

H. Gene Hawkins, Jr., Ph.D., P.E.

Curriculum Vitae

October 29, 2018

Professor, Zachry Department of Civil Engineering, Texas A&M University
Research Engineer, Texas A&M Transportation Institute, The Texas A&M University System

301C CE/TTI Building
3136 TAMU
College Station, TX 77843-3136

phone: 979-845-9946
email: gene.hawkins@tamu.edu
webpage: <http://ceprofs.civil.tamu.edu/ghawkins>

RESEARCH INTERESTS

- Traffic engineering policy, standards, and guidelines.
- Traffic control infrastructure.
- Retroreflectivity and visibility of traffic signs and pavement markings.
- Driver response to traffic control devices.
- Traffic signal design.
- Work zone traffic control.
- Freeway operations.
- Historical aspects of transportation engineering.

EDUCATION

- Doctor of Philosophy, Civil Engineering, Texas A&M University, College Station, Texas, May 1993.
- Master of Engineering, Civil Engineering, Texas A&M University, College Station, Texas, May 1983.
- Bachelor of Science, Civil Engineering, Texas A&M University, College Station, Texas, May 1981, Cum Laude.

PROFESSIONAL LICENSE

- Registered Professional Engineer, State of Texas, No. 61509

EXPERIENCE

- Texas A&M University, Department of Civil Engineering, College Station, Texas: Professor, 2016-Present; Associate Professor with tenure, 2007-2016; Division Head, Transportation and Materials Division, 2004-2011; Associate Professor without tenure, 2004-2007.
- Texas A&M Transportation Institute, The Texas A&M University System, College Station, Texas: Research Engineer, 2001-Present; Associate Director-Transportation Scholars Program, Texas A&M University Southwest Region University Transportation Center, 2006-2016; Division Head, Transportation Operations Division, 1999-2004; Associate Research Engineer, 1993-2001; Program Manager, System Implementation Program, 1993-1999; Assistant Research Engineer, 1987-1993; Engineering Research Associate, 1986-1987.
- Hawkins Engineering, College Station, Texas: Owner, 1994-Present.
- Walton & Associates/Consulting Engineers, Inc., Bryan, Texas: Associate, 1983-1986.
- Walter P. Moore & Associates, Houston, Texas: Engineer-in-Training, Summers, 1981-82.

RECOGNITIONS, HONORS, AND AWARDS (* indicates graduate student)

- 2018 Public Sector recipient of the American Road & Transportation Builders Association John “Jake” Landen Memorial Safety Award, awarded June 2018.
- 2016 Young First Author Best Paper Award, Operations Section from the Transportation Research Board Traffic Control Devices Committee for the paper entitled *Guidelines for Traffic Control Devices at Curves*, Brimley, B.K.*, P.J. Carlson, H.G. Hawkins, Jr., S. Hines, F. Gross, H. McGee, awarded January 2017.
- 2015-2016 College of Engineering William Keeler Memorial Fund Teaching Award, February 2016.
- 2016 Best Paper Award from the Transportation Research Board Traffic Control Devices Committee for the paper entitled *Guidelines for Traffic Control Devices at Curves*, Brimley, B.K.*, P.J. Carlson, H.G. Hawkins, Jr., S. Hines, F. Gross, H. McGee, awarded January 2016.
- 2015 Association of Former Students College Level Teaching Award, Texas A&M University Dwight Look College of Engineering, July 2015.
- 2013 Zachry Award for Teaching Excellence, Texas A&M University Zachry Department of Civil Engineering, December 2013.
- 2013 Aggie Salute to Academics Award, Texas A&M University Department of Athletics, September 2013.
- 2012 Wilbur S. Smith Distinguished Transportation Educator Award, Institute of Transportation Engineers, August 2012.
- Williams Brothers Construction Company Development Professor I, September 2011.
- 2010 Transportation Engineer of the Year, Texas District of the Institute of Transportation Engineers, June 2010.
- 2009 Technical Paper Award from the Texas District of the Institute of Transportation Engineers for the paper entitled *Revised Process for Work Zone Decision-Making Based on Quantitative Performance Measures*, T.W. Hartmann* and H.G Hawkins, August 2009.
- 2008 Outstanding Paper Award from the Transportation Research Board Geometric Design Committee for the paper entitled *Assessment of Sag Curve Design Criteria Considering Modern Headlamp Performance*, H.G. Hawkins and M. Gogula*, awarded January 2009.
- 2007-2008 Dick and Joyce Birdwell Endowed Teaching Award, Zachry Department of Civil Engineering, July 2008.
- FHWA Outstanding Service Award from Office of Safety in recognition of research and technical support for developing and implementing MUTCD minimum retroreflectivity standards, November 2008.
- Fellow of the Institute of Transportation Engineers, September 2006.
- Selected as Fish Camp namesake for Fish Camp 2005 at Texas A&M University.
- Selected as participant and report facilitator on an FHWA technology scanning trip of European practices regarding incident response practices, April 2005.
- Named as Industry Icon in Transportation Management + Engineering magazine, December/January 2002.
- Texas Department of Transportation Top Research Innovation Award for the document *Sign Crew Field Book*, 2001.
- Texas Department of Transportation Top Research Innovation Award for the document *Guidelines for Performing Traffic Signal Warrant Analysis*, 1999.

- Texas A&M Transportation Institute Trinity Researcher Award, December 1998.
- Selected as participant and report facilitator on an FHWA technology scanning trip of European practices regarding innovative traffic control, May 1998.
- One of 100 younger engineers invited to attend the National Academy of Engineering's Second and Third Symposia on Frontiers of Engineering held in Irvine, California, September 1996 and 1997.
- Institute of Transportation Engineers, 1995 Traffic Engineering Council Award for Best Paper Presented at the 1994 Annual Meeting, for the paper entitled "*Guidelines for the Use of Flashing Operation at Signalized Intersections.*" K.C. Kacir, H.G. Hawkins, R.J. Benz, and M.E. Obermeyer, awarded August 1995.

STUDENT AWARDS

- Marcus Brewer, Ph.D. student (2014-Present).
 - ♦ 2016: Eno Leadership Conference Fellow (competitively selected national award).
- Brad Brimley, Ph.D. student (2011-2014).
 - ♦ 2014 Dr. Robert Herman Award to the Most Outstanding Student in the Southwest Region University Transportation Center (competitively selected multi-university center award).
 - ♦ 2014: Institute of Transportation Engineers Student Paper (third place) – Texas District Award (competitively selected state award).
 - ♦ 2013: Eno Leadership Conference Fellow (competitively selected national award).
 - ♦ 2013: Federal Highway Administration Dwight D. Eisenhower Graduate Fellowship (competitively selected national award)
 - ♦ 2013: Sherryl and Steven Hofener '77 Fellowship in Transportation (competitively selected university department award)
 - ♦ 2013: Texas Transportation Institute Keese-Wootan Transportation Fellowship (competitively selected institute award)
 - ♦ 2013: Institute of Transportation Engineers Transoft Solutions "Ahead of the Curve" Scholarship (competitively selected national award)
 - ♦ 2012: Federal Highway Administration Dwight D. Eisenhower Graduate Fellowship (competitively selected national award)
 - ♦ 2012: ITS Texas Scholarship for Graduate Study in Intelligent Transportation Systems (competitively selected state award)
 - ♦ 2012: Texas District of the Institute of Transportation Engineers Houston Section Mike Ogden Scholarship (competitively selected area award)
- Hadi Khazraee Khoshroozi, student in course (2013).
 - ♦ 2015: Institute of Transportation Engineers Student Paper (first place) – Texas District Award (competitively selected state award).
 - ♦ 2014: Institute of Transportation Engineers Student Paper (first place) – Texas District Award (competitively selected state award).
- Yanfen Zhou, Ph.D. student (2012-present).
 - ♦ 2014: Institute of Transportation Engineers Student Paper (second place) – Texas District Award (competitively selected state award).
- James Robertson, M.S. student (2009-2011) and Ph.D. student (2011-present).
 - ♦ 2012: Federal Highway Administration Dwight D. Eisenhower Graduate Fellowship (competitively selected national award)

- ♦ 2011: Dr. Naomi Ledé Award to the Most Outstanding M.S. Student at Texas A&M University (competitively selected university center award).
- ♦ 2010: Eno Leadership Conference Fellow (competitively selected national award).
- Lacy Brown, Ph.D. student (2012-present).
 - ♦ 2015 Dr. William J. Harris Award to the Outstanding Ph.D. Student at Texas A&M University (competitively selected university center award).
 - ♦ 2013: Federal Highway Administration Dwight D. Eisenhower Graduate Fellowship (competitively selected national award)
- Mehdi Azimi, Ph.D. student (2007-2012).
 - ♦ 2012: Dr. William J. Harris Award to the Outstanding Ph.D. Student at Texas A&M University (competitively selected university center award).
 - ♦ 2012: Texas Transportation Institute Doctoral Student Award (competitively selected institute award).
 - ♦ 2011: Institute of Transportation Engineers Student Paper – Texas District Award (competitively selected state award).
 - ♦ 2011: International Road Federation Roads Scholar Fellow (competitively selected national award).
- Susan Paulus, M.S. student (2008-2010).
 - ♦ 2008: Federal Highway Administration Dwight D. Eisenhower Graduate Fellowship (competitively selected national award).
- Cameron Williams, M.S. student (2006-2008).
 - ♦ 2008: Council of University Transportation Centers Milton Pikarsky Memorial Award for outstanding Master of Science Thesis (competitively selected national award).
 - ♦ 2007: Eno Leadership Conference Fellow (competitively selected national award).

TEACHING

TEACHING EXPERIENCE

- 1445 total students taught since Fall 2004 (through Fall 2018, not including CVEN 691)
- Undergraduate Classes, Department of Civil Engineering, Texas A&M University
 - ♦ CVEN 307, Transportation Engineering (undergraduate). Taught 13 times to 753 students, average student evaluation of 4.52/5.0.
 - ♦ CVEN 400, Design Problems in Civil Engineering (undergraduate). Taught 1 time to 27 students, student evaluation of 4.13/5.0.
 - ♦ CVEN 451, Public Works Engineering (undergraduate). Taught 1 time to 24 students, student evaluation of 4.32/5.0.
 - ♦ CVEN 454, Urban Planning for Engineers (undergraduate). Taught 1 times to 28 students, average student evaluation of 4.21/5.0.
 - ♦ CVEN 457, Urban Traffic Facilities (undergraduate – stacked with CVEN 689/696). Taught 13 times to 246 students, average student evaluation of 4.48/5.0.
- Graduate Classes, Department of Civil Engineering, Texas A&M University
 - ♦ CVEN 625, Traffic Engineering: Design (graduate). Taught 7 times to 69 students, average student evaluation of 4.60/5.0.
 - ♦ CVEN 681, Seminar in Transportation (graduate). Taught twice to 31 students. Student evaluations not administered for seminar courses.

