NOISE & VIBRATION STUDY

"NEW APARTMENT BUILDING"
517 PLAINS ROAD EAST
BURLINGTON, ON

Prepared for:

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1.0 INTRODUCTION

dBA Acoustical Consultants Inc. has been retained to provide a noise & vibration study for the "New Apartment Building" located at 517 Plains Road East, Burlington.

The purpose of the study is to determine the vehicular noise impact from Plains Road East, and area stationary source noises that may have an impact on the proposed site.

This study will detail noise impact relative to the site plan and recommend noise control measures necessary (if applicable) to meet Ministry of Environment, Conservation and Parks (MECP) Publication NPC-300 entitled "Stationary & Transportation Sources-Approval & Planning guidelines while satisfying the planning requirements of the City of Burlington.

Rail vibration was not considered in this report as the rail lines are more than 300m from the proposed development. There is no heavy industry in the immediate area. Aircraft noise was not considered in this report as the development is located outside the NEF 25 contour.

2.0 SITE DESCRIPTION

Proposed is an 11-storey mixed-use building with 8 commercial units and 179 residential units. There are 2 levels of underground parking and an enclosed rooftop mechanical penthouse. Proposed is a ground level outdoor amenity area at the northwest portion of the building. The proposed underground parking has ground level intake and exhaust shafts these will not have an acoustical impact as the traffic noise is greater than the noise levels of the intake and exhaust. The mechanical equipment for the shafts is located underground.

To the north of the proposed development is a 1-storey Inn and to the south are 2-storey commercial businesses. To the east there is a 6-storey condo building as well as 1-storey commercial businesses. To the west are 1 and 2-storey residential homes. CN Rail Aldershot yard is located over 370m west of the proposed building and is separated by several residential streets. Due to the distance separation and extensive shielding from existing residential and commercial buildings, the CN Rail Aldershot Yard will not have an impact on the proposed development.

Plains Road East is a 4-lane roadway with center turning lane running north and south with a speed limit of 50 km/hr. A site visit has confirmed that there are no immediate area stationary noise sources that have any acoustical impact on the proposed development.

3.0 NOISE IMPACT ASSESSMENT

3.1 NOISE CRITERIA

The MECP specifies limits for road noise relative to new residential developments. The MECP Publication 300, Stationary & Transportation Sources-Approval & Planning, specifies the criteria, summarized as follows:

TABLE 1 - Road Traffic Sound Levels Limits	
Time Period	L_{eq} (dBA)
07:00 – 23:00 (16 hr.)	55 Outdoor Living Area (OLA)
23:00 – 07:00 (8 hr.)	50 Plane of Bedroom Window (POW)

Where noise levels estimated in the (OLA) and at the windows, (POW) are equal to or less than the values listed in Table 1, no noise control measures are required. Where noise levels exceed Table 1 values, the following action is required:

TABLE 2 – Noise Control Requirements		
Time Period	Noise Level Leq (dBA)	Action Required
07:00 - 23:00 Daytime (OLA)	56 to 60	Warning Clause Type "A"
	> 60	Barrier & Warning Clause Type "B"
07:00 – 23:00 Daytime (POW)	> 55	Provision for A/C, Warning Clause "C"
	> 65	Central A/C, Warning Clause "D"
	> 65	Building Component Specification
23:00 to 07:00 Nighttime (POW)	> 50	Provision for A/C and Warning Clause Type "C"
	> 60	Building Component Specification
	> 60	Central Air and Warning Clause Type "D"

Where nighttime noise levels exceed 60 dBA, building components must be designed to meet Table 3 indoor sound level limits.

TABLE 3 - Indoor Road Sound Levels Limits	
Indoor Location	Leq (dBA)
	Road
Living/Dining 7:00 – 23:00	45
Bedroom 23:00 - 07:00	40

3.2 ROAD NOISE

Predicted road traffic noise levels were calculated for Plains Road East, the major road noise source in the site area. Road traffic volumes were sourced from the City of Burlington's Open Data page. MECP computer program STAMSON version 5.04 was used to carry out prediction calculations (See Appendix "A"). Traffic data is summarized in Table 4.

The daytime/nighttime volume ratio relative for Plains Road East roadway is calculated using a 90/10 split and a 16/8-hour assessment as required by the MECP. The maximum posted speed for all vehicles is 50 km/hr on Plains Road East with a School Zone speed limit of 40 km/hr. School Zone speed limit is enforced during specific time of the school day. For the report we have used the speed limit of 50km/hr during the day and nighttime hours. The percentage of annual growth was figured at 2% over 14 years. The AADT (Annual Average Daily Traffic) 2022 volumes were used for Plains Road East, reflective of the worst-case scenario. Truck volumes were factored at 2% medium and 2% heavy of the total vehicle volumes for Plains Road East.

TABLE 4 – Future Road Traffic Volumes			
Plains Road East	AADT 42193 Vehicles		
	Cars	Medium Trucks	Heavy Trucks
Day	36455	759	759
Night	4051	84	84

Table 5 summarizes the "free field" traffic noise prediction results, modeled at 6 receptor locations. The west façade was not calculated as there are no direct angles to Plains Road East traffic.

TABLE 5 – Predicted Future Traffic Noise (dBA)		
Location	07:00 – 23:00	23:00 – 07:00
R1 – East Façade 2nd Floor (7m)	69 dBA	62 dBA
R2 – East Façade 11th Floor (35m)	69 dBA	62 dBA
R3 – South Façade 2nd Floor (7m)	64 dBA	57 dBA
R4 – South Façade 11th Floor (35m)	64 dBA	57 dBA
R5 – North Façade 1st Floor (2.5m)	63 dBA	56 dBA
R6 – North Facade 11th Floor (35m)	63 dBA	56 dBA

3.3 VIBRATION

The City of Burlington Construction and Mobility Management Plan (CMMP) require pre-condition surveys of area buildings within the area of influence, noise and vibration protocol, shoring approval and vibration monitoring during shoring and all heavy construction activities prior to mobilizing construction equipment. Further information will be provided prior to the issuance of a building permit or as The City of Burlington staff require the documents for approval.

4.0 RECOMMENDATIONS - NOISE CONTROL

4.1 OUTDOOR LIVING AREAS

Standard balconies are proposed and are less than 4m in depth and therefore not considered as Outdoor Living Areas (OLA's). The ground level outdoor amenity area located on the northwest portion of the property is shielded from the traffic on Plains Road East as well as by the Inn next door. Noise mitigation measures are not required.

4.2 INDOOR NOISE LEVELS

Calculated road noise levels at the Plane of Window (POW) exceed the 50 dBA criteria outlined in Table 1 for indoor space for all units. Specific building components (walls, windows, doors etc.) are required and confirmed using the STC (Sound Transmission Class) methods based on using three building components. Building design specifications were not made available at report time and STC are summarized in Table 6.

As a cost-efficient consideration for the builder, all windows for all floors and facades of the proposed building require the same window STC value configurations. Prior to the issuance of a Building Permit, a letter from the appropriate window company must be issued to the Acoustical Consultant confirming the acoustically tested windows STC values have been achieved.

TABLE 6 – Recommended Door and Window Construction			
LOCATION	Acoustically Tested Windows STC Rating	Patio Door Construction STC	Exterior Walls STC
All Units	Example	Example	Example
Bedroom Living room	STC-34 STC-34	STC-34 STC-34	STC-36 STC-36

5.0 VENTILATION / WARNING CLAUSES

Ventilation and Warning Clause requirements for all residential apartment units are presented in Table 7 following. It is recommended that the appropriate Warning Clauses be inserted into all Offers and Agreements of Purchase and Sale or Lease.

TABLE 7 - Ventilation and Warning Clause Requirements		
LOCATION	VENTILATION	WARNING CLAUSE
All Units	Central Air Conditioning	Type "D"

The following warning clause should be used:

TYPE D: (All Units)
"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 Municipality's and the MECP's noise criteria."

6.0 NOISE CONTROL REQUIREMENTS CONFIRMATION

The following Table 8 summarizes the highest roadway noise levels (Table 5) for the daytime/nighttime hours and recommends air conditioning, warning clauses, and indoor noise level limits criteria. Table 8 shows that with the Warning Clause and STC requirements listed below the redevelopment will meet the MECP minimum required indoor noise level limits.

TABLE 8 - Noise Control Requirements Confirmation											
Time Period	Predicted Impact, Leq (dBA)	A/C Req.	Warning Clause	Indoor Limits, Leq (dBA)		Window / Floor Area Ratio (%)	Wall / Floor Area Ratio (%)	STC Requirements			
				Living, Dining, and Den Areas	Sleeping Quarters			Living, Dining, and Den Areas		Sleeping Quarters	
	Road			Road	Road			Window	Wall	Window	Wall
Day	69	YES	D	45	45	80%	100%	34	36	34	36
Night	62	YES	D	45	40	80%	100%	28	30	32	34

7.0 STATIONARY SOURCES (EXHAUST & INTAKE UNITS)

7.1 REGULATORY CONTEXT (RESIDENTIAL)

The MECP Publication NPC-300, Stationary & Transportation Sources-Approval & Planning guidelines defines a point of reception/receptor as *"any point on the premises of a person where the sound or vibration originating from other than those premises are received."*

The point of reception may be located on any of the following, or zoned for future use, premises including but not limited to the following: residential homes, hospitals, nursing/retirement homes, etc.

The areas surrounding the proposed commercial development are indicative of a "Class 1 Area" as defined in MECP Publication NPC-300, Stationary & Transportation Sources-Approval & Planning guidelines. The applicable sound limits are the higher of:

- The existing ambient sound level; or
- The minimum values of Table 9.

No restrictions apply to stationary sources if the one-hour equivalent sound exposure (Leq) is lower than the levels in the following Table 9.

The parking exhaust shaft is located on the southeast portion of the proposed development, and the air intake shaft is located on the northeast portion at ground level. These units generate little noise from the source and operate only when required to intake air and exhaust fumes to/from the underground parking areas. The sound emanates upwards and quickly dissipates. Both main mechanical operating systems are located in the parking structure and generally equipped with acoustical wrapping.

The traffic background noise results in higher noise levels than the following Table 9 Therefore it is anticipated that the parking intake and exhaust units will follow MECP Publication NPC-300, Stationary & Transportation Sources-Approval & Planning guidelines.

