

HALIFAX

P.O. Box 1749
Halifax, Nova Scotia
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Item No. 14.1.2
Halifax Regional Council
December 12, 2017

TO: Mayor Savage and Members of Halifax Regional Council

Original Signed by



SUBMITTED BY:

Jacques Dubé, Chief Administrative Officer

DATE: October 23, 2017

SUBJECT: Crosswalk Flags

ORIGIN

Item 14.1.4 of the May 9, 2017 meeting of Halifax Regional Council:

MOVED by Councillor Cleary, seconded by Councillor Zurawski THAT Halifax Regional Council not allow any further installations of crosswalk flags and direct staff to begin a pilot of various treatments to enhance the visibility and safety, with relevant high-quality data collected pre-treatment and post-treatment, including at least one treatment of crosswalk flags, and also consider solutions that other jurisdictions have implemented based on evidence, and that staff provide an update by the end of December 2017 to Regional Council.

LEGISLATIVE AUTHORITY

Halifax Regional Municipality Charter (HRM Charter), Part XII, subsection 318(2), "In so far as is consistent with their use by the public, the Council has full control over the streets in the Municipality."

RECOMMENDATION

It is recommended that Halifax Regional Council direct staff to:

1. Continue with identification and pilot testing of various products to enhance the visibility of crosswalks as part of their on-going practice; and
2. Not allow any further installations of crosswalk flags until such time as a decision is made regarding a policy governing their installation.

BACKGROUND

On May 9, 2017, in response to a request from Halifax Regional Council, staff brought forward a proposed policy for Council consideration that would provide direction related to the installation of crosswalk flags on the Municipality's roadways. (Attachment 1)

The report included information resulting from the assessment of multiple crosswalk locations where flags had been installed as well as similar locations where there were no flags. Assessments were conducted as part of the 2015 and 2016 traffic data collection programs. The data obtained from the assessments was used in conjunction with information gathered from other jurisdictions that either have or had crosswalk flag programs to shape the proposed administrative order and recommendations outlined in the May 9, 2017 report.

DISCUSSION

As part of an on-going commitment to identify alternative measures to effectively improve visibility and safety at crosswalks, staff implemented two new treatments this year for testing; rectangular rapid flashing beacons and fluorescent yellow-green crosswalk signs.

The rectangular rapid flashing beacons are pedestrian activated beacons that are installed just above the standard crosswalk signs at marked crosswalks. Four locations had the new lights installed and data was collected both before and after the RRFB was installed in order to determine driver yielding compliance.

Location	Original Crosswalk Treatment	Yielding Before	Yielding After
South St at Wellington St	Overhead RA-5 no beacons	77%	94%
Williams Lake Rd at Ravenscraig Dr	Unmarked	52%	98%
Maple St at Dahlia St	Overhead RA-5 with beacons	93%	97%
Basinview Dr at Bedford Hills Rd	Overhead RA-5 with beacons	98%	100%

All study locations were two-lane, two-way roadways and based on the information obtained, it can be seen that the RRFB treatment has a noticeable impact on driver yielding behavior on these types of roadways, even at locations where yielding was already very high. In addition to the data that was collected, staff also received several comments from the public indicating that the RRFBs were very bright and easy to see, even on a sunny day, and were much more visible than the RA-5's because of their position and flash pattern. RRFBs are supported by the Transportation Association of Canada (TAC) and identified in the Pedestrian Crossing Control Guide. Given the initial success of these devices, staff will be incorporating RRFBs into the toolbox of potential crosswalk treatments in addition to RA-5s, which are still effective and appropriate for many situations.

The installation of fluorescent yellow-green crosswalk signs is a pilot being undertaken in support of a TAC sponsored project. The aim of this project is to determine if the use of the fluorescent yellow-green signs, as opposed to the standard white signs, will have an impact on driver yielding behavior. The project will incorporate before and after data collected at multiple locations within several jurisdictions across Canada. For HRM, six locations have been identified:

- Inglis Street at South Bland Street
- Windsor Street at Welsford Street
- Novalea Drive at Leeds Street
- Chebucto Road at Chebucto Lane
- Caldwell Road at Wexford Road
- Pleasant Street at Marvin Street

Data has already been collected at these locations for the "before" condition and the project will include

“after” data collected at 1 month and 3 months after installation of the fluorescent yellow-green signs. The results of this study will be made available once the project has been completed.

