DELIVERING AHEAD OF SCHEDULE

Learn how Chandos partnered to complete the Sacred Heart Parish.

CHANDOS

COMPLETION AHEAD OF ORIGINAL TIMELINE

We partnered with Sacred Heart Parish to reduce the original 14-month construction timeline and completed the project two months ahead of schedule through design optimization and close collaboration. We were able to streamline the construction process, allowing major foundation work to be completed before winter frost. This saved five weeks of heating costs and time, while minimizing environmental impact.

OUR APPROACH

Sacred Heart Parish required a quicker and budget-friendly construction method to transform a former grocery store into a church. Our objective was to finish the project in a reduced timeframe, reduce costs, and decrease environmental impact—all while maintaining high design standards.

SUSTAINABLE ADAPTIVE REUSE

Adaptive Reuse looks to give buildings a second life, instead of total demolition. This project once stood as an IGA supermarket, and with some creative design and adaptation, it has come back to life as a Church, serving the Sacred Heart Parish.

In this case, we were able to retain much of the building's original structure, saving on structural replacement costs. Using the building's existing structure avoided additional demolition and saved on emissions from additional construction materials.

RESULTS

Through early contractor involvement, collaborative design adjustments, and sustainable choices, we met our schedule, saved on costs, and significantly reduced emissions by avoiding winter heating costs - all while achieving the original design intent for Sacred Heart Parish.

STRATEGIES AND SOLUTIONS

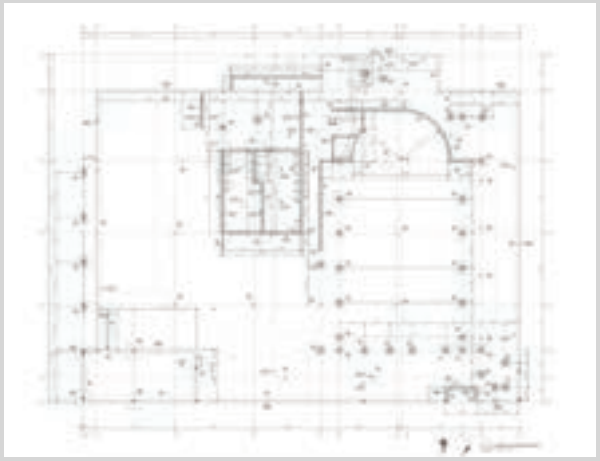
REVISED FOUNDATION DESIGN

The original plan required significant work to reroute existing utilities and stabilize the foundation. Instead of extensive footings and piles, we replaced sections of piling with a thickened slab and screw piles. This change cut down the time and costs associated with rebar, concrete, and installation. It also reduced heating and hoarding needs during winter.

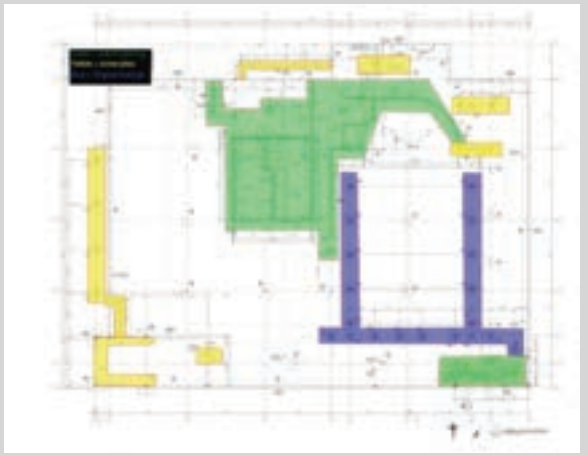
DESIGN OPTIMIZATION

Early engagement with Sacred Heart Parish allowed us to identify design adjustments that saved the project money. Our pre-construction review found opportunities to save over $250k and lower our on site and embodied carbon emissions by a total of 162.59 MT of CO2e.

Saved over **$250k** and lowered emissions by **162.59 metric tons.**



The original:
The original design would have necessitated extensive work throughout the area, including deep footings up to 1.5 meters in depth. It would have also required additional excavation and slab replacement.



