



CITY OF HAMILTON
PUBLIC WORKS DEPARTMENT
Transportation Operations and Maintenance Division

TO:	Chair and Members Public Works Committee
COMMITTEE DATE:	February 19, 2021
SUBJECT/REPORT NO:	Upper Gage Avenue between Rymal Road East and Stone Church Road East – Roadway Safety Audit Update (PW21007) (Ward 6)
WARD(S) AFFECTED:	Ward 6
PREPARED BY:	David Ferguson (905) 546-2424 Ext. 2433 Mike Field (905) 546-2424 Ext. 4576
SUBMITTED BY:	Edward Soldo Director, Transportation Operations & Maintenance Public Works Department
SIGNATURE:	

RECOMMENDATIONS

- (a) That the speed limit on Upper Gage Avenue between Rymal Road East and Stone Church Road East be reduced to 40 km/h;
- (b) That the speed limit on Royal Vista Drive between Templemead Drive and Upper Gage Avenue be reduced to 30 km/h in alignment with the school zone;
- (c) That the speed limit on Templemead Drive between Ingrid Court and Tudor Street be reduced to 30 km/h in alignment with the school zone; and
- (d) That Upper Gage Avenue between Rymal Road East and Stone Church Road East be designated as a Community Safety Zone.

EXECUTIVE SUMMARY

As a result of a fatal collision involving a pedestrian at the intersection of Upper Gage Avenue and Royalvita Drive that occurred on December 1, 2020, Council directed staff to undertake a roadway safety audit based on Vision Zero principles of Upper Gage Avenue between Rymal Road East and Stone Church Road East.

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Transportation Operations & Maintenance completed a roadway safety audit based on the considerations requested by the Council direction and the receipt of a community petition. Several recommendations are proposed which are supported through the Vision Zero Action Plan; including speed limit reductions, designation as a Community Safety Zone, installation of digital speed signs and pedestrian count down timers at the Royalvista Drive intersection.

In addition, a comprehensive review of the built environment is being undertaken to identify if there are further opportunities for safety enhancements such as the reconfiguration of lanes on Upper Gage Avenue in proximity to the Stone Church East intersection.

Alternatives for Consideration – N/A

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: Costs associated with the recommendations of this report will be funded through existing capital project budgets:

4662020053 – Engineering Priorities Vision Zero
Speed signage on Upper Gage at a cost of approximately \$1,000.

4662020930 Neighbourhood Speed Reduction Initiative
Speed signage on Royalvista Drive and Templemead Drive at a cost of approximately \$3,000.

4662020053 – Engineering Priorities Vision Zero
Community Safety Zone signage on Upper Gage at a cost of approximately \$1,000.

Staffing: N/A

Legal: N/A

HISTORICAL BACKGROUND

At the December 16, 2020 Council meeting, the following motion was approved:

Roadway Safety Audit of Upper Gage Avenue, between Stone Church Road East and Rymal Road East, Hamilton (Ward 6)

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That Transportation Operations & Maintenance staff undertake a roadway safety audit, based on Vision Zero principles, of Upper Gage Avenue, between Stone Church Road East and Rymal Road East, to assess potential safety enhancements such as a reduced speed limit, school zone flashing lights, physical changes to the lane configuration, and the feasibility as a future location for an automated speed enforcement camera or red-light camera.

This direction is in response to a collision resulting in a pedestrian fatality that occurred on December 1, 2020 at the intersection of Upper Gage Avenue and Royalvista Drive.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

N/A

RELEVANT CONSULTATION

N/A

ANALYSIS AND RATIONALE FOR RECOMMENDATION

Transportation Operations & Maintenance completed a roadway safety audit for Upper Gage Avenue between Rymal Road East and Stone Church Road East.

The safety audit examined safety enhancement opportunities as directed by Council, specifically:

- Speed limit reductions;
- School zone flashing beacons;
- Built environment roadway safety enhancements;
- Consideration for community safety zone designation;
- Consideration for automated speed enforcement; and
- Consideration for red light camera at the intersection of Upper Gage Avenue and Royalvista Drive.

Vehicular speed and volume data collection equipment were installed on Upper Gage Avenue on December 10, 2020 and removed on December 14, 2020. Digital speed signs (DSS) were proactively installed on December 21, 2020 along Upper Gage Avenue in proximity to the Royalvista Drive intersection. The DSS equipment provides drivers with an awareness of their speed in relation to the posted speed limit. Associated speed and volume data are also collected by this equipment which further supplements the data collected between December 10, 2020 and December 14, 2020.

