



Supplement to Noise Frequently Asked Questions

Common Questions at Neighborhood Meetings

How much worse will the noise be after the North Split Project if sound barriers are not installed? Put another way, just what is the overall noise impact of the North Split Project?

Noise levels are predicted to be reduced at most locations along the North Split Project even if no noise barriers are installed. Noise model results show a decrease in noise at approximately 69% of receptor locations modeled. The model only identified one receptor out of the 378 modeled receptor locations with an increase over 3.0 decibels, which is the threshold where noise change is considered perceptible.

If highway noise will be less at most locations after the North Split Project, why are noise barriers being considered at all?

Although noise levels are predicted to be lower after the North Split Project, they will still exceed current thresholds for consideration of noise abatement. According to federal regulations, noise that exceeds or approaches federal noise abatement criteria (NAC) are considered to be impacts, and consideration of noise abatement is required. Among the abatement measures considered in the North Split Traffic Noise Technical Report, only noise barriers were found to be feasible and potentially reasonable. As a result, noise barriers are being considered for the common noise environments.

Is INDOT considering actions other than noise barriers to reduce highway noise as part of the North Split Project?

The North Split Project will include several features that are not recognized as noise abatement in federal regulations or the traffic noise model, but are anticipated to have the effect of reducing highway noise. These features include the following:

- “Next Generation Pavement” – This new paving technique is designed specifically to reduce tire noise through the use of longitudinal grooves. Although results vary based on tire manufacturer, existing pavement type and condition, and other factors, recent studies have shown that next generation pavement can reduce tire noise levels by 3 to 5 decibels (or more).
- Continuous Reinforced Concrete Pavement – This paving technique eliminates the need for transverse joints, which are the cause of rhythmic sound patterns of tires passing over traditional concrete roadways.
- Jointless Concrete Bridges – This design eliminates the open joints at the end of bridges, which are the cause of the “banging” sounds typically heard at older bridges such as those currently existing in the project area.

Does the Traffic Noise Model used to identify potential noise barrier locations account for “next generation pavement,” elimination of concrete pavement joints, and elimination of bridge joints?

No. The results from the Traffic Noise Model are based on average pavement type. Although it has now been used in 14 states, next generation pavement is still “new” in the industry. This will be the first time in Indiana that this paving technique has been used throughout a project. The elimination of pavement and bridge joints can have an effect on older installations such as the North Split area, but they are too site specific for consideration in a general Traffic Noise Model designed for universal application.



I live on the east side of the interstates just south of the North Split. Our big noise concern is the CSX trains operating between us and the interstates. If a noise barrier is placed on the west side of the interstate [NB7], will the train noise “bounce back” in our direction and make things even worse?

This should not be a concern. Here's why:

- 1) INDOT requires absorptive (rather than reflective) noise barriers per the Noise Policy if there are noise sensitive receptors on the opposite side of the roadway. These barriers have a minimum noise reduction coefficient (NRC) of approximately 0.70. A noise reduction coefficient is an average rating of how much sound an acoustic product can absorb. An acoustic product with a 0.70 NRC rating means that 70% of sound in the space is absorbed, while the other 30% is reflected.
- 2) The corridor is wide in this area, and for most of the noise barrier length the CSX line sits lower than the roadway. It is not a close space with potential for direct reflection.

How tall will the noise barriers be?

The noise barriers currently under consideration have an average height that ranges from 14 to 19 feet tall. These barriers would be constructed on top of the elevated road, so the total height from ground level at adjacent properties to the top of the noise barrier would be the total of the height of the roadway and the height of the barrier.