

James River Freeway Sound Wall Public Meeting

Campbell Ave. to Kansas Expressway

January 24, 2013

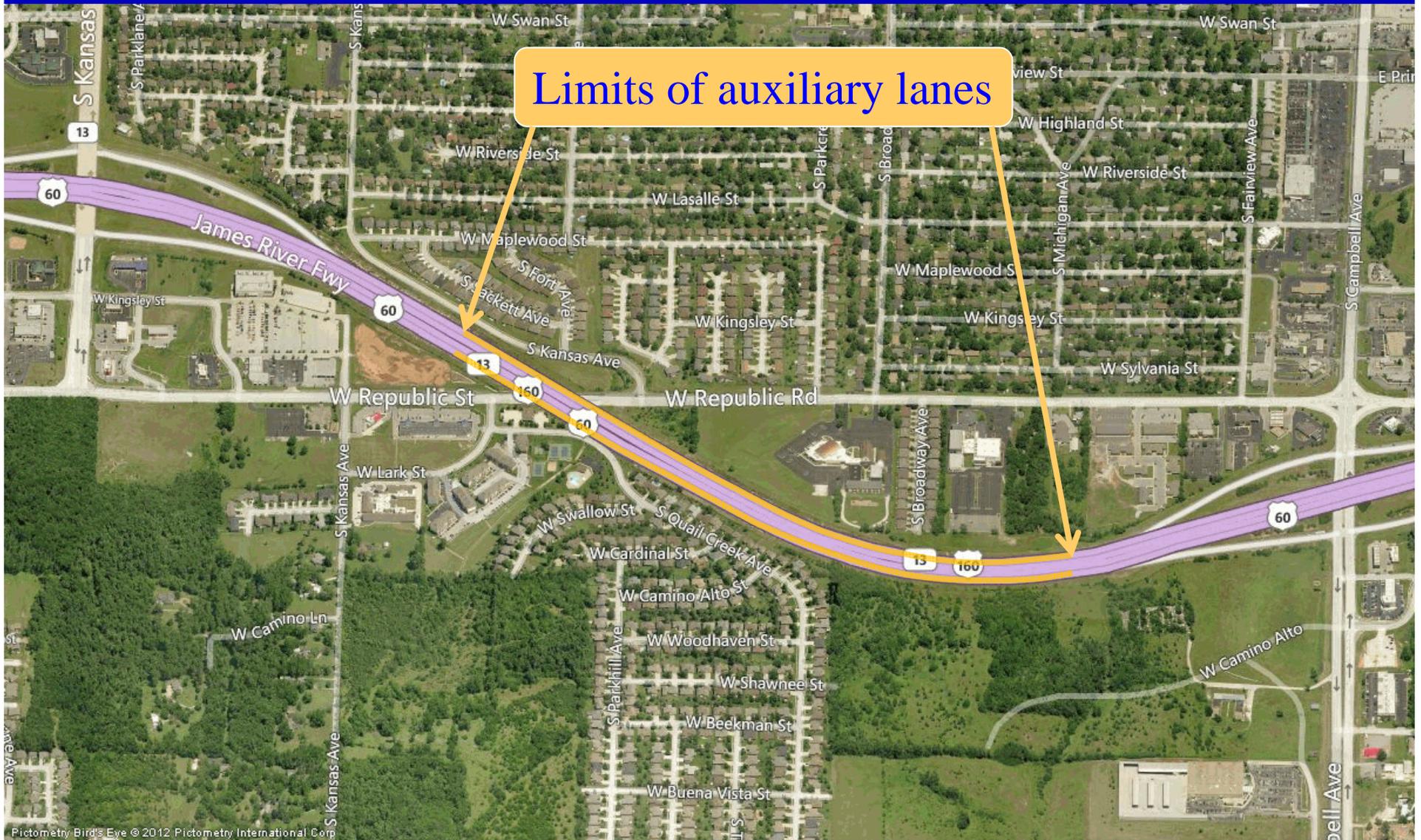
Dan Salisbury and Don Saiko
Missouri Department of Transportation



Outline of Discussion

- What initiated the noise/sound wall study?
- Highway noise
- Types of noise abatement (ways to lessen noise)
- Sound wall criteria
- The study areas for US 60
- What's next – the vote

How was noise study initiated?