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Pedestrian countdown timers were installed at the Royalvista Drive intersection, on all four legs of the intersection to provide pedestrians awareness of their safe and legally permissible crossing times.

The safety audit for Upper Gage Avenue within the noted segment complied the following information.

Vehicle Speeds

Upper Gage Avenue between Rymal Road East and Stone Church Road East has a regulatory speed limit of 50 km/h. Based on examination of data collection that occurred between December 10, 2020 and December 14, 2020 the 85th percentile speed, which is the speed in which 85% of the total traffic is travelling at or below, was determined to be 56 km/h for southbound and 57 km/h for northbound.

The following table summarizes the volume and speed data collected to date.

Data Collection Category:	Southbound Direction:	Northbound Direction:
85 th Percentile Speed:	56 km/h	57 km/h
85 th Percentile Vehicles:	15750 (85.8%)	14572 (85%)
Total Vehicle Count:	18350	17143
Average Speed:	47.6 km/h	48.7 km/h
Annual Average Daily Traffic (AADT):	4492	4155

Safety Performance

The five-year collision analysis (2015-2019) for the intersection of Upper Gage Avenue and Royalvista Drive identified a total of four collisions, all of which are classified as non-injury collisions. All collisions involved vehicles as three for the four collisions were rear-end and the other was a sideswipe. A review of the 2020 collision data identified there was one non-injury rear-end collision and the fatal pedestrian collision that occurred on December 1, 2020.

Network screening is a 5-year analysis of collisions on the roadway network (2015-2019). For intersections, the ranking is based on all intersections that have had at least 1 recorded collision in the past 5 years. For roadway segments, the ranking is based on recorded collisions that occur on a roadway between two intersections in the past 5 years. In both instances, collisions are evaluated based on industry standard safety performance functions with additional evaluation on injury severity and collision patterns that result in injuries.

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The network screening process is used to determine whether the observed safety performance at a given location is higher or lower than the average safety performance of other sites with similar roadway characteristics and exposure. The ranking allows the prioritization of locations for potential safety improvements where investing in improvements is likely to return the greatest benefit.

The following table summarizes network screening rankings for Upper Gage Avenue between Rymal Road East and Stone Church Road East up to the end of 2019.

Location:	Ranking:
Intersection of Upper Gage Avenue @ Stone Church Road East	113 out of 1,013
Intersection of Upper Gage Avenue @ Rymal Road East	534 out of 1,013
Intersection of Upper Gage Avenue @ Royal Vista Drive	911 out of 1,013
Roadway Segment of Upper Gage Avenue between Anna Capri Drive and Stone Church Road East	720 out of 4,281

A summary of findings, outcomes and next steps of the safety audit for Upper Gage Avenue are as follows.

Speed Limit Reductions

Upper Gage Avenue is designated as an arterial roadway and based on vehicle speed data and collision analysis, a reduction in speed limit would not normally be recommended. However, in further evaluating this location, identification that the intersection of Upper Gage Avenue and Royalvita Drive is a designated school crossing location with a school crossing guard and that a community petition has been received which requests a speed limit reduction supported by the Ward 6 Councillor, it is recommended that the speed limit be reduced from 50 km/h to 40 km/h between Rymal Road East and Stone Church Road East. An amendment of the City of Hamilton Traffic By-law would be required and approved, through delegated authority submission at Council upon the approval of recommendation (a) of Report PW21007.

Royalvita Drive between Templemead Drive and Upper Gage Avenue and Templemead Drive between Ingrid Court and Tudor Street are designated school zones and scheduled to receive reduced speed limits to 30 km/h as part of the Neighbourhood Speed Limit reduction project. Conversion was scheduled to be implementation in 2022. Based on the safety audit and Council direction it is recommended that the schedule be advanced and implemented in 2021. This change in schedule will not impact the timing of other neighbourhood conversions in the City as previously planned. An amendment of the City of Hamilton Traffic By-law would be required and approved, through delegated authority submission at Council upon the approval of recommendations (b) and (c) of Report PW21007.

