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Noise Feasibility Study
Proposed Mixed-Use Development
579, 619 Lakeshore Rd. East & 1022, 1028 Caven St.
City of Mississauga, Ontario

Prepared for:

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HGC Project Number: 02000879

Table of Contents

1 Introduction & Summary

HGC Engineering was retained by Star Seeker Inc. to conduct a noise feasibility study for a proposed mixed-use development located at 579, 619 Lakeshore Road East and 1022, 1028 Caven Street, in Mississauga, Ontario. The proposed development will consist of three residential 16-storey buildings and two 6-storey mixed-use buildings with retail uses on the ground floor and residential uses above. The study is required by the City of Mississauga as part of the planning and approvals process.

The primary sources of noise impacting the site were determined to be road traffic on Lakeshore Road East and rail traffic on the GO Transit/Metrolinx railway line, with lesser contributions from road traffic on Cawthra Road. Ultimate average annual daily traffic (AADT) was obtained from the City of Mississauga. Rail traffic data was obtained from Metrolinx personnel. Relevant traffic data was used to predict future traffic sound levels at the proposed building. The predicted sound levels were compared to the guidelines of the Ministry of Environment, Conservation and Parks (MECP) and the Municipality to develop noise control recommendations.

The sound level predictions indicate that the future road traffic sound levels will exceed MECP guidelines at the proposed buildings. Central air conditioning and upgraded building construction is required for the proposed buildings. Warning clauses are recommended to inform future residents of the road and rail traffic noise impacts, to address sound level excesses and inform of the proximity of existing commercial uses.

An analysis was also conducted to determine the anticipated impact of stationary noise from rooftop units at the existing commercial buildings to the east and south of the subject site on the proposed buildings. Reasonable estimates of the size and tonnage of the rooftop mechanical units have been used based on experience with similar projects. A 3D computer model of the area was created, using acoustic modelling software and manufacturer's sound power data. The model was used in the analysis to predict sound levels associated with the existing rooftop mechanical equipment at the proposed buildings.

The results indicate that sound emissions from the existing commercial buildings at the closest sensitive receptors will be below the MECP minimum exclusionary sound level limits. Further,

physical mitigation measures will not be required for the rooftop units associated with the existing commercial buildings.

2 Site Description & Noise Sources

The proposed development is located on the north side of Lakeshore Road East, west of Caven Street, specifically at 579, 619 Lakeshore Road East and 1022, 1028 Caven Street in the City of Mississauga, Ontario. Figure 1 shows a key plan of the subject site. A site plan prepared by Quadrangle Architects Ltd. dated July 11, 2022 ("Rezoning Application") is shown in Figure 2. The proposed development will include three 16-storey buildings atop a 6-storey podium and a 6-storey residential building with retail uses on the ground floor, all above three levels of underground parking. Appendix A includes the preliminary building elevations and floor plans.

A site visit was made by HGC Engineering personnel in March 2021 to make observations of the acoustic environment, and to identify the significant noise sources in the vicinity. The acoustical environment surrounding the site is urban in nature. Road traffic on Lakeshore Road East and rail traffic on the railway to the north of the site were confirmed to be the primary sources of sound impacting the proposed development. A secondary source of noise includes road traffic on Cawthra Road. The railway is located 200 m to the north of the closest proposed building façade. Ground-borne vibration measurements are not required for the subject site since the proposed buildings are located more than 75 metres from the railway line. Lands surrounding the subject site include existing residential uses to the east, north and west. There are existing commercial uses to the east of Caven Street, including a Domino's Pizza, Rabbi's Fine Foods and a Subway restaurant. South of the subject site are existing commercial uses including Osmow's Shawarma and a Kumon Math and Reading Centre. There are HVAC units and exhaust fans on the roof of these existing commercial buildings to the east and south of the subject site and these have been included in the noise assessment.

3 Noise Level Criteria

3.1 Road Traffic Noise

Guidelines for acceptable levels of road and rail traffic noise impacting residential developments are given in the MECP publication NPC-300 "Environment Noise Guideline Stationary and Transportation sources – Approval and Planning", release date October 21, 2013, and are listed in Table 1 below. The Railway Association of Canada/Federation of Canadian Municipalities "Report Research Phase 3: Proximity Guidelines and Best Practices" dated November 2006 and Guidelines for New Development in Proximity to Railway Operations dated May 2013 were also reviewed. The values in Table 1 are energy equivalent (average) sound levels [L_{EQ}] in units of A-weighted decibels [dBA].

Table 1: MECP Road and Rail Traffic Noise Criteria [dBA]

Space	Daytime L_{EQ} (16 hour) Road/Rail	Nighttime L_{EQ} (8 hour) Road/Rail
Outdoor Living Areas	55 dBA	--
Inside Living/Dining Rooms	45 dBA / 40 dBA	45 dBA / 40 dBA
Inside Bedrooms	45 dBA / 40 dBA	40 dBA / 35 dBA

Daytime refers to the period between 07:00 and 23:00, while nighttime refers to the period between 23:00 and 07:00. The term "Outdoor Living Area" (OLA) is used in reference to an outdoor patio, a backyard, a terrace or other area where passive recreation is expected to occur. Balconies that are less than 4 m in depth are not considered to be outdoor living areas under MECP guidelines.

The guidelines in the MECP publication allow the sound level in an OLA to be exceeded by up to 5 dBA, without mitigation, if warning clauses are placed in the purchase and rental agreements to the property. Where OLA sound levels exceed 60 dBA, physical mitigation is required to reduce the OLA sound level to below 60 dBA and as close to 55 dBA as technically, economically and administratively feasible.

Indoor guidelines for rail noise are 5 dBA more stringent than for road noise, to account for the low frequency (rumbling) character of locomotive sound, and its greater potential to transmit through

exterior wall/window assemblies.

A central air conditioning system as an alternative means of ventilation to open windows is required for all dwellings where nighttime sound levels outside bedroom/living/dining room windows exceed 60 dBA or daytime sound levels outside bedroom/living/dining room windows exceed 65 dBA. Forced-air ventilation with ducts sized to accommodate the future installation of air conditioning is required when nighttime sound levels at bedroom/living/dining room windows are in the range of 51 to 60 dBA or when daytime sound levels at bedroom/living/dining room windows are in the range of 56 to 65 dBA.

Building components such as walls, windows and doors must be designed to achieve indoor sound level criteria when the plane of the window nighttime sound level exceeds 60 dBA or the daytime sound level exceeds 65 dBA due to road traffic noise and exceed 55 dBA during the nighttime hours or exceed 60 dBA during the daytime hours due to rail traffic noise.

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

4 Traffic Noise Assessment

4.1 Road Traffic Data

Road traffic information for Lakeshore Road East and Cawthra Road were obtained from the City of Mississauga, in the form of ultimate AADT values, and is provided in Appendix B. An ultimate AADT of 33 100 and 30 000 vehicles per day, was applied to Lakeshore Road East and Cawthra Road, respectively. A commercial vehicle percentage of 5.0% was used in the analysis for Lakeshore Road East and was further split into 2.8% and 2.2% for medium and heavy trucks, respectively. A commercial vehicle percentage of 6.0% was used in the analysis for Cawthra Road and was further split into 1.8% and 4.2% for medium and heavy trucks, respectively. A road grade of 2% along with a speed limit of 50 km/h was also applied in the analysis for both roads. Table 2 summarizes the traffic volume data used in this study.

Table 2: Ultimate Road Traffic Data

Road Name		Cars	Medium Trucks	Heavy Trucks	Total
Lakeshore Road East	Daytime	28 301	834	655	29 790
	Nighttime	3 145	93	73	3 310
	Total	**31 445**	**927**	**728**	**33 100**
Cawthra Road	Daytime	25 662	491	1 147	27 300
	Nighttime	2 538	49	113	2 700
	Total	**28 200**	**540**	**1 260**	**30 000**

4.2 Rail Traffic Data

Rail traffic data for the Metrolinx railway (Oakville Subdivision) was obtained from Metrolinx personnel and previous project files, originally obtained from AECOM personnel and is provided in Appendix C. This rail line is used for freight and passenger operations and is classified as a principal main line. The maximum train speed for freight and way freight trains is 97 kph (60 mph) and for passenger trains is 153 kph (95 mph). The maximum allowable speed input in STAMSON 5.04, a computer algorithm developed by the MECP, is 150 kph and was used in the analysis. In conformance with CN/GO Transit assessment requirements, the maximum speeds, maximum number of cars and locomotives per train were used in the traffic noise analysis to yield a worst case estimate of train noise. The data was projected to the year 2031 using a 2.5% per year growth rate. Table 3 summarises the rail traffic data used in the analysis.

Table 3: Rail Traffic Data Projected and Forecasted to Year 2031

Type of Train	Number of Trains Day/ Night	Number of locomotives	Number of cars	Max Speed (KPH)*
Freight *(projected)*	2.2 / 0.0	4	140	97
Way Freight *(projected)*	4.3 / 2.2	2	25	97
Passenger *(projected)*	30.1 / 6.5	2	10	153
GO (Diesel) *(forecasted)*	60 / 8	1	12	153
GO (Diesel) *(forecasted)*	11 / 4	2	12	153
GO (Electric) *(forecasted)*	101 / 21	1	12	153
GO (Electric) *(forecasted)*	42 / 8	2	12	153

Note: *The maximum allowable speed input in STAMSON is 150 kph and was used in the analysis
+ All GO Transit trains modelled as diesel trains as per correspondence with Metrolinx personnel

4.3 Traffic Noise Predictions

To assess the levels of road and rail traffic noise which will impact the study area in the future, sound level predictions were made using STAMSON version 5.04. STAMSON outputs are included in Appendix D.

Sound levels were predicted at the plane of the top storey windows during daytime and nighttime hours to investigate ventilation requirements and in the outdoor amenity areas to determine acoustic barrier requirements. Sound level predictions are summarized in Tables 4 and 5.

The distance setbacks of the buildings indicated on the site plan were used in the analysis, along with an aerial photo to determine the distance of the proposed buildings to the roadways and railway. The acoustic recommendations may be subject to modifications if the site plan is changed significantly.

Table 4: Daytime Predicted Future Sound Levels [dBA], Without Mitigation

Building	Prediction Location	Description	Daytime - $L_{EQ(16)}$		Daytime - Total $L_{EQ(16)}$
			Road	Rail	
Building C/D	A	South Façade	68	<55	68
	B	East Façade	67	63	68
	C	North Façade	58	64	65
	D	West Façade	65	63	67
Building B (East)	E	South Façade	64	<55	64
	F	East Façade	64	68	69
	G	North Façade	58	71	71
	H	West Façade	60	68	68
	I	Amenity Area 6/F *	<55	<55	<55
Building B (West)	J	South Façade	63	<55	63
	K	East Façade	63	68	69
	L	North Façade	56	71	71
	M	West Façade	60	68	68
Building A	N	South Façade	62	<55	62
	O	East Façade	63	68	69
	P	North Façade	58	71	72
	Q	West Façade	60	68	68
	R	Amenity Area 6/F **	<55	59	59

Note:
* Assuming a standard 1.07 m solid parapet or guard.
** Including a 2.0 m high acoustic barrier along the perimeter of the area, as indicated on the amenity floor plan.

Table 5: Nighttime Predicted Future Sound Levels [dBA], Without Mitigation

Building	Prediction Location	Description	Daytime - $L_{EQ(8)}$		Daytime - Total $L_{EQ(8)}$
			Road	Rail	
Building C/D	A	South Façade	62	<50	62
	B	East Façade	60	59	63
	C	North Façade	51	60	60
	D	West Façade	59	59	62
Building B (East)	E	South Façade	58	<50	58
	F	East Façade	57	64	64
	G	North Façade	51	67	67
	H	West Façade	53	64	64
Building B (West)	J	South Façade	57	<50	57
	K	East Façade	56	64	64
	L	North Façade	49	67	67
	M	West Façade	53	64	64
Building A	N	South Façade	56	<50	56
	O	East Façade	56	64	65
	P	North Façade	51	67	67
	Q	West Façade	53	64	64

5 Traffic Noise Recommendations

The predictions indicate that the future traffic sound levels from Lakeshore Road East and the railway will exceed MECP guidelines at all the building façades. The following discussion outlines recommendations for ventilation requirements, upgraded building façade constructions and warning clauses to achieve the noise criteria stated in Table 1.

5.1 Outdoor Living Areas

The predicted sound level in the outdoor amenity area on the 5th floor of Building B (Prediction Location [I]) will be less than 55 dBA, assuming a standard 1.07 m high acoustic barrier around the perimeter of this area, as indicated on the amenity floor plan.

The predicted sound level in the outdoor amenity area on the 5th floor of Building A (Prediction Location [R]) will be 59 dBA, 4 dBA in excess of the MECP's limit of 55 dBA, assuming a 2.0 m high acoustic barrier around the perimeter of this area, as indicated on the amenity floor plan. The

4 dBA sound level excess is within the discretionary range acceptable to the MECP with the use of a noise warning clause.

Acoustic barriers must achieve a surface density of 20 kg/m^2 and be free of gaps or cracks within or below its extent.

5.2 Indoor Living Areas & Ventilation Requirements

Air Conditioning

The predicted daytime sound levels at most of the façades of the proposed buildings will be greater than 65 dBA during the daytime and 60 dBA during the nighttime. To address these excesses, the MECP guidelines recommend that the proposed buildings be equipped with central air conditioning systems, so that the windows can be closed.

5.3 Building Façade Constructions

Future sound levels at the façades of the proposed buildings will exceed 65 dBA during the daytime hours and 60 dBA during the nighttime hours. MECP guidelines recommend that the windows, walls, and doors be designed so that the indoor sound levels comply with MECP noise criteria.

Preliminary calculations have been performed to determine options for glazing elements required to maintain indoor sound levels within MECP guidelines. Calculations have been performed to determine building envelope constructions required to maintain indoor sound levels within MECP guidelines. The calculation methods were developed by the National Research Council (NRC), and are based on the predicted outdoor sound levels and the area of the exposed facade components (walls, doors and windows) relative to the floor area of the adjacent room.

5.3.1 Acoustical Requirements for Glazing

Since the floor plans and elevations have not yet been sufficiently developed for a detailed acoustical specification of the building envelope, the STC rating targets were determined based on the assumption that typical window-to-floor areas will be 50% for the living/dining rooms (40% fixed and 10% operable) and 25% for the bedrooms (20% fixed and 5% operable). A minimum of STC-33 is recommended given the urban nature of the site, to address spurious environmental noises that

have not been specifically modelled. Operable elements should have tight seals sufficient to achieve acoustical performance ratings no more than 2 points less.

The following table indicates the minimum acoustical requirement for the basic window glazing, including glass in fixed sections, doors, and operable windows for the façades of the proposed buildings.

Table 6: Minimum Acoustical Requirements for Glazing STC[1, 2]

Building	Prediction Location	Façade	Glazing STC
Building C/D	A	South	STC-33
	B	East	STC-33
	C	North	STC-33
	D	West	STC-33
Building B (East)	E	South	STC-33
	F	East	STC-34
	G	North	STC-37
	H	West	STC-33
Building B (West)	J	South	STC-33
	K	East	STC-34
	L	North	STC-37
	M	West	STC-33
Building A	N	South	STC-33
	O	East	STC-34
	P	North	STC-37
	Q	West	STC-33

Note:

[1] Based on 50% window to floor area ratio for living rooms and 25% window to floor area ratio for bedrooms.

[2] STC requirement refers to installed performance, including sound transmitted through mullions in window-wall systems and seals on operable windows and doors. Test data should be provided where available.

Further Analysis

Acoustical requirements for the building envelope should be confirmed once detailed floor plans and elevations have been developed, as different window-to-floor area ratios may result in different STC rating requirements.

5.4 Warning Clauses

The MECP guidelines recommend that warning clauses be included in the property and tenancy agreements and offers of purchase and sale for the proposed buildings as there are anticipated traffic sound level excesses. The following noise warning clauses are required for specific units.

Suggested wording for future dwellings with minor sound level excesses is given below:

Type A:

> Purchasers/tenants are advised that sound levels due to increasing road and rail traffic may occasion interfere with some activities of the dwelling unit occupants as the sound levels exceed the Municipality's and the Ministry of the Environment, Conservation and Parks' noise criteria.

A suggested wording for future dwellings requiring central air conditioning systems is given below.

Type B:

> 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 Environment, Conservation and Parks.

Suitable wording to inform future residents of the adjacent commercial facilities and that sounds from these facilities may at times be audible.

Type C:

> Purchasers/tenants are advised that due to the proximity of this development to nearby commercial/industrial facilities, sound levels from the facilities may at times be audible.

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

GO Transit's standard warning clause for residential developments located within 300 m of a railway right-of-way (principal main line) is given below.

Type D:

> Warning: Metrolinx and its assigns and 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 Metrolinx or any railway entering into an agreement with Metrolinx to use the right-of-way or their assigns or successors as aforesaid may expand their operations, which expansion may affect the living environment of the residents in the vicinity, notwithstanding the inclusion of any noise and vibration attenuating measures in the design of the development and individual dwelling(s). Metrolinx will not be responsible for any complaints or claims arising from use of such facilities and/or operations on, over or under the aforesaid right-of-way.

CN's standard warning clause for residential developments located near a principal main line is provided below. The following sample clause is typical of those included in agreements of purchase and sale or lease on the Lands that are within 300 meters of the railway right-of-way.

Type E:

> Warning: Canadian National Railway Company or its assigns or successors in interest has or have a rights-of-way within 300 meters from the land subject hereof. There may be alteration to or expansions of the railway facilities on such rights-of-way in the future including the possibility that the railway or its assigns or successors as aforesaid may expand its operations, which expansion may affect the living environment of the residents in the vicinity, notwithstanding the inclusion of any noise and vibration attenuating measures in the design of the development and individual dwellings. CNR will not be responsible for any complaints or claims arising from use of such facilities and/or operations on, over or under the aforesaid rights-of-way.

6 Stationary Noise Assessment

6.1 Criteria Governing Stationary (Industrial) Noise Sources

An industrial or commercial facility is classified in MECP guidelines as a stationary source of sound (as compared to sources such as traffic or construction, for example) for noise assessment purposes. The existing rooftop mechanical equipment on the roof of the adjacent commercial building located to the east and south of the development can be classified as stationary sources of sound. Noise source locations are shown in Figure 3.

The Ministry of the Environment, Conservation and Parks (MECP) provides guidelines for the assessment of stationary noise sources. NPC-300 "Environment Noise Guideline Stationary and Transportation sources – Approval and Planning" referenced with regard to traffic noise is also intended for use in the planning of noise sensitive land uses adjacent to residential buildings.

