NOISE BARRIERS

When is a Noise Study Needed?

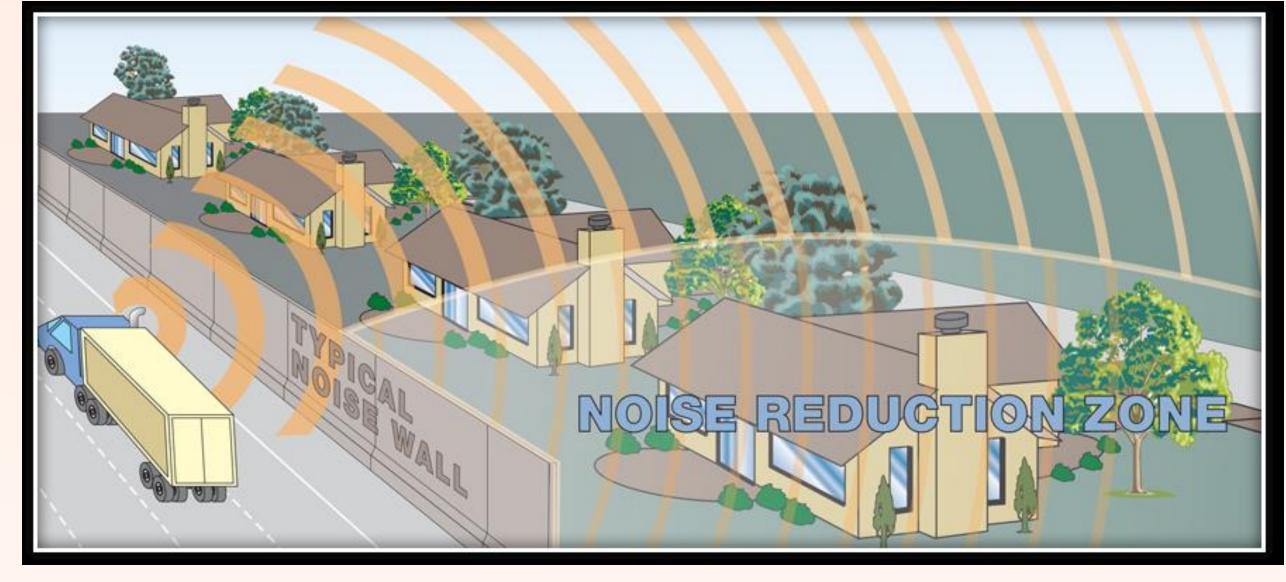
A noise study is typically required when:

- A new highway alignment is built
- The number of through traffic lanes is increased

What Will a Noise Barrier Do?

- The goal is to reduce traffic noise by at least 5 decibels (dB)
- The amount of noise reduction depends on:
 - •Distance of the property from the barrier
 - •Distance of the noise source from the barrier
 - Length and height of a barrier

•Elevation differences among the road, barrier and residences





Existing Noise Barrier along I-4



Advantages

- Can provide an audible reduction in highway traffic noise to areas directly behind the barrier
- Can be designed to be aesthetically pleasing from both the highway and property owner sides of the barrier

Disadvantages

- Can block the view of commercial or landmark signs
- Can adversely affect existing ornamental vegetation in proximity to the barrier
- Trees within FDOT Right-of-Way may be removed in order to construct barriers
- Can create nighttime shadow areas

Sound Levels	Decideis		Sound Levels
Jet Flyover at 1000 ft. Horn Noise - Train at 100 ft.	110	110	
Gas Lawnmower at 3 ft.	100	100	Dance Club Inside Subway Train (NY)
Diesel Truck at 50 ft. General Freight Train at 100 ft. Noisy Urban Daytime	90	90	Food Blender at 3 ft.
Gas Lawnmower at 100 ft.	80	80	Garbage Disposal at 3 ft. Very Loud Speech at 3 ft.
Commercial Area	70	70	Vacuum Cleaner at 10 ft.
Heavy Traffic at 300 ft.	60	60	Normal Speech at 3 ft.
	50	50	Large Business Office Quiet Speech at 3 ft. Dishwasher Next Room
Quiet Urban Nighttime	40	40	Small Theater, Large Conference Room (Background)
Quiet Suburban Nighttime			Library
Quiet Rural Nighttime	30	30	Bedroom at Night Concert Hall (Background)
	20	20	concert rian (counground)
	10	10	Broadcast & Recording Studio
	0	0	Threshold of Hearing

Common Sound Levels

- Noise barriers can obstruct breezes and sunlight
- Noise barriers may attract graffiti
- Noise barriers may reduce, but not eliminate, traffic noise

Who Gets a Noise Barrier?

- Areas predicted to experience future noise levels of 66 dB are eligible for consideration
- FHWA and FDOT require noise barriers to be <u>feasible and cost reasonable</u>.
 - Feasible
 - Reduces traffic noise by at least 5 dB at two or more sites and by 7 dB at one site
 - Noise barrier can be constructed (based on safety factors, access, right-of-way, maintenance, drainage and utilities)
 - Cost Reasonable
 - Cost per site to build the noise barrier is \$42,000 or less
- Reasonable
 - Consider the viewpoints of the benefitted site owners



I-4 BEYOND THE ULTIMATE PD&E STUDY | PUBLIC HEARING



