

AIL SOUND WALLS



- ▶ PVC Sound Barrier Wall Systems
- ▶ Lightweight and easy to install
- ▶ Lower installed costs
- ▶ Sustainable and low-maintenance
- ▶ Meets ASTM F3459 standards



Transportation & Rail



Commercial & Industrial



Energy, Oil & Gas



Municipal, Residential Development

ENGINEERED SOUND MITIGATION SOLUTIONS

NET ZERO BY
2050

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AIL SOUND WALLS

Engineered for maximum sound mitigation.

Easy to install with local crews and reduced need for lifting equipment.



PLAY OUR
INSTALLATION
VIDEO

With their lighter weight, lower installed cost and long-term durability, AIL Sound Walls are a perfect choice for efficient sound barrier solutions along busy transportation corridors, surrounding noisy equipment or in other applications.

These nimble PVC systems install easily on narrow road or rail job sites and make an efficient land use solution for urban applications.

They meet accelerated weathering test requirements for durability and, because they are impervious to rain, snow, ice and sleet, they will not rust, rot or stain. In fact, AIL Sound Walls are often replacing older, degraded sound barriers made of concrete or other materials.

They are also more environmentally friendly than other sound barrier wall materials and have a high percentage of recycled (and 100% recyclable) content and a lower carbon footprint.

Lightweight, easy-to-install, durable and cost-effective PVC sound barrier wall systems.

Tongue and groove PVC panels stack easily and within steel posts to the required height and are capped with a top panel.



- ▶ Lightweight and durable PVC construction
- ▶ Interlocking tongue and groove connection
- ▶ Quick and easy to install
- ▶ Adapt easily to site variations and design requirements
- ▶ Lower installed costs
- ▶ Sustainable and low-maintenance
- ▶ Will not rust, rot or stain
- ▶ Impervious to rain, snow and ice, unaffected by de-icing salts
- ▶ Environmentally friendly with recycled and recyclable content
- ▶ Variety of colors, textures and options
- ▶ Adaptable to different footing systems
- ▶ Available in panel lengths of up to 16' (4.9 m)
- ▶ Wind load tested for hurricane-force winds
- ▶ Meets accelerated test requirements for durability
- ▶ Designed to meet applicable design codes (AASHTO, IBC, CSA)
- ▶ Meets ASTM F3459-21 Standard Specification for PVC Exterior Profiles used for Sound Walls

Silent Protector® (Absorptive)

SILENT PROTECTOR® is an absorptive PVC sound barrier wall system with an acoustical mineral wool fill.

- ▶ Absorbs unwanted noise
- ▶ Sound Transmission Class (STC) rating of 32
- ▶ Noise Reduction Coefficient (NRC) rating of 0.95
- ▶ Available as Silent Protector XL® for extended panel lengths of up to 16' (4.9 m).

SILENT PROTECTOR PLUS® adds a sound-absorbing backer board behind the mineral wool batt for a heavier absorptive panel with higher sound mitigation properties.

- ▶ Sound Transmission Class (STC) rating of 39
- ▶ Noise Reduction Coefficient (NRC) rating of 0.90

Tuf-Barrier® (Reflective)

TUF-BARRIER® is a reflective PVC sound barrier wall system.

- ▶ Blocks and reflects unwanted noise
- ▶ Sound Transmission Class (STC) rating of 31
- ▶ Available as Tuf-Barrier XL® for extended panel lengths of up to 16' (4.9 m).

TUF-BARRIER PLUS® adds an acoustical mineral wool batt and a sound-absorbing backer board for a heavier panel with higher sound mitigation properties.

- ▶ Sound Transmission Class (STC) rating of 36



Louisville, KY

Silent Protector® **STC32**

Silent Protector Plus® **STC39**

Available as absorptive or reflective systems in panel lengths of up to 16' (4.9 m) for an even lower installed cost.



Residential Development, Burlington, ON

Tuf-Barrier® **STC31**

Tuf-Barrier Plus® **STC36**

With their light weight and versatile component structure, AIL Sound Walls systems offer numerous benefits that stack up to make them the go-to sound barrier wall solution for any number of applications.

