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## Noise Impact Assessment for 15728 Airport Road, Caledon East

Submitted to: **Wyndham Holdings Inc.**

c/o Glenn J. Wellings, *MCIP, RPP*  
Wellings Planning Consultants Inc.  
513 Locust St, Unit B  
Burlington, ON L7S 1V3

February 5, 2020

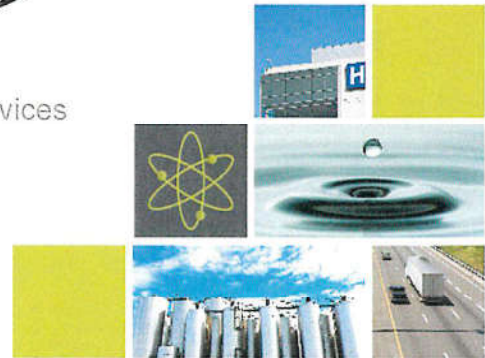
Rb File #3242

Submitted by: **Darcy Snyder, P.Eng**  
Environmental Engineer  
dsnyder@rb-enviro.com

**Thomas Li, P.Eng, MEPP**  
Technical Manager, Environmental Compliance Services  
tli@rb-enviro.com



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845 Harrington Court, Unit 200B,  
Burlington, Ontario L7N 3P3  
P: (905) 635-4063 F: (905) 635-4874  
www.Rb-enviro.com  
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## **Executive Summary**

A noise impact assessment was prepared for the proposed residential retirement complex at 15728 Airport Road, Caledon East, Ontario. Noise impacts resulting from vehicular traffic on nearby roadways were modelled at both the Plane of Window (POW) and Outdoor Living Area (OLA) of various receptors within the complex.

The predictions of this assessment indicate that the proposed development is feasible, subject to the following conditions:

- Units fronting Airport Road
  - To be designed with air conditioning.
  - All windows to be designed in accordance with section 4.5.
  - Warning Clauses Type “A” and “D” be registered on title.
- Rear units fronting Airport Road
  - To be designed a provision for air conditioning.
  - Warning Clauses Type “A” and “C” be registered on title.
- All other units
  - Warning Clause Type “A” be registered on title.

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## 1.0 INTRODUCTION AND FACILITY DESCRIPTION

Wellings Planning Consultants Inc., on behalf of Wyndham Holdings Inc., (Client) retained Rubidium Environmental (Rubidium) to prepare a Noise Impact Assessment in support of a proposed residential development located at 15728 Airport Road, Caledon East, Ontario. The purpose of this study is to determine the noise impact from vehicular traffic along nearby roads.

No sources of vibration concern were identified in the study area, and no rail lines exist within 300m proximity to the proposed development. The proposed development is also not within any areas identified with any Transport Canada Noise Exposure Forecast (NEF) rating of 25 or above.

This study was conducted in accordance with applicable environmental noise policies of the Town of Caledon, and with the Ministry of the Environment, Conservation and Parks (MECP) Guidelines:

- NPC-300: Environmental Noise Guideline: *Stationary and Transportation Sources*
- LU-131: Noise Assessment Criteria in Land Use Planning
- Guideline D6: Compatibility between Industrial Facilities and Sensitive Land Uses

### 1.1 Subject Site

The Client is proposing to develop the property located at 15728 Airport Road, Caledon, Ontario. The proposed development is for a sensitive land use, specifically a 3-storey retirement home comprised of approximately 135 units.

The proposed development is surrounded by existing residential, parkland, and commercial land uses. The nearest residential dwellings are adjacent to the proposed development. The assessment was based on publicly available information. The subject site is shown in Appendix A.

Vehicular traffic on Airport Road is expected to pose noise impacts on the proposed development, as the road traffic volume on all other roadways within 500m of the proposed development is insignificant. The posted speed limit on Airport Road is 50 km/hr.

The surrounding land can be characterized as:

*Table 1 - Summary of Surrounding Land Uses*

Direction	Land Use
North	Agricultural
East	Agricultural
South	Residential, Agricultural
West	Residential, Institutional

## 2.0 NOISE IMPACT ASSESSMENT

### 2.1 Road Noise Criteria

Road noise limits for proposed sensitive land uses have been established by the MECP in NPC – 300. Values for daytime and nighttime hours at both the Outdoor Living Area (OLA), such as a backyard or patio, as well as the Plane of Window (POW), such as a living area, are provided in Table 2 below:

Table 2 – Road Noise Sound Level Limits

Time Period	L <sub>eq</sub> (dBA)
07:00 to 23:00	55 (Measured at OLA)
07:00 to 23:00	55 (Measured at POW)
23:00 to 07:00	50 (Measured at POW)

If predicted noise levels at the OLA and/or at the POW are equal or less than the values in Table 2, no noise control measures are required. If predicted noise levels exceed Table 2 values, then the following clauses or actions are required:

Table 3 - Required Actions

Time Period	Location	Sound Pressure Level, L <sub>eq</sub> (dBA)	Requirements
07:00 to 23:00 (Daytime)	OLA	< 55	No Requirements
		55 – 60	Barrier or Warning Clause Type “A”
		> 60	Barrier & Warning Clause Type “B”
07:00 to 23:00 (Daytime)	POW	< 55	No Requirements
		55 – 65	Provision for A/C & Warning Clause “C”
		>65	Central A/C, Building Component Specifications Requirements & Warning Clause “D”
23:00 to 0:700 (Nighttime)	POW	< 50	No Requirements
		50 – 60	Provision for A/C & Warning Clause “C”
		> 60	Central A/C, Building Component Specifications Requirements & Warning Clause “D”

Where daytime (07:00 to 23:00) sound pressure levels exceed 65dBA, and/or nighttime (23:00 to 07:00) sound pressure levels exceed 60 dBA, the residential dwellings must be designed such that the indoor sound as measured at the bedroom or living/dining room meets the following criteria:

Table 4 - Indoor Sound Pressure Level Limits

Indoor Location & Time Period	Sound Pressure Level, L <sub>eq</sub> (dBA)
Living/Dining	45
Bedroom (07:00 to 23:00)	45
Bedroom (23:00 to 07:00)	40

## 2.2 Road Traffic Volumes

Road traffic data was obtained from the Region of Peel for Airport Road northwest of Cranston Road. The traffic volume vehicle by type was unknown, therefore based on location and growth for Caledon, a conservative estimate is 91% of the traffic was cars, 6% medium trucks, and 3% heavy trucks. Tables 5 and 6, below, specify the recorded and forecasted road traffic volumes that were used in the STAMSON model.

Table 5 - Recorded Traffic Volumes (Base - no inflation)

Time Period	Roadway	Total
2017	Airport Road NW of Cranston Road	14,654

A traffic growth value of 3%/year, for 10 years from the time of development, was conservatively assumed. It was also assumed that 90% of traffic occurred during daytime hours in accordance with *Ontario Road Noise Analysis Method for Environment and Transportation* (1989) for a regional road.

Table 6 - Traffic Volumes (10 Year Inflated Levels)

Roadway	Time Period	Total	Cars (Light)	Medium Trucks	Heavy Trucks
Airport Road	Daytime (07:00 – 23:00)	19,368	17,625	1,162	581
	Nighttime (23:00 – 07:00)	2,152	1,958	129	65

## 2.3 Road Traffic Noise

The road traffic noise was modelled using STAMSON at the OLA and POW of each lot.

Table 7 - Estimated Road Traffic Noise Impacts

Description	OLA/ POW	Barrier	Distance to Roadway (m)	Noise at Receiver Day (dBA)	Noise at Receiver Night (dBA)
Fronting Airport Rd.	POW	No	19.0	66.0	66.0
Courtyard	OLA	No	39.8	57.4	N/A
2 <sup>nd</sup> Row of units facing Airport Rd., north	POW	No	75.6	61.2	54.7
2 <sup>nd</sup> Row of units facing Airport Rd., south	POW	No	75.6	60.1	53.5

## 3.0 ENVIRONMENTAL NOISE

### 3.1 Potential Environmental Noise Concerns

The surrounding area within 1000m was surveyed for industrial land uses that may pose environmental noise concerns. All land uses within 1000m did not pose environmental noise concerns. Noise generated by the adjacent school HVAC equipment is exempt in accordance with O.Reg 524/98; thus, the school is not expected to adversely impact the proposed development.

