



Institutional

Rapid City Community Centers



“It’s like free gas for your car!”

Dave Stafford, architect with Thurston Design, commenting on the architecturally versatile SolarWall® system that was incorporated into the unique exterior styling of this South Dakota community center.

Background

The architects at Thurston Design Group specified a SolarWall® heating and ventilation system for two new community centers in Rapid City, South Dakota.

The complex houses many gymnasiums, so a large amount of ventilation air was required to maintain the required indoor air quality. A dark bronze metal cladding was used to augment the unique architectural features of the two buildings. The architects wanted to maintain a consistent appearance around both buildings, so the same cladding was used on all the walls, but only the two south walls were used as solar heaters.

Results

Approximately 9,400 ft² (900 m²) of panels were installed in total on both community center buildings. The actual solar collector panels on the South and West Buildings measure 1,240 ft² (115 m²) and 970 ft² (90 m²), respectively.

Financial savings are among the benefits the community center is reaping from Thurston Design’s decision to include a SolarWall heating system in its plans. Says architect Dave Stafford, *“We were able to combine the two functions (heating and metal cladding) without spending any significant additional money - whatever it is in any of*

SolarWall’s installations, it’s of no great consequence. You don’t even know that it’s there and all of a sudden you have a bunch of free BTUs that wouldn’t have been available otherwise. It’s like found money. Anytime that we can find an appropriate way to use it, we will.

“Around here it could be a good 20 degrees Fahrenheit below what’s comfortable. Because the codes require that you replace a lot of air all the time, you have to run the heating system big time overtime to recover the heat. For all the cold air you bring in, you’ve thrown away just as much hot air. By using SolarWall to pre-heat the incoming air, you get rid of the whole BTU trading process – it just goes away. That’s a huge savings; it’s like free gas for your car.

“We were using metal fascia anyway, and there was a conventional ventilation system. Just by adding the SolarWall panels, it became this solar thing that lets them save energy and money. Like I said, it’s like backing up to a free gas pump.”



The solar panels are completely building integrated, and were fitted around the awning on the upper floor.

U.S.A.

Conserval Systems Inc.

4242 Ridge Lea Road, Suite 28, Buffalo, NY 14226

P: 716-835-4903 F: 716-835-4904

E: solarwallUSA@solarwall.com

www.solarwall.com

Canada

Conserval Engineering Inc.

200 Wildcat Road, Toronto, ON M3J 2N5

P: 416-661-7057 F: 416-661-7146

E: info@solarwall.com

www.solarwall.com