

VIRGINIA DEPARTMENT OF TRANSPORTATION

NOISE REPORT GUIDANCE AND ACCOUNTABILITY CHECKLIST

VERSION 2.0

This checklist is not an inclusive document that accounts for all projects. However this guidance checklist outlines the most common items that will be reviewed during VDOT's review process. This checklist follows guidance set forth in VDOT's Highway Traffic Noise Manual.

Checked Items are Required		Preliminary	Final Design	UPC: <input style="width: 100%;" type="text"/> Completed By: <input style="width: 100%;" type="text"/> Date: <input style="width: 100%;" type="text"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> N/A <input type="checkbox"/> D	This Item has been verified by the document writer This item is "Not/Applicable" to this project This Item is Project Dependent
----------------------------	--	-------------	--------------	--	---	---

1.0 TITLE PAGE

- 1.1 ✓ ✓ - Report is Appropriately Named, with Correct Project Limits, Project Number(s), UPC(s) (Universal Project Code), and Submission Date
- 1.2 ✓ ✓ - Person Performing the Noise Analysis is Prequalified in the State of Virginia

2.0 TABLE OF CONTENTS (TOC)

- 2.1 ✓ ✓ - Items listed in TOC are Accurately Numbered, Including the Report Sections, Tables, Figures, Graphics, and Appendices

3.0 EXECUTIVE SUMMARY

- 3.1 ✓ ✓ - Brief Project Description provided with Project Location Information
- 3.2 ✓ ✓ - Summary of the Number (and sound level ranges) of Impacts for Existing, No-Build (if applicable), and the Future Design Year
- 3.3 ✓ ✓ - Noise Abatement Summary and Barrier Analyses Summary - (If Future Design Year Impacts are Predicted)
- 3.4 ✓ - "Conversely . . ." Statement Added
- 3.5 ✓ ✓ - Construction Noise Summary
- 3.6 ✓ - Discussion of Further Noise Abatement Considerations during Final Design - eg. Rail noise, Aviation noise, Reflected Noise from Existing or Proposed Barriers / Retaining Walls, Commitments for further evaluation based on new design information, Alternatives to proposed noise barrier placement. . .

4.0 INTRODUCTION

- 4.1 ✓ ✓ - Discussion of the Project Description of the Proposed Project. Should include the Project Limits, Number of Proposed Lanes and/or Proposed Modification, Lane Widths etc . . .
- 4.2 ✓ ✓ - Discussion of the History of the Project, Background, Future Design Year, Specific Permanent Project Details, Including the Preferred Alternative and other Road Improvements.

Checked Items are Required	<input type="checkbox"/>	Preliminary	Final Design	UPC:	<input type="checkbox"/>	<table border="1"> <tr><td>X</td></tr> <tr><td>N/A</td></tr> <tr><td>D</td></tr> </table>	X	N/A	D	This Item has been verified by the document writer This item is "Not/Applicable" to this project This Item is Project Dependent
				X						
				N/A						
D										
Completed By:	<input type="checkbox"/>									
Date:	<input type="checkbox"/>									

4.3 ✓ ✓ - Project Location Figure (See VDOT's Noise Report Development and Guidance Document)

4.4 D D - Additional NEPA documentation (If Necessary - Documents to support an older ROD or Date of Public Knowledge)

5.0 METHODOLOGY

5.1 ✓ ✓ - FHWA and State Policy Discussion and Compliance Regulations

5.2 ✓ ✓ - Sound Level Metrics Defined

5.3 ✓ ✓ - NAC Defined

5.4 ✓ ✓ - Definiton of Noise Impact

5.5 ✓ ✓ - Analysis Proceedure Defined

5.6 ✓ ✓ - TNM Model Version Defined and Program Overview Description given

Source of Model Inputs Documented

5.7 ✓ ✓ - Discussion of the Source of Design Files / Typical Sections/ Profiles / Cross Sections, or Study Corridor Limits if Engineering is not Available

5.8 ✓ ✓ - Discussion of Traffic Volumes / Speeds / Truck %'s

5.9 ✓ ✓ - Document the Source of Survey Information

5.10 D D - Additional Data (Existng or Proposed Retaining Walls, Existing Noise Barriers or Berms, GIS Layers and/or Supplemental Elevation Data)

6.0 EXISTING NOISE ENVIRONMENT

6.1 NOISE MONITORING

6.1.1 ✓ ✓ - Noise Monitoring Methodology is Clearly Defined

6.1.2 ✓ ✓ - The Date(s) of Monitoring are Documented

6.1.3 ✓ ✓ - Type of Meter is Noted and Pertinent Calibration Information is Included

