NOISE & VIBRATION IMPACT STUDY

175 JOHN STREET NORTH
12-STOREY RESIDENTIAL BUILDING
CITY OF HAMILTON, ON

Prepared for:

Urban Solutions
3 Studebaker Place, Unit 1
Hamilton, ON
L8L 0C8

Prepared By:

Frank Westaway
President/Owner

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Our File No: 22-2266

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1.0 INTRODUCTION

dBA Acoustical Consultants Inc. has been requested to conduct a noise & vibration impact study on behalf of Urban Solutions for the proposed "175 John Street North" Residential building located at 175 John Street North, Hamilton, ON. Proposed is a 12-storey residential building with 126 units.

The purpose of this study will detail, for OPA/ZBA approval, vehicular traffic noise from Cannon Street East, John Street North, Wilson Street & James Street North. Area stationary noise sources relative to the site plan are considered and recommend noise control measures necessary (if applicable) to meet Ministry of Environment, Conversation, and Parks, (MECP) Publication NPC-300 entitled "Stationary & Transportation Sources-Approval & Planning guidelines while satisfying the planning requirements of the City of Hamilton. Figure 1 Site Location.

Vibration is not considered as the CP/GO Railway lines are more than 600m away. Aircraft noise was not considered in this report as the proposed development is not within the minimum 25 NEF contour area of influence.

2.0 SITE DESCRIPTION

Proposed for the site is a 12-storey residential building with 126 units. Standard balconies are proposed for this development and are less than 4m in depth; therefore, noise mitigation measures are not required for the balconies. There are 2 levels of underground parking proposed as well as an enclosed rooftop mechanical penthouse. There are two private terraces on the 8th floor which are greater than 4m in depth and are therefore considered as an Outdoor Living Area (OLA).

The proposed building is located approximately 35m north of Cannon Street East, approximately 15m west of John Street North, approximately 235m north Wilson Street and approximately 170m east of James Street North. Barton Street East is located approximately 310m north of the proposed building and will not have an acoustical impact due to distance separation and extensive shielding from existing residential and commercial buildings.

The proposed residential building is situated in an area of existing commercial/residential properties. The north façade of the building is shielded by two 18-storey apartment buildings (181 John Street North & 192 Hughson Street North). John Street North and Cannon Street East have a few small automotive and commercial businesses and a site visit confirmed that these are small operations and will not have an acoustical impact on the proposed building. Wilson Street and James Street North have large commercial businesses, that due to the distance separation, provide shielding for the lower floors of the proposed building. Local area street will not have an acoustical impact on the proposed building due to low speed limits and low traffic volumes. There are no area stationary noise sources (HVAC units, etc.) in the general area that will have an acoustical impact on the proposed building as the background noise levels created by area traffic noise are greater than any noise associated by area stationary noise sources. See Table 5E.

Cannon Street East is a one-way roadway with three lanes of traffic and a dual direction bike lanes on the south side and has a speed limit of 50 km/hr. John Street North is a two-way roadway with two lanes of traffic on the east side moving south to north and one lane on the west moving north to south with a centre turn lane onto Cannon Street East and has a speed limit of 50 km/hr. There is street parking allowed on both sides of the roadway. Wilson Street South is two-direction roadway with two lanes of traffic on the south side moving west to east and a centre turn lane onto John Street North. There is one lane of traffic on the north side moving east to west and has a speed limit of 50 km/hr. James Street North is a two-direction roadway with one lane of traffic on each side as well as meter parking on each side and has a speed limit of 50 km/hr.

3.0 NOISE IMPACT ASSESSMENT

3.1 NOISE CRITERIA

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

TABLE 1- Road Traffic Sound Levels Limits	
Time Period	Leq (dBA)
07:00 – 23:00 (16 hr.)	55 Outdoor Living area
	55 Plane of Window
23:00 – 07:00 (8 hr.)	50 Plane of Bedroom window

Where noise levels estimated at windows 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 & Rail Sound Levels Limits		
Indoor Location	Leq (dBA)	
	Road	Rail
Living/Dining 7:00 – 23:00	45	40
Bedroom 23:00 - 07:00	40	35

3.2 ROAD NOISE

Predicted road traffic noise levels were calculated for Cannon Street East, John Street North, Wilson Street & James Street North, the major road noise sources in the site area. Road traffic volumes (2019) were sourced accordingly relative from the City of Hamilton Transportation Management System. The MECP computer program STAMSON version 5.04 was used to carry out prediction calculations (See Appendix "A"). Traffic data is summarized in Table 4. Local are roadways are below MECP requirements and not considered in this report as well as other area roadways.

The daytime/nighttime volume ratio relative to Cannon Street East, John Street North, Wilson Street & James Street North is typically calculated using a 90/10 split as required by the MECP. The percentage of annual growth for all roads was figured at 2% over 15 years The AADT (Annual Average Daily Traffic) volumes were used reflective of the worst-case scenario.

Truck volumes were factored at 2% medium and 2% heavy of the total vehicle volumes for Cannon Street East, John Street North, Wilson Street & James Street North.

TABLE 4 – Future Road Traffic Volumes (2034)			
Cannon Street East	AADT 26993 Vehicles		
	Cars	Medium Trucks	Heavy Trucks
Day	23322	486	486
Night	2591	54	54
John Street North	AADT 8832 Vehicles		
	Cars	Medium Trucks	Heavy Trucks
Day	7630	159	159
Night	848	18	18
Wilson Street	AADT 23071 Vehicles		
	Cars	Medium Trucks	Heavy Trucks
Day	19933	415	415
Night	2215	46	46
James Street North	AADT 18963 Vehicles		
	Medium Trucks	Medium Trucks	Heavy Trucks
Day	16384	341	341
Night	1820	38	38

The following Table 5A summarizes the "free field" Cannon Street East traffic noise prediction results, modeled at 8 receptor locations representing the north, south, east and west façades.

TABLE 5A- Predicted Traffic Noise Levels-Free Field (Cannon Street East)		
Location	L_{eq} (dBA)	
	07:00 - 23:00	23:00 - 07:00
R1 – 2nd Floor South Façade (6.5m)	64 dBA	58 dBA
R2 – 12th Floor South Façade (38.5m)	64 dBA	58 dBA
R3 – 2nd Floor East Façade (6.5m)	59 dBA	52 dBA
R4 – 12th Floor East Façade (38.5m)	59 dBA	52 dBA
R5 – 2nd Floor West Façade (6.5m)	55 dBA	48 dBA
R6 – 12th Floor West Façade (38.5m)	59 dBA	52 dBA
R7 – 2nd Floor North Façade (6.5m)	54 dBA	47 dBA
R8 – 12th Floor North Façade (38.5m)	54 dBA	47 dBA

The following Table 5B summarizes the "free field" John Street North traffic noise prediction results, modeled at 8 receptor locations representing the north, south, east and west façades.

TABLE 5B- Predicted Traffic Noise Levels-Free Field (John Street North)		
Location	L_{eq} (dBA)	
	07:00 - 23:00	23:00 - 07:00
R1 – 2nd Floor South Façade (6.5m)	60 dBA	54 dBA
R2 – 12th Floor South Façade (38.5m)	60 dBA	54 dBA
R3 – 2nd Floor East Façade (6.5m)	63 dBA	57 dBA
R4 – 12th Floor East Façade (38.5m)	63 dBA	57 dBA
R5 – 2nd Floor West Façade (6.5m)	41 dBA	35 dBA
R6 – 12th Floor West Façade (38.5m)	44 dBA	38 dBA
R7 – 2nd Floor North Façade (6.5m)	57 dBA	51 dBA
R8 – 12th Floor North Façade (38.5m)	57 dBA	51 dBA

The following Table 5C summarizes the "free field" Wilson Street traffic noise prediction results, modeled at 8 receptor locations representing the north, south, east and west façades.

TABLE 5C- Predicted Traffic Noise Levels-Free Field (Wilson Street)		
Location	L_{eq} (dBA)	
	07:00 - 23:00	23:00 - 07:00
R1 – 2nd Floor South Façade (6.5m)	45 dBA	39 dBA
R2 – 12th Floor South Façade (38.5m)	52 dBA	45 dBA
R3 – 2nd Floor East Façade (6.5m)	43 dBA	36 dBA
R4 – 12th Floor East Façade (38.5m)	49 dBA	43 dBA
R5 – 2nd Floor West Façade (6.5m)	45 dBA	39 dBA
R6 – 12th Floor West Façade (38.5m)	53 dBA	46 dBA
R7 – 2nd Floor North Façade (6.5m)	42 dBA	36 dBA
R8 – 12th Floor North Façade (38.5m)	49 dBA	42 dBA

The following Table 5D summarizes the "free field" James Street North traffic noise prediction results, modeled at 8 receptor locations representing the south, east and west façades.

TABLE 5D- Predicted Traffic Noise Levels-Free Field (James Street North)		
Location	L_{eq} (dBA)	
	07:00 - 23:00	23:00 - 07:00
R1 – 2nd Floor South Façade (6.5m)	44 dBA	38 dBA
R2 – 12th Floor South Façade (38.5m)	50 dBA	43 dBA
R3 – 2nd Floor East Façade (6.5m)	36 dBA	30 dBA
R4 – 12th Floor East Façade (38.5m)	42 dBA	36 dBA
R5 – 2nd Floor West Façade (6.5m)	49 dBA	43 dBA
R6 – 12th Floor West Façade (38.5m)	56 dBA	49 dBA
R7 – 2nd Floor North Façade (6.5m)	42 dBA	36 dBA
R8 – 12th Floor North Façade (38.5m)	48 dBA	42 dBA

The following Table 5E indicate the combined results of the road noise levels calculated at the south, east, north and west façades.

TABLE 5E– Predicted Combined Free Field Road Traffic Noise (dBA)		
COMBINED ROAD	L_{eq} (dBA)	
	07:00 - 23:00	23:00 - 07:00
R1 – 2nd Floor South Façade (6.5m)	66 dBA	59 dBA
R2 – 12th Floor South Façade (38.5m)	66 dBA	59 dBA
R3 – 2nd Floor East Façade (6.5m)	64 dBA	58 dBA
R4 – 12th Floor East Façade (38.5m)	65 dBA	58 dBA
R5 – 2nd Floor West Façade (6.5m)	56 dBA	50 dBA
R6 – 12th Floor West Façade (38.5m)	61 dBA	55 dBA
R7 – 2nd Floor North Façade (6.5m)	59 dBA	52 dBA
R8 – 12th Floor North Façade (38.5m)	59 dBA	53 dBA

The following Table 5F indicate the combined results (Cannon Street East & John Street North) of the road noise levels calculated at the east façade for the 8th Floor private terraces.

TABLE 5F– Predicted COMBINED Road Traffic Noise (dBA)		
COMBINED ROAD Cannon Street East & John Street North	L_{eq} (dBA)	
	07:00 - 23:00	23:00 - 07:00
R9 – 8th Floor Terrace East Façade (25.5m) 0.91m mitigated	52 dBA	N/A

3.3 VIBRATION

The City of Hamilton Construction Management Plan 2022 requires pre-condition surveys of area buildings within the area of influence (to be established), noise and vibration protocol, shoring approval and vibration monitoring during shoring and all heavy construction activities prior to mobilizing of construction equipment. Further information will be provided prior to the issuance of a building permit or as The City of Hamilton staff require the documents for approval.

4.0 RECOMMENDATIONS - NOISE CONTROL

4.1 OUTDOOR LIVING AREAS

Calculated road noise levels exceed 55 dBA daytime criteria outlined in Table 1. Standard balconies and are less than 4m in depth; therefore, noise mitigations are not required for the balconies. However, there are two private terraces on the east side of the 8th floor that are considered as OLA's. These private terraces exceed the 55 dBA daytime criteria. Noise mitigation measures are required in the form of a 0.91m (3 ft) safety railing or equivalent.

For reference, the MECP requirements for an acoustical barrier are:

- Minimum surface density (Face Weight) of 20 kg/m².
- Structurally sound.
- Appropriately designed to withstand wind and snow load and constructed without cracks or surface gaps.

4.2 INDOOR NOISE LEVELS

Calculated road noise levels at the Plane of Window (POW) exceed the noise criteria outlined in Table 1 for indoor space for residential units. Building design specifications were not made available at report time and STC calculations (Sound Transmission Class) method are summarized in Table 6 following with minimum window door and wall construction specified for all residential units throughout the proposed development.

The STC was calculated for each room type based on typical window to floor ratios of 20% for bedrooms and 30% for living room areas. Wall to floor ratio was factored at 60%. A maximum of two components were factored per room.

Road STC values were calculated as per MECP guidelines, and the assessment was conservative from a noise impact perspective with worst-case design options modeled to satisfy MECP requirements for indoor sound levels.

A rooftop Mechanical Room is proposed for the building which will consist of indoor HVAC units and appropriate operating mechanical equipment. The enclosed room will not emanate any noise that will have an acoustical impact on the building or area residential/commercial properties. There are no area stationary noise sources in the general area that will impact the proposed site development.

