

Request for Decision

All-Way Stop Control - Mont Adam Street at Sunrise Ridge Drive

Presented To: Operations Committee

Presented: Monday, Aug 11, 2014

Report Date: Wednesday, Jul 23, 2014

Type: Managers' Reports

Recommendation

THAT the City of Greater Sudbury maintain the current traffic control at the intersection of Mont Adam Street at Sunrise Ridge Drive, in accordance with the report dated July 23, 2014 from the General Manager of Infrastructure Services regarding All-Way Stop Control - Mont Adam Street at Sunrise Ridge Drive.

Background

The Ward Councillor submitted a petition signed by 36 area residents requesting that an all-way stop and crosswalk be installed at the intersection of Mont Adam Street and Sunrise Ridge Drive for the purpose of slowing down traffic (see Exhibit 'A'). As a result of this request, staff were directed to bring forth a report on the appropriateness of an all-way stop at the intersection of Mont Adam Street at Sunrise Ridge Drive.

Mont Adam Street at Sunrise Ridge Drive is a "T" intersection located approximately 300 metres north of Lloyd Street (M.R. 55) within Ward 12 (see Exhibit 'B'). Mont Adam Street is a local roadway with an average annual daily traffic (AADT) volume of approximately 5,600 and with a sidewalk on the west side. From Lloyd Street to Mountain Street, Mont Adam Street has a steep grade which plateaus near Sunrise Ridge Drive. The grade of Mont Adam Street is approximately 9 percent north and south of Sunrise Ridge Drive. Sunrise Ridge Drive is a divided local roadway which leads into the Sunrise Ridge Estates subdivision. Currently traffic on Sunrise Ridge Drive is controlled with a stop sign.

A turning movement count was conducted on June 2, 2014 to determine if an all-way stop is warranted. Based on the traffic volumes on Mont Adam Street, the arterial/major collector thresholds apply to this intersection. Applying the data from the turning movement count to the City's Minimum Volume Warrant indicates that the vehicle and pedestrian volume from Sunrise Ridge Drive meets only 14 percent of the minimum volume requirements for an all-way stop (see Exhibit 'C'). There were a total of 24 pedestrians (11 children and 13 adults) who crossed Mont Adam Street during the eight peak hours. It should be noted that eight of the children who crossed Mont Adam Street did so while a school bus stopped traffic on Mont

Signed By

Report Prepared By

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Division Review

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Adam Street.

A review of the City's collision information from 2011 to 2013 revealed that there were no collisions at this intersection during this three year period. For an arterial/major collector roadway, the Collision Warrant requires a minimum of four collisions per year over a three year period.

Roads and Transportation Services staff also reviewed sight distances at this intersection. When reviewing sight distance at an intersection, there are two types of sight distances that are typically considered, "approach sight" distance and "stopping sight" distance. "Approach sight" distance considers a scenario where the vehicle from the side street fails to stop at the intersection. Based on the speed limit of the main roadway, you are able to calculate the sight distance required for a driver to perceive that the vehicle from the side street will not stop and be able to react in time to avoid a collision. For this intersection, sight lines for northbound traffic are restricted by the pump house and hydro transformer installed near the intersection. For southbound traffic, sight distance is restricted by the decorative wall installed in the northeast corner of the intersection. "Stopping sight" distance is the distance required by a driver to bring the vehicle to a stop when an object on the roadway becomes visible. For northbound vehicles, the stopping sight distance is limited by the crest of the hill. For southbound vehicles, stopping sight distance is met at this intersection.

Roads and Transportation Services staff also reviewed Mont Adam Street under the Traffic Calming Program, however due to the grade of the roadway (greater than 8 percent), it does not qualify. Installing traffic calming devices on roadways with a grade greater than 8 percent is not recommended because they can become a hazard during slippery conditions.

Recommendation

All-way stops are often requested by residents in response to concerns on their street such as vehicle speeding, traffic volume, and safety for pedestrians and cyclists. Road authorities take guidance from the Ontario Traffic Manual when determining when and where to install stop signs. "The purpose of the Ontario Traffic Manual (OTM) is to provide information and guidance for transportation practitioners and to promote uniformity of treatment in the design, application and operation of traffic control devices and systems across Ontario. The objective is safe driving behaviour, achieved by a predictable roadway environment through the consistent, appropriate application of traffic control devices. Further purposes of the OTM are to provide a set of guidelines consistent with the intent of the Highway Traffic Act and to provide a basis for road authorities to generate or update their own guidelines and standards."