The criteria is based on the background sound level at sensitive points of reception (which are typically residences) in the quietest hour that the source can be in operation. Background sound includes sound from road traffic and natural sounds, but excludes the sources under assessment. For relatively quiet areas where background sound may fall to low levels during some hours, NPC-300 stipulates various minimum limits. In Class 1 areas such as this, these limits are 50 dBA for daytime periods (07:00 to 23:00) and 45 dBA at night (23:00 to 07:00). To ensure a conservative analysis, the minimum exclusionary limits will be adopted at the proposed building.

Sources sound levels for typical rooftop mechanical units and assumed operational information (outlined below) were used as input to a predictive computer model (*Cadna-A version 2022 MR2 (32 bit) : build 189.5221*), in order to estimate the sound levels from the existing commercial building at the proposed development. The computer model is based on the methods from ISO Standard 9613-2.2, "Acoustic – Attenuation of Sound During Propagation Outdoors", which accounts for reduction in sound level with distance due to geometrical spreading, air absorption, ground attenuation and acoustical shielding by intervening structures. Assumptions regarding the operating duty cycles of the equipment (100% during the daytime, and 50% during the nighttime) were included based on our experience with other projects.

6.2 Assessment of Noise Emissions from Existing Rooftop Mechanical Equipment at Proposed Sensitive Receptors

Sound power levels from the existing rooftop mechanical equipment at the commercial buildings to the east and south of the subject site were estimated based on an aerial photo and manufacturer's data for similar mechanical equipment used in similar past projects. Rooftop units and exhaust fans on the existing commercial buildings with sound power ratings of 72 and 75 dBA, respectively, were assumed in the analysis. The results of this assessment indicate predicted sound levels of 39 dBA during the daytime and 38 dBA during the nighttime at the proposed dwelling units. Daytime and

nighttime results are also shown graphically in Figures 4 and 5. These predicted sound levels are less than the MECP minimum exclusionary limit of 50 dBA during the daytime hours and 45 dBA during the nighttime hours, based on a typical worst-case operating scenario.

It is concluded that sounds from the existing rooftop mechanical equipment associated with the adjacent commercial buildings are anticipated to comply with the MECP guidelines at the proposed sensitive receptors and physical mitigation is not required.

7 Impact of the Development on the Environment

Sound levels from noise sources such as rooftop air-conditioners, cooling towers, exhaust fans, etc. associated with the proposed development should not exceed the minimum one-hour L_{EQ} ambient (background) sound level from road traffic, at any potentially impacted residential point of reception, to comply with the City of Mississauga's noise by-laws. Based on the levels observed during our site visit, the typical minimum ambient sound levels in the area are expected to be in the range of 55 dBA or more during the day and 45 dBA or more at night. Thus, any electro-mechanical equipment associated with this development (e.g., emergency generator testing, fresh-air handling equipment, etc.) should be designed such that they do not result in noise impact beyond these ranges.

8 Impact of the Development on Itself

Section 5.8.1.1 of the Ontario Building Code (OBC), released on January 1, 2020, specifies the minimum required sound insulation characteristics for demising partitions, in terms of Sound Transmission Class (STC) or Apparent Sound Transmission Class (ASTC) values. In order to maintain adequate acoustical privacy between separate suites in a multi-tenant building, inter-suite walls must meet or exceed STC-50 or ASTC-47. Suite separation from a refuse chute or elevator shaft must meet or exceed STC-55. In addition, it is recommended that the floor/ceiling constructions separating suites from any amenity or commercial spaces also meet or exceed STC-55. Tables 1 and 2 in Section SB-3 of the Supplementary Guideline to the OBC provide a comprehensive list of constructions that will meet the above requirements.

Tarion's Builder Bulletin B19R requires the internal design of condominium projects to integrate suitable acoustic features to insulate the suites from noise from each other and amenities in accordance with the OBC, and limit the potential intrusions of mechanical and electrical services of the buildings on its residents. If B19R certification is needed, an acoustical consultant is required to review the mechanical and electrical drawings and details of demising construction and mechanical/electrical equipment, when available, to help ensure that the noise impact of the development on itself is maintained within acceptable levels.

9 Summary & Recommendations

The following list summarizes the recommendations made in this report. The reader is referred to previous sections of the report where these recommendations are applied and discussed in more detail.

1. Central air conditioning is required for the proposed buildings. The location, installation and sound ratings of the air conditioning devices should comply with NPC-300, as applicable.

2. Certain minimum building and glazing constructions will be required for the proposed buildings, as indicated in Section 5.3. When detailed floor plans and building elevations are available, a review should be conducted to verify required glazing and building façade constructions based on actual window to floor area ratios.

3. Noise warning clauses to inform the occupants of the sound level excesses should be placed in the property and tenancy agreements and offers of purchase and sale.

4. Tarion Builder's Bulletin B19R requires that the internal design of condominium projects integrates suitable acoustic features to insulate the suites from noise from each other and amenities in accordance with the OBC, and limit the potential intrusions of mechanical and electrical services of the buildings on its residents. If B19R certification is needed, an acoustical consultant is required to review the mechanical and electrical drawings and details of demising constructions and mechanical/electrical equipment, when available, to help ensure that the noise impact of the development on itself are maintained within acceptable levels. Outdoor sound

emissions should also be checked to ensure compliance with the City of Mississauga's noise by-laws.

9.1 Implementation

To ensure that the noise control recommendations outlined above are fully implemented, it is recommended that:

1. Once detailed floor plans and elevations are available, a detailed analysis may be undertaken to provide refined STC rating for the glazing constructions based on actual window to floor area ratios, and to review the sound insulation of the proposed wall assemblies.

2. Prior to the issuance of building permits for this development, the Municipality's building inspector or a Professional Engineer qualified to perform acoustical engineering services in the Province of Ontario should certify that the noise control measures have been properly incorporated, installed and constructed.

Figure 1: Key Plan

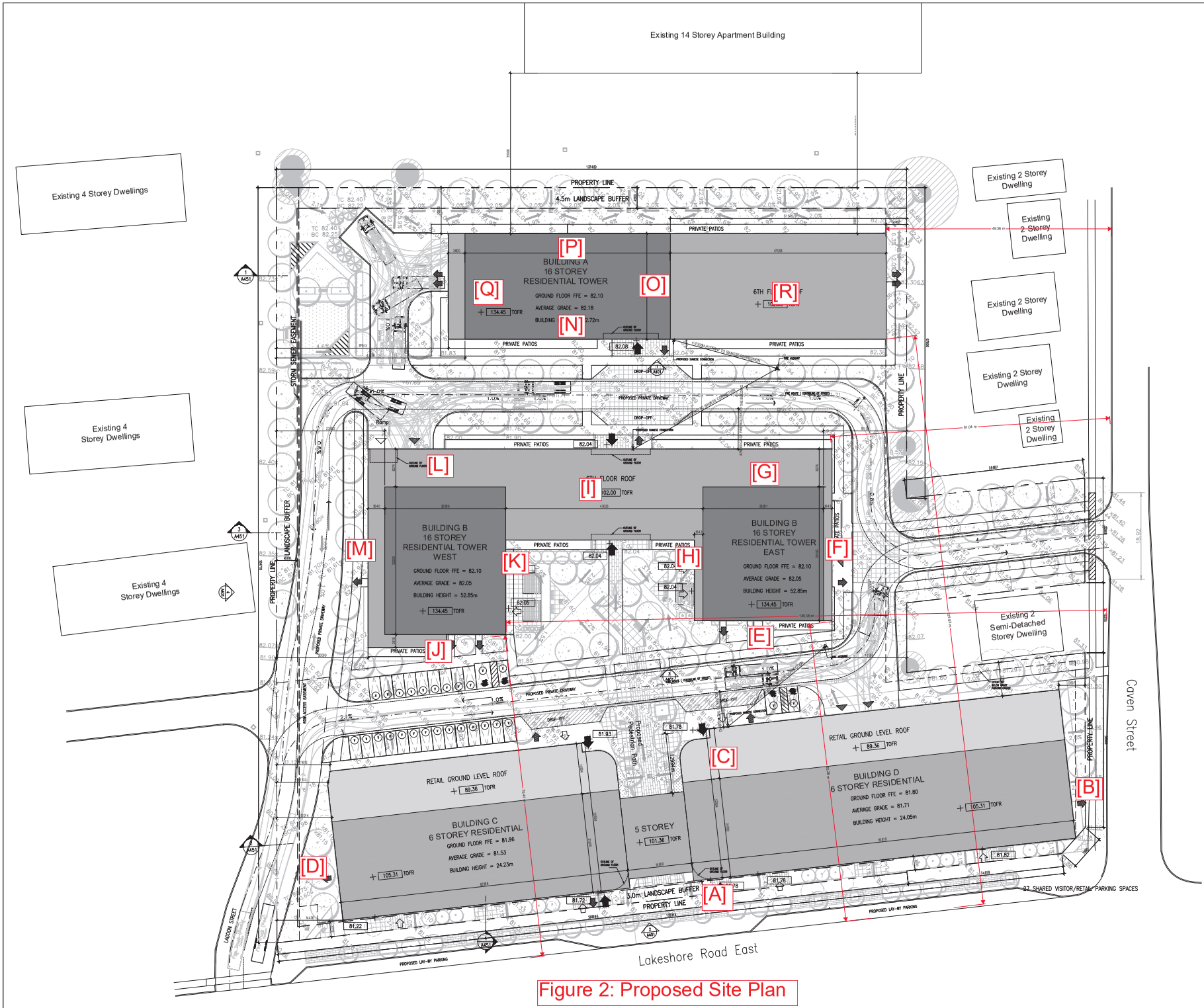

Figure 2: Proposed Site Plan

PARKING NOTES:

1. MINIMUM PARKING SPACE SIZE (UNLESS OTHERWISE NOTED):
- 2.60 m WIDE X 5.60 m LONG (NO OBSTRUCTIONS)
- 2.60 m WIDE X 6.60 m LONG (ONE SIDE OBSTRUCTED)
- 3.30 m WIDE X 6.60 m LONG (TWO SIDES OBSTRUCTED)
2. MINIMUM MANEUVERING AISLE WIDTH OF 7.00 m (AS REQUIRED BY ZONING BY-LAW NOTED)
3. MINIMUM HEADROOM CLEARANCE OF 2.10 m THROUGHOUT

PARKING LEGEND:

- RESIDENTIAL PARKING SPACE
- VISITOR PARKING SPACE
- RETAIL PARKING SPACE
- BIKE STORAGE LOCKER (1.830x915)
- BIKE PARKING (STACKED - 1800x610)
- BIKE PARKING (HORIZONTAL - 1800X600)
- BIKE PARKING (VERTICAL - 1200x600)
- PAINTED LINES

LEGEND

- BUILDING ENTRANCE (PRIMARY)
- BUILDING ENTRANCE (SECONDARY)
- BUILDING EXIT
- PARKING ENTRANCE
- LOADING ENTRANCE
- PROPOSED GRADE
- EXISTING GRADE
- TOP OF FINISHED ROOF
- PROPERTY LINE
- FIRE ROUTE
- SETBACK/ EASEMENT LINE
- LINE OF BUILDING
- LINE OF BUILDING AT GRADE
- LINE OF BUILDING BELOW GRADE

REZONING REVISION

REVISION RECORD

2022-07-11 REZONING APPLICATION

ISSUE RECORD

BDP Quadrangle

Quadrangle Architects Limited
901 King Street West, Suite 701 Toronto, ON M6V 3H6
t. 416 598 1240 www.bdpquadrangle.com

579, 619 Lakeshore Road East and 1022, 1028 Caven Street

17125 PROJECT | 1:250 SCALE | AR DRAWN | KVE REVIEWED

Site Plan

A101

Note: This drawing is the property of the Architect and may not be reproduced or used without the express consent of the Architect. The Contractor is responsible for checking and verifying all dimensions on site and will report all errors and discrepancies to the Architect and obtain clarification prior to commencing work.

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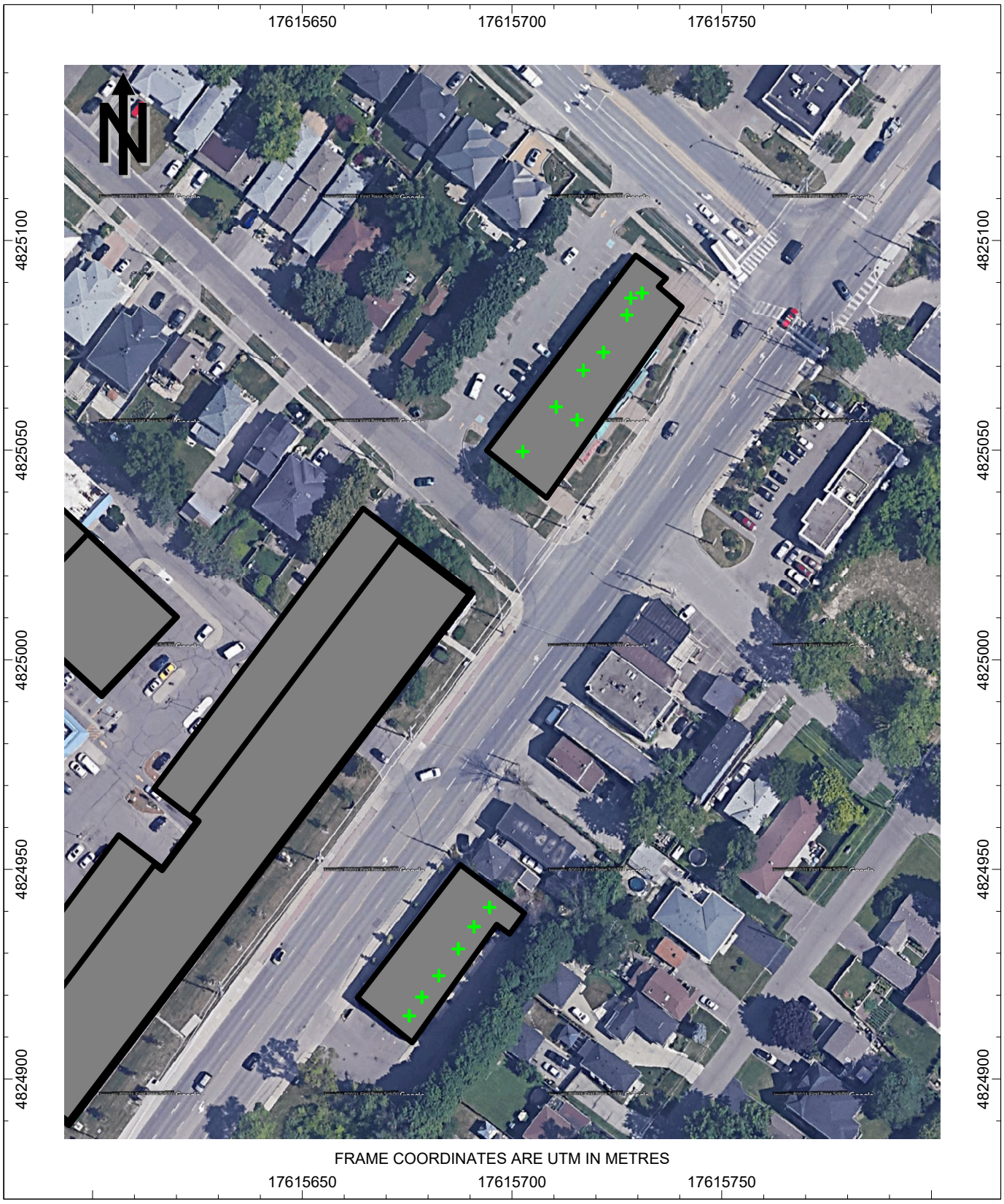


Figure 3: Existing Noise Sources

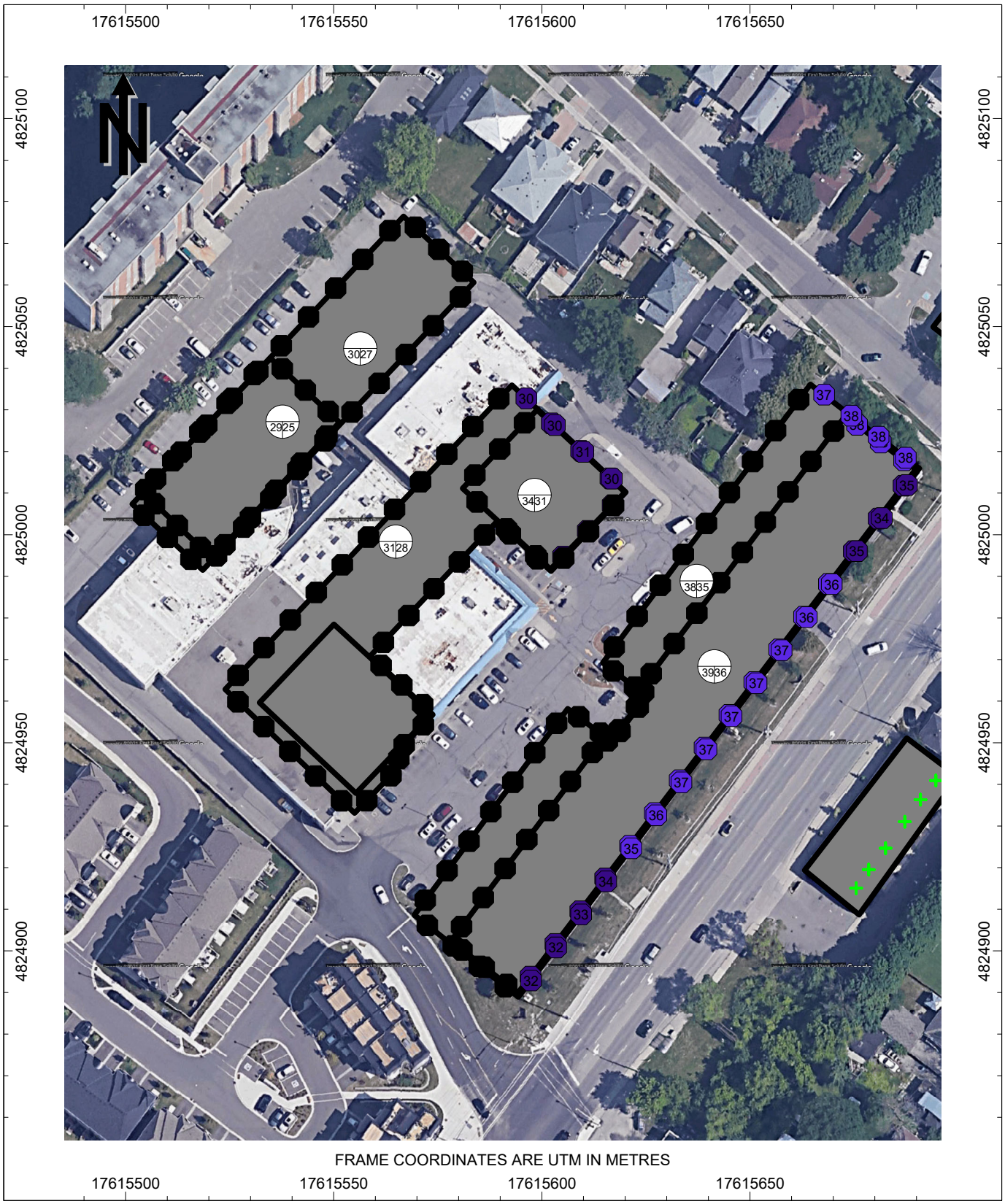


Figure 4: Predicted Daytime Sound Levels from Existing Stationary Noise Sources, dBA

