



COUNCIL REPORT
Engineering Department
For the October 12, 2010 Council Meeting

DATE: October 6, 2010
TO: Jason Johnson, Chief Administrative Officer
FROM: Gary O'Rourke, Director of Engineering
RE: Shannon Ridge Traffic Calming Study
File No. 5460-06

STAFF'S RECOMMENDATION:

THAT Council direct staff to implement traffic calming measures on Shannon Ridge Drive in accordance with the recommendations contained in this report, with the estimated costs of \$15,000 to be funded from the approved 2010 budget.

EXECUTIVE SUMMARY:

Shannon Ridge Drive was opened to traffic between Ensign Way and Shannon Lake Rd in 2010. Local residents have expressed concern that this new connection may have created traffic problems related to increased traffic volumes and speeding. Traffic volume and speed data has been collected, and 'visibility' has been checked to assess if drivers have adequate sight distances along this corridor.

Based on the assessment of the data, it is recommended that parking bulbs and a painted centre-line be installed at the top of the hill at the east end of the corridor. This will help to reduce speeding and improve stopping sight distances.

It is also recommended that the stop sign be relocated closer to the intersection of Shannon Ridge Drive and Shannon Ridge Place, and that a painted stop bar be installed at this location. This will help to improve driver visibility while stopped at the intersection.

FINANCIAL IMPLICATIONS:

The estimated cost of implementing the recommended traffic improvements on Shannon Ridge Drive is \$15,000. Funding is available from the unexpended balance of the approved 2010 budget (i.e. no net increase in budget is required).

BACKGROUND:

Since the connection of Shannon Ridge Drive and Ensign Way some neighbourhood residents have expressed concerns regarding speeding and high traffic volumes on this local road connection. In an effort to appropriately address these concerns staff collected associated data and is recommending improvements to mitigate the identified problems.

Data Collection

To collect vehicular volume and speed data, traffic counters were placed in the following three locations from June 9 to 16, 2010 (Refer to Figure 1):

- east of Shannon Ridge Place (west counter);
- midway between Fieldstone Crescent and Ensign Way (middle counter);
- west of Ensign Way (east counter)

Assessment

The traffic data collected was assessed based on the following criteria for local road facilities used by traffic engineers:

- **Traffic Volumes**
Typically, local roads can safely accommodate approximately 5000 vehicles per day. From a 'capacity' perspective the current traffic volumes, which indicate daily traffic volumes of up to 1035 vehicles, are well within this range and do not warrant any changes to Shannon Ridge Drive or the local road network;
- **Measured Speed**
Speeding problems are typically identified based on the '85th percentile' speed (i.e. 85 percent of drivers observed drive at this speed or slower). In a 50 km/hr speed zone it is generally considered that a speeding problem exists where the measured 85th percentile speed is greater than 55 km/hr. In a school zone with a posted speed limit of 30km/hr (during school hours) the 85th percentile speed should be less than 40km/hr.
- **Stopping Sight Distance**
The "Stopping Sight distance" is the distance a driver requires to be able to observe, react and safely stop a vehicle to avoid an accident.

The following summarizes the data collected and provides related comments and recommendations based on the above referenced criteria for volume and speed:

1. The west counter recorded an average weekday traffic volume of 942 vehicles in the westbound direction, and 1035 vehicles traveling eastbound. The 85th percentile two-way speed is from 36-40 km/h.
 - This data is within appropriate limits for a local road facility, in a school zone, with a posted speed limit of 30 km/hr during school times.

2. The middle counter recorded an average weekday traffic volume of 750 vehicles westbound and 869 vehicles traveling eastbound. The 85th percentile two-way speed is from 46-50 km/h.
 - This data is within appropriate limits for a local road facility with a posted speed limit of 50 km/hr.
3. The east counter recorded an average weekday traffic volume of 762 vehicles westbound and 848 vehicles traveling eastbound. The westbound 85th percentile speed is 56-60 km/h where as the eastbound 85th percentile speed is 66-70 km/h.
 - Traffic volumes are within appropriate limits for a local road facility;
 - The 85th percentile speeds are relatively high and traffic calming measures are warranted.
4. It was determined that a driver stopped at Shannon Ridge Place does not have adequate sight distance while looking towards eastbound traffic (70m required, 62m measured).
5. It was determined that there is inadequate sight distance for drivers at the west end of Shannon Ridge Dr at the top of the hill (65 m required, 62 m measured).

Recommendations

- a. The following measures are recommended to address the speeding problem at the east end of Shannon Ridge Drive, and the limited sight distances at the top of the hill in the same vicinity (Refer to Figure 2):
 - create parking 'bulbs' on the south end of the curve to protect vehicles parked on the curve
 - paint a solid yellow centerline leading up to, through, and out of the curve for a short distance
 - In additional minor trimming of vegetation would be done.