Main Causes of Noise

Truck Exhaust



Tire/Road Noise

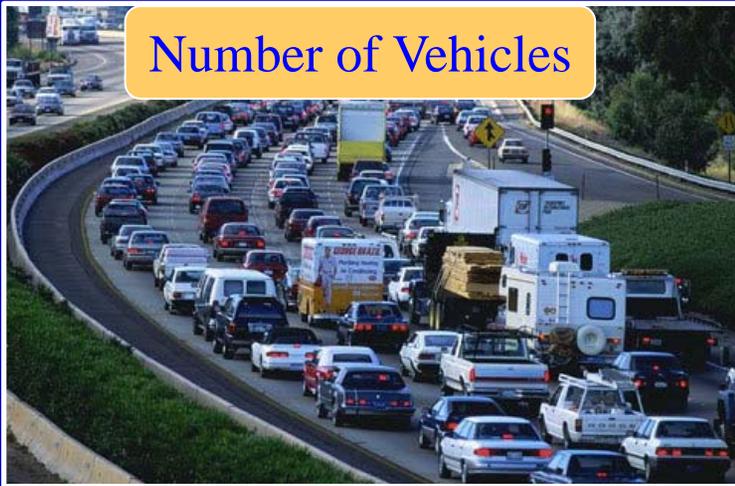


Vehicle Engines



What Determines Noise Level

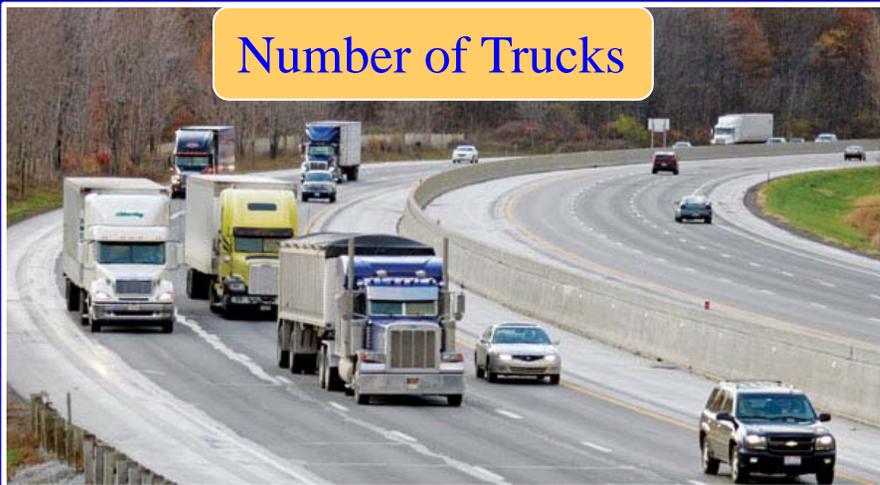
Number of Vehicles



Speed of Traffic



