NEW JERSEY TURNPIKE AUTHORITY
POLICY FOR TRAFFIC NOISE ANALYSIS AND ABATEMENT

I. INTRODUCTION

This Policy for Traffic Noise Analysis and Abatement ("Policy") has been developed by the New Jersey Turnpike Authority ("Authority") to include appropriate modifications and updates that reflect current state-of-the-practice criteria and procedures in general conformance with Federal Highway Administration (FHWA) guidelines. The Policy defines the circumstances under which noise barrier abatement will be considered for construction along noise-sensitive areas in proximity to the Authority Roadway System. This Policy clarifies and updates the criteria to be used for determining eligibility for noise barrier consideration, as well as the criteria to be used to identify the appropriateness of actual noise barrier construction. Although the Authority is not bound by State or Federal law to construct noise barriers, the Authority's Board of Commissioners has determined that noise-sensitive areas located in proximity to projects that meet identified eligibility criteria set forth herein shall appropriately be considered for the construction of noise barriers. Noise analyses shall be completed for projects qualifying as Type I including new roadways and/or significant improvements to existing roadways as defined in 23 CFR 772.5 (see definitions in Section II). ***This Policy supersedes any and all previous noise barrier policies adopted by the Authority.***

II. DEFINITIONS

Announcement. The Announcement of any Type I Project is defined as the date official notice is given to the public, which shall be considered to be the date the Board gives authorization to adopt the annual budget in which the project is listed.

Authority Roadway System. The Authority Roadway System includes both the New Jersey Turnpike and the Garden State Parkway. The New Jersey Turnpike system includes travel lanes, ramps, toll plazas and other Turnpike facilities used to carry traffic from Milepost 0.0 (south of Interchange 1) to Milepost 122.00, as well as the I-95 extension from Milepost 117.9 to Milepost 122.0. In addition, the New Jersey Turnpike system includes the Pearl Harbor Memorial Turnpike Extension, the Newark Bay – Hudson County Extension; and both the eastern and western alignments north of Interchange 15E. The Garden State Parkway system includes travel lanes, ramps, toll plazas and other Parkway facilities used to carry traffic from Milepost 0.0 to Milepost 172.4.

Auxiliary Lane. A roadway lane adjoining the traveled way for speed change, turning, weaving, truck climbing, maneuvering of entering and leaving traffic, and other purposes supplementary to through-traffic movement.

Benefit. A receptor that receives at least a 5 dB(A) L_{eq} noise level reduction from a noise barrier. Any receptor that meets either or both criteria defining a noise impact in Section III.C of this Policy and will receive a 5 dB(A) L_{eq} noise level reduction is considered to count as one full credit 'benefit'. Any receptor that does not meet either of the criteria defining a noise impact in Section III.C but will receive a 5 dB(A) L_{eq} noise level reduction is considered to count as one-half credit 'benefit' (or 'supplemental benefit').

dB(A). A-weighted decibel, unit used to measure noise which best corresponds to the frequency response of the human ear.

Design Hourly Volume (DHV). The number of vehicles estimated to travel through a segment of roadway during the design hour.

Design Year. The Design Year is the future year identified and used as the basis of operational design for a Type I Project. The Design Year is chosen on a project-specific basis.

Feasibility. The combination of acoustical and engineering factors considered in the evaluation of noise abatement.

Impacted Receptor. Any receptor which has a future Design Year loudest hour L_{eq} that exceeds the noise impact criteria discussed in Section III. C. or exceeds existing noise levels by 10 dB(A) L_{eq}. A 10 dB(A) increase in noise would be perceived as a doubling of the loudness in the natural environment.

L_{eq}. Equivalent sound level, the steady-state sound having the same A-weighted sound energy as that contained in the time-varying sound over a specific period of time.

$L_{eq(h)}$. The equivalent sound level over a one-hour period.

Level of Service (LOS) C. With respect to vehicle movements, represents restricted flow that remains stable and free-flowing; however, most drivers are restricted in their freedom to select their own speeds, change lanes, or pass. According to FHWA guidance, the worst-case (loudest) traffic noise hour usually occurs when volumes (including trucks) and vehicle speeds are greatest, which is typically when traffic is free-flowing and at or

near LOS C conditions.[1]

Multifamily Residence. A residential structure containing more than one residence or dwelling unit (each unit in a multifamily residence shall be counted as one receptor).

