

William Schultheiss, P.E.

Principal Engineer



Bill Schultheiss has a broad civil engineering background relating to many facets of engineering planning, design, and construction administration. Bill serves as lead technical engineer or principal-in-charge for all of Toole Design Group's (TDG) Complete Streets and sustainable safety projects. He has personally overseen and designed the retrofit of over 250 miles of urban streets to improve their multimodal capacity and safety in support of community livability, economic, safety, and mobility goals. Retrofits have incorporated road diets, lane narrowing, bike lanes, cycle tracks, medians, improved sidewalks, turn lanes, transit stop improvements, and various traffic calming treatments. Bill regularly negotiates the interpretation of guidelines and research with public agency professionals for retrofit projects to build support for Complete Streets treatments. Bill frequently leads public meetings, stakeholder workshops, and charrettes to educate and build support for his client's planning and design efforts.

Selected Project Experience

- **Capital City Bikeway and Jackson Street Reconstruction, Saint Paul, MN**
As Principal-in-Charge, Bill oversaw the redesign of Jackson Street and the development of the separated bike lanes that comprise the Capital City Bikeway. Project responsibilities included providing technical assistance to resolve project challenges, such as protected intersection design, ADA design, conflict management, and conformance to federal and state guidelines. Bill led design review meetings with City Staff to build support for design treatments. Bill also provided peer review at each deliverable stage of the project. The project is currently under construction.
- **North Lynn Street Esplanade, Arlington, VA**
As Senior Engineer, Bill established a conceptual design to improve pedestrian and bicyclist safety along North Lynn Street at intersections with limited access roadway ramps. The design modified curb lines, widened sidewalks, adjusted traffic operations at intersections, and improved sight lines and signage to increase pedestrian safety at two key intersections with a history of crashes. Throughout the development of construction documents, Bill provided final design oversight and at key points supported the development of successful design exception requests to the Virginia State Department of Transportation.
- **2017 AASHTO Guide for the Development of Bicycle Facilities, Washington, DC**
Under contract with the National Cooperative Highway Research Program (NCHRP), Bill is serving as the Principal Investigator for the 2017 edition of the Guide. He is responsible for coordination with the panel and stakeholders, team management, content development, and quality control. The project includes extensive literature review and best practice research. Anticipated updates to the Guide will include guidance for choosing bicycle facilities to accommodate all ages and abilities, guidance for working in constrained corridors, separated bike lane design, bicycle signal operation, bicycle boulevards, intersection operations, and bicycle share station placement, as well as an overhaul of the guide's organization and graphics. The project will be completed in 2018.

Professional Highlights

- Toole Design Group: 2003-Present
- Earth Tech, Inc: 1999-2002
- SEA Consultants: 1998-1999
- Anderson Nichols & Co. Inc.: 1996-98

Education/Certification

- Bachelor of Science, Civil Engineering, Northeastern University: 1998
- Professional Engineer: AZ, CO, DC, FL, GA, IL, KY, MA, MD, MN, MO, NC, OH, SC, TN, TX, VA, WA, WI

Instructor

- AASHTO Bicycle and Pedestrian Guide Training
- NACTO Urban Street and Bikeway Guide Certified Instructor
- National Center for Safe Routes to School Certified Instructor
- Complete Streets
- History of North American Roadway Design Practices
- Sustainable Safety/Vision Zero
- Traffic Calming

Appointments/Affiliations

- National Committee on Uniform Traffic Control Devices-Bicycle Subcommittee and Pedestrian Taskforce
- Institute of Traffic Engineers
- Association of Pedestrian and Bicycle Professionals

Other Transportation Projects

- **MassDOT Separated Bike Lane Design Guide**, Boston, MA
Bill served as a technical author for the 2015 *Separated Bike Lane Planning and Design Guide*. Bill performed a comprehensive review of guidance, research, and best practices from international and North American resources to identify strategies for retrofitting existing streets to include separated bike lanes. Bill developed language and graphics to support planning, geometric, operations, maintenance, and safety content in the guide for street level, sidewalk level, and intermediate level separated bike lanes. Design criteria was proposed for separation strategies, sight line requirements, driveway crossings, pedestrian crossings, ramp design, intersection design, drainage, surface materials, and signal phasing approaches.
- **Maryland Avenue Corridor Design**, Washington, DC
As Project Manager, and lead design engineer, Bill has developed conceptual design alternatives to improve multimodal safety of the roadway. The alternatives provided options for multi-leg intersection geometric improvements, green street drainage improvements, and a potential road diet. The preferred design selected was the road diet option which adds left turn lanes, reconfigures intersections, relocates bus stops, and adds bicycle lanes. The project is in now in final design by another consultant.
- **On-Call Bikeway Design**, Boston, MA
Bill serves as senior engineer for the development of conceptual and final designs for over 100 miles of bike lanes in addition to 19 cycle tracks including Boylston Street, Malcolm X Boulevard, Summer Street, and the perimeter roadways of the Public Gardens. Bill assists with the development of concept drawings, design memorandums, and meetings with the agency staff and the public. He provides Quality Assurance/Quality Control (QA/QC) review of all construction drawings. The designs required assessments of left and right side placement, one-way versus two-way operation, political feasibility, parking, driveway and intersection conflicts, transit and pedestrian interactions, and analysis of bicyclist safety.
- **Complete Streets Guide**, Boston, MA
Bill was responsible for developing the City of Boston's new minimum lane width policy based upon current research and best practices. Bill led discussions with City Staff and oversaw the development of key aspects of the guide including Accessible Pedestrian Signal guidance, signal timing considerations, curb ramp design, and bicycle facility design.
- **Westlake Cycle Track**, Seattle, WA
Bill served as technical advisor for the design and evaluation of protected bike lane alternatives along the Westlake Corridor in South Lake Union. He was the technical resource for the design team overseeing development of design criteria, alignment concepts, multimodal safety assessment, and intersection design. Bill played a leading role explaining the project at public meetings and key agency review meetings leading presentations and answering questions.

Other Representative Projects

Specific Projects (2011-2016)

- Seattle Vision Zero, Seattle, WA
 - Boston Vision Zero, Boston, WA
 - Denver Vision Zero, Denver, WA
 - C Street Corridor Study, Washington, DC
 - Protected Bike Lane Training, Portland OR
 - 14th Street Protected Bike Lane Design, Denver, CO
 - Governor's Island Shared Use Path Safety Assessment, New York City, NY
 - Brighton Boulevard Conceptual Design, Denver, CO
 - Achieving Multimodal Networks, Applying Design Flexibility & Reducing Conflicts Report, FHWA
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