

COMMITTEE OF THE WHOLE - MARCH 26, 2007

CREDITSTONE ROAD PROPOSED ALL-WAY STOP CONTROLS

Recommendation

The Commissioner of Engineering and Public Works recommends:

That all-way stop controls not be installed at the four subject intersections on Creditstone Road at:

1. MacIntosh Boulevard
2. Pippin Road
3. Edilcan Drive
4. Locke Street

Economic Impact

None.

Communications Plan

Not Applicable.

Purpose

To review the feasibility of implementing all-way stop controls at four intersections on Creditstone Road, in response to direction from Council.

Background - Analysis and Options

At its meeting on January 29, 2007 Council directed:

- “1. That staff review and report back on the feasibility of implementing appropriate stop signs instead of traffic control signals at the subject intersections on Creditstone Road;”**

Creditstone Road is an urbanized industrial roadway with a pavement width of 14.0 metres between approximately 100 metres south of MacIntosh Boulevard to Rutherford Road. The speed limit on Creditstone Road is posted at a statutory 50 km/h. The other intersecting roadways are all designed to our industrial roadway standard with a statutory speed limit of 50 km/h. The area is shown on Attachment No. 1.

Concerns were raised from several business owners regarding the speed of traffic on Creditstone Road.

Turning movement counts were conducted on Tuesday, November 14, 2006 at the four subject intersections during peak travel periods. The traffic counts were conducted from 7:00 am to 9:00 am, 11:00 am to 2:00 pm and 3:00 pm to 6:00 pm. On the day of the traffic studies the weather was clear and the roads were dry. Previously, the collected traffic volumes were compared to the Provincial Warrant for Traffic Signal Installation and none of the four intersections met the warrant to install traffic signals.

The collected volumes were now compared to the the Provincial Warrant for All-Way Stop Control and are summarized below:

Creditstone Road and MacIntosh Boulevard

- Warrant 1 – Minimum Vehicular Volumes Warranted 48%
- Warrant 2 – Accident Hazard Warranted 0%
- Warrant 3 – Sight Restriction Warranted 0%

Creditstone Road and Pippin Road

- Warrant 1 – Minimum Vehicular Volumes Warranted 47%
- Warrant 2 – Accident Hazard Warranted 0%
- Warrant 3 – Sight Restriction Warranted 0%

Creditstone Road and Edilcan Drive

- Warrant 1 – Minimum Vehicular Volumes Warranted 38%
- Warrant 2 – Accident Hazard Warranted 0%
- Warrant 3 – Sight Restriction Warranted 0%

Creditstone Road and Locke Street

- Warrant 1 – Minimum Vehicular Volumes Warranted 34%
- Warrant 2 – Accident Hazard Warranted 0%
- Warrant 3 – Sight Restriction Warranted 0%

For an all-way stop control to be warranted, one or more of the 3 warrants must be satisfied 100% or more. The results of the turning movement counts do not meet the requirements of the Provincial Warrant for All-Way Stop Control Installation. The above results reflect the highest eight peak traffic hours at the intersections. At all four intersections, there are zero recorded collisions from the past 12 months, and there are no sight line restrictions at any of the four intersections.

The All-Way Stop Control Warrant varies from the Traffic Signal Control Warrant in that the all-way stop control warrant does not include delay to cross traffic, and includes a review of sight line restrictions.

Both the All-Way Stop Control warrant and the Traffic Signal Control warrant include an Accident Hazard section, but the requirements are different for each warrant. For an all-way stop control, the past 12 months of collisions susceptible to correction by an all-way stop control are included, while for traffic signals, the past 36 months of collisions susceptible to correction by a traffic signal are included. The initial report dated December 11, 2006 is on Attachment No. 2.

The installation of an all-way stop control should be considered when two roadways have similar traffic volumes and operating characteristics. The traffic volumes on Creditstone Road are substantially higher than those on the four side streets. All-way stop controls are not to be installed as speed control devices.

Relationship to Vaughan Vision 2007

This traffic study is consistent with Vaughan Vision 2007 as to ensure enhanced safety standards are incorporated in community designs (1.1.2).

This report is consistent with the priorities previously set by Council.

Regional Implications

Not Applicable.

Conclusion

Based on staff's review, it is recommended that all-way stop controls not be installed at any of the four subject intersections on Creditstone Road.

