

## **U.S. Department of Transportation Improving Our Nation's Transportation System**

*The FHWA has revised the national standards for traffic signs, signals, and markings to require these devices to be bigger, brighter, more conspicuously located, and more appropriately operated, in order to better meet the unique needs of older people.*

### **Lead Agency:**

U.S. Department of Transportation/Federal Highway Administration (FHWA)

### **Agency Mission:**

Improve mobility on our Nation's highways through national leadership, innovation, and program delivery

### **Principal Investigator:**

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### **General Description:**

FHWA is helping to improve the nation's transportation system so that our increasingly older population can safely travel and maintain productive and independent lifestyles well into their senior years. With increasing age, older persons often find driving more hazardous and difficult as a result of vision problems, cognitive limitations, side effects of medications, slower reaction times, muscular difficulties, and other causes. Older citizens also tend to walk at a slower pace and will continue to face challenges in crossing busy streets and highways on foot.

The FHWA is responsible for developing and regularly updating the Manual on Uniform Traffic Control Devices (MUTCD). Traffic control devices are the signs, signals, pavement markings, and other features that regulate, warn, and guide the traveling public as they traverse our Nation's most vital asset—its transportation system. Serving such a critical role requires a uniform set of cues to travelers so that those devices appear the same no matter where people travel throughout the United States. The MUTCD is, by law, the national standard governing all traffic control devices installed by State and local jurisdictions on all streets and highways open to public travel. With efforts that started in 2001 and are continuing through the present, the FHWA has revised the MUTCD standards to better serve the needs of older drivers and pedestrians by increasing the visibility of traffic control devices, improving advance notification of traffic situations

and roadway patterns, and simplifying decision making at intersection and interchange approaches.

In 2003, the FHWA issued a new edition of the MUTCD to include a variety of new requirements designed to aid older drivers and pedestrians. These included larger lettering on street name signs to enhance readability, required use of advance street name signs that inform drivers of upcoming intersections, timing of pedestrian signals to provide longer times for pedestrians to cross, introduction of optional pedestrian countdown signal displays to inform pedestrians of the number of seconds left to complete crossing the roadway, and many other traffic control device enhancements.

In 2008, the FHWA initiated rulemaking to make further changes to the MUTCD aimed at enhanced safety and mobility for older citizens. One such change is a proposed increase in the sizes of many signs to meet the legibility needs of drivers with 20/40 corrected vision, the minimum in most states to obtain or keep a driver's license. Based on research showing better understanding by older drivers, a new, clearer diagrammatic guide sign design featuring an upward arrow above each lane has been proposed for standard use in some complex highway situations. Also, a slower walking speed is proposed for timing pedestrian crossing signals, to better accommodate the increasing numbers of slower-walking individuals, including wheelchair users. The FHWA has also proposed to change the existing option of using pedestrian countdown displays to a requirement for use with all pedestrian signals.

***Excellence:***                   What makes this project exceptional?

This project is exceptional because of its far-reaching effects in upgrading the safety and convenience of older people as drivers and as pedestrians. No other single project can claim to have such direct, everyday positive impacts on the mobility of older persons.

***Significance:***                How is this research relevant to older persons, populations and/or an aging society?

This project is relevant to all of the many millions of older persons who drive or walk as a part of their daily lives. The signs, signals, and markings older drivers and pedestrians rely on for their safe and convenient mobility have been and continue to be enhanced to better meet the needs of older persons and the physical effects of increasing age, such as declining vision, reaction times, and walking speeds.

***Effectiveness:***            What is the impact and/or application of this research to older persons?

The FHWA has revised the standards to increase the visibility of traffic control devices, improve advance notification of traffic situations and roadway patterns, simplify decision making at intersection and interchange approaches, and provide more time and better information to pedestrians to aid their ability to cross streets. By upgrading the nation's

standards for traffic control devices, our increasingly older population can safely travel and maintain productive and independent lifestyles well into their senior years.

***Innovativeness:*** Why is this research exciting or newsworthy?

This project is newsworthy and exciting because of the far-reaching, direct impacts on the vast majority of the increasing population of older people who wish to maintain their mobility as drivers and pedestrians.