



Northern Hills Federal Credit Union Expansion & Remodel



The expansion and remodel of the Northern Hills Federal Credit Union Building in Sturgis included the remodel of areas in the basement level, and a complete remodel of the existing main level.

New main entry and teller areas were designed and the existing drive-up lanes were replaced and covered with a new canopy. In addition, the existing drive-up teller outbuilding was removed and a new building was constructed to house an ATM and night depository.

Project Data

Location

Sturgis, South Dakota

Building Type

Commercial / Industrial / Office

Building Area

11,000 square feet

Mechanical Systems / Features

Rooftop HVAC with Economizer
VVT Controls
Natural Gas
Roof Drainage
Fire Sprinkler

Electrical Systems / Features

Direct/Indirect Recessed Light
Fixtures

Completion Date

Spring, 2003

Architect

Alliance of Architects and Engineers
alliance@rushmore.com

Mechanical Engineering

A complete mechanical redesign was provided for the main level including removal of the existing HVAC systems, along with the associated ductwork, diffusers, controls, and accessories. Mechanical systems included new forced-air heating, ductwork and piping distribution, air conditioning and condensate piping, natural gas distribution, domestic water distribution, HVAC controls and energy management, and fire sprinkler design criteria.

New rooftop units were utilized to heat and cool the space. The new systems use Variable Volume/Variable Temperature (VVT) technology, allowing a single air constant volume conditioning unit to serve multiple spaces while offering room-by-room temperature control. The entire natural gas piping system was removed and replaced in a configuration suiting the new equipment layout. Plumbing design was limited to replacement and augmentation of the roof drain system, demolition of two small toilet rooms, and installation of a new unisex toilet room adjacent to a new break area and beverage alcove.

Electrical Engineering

The electrical remodel for the Northern Hills Federal Credit Union consisted of the complete remodel of the main floor offices and both the bank and drive-up teller spaces.

The lobby and large customer area were illuminated using direct/indirect recessed light fixtures.

The owner wanted to keep the existing credit union securely in operation throughout the construction, complicating construction phasing. Therefore, mechanical, as well as electrical design items were taken into consideration for proper execution in the phasing of construction.