



# PROPOSED NOISE BARRIER Public Meeting Handout and Fact Sheet 7

Thursday, June 21, 2012  
5:00 p.m. to 7:00 p.m.  
Lockland High School

## Project History

The *I-75 Thru the Valley* project began in May of 2004 and involves the widening and reconstruction of I-75 from Paddock Road (*on the south*) to I-275 (*on the north*). Since then the project was split into phases. The current phase, HAM-75-12.60, focuses on the area of I-75 between the north end of the Lockland Split to Glendale-Milford Road. The goals of this project are to ease congestion on I-75, improve safety on I-75, increase regional mobility, and provide transportation solutions that are compatible with local land use plans.

## Project Background

As part of the *I-75 Thru the Valley Project*, a traffic noise impact analysis was performed. This analysis determined that areas along the project corridor will experience sound-level impacts under design year (2030) traffic conditions. A noise impact occurs when a predicted design year noise level Exceeds 66 decibels (dB) or if a substantial increase of 10 dB or greater is predicted for any noise sensitive areas.

Six (6) areas for this Phase (HAM-75-12.60) of the *I-75 Thru the Valley Project* qualify for noise abatement measures (Noise Barriers).

## Meeting Purpose

The purpose of today's meeting is to obtain public comments and input on:

1. Whether or not Noise Barriers should be constructed at the recommended locations?
2. Preferences for Noise Barrier Color and Texture.

## What Are Noise Barriers?

Noise Barriers are solid obstructions built between the highway and the homes along a highway. They do not completely block all noise, but they will reduce overall noise levels. Noise Barriers are usually constructed of formed concrete or fiberglass panels.

Effective Noise Barriers typically reduce noise levels by 5 to 10 decibels (dB), cutting the loudness of traffic noise by as much as one half. For example, a barrier which achieves a 10 dB reduction can reduce the sound level of a typical tractor trailer pass-by to that of an automobile.

## Feasibility and Reasonableness Factors

The two relevant criteria that are considered when evaluating noise abatement measures are feasibility and reasonableness.

"Feasibility" pertains to whether or not the abatement measure can be successfully implemented within the physical constraints of the project and its locale, and whether or not the abatement measure can be successful in providing what is considered to be an effective reduction of sound-levels (a minimum 5 dBA for receptors with predicted sound-level impacts) under project Build conditions.

"Reasonableness" pertains to whether or not the abatement measure is prudent in terms of cost versus benefit. In this context, "benefitted" receptors are defined as receptors which receive sound-level reductions of at least 5 dBA (for first-row receptors) or at least 3 dBA (for second-row receptors and beyond, up to 500 feet from the proposed roadway edge of pavement). The criterion for "reasonable cost" is \$35,000 per benefitted receptor.

## Noise Barrier Locations

### Noise Barrier 7

Located on the west side of I-75, between the freeway and West Forrer Street; beginning approximately 160 feet south of Bacon Street and ending at Shepherd Lane.

### Noise Barrier 8

Located on the east side of I-75, adjacent to the freeway and across from the northern tip of the I-75 'Lockland Split'; beginning approximately 420 feet south of the end of McWhorter Street and ending approximately 80 feet north of the end of McWhorter Street.

### Noise Barrier 9

Located on the east side of I-75, adjacent to the freeway; beginning approximately 450 feet south of the end of Smalley Road and ending approximately 25 feet north of the end of Smalley Road.

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## Noise Barrier Locations (Continued)

### Noise Barrier 10

Located on the west side of I-75, between the freeway and Mangham Drive; beginning approximately 300 feet north of Shepherd Lane and ending 150 feet north of Lindy Avenue.

### Noise Barrier 11

Located on the west side of I-75; beginning approximately 175 feet north of Magnolia Drive and ending 1,175 feet north of Magnolia Drive (near the existing I-75 Southbound Access Loop Ramp).

### Noise Barrier 12

Located on the west side of I-75, behind the St. Rita School for the Deaf; beginning approximately 225 feet north of Glendale-Milford Road and ending 700 feet north of Glendale-Milford Road.

## Noise Barrier Aesthetics Along I-75

In 2007, an *I-75 Aesthetics Committee* (made up of community groups and officials) was formed to assist ODOT in selecting color and texture options for the improvements along the interstate side of I-75.

