

FREQUENTLY ASKED QUESTIONS (FAQs)

I-35 in Love County | JP 31896(07) and JP 35728(04)

Why is ODOT planning a roadway improvement on I-35?

To accommodate future traffic volumes by adding one lane of traffic in each direction.

How will the projects be constructed?

Two lanes of traffic in both directions will remain open during construction.

What happens next? What is the project schedule?

The public comment period will continue through September 12, 2023.

After consideration of all public input received, ODOT will complete the environmental document and move forward with final design.

What is the construction schedule?

Construction will be completed in two packages:

- MM 3.2 north 1.5 miles to the MM 4.7 is scheduled to begin construction in 2027.
- MM 5.7 north 2.0 miles. to MM 7.7 is scheduled to begin construction in 2027.

Will ODOT be purchasing new right-of-way on these projects?

These projects will be constructed within existing ODOT right-of-way.

Will noise walls be included in the project?

ODOT will follow federally approved guidelines to study potential noise impacts along the highway corridor.

What are the Federal standards for highway traffic noise?

The Federal noise regulation at 23 Code of Federal Regulations (CFR) Part 772 constitutes the official Federal noise standards. The standards include the Noise Abatement Criteria and all other requirements of 23 CFR 772, such as prediction of noise levels, abatement, information for local officials, and construction noise. The entire Part 772 is the Noise Standard. FHWA has given highway agencies flexibility in implementing the 23 CFR 772 standards, per the current ODOT Noise Policy, dated July 13, 2010, to be applied uniformly and consistently to all federal aid projects throughout the state.

What are the FHWA Noise Abatement Criteria (NAC)?

The FHWA NAC are objective absolute noise levels for varying land use categories that are used to determine if and where traffic noise impacts occur, as defined in 23 CFR 772.5. The NAC categories are listed in Table 1. The FHWA NAC focuses on levels where highway traffic noise could potentially interfere with speech communication in exterior areas. 23 CFR 772's

primary focus is on determining traffic noise impacts and considering noise abatement for exterior areas of frequent human use.

Table 1: Federal Highway Administration Noise Abatement Criteria (NAC)		
Activity Category ⁽¹⁾	Noise Level (Leq) ⁽²⁾	Description of Activity
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B ⁽³⁾	67 (Exterior)	Residential
C ⁽³⁾	67 (Exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreational areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52 (Interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E ⁽³⁾	72 (Exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F
F	-	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing
G	-	Undeveloped lands that are not permitted

⁽¹⁾ The Leq (h) Activity Criteria values are for impact determination only and are not design standards for noise abatement measures.

⁽²⁾ The equivalent steady-state sound level, which is a stated period, contains the same acoustic energy as the time-varying sound level during the same period, with Leq (h) being the hourly value of Leq.

⁽³⁾ Includes undeveloped lands permitted for this Activity Category.

What is the extent of the noise study area?

Per FHWA guidelines, the highway agency must identify all receptors impacted by a project. For interstate projects, such as I-35, a 500 feet analysis envelope is typically applied to ensure all noise-sensitive receptors nearest to the proposed project are evaluated. If deemed necessary, the study area can be extended beyond 500 feet.

What is TNM v2.5?

The FHWA's TNM v2.5 is a computer software that calculates existing and future noise levels based on project design plans consisting of roadway geometry, traffic data, terrain lines, ground zones, etc., and receptor site locations.

How are existing noise levels determined?

Existing noise levels are determined by using one of the following methods:

- (1) Perform sound level measurements at representative receptors taken during the worst noise hour;
- (2) Predict noise levels using the FHWA Traffic Noise Model (TNM v2.5); or,
- (3) Use a combination of sound level measurements and prediction with a validated Traffic Noise Model. Measurements should occur during free-flow traffic conditions and do not need to occur during the worst noise hour.

How are future noise levels determined?

Future noise levels are determined using the FHWA TNM v2.5 consistent with the methodology of TNM per 23 CFR 772.9(a).

What is dB(A) $L_{EQ}(h)$?

The decibel (dB) is a logarithmic unit expressing the measured sound pressure ratio to a standard reference level. Sound is composed of various frequencies, but the human ear does not respond to all frequencies. Frequencies the human ear does not respond to are filtered out when measuring highway traffic noise levels. Sound level meters are usually equipped with weighting circuits, which filter out selected frequencies. The A-scale on a sound level meter best approximates the human ear's frequency response. The term $L_{EQ}(h)$ refers to an equivalent of an average sound level over an hour that contains the same acoustic energy as the time-varying sound level during the same period. All traffic noise levels are typically expressed in dB(A) $L_{EQ}(h)$.

How are noise impacts determined?

A traffic noise impact occurs when: (1) future predicted exterior $L_{EQ}(h)$ traffic noise levels approach by one decibel, meet or exceed any of the FHWA Noise Abatement Criteria (NAC); or, (2) Impacts when there is a substantial noise increase are when future levels exceed current levels by 15 dB or greater, even though the predicted levels may not exceed the NAC.

What is "feasible" highway traffic noise abatement?

Feasibility refers to the combination of acoustic and engineering factors. The engineering factors include whether it is possible to build a noise barrier given site constraints (drainage, safety, utilities). Acoustical characteristics are whether the abatement measure provides an acceptable reduction in noise levels. Noise barriers must be acoustically feasible. Per ODOT Noise Policy, a noise barrier must achieve at least a 5 dB(A) highway traffic noise reduction to be considered feasible.

What is "reasonable" highway traffic noise abatement?

Reasonableness refers to the many factors determining whether mitigation is fair and affordable. The following are the reasonableness criteria that are specified in the ODOT Noise Policy:

- (1) The property owners' and residents' desire for mitigation.
- (2) A design goal of 7 dB(A) noise reduction must be achieved for at least 75 percent of the benefitted receptors identified within the first row of receptors.
- (3) The cost not to exceed \$30,000.00 per benefitted residential receptor. A benefitted residential receptor receives at least a 5 dB(A) reduction compared to no mitigation and includes all residential receptors (not only first-row receptors). The benefit-cost is based on the historical unit cost of \$25 per square foot of wall height required to achieve a feasible reduction. As increased barrier height requires a disproportionate increase in foundation costs (up to two times the "standard" wall), the maximum wall height considered for noise reduction is 22 feet.

The additional factors that may be considered to increase the allowable cost and benefit factors listed above are as follows: if the overall magnitude of the future noise levels without mitigation exceeds 75 dBA; if the date of permitted construction of the residential area pre-dates the date of initial highway construction, and if local officials have implemented measures to control incompatible growth and development adjacent to highways, then an additional \$10,000 per benefitted receptor will be allowed in the Reasonableness Criteria, for a total of \$40,000 per benefitted receptor.

Are payments allowed for noise damages?

Per FHWA, State DOTs cannot use Federal-aid funds to compensate property owners for noise damages. Still, they can use Federal-aid funds for noise abatement, consisting primarily of noise barrier walls placed within the highway right-of-way. In addition, per ODOT Noise Policy, the Department will not consider the insulation of residences as noise mitigation.

Does vegetation reduce noise levels?

Studies have shown that vegetation must be a minimum of 100 feet thick, a minimum of 20 feet high, and sufficiently dense (100% opacity) to provide at least a 5-dB(A) noise reduction. Since a substantial noise reduction does not occur until vegetation matures, the FHWA does not consider planting vegetation as a highway traffic noise abatement measure for projects subject to the provisions of 23 CFR 772.

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