

Neighbourhood Traffic Safety Action Plan (NTSAP) Outcomes Report

Neighbourhood traffic safety is important to Strathcona County residents. The NTSAP set out eight specific actions based on resident priority and best practice. These actions were designed to be realistic, sustainable and actionable in order to provide measurable improvements in the safety and livability of our neighbourhoods. This report details the status of each action in the plan.

Action #1: Research a residential speed limit decrease, including the results from other jurisdictions who have implemented the practice to recommend a best course of action for our community.

See accompanying *Residential Speed Limits* report.

Based on collision history, community polling and consultation with the RCMP and Enforcement Services and Strathcona County's Traffic Safety Advisory Committee, Transportation Planning and Engineering (TPE) does not recommend a speed limit decrease across all urban residential neighbourhoods at this time.

Although research and best practice recommend lowering residential speed limits as an important component of creating a safe community, polling indicates that residents are divided on the support for this initiative in our community. Further, under our current enforcement model, the RCMP and Enforcement Services do not have the capacity to respond to an increased resident demand for enforcement that would likely accompany a decreased speed limit. Strathcona County's Traffic Safety Advisory Committee also does not support the consideration of a reduced residential speed limit across urban areas at this time.

Currently, both Edmonton and Calgary are in the process of considering the feasibility of citywide residential speed limit reductions. If speed limits are reduced in these cities, it may increase Strathcona County residents' interest in exploring a similar action, as well as provide a significant testbed to consider. For these reasons, as well as Strathcona County's excellent traffic safety record in our neighbourhoods, TPE recommends a "wait and see" approach until such time as there is an increased level of resident support for such a change.

Action #2: Improve traffic monitoring on residential roads (link to Action #4).

Strathcona County continues to perform regular traffic monitoring on residential roads, and our database has grown considerably over the last three years. There is high demand for traffic data collection to review and address resident concerns, provide information for Action #3 (see below) and to meet demand for emergent development, policing and engineering information needs.

Increasingly, driver feedback signs (DFS) are being used to increase our traffic monitoring capacity (see Action #6).

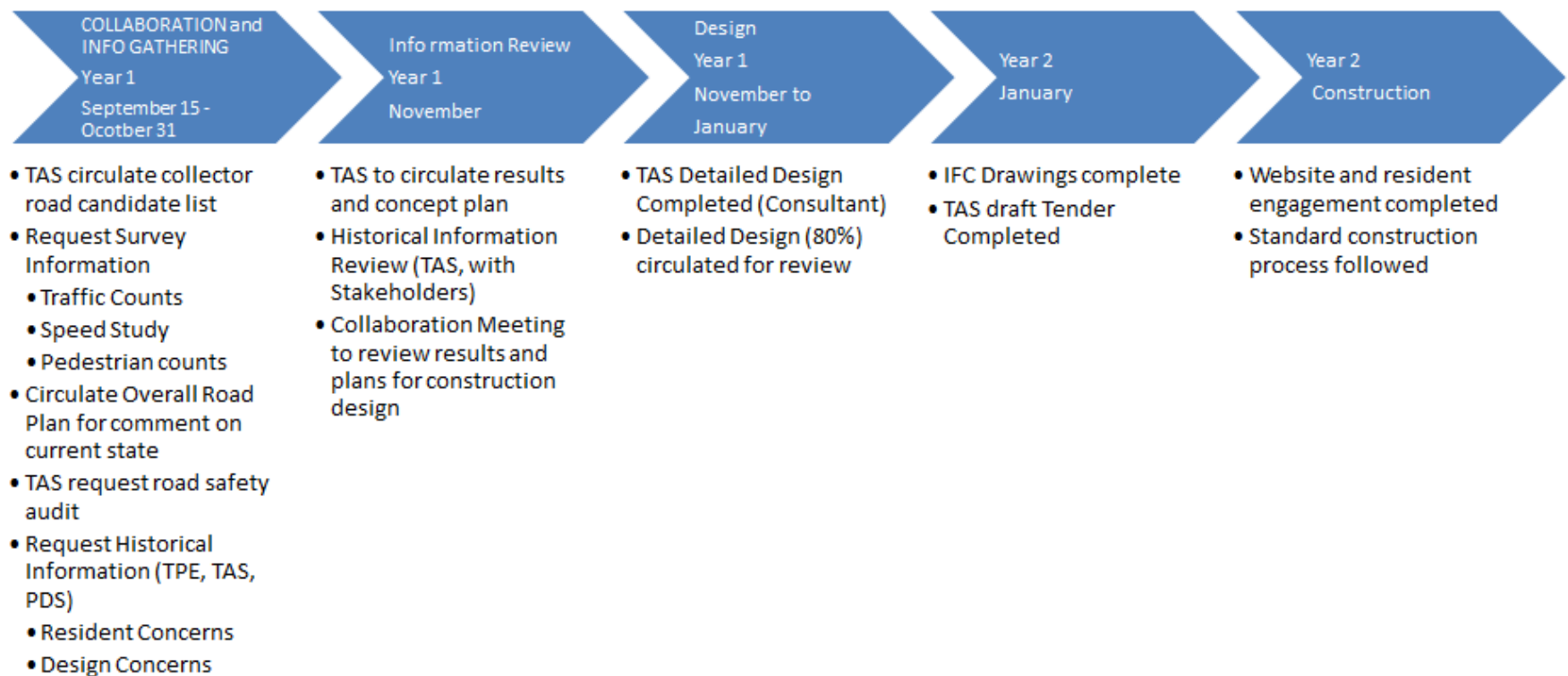
Action #3: Upgrade pedestrian facilities at multiuse trail crossings, playgrounds, schools and key pedestrian corridors. Include physical traffic calming features (such as raised features, refuge islands, and/or curb extensions) in conjunction with scheduled rehabilitation as appropriate.