Two of the crosswalk locations identified for inclusion in the fluorescent yellow-green sign study were also noted to have crosswalk flags installed, Caldwell Road at Wexford Road and Pleasant Street at Marvin Street. Since the study required that no other measures be in place while testing the yellow-green signs (the crosswalk flags had to be temporarily removed), staff took the opportunity to undertake further testing in relation to the crosswalk flags in order to build on the information gathered as part of previous studies undertaken in 2015 and 2016.

Both locations are similar with regard to the roadway type/width (two-lane, two-way), crosswalk configuration and traffic volume. Staff completed staged crossings in order to control flag usage. The factor being assessed was driver yielding behavior for three scenarios:

- Crosswalk flags in place and used by the pedestrian to cross
- Crosswalk flags in place not used by the pedestrian to cross
- No crosswalk flags in place

For both locations, staff completed 50 crossings for each of the three scenarios and made note of driver yielding behavior for each crossing. This provided 100 total crossings for each of the three scenarios.

Condition	Yielding
Flags in place / Used to cross	94%
Flags in place / Not used to cross	86%
No flags in place	89%

The results indicate there may be potential to achieve some improvement to driver yielding for a two-lane road when the flags are used. Because of the small sample size, the difference in yielding behaviour may or may not be statistically significant, however, the results are in keeping with those obtained during the 2016 data collection outlined in the May 9, 2017 staff report.

When reviewing recent experience with assessment of driver yielding rates here in HRM, it should be noted that even at standard, marked crosswalks (those with pavement markings and signs alone) driver yielding behavior is very high at about 89% and when additional measures are included, yielding has been observed in the range of 93% - 98% for RA-5's with flashing beacons and 94% - 100% for RRFB.

There has been reference made to a report by the National Cooperative Highway Research Program, Report 562, <http://www.trb.org/main/public/blurbs/157723.aspx> when discussing crosswalk flags. The report was intended to assess a number of pedestrian crosswalk treatments for high-speed, high-volume roadways at unsignalized crossings. Locations with crosswalk flags were included, but it was indicated in the report that these locations were on lower speed, low volume roadways. Since the report concluded that posted speed and number of lanes being crossed had an impact on driver yielding, comparison of locations with flags to other treatments used on higher speed, wider roadways is not really appropriate. This aside, results of the study showed average driver yielding to be about 65% for all locations with flags, which is considerably lower than what has been observed in HRM for locations with no flags in place. Other points of note from this study include:

- Overall study locations were chosen to focus on arterial roads, while the locations with flags were on lower volume roads
- None of the locations with flags were at mid-block locations
- Flags were not installed at locations with other devices (i.e. RA-5 or traffic signals)
- 9% of those using the flags used them improperly and crossed without a sufficient gap in traffic

Another measure that has been identified as potentially beneficial in improving crosswalk visibility is a reflective sleeve placed over the crosswalk sign post. A TAC study is currently in progress to investigate its

effectiveness and HRM staff are participating on the project committee.

FINANCIAL IMPLICATIONS

There are no financial implications associated with this report.

RISK CONSIDERATION

There are no significant risks associated with the recommendations of this report.

COMMUNITY ENGAGEMENT

Community engagement was not undertaken as this report is provided in response to questions raised by Council in relation to a previous report.

ENVIRONMENTAL IMPLICATIONS

There were no environmental implications identified in relation to this report.

ALTERNATIVES

Halifax Regional Council could:

1. Choose to adopt the proposed Administrative Order, By-Law amendment and recommendation as outlined in the May 9, 2017 Regional Council Report; or
2. Choose to consider one of the alternatives as outlined in the May 9, 2017 Regional Council Report. (Attachment 1).