It should be noted that the highest noise level for the proposed building has been considered for south, west, north, and east, exterior windows and walls. This will ensure full compliance with MEPC indoor noise levels for all residential units, as well, it is also cost effective for all windows being installed having the highest STC rating to eliminate noise complaints from the owners/renters of the residential units.

TABLE 6 –Window, Door, & Wall Construction Example Requirements			
LOCATIONS	Acoustically Tested Windows STC	Patio Door STC	Exterior Walls STC
All Units	Example	Example	Example
Bedroom	37	37	STC-48
Living room	37	37	STC-48

5.0 VENTILATION / WARNING CLAUSES

Ventilation and warning clause requirements for all the 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 and Registered on Title. Specific building component requirements noted in Table 7 for all apartment units will satisfy the MECP criterion for noise control relative to indoor living space.

TABLE 7- Ventilation and Warning Clause Requirements		
LOCATION	VENTILATION	WARNING CLAUSE
All Residential Units	Central Air Conditioning	Type “B” & “D”

The following warning clause must be used in combination:

TYPE B:

> “Purchasers/tenants are advised that despite the inclusion of noise control features in the development and within the buildings units, sound levels due to increasing road traffic may on occasions interfere with some activities of the dwelling occupants as the sound levels exceed the Municipality’s and the MECP’s noise criteria.”

TYPE D:

> “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 noise criteria.”

6.0 SUMMARY OF RECOMMENDATIONS

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

- Warning Clauses inserted into all Offers and Agreements of Purchase and Sale or Lease for all units. (Section 5.0)
- Central Air Conditioning for all residential units. (Section 5.0)
- Appropriate STC values required for all exterior windows, walls, and patio doors. (Section 4.2)
- Consideration for pre-condition surveys and vibration monitoring be considered prior to issuance of a building permit as noted in the City of Hamilton Construction Management Policy.
- A letter from the Window Installation Company confirming the appropriate STC values have been achieved and an Acoustical Certificate from the Qualified Acoustical Consultant be issued prior to issuance of the building plans.

- Qualified Acoustical Consultant certifies that the required noise control measures have been incorporated into the builder's plans prior to issuance of a building permit.
- Prior to issuance of an occupancy permit or equivalent, it is recommended the Qualified Acoustical Consultant certify that the approved noise control measures have been professionally installed.

7.0 CONCLUSIONS

dBA Acoustical Consultants Inc. has conducted a noise & vibration impact study on behalf of Urban Solutions for the proposed "175 John Street North" Residential building located at 175 John Street North, Hamilton, ON. Proposed is a 12-storey residential building with 126 units.

The study detailed, for OPA/ZBA approval, vehicular traffic noise from Cannon Street East, John Street North, Wilson Street & James Street North. This study determined noise impacts at the proposed development and recommended noise control measures necessary to meet Ministry of Environment, Conversation, and Parks, (MECP) Publication NPC-300 entitled "Stationary & Transportation Sources-Approval & Planning guidelines while satisfying the planning requirements of the City of Hamilton.

FIGURE 1
KEY PLAN

FIGURE 2
SITE PLAN

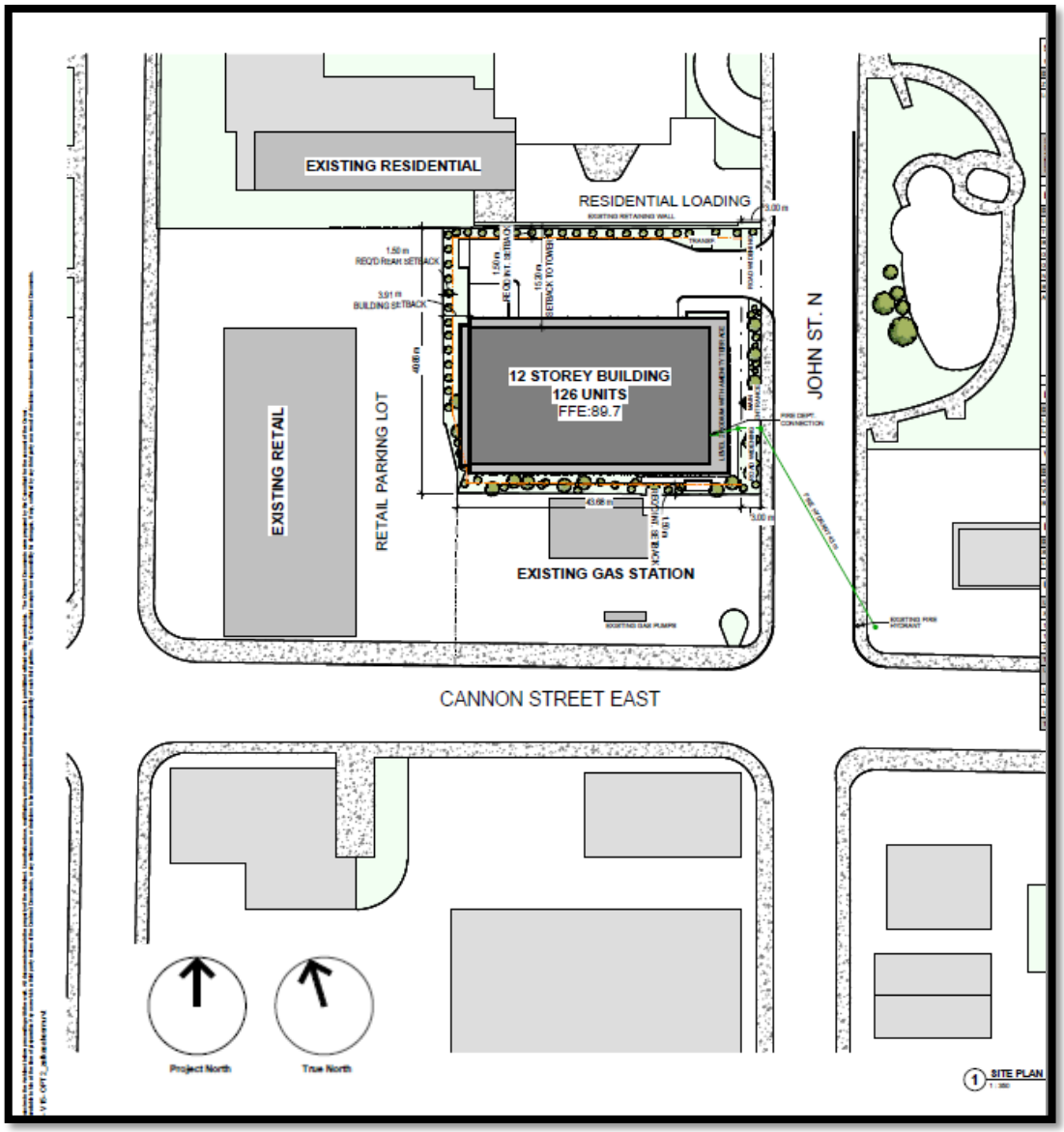
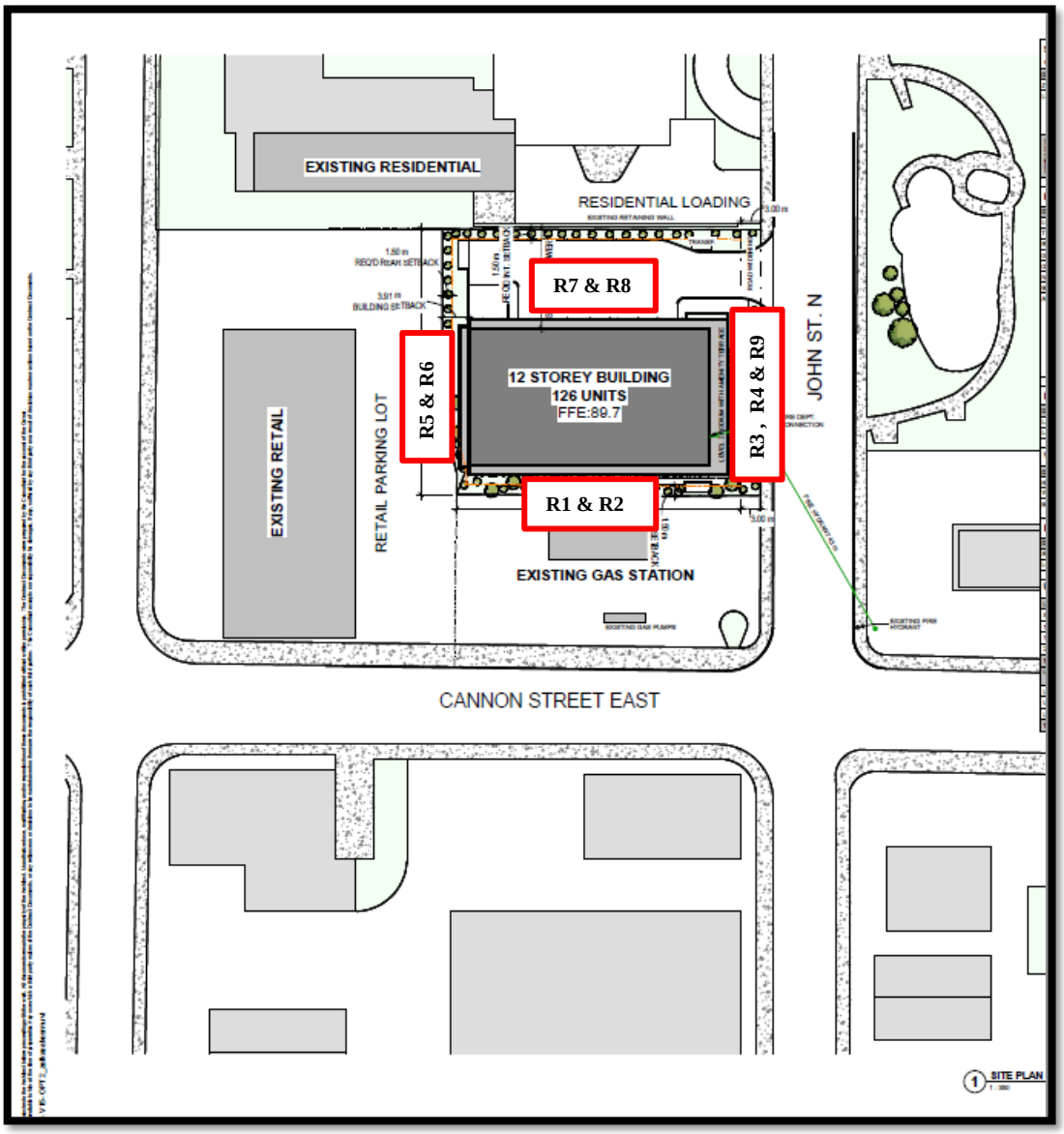
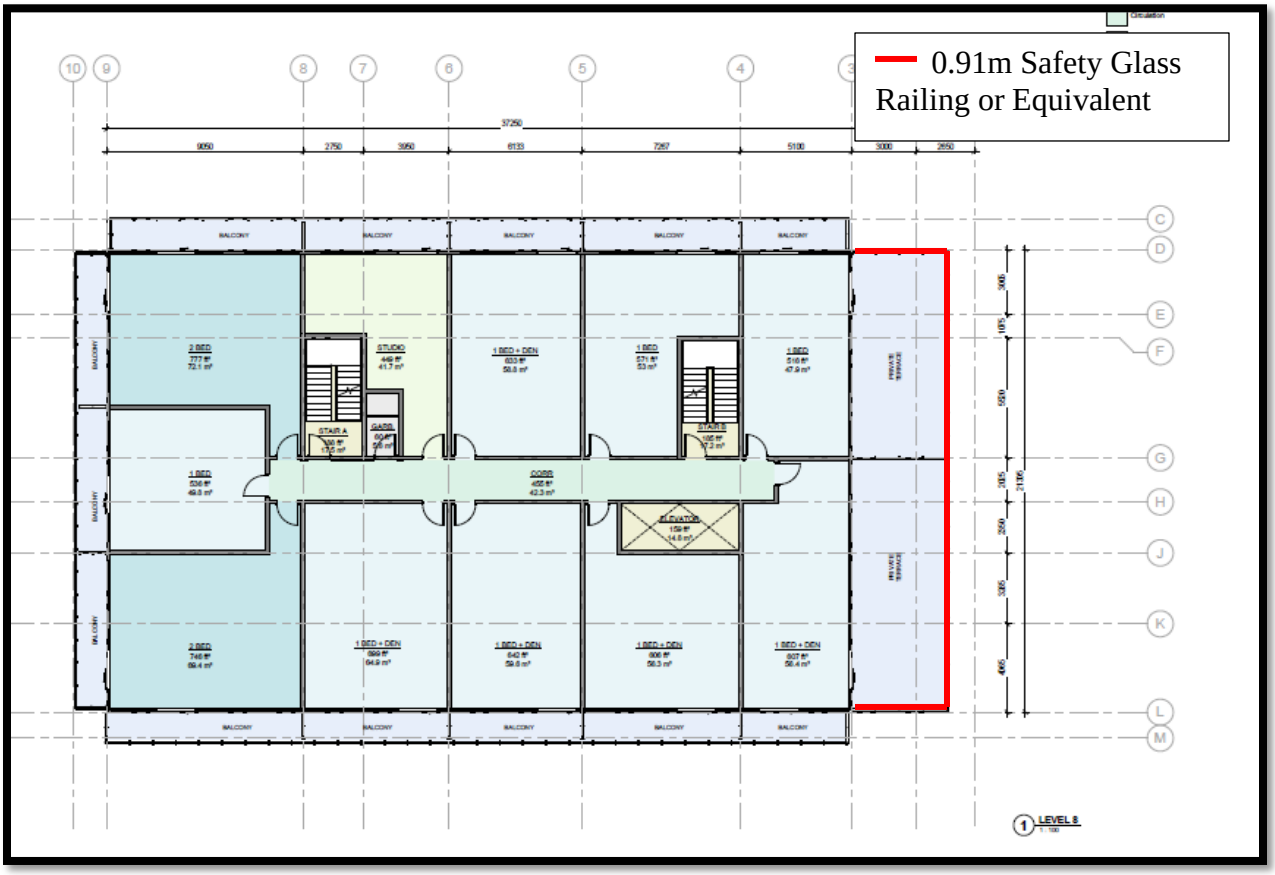


