

Air & Noise

Noise – Document Preparation

Noise Screening Assessment
Noise Impact Assessment
Noise Addendums
Additional Documentation
NEPA Documentation of Noise Assessments

NOISE SCREENING ASSESSMENT

For federal-aid highway projects fitting the Type III project classification, a Noise Screening Assessment will be prepared. The assessment demonstrates that the project meets the definition of the of a Type III project established in 23 Code of Federal Regulations (CFR) 772, and therefore the project does not require a noise study or abatement of highway noise impacts.

The assessment will contain the following sections:

- > Introduction (describing Federal Highway Administration [FHWA] guidelines),
- > Purpose (describing the reason for the assessment),
- > Project description,
- > Type III project determination, and
- > Conclusion.

NOISE IMPACT ASSESSMENT

For federal-aid highway projects fitting the Type I project classification, a Noise Impact Assessment will be prepared. The assessment documents the results of the noise analysis. It provides a baseline of noise levels used to determine project impacts, predicts the effects of the proposed project on the noise environment, and identifies impact locations where noise abatement is feasible and reasonable and likely to be included in the project. It also identifies impact locations where abatement is not feasible and reasonable.

The assessment is meant to be understood by the public and will be prepared in a “reader-friendly” style. For the purposes of this assessment, the style involves framing section

headings as questions where possible (e.g. “What is the Existing Noise Environment?”). It also involves the frequent use of tables, graphs, and figures.

The assessment will contain the following sections:

- > Executive summary,
- > Table of comments,
- > Introduction:
 - The proposed project,
 - FHWA guidelines for Type I projects, and
 - The project’s classification,
- > Existing noise environment:
 - A background of noise definitions,
 - A methodology for noise prediction,
 - The definition of noise impacts,
 - The assignment of activity categories to receptors,
 - A discussion of field measurements, and
 - Project modeling,
- > Noise model results:
 - A table listing receptors approaching/exceeding the Noise Abatement Criteria by activity category,
 - Projected sound levels for undeveloped land without a permit.
- > Noise abatement consideration:
 - Acquisition of right-of-way/land use and zoning,
 - Traffic management,
 - Alignment alterations,
 - Structural barriers,
- > Construction Noise,
- > Conclusions, and

- > Likelihood of Barrier Construction (if barriers are proposed).

If noise abatement through structural barriers are considered, the assessment will discuss the optimum barrier location (referencing the benefitted receptors and the approximate distance from nearby cross-streets), height, top and bottom elevations, length, finalized abatement costs (both total cost estimate and a breakdown of impacted and benefitted receptors), and the decibel reduction anticipated for each barrier. This information will support the determination of whether each barrier considered is reasonable and feasible. A noise barrier location map, preferably on aerial photography, will also be included. The noise barrier location map will allow the reader to see and understand the position of each barrier considered from the beginning to the end of the project.

The assessment's appendices will include the following attachments:

- > Noise results summary table (optional, if not provided in text),
- > Figures (any map not included in body of report),
- > Traffic volume diagrams or traffic analysis and approval documentation,
- > Field notes and validation input and output Traffic Noise Model (TNM) runs,
- > TNM files – Receiver Input,
- > TNM files – Roadways,
- > TNM files – Ground Zones and/or Terrain Inputs (if applicable),
- > TNM files – Traffic,
- > TNM files – Sound Level Result,
- > TNM files – Vacant/Undeveloped Land Sound Levels,
- > TNM files – Barrier Analysis (if applicable),
- > Information for local officials for vacant land use development, and
- > Summary text for NEPA documentation.

NOISE ADDENDUMS

An addendum of the noise analysis may be required in certain circumstances. These include changes to policy, state or federal regulations or laws, design, traffic volumes, and planning horizons. Also, an addendum may be required if time has passed that results in changes to the noise results and/or noise impacts described in previous assessments. Prior to completing an addendum, consultation between GDOT and the lead federal agency may be needed to clarify what information should be evaluated and how the information should be presented. The addendum will be discussed and documented in the NEPA document or

the Reevaluation of the NEPA document. Generally, addendums follow the Noise Impact Assessment format.

ADDITIONAL DOCUMENTATION

Additional documentation, through memorandums to agencies or memorandums to the project file may be needed. Generally, these may be needed to document minor changes to the project or other conditions that do not require a full addendum to reassess noise impacts.

NEPA DOCUMENTATION OF NOISE ASSESSMENTS

If the project is a Type III project validated through a Noise Screening Assessment, then the project's effects evaluation for noise is "none".

If the Noise Impact Assessment concludes with the determination that one or more noise receptors would be impacted by the proposed project, then the project has "involvement" with noise. Whether there is involvement or no involvement, the NEPA document should summarize the results of the Noise Impact Assessment. Summarizing these results should include the following:

- > A range of the existing (or base) noise levels for the receptors;
- > A range of the noise levels for receptors in the design year for both the build and the no-build conditions for the project;
- > If applicable, a table that lists noise receptors impacted by the project in the design year; and
- > A figure depicting the impacted receptors and proposed barrier location(s) should also be included, if applicable.

The table of impacted receptors should identify the receiver number, the number of receptors per receiver, the existing decibel level, and the decibel level in the design year for both the build and no-build conditions. Further, this section should describe whether noise abatement measures were recommended for the impacted receptors. If noise abatement is not determined to be reasonable and feasible, a brief discussion as to why should be included. If noise abatement is determined to be reasonable and feasible, a summary of public involvement regarding noise abatement measures—whether the public involvement is planned for the future or is already complete—should be included.

Additionally, the effects evaluation should include a discussion of how the project will affect noise during construction. This summary should include standard language regarding GDOT's Standard Specification Section 107.01 – Laws to Be Observed, which states in part, "The Contractor shall at all times observe and comply with all such laws, ordinances, codes, regulations, orders, and decrees..." unless the necessary variance is obtained. If

additional measures regarding construction noise are recommended, they should be summarized as well.

This section of the effects evaluation should also refer the reader to the appropriate attachment or appendix for report coordination, correspondence, or public involvement related to the Noise Impact Assessment.

Guidebook Revision History

| Revision Description | Relevant Sections | Revision Date |
|----------------------|-------------------|---------------|
| Initial Publication | All | 5/22/2019 |
| Revision Table Added | Last Page | 9/17/2020 |