



## MEMORANDUM

**TO:** Bruce K. Walden, Chief Administrative Officer  
**FROM:** William R. Gray, Public Works Director  
**DATE:** July 6, 2006  
**RE:** Windsor Road and Vine Street Intersection – Pedestrian Safety Plan

### INTRODUCTION

The subject intersection has been studied formally in 1995, 2000, and 2006. The three studies revealed that neither traffic signals nor an all-way stop intersection is warranted at this time. A review of traffic accidents at this intersection over the last seven years has revealed no pedestrian injuries. Pedestrians however do feel unsafe in crossing this wide five lane roadway, with travel speeds in excess of 40 mph, and infrequent gaps in traffic. Council members and city staff have received a lot of public feedback on this crossing's safety. As a result, at the June 12<sup>th</sup> Committee of the Whole meeting, City Council directed staff to research the following measures to help improve safety for the intersection of Windsor Road and Vine Street:

- Remove the west pedestrian striped crosswalk on Windsor Road.
- Provide a pedestrian refuge by installing a raised median in the middle of the east crosswalk on Windsor Road.
- Install additional and instructional striping and signage.
- Install yield lines on Windsor Road.
- Install a striped pedestrian crosswalk on Vine Street.
- Consider speed limits and enforcement of speed limits.
- Install flashing yellow warning lights.
- Review other safety suggestions and devices.

Some of these measures are recommended in the 2006 Vine Street and Windsor Road Intersection Study performed by the Champaign – Urbana Urbanized Area Transportation Study.

### Remove crosswalk on Windsor Road

Staff is recommending the removal of the pedestrian crosswalk on the west leg of the Windsor Road/Vine Street intersection. The removal will include eliminating the pedestrian ramps on the northwest and southwest corners of the intersection and replacing them with barrier curbs. Signage directing pedestrians and bicyclists to the east leg crosswalk will be installed. This action will

consolidate all crossings of Windsor Road at one location improving pedestrian safety by reducing the number of conflict points. This work is estimated to cost \$2000.

### **Provide a pedestrian refuge on Windsor Road**

On the remaining crosswalk that exists on the east leg of Windsor Road, a 9", barrier median is suggested in the middle of the crossing to provide a mid-point for pedestrians to stop while waiting for gaps in traffic so they may safely cross the remaining half of the roadway. To the east of the median, there will be a rumble strip (up to 70 feet) installed to warn westbound motorists of the approaching median. The median and the crosswalk ramps will contain truncated domes to warn visually impaired pedestrians of the sloped areas in the crosswalk. The raised median will enhance pedestrian safety and visibility.

The estimated cost for the installation of the barrier median, rumble strip and truncated domes is approximately \$7500.

### **Install additional and instructional striping and signage**

As recommended by Council, a crosswalk will be installed along the north leg of the intersection (Vine Street) to direct pedestrian traffic to the crosswalk on the east side of Windsor Road.

Currently, advance warning signage and crosswalk signage are posted on Windsor Road. These yellow-green fluorescent signs are located in the right-of-way for both directions of traffic on Windsor Road. Staff is recommending the installation of additional signage, "Yield Here To Pedestrians, (R1-5a)," to provide clearer directions to motorists as to where they should yield if pedestrians are in their lane of traffic. This work is estimated to cost \$1000.

To provide additional guidance to motorists, staff is recommending that the Urbana Park District install a stop sign to stop motorists leaving the parking lot on the south side of Windsor Road (Meadowbrook Park) and install truncated domes on the east-west multi-use path at the driveway.

### **Install yield lines on Windsor Road**

Installation of an advanced yield line or stop bar is not recommended to be added on Windsor Road to show motorists where to yield to pedestrians in the crosswalks. Motorists are unfamiliar with yield lines or stop bars in unsignalized and non-stop controlled intersections and staff believes this may lead to driver confusion.

### **Consider speed limits and enforcement of speed limits**

Windsor Road is a major arterial street that moves east/west traffic between Urbana, the University, Savoy, and Champaign. The current 40 mph speed limit was established based upon a number of criteria, including but not limited to, the 85<sup>th</sup> percentile of motorists travel speed, the number and type of vehicles, pedestrians, access control, and accidents. To arbitrarily reduce the speed limit on this arterial is counter to the function and purpose of this road. Also, arbitrary speed reduction might possibly cause motorists to travel to other residential streets. Lastly, a speed study would confirm, based on this roadway design, motorists are comfortable traveling at 40 mph. To "subjectively" reduce the speed will increase the violation rate and will become an enforcement challenge.

The Urbana Police Department regularly assigns Strategic Traffic Enforcement Program (STEP) details on Windsor Road to enforce the posted 40 mph speed limit.

### **Install flashing yellow warning lights**

Staff received cost estimates for the installation of solar-powered warning lights which would be installed with the existing pedestrian ahead signs to provide additional warning to motorists. This flashing light should increase driver awareness of this crossing. The flashing lights would cost approximately \$3,000 each (\$6000 total) and flash continuously from dawn to dusk (this coincides with the park hours) seven days a week.

### **Reviewing other safety suggestions and devices**

Based upon studies conducted by the Illinois Department of Transportation, several measures have been suggested to improve intersection safety.

*Add enhanced warning signs*— There are existing 36” advanced warning signs located on Windsor Road for eastbound and westbound traffic to provide notice to motorists of the pedestrian crosswalk. New 36” playground entrance signs will be installed to replace the smaller 30” ones.

*Doubling-up signs*—At the crosswalks, there are double-sided signs to the left and the right facing motorists as they approach the crosswalk. These signs are yellow-green fluorescent to increase their visibility.

*Flashers for intersection warning signs*—Yellow flashing lights are being recommended to provide advance warning for motorists.

*Painted channelization*—Crosswalks and left-turn lanes will be painted this summer to provide better visual cues for motorists and pedestrians.

*Lighting*—There are streetlights illuminating the intersection. This is found to be one of the most beneficial measures to improve intersection safety according to the Annual Report on Highway Safety Improvement (1996).

*Lane width reduction*—At the intersection, the traffic lane widths were reduced from 12’ to 11’ last year. This constriction helps to reduce driver speeds.

There were two other suggested ideas that staff researched.

*Painting on intersections*—The Manual on Uniform Traffic Control Devices (MUTCD) prohibits the use of colored pavements as traffic control devices. Examples provided from other communities were outside of Illinois and used in residential, low-volume traffic areas. Although artwork in the community is important and may serve as a way to cause traffic to slow and look, staff believes that pedestrians and motorists should be directed to watching for each other and not directed to looking at art on an arterial street.

*In-street pedestrian crossing signs*—To provide safety to motorists and pedestrians, staff is recommending that the in-street pedestrian crossing signs not be used. The 40 mph speed limit and four-lane configuration of Windsor Road would create a situation where motorists may not see the signage in time to stop for pedestrians. Pedestrians might believe that the motorists are aware that they are crossing and enter the intersection under the false impression that the motorists will be able to stop. Use of these signs is under study by University of Illinois’s Professor Ray Benekohal. Pending the results, this option may be given further consideration.

### **Financial Impact**

If all the above recommendations are implemented the total cost is estimated to be \$16,500. Funds from existing budgeted line items would be used to fund any of these improvements. The Urbana Park District will be contacted and asked to share in some of these costs.

### **Recommendation**

Staff seeks direction from the City Council by motion whether or not to proceed with any of the aforementioned enhancements.