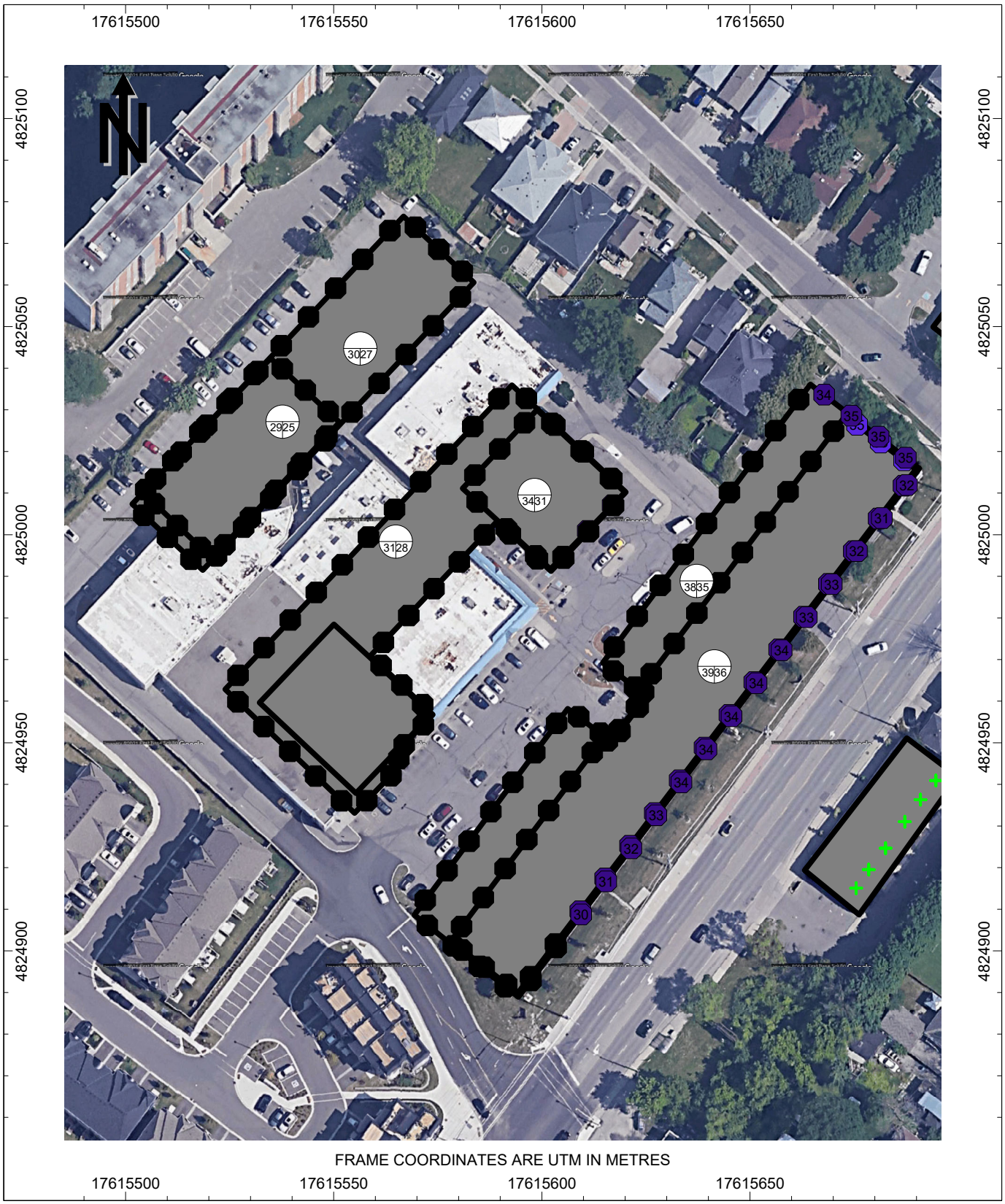


Figure 5: Predicted Nightime Sound Levels from Existing Stationary Noise Sources, dBA

APPENDIX A

Supporting Drawings

BDP. Quadrangle

Quadrangle Architects Limited
901 King Street West, Suite 701 Toronto, ON M5V 3H5
t 416 598 1240 www.bdpquadrangle.com

579, 619 Lakeshore Road East and 1022, 1028 Caven Street

579, 619 Lakeshore Road East and 1022, 1028 Caven Street
Mississauga, Ontario
for
Star Seeker Inc.

Project No. 17125
Date 11 July 2022
Issued for Rezoning-R1

ARCHITECTURAL DRAWINGS

1/A001 - View of Building C&D From Lakeshore Avenue West

2/A001 - View of Building A Podium and Rooftop Amenity Space

3/A001 - View of The Pedestrian Connection Through Building C&D From Lakeshore Avenue West

4/A001 - View of Building B Courtyard

5/A001 - View of Building C&D From Lakeshore Avenue West - Looking East

REZONING REVISION

REVISION RECORD

2022-07-11 REZONING APPLICATION

ISSUE RECORD

BDP. Quadrangle

Quadrangle Architects Limited
901 King Street West, Suite 701 Toronto, ON M6V 3H6
t 416 598 1240 www.bdpquadrangle.com

579, 619 Lakeshore Road East and 1022, 1028 Caven Street

17125	NTS	AR	KVE
PROJECT	SCALE	DRAWN	REVIEWED

Visualization Images

A001

BUILDING A

	BACH		1 BED				1 BED + DEN									2 BED				2 BED+DEN									Totals
SUITE TYPES	B-A	B-B	1-A	1-B	1-C	1-D	1D-A	1D-B	1D-C	1D-D	1D-E	1D-F	1D-G	1D-H	1D-I	2-A	2-B	2-C	2-D	2D-A	2D-B	2D-C	2D-D	2D-E	2D-F	2D-G	2D-H	2D-I	
AREA (sm)							52.9	53.7	54.6	56.0	56.2	56.3	56.8	59.0	59.5	66.5	65.2	62.5	67.9	72.2	76.6	77.9	80.4	80.8	81.1	84.8	89.4	99.1	
AREA (sf)							569	578	588	603	605	606	611	635	640	716	702	673	731	777	825	839	865	870	873	913	962	1,067	
16											4	1	1	2			1		1			1	1	1		1			14
15											4	1	1	2			1		1			1	1	1		1			14
14											4	1	1	2			1		1			1	1	1		1			14
13											4	1	1	2			1		1			1	1	1		1			14
12											4	1	1	2			1		1			1	1	1		1			14
11											4	1	1	2			1		1			1	1	1		1			14
10											4	1	1	2			1		1			1	1	1		1			14
9											4	1	1	2			1		1			1	1	1		1			14
8											4	1	1	2			1		1			1	1	1		1			14
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6							1	1	1		12	1	1	11		1						1		1	1			1	33
5							1	1	1		12	1	1	11		1						1		1	1			1	33
4							1	1	1		12	1	1	11		1						1		1	1			1	33
3							1	1	1		12	1	1	11		1						1		1	1			1	33
2											10	1	1	9		1		1	0			1		1	1			1	27
Ground Floor							0	0		1	8			8	3	1				1	1						1	0	24
Subtotals	0	0	0	0	0	0	4	4	4	1	102	14	14	79	3	6	9	1	9	1	1	14	9	14	5	9	1	5	
TOTAL		0				0									225				25									59	309
Percentage		0%				0%									73%				8%									19%	Suites
BARRIER FREE SUITES (hatched in grey)																													
Required (15%)	0		34													13													47
Provided	0		79													14													93

BUILDING B

	BACH			1 BED					1 BED + DEN																					
SUITE TYPES	B-A	B-B	B-C	1-A	1-B	1-C	1-D	1-E	1D-A	1D-B	1D-C	1D-D	1D-E	1D-F	1D-G	1D-H	1D-I	1D-J	1D-K	1D-L	1D-M	1D-N	1D-O	1D-P	1D-Q	1D-R	1D-S	1D-T	1D-U	1D-V
AREA (sm)	29.1	30.8	37.0	39.4	44.5	45.5	46.3	47.1	51.0	51.1	51.3	55.2	53.3	54.4	56.4	57.0	57.7	58.1	58.3	58.4	58.6	59.2	59.3	59.6	59.9	60.4	60.4	61.1	62.5	63.3
AREA (sf)	313	332	398	424	479	490	498	507	549	550	552	594	574	586	607	614	621	625	628	629	631	637	638	642	645	650	650	658	673	681
16			1					2	2			1	1				4	4					1							
15			1					2	2			1	1				4	4					1							
14			1					2	2			1	1				4	4					1							
13			1					2	2			1	1				4	4					1							
12			1					2	2			1	1				4	4					1							
11			1					2	2			1	1				4	4					1							
10			1					2	2			1	1				4	4					1							
9			1					2	2			1	1				4	4					1							
8			1					2	2			1	1				4	4					1							
7													1		1	1	2	2								1	1		1	1
6		9				1	6				7								1		1							1		
5		9				1	6				7								1		1							1		
4		9				1	6				7								1		1							1		
3		9				1	6				7								1		1							1		
2		6				1	6				4			1						2								1		
Ground Floor	3			1	5					1	4											1		1	1					
Subtotals	3	42	9	1	5	5	30	18	18	1	36	9	10	1	1	1	38	38	4	2	4	1	9	1	1	1	1	5	1	1
TOTAL			54					59																						184
Percentage			11%					12%																						38%
BARRIER FREE SUITES (hatched in grey)																														
Required (15%)	9			37																										
Provided	9			38																										

	2 BED																				2BED+D									Totals
SUITE TYPES	2-A	2-B	2-C	2-D	2-E	2-F	2-G	2-H	2-I	2-J	2-K	2-L	2-M	2-N	2-O	2-P	2-Q	2-R	2-S	2-T	2D-A	2D-B	2D-C	2D-D	2D-E	2D-F	2D-G	2D-H	2D-I	59
AREA (sm)	57.8	58.9	59.7	60.9	61.0	61.4	63.2	63.8	64.1	64.7	65.0	65.9	67.6	68.3	69.4	69.7	70.9	71.3	71.4	73.5	74.1	75.2	78.2	78.4	82.9	84.2	87.2	88.4	133.6	
AREA (sf)	622	634	643	656	657	661	680	687	690	696	700	709	728	735	747	750	763	767	769	791	798	809	842	844	892	906	939	952	1,438	
16																2				2			4							24
15																2				2			4							24
14																2				2			4							24
13																2				2			4							24
12																2				2			4							24
11																2				2			4							24
10																2				2			4							24
9																2				2			4							24
8																2				2			4							24
7																2							2							15
6		1	1	1	1	1	2		1	1	1		1	2				1	1		2	1			1			1	1	47
5		1	1	1	1	1	2		1	1	1		1	2				1	1		2	1			1			1	1	47
4		1	1	1	1	1	2		1	1	1		1	2				1	1		2	1			1			1	1	47
3		1	1	1	1	1	2		1	1	1		1	2				1	1		2	1			1			1	1	47
2		1	1		1		2		1		1		1	1					1		2	1					1	1	1	37
Ground Floor	1						2	1				1			1		1							1		1				26
Subtotals	1	5	5	4	5	4	12	1	5	4	5	1	5	9	1	20	1	4	5	18	10	5	38	1	4	1	1	5	5	
TOTAL																				115									70	482
Percentage																				24%									15%	Suites
BARRIER FREE SUITES (hatched in grey)																														
Required (15%)	28																													65
Provided	28																													66

BUILDING C

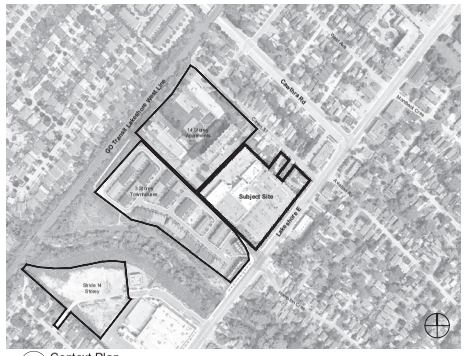
	BACH		1 BED		1 BED + DEN			2 BED			2 BED + DEN			Totals
SUITE TYPES	B-A	B-B	1-A	1-B	1D-A	1D-B	1D-C	2-A	2-B	2-C	2D-A	2D-B	2D-C	
AREA (sm)	39.6	40.2	49.2	50.4	56.7	58.6	59.4	65.8	66.9	68.6	75.6			
AREA (sf)	426	433	530	543	610	631	639	708	720	738	814			
6	1	1	1	8	1	1	5	1	1	1	1			22
5	1	1	1	8	1	1	5	1	1	1	1			22
4	1	1	1	8	1	1	5	1	1	1	1			22
3	1	1	1	8	1	1	5	1	1	1	1			22
2	1	1	1	8	1	1	5	1	1	1	1			22
Ground Floor														0
Subtotals	5	5	5	40	5	5	25	5	5	5	5	0	0	
TOTAL		10		45			35			15			5	110
Percentage		9%		40%			32%			14%			5%	Suites
BARRIER FREE SUITES (hatched in grey)														
Required (15%)	2		12					3						15
Provided	5		25					5						30

BUILDING D

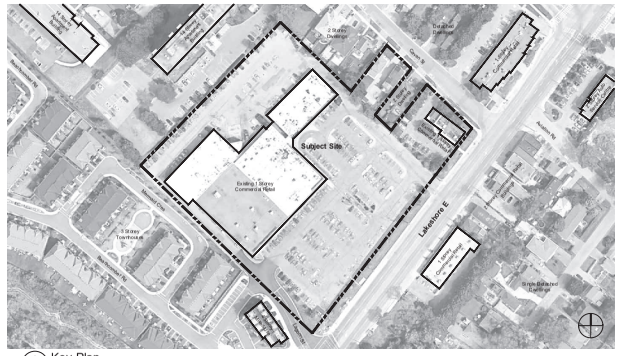
	BACH			1 BED					1 BED + DEN				2 BED				2 BED + DEN			Totals
SUITE TYPES	B-A	B-B	B-C	1-A	1-B	1-C	1-D	1-E	1D-A	1D-B	1D-C	1D-D	2-A	2-B	2-C	2-D	2D-A	2D-B	2D-C	
AREA (sm)	33.1	35.1	40.2	44.8	49.2	50.4	0.0	0.0	58.6	59.4			61.8	65.7	71.4	71.5	75.6			
AREA (sf)	356	378	433	482	530	543	0	0	631	639	0	0	665	707	769	770	814	0	0	
6		1	1		1	11			1	8			1	1	1	1	2			29
5	3	1	1	3	1	11			1	8			1	1	1	1	2			35
4	3	1	1	3	1	11			1	8			1	1	1	1	2			35
3	3	1	1	3	1	11			1	8			1	1	1	1	2			35
2	3	1	1	3	1	11			1	8			1	1	1	1	2			35
Ground Floor																				0
Subtotals	12	5	5	12	5	55	0	0	5	40	0	0	5	5	5	5	10	0	0	
TOTAL			22					72				45				20			10	169
Percentage			13%					43%				27%				12%			6%	Suites
BARRIER FREE SUITES (hatched in grey)																				
Required (15%)	4			18									5							23
Provided	5			40									5							45

BUILDING A, B, C AND D

	BACH		1 BED		1 BED+DEN		2 BED		2 BED+DEN		Totals
SUITE TYPES	Requested	Providing	Requested	Providing	Requested	Providing	Requested	Providing	Requested	Providing	
Building A		0		0		225		25		59	309
Building B		54		59		184		115		70	482
Building C		10		45		35		15		5	110
Building D		22		72		45		20		10	169
Subtotals	N/A	86	N/A	176	N/A	489	N/A	175	N/A	144	
TOTAL		86		176		489		175		144	1070
AVG. AREA (sm)		35.638	51.1	38.9	62.7	57.339	74.3	65.881	85.9	83.785	
AVG. AREA (sf)		383.6	550.04	418.72	674.9	617.2	799.77	709.14	924.63	901.86	
Percentage	10%	8%	15%	17%	45%	46%	20%	16%	10%	13%	
BARRIER FREE SUITES (hatched in grey)											
Required (15%)	13		100				48				148
Provided	13		100				48				148



1 A101 Context Plan
SCALE: N/A



2 A101 Key Plan
SCALE: N/A

PROJECT STATISTICS

BUILDING A

Floor	GBA/Typ. Floor (sm)	No. Typ. Floors	GBA Gross Building Area (no exclusions) sm	GBA sf	0225-2007, C4-14 GFA Exempt* (sm)	City-Wide By-Law 0225-2007, C4-14 GFA (Res) sm	GFA (Res) sf	GFA (Non-Res) sm	GFA (Non-Res) sf	STUDIO	1B	1B+D	2B	2B+D	Total Suites	Retail Useable sm	Retail Useable sf
MPH	215.2	1	215.2	2,316		0.0	0			0	0	0	0	0	0	0.0	0
Level 8-16	1,031.7	9	9,285.3	99,947	447	8,838.1	95,134			0	0	72	18	36	126	0.0	0
Level 7	1,031.7	1	1,031.7	11,105	962	69.3	746			0	0	0	0	0	0	0.0	0
Level 3-6	2,199.0	4	8,796.0	94,680	199	8,597.3	92,541			0	0	112	4	16	132	0.0	0
Level 2	2,199.0	1	2,199.0	23,670	50	2,013.7	21,675			0	0	21	2	4	27	0.0	0
Ground	2,184.0	1	2,184.0	23,509	318	1,854.2	19,959	0	0	0	0	20	1	3	24	0.0	0
Building A Total			23,711.2	255,227		21,372.6	230,055	0	0	0	0	225	25	59	309	0.0	0
			Required Amenity to be deducted from GFA =			618	sm (2sm/unit)			0%	0%	73%	8%	19%	100%		