TABLE 9 Minimum Sound Levels Limits (Class 1Area)	
Time Period	L_{eq} (dBA)
07:00 - 19:00	50
19:00 - 23:00	50
23:00 – 07:00	45

8.0 SUMMARY OF RECOMMENDATIONS

The following noise control measures are required to satisfy the indoor and outdoor noise level criterion:

- Window, Door, and Wall construction as recommended in Table 6.
- Type "D" Warning Clause for all residential units as recommended in Table 7
- A letter from the window company be issued to confirm STC values for all proposed windows to be installed and an Acoustical Certificate to be sent to the City of Hamilton confirming that STC values have been achieved.
- It is recommended that a qualified acoustical consultant certify that the required noise control measures have been incorporated into the builder's plans prior to issuance of a building permit.
- It is recommended that a qualified acoustical consultant certify that the required control measures have been properly installed prior to an occupancy permit.

9.0 CONCLUSIONS

dBA Acoustical Consultants Inc. has provided a noise & vibration study for the "New Apartment Building" located at 517 Plains Road East, Burlington.

The study determined the vehicular noise impact from Plains Road East, and area stationary source noises that have an impact on the proposed site.

This study detailed noise impact relative to the site plan and recommended noise control measures necessary to meet MECP Publication NPC-300 entitled "Stationary & Transportation Sources-Approval & Planning guidelines while satisfying the planning requirements of the City of Burlington.

FIGURE 1
SITE LOCATION

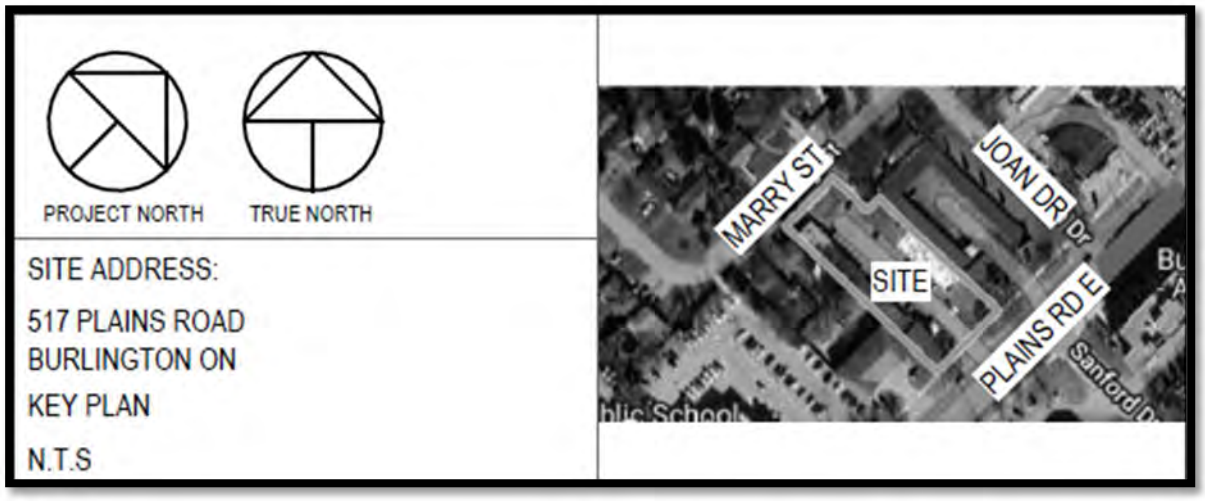


FIGURE 2
SITE PLAN

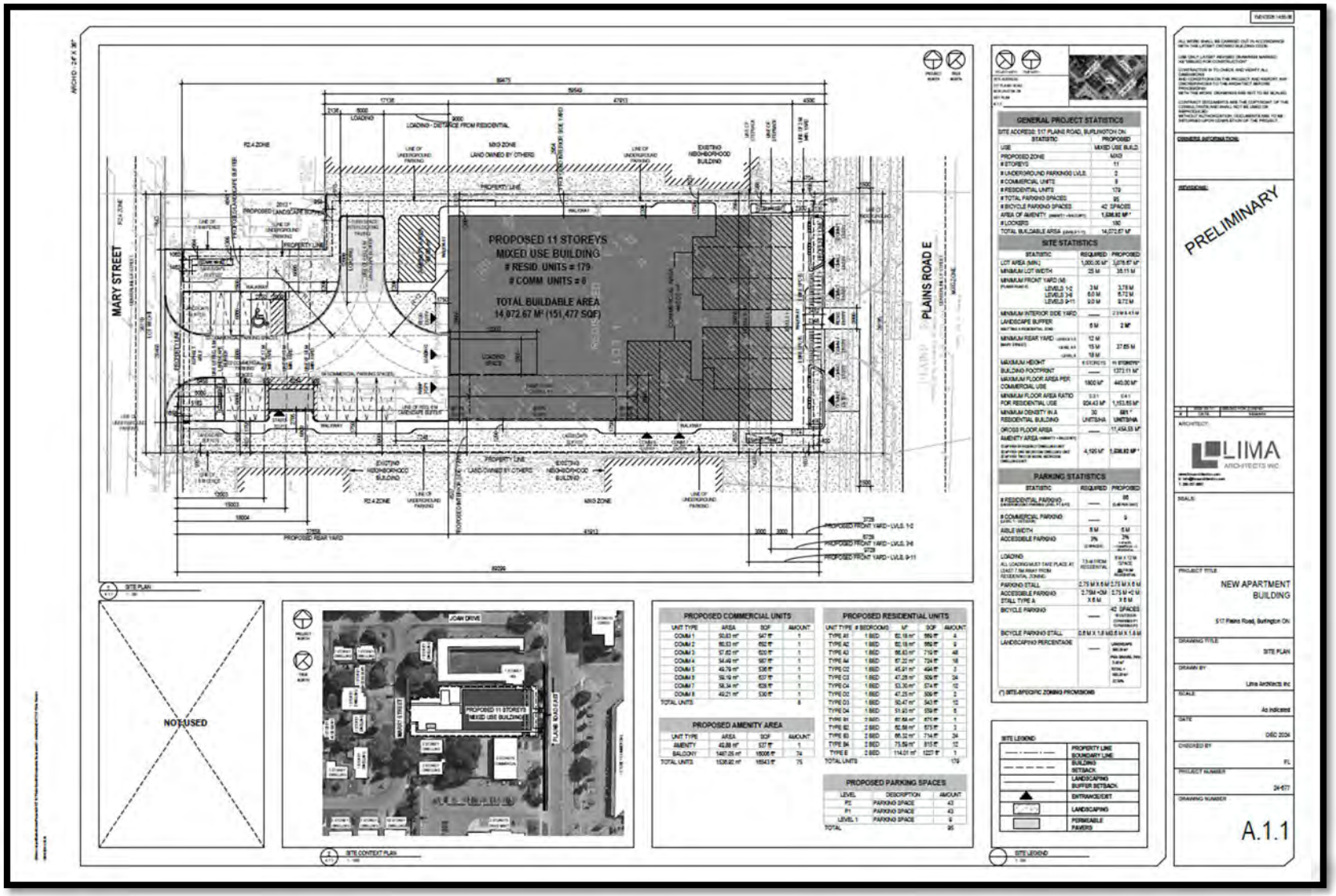
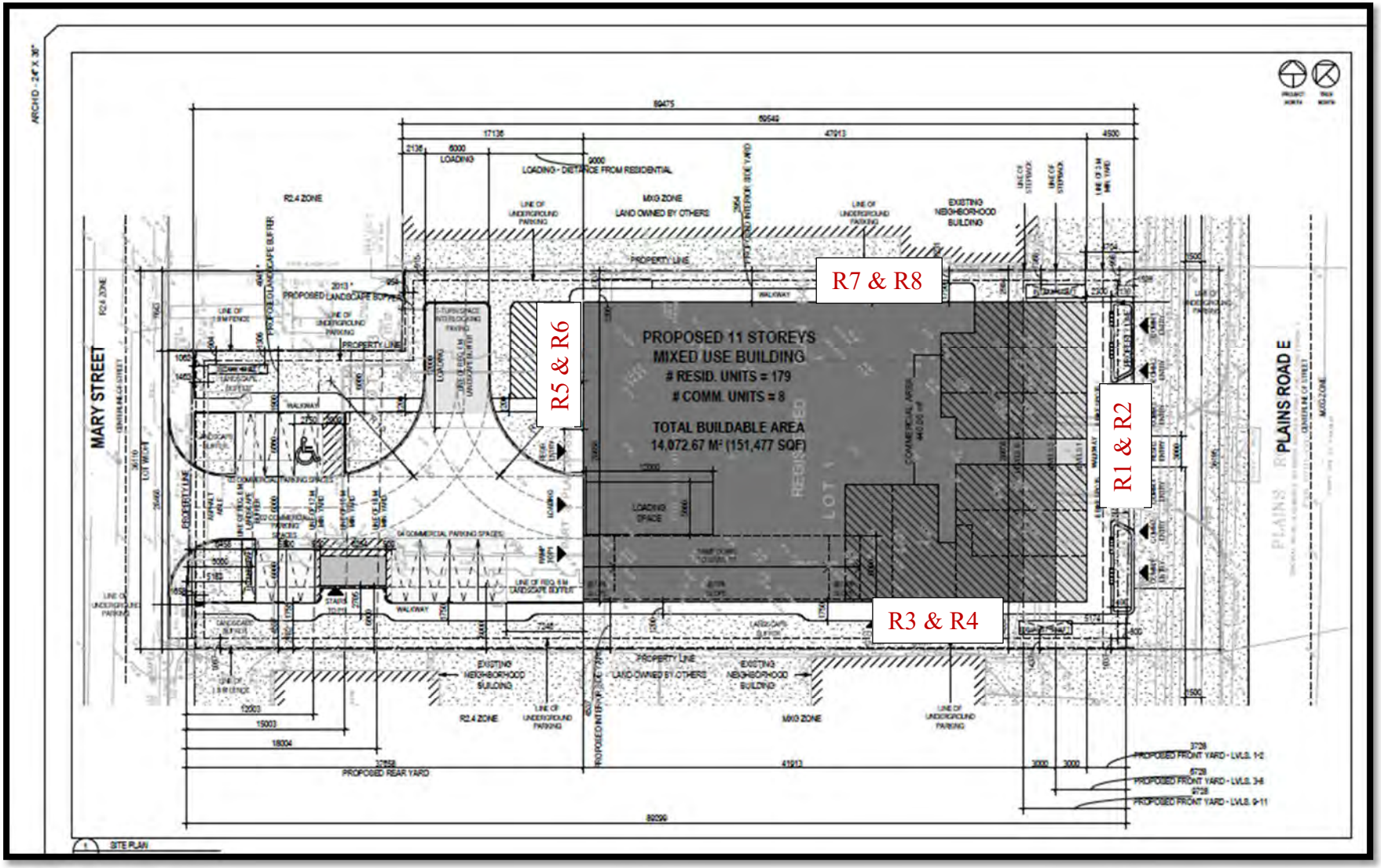


