

# Evaluating U.S. 69 Expansion Project Noise

When certain significant highway improvements occur like those being made as part of the U.S. 69 Expansion Project (69Express), potential traffic noise impacts are studied during the Project’s Environmental Assessment (EA).

EAs are undertaken to help identify and evaluate a project’s potential impacts on the natural and human-made environments so agencies like the Kansas Department of Transportation (KDOT) can make better decisions about solving transportation issues while minimizing impacts such as noise.

## What is Noise?

A noise evaluation is done to determine whether sound from the highway impacts adjacent properties.

Such an evaluation is undertaken when there is a significant change in roadway alignment or, as with 69Express, lanes are being added. The evaluation involves modeling noise levels accounting for terrain, traffic type and volume, and distance to adjacent properties.

The results are compared to federal and state regulations for considering unwanted sound to be an impact - generally set at 66 decibels (dB) or greater for residences (*Figure 1*).

Conducting this type of evaluation helps an agency like KDOT determine whether traffic sounds exceed the noise impact threshold and whether noise abatement must be considered as part of the project.

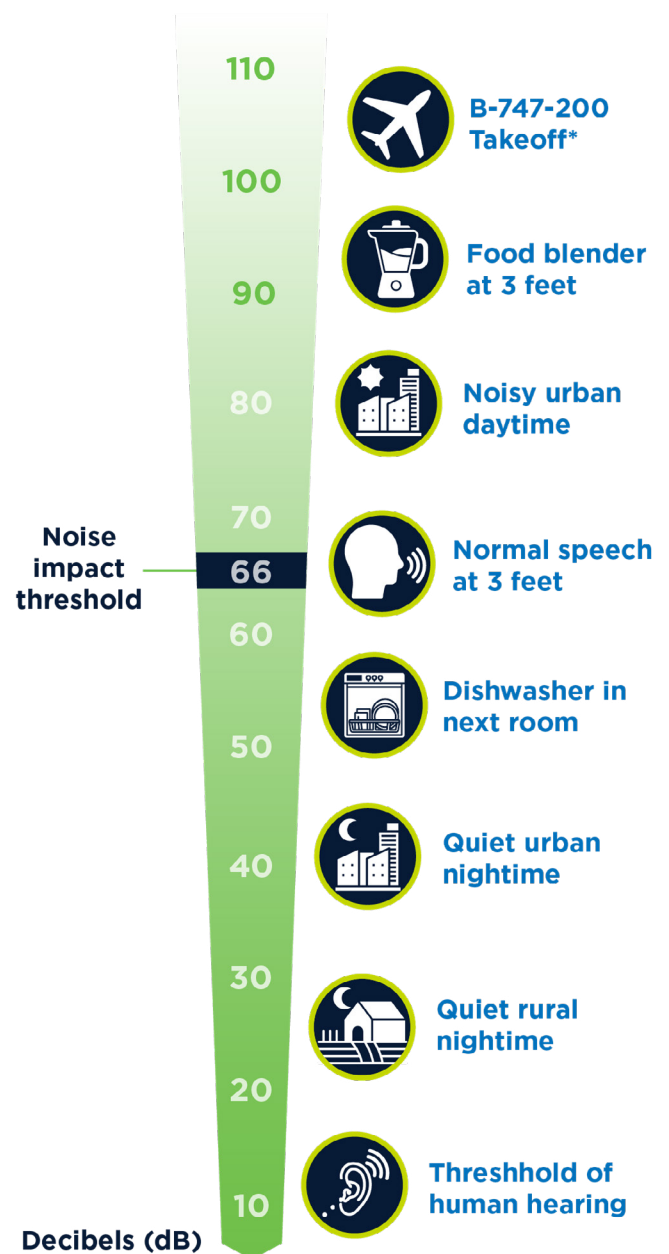
## Identifying Noise Impacts

A detailed software model is used to model both existing and future noise levels throughout the project. Field measurements are taken to confirm the accuracy of the software model. Noise levels are considered an impact if either:

- Future noise levels are predicted to average 66 dB or louder during the loudest hour of the day or
- The project is predicted to increase noise levels by more than 10 dB.

If either is true, then noise abatement measures will be considered for impacted locations.

Figure 1: Common Sound Levels



## Determining Abatement Measures

Noise abatement strategies may be deployed where noise impacts are identified. These most often involve sound walls, but other techniques include earthen berms, traffic management and using the undeveloped property as a buffer.

Noise abatement strategies must be feasible and reasonable. Strategies are considered feasible if

- They are physically constructible in a way that creates no major additional environmental impacts, and
- Can effectively reduce noise by 5-7 dB.

Strategies, such as noise walls, are considered by KDOT to be reasonable if an effective wall can be built that requires less than 1800 square feet of wall area per benefited receptor.

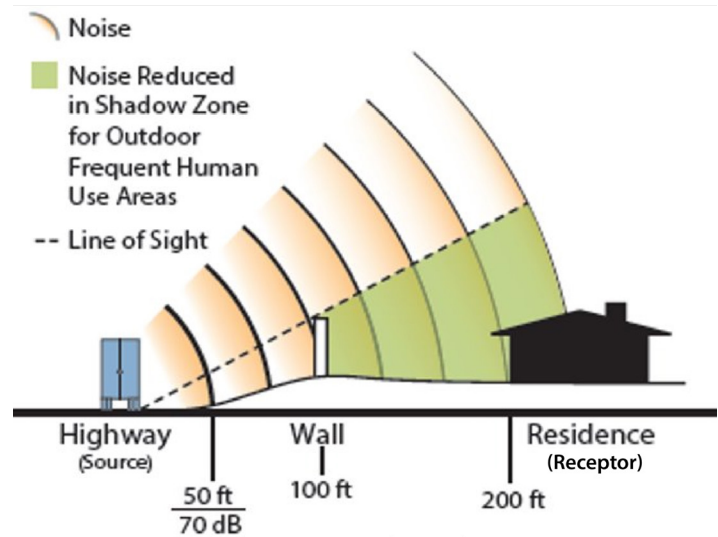
Abatement measures must also be desired by the affected community. This is determined by:

- Presenting the noise evaluation recommendations to local officials;
- Engaging with property owners and tenants to share evaluation results; and then
- Conducting a vote of affected individuals to determine if they want the proposed abatement measures.

## Next Steps

KDOT will conclude its 69Express noise evaluation in the fourth quarter of 2021. Final results of the evaluation and KDOT abatement recommendations will be presented to the community in a December 2021 public meeting. This will be followed by meetings with property owners and tenants in the first quarter of 2022 followed, as appropriate, by a vote by affected parties on whether to proceed with proposed abatement solutions.

Figure 2: Noise Mitigation and Reduction



## Contacts:

To learn more about the Project and sign up for email updates, please visit [www.69Express.org](http://www.69Express.org)

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