February 9, 2024

All Saints Development LP
150 Elgin Street, Suite 1000
Ottawa, ON K2P 1L4

Attn: Ross Farris, Senior Development Manager
ross.farris@windmilldevelopments.com

Dear Mr. Farris:

Re: Roadway Traffic Noise Addendum Letter
315 & 321 Chapel Street, Ottawa
GW File No.: 23-051 – Noise Addendum Letter

Gradient Wind Engineering Inc. (Gradient Wind) was retained by All Saints Development Limited to undertake a traffic noise assessment for a proposed mixed-use residential development located at 315 & 321 Chapel Street in Ottawa, Ontario. This addendum letter is supplemental to our traffic noise report (ref. *Gradient Wind report #23-051 – Traffic Noise*, dated August 9, 2023), to address changes in the latest site plan drawings.

Gradient Wind received updated site plan drawings in February 2024. Overall, the revised building retains a similar design to the tested configuration, which is a nine-storey nominally rectangular building affixed to the east of the existing church by a polygonal apse. Changes to the site plan include general reconfigurations of the balconies, an addition of a canopy at Level 2, and a reduction in the MPH Amenity Terrace area.

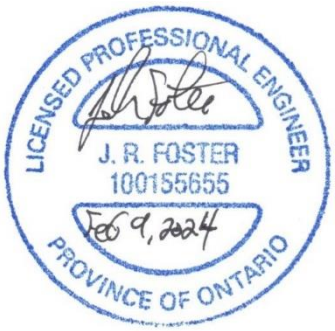
Further analysis was undertaken to examine the noise levels at the Level 4 south-facing terrace. Results indicate the noise levels are 48 dBA during the daytime period, which is well below the ENCG criterion of 55 dBA. As such, mitigation in this area is not required. The STAMSON 5.04 calculation can be seen at the end of this letter.

The minimal changes to the buildings' massing will not alter the noise impacts onto the development from nearby traffic noise sources. Therefore, the initial results, recommendations, and conclusions of our traffic noise report remain unchanged.

This concludes our response and review of the design changes for 315 & 321 Chapel Street in Ottawa, Ontario. Please advise the undersigned of any questions or concerns.

Sincerely,

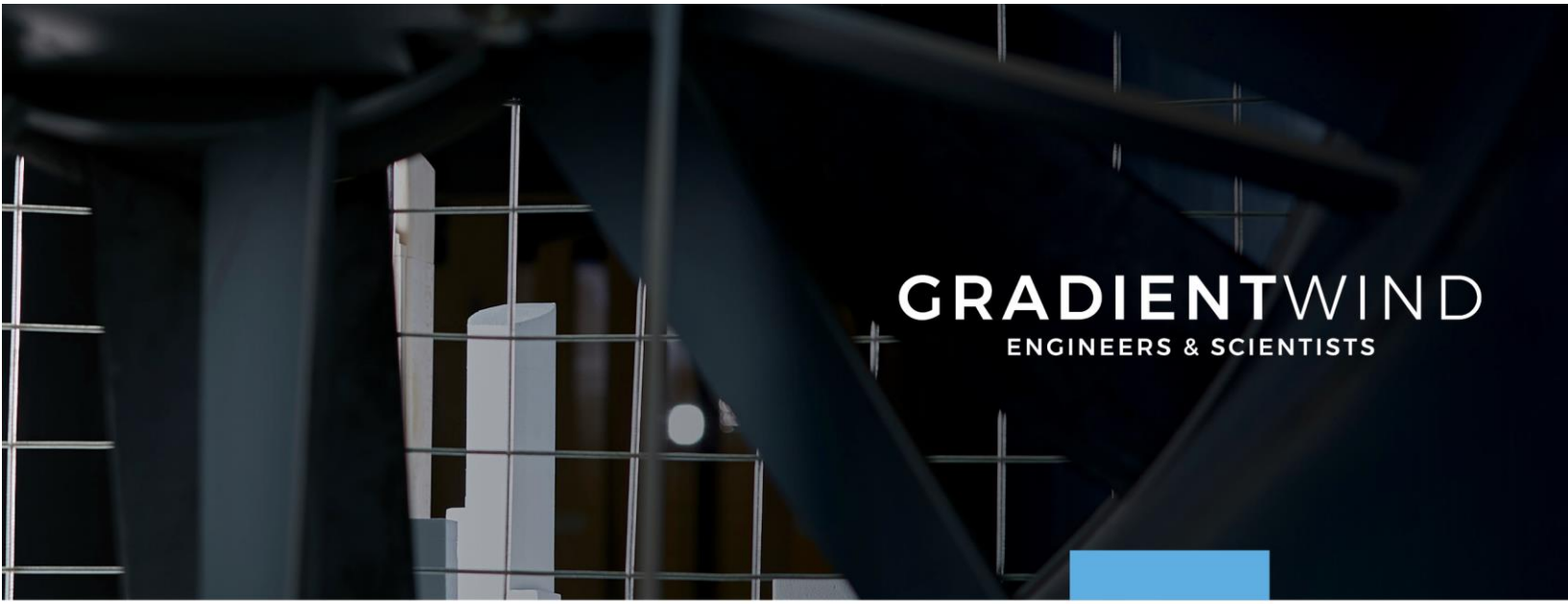
Gradient Wind Engineering Inc.

