Safety Impacts of the Emerging Digital Display Technology for Outdoor Advertising Signs

FINAL REPORT

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ACKNOWLEDGEMENTS AND NOTES

The author is grateful to the members of the peer review committee. Their thorough review of this paper, during its initial draft stage and again when the draft final report was submitted to them, pointed out numerous errors, weaknesses, and statements in need of clarification or documentation.

We have tried to make all the suggested corrections, and to incorporate all of the changes recommended by the reviewers. Several commenters offered suggestions that were excellent and appropriate, but could not be accommodated in the body of the actual paper. They are mentioned here, with our thanks and concurrence.

It was proposed that FHWA offer a short course for traffic engineers to understand the human factors issues associated with outdoor advertising signage, to assess the existing roadway environment for safety issues, and how to work with local businesses to improve signage and safety at the same time. We agree that this is an excellent and timely suggestion.

It was recommended that roadway signing and human factors (MUTCD) experts should be collaborating with the advertising industry to promote signs and their placement with appropriate lettering and symbol guidelines or standards that will increase readability while minimizing distraction. In a similar vein, future research should address DBB design criteria that will provide travelers with needed information while at the same time minimizing driver distraction. We note that such collaboration has existed between human factors experts and the on-premise sign industry, but we are not aware of any such relationships in the billboard (off-premise) field.

Another reviewer proposed that TRB conduct a Webinar on this topic in the future. This, too, would provide an excellent forum for the dissemination of this, sometimes arcane, information, in a manner that has practical applications.

Reviewer #5 proposed an interesting thought experiment that addressed the difference between the question: “What is the statistical relationship between digital billboards and traffic safety?” and the question: “Are accidents more, less, or equally likely to occur near digital billboards compared to conventional billboards?” The reviewer suggests that these two questions are not necessarily incongruent, as we stated in the report, and that the second question is both technically correct (as is the first), and more *useful* because it addresses the safety issue in a manner closer to real-world driving; i.e. with the recognition that conventional billboards are a given part of the landscape. While we do not disagree with the reviewer’s position, we question the underlying assumption that the presence of conventional billboards is the accepted and acceptable norm. Most of the research reviewed for this report studied driver distraction and other safety-related measures with real-world or simulated conventional billboards, and many of these studies (as have studies going back decades) identified safety concerns; the fact that control and enforcement may be lax should not de facto make the presence of these billboards the accepted baseline. As well, there are several States and local jurisdictions that ban all

billboards, so this baseline is not universal, even in the US. But our greatest concern is with the industry's efforts to raise the bar that research must be meet before, in their view, digital billboards could be found to have adverse traffic safety impacts. The study by Lee, et al., discussed at length in our report, compared digital billboards, not only to conventional billboards, but to "comparison" sites. When the research demonstrated that driver eye movements and vehicle control issues were similar between the DBBs and these comparison sites, the authors proclaimed the digital signs "safety neutral" because, as they defined them, the comparison sites contained "items you might encounter in everyday driving." But a careful reading of the report shows that these sites included digital on-premise signs, tri-vision signs and video boards. In other words, they were rather the same as DBBs, except that they included on-premise signs. In our opinion, this subtle "criterion creep" is unprofessional and inappropriate.