The following two photos show the color, texture and an example that has been selected for the I-75 interstate side of the formed concrete barriers [Noise Barriers 8-12] for the *I-75 Thru the Valley Project*.

### Light Neutral Ashlar

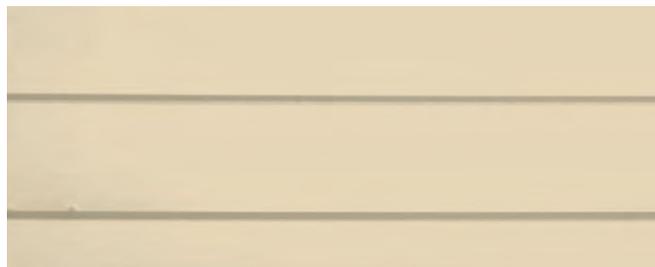


### Formed Concrete Noise Barrier Example



The following two photos show the color and an example that has been selected for the I-75 interstate side of the fiberglass barrier [Noise Barrier 7] for the *I-75 Thru the Valley Project*.

### Light Neutral Fiberglass



### Fiberglass Noise Barrier Example



## Potential Noise Barrier Colors & Textures

The following colors and textures are available for the residential side of the formed concrete barriers [Noise Barriers 8-12] for the *I-75 Thru the Valley Project*.

### Gray Ashlar



### Light Neutral Ashlar



### Dark Neutral Ashlar



**Gray Brick**



**Light Neutral Brick**



**Dark Neutral Brick**



**Gray Dry-Stack**



**Light Neutral Dry-Stack**



**Dark Neutral Dry-Stack**

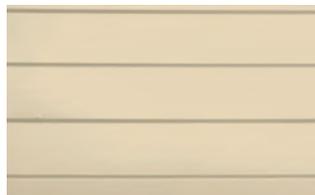


The following colors are available for the residential side of the fiberglass barrier [Noise Barrier 7].

**Gray Fiberglass**



**Light Neutral Fiberglass**



**Dark Neutral Fiberglass**



**PLEASE NOTE:** The samples shown are representations and may not precisely match the true Noise Barrier colors or depth of the texture form.

### Vegetative Screening

ODOT offers a Vegetative Screening as an option to a noise barrier. **However, vegetation in lieu of a noise barrier is intended to provide ONLY psychological relief and is NOT intended as a noise abatement measure.**



A series of evergreen trees and/or shrubs would be planted in staggered alternating rows. Do to safety reasons, Vegetative Screening MAY NOT BE FEASIBLE in all Noise Barrier locations along the **I-75 Thru the Valley Project**.

### What Are Decibels (dB)?

Decibels are the unit used to measure a sound's strength. They are based on a logarithmic scale, rather than a linear one. Zero decibels (0 dB) is the quietest sound audible to a healthy human ear. At 194 dB sound waves become shock waves, where an object is moving faster than sound.

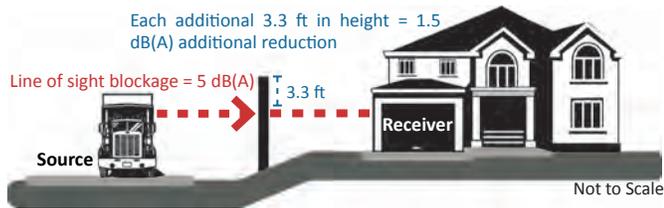
### What Are Noise Receivers (or Receptors)?

Noise Receivers refer to an individual site or location (such as a residence, school, church, etc.) registering measurable sound levels.

## How Do Noise Barriers Work?

Noise Barriers reduce the sound which enters a community from a busy highway by either absorbing the sound, transmitting it, reflecting it, or forcing it to take a longer path over and around the barrier.

A Noise Barrier must be tall enough and long enough to block the view of a highway from the area that is to be protected, the "receiver."