ATTACHMENTS

Attachment 1 – May 9, 2017 Regional Council Report – “Crosswalk Flag Program Administrative Order”

A copy of this report can be obtained online at halifax.ca or by contacting the Office of the Municipal Clerk at 902.490.4210.

Report Prepared by: Roddy MacIntyre, P.Eng., Senior Traffic Operations Engineer, 902.490.8425



P.O. Box 1749
Halifax, Nova Scotia
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Item No. 14.1.4
Halifax Regional Council
May 9, 2017

TO: Mayor Savage and Members of Halifax Regional Council

SUBMITTED BY:

Original Signed by 

Brad Anguish, A/Chief Administrative Officer

DATE: March 9, 2017

SUBJECT: Crosswalk Flag Program Administrative Order

ORIGIN

Item 14.5.3 of the July 19, 2016 meeting of Halifax Regional Council:

MOVED by Councillor Outhit, seconded by Councillor Rankin THAT Halifax Regional Council direct staff to prepare an administrative order outlining a policy, process, governance and criteria for the allowance of crosswalk flags to be placed at crosswalks.

MOTION PUT AND PASSED

LEGISLATIVE AUTHORITY

Halifax Regional Municipality Charter, (HRM Charter), Part III, subsection 59(3), "In addition to matters specified in this Act or another Act of Legislature, the Council may adopt policies on any matter that the Council considers conducive to the effective management of the Municipality."

HRM Charter Part VII, subsection 188(1), "The Council may make by-laws, for municipal purposes, respecting (a) the health, well-being, safety and protection of persons; ... (c) persons, activities and things in, on or near a public place or place that is open to the public."

HRM Charter, Part XII, subsection 318(2), "In so far as is consistent with their use by the public, the Council has full control over the streets in the Municipality."

RECOMMENDATION

It is recommended that Halifax Regional Council:

1. Adopt Administrative Order 2017-001-OP, the *Placement of Crosswalk Flags Administrative Order*, as set out in Attachment 1 of this report;
2. Adopt By-law S-310, amending By-law S-300, the *Streets By-law*, as set out in Attachment 3 of this report; and
3. Direct the CAO to direct staff to order the removal of any existing crosswalk flag installations not in compliance with the administrative order within a time frame of one year after the administrative order coming into force.

BACKGROUND

The Crosswalk Safety Advisory Committee (CSAC) was established by Halifax Regional Council on March 5, 2013 with the following mandate:

The CSAC will serve as a forum to develop and present input and advice with respect to crosswalks, with the objective of improving the safety of pedestrians using crosswalks in HRM;

The CSAC will develop a report, along with action plans to improve the safety of pedestrians using crosswalks, both marked and unmarked;

Issues to be addressed in the report include, but are not limited to education, enforcement, traffic control measures and standards and consistency, as they relate to crosswalks, including budget implications.

As part of their mandate the CSAC produced a report "Making Our Communities Safer – Crosswalk Safety Work Plan" (The Work Plan), which was presented to Regional Council on March 4, 2014, and identified six goals, each outlining several specific actions to be taken in achieving the goal. One of the action items under the goal titled, "Traffic Control" included:

"Approving the use of crosswalk flags in HRM at crosswalks where the community takes on the responsibility of installing and maintaining them."

In relation to the above noted CSAC work plan goal and action item, a recommendation report was approved by Regional Council at the August 5, 2014, council session which indicated that:

"Community groups would be allowed to implement crosswalk flag programs with input from HRM staff to help ensure programs are carried out appropriately and safely."

After receiving Council direction in 2014 to work with the community to facilitate the installation of flags at municipal crosswalks, staff met with the citizen leading the crosswalk flag campaign to discuss and agree on an approach to be used when requests were received for the installation of crosswalk flags. As a result, a general approach and guidelines were put in place to help facilitate the program. Since that time flags have been installed at approximately 135 crosswalk locations within HRM.

