLUEKRESCENT DEV.

Project North | *True North*

PROJECT TITLE:

Mixed Use Condo Development

51-55 Dundas St.W.,60-70 Agnes St, Mississauga, ON L5B 1J7

PROJECT NO. **24018**

DRAWING ISSUE:

DESIGN COORDINATION

DRAWING TITLE:

LEVEL 2 - FLOOR PLAN

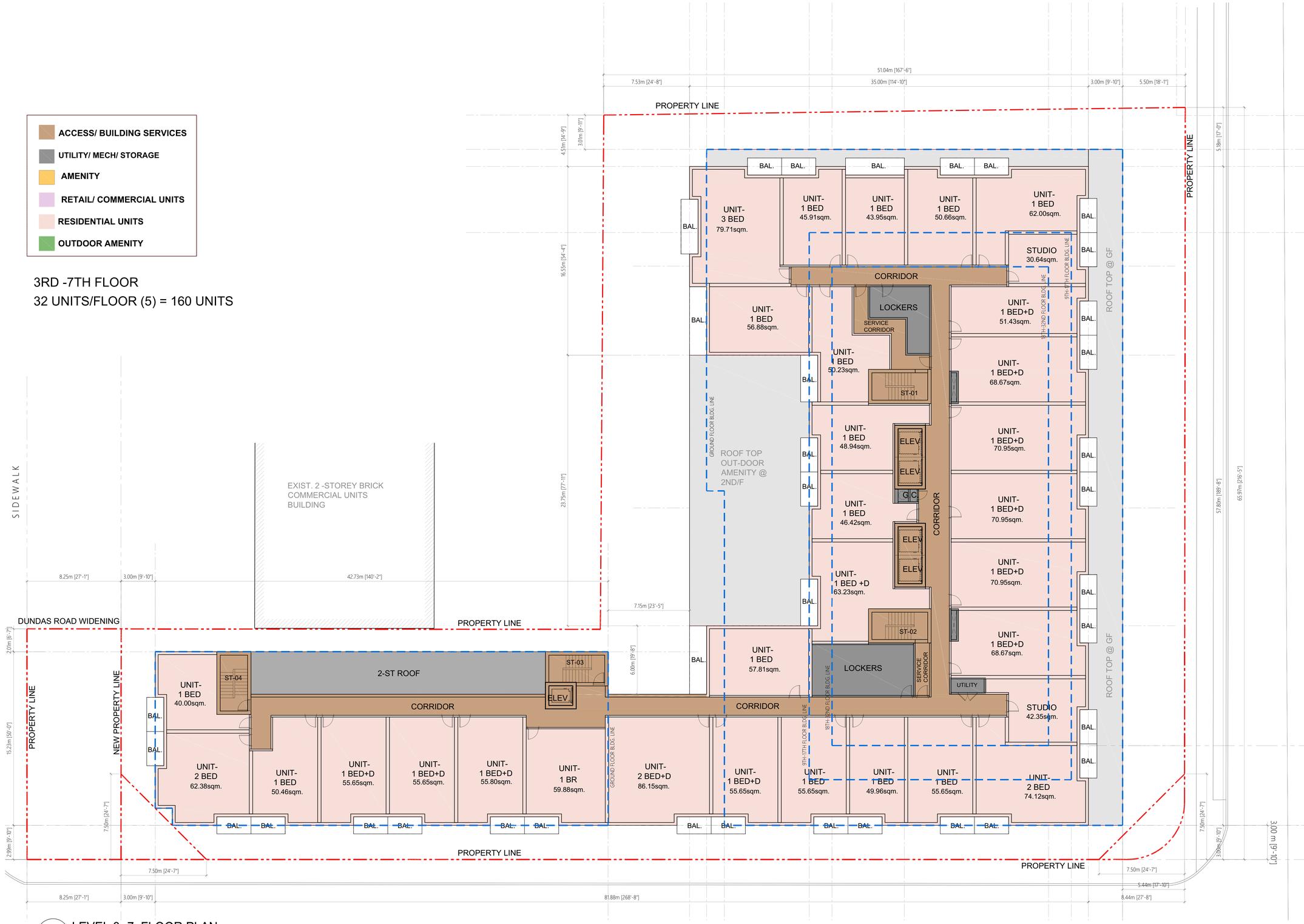
Drawn By	RG/MP	Scale
Checked By	RL	As Indicated
Plot Date	2025-03-05	

SHEET NO. **A103**

REVISION

- ACCESS/ BUILDING SERVICES
- UTILITY/ MECH/ STORAGE
- AMENITY
- RETAIL/ COMMERCIAL UNITS
- RESIDENTIAL UNITS
- OUTDOOR AMENITY

3RD -7TH FLOOR
32 UNITS/FLOOR (5) = 160 UNITS



01 A104 LEVEL 3 -7 FLOOR PLAN
SCALE: 1:150

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DRAWING ISSUE:

DESIGN COORDINATION

DRAWING TITLE:

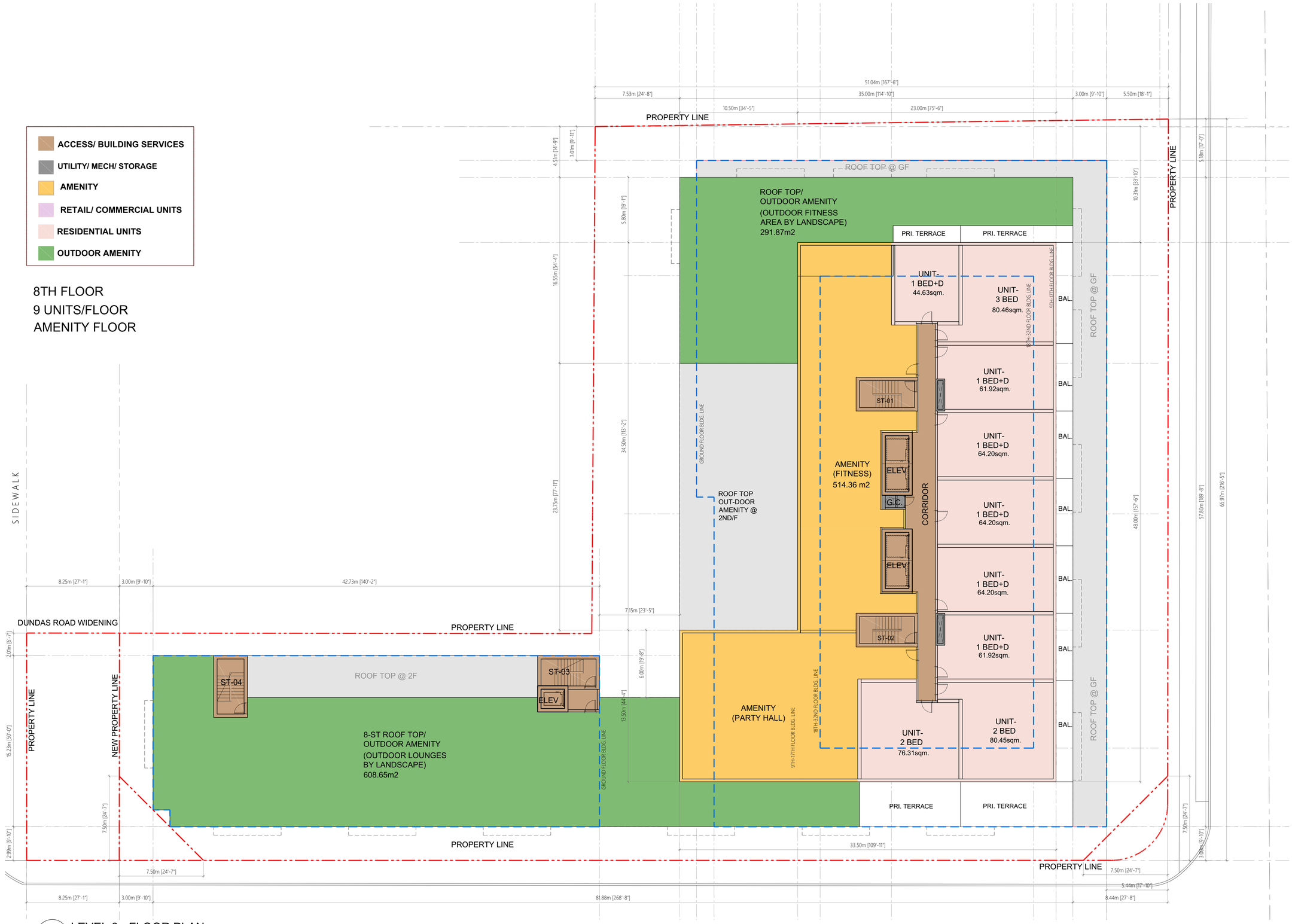
LEVEL 3 - 7 FLOOR PLAN

Drawn By	RG/MP	Scale	As Indicated
Checked By	RL		
Plot Date	2025-03-05		

SHEET NO. **A104** REVISION

- ACCESS/ BUILDING SERVICES
- UTILITY/ MECH/ STORAGE
- AMENITY
- RETAIL/ COMMERCIAL UNITS
- RESIDENTIAL UNITS
- OUTDOOR AMENITY

8TH FLOOR
9 UNITS/FLOOR
AMENITY FLOOR



01 LEVEL 8 - FLOOR PLAN
A105 SCALE: 1:150

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5	DESIGN COORDINATION	2025-03-05	MP

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DEVELOPMENTS INC.
OA BLUEKRESCENT DEV.

Project North *True North*

PROJECT TITLE:

Mixed Use Condo
Development

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PROJECT NO. **24018**

DRAWING ISSUE:

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DRAWING TITLE:

LEVEL 8 - FLOOR PLAN

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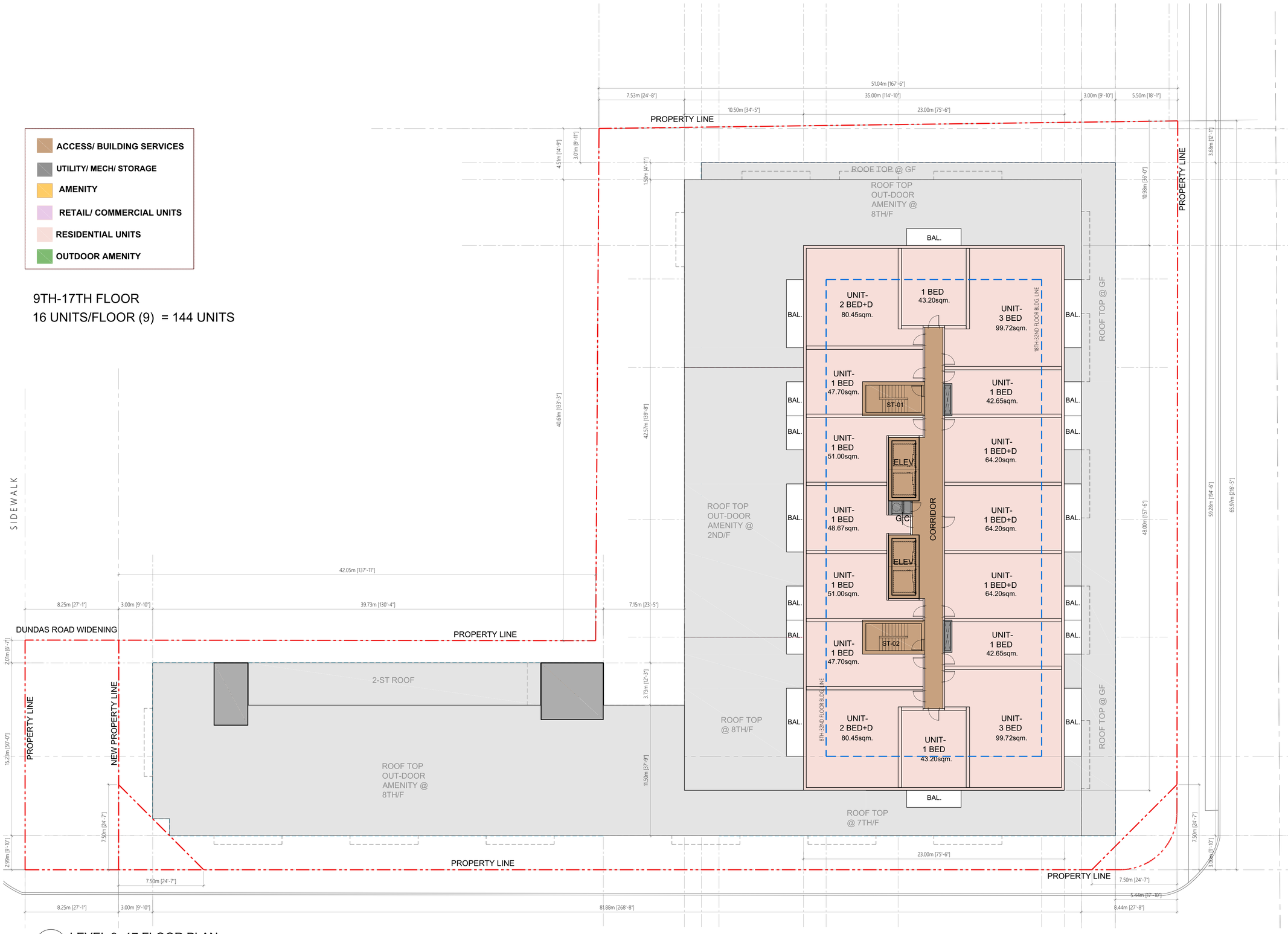
SHEET NO. **A105** REVISION