- ♦ CVEN 689/696, Urban Traffic Facilities (graduate – stacked with CVEN 457). Taught 11 times to 93 students, average student evaluation of 4.70/5.0.
- ♦ CVEN 684, Professional Internship. Taught once to 1 student.
- ♦ CVEN 685, Directed Studies. Taught 4 times to 5 students.
- ♦ CVEN 691, Research. Total of 40 semesters to 163 students.
- Developed and conducted (as Principal Investigator) the following professional development courses for the Federal Highway Administration:
 - ♦ Sign retroreflectivity train-the-trainer courses.
 - Taught three training courses in College Station, TX in 2003.
 - ♦ Minimum sign retroreflectivity workshops for public officials.
 - Conducted four workshops in Denver, CO, Hudson, WI, Hanover, MD, and College Station, TX in 2002.
 - ♦ Minimum pavement marking retroreflectivity workshops for public officials.
 - Conducted three workshops in Seattle, WA, Lake Charles, LA, and Raleigh, NC in 1999.
 - ♦ Freeway traffic operations (through the National Highway Institute).
 - Taught four classes as instructor in Schaumburg, IL, Milwaukee, WI, Phoenix, AZ, and Honolulu, HI in 1996-1998.
- Professional development course instructor for the following courses conducted by the Texas Engineering Extension Service in 1986-1989:

♦ AASHTO Green Book Concepts	♦ Traffic Engineering Characteristics
♦ Freeway Design and Operations	♦ Traffic Management
♦ Freeway Traffic Operations.	♦ Traffic Signal Design
♦ Highway Capacity – Interrupted Flow	♦ Transportation Engineering Concepts
♦ Highway Design	

SERVICE

PROFESSIONAL SERVICE

- National Committee on Uniform Traffic Control Devices (NCUTCD): Member, 2002-Present; Associate Member, 1995-2002; Technical Committee Member, 1992-Present.
 - ♦ Chair (elected), 2018-Present.
 - ♦ Vice-Chair for Programs (elected), 2012-2018.
 - ♦ Executive Committee: Member, 2008-Present.
 - ♦ Edit Committee: Chair 2012-2018 (appointed); Secretary, 1994-1998.
 - ♦ ITE Delegation: Chair 2008-2012; Member, 2002-Present; Associate Member, 1995-2002.
 - ♦ Markings Technical Committee: Chair, 2003-2012 (appointed); Member, 2003-Present.
 - ♦ MUTCD Strategic Planning Task Force: Chair, 2008-2014 (appointed).
 - ♦ Regulatory/Warning Signs Technical Committee: Secretary, 1998-2002 (appointed); Member, 1993-2002.
 - ♦ Signals Technical Committee: Member, 1992-1993.
 - ♦ Research Committee: Member, 1992-2006.
- Transportation Research Board (TRB): 1989-Present.
 - ♦ TRB Operations and Preservation Group, Committee Member, 2015-Present.
 - ♦ TRB Traffic Control Devices Committee; Committee Member, 1994-2017.

- Committee Chair, 2001-2007 (appointed).
 - Committee Secretary, 1995-2001.
 - Subcommittee Chairman, All-White Pavement Markings Session, 1995.
 - Subcommittee Chairman, Metric Traffic Control Devices Session 1994.
- ♦ TRB Tort Liability and Risk Management Committee; Committee Member, 2002-2017.
- ♦ TRB Transportation Education and Training Committee.
 - Subcommittee on Undergraduate and Graduate Education, member, 2015-present.
- ♦ TRB Roundabout Committee; Committee Member, 2012-2015.
- ♦ TRB Signing and Marking Materials Committee; Committee Member, 1994-2010.
- ♦ TRB User Information Systems Committee; Committee Member, 1993-1995.
- Institute of Transportation Engineers (ITE): Fellow 2006-Present, Member, 1993-2006; Associate Member, 1987-1993.
 - ♦ ITE Delegation to National Committee on Uniform Traffic Control Devices: Chair 2008-Present; Member, 2002-Present; Associate Member, 1995-2002.
 - ♦ Transportation Educators Council: Executive Committee, 2012-Present; Member, 1992-1994, 2009-Present.
 - ♦ Faculty Advisor, Texas A&M University Student Chapter, 2007-2010.
 - ♦ Expert Witness Council; Member, 1995-2008.
 - ♦ Committee on Historical Aspects of Transportation Engineering; Chair, 1996-1999; Member, 1990-1999.
 - ♦ Traffic Engineering Council; Member, 1997-2004.
 - ♦ Texas Section, Member; 1987-Present.
 - Local Arrangement Committee member, event co-chair, March 2015.
 - Local Arrangement Committee member, treasurer, June 1994.
- The Signage Foundation, Inc.
 - ♦ Academic Advisory Council for Signage Research and Education (AACRSRE): Member 2014-2018.
 - Vice-Chair of Executive Committee 2014-present (elected).
- Research Panels
 - ♦ National Science Foundation (NSF): panelist, 2006.
 - ♦ National Cooperative Highway Research Program (NCHRP) Project 5-18, Color Effectiveness of Yellow Pavement Marking Materials: Panel Member, 2002-2008.
 - ♦ NCHRP Program Synthesis 31-07, Temporary and Long-Term Pavement Markings: Panel Member, 1999-2002.
 - ♦ Transit Cooperative Research Program (TCRP) Panel A-9, Signs and Symbols in Transit Facilities: Panel Member, 1993-1995.
- American Traffic Safety Services Association (ATSSA): Public Official Member, 1994-2008.
 - ♦ Pavement Marking Committee: Member, 2001-2007.
 - Visibility Task Force: Chair, 2003-2006.
 - ♦ Sign Committee: Member, 1996-1998.
- Human Factors and Ergonomics Society (HFES): Member, 1999-2003.
- Highway Innovative Technology Evaluation Center (HITEC)
 - ♦ Pavement marking retroreflectometer: Chair, 1998-1999.
 - ♦ ALLSIGN Stop sign panel: Member, 1996-1998.
- American Association of State Highway and Transportation Officials (AASHTO)

- ♦ Task Force on Sign and Pavement Marking Retroreflectivity: Member, 1999-2002.
- National Academy of Engineering (NAE)
 - ♦ Second Annual Symposium on Frontiers of Engineering: Participant, 1996.
 - ♦ Third Annual Symposium on Frontiers of Engineering: Organizing Committee Member, 1996-1997; Participant, 1997.
- Texas Department of Transportation (TxDOT)
 - ♦ Traffic Operations Technical Advisory Panel: Member, 1998-2004.

UNIVERSITY SERVICE

- Department Peer-Review Committee, co-chair, 2017-Present.
- Department Tenure and Promotion Committee, member, Fall 2007 – Present.
- Departmental Representative to the University Strategic Planning Forums, Spring 2015.
- Professor of Practice Committee, Zachry Department of Civil Engineering: Chair, 2014.
- Graduate Coordinator – Transportation Program, Zachry Department of Civil Engineering, 2014 – Present.
- Department of Civil Engineering Distance Education Committee, 2013-present.
- Transportation course coordinator, Transportation and Materials Division, Department of Civil Engineering, 2011-present.
- Division Head, Transportation and Materials Division, Department of Civil Engineering, 2004-2011.
- Texas A&M University Civil Engineering Department Head Search Committee, Member, 2009-2010.
- Chair, SWUTC Student Conference Planning Committee, appointed August 2009, conference held February 2010.
- Curriculum Committee, Zachry Department of Civil Engineering: Member, 2008-2010.
- Institute of Transportation Engineers, Texas A&M University Student Chapter, Faculty Advisor, 2007-2010.
- Engineering and Public Policy Task Committee, Zachry Department of Civil Engineering: Member, 2009.
- Southwest Region University Transportation Center, Associate Director - Education, September 2006 - Present
 - ♦ Transportation Scholars Program, Director, 2006 – Present
 - ♦ Executive Committee, Member, December 2004 – Present.
 - ♦ Transportation Scholars Undergraduate Research Experience, Director, 2006 – 2016.
- Civil Engineering Transportation Faculty Search Committee, 2005-2006.
- Civil Engineering Task Force on the Undergraduate Experience, 2005-2006.
- Graduate Curriculum Committee, Department of Civil Engineering, 2005.
- Texas A&M University Fish Camp: Namesake 2005, Support Staff 2006 and 2007.
- Transportation engineering undergraduate coordinator, Department of Civil Engineering, 2004-Present.
- Advisor to civil engineering undergraduate students, 2004 – Present.
- Strategic Planning Committee for Surface Transportation Education Program, Department of Civil Engineering, Member, 2003-2004.

RESEARCH

JOURNAL PUBLICATIONS (Note: * indicates a graduate/former student as an author)

Refereed Journal Publications

48. Brown, L.*, K. Dixon, G. Hawkins. Quantifying Access Management on Arterial Roadways. Paper No 18-01612. In *Transportation Research Record, The Journal of the Transportation Research Board 1-11*, Transportation Research Board, Washington, D.C., 2018.
47. Hawkins, Jr., H.G. and B.G. Dillman. Evaluation of Mid-Point Runway Marking for General Aviation Airports. Paper No. 18-01258. Accepted for publication in *Transportation Research Record, The Journal of the Transportation Research Board*, Transportation Research Board, Washington, D.C., January 2018.
46. Zhou, Hongmin*, H.G. Hawkins, Jr., Y. Zhang. Arterial Signal Coordination with Uneven Double Cycling. In *Transportation Research Part A: Policy and Practice*, Elsevier Ltd., Volume 103, pp 409-429, September 2017.
45. Hawkins, Jr., H.G. and K. Chang. Employers' Perspectives on Needs for Critical Skills and Knowledge in the Transportation Field. In *ITE Journal*, Institute of Transportation Engineers, Washington, D.C., June 2016.
44. Khazraee, S. Hadi * and H.G. Hawkins, Jr. Revised Guidelines for Designing Median Openings to Accommodate Simultaneous Left Turns, *ASCE Journal of Transportation Engineering*, Vol. 142, Issue 10, October 2016.
43. Hawkins, Jr., H.G., B.K. Brimley*, P.J. Carlson. Updated Model for Advance Placement of Turn and Curve Warning Signs. Paper No. 16-1748. In *Transportation Research Record 2555, The Journal of the Transportation Research Board*, Transportation Research Board, Washington, D.C., pp. 111-119, 2016.
42. Brimley, B.K.*, P.J. Carlson, H.G. Hawkins, Jr., S. Hines, F. Gross, H. McGee. Guidelines for Traffic Control Devices at Curves. Paper No. 16-1654. In *Transportation Research Record 2555, The Journal of the Transportation Research Board*, Transportation Research Board, Washington, D.C., pp. 103-110, 2016.
41. Hawkins, Jr., H.G. The MUTCD Turns 80: Time for a Makeover? In *ITE Journal*, Institute of Transportation Engineers, Washington, D.C., November 2015. (Note, op/ed article with abbreviated peer-review process).
40. Khazraee, S. Hadi * and H.G. Hawkins, Jr. Criteria for Determining the Number of Intersections at a Divided Highway Junction: Recommendations for Changes to the MUTCD, Paper No. 15-0964. In *Transportation Research Record 2492, The Journal of the Transportation Research Board*, Transportation Research Board, Washington, D.C., pp. 23-32, 2015.
39. Brimley, B.K.*, P.J. Carlson, H.G. Hawkins, Jr. Evaluating Unfamiliar Driver Visual Behavior on Horizontal Curves Using Fixation Heat Maps, Paper No. 14-4247. In *Transportation Research Record 2458, The Journal of the Transportation Research Board*, Transportation Research Board, Washington, D.C., pp. 16-26, 2014.
38. Brown, L*, H.G. Hawkins, Jr. Addressing the Need for Consistent Traffic Control Devices at Channelized Right Turn Lanes. In *ASCE Journal of Transportation Engineering*, Vol. 140, No. 10, October 2014.
37. Azimi, M* and H.G. Hawkins, Jr. Algorithm for Analyzing Horizontal Sight Distance based on Lane Centerline Coordinates. In *Transportation Research Record 2538, The Journal of*

