

The Regional Municipality of York

Committee of the Whole
Transportation Services
January 13, 2022

Report of the Commissioner of Transportation Services

Request for Speed Limit Revisions and Intersection Control Improvements Wellington Street East/Aurora Road and Ninth Line Towns of Aurora and Whitchurch-Stouffville

1. Recommendations

1. Existing speed limits on Regional roads listed in Table 1 of this report be revised as detailed.
2. Traffic signals be installed in 2023 at the intersection of Aurora Road and Ninth Line in the Town of Whitchurch-Stouffville, based on the Region's Traffic and Pedestrian Signal Policy.
3. The Regional Clerk circulate this report to the Clerks of the Towns of Aurora and Whitchurch-Stouffville and Chief of York Regional Police.
4. The Regional Solicitor prepare the necessary bylaws.

2. Summary

This report responds to a resolution received from Town of Whitchurch-Stouffville requesting the Region reduce speed limits on Aurora Road between Highway 48 and Ninth Line and implement traffic control improvements at the intersection of Aurora Road and Ninth Line.

Key Points:

- A comprehensive speed limit review and intersection control study was undertaken for the Wellington Street East/Aurora Road corridor and Aurora Road and Ninth Line intersection
- Speed limit revisions on Wellington Street East/Aurora Road are recommended to create consistent speeds along the road corridor to help protect all travellers, encourage driver compliance, complement urbanizing land use across the road network and improve traffic operations

- Based on the Region’s Traffic and Pedestrian Signal Policy, traffic signals will be installed at the intersection of Aurora Road and Ninth Line in 2023

3. Background

August 26, 2021, the Town of Whitchurch-Stouffville Council passed a resolution requesting speed limit reductions on Aurora Road and intersection control improvements at Aurora Road and Ninth Line

The Town’s resolution (Attachment 1) requests speed limit reductions along Aurora Road between Highway 48 and Ninth Line, in response to speeding concerns by residents. The Town also requested the Region implement traffic signals, an all-way stop or roundabout at the intersection of Aurora Road and Ninth Line in response to recent collisions.

Safety measures have been implemented to increase visibility at the intersection

Aurora Road and Ninth Line is a four-legged intersection operating with a two-way stop on Ninth Line in the north/south direction and free flow conditions on Aurora Road in the east/west direction. Staff had previously undertaken operational safety reviews at the intersection and determined approximately two to three collisions occur annually, predominately due to motorists misjudging safe gaps in traffic flow. As a result, several safety measures were implemented to increase visibility and awareness at the intersection including oversized stop signs on Ninth Line, overhead intersection flashing beacons, intersection radius pavement markings, intersection ahead distance signs and vegetation management.

4. Analysis

Fall 2021, staff conducted a speed limit review for the Wellington Street East/Aurora Road corridor

Staff undertook a review in fall 2021 of the existing speed limits and operating speeds along Wellington Street East/Aurora Road from Bayview Avenue to York/Durham Line. Speed limit revisions on Wellington Street East/Aurora Road would allow for consistent speeds along the road corridor. Five proposed speed limit revisions are detailed in Table 1. Locations are shown in Attachment 3.

Justifications for speed limit revisions include:

- Changing land use – Urbanization resulting from new development and infrastructure can include changing land uses and traffic patterns along a road corridor. When communities are built adjacent to Regional roads, operating conditions of these roads require changes to reflect increases in volumes, intersections, driveway connections, turning movements, pedestrians, cyclists and transit activities.

- Promoting consistent speed limits – Speed limits that change frequently within short distances on the same road can result in low compliance. Limiting the number of speed zone changes helps encourage driver compliance and improves traffic operations.
- Improving traffic operations – An appropriate speed limit increases the amount of time a driver has to react to potential hazards. Speed limits are determined in accordance with existing roadway elements and characteristics.

Table 1
Speed Limit Revisions

	Regional Road	Municipality	Existing Speed	Proposed Speed	Justification
1	Wellington Street East (Y.R. 15) from Bayview Avenue (Y.R. 34) to approximately 75 metres west of the Highway 404 eastbound-southbound on-ramp	Town of Aurora	70 km/h	60 km/h	Changing land use and to comply with MTO ramp design speed at Highway 404 due to new development
2	Wellington Street East/Aurora Road (Y.R. 15) from approximately 75 metres west of Highway 404 eastbound-southbound on-ramp to Woodbine Avenue (Y.R. 8)	Towns of Aurora and Whitchurch-Stouffville	80 km/h	60 km/h	Improve traffic operations and consistent speed limit
3	Aurora Road (Y.R. 15) from Woodbine Avenue (Y.R. 8) to Kennedy Road (Y.R. 3)	Town of Whitchurch-Stouffville	80 km/h	70 km/h	Improve traffic operations
4	Aurora Road (Y.R. 15) from Kennedy Road (Y.R. 3) to 300 metres west of McCowan Road	Town of Whitchurch-Stouffville	70 km/h	60 km/h	Improve traffic operations