- ACCESS/ BUILDING SERVICES
- UTILITY/ MECH/ STORAGE
- AMENITY
- RETAIL/ COMMERCIAL UNITS
- RESIDENTIAL UNITS
- OUTDOOR AMENITY

9TH-17TH FLOOR
16 UNITS/FLOOR (9) = 144 UNITS



01 A106 LEVEL 9 -17 FLOOR PLAN
SCALE: 1:150

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5	DESIGN COORDINATION	2025-03-05	MP

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PROJECT NO. **24018**

DRAWING ISSUE:

DESIGN COORDINATION

DRAWING TITLE:

LEVEL 9-17 FLOOR PLAN

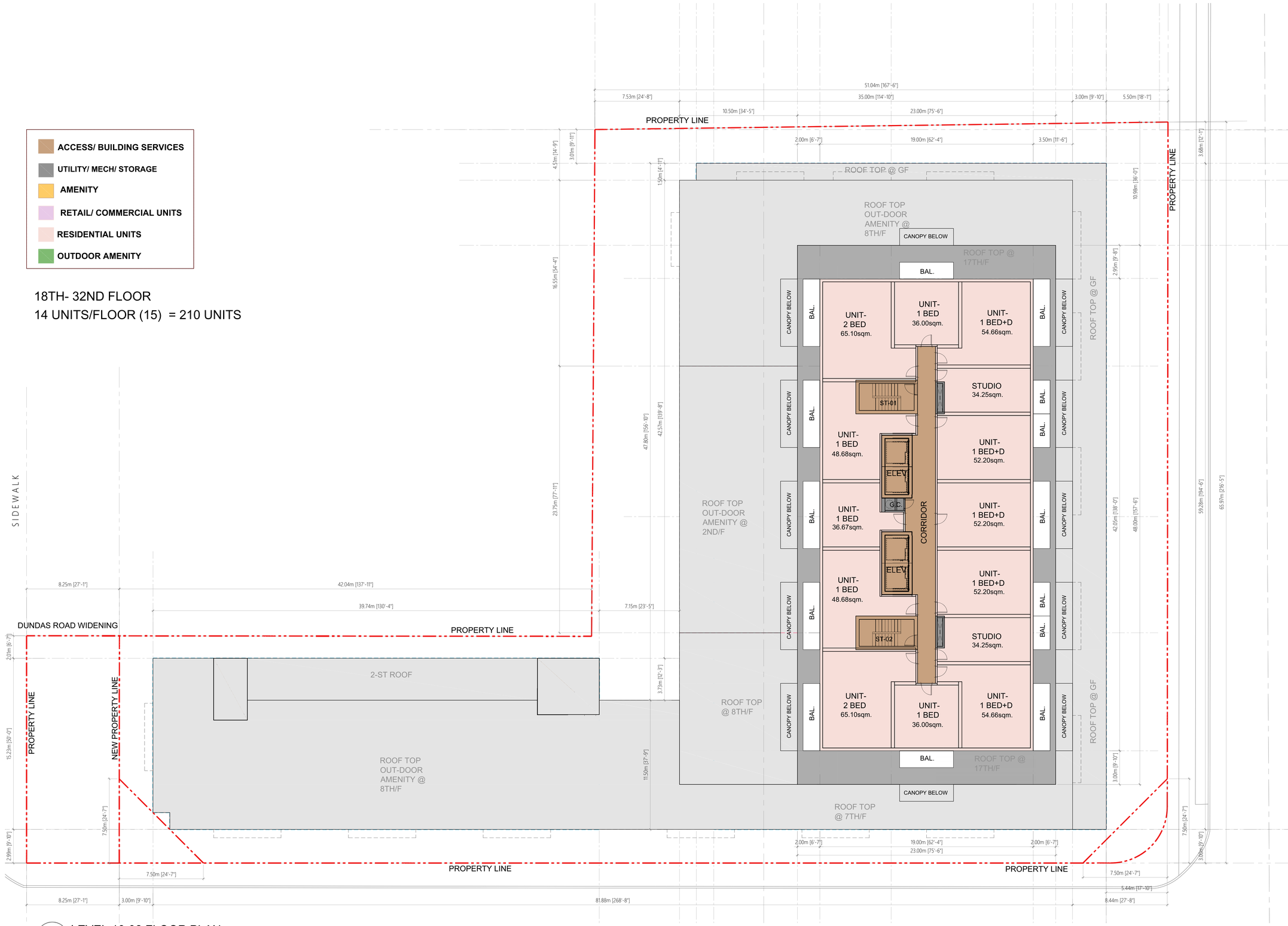
Drawn By	RG/MP	Scale
Checked By	RL	As Indicated
Plot Date	2025-03-05	

SHEET NO. **A106**

REVISION

- ACCESS/ BUILDING SERVICES
- UTILITY/ MECH/ STORAGE
- AMENITY
- RETAIL/ COMMERCIAL UNITS
- RESIDENTIAL UNITS
- OUTDOOR AMENITY

18TH- 32ND FLOOR
14 UNITS/FLOOR (15) = 210 UNITS



01 A107 LEVEL 18-32 FLOOR PLAN
SCALE: 1:150

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Project North *True North*

PROJECT TITLE:

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PROJECT NO. **24018**

DRAWING ISSUE:

DESIGN COORDINATION

DRAWING TITLE:

LEVEL 18-32 FLOOR PLAN

Drawn By	RG/MP	Scale
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Plot Date	2025-03-05	

SHEET NO. **A107**

REVISION

ACCESS/ BUILDING SERVICES

UTILITY/ MECH/ STORAGE

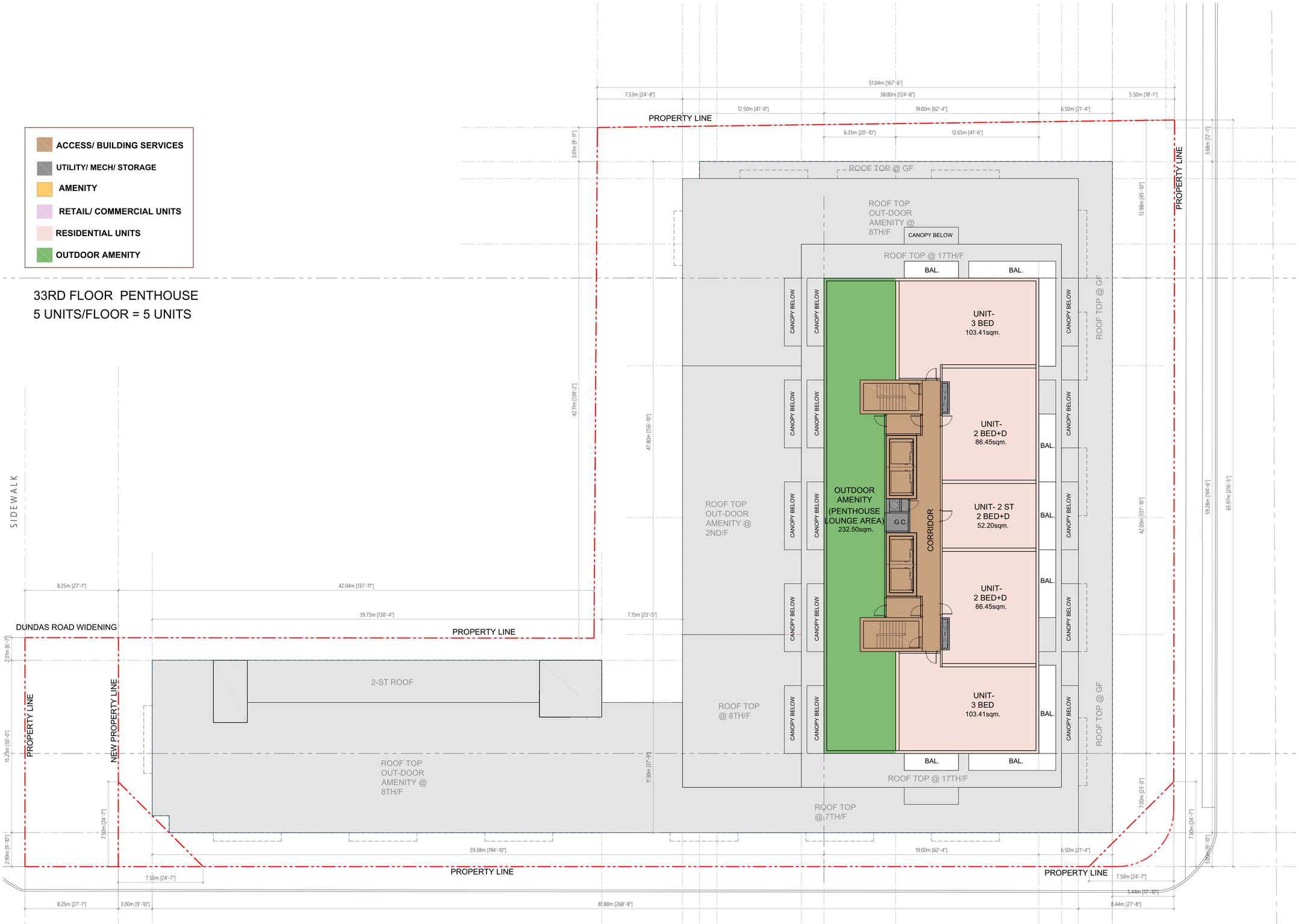
AMENITY

RETAIL/ COMMERCIAL UNITS

RESIDENTIAL UNITS

OUTDOOR AMENITY

33RD FLOOR PENTHOUSE
5 UNITS/FLOOR = 5 UNITS



01 / A108 LEVEL 33 - PENTHOUSE FLOOR PLAN
SCALE: 1:150

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DRAWING ISSUE:

DESIGN COORDINATION

DRAWING TITLE:

LEVEL 33 PENTHOUSE FLOOR PLAN

Drawn By	RG/MP	Scale
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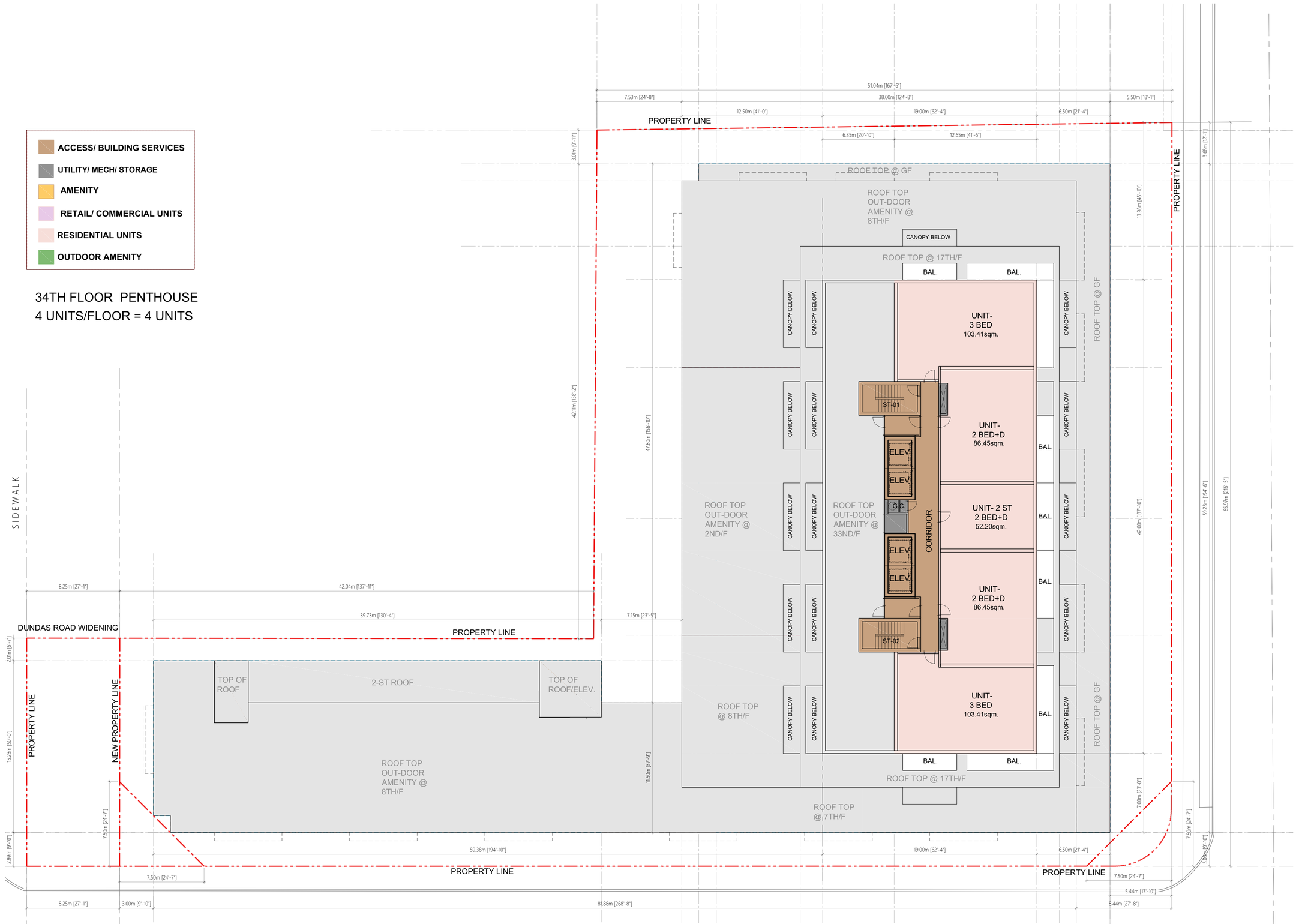
SHEET NO. **A108** REVISION

