Memorandum

U.S. Department of Transportation
Federal Highway Administration

Date: April 14, 2004

Reply to: HEPN-20

Subject: INFORMATION: Highway Traffic Noise - Release and Phase-In of the FHWA Traffic Noise Model Version 2.5

From: James M. Shrouds
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To: Division Administrators
Federal Lands Highway Division Engineers

The FHWA Traffic Noise Model (FHWA TNM) Version 1.0 was initially released in March of 1998. Since then, there have been five additional releases - v1.0a, v1.0b, v1.1, v2.0, and v2.1. These releases have contained fixes to software bugs and Graphical User Interface (GUI) enhancements - there have been no changes to the acoustical algorithms in the model. Phase 1 validation of FHWA TNM indicated a general over-prediction in vehicle emission levels, and the final phase-in date for required use of the model was extended until 6 months from the date of the release of an FHWA TNM version that effectively addressed the over-prediction.

This memorandum announces the release of FHWA TNM Version 2.5, which essentially eliminates the vehicle emission level over-prediction and corrects a case-specific anomaly that is related to diffraction points. Version 2.5 also contains one GUI enhancement: a pop-up warning box is generated if a TNM user enters a non-zero top-width for berms, which is also now prohibited (this enforces the recommendation that users should model berms only as wedges, not as flattop berms, with the barrier/berm function). The FHWA TNM software will be distributed at no charge to all registered FHWA TNM Version 2.1 users [NOTE: As a result of the acoustical changes to the FHWA TNM, a comprehensive update to the Phase 1 validation report will be forthcoming, as will revised FHWA Traffic Noise Model Look-Up Tables (and TNMLook)]. Included with the release of FHWA TNM Version 2.5 are updates on its recommended use and an overview of the comprehensive update to the Phase 1 validation report, which is currently being prepared.

The FHWA TNM, version 2.5 (or the latest version), will be required for use in all new traffic noise analyses for Federal-aid highway projects that begin six months or later from the date of this memorandum. We strongly encourage those analyses, begun for current projects utilizing either the FHWA Highway Traffic Noise Prediction Model (described in Report No. FHWA-RD-77-108) or the FHWA TNM, continue to use the same model throughout the life of the project, i.e., planning, environmental analysis and preliminary design, and final design. For projects using the FHWA TNM, each State DOT and respective FHWA division office should determine the appropriate version for use on a project-by-project basis.
Questions and comments on the *FHWA TNM* should be directed to Bob Armstrong (Robert.E.Armstrong@fhwa.dot.gov) at (202) 366-2073 or Chris Corbisier (Chris.Corbisier@fhwa.dot.gov) at (202) 366-1473 or Mark Ferroni (Mark.Ferroni@fhwa.dot.gov) at (202) 366-3233, respectively.

cc: Directors of Field Services