

NOISE IMPACT STUDY

“392-412 WILSON AVE EAST”
8-STOREY MIXED-USE CONDOMINIUM
DEVELOPMENT
392-412 WILSON AVE
ANCASTER ON
NOW IN THE CITY OF HAMILTON

Prepared for:

Wilson St. Ancaster Inc.
1 James Street South
8th Floor
Hamilton ON

Prepared By:



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Qualified Acoustical Consultant

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City of Hamilton 2020 AADT

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1.0 INTRODUCTION

dBA Acoustical Consultants Inc has been retained by Wilson St. Ancaster Inc. 1 James Street South, 8th Floor, Hamilton ON to provide a noise impact study for the proposed 392-412 Wilson Street East, 8-storey mixed-use condominium style development” located at 392-412 Wilson Ave East, Ancaster now in the City of Hamilton ON.

The purpose of the study is to determine the noise impact from Wilson Ave East road traffic and the stationary noise from area sources, for the Site Plan Approval for the 8-storey 169-unit mixed-use condominium building as required for the City of Hamilton. This noise impact study will detail noise levels at the proposed development and recommend noise control measures necessary (if applicable) to meet (Ministry of Environment, Conservation and Parks), MECP NPC- Publication-300 entitled “Stationary & Transportation Sources guidelines while satisfying the planning requirements of the City of Hamilton. There are no CP/CN rail within the proposed site development.

Vibration is not considered as there are no heavy industrial operations in the proposed development area. Aircraft is not a concern as the development is located outside the NEF 25 contour of John C. Munro Hamilton International Airport. See attached Figure 1 Site Location.

2.0 SITE DESCRIPTION

Wilson Street East is a 2-lane vehicular roadway, with a centre turning lane and is the main road noise source located approximately 15 metres east to the centerline of Wilson Street East vehicular traffic, running north and south relative to the proposed site development.

To the south, west, and east are existing residential and commercial dwellings. Glendale Motors vehicle repair shop & Car Wash is located east of the proposed development approximately 45m to the west proposed building façade. Academy Street traffic has no acoustical impact on the proposed development due to low speeds and low traffic volumes.

The proposed 8-storey mixed-use building comprises of first floor commercial and floors 2-8 residential units. Proposed is a ground floor indoor amenity space. All residential units have proposed standard small balconies. Residential floors 4, 5, & 8 have terraces that are less than 4m in depth and are not considered as outdoor amenity spaces (OLA’s) in this report. The rooftop mechanical room is completely enclosed and has no acoustical impact on the proposed development. The relocation of the existing heritage building has an OLA. See Figure 2 Site Plan.

3.0 NOISE IMPACT ASSESSMENT

3.1 NOISE CRITERIA

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

TABLE1- 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

The OLA refers to an outdoor patio, a backyard, a terrace or other area where outdoor passive recreation is expected. Noise levels are calculated at the upper storey bedroom window to represent nighttime (23:00-0700) periods.

Where noise levels estimated in the Outdoor Living Area (OLA) or plane of window (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)	55 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	Rail
Living/Dining 7:00 – 23:00	45	N/A
Bedroom 23:00 - 07:00	40	N/A

3.2 ROAD NOISE

Road traffic noise levels were calculated for Wilson Street East Ancaster On. Local traffic noise has no impact due to minimal vehicular volumes. Wilson Street East traffic noise (AADT) Annual Average Daily Traffic 2020 (Forecasted to year 2031) were sourced through the City of Hamilton Transportation Data Management System website.

The daytime/nighttime volume ratio relative to the roadway is typically calculated using a 90/10 split as required by the MECF. The percentage of annual growth was figured at 2.0% forecasted to year 2031.

Truck volumes were factored at 2% medium and 2% heavy of the total vehicle volumes Wilson Street East with a level road gradient. Table 4 below, summarizes future traffic volumes to year 2031.

TABLE 4 – Future Road Traffic Volumes (2031)			
Upper Wentworth Street	AADT 24407 Vehicles		
	Cars	Medium Trucks	Heavy Trucks
Day	21088	439	439
Night	2343	49	49

Table 5 represents the road traffic noise levels modeled at 5 specified receptor locations representative of the east, north, and south building facades and the terraces (OLAs) which represents the worst-case scenarios. (See Figure 3 Receptor Locations)

TABLE 5 - Predicted Road Traffic Noise Levels-Free Field		
Wilson Street East	L _{eq} (dBA)	
	07:00 - 23:00	23:00 - 07:00
R1- Wilson Street (West Façade) 2 nd Floor	66 (7.5m)	60 (7.5m)
R2- Wilson Street (West Façade) 8 th Floor	67 (26m)	61 (26m)
R3- Wilson Street (West Façade) (5 th Floor Terrace)	50 (22.0m)	N/A
R4- Wilson Street (West Façade) 8 th Floor (Terrace)	50 (28m)	N/A
R5- Heritage Building	(52 1.5m)	N/A

4.0 RECOMMENDATIONS - NOISE CONTROL

4.1 OUTDOOR LIVING AREAS

Calculated daytime noise levels exceed the 55 dBA criteria outlined in Table 1 however, there are standard balconies for the condo building development that do not exceed 4m in depth and do not require noise mitigation measures. Noise mitigation measures are not required for the terraces on floors 4, 5, and 8, as they are less than 4m in depth and not defined as OLA's. R3 & R4 is proposed to have a 0.91m safety glass (or equivalent) that will further reduce the noise levels for each terrace on specified floors. The Historical building that is to be relocated will have an Outdoor Amenity Area (OLA's), however, due to setback distance, shielding from existing and proposed building, the outdoor amenity area will not require noise mitigation measures.

