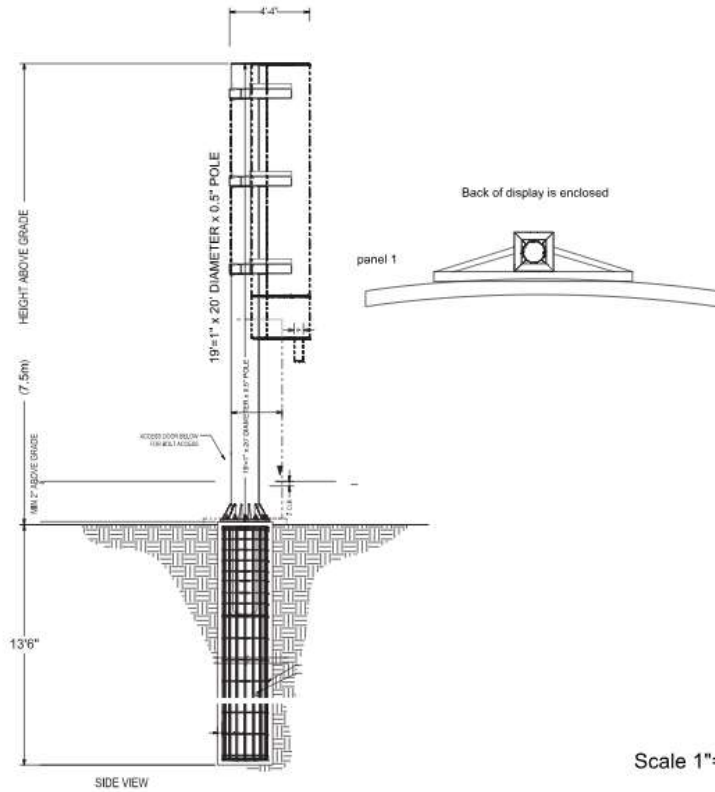
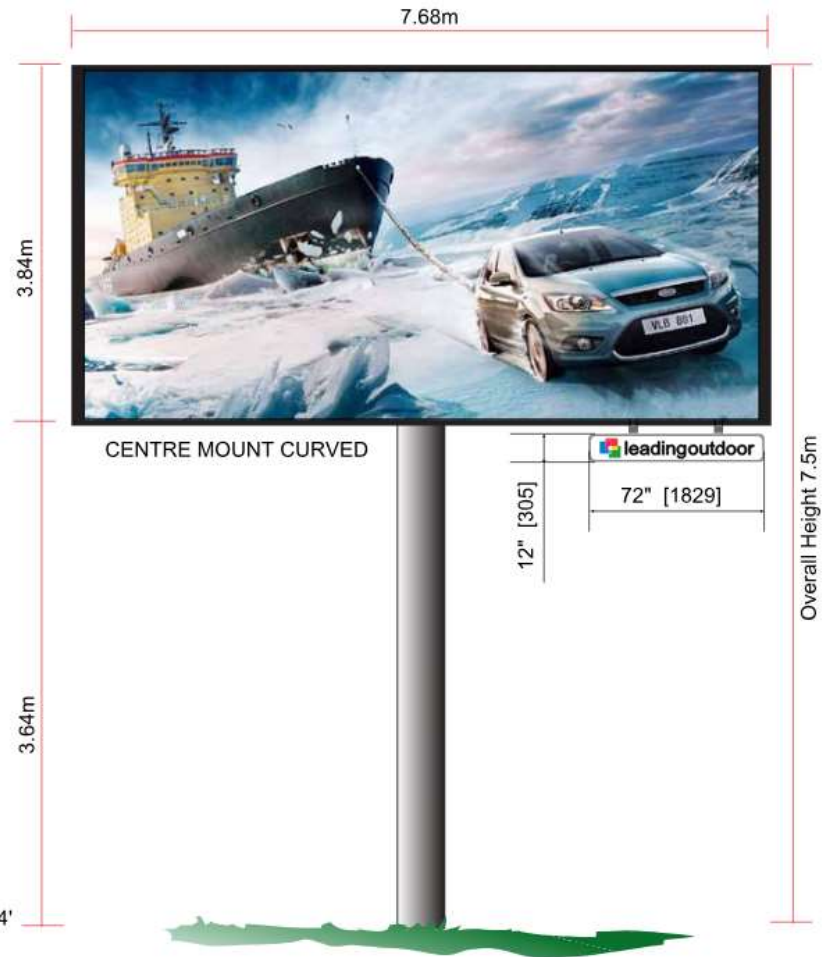