DISCUSSION

During implementation of the crosswalk flag program (the program), several questions arose as to the

intent behind the original direction provided by Council and the guidelines put in place to support the installation of crosswalk flags. As a result, a report was submitted at the June 23, 2016, session of the Transportation Standing Committee outlining the current approach being used and recommended the drafting of an administrative order to provide a formalised policy for moving forward with the crosswalk flag program.

As part of the 2015 and 2016 traffic data collection seasons (May to December), staff undertook some observations and assessments of crosswalk locations with and without flags. Information on the use and impact of crosswalk flags was gathered.

During the 2015 data collection season, crosswalk locations where flags had been installed were observed. Based on observations and data collected, staff was able to identify the following:

- Where flags were available, usage was identified to be approximately 8 percent;
- Flag usage was observed to be most common among young children and seniors;
- Driver yielding behaviour, with or without a flag, was found to be good at 87 percent yielding.

The 2016 data confirmed much of what was found in 2015, but went further to better assess driver yielding rates. The 2016 assessment included twenty four (24) crosswalk locations; twelve (12) with flags in place and twelve (12) without flags. Locations and data are included in Attachment 4. Based on the data collected and observations made, staff was able to identify the following:

- At locations where flags were present, overall usage was identified to be approximately 5 percent;
- Flag usage was most common among young children and seniors; and
- Flag usage and driver yielding behaviour by crosswalk type is outlined in the following table.

Crosswalk Type	Flag Usage	Driver Yielding Compliance	
		Locations Without Flags	Locations With Flags
Crosswalk with pavement markings and signs only	2%	89%	92%
Crosswalk with pedestrian activated flashing beacons	6%	95%	93%

The above information was obtained through random sampling of each location taken at various instances over the data collection season, beginning in June and continuing into November. During each observation period, staff would record the pedestrian and vehicle activity at the location and make note of flag usage and driver behaviour. Vehicles approaching the crosswalk when a pedestrian attempted to cross were observed. If the vehicle did not stop, it was identified as a non-yielding instance, as long as the driver had adequate time to react. In order to determine this, the stopping sight distance for a 50 km/h roadway, or 65 m, was used to locate a yielding point for each approach to the crosswalk. If a vehicle was at or beyond the yielding point, but did not stop for a pedestrian, it was considered as non-yielding. Any vehicle stopping for crossing pedestrians was considered to have yielded.

It was also observed that there were instances where the flags at some locations were all on one side of the crosswalk or there were no flags in the containers at all. This could indicate a need for greater “ownership” being taken to monitor and maintain these locations after they have been installed. During the 2016 study two pedestrians were seen arguing over the authority of the crosswalk flags. This demonstrated some confusion as to whether or not the flags must be used if they are present.

Staff has received feedback from the public indicating that even if the flags are not being used by pedestrians, their presence at a location helps to make the crosswalk more visible. If the desire is to increase the visibility of crosswalk locations, there are other methods available to do this.

Information from other jurisdictions that have or had crosswalk flag programs, as well as information based on assessment of locations with crosswalk flags in HRM was considered in drafting the proposed administrative order included as Attachment 1 of this report.

The following general questions are addressed by the proposed administrative order:

Where would crosswalk flags be permitted to be installed?

The current approach is to allow the placement of crosswalk flags primarily at crosswalks identified by pavement markings and side mounted signs and would also include crosswalks that have pedestrian activated flashing beacons. Unmarked crosswalk locations are also considered, but only if there is supporting infrastructure in place to accommodate placement of the containers used to hold the flags. HRM does not install posts for the purpose of placing flags at unmarked crosswalks, nor do we allow others to install posts on HRM property to accommodate placement of crosswalk flags.

Moving forward, the administrative order proposes to consider placement of flags only at uncontrolled crosswalks where pavement markings and side mounted signs are present. Consideration would no longer be given to locations with pedestrian activated flashing beacons or unmarked locations.