- the Transportation Research Board*, Transportation Research Board, Washington, D.C., pp. 12-19, 2013.
36. Dawn Jourdan, Kathryn Hurd, Gene Hawkins, and Kimberly Winson-Geideman. Evidence Based Sign Regulation: Regulating Signage on the Basis of Empirical Wisdom. In *The Urban Lawyer*. Vol. 45, No. 2, pp. 327-348, Spring 2013.
 35. Robertson, J.* and H.G. Hawkins, Jr. Shared Roadway Implementation Guidance. In *ASCE Journal of Transportation Engineering*, Vol. 139, No. 8, pp. 833-839, August 2013.
 34. Turochy, R.E., Jon Fricker, H.G. Hawkins, Jr., D.S. Hurwitz, S.S. Ivey, M.A. Knodler Jr., R.K. Young. Assessment of the Introductory Transportation Engineering Course and the General Transportation Engineering Curriculum. In *Transportation Research Record 2328, The Journal of the Transportation Research Board*, Transportation Research Board, Washington, D.C., pp. 9-15, 2013.
 33. Azimi, M*, C.L. Williams*, and H.G. Hawkins, Jr. Using GPS to Locate No-Passing Zones on Straight Sections of Two-Lane Highways, *Journal of Transportation of the Institute of Transportation Engineers*, Vol 1, Issue 1, Institute of Transportation Engineers, Washington, D.C., pp. 15-32, July 2012.
 32. Ré*, J.M., H.G. Hawkins, Jr. and S.T. Chrysler. Assessing Benefits of Chevrons with Full Retroreflective Signposts on Rural Horizontal Curves. In *Transportation Research Record 2149, The Journal of the Transportation Research Board*, Transportation Research Board, Washington, D.C., pp. 30-36, 2010.
 31. Hawkins, Jr., H.G. and M.A. Chacon. Improving Signing from the Installation Perspective: Creating a Sign Crew Field Book. In *Transportation Research Record 2122, The Journal of the Transportation Research Board*, Transportation Research Board, Washington, D.C., pp. 17-26, 2009.
 30. Hartmann*, T.W. and H.G. Hawkins, Jr. Revised Process for Work Zone Decision-Making Based On Quantitative Performance Measures. In *Transportation Research Record 2107, The Journal of the Transportation Research Board*, Transportation Research Board, Washington, D.C., pp. 14-23, 2009.
 29. Hawkins, Jr., H.G. and M. Gogula*. Assessment of Sag Curve Design Criteria Considering Modern Headlamp Performance. In *Transportation Research Record 2060, The Journal of the Transportation Research Board*, Transportation Research Board, Washington, D.C., pp. 3-9, 2008.
 28. Debaillon*, C., P.J. Carlson, H.G. Hawkins, Jr., Y. He, T. Schnell, and F. Aktan. Review and Development of Recommended Minimum Pavement Marking Retroreflectivity Levels, In *Transportation Research Record 2055, The Journal of the Transportation Research Board*, Transportation Research Board, Washington, D.C., pp. 71-77, 2008.
 27. Mokkaapati*, Naveen and H.G. Hawkins, Jr. “Guidelines for Minimum Signal Sight Distance.” In *Transportation Research Record 2030, The Journal of the Transportation Research Board*, Transportation Research Board, Washington, D.C., pp. 40-46, 2007.
 26. Pike*, Adam M., H.G. Hawkins, Jr. and P.J. Carlson. “Evaluating the Retroreflectivity of Pavement Marking Materials Under Continuous Wetting Conditions.” In *Transportation Research Record 2015, The Journal of the Transportation Research Board*, Transportation Research Board, Washington, D.C., pp. 81-90, 2007.
 25. Hawkins, H.G. “How Modern Headlamp Performance Impacts Sag Vertical Curve Design.” In *ASCE Journal of Transportation Engineering*. Vol. 133, No. 4, April 2007.
 24. Hawkins, H.G. Rear-Facing School Speed Limit Beacons. In *ITE Journal*. Vol. 77, No. 6, June 2007.

23. Hawkins, H.G., Jr., P.J. Carlson and S.T. Chrysler. "Headlamp Luminous Intensity Matrix Adjustment Factors for Modeling Traffic Sign Performance." In SAE 2005 Transactions Journal of Passenger Cars – Mechanical Systems, Society of Automotive Engineers, Warrendale, Pennsylvania, pp 1960-1973, March 2006.
22. Schrock, S.D. H.G. Hawkins, Jr., and S.T. Chrysler. "Effectiveness of Pavement Marking Lane Direction Arrows for Reducing Wrong-Way Movements on Two-Way Frontage Roads." In *Transportation Research Record 1918, The Journal of the Transportation Research Board*, Transportation Research Board, Washington, D.C., pp. 63-67, 2005.
21. Hawkins, Jr., H.G., and E.R. Rose. "Study of the Effects of Adding Dual Logo Panels to Specific Service Signs." In *Transportation Research Record 1918, The Journal of the Transportation Research Board*, Transportation Research Board, Washington, D.C., pp. 108-115, 2005.
20. Hawkins, Jr., H.G., A.H. Parham, and K.N. Womack. Driver Understanding of Potential All-White Pavement Marking Patterns, In *Transportation Research Record 1862, The Journal of the Transportation Research Board*, Transportation Research Board, Washington, D.C., pages 54-63, 2004.
19. Gates, T.J., P.J. Carlson, and H.G. Hawkins, Jr. Field Evaluations of Warning and Regulatory Signs with Enhanced Conspicuity Properties. In *Transportation Research Record 1862, The Journal of the Transportation Research Board*, Transportation Research Board, Washington, D.C., pages 64-76, 2004.
18. Parham, A.H., K.N. Womack, and H.G. Hawkins, Jr. Driver Understanding of Pavement Marking Colors and Patterns. In *Transportation Research Record 1844, The Journal of the Transportation Research Board*, Transportation Research Board, Washington, D.C., pages 35-44, 2003.
17. Carlson, P.J. and H.G. Hawkins, Jr. Legibility of Overhead Guide Signs with Encapsulated Versus Microprismatic Retroreflective Sheeting. In *Transportation Research Record 1844, The Journal of the Transportation Research Board*, Transportation Research Board, Washington, D.C., pages 59-66, 2003.
16. Carlson, P.J., H.G. Hawkins, Jr., K.S. Opiela, G.F. Schertz, and D.J. Mace. Developing Updated Minimum In-Service Retroreflectivity Values for Traffic Signs. In *Transportation Research Record 1824, The Journal of the Transportation Research Board*, Transportation Research Board, Washington, D.C., pages 133-143, 2003.
15. Carlson, P.J. and H.G. Hawkins, Jr. Minimum Retroreflectivity for Overhead Guide Signs and Street Name Signs. In *Transportation Research Record 1794, The Journal of the Transportation Research Board*, Transportation Research Board, Washington, D.C., pages 38-48, 2002.
14. Hawkins, Jr., H.G., and P.J. Carlson. Sign Retroreflectivity: Comparing Results of Nighttime Visual Inspections with Application of Minimum Retroreflectivity Values. In *Transportation Research Record 1754, The Journal of the Transportation Research Board*, Transportation Research Board, Washington, D.C., pages 11-20, 2001.
13. Hawkins, Jr., H.G., D.L. Picha, M.D. Wooldridge, F.K. Greene, and G. Brinkmeyer. Performance Comparison of Three Freeway Guide Sign Alphabets. In *Transportation Research Record 1692, The Journal of the Transportation Research Board*, Transportation Research Board, Washington, D.C., pages 9-16, 1999.
12. Hawkins, Jr., H.G., D.L. Picha and C.A. Lopez. Mexican Driver Comprehension of U.S. Traffic Control Devices. In *Transportation Research Record 1628*, Transportation Research Board, Washington, D.C., pages 15-24, 1998.

11. Picha, D.L., H.G. Hawkins, Jr., K.N. Womack, and L.R. Rhodes. Driver Understanding of Alternative Traffic Signs. In *Transportation Research Record 1605*, Transportation Research Board, Washington, D.C., pages 8-16, 1997.
10. Kacir, K.C., H.G. Hawkins, Jr., R.J. Benz*, and M.E. Obermeyer*. Guidelines for the Use of Flashing Operation at Signalized Intersections. In *ITE Journal*, Institute of Transportation Engineers, Washington, D.C., pages 26-31, October 1995.
9. Hawkins, Jr. H.G. Use of Supplemental Plaques to Improve the Effectiveness of Warning Signs. In *Transportation Research Record 1456*, Transportation Research Board, Washington, D.C., pages 20-26, 1994.
8. Hawkins, Jr., H.G. New Developments with the MUTCD. In *ITE Journal*, Institute of Transportation Engineers, Washington, D.C., pages 16-21, February 1994.
7. Kacir, K.C., R.J. Benz, H.G. Hawkins, Jr. Analysis of Flashing Signal Operation. In *Transportation Research Record 1421*, Transportation Research Board, Washington, D.C., pages 21-29, 1993.
6. Hawkins, Jr., H.G. and K.C. Kacir. Traffic Control Guidelines for Urban Arterial Work Zones. In *Transportation Research Record 1409*, Transportation Research Board, Washington, D.C., pages 23-31, 1993.
5. Hawkins, Jr., H.G., K.N. Womack, and J.M. Mounce. Driver Comprehension of Regulatory Signs, Warning Signs, and Pavement Markings. In *Transportation Research Record 1403*, Transportation Research Board, Washington, D.C., pages 67-82, 1993.
4. Hawkins, Jr., H.G. Evolution of the MUTCD: Part 3 - The MUTCD Since World War II. In *ITE Journal*, Institute of Transportation Engineers, Washington, D.C., pages 17-23, November 1992.
3. Hawkins, Jr., H.G. Evolution of the MUTCD: Part 2 - The Early Editions of the MUTCD. In *ITE Journal*, Institute of Transportation Engineers, Washington, D.C., pages 17-26, August 1992.
2. Hawkins, Jr., H.G. Evolution of the MUTCD: Part 1 - Early Standards for Traffic Control Devices. In *ITE Journal*, Institute of Transportation Engineers, Washington, D.C., pages 23-26, July 1992.
1. Hawkins, Jr., H.G. Detector Delay for Right-Turn-On-Red. In *Transportation Research Record 1360*, Transportation Research Board, Washington, D.C., pages 89-94, 1992.

Refereed Conference Proceedings

41. Hawkins, H.G., B. Dillman. Evaluation of Midpoint Runway Marking. Paper No 18-01258. TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2018. [note: accepted for publication in TRR]
40. Brown, L.*, K. Dixon, G. Hawkins. Quantifying Access Management on Arterial Roadways. Paper No 18-01612. TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2018. [note: accepted for publication in TRR]
39. Zhou, H., G. Hawkins. Multiobjective Optimization of Arterial Signal Coordination with Uneven Double Cycling. Paper No 18-00443. TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2018.
38. Hawkins, Jr., H.G., B.K. Brimley*, P.J. Carlson. Updated Model for Advance Placement of Turn and Curve Warning Signs. Paper No. 16-1748. TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2016. [note: to be published in TRR]
37. Brimley, B.K.*, P.J. Carlson, H.G. Hawkins, Jr., S. Hines, F. Gross, H. McGee. Guidelines for Traffic Control Devices at Curves. Paper No. 16-1654. TRB Annual Meeting

- Compendium of Papers, Washington, D.C., January 2016. [note: to be published in TRR]
36. Khazraee, S. Hadi * and H.G. Hawkins, Jr. Modifying the AASHTO Green Book Guidelines for Median Opening Design to Accommodate Simultaneous Left Turns. Paper No. 16-2434. TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2016. . [note: to be published in ASCE Journal of Transportation Engineering]
 35. Wang, M.*, H.G. Hawkins, Jr. Impact of Sunglasses on Color Perception of Traffic Signs. Paper No. 15-4111. TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2015.
 34. Khazraee, H.*, H.G. Hawkins, Jr. Criteria for Determining the Number of Intersections at a Divided Highway Junction: Recommendations for Changes to the MUTCD. Paper No. 15-0964. TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2015. [note: published in TRR 2492]
 33. Zhou, Y.*, H.G. Hawkins, Jr. Impact of Vehicle Types on Ball-Bank Indicator Reading and Curve Advisory Speed Determination. Paper No. 14-2987. TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2014.
 32. Alemazkoor, N.*, H.G. Hawkins, Jr. Examining Impacts of Increasing Speed Limit on Speed Distribution: Case Study, Paper No. 14-3335. TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2014.
 31. Brimley, B.K.*, P.J. Carlson, H.G. Hawkins, Jr. Evaluating Unfamiliar Driver Visual Behavior on Horizontal Curves Using Fixation Heat Maps, Paper No. 14-4247. TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2014. [note: published in TRR 2458]
 30. Hawkins, Jr. H.G., P.F. Kuo, D. Lord. Statistical Analysis of the Traffic Safety Impacts of On-Premise Digital Signs. Paper No. 14-2772. TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2014.
 29. Hawkins, Jr., H.G. Developing Long-Range Vision and Strategic Plan for the Future of the Manual on Uniform Traffic Control Devices. Paper No. 13-2117. TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2013.
 28. Turochy, R.E., Jon Fricker, H.G. Hawkins, Jr., D.S. Hurwitz, S.S. Ivey, M.A. Knodler Jr., R.K. Young. Assessment of the Introductory Transportation Engineering Course and the General Transportation Engineering Curriculum. Paper No. 13-1385. TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2013. [note: published in TRR 2328]
 27. Azimi, M* and H.G. Hawkins, Jr. Algorithm for Analyzing Horizontal Sight Distance based on Lane Centerline Coordinates. Paper No. 12-2155. TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2012. [note: accepted for publication in TRR]
 26. Hawkins, H.G. Changes Associated with the 2009 MUTCD, 2011 Compendium of Technical Papers, Texas Section ASCE, College Station, Texas, April 2011.
 25. McNeal, Heather C*. and H. Gene Hawkins. Creating Systems Engineering Approach for Manual on Uniform Traffic Control Devices, Paper 11-2724, TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2011.
 24. Williams*, Cameron and H. Gene Hawkins. Field Location and Marking of No-Passing Zones due to Vertical Alignments Using the Global Positioning System, Paper 11-2061, TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2011.
 23. Brimley*, Bradford K., H. Gene Hawkins, and Paul J. Carlson. Analysis of Retroreflectivity and Color Degradation in Sign Sheeting, Paper 11-2148, TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2011.