Residential GFA = 20,755 sm
Non-Residential GFA = 0 sm
Total GFA for Density Calculation = 20,754.6 sm

BUILDING B

Floor	GBA/Typ. Floor (sm)	No. Typ. Floors	GBA Gross Building Area (no exclusions) sm	GBA sf	0225-2007, C4-14 GFA Exempt* (sm)	City-Wide By-Law 0225-2007, C4-14 GFA (Res) sm	GFA (Res) sf	GFA (Non-Res) sm	GFA (Non-Res) sf	STUDIO	1B	1B+D	2B	2B+D	Total Suites	Retail Useable sm	Retail Useable sf
MPH	338.4	1	338.4	3,643		0.0	0			0	0	0	0	0	0	0.0	0
Level 8-16	1616.9	9	14,552.1	156,639	561	13,990.9	150,598			9	18	117	36	36	216	0.0	0
Level 7	1616.9	1	1,616.9	17,404	605	1,011.7	10,890			0	0	11	2	2	15	0.0	0
Level 3-6	3203.8	4	12,815.2	137,943	1,260	11,555.0	124,378			36	28	40	60	24	188	0.0	0
Level 2	3203.8	1	3,203.8	34,486	365	2,839.1	30,561			6	7	8	10	6	37	0.0	0
Ground	3171.5	1	3,171.5	34,138	600	2,571.2	27,677	0	0	3	6	8	7	2	26	0.0	0
Building B Total			35,697.9	384,252		31,968.0	344,103	0	0	54	59	184	115	70	482	0.0	0
			Required Amenity to be deducted from GFA =			964	sm (2sm/unit)			11%	12%	38%	24%	15%	100%		

Residential GFA = 31,004 sm
Non-Residential GFA = 0 sm
Total GFA for Density Calculation = 31,004.0 sm

BUILDING C

Floor	GBA/Typ. Floor (sm)	No. Typ. Floors	GBA Gross Building Area (no exclusions) sm	GBA sf	0225-2007, C4-14 GFA Exempt* (sm)	City-Wide By-Law 0225-2007, C4-14 GFA (Res) sm	GFA (Res) sf	GFA (Non-Res) sm	GFA (Non-Res) sf	STUDIO	1B	1B+D	2B	2B+D	Total Suites	Retail Useable sm	Retail Useable sf
MPH	219.8	1	219.8	2,366	0	0.0	0			0	0	0	0	0	0	0.0	0
Level 6	1360.7	1	1,360.7	14,647	33	1,327.7	14,291			2	9	7	3	1	22	0.0	0
Leve 3-5	1360.7	3	4,082.1	43,940	99	3,983.1	42,874			6	27	21	9	3	66	0.0	0
Level 2	1360.7	1	1,360.7	14,647	33	1,327.7	14,291			2	9	7	3	1	22	0.0	0
Ground	2031.4	1	2,031.4	21,866	169	308.5	3,321	1,554	16,727	0	0	0	0	0	0	1,554.0	16,727
Building C Total			9,054.7	97,465		6,947.0	74,778	1,554	16,727	10	45	35	15	5	110	1,554.0	16,727
			Required Amenity to be deducted from GFA =			220	sm (2sm/unit)			9%	41%	32%	14%	5%	100%		

Residential GFA = 6,727 sm
Non-Residential GFA = 1,554 sm
Total GFA for Density Calculation = 8,281.0 sm

BUILDING D

Floor	GBA/Typ. Floor (sm)	No. Typ. Floors	GBA Gross Building Area (no exclusions) sm	GBA sf	0225-2007, C4-14 GFA Exempt* (sm)	City-Wide By-Law 0225-2007, C4-14 GFA (Res) sm	GFA (Res) sf	GFA (Non-Res) sm	GFA (Non-Res) sf	STUDIO	1B	1B+D	2B	2B+D	Total Suites	Retail Useable sm	Retail Useable sf
MPH	225	1	225.0	2,422		0.0	0			0	0	0	0	0	0	0.0	0
Level 6	1810.4	1	1,810.4	19,487	33	1,777.4	19,132			2	12	9	4	2	29	0.0	0
Level 3-5	2056.7	3	6,170.1	66,415	99	6,071.6	65,354			15	45	27	12	6	105	0.0	0
Level 2	2056.7	1	2,056.7	22,138	33	2,023.9	21,785			5	15	9	4	2	35	0.0	0
Ground	2711.3	1	2,711.3	29,184	349	596.2	6,417	1,767	19,015	0	0	0	0	0	0	1,776.0	19,117
Building D Total			12,973.5	139,647		10,469.0	112,688	1,767	19,015	22	72	45	20	10	169	1,776.0	19,117
			Required Amenity to be deducted from GFA =			338	sm (2sm/unit)			13%	43%	27%	12%	6%	100%		

Residential GFA = 10,131 sm
Non-Residential GFA = 1,767 sm
Total GFA for Density Calculation = 11,897.5 sm

BELOW GRADE PARKING

Floor	GBA/Typ. Floor (sm)	No. Typ. Floors	GBA Gross Building Area (no exclusions) sm	GBA sf	0225-2007, C4-14 GFA Exempt* (sm)	City-Wide By-Law 0225-2007, C4-14 GFA (Res) sm	GFA (Res) sf	GFA (Non-Res) sm	GFA (Non-Res) sf	NOTE
P1	20685	1	20,685.0	222,653	58	20,627.2	222,031.2			See parking statistics below.
P2	20685	1	20,685.0	222,653	60	20,625.2	222,009.7			
P3	20685	1	20,685.0	222,653	60	20,625.2	222,009.7			
TOTAL GBA AND GFA BELOW GRADE			41,370.0	445,307		61,877.6	666,050			

TOTAL DEVELOPMENT

TOTAL GBA ABOVE GRADE	sm	sf	TOTAL GFA ABOVE GRADE	sm	sf	NUMBER OF UNITS	STUDIO	1B	1B+D	2B	2B+D	
BUILDING A	23,711	255,227	BUILDING A	20,755	223,403	BUILDING A	0	0	225	25	59	309
BUILDING B	35,698	384,252	BUILDING B	31,004	333,727	BUILDINGB	54	59	184	115	70	482
BUILDING C	9,055	97,465	BUILDING C	8,281	89,137	BUILDING C	10	45	35	15	5	110
BUILDING D	12,974	139,647	BUILDING D	11,897	128,064	BUILDING D	22	72	45	20	10	169
						TOTAL	86	176	489	175	144	1070
						%	8%	16%	46%	16%	13%	
TOTAL GBA =	81,437	876,591	TOTAL GFA =	71,937	774,330	TOTAL UNIT=			1,070			

FSI

	sm	sf			NOTE
Gross Site Area	24,239.00 sm	260,909	Gross FSI:	2.97	
RES GFA	68,617 sm	738,588	(Total GFA ABOVE GRADE/Gross Site Area)		
NON-RES GFA	3,321 sm	35,742			
Total GFA (above + below grade)	133,815 sm	1,440,381			

VEHICULAR PARKING

Parking Breakdown

Required

Residential - Occupant					
	Studio	1.0	x	86	86
	1B	1.0	x	176	176
	1B+D	1.0	x	489	489
	2B	1.0	x	175	175
	2B+D	1.0	x	144	144
	Total				1070
Shared Visitor/Retail					
	0.2/unit	0.2	x	1070	214
Total				Total	1284 spaces
Accessible Spaces	34	1 space + 3% of total			

Included in TOTAL above

BICYCLE & STORAGE LOCKERS

Bicycle Zone 1

					Required	Provided
Residential						
Long-Term	0.6/unit	0.6	x	1,070	642	701
Short-Term	0.05/unit	0.05	x	1,070	50	67
Retail (Long-Term)	0.15 spaces per 100m2	0.15	x	3,321.00	5	5
Retail (Short-Term)	0.25 spaces per 100m2	0.2	x	3,321.00	7	7
TOTAL	Required	Provided			704	780
Class A (Long-Term)	647	706				
Class B (Short-Term)	60	74				

Storage Lockers

Total Locker/Storage Provided 1757

LOADING

			Required	Provided
Residential				
BUILDING A	> 30 Dwelling Units	Type G	1	1
BUILDING B	> 30 Dwelling Units	Type C & G	1	1
Retail	3,321.00 sm	Type C & G	2	2
BUILDING C	1554 sm			
BUIDLING D	1766.5 sm			
TOTAL			4	4

*One per apartment containing minimum of 30 dwelling units

VEHICULAR PARKING LOCATION

Parking Space Location

Provided

Level	RESIDENTIAL	Shared Visitor/Retail	TOTAL
Surface	X	27	27
P1	296	187	483
P2	499	X	499
P2	332	X	332
TOTAL	1127	214	1341
EV Parking Spaces	20% of Total Residential Parking Spaces		214
	10% of Shared Visitor/Retail Parking Spaces		21

AMENITY SPACE

Residential		Required	Provided
TOTAL Res Amenity	5.0sm/dwelling unit	5,350.00 sm	3,958.50 sm
Total Interior Amenity	min. 2 sm/dwelling unit	2,140.00 sm	1,879.70 sm
Required Indoor Amenity Deducted from Gross Floor Area			
Building A			912.8 sm
Building B			966.9 sm
Building C			0 sm
Building D			0 sm
Total Outdoor Amenity	min. 3 sm/dwelling unit	3,210.00 sm	2078.80 sm
Bulding A			755.3 sm
Building B			1323.5 sm
Building C			0 sm
Biulding D			0

NOTES

RGFA Exclusions assumed above:

*as per By-law 0225-2007, C4-14 Zone Gross Floor Area is reduced by;

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 day care and amenity area

***NRGFA** as per By-law - 0225-2007, C4-14 Zone, NRGFA excludes the following;

(1) any part of the building, structure or part thereof used for mechanical floor area; (2) areas of stairwells, washrooms or elevators; (3) any enclosed area used for the collection or storage of disposable or recyclable waste generated within the building or structure or part thereof; (4) any part of the building or structure or part thereof above or below established grade used for motor vehicle parking or the provision of loading spaces; (5) any part of the building, structure or part thereof below established grade used for storage incidental to other uses in the building, structure or part thereof or provided and reserved for the personal needs of the occupants of the building, structure or part thereof including lunch rooms, lounges or fitness rooms; (6) accessory outdoor tank. (0379-2009)

3 A101 Project Statistics
SCALE: N/A

REZONING REVISION

REVISION RECORD

2022-07-11 REZONING APPLICATION

ISSUE RECORD

BDP. Quadrangle

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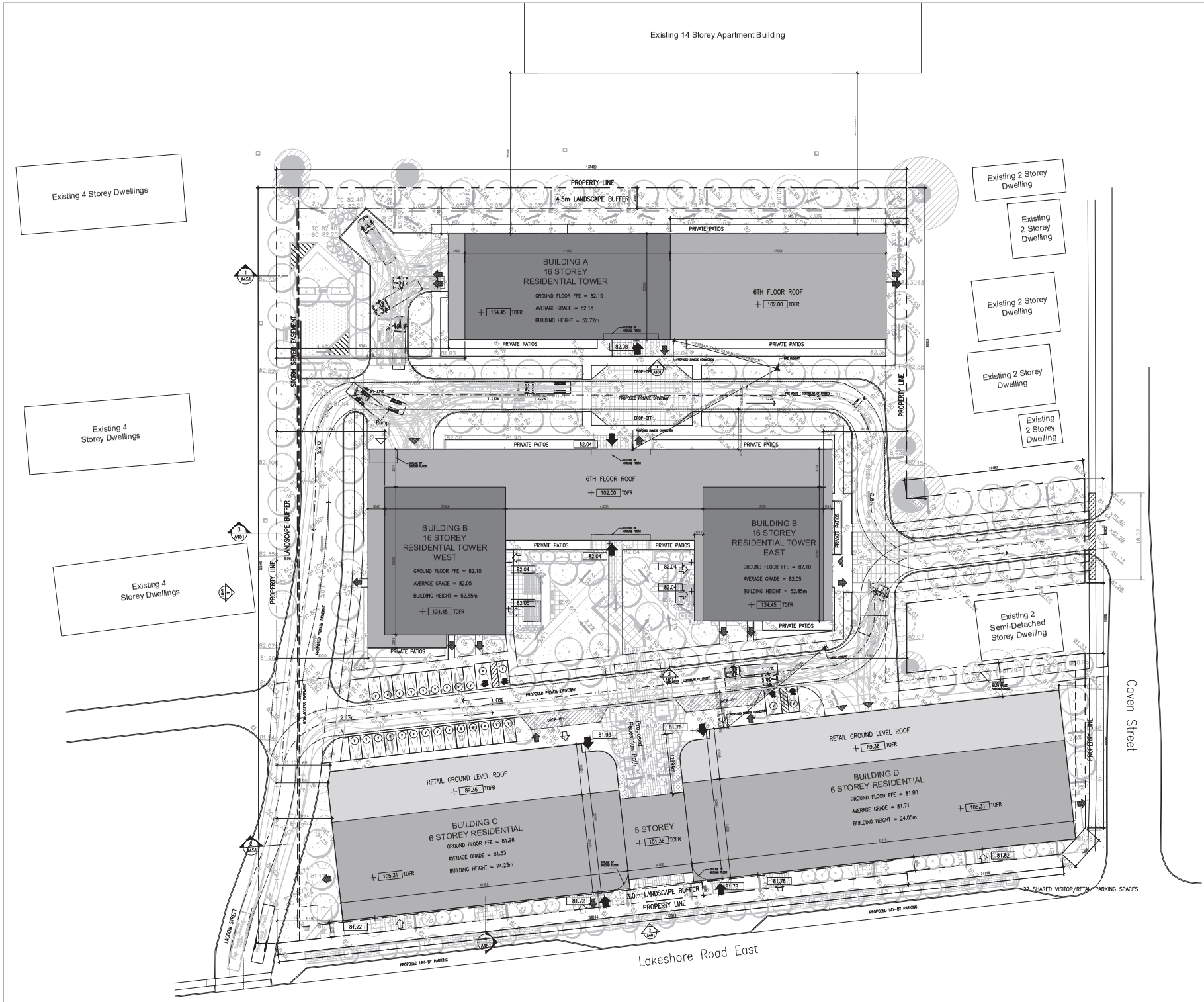
579, 619 Lakeshore Road East
and 1022, 1028 Caven Street

17125	N/A	AR	KVE
PROJECT	SCALE	DRAWN	REVIEWED

Context Plan and Statistics

A100

G:\17125-579 to 603 lakeshore rd e\Drawings\Arch\CAD\2022-06-29 rezoning package\17125 - A100- stats- context.dwg, 2022-07-12 4:31pm



PARKING NOTES:

1. MINIMUM PARKING SPACE SIZE (UNLESS OTHERWISE NOTED):
- 2.60 m WIDE X 5.60 m LONG (NO SIDES OBSTRUCTED)
- 2.90 m WIDE X 5.60 m LONG (ONE SIDE OBSTRUCTED)
- 3.20 m WIDE X 5.60 m LONG (TWO SIDES OBSTRUCTED)
2. MINIMUM MINIMUM DRIVE AISLE WIDTH OF 7.00 m UNLESS OTHERWISE NOTED
3. MINIMUM MINIMUM HEADROOM CLEARANCE OF 2.10 m THROUGHOUT

PARKING LEGEND:

- RESIDENTIAL PARKING SPACE
- VISITOR PARKING SPACE
- RETAIL PARKING SPACE
- BIKE STORAGE LOCKER (1.830x915)
- BIKE PARKING (STACKED - 1800x610)
- BIKE PARKING (HORIZONTAL - 1800X600)
- BIKE PARKING (VERTICAL - 1200x600)
- PAINTED LINES

LEGEND

- BUILDING ENTRANCE (PRIMARY)
- BUILDING ENTRANCE (SECONDARY)
- BUILDING EXIT
- PARKING ENTRANCE
- LOADING ENTRANCE
- PROPOSED GRADE
- EXISTING GRADE
- TOFR TOP OF FINISHED ROOF
- PROPERTY LINE
- FIRE ROUTE
- SETBACK/ EASEMENT LINE
- LINE OF BUILDING
- LINE OF BUILDING AT GRADE
- LINE OF BUILDING BELOW GRADE

REZONING REVISION

REVISION RECORD

2022-07-11 REZONING APPLICATION

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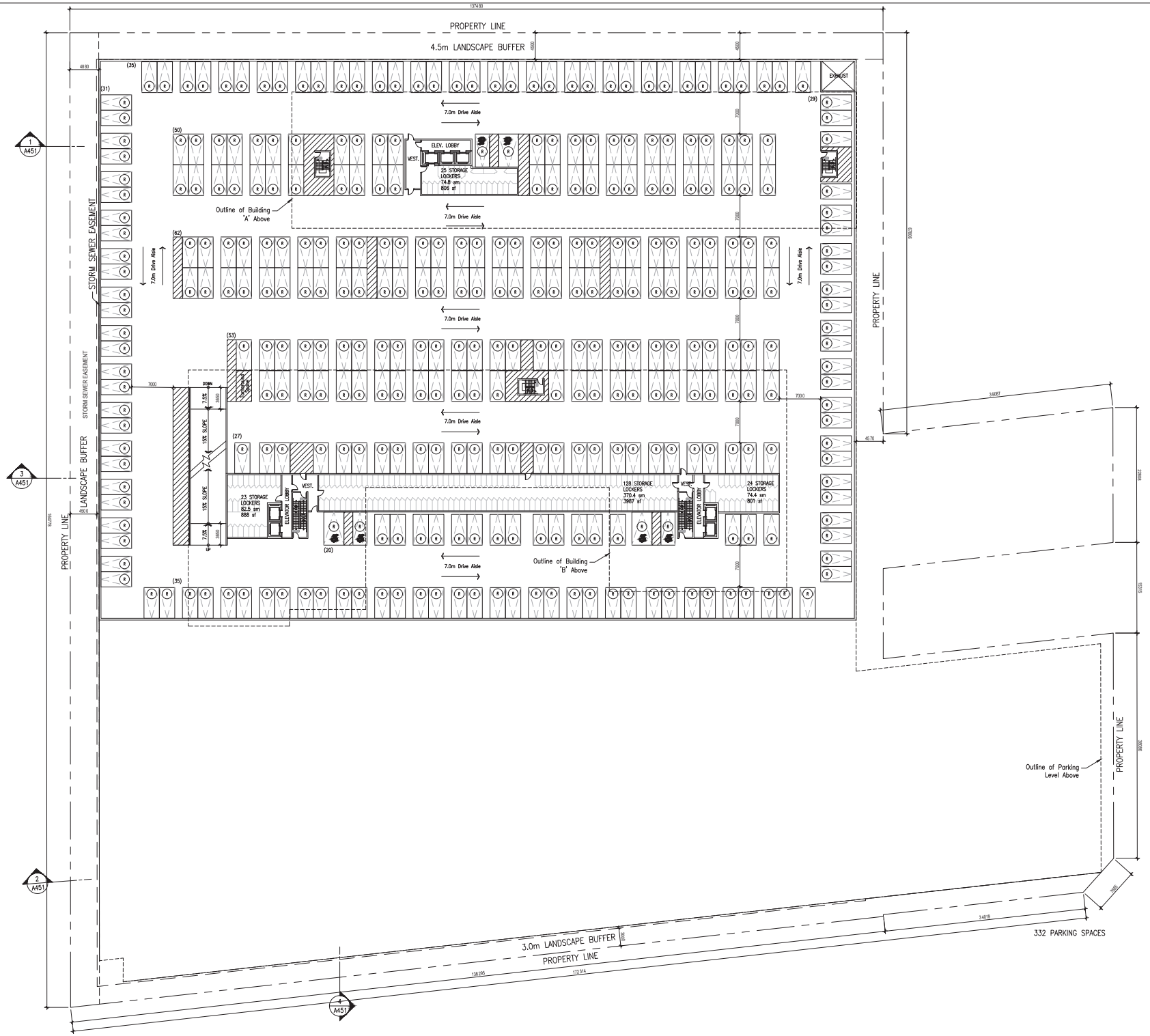
17125 PROJECT | 1:250 SCALE | AR DRAWN | KVE REVIEWED