A detailed integration program for Action #3 with Transportation and Agriculture Service's (TAS) urban rehabilitation program has been developed and implemented successfully at several locations already, including on Nottingham Drive and Parker Drive (see Figure 1). These upgrades are resourced through existing rehabilitation budgets and integration with this program makes the most efficient use of capital infrastructure dollars.

Generally, these pedestrian upgrades have been very well-received with few residents expressing concern about their construction. Public engagement held in 2019 as part of the Heritage Hills Community Traffic Safety Review further confirms that this action is consistent with resident support for pedestrian safety improvements. During that engagement, the majority of residents indicated they did not support physical traffic calming measures to manage traffic speeds; however, 69% supported physical changes to the road to improve pedestrian safety at key crossing points.

This program has had the added benefit of helping to structure our traffic monitoring program, as the program requires traffic speed, volume and pedestrian studies be conducted in advance of road rehabilitation to ensure appropriate facilities are being installed. In addition, any inappropriate existing facilities are removed, as per Strathcona County's SER-009-017 Traffic Control Devices policy. This review ensures the measures are applied consistently and provide a tangible safety benefit.

Figure 1: Integration plan for NTSAP and urban rehabilitation program



Action #4: Formalize communication between RCMP and Enforcement Services, Transportation Planning and Engineering, and Transportation and Agriculture Services to facilitate data sharing (link to Action #2).

Data sharing between the RCMP and Enforcement Services, Transportation Planning and Engineering, and Transportation and Agriculture Services has improved considerably over the last two years. Data is circulated regularly that is collected through formal traffic data collection, the speedwatch program and mobile DFSs.

Permanent DFS have greater capacity for traffic monitoring and reporting. Transportation and Agriculture Services now provides the RCMP and Enforcement Services detailed monthly reports from each of these sites.

Transportation and Agriculture Services is currently working to integrate traffic speed information into existing interactive maps on Strathcona County's website that already share information on traffic counts (volumes). Once completed, this data will be automatically uploaded and available to the RCMP and Enforcement Services, as well as the general public.

Action #5: Consider alternative resourcing and delivery models for residential traffic enforcement in a way that is responsive to resident needs while minimizing impacts to arterial enforcement operations.

As of August 2019, all possible methods of service delivery have been explored, and in some cases utilized, to measure the enforcement impact as well as the fiscal cost. The best delivery model is based on responding to complaints raised by local residents as well as elected officials.

Upon receiving the information from the complainant, RCMP & Enforcement Services consults with Transportation and Agriculture Services to review volume and speed data. Inquiries are also conducted with Transportation Planning and Engineering to determine collision history. RCMP & Enforcement Services sets up operations to determine firsthand the impact of traffic safety in the neighbourhood. If an officer determines there is an issue with traffic safety that is likely to be mitigated by enforcement, then a Neighbourhood Traffic Safety Action (NTSA) file is created and maintained until a significant impact has been achieved with local drivers. This is done as part of routine patrols without dedicating extra man-hours to the neighbourhood.

