

Flashing Beacons on School Zone Signs

ISSUE

This report provides information on the implications and feasibility of adding flashing beacons on school zone signs.

BACKGROUND

In 2014, the Administration installed flashing beacons on school zone signs at two locations for approximately two weeks as a pilot project. The beacons were provided by the vendor at no charge and were installed above the school zone signs. The beacons flashed only while the 30 km/h speed limit was in effect (i.e., Monday to Friday, 8:00 a.m. to 5:00 p.m.). The locations included in the pilot were:

1. Clarence Avenue between 3rd Street East and 5th Street East (École Canadienne Française – Pavillon Monique Rousseau)
2. 33rd Street West between Avenue K North and Valens Drive (École Henry Kelsey)

Results of the pilot were mixed. At Clarence Avenue, the 85th percentile speed (speed at which 85 percent of drivers are travelling at or below) was reduced by approximately 10 km/h while there was no change measured at 33rd Street West.

At the end of the pilot timeframe, the pilot program for the Saskatchewan Government Insurance (SGI) automated enforcement program in school zones was underway, and the Administration was working with each community to address speeding issues on local and collector streets through the Neighbourhood Traffic Review Program. For these reasons and inconclusive results of the flashing beacon pilot, the Administration did not continue the assessment of flashing beacons on school zone signs.

At the Standing Policy Committee on Transportation meeting held on March 28, 2022, the Committee received a report on the Amendments to Council Policy C07-015, Reduced Speed Zones for Schools and passed the following resolution:

“That Administration report back on the implications and feasibility of adding flashing lights on school zone signs, including the option for solar power.”

CURRENT STATUS

The City follows national guidance provided by Transportation Association of Canada (TAC) through the Manual of Uniform Traffic Control Devices for Canada (MUTCDC) for the installation of signs and pavement markings. There are currently no flashing beacons on school zone signs in the city.

The City recently modified school and playground areas and zones to align with national guidelines established by the TAC in the School and Playground Areas and Zones: Guidelines for Application and Implementation (School and Playground Guidelines).

The start of each school zone is denoted by a “School” warning sign and a 30 km/h maximum speed limit sign with the hours of operation. The end of each school zone is denoted by a “School” warning sign and an “Ends” tab. The City of Saskatoon does not currently use flashing beacons for “School” warning signs.

DISCUSSION

National Guidance

The School and Playground Guidelines defers to the MUTCDC and the proper placement of a beacon in relation to the school zone signage if a beacon is recommended.

The MUTCDC Section A1.6.9 Enhanced Conspicuity for Standard Signs states that the conspicuity or impact of a sign can be enhanced using a number of available treatments, including:

- Oversized signs;
- Double posting a sign (i.e., posting a second identical sign on the left side of the street);
- A “New” tab sign;
- Warning/flashing beacons;
- Light-emitting diode borders; or
- A strip of retroreflective material attached to the sign post.

The MUTCDC also states that it is important to use these strategies sparingly in order to preserve the effectiveness of all traffic control devices and that the use of these technologies or techniques is often limited to very specific conditions.

The MUTCDC Section B7.1 states that beacons should be used with considerable discretion because overuse of these devices may lead to their being disregarded by motorists. The decision to install flashing beacons should be based, at least in part, on a higher-than-expected collision risk, and the presence of a pattern of collisions of a type which should be prevented or reduced in number by the installation of the flashing beacon.

Other considerations for the installation of flashing beacons includes:

1. The devices, when installed near a resident’s home, have the potential to shine into their houses; and
2. The placement of flashing display boards must be carefully considered to ensure it does not interfere with other traffic control devices.

Solar Powered Traffic Devices

There are several factors that must be considered when using solar power for provision of power, including:

1. Areas with overhanging trees can obstruct the solar panels making it difficult for them to charge; and

2. Solar power for these devices may have operational concerns in winter due to battery issues in cold temperatures and less light hours for charging time.

If solar powered flashing beacons are to be considered, research would have to be undertaken to ensure the equipment will be operational in all weather environments experienced in Saskatoon and they are located in areas that will allow for continuous operation.

Jurisdictional Scan

A jurisdictional scan was completed to determine the use of flashing beacons for school zones, and to gauge whether they were effective. Thirteen Canadian municipalities responded, including:

- Regina, Martensville (SK)
- Edmonton, Red Deer, St. Albert, Okotoks (AB)
- Winnipeg (MB)
- Victoria (BC)
- Toronto, Mississauga, London, Kitchener (ON)
- Halifax (NS)

Of the 13 municipalities, four use flashing beacons on school zone signs for specific situations. Winnipeg piloted only one location and had not yet conducted a follow-up evaluation. Mississauga refers to their zones with flashing beacons as *40 km/h when flashing zones* as opposed to *school zones*. Of the municipalities that use flashing beacons, most either did not state, or were unable to determine if they were effective due to the implementation of multiple other improvements in the roadway at the same time.

Other devices used by municipalities to denote school zones included yellow sleeves or reflective sign post sleeves and speed cushions.

Additional details from the jurisdictional scan are included in Appendix 1.

Applicability for Saskatoon School Zones

Flashing beacons are not necessary at all locations for a driver to comprehend and understand school zones. With the recent implementation of the school and playground revisions, faded signs were replaced, obstructed signs were either relocated or the trees/shrubs were trimmed, and signs were adjusted so that drivers exiting back lanes would see the signage.

In the past, at locations where a number of complaints were received about enforcement fines and drivers being unaware of the school zone, supplementary signs were used to increase conspicuity of the school zone signage (either double-posting or overhead installations). Currently, there are no identified collision patterns in the school zones that would be addressed by the installation of flashing beacons.

FINANCIAL IMPLICATIONS

The cost to install flashing lights on school zone signs is approximately \$10,000 per sign (or \$20,000 per school zone if beacons are limited to only one location at the school).

Maintenance costs cannot be identified at this time. As these would be important traffic safety devices operating everyday throughout the year, additional regular inspection and maintenance beyond what is currently required for existing school zone signage would be required to ensure their continued operation.

OTHER IMPLICATIONS

There are no privacy, legal, social, or environmental implications identified.

NEXT STEPS

Administration will continue to follow the TAC and MUTCDC guidelines for installation of enhanced treatments, including flashing beacons, to school zone signage. If flashing beacons are warranted, consideration will be given to the installation of solar powered flashing beacons where feasible.

APPENDICES

1. Jurisdictional Scan

Report Approval

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