22. Hawkins, Jr., H.G., Impacts of Modern Headlights on the Design of Sag Vertical Curves, 4th International Symposium on Highway Geometric Design, Valencia, Spain, June 2010.
21. Reynolds, T.L. and H.G. Hawkins, Jr., The Impact of Snowplowing on Marking Retroreflectivity in New Hampshire, Paper 10-1364, TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2010.
20. Hawkins, Jr. H.G., A Historical Perspective on the Evolution of the MUTCD, Paper 10-3137, TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2010.
19. Hawkins, Jr., H.G. and M.A. Chacon. The TxDOT Sign Crew Field Book, Institute of Transportation Engineers, 2009 Compendium of Technical Papers, San Antonio Annual Meeting, August 2009.
18. Tong, J. Y. Zhang, H.G. Hawkins, P.J. Carlson, Finite Element Analysis of Raised Pavement Markers on Flexible Pavement and Laboratory Tests, Paper 09-2225, TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2009.
17. Hartmann, T.W.* and H.G. Hawkins, Jr. Revised Process for Work Zone Decision-Making Based On Quantitative Performance Measures, Paper 09-1093, TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2009. [note: accepted for publication in TRR]
16. Hawkins, Jr., H.G. and B.J. Katz. Evaluating Understanding of New Symbol Signs, Paper 09-1357, TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2009.
15. Hawkins, Jr., H.G. and M.A. Chacon. Improving Signing From the Installation Perspective: Texas Sign Crew Field Book, Paper 09-1375, TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2009.
14. Katz, B.J., J.F. Kennedy, and H.G. Hawkins, Jr. Evaluating Legibility Distance of Proposed Alternative Symbol Sign Designs, Paper 09-2544, TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2009.
13. Cheek*, M.T., H.G. Hawkins, Jr, and J.A. Bonneson. Improvements To A Queue And Delay Estimation Algorithm Utilized In Video Imaging Vehicle Detection Systems, Paper 08-1123, TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2008.
12. Pike*, A.M., P.J. Carlson, and H.G. Hawkins. Evaluation of the Visibility of Pavement Markings in Wet-Night Rainy Conditions and the Appropriateness of Associated Measurement Techniques. Paper Number, Paper 07-1221, TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2007.
11. Hawkins, H.G. and W.G. McClure. Methodology for Selecting Place Names in Destination and Distance Signs for Conventional Highways, Paper Number, Paper 06-0487, TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2006.
10. Hawkins, H.G. and E.R. Rose. Rear-Facing School Speed Limit Beacons, Paper 06-1572, TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2006.
9. Gates, T.J., H.G. Hawkins, and R. Ewart. Effectiveness of Rear-Facing Flashing Beacons in School Speed Limit Sign Assemblies, Paper 04-4069, TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2004.
8. Chrysler, S.T, P.J. Carlson, and H.G. Hawkins. Nighttime Legibility of Traffic Signs as a Function of Font, Color, and Retroreflective Sheeting, Paper 03-4113, TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2003.
7. Carlson, P.J., H.G. Hawkins, M.D. Finley Selection of Retroreflective Material as a Function of Sign Color and Critical Detail, Paper 01-2241, TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2001.

6. Carlson, P.J., H.G. Hawkins, M.D. Fontaine, K. Murphy Evaluation of Speed Trailers at High-Speed Temporary Work Zones, Paper 00-1475, TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2000.
5. Hawkins, H.G. and M. Pizza*. Recognition of Sign Colors Among Older Drivers, Paper 00-1706, TRB Annual Meeting Compendium of Papers, Washington, D.C., January 2000.
4. Hawkins, H.G., P.J. Carlson, and M. Elmquist. Evaluation of Weathering Data for Florescent Orange Sheeting, Paper 99-0637, TRB Annual Meeting Compendium of Papers, Washington, D.C., January 1999.
3. Picha, D.L., H.G. Hawkins, Jr., and C.A. Lopez. Assessment of Existing and Alternative Traffic Control Devices in Texas Border Areas, Paper 99-1401, TRB Annual Meeting Compendium of Papers, Washington, D.C., January 1999.
2. Hawkins, H.G., S.M. Lancaster, B.R. Fette, L.R. Rhodes. Helping Drivers Understand Traffic Control Devices: Implementing Research Results, Paper 98-0605, TRB Annual Meeting Compendium of Papers, Washington, D.C., January 1998.
1. Picha, D.L., H.G. Hawkins, Jr., and L.R. Rhodes. Driver Understanding of Alternative Traffic Signs. In *Traffic Congestion and Traffic Safety in the 21st Century: Challenges, Innovations, and Opportunities*, American Society of Civil Engineers, New York, New York, June 1997.

Conference Proceedings Refereed by Abstract

13. Changes Associated with the 2009 MUTCD, 2011 Compendium of Technical Papers, Texas Section ASCE, College Station, Texas, April 2011.
12. Hawkins, Jr., H.G. and M.A. Chacon. The TxDOT Sign Crew Field Book, Institute of Transportation Engineers, 2009 Compendium of Technical Papers, San Antonio Annual Meeting, August 2009.
11. Hawkins, Jr., H.G. et al. Traffic Incident Response Practices in Europe: Results of an American Scan Trip, Institute of Transportation Engineers in cooperation with the Australia Road Research Board, Melbourne, Australia Annual Meeting, 2005 Compendium of Technical Papers, August 2005.
10. Hawkins, Jr., H.G. U.S. Traffic Control Device Standards: What Does the Future Hold?, Institute of Transportation Engineers in cooperation with the Australia Road Research Board, 2005 Compendium of Technical Papers, Melbourne, Australia Annual Meeting, August 2005.
9. Carlson, P.J. and H.G. Hawkins, Jr. Development of Minimum Traffic Sign Retroreflectivity Levels in the U.S. and Implementation Strategies, Institute of Transportation Engineers in cooperation with the Australia Road Research Board, 2005 Compendium of Technical Papers, Melbourne, Australia Annual Meeting, August 2005.
8. Hawkins, Jr., H.G. and P.J. Carlson. Durability and Recognition Evaluation of Fluorescent Orange Signs. *1999 Compendium of Technical Papers*, Institute of Transportation Engineers, August 1999.
7. Hawkins, Jr., H.G. and S.C. Tignor. Innovative Traffic Control Practices in Europe. *1999 Compendium of Technical Papers*, Institute of Transportation Engineers, August 1999.
6. Hawkins, Jr., H.G. and L.R. Rhodes. Know Your Vital Signs: Implementing Research on Driver Understanding on Traffic Control Devices. *1996 Compendium of Technical Papers*, Institute of Transportation Engineers, September 1996, pages 261-265.

5. Kacir, K.C., H.G. Hawkins, Jr., R.J. Benz, and M.E. Obermeyer. Guidelines for the Use of Flashing Operation at Signalized Intersections. *1994 Compendium of Technical Papers*, Institute of Transportation Engineers, October 1994, pages 32-36.
4. Hawkins, Jr., H.G. Urban Arterial Work Zone Guidelines. *1992 Compendium of Technical Papers*, Institute of Transportation Engineers, August 1992, pages 456-460.
3. Hawkins, Jr., H.G. History of the National MUTCD. *1991 Compendium of Technical Papers*, Institute of Transportation Engineers, Washington, D.C., September 1991, pages 155-159.
2. Hawkins, Jr., H.G. Signing for High-Occupancy Vehicle Facilities. *1990 Compendium of Technical Papers*, Institute of Transportation Engineers, Washington, D.C., August 1990, pages 446-450.
1. Hawkins, Jr., H.G., and J.M. Mounce. Evaluation of Motorist Information Requirements for Transitways and Freeway-Transitway Interchanges. *ITE District 6 1988 Compendium of Technical Papers*, Colorado Springs, July 1988, pages 47-56.

Journal Papers Accepted without Review

5. 4. Hawkins, Jr., H.G., W.S. Wainwright, and S.C. Tignor. Innovative Traffic Control Practices in Europe. In *Public Roads*, Federal Highway Administration, Washington, D.C., September 1999.
3. Hawkins, Jr., H.G. Evolution of MUTCD Mirrors American Progress since 1920's. in *Roads and Bridges Magazine*, Scranton Gillette Communications, Des Plaines, Illinois, July 1995, pages 34-44.
2. Hawkins, Jr., H.G. New Developments with the MUTCD. *ATSSA Signal*, American Traffic Safety Services Association, Fredericksburg, Virginia, March 1994, page 4.
1. Hawkins, Jr., H.G. Advanced Technologies Workshop Report in *Proceedings of the National Conference on Work Zone Safety*. Federal Highway Administration, American Road and Transportation Builders Association, December 1994, pages 129-131.

PUBLICATION OF BOOKS OR AUTHORITATIVE REFERENCES

- Hawkins, Jr., H.G. Chapter 7: Traffic Flow Characteristics for Uninterrupted Flow Facilities. In *Traffic Engineering Handbook, 7th Edition*. Institute of Transportation Engineers, Washington, D.C., in press.
- Dawn Jourdan, Kathryn Hurd, Gene Hawkins, and Kimberly Winson-Geideman. Evidence Based Sign Regulation: Regulating Signage on the Basis of Empirical Wisdom. In the *Zoning and Planning Law Handbook, 2014 edition* (reprinted peer-reviewed journal article), Thomson Reuters, 2014 (in press).
- Hawkins, Jr., H.G. Traffic Control Devices. In the *Encyclopedia of Transportation: Social Science and Polity*, SAGE Publications, Thousand Oaks, California, pp. 1349-1354, 2014.
- Hawkins, Jr., H.G. Chapter 4: Regulatory and Warning Signs. In *Traffic Control Devices Handbook*. Institute of Transportation Engineers, Washington, D.C., 2013.
- *Manual on Uniform Traffic Control Devices*, Federal Highway Administration, Washington, D.C., 2009.
 - ♦ The MUTCD establishes the national standards for the design, installation, operation, and maintenance of traffic control devices. Its status as a national standard is defined in the Code of Federal Regulations and state laws. Government entities with responsibility for traffic control devices are required to comply with the MUTCD. Dr.