Noise Barrier. A solid structure constructed between the roadway noise source and noise-sensitive receptors to reduce traffic noise levels.

Noise Contours. Areas along a roadway within which noise levels would exceed a specified noise level. Noise contours shall not be used to identify traffic noise impacts.

Noise Reduction Design Goal. Used to determine noise abatement reasonableness, the optimum desired dB(A) noise reduction determined from calculating the difference between future Design Year noise levels with abatement, to future Design Year noise levels without abatement.

Noise-Sensitive Area. A dwelling unit, common use area or institutional land use where traffic-generated noise levels are determined for a traffic noise study (see noise-sensitive Activity Categories in Table 1).

Noise Study Area. A minimum 500-foot boundary around the project limits, measured from the proposed pavement edge.

Permitted. An approved specific design of land use activities as evidenced by the issuance of a building permit.

Reasonableness. The combination of social, economic, and environmental factors considered in the evaluation of noise abatement.

Receptor. A point used in a noise analysis for which the traffic-generated noise level is determined. A receptor is generally placed in an area of frequent active human use, assumed to be at a point five feet above the ground.

Replace-in-Kind. The replacement of a noise barrier impacted by a project with a new noise barrier of the same linear length and height or top of wall elevation (whichever is greater) in a new location.

Roadway. Travel lanes, ramps, toll plazas or other Authority Roadway System facilities used to carry traffic, excluding parking areas, service areas, shoulders, and any other

[1] FHWA, *Recommended Best Practices for the Use of the FHWA Traffic Noise Model (TNM), TNM Object Input, Noise Barrier Optimization, and Quality Assurance, Final Report*, December 8, 2015. https://www.fhwa.dot.gov/environment/noise/resources/tnm_best_practices/

Authority facilities not used primarily to carry traffic.

Single-Family Residence. Any house, dwelling unit, structure or building used and intended for use as a permanent residence or permanent place of habitation for one or more individuals regardless of the form of ownership.

Substantial Increase. One of the two criteria for identifying traffic noise impact. A 10 dB(A) L_{eq} increase from the existing year-of-study condition (baseline) to the Build condition Design Year during the worst case (loudest) traffic noise hour for Activity Categories A through D (see Section III.A) in proximity to the Authority Roadway System.

Type I Project. A Type I Project is any construction project on any portion of the Authority Roadway System that requires a noise analysis by meeting one of the criteria described below. The criteria include:

1. The construction of a highway on new location; or,
2. The physical alteration of an existing highway where there is either:
    - 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,
    - 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 High-Occupancy Vehicle (HOV) lane, bus lane, or truck climbing lane; or,
4. The addition of an auxiliary lane that is 2,500 feet or greater in length, 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 (2,500 feet or greater in length); or,
7. The addition of a new or substantial alteration of a service area, commuter lot, or toll plaza.

III. NOISE ANALYSIS PROCEDURE

No Federal funds are anticipated for any noise barrier construction on the Authority Roadway System resulting from determinations made in accordance with this Policy. Although compliance with FHWA noise abatement requirements and procedures is not specifically required, the Authority will conduct noise analyses under this Policy in

general accordance with the regulatory material found in Title 23 Code of Federal Regulations Part 772 (23 CFR 772) entitled *Procedures for Abatement of Highway Traffic Noise and Construction Noise*[2] and the document entitled *Highway Traffic Noise: Analysis and Abatement Guidance (2011)*.[3] Noise analyses must be conducted using the FHWA Traffic Noise Model (TNM), or any other model determined by the FHWA to be consistent with the methodology of the FHWA TNM. The noise analysis procedure is further described in the following sub-sections.

A. Identification of Noise-Sensitive Receptors

Noise-sensitive areas located in proximity to a Type I Project shall be analyzed to determine predicted traffic noise impacts. The proximity that shall be used to define the Noise Study Area is a minimum 500-foot boundary around the project limits, measured from the proposed edge of the nearest travel lane; however, the study area may need to extend beyond 500 feet to capture impact from the project and shall be assessed on a project-by-project basis. Noise-sensitive receptors shall be included for properties that either 1) physically exist at the time of the Announcement of the project, or 2) have received a building permit or are part of a development that has received final subdivision or site plan approval prior to the Announcement of the project, and where that permit or approval is valid and in full force and effect at the time of the Announcement of the project. Permitted receptors shall be analyzed in the same manner as receptors that physically exist.

