



## Staff Report

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<b>Report To:</b>	<b>General Government Committee</b>	
<b>Date of Meeting:</b>	March 21, 2022	<b>Report Number:</b> PWD-008-22
<b>Submitted By:</b>	Stephen Brake, Director of Public Works	
<b>Reviewed By:</b>	Mary-Anne Dempster, CAO	<b>Resolution#:</b> GG-157-22, C-080-22,
<b>File Number:</b>		C-083-22
<b>Report Subject:</b>	Solina Traffic Report	<b>By-law Number:</b>

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### Recommendations:

1. That Report PWD-008-22 and any related communication items, be received;
2. That Council review the Traffic Improvement Options presented in this Report and that staff be provided with direction to implement the options summarized in the Conclusion section;
3. That all interested parties listed in Report PWD-008-22 and any delegations be advised of Council's decision.

## Report Overview

At the Joint Committee meeting held on Monday, February 7, 2022, Council passed Resolution JC-011-22 and JC-012-22. These resolutions were adopted in response to a delegation by two residents of the Hamlet of Solina regarding their concerns over vehicle and pedestrian safety.

Resolution JC-011-22 directed staff to report back on suggestions for traffic calming measures, restrictions for truck traffic and a possible sidewalk extension in the Hamlet of Solina. Resolution JC-012-22 requested that staff also report back on the reason why Clarington is allowing the movement and placement of fill in contravention of the fill By-law.

This report provides clarity on the Clarington Site Alteration By-law and offers various short-term and longer-term traffic safety improvements that may be considered for implementation in the Hamlet of Solina.

## 1. Background

- 1.1 The Hamlet of Solina is clustered around the collector roads of Concession Road 6 and Solina Road in the western part of the rural area of Clarington. Concession Road 6 provides an east-west travel route across the Municipality with easy access to Highway 35/115, and connections to the various aggregate sites located along Regional Road 20 in the northern reaches of the Municipality.
- 1.2 The Hamlet of Solina has experienced significant changes in traffic patterns over the past few years. These changes can be attributed to the recent construction activities of Highway 407 and Highway 418 and more recently the areas of major residential growth that are occurring in northeast Oshawa. Community concerns related to the traffic are primarily associated with the high volume of dump truck traffic that is utilizing Concession Road 6. Reports from the community are frequently received regarding speeding, littering, noise and unsafe vehicle operations.
- 1.3 During the construction of Highway 407 and highway 418, staff worked jointly with the construction consortium to provide traffic safety improvements in the Hamlet of Solina. The efforts resulted in the installation of an All-Way STOP and the provision of roadway illumination at the offset intersection of Concession Road 6 and Solina Road.
- 1.4 At this time, the large scale residential development activities in Oshawa are resulting in an excessive number of dump trucks using Concession Road 6. Staff have confirmed that the majority of these truck movements are being completed by “dirt brokers”. Under this type of business practice, dump truck operators bid on individual load prices thereby creating a very competitive market. Operators often accept loads with low margins which results in a need to create profit through reduced vehicle maintenance and the

risk of incurring traffic violations. For these haulers, Concession Road 6 represents the shortest travel route for the transport of on-board materials between the source and a destination site.

- 1.5 One of the known dump locations is an aggregate pit located on the north side of Regional Road 20 in the City of Kawartha Lakes. Clarington staff have attempted to mitigate the truck issues in the Hamlet of Solina by reaching out to the City of Oshawa in order to work cooperatively on re-routing the trucks to Regional roads, to no effect. Since the origin and destination of the truck movements are located outside of Clarington's boundaries the current site alteration control mechanism does not apply.
- 1.6 Another type of dump truck operation that has affected the Hamlet of Solina in the past involves the local agricultural community. Material is often accepted at tree and sod farms for field top up. This practice has resulted in a significant number of dump trucks using various rural roads which makes it hard for staff to address. Staff continuously discuss these issues with the farm owners with the intent of reducing the impact of heavy truck traffic.