Attachments

1. Location Map
2. Council Extract titled Signalized Intersections – Creditstone Road, December 11, 2006 Committee of the Whole (referred to January 29, 2007 Council meeting)

Report prepared by:

Mark Ranstoller, Senior Traffic Technologist, ext. 3141
Mike Dokman, Supervisor, Traffic Engineering, ext. 3118

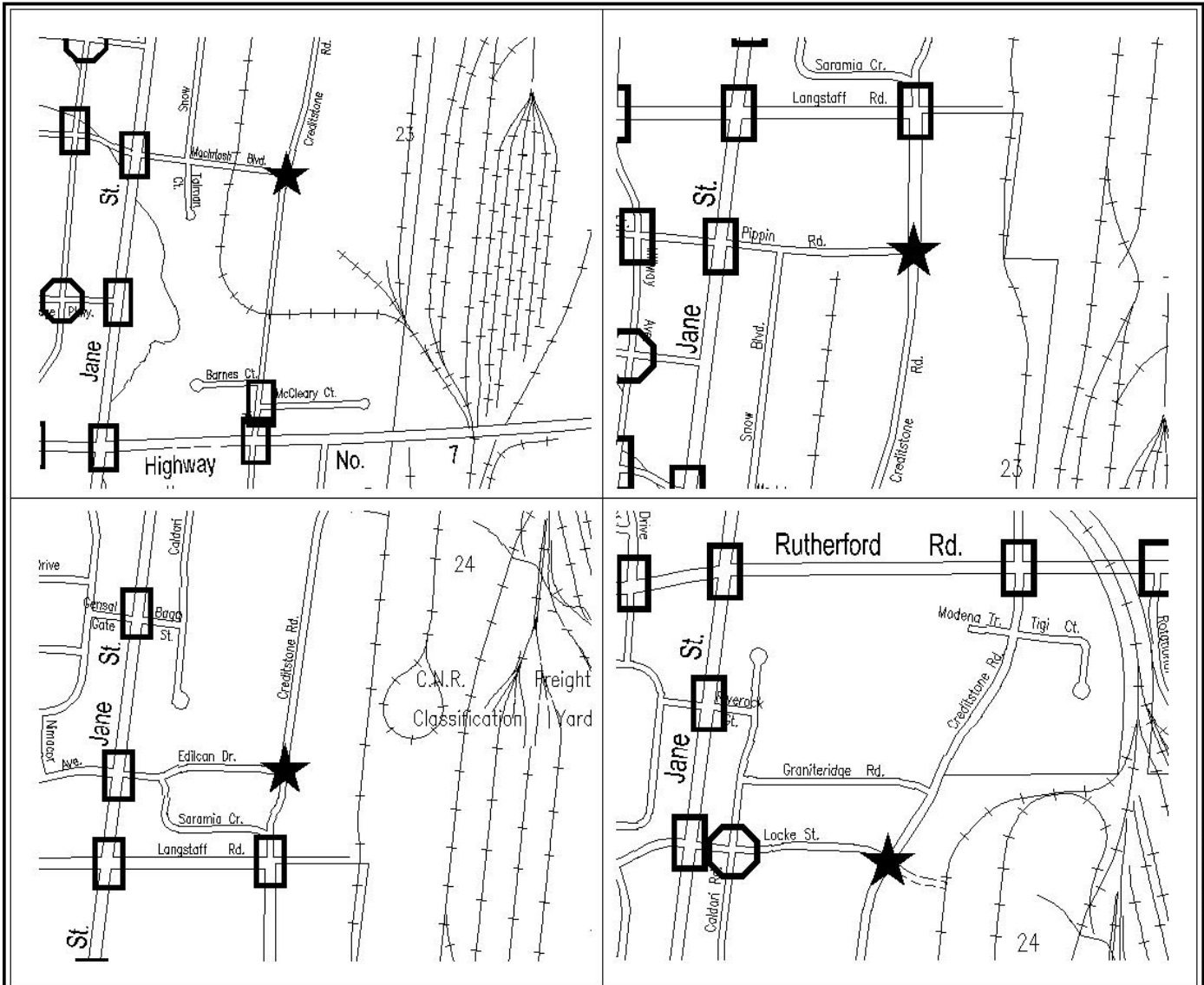
Respectfully submitted,

Bill Robinson, P. Eng.
Commissioner of Engineering and Public Works

Gary Carroll, P. Eng.
Director of Engineering Services




MR:mc

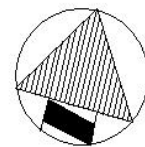
ATTACHMENT No. 1



CREDITSTONE ROAD PROPOSED ALL-WAY STOP CONTROLS

LEGEND

-  INTERSECTIONS UNDER REVIEW
-  EXISTING TRAFFIC SIGNALS
-  EXISTING ALL-WAY STOP CONTROL



NOT TO SCALE

ATTACHMENT NO. 2

CITY OF VAUGHAN

EXTRACT FROM COUNCIL MEETING MINUTES OF JANUARY 29, 2007

Item 11, Report No. 1, of the Committee of the Whole, which was adopted without amendment by the Council of the City of Vaughan on January 29, 2007.

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SIGNALIZED INTERSECTIONS – CREDITSTONE ROAD (Referred from the Council meeting of December 18, 2006)

The Committee of the Whole recommends:

- 1) That staff review and report back on the feasibility of implementing appropriate stop signs instead of traffic control signals at the subject intersections on Creditstone Road; and
- 2) That the following report of the Commissioner of Engineering and Public Works, dated December 11, 2006, be received.

