

Application Profile: Multi Purpose Room / Auditorium Acoustics



Above: Community Center in Novato, CA after baffles
Below: Community Center, Novato, CA before baffles

Elementary School, San Jose, CA

Improve the Acoustics in your Multipurpose Room/ Auditorium with Cloudlite Baffles™

A common issue in multipurpose rooms and auditoriums, is the high amount of reverberation (echo) within the room. This results in high levels of noise and makes amplified and un-amplified sound difficult for an audience to understand. Another common issue exists when there are a number of people speaking at the same time. The reverberation causes noise levels to rise and as a result people try to speak over one another. Reverberation is the result of an abundance of hard, reflective surfaces in a room which allows the uninhibited reflection of sound waves across parallel surfaces without anything to slow them down.

At this elementary school in San Jose, CA reflective surfaces and talking children made reverberation an issue in the cafeteria/ multipurpose room. The extreme noise level created with the introduction of even a moderate amount of students, during lunch or other events, forced the faculty to limit student conversation to a whisper. The high noise level which results in poor speech intelligibility which is caused by high noise energy build up, which is in turn caused by excessive reverberation. The 4'x 8' Cloudlite baffles adorned throughout the multipurpose-room brought noise levels down by transforming reflective surfaces with absorptive surfaces

A similar problem was apparent at the 1000 square foot community center space in Novato pictured above. The hard reflective surfaces of the walls, ceiling, and floor made for poor speech intelligibility, and an uncomfortable echo-y environment during activities such as the presentation of films. The 2 ft tall x 9 ft wide Cloudlite baffles shown are suspended vertically so as not to interfere with ceiling fixtures. Custom sized panels are installed on the back wall. The placement, finish, and colors are as specified.

Baffle Technical Data



Denver Coliseum



Seattle Library

Geometric Shape:

Rectangular

Size & Thickness:

1" or 2" thick (Maximum size up to 4' x 8')

Core:

2# or 3# fiberglass

Surface Finish:

Polyester scrim VRV, Cypress Fabric perforated with 1/2 mil PVC liner, polyester, nylon sailcloth, 2 mil PVC

Color:

To be selected from manufacturer's standard selection

Edge Shape:

Natural

Edge Construction:

sewn

Acoustical Performance:

1.05 to 1.40 N.R.C.

Incombustability:

Class "A" per ASTM E84 25/0/50

Suspension Provision:

Grommets-standard nickel plated-stainless steel for corrosive environments-brass. Eyescrews

Acoustical Test Data

Thickness	Density	125	250	500	1000	2000	4000	NRC
1"	3#	.31	.49	.84	1.44	1.51	1.09	1.07
2"	2#	.29	.68	1.35	1.70	1.68	1.60	1.35