Number of Trucks



Example of Noise Level



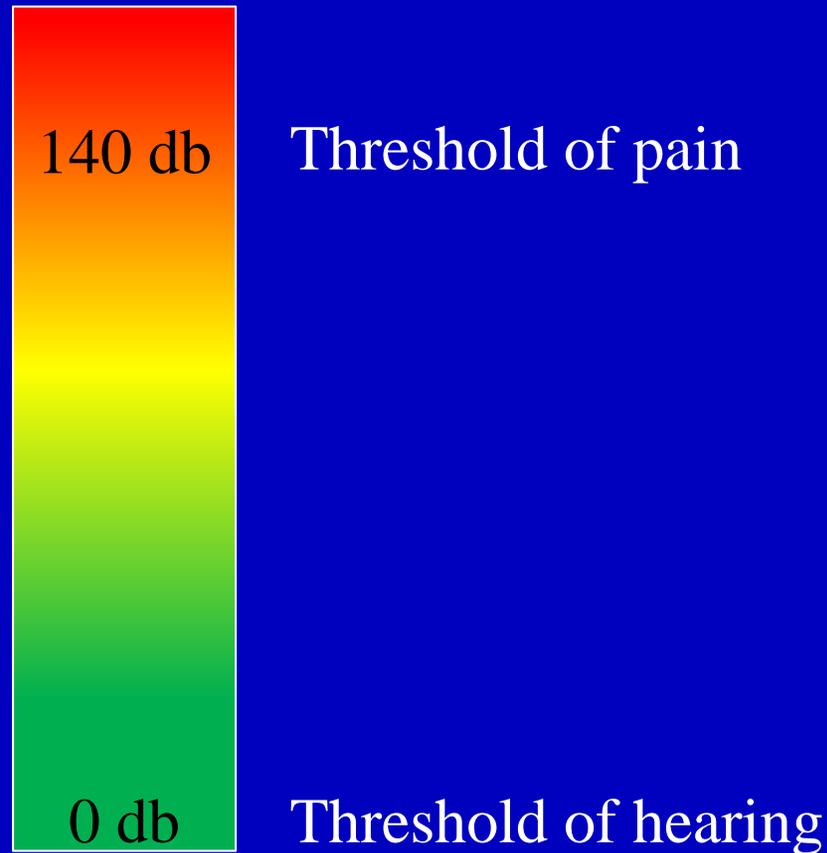
v.s.



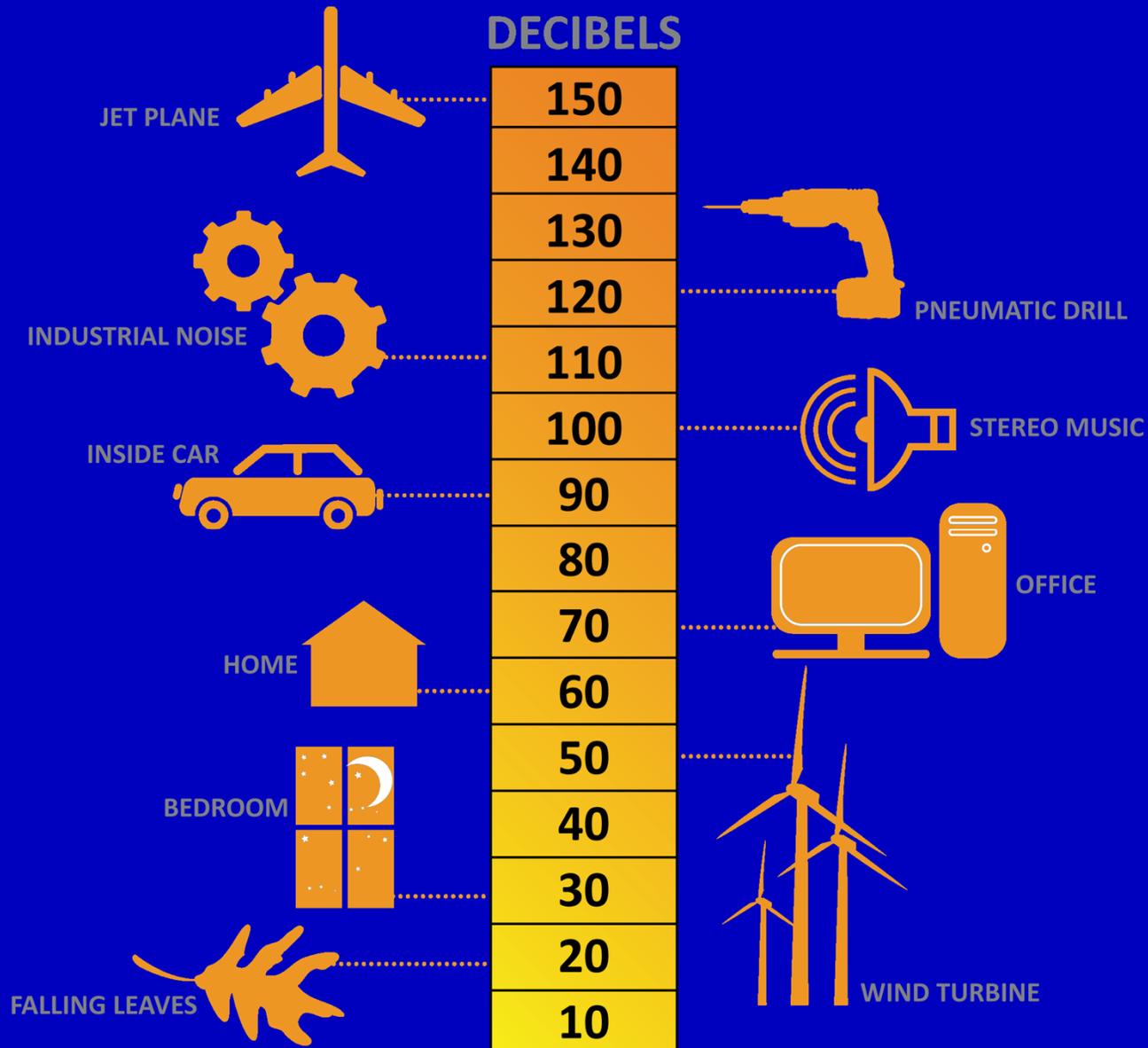
Traffic traveling at 65 MPH is twice as loud as traffic traveling at 30 MPH