The City has adopted a revised Warrant for the Installation of All-Way Stop Signs, which reduces the thresholds required to meet the requirements for all-way stop approval. The reduced warrant does not change the purpose of a stop sign. "The purpose of the stop sign is to clearly assign right-of-way between vehicles approaching an intersection from different directions when traffic signals are not warranted or not yet installed and it has been determined that a yield sign is inadequate."

In general, "all-way stops should only be considered at the intersection of two relatively equal roadways having similar traffic volume demand and operating characteristics".

As indicated above, the traffic volumes, pedestrian volumes and collision history do not warrant the installation of an all-way stop at the intersection of Mont Adam Street at Sunrise Ridge Drive. Additionally, requiring vehicles to stop on steep grades may create operational issues during slippery conditions. Roads and Transportation Services staff recommends that traffic control remain unchanged at this intersection.

Due to the restricted sight lines, staff recommends that "hidden intersection ahead" signs and "pedestrian ahead" signs be installed on Mont Adam Street to advise drivers of the upcoming intersection and crossing pedestrians.

EXHIBIT A

Joscelyne Landry-Altmann - Fwd: Traffic Study for Mount Adam

From: Glen Haslam
To: Joscelyne Landry-Altmann <Joscelyne.Landry-Altmann@city.greatersudbury.o...
Date: 6/5/2011 10:00 AM
Subject: Fwd: Traffic Study for Mount Adam
Attachments: IMG.pdf; Mount Adam Traffic Study.pdf

