



Pennington County

Skyline has an established working relationship with Pennington County and has been involved with every major County construction project over the past decade. Projects have included studies, master planning efforts, energy conservation measures, forensic laboratories, and correctional facilities.

Our most recent effort includes a major expansion of the central campus in downtown Rapid City. This project was planned to be executed in multiple construction phases and incorporates best available technologies to facilitate the County's goal of energy efficient government. The campus expansion project and other select projects are outlined below.

Central Campus Expansion (\$23,000,000, Completion scheduled for 2014)

120,000 SF expansion of the central campus, including new administration and evidence buildings. A new modular heat recovery chiller plant will eventually scale into a new hybrid central geothermal system under the second phase of construction. Low temperature heating coils were used in the design to allow the use of low grade chiller condenser heat and increase the efficiency of supplemental condensing boilers. Site electrical power uses multiple feeds from two independent substations via looped configuration to provide reliable energy for mission critical functions. A new generator and an existing unit, each with on-site fuel storage, are utilized to serve the expanded campus emergency loads. Redundant uninterruptable power supplies bolster the campus power and communications reliability.

Juvenile Services Center RTU Replacement (\$300,000, Completed in 2012)

This project implemented recommendations made by Skyline under a prior planning effort. Ten gas-fired RTUs scheduled for replacement were upgraded to air-source heat pumps with integral gas furnaces for backup heat. The \$100,000 incremental cost over replacement with like units is anticipated to be recovered in seven years or less.

Parking Structure Addition (\$4,300,000, Completed in 2012)

Project involved adding two parking levels to the top of an existing parking structure. Mechanical design included the extension of drains to the new upper level and extension of the fire protection system. Electrical design included additional ramp lighting, new electrical service, and security cameras.

County-Wide Facility Master Plan (Completed in 2010)

Master planning effort that included an ASHRAE Level 2 energy audit and analysis of eleven facilities in the Rapid City area (~462,000 SF total), with a primary focus on the downtown central campus. Existing mechanical, electrical, and control systems were reviewed in conjunction with historical utility bills to identify opportunities for low cost and no cost energy efficiency improvements. Documentation included payback analysis to prioritize improvements and recommendations for implementing an energy accounting infrastructure to better understand energy consumption in the buildings at the downtown courthouse complex. Project was partially funded through an ARRA related EECBG formula grant.

Jail Annex 2nd and 3rd Floors (\$5,800,000, Completed in 2009)

This 41,500 SF project involved finish of shelled spaces provided under a previous project completed by Skyline Engineering in 2006. The second floor was finished to include 58 beds of minimum-security configured in sleeping bays and the third floor was finished for 24 cells of medium-security and 8 cells of maximum-security space. Additional dayrooms, showers, recreation spaces, multipurpose spaces and support facilities were developed for each finished level.

Jail Annex and Parking Structure (\$10,200,000, Completed in 2006)

Project included phased construction of a new 4-story, 128 bed multi-level security facility with two floors of shelled space for future development. Mechanical and electrical systems were augmented and extended from the existing campus plant using a new underground connector from the central plant to the inmate facility. A new three level parking structure was also included in the project.