TEXAS DEPARTMENT OF TRANSPORTATION

TRAFFIC NOISE ANALYSIS

Traffic noise analysis was conducted in accordance with TxDOT's guidelines, also approved by FHWA. Noise impacts were identified for both Build Alternatives. Noise abatement measures were considered and analyzed including traffic management, schematic design changes, acquisition of undeveloped property to act as a buffer, and the construction of noise barriers.

TxDOT REQUIRES THAT A NOISE BARRIER MEET FEASIBILITY AND REASONABLENESS CRITERIA IN ORDER TO BE BUILT.

THESE CRITERIA ARE AS FOLLOWS:

a. An impacted receptor is one where the future noise levels approach or exceed the Noise Abatement Criteria Level listed in 23 CFR 772 (66 dBA for residential receptors) OR when the predicted future sound level exceeds the existing level by more than 10 dB(A)

b. A benefited receptor is a receptor that experiences at least 5 dB(A) of sound reduction from an abatement option

FEASIBILITY

- **Acoustical criteria**
  - 5 dBA or greater reduction of sound at more than 50% of first-row, impacted receptors
- **Engineering consideration**
  - Topography and drainage
  - Access, safety, and maintenance

REASONABLENESS

- **Noise reduction design goal:**
  7 dBA or more for at least one benefited receptor
- **Cost criterion:**
  surface area of the barrier wall does not exceed 1,500 square feet per benefited receptor
- **Bordering and benefiting property owners and residents** are invited to attend a noise workshop and are provided the opportunity to vote for or against the proposed noise barrier. If a majority of the weighted votes received are "for" the barrier, TxDOT will construct the noise barrier.