

Andrew J. Sullivan, P.E.

Research Engineer
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Civil, Construction, and Environmental Engineering
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Education

B.S.C.E University of Pennsylvania, Philadelphia, PA

Other Positions Held

Project Manager, Sain Associates, Inc. of Birmingham, AL . Supervised design of traffic control systems, highways, and preparation of traffic and safety studies.

Researcher, Bellomo-McGee, Inc. of Vienna, VA. Participated in various federally funded research studies including older driver performance, guardrail performance in accidents, and the use of advanced technologies in multimodal environments.

Experience

Traffic Simulation

Has extensive experience developing micro-simulation traffic models for signal timing, alternatives analysis, and traffic operations assessments. Projects include developing micro-simulation models of the US 280 corridor in Birmingham to evaluate urban interchange alternatives as well as the impacts of traffic signal timing changes. Other models have been developed for the Birmingham Region to evaluate emergency evacuation procedures, the new I-22 corridor in western Alabama, and corridor improvements. Has experience using CORSIM, SimTraffic, and the AIMSUN models.

Traffic Operations Analysis

Has evaluated traffic operations for corridor studies, spot improvements, signal improvements, and safety studies. Has performed traffic impact analysis for a wide variety of commercial, residential, office, industrial, and public developments. Performed an operations analysis for the Mercedes manufacturing plant in Vance, Alabama and provided recommendations to improve traffic flow. Has performed safety studies at both the intersection and corridor levels. As part of these analyses has supervised extensive data collection efforts including volume counts, travel time studies, and delay studies.

Traffic Signal Design – Lead engineer and project manager for the ALDOT *Statewide Signal Design Contract* from 1994 to 2003. During that time he designed or supervised the design of over 200 traffic signals for the Alabama Department of Transportation. He has designed signals in eight of the nine ALDOT Divisions and through that work has developed an understanding of the design and operational issues common in the State. Author of the *Alabama Statewide Signal Design Guide and Timing Manual*, a 160+ page design manual establishing design standards for all ALDOT signal projects (to be available in mid-2006).

Transportation Research – Manager of a project to assess intercity bus service in the State of Alabama for the ALDOT Multi-Modal Bureau. Project included an evaluation of existing service and recommendations for future funding. Performed research on a number of US DOT sponsored studies of transportation safety and advanced technologies. Was co-author of an FHWA report on older driver perception-reaction times. Also participated in an FHWA study of guardrail performance in accidents. Was one of the investigators on a joint FHWA/FTA study on multimodal applications of ITS technologies.

Public Outreach – Has taught several one-day courses covering the basics of traffic signal design. Attendees have included State and municipal employees. Has experience in all aspects of project management, including public hearings and outreach.

Professional Registration

Professional Engineer, State of Alabama (#25133)

Memberships

Institute of Transportation Engineers (ITE)
National Society of Professional Engineers
International Municipal Signal Association (IMSA)

Principal Publications

Sullivan, A.J. and Jones, S.L., *Traffic Signal Design Guide and Timing Manual*, prepared for the Alabama Department of Transportation, April 2005.

Hitchcock, W., Sullivan, A., and Watson, S., *Transportation CIP for the State of Alabama*, University Transportation Center for Alabama, 2007.

Lerner, Huey, McGee, and Sullivan, *Older Driver Perception Reaction Time for Intersection Sight Distance and Object Detection*, Federal Highway Administration, 1992.

Sisiopiku, V.P., Jones, S.L., Sullivan, A.J., and Patharkar, S., *Traffic Simulation for Emergency Preparedness*, University Transportation Center for Alabama Report, February 2004.

Sisiopiku, V.P., Sullivan, A.J., et al., *Applications of Ramp Metering in Alabama*, University Transportation Center for Alabama Report, February 2005.

Sullivan, A.J., *Alabama Intercity Bus Study*, prepared for the Alabama Department of Transportation, 1995.