How is Noise Measured?

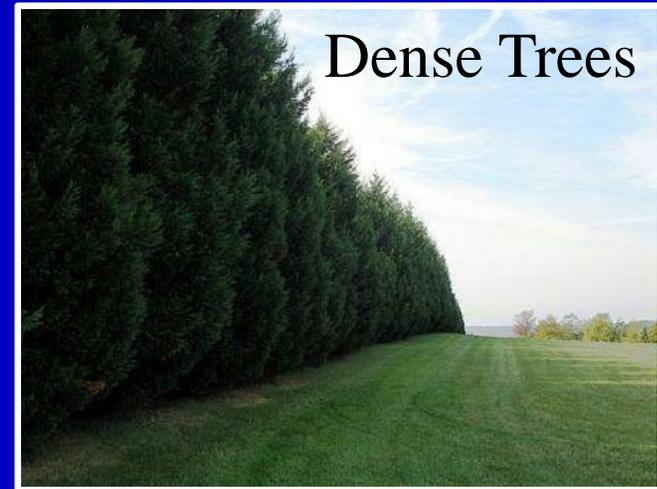
A scale known as Decibel



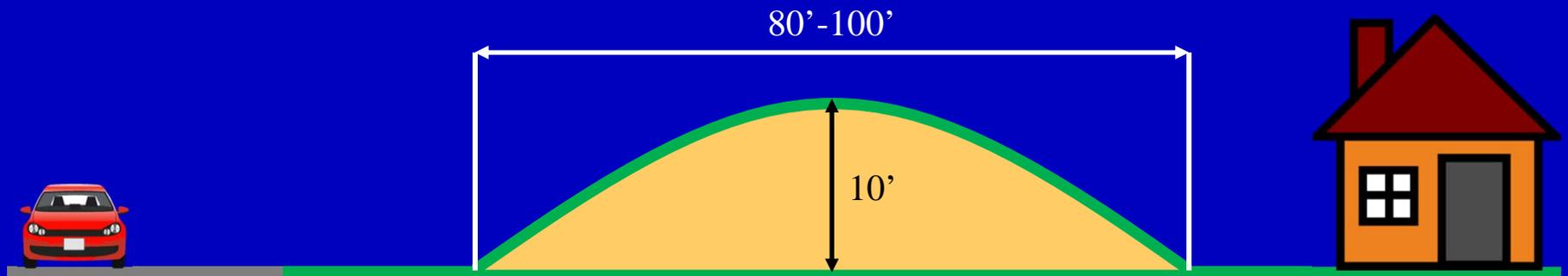
Examples of Noise Levels



Examples to Decrease Noise

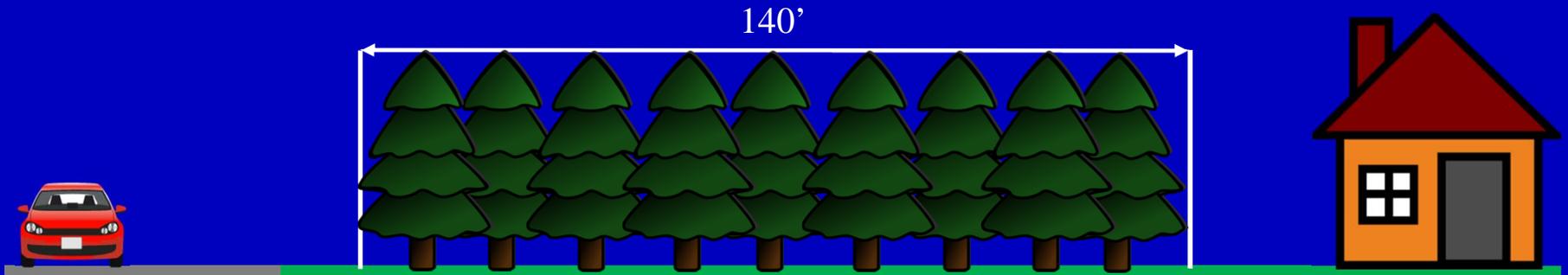


Earth Berm



Requires more right of way due to width of berm

Dense Wall of Trees



Requires 20' of width to reduce decibel level by 1 decibel

Requires more right of way due to width of trees

Takes time to establish growth

Sound Wall



Can be constructed within existing highway right of way

Most are made of concrete (durability and low maintenance)

Able to withstand elements (sun, temperature, moisture)

US 65 Sound Walls



Definitions

Impacted Receiver/Receptor

- Any receiver (property) that approaches 66 decibels or greater.

