

# TRAFFIC NOISE PRACTITIONER SUMMIT JUNE 2018



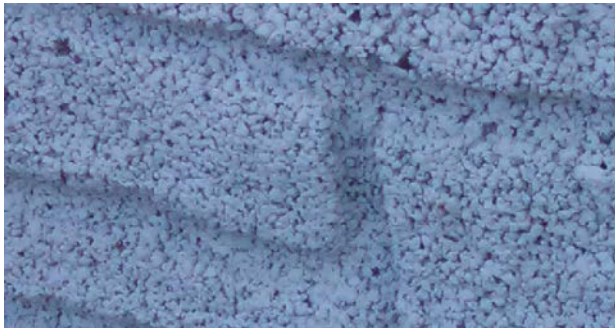
OHIO DEPARTMENT OF  
TRANSPORTATION

# Absorptive vs Reflective Walls

## ODOT's Policy

- ❑ Installation of sound absorptive noise barriers (i.e. the use of sound absorptive material) must be approved by ODOT-OES
- ❑ Typical uses for sound absorptive noise barriers have been where there are noise sensitive areas across from a proposed noise wall or where parallel barriers are proposed
- ❑ However, if the width to height ratio of the roadway section to the noise barrier is at least 10:1, the use of sound absorptive material (SAM) on noise walls is not required, based on FHWA guidance and research
- ❑ For example, this means that the use of SAM for two parallel barriers 10' tall and 120' apart, is not required.
- ❑ Reflective barriers are required in isolated areas with no noise sensitive land use on the opposite side of the roadway. Locations where future development may result in a noise sensitive land use on the opposite side of the roadway should also have reflective barriers installed. Locations with industrial or commercial use on the opposite side of the roadway are locations for reflective barriers.

# Absorptive vs Reflective Walls



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## Other factors to Consider

- ❑ SAM helps avoid any perception of increased highway noise due to the barriers.
- ❑ Based on research, small changes in sound level associated with barrier reflections can be meaningful to the public and to barrier effectiveness conclusions.
- ❑ Costs \$1-\$2 more per sf than reflective
- ❑ Based on research, the reduction in noise levels opposite the freeway from an absorptive wall is not even perceptible to the average human ear (~1.5 decibels or less).

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## Other factors to Consider

- Much more sealer/paint is required to cover sound absorptive noise walls
- Reflective walls are aesthetically more pleasing than absorptive, especially over time-cleaner, sharper look. SAM on older walls starting to degrade; looking dirty/dingy
- ODOT still receives complaints on noise reflecting on our absorptive walls
- Graffiti removal is much more difficult with a sound absorptive noise wall

# Questions, comments?

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