The following noise-sensitive receptors shall be identified:

1. **Activity Category A.** Exterior lands on which 1) serenity and quiet are of extraordinary significance, 2) the site serves an important public need, 3) preservation of those qualities is essential for the site to continue to serve its intended purpose, and 4) the site has frequent human use. Sufficient evidence must be submitted to the Authority to designate a site or facility as Activity Category A.
2. **Activity Category B.** Exterior locations for single-family and multifamily residences. For single-family residences, an exterior use may be a patio, deck or other frequent outdoor use area in the yard. For multifamily residences, exterior locations such as balconies up to the third floor "above grade" from the proposed roadway shall be analyzed.
    - For a common use area that is part of a multifamily property, the number of residences located within the associated multifamily residential building should be tallied to determine "equivalent number of residences" for a common area of frequent human use. If the number of residences exceeds

[2] FHWA, *Procedures for Abatement of Highway Traffic Noise and Construction Noise,* Code of Federal Regulations, Title 23 Part 772 (23 CFR 722), July 13, 2010.
[3] FHWA, *Highway Traffic Noise: Analysis and Abatement Guidance,* FHWA-HEP-10-025, December 2011.

the capacity of the common use area, the capacity should be used. However, where no common area of frequent human use is present, patios and/or balconies (individual outdoor use areas) shall be analyzed. Each individual outdoor use area should be assigned one unit. If both individual outdoor use areas and common use areas exist, the number of residences not already represented by individual outdoor use areas should be assigned to the common use area, or the common use area should be given one unit at a minimum. In addition, professional judgment should be used to assign units when both individual outdoor use areas and common use areas exist (i.e., if balconies are not highway facing and are shielded by the building, those units should instead be assigned to a common use area with direct exposure to the highway if it exists).

3. **Activity Category C.** Exterior locations for facilities such as schools or day care centers, places of worships, recreation areas and parks (including picnic areas, campgrounds, playgrounds, and trails), cemeteries, libraries, amphitheaters, auditoriums, public meeting rooms, public or nonprofit institutional structures, studios (including radio, recording, and television) and hospitals.

    - For exterior non-residential facilities, the lot size-based "equivalent number of residences" method will be used to determine the number of receptors for cost-effectiveness calculations. This method identifies an average representative lot size (square footage) of residential development near the facility and divides that area into the noise-impacted area of the facility to determine the number of units. The impacted area (square footage) is determined based on a dense grid of modeling receptors within common use areas (areas with evidence of frequent human use in the facility) or along a common use area (such as a trail) in order to determine the extent of impact. The modeling receptors should start at the closest location to the highway where frequent human use typically occurs. Once the extent of impact is identified, the noise-impacted area shall be divided by the representative lot size to determine the "equivalent number of residences" that are impacted. The FHWA guidance on lot size-based receptor placement for non-residential receptors may be referenced for further guidance.[4]
    - If a non-residential facility, such as a neighborhood playground, has a square footage less than the average residential lot size, one receptor with one unit shall be placed at the closest location to the highway where frequent human use typically occurs; however, for a common use area on a multifamily residential property, follow the guidance under Activity Category B.

4. **Activity Category D.** Interior locations for certain facilities listed under Activity Category C that may have interior use. Activity Category D should only be used

[4] FHWA, *Calculating and Placing Non-Residential Receptors (NRRs), Methodology: Lot Size*, FHWA-HEP-17-056, https://www.fhwa.dot.gov/Environment/noise/resources/fhwahep17056.pdf.

if Activity Category C use is either not present, far from the roadway or physically shielded from the roadway compared to the Activity Category D use location.

