

## I-55 at IL 59 Access Project

**JUIT** 

# ENVIRONMENTAL **NOISE STUDY PROCESS**



Illinois Department of Transportation

#### **TYPE I PROJECT**

- New Roadway
- New travel lanes
- Substantial alteration



#### **Common Sound Levels** SOUND LEVEL dB(A) 90 ..... food blender freight train at 100 feet 80 at 3 feet 70 72 dB(A)

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Illinois has **NO** Type II (retrofit) Program



## **Traffic Noise Study Process**

Identify Noise Receptors





67 dB(A

library,

quiet urban nighttime



NAC: Category E

## **Exterior and Interior Noise**

IDOT and FHWA stipulate that outdoor areas of frequent human use be given primary consideration.

Interior noise for private residences is not studied; the study analysis focuses on noise levels that interfere with outdoor conversations.



Traffic Noise Field Measurement

## Determine Noise Levels

**Predicted Traffic Noise Using** FHWA Traffic Noise Model

Existing Conditions (validated by field measurements) Future 2050 – Without Improvements (No Build) Future 2050 – With Improvements (Build)

Recognize

**Impacts Identified for** Worst-Case Receptors

1. Future noise levels approach, meet or exceed the FHWA Noise Abatement Criteria CAT B/C: Residential, cemetery, library, hospital, parks: > 65 dB(A) CAT E: Hotels, motels, office, restaurants > 71 dB(A)

## Noise Impacts

### 2. Substantial increase in noise (+15 dB(A) or greater)

RECEPTOR

YEN

Traffic Noise Abatement Analysis

Noise Walls MUST be FEASIBLE and REASONABLE

#### Feasibility

- Must achieve at least 5 dB(A) noise reduction for two impacted receptors.
- Must be feasible to construct.

#### Reasonableness

- Must achieve an 8 dB(A) reduction for at least one benefitted receptor.
- Must be cost-effective (generally <\$24,000 per benefitted receptor).
- Viewpoint Solicitation Majority vote by benefitted receptors in favor of abatement.

**RESPONSE GOAL OF 33%** of benefited receptors per proposed barrier

SOURCE

IF RESPONSE GOAL IS NOT MET a second mailing will be sent to maximize response rate for voting