

ITEM # 28  
DATE 11-20-07

**COUNCIL ACTION FORM**

**SUBJECT: TRAFFIC ANALYSIS FOR MINNESOTA AVENUE SCHOOL CROSSING**

**BACKGROUND:**

This analysis is part of an ongoing citywide effort between the Ames Community School District, the Ames Police Department, and Public Works to review crossing safety for our school-aged children. It is the intent of staff to have continuous and open communications with administrators from all of the Ames elementary and middle school locations in order to enhance the walk-ability of our Safe Routes to School.

At the July 10, 2007, City Council Meeting, staff presented a report regarding potential pedestrian treatments that could be utilized to enhance safety for those students and residents crossing Ontario Street at Minnesota Avenue. As a result, City Council directed staff to install pavement markings, advanced warning signs, and sidewalk along the east side of Minnesota Avenue prior to the beginning the school year. Staff was also directed to conduct a study to determine whether or not a signalized pedestrian crossing is warranted at this location. During the time this study is conducted, the City of Ames Police Department has staffed this crossing with a temporary crossing guard.

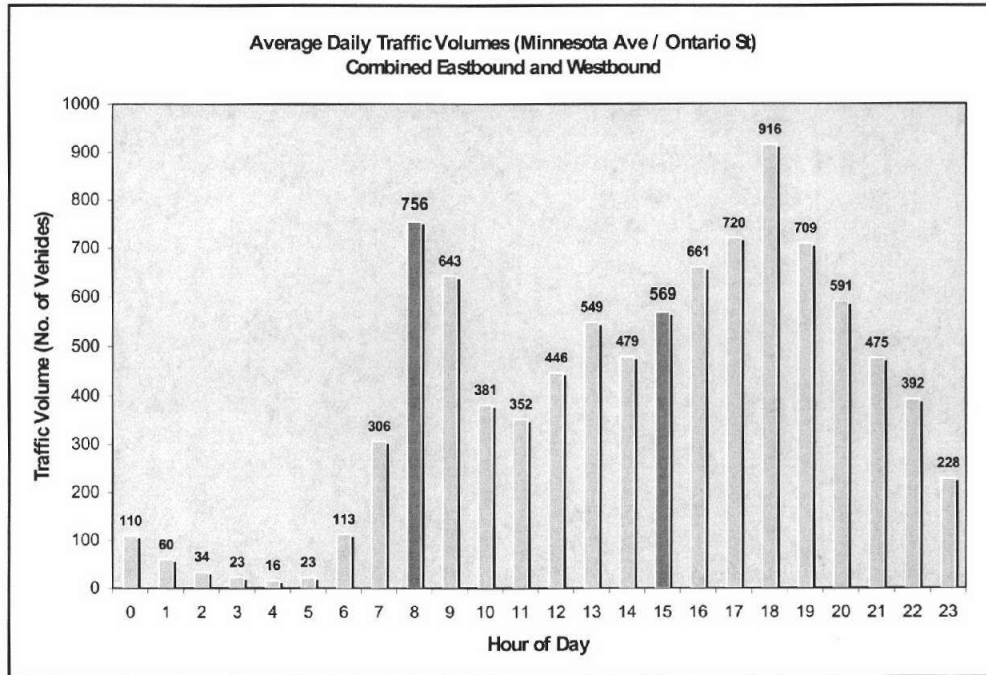
Staff indicated during the July 10, 2007, meeting that a study must be conducted while school is in session in order to accurately assess the nature of combined traffic patterns related to the Ames Community School District, Iowa State University (ISU), and the neighborhood. Therefore, 24-hour data was collected during a representative week in September 2007. The following will summarize the findings of this study and the results of the appropriate traffic signal warrant analysis.

The criterion for crossing guards, adopted by City Council on December 20, 1994, has been used to analyze the Minnesota Avenue crossing is as follows:

- 1) Vehicular volumes in excess of 500 vehicles per hour (vph)
- 2) Speed limit of 30 mph or greater on one of two intersecting streets
- 3) Accident history
- 4) Minimum number of ten (10) children during both morning and afternoon crossing periods
- 5) Traffic Signal Warrants 4 & 5, "Pedestrian Volume," and "School Crossing" warrants respectively

*(Note: Criteria 1 to 4 pertain to crossing guard justification only)*

For criteria one, staff found a weekday average daily traffic for those vehicles traveling in the vicinity of the newly establishing Minnesota Avenue crossing. According to the data, on average, during the morning period (8:00 a.m.) Ontario Street carries 756 vph and during the afternoon period (3:00 p.m.) carries 569 vph. A graph showing 24-hour traffic volumes seen on an average weekday has been provided below.



As seen in the collected data, the minimum threshold of 500 vph has been met in both the morning and afternoon periods.

Criteria 2 looked at the traveling speed of the traffic during these same crossing periods. Staff utilized the 85<sup>th</sup>-percentile speed rather than the posted speed limit to more accurately describe the speed of vehicles along Ontario Street. It was found that on average the 85<sup>th</sup>-percentile speed for this crossing is 32 mph. The full speed profile for the data collected has been provided on the following page.