Benefited Receiver/Receptor

- A receptor (property) that receives at least a 7 decibel reduction in noise level with the addition of a sound wall.

Noise Policy Criteria

- Noise level must exceed 66 dBA
- Wall must provide a minimum 7 dBA reduction
- Wall must be no higher than 20 feet
- Wall must be built on state property and meet safety and maintenance needs
- Majority of benefited property owners must agree
- Cost can't exceed \$36,000 per benefited receptor

US 60 Study Areas



Wall Study Location No. 1

Legend

4000 Receiver Address – Software Model

Receiver – Field Measured

Noise Abatement Wall

Property Lines

Approx. 66 dBA Contour (Existing)

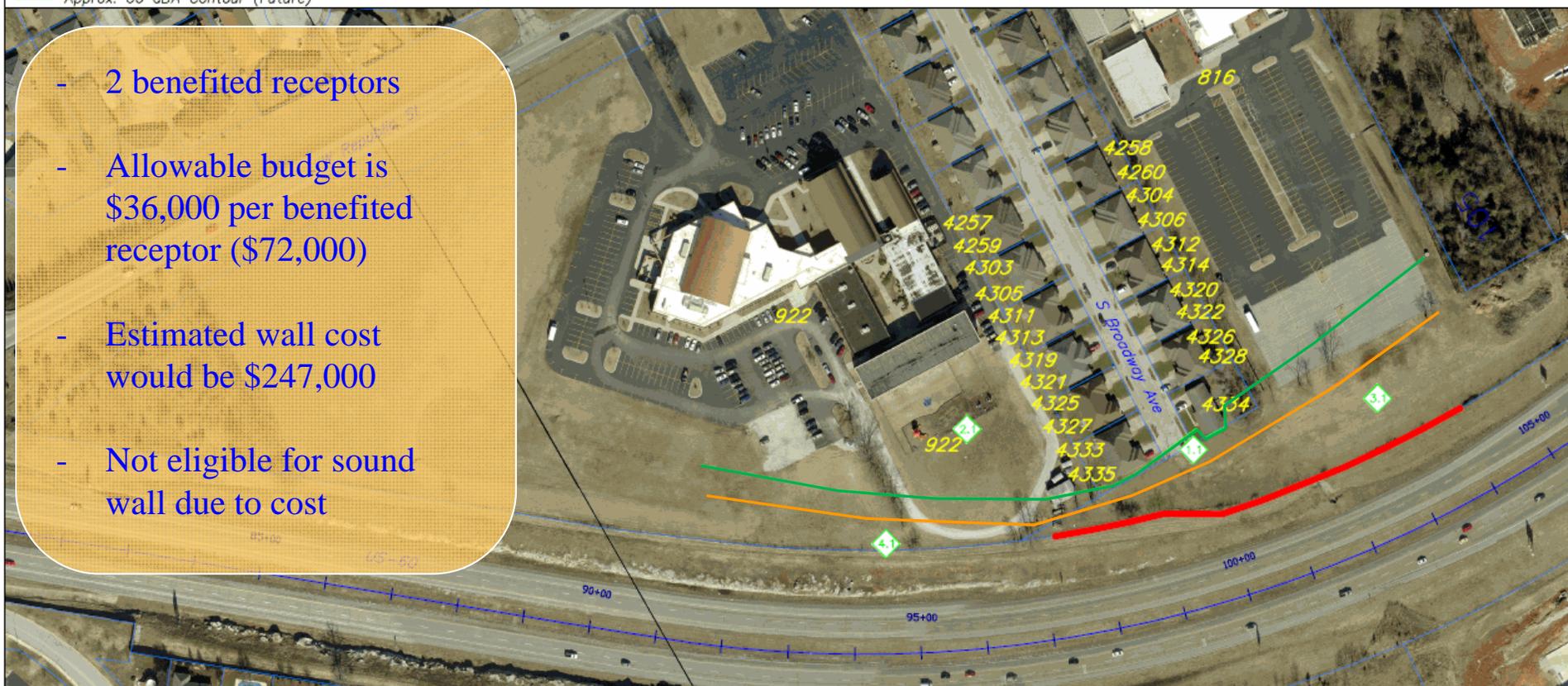
Approx. 66 dBA Contour (Future)