4.2 INDOOR NOISE LEVELS

Calculated nighttime road noise levels at the Plane of Window (POW) exceed the 50 dBA criteria outlined in Table 1 for indoor space for all Receptors. Specific building components (walls, windows, doors etc.) are required and confirmed using the STC (Sound Transmission Class) method and are summarized in Table 6 following, with minimum window, door and wall construction specified throughout the development. The STC values are calculated for each room type, with a minimum of 2 components and based on window to floor ratios of 80% for noise sensitive areas.

Whereas the facades for all east, north, and south residential units have extensive glass for the exterior walls on all floors, it is recommended that all windows throughout the development for all floors have an STC-30 acoustically tested rating. The purpose for all the windows having an STC-30 is cost saving for the client, installation will be simpler with one STC-rating and ensuring correct windows are installed. The highest noise levels of 67dba are along all the residential units facing Wilson Street East. Although the noise levels for the north and south building facades will be slightly lower for each floor compared to the east façade, the STC-30 rating will still be required as there is no difference in window construction for the north and south windows.

The proposed exterior walls construction appears to meet or exceed the required EW-2 wall construction.

TABLE 6 – Recommended Door, Wall, and Window Construction			
LOCATION	STC To Be Used	Wall	Patio Door Construction
All Residential Units	Example	Example	
Bedroom	30	EW-2	OBC
Living room	30	EW-2	OBC

5.0 VENTILATION / WARNING CLAUSES

Ventilation and warning clause requirements are required for this project as noted in Table 7 below. It is recommended that the appropriate warning clauses be inserted into all Offers and Agreements of Purchase and Sale or Lease. Due to the possibility that the Glendale Motor may occasionally create noise likely to disturb occupants of the proposed dwellings, a Type “E” Warning Clause is recommended.

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

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 Ministry of the Environment’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 Ministry of the Environment’s noise criteria.”

TYPE E:

“Purchasers/tenants are advised that sound levels due to the adjacent businesses are required to comply with MECP sound level limits that are protective of indoor areas and assume that windows and exterior doors are closed. This dwelling unit will be supplied with an air conditioning system which will allow windows and exterior doors to remain closed.”

6.0 SUMMARY OF RECOMMENDATIONS

- Appropriate ventilation requirements and warning clauses be inserted into the Offers and Agreements of Purchase and Sale or Lease. (Section 5, Table 6)
- STC- 30 windows are to be confirmed with the proper floor to wall percentage.

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.

Prior to issuance of an occupancy permit, it is recommended the Qualified Acoustical Consultant certify that the approved noise control measures have been properly installed.

7.0 STATIONARY SOURCES

7.1 REGULATORY CONTEXT

The MECP Publication-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 residential development are indicative of a “Class 2 Area” as defined in MECP Publication 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 7.1.

No restrictions apply to stationary sources if the one-hour equivalent sound exposure (Leq) is lower than the levels in the following Table 7.1.

Although the background traffic noise may result in higher noise levels (66dba during daytime and 60dba for nighttime), then the following Table 7.1 Minimum Sound Level Limits are used to achieve compliance with MECP Publication-300, Stationary & Transportation Sources-Approval & Planning guidelines.

TABLE 7.1 Minimum Sound Levels Limits (Class 1 Area)	
Time Period	L _{eq} (dBA)
07:00 - 19:00	50
19:00 - 23:00	50
23:00 – 07:00	45

7.2 GLENDALE AUTO MOTORS

During several site visits and discussions with the owner (Doug) dBA staff confirmed that the auto repair shop does not have an acoustical impact on the proposed development site. Glendale Auto Motors have been at this location since 1950 and operates Monday to Friday 8:00am till 5:30pm. The shop is closed weekends. It was noted that the garage doors are always kept closed during daily hours and only used to let vehicles enter and exit the garage.

7.3 GLENDALE TIRE REPAIR SHOP

The Tire Repair Shop (Tirecraft) is in a separate building located to the northwest of the proposed development site and faces north. The tire shop operates the same as the Auto Repair Shop. dBA staff also confirmed that all garage doors are always kept closed during daily hours and only used to let vehicles enter and exit the tire repair shop.

7.4 GLENDALE AUTOMATIC CAR WASH

To the west of the proposed development is an automatic car wash which faces the proposed development 45m from the building façade. The car wash operates 24/7 from 8:00am – 10:00pm. The car wash is equipped with small blowers and are located near the exit area of the car wash. Noise level reading were acquired on June 2, 2021, during the car wash operations.

The car wash has a modern automatic touchless wash with up-to-date modern technology and the car wash is not equipped with brushes. The complete car wash cycle takes 4 minutes from when the vehicle entered the car wash to when it exited with the automatic blowers in operation for 30 seconds during the car wash cycle. The car wash door is closed until the blowers commence operation.

8.0 CAR WASH NOISE LEVELS

Sound level measurements were performed on June 2, 2021, from 11:01 – 11:05am at 5m from the Glendale Car Wash. dBA Acoustical Consultants Inc. staff conducted noise monitoring using Larson Davis Model 820 sound level meter. Calibration was verified before and after use with a Larson Davis model CA250 acoustic calibrator, serial number 0495.

The sound monitor was handheld with a wind screen attached to the microphone. Meteorological conditions were ideal for sound level monitoring. All monitoring was conducted in accordance with MECP Publication NPC-103 entitled “Procedures”. Noise levels were measured to be representative of worst-case scenario. Noise readings were measured from which the sound level is representative of the one-hour average sound level (Leq).

On June 2, 2021, dBA staff attended the Glendale Motors and noted that the only noise source was the automatic car wash. Noise monitoring was conducted on the car wash property 5m from the exit of the car wash. The noise monitoring included the complete car wash cycle. The noise level recorded was 79.3dba over a 4-minute period. It is calculated that 15 vehicles per/hr can utilize the car wash. Only one vehicle can utilize the car wash per wash cycle. Therefore, one vehicle every 4 minutes.

