III. General Noise Analysis Requirements

Noise analyses must be prepared by ODOT pre-qualified noise analysts per the ODOT Consultant Prequalification Requirements and Procedures (Revised April 21, 2006). This requirement applies to consultants and to ODOT staff.

► see Appendix_A: Flowchart for When a Noise Analysis is Needed

A noise analysis is required for any project that meets the description of a Type I project in 23 CFR 772.5. A Type I project is a proposed Federal or Federal-aid highway project for the (1) Construction of a highway on new location; or, (2) The physical alteration of an existing highway where there is either: (i) Substantial Horizontal Alteration. A project that halves the distance between the traffic noise source and the closest receptor between the existing condition to the future build condition; or, (ii) Substantial Vertical Alteration. A project that removes shielding therefore exposing the line-of-sight between the receptor and the traffic noise source. This is done by either altering the vertical alignment of the highway or by altering the topography between the highway traffic noise source and the receptor; or, (3) The addition of a through-traffic lane(s). This includes the addition of a through-traffic lane that functions as a HOV lane, High-Occupancy Toll (HOT) lane, bus lane, or truck climbing lane; or, (4) The addition of an auxiliary lane, except for when the auxiliary lane is a turn lane; or, (5) The addition or relocation of interchange lanes or ramps added to a quadrant to complete an existing partial interchange; or, (6) Restriping existing pavement for the purpose of adding a through-traffic lane or an auxiliary lane; or, (7) The addition of a new or substantial alteration of a weigh station, rest stop, ride-share lot or toll plaza. (8) If a project is determined to be a Type I project per § 772.5 then the entire project area as defined in the environmental document is a Type I project.

In a case where a project involves constructing a bridge at a location where it was removed and left un-replaced for a long period of time, a noise analysis is not likely to be required and this type of project would be considered a Type III project where no noise analysis would be required. However, this type of project will be handled on a case by case basis. A request for a noise determination for this type of project must be coordinated with OES.

The noise analysis must include a narrative discussion of environmental noise conditions within the study area. The narrative must identify and describe all noise sensitive land uses in the study area. If highway noise impacts are identified at the study area limit, the study area should be expanded. The report must include a comparison of the predicted noise levels at locations in the study area for the existing and design year Build alternatives. The report will include a discussion of basic noise principles and noise measurement techniques and will conform to the requirements for noise analysis reports provided in the latest.
revision of the FHWA Highway Traffic Noise Analysis and Abatement Guidance, Appendix B. To minimize future traffic noise impacts on currently undeveloped lands of Type I projects, local officials within whose jurisdiction the highway project is located shall be informed of the best estimation of the future design year noise levels at various distances from the edge of the nearest travel lane of the highway improvement where the future noise levels meet ODOT’s definition of “approach” for undeveloped lands. At a minimum, identify the distance to the exterior noise abatement criteria in Table 1.

Type II projects provide abatement for receptors that were in existence prior to the construction of the original highway. A noise analysis is required for any Type II project. Traffic used for a Type II noise analysis project shall be determined from current year conditions.

Other projects that are not classified as Type I or Type II projects are known as Type III projects and do not require noise analysis under 23CFR772. However, they may result in noise impacts under NEPA. Examples may include projects that cause a major change in the vehicle mix, i.e. truck percentage. For further guidance on NEPA analysis of Type III projects, contact OES.

Rail projects may require a noise analysis. Examples of rail projects that may require a noise analysis are a new rail line, rail spur realignment, and rehabilitation and reactivation of an abandoned rail line. Contact OES to discuss the noise scope requirements before moving forward. Rail projects using Federal-aid highway funds or if it requires FHWA approval, will require a noise analysis.