**(1) DIGITAL ELECTRONIC MESSAGE BOARD**

**Ambient Light meter:** located on upper right retainer  
**Camera:** Located on first qtr away from street side



Scale 1"=4'





April 10, 2023

City of Mississauga  
Planning and Building Department  
Development and Design Division  
300 City Centre Drive  
Mississauga, ON L5<sup>+</sup> 3C1

Attention: Jeff Grech

**Re: Urban Design Impact Study – SGNBLD 23-6511 - Sign Variance 2531 Cawthra Rd**

Dear Sir:

The following submission is our Design Impact Assessment Study as it relates to our sign variance submission for the property known as 2531 Cawthra Road.

There was a previous variance application – 22-1187 – which was approved at the November 21, 2022 Planning and Development Committee meeting. This approval was for a smaller board than the one being requested in this application. The approved board had a sign face area of 19.52 sq m and the sign face area being requested here is 29.49 sq m. Due to some design and structural changes to the sign itself and the construction of the individual panels making up the sign, it was determined that a larger sign face area is required and a new application was submitted after consultation with the ward Councillor

The variances being requested are to permit one electronic billboard sign with a static electronic changing copy face, with a total sign face area larger than the maximum 20 sq m.

This property is located on the northern side of Cawthra Road between Dundas St. E. to the north and Queensway E. to the south and is zoned single tenant industrial, E2-Employment. The property frontage is 164.69m with an overall depth varying between 195.92m and 197.18m. The property is operating as Franceschini Brothers Aggregates. Properties to the east, south and west are all zoned E2-Employment with a CP rail line between the subject property and C3-Commercial beyond that to the north. The area to the west of Cawthra Road and south of Dundas St. E, north of the CP rail line is also zoned C3 but has multi-tenant residential units.

The image below shows the property location and properties within 500 m of the proposed sign. Note that some of the upper level apartments in the multi-tenant residential building located at 600 and 620 Lolita Gardens may have limited visibility to the proposed electronic changing copy billboard sign with the separation distance at approximately 450m.



The following assessment of our application will be completed in conjunction with the document titled "Guidelines for the Review of Sign Variance Applications for Billboard Signs with Electronic Changing Copy". Our analysis will be compared to the "Guideline" excerpt:

*"The purpose of this document is to establish a set of criteria by which sign variance applications for billboard signs with electronic changing copy will be evaluated. Municipalities generally establish controls to mitigate the impacts of electronic billboard signs on traffic safety, sensitive land uses and on the visual image of the communities in which they are located."*

The guidelines contained in that document and their criteria will be applied in this review and submission for our request to install a "V" shaped billboard featuring electronic changing copy. One face of the board will be oriented towards south bound traffic and the other will be facing north bound traffic on Dixie Road.

### **3.1 Waiver**

A waiver releasing the City and Road Authority from liability and committing to indemnifying the City and Road Authority against any claim, action or process for damage and/or injury as a result of the installation or existing of the billboard sign has been submitted to the city.

### **3.2 Location**

Billboard signs with electronic changing copy shall only be considered wherever billboard signs are permitted in accordance with Sign by-Law 54-02 (see Table 4, page 19) and in the following areas of the City:

- Public Squares in the Downtown Core
- Public Squares within the Cooksville 4 Corners
- Public Squares within Major Nodes
- Specific areas of the City, deemed by the City to be locations in which electronic billboard signs are seen as key elements that contribute to the character and vibrancy of the area.

The property at 2531 Cawthra Road is ideally located for this type of sign.

The property is situated approximately 1.1km north of the off-ramp for the QEW to the south, along a four lane road. The area is predominantly Employment or Industrial with residential on the northern edge of the 500m radius from the proposed sign location. There are no other sensitive uses which could be impacted by the proposed sign. There is a signalized intersection approximately 500 m to the north of the property where there is access from Cawthra Road to Dundas St. E. To the south, the next signalized intersection is approximately 1.1km at Hwy 20/Queensway East. The proposed billboard sign will have no impact on either of those intersections.

### **3.3 Urban Design Impact Assessment**

Each sign variance application package for a billboard sign with electronic changing copy shall include an urban design impact assessment of the proposed sign on the views, visual quality and character of the existing and planned surrounding context (see Appendix C for Terms of Reference).