Panel lengths of up to 16' (4.9 m) with our XL Series

AIL Sound Walls are now available in XL Series panel lengths of up to 16' (4.9 m) with fewer panels, post and foundations — for an even lower installed cost.



An environmentally friendly choice

- ▶ Made from recycled and recyclable PVC
- ▶ Highest percentage of recycled material
- ▶ A readily renewable and 100% recyclable product
- ▶ Minimized water consumption in manufacturing
- ▶ Optimized shipping for reduced CO₂ emissions
- ▶ Long product lifespan
- ▶ Excellent fire-resistant properties
- ▶ Smaller footprint, better urban land use
- ▶ Earn LEED Points for Green Building

Generator, HVAC and equipment enclosures of all shapes and sizes



Easily integrated with roof systems



For project planning and assistance, call toll-free 1-866-231-7867.

Access gates, doors, utility ports and site variations are easily accommodated



Custom structure-mounted solutions



Transportation & Rail

AIL Sound Walls are a perfect choice to keep the peace in neighborhoods along busy transportation corridors. They can be installed easily on narrow road or rail job sites and are an efficient land use solution in urban areas.

Applications include:

- ▶ Highways, Railways and Bridges (Structure-Mounted)
- ▶ LRT Guideways and Stations
- ▶ Transit or Intermodal Hubs
- ▶ Test Track Facilities
- ▶ Airports



I-190 at Route 12, Worcester, MA



MetroRail Expansion, Houston, TX



LRT Guideway, Vancouver, BC

All Sound Walls are perfect for narrow roadsides or railways and for mounting to bridges, barriers or retaining walls.

Commercial & Industrial

Noise from commercial and industrial developments and their associated mechanical systems and traffic can be mitigated economically with AIL Sound Walls.

Applications include:

- ▶ Big Box Stores
- ▶ Distribution Facilities
- ▶ Manufacturing Facilities
- ▶ Mechanical System Barriers
- ▶ Rooftop System Surrounds
- ▶ Loading Docks
- ▶ Generator Surrounds