FIGURE 3
RECEPTOR LOCATIONS



APPENDIX "A"

CITY OF BURLINGTON AADT
2022 TRAFFIC DATA



AADT Counts 2022

Zoom to

FID	376
STREET_NAM	PLAINS RD. E
TES_ID	239,190
Volume	31,977
AADT_Year	2,022
Shape__Length	389.352

STAMSON CALCULATIONS

```
STAMSON 5.04        SUMMARY REPORT        Date: 16-01-2026 10:13:10
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: R1Plains.te          Time Period: Day/Night 16/8 hours
Description: R1 East Facade 2nd Floor
                 TOTAL Leq FROM ALL SOURCES              (DAY): 68.59
                                                        (NIGHT): 62.05
Road data, segment # 1: Plains Rd E (day/night)
-----------------------------------------------
Car traffic volume  : 36455/4051  veh/TimePeriod  *
Medium truck volume :   759/84    veh/TimePeriod  *
Heavy truck volume  :   759/84    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):  31977
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Plains Rd E (day/night)
-----------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  20.00 / 20.00  m
Receiver height           :   7.00 / 7.00   m
Topography                :      1       (Flat/gentle slope; no barrier)

Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E      !     1.19 !    68.59 !    68.59
--------------------+---------+---------+---------
                      Total                  68.59 dBA

Result summary (night)
----------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E      !     1.19 !    62.05 !    62.05
--------------------+---------+---------+---------
                      Total                  62.05 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 16-01-2026 10:21:45
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r2plains.te          Time Period: Day/Night 16/8 hours
Description: R2 East Facade 11th Floor
                  TOTAL Leq FROM ALL SOURCES              (DAY): 68.59
                                                          (NIGHT): 62.05
Road data, segment # 1: Plains Rd E (day/night)
-----------------------------------------------
Car traffic volume  : 36455/4051  veh/TimePeriod  *
Medium truck volume :   759/84    veh/TimePeriod  *
Heavy truck volume  :   759/84    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):  31977
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Plains Rd E (day/night)
-----------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  20.00 / 20.00  m
Receiver height           :  35.00 / 35.00  m
Topography                :      1       (Flat/gentle slope; no barrier)

Result summary (day)
--------------------
                     !  source  !   Road   !  Total
                     !  height  !   Leq    !   Leq
                     !    (m)   !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E       !     1.19 !    68.59 !    68.59
--------------------+---------+---------+---------
                       Total                  68.59 dBA

Result summary (night)
----------------------
                     !  source  !   Road   !  Total
                     !  height  !   Leq    !   Leq
                     !    (m)   !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E       !     1.19 !    62.05 !    62.05
--------------------+---------+---------+---------
                       Total                  62.05 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 16-01-2026 10:18:41
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: R3Plains.te          Time Period: Day/Night 16/8 hours
Description: R3 South Facade 2nd Floor
                  TOTAL Leq FROM ALL SOURCES              (DAY): 63.54
                                                          (NIGHT): 57.00
Road data, segment # 1: Plains Rd E (day/night)
-----------------------------------------------
Car traffic volume  : 36455/4051  veh/TimePeriod  *
Medium truck volume :   759/84    veh/TimePeriod  *
Heavy truck volume  :   759/84    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):  31977
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Plains Rd E (day/night)
-----------------------------------------------
Angle1   Angle2           : -90.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  32.00 / 32.00  m
Receiver height           :   7.00 / 7.00   m
Topography                :      1       (Flat/gentle slope; no barrier)

Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E      !     1.19 !    63.54 !    63.54
--------------------+---------+---------+---------
                      Total                  63.54 dBA

Result summary (night)
----------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E      !     1.19 !    57.00 !    57.00
--------------------+---------+---------+---------
                      Total                  57.00 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 16-01-2026 10:23:18
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r4plains.te          Time Period: Day/Night 16/8 hours
Description: R4 South Facade 11th Floor
                 TOTAL Leq FROM ALL SOURCES              (DAY): 63.54
                                                        (NIGHT): 57.00
Road data, segment # 1: Plains Rd E (day/night)
-----------------------------------------------
Car traffic volume  : 36455/4051  veh/TimePeriod  *
Medium truck volume :   759/84    veh/TimePeriod  *
Heavy truck volume  :   759/84    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):  31977
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Plains Rd E (day/night)
-----------------------------------------------
Angle1   Angle2           : -90.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  32.00 / 32.00  m
Receiver height           :  35.00 / 35.00  m
Topography                :      1       (Flat/gentle slope; no barrier)

Result summary (day)
--------------------
                     !  source  !   Road   !  Total
                     !  height  !   Leq    !   Leq
                     !    (m)   !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E       !     1.19 !    63.54 !    63.54
--------------------+---------+---------+---------
                       Total                  63.54 dBA

Result summary (night)
----------------------
                     !  source  !   Road   !  Total
                     !  height  !   Leq    !   Leq
                     !    (m)   !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E       !     1.19 !    57.00 !    57.00
--------------------+---------+---------+---------