6.1.4 ✓ ✓ - Number of Sites (Short-term or Long-term) are Identified and Located on Figure

Checked Items are Required	<input type="checkbox"/>	Preliminary	Final Design	UPC:	<input type="checkbox"/>	<input checked="" type="checkbox"/> This Item has been verified by the document writer <input type="checkbox"/> This item is "Not/Applicable" to this project <input type="checkbox"/> This Item is Project Dependent
				Completed By:	<input type="checkbox"/>	
				Date:	<input type="checkbox"/>	

6.1.5 ✓ ✓ - Documentation of Noise Monitoring Data Sheets and other monitoring factors such sampling interval, weather . . .

6.1.6 ✓ ✓ - Table and Discussion of Ambient Noise Monitoring Results and Required Sample Text Regarding Monitoring

6.1.7 ✓ ✓ - Table and Discussion of Noise Validation Results

6.2 UNDEVELOPED LANDS AND PERMITTED DEVELOPMENTS

6.2.1 ✓ ✓ - "Undeveloped Lands and Permitted Developments" Sample Text Added

6.2.2 ✓ ✓ - Documentation of the Coordination Dates and Contact Information for the Undeveloped Lands and Permitted Developments Search

6.3 COMMON NOISE ENVIRONMENT (CNE) DETERMINATION

6.3.1 ✓ ✓ - Are all Noise Sensitive Receptors within at least 500 feet of the Proposed Edge of Pavement Considered for Evaluation?

6.3.2 ✓ ✓ - Discussion of Existing Land Uses for each CNE

6.3.3 ✓ ✓ - Are all non noise sensitive land uses addressed in the report (reasons why they are not noise sensitive)?

6.3.4 ✓ ✓ - CNE's Boundaries Located on Figure

6.4 WORST NOISE HOUR

6.4.1 ✓ ✓ - The Worst Noise Hour selected needs to be the same for ALL roadways. Review to ensure this is accurate.

6.4.2 ✓ ✓ - Discussion of the Selection of the Worst Noise Hour

6.4.3 ✓ ✓ - Was 24-Hour (Long Term Monitoring) Utilized to Determine the Worst Noise Hour

6.4.4 D D - State if Multiple Sets of TNM runs were Created / Modeled to Determine the Worst Noise Hour (or were there dual worst noise hours)

6.4.5 D D - Were other Factors Considered for the Selection of the Worst Noise Hour

6.5 RECEPTOR IDENTIFICATION AND NAC CATEGORIZATION

If NAC A's are present, is the Criteria met and the Items Listed Below are Discussed:

6.5.1 D D - Are these Lands on which Serenity and Quiet are of Extraordinary Significance

6.5.2 D D - Do these Lands Serve an Important Public Need

Checked Items are Required	<input type="checkbox"/>	Preliminary	Final Design	UPC:	<input type="text"/>	<table border="1"> <tr><td>X</td></tr> <tr><td>N/A</td></tr> <tr><td>D</td></tr> </table>	X	N/A	D	This Item has been verified by the document writer This item is "Not/Applicable" to this project This Item is Project Dependent
				X						
				N/A						
D										
Completed By:	<input type="text"/>									
Date:	<input type="text"/>									

6.5.3 D D - Is the Preservation of these Qualities Essential for the Area to Continue to Serve its Intended Purpose

6.5.4 D D - Is the FHWA Supporting Documentation Included

If NAC B's are present, is the Criteria met and the Items Listed Below are Discussed:

6.5.5 D D - Are the Number of Receptors Equal to or Representative to a Number of Dwelling Units

6.5.6 D D - Are there Multi-floor Residential Units and do they have Outdoor Use Areas

6.5.7 D D - Are Outdoor Use Areas (Balconies) Identified and Discussed

If NAC C's are present, is the Criteria met and the Items Listed Below are Discussed:

6.5.8 D D - Are the Outdoor Use Areas Documented for Each of the Identified Receptors

6.5.9 D D - Was the "Grid system" Used and Shown on Figures for Recreational Areas, Trails, Campgrounds, Cemeteries, etc. . .