FedEx Logistics Center, Hampton, VA



Graphic Packaging, Kalamazoo, MI



Cerner Data Center Rooftop, Kansas City, MO



Midstream Gas Compressor Station, LaSalle, CO



Compressed Natural Gas Station Enclosure, Norwalk, CA



Biosolids to Energy Equipment Enclosure, St. Petersburg, FL

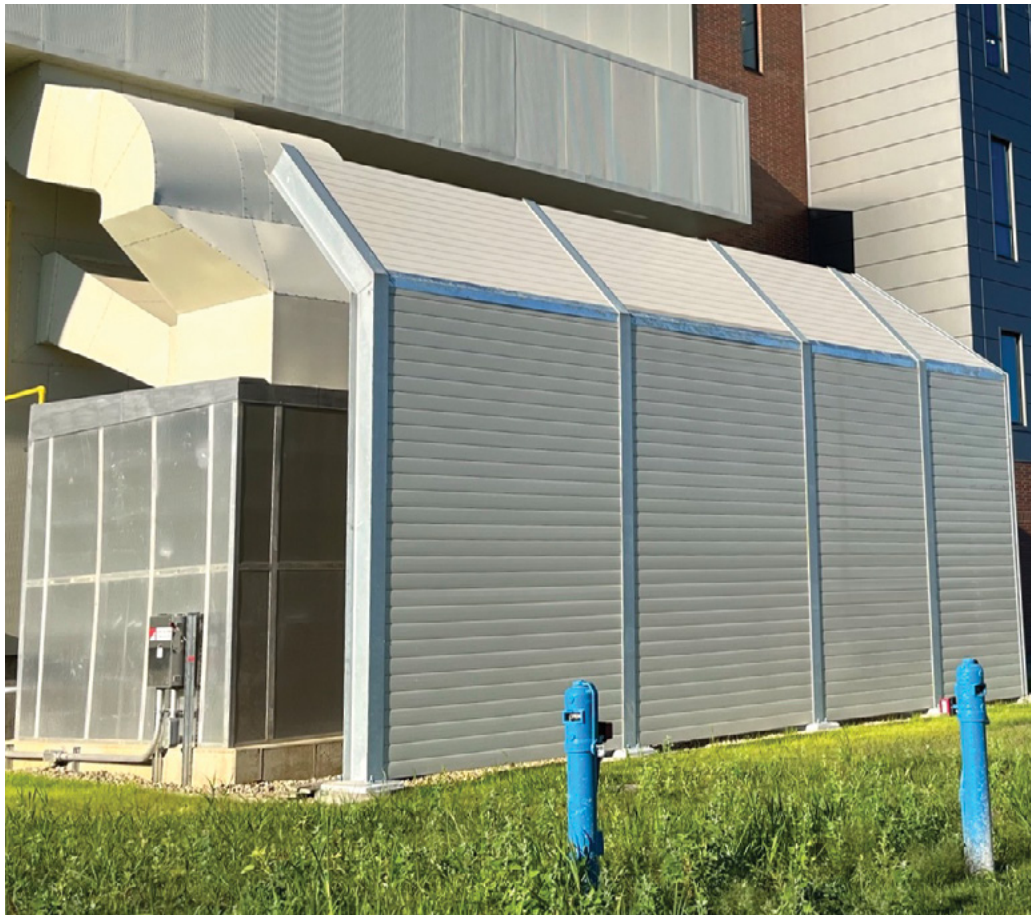
Energy, Oil & Gas

Cost-effective AIL Sound Walls ship economically to remote sites and assemble quickly using local crews and less lifting equipment. This makes them ideal for energy and oil & gas applications.

Applications include:

- ▶ Oil and Gas
- ▶ Compressor Stations and Substations
- ▶ Liquid Natural Gas / Compressed Natural Gas
- ▶ Alternative Energy — Wind and Solar
- ▶ Chillers and Generators
- ▶ Vapor Walls

Our lightweight and nimble PVC systems easily adapt to site variations and design requirements.



APEX
BY AIL SOUND WALLS

INNOVATION

Take any type of AIL Sound Walls (Silent Protector, Tuf-Barrer, Plus, XL Series), angle the top portion toward the noise source and you have APEX by AIL Sound Walls. The resulting “sound cove” effect helps contain the unwanted noise and reduce the wall heights while providing similar sound-mitigation effectiveness.

- ▶ Recommended for equipment enclosures and surrounds
- ▶ Contains unwanted sound and reduces overall wall height

Municipal

ALL Sound Walls offer proven sound mitigation solutions that are environmentally friendly and cost-effective solutions for today's municipalities and institutions.

Applications include:

- ▶ Waste Water Treatment Plants
- ▶ Pumping Stations
- ▶ Schools and Hospitals
- ▶ Equipment Barriers
- ▶ Rooftop Equipment Enclosures
- ▶ Natural Gas Reduction Sites



Water System Pump Station, San Antonio, TX



MARTA Peachtree Center LRT Station, Atlanta, GA



OC Transpo Bus Garage, Ottawa, ON

ALL Sound Walls are efficient noise control solutions for applications like generator enclosures and rooftop HVAC equipment.

Concrete-Free Foundation Solution

GEOSONIC

INNOVATION

Our new GeoSonic Concrete-Free Foundation Solution features a steel blade added to the steel posts or post sections to resist lateral pressure on the wall by forces such as wind load. They can be quickly installed by vibratory equipment without the need for excavation or concrete — greatly reducing the installation time and cost.

- ▶ No need for concrete foundations or excavation
- ▶ Faster, immediate installation of posts and panels
- ▶ Unaffected by water table





Vertical Panels, Oakville, ON



Giles Overlook Development, Lorton, VA



Sun Outdoors RV Resort Pool Equipment Surround, Chula Vista, CA



Solera Retirement Living, Kensington, MD

Residential Development

Smart developers know that AIL Sound Walls provide economical, long-lasting and effective noise mitigation solutions that improve their bottom lines and keep their residents happy.

