



VILLAGE OF ROCHESTER

Energy Savings Exceed Expectations; Construction Stays Under Budget

Rochester Village officials had clear priorities when they sought to replace their 70-year-old village hall: a building that would be functional, with minimal up-front costs and maximum operational savings. Anderson Ashton Design Build delivered a value that exceeded those demands.

The 6,200-square foot Village Hall opened in 2013, and cost \$1.12 million. The building provides 40% more space for staff and residents, yet costs less to heat, cool and power. The Village reduced annual energy cost by 33% per square foot in the first year of operation—during one of the harshest winters on record. The building is the first Environmental Protection Agency EnergySTAR certified Office Building in Racine County. The Village Hall performed better, or more efficiently, than 94% of office buildings with similar operating characteristics in regions that experience similar weather patterns and surpassed the standards required for EnergySTAR certification.

Just as important to the cost-conscious village officials, it proves that building “green” doesn’t burden taxpayers. The construction remained within budget, and the features that produced the energy efficiencies were simple and immediately cost-effective.

PROJECT OVERVIEW

- ▶ **PROJECT TYPE:** New Construction
- ▶ **MARKET SEGMENT:** Municipal
- ▶ **SIZE:** 6,200 square feet
- ▶ **BUDGET:** \$1.2 million
- ▶ **HIGHLIGHTS:** First EnergySTAR certified Office Building in Racine County
Demonstrated fiscal, aesthetic and environmental stewardship

***Pictured:** A metal standing seam roof lasts longer than a shingled roof and increases the water quality of roof run-off. The light gray reflects light and heat away from the building and the metal is completely recyclable. Expanded green space buffers adjacent to the building perimeter help control roof rainwater quantity and quality.*



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Pictured Top: A large, high mounted clerestory low “E” insulated window within a ceiling light well neutralizes potential harsh lighting and glare from east and west facing windows while drawing natural light deeper into the building. **Bottom:** Light shelves used throughout the building help direct natural light above the shelf toward the ceiling. In this application a light colored paint is used on top of the shelf to help bounce natural light toward the vaulted ceiling. **Opposite Page:** Abundant south facing windows maximize natural daylight while aluminum sun shades and tinted windows control heat and glare.



Anderson Ashton designers shared a full range of options, from the simple to the more advanced including solar/photovoltaic and geothermal systems for heating, cooling and electricity. Those options, though, cost more up-front and extend the return-on-investment payback. The architects and engineers listened to village workers, trustees and residents and followed their lead in selecting the best features to fit the Village's unique needs—and budget.

Windows, building placement and interior finishes were among elements designed to conserve both environmental and financial resources. The building is L-shaped, with the most-heavily used portion stretched along an east-west axis to maximize the light from the southern exposure. Windows in a large meeting room, exposed to sunlight from the east and west, were installed near the ceiling line with light wells to bring the light deep into the room, yet minimize glare. Tinted glazing helps manage the radiant heating and light.

Shading devices attached to the building's exterior control the interior sunlight. Treatments and designs incorporated into the interior walls draw light deeper into hallways and other spaces.

High-efficient lighting fixtures, occupancy sensors, low-flow plumbing fixtures and an energy-efficient HVAC system reduce the overall demand for energy to operate the building.

Landscaping also plays an important role in limiting the building's environmental impact and maximizing its aesthetics. By placing the building along an existing tree-line, designers made strategic use of the shade provided in summer and the low sun in winter. Much of the community green space surrounding the building was left undisturbed, making it an attractive location for workers and visitors.

“We appreciated Anderson Ashton’s approach to educating us on the financial benefits of different green features.”

BETTY NOVY, VILLAGE CLERK/TREASURER

“What we have now is just amazing. We got, I think, the green that we needed to get while staying within our budget and got more than we really thought we were going to get from the start. The team at Anderson Ashton did a great job. We plan on this building lasting over 70 to 80 years.”

ED CHART, VILLAGE TRUSTEE



Rochester is a small but growing community in western Racine County, and the Village Hall is a business hub and gathering place for anniversaries and other celebrations. It not only represents a new standard for energy-efficiency, but a symbol of what's important to the village's 3,700 residents. Blending seamlessly with the adjacent library, the new Village Hall imparts a positive impression of Rochester.

"Obviously, you like a pleasant view for people who drive up to the building," Novy said. "We have private commercial entities come to us looking for approvals for buildings they want to build and we want to serve as a role model."

The project demonstrates that smart design and careful selection of building materials can generate tangible savings and improve the working environment.

Pictured: Window placement provides expansive views of green spaces for all village employees and brings in natural daylight. Public lobby space also has expansive landscaping views and a perforated aluminum light shelf.



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