

NOTE ALL MEETINGS ARE HELD IN RATHBONE 1052 FOR THE REST OF THE SEMESTER!!!

CE 890 Graduate Seminar

DATE: September 22, 2010
TIME: 4:00 p.m. (refreshments at 3:45 p.m.)
PLACE: 1052 Rathbone Hall
SPEAKER: Abdoulaye Balde (Advisor: Dr. Sunanda Dissanayake)
TOPIC: “Approach Speed Management to Rural Communities Using Innovative Low Cost Approaches: Optical Speed Bars”

ABSTRACT

Both international and U.S. traffic safety engineers recognized lowering the operating speed or observing the appropriate posted speed limit have the potential to reduce fatalities on roadways. However, reducing the number of crashes and the associated fatality rates are major concerns, particularly in rural areas. Besides the higher number of miles travelled and crash occurrences in urban areas, crash fatalities are more frequent in rural areas according to NHTSA. In some of these rural towns, highways pass right through, requiring a great amount of speed reductions, and there are limited resources to effectively mitigate speeding concerns. Therefore, it is important to identify low cost yet effective countermeasures to speeding.

In that regard, this study evaluated the effectiveness of optical speed bars on the approaches to four small towns in Kansas. Speed data were collected before and after painting the speed bars at the chosen test sites. The speed data were analyzed for the combined vehicles, vehicle classification, time of day, and day of week, and the before-after speed data were compared for statistical significant differences, using the F-, Z-, and t-tests. The results of the study indicated significant reductions in speeds and speed variation at the end of the optical speed bar treatment at four of the five sites, with one site showing no statistically significant changes in speeds.