- ACCESS/ BUILDING SERVICES
- UTILITY/ MECH/ STORAGE
- AMENITY
- RETAIL/ COMMERCIAL UNITS
- RESIDENTIAL UNITS
- OUTDOOR AMENITY

34TH FLOOR PENTHOUSE
4 UNITS/FLOOR = 4 UNITS



01 LEVEL 34 FLOOR PLAN
A109 SCALE: 1:150

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DRAWING TITLE:

LEVEL 34 FLOOR PLAN

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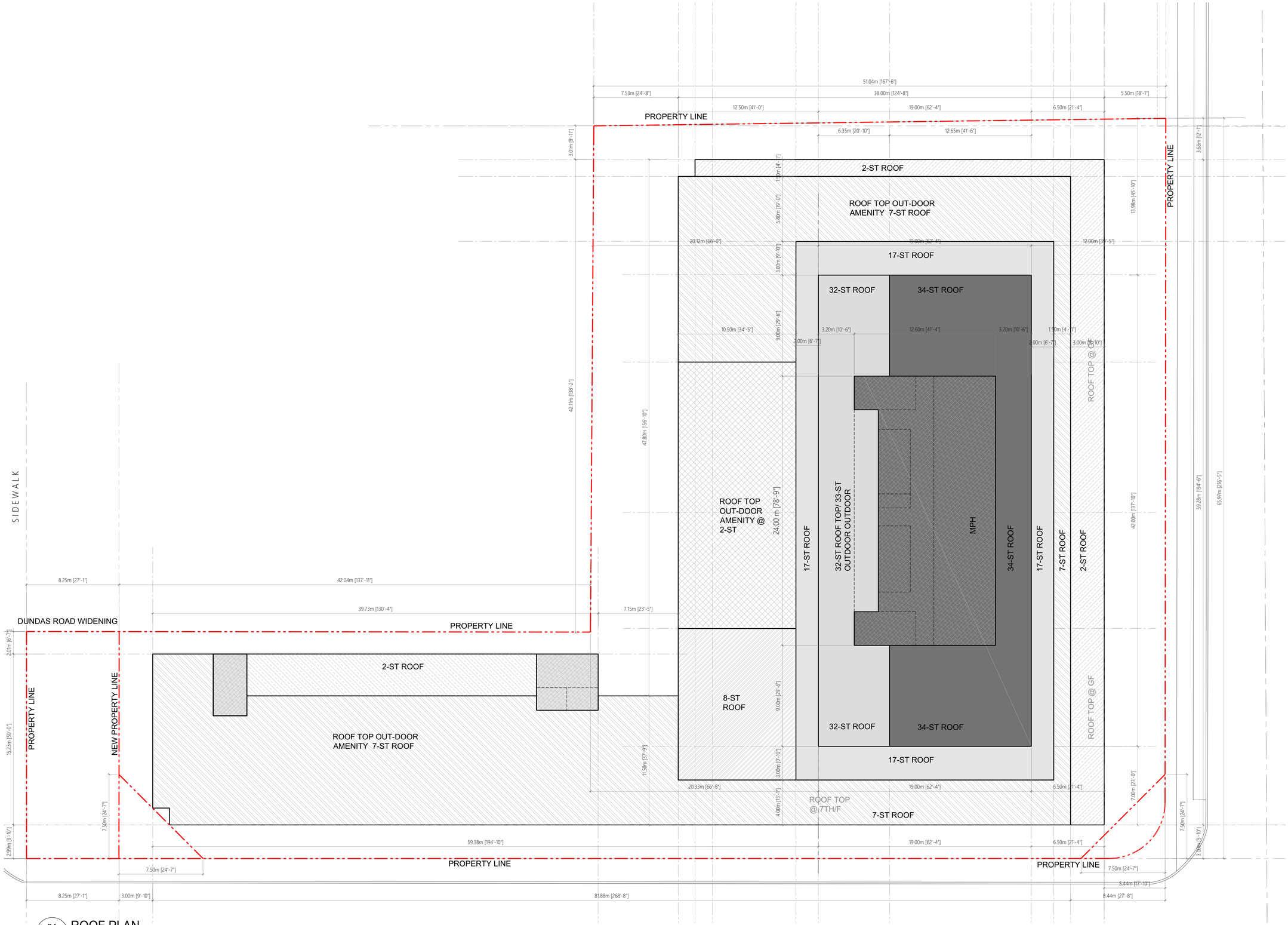

01 ROOF PLAN
A110 SCALE: 1:150

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DRAWING ISSUE:

DESIGN COORDINATION

DRAWING TITLE:

ROOF PLAN

Drawn By	RG/MP	Scale
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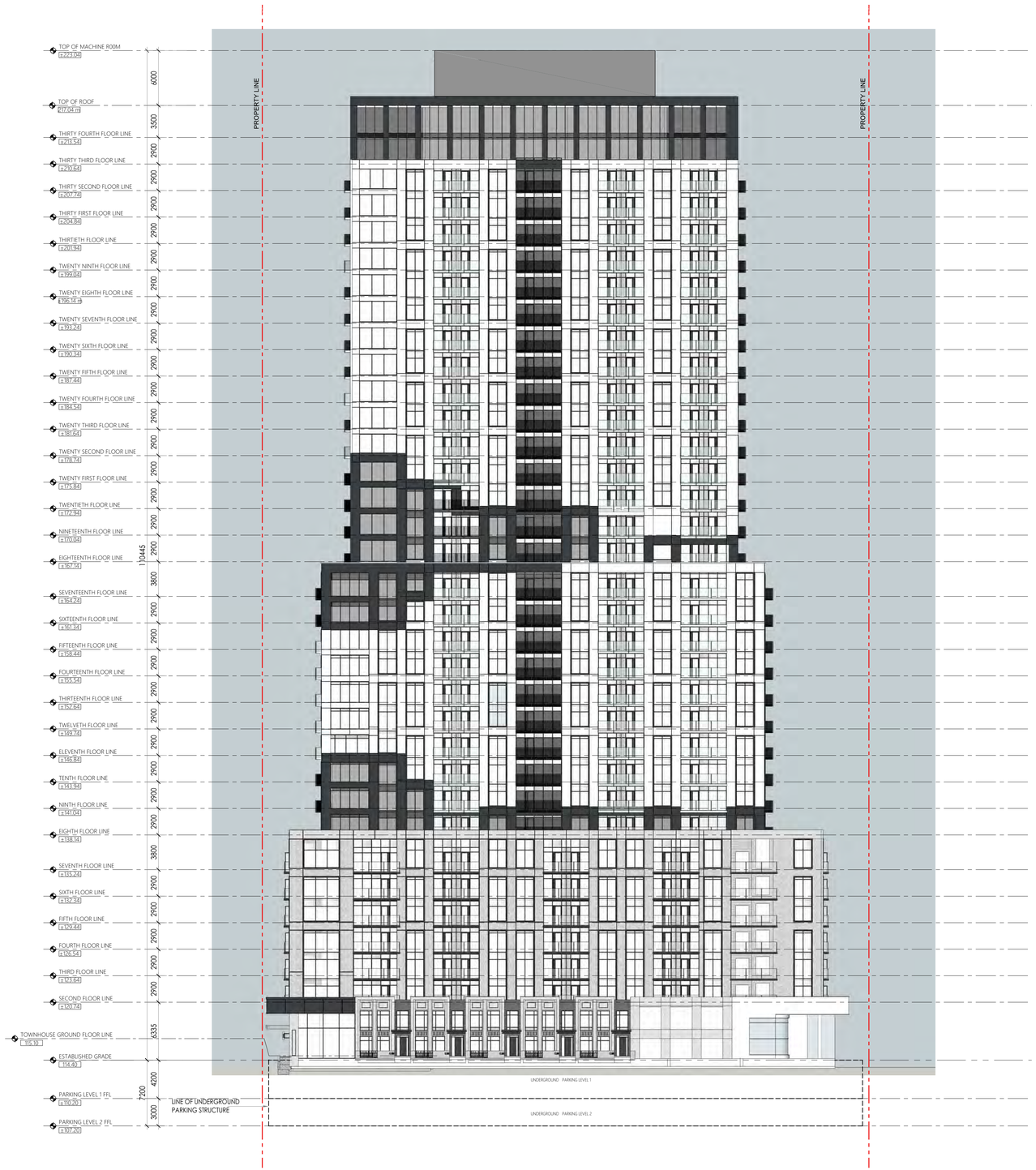

ALONG AGNES ST.

01
A200

FRONT ELEVATION - E1

SCALE: 1:250

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PROJECT NO. **24018**

DRAWING ISSUE:

DESIGN COORDINATION

DRAWING TITLE:

ELEVATION PART - 1

Drawn By	RG/MP	Scale
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Plot Date	2025-03-05	

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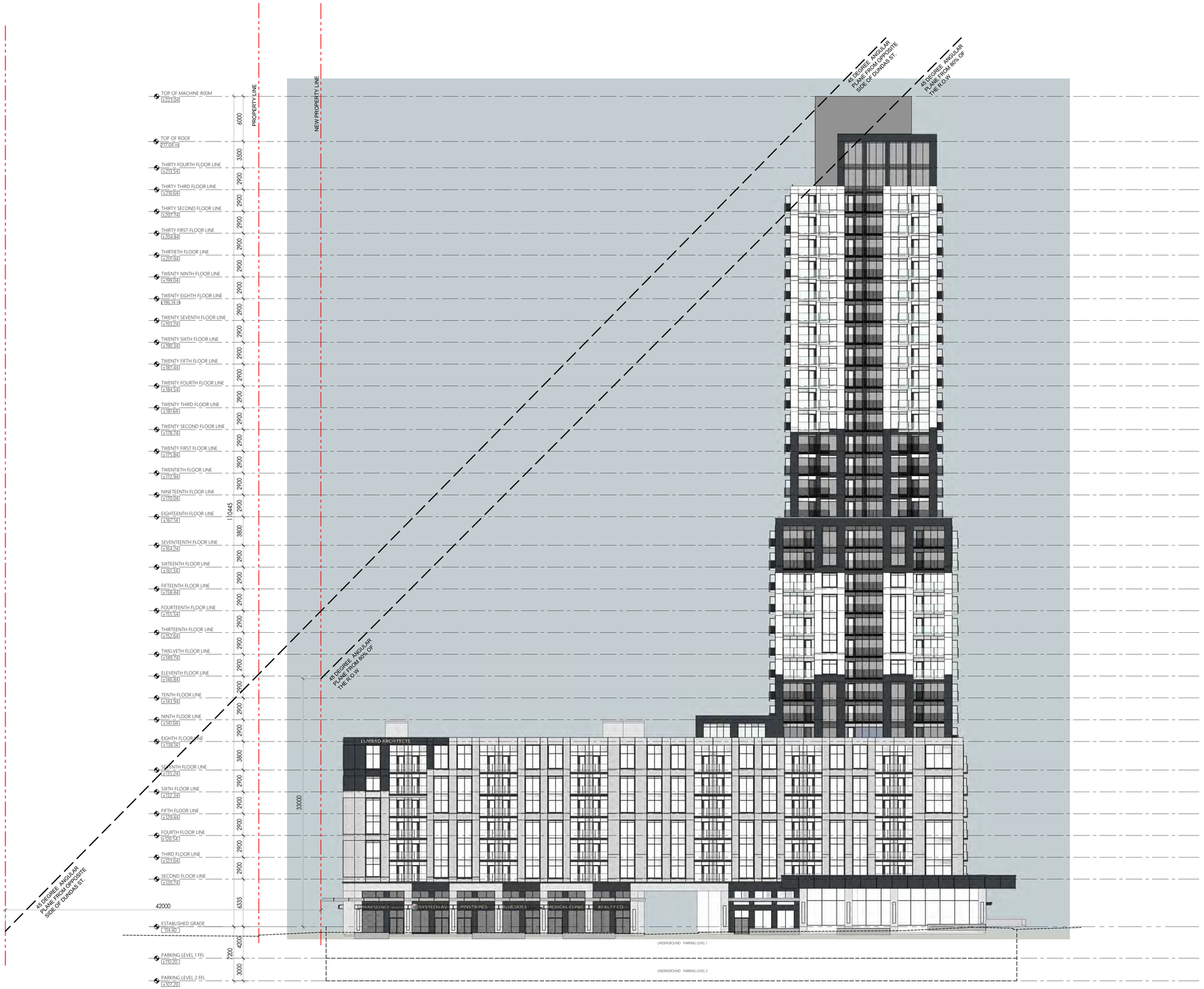
REVISION



ALONG COOK ST.

