

STAFF REPORT

Department: Environmental Services & Special Projects

Date: October 6, 2024

Item: Traffic Signals

Recommendation: For information Only

Background:

- Council had a requested additional information with regard to consideration for traffic lights at Park Street.
- This staff report was prepared based on information found in Book 12 of the Ontario Traffic Manual.
- A comprehensive study of the traffic conditions and the physical characteristics of the site should be undertaken to determine whether the installation of a traffic control signal would benefit the intersection operation.
- There are 7 traffic Control Signal Justifications-
 1. Minimum 8 hour vehicle traffic volume
 2. Delay to Cross Traffic
 3. Combination Warrant
 4. Minimum 4 Hour Volume
 5. Collision Warrant
 6. Pedestrian Volume and Delay Warrant
 7. Projected Volumes
- **Justification 1**-Minium Vehicle Volume- is intended for applications where the principal reason for installing a traffic signal is the cumulative delay produced by large volumes of intersecting traffic at an unsignalized intersection.

In laymen's terms, the traffic volume of Park Street should be near the volume of traffic for Center Street to create this conflict.

- **Justification 2-** Delay to Cross traffic- is intended for application where the traffic volume on the main road is so heavy that traffic on the minor road suffers excessive delay or hazard in entering of crossing the main road.
- **Justification 3-** Volume Delay combination- signals may be installed where neither Justification 1 or justification 2 can be 100% satisfied but a signal could be installed if both justifications are at least 80% satisfied.
- **Justification 4-** Minimum four-hour vehicle volume- is intended for applications where the intersection experiences excessive delays for four or more peak hours delay, but does not have the prolonged demands throughout the day to meet an eight hour warrant. The ministry of Transportation, Ontario does not use the minimum four-hour vehicle justification.
- **Justification 5-** Collision Experience – signals may be considered as one means of improving an intersection safety where an unsignalized intersection has an unusually high collision history.

To satisfy this Justification two conditions must be met:

1. 15 or more reportable collisions of types susceptible to correction over a 36-month analysis period.
 2. Adequate Trial or consideration of less restrictive remedies with satisfactory observance and enforcement has failed to reduce collision frequency
- Justification 6- Pedestrian Volume and Delay- the minimum pedestrian volumes are intended for applications where the traffic volume on a main road is so heavy that pedestrians experience excessive delay or hazard in crossing the main road, or where high pedestrian crossing volumes produce the likelihood of such delays.

This justification is in table format, our municipal traffic counts suggested an average annual daily traffic exceeding 8000 vehicle/day. Even with traffic volumes in an eight-hour period between 2601-7000 vehicles would require over 275-475 pedestrians before a formula base equation justified a traffic light.

- Justification 7- Projected Volumes- there are 2 scenarios:
 1. The first intersection may exist and all that is changing is the addition of one or more developments which will add traffic to the intersection.
 2. The development which will require, or be associated with, the construction of one or more new legs at an existing intersection or a completely.

Analysis:

- The fulfillment of a traffic signal justification or justifications does not in itself require the installation of a traffic signal. Justifications must be used in combination with traffic engineering experience, professional judgement, and economic analysis.
- Based on the information presented above Senior staff did not think a traffic study was warranted.

Existing Policy: N/A

Strategic Goal: #3 Infrastructure, #6 Town Government

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