

COMMITTEE OF THE WHOLE – APRIL 10, 2001

**HIGHWAY 7 AND ABERDEEN AVENUE/MARYCROFT AVENUE
SOUTHBOUND LEFT TURN ADVANCE REQUEST**

Recommendation

The Commissioner of Development Services recommends:

That this report be received for information purposes.

Background

On October 10, 2000 City of Vaughan Council approved a report requesting that the Region of York review the traffic operations and the feasibility on implementing a southbound left turn phase at the intersection of Highway 7 and Aberdeen Avenue/Marycroft Avenue.

Below is a brief outline of the Region of York's Staff report on the matter, contained in the extract from the February 8, 2001 Regional Council meeting minutes shown as Attachment No.2:

- Advance left turn phases are routinely implemented as traffic volumes warrant.
- The Region of York conducted a nine hour observation and turning movement study on Thursday, November 23, 2000.
- During the morning peak period, there were 168 southbound left turn vehicles per hour (Aberdeen Avenue) that yield to only 26 northbound through vehicles per hour (Marycroft Avenue).
- All southbound left turn vehicles "cleared" the allocated green time for that phase.
- During the remaining peak periods all southbound left turn vehicles "cleared" on the allocated green time.

The Region of York will not be implementing a southbound left turn advance phase at the intersection of Highway 7 and Aberdeen Avenue/Marycroft Avenue. The Region of York will continue to monitor this intersection with the continuous growth in the Woodbridge area and adjust the traffic control signal timings as warranted.

Respectfully submitted by,

Approved by,

FRANK MIELE
Commissioner of Development Services

Bill Robinson, P. Eng.
Director of Engineering

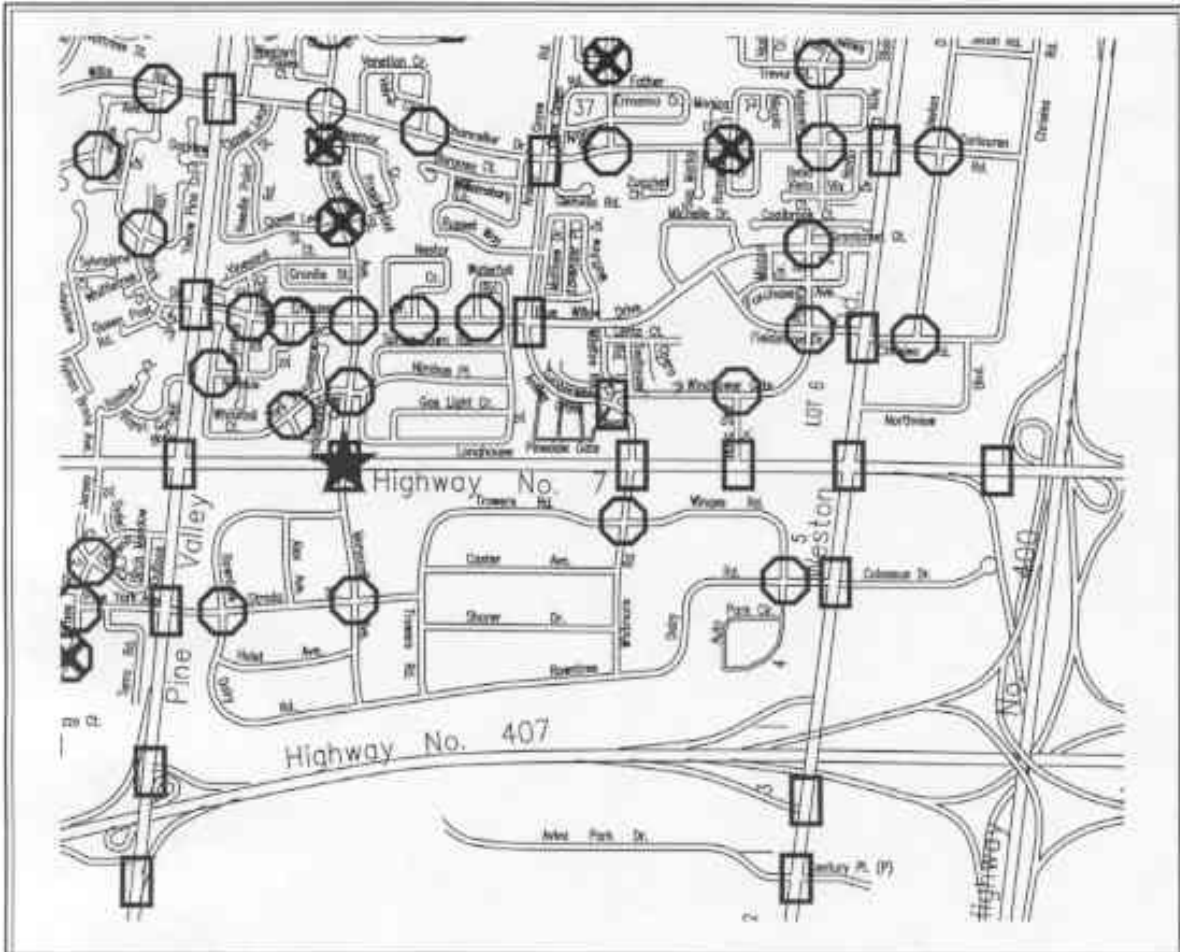
Report Prepared by: Mike Dokman, Sr. Transportation Technologist, ext 8031
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MD:PW:BH:MP

Attachments





1. Location Map
2. Region of York Report

ATTACHMENT No. 1



HIGHWAY NO. 7 & ABERDEEN AVENUE.
AND MARYCROFT AVENUE.
PROPOSED SOUTHBOUND LEFT TURN PHASE.

