



# CITY OF RAPID CITY

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## Engineering Division

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## MEMORANDUM

TO: Dirk Jablonski, P.E.  
Director, Public Works Department

FROM: John Less, P.E.  
Traffic Engineer, Engineering Services

Cc: Ted Vore, P.E., P.S.  
City Engineer, Engineering Services

SUBJECT: Pedestrian Crosswalk Evaluation  
Black Hills Workshop  
Range Road, west of Soo San Drive

DATE: December 19, 2006

## INTRODUCTION

This evaluation was completed in response to a request from the Black Hills Workshop and from the City Council. The reference used for the evaluation was the Federal Highway Administration's (FHWA) Safety Effects of Marked vs. Unmarked Crosswalks at Uncontrolled Locations (2002). A location map showing the crosswalk and adjacent road system is included for your reference.

## EVALUATION

- 1) The existing crosswalk is signed and marked as a SCHOOL CROSSING. The signs and markings are in fair condition.
- 2) The speed limit on Range Road is 25 MPH. The average daily traffic (ADT) in September 2006 was 3,400 vehicles per day.
- 3) Adequate visibility exists from the crosswalk looking in both directions from each approach. Motorists approaching the crosswalk also have adequate sight distance to see crossing pedestrians.
- 4) From 01/01/02 to 11/30/06, no motor vehicle/pedestrian crashes have been reported at this location.

December 14, 2006

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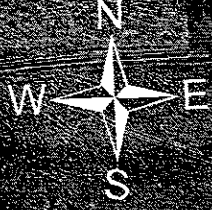
- 5) Fifty-three (53) pedestrians used the crosswalk between 8:00 AM and 5:00 PM. Motorist compliance with yielding to pedestrians in the crosswalk was excellent with no violations observed. Ten (10) pedestrians crossed Range Road outside of the crosswalk. No vehicles conflicted with these pedestrians. All pedestrian traffic was observed to be to or from the Black Hills Workshop buildings.

## **CONCLUSIONS/RECOMMENDATIONS**

- 1) No school related pedestrians use the crosswalk.
- 2) The existing crosswalk treatment is consistent with the recommendations contained in the Safety Effects of Marked vs. Unmarked Crosswalks at Uncontrolled Locations (2002).
- 3) The existing SCHOOL CROSSING signing should be replaced with fluorescent yellow-green PEDESTRIAN CROSSING signs. Conspicuity strips should be installed on the sign posts. We will proceed with scheduling this work to be done next month.
- 4) Workshop staff should be encouraged to use the marked crosswalk.
- 5) In consideration of the special needs pedestrians who use the crosswalk on a regular basis, we recommend that flashing warning beacons be installed at the crossing (to supplement the revised signing). We have identified three options for how the beacons would operate:
  - a. 24/7 flash operation (similar to the beacons at the multi-use crossings on Sheridan Lake Road).
  - b. Pedestrian activated operation.
  - c. Limited timed operation, similar to flashing school zone beacons.

In preliminary discussions with Workshop staff, Option "c" is the preferred option. These beacons would be the same type as we are purchasing for the Vision 2012 School Zone Beacon project and this installation would cost \$4,700. If Council approves the installation of the beacons, a funding source needs to be identified for the materials.

Please let me know if you have any questions or need further information.



1 inch equals 200 feet

Crosswalk Location

Range Road

500 San Drive