## **4.0 RECOMMENDATIONS**

### **4.1 Suites Fronting Airport Road**

The predicted noise level at the POW of the suites fronting Airport Road is in excess of 65 dBA. It is recommended and required that all suites be constructed with central air conditioning such that windows can remain closed, and that Warning Clause Type “D” be registered on title. Additionally, windows must be constructed in accordance with section 4.5.

### **4.2 Rear Suites Facing Airport Road**

The predicted noise level at the POW is in excess of 55 dBA and 50 dBA during daytime and nighttime, respectively. For this reason, it is required that these units be designed for a provision for central air conditioning to be installed at the owner’s discretion, and that Warning Clause Type “C” be registered on title.

### **4.3 Amenity Area**

The predicted noise level at the OLA of the amenity area is greater than the guideline limit of 55 dBA. As the building already acts as a barrier, it is required that Warning Clause Type “A” be registered on title for all units that use this amenity area.

### **4.4 Warning Clauses**

#### Warning Clause Type “A”

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

#### Warning Clause Type “C”

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

#### Warning Clause 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 sound level limits of the Municipality and the Ministry of the Environment, Conservation and Parks.

#### 4.5 Window Glazing Specifications

It is required that the windows of all units directly fronting Airport Road be constructed with windows in accordance with the table below:

Receiver/Unit	Area	Outside $L_{eq}$	Indoor $L_{eq}$	N, number of components	Required AIF	Required Glazing (mm)
D3	Living, Dining, Bed Room	66	45	2	26	2/22/2 or 3/16/3
D3	Bedroom	66	40	2	31	2/63/2 or 3/50/3

#### 5.0 SUMMARY OF RECOMMENDATIONS

The predictions of this assessment indicate that the proposed development is feasible, subject to the following conditions:

- Units fronting Airport Road
  - To be designed with air conditioning.
  - All windows to be designed in accordance with section 4.5.
  - Warning Clauses Type “A” and “D” be registered on title.
- Rear units fronting Airport Road
  - To be designed a provision for air conditioning.
  - Warning Clauses Type “A” and “C” be registered on title.
- All other units
  - Warning Clause Type “A” be registered on title.





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**APPENDIX A –  
Site Plan**

# WYNDHAM RESIDENCE

15728 Airport Road, Caledon East, ON

FULL SERVICE RETIREMENT COMMUNITY

PRELIMINARY DESIGN

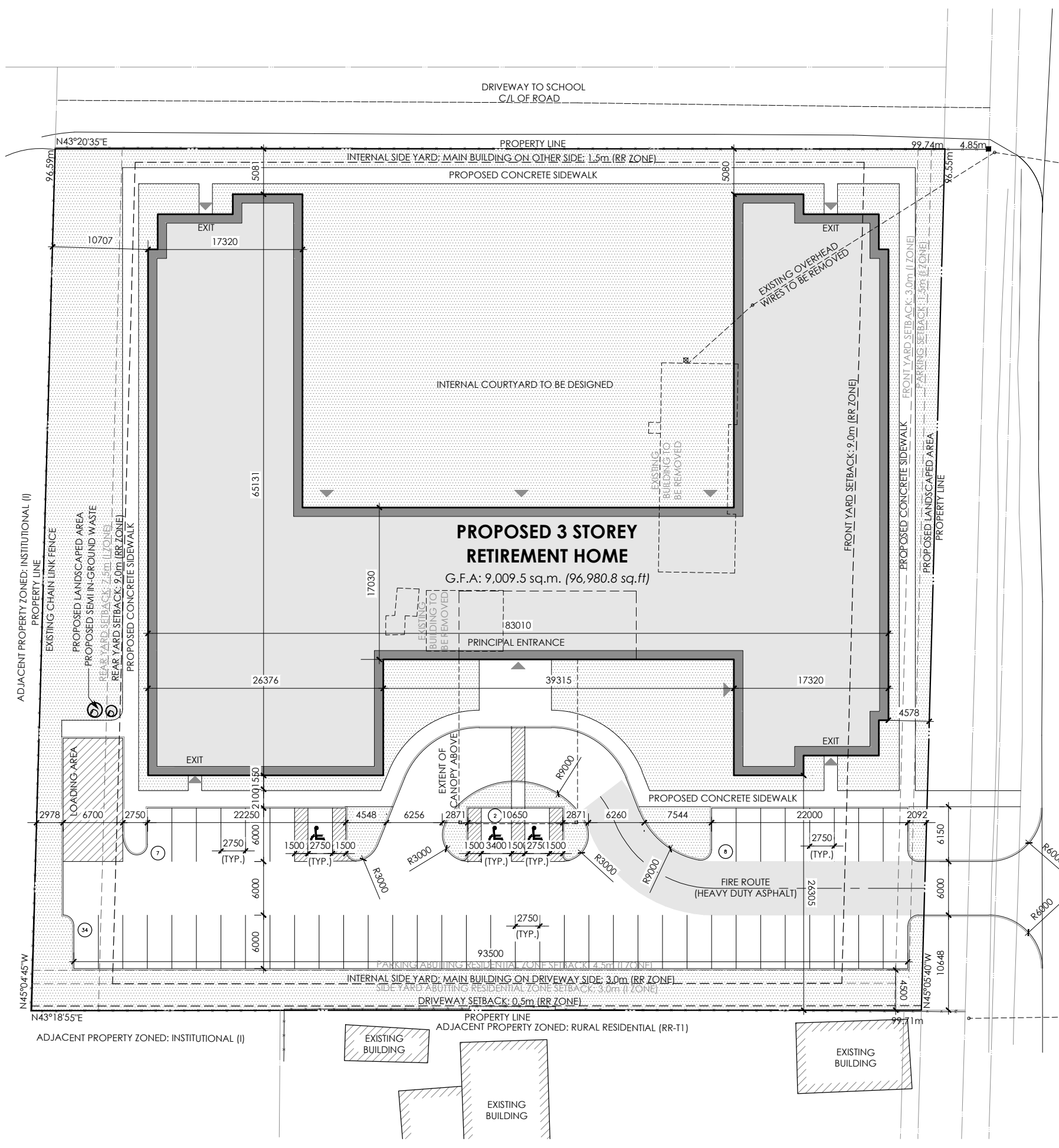
PREPARED BY **ABA ARCHITECTS INC.**  
FOR **WYNDHAM HOLDINGS INC.**

2019.01.24



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- LOWER LEVEL FLOOR PLAN 2.1
- FIRST FLOOR PLAN 2.2
- SECOND FLOOR PLAN 2.3
- THIRD FLOOR PLAN 2.4
- SECTIONS 4.1
- MASSING MODEL 5.1
- MASSING MODEL PERSPECTIVES 5.2



**SITE DATA - 15782 Airport Rd., Caledon East** Zone: Rural Residential (RR)

DENSITY	Minimum	Maximum	Provided
Units / hectare			140
Beds / hectare			144
Total Floor Space Ratio (FSR)			0.9

**AREAS**

	Metric	Imperial	%
Site Area (Min. Partially Serviced Lot: 650 sq.m.)	0.96 ha	2.4 acre	-
Building Footprint at grade (Max. 25%)	9,629.4 sq m	103,653.6 sq ft	100%
Asphalt Area	3,120.9 sq m	33,593.8 sq ft	32%
Concrete Area	1,837.0 sq m	19,774.3 sq ft	19%
Concrete Area	666.5 sq m	7,173.9 sq ft	7%
<b>Total Impervious Area</b>	<b>5,624.4 sq m</b>	<b>60,542.0 sq ft</b>	<b>58%</b>
Landscaped/Sodded Area	4,005.1 sq m	43,111.6 sq ft	42%
<b>Total Permeable Area</b>	<b>4,005.1 sq m</b>	<b>43,111.6 sq ft</b>	<b>42%</b>

**SETBACKS**

	Required	Provided
Front Yard Setback (East)(Airport Rd.)	9.0 m	4.5 m
Rear Yard Setback (West)	9.0 m	10.7 m
Side Yard Setback (North) (Main Building Other Side)	1.5 m	5.0 m
Side Yard Setback (South) (Main Building Driveway Side)	3.0 m	26.3 m
Driveway Setback	0.5 m	4.5 m

**FRONTAGE**

	Min Required	Provided
Lot Frontage	15.0 m	96.5 m

**LANDSCAPING**

	Min Required	Provided	
Landscaped Area (40% of Site Area)	3,851.8 sq m	4,671.53 sq m	49%