FIGURE 3
RECEPTOR LOCATIONS



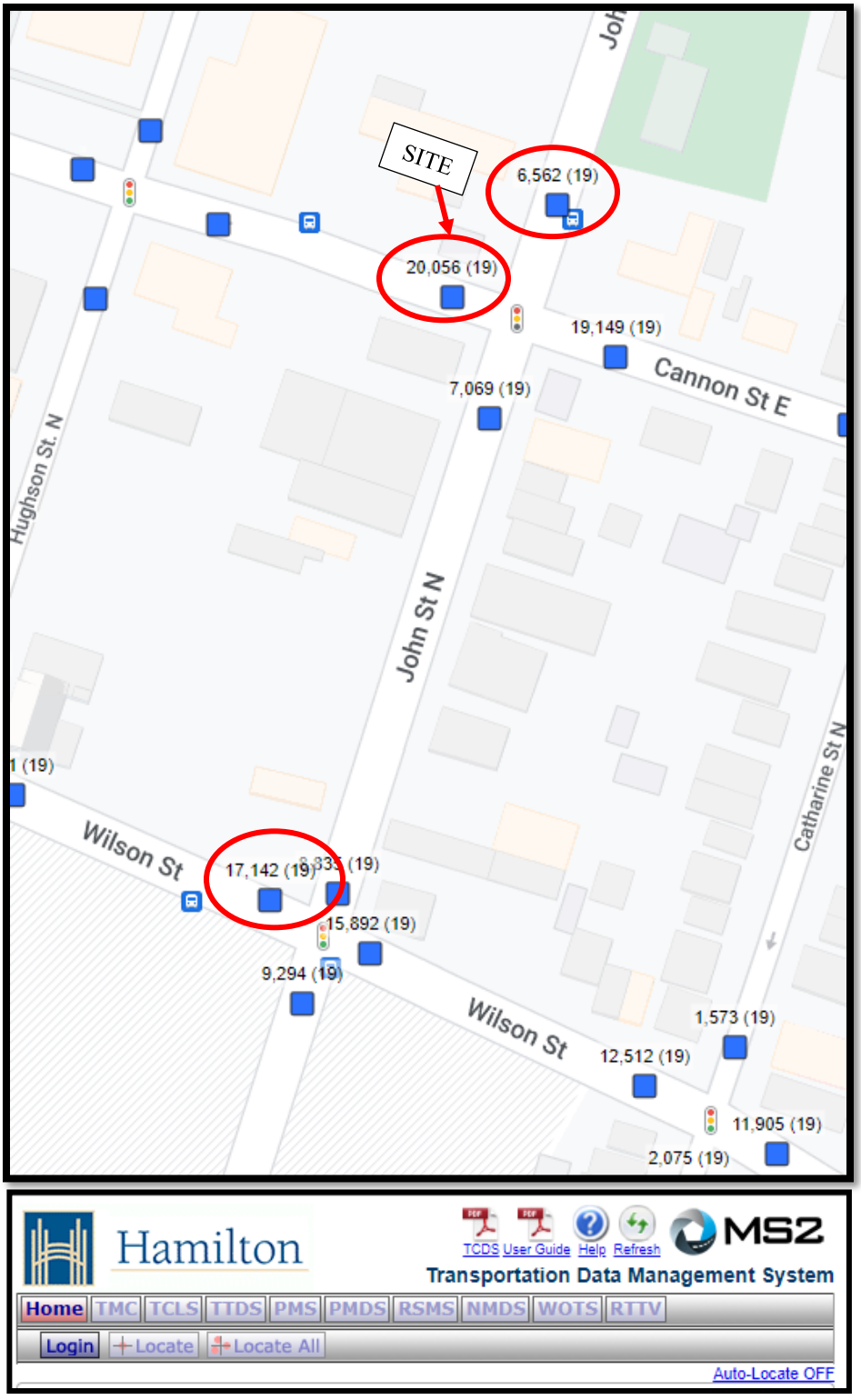
R1 – 2nd Floor South Façade (6.5m)	66 dBA	59 dBA
R2 – 12th Floor South Façade (38.5m)	66 dBA	59 dBA
R3 – 2nd Floor East Façade (6.5m)	64 dBA	58 dBA
R4 – 12th Floor East Façade (38.5m)	65 dBA	58 dBA
R5 – 2nd Floor West Façade (6.5m)	56 dBA	50 dBA
R6 – 12th Floor West Façade (38.5m)	61 dBA	55 dBA
R7 – 2nd Floor North Façade (6.5m)	59 dBA	52 dBA
R8 – 12th Floor North Façade (38.5m)	59 dBA	53 dBA
R9 – 8th Floor Terrace East Façade (25.5m) 0.91m mitigated	52 dBA	N/A

FIGURE 4
0.91m SAFETY GLASS RAILING OR EQUIVALENT LOCATIONS

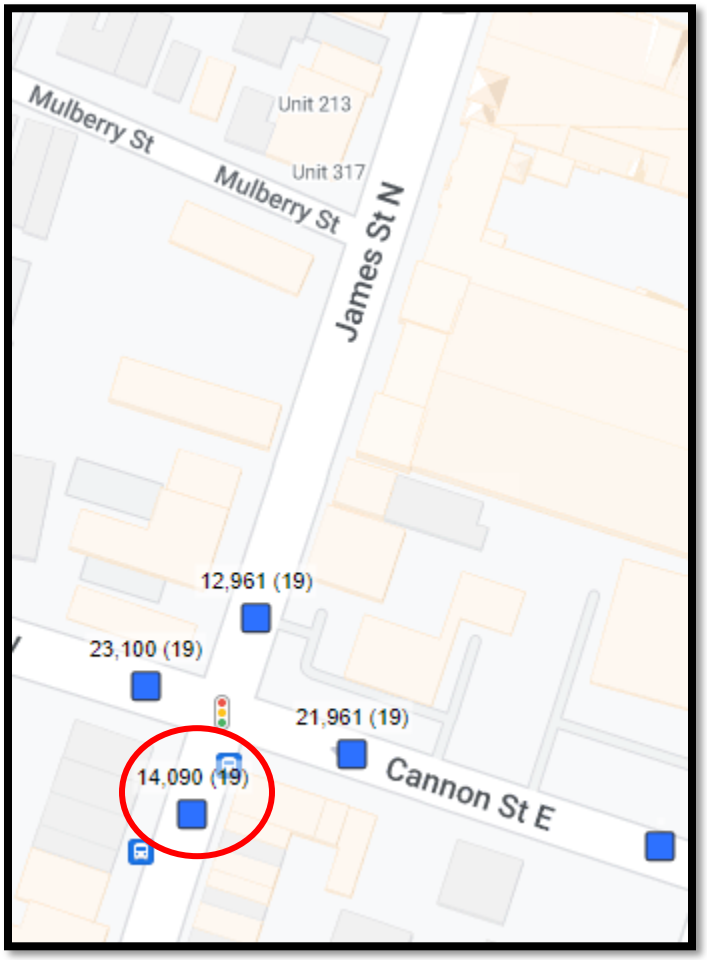


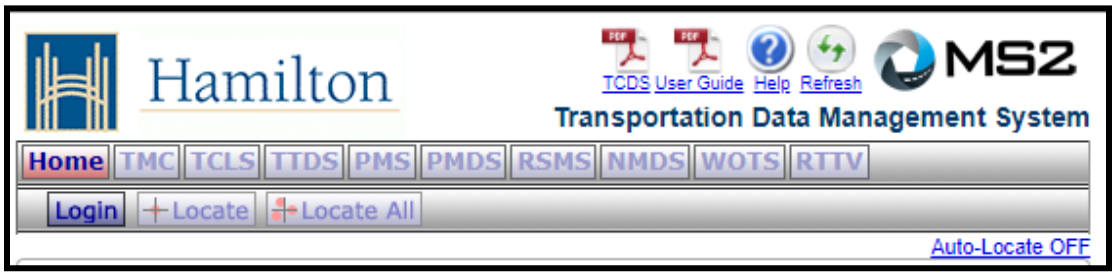
APPENDIX "A"