Applications include:

- ▶ Abutting Roadways and Railways
- ▶ Rooftop HVAC Systems
- ▶ Equipment Surrounds
- ▶ Playgrounds, Daycares and Pools

Our sound barrier wall systems are available in a wide variety of colors and textures to enhance any architectural style.



INNOVATION

Reduce the tunnel effect and allow more natural light onto roadways and properties or into equipment enclosures by incorporating clear reflective panels into your design. Visia Transparent Panels have the same tongue and groove configuration as our sound barrier wall panels so they are easy to integrate.

- ▶ Durable, clear acrylic panels
- ▶ Available in various sizes and thicknesses
- ▶ Bird striping, tinting and non-glare available

All Sound Walls are available in a variety of attractive colors and textures in both Standard and Upgraded Finish Levels.

Standard Finish Level

Our Standard Finish Level provides an economical and attractive look with smooth panels and galvanized steel posts.

Features:

- ▶ Smooth panels
- ▶ Four standard colors available
- ▶ Galvanized steel posts

Options:

- ▶ Add post sleeves and caps¹
- ▶ Add an embossed woodgrain texture to standard color panels

Standard Finish Colors²

We offer four popular Standard Finish Colors that are designed to enhance any application: Gray, Adobe, Tan and White. Woodgrain texture can be added to any Standard Finish Color as an option.



Upgraded Finish Level

Our Upgraded Finish Level captures the essence of traditional wood fencing in a durable PVC sound barrier wall. It features woodgrain colored/textured panels accented by post sleeves, caps, top/bottom rails and reinforcement panels in one of our Standard Colors.

Features:

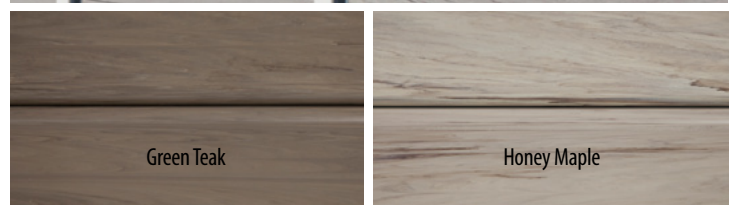
- ▶ Woodgrain colored/textured panels
- ▶ Two woodgrain colors available
- ▶ Post sleeves, caps, top/bottom rails and reinforcement panels in one of our Standard Colors

Options:

- ▶ Choose a Standard Color for post sleeves, caps, top/bottom rails and reinforcement panels
- ▶ Add woodgrain texture to bottom rails and reinforcement panels

Upgraded Finish Colors³:

We offer two popular Upgraded Finish Colors to enhance any application: Green Teak and Honey Maple.



¹ Not available on all post sizes.

² Color reproduction is subject to limitations of the printing process and/or screen viewing. Please ask your AIL Sound Walls Technical Sales Representative for actual color swatches.

³ Top Rails are always needed, but are not available in Green Teak or Honey Maple colors. The requirement for bottom rails and mid-wall reinforcement panels varies with sound barrier size and other factors. Larger post sizes may require powder coat finish instead of sleeves. Ask your AIL Sound Walls Technical Sales Representative for details before ordering.

Take a good look at our STC and NRC ratings.

There are two ways to measure a sound barrier's performance — Noise Reduction Coefficient (NRC) and Sound Transmission Class (STC). NRC measures the volume of sound absorbed versus the volume reflected, while STC measures the volume of sound that the wall allows to pass through. As shown below, all our sound wall products meet and surpass recommended NRC and STC standards.

