

| Saint Anne and Joachim Catholic Church

LOCATION | Fargo, ND
REPRESENTATION FIRM | SVL, Inc.
ENGINEERING FIRM | Obermiller Nelson
MECHANICAL CONTRACTOR | Air Mechanical

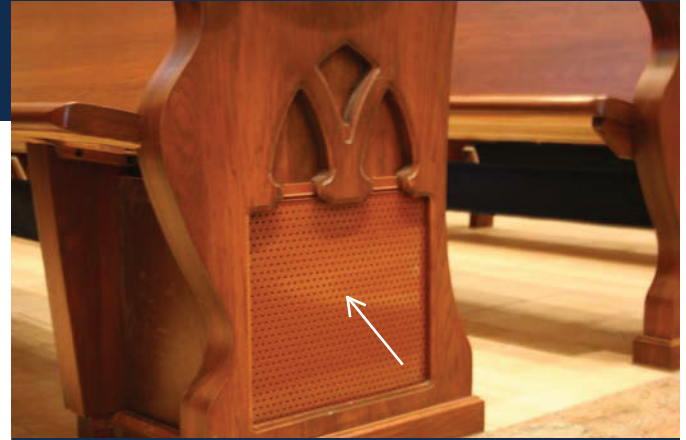
| BACKGROUND

St. Anne and Joachim is a traditional style Catholic Church sanctuary built to match the beauty of traditional architecture from hundreds of years ago, with all the comforts and technology of the 21st Century.

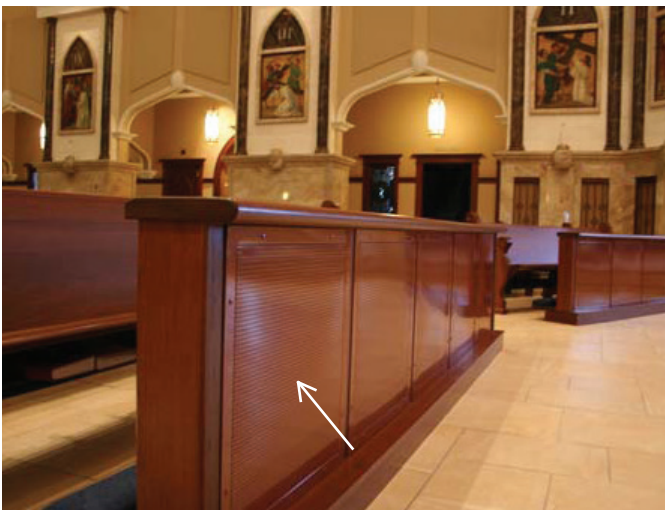
The mechanical engineer selected displacement ventilation to achieve maximum comfort and energy efficiency while maintaining stringent acoustical requirements. Displacement ventilation incorporates a floor-mounted low-velocity supply system to use the natural effects of heat rising to provide efficient comfort.

| CHALLENGE

A church presents a unique situation for heating and cooling with a large mass of people in a short window of time. The mechanical system needs to react quickly to maintain comfort, while responding in a manner that keeps the space peaceful and quiet. The challenges was placing the displacement diffusers close to the occupants and spacing them throughout the room. The only way to achieve the air distribution was to use underground duct.



The displacement diffusers are uniquely incorporated into every third pew row



The BlueDuct underground air duct supplies air to the hidden displacement diffusers

| SOLUTION

The mechanical system design by ONE of Fargo, ND was truly innovative, energy efficient, and forward-thinking. The displacement diffusers were incorporated into the rock pilasters, prayer kneelers, and pews (every third row), so the mechanical system is virtually hidden from the human eye.

The velocity from the displacement ventilation system has such a low velocity that airflow cannot be felt even when sitting within one foot of the air outlets. The return air system is located in the attic, pulling the return air from the top of the 45-foot room.

With the significant investment in the building, the engineer selected The BlueDuct for its inherent features of being air leak testable, insulated, and able to last as long as the building itself.