Site Plan

A101

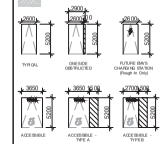


PARKING NOTES:

1. MINIMUM PARKING SPACE SIZE (UNLESS OTHERWISE NOTED):
   - 2.60 m WIDE X 5.60 m LONG (NO SIDES OBSTRUCTED)
   - 2.60 m WIDE X 5.60 m LONG (ONE SIDE OBSTRUCTED)
   - 2.60 m WIDE X 5.60 m LONG (TWO SIDES OBSTRUCTED)
2. MINIMUM ISLE WIDTH OF 7.00 m (NO LESS THAN 6.70 m WHERE BI-DIRECTIONAL)
3. MINIMUM HEADROOM CLEARANCE OF 2.10 m THROUGHOUT

PARKING LEGEND:

- RESIDENTIAL PARKING SPACE
- SHARED VISITOR/RETAIL PARKING SPACE
- BIKE STORAGE LOCKER (1.930x0.915)
- BIKE PARKING (STACKED - 1.900x0.610)
- BIKE PARKING (HORIZONTAL - 1.800x0.600)
- BIKE PARKING (VERTICAL - 1.200x0.600)
- PAINTED LINES



REZONING REVISION

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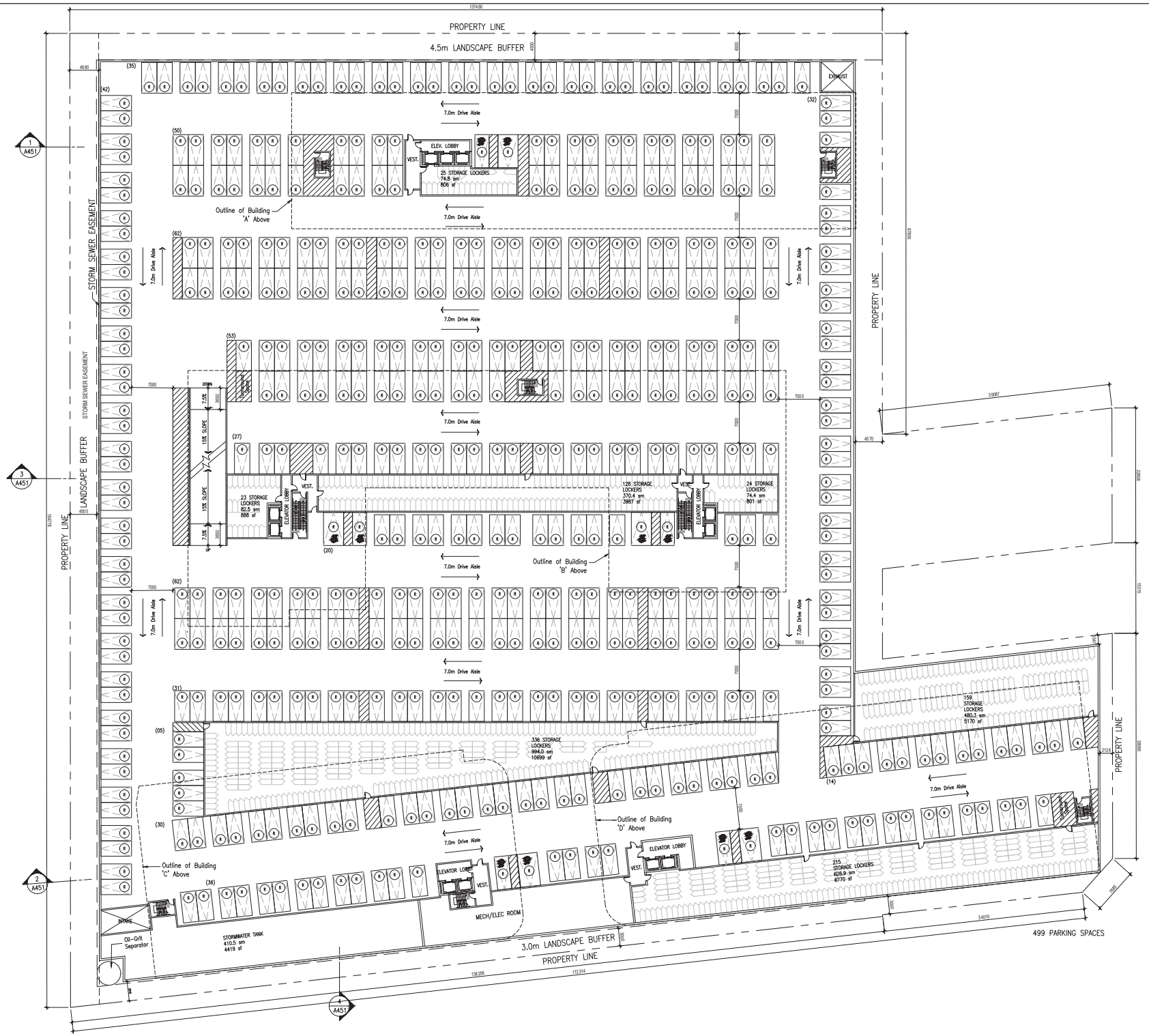
17125	1:200	AR	KVE
PROJECT	SCALE	DRAWN	REVIEWED

P3 Parking Level

A151



PARKING NOTES:

1. MINIMUM PARKING SPACE SIZE (UNLESS PARKING NOTED):
   - 2.60 m WIDE X 5.60 m LONG (NO SIDES OBSTRUCTED)
   - 2.90 m WIDE X 5.60 m LONG (ONE SIDE OBSTRUCTED)
   - 3.20 m WIDE X 5.60 m LONG (TWO SIDES OBSTRUCTED)
2. MINIMUM MINIMUM DRIVE AISLE WIDTH OF 7.00 m (NO NOTED)
3. MINIMUM MINIMUM HEADROOM CLEARANCE OF 2.10 m

PARKING LEGEND:

- R — RESIDENTIAL PARKING SPACE
- V — SHARED VISITOR/RETAIL PARKING SPACE
- BIKE STORAGE LOCKER (1,600x915)
- BIKE PARKING (STACKED - 1900x910)
- BIKE PARKING (HORIZONTAL - 1800X600)
- BIKE PARKING (VERTICAL - 1200x600)
- PAINTED LINES

TYPICAL · ONE SIDE OBSTRUCTED · FUTURE EV/EV-READY (Phase 1 Only) · ACCESSIBLE · ACCESSIBLE - TYPE A · ACCESSIBLE - TYPE B

REZONING REVISION

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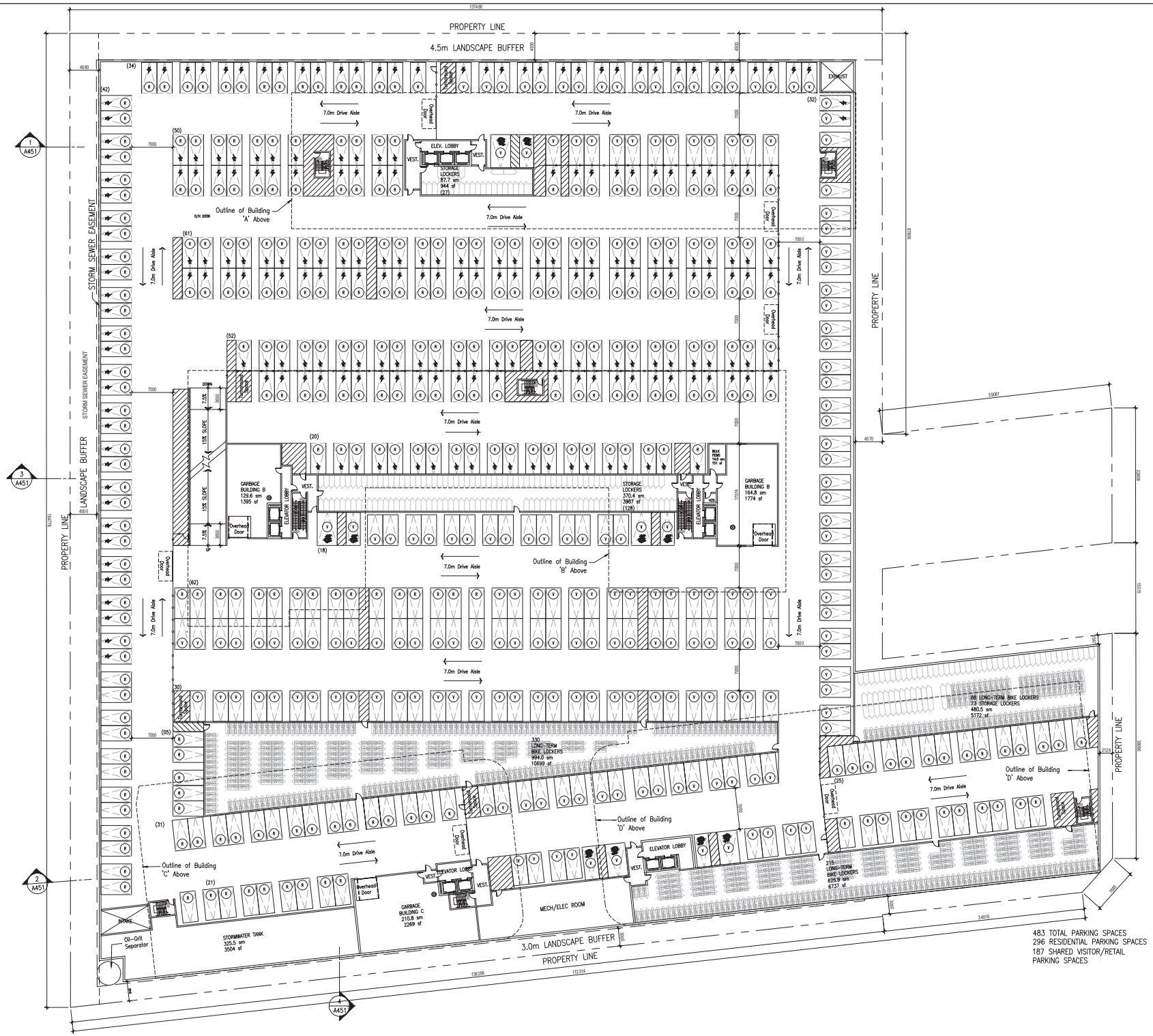
17125	1:200	AR	KVE
PROJECT	SCALE	DRAWN	REVIEWED

P2 Parking Level

A152



PARKING NOTES:

1. MINIMUM PARKING SPACE SIZE (UNLESS OTHERWISE NOTED):
   - 2.60 m WIDE X 5.60 m LONG (NO SIDES OBSTRUCTED)
   - 2.60 m WIDE X 5.60 m LONG (ONE SIDE OBSTRUCTED)
   - 3.20 m WIDE X 5.60 m LONG (TWO SIDES OBSTRUCTED)
2. MINIMUM MANEUVERING AISLE WIDTH OF 7.0 m (UNLESS OTHERWISE NOTED)
3. MINIMUM HEADROOM CLEARANCE OF 2.10 m THROUGHOUT

PARKING LEGEND:

- (R) RESIDENTIAL PARKING SPACE
- (V) SHARED VISITOR/RETAIL PARKING SPACE
- BIKE STORAGE LOCKER (1.600x0.915)
- BIKE PARKING (STACKED - 1.900x0.610)
- BIKE PARKING (HORIZONTAL - 1.800X0.600)
- BIKE PARKING (VERTICAL - 1.200x0.600)
- PAINTED LINES

TYPICAL | ONE SIDE OBSTRUCTED | FUTURE EV/EV-READY (Stage II Only)

ACCESSIBLE | ACCESSIBLE - TYPE A | ACCESSIBLE - TYPE B

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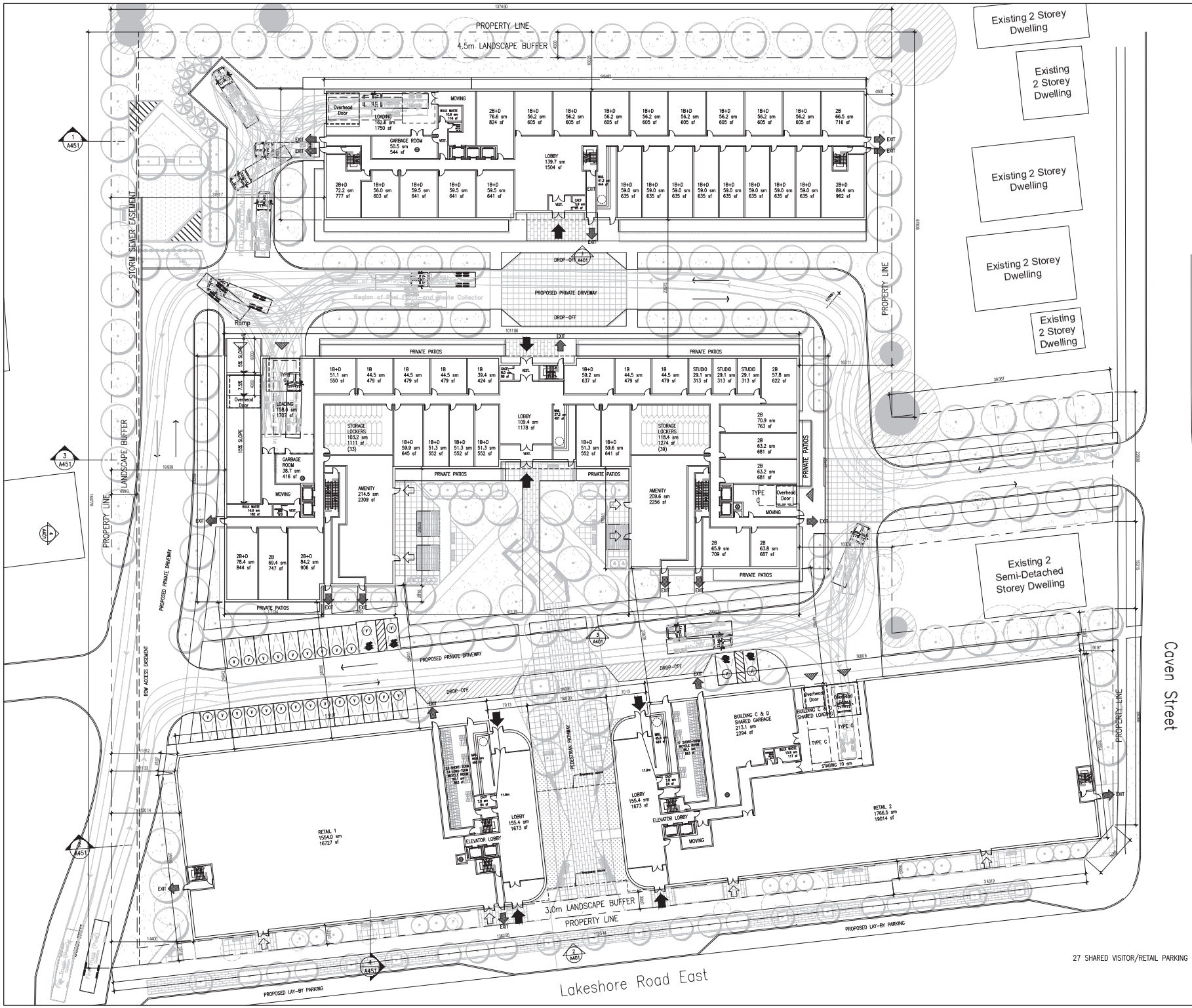
17125	1:200	AR	KVE
PROJECT	SCALE	DRAWN	REVIEWED

P1 Parking Level

A153



PARKING NOTES:

1. MINIMUM PARKING SPACE SIZE (2.6M (85.0') PER AISLE NOTED):
   - 2.6m (8'-6") WIDE X 5.6m (18'-4") LONG (NO SIDES OBSTRUCTED)
   - 2.6m (8'-6") WIDE X 5.6m (18'-4") LONG (ONE SIDE OBSTRUCTED)
   - 2.6m (8'-6") WIDE X 5.6m (18'-4") LONG (TWO SIDES OBSTRUCTED)
2. MAINTAIN MINIMUM DRIVE AISLE WIDTH OF 7.0M (6m IN ALLEYS) UNLESS OTHERWISE NOTED
3. MAINTAIN MINIMUM HEADROOM CLEARANCE OF 2.1M (6m THROUGHOUT)

PARKING LEGEND:

- RESIDENTIAL PARKING SPACE
- SHARED VISITOR/RETAIL PARKING SPACE
- BIKE/STORAGE LOCKER (1.830x0.915)
- BIKE PARKING (STACKED - 1.830x0.610)
- BIKE PARKING (HORIZONTAL - 1.800X0.600)
- BIKE PARKING (VERTICAL - 1.200x0.600)
- PAINTED LINES

