2EN2 Stage 2 - Traffic Noise and Air Quality
QA Checklist for TNR NOISE MODEL VALIDATION MEMO

SPOT ID/Project TIP #: _____

County: _____

Note: This QA checklist is for the initial submittal only. For subsequent submittals, the Comment/Response matrix will serve as QA checklist.

Item #	Review Item	Yes	No	N/A
QA.0	Appropriate QC has taken place (all applicable State and Federal regulations, standards, and policies are met and all calculations, designs, reports, etc. are complete, accurate and reasonable.)	☐	☐	☐
QA.1	Reporting			
QA.1.1	Prepared by a traffic noise analyst prequalified with NCDOT to prepare a TNR.	☐	☐	☐
QA.1.2	The Noise Model Validation Memo Template has been followed.	☐	☐	☐
QA.1.2.1	Design speed has been confirmed and identified and aligns with most current design criteria.	☐	☐	☐
QA.1.2.2	Discusses the number and duration of ambient noise measurements performed compared to the number and duration of ambient noise measurements proposed in the work plan.	☐	☐	☐
QA.1.2.3	Discusses the procedures used to collect all necessary data for TNM validation.	☐	☐	☐
QA.1.2.4	Includes accurate TNM validation results and provides explanation for any site(s) that did not validate (if applicable).	☐	☐	☐
QA.1.3	The Noise Measurement Field Data Sheet Template has been followed.	☐	☐	☐
QA.1.3.1	Includes complete and accurate field data sheet, unusual event log, and photographs of each individual SLM setup for all short-term ambient noise measurement sites.	☐	☐	☐
QA.2	Figures			
QA.2.1	Figures include all short-term and long-term noise monitoring sites where ambient noise measurements were performed, and number of SLMs per site, as applicable, indicated with white dots on the figures. Include reason(s) for any long-term measurements, as applicable.	☐	☐	☐
QA.2.2	Figures include all receptor locations and the associated noise abatement criteria (NAC) activity category for each location, including black dots for NAC F and other Non-Noise Sensitive (NNS) land uses.	☐	☐	☐

Item #	Review Item	Yes	No	N/A
QA.2.3	Proposed spatial limits of traffic noise study area generally follow guidance from Table 7.1 of the 2022 NCDOT Traffic Noise Manual (may need to be expanded following the initial noise modeling effort if the outer limit of predicted traffic noise impacts and/or benefits is not defined).	☐	☐	☐
QA.3	**TNM Files**			
QA.3.1	All TNM modeling follows the guidance outlined in Section 7.10 of the 2022 NCDOT Traffic Noise Manual.	☐	☐	☐
QA.3.2	For each measurement site, the traffic volumes in TNM are consistent with the traffic counts on the field data sheet (converted to hourly volumes).	☐	☐	☐
QA.3.3	For each measurement site, vehicle speeds in TNM are consistent with the vehicle speeds on the field data sheet.	☐	☐	☐
QA.4	**Other Electronic Files**			
QA.4.1	Spreadsheet provided that includes all ambient noise measurement data collected.	☐	☐	☐
QA.4.1.1	Sound level metrics (L_{eq} and L_{max} at minimum) collected in increments of one minute (i.e., a 20-minute short-term measurement shall be comprised of 20 data points; a 24-hour long-term measurement session shall be comprised of 1,440 data points).	☐	☐	☐
QA.4.1.2	Includes accurate calculation of equivalent noise level (L_{eq}) for each short-term ambient noise measurement location, including any appropriate despiking of aberrant noise events from data sets (if applicable). Provides an explanation of despiking due to aberrant noise events, if known (e.g., jet plane flyover, lawnmower, car horn, emergency vehicle siren, etc.)	☐	☐	☐
QA.4.1.3	Includes accurate calculation of the loudest hour equivalent noise level [$L_{eq(h)}$], using the "rolling hour" method, for any long-term ambient noise measurement site where traffic noise is not dominant.	☐	☐	☐

For items marked NO or N/A that require further explanation, provide comments or action items in the table below.

Item #	Comments and Action Items

> *This checklist may not be comprehensive to every project. All items may not be applicable for smaller projects. It is the responsibility of the reviewer to ensure that an adequate review is performed.*

I have reviewed the deliverables for consistency with this checklist and confirmed that all items have been completed.

QA Reviewer Name: _____ **Date:** _____

QA Reviewer (Signature): _____