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School Ac Chiller Noise Pollution Problem Reduced By Acoustiblok All Weather Sound Panels™

The Ida Stewart Elementary School in Bradenton, Florida, faced a challenge common at schools throughout the U.S.: replacing older, water cooled air conditioning chiller units with more efficient air cooled chillers resulted in dramatic increases in noise.

Upgrading the air conditioning chillers was a decision based on economic necessity, but it also increased the noise pollution on school grounds and in the neighborhood - as well as placed Ida Stewart Elementary in violation of noise pollution regulations.

The school first tried a conventional noise abatement method which provided a limited, and inadequate, reduction in the noise from the new chillers: a 10 foot concrete block wall was built to surround the chillers, forming a square with one wall being a 25 foot high exterior school wall.

Although a concrete block wall does provide some noise relief, while allowing air flow, it also allows a substantial amount of noise to escape. A rigid concrete block wall structure reflects sound off the walls in all directions until it escapes from the open top of the structure. At that point, the escaped sound reflects off the adjacent walls, trees, and other buildings.

Managers at the Ida Stewart Elementary School were dissatisfied with the results of the concrete block wall structure, especially since the chillers were positioned outside classrooms and were in close proximity to the children's play area.

Acoustiblok All Weather Sound Panels™ were installed between 3" aluminum I-beams around the chiller unit, positioned 3' from the chiller and 10" off the ground. The 4' x 8' panels were easily secured with stainless steel bolts. One panel was installed as a gate, with stainless steel hinges, to allow access to the chiller for servicing and repairs.