Hawkins' research activities have influenced the content of this document in several ways:

- ♦ During 2012-2013, Dr. Hawkins led an effort to prepare a 20 year vision and strategic plan for the MUTCD. The formal document was approved in January 2014.
- ♦ During 2010, Dr. Hawkins was a member of a small working group of 10 individuals who interacted directly with the Federal Highway Administration to address significant problems that have been identified in the 2009 MUTCD. As part of this working group, Dr. Hawkins prepared the first draft of several significant documents that were used to identify and explain the theoretical and practical challenges related to the problems.
- ♦ As the chair of the Markings Technical Committee within the National Committee on Uniform Traffic Control Devices, Dr. Hawkins was responsible for leading the efforts in developing material that was incorporated into the 2009 edition of the MUTCD. These proposals were developed within his committee, reviewed and critiqued by the NCUTCD, revised, approved, and then submitted to the FHWA for use in the MUTCD rulemaking process.
- ♦ Dr. Hawkins' research on sign conspicuity served as the basis for changes to the MUTCD regarding treatments for enhancing the visibility of traffic signs.
- ♦ Dr. Hawkins' and Dr. Paul Carlson's research on minimum sign retroreflectivity formed the basis for a revision of the MUTCD that added minimum retroreflectivity guidelines to the MUTCD. This revision was published in a December 21, 2007 *Federal Register* notice. Drs. Hawkins and Carlson contributed to the developing the language and content of the *Federal Register* proposed rule notice, as well as a supplemental proposed rule. Dr. Hawkins also authored or co-authored several papers, research reports, and guidance documents that supported the content of the MUTCD revision. Establishing minimum retroreflectivity guidelines in the MUTCD is a significant issue for both public agencies and the private sector. These guidelines have also been mandated by Congressional action. They are controversial and subject to much scrutiny.
- ♦ Dr. Hawkins' dissertation research influenced the organization and content of the warning sign chapter in the 2000 edition of the MUTCD (Chapter 2C). The content of the chapter was reorganized to reflect recommendations from the dissertation and several signs were added to the chapter on the basis of the recommendations.
- *Sign Crew Field Book*, Texas Department of Transportation, Austin, Texas, April 1998, revised to January 2000, new edition October 2009.
 - ♦ The TxDOT *Sign Crew Field Book* is used in TxDOT by all sign crews in the field and by TxDOT designers and engineers involved in sign design and decision making. As the PI of the project that developed and revised the field book, Dr. Hawkins played a significant role in developing the vision for the document and for creating the draft content. He also directed the process by which the draft material was vetted through a panel of TxDOT signing experts who provided valuable guidance in refining the content. The field book won a TxDOT award as a top research innovation and continues to be widely used today.
- *Airfield Marking Handbook*, IPRF 01-G-002-05-1, Innovative Pavement Research Foundation, Airport Concrete Pavement Technology Program, Skokie, Illinois, September 2008.

- ♦ This document is the first authoritative handbook devoted to the installation and maintenance of markings on airfield runways and taxiways.
- ♦ Authors: Speidel, D.J., C.D. Carneal, H.G. Hawkins, Jr., B.A. Hudson, R. Krommendyk, S. Quilty, C. Randazzo, D. Schall, M.W. Speidel.
- *Freeway Signing Handbook*, Texas Department of Transportation, Austin, Texas, February 2008.
 - ♦ The TxDOT *Freeway Signing Handbook* provides detailed guidelines for the design, layout, and placement of freeway guide signs and related signs. The document is used by TxDOT personnel and consultants in road design and other projects. As the PI of the project that developed the field book, Dr. Hawkins guided the creating and preparation of the handbook.
- *Pavement Marking Handbook*, Texas Department of Transportation, Austin, Texas, August 2004.
 - ♦ The TxDOT *Pavement Marking Handbook* is used in TxDOT to guide personnel in the selection and maintenance of pavement markings. As the PI of the project that developed the field book, Dr. Hawkins guided the creating and preparation of the handbook. The handbook is posted on the TxDOT web site.
- Hawkins, Jr., H.G. and P.J. Carlson. Chapter 4: Regulatory and Warning Signs. In *Traffic Control Devices Handbook*. Institute of Transportation Engineers, Washington, D.C., 2001.
- Jones, R.W. and H.G. Hawkins, Jr. Chapter 1: Introduction. In *Traffic Sign Handbook*. Institute of Transportation Engineers, Washington, D.C., 1997.
- Hawkins, Jr., H.G. Chapter 3: Types of Signs. In *Traffic Sign Handbook*. Institute of Transportation Engineers, Washington, D.C., 1997.

RESEARCH REPORTS

82. Finley, M.D., R.E. Avelar, S.P. Venglar, H.G. Hawkins, and H. Al-Deek. Traffic Control Devices and Measures for Deterring Wrong-Way Movements. NCHRP Report 881, National Cooperative Highway Research Program, Transportation Research Board, Washington, D.C., 2018.
81. Carlson, P., B. Brimley*, G. Hawkins, H. McGee, F. Gross, S. Himes. Traffic Control Device Guidelines for Curves, Final Report. NCHRP Project 3-106, February 2015 draft.
80. Fitzpatrick, K., M. Brewer, G. Hawkins, J. Pline, P. Koonce, P. Carlson, and V. Iragavarapu. Potential MUTCD Criteria for Selecting the Type of Control for Unsignalized Intersections, NCHRP Web-Only Document 213, March 2014.
79. Hawkins, Jr., H. Gene, Pei-Fen Kuo, and Dominique Lord. Statistical Analysis of the Relationship between On-Premise Digital Signage and Traffic Safety, Texas Engineering Experiment Station, December 2012.
78. Zhou, Hongmin "Tracy", H. Gene Hawkins, Jr., and Jeff D. Miles. Guidelines For Freeway Lighting Curfews, Research Report 0-6645-1. Texas Transportation Institute, College Station, TX. May 2013.
77. Lodgher, A., J.A. Perkins, Y. Yang, E. Jones, and H.G. Hawkins, Jr. Feasibility and Applications of RFID Technologies to Support Right-of-Way Functions: Technical Report, Research Report 0-6142-1. Texas Transportation Institute, College Station, TX. August 2010.
76. Zhang, Y., J. Tong, P.J. Carlson, H.G. Hawkins, Jr., and P.B. Keating. Development of Measures to Improve Field Performance of Retroreflective Raised Pavement Markers,

- Research Report. 0-5089-1. Texas Transportation Institute, College Station, TX. February 2009.
75. Hawkins, Jr., H.G., A. Pike, and M. Azimi. Evaluation of Traffic Control Devices: Fifth-Year Activities. Research Report. 0-4701-5. Texas Transportation Institute, College Station, TX. February 2009.
 74. Hawkins, H.G., M.P. Pratt, and P.J. Carlson. Preliminary Economic Impacts of Implementing Minimum Levels of Pavement Marking Retroreflectivity. FHWA-SA-08-010, Federal Highway Administration, Washington, D.C., July 2008.
 73. Hawkins, Jr., H.G., C.L. Williams, and S. Sunkari. Evaluation of Traffic Control Devices: Fourth-Year Activities. Research Report. 0-4701-4. Texas Transportation Institute, College Station, TX. May 2008.
 72. Hawkins, Jr., H.G., M.A. Sneed, C.L. Williams. Evaluation of Traffic Control Devices: Third-Year Activities. Research Report. 0-4701-3. Texas Transportation Institute, College Station, TX. January 2007.
 71. Hawkins, Gene, John Conrad, David Helman, Rebecca Brewster, John Corbin, Henry deVries, Gregory Jones, Kevin McGinnis, Ron Moore, Mark Olson, Larry Tibbits, and Michael Zezeski. Traffic Incident Response Practices in Europe. FHWA-PL-06-002, Office of International Programs, Federal Highway Administration, Washington, D.C., February 2006.
 70. Hawkins, Jr., H.G., R. Garg, P.J. Carlson, and A.J. Holick. Evaluation of Traffic Control Devices: Second Year Activities, Research Report 0-4701-2, Texas Transportation Institute, College Station, Texas, October 2005.
 69. Gates, T.J. and H.G. Hawkins, Jr. Effect of Higher-Conspicuity Warning and Regulatory Signs on Driver Behavior, PSR 0-4271-S. Texas Transportation Institute, College Station, Texas, December 2004.
 68. Rose, E.R., H.G. Hawkins, Jr., A.J. Holick, and R.P. Bligh. Evaluation of Traffic Control Devices: First Year Activities, Research Report 0-4701-1, Texas Transportation Institute, College Station, Texas, October 2004.
 67. Hawkins, Jr., H.G., T.J. Gates, and E.R. Rose. Pavement Marking Handbook, Product 0-4150-P1. Texas Transportation Institute, College Station, Texas, October 2004.
 66. Ford, G.L. and H.G. Hawkins, Jr. Freeway Signing Handbook, Product 0-4170-P1. Texas Transportation Institute, College Station, Texas, October 2004.
 65. Hawkins, Jr., H.G., P.J. Carlson, and S.T. Chrysler. Traffic Sign Retroreflectivity Issues, PSR 0-1796-S. Texas Transportation Institute, College Station, Texas, September 2004.
 64. Hawkins, Jr., H.G., G.L. Ford, and S.T. Chrysler. Urban Freeway Signing and the Freeway Signing Handbook, PSR 0-4170-S. Texas Transportation Institute, College Station, Texas, May 2004.
 63. Hawkins, Jr., H.G., T.J. Gates, and E.R. Rose. Pavement Marking Effectiveness and the Pavement Marking Handbook, PSR 0-4150-S. Texas Transportation Institute, College Station, Texas, March 2004.
 62. Carlson, P.J. and H.G. Hawkins, Jr. Minimum Retroreflectivity Values for Overhead Guide Signs and Street Name Signs, Research Report FHWA-RD-03-082, Federal Highway Administration, McLean, Virginia, December 2003.
 61. Gates, T.J., H.G. Hawkins, Jr., A.J. Holick, P.J. Carlson, S.T. Chrysler, and N.L. Hogue. Traffic Operational Impacts of Higher-Conspicuity Sign Materials, Research Report 4271-1, Texas Transportation Institute, College Station, TX, October 2003.

60. Chrysler, S.T., P.J. Carlson, and H.G. Hawkins, Jr. Headlamp Illumination Provided to Sign Positions by Passenger Vehicles, Research Report 0-1796-3. Texas Transportation Institute, College Station, Texas, October 2003.
59. Hawkins, Jr., H.G., G.L. Ford, and S.T. Chrysler. Urban Freeway Guide Signing: Final Report, Research Report 0-4170-2. Texas Transportation Institute, College Station, Texas, October 2003.
58. Gates, T.J., H.G. Hawkins, Jr., and E.R. Rose. Effective Pavement Marking Practices for Sealcoat and Hot-Mix Asphalt Pavements, Research Report 0-4150-4. Texas Transportation Institute, College Station, Texas, August 2003.
57. Carlson, P.J. and H.G. Hawkins, Jr. Updated Minimum Retroreflectivity Levels for Traffic Signs, Research Report FHWA-RD-03-081, Federal Highway Administration, McLean, Virginia, July 2003.
56. Gates, T.J., H.G. Hawkins, Jr., and E.R. Rose. Effective Pavement Marking Materials and Applications for Portland Cement Concrete Roadways. Research Report 4150-2, Texas Transportation Institute, College Station, Texas, July 2003.
55. Hawkins, Jr., H.G. and P.J. Carlson. Workshops on Nighttime Visibility of Traffic Signs: Summary of Workshop Findings, FHWA-SA-03-002. Federal Highway Administration, Washington, D.C., February 2003.
54. Gates, T.J. and H.G. Hawkins, Jr. Analysis of TxDOT Thickness Measurement Procedures for Thermoplastic Pavement Markings. Research Report 4150-1, Texas Transportation Institute, College Station, Texas, October 2002.
53. P.J. Carlson and H.G. Hawkins, Jr. Updated Minimum Retroreflectivity Levels for Traffic Signs, 474570-4. October 2002.
52. Chrysler, S.T., P.J. Carlson, and H.G. Hawkins, Jr. Nighttime Legibility of Ground-Mounted Traffic Signs as a Function of Font, Color, and Retroreflective Sheeting Type. Research Report 1796-2, Texas Transportation Institute, College Station, Texas, September 2002.
51. M.D. Fontaine, S.T. Chrysler, G.L. Ford, and H.G. Hawkins, Jr. Freeway Guide Signing: Review of Past Research, Research Report 0-4170-1. Texas Transportation Institute, College Station, Texas, April 2002.
50. Hawkins, Jr., H.G., P.J. Carlson, R. Collins, and G. Brinkmeyer. A Review of TxDOT Signing Operations, Research Report 1796-1. Texas Transportation Institute, College Station, Texas, March 2002.
49. Gates, T.J. and H.G. Hawkins, Jr. The Use of Wider Longitudinal Pavement Markings. Research Report 0024-1, Texas Transportation Institute, College Station, Texas, March 2002.
48. Hawkins, Jr., H.G., A.H. Parham, and K.N. Womack. Feasibility Study for an All-White Pavement Marking System. NCHRP Report 484, National Cooperative Highway Research Program, Transportation Research Board, Washington, D.C., 2002.
47. Fontaine, M.D. and H.G. Hawkins, Jr. Summary of Evaluation Findings for 30-Meter Handheld and Mobile Pavement Marking Retroreflectometer, Report #40525, Highway Innovative Technology Evaluation Center, Washington, D.C., March 2001.
46. Fontaine, M.D. and H.G. Hawkins, Jr. Catalog of Effective Treatments to Improve Driver and Worker Safety at Short-Term Work Zones. Research Report 1879-3, Texas Transportation Institute, College Station, Texas, January 2001.