For Product Specifications and Technical Drawings, visit ailsoundwalls.com



Product Specifications **Silent Protector® (Absorptive)** **Tuf Barrier® (Reflective)**

Span ¹	8 ft -16 ft (2.44 m -4.87 m) ²	8 ft -16 ft (2.44 m -4.87 m) ²
Panel Width	2.70 in (68.58 mm)	2.70 in (68.58 mm)
Panel Height	5.96 in ± .10 in (151.38 mm ± 0.25 mm)	5.96 in ± .10 in (151.38 mm ± 0.25 mm)
Weight	4.30 lbs/ft ² (21 kg/m ²) ³	Min. 4.10 lbs/ft ² (20 kg/m ²) ⁴
Wall Height	Greater than 30 ft / 9 m	Greater than 30 ft / 9 m
STC Rating	up to 39 ⁵	up to 36 ⁶
NRC Rating	0.95 ⁷	n/a

Product Specification Notes:

1. Span is governed by wind loads and varies on code requirements. Contact AIL Sound Walls for recommended panel spans for your project.
2. Achieve spans of up to 16 ft (4.88 m) with Silent Protector XL® or Tuf-Barrier XL®.
3. Weight of Silent Protector Plus® is 7.3 lbs/ft² (36 kg/m²).
4. Weight of Tuf-Barrier Plus® is 7.5 lbs/ft² (36.5 kg/m²).
5. Standard Silent Protector® has an STC rating of 32. Silent Protector Plus® can achieve an STC rating of 39.
6. Standard Tuf-Barrier® has an STC rating of 31. Tuf-Barrier Plus® can achieve an STC rating of 36.
7. Standard Silent Protector® NRC is 0.95. Silent Protector Plus® NRC is 0.90.

Sound Transmission Loss ASTM E90 / E413

Octave Band Number	2	3	4	5	6	7	STC
Center Frequency (Hz)	125	250	500	1000	2000	4000	—
Silent Protector®	23	21	28	42	48	49	32
Silent Protector® Plus	30	28	34	43	45	49	39
Tuf-Barrier®	23	19	30	45	45	54	31
Tuf-Barrier Plus®	24	21	36	45	49	57	36

Sound Absorption Coefficients ASTM C423/E795

Octave Band Number	2	3	4	5	6	7	NRC
Center Frequency (Hz)	125	250	500	1000	2000	4000	—
Silent Protector®	0.29	0.80	1.13	1.00	0.96	0.72	0.95
Silent Protector® Plus	0.28	0.71	1.06	0.97	0.94	0.78	0.90

STC – Sound Transmission Class

STC is an integer rating used to measure the decibel reduction through a partition. It states the number of decibels lost through that partition in a laboratory environment.

NRC – Noise Reduction Coefficient

NRC is a rating between 0 and 1 to index how absorptive a material is. An NRC of 0 means no sound waves are absorbed, whereas a rating of 1 means all of the sound waves are absorbed.

NRC	Qualitative
0.4 or less	Poor
0.5 to 0.6	Mediocre
0.6 to 0.7	Good
0.7 to 0.85	Very Good
> 0.85	Excellent
0.95	AIL Silent Protector®

For project planning and assistance, call toll-free 1-866-231-7867.

The AIL Sound Walls Team will work with you through the complete project cycle.

- ▶ Designs based on wind loading and local soil conditions
- ▶ Detailed proposals complete with installation budget estimates
- ▶ Engineer-stamped project drawings for approvals and construction
- ▶ Professional support in engineering, project management and site assistance
- ▶ Offering value engineered alternatives to help you save time and money

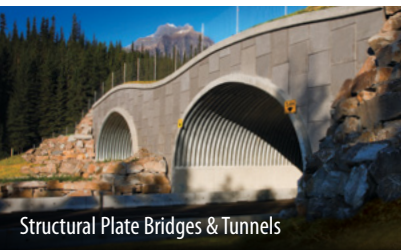


VIEW OUR
VALUE ENGINEERING
CASE STUDIES

ailsoundwalls.com

The information and suggested applications in this brochure are accurate and correct to the best of our knowledge and are intended for general information purposes only. These general guidelines are not intended to be relied upon as final specifications and we do not guarantee specific results for any particular purpose. We strongly recommend consultation with an AIL Sound Walls Technical Sales Representative before making any design and purchasing decisions.

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Structural Plate Bridges & Tunnels



Prefabricated Bridges



Pipe & Drainage Solutions



Retaining Walls & Abutments

Get more AIL infrastructure solutions working for your better bottom line.



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