A contextual plan/site plan is attached to this submission as per the criteria contained in Appendix C of the Guidelines.

### **3.4 Sign By-law 54-02**

As per Table 4 and Sec. 20 of the Sign By-law 54-02 the proposed billboard featuring electronic changing copy will abide by all the criteria as set out on Page 20 of the Sign By-law 54-02 except that the sign shall have a total sign face area of 29.49 sq m.

### **3.5 Separation Distances, Heights, Setbacks, Maximum Sign Area**

Billboard signs with electronic changing copy shall be positioned relative to one another such that not more than one electronic billboard display shall be visible to an approaching driver at the same time. Except for 2(a) and 2(b), the provisions of the Sign By-law 54-02 Sec. 20 shall also apply to billboard signs with electronic changing copy. No part of a billboard sign with electronic changing copy shall:

- Exceed 7.62 m in height (240-07)
- Be located closer than 7.5 m to the street line (240-07)
- Be multi-faced
- The maximum sign area of a billboard shall be 20 m<sup>2</sup> per sign face (240-07)

The proposed sign will not exceed 7.62 m in height.

The proposed sign will be set back not less than 7.5 m from the property line

The proposed sign will have one sign face with a total sign face area of 29.49 sq m.

Notwithstanding the provisions of Sign By-law 54-02, Section 20, 2(a) and 2(b), no part of a billboard sign with electronic changing copy shall be:

- Located closer than 250 m from another billboard on the same side of the street but this does not apply to billboard signs on opposite sides of grade separated by railway crossings.
- Located closer than 250 m measured in a straight line from a residential Zone.

There is an existing City of Mississauga electronic billboard sign on the rail overpass approximately 226m to the north of the proposed billboard sign location. The image below shows the location of both signs and the separation distance.



The image below shows the view for south bound traffic where there would be no visibility to the proposed new billboard sign until traffic is past the railway underpass. Visibility to the proposed billboard sign would be approximately 175m north of the sign for south bound traffic (see 2<sup>nd</sup> image below).



There is a static billboard located at 2421 Cawthra Road with a permit issued in 2001 under Permit SGNBLD 1-8062. This sign is on the same side of Cawthra Road as the proposed billboard sign and separated by approximately 246.0m. There should be no impact from this sign on the proposed new sign.

### **3.6 Location of billboard signs with electronic changing copy, relative to traffic control devices and important driver decision points**

Where the posted speed limit on a road is less than 80 km/hr, a billboard sign with electronic changing copy shall not be erected within 120 m of a major traffic sign or driver decision point.

The proposed billboard sign will be located approximately 500.0 m from the controlled intersection at Dundas St. E. and Cawthra Road and 1.1km from Queensway East. The speed limit along this section of road is 50 kmph. This separation satisfies the Sign by-laws for setback for a static image billboard.

Driver decision points include intersections, on ramps, interchanges, merge areas, right/left turn lanes and close to traffic signals, toll plaza, pedestrian crossings, rail crossings, work zones, where the cognitive demands on drivers are greatest.

There is a left turn lane due west of the proposed sign location onto Needham Lane as well as a turning lane for vehicles turning into the subject premise from the southbound side of Cawthra Road. Heavy traffic is not associated with either of these turning lanes.

### **3.7 Minimum Message Display Duration**

Generally, bright lights and visual changes, both of which are associated with electronic billboards, can draw the eye to a stimulus that is brighter than its surroundings. Bright lights and visual change can also draw the eye to a stimulus that exhibits movement or apparent movement. In addition, the Zeigarnik Effect (the increased memory recall of an incomplete task/message) suggests that drivers will focus longer on a display in which the message changes, in an effort to complete the viewing experience. Ideally, the dwell time for an individual message should be set so that drivers will see no more than one complete message, thus reducing any possible distracting effects of trying to complete the viewing experience.

The minimum dwell time of the proposed billboard with electronic changing copy shall be 10 seconds.

### **3.8 Transition between successive displays**

The transition time between successive displays on a billboard sign with electronic changing copy shall appear seamless and imperceptible to approaching drivers.

- The maximum interval between successive displays on a billboard sign with electronic changing copy shall be 0.1 seconds.
- There shall be no visual effects or animation of any kind, including but not limited to, fading, dissolving, blinking or the illusion of such effects, during the message transition or interval between successive displays.