	Regional Road	Municipality	Existing Speed	Proposed Speed	Justification
5	Aurora Road (Y.R. 15) from 550 metres west of Ninth Line (Y.R. 69) to York/Durham Line (Y.R. 30)	Town of Whitchurch-Stouffville	70 km/h	60 km/h	Improve traffic operations and consistent speed limit

An intersection control study undertaken at the intersection of Aurora Road and Ninth Line identified traffic signals as the appropriate control measure

In fall 2021, staff reviewed the feasibility of implementing a traffic signal, all-way stop and roundabout at the intersection of Aurora Road and Ninth Line. Findings are summarized below:

- **Traffic Signals**

Based on the Region’s Traffic and Pedestrian Signal Policy (Signal Policy), which is consistent with the Ministry of Transportation of Ontario warrant criteria, the intersection of Aurora Road and Ninth Line does not currently warrant traffic signals (91% satisfied). Staff further applied an estimated annual growth rate to the traffic volume data collected and determined the intersection is projected to satisfy the Signal Policy and provincial criteria for a traffic signal in 2023. Staff plan to begin intersection signal design and the procurement process in 2022 with installation of the signals in 2023.

- **All-way Stop**

All-way stop control is evaluated using the Ministry of Transportation of Ontario warrant criteria. All-way stop controls disrupt the flow of traffic and introduce delays in all directions and should only be considered at intersections of two relatively equal roadways with similar traffic volume demand and operating characteristics. Recent data shows Aurora Road carries three times more traffic than Ninth Line. The intersection of Aurora Road and Ninth Line does not warrant an all-way stop (77% satisfied), based on provincial criteria.

- **Roundabout**

In [June 2008](#), Council endorsed a report recommending staff give consideration, where applicable, to incorporating roundabouts in future major intersection improvement projects at the environmental assessment stage. A preliminary assessment of the intersection of Aurora Road and Ninth Line identifies the intersection as a potential location for a roundabout. Further study is required as part of a future environmental assessment to determine property requirements and utility relocations. The intersection of Aurora Road and Ninth Line is not currently identified in the Region’s 10-Year Major Roads and Transit Capital Construction Program.

Citizens are notified of new or changes in speed limits and traffic controls through on-street signs and a range of other communications

When speed limits are changed on Regional roads, a NEW sign is placed above each speed limit sign at the beginning of the speed zone. The NEW sign remains in place for approximately 60-90 days. To generate awareness of new and changing traffic controls on Regional roads, citizens are informed through a range of communications that include media alerts, social media and information posted on York.ca.

5. Financial

Costs associated with the manufacture and installation of new speed limit signs are included in the proposed 2022 Transportation Services Operating Budget.

The cost to install traffic signals at a typical four-approach intersection is approximately \$250,000, subject to final design. Annual operating and maintenance costs are approximately \$7,800.

6. Local Impact

The proposed speed limit revisions detailed in Table 1 will help reflect changes in land use, traffic operations and promote safety for all travellers. Lower speeds also help create a more conducive environment for pedestrians and cyclists. Local municipal staff support the proposed speed limit revisions.

Intersection traffic controls help improve safety for travellers. Traffic signals assign alternating right-of-way and have also been shown to be effective at reducing the severity and frequency of various types of accidents, most notably, right-angle collisions.

7. Conclusion

Town of Whitchurch-Stouffville has requested speed limit revisions on Aurora Road between Highway 48 and Ninth Line and implementation of traffic controls at the intersection of Aurora Road and Ninth Line.

Staff recommend implementing speed limit revisions on Wellington Street East/Aurora Road as described in this report.

The intersection of Aurora Road and Ninth Line does not currently warrant a traffic signal or all-way stop. The intersection is projected to warrant traffic signals in 2023, based on the estimated annual traffic volume growth rate, the Region's Signal Policy and provincial criteria for a traffic signal. Staff propose to begin the intersection signal design in 2022 and prepare for future installation.

Bylaw amendments are required before speed limit revisions may be implemented. Subject to Council approval, the Regional Solicitor would prepare the necessary bylaws and forward applicable copies to the Towns of Aurora and Whitchurch-Stouffville and Chief of York Regional Police.

For more information on this report, please contact Joseph Petrunaro, Director Roads and Traffic Operations, at 1-877-464-9675 ext. 75220. Accessible formats or communication supports are available upon request.



Recommended by:

Ann-Marie Carroll
Acting Commissioner of Transportation Services



Approved for Submission:

Bruce Macgregor
Chief Administrative Officer

December 8, 2021
Attachments (3)
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