- One receptor shall be placed at the closest interior location to the highway where frequent human use typically occurs. Activity Category D does not require an assessment to determine "equivalent number of residences". Each Activity Category D receptor will count as one unit. However, for schools, the total number of units should be tallied based on the number of highway-facing classrooms predicted to be impacted based on best available data. To determine interior noise levels, refer to Table 6: Building Noise Reduction Factors in FHWA's *Highway Traffic Noise: Analysis and Abatement Guidance*.[5]

B. Measurement of Noise Levels and Model Validation

Measurement of noise levels at representative locations in proximity to a project shall take place using an American National Standards Institute (ANSI) Type I or Type II integrating sound level meter (SLM). SLMs shall be calibrated at least once every two years, or in accordance with the manufacturer's specifications, at a certified testing laboratory. Field noise measurements shall be taken in general accordance with the guidelines in FHWA's *Noise Measurement Handbook*[6] and *Noise Measurement Field Guide (2018)*.[7] Measurements are not required at each receptor location.

For projects on new alignment, existing noise level measurements will be used to determine existing noise levels and compare to future Design Year project noise levels. Measurements should take place for a duration of no less than 1 hour.

For projects on existing alignment, existing noise level measurements will be used to validate predicted noise levels through comparison between measured and predicted levels. Measurements should take place for a duration of no less than 15 minutes, and traffic counts gathered during the noise measurement should be classified by automobiles, medium trucks (2-axle), heavy trucks (3+ axles), buses, and motorcycles and converted to equivalent 1-hour counts for entry into the existing model. If the measured noise level is within +/- 3 dB(A) of the predicted noise level from the existing model at the measurement site location, the model is within the accepted level of accuracy for predicting existing and future Design Year noise levels for the project. Noise levels from measurements and model validation may be reported as whole decibels, but rounded values shall not be used to

[5] FHWA, *Highway Traffic Noise: Analysis and Abatement Guidance,* FHWA-HEP-10-025, December 2011.
[6] FHWA, *Noise Measurement Handbook*, FHWA-HEP-18-065, June 2018, https://www.fhwa.dot.gov/environment/noise/measurement/handbook.cfm.
[7] FHWA, *Noise Measurement Field Guide*, FHWA-HEP-18-066, June 2018, https://www.fhwa.dot.gov/environment/noise/measurement/field_guide.cfm.

determine model validation.

C. Traffic Noise Prediction and Criteria for Noise Impact

Noise analysis should be conducted using traffic volumes representative of the worst-case (loudest) traffic noise hour. Traffic data for the worst-case (loudest) traffic noise hour will generally be the DHV. However, if traffic-flow during the future hour represented by the DHV will not be above LOS D, an equivalent traffic volume that would produce LOS C should be provided. The posted speed may be used to predict worst-case (loudest) traffic noise levels. The operating or design speed may be used if known to be consistently faster or higher than the posted speed. Speeds below posted should not be used.

For projects on existing alignment, the worst-case (loudest) traffic noise levels for the existing condition should be predicted using TNM and existing LOS C or better traffic volumes based on available volume data provided by the Authority Operations Department. These existing worst-case (loudest) traffic noise levels then serve as the basis for determining "Substantial Increase."

The worst-case (loudest) traffic noise levels for the project No-Build and Build condition (or multiple Build conditions) should be predicted using TNM, updated with the details of the project design, and future Design Year LOS C or better traffic forecasts based on available volume data provided by the Authority Operations Department. The Design Year noise levels can then be compared to the criteria for eligibility of noise barrier construction (noise abatement criteria) and existing noise levels to determine if noise impacts will occur.

The Authority shall only consider construction of noise barriers as part of a Type I Project for noise impacted receptors under the Build condition. A noise impact is identified where either of the following conditions (criteria for eligibility of noise barrier construction) are met:

1. Noise levels must be projected by the Authority to approach (within 1 dB) or exceed the $L_{eq(h)}$ criteria given in **Table 1** for each Activity Category in the Design Year during the worst case (loudest) traffic noise hour.

Table 1. Noise-Sensitive Activity Categories and Criteria for Impact Determination

Activity Category	$L_{eq(h)}$ Criteria for Impact Determination	Activity Description
A	57	Exterior locations on lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67	Exterior residential locations.
C	67	Exterior locations for facilities such as schools or day care centers, places of worships, recreation areas and parks (including picnic areas, campgrounds, playgrounds, and trails), cemeteries, libraries, amphitheaters, auditoriums, public meeting rooms, public or nonprofit institutional structures, studios (including radio, recording, and television) and hospitals.
D	52	Interior locations for certain facilities listed under Activity Category C that may have interior use.