45. Fontaine, M.D., P.J. Carlson, and H.G. Hawkins, Jr. Evaluation of Traffic Control Devices for Rural High-Speed Maintenance Work Zones: Second Year Activities and Final Recommendations. Research Report 1879-2, Texas Transportation Institute, College Station, Texas, October 2000.
44. Carlson, P.J., M.D. Fontaine, and H.G. Hawkins, Jr. Evaluation of Traffic Control Devices for Rural High-Speed Maintenance Work Zones. Research Report 1879-1, Texas Transportation Institute, College Station, Texas, October 2000.
43. Hawkins, Gene, Greg Schertz, Jim Carlson, and Rick Beck. Minimum Levels of In-Service Retroreflectivity for Pavement Markings: Summary of Workshop Findings. Federal Highway Administration, August 2000, http://safety.fhwa.dot.gov/roadway_dept/retro/sum2000wkshps/sum2000wkshps.pdf.
42. Fontaine, M.D. and H.G. Hawkins, Jr. Evaluation Findings of the Mirolux Plus 30 Pavement Marking Retroreflectometer, Report #40465, Highway Innovative Technology Evaluation Center, Washington, D.C., January 2000.
41. Fontaine, M.D. and H.G. Hawkins, Jr. Evaluation Findings of the Laserlux Mobile Pavement Marking Retroreflectometer, Report #40466, Highway Innovative Technology Evaluation Center, Washington, D.C., January 2000.
40. Fontaine, M.D. and H.G. Hawkins, Jr. Evaluation Findings of the MX30 Pavement Marking Retroreflectometer, Report #40467, Highway Innovative Technology Evaluation Center, Washington, D.C., January 2000.
39. Fontaine, M.D. and H.G. Hawkins, Jr. Evaluation Findings of the FRT01 Pavement Marking Retroreflectometer, Report #40468, Highway Innovative Technology Evaluation Center, Washington, D.C., January 2000.
38. Fontaine, M.D. and H.G. Hawkins, Jr. Evaluation Findings of the LTL 2000 Pavement Marking Retroreflectometer, Report #40469, Highway Innovative Technology Evaluation Center, Washington, D.C., January 2000.
37. Fontaine, M.D. and H.G. Hawkins, Jr. Evaluation Findings of the Ecodyn Mobile Pavement Marking Retroreflectometer, Report #40470, Highway Innovative Technology Evaluation Center, Washington, D.C., January 2000.
36. Innovative Traffic Control Practices in Europe. FHWA-PL-99-021, U.S. DOT, Federal Highway Administration, Washington, D.C., August 1999.
35. Hawkins, Jr., H.G., M.D. Wooldridge, A.B. Kelly, D.L. Picha, and F.K. Greene. Legibility Comparison of Three Freeway Guide Signs Alphabets. Research Report 1276-1F, Texas Transportation Institute, College Station, Texas, May 1999.
34. Hawkins, Jr., H.G. Traffic Control Devices in Texas Border Areas: Summary of Research and Recommendations. Research Report 1274-S, Texas Transportation Institute, College Station, Texas, March 1999.
33. Hawkins, Jr., H.G., D.L. Picha, D.C. Kreis, and M.A. Knodler. Evaluation of Alternative Traffic Signs for Use in Texas Border Areas. Research Report 1274-3, Texas Transportation Institute, College Station, Texas, March 1999.
32. Hawkins, Jr., H.G., P.J. Carlson, and M. Elmquist. Evaluation Of Fluorescent Orange Signs. Research Report 2962-S, Texas Transportation Institute, College Station, Texas, October 2000.
31. Hawkins, Jr., H.G. and P.J. Carlson. Traffic Signal Warrants: Guidelines for Conducting a Traffic Signals Warrant Analysis. Research Report 3991-2, Texas Transportation Institute, College Station, Texas, September 1998.

30. Hawkins, Jr., H.G., A. Stoddard, K. Collins, and C. Weatherby. Identification and Evaluation of Guide Signing for Airport Roadways with Specific Application to the Dallas/Fort Worth International Airport. Research Report 467406-1, Texas Transportation Institute, College Station, Texas, July 1998.
29. Carlson, P.J. and H.G. Hawkins, Jr. Evaluation of Potential Traffic Signal Warrant Considerations. Research Report 3991-1, Texas Transportation Institute, College Station, Texas, August 1998.
28. Hawkins, Jr., H.G. and P.J. Carlson. Sign Crew Field Book, 2nd Edition, Texas Transportation Institute, College Station, Texas, April 1998.
27. Picha, D.L., H.G. Hawkins, Jr., A.K. Vizcarra, and R.A. Donovan. Assessment of Existing and Alternative Traffic Control Devices in Texas Border Areas. Research Report 1274-2, Texas Transportation Institute, College Station, Texas, February 1998.
26. Benz, R.J., K.F. Turnbull, S. Turner, D.S. Hauser, P.S. Hurtado, and H.G. Hawkins, Jr. Guidelines for Bicycle and Pedestrian Facilities in Texas. Research Report 1449-3F, Texas Transportation Institute, College Station, Texas, December 1997.
25. Sign Crew Field Book. Research Report 1373-3, Texas Transportation Institute, College Station, Texas, January 1997.
24. Hawkins, Jr., H.G., et al. Training Course on Freeway Traffic Operations: Participant Handbook. FHWA-HI-97-009, Federal Highway Administration, Washington, D.C., December 1996.
23. Hawkins, Jr., H.G., D.L. Picha, B.L. Mann, C.R. McIlroy, K.N. Womack and C.L. Dudek. Assessment of Mexican Driver Understanding of Existing Traffic Control Devices Used in Texas. Research Report 1274-1, Texas Transportation Institute, College Station, Texas, November 1996.
22. McIlroy, C.R., D.L. Picha, and H.G. Hawkins, Jr. An Assessment of Sign Vandalism in the State of Texas. Research Report 1467-1, Texas Transportation Institute, College Station, Texas, August 1996.
21. Hawkins, Jr., H.G., P.J. Carlson, J.B. McCaleb, and C.R. McIlroy. Impact of Minimum Retroreflectivity Values on Sign Replacement Practices. Research Report 1275-1F, Texas Transportation Institute, College Station, Texas, October 1996.
20. Somers, R.A., H.G. Hawkins, Jr., D. Jasek, and T. Urbanik. An Evaluation of Guide Signing at Right Multilane Freeway Exits with Optional Lanes. Research Report 1467-5, Texas Transportation Institute, College Station, Texas, September 1996.
19. Picha, D.L., H.G. Hawkins, Jr., and K.N. Womack. Motorist Understanding of Alternative Designs for Traffic Signs. Research Report 1261-5F, Texas Transportation Institute, College Station, Texas, November 1995.
18. Hauser, D.S., R.J. Benz, and H.G. Hawkins, Jr. Guidelines for Bicycle and Pedestrian Facilities: First-Year Activities. Interim Report. Research Report 1449-3F, Texas Transportation Institute, College Station, Texas, November 1995.
17. Hawkins, Jr., H.G., R.T. Bartoskewitz, and D.W. Fenno. Evaluation of Rural Guide Signing: Second Year Activities and Preliminary Recommendations. Research Report 1373-2, Texas Transportation Institute, College Station, Texas, May 1995.
16. Hawkins, Jr., H.G., K.N. Womack, and J.M. Mounce. Motorist Understanding of Traffic Control Devices: Study Results and Recommendations. Research Report 1261-4, Texas Transportation Institute, College Station, Texas, March 1995.

15. Dudek, C.L., R.D. Huchingson, H.G. Hawkins, Jr., and N. Trout. Evaluation of International Signing Practices. Florida Department of Transportation, Texas A&M Research Foundation Project 7240, November 1994.
14. Kacir, K.C., H.G. Hawkins, Jr., R.J. Benz, and M.E. Obermeyer. Evaluation of Flashing Traffic Signal Operation. Research Report 1297-2F, Texas Transportation Institute, College Station, Texas, November 1993.
13. Hawkins, Jr., H.G., R.T. Bartoskewitz, D.W. Fenno, and J.M. Distin. Evaluation of Rural Guide Signing: First Year Report. Research Report 1373-1, Texas Transportation Institute, College Station, Texas, May 1994.
12. Hawkins, Jr., H.G. An Analytical Model for Evaluating Driver Comprehension of Warning Signs. Dissertation, Department of Civil Engineering, Texas A&M University, College Station, Texas, May 1993.
11. Womack, K.N., H.G. Hawkins, Jr., and J.M. Mounce. Motorist Comprehension of Traffic Control Devices: Statewide Survey Results. Research Report 1261-2, Texas Transportation Institute, College Station, Texas, February 1993.
10. Texas Highway Operations Manual. Research Report 1232-3, Texas Transportation Institute, College Station, Texas, August 1992.
9. Hawkins, Jr., H.G., K.C. Kacir, and M.A. Ogden. Traffic Control Guidelines for Urban Arterial Work Zones, Volume 1: Executive Summary. Research Report 1161-5: Vol. 1, Texas Transportation Institute, College Station, Texas, February 1992.
8. Hawkins, Jr., H.G., K.C. Kacir, and M.A. Ogden. Traffic Control Guidelines for Urban Arterial Work Zones, Volume 2: Technical Report. Research Report 1161-5: Vol. 2, Texas Transportation Institute, College Station, Texas, February 1992.
7. Mounce, J.M., H.G. Hawkins, Jr., and K.N. Womack. Assessment and Improvement of Motorist Understanding of Traffic Control Devices. Research Report 1261-1, Texas Transportation Institute, College Station, Texas, June 1991.
6. Hawkins, Jr., H.G. and D.L. Christiansen. The Impacts of Carpool Utilization on the Katy Freeway Transitway, 42-Month After Evaluation. Research Report 484-11, Texas Transportation Institute, College Station, Texas, September 1989.
5. Stokes R.W. and H.G. Hawkins, Jr. Austin/San Antonio Origin-Destination Study, Sensitivity Analysis of Traffic Diversion Methodology. Research Report 1186-3F, Texas Transportation Institute, College Station, Texas, September 1988.
4. Stokes, R.W., H.G. Hawkins, Jr., D.E. Morris, and W.M. Hinshaw. Austin/San Antonio Origin-Destination Study, Vol. I: Summary Report. Research Report 1186-2 (I), Texas Transportation Institute, College Station, Texas, April 1988.
3. Stokes, R.W., H.G. Hawkins, Jr., D.E. Morris, and W.M. Hinshaw. Austin/San Antonio Origin-Destination Study, Vol. II: Technical Appendices. Research Report 1186-2 (II), Texas Transportation Institute, College Station, Texas, February 1988.
2. Hawkins, Jr., H.G., J.M. Mounce, and S. Albert. Evaluation of Motorist Information Requirements for Transitways. Research Report 1113-1, Texas Transportation Institute, College Station, Texas, August 1988.
1. Mounce, J.M., H.G. Hawkins, Jr., R.W. Stokes, and H.S. Payne. Revised Manual for Planning, Designing, and Operating Transitway Facilities in Texas. Research Report 339-14, Texas Transportation Institute, College Station, Texas, September 1988.