This would be consistent with many other jurisdictions. Where crosswalk flag programs are in place, flags are allowed only at legal, marked crosswalks and cannot be located where the crosswalk is associated with a traffic control device. Further to this, the region of West Vancouver only installs crosswalk flags as an interim measure while crosswalk upgrades are being designed and funded. Once a crosswalk area has had the necessary upgrades, which could include the installation pedestrian activated flashing beacons, the crosswalk flags are removed. The high instance of driver yielding at HRM crosswalks with pedestrian activated flashing beacons, particularly those without crosswalk flags present, would appear to confirm the effectiveness of the treatment without the need to be supplemented by crosswalk flags.

Unmarked crosswalk locations do not have appropriately located infrastructure to support placement of the flags. Without poles/posts located within, or very near to, the legal crossing location it may encourage pedestrians to cross outside of the crosswalk where they do not have the legal right of way. This could lead to dangerous situations where pedestrians are assuming a driver is required to stop for them and then stepping out when they shouldn't. With confusion over the "authority" associated with the flags, allowing flags to be placed at unmarked crosswalks may be creating an unsafe situation for both pedestrians and drivers.

What is the process for requesting a location to be assessed for placement of crosswalk flags?

Requests to allow flags to be placed at a crosswalk can be made by any individual. HRM's current practice regarding the installation of other infrastructure, such as marked crosswalks, can be made by a single individual and if the proper criteria are met, the infrastructure is installed. Given that other infrastructure that would involve a cost to the Municipality can be requested by a single individual, it would seem reasonable that placement of crosswalk flags, which represents no cost to the Municipality, could also be requested in this manner.

As part of the request process, a "sponsor" must be identified to take on the responsibility to monitor and maintain the crosswalk flags once installed.

What are the requirements that would allow for crosswalk flags to be placed at a particular location?

In order for crosswalk flags to be placed at a location, the following criteria must be met:

- The location must be an existing uncontrolled crosswalk of the type consisting of pavement markings and side mounted crosswalk signs only;

- The location must have existing sign posts or utility poles in place to support placement of the flag containers. HRM will not install posts for the sole purpose of placing crosswalk flags, nor will installation of posts by others be allowed within the right of way;
- Posts or poles must be located within approximately one (1) meter of the crosswalk. This is to ensure the flags are accessible and do not encourage pedestrians to cross outside the crosswalk area;
- Posts or poles already supporting regulatory signage controlling right of way (stop yield, etc.) or access (turn restrictions, one-way, etc.) cannot be used to support placement of crosswalk flags. This ensures the visibility and recognition of these controls;
- Flags shall be no larger than 40 x 40 centimetres (16 x 16 inches) attached to a dowel or rod no longer than 75 centimetres (30 inches); and
- Placement of the containers and flags will not create any obstruction to access or visibility or contribute to any other safety issue.

What roles and responsibilities are associated with a location where crosswalk flags are placed?

The crosswalk flag program is a community led initiative and as such, the “sponsor” for each installation would be responsible for:

- Supply and installation of the containers and flags. This would include the cost for all materials and labour required;
- On-going monitoring and upkeep of the location after installation;
- Providing regular updates to HRM outlining monitoring and upkeep activities;
- Obtaining any permissions necessary to attach equipment to utility poles and supply of proof of permission to HRM upon request; and
- Modification or removal of the installation if requested by HRM.

Because this is a community initiative, HRM is responsible for providing initial review of requests as a facilitator for the installation of crosswalk flags and would not be responsible for any costs associated with installations, loss, damage or theft of the flags, containers or any other materials associated with the installation.

At the time this report was prepared, there were approximately 154 crosswalk locations in HRM where crosswalk flags had been placed. Approval of the recommendation to remove any crosswalk flag installations not in compliance with the proposed administrative order would be important in order to ensure consistency. There would be approximately 56 current locations where the flags would be non-compliant. These flags could be relocated and re-used at other crosswalk locations in HRM compliant with the recommended AO practice.

FINANCIAL IMPLICATIONS

There are no financial implications associated with this report.

RISK CONSIDERATION

There are no significant risks associated with the recommendations in this report.

COMMUNITY ENGAGEMENT

Community engagement was not undertaken as this report deals with matters related to internal policy.

