

Traffic Noise Modeling with FHWA TNM[®] 2.5 Training Course, October 30-November 3, 2017

Why attend this course?

We will teach you the correct way to model traffic noise in the context of doing a noise study. Some state highway agencies require traffic noise training for prequalification, and we are the only entity offering that training.

We have trained over 1,100 professionals in traffic noise fundamentals and the use of TNM since the program's initial release in 1998. Participants have come from over 50 State, Federal, local and Canadian transportation agencies, and numerous consulting firms. Simply put, we enjoy teaching and sharing what we know!

- ✓ **A computer for every participant!**
- ✓ **Extra one-on-one assistance available at all times!**
- ✓ **Hands-on work with real-world problems!**
- ✓ **Very comprehensive course workbook!**

We will use the prediction model currently required by the FHWA: FHWA Traffic Noise Model[®] Version 2.5. We will also introduce you to some of the features of TNM 3.0. The FHWA released a "draft" version of TNM 3.0 in March 2017, for a 6-month comment period for users to test it and become familiar with the new features. After that period, the FHWA will make any needed changes to the program before releasing it as a "final" version. It is anticipated that there will then be transition time during which its use on Federal-aid highway projects will be optional at the discretion of the state DOTs before a likely rule change occurs that would require its use.

Who should attend?

This course is for professionals who will be using TNM on project studies or who need to supervise or review TNM modeling done by others. Many of our attendees have little or no experience in traffic noise modeling. For them, we highly recommend our optional one-day **Fundamentals** front-end session.

Our instructors:

Our course is taught by Dr. William Bowlby, P.E., Dr. Darlene Reiter, P.E., and Mr. Geoffrey Pratt, P.E. We have over 80 years of combined experience in traffic noise work. Dr. Bowlby was part of the original TNM development team and led the development of the *TNM Trainer* tool for USDOT. He and Mr. Pratt were key researchers for NCHRP Report 791, *Supplemental Guidance on the Application of FHWA's TNM*. He also led FHWA studies on *Sensitivity Test Case Results Comparing FHWA TNM 2.5 and TNM 3.0* and a *Consistency Test Suite for TNM 3.0*. Dr. Reiter has used TNM on hundreds of highway projects – many being very complex. She and Dr. Bowlby were key researchers on recent FHWA policy studies, *23 CFR 772 Streamlining, Analysis and Outreach Phases I and II*. Mr. Pratt is also an experienced user of TNM, MicroStation[®] and ArcGIS[®].

"Best noise course I have ever taken. Extremely knowledgeable instructors. Very useful discussions. Nice classroom rapport. Well done, Bowlby & Associates." -- Erich Thalheimer, Parsons Brinckerhoff

"I didn't think this course could be as great as it was but I was very impressed by the presentation of the material" -- Rachel Saunders, CH2M Hill

"The TNM 2.5 course's comprehensive approach to noise modeling and policy is sure to be applied in my career and state DOT moving forward. Great Job! Thank you!" -- Paul Moch, North Dakota DOT

"This course opened up so many new doors for me in my career. I really value all of the effort and detail. Lots of visual learning, which is how I learn best. Highly recommend!" -- Amber Taylor, TranSystems

Course Content

Optional Traffic Noise Fundamentals Session: Monday, 8 a.m. to 5 p.m. (7.5 PDH units)

- **Concepts of Sound and Traffic Noise**, with the Interactive Sound Experience (ISE) demonstrations
- **FHWA Noise Regulation, Policy & Procedures**, including a detailed exploration of 23 CFR 772
- **Conducting & Reporting a Traffic Noise Study**

TNM 2.5: Tuesday - Thursday, 8 a.m. to 5 p.m.; Friday 8 a.m. to approx. 4 p.m. (29 PDH units)