Recommendation

Council, at its meeting of December 18, 2006, adopted the following:

That this matter be referred to the Committee of the Whole meeting of January 22, 2007.

Report of the Commissioner of Engineering and Public Works, dated December 11, 2006

Recommendation

The Commissioner of Engineering and Public Works recommends:

That traffic control signals not be installed at the four subject intersections on Creditstone Road at:

1. MacIntosh Boulevard
2. Pippin Road
3. Edilcan Drive
4. Locke Street

Economic Impact

Not Applicable.

Purpose

To review the feasibility of implementing traffic control signals at four intersections on Creditstone Road, in response to direction from Council.

Background - Analysis and Options

At its meeting on September 25, 2006 Council directed:

- “1. That staff investigate the need for and feasibility of a signalized intersection at Creditstone Road and MacIntosh Boulevard;
2. That staff investigate the need for and feasibility of a signalized intersection at Creditstone Road and Pippin Road;
3. That staff investigate the need for and feasibility of a signalized intersection at Creditstone Road and Edilcan Drive;

.../2

CITY OF VAUGHAN

EXTRACT FROM COUNCIL MEETING MINUTES OF JANUARY 29, 2007

Item 11, CW Report No. 1 – Page 2

4. That staff investigate the need for and feasibility of a signalized intersection at Creditstone Road and Locke Street; and
5. That staff report to a future Committee of the Whole meeting in December 2006 with their findings.”

Creditstone Road is an urbanized industrial roadway with pavement widths ranging from 11.5 to 14.0 metres between Highway 7 and Locke. The speed limit on Creditstone Road is a statutory 50 km/h. The other intersecting roadways are all designed to our industrial roadway standard with a statutory speed limit of 50 km/h. The area is shown on Attachment No. 1.

Turning movement counts were conducted on Tuesday, November 14, 2006 at the four subject intersections during peak travel periods. The traffic counts were conducted from 7:00 am to 9:00 am, 11:00 am to 2:00 pm and 3:00 pm to 6:00 pm. On the day of the traffic studies the weather was clear and the roads were dry. The collected traffic volumes compared to the Provincial Warrant for Traffic Signal Installation are as shown below.

Creditstone Road and MacIntosh Boulevard

- | | |
|---|---------------|
| • Warrant 1 – Minimum Vehicular Volumes | Warranted 25% |
| • Warrant 2 – Delay to Cross Traffic | Warranted 25% |
| • Warrant 3 – Accident Experience | Warranted 0% |

Creditstone Road and Pippin Road

- | | |
|---|---------------|
| • Warrant 1 – Minimum Vehicular Volumes | Warranted 54% |
| • Warrant 2 – Delay to Cross Traffic | Warranted 62% |
| • Warrant 3 – Accident Experience | Warranted 6% |

Creditstone Road and Edilcan Drive

- | | |
|---|---------------|
| • Warrant 1 – Minimum Vehicular Volumes | Warranted 44% |
| • Warrant 2 – Delay to Cross Traffic | Warranted 55% |
| • Warrant 3 – Accident Experience | Warranted 0% |

Creditstone Road and Locke Street

- | | |
|---|---------------|
| • Warrant 1 – Minimum Vehicular Volumes | Warranted 40% |
| • Warrant 2 – Delay to Cross Traffic | Warranted 56% |
| • Warrant 3 – Accident Experience | Warranted 0% |

For a traffic signal control to be warranted, one or more of the 3 warrants must be satisfied 100% or more. The results of the turning movement counts do not meet the requirements of the Provincial Warrant for Traffic Signal Installation. The above results reflect the highest eight peak traffic hours at the intersections.

There is also Warrant 4 – Combination Warrant which may be used if no individual warrants are satisfied 100%, in which two warrants satisfying 80% or more could warrant the installation of a traffic signal. At all four intersections, Warrant 4 does not meet requirements.

Relationship to Vaughan Vision 2007

This traffic study is consistent with Vaughan Vision 2007 as to ensure enhanced safety standards are incorporated in community designs (1.1.2).

This report is consistent with the priorities previously set by Council.

CITY OF VAUGHAN

EXTRACT FROM COUNCIL MEETING MINUTES OF JANUARY 29, 2007

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Conclusion

Based on staff's review, it is recommended that traffic signals controls not be installed at any of the four subject intersections on Creditstone Road.

Attachments

1. Location Map

Report prepared by:

Mark Ranstoller, Senior Traffic Technologist, ext. 3141
Mike Dokman, Supervisor, Traffic Engineering, ext. 3118

MR:mc

(A copy of the attachments referred to in the foregoing have been forwarded to each Member of Council and a copy thereof is also on file in the office of the City Clerk.)