Should additional patrols be required in the future in order to address residential complaints, the area would be revisited with the use of new technology to ensure

we continue to address priority areas that have been identified through our traffic plan.

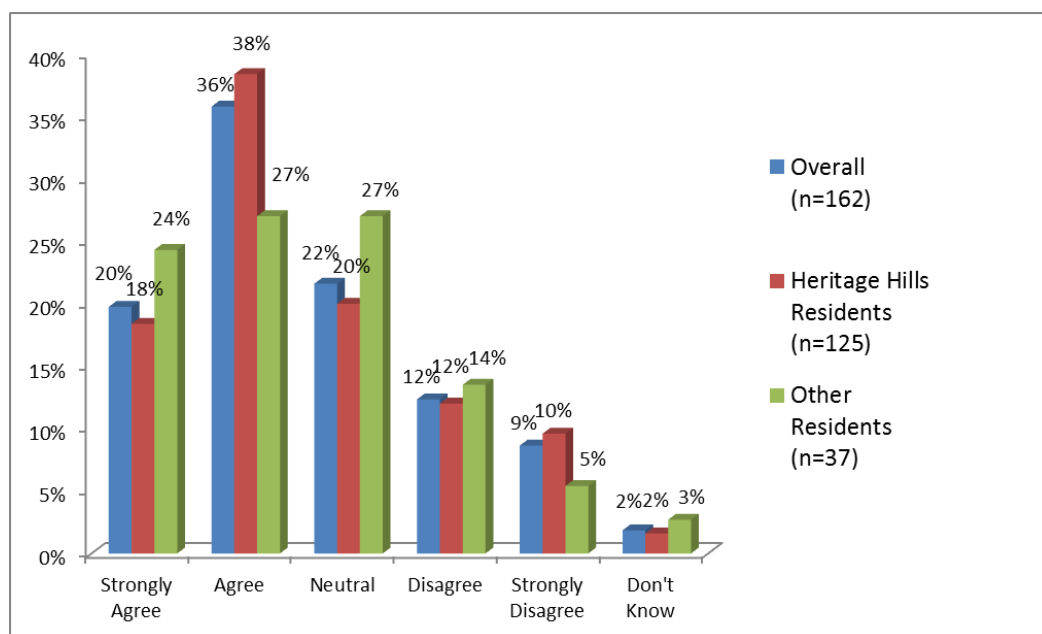
Action #6: Expand the driver feedback sign program and explore new ways to integrate the signs to support data collection and strategic enforcement.

Our DFS program continues to grow and develop. Since 2010, Strathcona County has been using DFS on a rotating basis through locations of concern, relocating the driver feedback signs every three weeks from May to October. The program started with five streetlight pole mounted signs.

Transportation and Agriculture Services has now acquired five mobile trailer units which gives us more flexibility in placement of the signs and allowed us to expand the program to the rural areas. The signs help educate drivers to check their speed and also monitor speed and volume data. This is useful to identify areas that would benefit from further traffic data collection.

Recent research suggests the DFS are effective in curbing speeds from both an engineering and resident perspective. During the Heritage Hills Community Safety Review, residents were asked if they felt DFS were effective in managing traffic speeds. The majority of respondents agreed. Further, only 21% of respondents disagreed, suggesting the signs are a well-supported traffic calming measure.

Figure 2: Survey responses: digital driver feedback signs are effective in managing traffic speeds.



Research investigating the City of Edmonton’s DFS also suggests the permanent installation of the signs is a very effective intervention to improve road safety¹.

Strathcona County has started to use the DFS as permanent traffic calming measures. Three signs were installed in 2018 as part of the Davidson Creek/Clarkdale Meadows traffic calming project. Two more are being installed in 2019, one on Galaxy Drive and a one on Highland Drive.

The permanent DFS have better data collecting and reporting capabilities than the mobile signs, which allows for better monitoring at these locations. More detail is provided in Action #2 and #4 regarding traffic monitoring and data sharing related to the DFS.

Action #7: Update the traffic safety communication plan to include a residential traffic safety component. Engage with residents to develop messages and to help with the reach of the education program (link to Action #8).