INVITED SEMINARS

35. "Traffic Sign Practices in the United States" Presented at First International Symposium on Technological Innovations in Traffic Signs, Nanjing, China, March 2017.
34. "Speeding Up the Process: Getting TCD Guidelines into Practice." Presented at the ITE Annual Meeting, Anaheim, California, August 2016.
33. "Rules of the Road." Panelist in session at Eno Policy Summit, Washington, D.C., November 2015.
32. "Assessment of Employers' Perspectives on Needs for Critical Skills and Knowledge in the Transportation Field." Presented at the ITE Annual Meeting, Hollywood, Florida, August 2015.
31. "Back to the MUTCD Future." Presented at the TexITE District Meeting, College Station, Texas, March 12, 2015.
30. "On-Premise Signing: Reflections of a Traffic Engineer." Keynote address to the Watchfire Dealers Council Meeting, Nashville, Tennessee, September 10, 2014.
29. "Challenges and Solutions Associated with the U.S. and Canadian MUTCDs." Presented at the American Public Works Association Congress, Toronto, Ontario, August 2014.
28. "The MUTCD: Its History and Future." Keynote address to the Dallas-Fort Worth Joint Section Meeting of the Texas District of ITE, Grand Prairie, Texas, July 17, 2014.
27. "The MUTCD: Its History and Future." Presented at the ASCE Transportation and Development Institute Conference, Orlando, Florida, June 11, 2014.
26. "Roundabout Signing and Marking: State Perspectives and Case Studies." Webinar Presenter and Moderator. Transportation Research Board Webinar, July 2013.
25. "Future of the MUTCD: Innovating a Traditional Document." Presented at the Oregon ITE Winter Workshop, Portland, Oregon, February 2013.
24. "Evolution of the MUTCD and Critical Issues Related to the 2009 MUTCD." Presented at the Southeast Branch of the Texas Public Works Association, Sugarland, Texas, October 2012.
23. "Evolution of the MUTCD and Critical Issues Related to the '09 Edition." Presented at the Houston Section of the Texas Institute of Transportation Engineers, Houston, Texas, June 2012.
22. "MUTCD and Tort Liability." Presented at the 91st Annual Meeting of the Transportation Research Board, January 2012.
21. "The Future of Traffic Control Devices." Presented to the Traffic Control Devices Committee, 91st Annual Meeting of the Transportation Research Board, January 2012.
20. "Overview of the 2009 MUTCD: Significant Changes for Traffic Signs and Pavement Markings." Webinar Presented by the Institute of Transportation Engineers, September 2011 (370 participants), February 2011 (365 participants), December 2010 (306 participants).
19. "Preliminary Thoughts on a Long-Range Vision for the MUTCD." Presented at the ITE Annual Meeting, St. Louis, Missouri, August 2011.
18. "Signing and Markings of Roundabouts." Presented at the 3rd International Roundabout Conference, Carmel, Indiana, May 2011.
17. "Changes Associated with the 2009 MUTCD." Presented at the Texas Section Meeting of the American Society of Civil Engineers, College Station, Texas, April 2011.
16. "Preliminary Thoughts on a Long-Range Vision for the MUTCD." Presented at the 90th Annual Meeting of the Transportation Research Board, January 2011.

15. "The Science of Signage: Parallels between Traffic Signs and Business Signs." Presented at the National Signage Research and Education Conference, Cincinnati, Ohio, October 2010.
14. "Preliminary Thoughts on a Long-Range Vision for the MUTCD." Presented at the American Association of State Highway and Transportation Officials Subcommittee on Traffic Engineering, Chicago, Illinois, June 2010.
13. "2009 MUTCD: A Review of Significant Changes – Signs, Markings, and Rail." Presented at the Texas District of the Institute of Transportation Engineers Semi-Annual Meeting, Sugarland, Texas, June 2010.
12. "2009 MUTCD: A Review of Significant Changes." Presented at the Houston Section, Texas District of the Institute of Transportation Engineers, Houston, Texas, May 2010.
11. "2009 MUTCD: A Review of Significant Changes." Presented at the Texas Chapter, American Traffic Safety Services Association, Austin, Texas, March 2010.
10. "2009 MUTCD: A Review of Significant Changes." Presented at the Brazos Valley Section, Texas District of the Institute of Transportation Engineers, College Station, Texas, February 2010.
9. "The MUTCD: Where It's Been and Where It's Going." Presented at the Annual Convention and Traffic Expo, American Traffic Safety Services Association, San Antonio, Texas, February 2010.
8. "The MUTCD: Where It's Been and Where It's Going." Keynote address to the Colorado-Wyoming Section of ITE, Denver, Colorado, May 9, 2008.
7. "Historical Perspective of the Role of Traffic Engineering." Keynote address at DeShazo Tang and Associates 25th Anniversary Dinner, November 19, 2005, Dallas Texas.
6. Conceptual Tool for Assessing the Performance of On-Premise Business Signs, National Signage Research Symposium, Las Vegas, Nevada, March 2005.
5. The Signage Sourcebook: A Signage Handbook, National Signage Research Symposium, Orlando, Florida, April 2004.
4. Business Signs and Traffic Signs: Perspectives of a Traffic Engineer, National Signage Research Symposium, Las Vegas, Nevada, April 2003.
3. Traffic Sign Retroreflectivity Workshops: Soliciting Input from Public Officials:
 - ♦ Hanover, Maryland (outside of Baltimore), September 4-5, 2002.
 - ♦ College Station, Texas, August 21-22, 2002.
 - ♦ Hudson, Wisconsin, August 13-14, 2002.
 - ♦ Lakewood, Colorado (outside of Denver), July 10-11, 2002.
2. Pavement Marking Retroreflectivity Workshops: Soliciting Input from Public Officials:
 - ♦ Raleigh, North Carolina, December 6-8, 1999.
 - ♦ Sulphur, Louisiana (outside of Lake Charles), November 15-17, 1999.
 - ♦ Kent, Washington (outside of Seattle), October 5-6, 1999.
1. Human Factors and Traffic Control Devices, presented at the TRB Human Factors in Transportation Workshop, Washington, D.C., March 1997.

RESEARCH PRESENTATIONS

104. "Updated Model for Advance Placement of Turn and Curve Warning Signs." Presented at the 95th Annual Meeting, Transportation Research Board, Washington, D.C., January 2016.
103. "NCUTCD 20-year vision for the MUTCD." Presented at the 93rd Annual Meeting, Transportation Research Board, Session 276, Washington, D.C., January 2014.

102. "Statistical Analysis of the Traffic Safety Impacts of On-Premise Digital Signs." Presented to the Digital Billboards Joint Subcommittee at the 93rd Annual Meeting, Transportation Research Board, Washington, D.C., January 2014.
101. "20-Year Vision for the MUTCD: What Do You Think?" Presented at American Traffic Safety Services Association Mid-Year Meeting, Nashville, Tennessee, August 2013.
100. "Initial Draft of a 20-Year MUTCD Long-Range Vision and Strategic Plan." Presented at National Committee on Uniform Traffic Control Devices Meeting, Portland, Maine, June 2013.
99. "Initial Draft of a 20-Year MUTCD Long-Range Vision and Strategic Plan." Presented at American Association of State Highway and Transportation Officials Subcommittee on Traffic Engineering Meeting, Portland, Maine, June 2013.
98. "Long-Range Vision and Strategic Plan for the MUTCD." Presented to the Brazos Valley Section of the Institute of Transportation Engineers, College Station, Texas, March 2013.
97. "Developing Long-Range Vision and Strategic Plan for the Future of the Manual on Uniform Traffic Control Devices." Presented at the 92nd Annual Meeting, Transportation Research Board, Session 429, Washington, D.C., January 2013.
96. "Long-Range Vision and Strategic Plan for the MUTCD." Presented to the Traffic Control Devices Committee at the 92nd Annual Meeting, Transportation Research Board, Washington, D.C., January 2013.
95. "MUTCD Strategic Planning Status and Vision Development." Presented to the National Committee on Uniform Traffic Control Devices, Arlington, Virginia, January 2013.
94. "Statistical Analysis of the Safety Impacts of Digital On-Premise Signs." Presented at the National Signage Research and Education Conference, Cincinnati, Ohio, October 2012.
93. "Preliminary Thoughts on a Long-Range Vision for the MUTCD." Presented at American Traffic Safety Services Association Mid-Year Meeting, Hilton Head, South Carolina, August 2012.
92. "Preliminary Thoughts on a Long-Range Vision for the MUTCD." Presented at Institute of Transportation Engineers Annual Meeting, Atlanta, Georgia, August 2012.
91. "Preliminary Thoughts on a Long-Range Vision for the MUTCD." Presented at National Committee on Uniform Traffic Control Devices Meeting, Orlando, Florida, June 2012.
90. "Preliminary Thoughts on a Long-Range Vision for the MUTCD." Presented at American Association of State Highway and Transportation Officials Subcommittee on Traffic Engineering Meeting, Orlando, Florida, June 2012.
89. "Preliminary Thoughts on a Long-Range Vision for the MUTCD." Presented at National Association of County Engineers Annual Meeting and Technical Conference, Lexington, Kentucky, April 2012.
88. "Impacts of Modern Headlights on the Design of Sag Vertical Curves." Presented at the 4th International Symposium on Highway Geometric Design, Valencia, Spain, June 2010.
87. "Traffic Control Device Retroreflectivity: Turning Scientific Research into Public Policy." Presented to the Industrial and Systems Engineering Graduate Seminar, Texas A&M University, College Station, Texas, March 2010.
86. "A Historical Perspective on the Evolution of the MUTCD." Presented at the 89th Annual Meeting, Transportation Research Board, Session 432, Washington, D.C., January 2009.
85. "Evaluating Understanding of New Symbol Signs." Presented at the 88th Annual Meeting, Transportation Research Board, Washington, D.C., January 2009.

84. "Improving Signing From the Installation Perspective: Texas Sign Crew Field Book." Presented at the 88th Annual Meeting, Transportation Research Board, Washington, D.C., January 2009.
83. "The MUTCD: Where It's Been and Where It's Going." Presented to the National Committee on Uniform Traffic Control Devices, Arlington, Virginia, January 2009.
82. "The MUTCD: Where It's Been and Where It's Going." Presented to the Colorado-Wyoming Section of the Institute of Transportation Engineers, Denver, Colorado, May 2008.
81. "Assessment of Sag Curve Design Criteria Considering Modern Headlamp Performance." Presented at the 87th Annual Meeting, Transportation Research Board, Washington, D.C., January 2008.
80. "Improved Signing and Markings for Roundabouts." Presented at the 87th Annual Meeting, Transportation Research Board, Washington, D.C., January 2008.
79. "Improved Signing and Markings for Roundabouts." Presented at the 77th Annual Meeting, Institute of Transportation Engineers, Pittsburgh, Pennsylvania, August 2007.
78. "Minimum Signal Sight Distance Guidelines." Presented at the 86th Annual Meeting, Transportation Research Board, Washington, D.C., January 2007.
77. "Symbol Designs for Traffic Control Devices." Presented at the 76th Annual Meeting, Institute of Transportation Engineers, Milwaukee, Wisconsin, August 2006.
76. "Rear-Facing School Speed Limit Beacons." Presented at the 85th Annual Meeting, Transportation Research Board, Washington, D.C., January 2006.
75. "Methodology for Selecting Place Names in Destination and Distance Signs for Conventional Highways." Presented at the 85th Annual Meeting, Transportation Research Board, Washington, D.C., January 2006.
74. "Global Harmonization of TCDs: What are the Opportunities?" Presented at the 75th Annual Meeting, Institute of Transportation Engineers, Melbourne, Australia, August 2005.
73. "Scan Trip on Traffic Incident Response." Presented at the 75th Annual Meeting, Institute of Transportation Engineers, Melbourne, Australia, August 2005.
72. "U.S. Traffic Control Device Standards: What Does the Future Hold?" Presented at the 75th Annual Meeting, Institute of Transportation Engineers, Melbourne, Australia, August 2005.
71. "Scan Trip on Traffic Incident Response." Highway Subcommittee on Traffic Engineering, American Association of State Highway and Transportation Officials, Buffalo, New York, June 2005.
70. "Study of the Effects of Adding Dual Logo Panels to Specific Service Signs." Presented at the 84th Annual Meeting, Transportation Research Board, Washington, D.C., January 2005.
69. "Brief History of the MUTCD." Presented at the 50th Anniversary Meeting, Texas Section of the Institute of Transportation Engineers, Austin, Texas, June 2004.
68. "Texas Pavement Marking Handbook," American Traffic Safety Services Association, San Antonio, Texas, February 2004.
67. "Driver Understanding of Potential All-White Pavement Marking Patterns." Presented at the 83rd Annual Meeting, Transportation Research Board, Washington, D.C., January 2004.
66. "Helping Drivers See at Night: Maintaining Traffic Sign Retroreflectivity." American Public Works Association, San Diego, California, August 2003.