The proposed billboard will only display static images which will change on 10 second intervals. There will be no visual effects or animation of any kind as described above. The maximum transition interval between successive displays on the proposed sign will adhere to 0.1 seconds.

### **3.9 Message Sequencing**

When a single message or advertisement is divided into segments and presented over two or more successive display phases on a single electronic billboard or across two or more billboards, it is described as Message Sequencing. The objective of this type of advertising is to capture and hold the viewers' attention throughout the time or distance required to complete the message.

The proposed billboard with electronic changing copy will not use message sequencing or text scrolling of any kind, over successive display phases on a single billboard or across multiple billboards.

### **3.10 Amount of information displayed**

It takes approximately one second for a road user to read one word. The number of words displayed on a billboard sign with electronic changing copy shall not be greater than the number of seconds required for the duration of the message display. The height of each character on the message display shall be sufficient to ensure that the message is clearly legible over the entire viewing distance.

The proposed billboard will adhere to the maximums above.

Interactive billboard messages that permit, support or encourage interactive communication with drivers in real time shall not be permitted. These include billboard signs with electronic changing copy that respond to text messages, phone calls or emails from passing drivers or that request immediate response by text, phone, email, etc. The proposed billboard will only display static images which meet the criteria above and will include no interactive communication whatsoever.

### **3.11 Sign Animation**

Animation refers to any motion in the advertisement, including video, special effects within a single frame and transition, movement and rotation between successive frames.

There shall be no animation, flashing movement or appearance of movement on a billboard with electronic changing copy, except where the billboard sign with electronic changing copy is not visible from any vehicular roadway.

The proposed electronic changing copy billboard will provide only static images and those images will change in 10 second intervals. In addition, there will be no video, or animation or flashing as well as those criteria mentioned above and to as "*Transition between successive displays*".

### **3.12 Sign Brightness and Luminance**

Brightness is the perceived intensity of a source of light. It is the appearance of light to the viewer. Luminance is the amount of light leaving a surface in a particular direction or the amount of light that is deflected off a surface. Sign brightness is a function of sign luminance, the background against which the sign is viewed, the driver's age, level of adaptation to the eyes, and atmospheric conditions, such as fog.

Brightness can be measured as luminance, in candelas per square m (cd/m<sup>2</sup>) or illuminance in foot candles (fc). Luminance is the amount of light that is emitted from a surface, while illumination is the amount of light falling upon a surface. The human eye is drawn to the brightest objects in a field of view and this is generally referred to as the "moth effect". A brightly illuminated electronic billboard sign could draw a driver's



attention away from the road, other vehicles and traffic devices. This is of particular concern at nighttime, dusk or dawn and during periods of inclement weather. The maximum luminance level for a billboard sign with electronic changing copy shall be:

- 5000cd/m<sup>2</sup> from sunrise to sunset (One nit = One Candela per m<sup>2</sup> [cd/m<sup>2</sup>])
- 300cd/m<sup>2</sup> from sunset to sunrise (One nit = One candela per m<sup>2</sup> [cd/m<sup>2</sup>])
- The maximum illumination level for a billboard sign with electronic changing copy shall be 0.3 lux above ambient light levels (One lux = 0.093 foot-candles [fc])
- All billboard signs with electronic changing copy shall be equipped with ambient light sensors and automatic dimmers that control the light output relative to ambient conditions
- Electronic billboard signs shall be illuminated between the hours of 5:00 am and 12 midnight only each day.

To measure illumination, the International Sign Association (2011) has provided the following equation to determine the distance away from the billboard sign at which the measurement shall be taken:

Measurement distance = Square Root of (Sign Area [m<sup>2</sup>] x 100)

The proposed billboard will adhere to the proposed criteria of 5,000 nits during the day and powering down to 300 nits during the night. This is typical for many other municipalities in Ontario. Preferred illumination of the boards is continuous with no shut-down time.

#### **Conclusion**

It is important to remember that these are guidelines only and are not contained in any municipal law. The intent is to allow for applications of this type to be reviewed on a case by case basis by staff and decided through Council.

As stated in the introduction, the property location and proposed billboard with electronic changing copy are ideally suited to this particular location. From every perspective, this is an extremely safe location. The sign meets all of the criteria identified in the by-law with the exception of the overall increased sign face area of the sign which is proposed to enhance driver viewing.

We respectfully request your support for this applications.

Yours sincerely,



**Gilda Collins**

Senior Project Manager – Special Projects

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