**BUILDING DATA**

**BUILDING AREAS**

	Area (sq.m.)	# of Floors	Metric	Imperial
<b>Below Grade</b>				
Basement	3003.2	1	3,003.2 sq m	32,326.9 sq ft
<b>Above Grade</b>				
Ground Floor	3120.9	1	3,120.9 sq m	33,593.8 sq ft
Typical Floor (2nd - 3rd Floor)	3003.2	2	6,006.3 sq m	64,653.9 sq ft
<b>Gross Floor Area (Above Grade)</b>	<b>9,127.2</b>	<b>3</b>	<b>9,127.2 sq m</b>	<b>98,247.7 sq ft</b>
<b>Total Gross Floor Area (Above &amp; Below Grade)</b>	<b>12,130.4</b>		<b>12,130.4 sq m</b>	<b>130,574.6 sq ft</b>

**BUILDING HEIGHT (Max. 10.5m)**

	Height (m)	# of Floors	Metric	Imperial
Ground Floor	3.4	1	3.4 m	11.0 ft
Typical Floor (2nd - 3rd Floor)	3.0	2	6.0 m	19.0 ft
Parapet	1.1		1.1 m	3.0 ft
<b>Total Building Height</b>	<b>10.5</b>	<b>3</b>	<b>10.5 m</b>	<b>34.0 ft</b>

**RESIDENTIAL**

UNITS	# of Floors	Studio	1 Bed	Care Units	2 Bed	Units/Flr	Beds/Flr
Ground Floor	1	-	7	38	0	45	45
Typical Floor (2nd - 3rd Floor)	2	8	35	-	2	37	47
<b>Total</b>		<b>16</b>	<b>77</b>	<b>38</b>	<b>4</b>	<b>135</b>	<b>139</b>

**AMENITY**

	Required	Provided
Backyard Amenity Area	Min. 56.0 sq m	602.8 sq ft
<b>PROVIDED</b>		
Landscaped Open Space (landscaped area + conc. walkways)	4,671.5 sq m	50,285.5 sq ft
<b>Total</b>	<b>4,671.5 sq m</b>	<b>50,285.5 sq ft</b>

**Parking Data**

**VEHICLES**

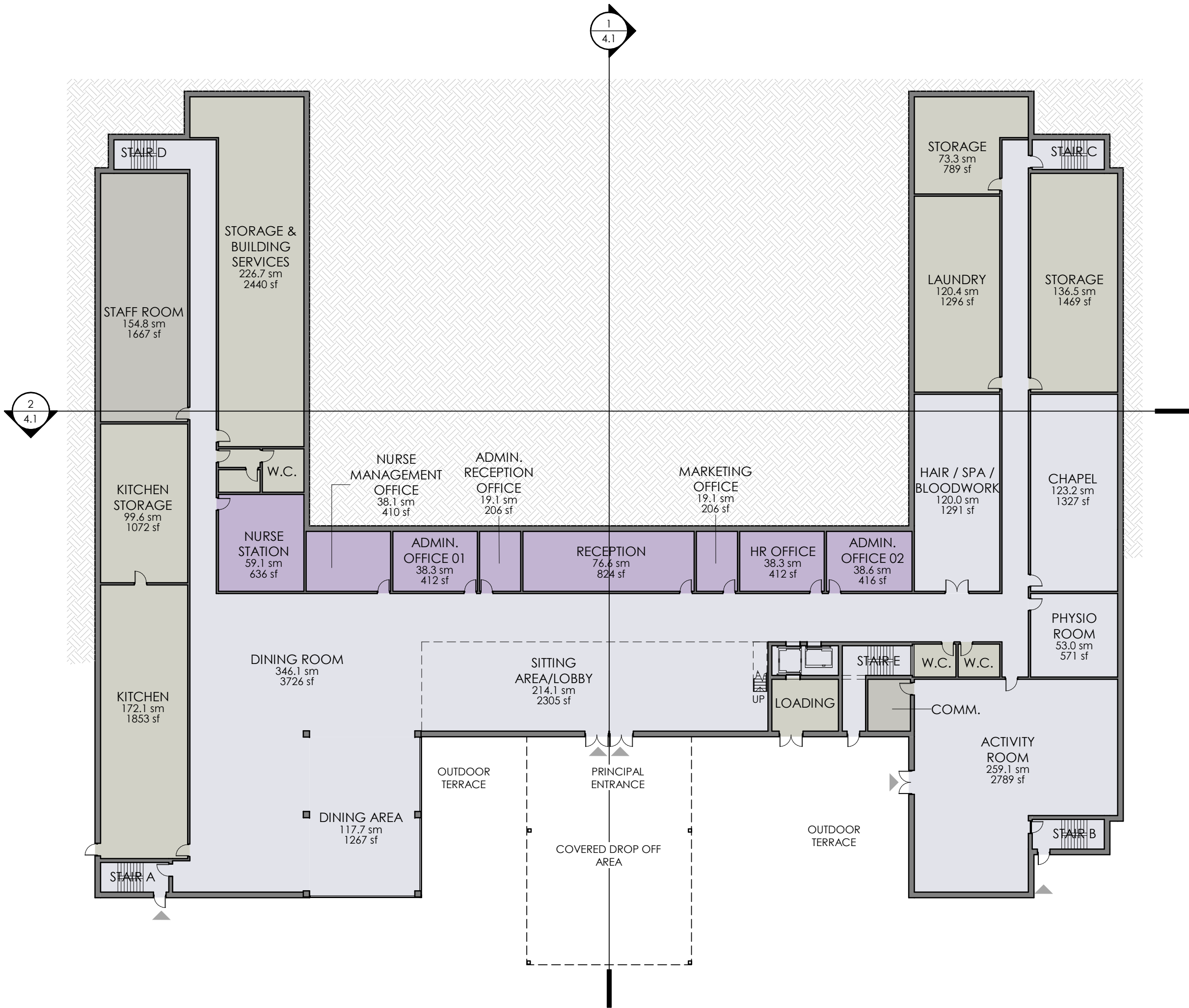
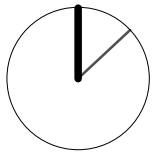
REQUIRED	Spaces
Zoning: Long Term Care Facility: (0.5 spaces /bed)	70
Client: Long Term Care Facility: (0.3 spaces /bed)	42
<b>Total Parking Required</b>	<b>42</b>
Barrier Free Parking Required (4% applies for 13-100 spaces req'd)	2
Type A Required	1
Type B Required	2

**PROVIDED**

	Type A	Type B	Standard	Total
Surface Parking	1	2	48	51
<b>Total Parking Provided</b>				<b>51</b>