A second noise level reading was taken across the Wilson Street East near the proposed development site. Due to the background traffic noise readings were inhibited by Wilson Street East traffic. In any event, we can calculate the noise levels of the car wash at the proposed site development to ensure that the car wash complies with MECP Publication-300 entitled “Stationary & Transportation Sources noise guidelines and Table 7.1 Minimum Sound Level Limits. Noise calculations are as follows.

Distance Separation:

$$5m \div 40m = (\text{Log } X 20) = -18 (79.3 - 18.06 = 60.7 (61\text{dba}))$$

Time Difference:

$$4\text{min} \div 60\text{min} = (\text{Log } X 10) = -11.8 (61.7\text{dba} - 11.8\text{dba}) = \mathbf{49.9\text{dba overall.}}$$

The overall noise calculations of the car wash at the west building façade during the daytime hours is 49.9 (50.0dba). The calculated traffic noise levels during the daytime hours are 67dba and nighttime 61dba. Therefore, we can confirm that the car wash has no acoustical impact on the proposed development as the background noise from Wilson Street East is the predominate noise at the proposed development.

9.0 CONCLUSIONS

dBA Acoustical Consultants Inc has been retained by Wilson St. Ancaster 3 Studebaker Place, Unit 1, Hamilton ON to provide a noise impact study for the proposed 392-412 Wilson Street East, 6-storey residential condominium style development” located at 392-412 Wilson Ave East, Ancaster now in the City of Hamilton ON.

The purpose of the study determined noise impact from Wilson Ave East road traffic and the stationary noise from area sources and the Historical building outdoor amenity area, for Site Plan Approval for the 8-storey 169-unit residential condominium building as required for the City of Hamilton. This noise impact study detailed noise levels at the proposed development and recommend noise control measures necessary to meet MECP Publication-300 entitled “Stationary & Transportation Sources guidelines while satisfying the planning requirements of the City of Hamilton.

FIGURE 1 SITE LOCATION



FIGURE 2 SITE PLAN

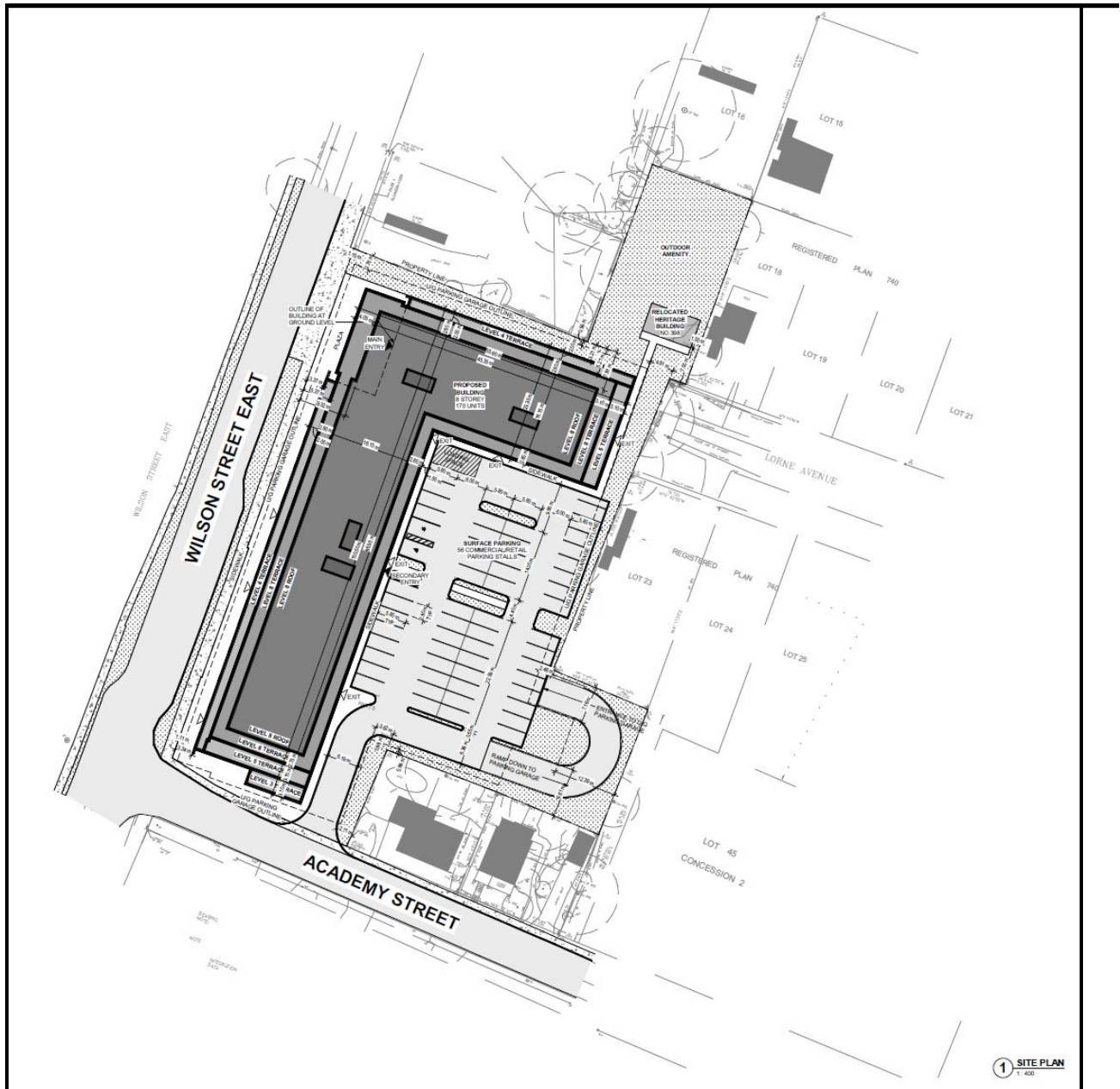
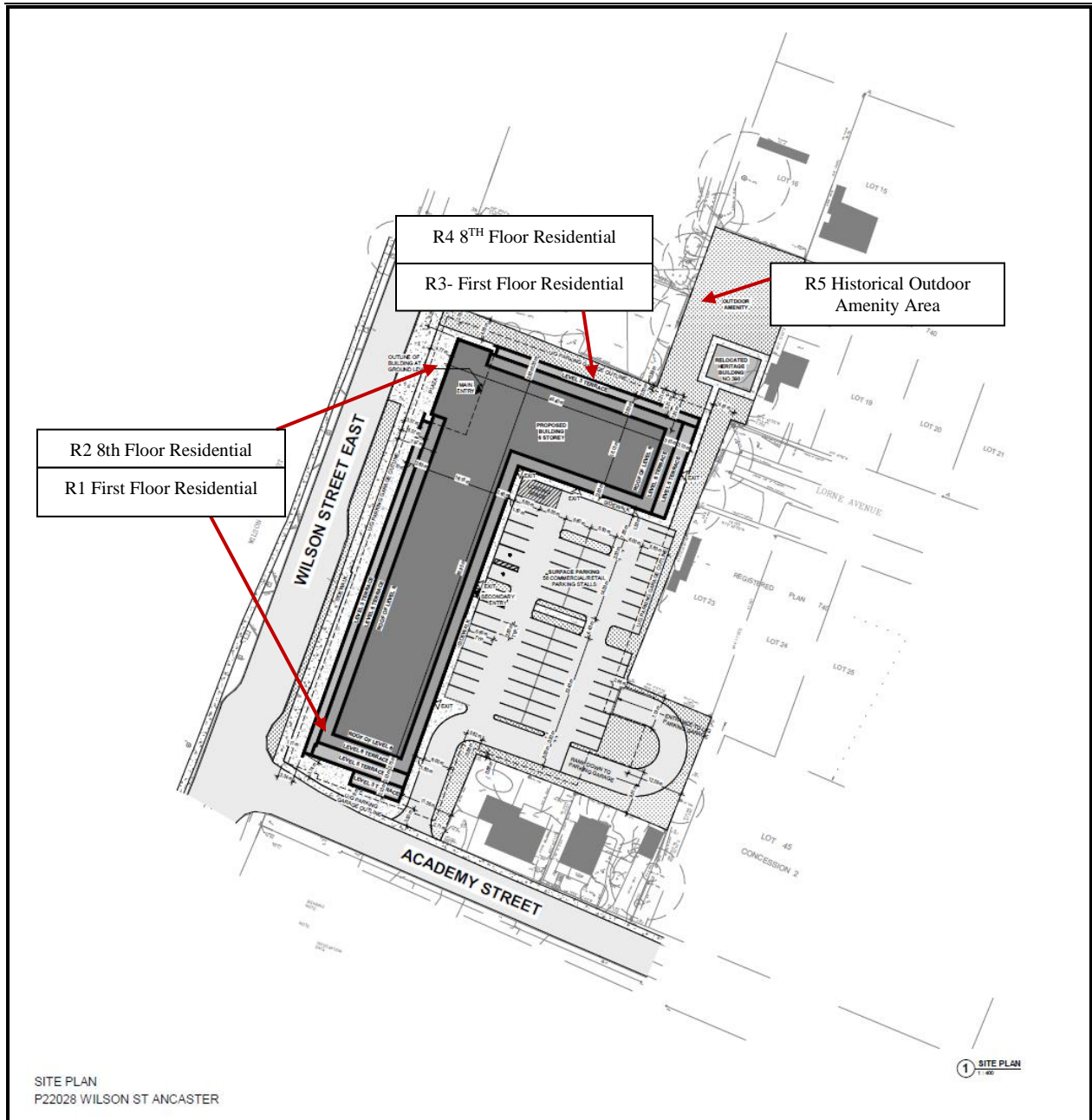