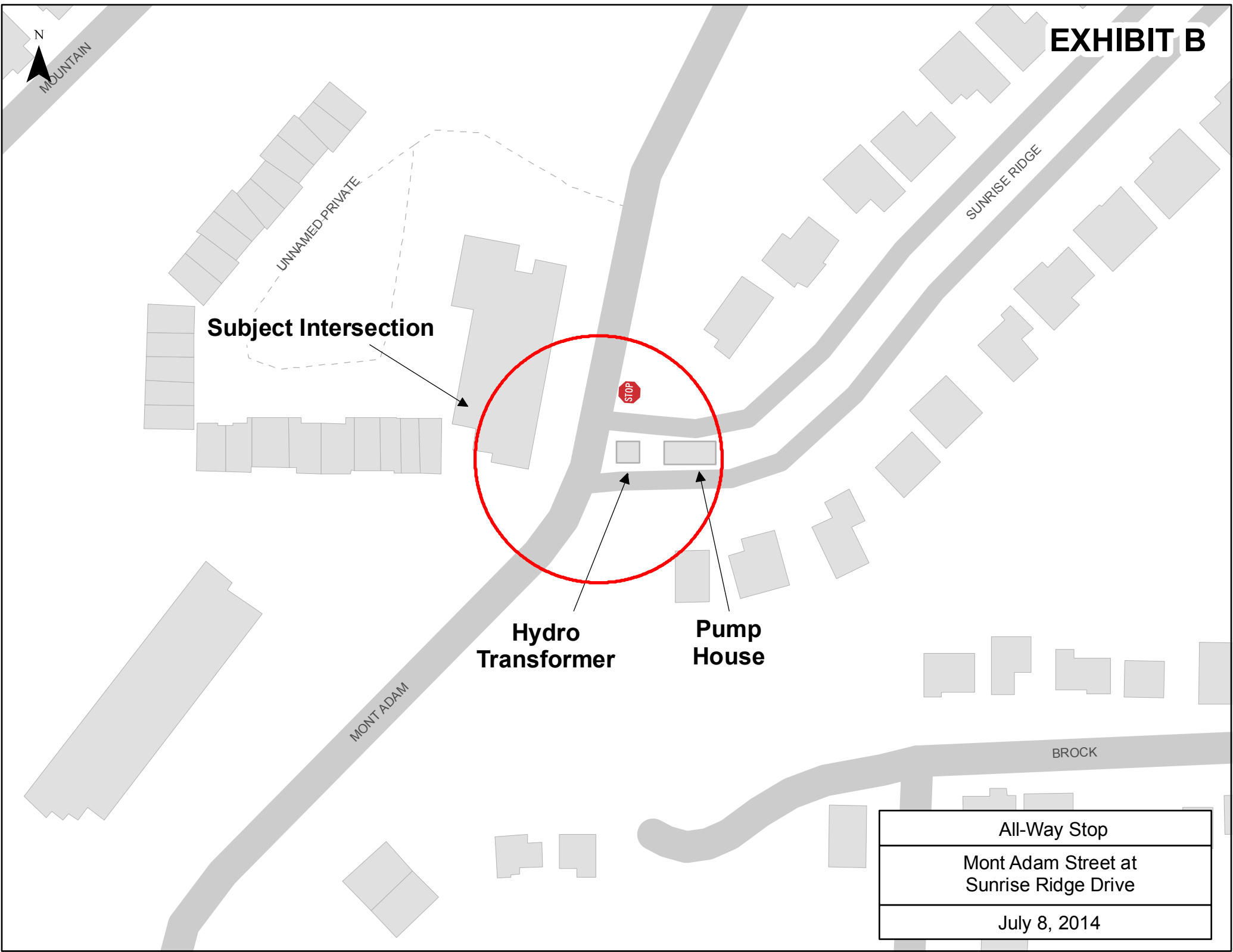
----- Forwarded message -----

From: Glen Haslam
Date: Sun, Jun 5, 2011 at 9:58 AM
Subject: Traffic Study for Mount Adam
To: Glen Haslam

Hi: Joscelyne,
The residents of Sunrise Ridge have all supported the idea of a traffic study of Mount Adam for the purpose of slowing traffic down. We would like a stop signs at the entrance to Sunrise Ridge and a crosswalk from the sidewalk across the road.

Thanks
Glen Haslam
President of Sunrise Ridge neighbourhood Association

EXHIBIT B



Subject Intersection

**Hydro
Transformer**

**Pump
House**

| |
|--|
| All-Way Stop |
| Mont Adam Street at Sunrise Ridge Drive |
| July 8, 2014 |

EXHIBIT: C

CITY OF GREATER SUDBURY ALL-WAY STOP WARRANTS

| | | | |
|-----------------------|----------------------------------|----------|--------------|
| Location: | Mont Adam St at Sunrise Ridge Dr | Date: | June 9, 2014 |
| Date of TM Count: | June 2, 2014 | Analyst: | JR |
| Type of Intersection: | T | | |
| Roadway Type | Arterial/Major Collector | | |
| AADT of Main Road: | 5600 | | |

All-Way Stop Warrant Summary

| | | | |
|------------|-------------------------|----|-----|
| Warrant #1 | Minimum Vehicle Volume | 14 | % |
| Warrant #2 | Collision History | 0 | % |
| Warrant #3 | Traffic Control Signals | No | Y/N |

All-Way Stop Warranted? **No** Y/N

Warrant #1 - Minimum Vehicle Volume

| Roadway Type | Arterial/Major Collector | Minor Collector | Local | Vehicles per hour | Percent Compliance |
|---|--------------------------|-----------------|--------------|-------------------|--------------------|
| AADT | > 5000 | 1000 - 5000 | < 1000 | | |
| Count Period | 7 hours | 4 peak hours | 4 peak hours | | |
| Total vehicle volume from all approaches is ≥ | 500/hr | 350/hr | 250/hr | 494 | 99% |
| Veh + Pedestrian volume from side street is ≥ | 200/hr | 140/hr | N/A | 28 | 14.1% |
| Traffic Split | 70/30 | 70/30 | 70/30 | 95/5 | 17% |

Warrant #2 - Collision History

| Roadway Type | Arterial/Major Collector | Minor Collector | Local | Total Number of Collisions | Percent Compliance |
|---------------------------------------|--------------------------|-----------------|-------|----------------------------|--------------------|
| Total Collisions over a 3 year period | 12* | 9* | 6* | 0 | 0% |

Warrant #3 **Traffic Control Signals are warranted and urgently needed, signs to be used as interim measures.** **No** Y/N

* Only those collisions susceptible to relief through multi-way stop control must be considered (i.e. right angle and turning types).

- If the intersection meets warrant # 1, then the all-way stop is recommended regardless of the remaining warrants.
- If the intersection does not meet warrant #1 and does not meet warrant #2, then the all-way stop is not recommended.
- If the intersection does not meet warrant #1 and does meet warrant #2, then the all-way stop is recommended.