

St. James the Greater Catholic School

Oklahoma City, Oklahoma

Project Details

Completed: 2022

Climate: Humid Subtropical, Zone 3A

Footprint: 20,845 square feet

Project Team

Mechanical Contractors: Wattie Wolfe Co.

Project Manager: Wattie Wolfe Co.– Travis Wolfe

Project Manager: Trane – Chris Favre



St. James the Greater Catholic School Project

CITY MULTI[®] Heat Recovery VRF, Ceiling-Cassettes, and Wall-mounted indoor units

St. James the Greater Catholic School was constructed in 1956 in Oklahoma City, Oklahoma. For many years, the student population was educated in classrooms fitted with multiple window units, but both students and teachers struggled to find a temperature that could keep everyone comfortable and facilitate learning. The units were a frequent distraction due to how loud they were, and when they failed, teachers and students would have to wear their coats in class. The school's 50-year-old boiler system was also inefficient and costly to maintain. Deacon Marti of St. James the Greater Catholic School realized that the HVAC needed to be upgraded, so he spoke with Hendrik Gulikers, the Service Superintendent with Wattie Wolfe, and discussed a solution.

Wattie Wolfe Co. is a specialty contracting company in Oklahoma City that started in the 1950s and offers commercial construction solutions for HVAC and plumbing. They specialize in working with clients with older buildings that don't have room for conventional HVAC systems and need upgrades to be completed in a way that will not harm the aesthetics of the historical buildings. Hendrik Gulikers advised that St. James the Greater Catholic School upgrade their HVAC system to VRF technology from Trane®/Mitsubishi Electric, citing how much more energy-efficient, reliable, and quiet the new system would be. Additionally, the installation of the indoor units would be completed without damaging the interior structure of the building, a benefit unique to the VRF system, compared to conventional systems that require extensive ductwork, complex wiring, and piping. The school accepted the proposed solution, and Wattie Wolfe Co. completed the project in 2022.









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Scan the code to view the case study video on YouTube.



The new HVAC system significantly enhanced the comfort for the 178 students at St. James the Greater Catholic School. In fact, the school soon noticed that students increased their test scores because they were able to better focus on the teachers and not on the environment. With a VRF system, the teachers are able to control the comfort of their own classrooms and have praised how easy the controller is to use, even allowing them to adjust the direction of the vanes on the ceiling-cassettes. Not only did comfort improve, but the new system also allowed the school to reduce utility costs and gain useable space. The costly boiler system was removed, and that space was converted into a brand-new conference room. The INVERTER-driven compressor technology used in Mitsubishi Electric heat pump systems only uses the precise amount of energy needed to reach and maintain a set point temperature. The upgrade to the CITY MULTI® VRF systems enabled the school to reduce their energy bills by about a third, according to the Deacon.

Benefits

- Compact, modular system allows for greater design and installation flexibility
- Installation maintains the historical integrity of the building structure
- INVERTER-driven compressor minimizes electrical usage
- Simultaneous heating and cooling for a classroom-by-classroom comfort solution
- Mitsubishi Electric Trane HVAC US (METUS) product support