School Zone Flashing Beacons

The Highway Traffic Act (HTA) regulates the designation of school zones and Part IX - Rate of Speed, part 128(5)(a) states that a school zone may only be designated for portions of roadways that “adjoins the entrance to or exit from a school that is within 150 metres along the highway in either direction beyond the limits of the land used for the purposes of the school”. The use of school zone flashing beacons also falls within the constraints of the HTA regulation. Therefore, Upper Gage Avenue is precluded from being designated as a school zone with associated flashing beacons as it does not conform to the HTA requirements.

Built Environment Roadway Safety Enhancements

Transportation Operations & Maintenance are examining the feasibility of lane configuration changes on Upper Gage Avenue, specifically the possible removal or alteration of the southbound curb lane as directed by Council. This work requires a comprehensive review to determine if there are any impacts to the safe and efficient operation of the intersection of Upper Gage Avenue and Stone Church Road East. Additionally, other safety enhancement opportunities relating to changes to the built environment are being examined. Transportation Operations & Maintenance will report back to PW Committee if required should the built environment review result in the need for approval of any recommended changes.

Community Safety Zone Designation

Community Safety Zones (CSZ) were permitted for use in the City after being added to the City of Hamilton Traffic By-law per Council approval on July 17, 2020 (PW20045). The intent of CSZ's is to provide road users with visual awareness that they should be diligent in their attentiveness to roadway safety when traveling in or through designated areas. A CSZ guideline was also approved to provide a consistent, repeatable, transparent and a defined method for designation of roadway segments. The guideline considers roadway characteristics such as daily traffic volume, vehicle operating speed, pedestrian volumes, collision history, and the presence (or lack of) multi-modal amenities. Candidate locations must achieve a minimum of 25 points to be considered for designation of a CSZ per the approved guideline.

An assessment of Upper Gage Avenue between Rymal Road East and Stone Church Road East using the CSZ guideline and score it as 29. Based on the ranking, CSZ designation is therefore recommended as data analysis indicates that this roadway segment does meet permissive thresholds. Further, the intersection of Upper Gage Avenue and Royalvista Drive is a designated school crossing location with a school crossing guard and that a community petition has been received which indicates

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support from the community related to localized enhanced safety desires. An amendment of the City of Hamilton Traffic By-law would be required and approved, through delegated authority submission at Council upon the approval of recommendation (d) of Report PW21007.

Automated Speed Enforcement

The City's Automated Speed Enforcement (ASE) program became operational as a pilot project in October 2020 as directed by Council (PW20002). Through this pilot project two portable automated speed enforcement cameras are circulated amongst various approved locations throughout the City. Transportation Operations and Maintenance will be reporting to Public Works Committee upon the completion of the pilot, including any associated recommendations.

On December 16, 2020 Council approved an expanded list of ASE locations (PW240045a) for the ASE pilot which brought the total number of locations from 12 to 18. In consideration that the ASE program is actively in a piloting stage, locations have been previously approved and scheduled, and data does not indicate a systemic speeding issue on Upper Gage Avenue. It is not recommended that Upper Gage Avenue be included as part of the pilot. Should ASE be established as a permanent program Upper Gage Avenue could be considered for ASE operations at that time.

Red Light Camera

Red Light Cameras (RLC) are utilized at locations that have an identified collision pattern, particularly right-angle type collisions, and that could be attributed to aggressive driving behaviour and red light running. Transportation Operations & Maintenance undertakes a yearly review of all traffic signals within the City and evaluates each location for consideration of the RLC program.

RLC evaluation of the intersection of Upper Gage Avenue and Royalvista Drive ranks the it at 226 out of 620 signalized intersections. Based on the ranking, RLC operation is not recommended as analysis indicates that the intersection does not experience issues to thresholds that the RLC program seeks to mitigate when compared to other RLC candidate locations in the City.

ALTERNATIVES FOR CONSIDERATION

N/A

ALIGNMENT TO THE 2016 – 2025 STRATEGIC PLAN

Community Engagement and Participation

Hamilton has an open, transparent and accessible approach to City government that engages with and empowers all citizens to be involved in their community.

Healthy and Safe Communities

Hamilton is a safe and supportive City where people are active, healthy, and have a high quality of life.

Built Environment and Infrastructure

Hamilton is supported by state of the art infrastructure, transportation options, buildings and public spaces that create a dynamic City.

Our People and Performance

Hamiltonians have a high level of trust and confidence in their City government.

APPENDICES AND SCHEDULES ATTACHED

N/A