CITY OF HAMILTON
2019 AADT TRAFFIC
CANNON STREET EAST, JOHN STREET NORTH & WILSON STREET



CITY OF HAMILTON
2019 AADT TRAFFIC
JAMES STREET NORTH





STAMSON CALCULATIONS

```
STAMSON 5.04        SUMMARY REPORT        Date: 28-11-2023 14:24:32
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r1Cannon.te          Time Period: Day/Night 16/8 hours
```
Description: R1 South Facade 1st Floor Residential
TOTAL Leq FROM ALL SOURCES (DAY): 65.70
(NIGHT): 59.18

```
Road data, segment # 1: Cannon St (day/night)
-----------------------------------------------
Car traffic volume  : 23322/2591  veh/TimePeriod  *
Medium truck volume :   486/54    veh/TimePeriod  *
Heavy truck volume  :   486/54    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):  20056
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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: Cannon St (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  :  35.00 / 35.00  m
Receiver height           :   6.50 / 6.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 2: John St N (day/night)
-----------------------------------------------
Car traffic volume  :  7630/848   veh/TimePeriod  *
Medium truck volume :   159/18    veh/TimePeriod  *
Heavy truck volume  :   159/18    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):   6562
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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 # 2: John St N (day/night)
-------------------------------------------
Angle1   Angle2           :  -0.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  15.00 / 15.00  m
Receiver height           :   6.50 / 6.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 3: Wilson St (day/night)
---------------------------------------------
Car traffic volume  : 19933/2215  veh/TimePeriod  *
Medium truck volume :   415/46    veh/TimePeriod  *
Heavy truck volume  :   415/46    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):  17142
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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 # 3: Wilson St (day/night)
-------------------------------------------
Angle1   Angle2           : -45.00 deg   35.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 235.00 / 235.00 m
Receiver height           :   6.50 / 6.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 4: James St N (day/night)
----------------------------------------------
Car traffic volume  : 16384/1820  veh/TimePeriod  *
Medium truck volume :   341/38    veh/TimePeriod  *
Heavy truck volume  :   341/38    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):  14090
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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 # 4: James St N (day/night)
--------------------------------------------
Angle1   Angle2           :  -0.00 deg   45.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 165.00 / 165.00 m
Receiver height           :   6.50 / 6.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Result summary (day)
--------------------
                     !  source  !   Road   !  Total
                     !  height  !   Leq    !   Leq
                     !    (m)   !  (dBA)   !  (dBA)
---------------------+---------+---------+---------
 1.Cannon St         !     1.19 !    64.22 !    64.22
 2.John St N         !     1.19 !    60.04 !    60.04
 3.Wilson St         !     1.19 !    45.34 !    45.34
 4.James St N        !     1.19 !    44.28 !    44.28
---------------------+---------+---------+---------
                       Total                  65.70 dBA

Result summary (night)
----------------------
                     !  source  !   Road   !  Total
                     !  height  !   Leq    !   Leq
                     !    (m)   !  (dBA)   !  (dBA)
---------------------+---------+---------+---------
 1.Cannon St         !     1.19 !    57.69 !    57.69
 2.John St N         !     1.19 !    53.56 !    53.56
 3.Wilson St         !     1.19 !    38.80 !    38.80
 4.James St N        !     1.19 !    37.76 !    37.76
---------------------+---------+---------+---------
                       Total                  59.18 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 28-11-2023 14:27:38
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r2john.te            Time Period: Day/Night 16/8 hours
Description: R2 South Facade 12th Floor Residential
                 TOTAL Leq FROM ALL SOURCES              (DAY): 65.91
                                                         (NIGHT): 59.39

Road data, segment # 1: Cannon St (day/night)
----------------------------------------------
Car traffic volume  : 23322/2591  veh/TimePeriod  *
Medium truck volume :   486/54    veh/TimePeriod  *
Heavy truck volume  :   486/54    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):  20056
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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: Cannon St (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 :  35.00 / 35.00  m
Receiver height          :  38.50 / 38.50  m
Topography               :      1       (Flat/gentle slope; no barrier)
Reference angle          :   0.00

Road data, segment # 2: John St N (day/night)
----------------------------------------------
Car traffic volume  :  7630/848   veh/TimePeriod  *
Medium truck volume :   159/18    veh/TimePeriod  *
Heavy truck volume  :   159/18    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):   6562
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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 # 2: John St N (day/night)
-------------------------------------------
Angle1   Angle2           :  -0.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  15.00 / 15.00  m
Receiver height           :  38.50 / 38.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 3: Wilson St (day/night)
---------------------------------------------
Car traffic volume  : 19933/2215  veh/TimePeriod  *
Medium truck volume :   415/46    veh/TimePeriod  *
Heavy truck volume  :   415/46    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):  17142
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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 # 3: Wilson St (day/night)
-------------------------------------------
Angle1   Angle2           : -45.00 deg   35.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 235.00 / 235.00 m
Receiver height           :  38.50 / 38.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 4: James St N (day/night)
----------------------------------------------
Car traffic volume  : 16384/1820  veh/TimePeriod  *
Medium truck volume :   341/38    veh/TimePeriod  *
Heavy truck volume  :   341/38    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):  14090
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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 # 4: James St N (day/night)
--------------------------------------------
Angle1   Angle2           :  -0.00 deg   45.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 165.00 / 165.00 m
Receiver height           :  38.50 / 38.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Result summary (day)
--------------------
                     !  source  !   Road   !  Total
                     !  height  !   Leq    !   Leq
                     !    (m)   !  (dBA)   !  (dBA)
---------------------+---------+---------+---------
 1.Cannon St         !     1.19 !    64.22 !    64.22
 2.John St N         !     1.19 !    60.04 !    60.04
 3.Wilson St         !     1.19 !    51.75 !    51.75
 4.James St N        !     1.19 !    49.93 !    49.93
---------------------+---------+---------+---------
                       Total                  65.91 dBA

Result summary (night)
----------------------
                     !  source  !   Road   !  Total
                     !  height  !   Leq    !   Leq
                     !    (m)   !  (dBA)   !  (dBA)
---------------------+---------+---------+---------
 1.Cannon St         !     1.19 !    57.69 !    57.69
 2.John St N         !     1.19 !    53.56 !    53.56
 3.Wilson St         !     1.19 !    45.21 !    45.21
 4.James St N        !     1.19 !    43.41 !    43.41
---------------------+---------+---------+---------
                       Total                  59.39 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 28-11-2023 14:29:25
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r3john.te            Time Period: Day/Night 16/8 hours
```
Description: R3 East Facade 2nd Floor Residential
TOTAL Leq FROM ALL SOURCES (DAY): 64.49
(NIGHT): 58.00

```
Road data, segment # 1: Cannon St (day/night)
----------------------------------------------
Car traffic volume  : 23322/2591  veh/TimePeriod  *
Medium truck volume :   486/54    veh/TimePeriod  *
Heavy truck volume  :   486/54    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):  20056
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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: Cannon St (day/night)
--------------------------------------------
Angle1   Angle2           :  -0.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  60.00 / 60.00  m
Receiver height           :   6.50 / 6.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 2: John St N (day/night)
----------------------------------------------
Car traffic volume  :  7630/848   veh/TimePeriod  *
Medium truck volume :   159/18    veh/TimePeriod  *
Heavy truck volume  :   159/18    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):   6562
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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 # 2: John St N (day/night)
-------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  15.00 / 15.00  m
Receiver height           :   6.50 / 6.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 3: Wilson St (day/night)
---------------------------------------------
Car traffic volume  : 19933/2215  veh/TimePeriod  *
Medium truck volume :   415/46    veh/TimePeriod  *
Heavy truck volume  :   415/46    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):  17142
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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 # 3: Wilson St (day/night)
-------------------------------------------
Angle1   Angle2           : -45.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 235.00 / 235.00 m
Receiver height           :   6.50 / 6.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 4: James St N (day/night)
----------------------------------------------
Car traffic volume  : 16384/1820  veh/TimePeriod  *
Medium truck volume :   341/38    veh/TimePeriod  *
Heavy truck volume  :   341/38    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):  14090
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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 # 4: James St N (day/night)
--------------------------------------------
Angle1   Angle2           :  -0.00 deg   10.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 215.00 / 215.00 m
Receiver height           :   6.50 / 6.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Result summary (day)
--------------------
                     !  source  !   Road   !  Total
                     !  height  !   Leq    !   Leq
                     !    (m)   !  (dBA)   !  (dBA)
---------------------+---------+---------+---------
 1.Cannon St         !     1.19 !    58.87 !    58.87
 2.John St N         !     1.19 !    63.05 !    63.05
 3.Wilson St         !     1.19 !    42.80 !    42.80
 4.James St N        !     1.19 !    36.23 !    36.23
---------------------+---------+---------+---------
                       Total                  64.49 dBA

Result summary (night)
----------------------
                     !  source  !   Road   !  Total
                     !  height  !   Leq    !   Leq
                     !    (m)   !  (dBA)   !  (dBA)
---------------------+---------+---------+---------
 1.Cannon St         !     1.19 !    52.34 !    52.34
 2.John St N         !     1.19 !    56.57 !    56.57
 3.Wilson St         !     1.19 !    36.26 !    36.26
 4.James St N        !     1.19 !    29.71 !    29.71
---------------------+---------+---------+---------
                       Total                  58.00 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 28-11-2023 14:30:26
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r4john.te            Time Period: Day/Night 16/8 hours
Description: R4 East Facade 12th Floor Residential
                 TOTAL Leq FROM ALL SOURCES              (DAY): 64.61
                                                         (NIGHT): 58.11

Road data, segment # 1: Cannon St (day/night)
----------------------------------------------
Car traffic volume  : 23322/2591  veh/TimePeriod  *
Medium truck volume :   486/54    veh/TimePeriod  *
Heavy truck volume  :   486/54    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):  20056
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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: Cannon St (day/night)
--------------------------------------------
Angle1   Angle2           :  -0.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  60.00 / 60.00  m
Receiver height           :  38.50 / 38.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 2: John St N (day/night)
----------------------------------------------
Car traffic volume  :  7630/848   veh/TimePeriod  *
Medium truck volume :   159/18    veh/TimePeriod  *
Heavy truck volume  :   159/18    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):   6562
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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 # 2: John St N (day/night)
-------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  15.00 / 15.00  m
Receiver height           :  38.50 / 38.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 3: Wilson St (day/night)
---------------------------------------------
Car traffic volume  : 19933/2215  veh/TimePeriod  *
Medium truck volume :   415/46    veh/TimePeriod  *
Heavy truck volume  :   415/46    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):  17142
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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 # 3: Wilson St (day/night)
-------------------------------------------
Angle1   Angle2           : -45.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 235.00 / 235.00 m
Receiver height           :  38.50 / 38.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 4: James St N (day/night)
----------------------------------------------
Car traffic volume  : 16384/1820  veh/TimePeriod  *
Medium truck volume :   341/38    veh/TimePeriod  *
Heavy truck volume  :   341/38    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):  14090
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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 # 4: James St N (day/night)
--------------------------------------------
Angle1   Angle2           :  -0.00 deg   10.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 215.00 / 215.00 m
Receiver height           :  38.50 / 38.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Result summary (day)
--------------------
                     !  source  !   Road   !  Total
                     !  height  !   Leq    !   Leq
                     !    (m)   !  (dBA)   !  (dBA)
---------------------+---------+---------+---------
 1.Cannon St         !     1.19 !    58.87 !    58.87
 2.John St N         !     1.19 !    63.05 !    63.05
 3.Wilson St         !     1.19 !    49.25 !    49.25
 4.James St N        !     1.19 !    42.25 !    42.25
---------------------+---------+---------+---------
                       Total                  64.61 dBA

Result summary (night)
----------------------
                     !  source  !   Road   !  Total
                     !  height  !   Leq    !   Leq
                     !    (m)   !  (dBA)   !  (dBA)
---------------------+---------+---------+---------
 1.Cannon St         !     1.19 !    52.34 !    52.34
 2.John St N         !     1.19 !    56.57 !    56.57
 3.Wilson St         !     1.19 !    42.71 !    42.71
 4.James St N        !     1.19 !    35.73 !    35.73
---------------------+---------+---------+---------
                       Total                  58.11 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 28-11-2023 14:32:06
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r5john.te            Time Period: Day/Night 16/8 hours
Description: R5 West Facade 1st Floor Residential
                  TOTAL Leq FROM ALL SOURCES              (DAY): 56.17
                                                          (NIGHT): 49.63

Road data, segment # 1: Cannon St (day/night)
----------------------------------------------
Car traffic volume  : 23322/2591  veh/TimePeriod  *
Medium truck volume :   486/54    veh/TimePeriod  *
Heavy truck volume  :   486/54    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):  20056
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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: Cannon St (day/night)
--------------------------------------------
Angle1   Angle2           :  -0.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  60.00 / 60.00  m
Receiver height           :   6.50 / 6.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 2: John St N (day/night)
----------------------------------------------
Car traffic volume  :  7630/848   veh/TimePeriod  *
Medium truck volume :   159/18    veh/TimePeriod  *
Heavy truck volume  :   159/18    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):   6562
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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 # 2: John St N (day/night)
-------------------------------------------
Angle1   Angle2           :  -0.00 deg   10.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  60.00 / 60.00  m
Receiver height           :   6.50 / 6.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 3: Wilson St (day/night)
---------------------------------------------
Car traffic volume  : 19933/2215  veh/TimePeriod  *
Medium truck volume :   415/46    veh/TimePeriod  *
Heavy truck volume  :   415/46    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):  17142
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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 # 3: Wilson St (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  : 220.00 / 220.00 m
Receiver height           :   6.50 / 6.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 4: James St N (day/night)
----------------------------------------------
Car traffic volume  : 16384/1820  veh/TimePeriod  *
Medium truck volume :   341/38    veh/TimePeriod  *
Heavy truck volume  :   341/38    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):  14090
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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 # 4: James St N (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  : 170.00 / 170.00 m
Receiver height           :   6.50 / 6.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Result summary (day)
--------------------
                     !  source  !   Road   !  Total
                     !  height  !   Leq    !   Leq
                     !    (m)   !  (dBA)   !  (dBA)
---------------------+---------+---------+---------
 1.Cannon St         !     1.19 !    54.54 !    54.54
 2.John St N         !     1.19 !    41.34 !    41.34
 3.Wilson St         !     1.19 !    45.28 !    45.28
 4.James St N        !     1.19 !    49.14 !    49.14
---------------------+---------+---------+---------
                       Total                  56.17 dBA

Result summary (night)
----------------------
                     !  source  !   Road   !  Total
                     !  height  !   Leq    !   Leq
                     !    (m)   !  (dBA)   !  (dBA)
---------------------+---------+---------+---------
 1.Cannon St         !     1.19 !    48.00 !    48.00
 2.John St N         !     1.19 !    34.86 !    34.86
 3.Wilson St         !     1.19 !    38.74 !    38.74
 4.James St N        !     1.19 !    42.61 !    42.61
---------------------+---------+---------+---------
                       Total                  49.63 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 28-11-2023 14:33:02
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r6john.te            Time Period: Day/Night 16/8 hours
```
Description: R5 West Facade 1st Floor Residential
TOTAL Leq FROM ALL SOURCES (DAY): 61.34
(NIGHT): 54.81

```
Road data, segment # 1: Cannon St (day/night)
----------------------------------------------
Car traffic volume  : 23322/2591  veh/TimePeriod  *
Medium truck volume :   486/54    veh/TimePeriod  *
Heavy truck volume  :   486/54    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):  20056
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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: Cannon St (day/night)
--------------------------------------------
Angle1   Angle2           :  -0.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  60.00 / 60.00  m
Receiver height           :  38.50 / 38.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 2: John St N (day/night)
----------------------------------------------
Car traffic volume  :  7630/848   veh/TimePeriod  *
Medium truck volume :   159/18    veh/TimePeriod  *
Heavy truck volume  :   159/18    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):   6562
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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 # 2: John St N (day/night)
-------------------------------------------
Angle1   Angle2           :  -0.00 deg   10.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  60.00 / 60.00  m
Receiver height           :  38.50 / 38.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 3: Wilson St (day/night)
---------------------------------------------
Car traffic volume  : 19933/2215  veh/TimePeriod  *
Medium truck volume :   415/46    veh/TimePeriod  *
Heavy truck volume  :   415/46    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):  17142
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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 # 3: Wilson St (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  : 220.00 / 220.00 m
Receiver height           :  38.50 / 38.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 4: James St N (day/night)
----------------------------------------------
Car traffic volume  : 16384/1820  veh/TimePeriod  *
Medium truck volume :   341/38    veh/TimePeriod  *
Heavy truck volume  :   341/38    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):  14090
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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 # 4: James St N (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  : 170.00 / 170.00 m
Receiver height           :  38.50 / 38.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Result summary (day)
--------------------
                     !  source  !   Road   !  Total
                     !  height  !   Leq    !   Leq
                     !    (m)   !  (dBA)   !  (dBA)
---------------------+---------+---------+---------
 1.Cannon St         !     1.19 !    58.87 !    58.87
 2.John St N         !     1.19 !    44.48 !    44.48
 3.Wilson St         !     1.19 !    52.55 !    52.55
 4.James St N        !     1.19 !    55.82 !    55.82
---------------------+---------+---------+---------
                       Total                  61.34 dBA

Result summary (night)
----------------------
                     !  source  !   Road   !  Total
                     !  height  !   Leq    !   Leq
                     !    (m)   !  (dBA)   !  (dBA)
---------------------+---------+---------+---------
 1.Cannon St         !     1.19 !    52.34 !    52.34
 2.John St N         !     1.19 !    38.00 !    38.00
 3.Wilson St         !     1.19 !    46.01 !    46.01
 4.James St N        !     1.19 !    49.30 !    49.30
---------------------+---------+---------+---------
                       Total                  54.81 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 28-11-2023 14:35:38
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r7john.te            Time Period: Day/Night 16/8 hours
Description: R7 North Facade 1st Floor Residential
                  TOTAL Leq FROM ALL SOURCES              (DAY): 58.91
                                                          (NIGHT): 52.41

Road data, segment # 1: Cannon St (day/night)
----------------------------------------------
Car traffic volume  : 23322/2591  veh/TimePeriod  *
Medium truck volume :   486/54    veh/TimePeriod  *
Heavy truck volume  :   486/54    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):  20056
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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: Cannon St (day/night)
--------------------------------------------
Angle1   Angle2           : -35.00 deg   -0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  75.00 / 75.00  m
Receiver height           :   6.50 / 6.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 2: John St N (day/night)
----------------------------------------------
Car traffic volume  :  7630/848   veh/TimePeriod  *
Medium truck volume :   159/18    veh/TimePeriod  *
Heavy truck volume  :   159/18    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):   6562
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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 # 2: John St N (day/night)
-------------------------------------------
Angle1   Angle2           :  -0.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  30.00 / 30.00  m
Receiver height           :   6.50 / 6.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 3: Wilson St (day/night)
---------------------------------------------
Car traffic volume  : 19933/2215  veh/TimePeriod  *
Medium truck volume :   415/46    veh/TimePeriod  *
Heavy truck volume  :   415/46    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):  17142
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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 # 3: Wilson St (day/night)
-------------------------------------------
Angle1   Angle2           : -20.00 deg   20.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 245.00 / 245.00 m
Receiver height           :   6.50 / 6.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 4: James St N (day/night)
----------------------------------------------
Car traffic volume  : 16384/1820  veh/TimePeriod  *
Medium truck volume :   341/38    veh/TimePeriod  *
Heavy truck volume  :   341/38    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):  14090
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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 # 4: James St N (day/night)
--------------------------------------------
Angle1   Angle2           :  -0.00 deg   35.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 190.00 / 190.00 m
Receiver height           :   6.50 / 6.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Result summary (day)
--------------------
                     !  source  !   Road   !  Total
                     !  height  !   Leq    !   Leq
                     !    (m)   !  (dBA)   !  (dBA)
---------------------+---------+---------+---------
 1.Cannon St         !     1.19 !    53.80 !    53.80
 2.John St N         !     1.19 !    57.03 !    57.03
 3.Wilson St         !     1.19 !    42.21 !    42.21
 4.James St N        !     1.19 !    42.36 !    42.36
---------------------+---------+---------+---------
                       Total                  58.91 dBA

Result summary (night)
----------------------
                     !  source  !   Road   !  Total
                     !  height  !   Leq    !   Leq
                     !    (m)   !  (dBA)   !  (dBA)
---------------------+---------+---------+---------
 1.Cannon St         !     1.19 !    47.27 !    47.27
 2.John St N         !     1.19 !    50.55 !    50.55
 3.Wilson St         !     1.19 !    35.67 !    35.67
 4.James St N        !     1.19 !    35.83 !    35.83
---------------------+---------+---------+---------
                       Total                  52.41 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 28-11-2023 14:36:41
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r8john.te            Time Period: Day/Night 16/8 hours
Description: 87 North Facade 12th Floor Residential
                 TOTAL Leq FROM ALL SOURCES              (DAY): 59.46
                                                        (NIGHT): 52.96

Road data, segment # 1: Cannon St (day/night)
----------------------------------------------
Car traffic volume  : 23322/2591  veh/TimePeriod  *
Medium truck volume :   486/54    veh/TimePeriod  *
Heavy truck volume  :   486/54    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):  20056
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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: Cannon St (day/night)
--------------------------------------------
Angle1   Angle2          : -35.00 deg   -0.00 deg
Wood depth               :      0       (No woods.)
No of house rows         :      0 / 0
Surface                  :      1       (Absorptive ground surface)
Receiver source distance :  75.00 / 75.00  m
Receiver height          :  38.50 / 38.50  m
Topography               :      1       (Flat/gentle slope; no barrier)
Reference angle          :   0.00

Road data, segment # 2: John St N (day/night)
----------------------------------------------
Car traffic volume  :  7630/848   veh/TimePeriod  *
Medium truck volume :   159/18    veh/TimePeriod  *
Heavy truck volume  :   159/18    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):   6562
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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 # 2: John St N (day/night)
-------------------------------------------
Angle1   Angle2           :  -0.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  30.00 / 30.00  m
Receiver height           :  38.50 / 38.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 3: Wilson St (day/night)
---------------------------------------------
Car traffic volume  : 19933/2215  veh/TimePeriod  *
Medium truck volume :   415/46    veh/TimePeriod  *
Heavy truck volume  :   415/46    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):  17142
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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 # 3: Wilson St (day/night)
-------------------------------------------
Angle1   Angle2           : -20.00 deg   20.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 245.00 / 245.00 m
Receiver height           :  38.50 / 38.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 4: James St N (day/night)
----------------------------------------------
Car traffic volume  : 16384/1820  veh/TimePeriod  *
Medium truck volume :   341/38    veh/TimePeriod  *
Heavy truck volume  :   341/38    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:
```

