Note: Only adjacent property owners may submit a ballot to vote on the proposed noise barrier.
What is the Purpose of this Workshop?

• Provide overview of Traffic Noise Analysis
• Present the potential noise barrier location, dimensions, and aesthetic elements

Voting Ballot
For Noise Barrier
Against Noise Barrier
SH 360 – Proposed Construction Project

- Environmental clearance received in February 2007
- Reconstruct to four main lanes each direction at East Abram Street
- Widen to four main lanes each direction from Mitchell Street to Green Oaks Boulevard
- Existing frontage roads to remain
- Five proposed noise barriers
Traffic Noise Analysis

• FHWA regulation on highway traffic noise requires that we conduct noise studies when:
  ▪ Utilizing federal funds
  ▪ Adding capacity on existing highways

• TxDOT guidelines (FHWA approved) utilized to perform this analysis.

• The most current Traffic Noise Model is the software that models the existing and future roadway.

• The purpose of our noise study is to learn whether the SH 360 Project traffic noise will have an impact on nearby outdoor areas frequently used by people.
Highway Traffic Noise

• Produced from tires, engines, and mufflers of cars and trucks.

• Measured either by a sound meter or predicted by computer program.

• Depends on the number and speed of vehicles, the terrain, and the distance between the highway (source) and listener (receiver).
FHWA has established Noise Abatement Criteria (NAC) to determine possible traffic noise impacts on various activity areas.

<table>
<thead>
<tr>
<th>dB(A) (Leq)</th>
<th>Activity Area Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>57</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where preservation of those qualities is essential if the area is to continue to serve its intended purpose</td>
</tr>
<tr>
<td>67</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Residential</td>
</tr>
<tr>
<td>67</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, daycare centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings</td>
</tr>
</tbody>
</table>

TxDOT decides that an impact occurs when predicted noise levels are:

- 1 dB(A) below, equal to, or above the NAC criteria for a specific activity area
- More than 10 dB(A) higher than the existing levels at any activity area.

In either of the above condition, noise abatement must be considered.
What Does 67 dB(A) Sound Like?

<table>
<thead>
<tr>
<th>Sources</th>
<th>dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rock Band</td>
<td>110</td>
</tr>
<tr>
<td>Leaf Blower</td>
<td>100</td>
</tr>
<tr>
<td>Food Blender</td>
<td>90</td>
</tr>
<tr>
<td>Police Whistle</td>
<td>80</td>
</tr>
<tr>
<td>Vacuum Cleaner</td>
<td>70</td>
</tr>
<tr>
<td>Conversation at 3-ft to 5-ft</td>
<td>60</td>
</tr>
<tr>
<td>Refrigerator</td>
<td>50</td>
</tr>
<tr>
<td>Library</td>
<td>40</td>
</tr>
</tbody>
</table>
Our Noise Study Does What?

- Identifies land use and activity areas that may be impacted by highway traffic noise.
- Determines existing noise levels.
- Predicts noise levels 20 years in the future for No-Build and Build Alternatives.
- Examines and evaluates ways to reduce noise impacts (abatement measures).
Noise Abatement Consideration

• Noise abatement refers to the positive action taken to reduce the impact of noise from highway traffic on an activity area.

• Noise abatement on this project:

  Noise Barriers

• Noise Barriers evaluated to determine if they are feasible and reasonable.

Photos taken from FHWA Keeping the Noise Down Guidebook
How Noise Barriers Work

Diffraction

A + B > C

= Longer Path Length
When Noise Barriers are MORE Effective

Within TxDOT ROW

Source

Within TxDOT ROW

-5

200 ft

Source

Within TxDOT ROW

-5

Receiver

Receiver
Feasibility Requirements

• Can the noise barrier:
  ▪ Provide a minimum of 5 dB(A) reduction in noise levels at the majority of impacted sites?
  ▪ Be constructed at the appropriate location?

• Would noise barrier:
  ▪ Create a safety issue?
  ▪ Restrict access for vehicular and pedestrian movement?
  ▪ Be inaccessible for maintenance?
  ▪ Impact utilities, drainage?
  ▪ Affect historic properties?
Reasonableness Requirements

- **Cost/benefit analysis** where total cost of noise barrier is $25,000 (or less) per benefitted receiver.

- **Noise reduction design goal** where at least one first row receiver (residence) achieves at least a 7 dBA reduction in noise.

- **Opinion of the benefitted receiver(s)** where the final decision to construct noise barrier or not is by a simple majority vote.
Reasonable and Feasible

Feasible

-5 (or more)

Reasonable

$25,000 (or less)

Total Cost

Cost for each Benefited Receiver

$120,000

= 6

= $20,000

Noise Barrier
Near your neighborhood, existing sound levels estimated to be 68 - 75 dB(A) and year 2025 levels predicted as 70 – 76 dB(A).