## **2. Clarington Site Alteration By-law**

- 2.1 The Clarington Site Alteration By-law 2008-114 (the "By-law") regulates the placement or removal of fill within the Municipality. The By-law is enacted pursuant to the authority found in section 142 of the *Municipal Act*, 2001.
- 2.2 The By-law includes a general prohibition on dumping fill that originates from a variety of sources that are outside of Clarington, however, the By-law is subject to a variety of exemptions.
- 2.3 These exemptions include, but are not limited to:
  - a) Fill has been taken from within a municipal road allowance or municipal easement as part of a municipal construction or reconstruction project undertaken by or on behalf of a municipality;
  - b) Operations of an otherwise lawful business which imports, processes, used an /or calls organic or granular material; and
  - c) Fill that is placed in connection with a normal farm practice including sod-farming, greenhouse operations and nurseries for horticultural products.
- 2.4 It should be noted that many, but not all, of the exemptions found in the By-law are mandatory exemptions pursuant to section 142 of the *Municipal Act*, 2001.

### 3. Traffic Data

- 3.1 Staff have deployed speed monitoring equipment on Concession Road 6 and Solina Road since 2016. These devices include the standard temporary Radar Message Boards that have been used multiple times to record data and determine traffic operating parameters. In 2021, staff purchased additional larger Radar Message Boards for semi-permanent locations. Two of these units are currently installed at the west and east entry points into the Hamlet of Solina.

The most recent available data obtained from the Semi-Permanent boards is as follows:

- Concession Road 6 Westbound approximately 500 meters east of Solina Road (at the transition from 70 km/h to 50 km/h)
  - Average Speed ranges 66-71 km/h
  - 85<sup>th</sup> percentile speed ranges 76-82 km/h
- Concession Road 6 Eastbound approximately 250 meters west of Solina Road (with a posted speed limit of 50 km/h)
  - Average Speed ranges 58-65 km/h
  - 85<sup>th</sup> percentile speed ranges 71-77 km/h

It is worth noting that due to the physical conditions of the roadside environment and the availability of installation locations, speeds for both locations are recording vehicles on the downhill approaches into the hamlets.

- 3.2 Staff have also studied the roadway network surrounding the Hamlet and the type of traffic that is travelling through Solina. While the influx of dump truck traffic is the major contributor for increases in complaints from residents, there is also a seasonal “out of town” traffic pattern created by cottagers that escalates during the summer weekends.
- 3.3 It should be noted that for any traffic improvement solutions to be effective they must suitably correspond to the environment and target the driver type. Selecting “artificial” means that feel out of place in a rural setting will not be adhered to or achieve the desired results. An example of this approach is the arbitrary lowering of posted speed limits.

## 4. Traffic Improvement Options

- 4.1 In 2021, Durham Regional Police Service (DRPS), in discussions with Clarington staff, engaged with the local community and established a communications group. Discussions included traffic concerns and violations, trucks, living conditions, enforcement, littering and sidewalks. Several proposals were discussed with DRPS and Clarington staff.
- 4.2 One of the current tools that staff have been using are the Radar Message Boards. Aside from the seasonal deployments, staff have now dedicated two larger semi-permanent Radar Message Boards to the Hamlet. Since these units are powered by internal batteries and auxiliary solar panels the equipment will continue to be utilized in Solina until the current traffic problems have been resolved or a requirement arises to relocate the units to another location.
- 4.3 On March 1, 2022, staff took interim steps to address truck traffic. In discussions with DRPS, and with their full support of enforcement, staff have temporarily signed Concession Road 6 and Concession Road 7 from Townline Road to Bowmanville Avenue as NO HEAVY TRUCKS. The purpose of these regulations is to directly target the truck traffic related to the large developments in north Oshawa using Conlin Road onto Concession Road 6. This prohibition will serve as a direct deterrent to any of the truck movements wanting to use Concession Road 6. Due to the concurrent start of the seasonal weight restriction season for Oshawa, Region of Durham and Clarington roads, the Oshawa construction site has been temporarily closed and the dump truck traffic has ended. Public Works staff and DRPS, however, will monitor Concession Road 6 when the Spring weight restrictions expire at the end of April and the development site reopens.
- 4.4 The All-Way STOP at the intersection of Concession Road 6 and Solina Road was installed during the construction of Highway 407 and Highway 418 to address changing traffic patterns and detours. To further enhance the awareness of these stop conditions upon approach to the intersection red flashing beacons are recommended to be installed above the existing STOP signs. The effect may result in improved compliance with the all-way stop sign conditions that are present.
- 4.5 Public Works staff have implemented several Community Safety Zones (CSZ) along urban road sections. These regulatory provisions were originally introduced by the Ministry of Transportation to offer additional support to high problem areas such as in schools zones or urban clusters. While various CSZ's have been in place for some years, staff have not been able to gather statistical evidence that would directly demonstrate any proof of their effectiveness or a change in driver behavior. This is based on feedback from various jurisdictions across the province and from reviews of

local speed data when comparing active CSZ's to other areas in Clarington that are not signed. The introduction of a Community Safety Zone in Solina is not recommended.