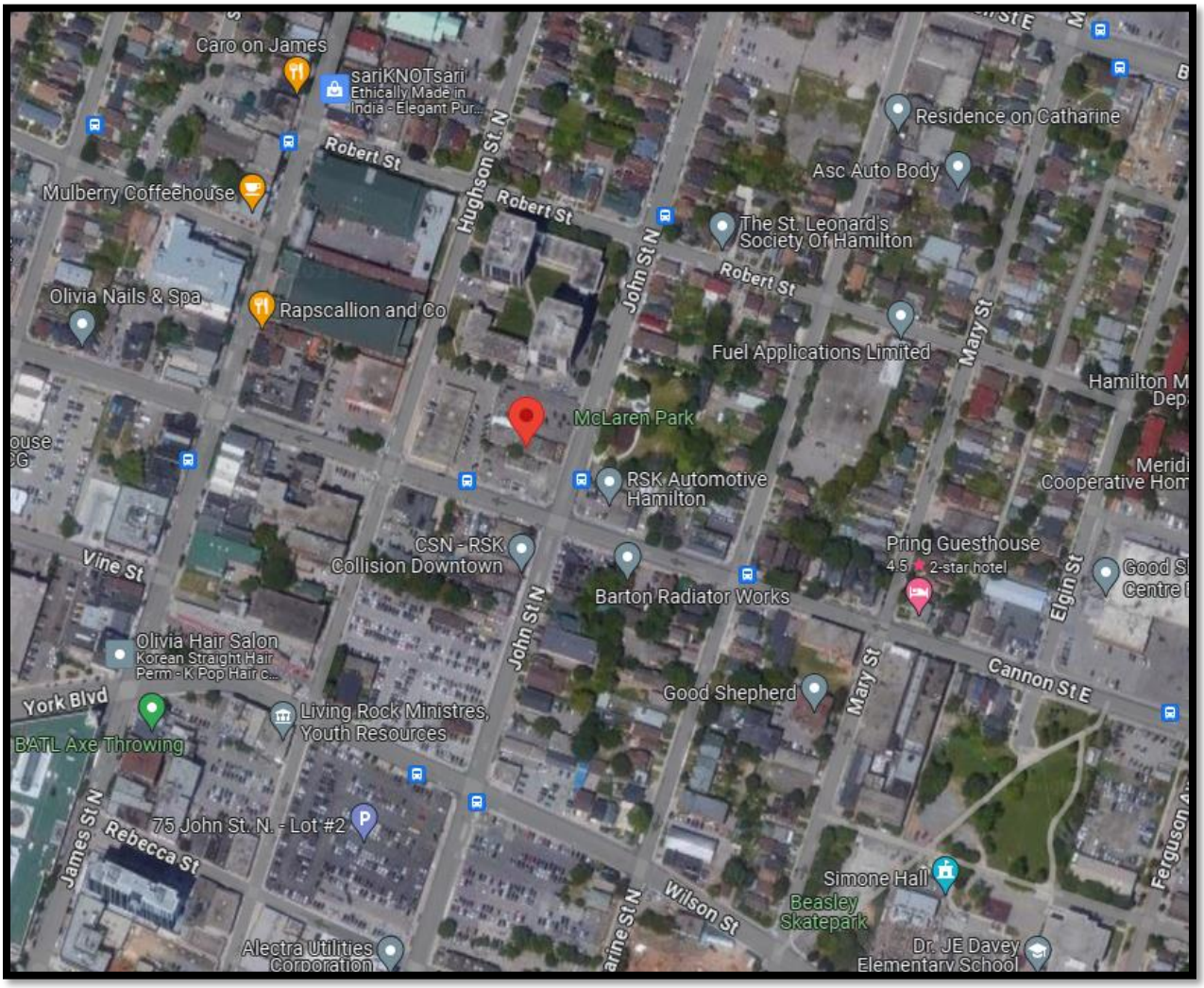
```
    24 hr Traffic Volume (AADT or SADT):  14090
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 4: James St N (day/night)
--------------------------------------------
Angle1   Angle2           :  -0.00 deg   35.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 190.00 / 190.00 m
Receiver height           :  38.50 / 38.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Result summary (day)
--------------------
                     !  source  !   Road   !  Total
                     !  height  !   Leq    !   Leq
                     !    (m)   !  (dBA)   !  (dBA)
---------------------+---------+---------+---------
 1.Cannon St         !     1.19 !    53.80 !    53.80
 2.John St N         !     1.19 !    57.03 !    57.03
 3.Wilson St         !     1.19 !    48.56 !    48.56
 4.James St N        !     1.19 !    48.23 !    48.23
---------------------+---------+---------+---------
                       Total                  59.46 dBA

Result summary (night)
----------------------
                     !  source  !   Road   !  Total
                     !  height  !   Leq    !   Leq
                     !    (m)   !  (dBA)   !  (dBA)
---------------------+---------+---------+---------
 1.Cannon St         !     1.19 !    47.27 !    47.27
 2.John St N         !     1.19 !    50.55 !    50.55
 3.Wilson St         !     1.19 !    42.02 !    42.02
 4.James St N        !     1.19 !    41.70 !    41.70
---------------------+---------+---------+---------
                       Total                  52.96 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 17-01-2024 13:52:33
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: R9Terace.te          Time Period: Day/Night 16/8 hours
```
Description: R9- 8th floor east side terraces
TOTAL Leq FROM ALL SOURCES (DAY): 51.53

