

Boise moves up with 2-level airport terminal

By Ken Levy
SPECIAL TO THE IBR

High-tech security systems and beefed-up structural strength complement the flowing lines and open design of the \$54 million-plus Boise Airport terminal, due to open June 25.

The 361,000-square-foot terminal expansion provides additional space for everything from curbside drop-offs to baggage claims, concessions and, significantly, security, notes Airport Director John Anderson.

Security was a relatively straightforward design issue when architects CSHQA, Boise, began their work in July 2001. Two months later, it became the focal point for major modifications to the design and construction of the terminal.

"The ceiling lines are flowing and curvy, representing flowing water."
— Larry Kalousek

Prior to the 9/11 attacks, architects at CSHQA faced relatively routine challenges for the design of the terminal building and related roadway. City and airport representatives told architects that they wanted a design representing the feel of Boise and the region, "using local, indigenous materials," said Larry Kalousek, project manager.

Designers chose a river theme, using river rock, sandstone, granite and Idaho travertine extensively. The terrazzo floor features a flowing river motif.

"The ceiling lines are flowing and curvy, representing flowing water," said Kalousek. "The main roof feature is in a wave form that ties in well."

Designers also used "a lot of glass" to make the terminal light and airy by allowing natural daylight in.

CSHQA developed the two-level terminal design to fit the required square footage into a relatively confined space, Kalousek explained. An \$8 million roadway was built to accommodate the two-tier building. McAlvain Construction, Inc., Boise was the general



KEN LEVY

The \$54 million-plus new Boise Airport terminal is slated to open June 25.

contractor on that portion of the project.

In the new terminal, outbound passengers will get their tickets and depart from the upper level, while arrivals will use the lower level.

"That's the airport concept you see in bigger cities," said Kalousek. "This allowed us to reduce the size of the footprint while maintaining the existing airport and airline operations."

Kalousek said the new structure and related improvements are intended to handle about 3 million passengers annually. The design allows for future expansion on the existing site to eventually accommodate 6 million.

The design also had to accommodate numerous modifications in the wake of the terrorist attacks on America.

"When 9/11 hit, new high-level security requirements

said no unattended parking could be within 300 feet of the building," said Kalousek. To allow existing parking to remain, designers followed federal Transportation Security Administration guidelines in doing a blast analysis of the terminal design. TSA guidelines require that the terminal building be able to withstand a blast from a car bomb, for example, "with light cleanup while remaining operational," said Kalousek. "We had to do some building strengthening."

Project Manager Joe Reynolds of Layton Construction, Sandy, Utah, said strengthening the building included reinforcing steel columns, beams and connections with steel plates to meet blast-resistance requirements. Steel studs were placed closer together and increased in gauge "to provide a more blast-resistant building

shell," he said. The roof decking was also fortified.

"Perimeter glass was tempered and glass blast stops were installed," said Reynolds. The building was also extended to the east to provide the additional space needed for security checkpoints.

Design and construction were modified to accommodate five, 16,000-pound explosive-detection systems. Floor designs for the ticket lobby had to be modified to accommodate the weight anywhere on that floor for maximum flexibility. Reynolds said floors were lowered and the roof raised in the bag make-up room, where baggage is sorted for departure, to accommodate the installation of the machines.

"We still aren't up to 2001 calendar-year levels."
— John Anderson

"We built a platform to house these machines, which required popping up a little section of the roof in the back of the building, called a doghouse," said Kalousek. The end result, he said, is one of the first in-line baggage security systems of its kind in the United States.

"We've gone from a very sim-

See AIRPORT, page 3



KEN LEVY

The entranceway and new roadway to the new terminal.



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The rotunda area leading to the ticketing area beyond.

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Airport project set for June opening

Continued from page 1

plified outbound baggage system to an integrated pier system with multiple explosive detection systems (EDS) machines," said Anderson. The requirements boosted the cost of the baggage system by about \$4 million, to about \$7.5 million. In addition, TSA spent about \$1 million per machine to facilitate installation of the machines.

Most of the additional security-related construction costs may be reimbursed through grants, Anderson said, while the remainder could be recouped by extending an existing \$4.50 per passenger facility charge program.

Reynolds said construction value for the terminal building itself was about \$44 million for this phase.

The expansion budget also included more than \$4.7 million for utilities and infrastructure development and about \$5.28 million for IT systems, including security, electronic visual information display sys-

tems (EVIDS), fiber optics, data and phone communications. Major subcontractors on the project include SME Steel, DeBest Plumbing, Lea Electric, Interior Systems, Inc., TMC Masonry, Commercial Glass and Treasure Valley Fire Protection.

Another \$13 million is earmarked for additional terminal construction and related projects, according to Reynolds. But Anderson indicated additional construction on the project might be delayed.

"Travel has been softening since before 9/11," said Anderson. "We were already in a recession, and 9/11 just added a real big downward spike."

"We're a little less than enthusiastic about building the second phase of the terminal building itself," he said, "and we've pushed back the building of a new Concourse A. We're working on plans to build a second parking garage."

Construction of the garage could begin in early 2005, Anderson said, with a new Concourse A not starting until 2006

or 2007.

Security and high jet fuel costs, along with war in Iraq, have affected airline health. But the first six months of the year showed an increase over the previous year's roughly 1.4 million annual incoming passengers, Anderson said, although "we still aren't up to 2001 calendar-year levels."

But Boise is doing better than about 90 percent of the airports nationwide, showing a drop of about 6 percent in 2002 compared with a 10 percent dip nationally, according to Anderson.

The national slump remained the same in March 2003, while Boise showed a slight increase in traffic. Anderson attributed much of that to Boise's relative isolation and stronger economy than many parts of the country.

Two airlines – Frontier and Big Sky – added service to and from Boise last year, while American Eagle folded its wings at the end of 2002 after less than a year serving the City of Trees.