Not to Scale

Wall Study Location No. 1

- 2 benefited receptors
- Allowable budget is \$36,000 per benefited receptor (\$72,000)
- Estimated wall cost would be \$247,000
- Not eligible for sound wall due to cost



Wall Study Location No. 2

Legend

4000 Receiver Address - Software Model

Receiver - Field Measured

Property Lines

Approx. 66 dBA Contour (Existing)

Approx. 66 dBA Contour (Future)



Not to Scale

Wall Study Location No. 2



Wall Study Location No. 3

Legend

4000 Receiver Address - Software Model

Receiver - Field Measured

Noise Abatement Wall

Property Lines

Approx. 66 dBA Contour (Existing)

Approx. 66 dBA Contour (Future)



Not to Scale

Wall Study Location No. 3



What's next?



Letters will be sent out to 15 homes in Quail Creek

Majority of property owners must agree for wall to be built



Actual construction bids will need to be reviewed

Limit of \$36,000 per benefitted receptor/property

Additional Information

www.fhwa.dot.gov/environment/noise/

U.S. Department of Transportation
Federal Highway Administration

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Highway Traffic Noise

Construction Noise

Measurement

Noise Barriers

Noise Compatible Planning

Noise Effect on Wildlife

Regulation and Guidance

Tire Pavement Noise

Traffic Noise Model

Training

Contacts

For more

FHWA → Environment

Highway Traffic Noise

The Federal Highway Administration (FHWA) is the agency responsible for administering the Federal-aid highway program in accordance with Federal statutes and regulations. The FHWA developed the noise regulations as required by the Federal-Aid Highway Act of 1970 (Public Law 91-605, 84 Stat. 1713). The regulation, 23 CFR 772 Procedures for Abatement of Highway Traffic Noise and Construction Noise, applies to highway construction projects where a State department of transportation has requested Federal funding for participation in the project. The regulation requires the highway agency to investigate traffic noise impacts in areas adjacent to federally-aided highways for proposed construction of a highway or a new



- FHWA Traffic Noise Model version 3.0 Development ([TNM 3.0](#))
- Final Rule on 23 CFR 772 - [HTML](#) or [PDF \(129 Kb\)](#)
- Highway Traffic Noise: Analysis and Abatement Guidance - [HTML](#) or [PDF \(977 Kb\)](#)
- Highway Traffic Noise: Analysis and Abatement Additional

Questions or Comments

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