0m 5 10 25 50

SITE PLAN  
1:500  
2019.01.24



2  
4.1

1  
4.1

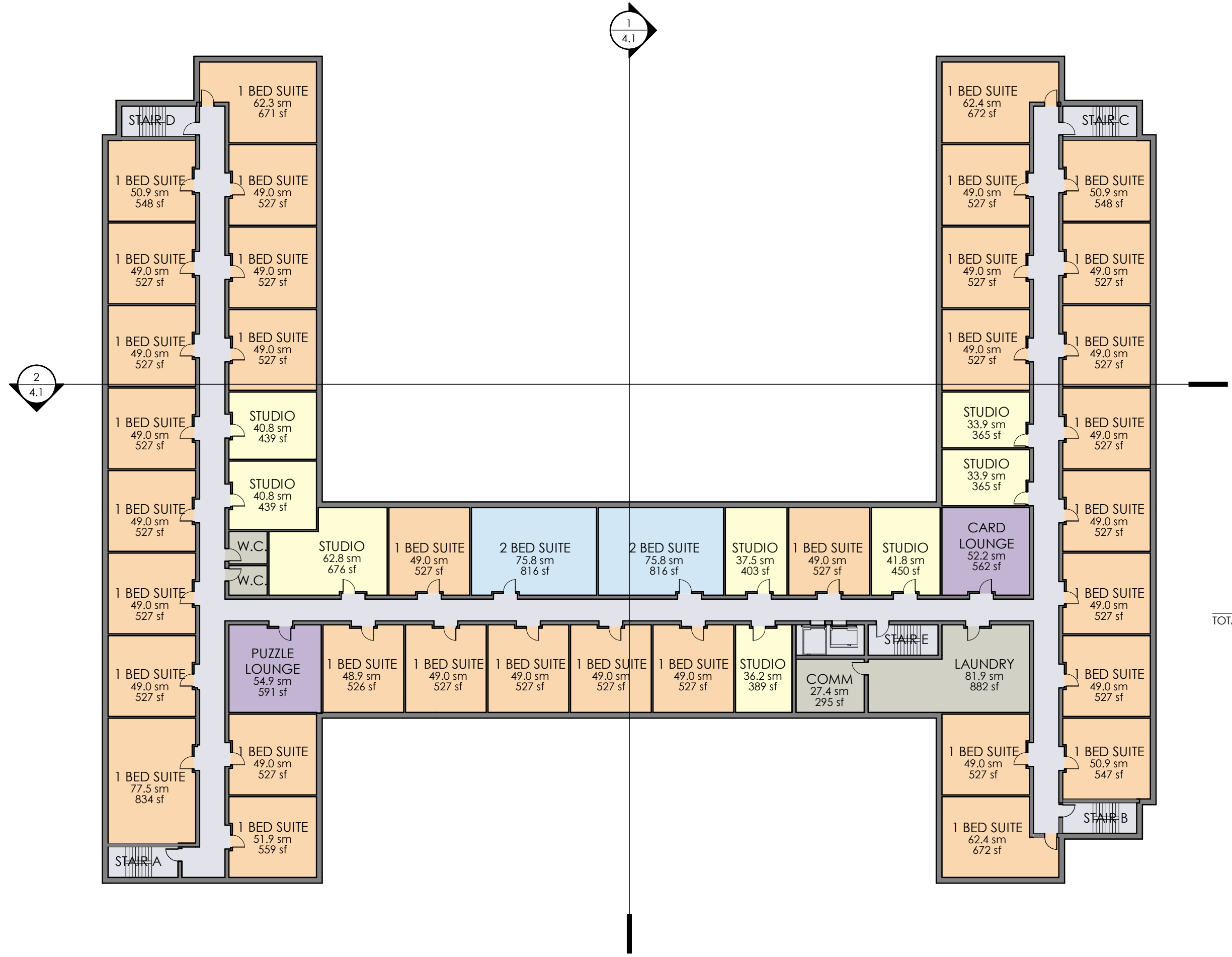
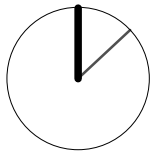


PROJECT NO. 2018-127  
WYNDHAM RESIDENCE



CARE SUITES: 38  
1 BED SUITES: 7  
TOTAL PER FLOOR: 45

**FIRST FLOOR PLAN**  
20\_AMBULATORY SUITES  
18\_MEMORY CARE SUITES  
7\_1 BED SUITES  
1:300  
2019.01.24

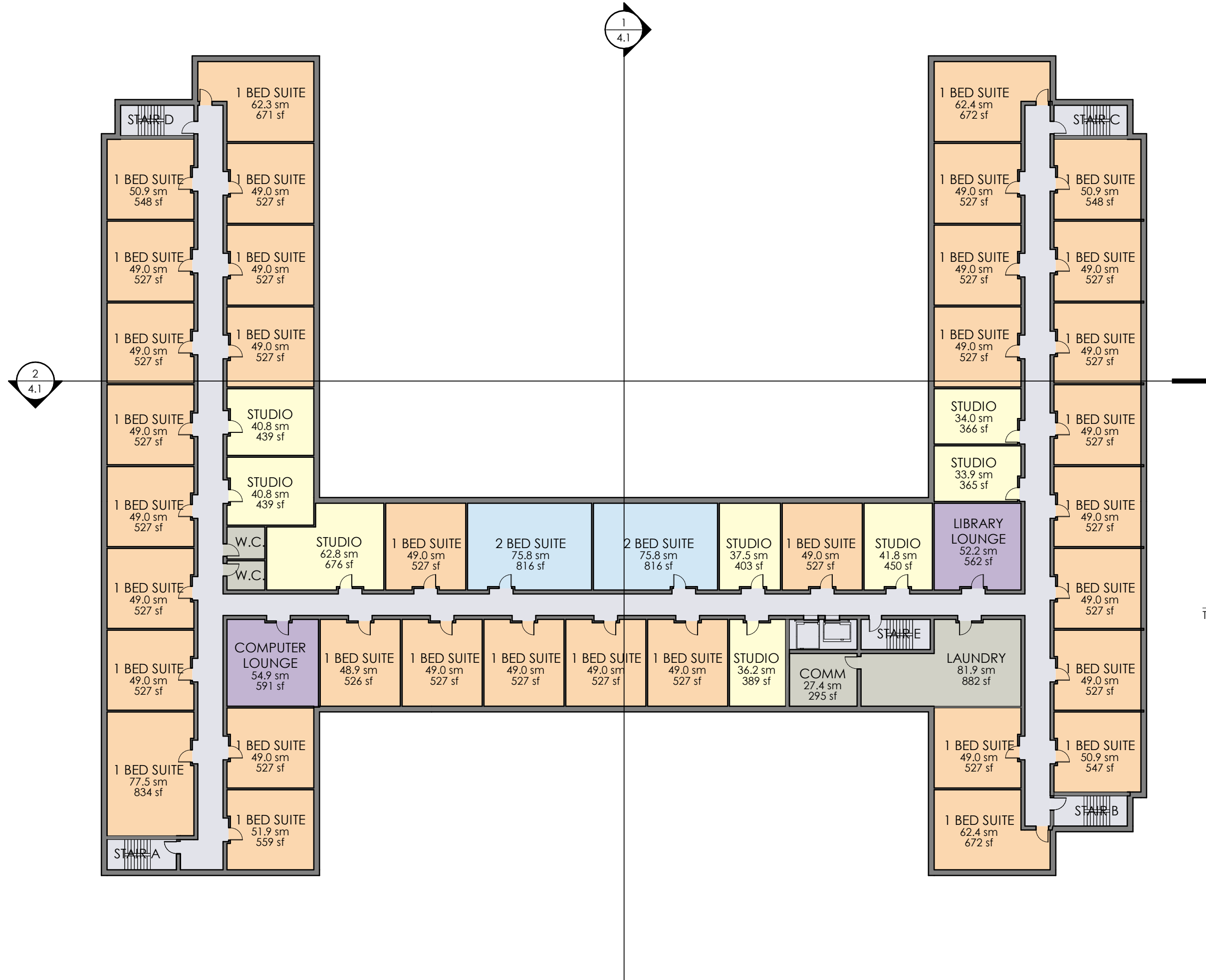
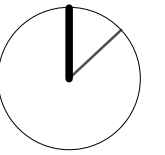