- **Introduction to TNM:** Concepts; emission levels; propagation and attenuation algorithms
- PowerPoint Presentations on **Site Modeling Prior to Using TNM, Noise Barrier Design Considerations** and **NCHRP Report 791 (Supplemental Guidance on the Application of TNM)**
- **Input Data Objects and Concepts:** Roadways (free flow, on structure and interrupted flow); receivers; barriers; building rows; terrain lines; ground zones; tree zones
- **Noise Barrier Concepts:** Barriers on structure; earth berms; line of sight check; interactive barrier design process; sound reflection and absorption; parallel barrier analysis
- **Data Input and Editing:** Input dialog boxes; graphical editing; “heads-up” digitizing; creating TNM runs from CAD and GIS, including importing DXF files
- **Data Display and Output:** Plan, profile, skew-section and perspective views; input and results tables; sound level contours; printing and plotting
- **Workshops** on simple, intermediate and complex problems, including real-world site modeling exercises

Registration

Location and lodging: The course location is the Williamson County Association of Realtors training center, 1646 Westgate Circle, Brentwood, TN 37027. See the next page for nearby hotels.

Cost: Four-day (TNM only) course is \$1,900. One-day Fundamentals option: add \$300 (\$2,200) total for full five-days of Fundamentals and TNM). TO HOLD A SLOT in the course, a registration form with purchase order or check for the full amount **must** be received. A registration form alone will NOT hold your position in the course.

Privacy Policy: We respect your privacy. Any information collected by Bowlby & Associates, Inc., is for our internal use only. We do not share or sell information. We do hand out a roster with contact information to attendees only.	
Please fill out below, print to PDF – or print a hardcopy and scan to PDF, then email the completed form to rrock@bowlbyassociates.com. To complete your registration, also mail a check or purchase order to: Bowlby & Associates, Inc., 504 Autumn Springs Court, # 11, Franklin, Tennessee 37067-8278	
Check one:	4-day (Tues.-Fri., Oct 31-Nov 3, 2017), TNM only (\$1,900) 5-day (Mon.-Fri., Oct 30-Nov 3, 2017), TNM + Fundamentals (\$2,200) 1-day (Mon., Oct 30, 2017), Fundamentals only (\$400)
Check # _____	is enclosed. Purchase order # _____ is enclosed.

Please fill in:	Course Attendee
Attendee’s Full Name	
Attendee’s Nickname	
Attendee’s Organization	
Organization Street Address	
Organization City, State, Zip	
Organization phone	
Attendee’s cell phone	
Attendee’s e-mail	

Contact Ruth Rock for information: rrock@bowlbyassociates.com.

Logistics

COURSE POLICIES

Registration Policy - You will be registered in the course when we have received your registration form and payment in form of a check. If a check cannot be sent with the registration form, a purchase order may accompany the registration form.

Cancellation Policy - You may cancel at any time prior to 14 calendar days of the course start date. Cancellation must be in writing. There will be a \$100 administrative fee. Cancellation between 1-14 calendar days of the course start date will only be refunded (minus a \$100 administrative fee) if we are able to fill your slot.

COURSE LOCATION - Williamson County Association of Realtors (WCAR) -- 1646 Westgate Circle, Suite 104, Brentwood, TN 37027.

LODGING - Nearby **hotels** with address, phone and distance to WCAR:

Holiday Inn Franklin - Cool Springs	1738 Carothers Pkwy.	Brentwood, TN 37027	(615) 277-8700	0.7 mile
Hilton Garden Inn	9150 Carothers Pkwy.	Franklin, TN 37067	(615) 656-2700	0.8 mile
Holiday Inn Express	8097 Moores Lane	Brentwood, TN 37027	(615) 309-8860	1.0 mile
Hyatt Place	650 Bakers Bridge Ave.	Franklin, TN 37067	(615) 771-8900	1.2 miles
Courtyard by Marriott	2001 Meridian Blvd.	Franklin, TN 37067	(615) 778-0080	1.7 miles

GROUND TRANSPORTATION - Most attendees prefer to have a rental car. We also suggest **Cool Springs Limo**, 615-456-4979 for **transportation** to and from airport. <http://www.coolspringslimo.com>.

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