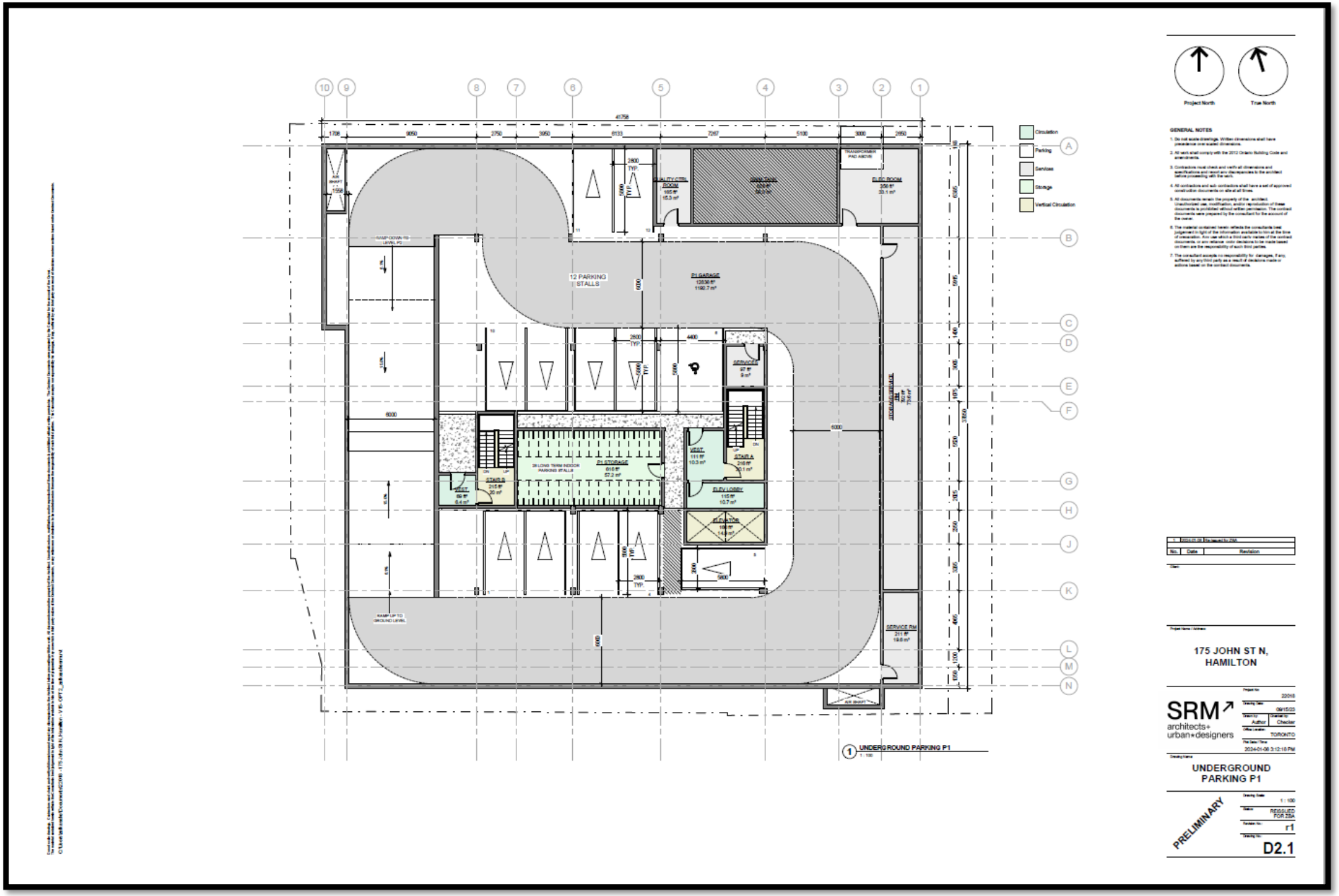
```
Road data, segment # 1: Cannon E (day/night)
-------------------------------------------
Car traffic volume  : 23322/2591  veh/TimePeriod  *
Medium truck volume :   486/54    veh/TimePeriod  *
Heavy truck volume  :   486/54    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     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):  20056
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    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: Cannon 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  :  35.00 / 35.00  m
Receiver height           :  25.50 / 25.50  m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -90.00 deg   Angle2 : 90.00 deg
Barrier height            :   0.91 m
Barrier receiver distance :   3.00 / 10.00  m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :  25.50 m
Reference angle           :   0.00

Road data, segment # 2: John St N (day/night)
-------------------------------------------
Car traffic volume  :  7630/848   veh/TimePeriod  *
Medium truck volume :   159/18    veh/TimePeriod  *
Heavy truck volume  :   159/18    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:
```

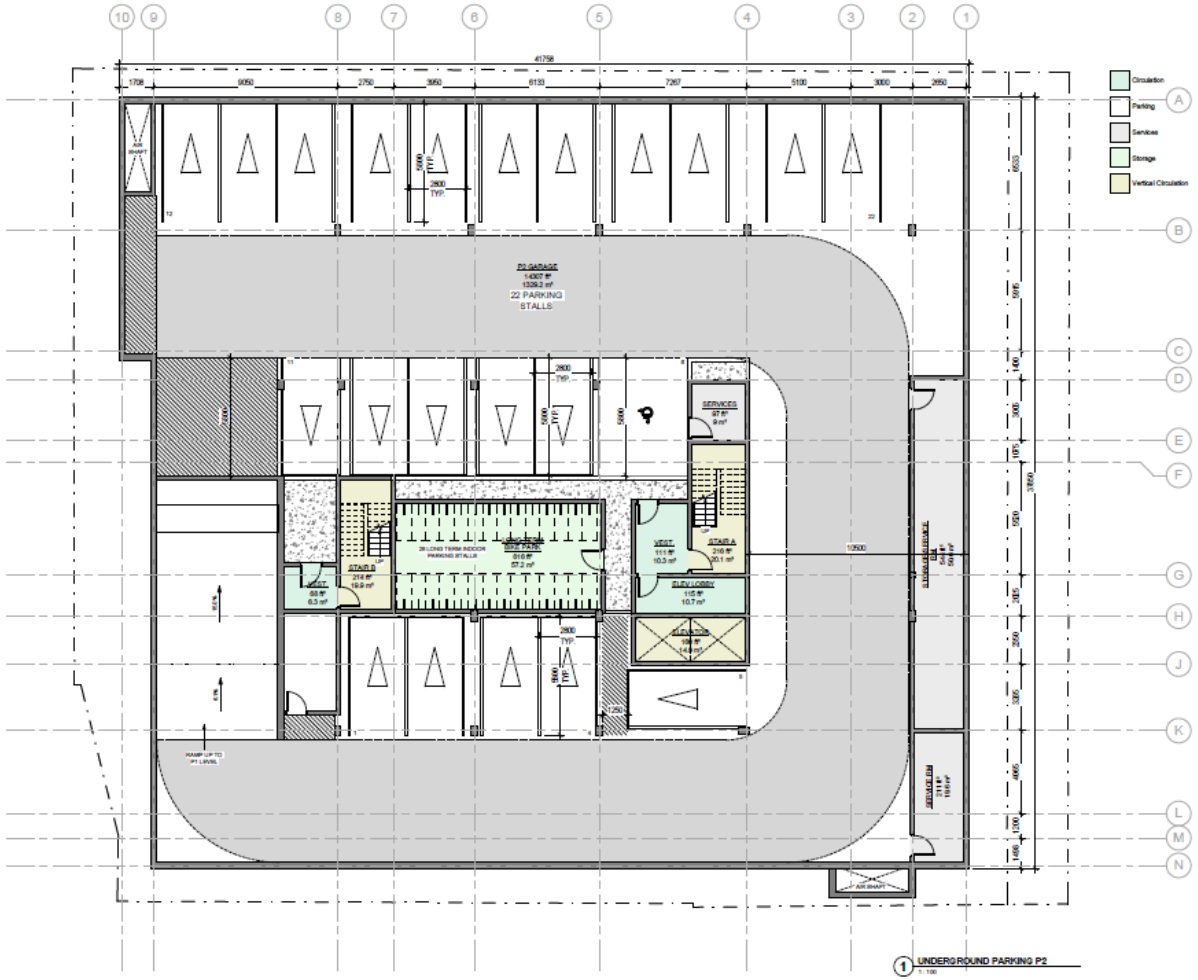
```
    24 hr Traffic Volume (AADT or SADT):   6562
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  15.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 2: John St N (day/night)
-------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  15.00 / 15.00  m
Receiver height           :  25.50 / 25.50  m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -90.00 deg   Angle2 : 90.00 deg
Barrier height            :   0.91 m
Barrier receiver distance :   3.00 / 10.00  m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :  25.50 m
Reference angle           :   0.00

Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !    (m)   !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.Cannon E         !     1.19 !    49.83 !    49.83
 2.John St N        !     1.19 !    46.63 !    46.63
--------------------+---------+---------+---------
                      Total                  51.53 dBA
```

AREA CONTEXT MAP



FLOOR PLANS


Circulation
Parking
Services
Storage
Vertical Circulation
12 PARKING STALLS
P1 GARAGE
P1 STORAGE
ELEV. ROOM
SERVICE RM
ELEVATOR
STAIR A
STAIR B
ELEV. LOBBY
RAMP DOWN TO LEVEL P2
RAMP UP TO GROUND LEVEL
1 UNDERGROUND PARKING P1
1 : 100
Project North
True North
GENERAL NOTES
175 JOHN ST N, HAMILTON
SRM architects+ urban+designers
UNDERGROUND PARKING P1
PRELIMINARY
ISSUED FOR ZBA
r1
D2.1



Project North
True North

GENERAL NOTES

1. Do not scale drawings. Written dimensions shall have precedence over scaled dimensions.
2. All work shall comply with the 2012 Ontario Building Code and amendments.
3. Contractors must check and verify all dimensions and specifications and report any discrepancies to the architect before proceeding with the work.
4. All contractors and sub contractors shall have a set of approved construction documents on site at all times.
5. All documents remain the property of the architect. Unauthorized use, modification, and/or reproduction of these documents is prohibited without written permission. The contract documents were prepared by the consultant for the account of the owner.
6. The material contained herein reflects the consultants best judgement in light of the information available to him at the time of preparation. Any use which a third party makes of the contract documents, or any reliance, and/or decisions to be made based on them are the responsibility of such third parties.
7. The consultant accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on the contract documents.

No.	Date	Revision
1	2023-01-06	Re-Issued for ZBA

175 JOHN ST N,
HAMILTON

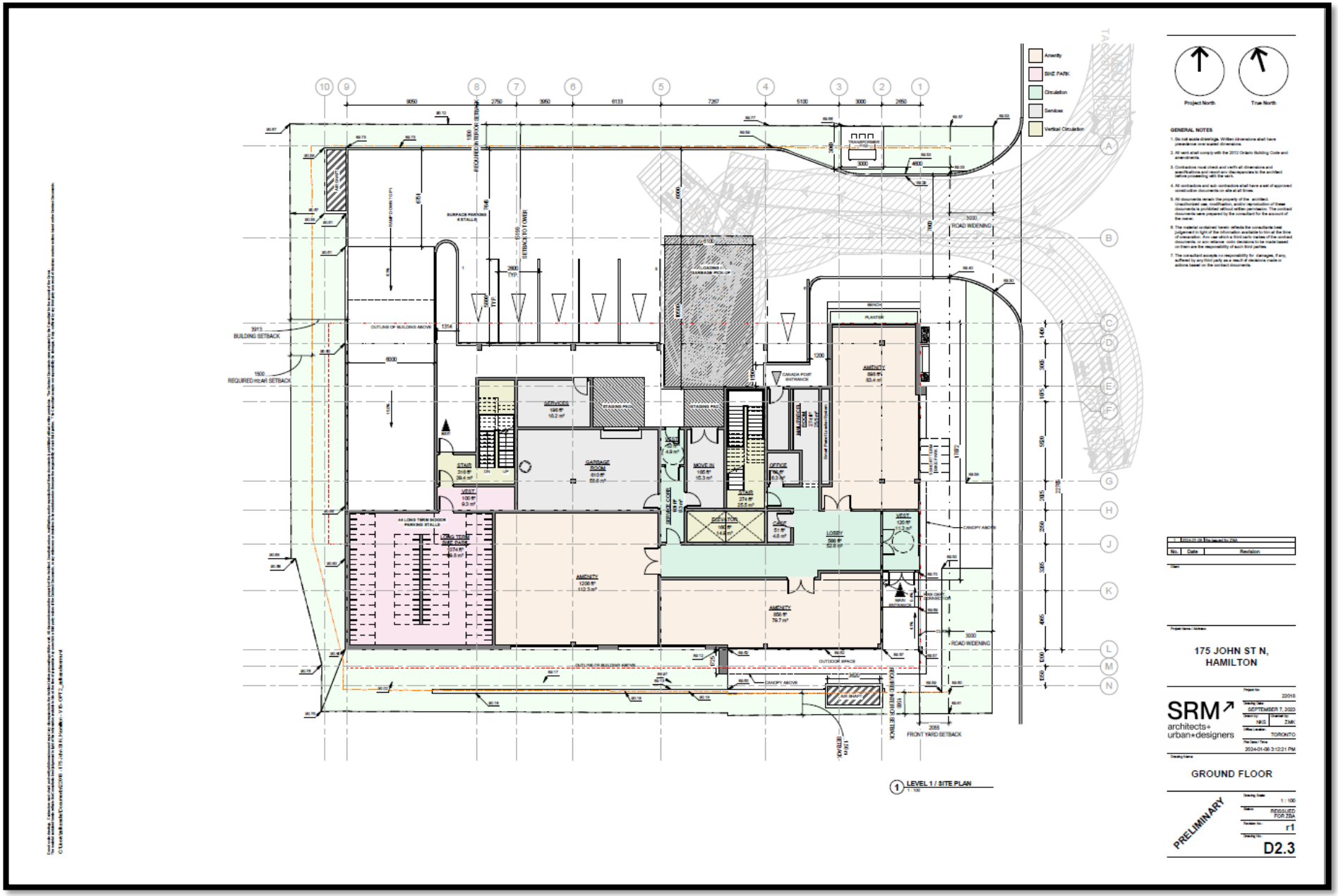
Project No. 22016
Drawing Date 09/15/23
Drawn by Author
Checked by Checker
Office Location TORONTO
File Date/Time 2024-01-06 3:12:19 PM