STUDIO SUITES: 8  
 1 BED SUITES: 35  
 2 BED SUITES: 2  
 TOTAL PER FLOOR: 45

SECOND FLOOR PLAN

6\_2 STUDIO  
 35\_1 1 BED SUITE  
 2019.01.24 | 2\_2 BED SUITE





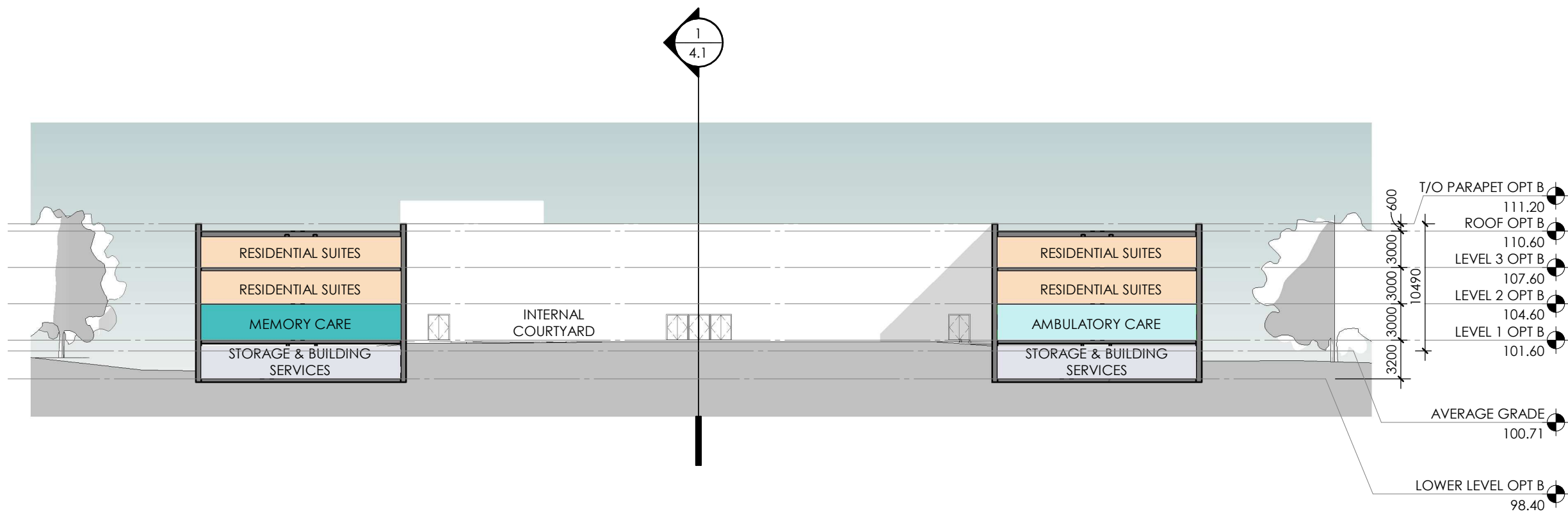
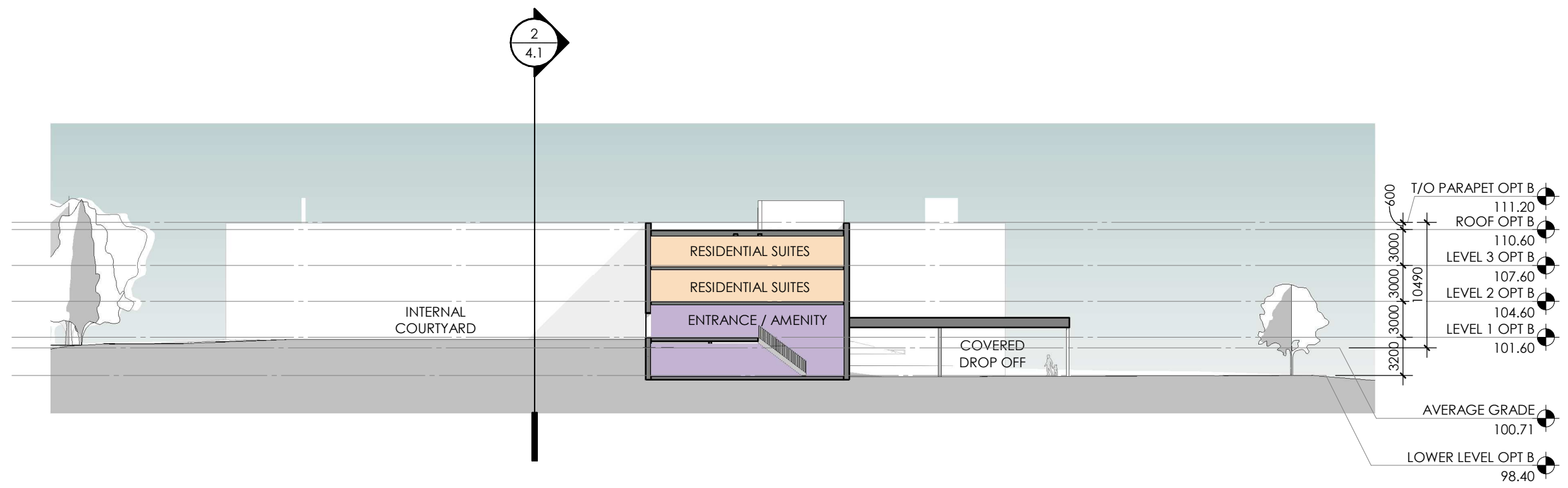