If NAC D's are present, is the Criteria met and the Item Listed Below is Discussed:

6.5.10 D D - Discuss the Building Materials and Interior Reduction Factor for each Identified Receptor

If NAC E's are present, is the Criteria met and the Item Listed Below is Discussed:

6.5.11 D D - Are Outdoor Use Areas Identified and Discussed

6.5.12 D D - If "No", Text Should be Provided that the Land Use was Identified but not Evaluated due to the Lack of Outdoor Use

Historic Properties

6.5.13 D D - Discuss if any Section 106 (Historic) Properties were Identified

6.5.14 D D - Discuss if any Section 4(f) Properties were Identified

6.5.15 D D - If Section 4(f) Properties are Identified, Does it Constitute a "Constructive Use" Determination

6.6 MODELED EXISTING ENVIRONMENT

6.6.1 ✓ D - Are Existing and Future Design Years Stated

Checked Items are Required		Preliminary	Final Design	UPC:		<input checked="" type="checkbox"/>	This Item has been verified by the document writer
				Completed By:		N/A	This item is "Not/Applicable" to this project
				Date:		D	This Item is Project Dependent

- 6.6.2 D D - Are Existing Noise Barriers Present within the Proposed Project Area
- 6.6.3 D D - If Existing Noise Barriers are Present, Does the Project Involve In-Kind Barrier Replacement
- 6.6.4 ✓ ✓ - Discussion of the Overall Numbers of Existing Condition Impacts and Sound Level Ranges (all CNEs)
- 6.6.5 ✓ ✓ - Discussion of the Determination and Identification of Noise Impacts (by CNE under Existing Condition)
- 6.6.6 ✓ D - Existing Noise Environment discussion

7.0 FUTURE NOISE ENVIRONMENT

7.1 MODELED FUTURE ENVIRONMENT

- 7.1.1 ✓ ✓ - Is there Documentation why a No-Build Condition evaluation was/wasn't warranted?
- 7.1.2 D D - Discussion of the Overall Numbers of No-Build Condition Impacts and Sound Level Ranges (all CNEs)
- 7.1.3 D D - Discussion of the Determination and Identification of Noise Impacts (by CNE under No-Build Condition)
- 7.1.4 ✓ ✓ - Discussion of the Overall Numbers of Build Condition Impacts and Sound Level Ranges (all CNEs)
- 7.1.5 ✓ ✓ - Discussion of the Determination and Identification of Noise Impacts (by CNE under Build Condition)
- 7.1.6 ✓ D - Comparison of existing and future total noise levels for all identified receptors
- 7.1.7 ✓ ✓ - Future Noise Environment Discussion
- 7.1.8 ✓ ✓ - Table of Predicted Noise Levels (By CNE)

7.2 NOISE ABATEMENT DETERMINATION

- 7.2.1 ✓ ✓ - Alternative Abatement Measures Discussion
- 7.2.2 ✓ ✓ - Was VDOT's Single Receptor Methodology Utilized?

WARRANTED CRITERIA

- 7.2.3 ✓ ✓ - Is Warranted Criteria Defined?

Checked Items are Required		Preliminary	Final Design	UPC:		<input checked="" type="checkbox"/>	This Item has been verified by the document writer This item is "Not/Applicable" to this project This Item is Project Dependent
				Completed By:		N/A	
				Date:		D	

- 7.2.3.1 ✓ ✓ - NAC Impact Definition ("Approach or Exceed") Provided
- 7.2.3.2 ✓ ✓ - Substantial Increase Impact Definiton Provided
- 7.2.3.3 ✓ ✓ - Has the NAC for Each Evaluated Land Use Category been Defined

FEASIBILITY CRITERIA

- 7.2.4 ✓ ✓ - Is Feasibility Defined?
- 7.2.4.1 ✓ ✓ - Included definition regarding "Are at least 50% of the impacted receptors predicted to experience at least a 5dB(A) benefit?"
- 7.2.4.2 ✓ ✓ - Included definition regarding "Is the barrier able to be constructed?"