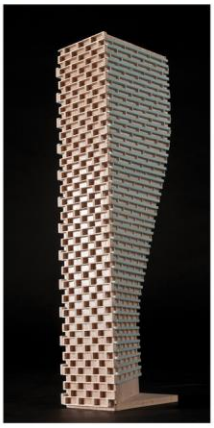


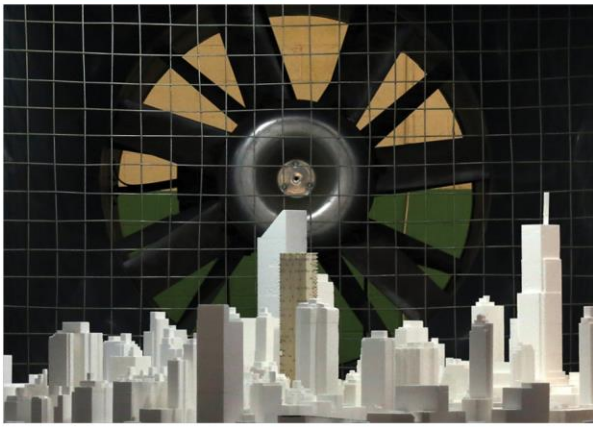
Essraa Alqassab, BASc.
Junior Environmental Scientist

Joshua Foster, P.Eng.
Lead Engineer

Gradient Wind File #23-051 – Noise Addendum Letter







NOISE AT THE LEVEL 4 TERRACE – STAMSON CALCULATION

127 WALGREEN ROAD, OTTAWA, ON, CANADA K0A 1L0 | 613 836 0934
GRADIENTWIND.COM

```
STAMSON 5.0        NORMAL REPORT        Date: 08-02-2024 11:30:32
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: l4.te                Time Period: Day/Night 16/8 hours
Description:


Road data, segment # 1: Chapel St (day/night)
----------------------------------------------
Car traffic volume  :  6477/563   veh/TimePeriod  *
Medium truck volume :   515/45    veh/TimePeriod  *
Heavy truck volume  :   368/32    veh/TimePeriod  *
Posted speed limit  :    40 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):   8000
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 1: Chapel 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  :  48.00 / 48.00  m
Receiver height           :  14.70 / 14.70  m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -90.00 deg   Angle2 : 90.00 deg
Barrier height            :  10.00 m
Barrier receiver distance :  32.00 / 32.00  m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00
```

```
Road data, segment # 2: Laurier Ave (day/night)
----------------------------------------------
Car traffic volume  :  9715/845   veh/TimePeriod  *
Medium truck volume :   773/67    veh/TimePeriod  *
Heavy truck volume  :   552/48    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):  12000
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: Laurier Ave (day/night)
---------------------------------------------
Angle1   Angle2           : -90.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  62.00 / 62.00  m
Receiver height           :  14.70 / 14.70  m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -90.00 deg   Angle2 : 0.00 deg
Barrier height            :  10.00 m
Barrier receiver distance :  51.00 / 51.00  m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m
Reference angle           :   0.00
```

```
Results segment # 1: Chapel St (day)
-----------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
-----------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !       14.70 !        5.90 !         5.90

ROAD (0.00 + 46.57 + 0.00) = 46.57 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
-------------------------------------------------------------------------------
--
   -90     90   0.00  63.96   0.00  -5.05   0.00   0.00   0.00 -12.33
46.57
-------------------------------------------------------------------------------
--

Segment Leq : 46.57 dBA


Results segment # 2: Laurier Ave (day)
-------------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
-----------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !       14.70 !        3.84 !         3.84

ROAD (0.00 + 42.95 + 0.00) = 42.95 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
-------------------------------------------------------------------------------
--
   -90      0   0.00  67.51   0.00  -6.16  -3.01   0.00   0.00 -15.39
42.95
-------------------------------------------------------------------------------
--
```

```
Segment Leq : 42.95 dBA

Total Leq All Segments: 48.14 dBA


Results segment # 1: Chapel St (night)
--------------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !       14.70 !        5.90 !         5.90

ROAD (0.00 + 38.98 + 0.00) = 38.98 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
-------------------------------------------------------------------------------
--
   -90     90   0.00  56.36   0.00  -5.05   0.00   0.00   0.00 -12.33
38.98
-------------------------------------------------------------------------------
--

Segment Leq : 38.98 dBA
```

```
Results segment # 2: Laurier Ave (night)
----------------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !       14.70 !        3.84 !         3.84

ROAD (0.00 + 35.35 + 0.00) = 35.35 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj
SubLeq
-------------------------------------------------------------------------------
--
   -90      0   0.00  59.91   0.00  -6.16  -3.01   0.00   0.00 -15.39
35.35
-------------------------------------------------------------------------------
--

Segment Leq : 35.35 dBA

Total Leq All Segments: 40.54 dBA



TOTAL Leq FROM ALL SOURCES (DAY): 48.14
                           (NIGHT): 40.54
```