ENVIRONMENTAL IMPLICATIONS

There were no environmental implications identified in relation to this report.

ALTERNATIVES

Halifax Regional Council could decide not to approve the administrative order and by-law amendments and direct staff to do one of the following:

1. Continue facilitating the installation of crosswalk flags according to the current process;
2. Not allow any further installations of crosswalk flags and direct staff to begin a pilot of various products to enhance the visibility of crosswalks; or
3. Not allow any further installations of crosswalk flags, order the removal of flags from all locations where they are currently installed and direct staff to begin a pilot of various products to enhance the visibility of crosswalks.

ATTACHMENTS

- Attachment 1 - Proposed Administrative Order 2017-001-OP Respecting the Placement of Crosswalk Flags
- Attachment 2 - Showing Proposed Changes
- Attachment 3 - Amending By-law (By-Law S-310)
- Attachment 4 - 2016 Crossing Assessment Locations

A copy of this report can be obtained online at <http://www.halifax.ca/council/agendasc/cagenda.php> then choose the appropriate meeting date, or by contacting the Office of the Municipal Clerk at 902.490.4210, or Fax 902.490.4208.

Report Prepared by: Roddy MacIntyre, P.Eng., Senior Traffic Operations Engineer, 902.490.8425

**ADMINISTRATIVE ORDER NUMBER 2017-001-OP
RESPECTING THE PLACEMENT OF CROSSWALK FLAGS**

BE IT RESOLVED AS AN ADMINISTRATIVE ORDER of the Council of the Halifax Regional Municipality under the authority of the *Halifax Regional Municipality Charter*, as follows:

WHEREAS the Crosswalk Safety Advisory Committee was formed in March of 2013 in response to concerns from residents within the Municipality for the safety of pedestrians in crosswalks;

AND WHEREAS the Committee put forward recommendations related to goals and actions to be taken to improve pedestrian safety at crosswalks, including "Approve the use of crosswalk flags in HRM at crosswalks where the community takes on the responsibility of installing and maintaining them.";

AND WHEREAS Regional Council approved a recommendation report in August of 2014 indicating that "Community groups would be allowed to implement crosswalk flag programs with input from HRM staff to help ensure programs are carried out appropriately and safely.

Short Title

1. This Administrative Order may be cited as the "*Placement of Crosswalk Flags Administrative Order*."

Purposes

2. The purposes of this Administrative Order are to:

(a) identify crosswalk types that would be considered for the installation or erection of crosswalk flags;

(b) establish a process for requests to be considered for the installation or erection of crosswalk flags; and

(c) establish the roles and responsibilities with regard to installation, erection, monitoring, maintenance and removal of crosswalk flags.

Interpretation

3. In this Administrative Order,

(a) "crosswalk" means that portion of a street indicated for pedestrian crossing;

(b) "Municipality" means the Halifax Regional Municipality;

(c) "street" means a public street as defined in clause 3(bu) of the *Halifax Regional Municipality Charter, S.N.S. 2008, c. 39*;

(d) "Traffic Authority" means the Traffic Authority of the Municipality appointed by the Council pursuant to the *Halifax Regional Municipality Charter* and the *Motor Vehicle Act*; and

(e) "traffic control device" includes a traffic signal, stop sign, or pedestrian activated flashing beacon.

Application

4. This Administrative Order applies to the installation and erection of crosswalk flags on streets owned by the Municipality.

Requests to Install or Erect Crosswalk Flags

5. Requests to have a crosswalk considered for the installation or erection of crosswalk flags may be made to the Municipality by any individual resident of the Municipality.

6. A request made in accordance to section 5 shall include the name and contact information of the individual who will assume responsibility for monitoring and maintaining the crosswalk flags once installed or erected.

Criteria for Placement of Crosswalk Flags

7. (1) The Municipality shall review any request received in accordance with section 6.

