

Memorandum

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To: Vince Vander Top
From: Ed Terhaar
Wenck File #0564-100
Date: January 7, 2009
Subject: 3rd Street SW and Savanna Trail/Prairie Creek Drive Intersection Review in Delano, MN

PURPOSE AND BACKGROUND

The memorandum presents the results of our review of the 3rd Street SW and Savanna Trail/Prairie Creek Drive intersection relative to the potential need for all-way stop control. The existing conditions at the intersection were reviewed in the field and compared to pertinent all-way stop criteria.

EXISTING CONDITIONS

The intersection is a four-legged intersection, with stop control on the Savanna Trail and Prairie Creek Drive approaches. 3rd Street SW has the right-of-way through the intersection. Sidewalk is provided on the east side of 3rd Street SW and the north side of Savanna Trail. No sidewalk is provided along Prairie Creek Trail.

Clear sight lines are provided in all directions at the intersection. Stopping sight distances to the east and south exceed 400 feet. To the west and north the stopping sight distances are approximately 300 feet. The roadway grades at the intersection are minimal, with a slight grade increase to the north on 3rd Street SW.

ALL-WAY STOP CRITERIA

The Minnesota Manual on Uniform Traffic Control Devices (MMUTCD) describes the traffic volume requirements for all-way stop control. The minimum volume requirements are 300 vehicles per hour for eight hours on the major street approaches and 200 vehicles per hour for eight hours on the minor street approaches. Traffic volumes were not collected at the intersection, but observations at the site indicate low likelihood of meeting the volume requirements.

Other all-way stop control criteria listed in the MMUTCD include provisions for intersections with restricted sight distances. As noted earlier, clear sight lines are provided in all directions at the intersection. As an additional check, stopping sight distances were reviewed relative to minimum design standards recommended in the Mn/DOT Road Design Manual for a 30 mile per hour street. The measured stopping sight distances on all street approaches exceed the recommended distance. Therefore, adequate sight distances are provided at this intersection.

RECOMMENDATIONS

Based on our review of conditions at this intersection, including sight distance, we recommend that the existing two-way stop control be maintained. In order to help accommodate pedestrian movements at the intersection, we recommend that pedestrian crosswalk striping be installed on the north approach of the intersection. This would connect the sidewalk on the east side of 3rd Street SW to the sidewalk on the north side of Savanna Trail. The crosswalk installation would also include pedestrian crossing signs on 3rd Street SW.