FIGURE 3 RECEPTOR LOCATIONS

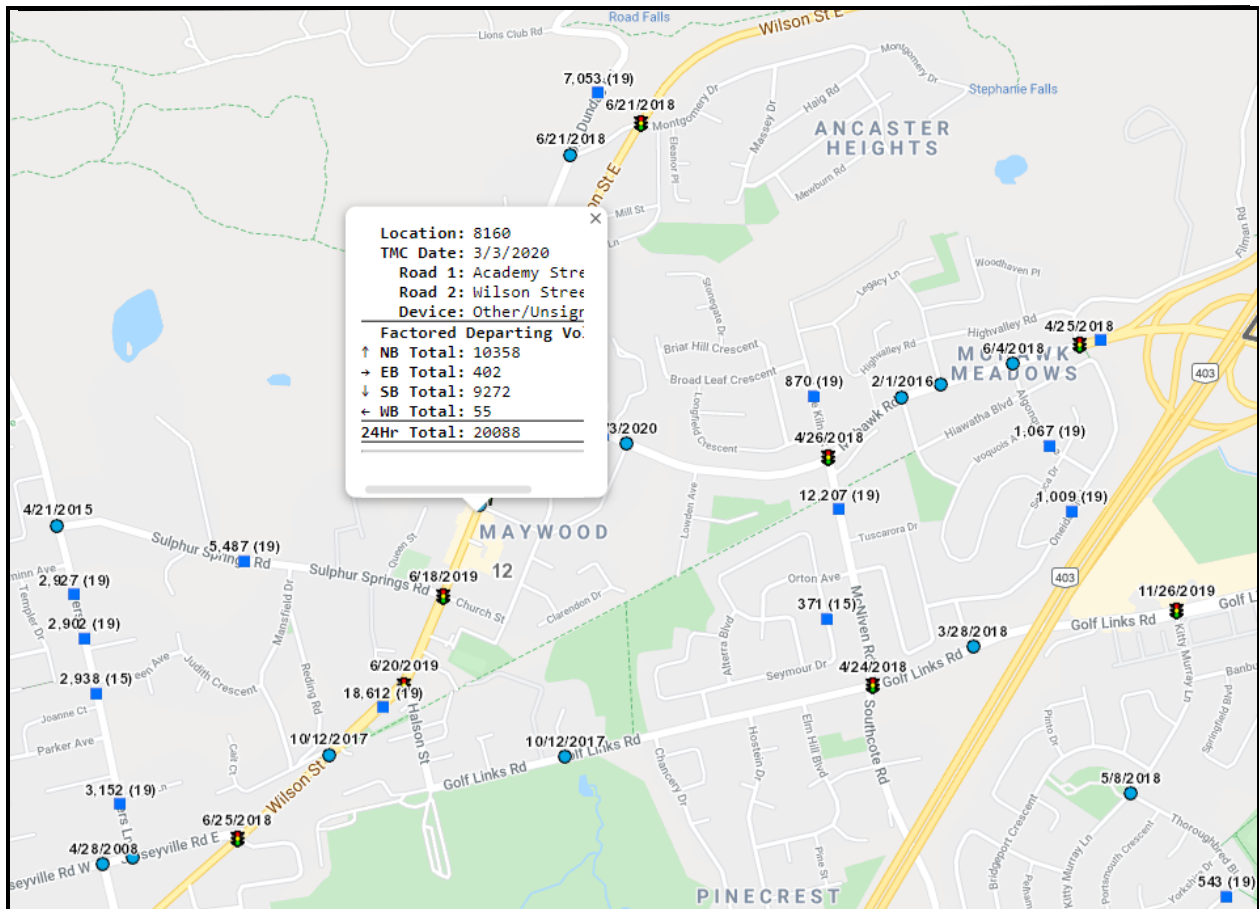


SITE PLAN
P22028 WILSON ST ANCASTER

1 SITE PLAN
1:40

APPENDIX “A”

CITY OF HAMILTON AADT (2020) TRAFFIC DATA



**STAMSON TRAFFIC
CALCULATION SHEETS
FORECASTED (2031)**

STAMSON 5.04 SUMMARY REPORT Date: 22-04-2021 21:00:51
 MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: WilsonR1.te Time Period: Day/Night 16/8 hours

Description: R1- Free Field Wilson St 2nd Floor East Facade

TOTAL Leq FROM ALL SOURCES

(DAY): 66.31

(NIGHT): 59.79

Road data, segment # 1: Wilson St E (day/night)

 Car traffic volume : 21088/2343 veh/TimePeriod *
 Medium truck volume : 439/49 veh/TimePeriod *
 Heavy truck volume : 439/49 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): 19630
 Percentage of Annual Growth : 2.00
 Number of Years of Growth : 11.00
 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: Wilson St 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 : 12.00 / 12.00 m
 Receiver height : 7.50 / 7.50 m
 Topography : 1 (Flat/gentle slope; no barrier)

Result summary (day)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Wilson St E	! 1.19 !	66.31	! 66.31
Total			66.31 dBA

Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Wilson St E	! 1.19 !	59.79	! 59.79
Total			59.79 dBA

STAMSON 5.04 SUMMARY REPORT Date: 22-04-2021 21:03:55
 MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: wilsonR2.te Time Period: Day/Night 16/8 hours
 Description: R2- Free Field Wilson St 8th Floor East Facade
TOTAL Leq FROM ALL SOURCES

(DAY) : 67.46
(NIGHT) : 60.94

Road data, segment # 1: Wilson St E (day/night)

 Car traffic volume : 21088/2343 veh/TimePeriod *
 Medium truck volume : 439/49 veh/TimePeriod *
 Heavy truck volume : 439/49 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): 19630
 Percentage of Annual Growth : 2.00
 Number of Years of Growth : 11.00
 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: Wilson St 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 : 15.00 / 15.00 m
 Receiver height : 28.00 / 28.00 m
 Topography : 1 (Flat/gentle slope; no barrier)

Result summary (day)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Wilson St E	! 1.19 !	67.46	! 67.46
Total			67.46 dBA

Result summary (night)

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.Wilson St E	! 1.19 !	60.94	! 60.94
Total			60.94 dBA

STAMSON 5.04 SUMMARY REPORT Date: 22-04-2021 21:08:13
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: wilsonR3.te Time Period: Day/Night 16/8 hours
Description: **R3- Wilson St 5th Floor East Facade Terrace with Safety Glass or Equivalent**
TOTAL Leq FROM ALL SOURCES (DAY): 50.28
(NIGHT): 44.57

Road data, segment # 1: Wilson St E (day/night)

Car traffic volume : 21088/2343 veh/TimePeriod *
Medium truck volume : 439/49 veh/TimePeriod *
Heavy truck volume : 439/49 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): 19630
Percentage of Annual Growth : 2.00
Number of Years of Growth : 11.00
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: Wilson St 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 : 15.00 / 15.00 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 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 22.00 m
Reference angle : 0.00

Result summary (day)

! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)

1.Wilson St E ! 1.19 ! 50.28 ! 50.28

Total 50.28 dBA

Result summary (night)

! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)

1.Wilson St E ! 1.19 ! 44.57 ! 44.57

Total 44.57 dBA

STAMSON 5.04 SUMMARY REPORT Date: 22-04-2021 21:09:06
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: wilsonr4.te Time Period: Day/Night 16/8 hours
Description: **R4- Wilson St 8th Floor East Facade Terrace**

TOTAL Leq FROM ALL SOURCES

(DAY) : 50.28
(NIGHT) : 44.57

Road data, segment # 1: Wilson St E (day/night)

Car traffic volume : 21088/2343 veh/TimePeriod *
Medium truck volume : 439/49 veh/TimePeriod *
Heavy truck volume : 439/49 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): 19630
Percentage of Annual Growth : 2.00
Number of Years of Growth : 11.00
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: Wilson St 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 : 15.00 / 15.00 m
Receiver height : 30.00 / 30.00 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 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 22.00 m
Reference angle : 0.00

Result summary (day)

! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)