(2) The Municipality shall only grant permission for the installation or erection of crosswalk flags and associated containers, if all of the following are satisfied:

(a) the crosswalk that is the subject of the request is marked by lines or other markings on the surface of a street, and is not otherwise controlled with a traffic control device;

(b) the erection or installation will be on a sign post or utility pole that:

(i) is existing infrastructure,

(ii) is located within one (1) metre of the crosswalk that is the subject of the request,

(iii) in the opinion of the Traffic Authority, is suitable to allow such installation or erection, and

(iv) does not support regulatory signage controlling the right of way or access to the right of way, such as a stop sign, turn restriction, or one-way street; and

(c) in the opinion of the Traffic Authority, the installation or erection of the crosswalk flags will not create an obstruction to visibility, access issues or safety issues.

(3) For greater certainty, the Municipality shall not install or erect posts, or permit others to install or erect posts, for the purpose of installation or erection of crosswalk flags and associated containers.

8. Upon completion of the review, the Municipality shall notify the requestor of the decision to grant or refuse permission to install or erect the crosswalk flags and associated containers.

9. If permission is granted, the Municipality may impose conditions on such permission and shall notify the requestor of them.

Roles and Responsibilities

10. The requestor shall be responsible for:

(a) the installation or erection of the crosswalk flags and associated containers and all costs related to such installation or erection, including material and labour costs;

(b) the on-going monitoring and maintenance of the crosswalk flags and associated containers and all costs related to such monitoring and maintenance, including material and labour costs;

(c) obtaining all necessary permissions to install or erect the crosswalk flags and associated containers, such as permission from Nova Scotia Power, Bell Aliant or Eastlink , and upon request, providing the Municipality with copies of the permissions obtained;

(d) providing the Municipality, upon request, with a written log of monitoring and maintenance activity undertaken by the requestor for the location(s) where they have assumed responsibility for the installation or erection of crosswalk flags; and

(e) upon the request of the Municipality, to remove the crosswalk flags and associated containers within the timeframe specified in the request.

11. The Municipality shall be responsible for providing initial review of requests as a facilitator for the installation or erection of crosswalk flags.

12. The Municipality shall not be responsible for any loss, damage or theft of the crosswalk flags, containers or any other materials associated with the installation or erection.

Done and passed this day of , 2017.

Mike Savage, Mayor

Kevin Arjoon, Municipal Clerk

I, Kevin Arjoon, Municipal Clerk of the Halifax Regional Municipality, hereby certify that the above noted Administrative Order was passed at a meeting of Halifax Regional Council held on [month], [day], 201_.

Kevin Arjoon, Municipal Clerk

PART IV - STREETS & SERVICES PERMIT

...

Obstructions

30. (1) No person shall obstruct any street without first obtaining a Street & Services permit from the Engineer.
- (2) Where an obstruction may cause damage to the street, the Engineer may require a security deposit in the amount specified in Administrative Order 15, such deposit to be held until the Engineer is satisfied that no damage has occurred to the street after the obstruction has been removed.
- (3) The Engineer may permit any person to use any portion of a street for construction or other temporary purpose subject to any conditions that he may reasonably impose.
- (4) The Engineer may refuse to issue a Street & Services permit when it is in the public interest to do so.

PART IVA – CROSSWALK FLAGS

- 30A (1) No person shall install or erect crosswalk flags on or near a street except in accordance with this section.
- (2) A person may request permission from the Municipality to install or erect crosswalk flags on or near a street pursuant to the *Placement of Crosswalk Flags Administrative Order, 2017-001-OP*.
- (3) If permission has been granted by the Municipality, every crosswalk flag shall
- (a) be bright orange in colour;
 - (b) not exceed forty (40) by forty (40) centimeters in width; and
 - (c) be attached to a dowel or rod that does not exceed 75 centimeters in length.

PART V - DRIVEWAY ACCESS

Permit Required

31. Every property owner is required to obtain a street and services permit from the Engineer before constructing a driveway access.