While a formal update to the existing traffic safety communication plan has not been completed, Strathcona County is continuing to identify and explore potential topics and messages through formal public engagement and everyday interactions. Gaps in resident knowledge have been identified through the 2018 traffic safety survey, residential speeding Option 4 feedback (see Action #8), the Jim Common

¹ Wu, M., El-Basyouny, K and Kwon, T.J. “Before -and-after Empirical Bayes Evaluation of Citywide Installation of Driver Feedback Signs” TRR: Journal of the Transportation Research Board. Under -review, 2019.

Drive evaluation project and county connect interactions. Common causes of collision have also been identified through collision data mining.

Strathcona County will be engaging with rural residents through the development of the rural road safety/sustainable rural roads master plan engagement process, which will ensure that rural specific messages are included in the plan. Completing the formal update of the traffic safety communication plan is scheduled for the fourth quarter of 2019. Strathcona County will be consulting with the Traffic Safety Advisory Committee to inform the development of the plan.

Action #8: Engage residents to develop new and innovative ways to get neighbourhoods involved in residential traffic safety.

Residential traffic safety is a community-based problem that needs community-based solutions. Resident buy-in and engagement is crucial to the success of neighbourhood level initiatives.

Community Action on Residential Traffic Safety (CARTS) is a grass-roots resident group who are passionate about improving traffic safety in Strathcona County. Strathcona County partnered with CARTS to deliver a residential traffic safety campaign in May 2017 that won a national Vision Zero award. Strathcona County continues to support CARTS and helps distribute their lawn signs through County facilities, including the RCMP and Enforcement Services detachment, the Community Centre and rural contact offices.

The RCMP and Enforcement Services continue to work with Strathcona County Citizens on Patrol to operate an active speedwatch program, which is effective in changing driver behaviour and in generating speed data to share amongst stakeholders.

In May 2017, Strathcona County RCMP and Enforcement Services piloted a new education project. Those receiving a residential speed violation were given the opportunity to attend an "Option 4" presentation in lieu of paying their violation. The Option 4 presentations enabled the County to connect with residents regarding Strathcona County's approach to traffic safety (the safe system) as well as some educational messages regarding speed/pedestrian risk and local statistics. During the presentation, the Poll Everywhere application was used to engage with participants to explore their opinions and perspectives on speeding in residential areas. This information will be used to develop tailored messages for the updated traffic safety communication plan (see Action #7).

The Option 4 initiative was highly rated by participants, with 74% of those participating indicating that attending the session would change the way they drive

on neighbourhood streets. Strathcona County has partnered with the Injury Prevention Centre to evaluate the effectiveness of the sessions in reducing recidivism and, ultimately, collisions. Early results have shown the sessions are highly effective in reducing recidivism. More time is required to assess the impact on collisions.

Conclusion

The NTSAP has resulted in significant improvements in the way we engineer, educate, enforce, evaluate and engage with residents in our neighbourhoods. While our neighbourhoods had an excellent safety record prior to the NTSAP's implementation, recent statistics suggest we are continuing to improve safety, with none of our major collisions happening on residential roads in 2017 or 2018.

Table 1: Residential collisions as a percentage of major injury and fatal collisions

	FATAL/MAJOR INJURY CRASHES			
	2015	2016	2017	2018
Residential	5.08%	11.66%	0.00%	0.00%
Arterials/Highways	94.92%	88.34%	100%	100%

Table 2: Fatal and major injury collisions by location, 2015-2018

	2015		2016		2017		2018	
	FATAL	MAJOR	FATAL	MAJOR	FATAL	MAJOR	FATAL	MAJOR
Urban Residential	0	2	0	5	0	0	0	0
Rural Residential	0	1	0	2	0	0	0	0
Arterial	3	31	1	32	2	29	0	10
Highways	2	25	4	21	4	20	5	11

No collisions involving a cyclist were reported in residential areas of Strathcona County in 2017 or 2018.

In 2017, five minor pedestrian injuries were reported in residential areas; one pedestrian involved was 15 years old. All others were between 20-49 years of age.

In 2018, one minor injury pedestrian collision was reported in the residential areas of the County; this collision involved an 11-year-old crossing in a school zone in a marked crosswalk with pedestrian beacons activated.

As a result of the positive safety impacts realized by the NTSAP, Strathcona County will continue to implement and improve on actions identified through the plan.