1.Wilson St E ! 1.19 ! 50.28 ! 50.28

Total 50.28 dBA

Result summary (night)

! source ! Road ! Total
! height ! Leq ! Leq
! (m) ! (dBA) ! (dBA)

1.Wilson St E ! 1.19 ! 44.57 ! 44.57

Total 44.57 dBA

STAMSON 5.04 SUMMARY REPORT Date: 16-11-2021 15:25:34
 MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: **wilsonr5.te** Time Period: **Day/Night 16/8 hours**
Description: R5-Heritage Building Outdoor Amenity Area
TOTAL Leq FROM ALL SOURCES (DAY): 52.02 (OLA)

Road data, segment # 1: Wilson St E (day/night)

```
-----
Car traffic volume : 21088/2343 veh/TimePeriod *
Medium truck volume : 439/49 veh/TimePeriod *
Heavy truck volume : 439/49 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): 19630
Percentage of Annual Growth : 2.00
Number of Years of Growth : 11.00
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: Wilson St E (day/night)

```
-----
Angle1 Angle2 : -0.00 deg 25.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 73.00 m
Receiver height : 1.50 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.Wilson St E ! 1.19 ! 52.02 ! 52.02
-----+-----+-----+-----
Total 52.02 dBA
```

GLENDALE MOTORS



GLENDALE MOTORS



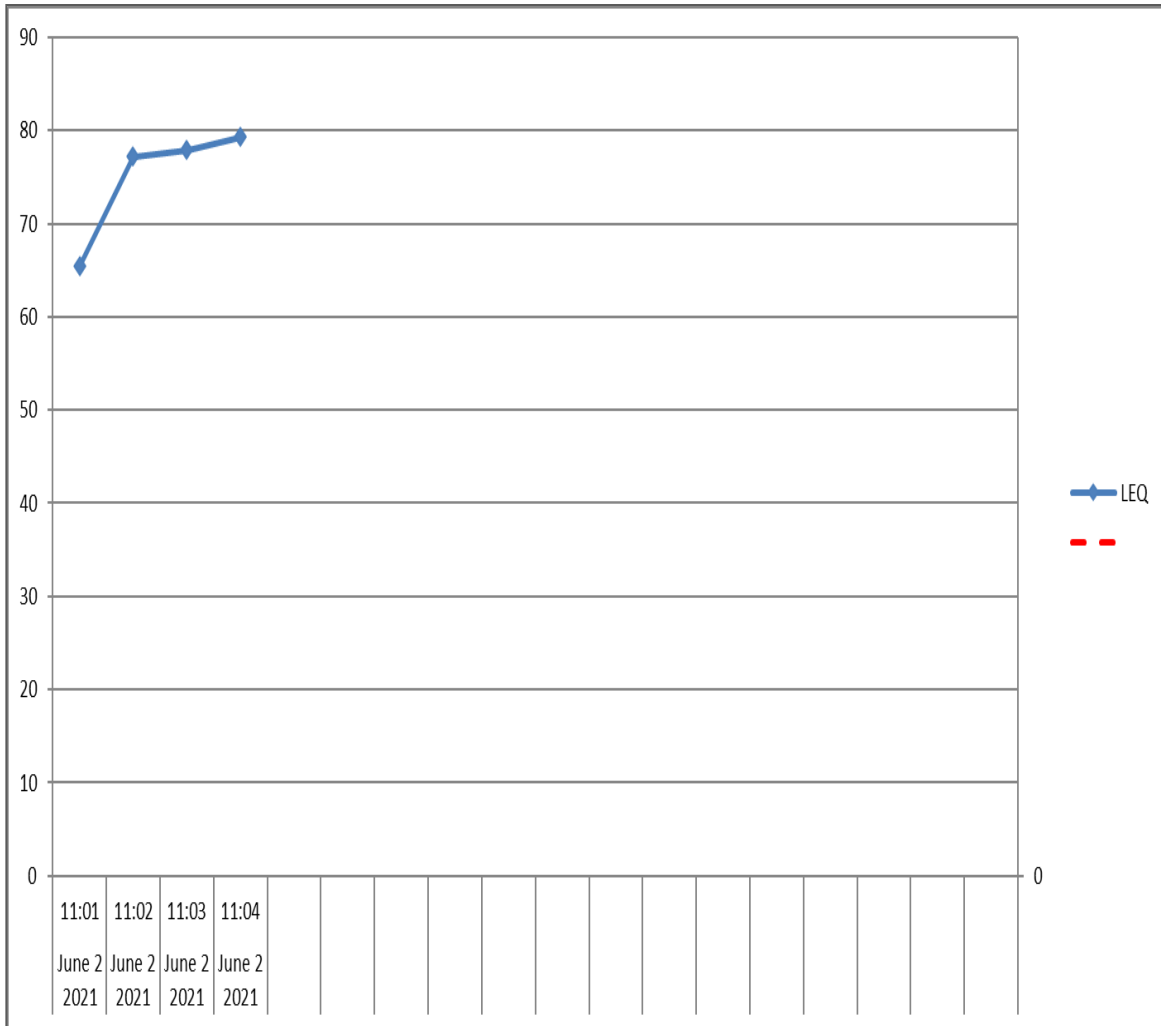
GLENDALE TIRE REPAIR SHOP



Car Wash Noise Receptor 5m



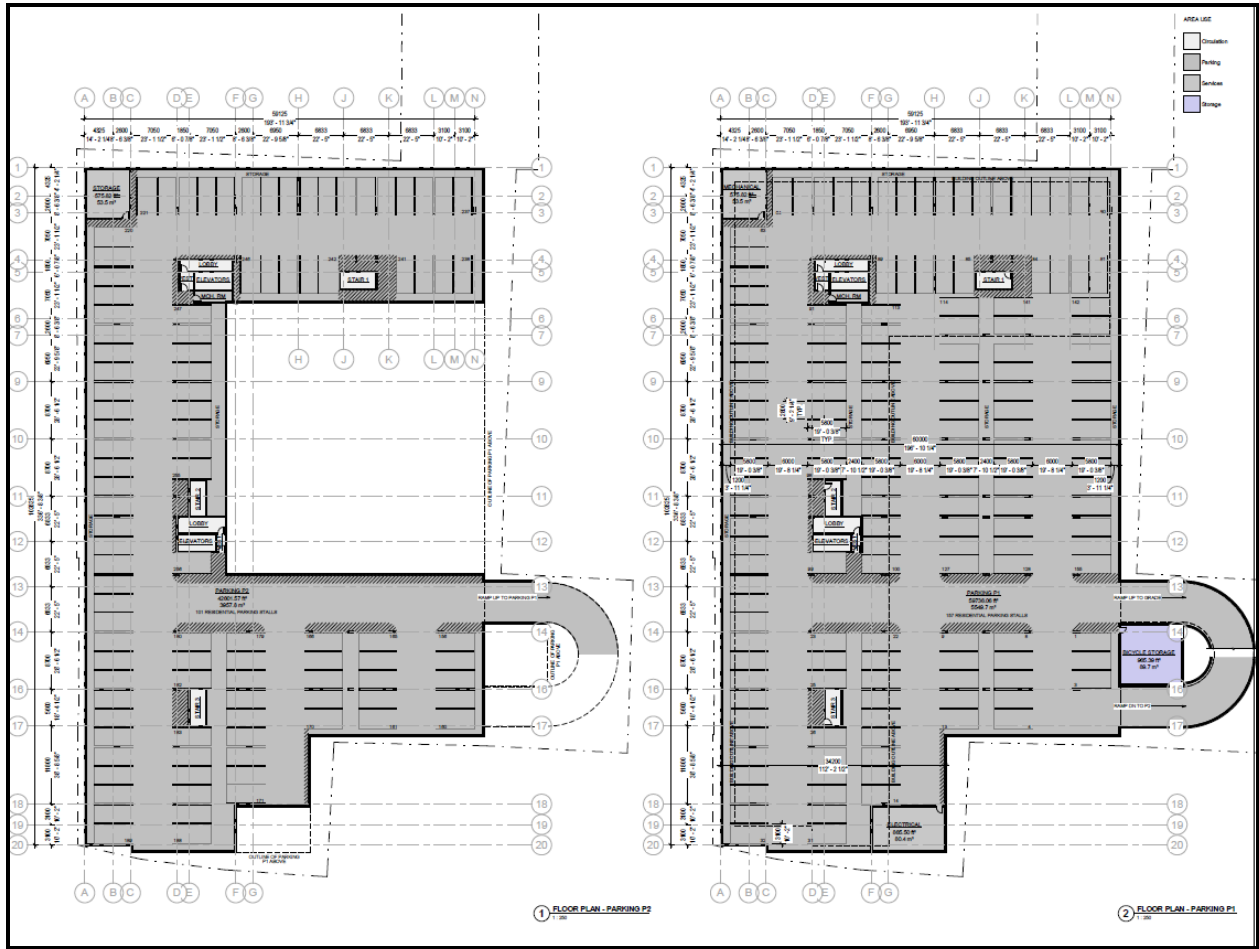
CAR WASH NOISE READING RESULTS JUNE 2, 2021, 4 MINUTES



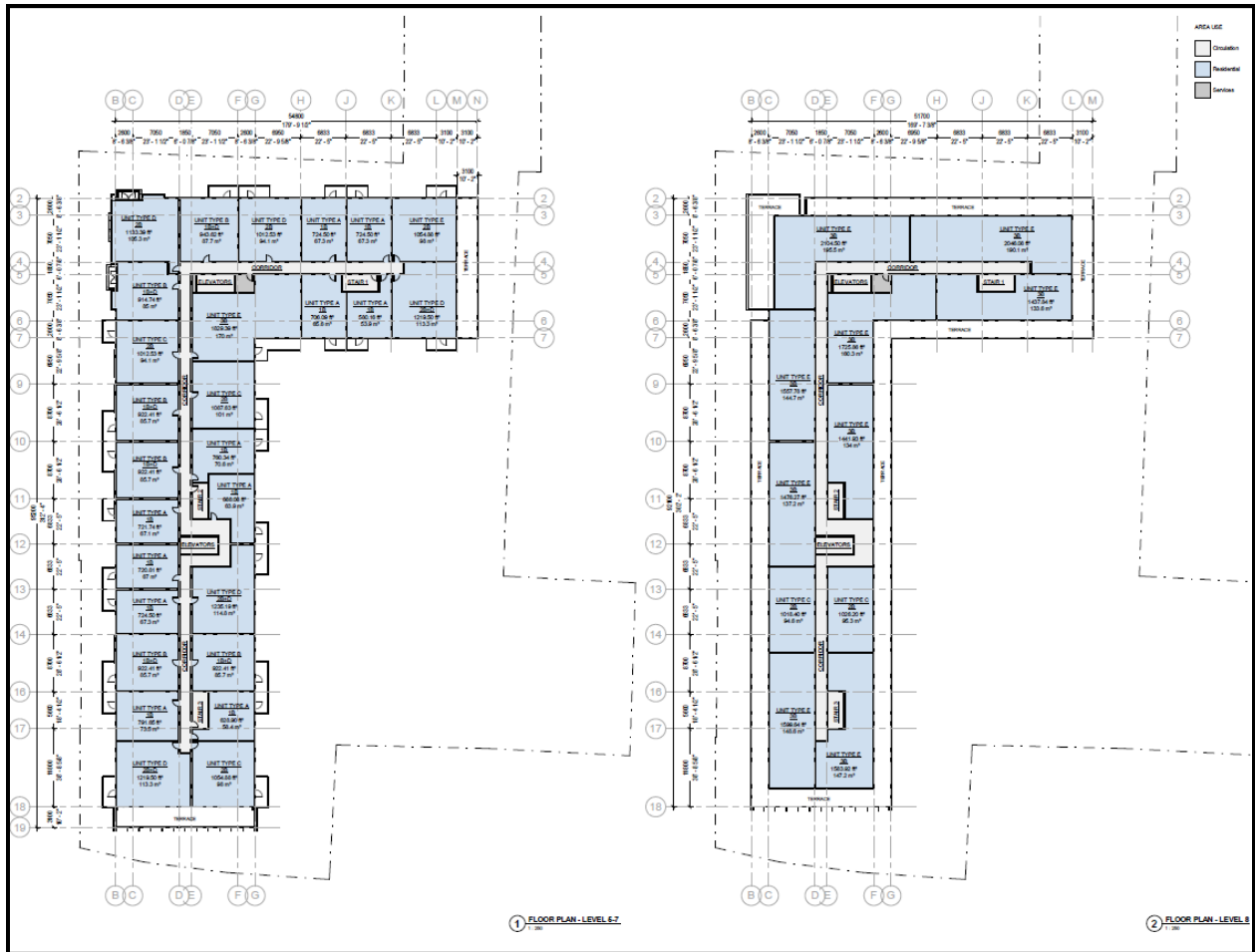
SITE DATA

SITE DATA		
Wilson Street, Ancaster, Ontario		
DATA		PROVIDED
ZONING		TBC
LOT AREA (m ²)		83,870 ft ² (7,791.70 m ²)
SETBACKS	FRONT YARD (m)	3 (m)
	INTERIOR SIDE YARD (m)	3 (m)
	EXTERIOR SIDE YARD (m)	3 (m)
	REAR YARD (m)	6 (m)
BUILDING DATA		
DATA		PROVIDED
TOTAL DENSITY (# of units)		169 (units)
BUILDING AREA (m ²)		33,266 ft ² (3,091 m ²)