                       Total                  57.00 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 16-01-2026 10:25:54
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r5plains.te          Time Period: Day/Night 16/8 hours
Description: R5 West Facade 1st Floor
                 TOTAL Leq FROM ALL SOURCES              (DAY): 57.26
                                                        (NIGHT): 50.71
Road data, segment # 1: Plains Rd E (day/night)
-----------------------------------------------
Car traffic volume  : 36455/4051  veh/TimePeriod  *
Medium truck volume :   759/84    veh/TimePeriod  *
Heavy truck volume  :   759/84    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):  31977
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Plains Rd E (day/night)
-----------------------------------------------
Angle1   Angle2           :  -0.00 deg   45.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  68.00 / 68.00  m
Receiver height           :   2.50 / 2.50   m
Topography                :      1       (Flat/gentle slope; no barrier)

Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E      !     1.19 !    57.26 !    57.26
--------------------+---------+---------+---------
                      Total                  57.26 dBA

Result summary (night)
----------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E      !     1.19 !    50.71 !    50.71
--------------------+---------+---------+---------
                      Total                  50.71 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 16-01-2026 10:27:56
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r6plains.te          Time Period: Day/Night 16/8 hours
Description: R6 West Facade 11th Floor
                 TOTAL Leq FROM ALL SOURCES              (DAY): 57.26
                                                        (NIGHT): 50.71
Road data, segment # 1: Plains Rd E (day/night)
-----------------------------------------------
Car traffic volume  : 36455/4051  veh/TimePeriod  *
Medium truck volume :   759/84    veh/TimePeriod  *
Heavy truck volume  :   759/84    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):  31977
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Plains Rd E (day/night)
-----------------------------------------------
Angle1   Angle2           :  -0.00 deg   45.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  68.00 / 68.00  m
Receiver height           :  35.00 / 35.00  m
Topography                :      1       (Flat/gentle slope; no barrier)

Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E      !     1.19 !    57.26 !    57.26
--------------------+---------+---------+---------
                      Total                  57.26 dBA

Result summary (night)
----------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E      !     1.19 !    50.71 !    50.71
--------------------+---------+---------+---------
                      Total                  50.71 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 16-01-2026 10:30:07
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r7plains.te          Time Period: Day/Night 16/8 hours
Description: R7 North Facade 1st Floor
                  TOTAL Leq FROM ALL SOURCES              (DAY): 62.57
                                                          (NIGHT): 56.03
Road data, segment # 1: Plains Rd E (day/night)
-----------------------------------------------
Car traffic volume  : 36455/4051  veh/TimePeriod  *
Medium truck volume :   759/84    veh/TimePeriod  *
Heavy truck volume  :   759/84    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

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

    24 hr Traffic Volume (AADT or SADT):  31977
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Plains Rd E (day/night)
-----------------------------------------------
Angle1   Angle2           : -90.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  40.00 / 40.00  m
Receiver height           :   2.50 / 2.50   m
Topography                :      1       (Flat/gentle slope; no barrier)

Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E      !     1.19 !    62.57 !    62.57
--------------------+---------+---------+---------
                      Total                  62.57 dBA

Result summary (night)
----------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E      !     1.19 !    56.03 !    56.03
--------------------+---------+---------+---------
                      Total                  56.03 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 16-01-2026 10:31:28
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r8plains.te          Time Period: Day/Night 16/8 hours
Description: R8 North Facade 11th Floor
                 TOTAL Leq FROM ALL SOURCES              (DAY): 62.57
                                                        (NIGHT): 56.03
Road data, segment # 1: Plains Rd E (day/night)
-----------------------------------------------
Car traffic volume  : 36455/4051  veh/TimePeriod  *
Medium truck volume :   759/84    veh/TimePeriod  *
Heavy truck volume  :   759/84    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

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

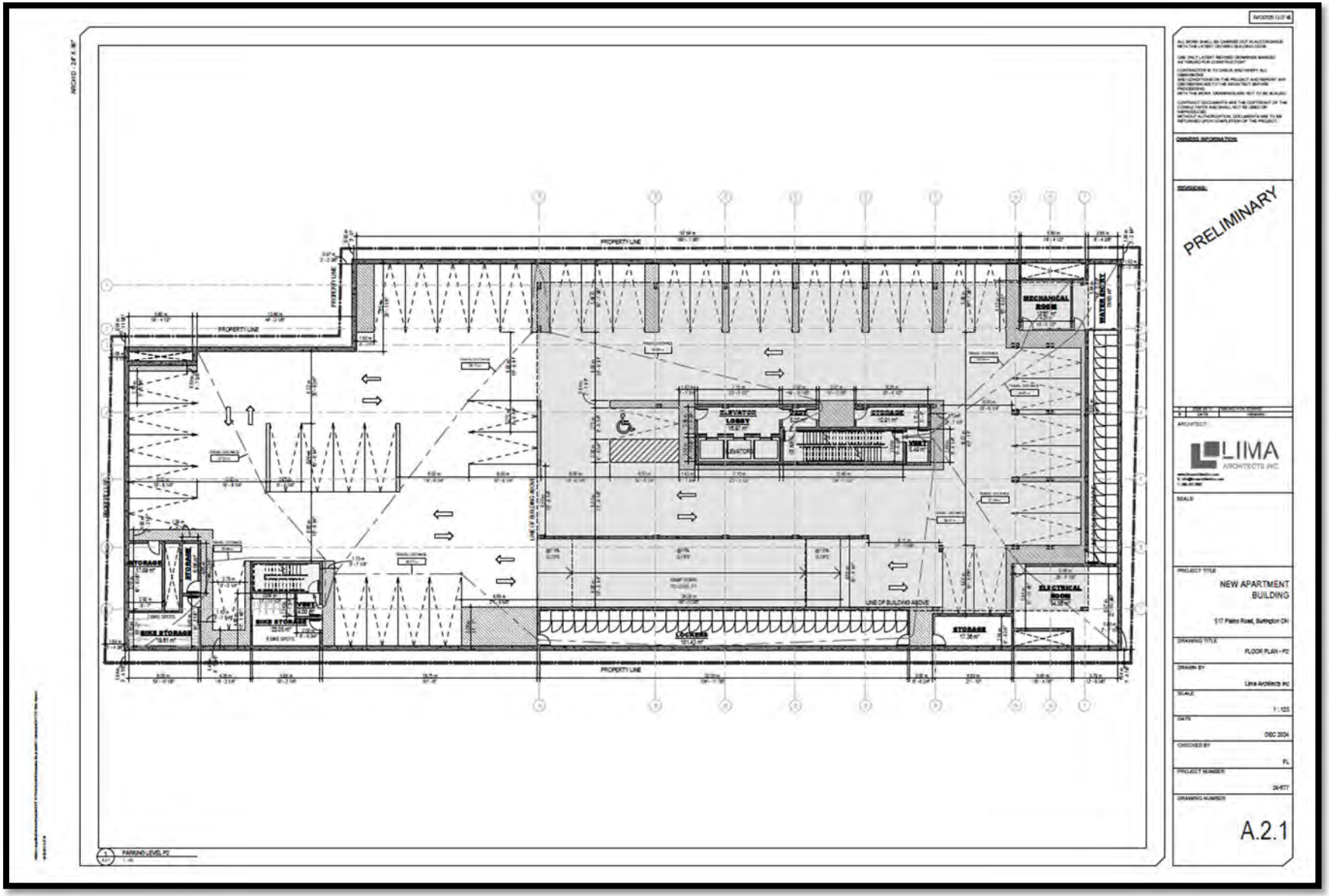
    24 hr Traffic Volume (AADT or SADT):  31977
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

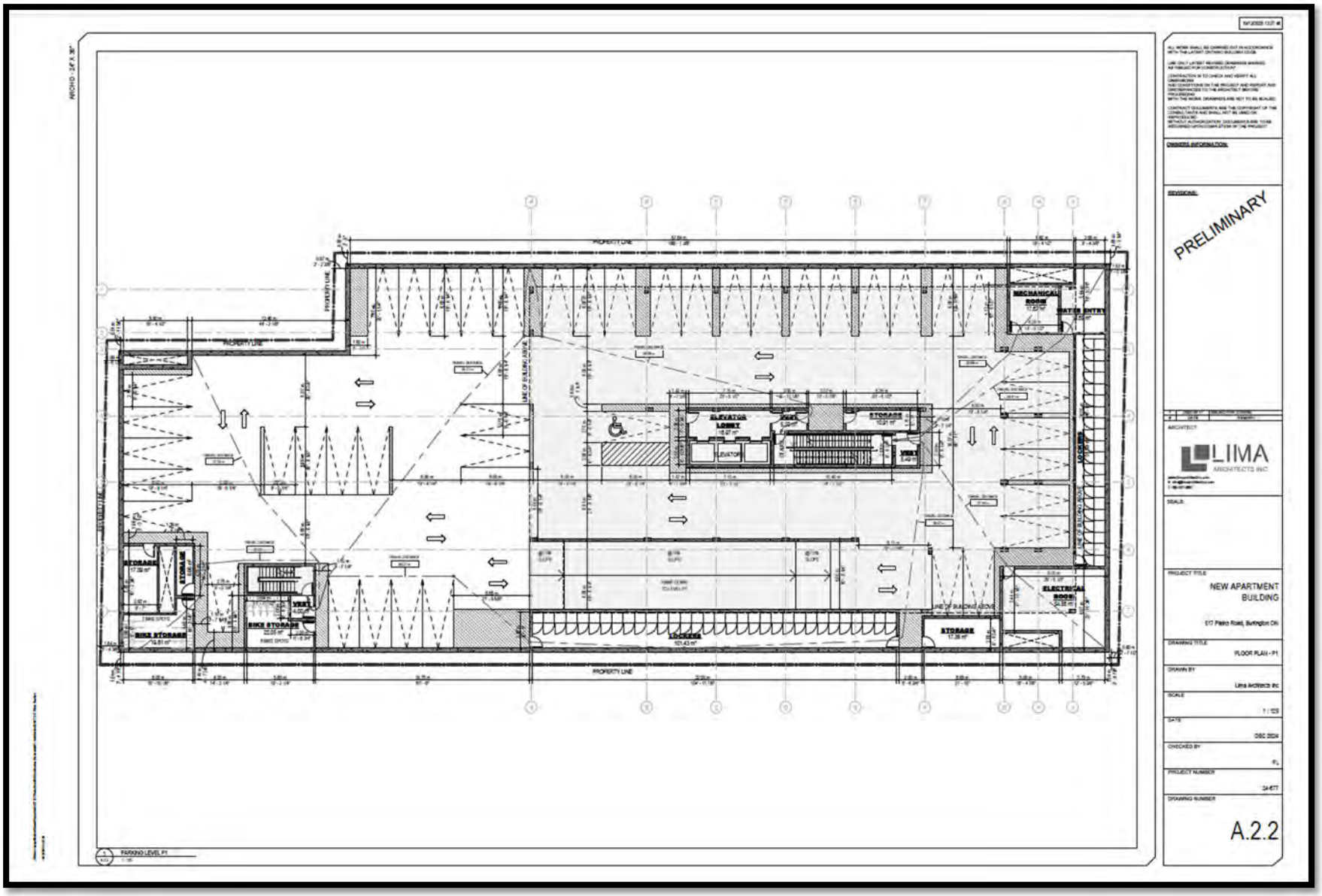
Data for Segment # 1: Plains Rd E (day/night)
-----------------------------------------------
Angle1   Angle2           : -90.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  40.00 / 40.00  m
Receiver height           :   2.50 / 2.50   m
Topography                :      1       (Flat/gentle slope; no barrier)

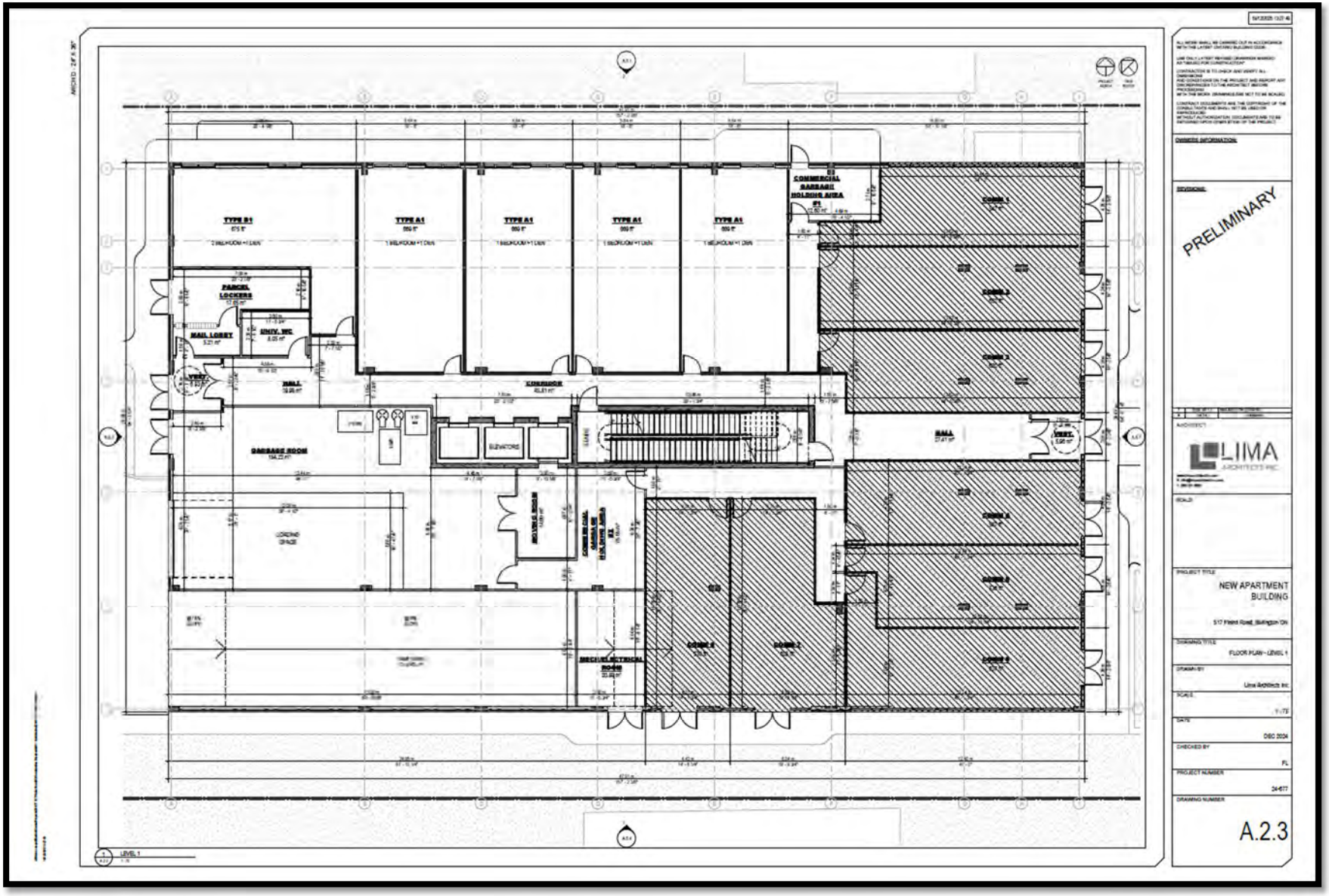
Result summary (day)
--------------------
                     !  source  !   Road   !  Total
                     !  height  !   Leq    !   Leq
                     !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E       !     1.19 !    62.57 !    62.57
--------------------+---------+---------+---------
                       Total                  62.57 dBA

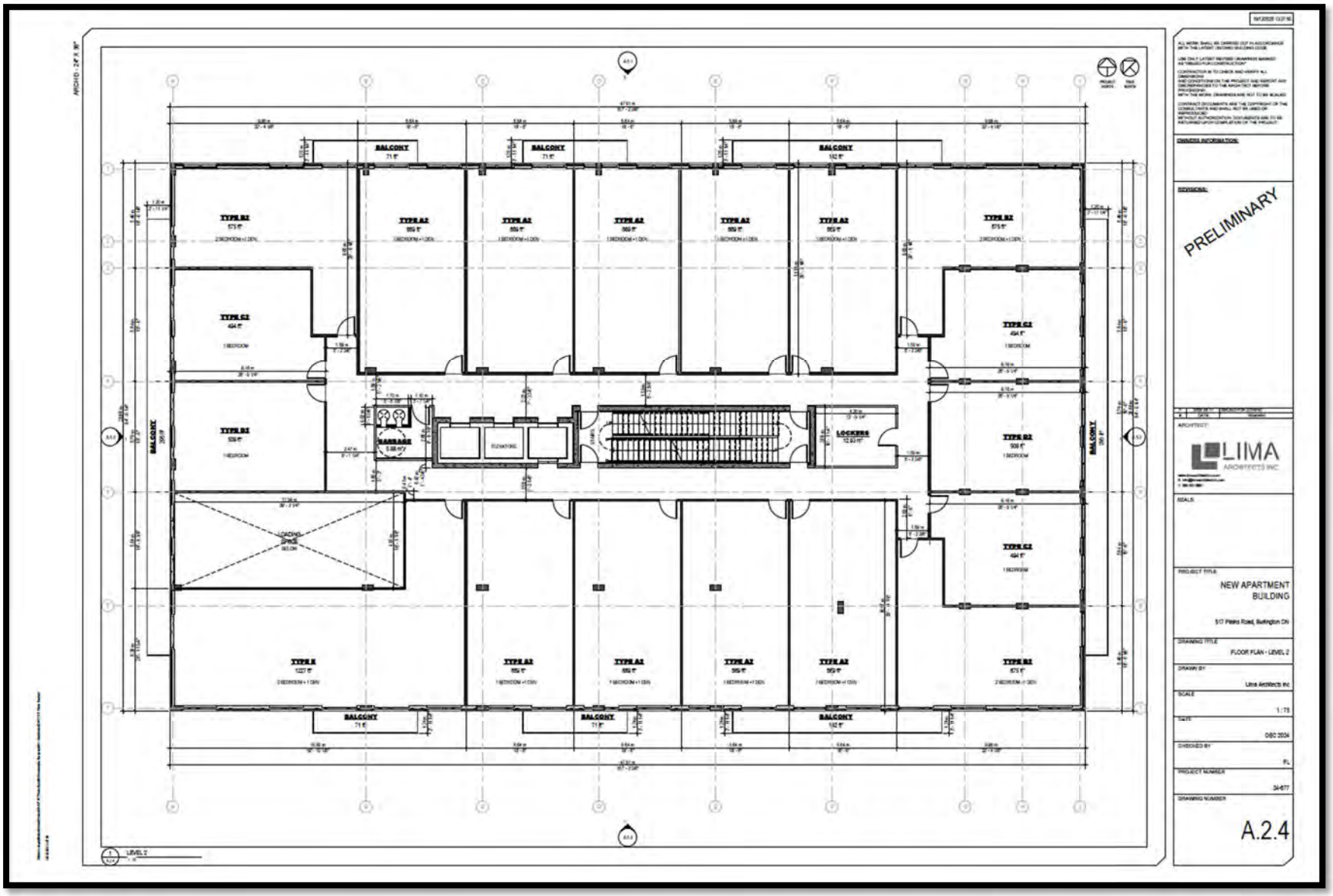
Result summary (night)
----------------------
                     !  source  !   Road   !  Total
                     !  height  !   Leq    !   Leq
                     !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Plains Rd E       !     1.19 !    56.03 !    56.03
--------------------+---------+---------+---------
                       Total                  56.03 dBA
```