SRM architects + urban + designers

UNDERGROUND PARKING P2

PRELIMINARY

Drawing Scale 1 : 100
Status RE-ISSUED FOR ZBA
Revision No. r1
Drawing No. D2.2


Amenity
BIKE PARK
Circulation
Services
Vertical Circulation
Project North
True North
GENERAL NOTES
1. Do not scale drawings. Written dimensions shall have precedence over scaled dimensions.
2. All work shall comply with the 2012 Ontario Building Code and amendments.
3. Contractors must check and verify all dimensions and specifications and report any discrepancies to the architect before proceeding with the work.
4. All contractors and sub contractors shall have a set of approved construction documents on site at all times.
5. All documents remain the property of the architect. Unauthorized use, modification, and/or reproduction of these documents is prohibited without written permission. The contract documents were prepared by the consultant for the account of the owner.
6. The material contained herein reflects the consultants best judgement in light of the information available to him at the time of preparation. Any use which a third party makes of the contract documents, or any reliance on/or decisions to be made based on them are the responsibility of such third parties.
7. The consultant accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on the contract documents.
No. Date Revision
175 JOHN ST N,
HAMILTON
SRM
architects+
urban+designers
SEPTEMBER 7, 2023
NKG
ZMK
TORONTO
2024-01-08 3:12:21 PM
GROUND FLOOR
PRELIMINARY
ISSUED FOR ZBA
r1
D2.3
1 LEVEL 1 / SITE PLAN
1 : 100


1 BED
2 BED
Amenity
BALCONY
Circulation
Outdoor Terrace
Services
STUDIO
Vertical Circulation
Project North
True North
GENERAL NOTES
1 LEVEL 2
175 JOHN ST N,
HAMILTON
SRM
architects+
urban+designers
LEVEL 2
PRELIMINARY
D2.4


1 BED
2 BED
Amenity
BALCONY
Circulation
Outdoor Terrace
Services
STUDIO
Vertical Circulation
Project North
True North
GENERAL NOTES
175 JOHN ST N,
HAMILTON
SRM
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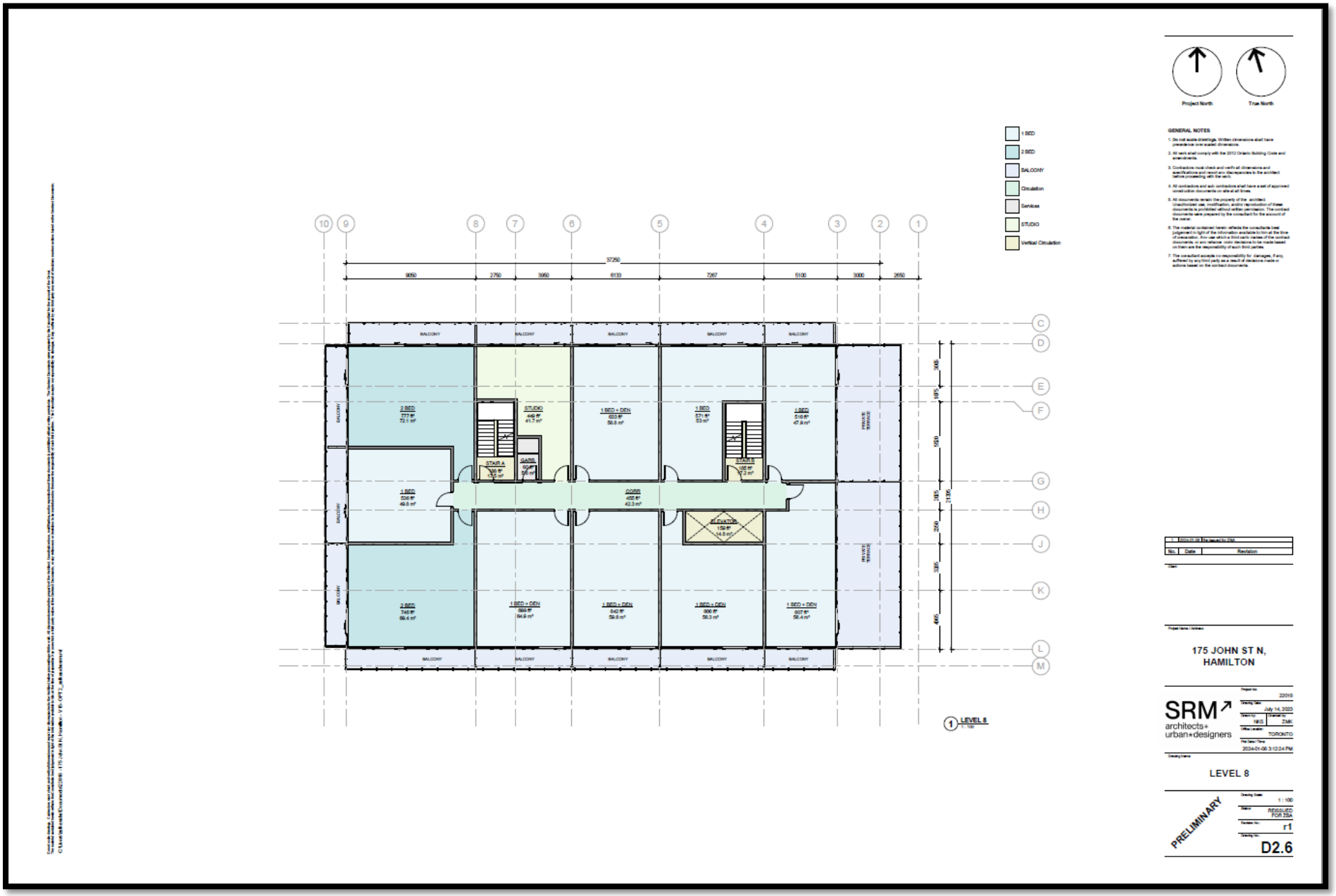
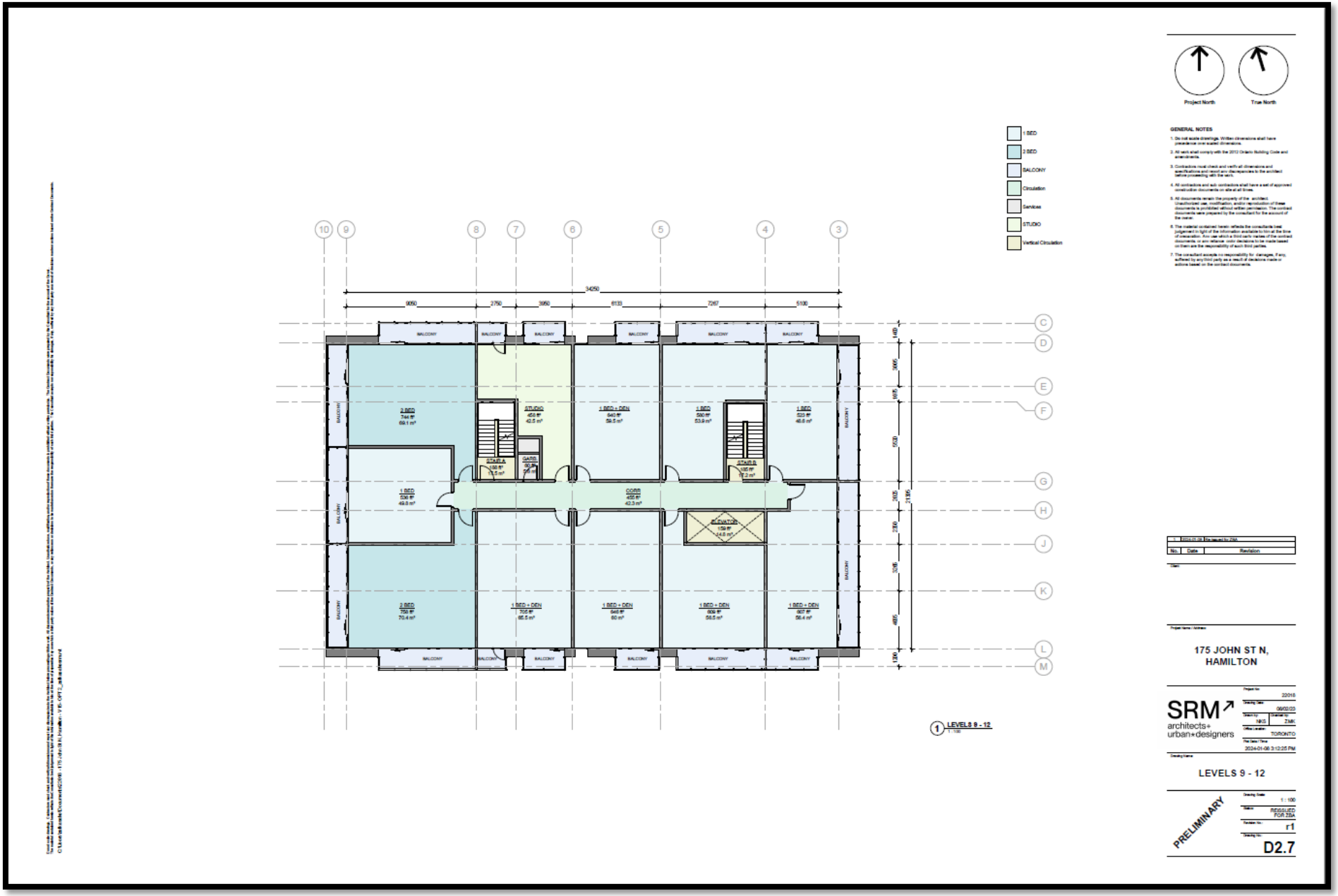
urban+designers
LEVEL 2
PRELIMINARY
ISSUED FOR ZBA
D2.4
1 LEVEL 2


1 BED
2 BED
BALCONY
Circulation
Services
STUDIO
Vertical Circulation
Project North
True North
GENERAL NOTES
175 JOHN ST N,
HAMILTON
SRM
architects+
urban+designers
LEVEL 8
PRELIMINARY
D2.6


1 BED
2 BED
BALCONY
Circulation
Services
STUDIO
Vertical Circulation
Project North
True North
GENERAL NOTES
1 LEVELS 9 - 12
175 JOHN ST N,
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LEVELS 9 - 12
PRELIMINARY
D2.7

ELEVATIONS


ELEVATION MATERIAL LEGEND
1 ACCENT COLOUR PAINT
2a WINDOW WALL - CLEAR GLASS PANEL
2b WINDOW WALL - SPANDREL GLASS PANEL
3 GLASS RAILING
4 METAL PANEL - BLACK
5 BRICK
6 PRECAST CLADDING - WHITE
7a CURTAIN WALL - CLEAR GLASS PANEL
7b CURTAIN WALL - SPANDREL GLASS PANEL
8 BRICK
9 BRICK PENTHOUSE - ILLUMINATED PANELS
10 BLACK MULLIONS
11 SIGNAGE
GENERAL NOTES
2 NORTH ELEVATION
1 EAST ELEVATION
No. Date Revision
175 JOHN ST N,
HAMILTON
SRM
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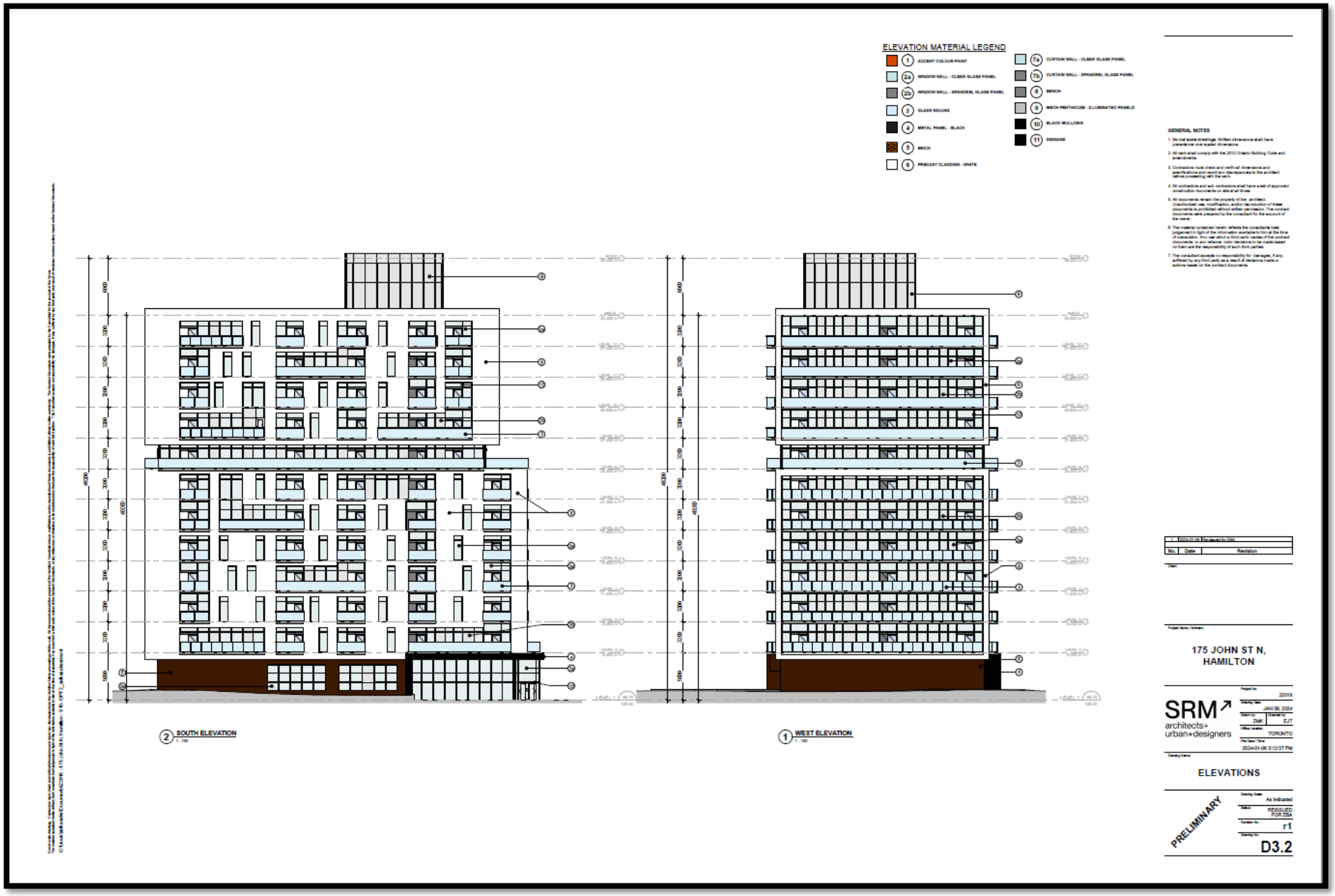
ELEVATIONS
PRELIMINARY
D3.1