01 / A201 LEFT SIDE ELEVATION - E3

SCALE: 1:250

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PROJECT NO. **24018**

DRAWING ISSUE:

DESIGN COORDINATION

DRAWING TITLE:

ELEVATION PART - 3

Drawn By	RG/MP	Scale
Checked By	RL	As Indicated
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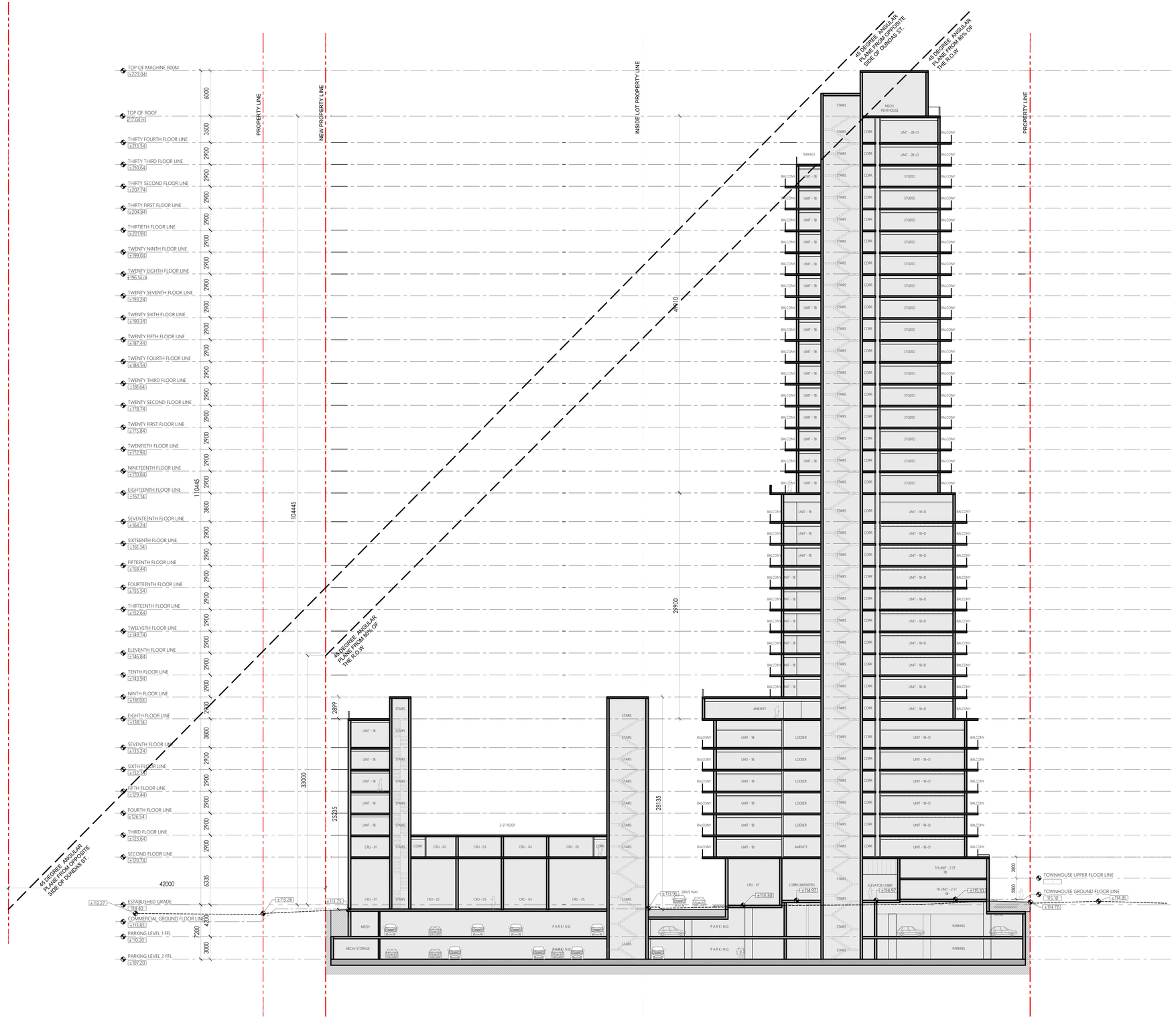
SHEET NO. **A201**

REVISION



01
A300
SECTIONAL ELEVATION - A
SCALE: 1:250

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PROJECT NO. **24018**

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DESIGN COORDINATION

DRAWING TITLE:

SECTIONAL ELEVATION
PART 1

Drawn By	RG/MP	Scale
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Plot Date	2025-03-05	

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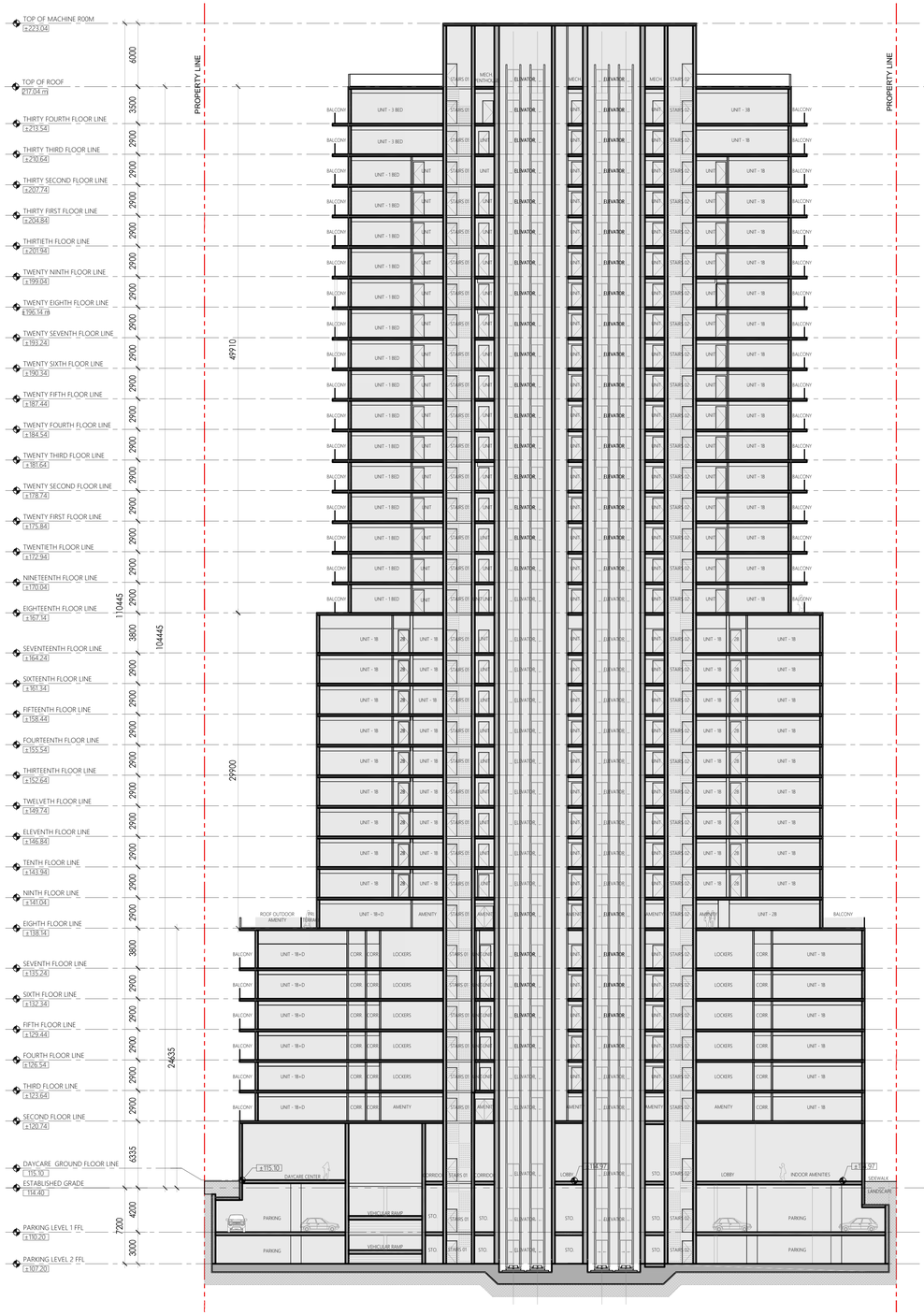
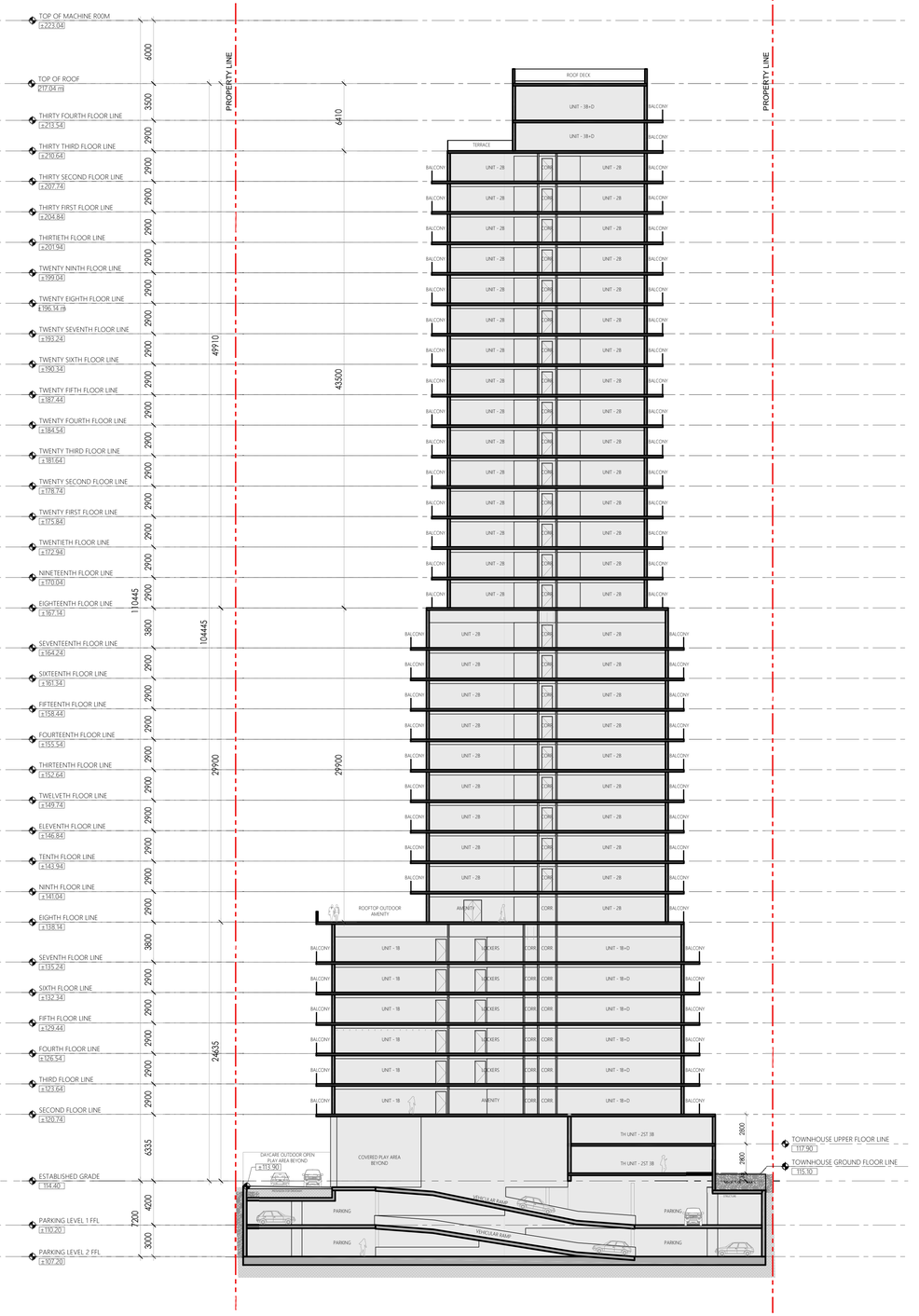
REVISION



01 / 301 SECTIONAL ELEVATION - B

SCALE: 1:250



02 / 301 SECTIONAL ELEVATION - C

SCALE: 1:250

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4	DESIGN COORDINATION	2025-02-26	MP
5	DESIGN COORDINATION	2025-03-05	MP

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PROJECT TITLE:

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PROJECT NO. **24018**

DRAWING ISSUE:

DESIGN COORDINATION

DRAWING TITLE:

SECTION ELEVATION PART 2

Drawn By	RG/MP	Scale
Checked By	RL	As Indicated
Plot Date	2025-03-05	

SHEET NO. **A301**

REVISION

APPENDIX B

CRITERIA

Transportation Sources

Guidance from the Ontario Ministry of the Environment, Conservation and Parks (MECP) NPC-300 Environmental Noise Guideline was used to assess environmental noise generated by transportation-related sources. There are three aspects to consider, which include the following:

i. Transportation source sound levels in indoor living areas (living rooms and sleeping quarters), which determines building façade elements (windows, exterior walls, doors) sound insulation design recommendations.
ii. Transportation source sound levels at the plane of the window, which determines air-conditioning and ventilation system recommendations and associated warning clauses which inform the future occupants that windows and doors must be closed in order to meet the indoor sound level criteria.
iii. Transportation source sound levels in Outdoor Living Areas (OLAs), which determines OLA noise mitigation and related warning clause recommendations.

