

2200 Markham Road

Managing Lighting Impacts

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Challenges of Complying with Condition 3

We support Staff's position that all eight criteria for the requested variances have been met, subject to Conditions of Approval.

Compliance with two of the Conditions are easily achievable:

- 1) to remove the existing third party ground sign from the Subject Property; and
- 2) to limit the interior angle of the V-Shape configuration to no more than 45 degrees

Upon further consultation with Media Resources Inc., Canada's leader in digital billboard manufacturing and light-mitigation measures, it has been found that the Condition limiting the Proposed Sign to 3000K Correlated Color Temperature (CCT) is not a suitable requirement for this type of sign, because it will severely compromise the image quality and distort the colors of corporate logos to a point that render the sign ineffective.

We respectfully ask that the Sign Variance Committee consider that the Proposed Sign already achieves higher-level Planning objectives through by-law compliance and leveraging the latest technology – minimizing glare, eliminating direct upward light, reducing light spill, and using appropriate color temperature.

Rationale for an Alternative Condition

The current Condition is intended to manage “traditional” lighting fixtures, such as streetlights, floodlights, sports field lighting, or pathway and architectural accent lighting.

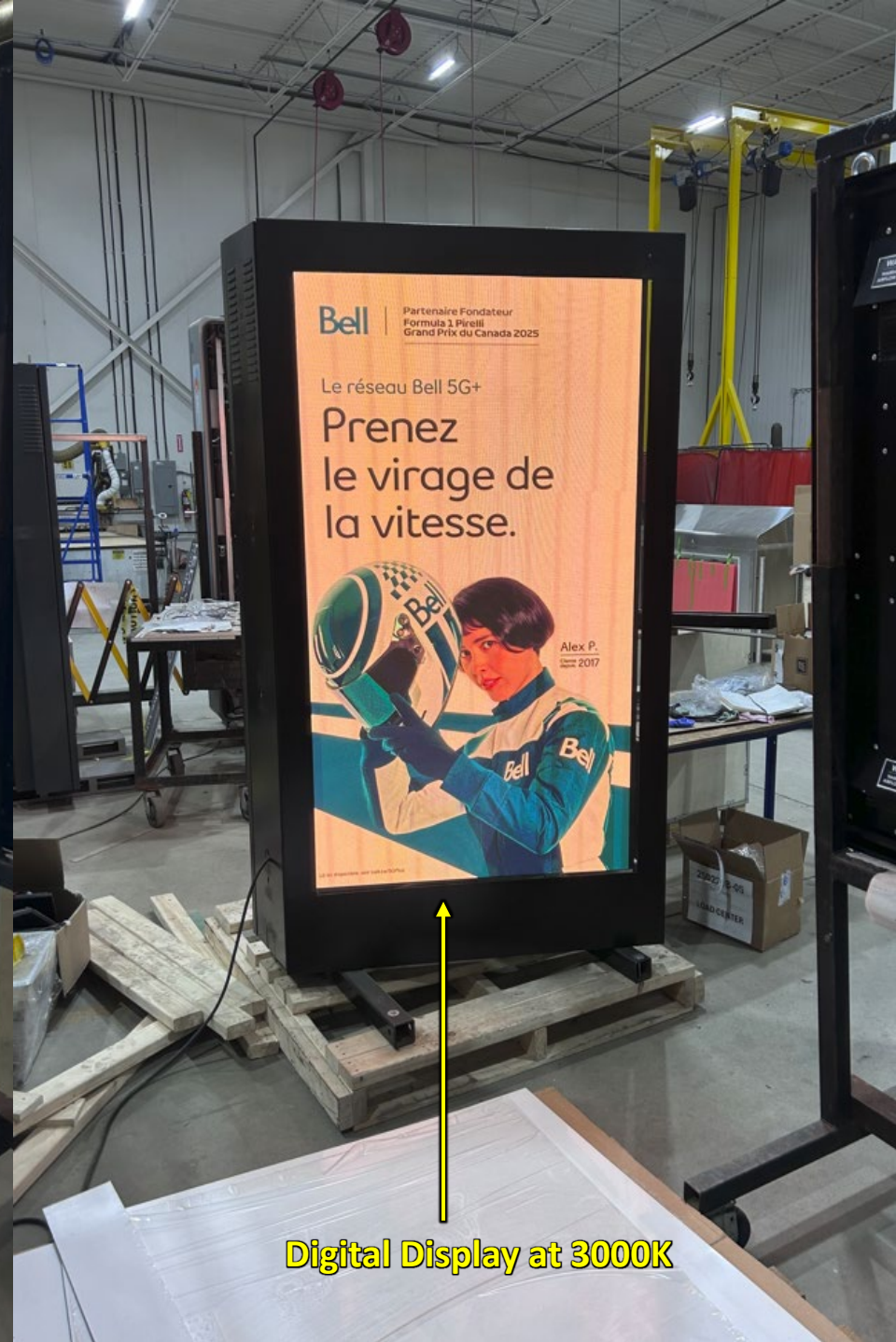
These light sources emit white light only, and therefore can operate at a fixed color temperature.

