Off-Hour Deliveries (OHD) Noise Mitigation Strategies
Overview

- The Off-Hour Deliveries (OHD) is a NYC DOT initiative to shift truck deliveries from peak day time hours to the off peak period (7pm – 6am).
- OHD can take place in a manner that is considerate of neighborhood quality of life concerns, such as noise pollution.
- **Noise mitigation** is a key factor for successful OHD implementation.

OHD Noise Mitigation Strategies Menu:

- Training/Education
- Low Noise Equipment
- Truck Noise Mitigation
- Noise Absorbing Materials
Training/Education
EMPLOYEE TRAINING

Transporters

- To reduce noise levels when making deliveries during the off hours, drivers should consider:
  - Noise increases with speed, reduce speed when approaching the delivery area.
  - If early for your delivery slot, do not wait within a residential area.
  - Turn off radio when approaching or leaving a residential delivery area, as well as during the delivery.
  - Avoid speaking loudly or shouting during the delivery.
  - Avoid slamming doors, dropping cargo storage bar, or dragging cargo on surfaces where it will create excessive noise.
  - Do not sound your horn (unless absolutely necessary for safety)
  - Turn off the refrigerator (if possible)
EMPLOYEE TRAINING

Receivers

- There are strategies that can be implemented to reduce noise impacts and be considerate of neighbors.

- Strategies to consider:
  - Avoid playing radio during the off hours in the delivery area.
  - Avoid speaking loudly or shouting to others (including delivery driver) during the deliveries.
  - Encourage drivers to park at the curb and avoid double-parking. Double parking can create congestion and cause other drivers to honk their horns, which in turn increases noise during the delivery.
  - Encourage deliveries to take place at the loading dock (if available) or at the curb closest to the delivery area.
Low Noise Delivery Equipment
LOW NOISE EQUIPMENT

Delivery Equipment

• When trucks are unloaded, equipment such as pallet jacks or fork lifts are used to move goods from the truck to the delivery point.
• Typically, this equipment has not had noise reduction measures installed, though some vendors have recently developed low noise equipment. These include:

Hand Pallet Jacks:
Low-noise tire models enables the pallet truck to drive smoothly and quietly; shock-absorbing material reduces noise caused by vibrations and rattling that occurs when the forks are lowered.

Pallet Forklifts:
Low-noise models reduces noise and vibration levels within the body as well as the tires. Electric versions can also reduce noise.
LOW NOISE EQUIPMENT

Resources - Sample List of Vendors and Products

Hand Pallet Trucks

- Grainger - Standard Quiet Manual Pallet Jack
- Logitrans - Panther Silent
- Lift-Rite - Stealth Pallet Jack

Forklifts

- Hiab - Moffett: Category E Series
- Maximal USA - M Series (Electric)
- National Forklift - FRHB15-FRHB25

Pictures of sample hand pallet trucks which are designed to meet the growing demand for quieter materials handling solutions.

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Truck Noise Mitigation
TRUCK NOISE MITIGATION

Backup Alarms

• A common source of noise complaints is associated with the backup alarms on trucks and forklifts.
• Self-adjusting and directional backup alarms can assist in mitigating noise while still being loud enough to be heard by pedestrians.
• Examples of vendors producing backup alarms include:

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Model(s)</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preco Electronics</td>
<td>45, 200 and 6000 Series</td>
<td><a href="http://www.precosafety.com">www.precosafety.com</a></td>
</tr>
<tr>
<td>Ecco Group Smart Alarms</td>
<td>500 and 700 Series</td>
<td><a href="http://www.eccolink.com">www.eccolink.com</a></td>
</tr>
<tr>
<td>Grote Industries</td>
<td>Model 73 040</td>
<td><a href="http://www.grote.com">www.grote.com</a></td>
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<tr>
<td>Brigade Electronics</td>
<td>BBS-TEK Series</td>
<td><a href="http://www.bbs-tek.com">www.bbs-tek.com</a></td>
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</tbody>
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TRUCK NOISE MITIGATION

Truck Modifications

• Low noise modifications to trucks can include:
  • Electrically operated roller shuttle cargo door
  • Noise absorbing floor coatings or aluminum floors that are also skid proof inside the trailer
  • Low noise tires, ex. “s-marking” in line with the rolling sound regulation
  • Tail-lift that is used to load and unload the truck
  • Refrigeration units (TRUs) – quiet units including electric or cryogenics
• Consider using electric, hybrid or natural gas trucks that are typically quieter than diesel counterparts
Noise Absorbing Materials
NOISE ABSORBING MATERIALS

Transporters/Receivers

Sound Absorption Sheets
• May be applied to the vehicle as well as the receiving location.
• Can be strategically placed to diminish noise levels.
• Materials: polyether or polyester foam, recycled foam, white glass wool, or recycled textile fiber

Barrier Mats
• May be used in vehicles, lifts, walls, enclosures, doors, ventilations systems, and all vibrating sheet metal structures.
• Materials: bitumen board, ethylene propylene diene monomer—a type of rubber, vinyl.

Multilayer Floor Mats
• May be used where sound and heat insulation is required. Suitable for applications where both low and high frequency noise occurs.
• Materials: rubber and vinyl in various surface textures such as a checkered, diamond or coin patterns.
NOISE ABSORBING MATERIALS

Resources - Sample List of Vendors and Products

Sound Absorption Sheets
- FatMat Sound Control – Self-Adhesive Kit
- Audimute – Peacemaker Sound Barrier Lite

Barrier Mats
- Sound Away – SoundAway Mat
- AudioSeal – Sound Barrier

Multilayer Floor Mats
- IsoStore – GenieMat
- Iso-Step – Floor Underlayment

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CONTACT NYC DOT

Get in Touch

• NYC DOT is keen on hearing from organizations and businesses implementing OHD.
• Some support and advice is available from the Office of Freight Mobility to assist organizations in the implementation of OHD.

Contact Us Today!
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OHD NOISE MITIGATION – THANK YOU!