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 1 BED SUITES: 35  
 2 BED SUITES: 2  
 TOTAL PER FLOOR: 45

THIRD FLOOR PLAN

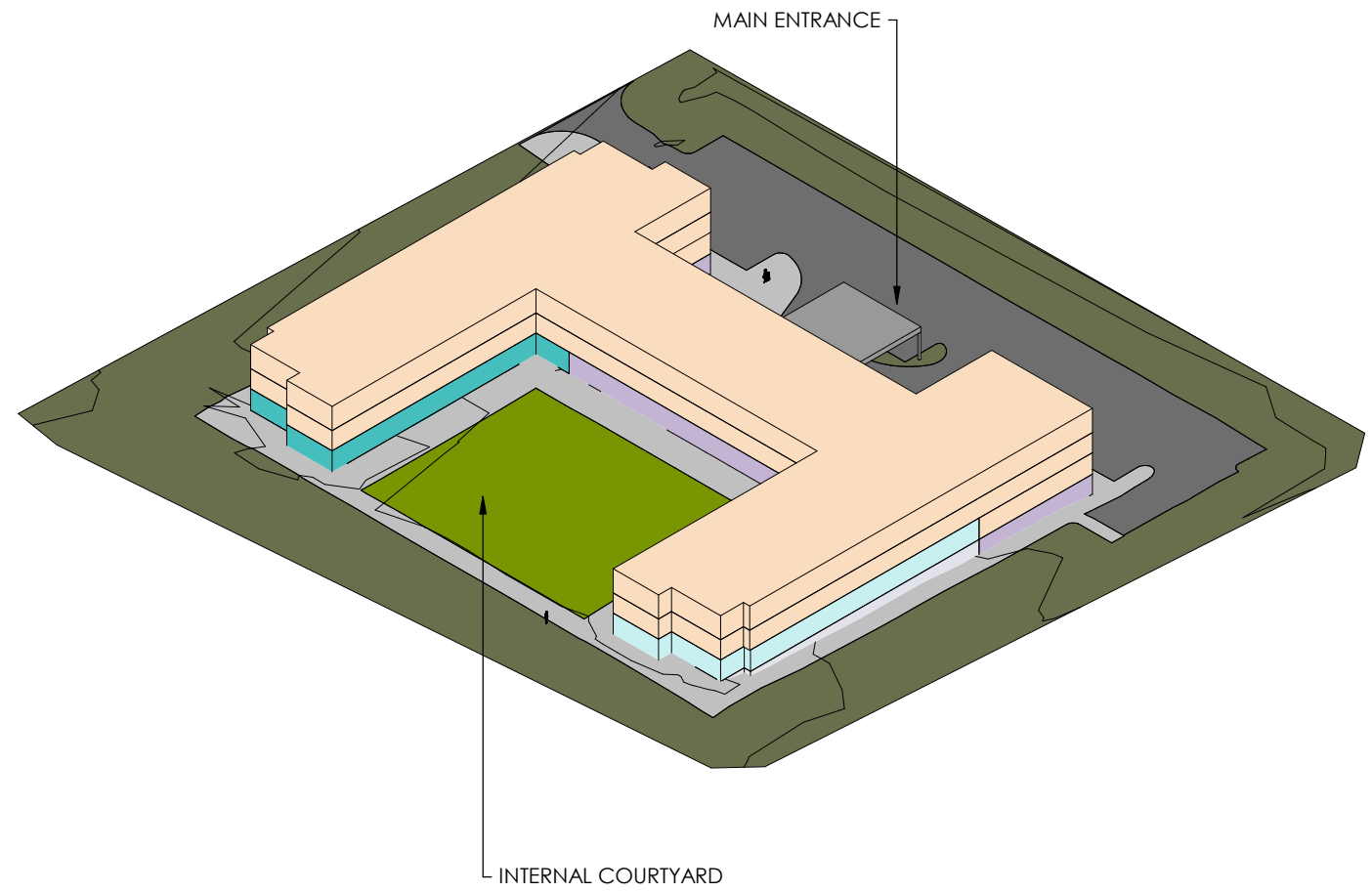
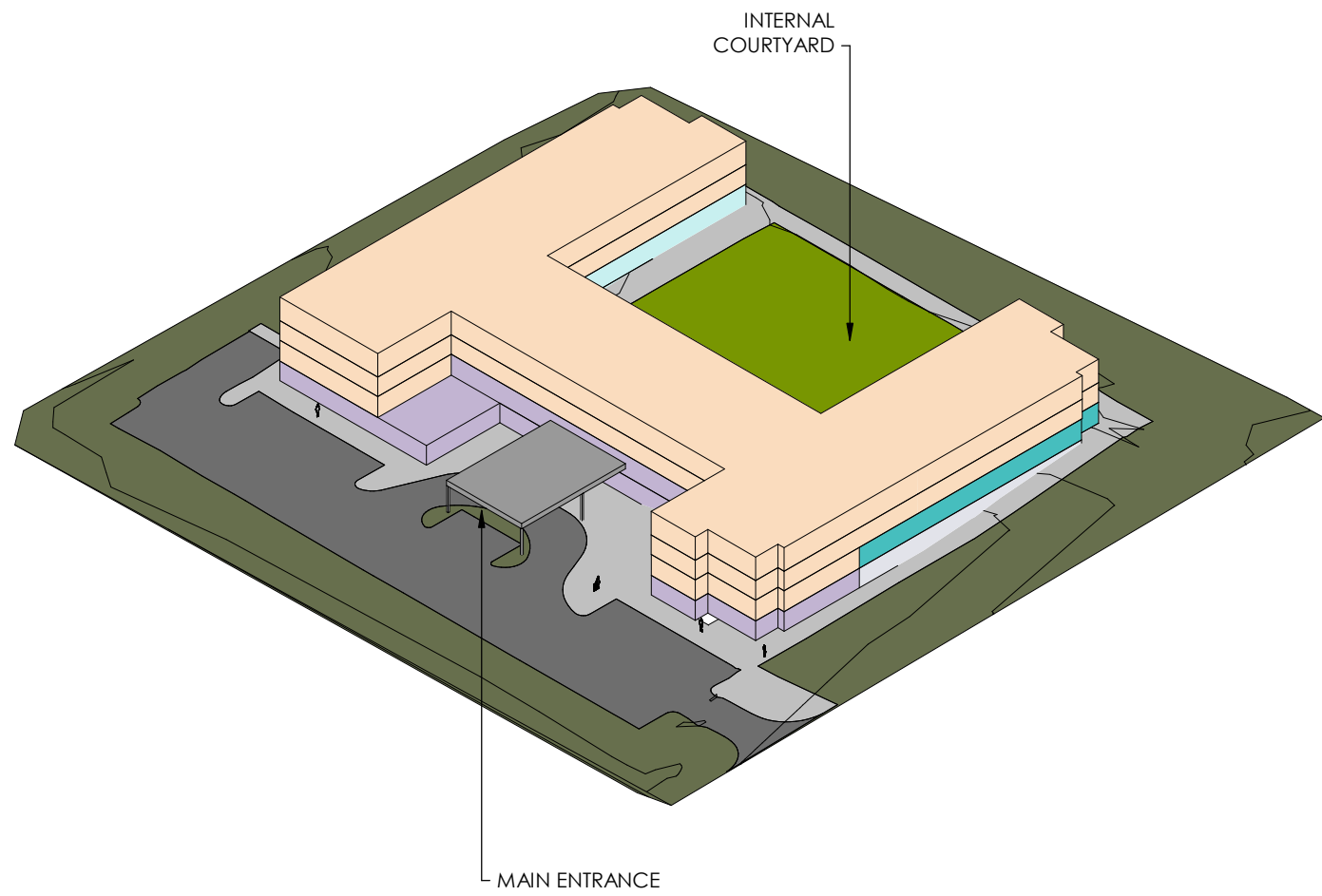
6\_1 STUDIO  
 35\_1 1 BED SUITE  
 2019.01.24 | 2\_2 BED SUITE