HALIFAX REGIONAL MUNICIPALITY
BY-LAW NUMBER S - 310
BY-LAW RESPECTING STREETS

BE IT ENACTED by the Council of the Halifax Regional Municipality that By-law S-300, the Streets By-law, is further amended as follows:

1. PART IVA is added after PART IV and before PART V, as follows:

PART IVA – CROSSWALK FLAGS

30A (1) No person shall install or erect crosswalk flags on or near a street except in accordance with this section.

(2) A person may request permission from the Municipality to install or erect crosswalk flags on or near a street pursuant to the *Placement of Crosswalk Flags Administrative Order, 2017-001-OP*.

(3) If permission has been granted by the Municipality, every crosswalk flags shall

- (a) be bright orange in colour;
- (b) not exceed forty (40) by forty (40) centimeters in width; and
- (c) be attached to a dowel or rod that does not exceed 75 centimeters in length.

Done and passed this _____ day of _____, 2017.

MAYOR

MUNICIPAL CLERK

Attachment 4

Flag Usage by Crosswalk Type			
		Number of Ped Crossings	Number of Peds Using Flags
			Percent of Peds Using Flags
Pedestrian Activated Flashing Beacons			
Bedford Highway at Civic 1493		7	0
Braemar Drive at Maple Drive		7	0
Chrichton Avenue at Oakdale Crescent		3	0
Dartmouth Road at Wardour Avenue		20	2
Devonshire Avenue at Young Street		6	0
Larry Uteck Boulevard at Starboard Drive		3	1
Leppert Street at Mumford Road		31	2
		77	5
Pavement Markings and Signs			
Demetreous Lane at Victoria Road		4	0
Dublin Street at North Street		17	1
Gottingen Street at Falkland Street		28	0
Moirs Mill Road at Acadia Mill		3	0
Roblea Drive at Spring Avenue		2	0
		54	1
	Total	131	6
			4.6

Attachment 4

Driver Yielding Behaviour by Crosswalk Type

	No Flags			Flags Present		
	Total Vehicles at Crosswalk	Vehicles Yielding	Percent Yielding	Total Vehicles at Crosswalk	Vehicles Yielding	Percent Yielding
Pedestrian Activated Flashing Beacons						
Chappell Street at Victoria Road	13	13	100	-	-	-
Critchon Avenue at Hawthorne Street	5	5	100	-	-	-
Evans Avenue at Titus Street	40	39	97.5	-	-	-
Gottingen Street at Cunard Street	42	41	97.6	-	-	-
Herring Cove Road at Sylvia Avenue	13	13	100	-	-	-
Mumford Road at Olivet Street	25	22	88.0	-	-	-
North Street at Maynard Street	49	44	89.8	-	-	-
Bedford Highway at Civic 1493	-	-	-	9	7	77.8
Braemar Drive at Maple Drive	-	-	-	9	9	100
Chrichton Avenue at Oakdale Crescent	-	-	-	5	5	100
Dartmouth Road at Wardour Avenue	-	-	-	37	31	83.8
Devanshire Avenue at Young Street	-	-	-	3	3	100
Larry Uteck Boulevard at Starboard Drive	-	-	-	3	3	100
Leppert Street at Mumford Road	-	-	-	57	56	98.2
<i>Subtotal</i>	187	177	94.7	123	114	92.7
Pavement Markings and Signs						
Chebucto Lane at Chebucto Road	15	13	86.7	-	-	-
Critchon Avenue at Lakeside Drive	2	2	100	-	-	-
Elmwood Avenue at Wyse Road	11	9	81.8	-	-	-
Inglis Street at South Bland Street	19	17	89.5	-	-	-
Spring Avenue at Stephen Cross Drive	6	6	100	-	-	-
Demetreous Lane at Victoria Road	-	-	-	6	6	100
Dublin Street at North Street	-	-	-	18	15	83.3
Gottingen Street at Falkland Street	-	-	-	26	25	96.2
Moirs Mill Road at Acadia Mill	-	-	-	0	0	N/A
Roblea Drive at Spring Avenue	-	-	-	0	0	N/A
<i>Subtotal</i>	53	47	88.7	50	46	92.0
Total	240	224	93.3	173	160	92.5