

GOAL

Support the commissioning of the ventilation system in a new or renovated building.

APPLICATION - BOSTON PUBLIC SCHOOL DEPARTMENT

The Boston Public School Department purchased its first AIRxpert 7000 monitoring system in 1999 in connection with the renovation of the entire ventilation system in an elementary school. The initial focus of the monitoring program was to assist with the commissioning of the new HVAC system.

BENEFIT

The CO₂ data immediately revealed a ventilation shortfall in all monitored areas on the second floor in comparison with ventilation on the first and third floors. The discrepancy could not be attributed to the number of students on each floor, which was relatively consistent.

An investigation by the Engineering Department found that a tripped fire damper was preventing supply air from reaching any second floor classroom, a situation that had not been detected by other elements of the commissioning process.

When the problem was corrected, CO₂ concentrations immediately decreased in the affected areas, bringing the ventilation rate back within the ASHRAE Standard for schools. Eight months later, the monitoring data showed that the problem had not recurred.