- 4.6 To date, pedestrian sidewalks have only been constructed on the north side of Concession Road 6 between Solina Road and the west limit of the Hamlet due to the rural nature of the Hamlet. Staff are now recommending that additional pedestrian walking facilities be installed to connect to the Community Center. The proposal recommends that a new concrete sidewalk be constructed along the north side of Concession Road 6 fronting Solina Community Park and that a paved shoulder be added to the east side of Solina Road from Concession Road 6 to the intersection of Hockaday Court (See Figure 1). The preliminary estimates for the conceptual improvements would be approximately \$136,000, based on the average costs of similar projects from 2021.



Figure 1: Conceptual drawing of pedestrian facility improvements in Solina.

- 4.7 Public Works staff have been testing traffic calming Flex Signs. The purpose of these devices is to physically narrow the travel lane while also changing the driver's perception. Studies have confirmed that various levels of speed reduction have been observed depending on the installation location and the roadway operating parameters. Because the Hamlet of Solina is located within an active farming area, staff are not recommending the use of Flex Signs at this time. When previously tested in Enniskillen, the Flex Sign devices caused damage and operational changes to the various pieces of farm equipment passing over them.
- 4.8 Over the past two years, staff have been testing several sets of traffic calming seasonal rubber speed cushions. The initial installation location in Enniskillen received very positive feedback, both from the residents and the local farming community. When installed, the cushions have proven to be an effective tool in reducing vehicle travel speeds for the duration of the season. Potential locations for the installation of trial speed cushions in Solina would be along Concession Road 6, with one set of cushions approximately 200 meters west and east of Solina Road. It should be noted that while the speed cushions provide a marked reduction in vehicle speeds they can also generate additional noise that may lead to complaints from local residents.
- 4.9 Public Works staff are presently developing a Traffic Calming Guide for the Municipality. When approved by Council this document will provide a tool kit of industry accepted standards and a full implementation procedure that will assist with the safe design and effective installation. Traffic Calming Measures represent self regulating alternatives to traditional speed limit reductions, stop sign installations and speed enforcement. Care, however, must be fully exercised to ensure that the majority of the affected community is in support of their installation. Concession Road 6 and Solina Road are very good candidates for the implementation of a longer-term traffic calming plan. This level of control, however, will be considered following the approval of the proposed Guide by Council and results of the trial speed cushion implementation later this Spring.

## **5. Concurrence**

Not Applicable.

## **6. Conclusion**

The heavy truck volumes and excessive rates of vehicle speed that have been recorded on Concession Road 6 represent a justifiable concern for the residents of the Hamlet of Solina. In response to these issues, it is respectfully recommended that Council provide staff with direction to continue developing the following solutions in full partnership with the DRPS and the local community:

1. That the NO HEAVY TRUCKS prohibition currently in effect along Concession Road 6 and Concession Road 7 be maintained until at least after the Spring seasonal weight restrictions have been lifted and the site development grading in Oshawa has been completed. Truck movements will be monitored by staff and consideration will be given towards making this regulation permanent.
2. That staff investigate a cost for the installation of the red flashing beacons on the all-way stop signs at Concession Road 6 and Solina Road. If deemed beneficial and supported by the Community these expenses will be included in the 2023 Public Works budget submission.
3. That staff consult with the community on the installation of a paved shoulder for walking purposes on the east side of Solina Road south of Concession Road 6. If supported by the residents the estimated cost will be included in the 2023 Public works budget submission.
4. That staff schedule the installation of the Municipality's seasonal rubber speed cushions on Concession Road 6 later this Spring. In combination with the installation of the speed cushions that speed study data and community consultation be undertaken.
5. That following Council's approval of a Traffic Calming Guide for the Municipality that staff be directed to form a working group with a representative number of interested residents from Solina. In consultation with Public Works staff, the committee will be tasked with developing a permanent traffic calming design for Concession Road and Solina Road. If supported by the majority of the community the associated costs will be included in the 2023 Public Works budget submission.

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Staff Contact: Slav Potrykus, Traffic Engineering Supervisor, 905-623-3379 or [spotrykus@clarington.net](mailto:spotrykus@clarington.net)

Attachments:

Not Applicable

Interested Parties:

Rachel Taylor  
Lauren Baker