Road and Rail

Indoor Sound Level Criteria

For assessing sound originating from transportation sources, NPC-300 defines sound level criteria as summarized in **Table 1** for indoor areas of sensitive uses. The specified values are maximum sound levels and apply to the indicated indoor spaces with the windows and doors closed.

Table 1: Indoor Sound Level Criteria for Road and Rail Sources

Type of Space	Source	Sound Level Criteria (Indoors)	
		Daytime $L_{eq,16\text{-}hr}$ 07:00h – 23:00h	Nighttime $L_{eq,8\text{-}hr}$ 23:00h – 07:00h
Living Quarters Examples: Living, dining and den areas of residences, hospitals, nursing homes, schools and daycare centres	**Road**	45 dBA	
	Rail	40 dBA	
Sleeping Quarters	**Road**	45 dBA	40 dBA
	Rail	40 dBA	35 dBA

NPC-300 also provides guidelines for acceptable indoor sound levels that are extended to land uses and developments which are not normally considered noise sensitive. The guideline sound level criteria presented in **Table 2** are provided to inform good-practice design objectives.

Table 2: Supplementary Indoor Sound Level Criteria for Road and Rail Sources

Type of Space	Source	Sound Level Criteria (Indoors)	
		Daytime $L_{eq,16\text{-}hr}$ 07:00h – 23:00h	Nighttime $L_{eq,8\text{-}hr}$ 23:00h – 07:00h
General offices, reception areas, retail stores, etc.	**Road**	50 dBA	-
	Rail	45 dBA	-
Theatres, places of worship, libraries, individual or semi-private offices, conference rooms, reading rooms, etc.	**Road**	45 dBA	-
	Rail	40 dBA	-
Sleeping quarters of residences, hospitals, nursing/retirement homes, etc.	**Road**	-	40 dBA
	Rail	-	35 dBA
Sleeping quarters of hotels/motels	**Road**	-	45 dBA
	Rail	-	40 dBA

Outdoor Living Areas (OLAs)

Outdoor Living Areas (OLAs) would include outdoor areas intended and designed for the quiet enjoyment of the outdoor environment and which are readily accessible from the building.

OLAs may include any common outdoor amenity spaces associated with a multi-unit residential development (e.g. courtyards, roof-top terraces), and/or private backyards and terraces with a minimum depth of 4m provided they are the only outdoor living area for the occupant. The sound level criteria for outdoor living areas is summarized in **Table 3**.

Table 3: Sound Level Criteria – Outdoor Living Area

Assessment Location	Sound Level Criteria (Outdoors)	
	Daytime $L_{eq,16\text{-}hr}$ 07:00h – 23:00h	Nighttime $L_{eq,8\text{-}hr}$ 23:00h – 07:00h
Outdoor Living Area (OLA) (Combined Road and Rail)	55 dBA	-

Outdoor and Plane of Window Sound Levels

In addition to the sound level criteria, noise control measures and requirements for ventilation and warning clauses requirements are recommended for residential land-uses based on predicted transportation source sound levels incident in the plane of window at bedrooms and living/dining rooms, and/or at outdoor living areas. These recommendations are summarized in **Table 4** below.

Table 4: Ventilation, Building Component, and Warning Clauses Recommendations for Road/Rail Sources

Assessment Location	Transportation Sound Level (Outdoors)		Recommendations
	Daytime $L_{eq,16\text{-}hr}$ 07:00h – 23:00h	Nighttime $L_{eq,8\text{-}hr}$ 23:00h – 07:00h	
Plane of Window (Road)	> 65 dBA	> 60 dBA	Installation of air conditioning to allow windows to remained closed. The sound insulation performance of building components must be specified and designed to meet the indoor sound level criteria. Warning clause "Type D" is recommended.
	> 55 dBA	> 50 dBA	Applicable for low and medium density development: Forced-air ventilation system to allow for the future installation of air-conditioning. Warning clause "Type C" is recommended. Applicable for high density development: Air conditioning to allow windows to remained closed. Warning clause "Type D" is recommended.
Plane of Window (Rail [1, 2])	> 60 dBA	> 55 dBA	The acoustical performance of building façade components should be specified such that the indoor sound level limits are predicted to be achieved. Warning clause "Type D" is recommended.
	> 60 dBA ($L_{eq,\ 24hr}$) and < 100m from tracks		Exterior walls consisting of a brick veneer or masonry equivalent for the first row of dwellings. Warning clause "Type D" is recommended.
Outdoor Living Area (Combined Road and Rail [3])	≤ 60 dBA > 55 dBA	-	If sound levels are predicted to exceed 55 dBA, but are less than 60 dBA, noise controls may be applied to reduce the sound level to 55 dBA. If noise control measures are not provided, a warning clause "Type A" is recommended.
	> 60 dBA	-	Noise controls (barriers) should be implemented to meet the 55 dBA criterion. If mitigation is not feasible to meet the 55 dBA criterion for technical, economic or administrative reasons, an exceedance of 5 dB may be acceptable (to a maximum sound level of 60 dBA). In this case a warning clause "Type B" would be recommended.

Note(s):

1. Whistle noise is included (if applicable) in the determination of the sound level at the plane of window.
2. Some railway companies (e.g. CN, CP) may require that the exterior walls include a brick veneer or masonry equivalent for the façade facing the railway line, regardless of the sound level.
3. Whistle noise is not included in the determination of the sound level at the OLA.

Rail Layover Sites

NPC-300 provides a sound level limit for rail layover sites to be the higher of the background sound level or 55 dBA $L_{eq,1\text{-}hr,}$ for any one-hour period.

Rail Vibration Criteria

An assessment of rail vibration is generally recommended for developments within 75m of a rail corridor or rail yard, and adjacent to or within a setback of 15m of a transit (subway or light-rail) rail line.

The generally accepted vibration criterion for sensitive land-uses is the threshold of perception for human exposure to vibration, being a vibration velocity level of 0.14 mm/s RMS in any one-third octave band centre frequency in the range of 4 Hz to 200 Hz.

This vibration criterion is based on a one-second exponential time-averaged maximum hold root-mean-square (RMS) vibration velocity level and is consistent with the Railway Associations of Canada (RAC, 2013) guideline, the U.S. Federal Transit Authority (FTA, 2018) criterion for residential land-uses, the Toronto Transit Commission (TTC) guidelines for the assessment of potential vibration impact of future expansion (MOEE/TTC, 1993).

For ground-borne vibration due to subway and light-rail (TTC) passes, the generally accepted limit corresponds to the approximate on-set of human perception to vibration, 0.1mm/s rms; which aligns with the U.S. Federal Transit Authority (FTA, 2018) criterion for residential land-uses, and with the TTC guidelines for the assessment of potential vibration impact of future expansion (MECP/TTC, 1993).

Stationary Sources

NPC-300 Sound Level Criteria – Stationary Sources

Guidance from the MECP NPC-300 Environmental Noise Guideline is used to assess environmental noise generated by stationary sources, for example industrial and commercial facilities.

Noise from stationary sources is treated differently from transportation sources and requires sound levels be assessed for the predictable worst-case one-hour average sound level (L_{eq}) for each period of the day. For assessing sound originating from stationary sources, NPC-300 defines sound level criteria for two types of Points of Reception (PORs): outdoor and plane of window.

The assessment criteria for all PORs is the higher of either the exclusion limit per NPC-300 or the minimum background sound level that occurs or is likely to occur at a POR. The applicable exclusion limit is determined based on the level of urbanization or “Class” of the area. The NPC-300 exclusion limits for continuously operating stationary sources are summarized in **Table 9**.

Table 5: NPC-300 Exclusion Limits – Continuous and Quasi-Steady Impulsive Stationary Sources (LAeq-1hr)

Time Period	Class 1 Area		Class 2 Area		Class 3 Area		Class 4 Area	
	Outdoor	Plane of Window	Outdoor	Plane of Window	Outdoor	Plane of Window	Outdoor	Plane of Window
Daytime 0700-1900h	50 dBA	50 dBA	50 dBA	50 dBA	45 dBA	45 dBA	55 dBA	60 dBA
Evening 1900-2300h	50 dBA	50 dBA	45 dBA	50 dBA	40 dBA	40 dBA	55 dBA	60 dBA
Nighttime 2300-0700h	--	45 dBA	--	45 dBA	--	40 dBA	--	55 dBA

Note(s):

1. The applicable sound level criterion is the background sound level or the exclusion limit, whichever is higher.
2. Class 1, 2 and 3 sound level criteria apply to a window that is assumed to be open.
3. Class 4 area criteria apply to a window that is assumed closed. Class 4 area requires formal designation by the land-use planning authority.
4. Sound level criteria for emergency backup equipment (e.g. generators) operating in non-emergency situations such as testing or maintenance are 5 dB greater than the applicable sound level criteria for stationary sources.

For impulsive sound, other than quasi-steady impulsive sound, from a stationary source, the sound level criteria at a POR is expressed in terms of the Logarithmic Mean Impulse Sound Level (L_{LM}), and is summarized in **Table 6**.

Table 6: NPC-300 Exclusion Limits – Impulsive Stationary Sources (L_{LM})

Time Period	Number of Impulses in Period of One-Hour	Class 1 and 2 Areas		Class 3 Areas		Class 4 Areas	
		Outdoor	Plane of Window	Outdoor	Plane of Window	Outdoor	Plane of Window
Daytime (0700-2300h)	9 or more	50 dBAI	50 dBAI	45 dBAI	45 dBAI	55 dBAI	60 dBAI
Nighttime (2300–0700h)		-	45 dBAI	-	40 dBAI	-	55 dBAI
Daytime (0700-2300h)	7 to 8	55 dBAI	55 dBAI	50 dBAI	50 dBAI	60dBAI	65 dBAI
Nighttime (2300–0700h)		-	50 dBAI	-	45 dBAI	-	60 dBAI
Daytime (0700-2300h)	5 to 6	60 dBAI	60 dBAI	55 dBAI	55 dBAI	65 dBAI	70 dBAI
Nighttime (2300–0700h)		-	55 dBAI	-	50 dBAI	-	65 dBAI
Daytime (0700-2300h)	4	65 dBAI	65 dBAI	60 dBAI	60 dBAI	70 dBAI	75 dBAI
Nighttime (2300–0700h)		-	60 dBAI	-	55 dBAI	-	70 dBAI
Daytime (0700-2300h)	3	70 dBAI	70 dBAI	65 dBAI	65 dBAI	75 dBAI	80 dBAI
Nighttime (2300–0700h)		-	65 dBAI	-	60 dBAI	-	75 dBAI
Daytime (0700-2300h)	2	75 dBAI	75 dBAI	70 dBAI	70 dBAI	80 dBAI	85 dBAI
Nighttime (2300–0700h)		-	70 dBAI	-	65 dBAI	-	80 dBAI
Daytime (0700-2300h)	1	80 dBAI	80 dBAI	75 dBAI	75 dBAI	85 dBAI	90 dBAI
Nighttime (2300–0700h)		-	75 dBAI	-	70 dBAI	-	85 dBAI

Note(s):

1. The applicable sound level criterion is the background sound level or the exclusion limit, whichever is higher.

D-Series Guidelines

The MECP D-series guidelines (MOE, 1995) provide direction for land use planning to maximize compatibility of industrial uses with adjacent land uses. The goal of Guideline D-6 is to minimize encroachment of sensitive land uses on industrial facilities and vice versa, in order to address potential incompatibility due to adverse effects such as noise, odour and dust.

For each class of industry, the guideline provides an estimate of potential influence area and states that this influence area shall be used in the absence of the recommended technical studies. Guideline D-6 also recommends a minimum separation distance between each class of industry and sensitive land uses (see **Table 7**). Section 4.10 of D-6 identifies exceptional circumstances with respect to redevelopment, infill and mixed-use areas. In these cases, the guideline suggests that separation distances at, or less than, the recommended minimum separation distance may be acceptable if a justifying impact assessment is provided.

Table 7: Summary of Guideline D-6

Industry Class	Definition	Potential Influence Area	Recommended Minimum Separation Distance (property line to property line)
Class I	Small scale, self-contained, daytime only, infrequent heavy vehicle movements, no outside storage.	70 m	20 m
Class II	Medium scale, outdoor storage of wastes or materials, shift operations and frequent heavy equipment movement during the daytime.	300 m	70 m
Class III	Large scale, outdoor storage of raw and finished products, large production volume, continuous movement of products and employees during daily shift operations.	1000 m	300 m

Guideline D-6 provides criteria for classifying industrial land uses, based on their outputs, scale of operations, processes, schedule and intensity of operations. **Table 8** provides the classification criteria and examples.