65. "Helping Drivers See at Night: Maintaining Traffic Sign Retroreflectivity." Highway Subcommittee on Traffic Engineering, American Association of State Highway and Transportation Officials, Savannah, Georgia, June 2003.
64. "Business Signs and Traffic Signs: Perspectives of a Traffic Engineer," National Signage Research Symposium, Las Vegas, Nevada, April 2003.
63. "Nighttime Visibility for America's Signage," American Traffic Safety Services Association, New Orleans, Louisiana, February 2003.
62. "Implementing Minimum Requirements for Traffic Sign Retroreflectivity," Research Committee of the National Committee on Uniform Traffic Control Devices, Washington, D.C., January 2003.
61. "Driver Comprehension of Pavement Markings," FHWA Southern Resource Center Pavement Marking Conference, Memphis, Tennessee, August 2002.
60. "Pavement Marking Retroreflectivity," FHWA Southern Resource Center Pavement Marking Conference, Memphis, Tennessee, August 2002.
59. "HITEC Evaluation of 30-Meter Pavement Marking Retroreflectometers," FHWA Southern Resource Center Pavement Marking Conference, Memphis, Tennessee, August 2002.
58. "Texas Pavement Marking Research," FHWA Southern Resource Center Pavement Marking Conference, Memphis, Tennessee, August 2002.
57. "A Brief History of the MUTCD," American Traffic Safety Services Association, Dallas, Texas, February 2002.
56. "Pavement Markings: Performance and Warranty Specifications," American Traffic Safety Services Association, Dallas, Texas, February 2002.
55. "A Brief History of the MUTCD." Presented at the AASHTO Highway Subcommittee on Traffic Engineering, Portland, Maine, June 2001.
54. "Non-Standard Sign Design." Presented at the ITE Mid-Year Meeting, Monterey, California, March 2001.
53. "Retroreflectivity 101 – Basic Retroreflectivity" and "Retroreflectivity 102 – Advanced Retroreflectivity." Presented at the ATSSA Annual Convention, Fort Lauderdale, Florida, February 2001.
52. "Results of Visual Evaluations of Sign Retroreflectivity Compared to Minimum Retroreflectivity Recommendations." Presented at the 80th Annual Meeting, Transportation Research Board, Washington, D.C., January 2001.
51. "Signs in the 2000 Manual of Uniform Traffic Control Devices." Presented at the 80th Annual Meeting, Transportation Research Board, Washington, D.C., January 2001.
50. "Retroreflectivity" Presented at the Texas ATSSA How To Conference, Conroe, Texas, September 2000.
49. "Recognition of Sign Colors Among Older Drivers." Presented at the 79th Annual Meeting, Transportation Research Board, Washington, D.C., January 2000.
48. "How to Make Roads Safer and Driver Friendly." Presented at the 32nd Annual Conference of the National Association of Women Highway Safety Leaders, San Antonio, Texas, August 1999.
47. "Durability and Recognition Evaluation of Fluorescent Orange Signs." Presented at the 69th Annual Meeting, Institute of Transportation Engineers, Las Vegas, Nevada, August 1999.

46. "Innovative Traffic Control Practices in Europe." Presented at the 69th Annual Meeting, Institute of Transportation Engineers, Las Vegas, Nevada, August 1999.
45. "Innovative Technologies from Europe." Presented at the American Traffic Safety Services Association Annual Convention, San Antonio, Texas, February 1999.
44. "Performance Comparison of Three Freeway Guide Sign Alphabets." Presented at the 78th Annual Meeting, Transportation Research Board, Washington, D.C., January 1999.
43. "European Innovations in Traffic Control: What Can We Learn from Them." Presented at the 78th Annual Meeting, Transportation Research Board, Washington, D.C., January 1999.
42. "Assessment of Existing and Alternative Traffic Control Devices in Texas Border Areas." Presented at the 78th Annual Meeting, Transportation Research Board, Washington, D.C., January 1999.
41. "Evaluation of Weathering Data for Fluorescent Orange Sheeting." Presented at the 78th Annual Meeting, Transportation Research Board, Washington, D.C., January 1999.
40. "Comparing the Legibility of Alphabets Used in Freeway Guide Signs." Presented at the TRB Symposium on Night Visibility and Driver Behavior, Washington, D.C., April 1998.
39. "Helping Drivers Understand Traffic Control Devices: Implementing Research Results." Presented at the 77th Annual Meeting, Transportation Research Board, Washington, D.C., January 1998.
38. "Mexican Driver Understanding of U.S. Traffic Control Devices." Presented at the 77th Annual Meeting, Transportation Research Board, Washington, D.C., January 1998.
37. "Description of How Well Border Area Drivers from Texas and Mexico Understand Traffic Control Devices." Presented at the 80th TxDOT Transportation Conference, College Station, Texas, October 1997.
36. "Sign Crew Field Book." Presented to the AASHTO Traffic Engineering Subcommittee meeting, Milwaukee, Wisconsin, June 1997.
35. "Traffic Engineering and Human Factors: A Traffic Control Device Partnership." Presented at the Conference on Human Factors and Highway Safety, Transportation Research Board, Washington, D.C., March 1997.
34. "Assessment of Alternative Sign Replacement Strategies." Presented at the 76th Annual Meeting, Transportation Research Board, Washington, D.C., January 1997.
33. "History of Traffic Control Devices from a Human Factors Perspective." Presented to the Traffic Control Devices Session, 30th Annual Human Factors Workshop, Transportation Research Board, Washington, D.C., January 1997.
32. "Texas Research on Driver Comprehension of Traffic Control Devices." Presented to the Traffic Control Devices Session, 30th Annual Human Factors Workshop, Transportation Research Board, Washington, D.C., January 1997.
31. "Texas Research on Driver Comprehension of Traffic Control Devices." Presented to the Research Committee, National Committee on Uniform Traffic Control Devices, Washington, D.C., January 1997.
30. "Know Your Vital Signs: Implementing Research on Driver Understanding on Traffic Control Devices." Presented at the 66th Annual Meeting, Institute of Transportation Engineers, Minneapolis, Minnesota, September 1996.
29. "From the Rio Grande to the 49th Parallel: The Need for Uniform Traffic Control Devices." Presented at the Southwest Traffic Safety Workshop, Austin, Texas, May 1996.
28. "The Need for Consistency with In-Vehicle Communications." Presented at the TRB Symposium on Night Visibility and Driver Behavior, Iowa City, Iowa, April 1996.

27. "Advances in Work Zone Safety: Advanced Technologies." Presented at the CONEXPO-CON/AGG Exposition, Las Vegas, Nevada, March 1996.
26. "Pavement Marking Systems: The Case of All-White vs. Yellow/White." Session presider at the 75th Annual Meeting, Transportation Research Board, Washington, D.C., January 1996.
25. "Public/Private Partnerships in Public Education and Involvement." Presented at the Annual Transportation Conference, Texas Department of Transportation, College Station, Texas, October 1995.
24. "From the Rio Grande to the 49th Parallel: The Need for Uniform Traffic Control Devices." Presented at the MEX-TEX Conference, Texas Chapter, American Public Works Association, Houston, Texas, May 1995.
23. "Traffic Signs: Past, Present, and Future." Presented at the American Traffic Safety Services Association Annual Traffic Expo meeting, San Antonio, Texas, February 1995.
22. "Metric Traffic Signs: Where Have We Been, Where Are We Going?" Session presider at the 74th Annual Meeting, Transportation Research Board, Washington, D.C., January 1995.
21. "Advanced Work Zone Technologies." Presider/Facilitator for two workshops at the National Work Zone Safety Conference, American Road and Transportation Builders Association, Washington, D.C., December 1994.
20. "Assessment and Improvement of Motorist Understanding of Traffic Control Devices." Presented at the Annual Transportation Conference, Texas Department of Transportation, College Station, Texas, October 1994.
19. "Guidelines for the Use of Flashing Operation at Signalized Intersections." Presented at the 64th Annual Meeting, Institute of Transportation Engineers, Dallas, Texas, October 1994.
18. "Motorists Comprehension of Warning Signs." Presented at the American Traffic Safety Services Association Annual Traffic Expo meeting, San Jose, California, February 1994.
17. "Work Zone Traffic Control for Urban Arterials." Presented at the American Traffic Safety Services Association Annual Traffic Expo meeting, San Jose, California, February 1994.
16. "Use of Supplemental Plaques to Improve the Effectiveness of Warning Signs." Presented at the 73rd Annual Meeting, Transportation Research Board, Washington, D.C., January 1994.
15. "History of the MUTCD." Presented at the Houston Chapter of the Texas Section of the Institute of Transportation Engineers monthly meeting, Houston, Texas, December 1993.
14. "History of the MUTCD." Presented at the National Committee on Uniform Traffic Control Devices Semi-Annual Meeting, Lake Tahoe, Nevada, June 1993.
13. "An Analytical Model for Interpreting Driver Comprehension of Warning Signs." Presented to the Regulatory/Warning Sign Technical Committee of the National Committee on Uniform Traffic Control Devices, Lake Tahoe, Nevada, June 1993.
12. "History of the MUTCD." Presented at the Texas Section of the Institute of Transportation Engineers Section Meeting, Texas Section of the Institute of Transportation Engineers, Waco, Texas, January 1993.
11. "Driver Comprehension of Warning Signs." Presented at the 72nd Annual Meeting, Transportation Research Board, Washington, D.C., January 1993.
10. "Traffic Control Guidelines for Urban Arterial Work Zones." Presented at the 72nd Annual Meeting, Transportation Research Board, Washington, D.C., January 1993.

9. "Urban Arterial Work Zone Guidelines." Presented at the 62nd Annual Meeting, Institute of Transportation Engineers, Washington, D.C., August 1992.
8. "History of the MUTCD." Presented at the Traffic Operations Conference, Texas Department of Transportation, Austin, Texas, June 1992.
7. "Traffic Control Devices, the MUTCD, and Driver Comprehension." Presented at the 43rd Annual Traffic Conference, Missouri Highway and Transportation Department, Columbia, Missouri, April 1992.
6. "Detector Delay for Right-Turn-On-Red." Presented at the Transportation Research Board Annual Meeting, Washington, D.C., January 1992.
5. "The Evolution of Standards for Traffic Control Devices." Presented to Committee on Traffic Control Devices, Transportation Research Board Annual Meeting, Washington, D.C., January 1992.
4. "The MUTCD from 1935 to 1988." Presented at the Texas Section Fall Meeting, American Society of Civil Engineers, South Padre, Texas, October 1991.
3. "History of the National MUTCD." Presented at the 61st Annual Meeting, Institute of Transportation Engineers, Milwaukee, Wisconsin, September 1991.
2. "Signing for High-Occupancy Vehicle Facilities." Presented at the 60th Annual Meeting, Institute of Transportation Engineers, Orlando, Florida, August 1990.
1. "Evaluation of Motorist Information Requirements for Transitways and Freeway-Transitway Interchanges." ITE District 6 41st Annual Meeting, Colorado Springs, Colorado, July 1988.

CONSULTING ACTIVITIES (as Hawkins Engineering)

- Expert technical services provided to various clients as a consulting expert or testifying expert, 2010-present.
- Consulting services provided to Sightline, LC, Airfield Marking Consultants. Contributed as a subcontractor to develop the *Airfield Marking Handbook* on a project sponsored by the Innovative Pavement Research Foundation, Airport Concrete Pavement Technology Program, 2007-2008.
- Consulting services provided to Wal-Mart, Inc. Conducted analysis of parking area traffic control, 2007-2008.
- Consulting services provided to Urban Design Associates. Contributed as a subcontractor to develop a Model Sign Code on a project sponsored by the International Sign Association, 2007-2008.
- Consulting services provided to Scientific Applications International, Inc. Contributed as a subcontractor developing and evaluating symbols for traffic signs on a research project sponsored by the Federal Highway Administration, 2005-2008.
- Consulting services provided to the Federal Highway Administration. Developed and conducted workshops on minimum pavement marking retroreflectivity, 1998-1999.