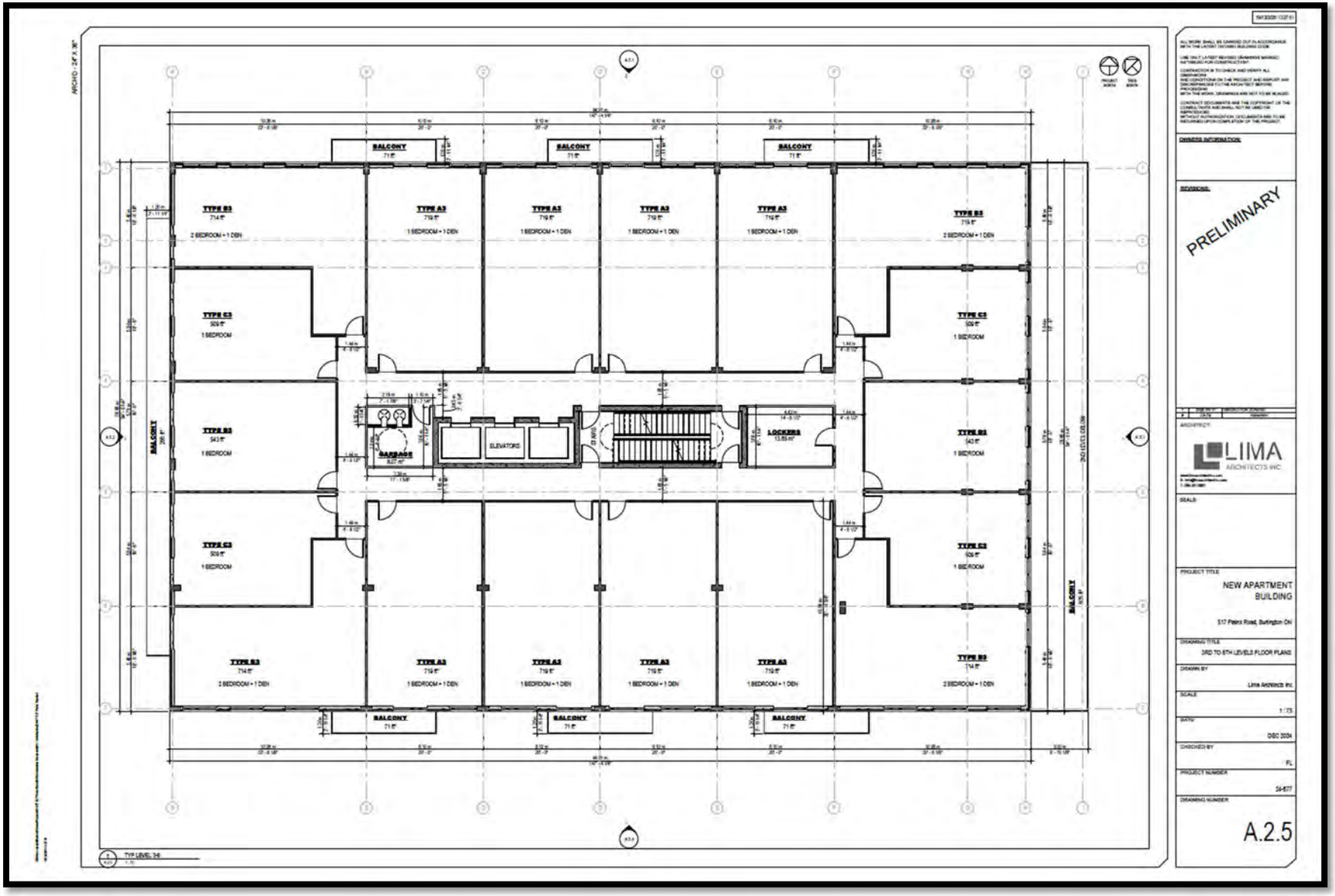
FLOOR PLANS

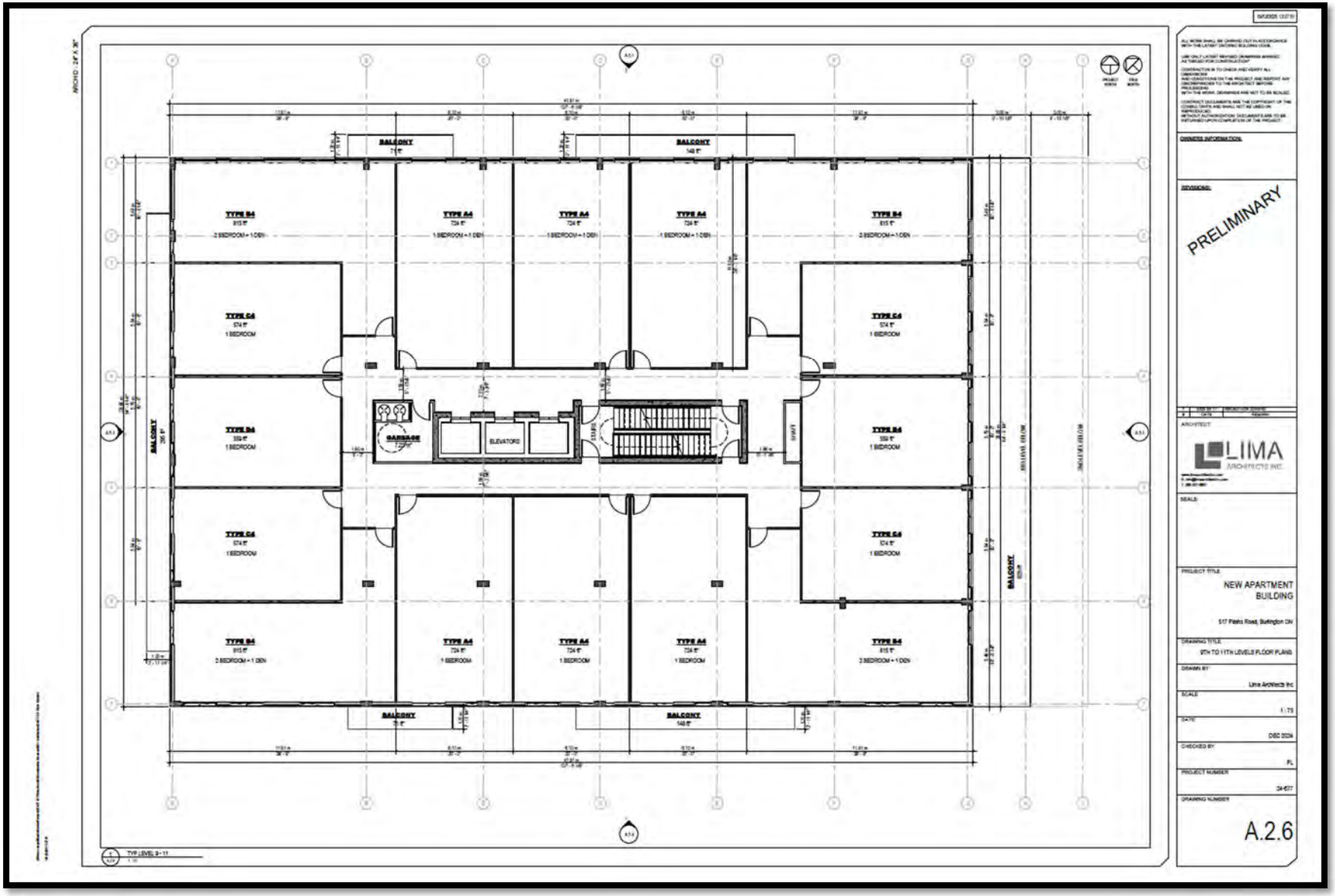

PROPERTY LINE
MECHANICAL ROOM
ELEVATOR LOBBY
STORAGE
ELECTRICAL ROOM
LOCKERS
BIKE STORAGE
LINE OF BUILDING ABOVE
PRELIMINARY
LIMA ARCHITECTS INC.
NEW APARTMENT BUILDING
517 Plains Road, Burlington ON
FLOOR PLAN - P2
Lima Architects Inc
1:100
OBC 2024
PL
24-677
A.2.1


PRELIMINARY
LIMA
ARCHITECTS INC
NEW APARTMENT BUILDING
517 Plains Road, Burlington ON
FLOOR PLAN - P1
A.2.2
PROPERTY LINE
MECHANICAL ROOM
ELEVATOR
STORAGE
LOCKERS
ELECTRICAL ROOM
BIKE STORAGE
LINE OF BUILDING ABOVE

