Highway Traffic Noise Facts & FAQs

- Changes in noise levels of 3dBA or less are not typically detectable by the human ear
- A noise level increase of 5dBA is generally readily noticeable
- A noise level increase of 10dBA is usually felt to be 'twice as loud' as before
- Doubling of traffic = 3dBA increase in noise levels
- Traffic would need to triple to result in a readily perceivable (5 dBA) increase in noise
- If a highway is moved half as close to existing homes (i.e. 200-ft to 100-ft), the noise levels will increase by 3 dBA
- If a highway is moved double the distance from existing homes (i.e. 100-ft to 200-ft), the noise levels will decrease by 3 dbA

- **When is there a traffic noise impact?**
  - A 'noise sensitive receiver' (defined as homes, parks, schools, etc.) is considered impacted by noise if:
    - Future noise levels exceed FHWA noise abatement criteria –or-
    - There is a substantial increase (5 dBA) in future noise levels over existing noise levels

- **A noise barrier must be both Feasible and Reasonable to be constructed with improvement project**
  - Noise barrier is feasible if it can be constructed without major engineering or safety issues and provides a substantial noise reduction to adjacent receivers
  - Reasonableness deals with whether or not the barrier can be constructed in a cost-effective manner, overall noise levels and noise level increases, and the desires of the impacted property owners
- A noise barrier must provide a readily perceptible decrease in noise levels to adjacent receivers to be effective (5 dbA)
- Noise barriers reduce noise by blocking the direct travel of sound waves from a source (highway) to adjacent homes or businesses, forcing them over the top or around the barrier
- The barrier must be high enough and long enough to block the view (line of sight) of the highway
- Openings or gaps in barriers for driveway connections or streets reduce barrier effectiveness