Updated design:

- **Green:** Represents the thickened slab used instead of deep foundations.
- **Yellow:** Highlights the area where screwpiles were proposed in lieu of deep foundation.
- **Purple:** Indicates where the original design was retained, but rerouted the underslab piping to save on slab removed.

IMPACT HIGHLIGHTS

REDUCED SCHEDULE AND COSTS

By optimizing the foundation design, we saved two months on the schedule, reduced heating, and hoarding needs by five weeks, and cut construction costs.

ON SITE EMISSIONS SAVINGS

Avoided emissions: Due to the improved schedule, we saved on 5 weeks on heating and hoarding requirements during the pour, saving 51.09 mt of CO_2e from the use of a 400k BTU heater.

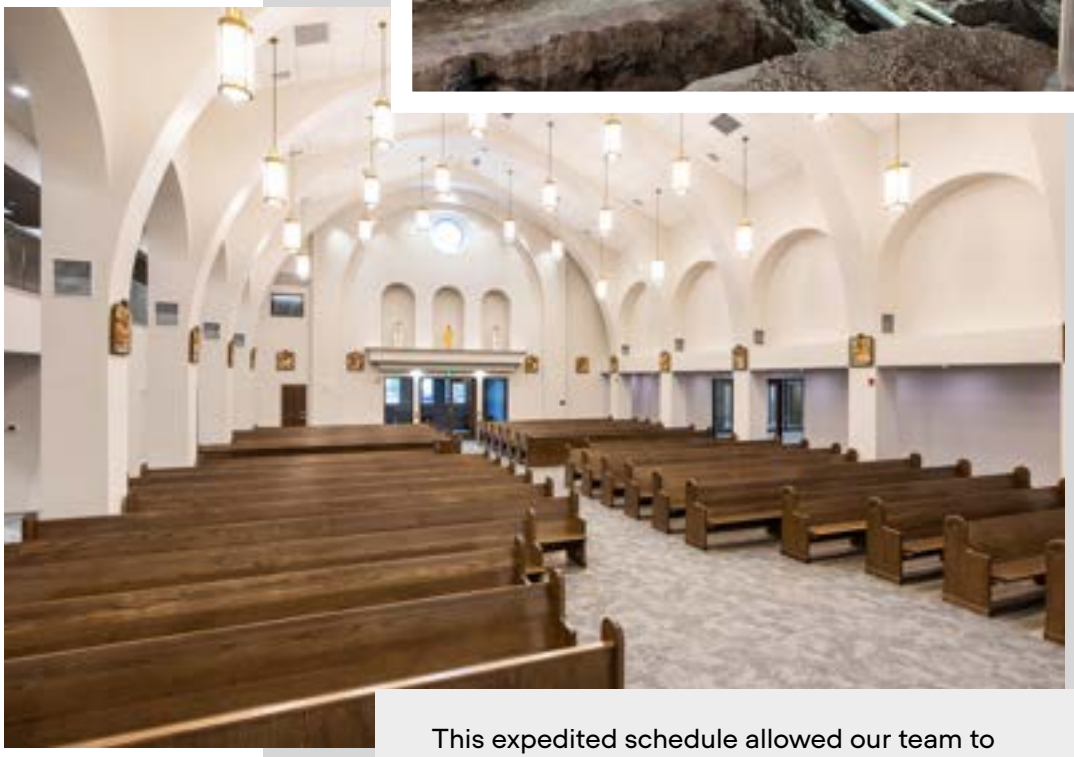
MATERIALS SAVINGS

Through design revisions, we reduced concrete, rebar, and piling materials, achieving an additional 68.6 metric tons in CO_2e of embodied carbon.

REDUCED WASTE AND EXCAVATION

Eliminating unnecessary concrete removal and transport further minimized emissions. This approach not only avoided waste but also reduced heavy-duty vehicle use for demolition and excavation.

Before: we initially built the foundations as designed and the site was very obstructed, and it took more time and equipment to execute.



This expedited schedule allowed our team to complete most of the foundation work prior to winter. This saved **840** hours of heating, avoiding a further **51MT** of emissions.