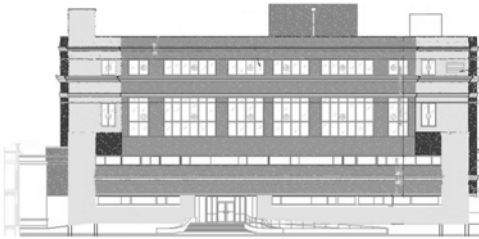




Pennington County Public Safety Building



This project involved the remodel of the existing Public Safety Building and the addition of two floors on top of the facility. All public safety functions will be housed within the new facility including the Rapid City Police Department, County Sheriff's Office, 911 Dispatch, and the State's Attorney Office.

This project features a new 8-lane subsurface shooting range and a central plant serving the Pennington County Courthouse complex.

Project Data

Location

Rapid City, South Dakota

Building Type

Office/Administration

Building Area

20,000 square feet addition
28,000 square feet remodel

Mechanical Systems / Features

VAV Reheat
Fire Sprinkler
Smoke Control

Electrical Systems / Features

Security/Access
Data/Communications
Fire Alarm
Interior/Exterior Lighting

Completion Date

Scheduled for late 2004

Architect

Lund Associates, Ltd.
www.lundltd.com

Mechanical Engineering

Approximately 90% of the existing ductwork in the building was removed in order to make way for the new programming functions. Two existing air handling units were reused and an additional air handling unit added to serve the two new floors. Airside systems are variable air volume reheat served by the expanded central plant in conjunction with the Jail Annex expansion project.

Other challenges in the project included a subsurface shooting range, requiring an extensive makeup air and exhaust system and a mission critical 911 system requiring the addition of a computer room cooling system.

Electrical Engineering

The lighting package featured exterior facility illumination, shooting range lighting, office lighting, conference dimming controls and multi-switching for an energy efficient design.

The power systems included extension of the existing electrical services to add two new floors to the top of the structure. The existing electrical service and emergency power systems were re-utilized.

Reprogramming of the facility required the existing fire alarm system to be augmented to a full-coverage system. A new security/access system was provided for the entire facility. A new data and phone distribution system was also designed for all five floors utilizing intermediate data facilities and a fiber optic hub in an existing demarcation room.