A digital billboard, however, is not a lighting fixture. It is a full-color electronic display that uses red, green, and blue LEDs to reproduce millions of colors to accurately display logos, graphics, and other content.

Setting a limit of 3000K forces the display to shift to warmer orange and yellow tones, which alters the client’s distinct branding.



Standard Digital Display



Digital Display at 3000K

Examples of Light Sources from “Best Practices for Effective Lighting” Development Guideline



Photo Credit: Gabriel Guillen



Photo Credit: Gabriel Guillen



Photo Credit: Gabriel Guillen

Effective Lighting Fixtures

Lighting used to illuminate the pathways and surrounding site of a building should be efficient while providing enough illumination to make the site safe and secure at night.



Examples of effective fixtures are shown in this collage. Preferred fixtures direct light downward to the surface where it is needed. They minimize uplight which causes skyglow and glare to an observer. For locations of examples, see Appendix G, pg 75.

Photos Credit: Gabriel Guillen

Mid to High Rise and all Non-residential Buildings

- Applies to all residential apartment buildings and non-residential buildings.
- Minimize office lighting after-hours by using timers, area control switches and occupancy sensors.
- Where offices must be lit, use blinds, electronic shutters and task lighting to minimize light spill.
- Where external lighting of the building is necessary, use downlight to highlight architectural features.
- All lighting should be facing downward on building facades.
- Shield street facing lighting so that establishments and the sidewalks can be seen by passers-by.
- Observe the Toronto City Sign Bylaw: turn off signage after hours and observe limits on sign brightness and light trespass.



Photo Credit: Gabriel Guillen

Bright Building
on Simcoe Street



Photo Credit: Gabriel Guillen

Queen Street West
Sign Bylaw | www.toronto.ca/signbylawunit

Gas Station and Convenience Store Canopy

Light sources in the canopy should be shielded so they are not visible from the property line.

The lighting of the area under the canopy should be adequate for the activities taking place, not to attract attention to the business.

The average horizontal illuminance under the canopy should be no more than 10 lux, with a uniformity ratio no greater than 3:1.

Lights should not be mounted on the top or sides of the canopy, and the sides of the canopy should not be illuminated.

Canopy lights are an excellent candidate for motion-sensing activation, where the lamps remain in a partially dimmed state until a car is detected.

Signs should meet the requirements of the City of Toronto Sign Bylaw. www.toronto.ca/signbylawunit



Photo Credit: Gabriel Guillen

Gas Station Canopy | Shielded Canopy Light

By-law Compliance and Mitigation Technology

- Reduction in Brightness Levels to 300 NITS between Sunset and Sunrise ✓
- Sign will be turned off between the hours of 11 pm and 7 am ✓
- An Ambient Light Sensor will be installed to automatically optimize the display ✓
- Louvres above individual LEDs will reduce upwards light spill ✓
- Low-Level LED Screens reduce overall carbon emissions by 70% ✓
- The lifespan for this product is up to 40% longer than standard displays ✓
- Power consumption is also reduced by 50% compared to standard displays ✓
- More components are recyclable and re-usable, reducing carbon-intensive production of aluminum parts ✓
- The Proposed Sign will be powered by “green” energy via Bullfrog Power ✓

Rationale for an Alternative Condition

Media Resources have suggested an alternative approach that will allow for accurate color display while still achieving higher-level objectives for lighting mitigation:

“The Proposed Sign will include light-mitigation technology that reduces upward light trespass and minimizes glare, by way of light-blocking louvres and a reduction of blue-wave output by 50% between sunset and sunrise.”

We are confident that this Condition will minimize glare, reduce upwards light spill and therefore minimize night-sky pollution, while maintaining accurate color reproduction to preserve the Proposed Sign’s intended functionality.

Questions?

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