REASONABLENESS CRITERIA

- 7.2.5 ✓ ✓ - Is Reasonableness Defined?
- 7.2.5.1 ✓ ✓ - Included definition regarding "Noise Reduction Design Goals"
- 7.2.5.2 ✓ ✓ - Included definition regarding "Cost-effectiveness"
- 7.2.5.3 ✓ ✓ - Included definition regarding "The Viewpoints of the Benefited Receptors"

NOISE BARRIER EVALUATION

- 7.2.6 ✓ ✓ - Barrier Documentation should Include: Discussion of Total Number of Impacts, Benefitted Impacts, Additional Benefits, Total Benefits, Feasibility, Reasonability, Barrier Length, Range of Panel Heights, Barrier Location, Ground or Structure Mounted, Barrier Systems, etc. . .
- 7.2.7 ✓ ✓ - Reason for Barrier Placement, Barrier Termini, Barrier Location etc. . .
- 7.2.8 ✓ ✓ - All Evaluated Barrriers shown on Figures
- 7.2.9 ✓ - Barriers were Optimized to Maximize Benefits while Minimizing Cost (Diminishing Returns)
- 7.2.10 ✓ ✓ - Table was included that shows the Barrier name, Insertion Loss, Panel Height Range, Total Length, Total Surface Area, Total Benefits, Total sq.ft. / no. of benefits, Cost (for Planning Purposes Only)
- 7.2.11 ✓ ✓ - Table that shows the Sound Levels, Barrier Insertion Loss for each Receptor included in the Barrier Analysis

Checked Items are Required	<input type="checkbox"/>	Preliminary	Final Design	UPC:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	This Item has been verified by the document writer
				Completed By:	<input type="checkbox"/>	N/A	This item is "Not/Applicable" to this project
				Date:	<input type="checkbox"/>	D	This Item is Project Dependent

7.2.12 D ✓ - Table that shows the Approximate Stationing, Northing, Easting, Bottom and Top of barrier, Panel Heights by Segment

7.2.13 D D - Does the Barrier (System) Work Independently or is it Dependent on Another Barrier (Existing or Proposed)

8.0 CONSTRUCTION NOISE

8.1 ✓ ✓ - Construction Noise Discussion

9.0 PUBLIC INVOLVEMENT PROCESS

9.1 NOISE COMPATIBLE CONTOURS

9.1.1 ✓ ✓ - 66 dBA Contour Discussion and Shown on Figure(s)

9.1.2 D D - Discussion of Public Involvement Efforts (including Community Information Meetings, Individual Meetings, and Special Coordination)

9.2 VOTING PROCEDURES

9.2.1 ✓ ✓ - Voting Process Defined?

9.2.2 ✓ - How many / when were Certified Letters Sent?

9.2.3 ✓ - What were the Voting Results Related to Desire for a Barrier?

9.2.4 ✓ - Summary of Barrier Survey Results and Comments?

9.2.5 ✓ - How many Surveys were Unresponsive or Undeliverable?

9.2.6 ✓ - Voting Graphic showing the Results of the Barrier Survey?

9.2.7 ✓ - Were there any Special Abatement Commitments / Acoustic Profiles/ Aesthetics Considerations

9.2.8 ✓ - Is this an Addendum Report with Revised Impact / Barrier Results

10.0 OTHER CONSIDERATIONS

10.1 D D - Absorptive or Reflective Noise Barriers Proposed?

10.2 D D - Was Reflection Noise Considered?

10.3 D D - Was Structure Noise Considered?

Checked Items are Required	<input type="checkbox"/>	Preliminary	Final Design	UPC:	<input type="text"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> N/A <input type="checkbox"/> D	This Item has been verified by the document writer This item is "Not/Applicable" to this project This Item is Project Dependent
				Completed By:	<input type="text"/>		
				Date:	<input type="text"/>		

10.4 D D - Was Rail or Aviation Noise Considered?

11.0 APPENDICES

- 11.1 ✓ ✓ - List of References
- 11.2 ✓ ✓ - List of Preparers / Reviewers
- 11.3 ✓ ✓ - Traffic Data
- 11.4 ✓ ✓ - Noise Monitoring Field Logs
- 11.5 ✓ ✓ - Warranted, Feasible, Reasonable, Worksheets
- 11.6 ✓ ✓ - Alternative Mitigation Measures Response Form from Project Manager
- 11.7 ✓ ✓ - Other Site Sketches of Monitored Locations, Noise Meter Printouts, Noise Meter Calibration Reports, Pertinent Correspondance
- 11.8 ✓ ✓ - TNM Certification Certificates
- 11.9 ✓ ✓ - Noise Report Guidance and Accountability Form

12.0 TNM RUNS

12.1 ✓ ✓ - Actual TNM Runs (Electronic Files) must be Submitted for Review with Report, TNM Output Tables are Not Required for Inclusion into the Report, However a Copy of the Printed Modeling Information shall be Supplied Upon Request

13.0 GENERAL

13.1 ✓ ✓ - Figures were Developed in Accordance with VDOT's Noise Report Development and Guidance Document