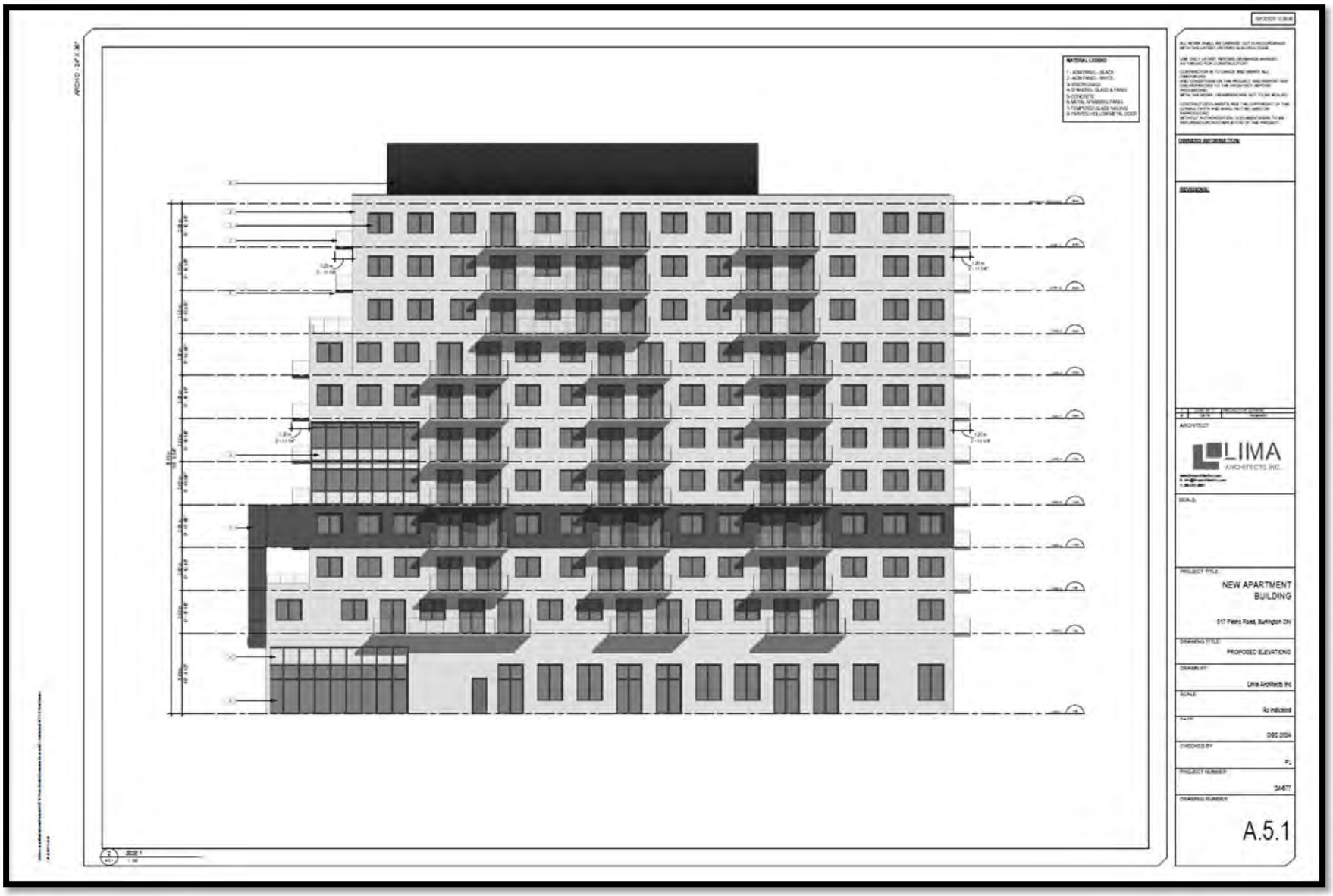

TYPE B1
TYPE A1
TYPE A1
TYPE A1
TYPE A1
COMMERCIAL GARBAGE HOLDING AREA
PARCEL LOCKERS
MAIL LOBBY
UNIV. WC
CORRIDOR
ELEVATORS
GARBAGE ROOM
MAIL
ELEC.
MECH.
PRELIMINARY
LIMA
NEW APARTMENT BUILDING
517 Plains Road, Burlington ON
FLOOR PLAN - LEVEL 1
Lima Architects Inc.
DEC 2024
FL
24-677
A.2.3
LEVEL 1

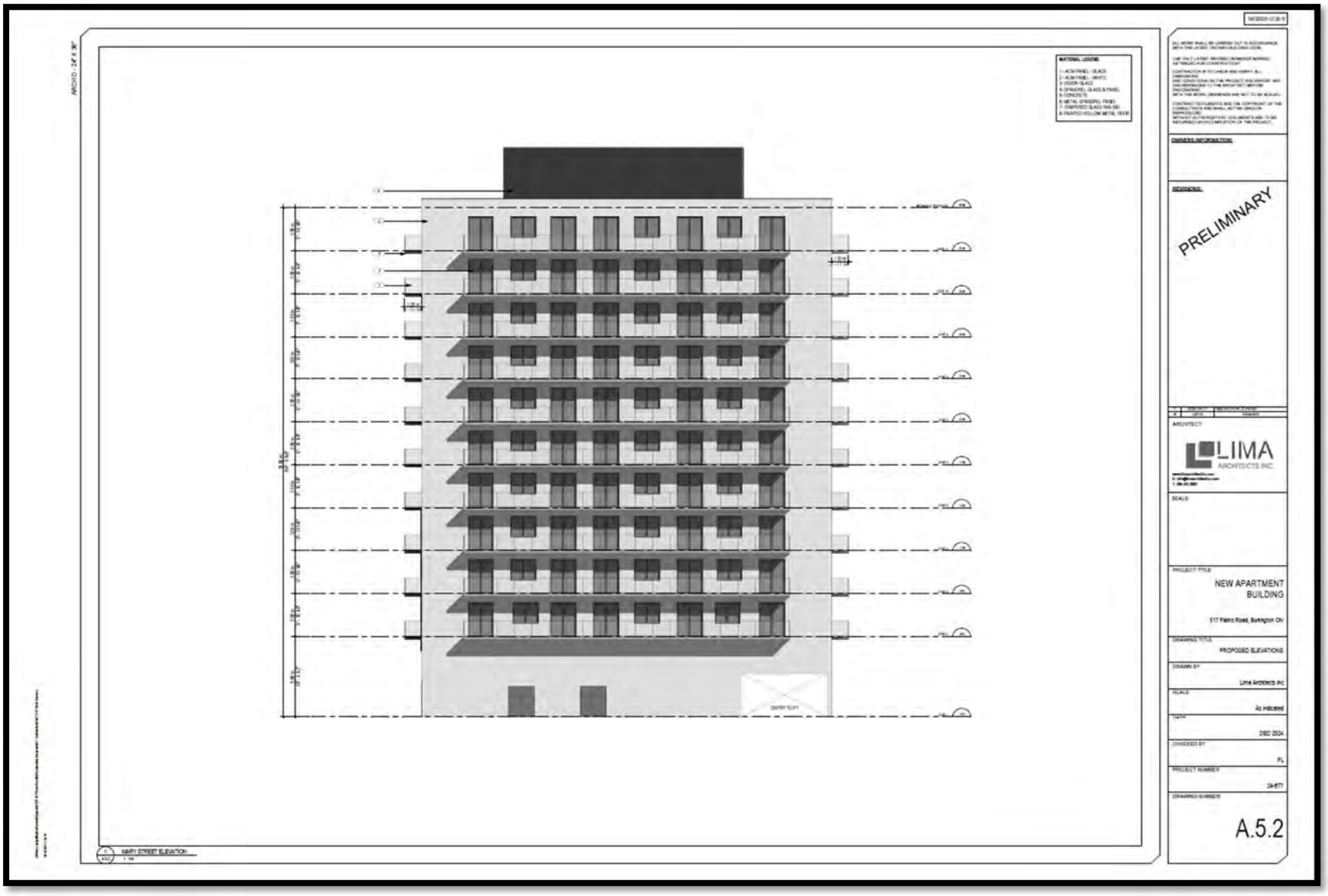

PRELIMINARY
LIMA
ARCHITECTS INC
NEW APARTMENT BUILDING
517 Plains Road, Burlington ON
FLOOR PLAN - LEVEL 2
Lima Architects Inc
1:75
DEC 2024
PL
24-677
A.2.4
BALCONY
LOCKERS
LOADING SPACE