Table 8: Guideline D-6 Industrial Categorization Criteria

Criteria	Class I	Class II	Class III
Outputs	• Sound not audible off property • Infrequent dust and/ or odour emissions and not intense • No ground-borne vibration	• Sound occasionally audible off property • Frequent dust and/ or odour emissions and occasionally intense • Possible ground-borne vibration	• Sound frequently audible off property • Persistent and intense dust and/ or odour emissions • Frequent ground-borne vibration
Scale	• No outside storage • Small scale plant or scale is irrelevant in relation to all other criteria	• Outside storage permitted • Medium level of production	• Outside storage of raw and finished products • Large production levels
Process	• Self-contained plant or building which produces / stores a packaged product • Low probability of fugitive emissions	• Open process • Periodic outputs of minor annoyance • Low probability of fugitive emissions	• Open process • Frequent outputs of major annoyances • High probability of fugitive emissions
Operation / Intensity	• Daytime operations only • Infrequent movement of products and/or heavy trucks	• Shift operations permitted • Frequent movements of products and/or heavy trucks with majority of movements during daytime hours	• Continuous movement of products and employees • Daily shift operations permitted
Examples	• Electronics Manufacturing • Furniture refinishing • Beverage bottling • Auto parts • Packaging services • Dairy distribution • Laundry and linen supply	• Magazine printing • Paint spray booths • Metal command • Electrical production • Dairy product manufacturing • Feed packing plant	• Paint and varnish manufacturing • Organic chemicals manufacturing • Breweries • Solvent recovery plant • Soap manufacturing • Metal manufacturing

APPENDIX C

LRT System Elements

LRT Operations

The objective of the operational design criteria was to set out specifications that will help ensure reliable service, even during downgraded operating conditions. The operations will also vary to cater to the expected demand throughout the hours of operation. On a daily basis, revenue service is expected to commence at 5:00 a.m. from both terminal stops and end at 1:30 a.m. on weekdays and Saturdays, and operate between 7:00 a.m. and midnight on Sundays. The headway will be adjusted throughout operational service in order to comply with scheduling demands, with a minimum headway of 5 minutes during peak periods and decreasing in off-peak periods. The current operations plan will result in an average operating speed of 27 km/h and a one-way journey time of 47 minutes between the two end stops. This is achieved through partial segregation from other vehicular traffic and providing priority to LRT vehicles at signalized intersections (through the implementation of Intelligent Transportation System components), and the system will operate on an LRT vehicle priority green signal basis. In order to achieve this, the traffic signal system will be optimized, including the installation of an integrated system of location sensors, with specialized traffic controllers that use logical algorithms to define optimum cycle times for an LRT priority system throughout the corridor.

Light Rail Vehicle

The light rail vehicles will be multi-section articulated low-floor vehicles, with a maximum width of 2.65 m (excluding rear-view cameras) and a length of about 30 m (although longer units around 40 m long are also possible). Initially, the vehicles will typically be operated in two-unit consists (60 m long). The system has been designed to operate with three-unit consists up to a length of 90 m in the long term. Peak carrying capacity will be in the order of 200 passengers/vehicle, or 600 passengers per 3-vehicle consist.

Maintenance and Storage Facility

It is proopsed that the HMLRT Maintenance and Storage Facility (MSF) be situated on the provincially-owned lands within the Parkway Belt West bounded by Highway 407 to the north, Hurontario Street to the west, the Hydro One Networks Inc. transmission line and utility corridor to the south and Kennedy Road to the east. It will be connected to Hurontario Street via a dedicated spur line that diverges from the Hurontario Street corridor and runs east on Topflight Drive and north on Edwards Boulevard. The 7 ha MSF will accommodate up to 56 LRVs initially, and 74 over the long term. The HMLRT Control Centre will also be located on the MSF site. The MSF layout is shown in Appendix A.1 of this EPR.

Power Supply and Distribution

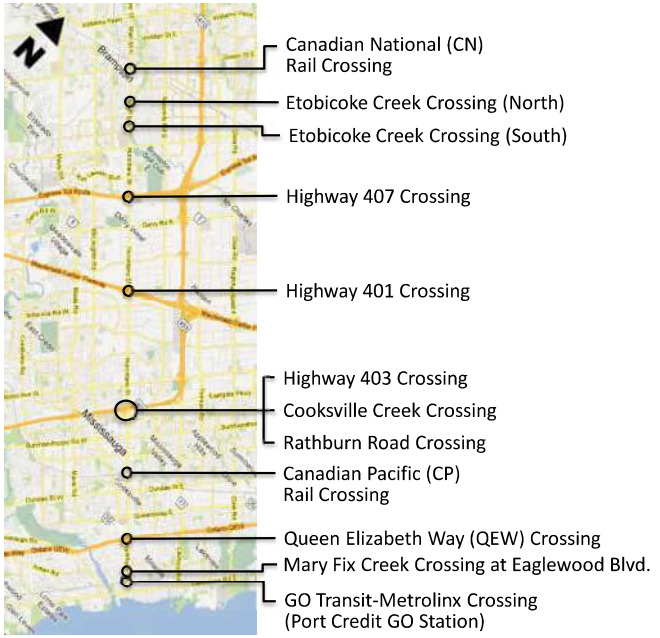
The system will be designed to provide the necessary power, as well as the voltage range, to ensure proper operation of the trains. The traction power system, consisting of traction power substations (TPSS) and the Overhead Contact System (OCS), will provide 750Vdc to power the trains. Due to concerns related to heritage attributes within the Main Street South Heritage Area and Downtown Brampton, (i.e., between the north crossing of Etobicoke Creek and the Brampton GO stop), an alternative power supply system (the option comprising battery packs or super/ultracapacitors installed on board the LRVs, with no Overhead Contact System) is being carried forward for further investigation of costs and benefits as part of the Detail Design phase. Its implementation is contingent upon final acceptability of financial and technical implications.

The system will be designed to allow for a single TPSS failure without any degradation of service. A preliminary estimate indicates that 15 TPSS would be needed for the mainline and one TPSS will be provided for the Maintenance and Storage Facility to meet the Service Level to 2031. The preliminary TPSS locations are shown in Appendix A.1 of this EPR.

Structures

A number of existing structures are affected by the proposed HMLRT design scheme. In addition, some new structures are proposed. The engineering investigations included an assessment of the condition of all existing structures in the LRT corridor, identified the new structures required, and offered recommendations for the structural work to be completed as part of the project. The structure locations are shown in Figure ES-3.

Figure ES-3: Key Plan for New and Upgraded Structures



The proposed structural work, as shown on the Preliminary Design plates in Appendix A.1, include:

- New bridges at:
  - GO Transit-Metrolinx Crossing (Port Credit GO Station) - immediately west of the existing bridge (box structure through the existing rail embankment);
  - Mary Fix Creek - Eaglewood Boulevard will be extended to Oriole Avenue (west of Hurontario Street) via a new bridge over the Mary Fix Creek channel;
  - Queen Elizabeth Way (QEW) - construction of a new bridge to carry the QEW over the realigned northbound lanes carrying general purpose traffic; and

Roadway	Intersection	2031 AM Peak Hour Traffic Volumes		Increase (dB)
		No Project	With Project	
Confederation Pkwy.	Hillcrest	1,623	1,735	0.3
Confederation Pkwy.	Dundas	1,259	1,232	-0.1
Confederation Pkwy.	King	583	812	1.4
Confederation Pkwy.	**Paisley**	**274**	**562**	**3.1**
Confederation Pkwy.	**Queensway**	**61**	**336**	**7.4**
Kennedy	Queen	1,331	1,375	0.1
Kennedy	Clarence	1,070	1,049	-0.1
Kennedy	Glidden	916	954	0.2
Kennedy	Steeles	706	680	-0.2
Kennedy	First Gulf Blvd.	943	1,068	0.5
Kennedy	Derry	808	934	0.6
Kennedy	Courtneypark	978	1,067	0.4
Kennedy	Matheson	676	721	0.3
Kennedy	Bristol	656	743	0.5
Central Pkwy.	Eglinton	1,038	1,140	0.4
Central Pkwy.	Rathburn	804	824	0.1
Central Pkwy.	Burnhamthorpe	675	645	-0.2
Central Pkwy.	Bloor	1,031	1,045	0.1
Central Pkwy.	Cliff	742	824	0.5
Central Pkwy.	Mississauga Valley South	685	815	0.8

As can be seen in the above table, the sound-level increases along parallel routes are quite minimal. Increases of less than 3 dB in the average sound levels are considered insignificant. The exceptions are shown in bold in Table 4-7, along a portion of Confederation Parkway. Here, the absolute sound levels increase between 3 and 7 dB. While this is a significant change, it should be taken in context with the absolute sound levels.

With peak-hour volumes of 336 vehicles per hour at Queensway, the sound levels at receptors along Confederation Parkway would be approximately 56 dB Leq during the daytime and 50 dBA Leq during the night-time. In comparing this to the MOEE/TTC draft protocol's baseline limit of 55 dBA during the daytime and 50 dBA during the night-time, the impacts are actually 1 dB and 0 dB, respectively.

Hence, overall, the diversion of traffic to parallel routes is minor and the acoustic effects are insignificant. Noise control measures are not warranted for any associated increases in traffic noise along the major parallel routes.

The potential vehicle wheel squeal has also been reviewed wherever the LRT corridor makes sharp turns. Generally, such turns occur at major intersections where the ambient sound levels are already quite high. Provided that the light rail vehicles are equipped with a wheel damping system, the increase in sound levels at the intersections is approximately 2-3 dB in the worst-case. Hence, further noise control measures to control wheel squeal are not required.

Maintenance and Storage Facility

A preliminary review of the MSF indicates that the noise from the facility will not be significant at the nearest sensitive receptors. The results of the modelling indicate that the sound level from the MSF will be approximately 55 dBA 1-hr Leq at the nearest sensitive receptor during the most sensitive hour. As the ambient sound level has been calculated to be 58 dBA at this location, an adverse impact is not expected.

The greatest contributors to the overall sound from the MSF are the noise from dust collector fans and the noise from wheel squeal. Also, there is some potential for noise from the paint booth fans, depending on the size of the fan selected.

Overall, given the distance between the MSF and the nearest sensitive receptor, and given the high ambient noise from Highway 407, a noise impact from the MSF is not expected.

Traction Power Substations

A preliminary review of the noise from the traction power substations (TPSS) has been completed. Based on measurements of similar transformers, it is assumed that each TPSS will produce a sound level of approximately 63 dBA at a distance of 3 m. The modelling indicates that, in most cases, the sound levels from the TPSS are well below the ambient sound levels at the nearest sensitive receptors and are also well below the MOE's minimum exclusion level of 45 dBA. Hence, noise control measures are not warranted for most of the TPSS. TPSS18, located near the Brampton GO Station, needs to be moved so that it is a minimum of 23 m from the nearest sensitive receptor to avoid the potential noise impacts. Alternatively, it should be ensured that the actual TPSS sound level output is less than or equal to 58 dBA at a distance of 3 m and that the sound level is not tonal.

Both the TPSS and the MSF will require ECAs from the MOE. A more detailed review of the noise affects of these facilities will be completed at that time.

Vibration

Based on the current design, the LRT will run as close as 5 to 10 m from the façades of some buildings. More typically, the LRT will run more than 20 m from the nearest building.

Any sensitive receptors located at least:

- 10 m from the centreline of the nearest track wherever the LRT travels at 40 km/h
- 15 m from the centreline of the nearest track wherever the LRT travels at 50 km/h
- 20 m from the centreline of the nearest track wherever the LRT travels at 60 km/h
- 25 m from the centreline of the nearest track wherever the LRT travels at 80 km/h

will meet the guideline limit of 0.10 mm/s without any additional vibration control measures. An additional 5 dB reduction (44% reduction) will be required for areas with residential receptors located closer than the minimum setbacks described above, in order to reduce the vibration levels to 0.10mm/s rms. For concrete embedded track, however, vibration control to limit vibration-induced noise is more critical and will supersede the requirements for ground-borne vibration mitigation.

The results of the assessment also suggest that some sensitive receptors (critical residential rooms) along the HMLRT corridor, including those within 50 m of special trackwork (crossovers, switches and pocket tracks) may experience levels of vibration-induced noise that require mitigation. Vibration levels immediately adjacent to special track structures can be up to 3 times (10 dB) greater than vibration levels on tangent track (assuming the speed remains the same).

Date:	07-Feb-22

NOISE REPORT FOR PROPOSED DEVELOPMENT

REQUESTED BY:

Name:	Amy Patenaude
Company:	RWDI

PREPARED BY:

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

MISSISSAUGA

Location: Hurontario Street - Dundas Street to Queensway
Dundas Street East - Hurontario Street to Grenville Drive / Cliff Road
Camilla Road - Dundas Street East to King Street East

ID 535

ON SITE TRAFFIC DATA

Specific	*Street Names*				
[redacted]	Hurontario St	Dundas St E	Camilla Rd		
AADT:	31,700	33,200	8,600		
# of Lanes:	4 Lanes*	4 Lanes	2 Lanes		
% Trucks:	4%	6%	3%		
Medium/Heavy Trucks Ratio:	55/45	55/45	55/45		
Day/Night Split:	90/10	90/10	90/10		
Posted Speed Limit:	50 km/h	50 km/h	40 km/h		
Gradient Of Road:	<2%	<2%	<2%		
Ultimate R.O.W:	35 m	42 m	26 m		

Comments:

Ultimate street data only (2041).

*Note: the future lane configuration of Hurontario Street at this location will consist of 4 through lanes with 2 LRT lines along the center of the roadway.

