

NOISE CONTROL ENCLOSURES - SOUNDWALLS - ABSORPTIVE PANELS



- **ACOUSTICAL PERFORMANCE INDEPENDENTLY TESTED & RATED**
- **RUGGED CONSTRUCTION FOR OUTDOOR ENVIRONMENTS**
- **NON-COMBUSTIBLE CONSTRUCTION**
- **ENGINEERED & FACTORY FABRICATED**

SonoCon Class One, Type E exterior noise control systems are fabricated of acoustical panels which provide substantial sound absorption and transmission loss performance.

ACOUSTICAL PERFORMANCE

With high transmission loss and sound absorption properties, the SonoCon sound barriers acoustically isolate equipment and processes from the community and in-plant personnel. Energy within the enclosure is absorbed preventing both reverberant buildup and unwanted reflections which might direct or broadcast the high noise levels into nearby areas.

CONSTRUCTION

Constructed of galvanized steel, the acoustical barriers are erected of internally reinforced, tongue and groove panels into a structural

framework. SonoCon panels can easily accommodate 15'-0" spans and assemblies can be erected to virtually any height.

Engineered to withstand typical outdoor environments, SonoCon Soundwall systems can accommodate wind speeds to 95 MPH and seismic zone 4 loads.

ENGINEERING

All SonoCon systems are engineered to meet the structural requirements specified by local building codes.

INSTALLATION

Shipped as prefabricated components, SonoCon sound walls and enclosures are quickly installed integrating the acoustical panels with the structural framing.

SONO-CON CLASS 1-E EXTERIOR ACOUSTICAL PANELS

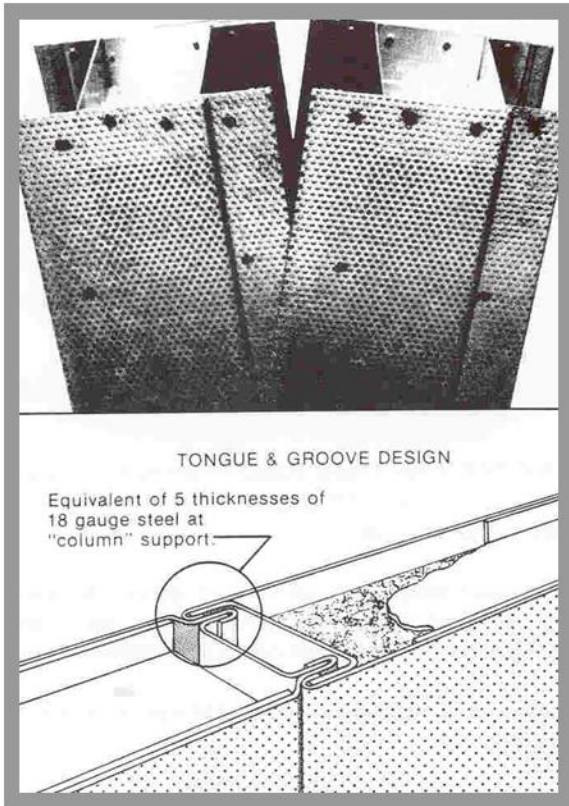
MATERIALS & CONSTRUCTION

The SonoCon acoustical barrier shall be installed on a foundation or other supporting structure adequate to accommodate the structural loads. The acoustical assembly shall be constructed of SonoCon Class 1-E acoustically rated panels. Panels are to be 4-1/4" thick fabricated of G90 galvanized steel

Panels used as sound barriers shall be constructed of tongue and groove acoustical panels with the groove facing downwards. The panels shall be fabricated with 18 gage steel exterior face sheets. Panels used for noise absorption only shall be fabricated with 22 gage exterior backing sheets. All panels will be constructed with 20 gage perforated steel sheet facing the noise source. The perforated sheet shall consist of 3/32" diameter holes on 3/16" staggered centers. The sound absorbing core shall be non-combustible, inorganic, and inert. It shall be vermin proof and mildew resistant.

The panels shall be internally reinforced with 16 gage member designed to safely withstand the lateral loads imposed on the spans shown on the drawing in accordance with the specified building code. Stiffener spans should not exceed 24". Perimeter and internal reinforcing steel shall be welded to the solid face sheet to form a rugged, unitized acoustic component. Weld centers should not exceed three inches. The acoustical fill shall be packed under compression without voids so as to secure the acoustic core even under severe vibration.

Attachment to the structural framing or existing wall surfaces shall be adequate to support the specified live and dead loads. The acoustical core shall be protected with an acoustically permeable, UV resistant, non-hygroscopic membrane placed between the acoustical fill and perforated sheet. Mylar, Tedlar or similar films are not acceptable due to weather degradation.



SOUND TRANSMISSION LOSS — ASTM E 90

Octave Band	2	3	4	5	6	7	—
Center Frequency (Hz)	125	250	500	1000	2000	4000	STC
dB	22	29	40	48	54	60	41

MINIMUM ABSORPTION COEFFICIENTS — ASTM C 423

Octave Band	2	3	4	5	6	7	—
Center Frequency (Hz)	125	250	500	1000	2000	4000	NRC
dB	0.86	1.09	1.22	1.06	1.05	1.04	1.10

(B) Thermal — Panels shall have a "U" factor of .07 in calculated in accordance with ASHRE guidelines.

(C) Fire — Panel materials shall be non-combustible and shall not exceed the following:

Flame Spread.....15 Fuel Contributed..... 0 Smoke Developed..... 0

Sound transmission loss data for the SonoCon Class One panel is determined by ASTM E-90 Standard Recommended Practice for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions. Sound absorption data obtained per ANSI/ASTM C-423 Standard Method of Test for Sound Absorption of Acoustical Materials in Reverberation Rooms. Both tests were conducted at an independent laboratory accredited by the United States Department of Commerce National Voluntary Laboratory Accreditation Program (NVLAP).

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