

Education

Ph.D. in Civil Engineering
NC State, 2001
M.S. in Civil Engineering
NC State, 1996
B.S. in Civil Engineering
Tennessee Tech, 1993
B.S. in Mathematics
Tennessee Tech, 1993

Registration

Professional Engineer
North Carolina, 2002
Tennessee, 2006

Memberships

TRB – The Transportation
Research Board
TSSC – TRB's Traffic Signal
Systems Committee
ITE – The Institute of
Transportation Engineers
ASEE – The American Society
for Engineering Education

Dr. Click's background spans both the public and private sector and includes experience as an educator, a researcher, and a practicing engineer.

As an educator, Dr. Click has developed and taught both university courses and public and private sector training events. His university experience includes senior and graduate level courses in transportation engineering including highway design, traffic operations, and traffic signal and signal system design and operations. His preferred classroom style is highly interactive, with frequent student participation through both small group activities and in-class problem solving. He also works diligently to develop and incorporate technology into the learning experience, as he seeks both to improve the learning environment during class and to extend learning opportunities outside class.

As a researcher, Dr. Click has publications and presentations in both his technical field and in engineering education. He prefers applied research topics whose results can be quickly implemented by operating agencies. Recent technical research topics include a field investigation of traffic signal based interchange treatments, an evaluation of non-traditional interchange design options, real-time performance measures for arterial streets, and advanced traffic signal operations. Recent education research topics include the use of Tablet PCs in the classroom, student perception of classroom response systems, and the use of computer-based homework in upper-level engineering courses.

As a practicing engineer, Dr. Click has significant experience both from the public sector and as a part-time consultant. His areas of expertise include traffic signal and signal system design and operations, non-traditional design options for reducing congestion, traffic signal controller and master controller, and central system operations, and the development of training courses in these areas. He also specializes in developing short and long term operational strategies for highly complex saturated corridors.

Externally Funded Research Projects

"Field Evaluation of Traffic Signal Based Interchange Treatments"

Sponsored by the Tennessee Department of Transportation. 2010-2012.

"Application of Non-Traditional Interchange Treatments to Improve Interchange Quality of Service and Preserve the Service Life of Narrow Over- and Underpass Roadways"

Sponsored by the Tennessee Department of Transportation. 2007-2009.

"Improved Traffic Signal Efficiency in Rural Areas Through the Use of Variable Maximum Green Time"

Sponsored by the Mack Blackwell Rural Transportation Agency. 2006-2007.

Example Technical Publications

"Applicability of Bluetooth Data Collection Methods for Collecting Traffic Operations Data on Rural Freeways"

Transportation Research Record: The Journal of the Transportation Research Board, under review.

"Evaluation of Traditional and Non-Traditional Interchange Treatments to Preserve the Service Life of Narrow Over- and Underpass Roadways"

Transportation Research Record: The Journal of the Transportation Research Board No 2171, 2010.

"Using Dynamic Maximum Greens to Reduce Traffic Signal Timing Maintenance Needs"

ITE Journal. April 2010.

"Evaluation of Variable Maximum Green Time to Improve Rural Traffic Signal Operations"

Transportation Research Record: The Journal of the Transportation Research Board. No. 2080, 2008.

"Application of the ITE Change and Clearance Interval Formulas in North Carolina"

ITE Journal. January 2008.

Example Technical Presentations

- “Real Time Traffic Signal Delay Estimation using State-of-the-Practice Detection Technology: A Simulation Proof-of-Concept” (with E. Boden) Proceedings of the 89th Annual Meeting of the Transportation Research Board, 2010.
- “New Interchange Design: FRE Interchange Releasing Control and Enhancing Performance” (with C. Berry) Proceedings of the 89th Annual Meeting of the Transportation Research Board, 2010.
- “Retiming of NC 54 at I-40 and Farrington Rd in Durham, NC: A Case Study in Managing Oversaturated Conditions” Sunday Workshops of the 86th Annual Meeting of the Transportation Research Board, 2007.

Example Education Publications and Presentations

- “Pen-Enabled PCs for Engineering Courses: An Introductory Demonstration”
The 2011 ASEE Southeastern Section Annual Conference, April 2011.
- “The (Disappointingly Commonplace) Traffic Signal Content in TTU’s CEE Undergraduate Program”
The Summer Meeting of the Transportation Research Board’s Traffic Signal System Committee, July 2010.
- “Classroom Polling Systems in Upper Level Transportation Engineering Classes: A Pilot Study”
Proceedings of the 2009 ASEE Southeastern Section Annual Conference, April 2009.
- “Using E-Homework to Provide Disaggregate Problem Solving Assessment in a Senior-Level Traffic Engineering Course”
Proceedings of the 2008 ASEE Southeastern Section Annual Conference, April 2008.

Example Education Grants and Awards

- Tablet PC Initiative Recipient, Fall 2007
- Hands-on Learning Gift for a Wireless Classroom Projector, Fall 2007
- Exemplary Course Award at Tennessee Tech University for CEE 4640/5640 Highway Engineering, Spring 2007
- SACS QEP Teaching-Learning Enhancement Grant for Real World Problem Solving, Spring 2006

Example University Courses Taught

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|---------------------------------------|--|
| CEE 3610 – Transportation Engineering | CEE 6410 – Advanced Traffic Control |
| CEE 4630/5630 – Traffic Engineering | CEE 7980 – Traffic Flow Theory |
| CEE 4640/5640 – Highway Engineering | CEE 7980 – Transportation Research Seminar |

Example Consulting Projects

- 2011 – Coordination Timing for Improved Operations on the US-15-501 Corridor in Chapel Hill, NC
- 2010 – Specifications and Evaluation Methodology for Citywide Traffic Signal Hardware and Software for Charlotte, NC
- 2008 – Synchro + SimTraffic 7 Intermediate Level Training – Short Course Development
- 2007 – Evaluation of Current, Near Term, and Future Operations on NC 62 at and near I-40 / I-85 in Burlington, NC

Public Sector Engineering Experience

- Signals and Geometrics Section, North Carolina Department of Transportation
 - Senior Systems Engineer (Transportation Engineer III), 2001-2005
 - Project Engineer (Transportation Engineer II), 2000-2001
 - Design Engineer (Transportation Engineer I), 1999-2000
 - Design Technician (Temporary Transportation Technician IV), 1998-1999

Example Public Sector Projects

- US 17 Corridor Study Working Group, from Wilmington, NC to the South Carolina state line
 - Reviewed consultant recommendations, developed a new corridor-wide design philosophy for future operations
- Durham City Signal System Project, Durham, NC
 - Included the development of city-wide signal system timing plans, training courses, and review of contractor work
- US 15-501 at Erwin and Europa, Chapel Hill, NC
 - Included evaluation of non-traditional designs and development of public meeting presentation materials
- NCSITE Statewide Task Force on Yellow & Red Clearance Times
 - Assistant to the chair, presented practice history, helped with consensus building for new method of practice