Date:	24-Mar-22

NOISE REPORT FOR PROPOSED DEVELOPMENT

REQUESTED BY:

Name:	Amy Patenaude
Company:	RWDI

PREPARED BY:

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

MISSISSAUGA

Location:	Confederation Parkway - Hillcrest Avenue to Dundas Street West Hillcrest Avenue - Confederation Parkway to Hurontario Street
ID	538

ON SITE TRAFFIC DATA

Specific	Street Names				
	Confederation Pkwy	Hillcrest Ave			
AADT:	19,700	28,400			
# of Lanes:	4 Lanes	4 Lanes			
% Trucks:	3%	3%			
Medium/Heavy Trucks Ratio:	55/45	55/45			
Day/Night Split:	90/10	90/10			
Posted Speed Limit:	50 km/h	50 km/h			
Gradient Of Road:	<2%	<2%			
Ultimate R.O.W:	30 m	26 m			

Comments:	Ultimate Traffic Data Only

Turning Movement Count - Details Report

Location..... DUNDAS ST W @ HURONTARIO ST / DUNDAS ST E

Municipality..... Mississauga

Road 1 DUNDAS ST W **Road 2** HURONTARIO ST / DUNDAS ST E

Count Date..... Wednesday, November 01, 2023

		North Approach					South Approach					East Approach					West Approach				
Time Period		LT	TH	RT	Heavy	TOT	LT	TH	RT	Heavy	TOT	LT	TH	RT	Heavy	TOT	LT	TH	RT	Heavy	TOT
07:00	07:15	24	73	4	6	101	31	69	9	7	109	7	51	5	10	63	6	94	1	3	101
07:15	07:30	6	65	4	6	75	12	70	7	8	89	14	73	8	7	95	8	128	8	7	144
07:30	07:45	25	103	10	10	138	23	93	9	6	125	6	67	7	8	80	20	159	4	6	183
07:45	08:00	24	97	4	9	125	15	97	9	5	121	6	96	7	7	109	8	218	11	11	237
08:00	08:15	34	77	7	16	118	19	90	11	4	120	12	122	9	6	143	7	225	6	8	238
08:15	08:30	40	89	8	5	137	30	106	9	11	145	13	102	24	11	139	6	180	10	6	196
08:30	08:45	21	77	8	0	106	22	90	12	7	124	18	139	10	12	167	10	235	8	8	253
08:45	09:00	21	83	12	11	116	33	109	15	12	157	14	113	16	9	143	14	180	2	5	196
11:00	11:15	28	90	13	10	131	35	86	12	8	133	30	141	21	14	192	26	171	14	10	211
11:15	11:30	30	76	17	10	123	21	78	14	7	113	22	141	21	9	184	17	136	16	12	169
11:30	11:45	39	96	24	12	159	20	92	26	7	138	16	140	22	11	178	30	159	24	9	213
11:45	12:00	32	89	20	9	141	33	102	16	9	151	21	141	31	8	193	28	181	15	6	224
12:00	12:15	41	99	26	9	166	33	89	22	7	144	23	146	27	12	196	25	149	15	9	189
12:15	12:30	24	97	24	4	145	38	96	17	3	151	18	173	35	10	226	15	173	16	11	204
12:30	12:45	38	106	17	8	161	27	118	16	8	161	26	174	29	11	229	20	153	17	9	190
12:45	13:00	27	120	12	7	159	27	117	27	19	171	23	142	22	11	187	27	147	14	4	188
13:00	13:15	45	90	22	7	157	28	99	11	2	138	28	165	38	15	231	27	148	33	11	208
13:15	13:30	28	96	33	8	157	35	88	17	11	140	19	133	36	8	188	16	151	24	8	191
13:30	13:45	39	128	26	6	193	33	105	18	7	156	29	145	34	8	208	26	154	28	13	208
13:45	14:00	38	96	19	7	153	28	99	19	4	146	30	147	23	10	200	31	165	23	10	219
15:00	15:15	32	124	12	5	168	25	121	21	9	167	28	198	33	7	259	18	183	16	7	217
15:15	15:30	44	136	19	4	199	53	130	25	8	208	22	171	26	7	219	16	163	18	12	197
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15:45	16:00	32	120	25	5	177	32	138	16	14	186	13	213	20	7	246	21	179	19	13	219
16:00	16:15	33	106	22	8	161	32	143	28	9	203	21	199	18	9	238	22	165	20	7	207
16:15	16:30	31	120	22	4	173	42	105	18	6	165	20	231	26	4	277	23	176	20	5	219
16:30	16:45	33	127	27	4	187	36	144	26	6	206	8	202	22	8	232	32	163	23	4	218
16:45	17:00	36	126	25	4	187	38	137	27	4	202	11	225	21	5	257	20	202	25	2	247
17:00	17:15	46	113	23	6	182	23	97	24	3	144	21	240	24	9	285	26	194	18	6	238
17:15	17:30	35	128	20	3	183	59	127	28	3	214	23	212	18	6	253	12	168	26	3	206
17:30	17:45	37	128	24	5	189	35	105	26	5	166	19	242	31	4	292	19	185	17	6	221
17:45	18:00	30	114	20	8	164	35	101	25	6	161	31	235	30	5	296	17	198	17	4	232
Total	.....	1021	3318	568	222	4907	972	3385	588	235	4945	608	5087	725	273	6420	620	5455	533	245	6608

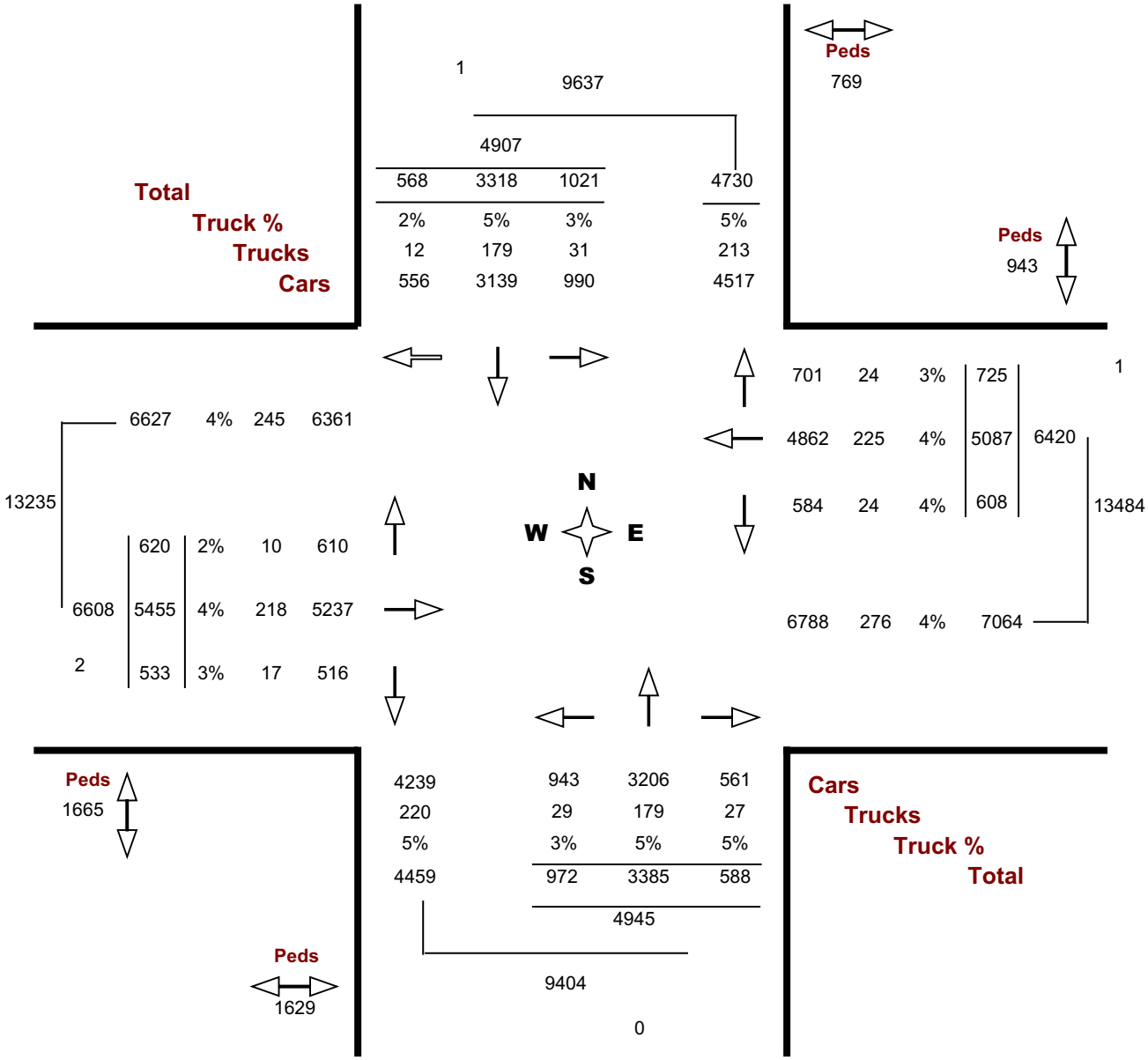
Turning Movements Count - Full Study Report

Location..... DUNDAS ST W @ HURONTARIO ST / DUNDAS ST E

Municipality..... Mississauga

GeoID..... 349709 **Count Date.....** Wednesday, 01 November, 2023

Road 1 DUNDAS ST W **Road 2** HURONTARIO ST / DUNDAS ST E



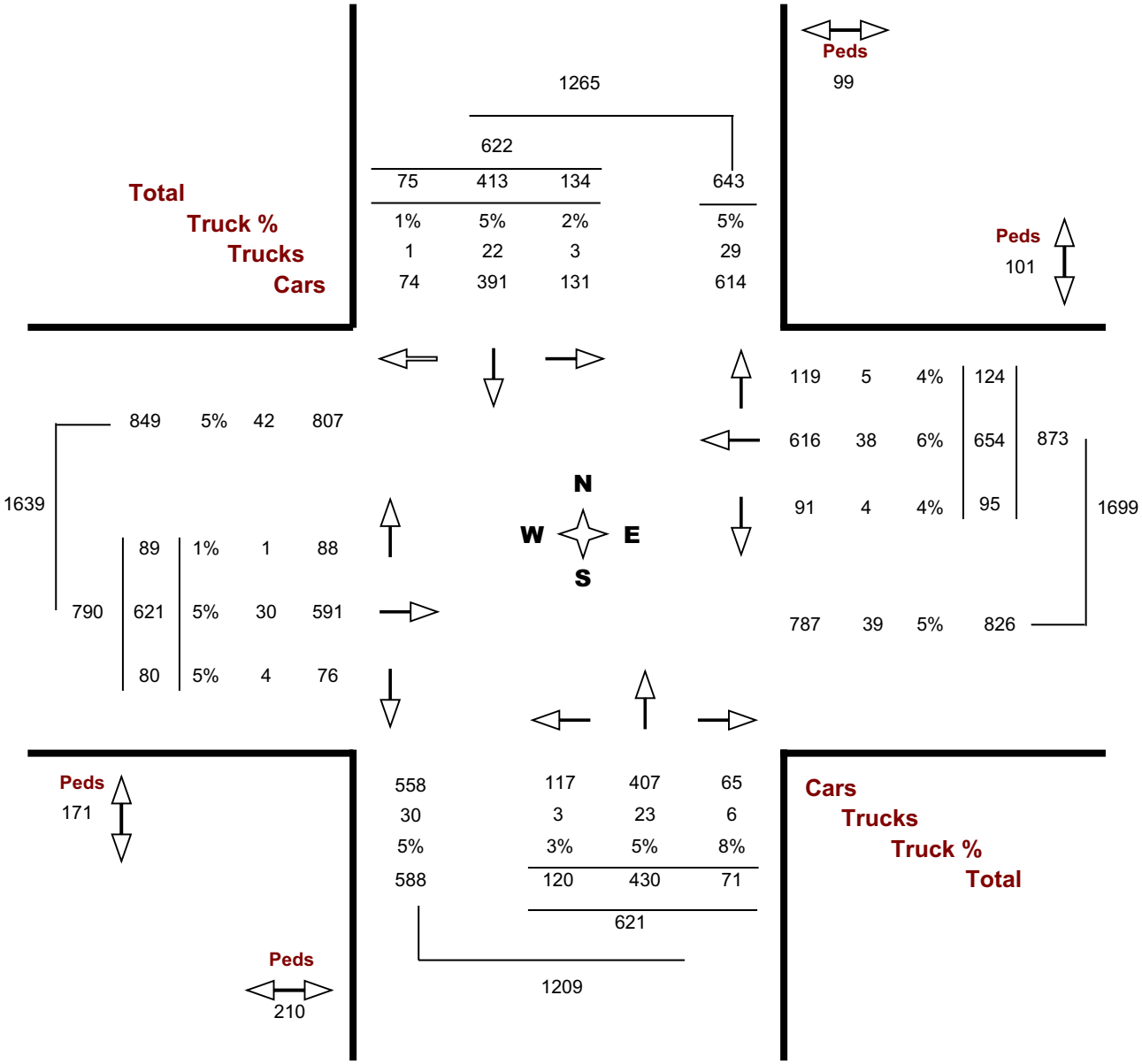
Turning Movements Report - MD Period

Location..... DUNDAS ST W @ HURONTARIO ST / DUNDAS ST E

Municipality..... Mississauga **GeoID.....** 349709

Count Date..... Wednesday, 01 November, 2023 **Peak Hour.....** 12:15 PM — 01:15 PM