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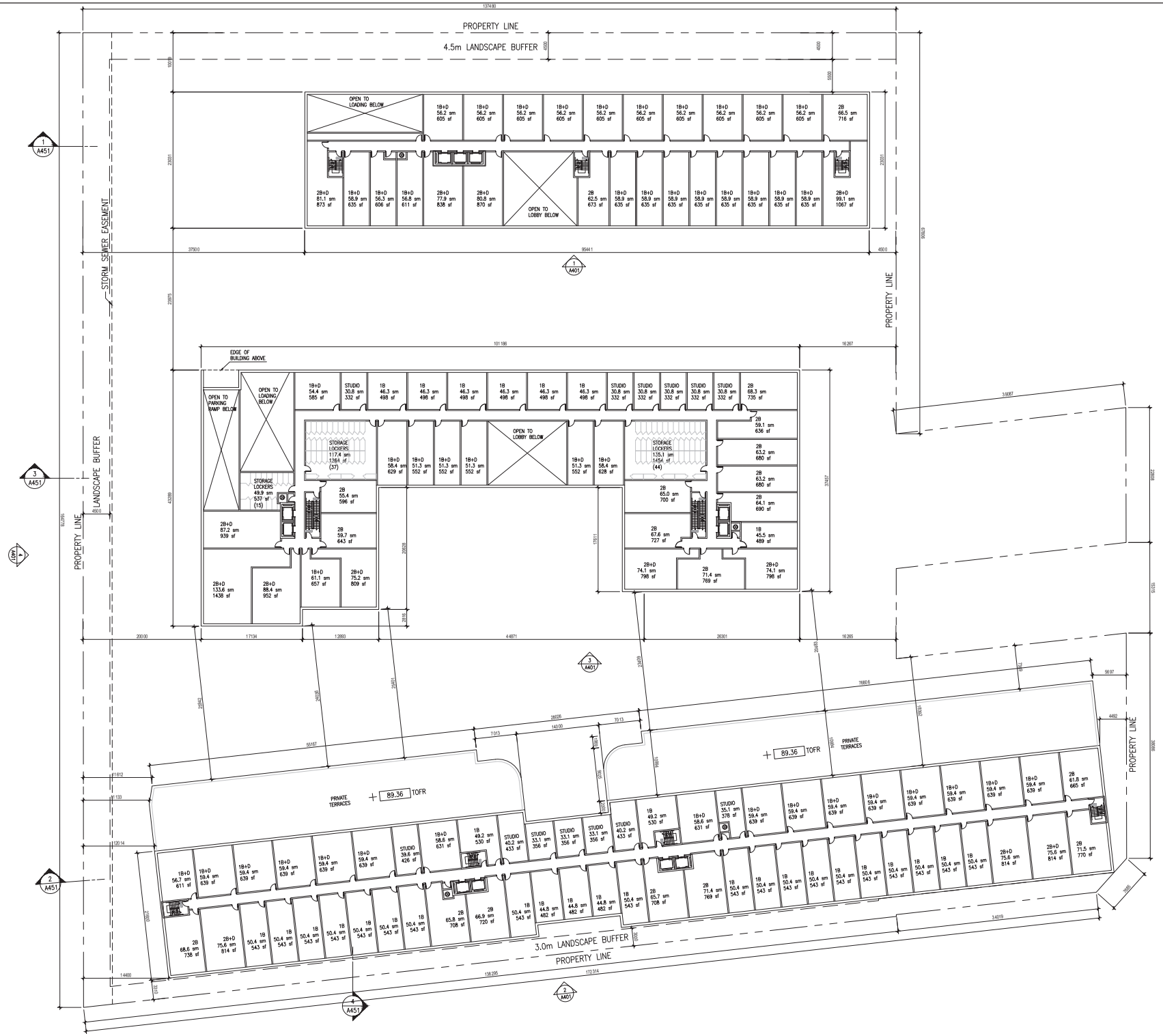
17125	1:200	AR	KVE
PROJECT	SCALE	DRAWN	REVIEWED

Ground Floor Plan

A201



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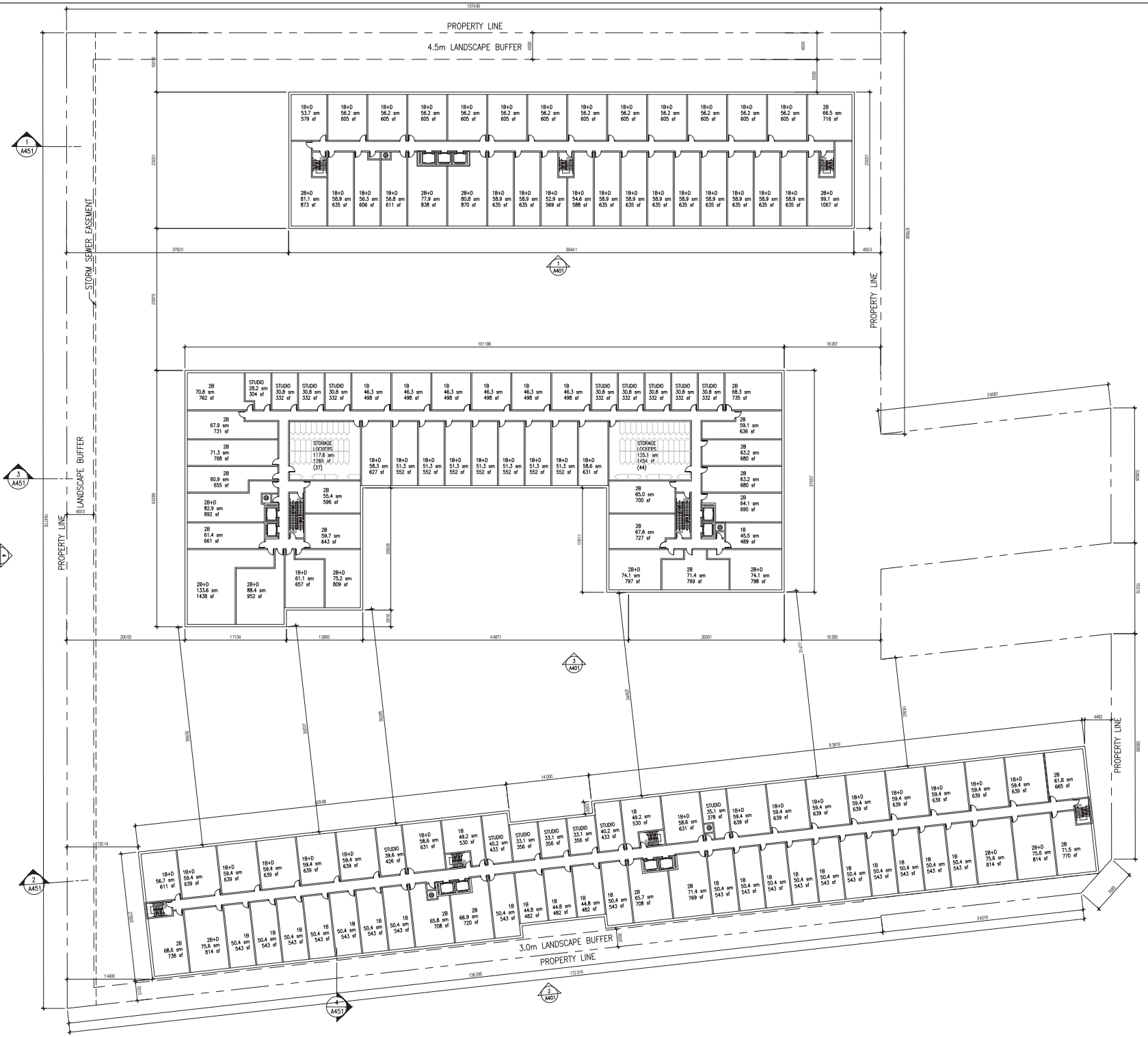
17125	1:200	AR	KVE
PROJECT	SCALE	DRAWN	REVIEWED

Second Floor Plan

A202



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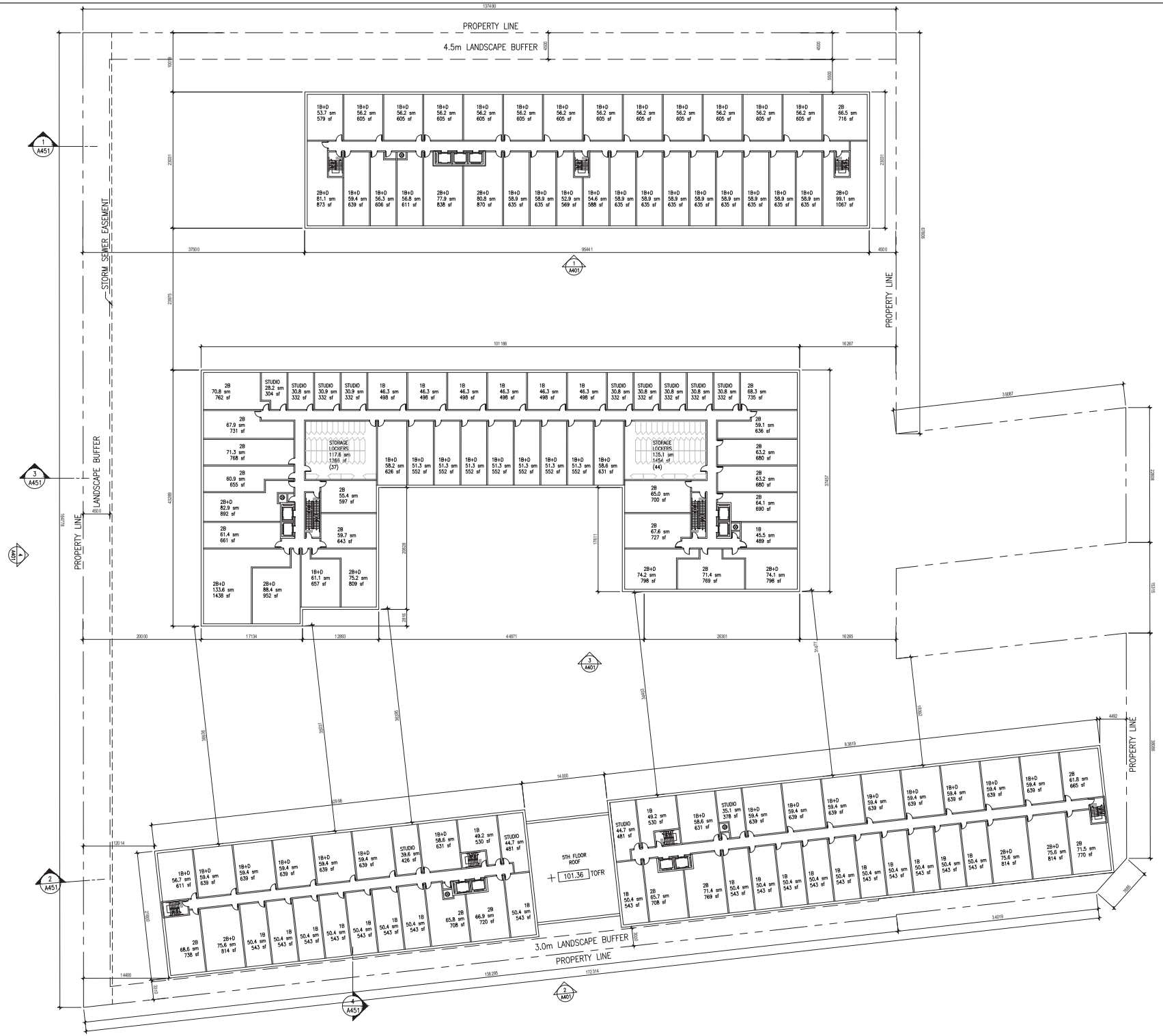
17125 PROJECT | 1:200 SCALE | AR DRAWN | KVE REVIEWED

3rd to 5th Floor Plan

A203



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17125 PROJECT | 1:200 SCALE | AR DRAWN | KVE REVIEWED

6th Floor Plan

A204

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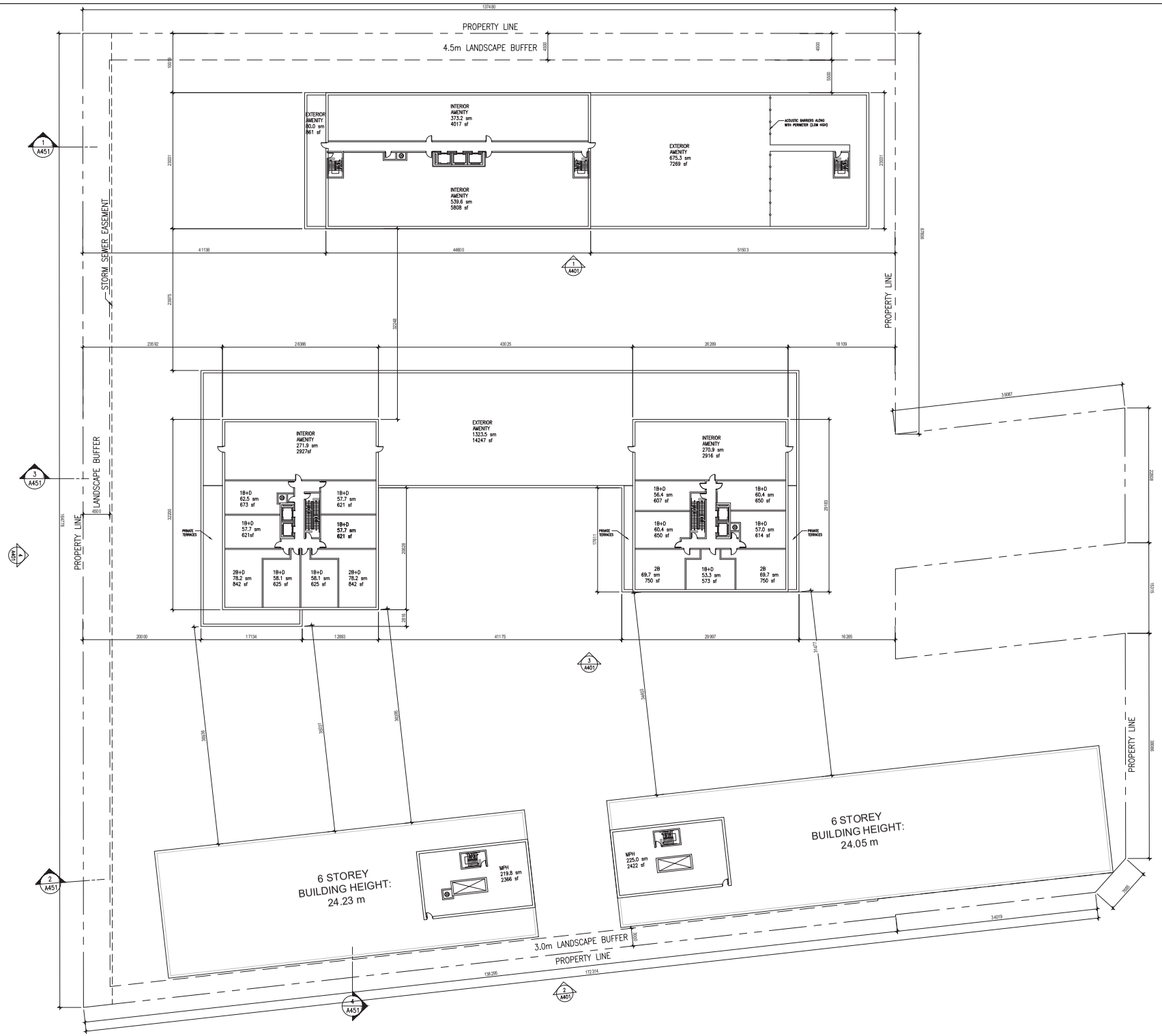
G:\17125-579 to 1028 lakeshore rd E\Drawings\Arch\SD\2022-04-29 rezoning package\17125 - A204 - 6.dgn, 2022-07-12 4:23pm



REZONING REVISION

REVISION RECORD

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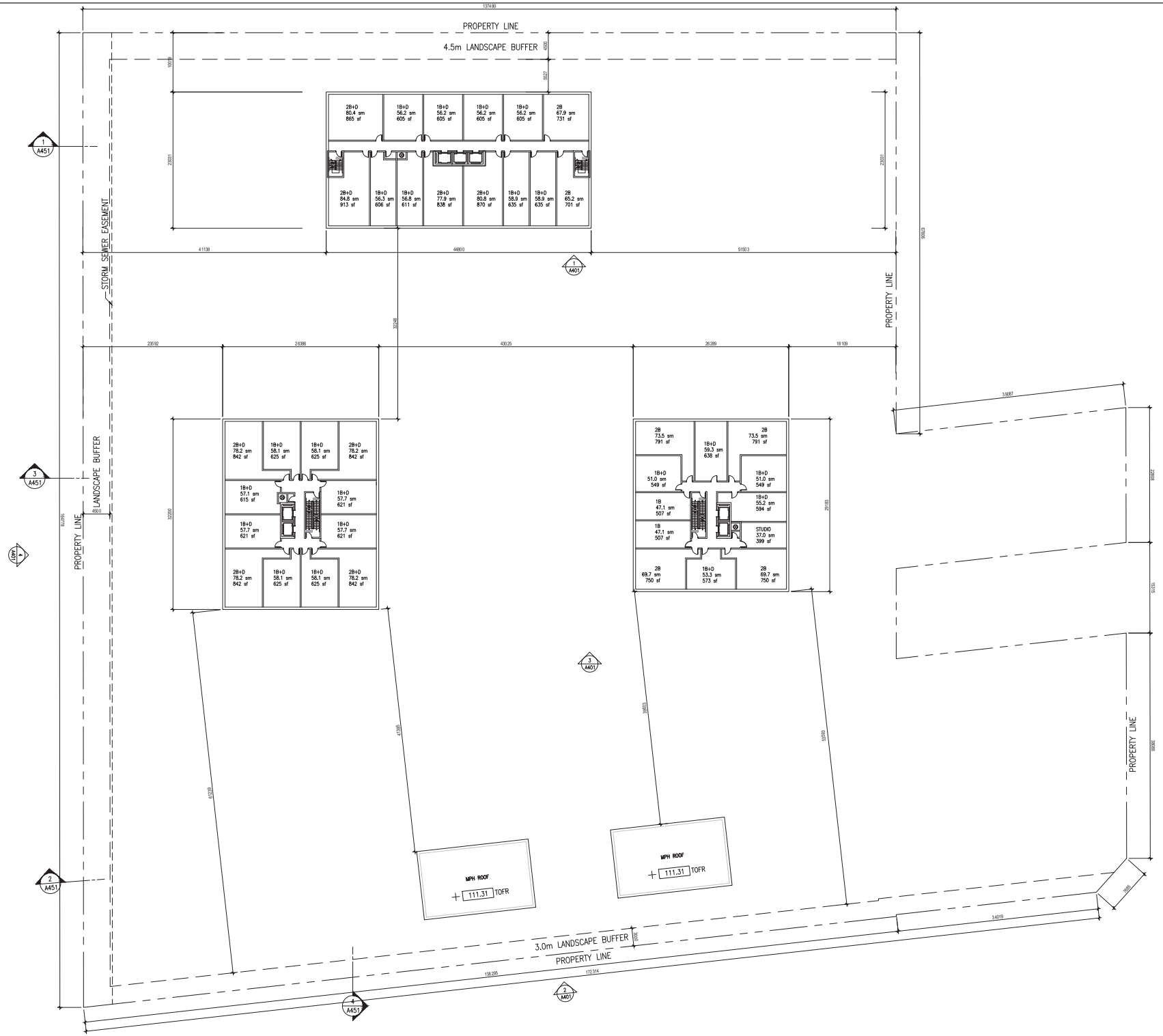
17125	1:200	AR	KVE
PROJECT	SCALE	DRAWN	REVIEWED