0m 2 4 10 20



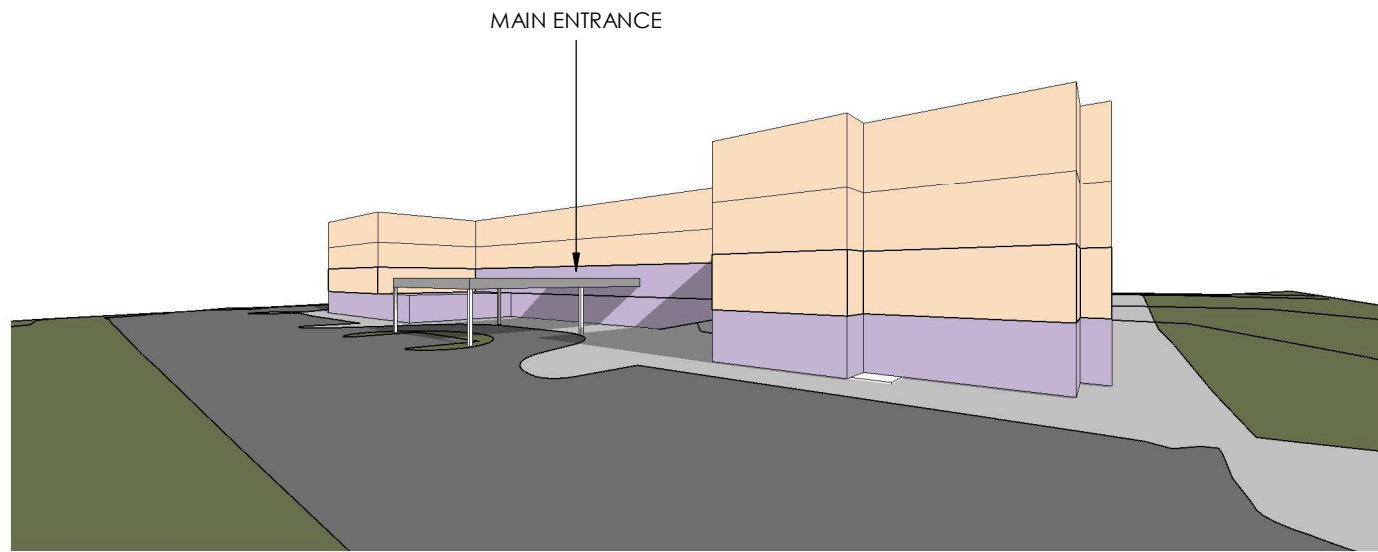


SITE SECTIONS

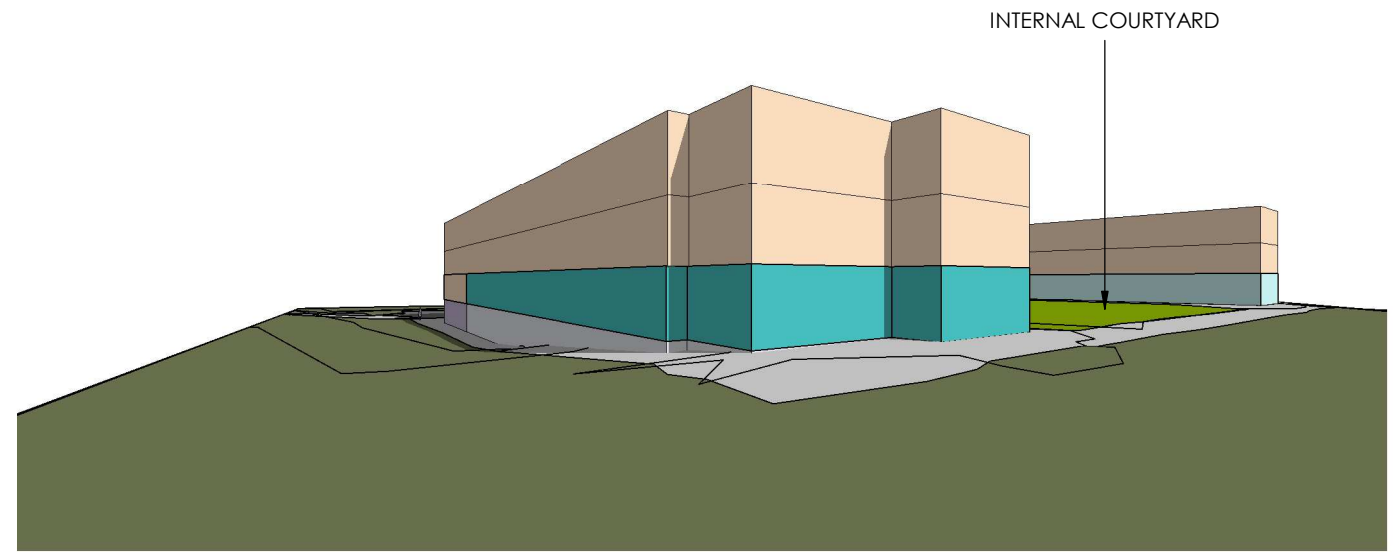


- AMENITY
- AMBULATORY CARE
- MEMORY CARE
- RESIDENTIAL SUITES

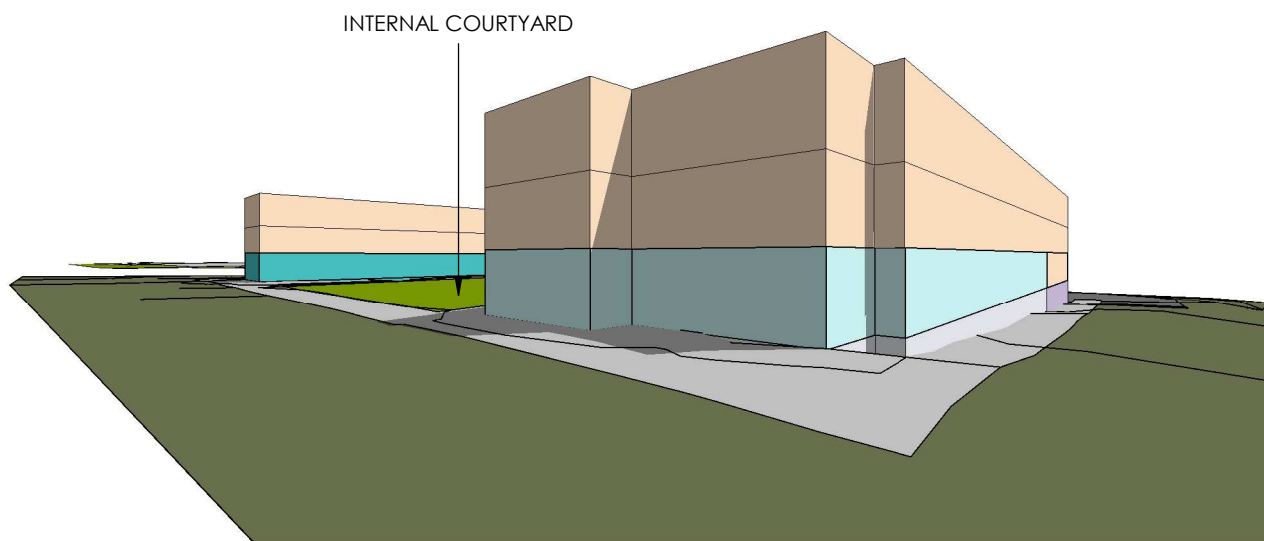




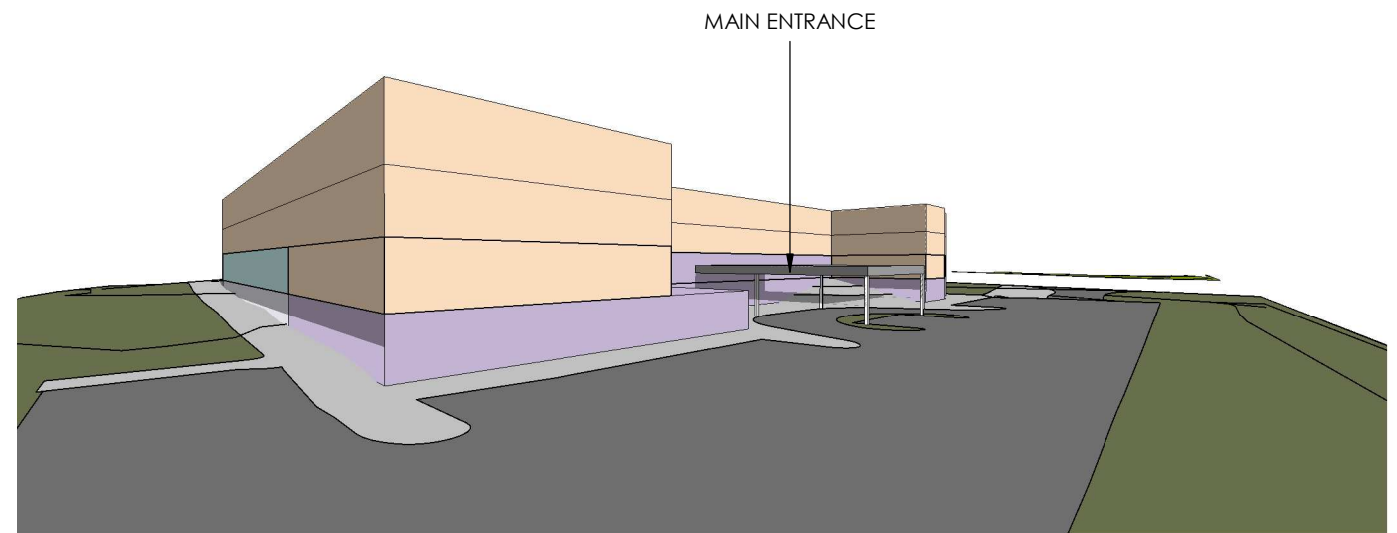
SOUTHEAST VIEW



NORTHEAST VIEW



NORTHWEST VIEW



SOUTHWEST VIEW



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## **APPENDIX B – Road Traffic Data**



about pdc



data



open data



maps



resources



contact us

Planning

Open Data Search

 go

Advanced Search

Data Categories

- Demographics
- Economic Activity
- Environment and Resources
- Facilities and Structures
- Food Check
- Forecasts and Performance Indicators
- Regional Geography
- Transportation

A to Z

Glossary of Terms

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open data

| Open Data | Data Categories | Transportation | Traffic Count Stations |

Traffic Count Stations

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Data Set Description

Point features representing the traffic count stations on the regional road system with traffic counts from 1998 to 2017 for the Region of Peel.

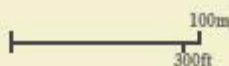
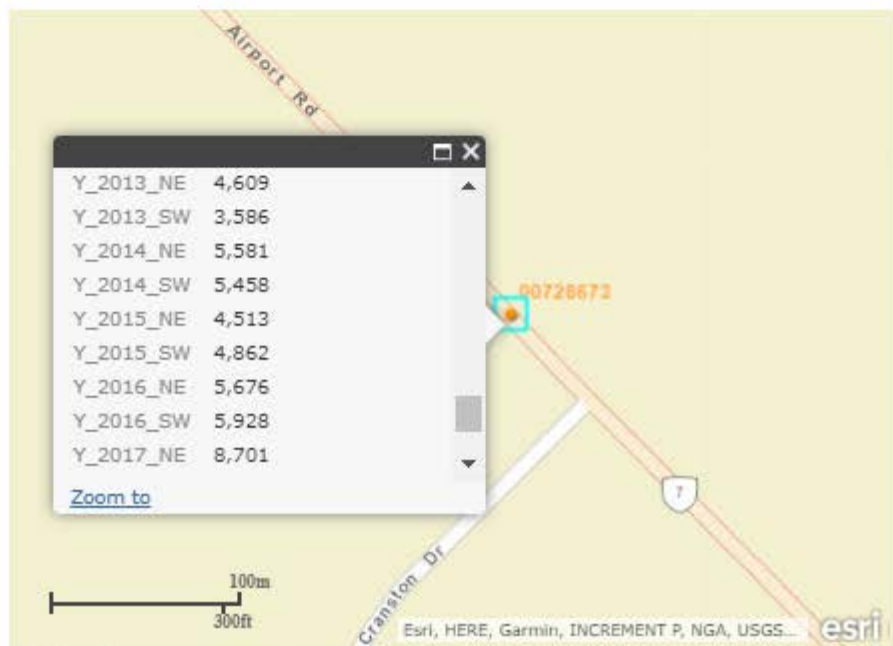
Average Annual Daily Traffic (AADT) is the total volume of vehicles on a roadway for a 24-hour period. AADT's are calculated from raw data which is collected by an Automated Traffic Recorder (ATR). ATR data is collected with pneumatic road tubes that are attached to the road and record traffic with a counting device that is attached to the road tubes. These tubes are installed on the road for at least one day but can be down for up to seven consecutive days.

For north/south roads (ex: Dixie Road), columns with NE show northbound traffic and columns named SW show southbound traffic. For east/west roads (ex: Bovaird Drive), columns named NE show eastbound traffic and columns named SW show westbound traffic.

Years with a 0 or no value as their count reflect that no count was taken for that year.