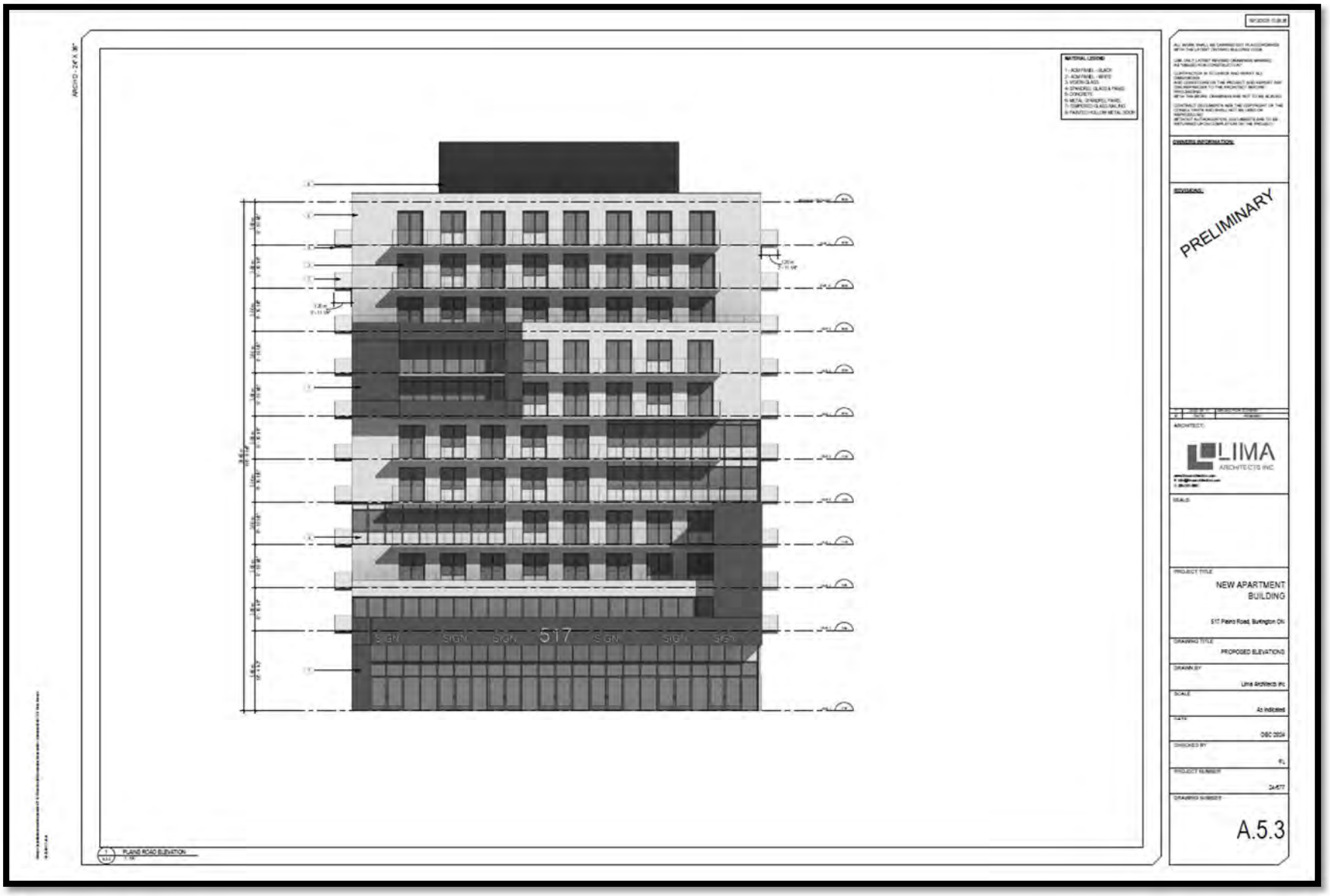

PRELIMINARY
LIMA
ARCHITECTS INC.
NEW APARTMENT BUILDING
517 Plains Road, Burlington ON
3RD TO 6TH LEVELS FLOOR PLANS
A.2.5
BALCONY
ELEVATORS
LOCKERS
GARBAGE

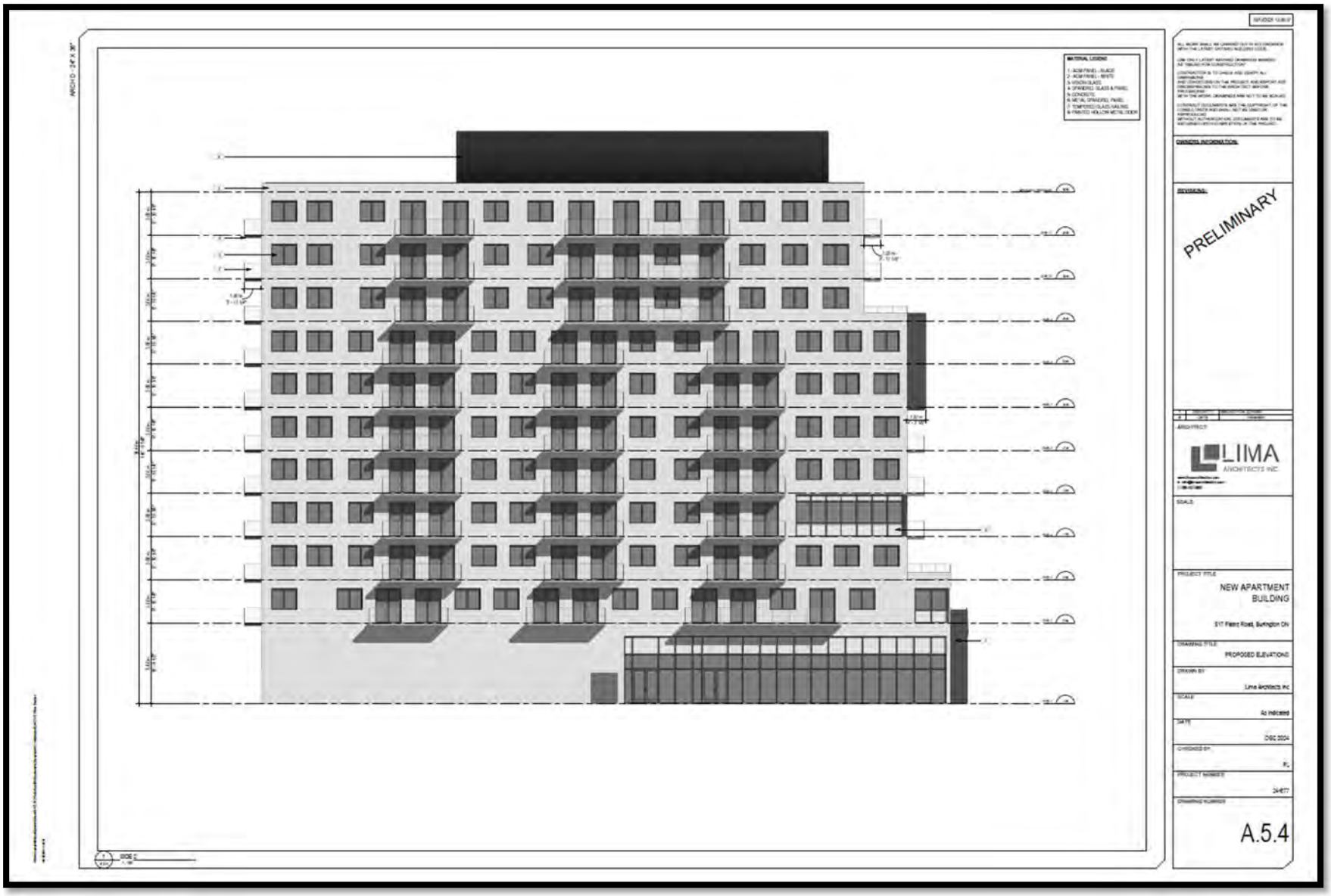

PRELIMINARY
NEW APARTMENT BUILDING
517 Plains Road, Burlington ON
A.2.6
LIMA
ARCHITECTS INC.
BALCONY
GARBAGE
ELEVATORS

ELEVATIONS


LIMA
ARCHITECTS INC.
NEW APARTMENT BUILDING
517 Plains Road, Burlington ON
PROPOSED ELEVATIONS
Lima Architects Inc
As indicated
DEC 2024
A.5.1


PRELIMINARY
LIMA
ARCHITECTS INC.
NEW APARTMENT BUILDING
517 Plains Road, Burlington ON
PROPOSED ELEVATIONS
A.5.2


PRELIMINARY
LIMA
ARCHITECTS INC
NEW APARTMENT BUILDING
517 Plains Road, Burlington ON
PROPOSED ELEVATIONS
Lima Architects Inc
As indicated
DEC 2024
A.5.3
517
SIGN
PLAINS ROAD ELEVATION


