

**City of Rochester Hills
Department of Public Service**

**Volume Count Analysis
For Grandview and Sandy Ridge Drive
Multi-way Stop Sign Installations**

February 23, 2004

Background

The final step in performing the traffic study was to review whether or not **Traffic Volume Count Warrants** are met for the Multi-way “Stop Signs” that were installed along Grandview at its intersection with Ridgefield Ct. and Sandy Ridge Dr., and at the intersection of Sandy Ridge Drive and Fairmont Dr. The warrants for the installation of Multi-way “Stop Signs” are based upon the criteria as set forth by the Michigan Manual of Uniform Traffic Control Devices (MMUTCD).

Summary

The following criteria are reviewed, as outlined by the MMUTCD, when analyzing traffic volume count warrants for Multi-way “Stop Sign” installation:

Requirements:

- 1) 500 vehicles per hour (vph) for an eight (8) hour period of the day from all approaches;
- 2) The combined vehicular and pedestrian traffic from the minor street must average at least 200 units per hour for the same eight (8) hours;
- 3) When the 85th percentile approach speed of the major street of traffic exceeds 40 miles per hour (mph), the minimum vehicular volume warrant is 70 percent of the above requirements.

Results

The traffic volume count data was obtained during the period of **12:00 pm on Wednesday, February 4th through 8:00 am on Friday, February 6th**.

a. Grandview Dr. and Ridgefield Ct.

- 1) The greatest one hour bi-directional traffic volume along Grandview Dr. was 216 vph. The traffic volume data along Ridgefield Ct. was not collected because it is a cul-de-sac and does not generate a significant amount of traffic to impact the traffic volume.

- 2) Again, being a cul-de-sac, Ridgefield Ct does not generate nearly enough traffic to meet the necessary traffic volume counts.
- 3) The 85th percentile approach speed north of this intersection was measured at 31 mph; therefore, no justification is made for reducing the above requirements.

b. Grandview Dr. & Sandy Ridge Dr.

- 1) The greatest one hour bi-directional traffic from all approaches was 139 vph.
- 2) The greatest one (1) hour bi-directional traffic volume for Sandy Ridge Dr. was 17 vph.
- 3) The 85th percentile approach speed north of this intersection was measured at 33 mph; therefore, no justification is made for reducing the above requirements.

c. Sandy Ridge Dr. & Fairmont

- 1) The greatest one hour bi-directional traffic along Sandy Ridge Dr. was 17 vph.
- 2) Fairmont Dr. is the less traveled road at this intersection and would not meet the 200 vph warrant requirement for eight (8) hours of the day.
- 3) Not applicable. No speed count data collection was performed along Sandy Ridge.

Conclusion

Based upon the summary above, the traffic volume count warrants **are not** met and do not justify for the Multi-way “Stop Signs” along Grandview Dr. and Sandy Ridge Dr. to remain in place. This concludes the warrant analysis for the Multi-way “Stop Signs”. Staff’s recommendation for speed control along Grandview is to install traffic calming measures such as speed humps. A map of the recommended locations is attached.

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