



## Dakota Sioux Casino and Hotel

Location: Watertown, South Dakota

Architect: English & Smart Architects

### The Situation:

The Dakota Sioux Casino and Hotel is a 110,000 sq. foot facility located in Watertown, South Dakota. The casino and hotel were designed to combine the symbolism and heritage of the Sisseton-Wahpeton Oyate with a state-of-the-art gaming and lodging experience. One of the problems faced in the design of the project was the ventilation of cigarette smoke from the gaming facility while maintaining energy efficiency.

### The [engineous\*]:

EP clears the smoke with energy efficiency in mind and creates a plan to compliment the technology designed for the casino and hotel. Thinking from the floor up, Emanuelson-Podas designed an underfloor air distribution system to displace the smoke upward and out of the breathing zone. The plan includes a modular power and data distribution system, which utilizes a “plug and play” configuration for simple relocation of the slot machines. Twin air-to-air energy recovery units supply fresh air to the underfloor system. The air is tempered by recovering energy from the exhaust stream through the use of dual energy wheels located in each unit. For precise energy management, EP centralized the hotel and casino facilities with a chiller, boiler, and domestic water plant using a web-based Direct Digital Control system. While smoking still continues at the casino and hotel, patrons have taken notice to the improved air quality.

For more information on the Dakota Sioux Casino and Hotel project please contact:

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