PRELIMINARY
LIMA
NEW APARTMENT BUILDING
A.5.4

SITE STATISTICS

GENERAL PROJECT STATISTICS

SITE ADDRESS: 517 PLAINS ROAD, BURLINGTON ON

STATISTIC	PROPOSED
USE	MIXED USE BUILD.
PROPOSED ZONE	MXG
# STOREYS	11
# UNDERGROUND PARKINGS LVLS.	2
# COMMERCIAL UNITS	8
# RESIDENTIAL UNITS	179
# TOTAL PARKING SPACES	95
# BICYCLE PARKING SPACES	42 SPACES
AREA OF AMENITY (AMENITY + BALCONY)	1,536.92 M² *
# LOCKERS	180
TOTAL BUILDABLE AREA (LEVELS 1-11)	14,072.67 M²

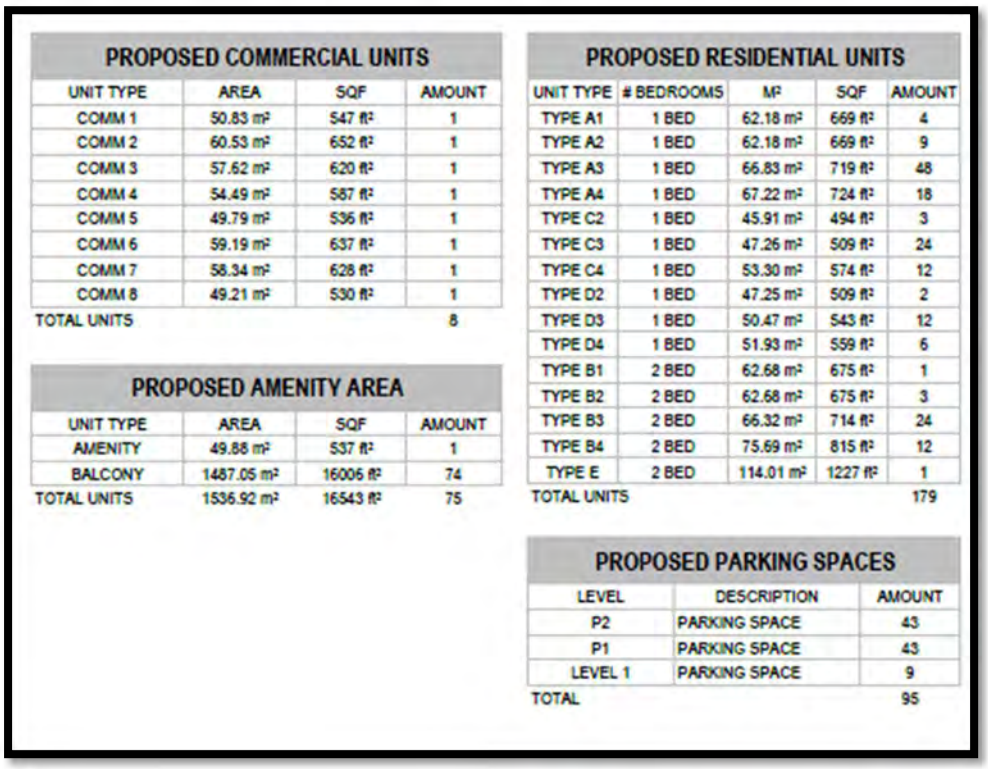
SITE STATISTICS

STATISTIC	REQUIRED	PROPOSED
LOT AREA (MIN.)	1,000.00 M²	3,076.67 M²
MINIMUM LOT WIDTH	25 M	36.11 M
MINIMUM FRONT YARD (M) (PLAINS ROAD E) LEVELS 1-2 LEVELS 3-8 LEVELS 9-11	3 M 6.0 M 9.0 M	3.78 M 6.72 M 9.72 M
MINIMUM INTERIOR SIDE YARD	—	2.9 M & 4.5 M
LANDSCAPE BUFFER ABUTTING A RESIDENTIAL ZONE	6 M	2 M*
MINIMUM REAR YARD (MARY STREET) - LEVELS 1-3 - LEVEL 4-5 - LEVEL 6	12 M 15 M 18 M	37.65 M
MAXIMUM HEIGHT	6 STOREYS	11 STOREYS*
BUILDING FOOTPRINT	—	1373.11 M²
MAXIMUM FLOOR AREA PER COMMERCIAL USE	1800 M²	440.00 M²
MINIMUM FLOOR AREA RATIO FOR RESIDENTIAL USE	0.3:1 924.43 M²	0.4:1 1,153.65 M²
MINIMUM DENSITY IN A RESIDENTIAL BUILDING	30 UNITS/HA	581 * UNITS/HA
GROSS FLOOR AREA	—	11,454.55 M²
AMENITY AREA (AMENITY + BALCONY) 15 M² PER EFFICIENCY DWELLING UNIT 20 M² PER ONE BEDROOM DWELLING UNIT 35 M² PER TWO OR MORE BEDROOM DWELLING UNIT	4,195 M²	1,536.92 M² *

PARKING STATISTICS

STATISTIC	REQUIRED	PROPOSED
# RESIDENTIAL PARKING (UNDERGROUND PARKING LEVEL P1 & P2)	—	86 (0.48 PER UNIT)
# COMMERCIAL PARKING (LEVEL 1 - OUTDOOR)	—	9
AISLE WIDTH	6 M	6 M
ACCESSIBLE PARKING	3% (3 SPACES)	3% 3 SPACES 1 COMMERCIAL + 2 RESIDENTIAL
LOADING ALL LOADING MUST TAKE PLACE AT LEAST 7.5M AWAY FROM RESIDENTIAL ZONING	7.5 M FROM RESIDENTIAL	6 M X 12 M SPACE 5M FROM RESIDENTIAL
PARKING STALL	2.75 M X 6 M	2.75 M X 6 M
ACCESSIBLE PARKING STALL TYPE A	2.75M +2M X 6 M	2.75 M +2 M X 6 M
BICYCLE PARKING	—	42 SPACES 16 OUTDOOR 13 PARKING P1 13 PARKING P2
BICYCLE PARKING STALL	0.6 M X 1.8 M	0.6 M X 1.8 M
LANDSCAPING PERCENTAGE	—	LANDSCAPE 688.29 M² PEA GRAVEL PAV. 5.00 M² TOTAL = 693.29 M² 22.50%

(*) SITE-SPECIFIC ZONING PROVISIONS



PROPOSED COMMERCIAL UNITS

UNIT TYPE	AREA	SQF	AMOUNT
COMM 1	50.83 m²	547 ft²	1
COMM 2	60.53 m²	652 ft²	1
COMM 3	57.62 m²	620 ft²	1
COMM 4	54.49 m²	587 ft²	1
COMM 5	49.79 m²	536 ft²	1
COMM 6	59.19 m²	637 ft²	1
COMM 7	58.34 m²	628 ft²	1
COMM 8	49.21 m²	530 ft²	1
TOTAL UNITS			8

PROPOSED AMENITY AREA

UNIT TYPE	AREA	SQF	AMOUNT
AMENITY	49.88 m²	537 ft²	1
BALCONY	1487.05 m²	16006 ft²	74
TOTAL UNITS	1536.92 m²	16543 ft²	75

PROPOSED RESIDENTIAL UNITS

UNIT TYPE	# BEDROOMS	M²	SQF	AMOUNT
TYPE A1	1 BED	62.18 m²	669 ft²	4
TYPE A2	1 BED	62.18 m²	669 ft²	9
TYPE A3	1 BED	66.83 m²	719 ft²	48
TYPE A4	1 BED	67.22 m²	724 ft²	18
TYPE C2	1 BED	45.91 m²	494 ft²	3
TYPE C3	1 BED	47.26 m²	509 ft²	24
TYPE C4	1 BED	53.30 m²	574 ft²	12
TYPE D2	1 BED	47.25 m²	509 ft²	2
TYPE D3	1 BED	50.47 m²	543 ft²	12
TYPE D4	1 BED	51.93 m²	559 ft²	6
TYPE B1	2 BED	62.68 m²	675 ft²	1
TYPE B2	2 BED	62.68 m²	675 ft²	3
TYPE B3	2 BED	66.32 m²	714 ft²	24
TYPE B4	2 BED	75.69 m²	815 ft²	12
TYPE E	2 BED	114.01 m²	1227 ft²	1
TOTAL UNITS				179

PROPOSED PARKING SPACES

LEVEL	DESCRIPTION	AMOUNT
P2	PARKING SPACE	43
P1	PARKING SPACE	43
LEVEL 1	PARKING SPACE	9
TOTAL		95

EXTERIOR WALL STC RATINGS

EXTERIOR WALL STC RATINGS

Wall Configuration	EW1	EW2	EW3	EW4	EW1R	EW2R	EW3R	EW5	EW4R	EW6	EW7 EW5R	EW8
STC Rating	38	40	43	46	47	48	49	54	55	57	58	62

Source: National Research Council, Division of Building Research

NOTES:

1 The common structure of walls EW1 to EW5 is composed of 12.7mm gypsum board, vapour barrier and 38x89 mm studs with 50 mm (or thicker) mineral wool or glass fibre batts in inter-stud cavities.

- EW1 denotes the common structure, plus sheathing, plus wood siding or metal siding and fibre backer board
- EW2 denotes the common structure, plus rigid insulation (25 to 30 mm), and wood siding or metal siding and fibre backer board.
- EW3 denotes simulated mansard with the common structure, plus sheathing, 28 X89 mm framing, sheathing and asphalt roofing material
- EW4 denotes the common structure, plus sheathing and 20 mm stucco.
- EW5 denotes the common structure, plus sheathing, 25 mm air space, 100mm brick veneer.
- EW6 denotes exterior wall composed of 12.7 mm gypsum board, rigid insulation (25 to 50 mm), 100 mm back-up block 100 mm face brick.
- EW7 denotes exterior wall composed of 12.7 mm gypsum board, rigid insulation (25 to 50 mm), 140mm back-up block, 100 mm face brick.
- EW8 denotes exterior wall composed of 12.7 mm gypsum board, rigid insulation (25 to 50 mm), 200 mm concrete.

2 R signifies the mounting of the interior gypsum board on resilient clips.

3 An exterior wall conforming to rainscreen design principles and composed of 12.7 mm gypsum board, 100 mm concrete block, rigid insulation (25 to 50 mm), 25 mm air space, and 100 mm brick veneer has the same STC as EW6.

4 An exterior wall described in EW1 with the addition of rigid insulation (25 to 50 mm) between the sheathing and the external finish has the same STC as EW2.