2. Noise levels must be projected by the Authority to increase by at least 10 dB(A) L_{eq} from the existing year-of-study condition (baseline) to the Design Year during the worst case (loudest) traffic noise hour ("Substantial Increase") at Activity Categories A through D located in proximity to the Authority Roadway System.

Predicted noise levels from TNM shall be rounded to the nearest whole decibel values prior to application of this Policy and reporting. For example, an Activity Category B predicted noise level of 65.5 dB(A) shall be reported as a noise impact at 66 dB(A), while a predicted noise level of 65.4 dB(A) shall be reported as 65 dB(A) and not impacted. A predicted noise reduction from a TNM barrier analysis table of 4.5 dB(A) shall be reported as 5 dB(A).

D. Criteria for Construction of Noise Barriers

If noise impacts are identified, the Authority shall consider the construction of a noise barrier. Actual construction of a barrier shall be conditioned upon the proposed noise barrier being found feasible, reasonable and cost-effective by meeting all of the following conditions:

Feasibility Factors

1. Acoustic Feasibility: A minimum reduction of 5 dB(A) L_{eq} to Design Year noise levels for at least 50 percent of impacted receptors in the first row.
2. Construction of the proposed barrier must be feasible from an engineering perspective in the sole opinion of the Authority. Feasibility issues from an engineering perspective may include:
   - Constructability on existing topography

- Safety considerations (e.g., intersection sight distances)
- Ability to maintain access to vehicular or pedestrian travel
- Conflicts with drainage or utilities in the area.

3. The height of the barrier shall not exceed 18 feet, unless the Authority determines that extraordinary circumstances justify a higher barrier in a particular case, or in the case of replacement in-kind of an existing noise barrier (see further discussion below).

Reasonableness Factors

1. Noise Reduction Design Goal: A reduction of 7 dB(A) L_{eq} to Design Year noise levels for at least 50 percent of receptors in the first row, and a reduction of 10 dB(A) L_{eq} to Design Year noise levels for at least one benefited receptor (any row, whether impacted or not impacted).
2. Cost-Effectiveness: The construction cost of the proposed noise barrier must not exceed a specified cost per benefited receptor (receptors with at least 5 dB(A) noise reduction). Refer to the current New Jersey Department of Transportation (NJDOT) traffic noise policy for planning costs per square footage as well as the cost per benefited receptor criterion to apply in the noise barrier cost-effectiveness determination. Costs of additional right-of-way, utility relocations, and any other items associated with the noise barrier that are only necessary to accommodate construction of the noise barrier should be included in the cost-effectiveness determination. When considering one-half credit benefit (or 'supplemental benefit' for non-impacted receptors with 5 dB of noise reduction), the total number of dwelling units for these receptors shall be divided by two for the cost-effectiveness calculation (e.g., six full credit benefits and five one-half credit 'supplemental' benefits would result in the total cost of the noise barrier being divided by 8.5 for the cost per benefited receptor).
3. Favorable viewpoints from the benefited receptors and local municipalities (see Section IV.).

23 CFR 722.15(c) lists abatement alternatives that may be considered along with noise barriers. The Authority may investigate these alternatives as appropriate on a project-by-project basis. In the case of Activity Category D receptors, noise insulation of interior spaces, including replacement of windows and doors, should be investigated if no other abatement alternatives are found feasible and reasonable. The cost of providing noise insulation shall be subject to the same cost-effectiveness criterion as noise barriers.

Existing Noise Barriers

When an existing noise barrier is present in a project study area, one of two scenarios may be encountered:

1. An existing noise barrier that is not being physically impacted by the project must be analyzed. In this case, the barrier shall be analyzed following the guidance provided by *FHWA's Consideration of Existing Noise Barrier in a Type I Noise Analysis*.[8] As explained by the guidance, if noise impact is identified behind an existing noise barrier, an analysis shall be completed to determine if the barrier is still feasible and reasonable. The Design Year noise levels are determined with and without the existing noise barrier for this analysis. If the existing noise barrier is feasible and reasonable as built, no further analysis is required.