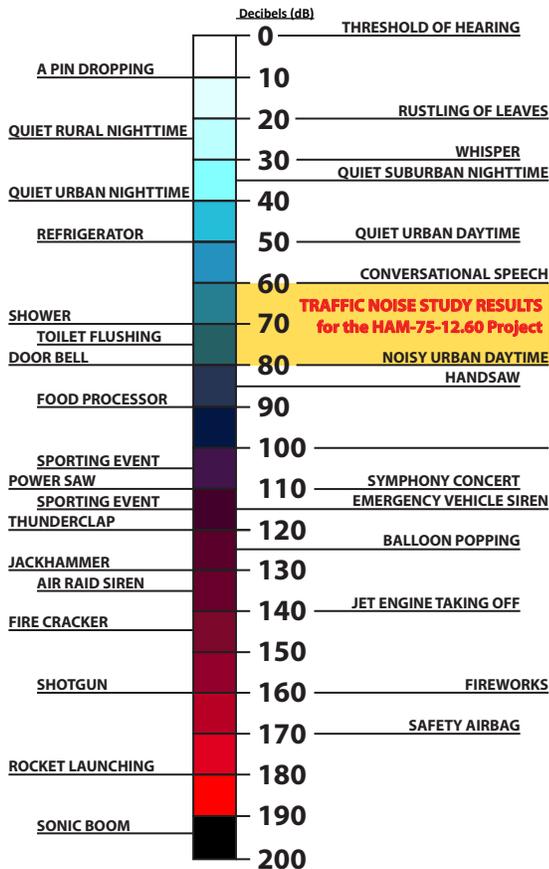


A Noise Barrier can achieve a 5 dB noise level reduction, when it is tall enough to break the line-of-sight from the highway to the home or receiver.

After it breaks the line-of-sight, it can achieve approximately 1.5 dB of additional noise level reduction for each 3.3 feet of barrier height.

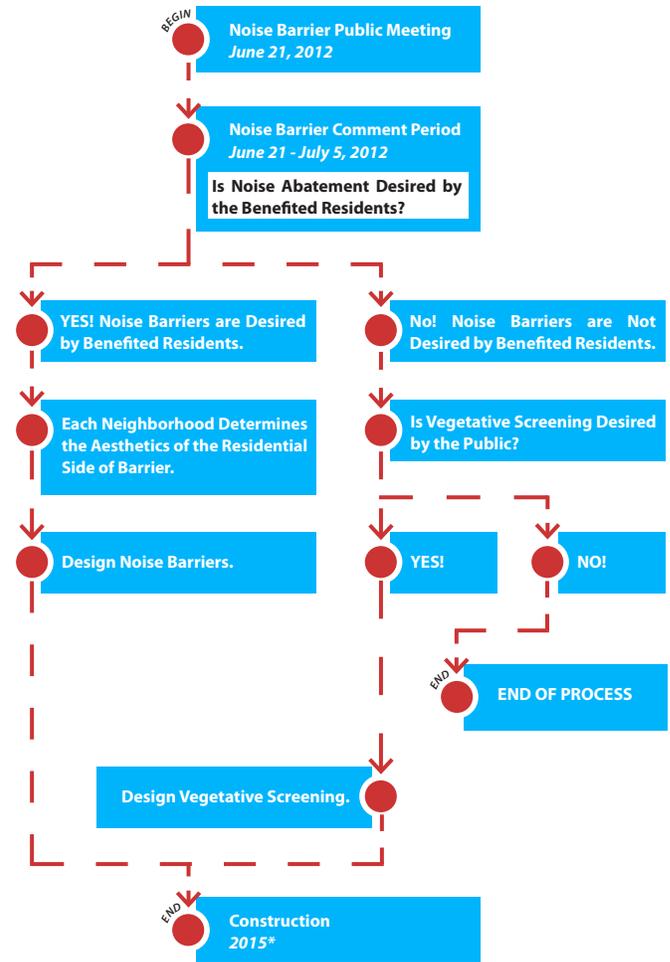
Noise Barriers are normally most effective in reducing noise for areas that are within approximately 200 feet of a highway (usually the first row of homes).

## Comparative Noise Levels



Detailed exhibits showing aerial photos and profile view for Noise Barriers 7-12 can be found on the project website at: [www.thruthevalley.com](http://www.thruthevalley.com)

## What's Next? & Project Schedule



\*Construction date is funding dependent. Earliest possible construction would begin in 2015. The project schedule for the I-75 Thru the Valley Project is subject to change.

## Questions or Comments?

For more information about this project, please visit our Web site at [www.thruthevalley.com](http://www.thruthevalley.com) or contact one of the project managers listed below.

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