More data:

- Ontario Open Data: [Traffic Volumes \(1988-2010\)](#)
- City of Brampton: [Municipal road traffic counts map](#) (select the stations under the Traffic Volumes section on the right side)





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**APPENDIX C –  
STAMSON**

Filename: OLA.te                            Time Period: Day/Night 16/8 hours  
 Description: Noise impact at OLA

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

-----  
 Car traffic volume : 13055/6528 veh/TimePeriod  
 Medium truck volume : 861/430 veh/TimePeriod  
 Heavy truck volume : 431/215 veh/TimePeriod  
 Posted speed limit : 60 km/h  
 Road gradient : 0 %  
 Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Airport Rd (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 : 39.80 / 39.80 m  
 Receiver height : 1.50 / 1.50 m  
 Topography : 1 (Flat/gentle slope; no barrier)  
 Reference angle : 0.00

↑  
 Results segment # 1: Airport Rd (day)

-----  
 Source height = 1.32 m

ROAD (0.00 + 57.40 + 0.00) = 57.40 dBA  

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.66	68.90	0.00	-7.03	-4.47	0.00	0.00	0.00	57.40

 -----

Segment Leq : 57.40 dBA

Total Leq All Segments: 57.40 dBA

↑  
 Results segment # 1: Airport Rd (night)

-----  
 Source height = 1.32 m

ROAD (0.00 + 57.39 + 0.00) = 57.39 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.66	68.89	0.00	-7.03	-4.47	0.00	0.00	0.00	57.39

Segment Leq : 57.39 dBA

Total Leq All Segments: 57.39 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 57.40  
(NIGHT): 57.39

↑

↑



Filename: pow.te                            Time Period: Day/Night 16/8 hours  
 Description: Noise Impact at POW

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

-----  
 Car traffic volume : 13055/6528 veh/TimePeriod  
 Medium truck volume : 861/430 veh/TimePeriod  
 Heavy truck volume : 431/215 veh/TimePeriod  
 Posted speed limit : 60 km/h  
 Road gradient : 0 %  
 Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: Airport Rd (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 : 19.00 / 19.00 m  
 Receiver height : 4.50 / 4.50 m  
 Topography : 1 (Flat/gentle slope; no barrier)  
 Reference angle : 0.00

↑  
 Results segment # 1: Airport Rd (day)

-----  
 Source height = 1.32 m

ROAD (0.00 + 65.97 + 0.00) = 65.97 dBA  

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.58	68.90	0.00	-1.62	-1.31	0.00	0.00	0.00	65.97

 -----

Segment Leq : 65.97 dBA

Total Leq All Segments: 65.97 dBA

↑  
 Results segment # 1: Airport Rd (night)

-----  
 Source height = 1.32 m

ROAD (0.00 + 65.96 + 0.00) = 65.96 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.58	68.89	0.00	-1.62	-1.31	0.00	0.00	0.00	65.96

Segment Leq : 65.96 dBA

Total Leq All Segments: 65.96 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 65.97  
(NIGHT): 65.96

↑

↑

Filename: pow2.te                            Time Period: Day/Night 16/8 hours  
Description: Noise Impact at POW2

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

-----  
Car traffic volume : 17625/1958 veh/TimePeriod \*  
Medium truck volume : 1162/129 veh/TimePeriod \*  
Heavy truck volume : 581/65 veh/TimePeriod \*  
Posted speed limit : 60 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): 14654  
Percentage of Annual Growth : 3.00  
Number of Years of Growth : 13.00  
Medium Truck % of Total Volume : 6.00  
Heavy Truck % of Total Volume : 3.00  
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 1: Airport Rd (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 : 75.60 / 75.60 m  
Receiver height : 4.50 / 1.50 m  
Topography : 1 (Flat/gentle slope; no barrier)  
Reference angle : 0.00

↑

Road data, segment # 2: Airport Rd B (day/night)

-----  
Car traffic volume : 17625/1958 veh/TimePeriod \*  
Medium truck volume : 1162/129 veh/TimePeriod \*  
Heavy truck volume : 581/65 veh/TimePeriod \*  
Posted speed limit : 60 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): 14654  
Percentage of Annual Growth : 3.00

Number of Years of Growth : 13.00  
 Medium Truck % of Total Volume : 6.00  
 Heavy Truck % of Total Volume : 3.00  
 Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 2: Airport Rd B (day/night)

-----  
 Angle1 Angle2 : -90.00 deg 0.00 deg  
 Wood depth : 0 (No woods.)  
 No of house rows : 1 / 1  
 House density : 80 %  
 Surface : 2 (Reflective ground surface)  
 Receiver source distance : 75.60 / 75.60 m  
 Receiver height : 4.50 / 4.50 m  
 Topography : 1 (Flat/gentle slope; no barrier)  
 Reference angle : 0.00

↑  
 Results segment # 1: Airport Rd (day)

Source height = 1.32 m

ROAD (0.00 + 60.16 + 0.00) = 60.16 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	70.20	0.00	-7.02	-3.01	0.00	0.00	0.00	60.16

Segment Leq : 60.16 dBA

↑  
 Results segment # 2: Airport Rd B (day)

Source height = 1.32 m

ROAD (0.00 + 54.34 + 0.00) = 54.34 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	70.20	0.00	-7.02	-3.01	0.00	-5.82	0.00	54.34

Segment Leq : 54.34 dBA

Total Leq All Segments: 61.17 dBA

↑  
 Results segment # 1: Airport Rd (night)

Source height = 1.32 m

ROAD (0.00 + 53.64 + 0.00) = 53.64 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	63.68	0.00	-7.02	-3.01	0.00	0.00	0.00	53.64

Segment Leq : 53.64 dBA

↑

Results segment # 2: Airport Rd B (night)

Source height = 1.32 m

ROAD (0.00 + 47.82 + 0.00) = 47.82 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	63.68	0.00	-7.02	-3.01	0.00	-5.82	0.00	47.82

Segment Leq : 47.82 dBA

Total Leq All Segments: 54.65 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 61.17  
(NIGHT): 54.65

↑

↑

Filename: pow3.te                            Time Period: Day/Night 16/8 hours  
Description: Noise Impact at POW3

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

-----  
Car traffic volume : 17625/1958 veh/TimePeriod \*  
Medium truck volume : 1162/129 veh/TimePeriod \*  
Heavy truck volume : 581/65 veh/TimePeriod \*  
Posted speed limit : 60 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): 14654  
Percentage of Annual Growth : 3.00  
Number of Years of Growth : 13.00  
Medium Truck % of Total Volume : 6.00  
Heavy Truck % of Total Volume : 3.00  
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 1: Airport Rd (day/night)

-----  
Angle1 Angle2 : 35.00 deg 90.00 deg  
Wood depth : 0 (No woods.)  
No of house rows : 0 / 0  
Surface : 2 (Reflective ground surface)  
Receiver source distance : 75.60 / 75.60 m  
Receiver height : 4.50 / 4.50 m  
Topography : 1 (Flat/gentle slope; no barrier)  
Reference angle : 0.00

↑  
Road data, segment # 2: Airport Rd B (day/night)

-----  
Car traffic volume : 17625/1958 veh/TimePeriod \*  
Medium truck volume : 1162/129 veh/TimePeriod \*  
Heavy truck volume : 581/65 veh/TimePeriod \*  
Posted speed limit : 60 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): 14654  
Percentage of Annual Growth : 3.00

Number of Years of Growth : 13.00  
 Medium Truck % of Total Volume : 6.00  
 Heavy Truck % of Total Volume : 3.00  
 Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 2: Airport Rd B (day/night)

-----  
 Angle1 Angle2 : -90.00 deg 35.00 deg  
 Wood depth : 0 (No woods.)  
 No of house rows : 1 / 1  
 House density : 80 %  
 Surface : 2 (Reflective ground surface)  
 Receiver source distance : 75.60 / 75.60 m  
 Receiver height : 4.50 / 4.50 m  
 Topography : 1 (Flat/gentle slope; no barrier)  
 Reference angle : 0.00

↑  
 Results segment # 1: Airport Rd (day)

Source height = 1.32 m

ROAD (0.00 + 58.02 + 0.00) = 58.02 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
35	90	0.00	70.20	0.00	-7.02	-5.15	0.00	0.00	0.00	58.02

Segment Leq : 58.02 dBA

↑  
 Results segment # 2: Airport Rd B (day)

Source height = 1.32 m

ROAD (0.00 + 55.77 + 0.00) = 55.77 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	35	0.00	70.20	0.00	-7.02	-1.58	0.00	-5.82	0.00	55.77

Segment Leq : 55.77 dBA

Total Leq All Segments: 60.05 dBA

↑  
 Results segment # 1: Airport Rd (night)

Source height = 1.32 m

ROAD (0.00 + 51.51 + 0.00) = 51.51 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
35	90	0.00	63.68	0.00	-7.02	-5.15	0.00	0.00	0.00	51.51

Segment Leq : 51.51 dBA

↑

Results segment # 2: Airport Rd B (night)

Source height = 1.32 m

ROAD (0.00 + 49.25 + 0.00) = 49.25 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	35	0.00	63.68	0.00	-7.02	-1.58	0.00	-5.82	0.00	49.25

Segment Leq : 49.25 dBA

Total Leq All Segments: 53.54 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 60.05  
(NIGHT): 53.54

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