These measures will help to increase the stopping sight distance and channelize traffic into their required lanes through the corner, and to reduce speeds.

- b. At Shannon Ridge Place and Shannon Ridge Dr the following is recommended:
 - paint stop bar;
 - the stop sign be relocated forward towards the intersection.

These measures will help to improve the stopping sight distance for drivers stopped at the intersection.

It is estimated that the recommended works can be completed at a total cost of approximately \$15,000, with the funding available from the approved 2010 budget.

It is worth noting that staff has discussed these recommendations with a representative of the Shannon Lake Neighbourhood Association.

Staff will also advise the RCMP of the identified traffic concerns for their information and enforcement as they deem appropriate.

ALTERNATE RECOMMENDATION:

Council could direct staff to proceed on a different basis. This would require Council direction.

Respectfully submitted,

Gary O'Rourke, P.Eng.
Director of Engineering

Jim Zaffino
Chief Financial Officer

Attachments: Figure 1
Figure 2

Approved for Council's Consideration
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Jason Johnson
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Date

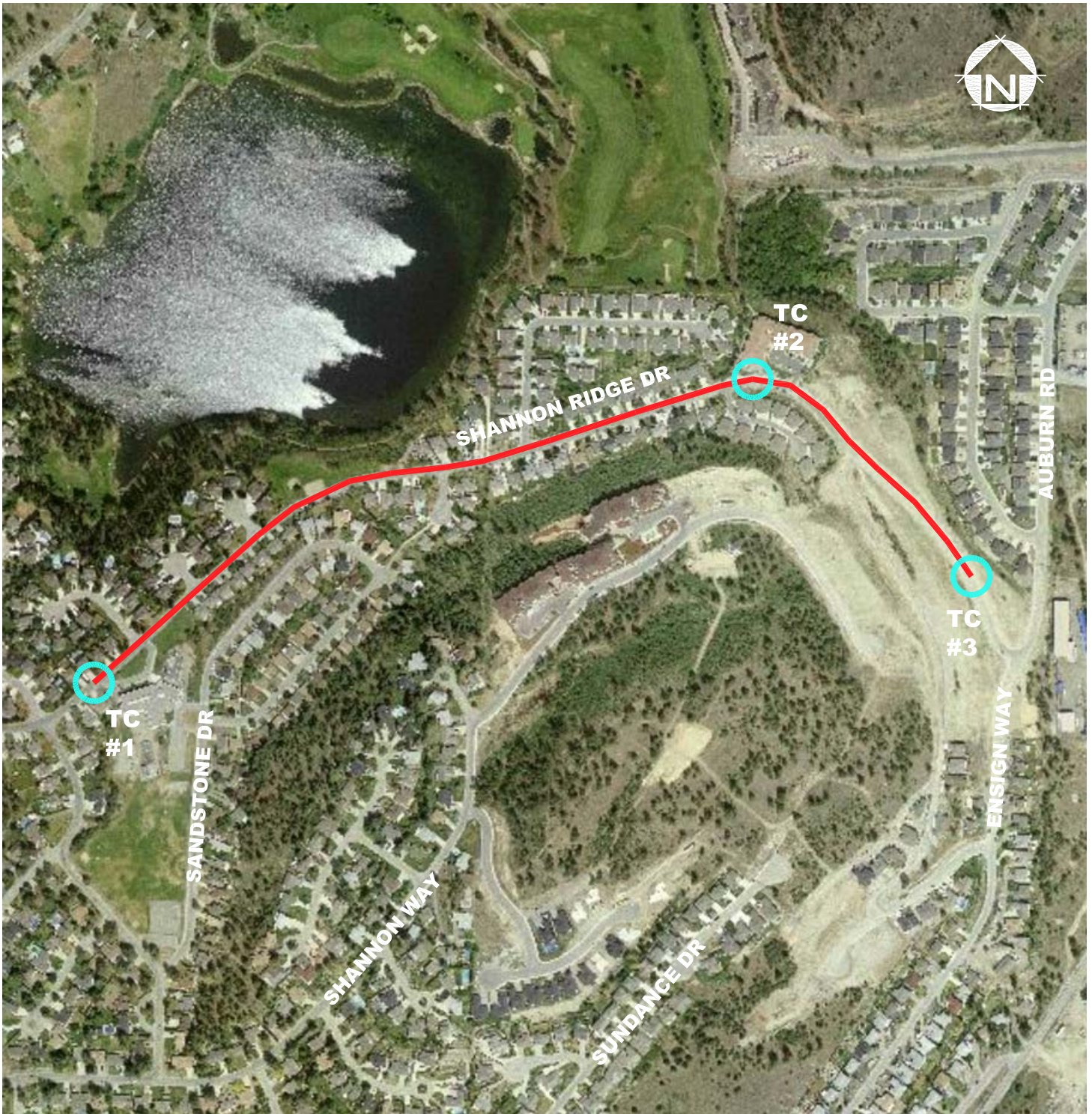


FIGURE 1

- STUDY AREA
- TRAFFIC COUNT LOCATION



**TRAFFIC COUNT LOCATIONS
SHANNON RIDGE DRIVE**

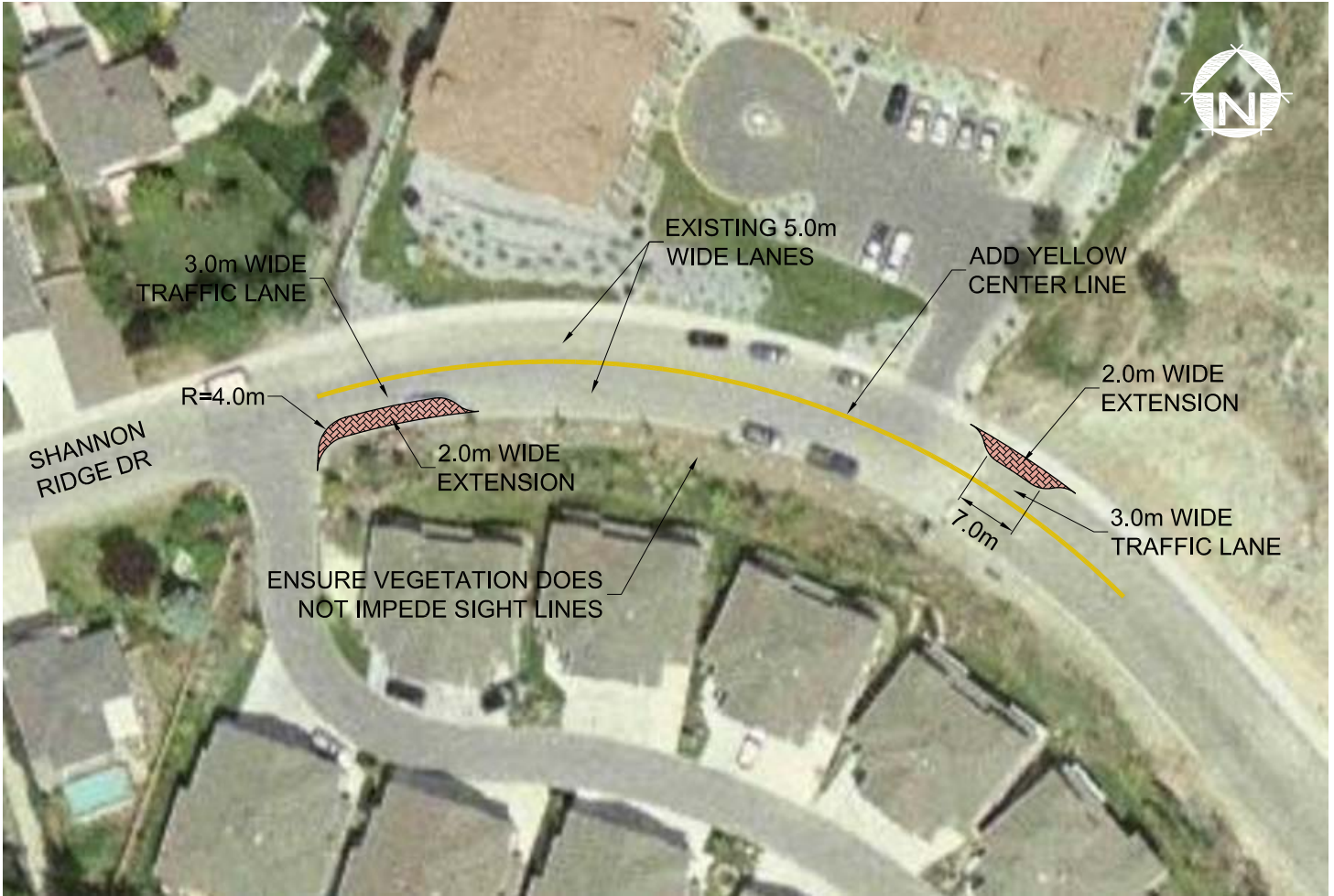
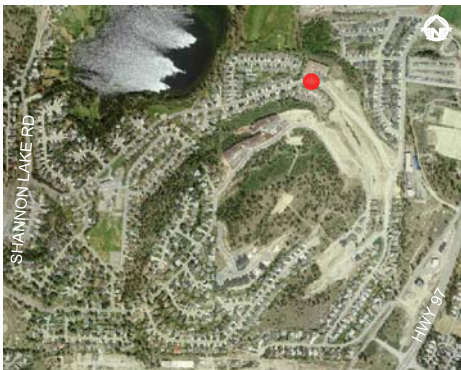


FIGURE 2



LOCATION MAP



**ROAD IMPROVEMENT PLAN
SHANNON RIDGE DRIVE**