

# GRADIENTWIND

ENGINEERS & SCIENTISTS

March 27, 2023

Brigil  
98 rue Lois  
Gatineau, Québec J8Y 3R7

Attn: Jean-Luc Rivard, Vice President - Land Acquisitions & Development  
[jlrivard@brigil.com](mailto:jlrivard@brigil.com)

Dear Mr. Rivard:

Re: Roadway Traffic Noise Assessment, Addendum  
2829 Dumaaurier Avenue, Ottawa  
Gradient Wind File 20-150

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Following the completion of a roadway traffic noise assessment for the proposed mixed-use development located at 2829 Dumaaurier Avenue in Ottawa (ref. report 20-150-Traffic Noise Final, dated July 8, 2021), Gradient Wind Engineering Inc. (Gradient Wind) was informed by the planners that the site plan has been updated. The following is a list of the notable changes to the building massing relevant to traffic noise impacts:

- The L-shaped building was changed to have an almost rectangular shape.
- The 30-storey building now features 41 storeys topped by a mechanical penthouse (MPH)
- The northside 6-storey podium rooftop terrace was changed from an L-shaped planform to a rectangular shape. The tower section now shields this OLA from exposure to Hwy 417. As a result noise levels are below 55 dBA. See attached calculation below.
- The Receptor 6 defined as an Outdoor Living Area (OLA) receptor for the south side of the 6-storey podium is now obsolete as the terrace on the south side is removed.

Even though the building massing has changed since the completion of the original report, the distances and angles of exposure to traffic noise sources have not changed significantly. As the noise levels from local roadway sources, namely Dumaaurier Avenue and Highway 417, are expected to be similar to the original predictions achieved for the previous design, our previous recommendations are still applicable to the building, apart from the notable sections above.

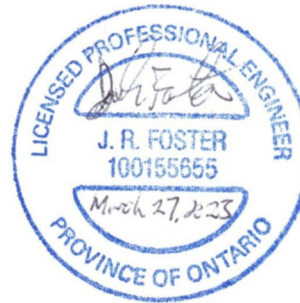
Please contact the undersigned with any questions.

Sincerely,

**Gradient Wind Engineering Inc.**



Efser Kara, MSc, LEED GA  
Acoustic Scientist



Joshua Foster, P.Eng.  
Lead Engineer



Results segment # 1: Dumaaurier (day)

Source height = 1.50 m

Barrier height for grazing incidence

| Source Height (m) | Receiver Height (m) | Barrier Height (m) | Elevation of Barrier Top (m) |
|-------------------|---------------------|--------------------|------------------------------|
| 1.50              | 21.50               | 15.71              | 15.71                        |

ROAD (0.00 + 37.51 + 0.00) = 37.51 dBA

| Angle1 | Angle2 | Alpha | RefLeq | P.Adj | D.Adj | F.Adj | W.Adj | H.Adj | B.Adj  | SubLeq |
|--------|--------|-------|--------|-------|-------|-------|-------|-------|--------|--------|
| -47    | 0      | 0.00  | 63.96  | 0.00  | -4.04 | -5.83 | 0.00  | 0.00  | -16.58 | 37.51  |

Segment Leq : 37.51 dBA

Total Leq All Segments: 37.51 dBA

Results segment # 1: Dumaaurier (night)

Source height = 1.50 m

Barrier height for grazing incidence

| Source Height (m) | Receiver Height (m) | Barrier Height (m) | Elevation of Barrier Top (m) |
|-------------------|---------------------|--------------------|------------------------------|
| 1.50              | 4.50                | 3.63               | 3.63                         |

ROAD (0.00 + 26.49 + 0.00) = 26.49 dBA

| Angle1 | Angle2 | Alpha | RefLeq | P.Adj | D.Adj | F.Adj | W.Adj | H.Adj | B.Adj  | SubLeq |
|--------|--------|-------|--------|-------|-------|-------|-------|-------|--------|--------|
| -47    | 0      | 0.00  | 56.36  | 0.00  | -4.04 | -5.83 | 0.00  | 0.00  | -20.00 | 26.49  |

Segment Leq : 26.49 dBA

Total Leq All Segments: 26.49 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 37.51

(NIGHT): 26.49