LEGEND

-  INTERSECTION UNDER REVIEW
-  EXISTING TRAFFIC SIGNALS
-  EXISTING ALLWAY STOP CONTROL
-  EXISTING ADULT SUPERVISED SCHOOLCROSSING



NOT TO SCALE

THE REGIONAL MUNICIPALITY OF YORK

Transportation and Works Committee
January 31, 2001
Report of the
Commissioner of Transportation and Works

HIGHWAY 7 (Y.R. 7) AT ABERDEEN AVENUE/MARYCROFT AVENUE TRAFFIC SIGNAL OPERATION

1. RECOMMENDATIONS

It is recommended that:

1. A southbound left turn off of Aberdeen Avenue onto Highway 7 eastbound not be implemented at this time.
2. Staff continue to monitor this intersection for changes in traffic demands.
3. The Clerk forward a copy of this report to the Clerk of the City of Vaughan.

2. PURPOSE

This report addresses a request from the City of Vaughan Council for a southbound left turn advance phase at the traffic control signals at Highway 7 and Aberdeen Avenue/Marycroft Avenue.

3. BACKGROUND

During the City of Vaughan Council meeting held October 10, 2000, the Committee of the Whole requested the Region's staff to the traffic movements at the intersection of Highway 7 at Aberdeen Avenue/Marycroft Avenue taking into consideration the installation of a southbound left turn phase.

The intersection of Highway 7 and Aberdeen Avenue/Marycroft Avenue is located east of Pine Valley Drive in the community of Woodbridge. Aberdeen Avenue services a residential subdivision north of Highway 7 while Marycroft Avenue services a commercial/industrial area south of Highway 7. A location plan is provided at Attachment 1.

Where sight distances and safety issues are not of particular concern, advance left turn phases are routinely implemented as traffic volumes warrant. The traffic patterns that typically require left turn advance phases typically have high left turning volumes as well as a high volume of traffic in the opposing direction.

To determine the need for advance left turn phases, traffic demand and delay studies are often conducted. These studies establish the delay to the left turning traffic as it relates to the delays to the traffic and pedestrians on all other approaches. Traffic control signals

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operate a maximum efficiency and safety when the timing of the signals is closely balanced with the demands of traffic and pedestrians.

4. ANALYSIS

To assess the request for a southbound left turn advance phase at the intersection of Highway 7 and Aberdeen Avenue/Marycroft Avenue, a nine-hour observation and turning movement study was conducted on Thursday November 23, 2000.

The study results show that the southbound left turn volume onto Highway 7 eastbound peaked at 168 vehicles per hour during the morning peak period. However, the southbound turning movement was opposed by 26 vehicles per hour in the opposing northbound direction. As a result, all vehicles arriving at the intersection were observed to "clear" during the allocated green time of the same cycle.

During the mid-day periods and the evening peak period, less than 60 vehicles per hour were routinely observed turning left in the southbound direction. With approximately 30 cycles of the traffic signal per hour, this averages to less than 2 vehicles per cycle. Again, all southbound left turn vehicles were observed to clear on the allocated green time.

Based on these observations and studies and to ensure an adequate balance between the timing of the traffic signals and the demands of pedestrian and vehicle traffic is maintained, a southbound left turn phase is not recommended at this time. However, with the continuous growth of traffic in the Woodbridge area, it is recommended that Region staff continue to monitor the intersection and adjust the traffic control signal timing as warranted.

5. FINANCIAL IMPLICATIONS

There are no financial implications associated with this report.

6. LOCAL MUNICIPAL IMPACT

This report has been prepared in response to a request from the Vaughan Committee of the Whole. As a result, the Regional Clerk should forward a copy of this report to the Clerk of the City of Vaughan.

7. CONCLUSION

During the City of Vaughan Council meeting held October 10, 2000, the Committee of the Whole requested the Region's staff to review the traffic movements at the intersection of Highway 7 at Aberdeen Avenue/Marycroft Avenue taking into consideration the installation of a southbound left turn phase.

The requested review has now been completed. The results show that a southbound left turn phase is not currently recommended for Highway 7 at Aberdeen Avenue/Marycroft Avenue. However, staff should continue to monitor and modify signal timing when

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necessary to ensure optimum efficiency and operation. Additionally, the Clerk should forward a copy of this report to the Clerk of the City of Vaughan.

This report has been reviewed by the Senior Management Group.

Prepared by:

Brian Harrison
Director Transportation Operations

Recommended by:

Approved for Submission:

Kees Schipper
Commissioner, Transportation and Works

Alan P. Wells
Chief Administrative Officer

27-Mar-01
Attachment(s) 1

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