ELEVATION MATERIAL LEGEND
1 ACCENT COLOUR PAINT
2a WINDOW WALL - CLEAR GLASS PANEL
2b WINDOW WALL - SPANDREL GLASS PANEL
3 GLASS RAILING
4 METAL PANEL - BLACK
5 BRICK
6 PRECAST CLADDING - WHITE
7a CURTAIN WALL - CLEAR GLASS PANEL
7b CURTAIN WALL - SPANDREL GLASS PANEL
8 BRICK
9 MECH PENTHOUSE - ILLUMINATED PANELS
10 BLACK MULLIONS
11 SIGNAGE
GENERAL NOTES
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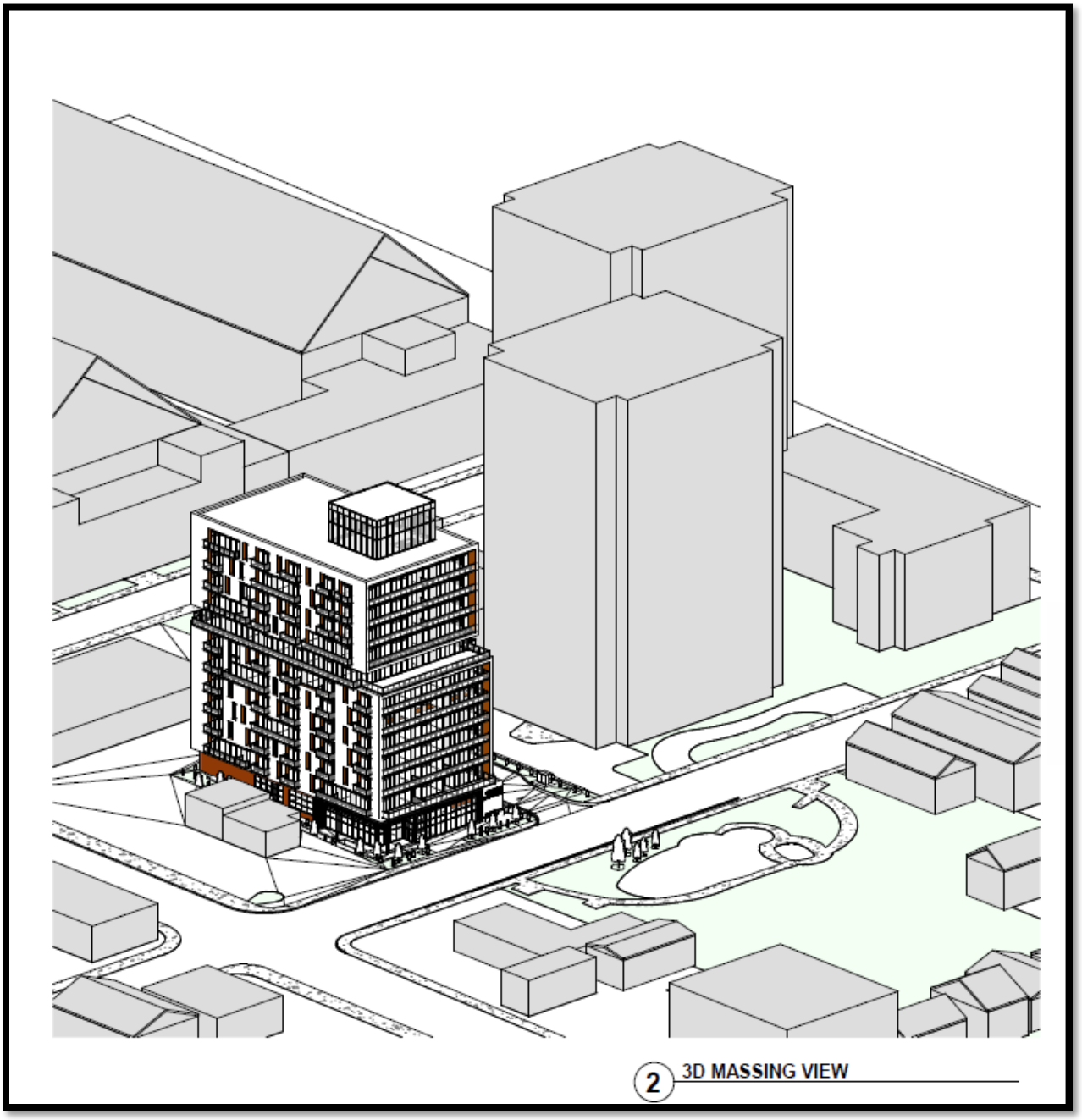
5. All documents remain the property of the architect. Unauthorized use, modification, and/or reproduction of these documents is prohibited without written permission. The contract documents were prepared by the consultant for the account of the owner.
6. The material contained herein reflects the consultants best judgement in light of the information available to him at the time of preparation. Any use which a third party makes of the contract documents, or any reliance upon decisions to be made based on them are the responsibility of such third parties.
7. The consultant accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on the contract documents.
2 SOUTH ELEVATION
1 WEST ELEVATION
No. Date Revision
175 JOHN ST N, HAMILTON
SRM architects+ urban+designers
TORONTO
ELEVATIONS
PRELIMINARY
As Indicated
ISSUED FOR ZBA
r1
D3.2

3D MASSING VIEW


2
3D MASSING VIEW

RENDERINGS

GENERAL NOTES

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No.	Date	Revision
1	2024-01-08	Re-issued for ZBA

175 JOHN ST N,
HAMILTON

SRM architects+ urban+designers

Project No.	22018
Drawing Date	JAN 08, 2024
Drawn by	ZMH
Checked by	EJT
Office Location	TORONTO
Plot Date/Time	2024-01-08 3:12:37 PM

RENDERINGS

PRELIMINARY

Drawing Scale	
Status	REQUIRED FOR ZBA
Revision No.	r1
Drawing No.	D3.3

GENERAL NOTES

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No.	Date	Revision
1	2024-01-08	Re-issued for ZBA

175 JOHN ST N,
HAMILTON

SRM↗
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Project No: 22010
Drawing Date: JAN 08, 2024
Drawn By: Author
Checked By: Checker
Office Location: TORONTO
Plot Date / Time: 2024-01-08 3:12:38 PM

RENDERINGS

PRELIMINARY

Drawing Scale:
Status: RESSUED FOR ZBA
Revision No.: r1
Drawing No.: D3.4

GENERAL NOTES

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No.	Date	Revision
1	2024-01-08	Re-issued for ZBA

175 JOHN ST N,
HAMILTON

SRM architects+ urban+designers

Project No.	22018
Drawing Date	JAN 08, 2024
Drawn by	Author
Checked by	Checker
Office Location	TORONTO
Plot Date/Time	2024-01-08 3:12:38 PM

RENDERINGS

PRELIMINARY

Drawing Scale	
Status	RE-ISSUED FOR ZBA
Revision No.	r1
Drawing No.	D3.5

GENERAL NOTES

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No.	Date	Revision
1	[illegible]	Issued for ZBA

175 JOHN ST N,
HAMILTON

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Project No. 22018
Drawing Date JAN 08 2024
Drawn by Author
Checked by Checker
Office Location TORONTO
File Date/Time 2024-01-08 3:12:39 PM

Drawing Name
RENDERINGS

Drawing Scale
Status ISSUED FOR ZBA
Revision No. r1
Drawing No. D3.6

PRELIMINARY

GENERAL NOTES

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No.	Date	Revision
1	[illegible]	Issue for ZBA

175 JOHN ST N,
HAMILTON

SRM↗
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urban+designers

Project No: 22018
Drawing Date: JAN 08 2024
Drawn by: Author
Checked by: Checker
Office Location: TORONTO
Plot Date/Time: 2024-01-08 3:12:39 PM

RENDERINGS

PRELIMINARY

Status: REISSUED FOR ZBA
Revision No.: r1
Drawing No.: D3.7

SITE DATA

SITE DATA

175 JOHN ST N., HAMILTON, ONTARIO

DATA		REQUIRED	PROVIDED
ZONING		ZONING - M1	
LOT AREA (m²)		BEFORE ROAD WIDEDNING 1,981m² (21,323 ft²) WITH ROAD WIDEDNING 1,859m² (20,010 ft²)	
SETBACKS	FRONT YARD (m)	0 (m)	2.05 (m)
	INTERIOR SIDE YARD (m)	1.5 (m)	4.63 (m)
	INTERIOR SIDE YARD (m)	1.5 (m)	15.20 (m)
	REAR YARD (m)	1.5 (m)	3.91 (m)

BUILDING DATA

DATA	REQUIRED	PROVIDED
LOT COVERAGE (m²)	%	52% (LEVEL 2)
TOTAL DENSITY (# of units)	--	126 UNITS
BUILDING AREA (GROUND FLR.)	--	659.33 m² (7096.9 ft²)
GROSS FLOOR AREA	--	9,185.8 m² (98875.1 ft²)
GROSS CONSTRUCTION AREA	--	12,254.6 m² (131908 ft²)
NUMBER OF STOREYS	---	12
BUILDING HEIGHT (m)	-- (m) MAX.	40.2 (m)
AMENITY AREA (m²)	4m² < 50m² 4 x 44 = 176m² 6m² /unit > 50m² 6 x 82 = 492m² TOTAL 668 m² (7,190 ft²)	INDOOR AMENITY 275.4 m² (2964.4 ft²) OUTDOOR AMENITY 30.8 m² (331.5 ft²) BALCONIES 1,338.2 m² (14404.7 ft²) TOTAL 1,644.4 m² (17700.6 ft²)

LANDSCAPING DATA

DATA	REQUIRED	PROVIDED
LANDSCAPE AREA (percentage)	-- (%)	21 (%)
LANDSCAPE AREA (m²)	-- (m²)	425 m² (4,575 ft²)

VEHICLE PARKING DATA

DATA	REQUIRED	PROVIDED
RESIDENTIAL PARKING	0	40
VISITOR PARKING	2 + 0.05 / UNIT = 8.3	9 (INC)
BARRIER FREE PARKING	1	2 (INCLUDED ABOVE)

BICYCLE PARKING DATA

DATA	REQUIRED	PROVIDED
SHORT TERM BICYCLE PARKING	5 Stalls	5
LONG TERM BIKE PARKING	0.5 / 126 units = 63	100

UNIT MIX DATA

UNIT TYPE	UNIT COUNT	PERCENTAGE
STUDIO	17	14%
1 BED	27	21%
1 BED + DEN	49	39%
2 BED	33	26%
TOTAL	**126**	

UNIT BREAKDOWN	STUDIO	1 BED	1 BED + DEN	2 BED
LEVEL 2	2 PER FLR.	2 PER FLR.	4 PER FLR.	3 PER FLR.
LEVEL 3-7	2 PER FLR.	2 PER FLR.	4 PER FLR.	4 PER FLR.
LEVEL 8-12	1 PER FLR.	3 PER FLR.	5 PER FLR.	2 PER FLR.
TOTAL	**17**	**27**	**49**	**33**

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.