7th Floor Plan (Amenity Level)

A205



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17125 PROJECT | 1:200 SCALE | AR DRAWN | KVE REVIEWED

8th to 16th Floor Plan

A206

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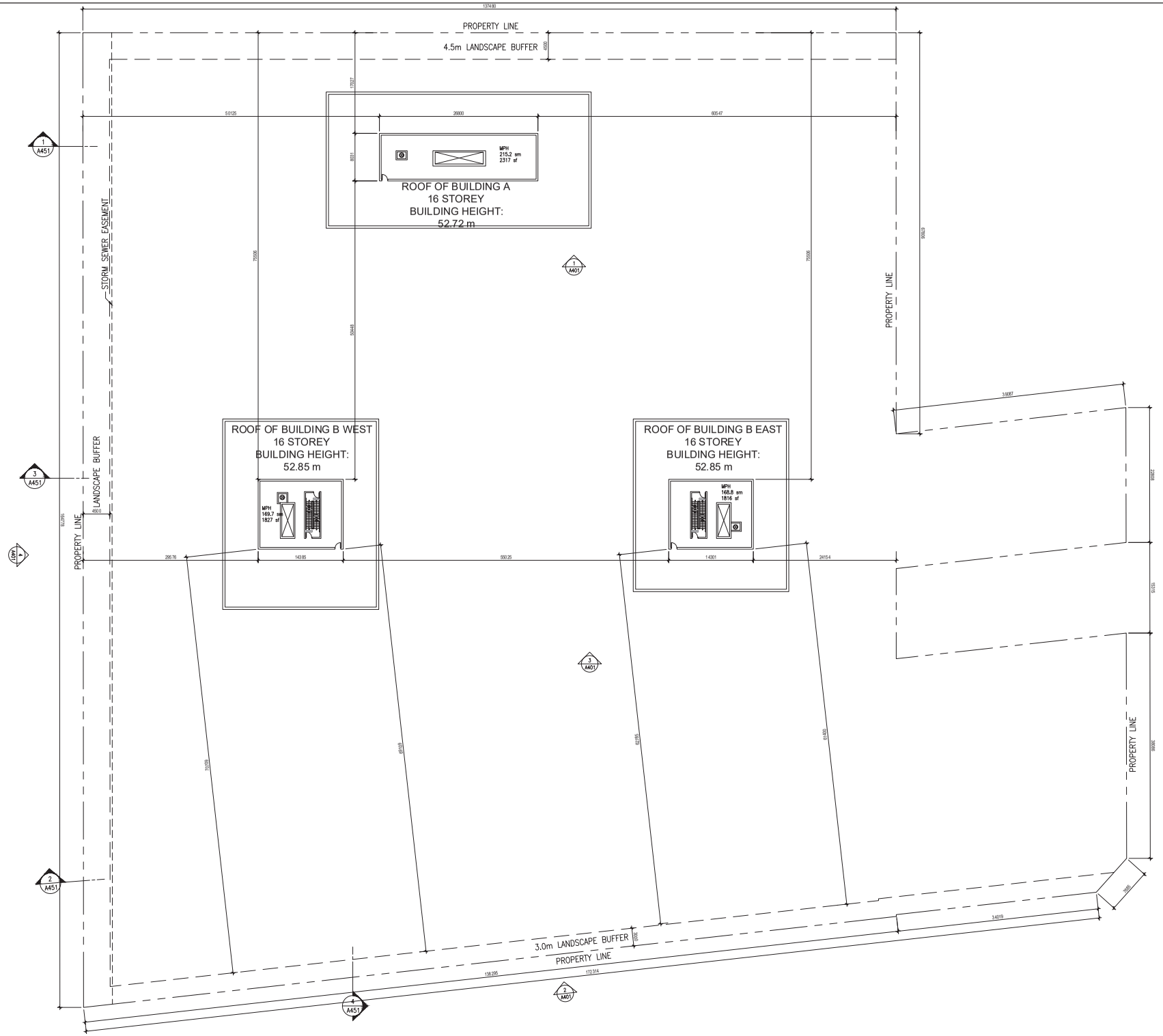

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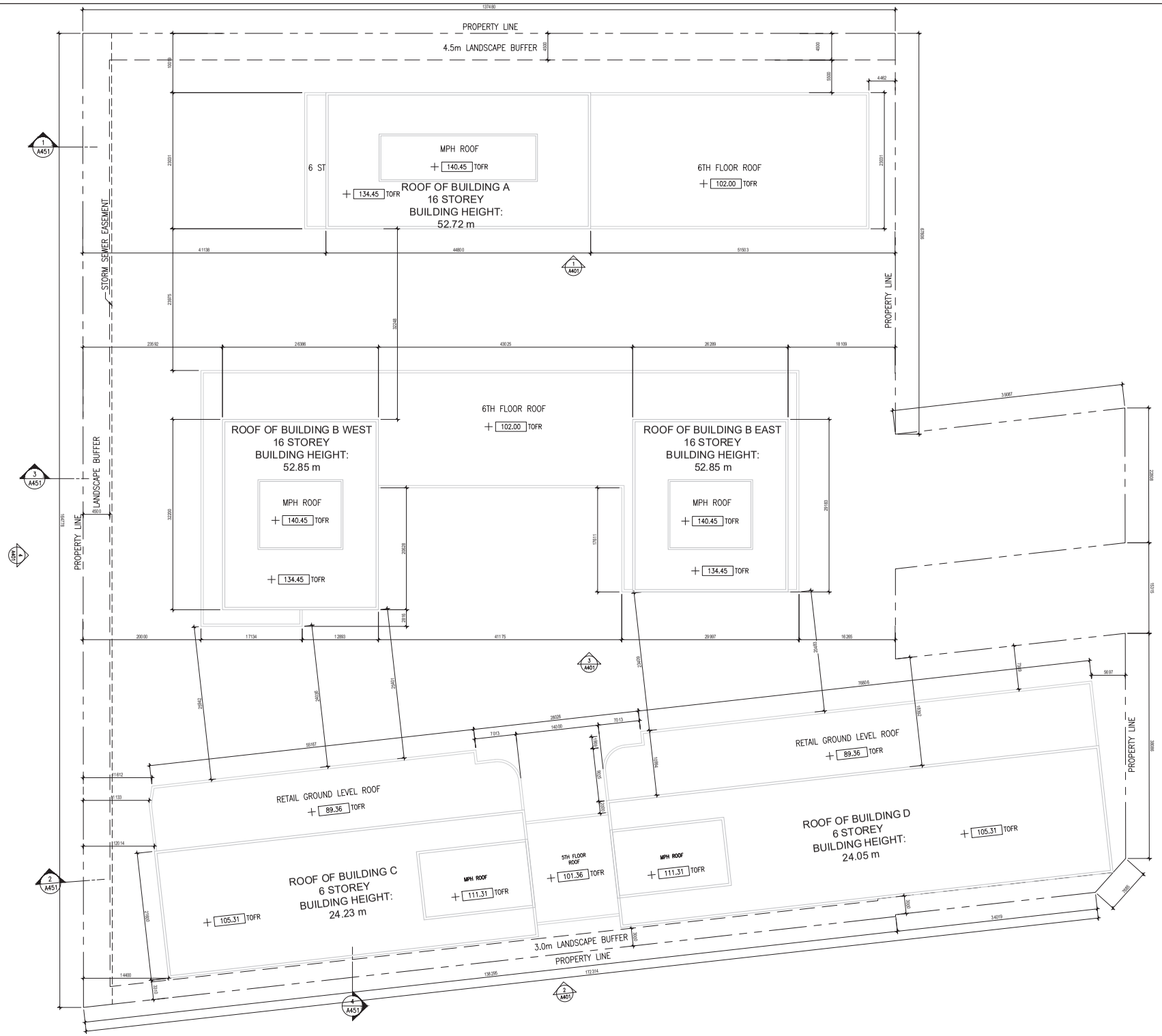
17125 PROJECT | 1:200 SCALE | AR DRAWN | KVE REVIEWED

TOWER MECHANICAL PENTHOUSE PLAN

A207



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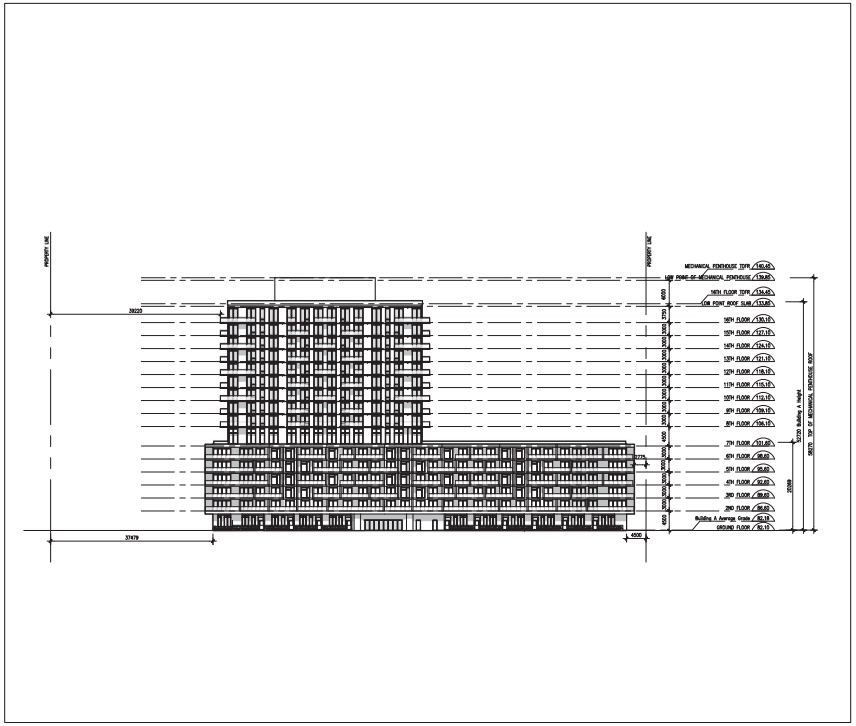
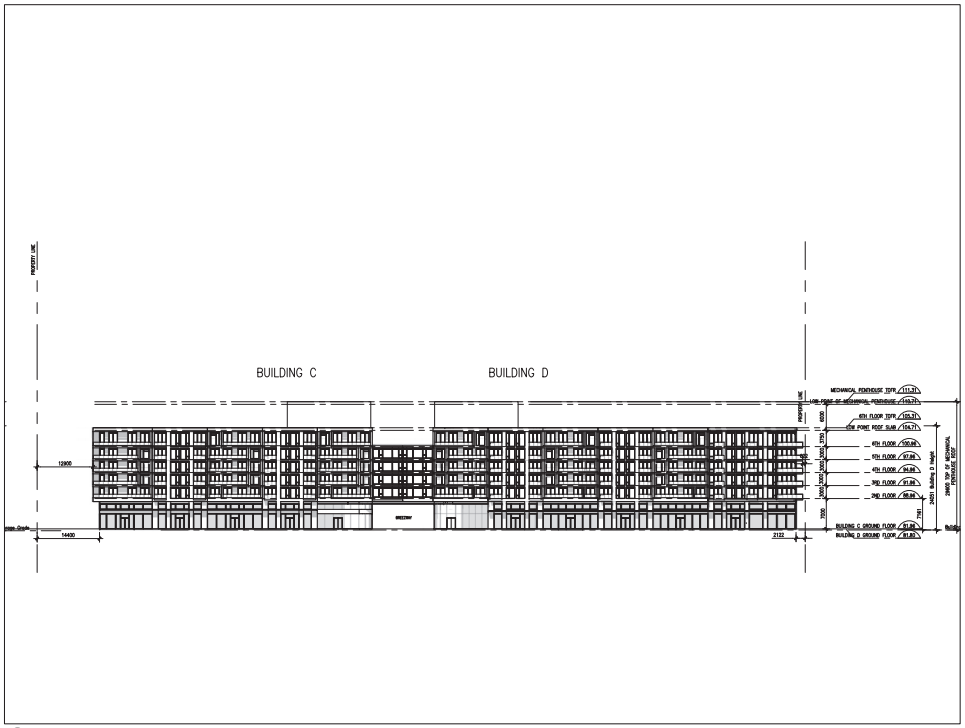
PROJECT	SCALE	DRAWN	REVIEWED
17125	1:200	AR	KVE

Roof Plan

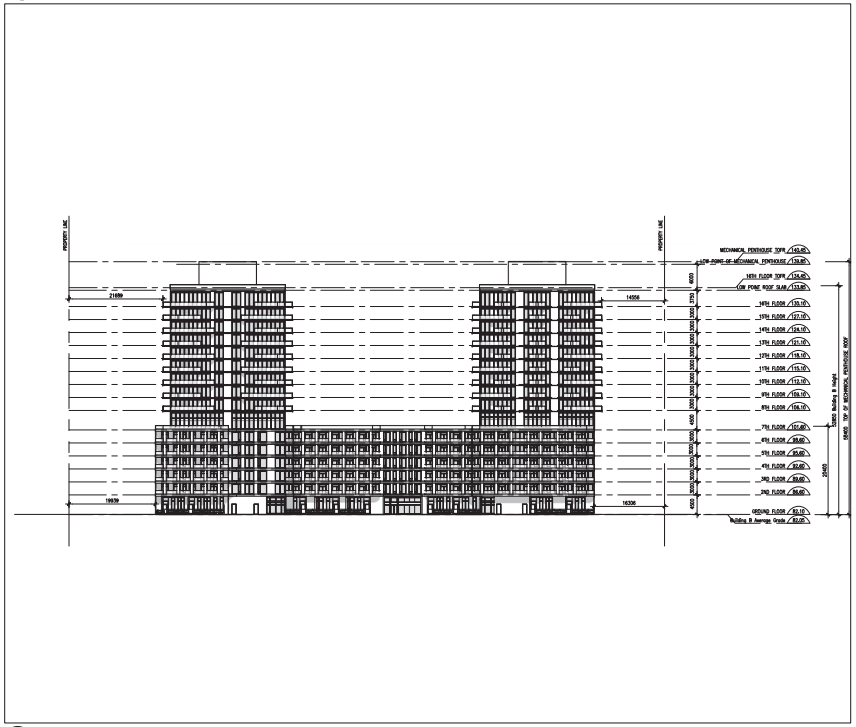
A208



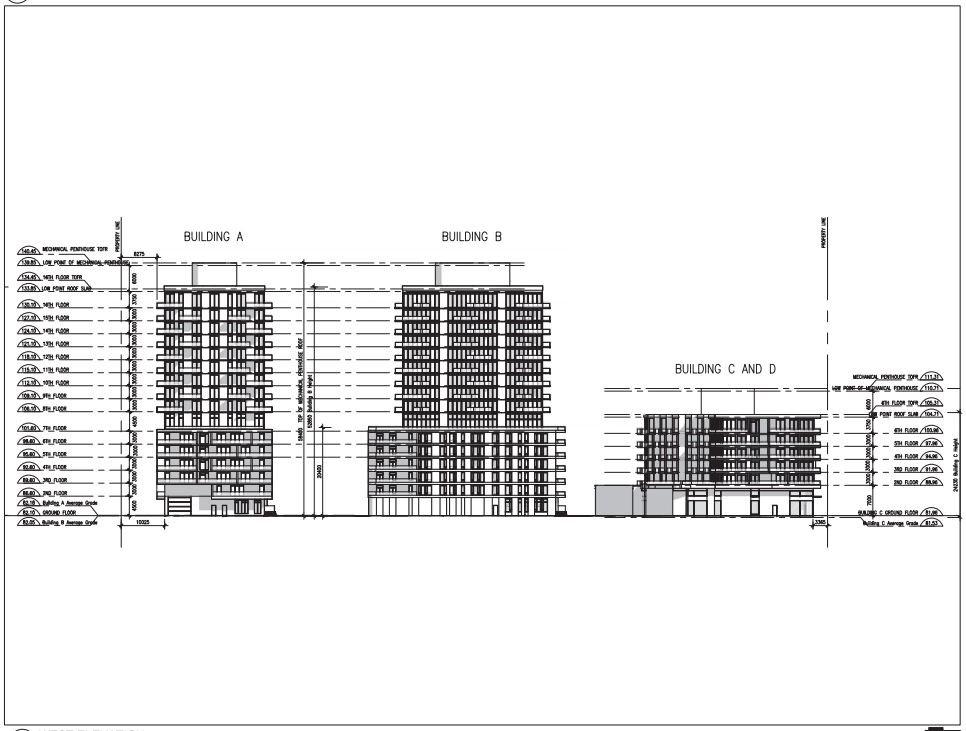
1 A401 SOUTH ELEVATION - BUILDING A
SCALE: 1:400