A noise barrier including four segments for a total length of 4,766 feet and ranging in height from 6 to 12 feet is recommended to reduce levels by approximately 5 – 9 dB(A).

The noise barrier was determined to be reasonable and feasible for implementation based upon an analysis that considered all individual segments as one barrier.

Through this type of analysis, all segments of the barrier would or would not be constructed through a majority vote, greater than 50%, by ballot of all adjacent property owners.
Noise Barrier Aesthetics

Roadway Side

Residential Side

*These are photographs of a similar aesthetic treatment on an existing noise barrier. Actual aesthetic treatment may vary.
• The aesthetic style was coordinated between TxDOT project engineers and the City of Arlington and City of Grand Prairie.

• TxDOT would maintain the noise barrier.
Ballots must be postmarked by:

December 2, 2016

What Happens After December 2, 2016?

- Tally up the votes received.

- If approved by majority vote, the noise barrier would be planned for construction as part of the SH 360 Project expected to be awarded for construction in 2020.
Questions?

For Questions or Concerns After This Workshop
Please Contact:
Andy Kissig, P.E. at 817-370-6599


Note: Noise barrier ballot included on website is for adjacent property owners only.
Noise Barrier Ballot
SH 360 from E. Abram Street to Green Oaks Boulevard
Tarrant County, Texas
CSJ: 2266-02-086

A Noise Workshop will be held on 11/17/2016

As part of the State Highway (SH) 360 widening project the Texas Department of Transportation proposes to construct a noise barrier (Noise Barrier 1), ranging in height from 6 to 12 feet, between the southbound main lanes and frontage road adjacent to your property. The existing frontage road would remain. The proposed noise barrier would not be constructed without the approval, by majority vote, of the adjacent property owners.

1. Property Owner
   Address
   City, State Zip Code

2. If the person listed in Item 1 is not the current property owner, please provide current property owner information here:
   
   Full Name (please print): ____________________________
   Mailing Address: __________________________________
   City, state, zip code: ________________________________

3. Are you for or against the construction of the proposed noise barrier? Only one vote is allowed for each adjacent property to the proposed noise barrier.
   ❑ For ❑ Against

COMMENTS /CONCERN: (Please Print) __________________________________________________________

________________________________________________________

________________________________________________________

________________________________________________________

________________________________________________________

________________________________________________________

________________________________________________________

________________________________________________________

Signature (required): ____________________________ Date: ____________________________

Telephone no.: ____________________________

▪ If possible, please bring your completed and signed ballot to the Noise Workshop.
▪ If you are not able to attend the Noise Workshop, please send your completed and signed ballot to: Brian Barth, P.E., TxDOT, 2501 S.W. Loop 820, Fort Worth, Texas, 76133. (Ballot must be postmarked no later than 12/2/2016)
▪ Adjacent property owners will be notified of the results of the vote for or against the proposed noise barrier after all ballots have been received and counted.
Como parte del proyecto de ampliación de la carretera del estado (SH) 360, el Departamento de Transporte de Texas propone construir una barrera de ruido (barrera de ruido 1), que variará en altura de 6 a 12 pies, entre las carretera principal hacia el sur y la carretera de servicio adyacente a su propiedad. La carretera de servicio existente se mantendría. La barrera de ruido propuesta no se construirá sin la aprobación, por mayoría de votos de los propietarios adyacentes.

1. **Nombre Completo**  
   Dirección postal  
   Ciudad, Estado, Codigo postal

2. **Si la persona listada en el Artículo 1 no es el propietario actual, favor de proveer la informacion del dueño actual aquí:**
   - Nombre Completo:
   - Dirección postal:
   - Ciudad, Estado, Codigo postal:

3. **Esta usted a favor o en contra de la barrera de ruido en propuesta?**  
   Solo un voto es permitido por cada propiedad adyacente a la barrera de ruido en propuesta.
   - [ ] A Favor  
   - [ ] En Contra

**COMENTARIOS/PREOCUPACIONES:**  
(Favor Use Letra Imprenta)

---

**Firma** (obligatorio):

**Numero de telefono:**

**Fecha:**

- Si es posible, favor de traer su boleta completada y firmada a el taller de ruido.
- Si no es capaz de asistir al taller de ruido, por favor, envíe su boleta completada y firmada a: Brian Barth, P.E., TxDOT, 2501 S.W. Loop 820, Fort Worth, Texas, 76133. **(Boleta se debe matasar a no más tardar el 12/2/2016)**
- Los dueños de las propiedades adyacentes serán notificados de los resultados de la votación a favor o contra de la barrera de ruido propuesta después que todas las boletas hayan sido recibidas y contadas.