GFA (m²) - BELOW GRADE		108,195 ft² (10,052 m²)
PARKING P1		63,580 ft ² (5,907 m ²)
PARKING P2		44,615 ft ² (4,145 m ²)
GFA (m²) - ABOVE GRADE		227,057 ft² (21,094 m²)
GROUND		31,082 ft ² (2,888 m ²)
LEVEL 2		29,691 ft ² (2,758 m ²)
LEVEL 3		31,397 ft ² (2,917 m ²)
LEVEL 4		29,738 ft ² (2,763 m ²)
LEVEL 5		28,313 ft ² (2,630 m ²)
LEVEL 6		28,313 ft ² (2,630 m ²)
LEVEL 7		28,313 ft ² (2,630 m ²)
LEVEL 8		20,209 ft ² (1,877 m ²)
RENTABLE RESIDENTIAL AREA (m ²)		173,884 ft ² (16,154 m ²)
COMMERCIAL/RETAIL AREA (m ²)		18,116 ft ² (1,683 m ²)
AMENITY AREA (m ²)		5,791 ft ² (538 m ²)
NUMBER OF STOREYS		8
BUILDING HEIGHT (m)		30.60 (m)

FLOOR PLANS

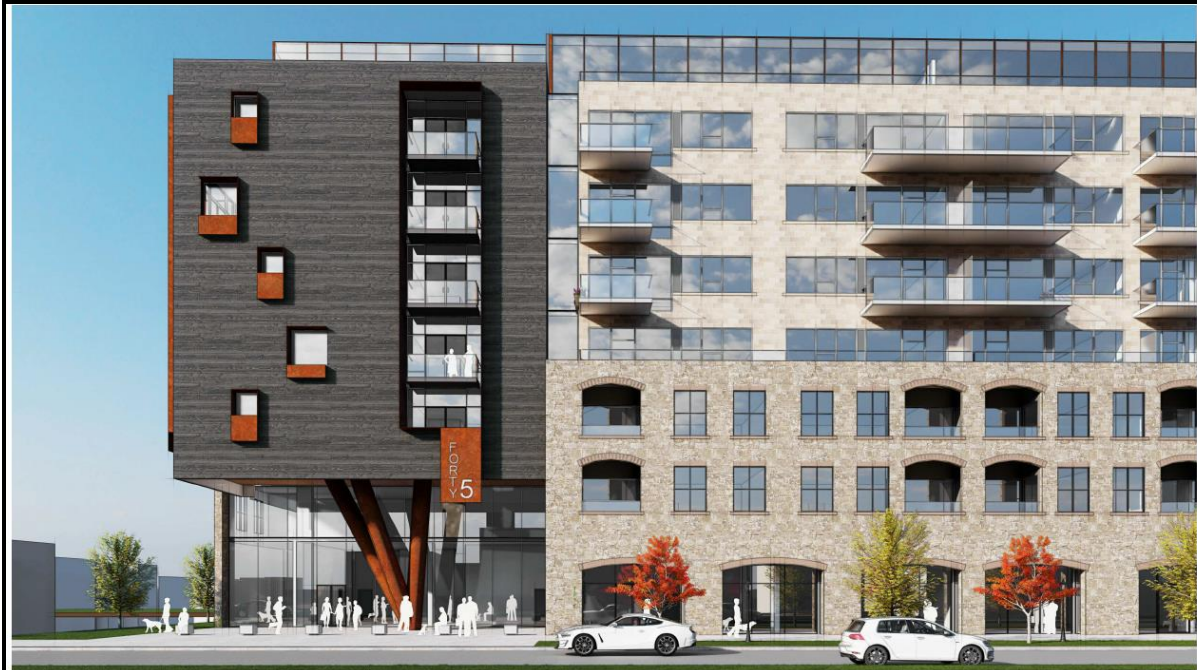






RENDERING





8 STOREY - WILSON ST. E.
22023 WILSON ST. E. & ACADEMY ST. ANCASTER

22023
26/11/2021



8 STOREY - WILSON ST. E.
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22023
26/11/2021



