

the challenge:

When students at St. Francis Xavier School returned to the classroom in the fall of 2020, the faculty, staff, and parents were determined to keep them safe from COVID-19 and launched a full-scale research effort to learn how the virus is transmitted and what can be done to reduce the risk in a school environment.

What they learned is that the single most important element, after masks, is the overall air quality in a room and that by reducing the concentration of infectious aerosols in the air, they could reduce exposure to the virus and the associated risk of contracting COVID-19.



Project | *St. Francis Xavier Cafeteria*
Location | *Wilmette, Illinois*
Product | *VidaShield UV24 Air Purification System/
School Zone Fine Fissured AirAssure Panels*

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To improve indoor air quality, the school placed portable UV-C (ultraviolet light) air purifiers in the classrooms and key common areas. The portable units were loud, particularly in the cafeteria where between 40-to-50 children have lunch at the same time. "The portable air purifiers were reasonably loud, so the kids had to be even louder to compensate," said Operations Director Joseph D'Arco. "The units were on the floor, where they were plugged in and not always conveniently located."

the solution:

D'Arco found a safe, quiet, in-ceiling solution for improving indoor air quality by installing four units with the VidaShield UV24™ Air Purification System from Armstrong in the 800-square-foot cafeteria.

The VidaShield UV24 system uses patented UV-C air cleaning technology that reduces the levels of infectious viruses, bacteria, and fungi in the air and prevents those pathogens from settling onto room surfaces. The system operates by continuously drawing air into a self-contained chamber hidden in the ceiling plenum where the air is treated safely with ultraviolet light air-cleaning technology. The cleaner air is then recirculated back into the room. "The overall sound level of the VidaShield units is much quieter than the portable units we have," said D'Arco, "and having them out of the way in the ceiling is much better than having them on the floor."

To further improve indoor air quality and increase the effectiveness of the VidaShield system, the school replaced the existing ceiling with School Zone® Fine Fissured™ AirAssure™ ceiling panels from Armstrong. AirAssure panels with factory-gasketed edges provide a tighter-fitting ceiling that reduces air leakage through the ceiling plane and allows more air to flow through return air vents where it can be filtered.

As part of the Armstrong® Total Acoustics® portfolio, AirAssure ceiling panels offer a combination of sound absorption and sound blocking which has had a quieting effect on the school cafeteria. Commenting on the new level of acoustical comfort in the cafeteria, D'Arco said, "Several teachers noticed a dramatic drop in the ambient noise level of kids having lunch. This is 100 percent attributable to the new ceiling."