2 A401 SOUTH ELEVATION - BUILDING C AND D
SCALE: 1:400



3 A401 SOUTH ELEVATION - BUILDING B
SCALE: 1:400



4 A401 WEST ELEVATION
SCALE: 1:500

1:500 0 1 5 10m

REZONING REVISION

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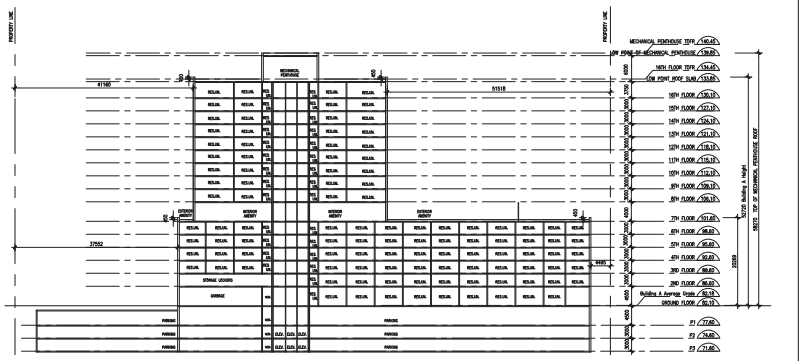
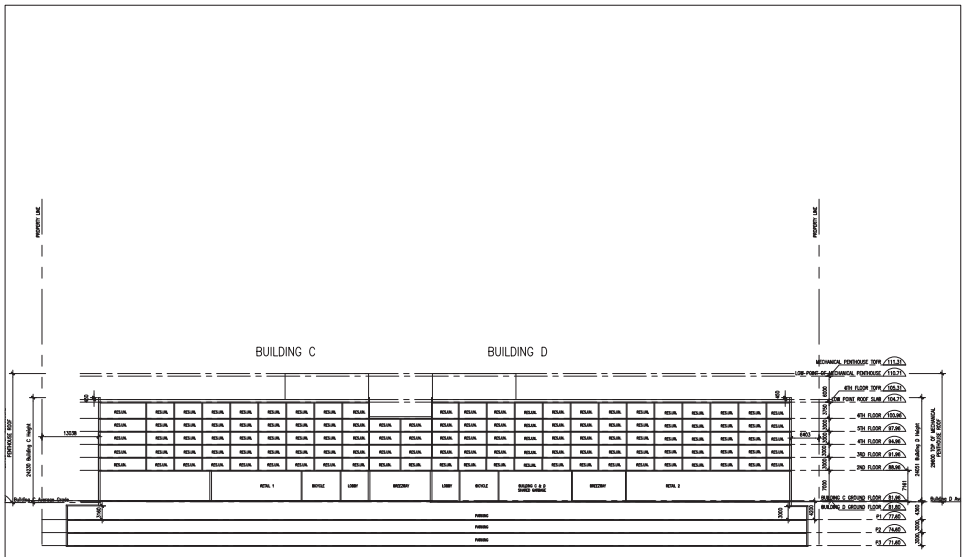
17125 PROJECT | 1:400 SCALE | AR DRAWN | KVE REVIEWED

Elevations

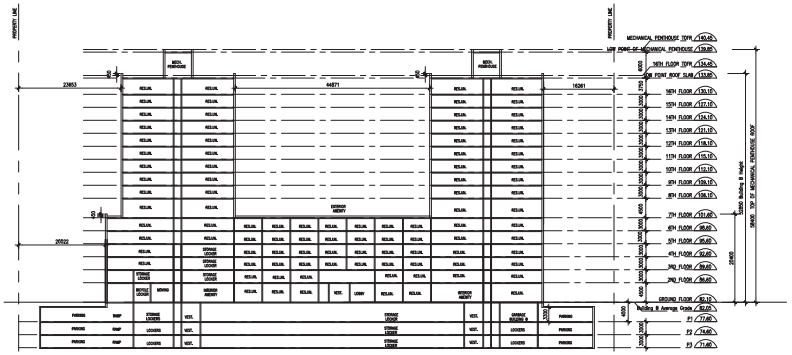
A401



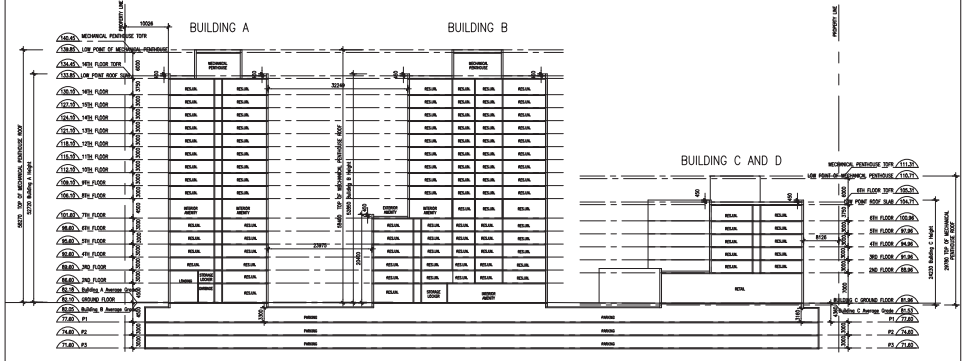
1 A451 BUILDING A
SCALE: 1:400



2 A451 BUILDING C & D
SCALE: 1:400



3 A451 BUILDING B
SCALE: 1:400



4 A451 NORTH-SOUTH SITE SECTION
SCALE: 1:400

1:400 0 1 5 10m

REZONING REVISION

REVISION RECORD

2022-07-11 REZONING APPLICATION

ISSUE RECORD

BDP. Quadrangle

Quadrangle Architects Limited
901 King Street West, Suite 701 Toronto, ON M5V 3H5
t 416 599 1240 www.bdpquadrangle.com

579, 619 Lakeshore Road East and 1022, 1028 Caven Street

17125 PROJECT | 1:400 SCALE | AR DRAWN | KVE REVIEWED

Sections

A451

APPENDIX B

Road Traffic Data

NOISE REPORT FOR PROPOSED DEVELOPMENT

Date:	25-Feb-21

REQUESTED BY:

Name:	Sheeba Paul, M.Eng., P.Eng.
Company:	HGC Engineering

PREPARED BY:

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

MISSISSAUGA

Location: Lakeshore Road East - West of Cawthra Road (in the vicinity of 579 to 613 Lakeshore Road East)
Cawthra Road - 0.1 km North of Arbor Street

ID 504

ON SITE TRAFFIC DATA

Specific	*Street Names*				
	Lakeshore Road East	Cawthra Road			
AADT:	33,100	30,000			
# of Lanes:	4 Lanes	5 Lanes*			
% Trucks:	5%	6%			
Medium/Heavy Trucks Ratio:	55/45	30/70			
Day/Night Split:	90/10	91/9			
Posted Speed Limit:	50 km/h	50 km/h			
Gradient Of Road:	<2%	<2%			
Ultimate R.O.W:	30 m	36 m			

Comments:

Ultimate Traffic Data Only (2041)

*Note: 5 lanes on Cawthra Road includes both the left turn and right turn lanes for Cawthra Road southbound

Cawthra Road is a Regional Road. The ultimate AADT estimate for Cawthra Road is based on an estimated Compounded Annual Growth Rate (CAGR) of 0.5%

APPENDIX C

Rail Traffic Data

Yvonne Lo

From: Sheeba Paul
Sent: April 8, 2021 3:23 PM
To: Yvonne Lo
Subject: FW: rail data verification/update-579-613 Lakeshore Road East, Mississauga

Hi Yvonne

Here it is.

Ms. Sheeba Paul, MEng, PEng
Senior Associate

HGC Engineering NOISE | VIBRATION | ACOUSTICS
Howe Gastmeier Chapnik Limited
2000 Argentia Road, Plaza One, Suite 203, Mississauga, Ontario, Canada L5N 1P7
t: 905.826.4044 **e**: spaul@hgcengineering.com
Visit our website – www.hgcengineering.com **Follow Us** – LinkedIn | Twitter | YouTube

---

From: Rail Data Requests <RailDataRequests@metrolinx.com>
Sent: March-18-21 3:31 PM
To: Sheeba Paul <spaul@hgcengineering.com>
Subject: RE: rail data verification/update-579-613 Lakeshore Road East, Mississauga

Hi Sheeba:

Sorry for the delay. Further to your request dated February 23, 2021, the subject lands (579-613 Lakeshore Rd E, Mississauga) are located within 300 metres of the Metrolinx Oakville Subdivision (which carries Lakeshore West GO rail service).

It's anticipated that GO rail service on this Subdivision will be comprised of diesel and electric trains. The GO rail fleet combination on this Subdivision will consist of up to 2 locomotives and 12 passenger cars. The typical GO rail weekday train volume forecast near the subject lands, including both revenue and equipment trips is in the order of 255 trains. The planned detailed trip breakdown is listed below:

	1 Diesel Locomotive	2 Diesel Locomotives	1 Electric Locomotive	2 Electric Locomotives		1 Diesel Locomotive	2 Diesel Locomotives	1 Electric Locomotive	2 Electric Locomotives
Day (0700-2300)	60	11	101	42	Night (2300-0700)	8	4	21	8

The current track design speed near the subject lands is 95 mph (153 km/h).

With respect to future electrified rail service, Metrolinx is committed to finding the most sustainable solution for electrifying the GO rail network and we are currently working towards the next phase.

Options have been studied as part of the Transit Project Assessment Process (TPAP) for the GO Expansion program, currently in the procurement phase. The successful proponent team will be responsible for selecting and delivering the right trains and infrastructure to unlock the benefits of GO Expansion. The contract is in a multi-year procurement process and teams are currently completing the bids that will close in 2021. GO Expansion construction will get underway in 2022.

However, we can advise that train noise is dominated by the powertrain at lower speeds and by the wheel- track interaction at higher speeds. Hence, the noise level and spectrum of electric trains is expected to be very similar at higher speeds, if not identical, to those of equivalent diesel trains.

Given the above considerations, it would be prudent at this time, for the purposes of acoustical analyses for development in proximity to Metrolinx corridors, to assume that the acoustical characteristics of electrified and diesel trains are equivalent. In light of the aforementioned information, acoustical models should employ diesel train parameters as the basis for analyses. We anticipate that additional information regarding specific operational parameters for electrified trains will become available in the future once the proponent team is selected.

There are *anti-whistling by-laws* in affect at Revus Ave, Alexandra Ave, Ogden Ave and Haig Blvd at grade-crossing.

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

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

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

Regards,

Lyndsy You, B.Eng.
Project Manager
Third Party Projects Review, Capital Projects Group
Metrolinx|30 Wellington St. W |Toronto, Ontario|M5J 2N8
C: 416.399.8284
METROLINX

From: Sheeba Paul <spaul@hgcengineering.com>
Sent: February 23, 2021 11:19 AM
To: Rail Data Requests <RailDataRequests@metrolinx.com>
Cc: Edmond Wu <Edmond.Wu@metrolinx.com>; Brandon Gaffoor <Brandon.Gaffoor@metrolinx.com>
Subject: RE: rail data verification/update

Hello,

We have the attached data. We are performing a noise study for a proposed development in Mississauga, at 579-613 Lakeshore Road East.

https://www.google.com/maps/place/579+Lakeshore+Rd+E,+Mississauga,+ON+L5G+1H9/@43.5692846,-79.5685358,901m/data=!3m1!1e3!4m5!3m4!1s0x882b4624fbddd723:0xa62e91c53939d389!8m2!3d43.5687599!4d-79.5692117

Please provide the latest Metrolinx data or let me know that the attached data is okay to use.

Thank you.

Ms. Sheeba Paul, MEng, PEng
Senior Associate

HGC Engineering **NOISE | VIBRATION | ACOUSTICS**
Howe Gastmeier Chapnik Limited
2000 Argentia Road, Plaza One, Suite 203, Mississauga, Ontario, Canada L5N 1P7
t: 905.826.4044 **e**: spaul@hgcengineering.com
Visit our website – www.hgcengineering.com **Follow Us** – LinkedIn | Twitter | YouTube

AECOM
5080 Commerce Boulevard
Mississauga, ON, Canada L4W 4P2
www.aecom.com

905 238 0007 tel
905 238 0038 fax

Transmittal Form

Date	September 26, 2011	Project Number	60114380-0800-11-27
Contact	Sheeba Paul, MEng, PEng	Routing	spaul@hgcengineering.com
Company	HGC Engineering - Howe Gastmeier Chapnik Limited		
Address	2000 Argentia Road, Plaza One, Suite 203 Mississauga, Ontario, Canada L5N 1P7		
Telephone #	905-826-4044		
Sent By	Warren D'Andrade	Copies To	Nick Coleman, CN – email Adam Snow, Metrolinx – email
Project Name	Train Traffic Data – Oakville Subdivision in the vicinity of Cawthra Road – Approximately at Mile 11.47		

[ ] Urgent [X] For Your Use [ ] For Review [ ] For Your Information [ ] Confidential

Comments: Please find attached the requested Train Traffic Data.
Should you have any questions, please do not hesitate to contact the undersigned at 905-238-0007 ext. 8214.

Sent Via: [ ] mail [ ] courier [ ] picked up [ ] by hand [X] email [ ] fax [ ] other

Authorized Signature: 

Name *(please print)*: Warren D'Andrade **Title:** Project Manager

Sheeba Paul, MEng, PEng
HGC Engineering - Howe Gastmeier Chapnik Limited
2000 Argentia Road, Plaza One, Suite 203
Mississauga, Ontario, Canada L5N 1P7

Dear Sheeba:

Project No: 60114380-0800-11-27

Regarding: Train Traffic Data – Oakville Subdivision in the vicinity of Cawthra Road – Approximately at Mile 11.47

The following is provided in response to your September 13th, 2011 request for information regarding rail traffic in the vicinity of Cawthra Road, at approximately Mile 11.47 on the Oakville Subdivision.

Typical daily traffic volumes are recorded below. However, traffic volumes may fluctuate due to overall economic conditions, varying traffic demands, weather conditions, track maintenance programs, statutory holidays and traffic detours that when required may be heavy although temporary.

Typical daily traffic volumes at this site location are as follows:
***Maximum train speed is given in Miles per Hour**

Eastbound	**0700 - 2300**			
Type of Train	**Volumes**	**Max. Consist**	**Max. Speed**	**Max. Power**
Freight	0	140	60	4
Way Freight	1	25	60	2
Passenger	6	10	95	2

Westbound	**0700 - 2300**			
Type of Train	**Volumes**	**Max. Consist**	**Max. Speed**	**Max. Power**
Freight	1	140	60	4
Way Freight	1	25	60	2
Passenger	8	10	95	2

Eastbound	**2300 - 0700**			
Type of Train	**Volumes**	**Max. Consist**	**Max. Speed**	**Max. Power**
Freight	0	140	60	4
Way Freight	0	25	60	2
Passenger	2	10	95	2

Westbound	**2300 - 0700**			
Type of Train	**Volumes**	**Max. Consist**	**Max. Speed**	**Max. Power**
Freight	0	140	60	4
Way Freight	1	25	60	2
Passenger	1	10	95	2

The volumes recorded reflect eastbound and westbound freight, way freight and passenger operations on the Oakville Subdivision. Not included in the above data are GO Transit commuter trains running east and west on the Oakville Subdivision. For more information regarding existing and projected commuter operations, Mr. Adam Snow, Transportation Planner, should be contacted directly through Metrolinx offices at 20 Bay Street, Suite 600, Toronto, Ontario M5J 2W3, Fax 416-869-1563 and phone 416-869-3600.

Except where anti-whistling bylaws are in effect, engine-warning whistles and bells are normally sounded at all at-grade crossings. There are three at-grade crossings in the immediate vicinity of the study area, Ogden Avenue (Mile 10.84), Alexandra Avenue (Mile 11.02) and Revus Avenue (Mile 12.02). Anti-whistling bylaws are in effect at these crossings. Please note that engine warning whistles may be sounded in cases of emergency, as a safety and or warning precaution at station locations and pedestrian crossings and occasionally for operating requirements.

With respect to equipment restrictions, the gross weight of the heaviest permissible car is 286,000 lbs. The three mainline tracks of the Oakville Subdivision are constructed of continuously welded rail throughout the study area.

The Canadian National Railway continues to be strongly opposed to locating developments near railway facilities and rights-of-way due to potential safety and environmental conflicts. Development adjacent to the Railway Right-of-Way is not appropriate without sound impact mitigation measures to reduce the incompatibility. For confirmation of the applicable rail noise, vibration and safety standards, Mr. Nick Coleman, Canadian National Railway Properties at 905-760-5007 should be contacted directly.

We trust the above information will satisfy your current request.

Sincerely,
AECOM Canada Ltd.

Warren D'Andrade
warren.dandrade@aecom.com

cc: Nick Coleman, CN – email
Adam Snow, Metrolinx – email

APPENDIX D

Sample STAMSON 5.04 Output

STAMSON 5.0 COMPREHENSIVE REPORT Date: 16-08-2022 13:31:38
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: a.te Time Period: Day/Night 16/8 hours
Description: **Proposed daytime and nighttime sound levels at the south façade of Building C/D, Prediction Location**
[A]

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

Car traffic volume : 28301/3145 veh/TimePeriod *
Medium truck volume : 834/93 veh/TimePeriod *
Heavy truck volume : 655/73 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 33100
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 2.80
Heavy Truck % of Total Volume : 2.20
Day (16 hrs) % of Total Volume : 90.00

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

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 20.00 / 20.00 m
Receiver height : 1.50 / 1.50 m
Topography : 3 (Elevated; no barrier)
Elevation : 19.00 m
Reference angle : 0.00

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

Car traffic volume : 25662/2538 veh/TimePeriod *
Medium truck volume : 491/49 veh/TimePeriod *
Heavy truck volume : 1147/113 veh/TimePeriod *
Posted speed limit : 50 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 30000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 1.80

```
    Heavy Truck  % of Total Volume     :   4.20
    Day (16 hrs) % of Total Volume     :  91.00

Data for Segment # 2: Cawthra (day/night)
-----------------------------------------
Angle1   Angle2           : -90.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 105.00 / 105.00 m
Receiver height           :   1.50 / 1.50   m
Topography                :      3       (Elevated; no barrier)
Elevation                 :  19.00 m
Reference angle           :   0.00

Segment # 1: Lakeshore (day)
----------------------------

Source height = 1.22 m

ROAD (0.00 + 68.04 + 0.00) = 68.04 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
-------------------------------------------------------------------------
--
   -90     90   0.10  69.69   0.00  -1.37  -0.28   0.00   0.00   0.00
68.04
-------------------------------------------------------------------------
--

Segment Leq : 68.04 dBA

Segment # 2: Cawthra (day)
--------------------------

Source height = 1.43 m

ROAD (0.00 + 58.44 + 0.00) = 58.44 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
-------------------------------------------------------------------------
--
   -90      0   0.09  70.94   0.00  -9.23  -3.27   0.00   0.00   0.00
58.44
-------------------------------------------------------------------------
--

Segment Leq : 58.44 dBA

Total Leq All Segments: 68.49 dBA

Segment # 1: Lakeshore (night)
------------------------------
```

```
Source height = 1.22 m

ROAD (0.00 + 61.51 + 0.00) = 61.51 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
-------------------------------------------------------------------------
--
   -90     90   0.10  63.17   0.00  -1.37  -0.28   0.00   0.00   0.00
61.51
-------------------------------------------------------------------------
--

Segment Leq : 61.51 dBA

Segment # 2: Cawthra (night)
----------------------------

Source height = 1.43 m

ROAD (0.00 + 51.40 + 0.00) = 51.40 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
-------------------------------------------------------------------------
--
   -90      0   0.09  63.90   0.00  -9.23  -3.27   0.00   0.00   0.00
51.40
-------------------------------------------------------------------------
--

Segment Leq : 51.40 dBA

Total Leq All Segments: 61.91 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 68.49
                           (NIGHT): 61.91
```