



Northeast Wyoming Welcome Center

This new welcome center facility is located just inside the Wyoming border along interstate I-90. The 9,600 SF building consists of a visitor center area and a restroom facility intended to be open 24 hours. The project utilized renewable energies including solar (photovoltaic), natural lighting, natural ventilation, and the collection of water for irrigation use. The mechanical HVAC system involved variable refrigerant volume technology coupled to a ground source condenser. Hands free low water consumption plumbing fixtures were utilized as well. In addition, a total energy recovery unit was incorporated to handle the exhaust and ventilation requirements. The long term intent of the project is to be a net-zero energy use facility.

Project Data

Owner

State of Wyoming

Location

Alladin, WY

Building Type

Hospitality

Building Area

4,800 square feet

Mechanical Systems / Features

- Ground Source VRV System
- Total Energy Recovery Ventilator
- Geothermal Bore Field
- Vandal Resistant Plumbing Fixtures
- Flush Valve Actuators
- Hands Free Trim on Water Closets and Urinals

Construction Cost

\$3,000,000

Completion Date

June 2010

Mechanical Engineering

The HVAC System consists of a ground source VRV system (Variable Refrigerant Volume). The building is designed with four zones with the units located in the basement mechanical room, with supply and return ducts routed accordingly, feeding the building with floor registers. Valve assemblies are provided at each fan coil unit allowing maintenance or removal without affecting other portions of the building.

A total energy recovery ventilator is utilized to provide required exhaust and ventilation for the facility.

A geothermal bore field is located on the grounds of the facility and is coupled to the building through a primary-secondary pumping connection. Supply and return headers are located in the basement mechanical room.

Plumbing fixture for restroom groups are vandal resistant. Flush valve actuators and wall mount water closets and urinals with hands free trim were incorporated into the design.

Electrical Engineering

Services completed by another firm.



Auto-vent Windows



Solar Strip on Sink