   If the existing barrier is not feasible and reasonable as built, a noise abatement design that satisfies the requirements should be developed. Any modifications to, or replacement of, the existing noise barrier would be subject to the cost-effectiveness determination. Any costs associated with retrofitting or replacing the barrier that are only necessary to accommodate construction of the noise barrier should be considered, such as demolition of the existing barrier. If it is determined that either retrofitting or replacing an existing barrier is not cost-effective, the existing barrier should remain in place. Viewpoints of the benefited residents and property owners should be surveyed for a retrofit or replacement in accordance with Section IV.

2. An existing noise barrier is being physically impacted or relocated by the project (in full or part). In this case, the barrier shall be replaced in-kind, meaning any modification required to maintain the same linear length and height or top of barrier elevation (whichever is greater) in the new location shall not be subject to the cost-effectiveness determination. However, if additional modification is necessary to protect additional impacted receptors as a result of the project, these modifications would be subject to the cost-effectiveness determination. If it is determined that additional modification is not cost-effective, the replace-in-kind barrier shall remain as part of the project. Viewpoints of the benefited residents and property owners should be surveyed for a modification in accordance with Section IV.

IV. PUBLIC INVOLVEMENT

A Public Hearing and comment period conducted pursuant to and in accordance with the requirements of Executive Order No. 172 shall be conducted by the Authority for any Type I Project prior to construction of same, including any noise barriers proposed to be included as a part thereof.

During the comment period, the Authority shall survey the owners and residents of properties benefited by the noise barrier to determine community viewpoints on the noise

[8] FHWA, *Consideration of Existing Noise Barrier in a Type I Noise Analysis*, FHWA-HEP-12-051, https://www.fhwa.dot.gov/environment/noise/noise_barriers/abatement/existing.cfm.

barrier with voting ballots sent via certified mailing. If owners/residents choose to cast a vote in person via written ballot at a Public Hearing, they will not receive the opportunity to cast a vote via certified mail ballot. The voting solicitation period shall occur for no less than 30 days (from the date the certified mailing is sent) to assure adequate time for the benefited receptors to return a response. The determination of community support will be based on a simple majority (greater than 50 percent) of the votes received. Votes shall be solicited from all benefited receptors, including non-impacted ('supplemental') benefits. In addition, for any receptor that is not owner-occupied, both the owner and the resident shall receive a vote. In the case of schools, recreation areas or other land uses listed as Activity Category C and D, the owners and operators of the facility will be surveyed (one entity such as a school board or private owner shall provide the facility's vote).

The Authority must receive a voting response from at least 50 percent of the owners and residents surveyed. If sufficient community response is not received, the Authority shall request a formal resolution of the governing body of any municipality within which noise barriers have been deemed eligible pursuant to this Policy. The Authority shall not construct any noise barrier without either the support of the local community or the local governing body. The Authority shall request a formal resolution of the governing body with the transmittal of engineering plans depicting the proposed location and height of the proposed noise barrier(s). Engineering plans shall be transmitted by the Authority to the municipal clerk of the affected municipality. A formal resolution in support of the construction of any noise barrier must be provided to the Authority within four months of the Authority's request for same.

Note that exterior use at properties such as commercial (hotels, restaurants, offices, retail, etc.) or industrial sites are not considered for noise analysis in this Policy and would be excluded from voting; however, these properties may have outdoor signs or advertising that would be blocked by a noise barrier, which may require outreach to these sites to inform on the noise barrier construction and address any concerns to the extent possible.

V. LAND USE PLANNING

The Authority encourages the use of rational local land use planning within general proximity of the Authority Roadway System. The Authority's Executive Director has the discretion to encourage municipalities located along the Authority Roadway System to implement effective land use controls which consider noise levels generated by roadway traffic in its subdivision and site plan approvals process.

In an effort to prevent future traffic noise impacts on undeveloped lands, the Authority shall inform local officials with an estimate of distance to the future 66 dB(A) L_{eq} noise level where applicable. This may be communicated in a project's noise analysis via buffer

lines on maps or lists, tables, or similar presentation of distances by specific area.

VI. CONSTRUCTION NOISE

Construction noise shall be addressed in the noise reporting with a qualitative analysis at a minimum. Potentially affected land use, typical types of equipment and potential construction activities should be listed, along with generally accepted control measures. Reference to the Authority Standard Specification 104.11 and local noise ordinances may need to be included.