Road 1 DUNDAS ST W **Road 2** HURONTARIO ST / DUNDAS ST E



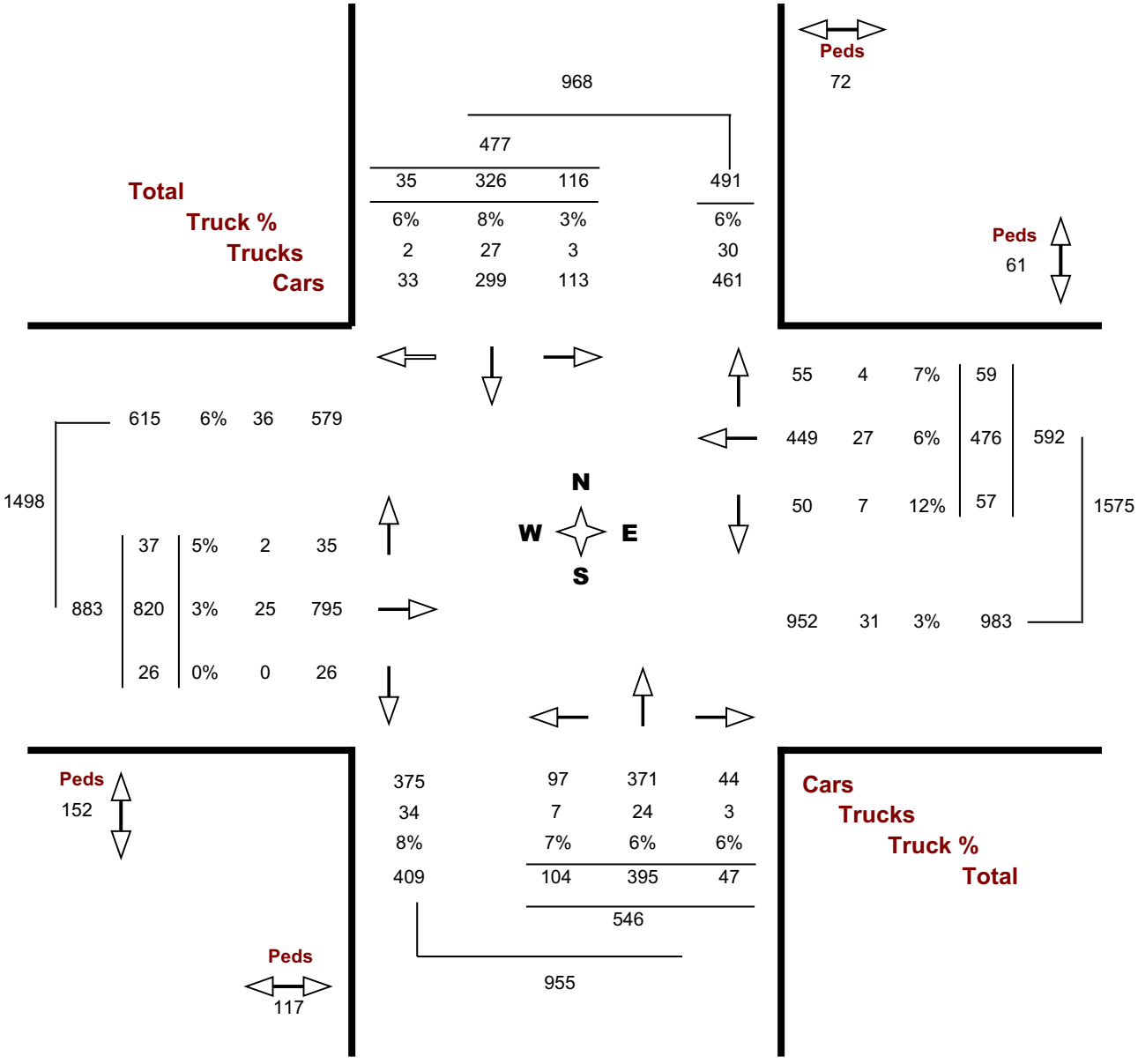
Turning Movements Report - AM Period

Location..... DUNDAS ST W @ HURONTARIO ST / DUNDAS ST E

Municipality..... Mississauga **GeoID.....** 349709

Count Date..... Wednesday, 01 November, 2023 **Peak Hour.....** 08:00 AM — 09:00 AM

Road 1 DUNDAS ST W **Road 2** HURONTARIO ST / DUNDAS ST E



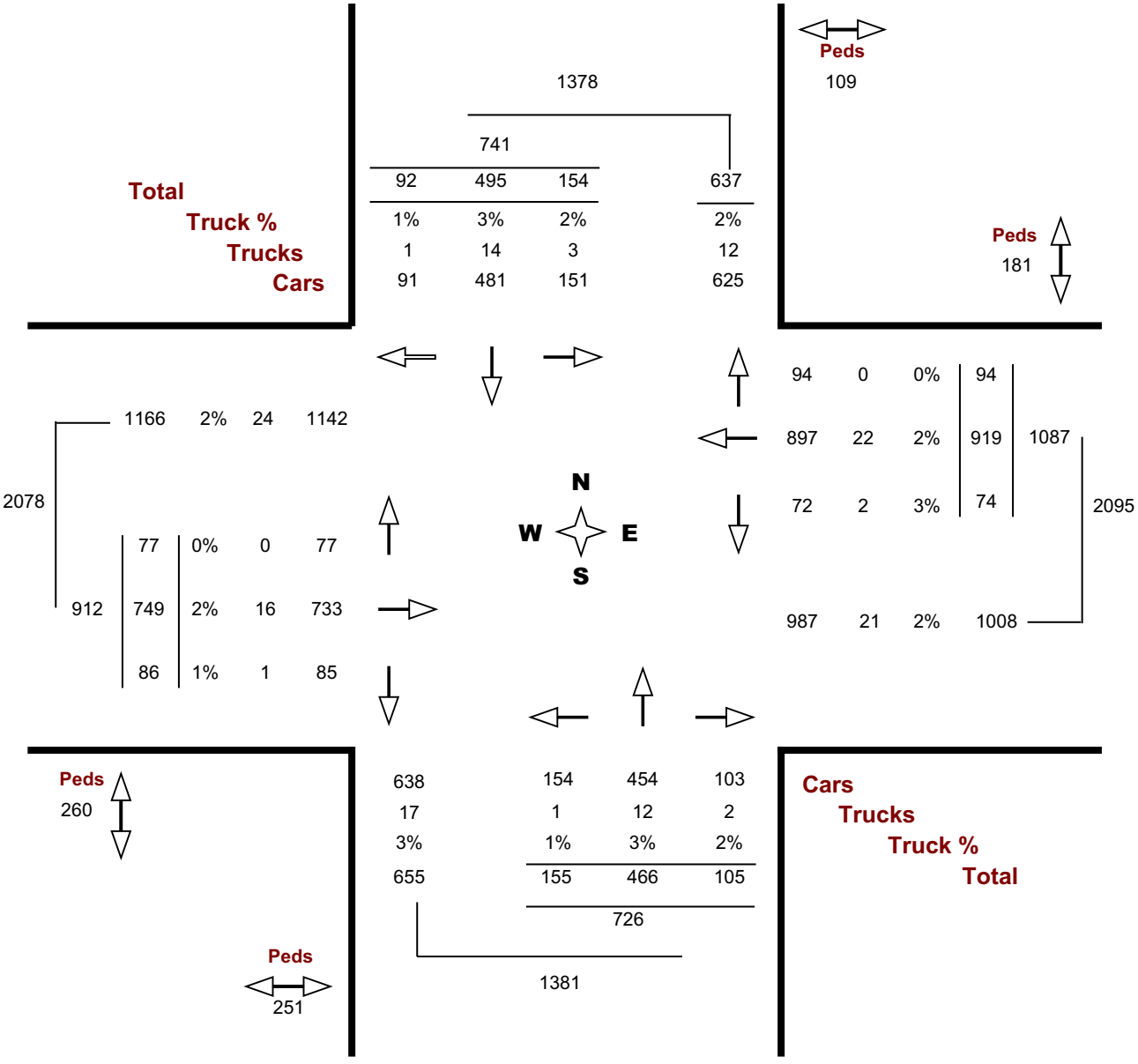
Turning Movements Report - PM Period

Location..... DUNDAS ST W @ HURONTARIO ST / DUNDAS ST E

Municipality..... Mississauga **GeoID.....** 349709

Count Date..... Wednesday, 01 November, 2023 **Peak Hour.....** 04:45 PM — 05:45 PM

Road 1 DUNDAS ST W **Road 2** HURONTARIO ST / DUNDAS ST E



APPENDIX D

NOISE MITIGATION GUIDANCE

Acoustic/Noise Barrier

Generally, noise controls to attenuate transportation sound levels at Outdoor Living Areas (OLAs) would consist of the implementation of acoustic/noise barriers with materials that would meet the guidance included in NPC-300, for example:

- A wall, berm, wall/berm combination or similar structure, used as a noise control measure, and high enough to break the line-of-sight between the source and the receptor.
- The minimum surface density (face weight) is 20 kg/m^2
    - Many materials could satisfy the surface density requirement, e.g. wood, glass, concrete, Plexiglas, Acrylite.
    - The required thickness can be determined by dividing the 20 kg/m^2 face weight by the material density (kg/m^3). Typically, this would imply:
        - 50 mm (2") thickness of wood
        - 13 mm (0.5") thickness of lighter plastic (like Plexiglas or PVC)
        - 6 mm (0.25") thickness of heavier material (like aluminum, glass, concrete)
- The barrier should be structurally sound, appropriately designed to withstand wind and snow load, and constructed without cracks or surface gaps. Joints between panels may need to be overlapped to ensure surfaces are free of gaps, particularly for wood construction.
- Any gaps under the barrier that are necessary for drainage purposes should be minimized and localized, so that the acoustical performance of the barrier is maintained.
- If a sound absorptive face is to be included in the barrier design, the minimum noise reduction coefficient is recommended to be NRC 0.7.

Building Ventilation and Air Conditioning

The use of air conditioning itself is not a noise control measure; however, it allows for windows and doors to remain closed, thereby reducing the indoor sound levels.

NPC-300 provides the following guidance with respect to implementation of building ventilation and air conditioning:

a. the noise produced by the proposed ventilation system in the space served does not exceed 40 dBA. In practice, this condition usually implies that window air conditioning units are not acceptable;
b. the ventilation system complies with all national, provincial and municipal standards and codes;
c. the ventilation system is designed by a heating and ventilation professional; and
d. the ventilation system enables the windows and exterior doors to remain closed.

Air conditioning systems also need to comply with Publication NPC-216, and/or any local municipal noise by-law that has provisions relating to air conditioning equipment.

APPENDIX E

WARNING CLAUSES

All NPC-300 warning clauses are presented as general guidance for context. However, not all warning clauses may apply to this proposed development. See the report body text for which warning clauses are recommended.

Warning clauses are recommended to be included on all development agreements, offers of purchase and agreements of purchase and sale or lease. Warning clauses may be used individually or in combination. The following warning clauses are recommended based on the applicable guidelines; however, wording may be modified/customized during consultation with the planning authority to best suit the proposed development.

Transportation Sources

NPC-300 Type A: Recommended to address surface transportation sound levels in OLAs if sound level is in the range of >55 dBA but ≤ 60 dBA, and noise controls have not been provided.

"Purchasers/tenants are advised that sound levels due to increasing road traffic (rail traffic) (air traffic) may occasionally interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the Municipality and the Ministry of the Environment."

NPC-300 Type B: Recommended to address surface transportation sound levels in OLAs if the sound level is in the range of >55 dBA but ≤ 60 dBA, and noise controls have been provided. Recommended to address outdoor aircraft sound levels ≥NEF 30.

"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 traffic (rail traffic) (air 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."

NPC-300 Type C: Applicable for low and medium density developments only, recommended to address transportation sound levels at the plane of window.

"This dwelling unit has been designed with the provision for adding central air conditioning at the occupant's discretion. Installation of central air conditioning by the occupant in low and medium density developments will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the Municipality and the Ministry of the Environment."

NPC-300 Type D: Recommended to address transportation sound levels at the plane of window.

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

Proximity to Railway Line: Metrolinx/CN/CP/VIA Warning Clause for developments that are within 300 metres of the right-of-way

"Warning: [Canadian National Railway Company] [Metrolinx / GO] [Canadian Pacific Railway Company] [VIA Rail Canada Inc.] or its assigns or successors in interest has or have a right-of-way within 300 metres from the land the subject hereof. There may be alterations to or expansions of the rail facilities on such right-of-way in the future including the possibility that the railway or its assigns or successors as aforesaid may expand its operations, which expansion may affect the living environment of the residents in the vicinity, notwithstanding the inclusion of any noise and vibration attenuating measures in the design of the development and individual dwelling(s). CNR/Metrolinx/GO/CPR/VIA will not responsible for any complaints or claims arising from use of such facilities and/or operations on, over or under the aforesaid right-of-way."

Stationary Sources

NPC-300 Type E: Recommended to address proximity to commercial/industrial land-use

"Purchasers/tenants are advised that due to the proximity of the adjacent industrial/commercial land-uses, noise from the industrial/commercial land-uses may at times be audible."

NPC-300 Type F: Recommended to for Class 4 Area Notification

"Purchasers/tenants are advised that sound levels due to the adjacent industry (facility) (utility) are required to comply with sound level limits that are protective of indoor areas and are based on the assumption that windows and exterior doors are closed. This dwelling unit has been supplied with a ventilation/air conditioning system which will allow windows and exterior doors to remain closed."