

# Mission completed



**The summer completion of Mineta San José's \$1.3 billion development programme heralds the dawn of a new era for the Silicon Valley gateway, writes Dan McCue.**

**H**igh intellect, innovation, creativity, spirit and entrepreneurship are key words to Norman Y Mineta—San José International Airport's aviation director, Bill Sherry, for they are the ones that inspired the gateway's recently completed master plan.

"The city council wanted the airport to reflect the 'essence of California's Silicon Valley'. The only trouble was that as a newcomer to the area I had no idea what that meant, so I started asking around and these phrases kept popping up," explains Sherry.

"It was a helpful exercise though, even if I couldn't help but wonder how the words would translate into what carpet I would choose for our terminals, or what colour we'd eventually paint the walls."

Five years on he has his answer because Mineta—San José's new Terminal B fully opened to passengers in June to signal the completion of the airport's \$1.3 billion capital development programme.

In addition to the construction of Terminal B, the gateway has added a new concourse and significantly upgraded an existing terminal during a three-and-a-half year long development programme that Sherry now refers to as "the biggest home remodel you can possibly imagine".

Mineta—San José (SJC) also gained a new consolidated rent-a-car facility and public parking garage, and has benefited from a dramatic reworking of the roads that serve the facility.

Sherry also proudly announces that SJC was the first San Francisco Bay area airport to offer free Wi-Fi to its patrons in 2008, as each step of its transformation proceeded from the premise that the airport's customers are both demanding and very IT savvy.

Among the whiz-bang elements of the new and revamped terminals is the ability to allow passengers to check-in using mobile phones and other portable devices when San José's airlines are ready to embrace the technology.

Security has also been enhanced by the installation of eight Morpho Detection manufactured CTX 9800 DSI bag screening machines that utilise advanced high-definition 3D imaging.

"Basically, they are the latest and greatest," enthuses Sherry. "Fully automated, with a very high throughput, and they've been performing quite well."

But, perhaps most significantly of all, the introduction of common use technology across the terminals has increased SJC's operational effectiveness to such an extent that it is now able to handle more passengers than ever before despite having fewer gates.

To facilitate the shared use, the airport needed to install a robust and flexible system that would allow each airline to operate any gate as if it was their own.

"Basically it was a question of having emulation software developed by VMware running on Cisco hardware that would allow our technology backbone



to work seamlessly with the proprietary software of the airlines,” notes SJC’s communications director, David Vossbrink.

In revamping its operations, Mineta–San José also embraced sustainability in a big way, installing a 3.4 acre, one-megawatt solar panel array on the roof of the rental car centre. One of the largest solar arrays in the Silicon Valley, the panels will provide at least 20% of the energy used in the facility.

In addition, having the entire 3,000 vehicle capacity rental car operation housed in one facility will reduce carbon emissions at the airport by thousands of tons a year, comments Sherry. The facility is conveniently located across the street from Terminal B.

The final piece of the jigsaw was the reconfiguration of the airport’s road system to make it more straightforward and intuitive.

“The old system was so confusing that it was sometimes referred to as having all the twists and turns of a plate of spaghetti,” laughs Sherry. “It is much better now. Our roads are straighter, wider and designed to ensure more intuitive navigation around the airport.

“Best of all, the entire modernisation project was completed ahead of schedule and about \$140 million under budget.”

Making that happen required as much innovation and creative savvy as anything occurring just up the road at Google, Intel or Apple.

Sherry admits the fact that the gateway is surrounded by housing and well-established communities meant that the needs and fears of local residents had to be top of mind when the airport was formulating its capital development programme.

“Our location has always been our best asset, and our biggest liability,” muses Sherry. “By that I mean, we are in close proximity to downtown San José – just a five-minute cab ride – and that makes us quick and easy to get to and subsequently popular with passengers.

“However, we now have development 360 degrees around the airport, much of it residential, and that has created its own problems. As a result, the city council has a lot of experience of dealing with noise and other compatibility issues.”

For the better part of the 1990s and well into the 2000s dealing with those issues took precedence over modernising the council owned and operated airport, according to Sherry, despite the fact that it arguably serves the nation’s most “modern” community.

First, the council instituted a night time curfew based on noise levels as opposed to aircraft weight and got it approved by the FAA. Then, it turned to mitigating sound impacts at 2,700 homes, as well as a church, schools and affected businesses near the airport.

In most cases, these efforts revolved around sound proofing the impacted structures. In some cases, the city actually purchased the properties and demolished the buildings.

The city also addressed traffic congestion issues near the airport by improving roads, highways and intersections to assure good levels of service.

By mutual agreement with city residents, it was decided that no construction would be undertaken at the airport until mitigation efforts had been completed. It seemed a good idea at the time, but Sherry now has no hesitation in saying that the policy allowed SJC to fall into a “serious state of disrepair”.



And there was one more thing to grapple with. When the airport project was first conceived of, in the late 1990s, Silicon Valley was deep into the dot.com boom, a time when Sherry remembers “money was abundant, facilities were scarce, and the attitude was, don’t worry about the cost, just get the thing built.”

As a result the original master plan’s price tag was put at \$4.5 billion for a project that included replacing the airport’s Terminal A and Terminal C with a single, unified terminal.

But by 2005, when all agreed it was time to start refurbishing the airport, the boom had gone bust, 9/11 had staggered the economy, and American Airlines had announced it would no longer use San José as a hub for its operations.

“Suddenly, as much as we needed to modernise to keep pace with Silicon Valley, we just couldn’t afford this incredibly expensive plan anymore,” says Sherry.

One of his first tasks as aviation director was resizing the city’s ambitions. In the end, a total \$3 billion was excised from the programme.

“Now, you might be tempted to think we cut out the bulk of the programme, but the truth is somewhere in between as we did, and yet we didn’t,” he cryptically comments.

The revised plan kept Terminal A and renovated it, the upgrade including the expansion and relocation of its ticket counters and security checkpoints and the addition of new concession areas.

It also included the construction of a new Terminal B and the bulldozing of Terminal C, the airport’s oldest facility, to make room for it.

In fact, a close look at the original project budget showed that most of the money earmarked for it was being eaten up by acceleration costs – the anticipated rise in the cost of labour and materials over the life of what was then anticipated to be a seven to ten year construction project.

“So what we did was compress the project period down to about three,” says Sherry.

Fast tracking the project meant that he had to convince the city council to set aside its usual bureaucratic and slow procurement methods to make everything possible.

“We came to the city and said, if you want to eliminate the escalation costs, we need to do this as a design/build contract, and we have to give it to a contractor that’s enormously successful and experienced,” Sherry recalls.

“What that meant is that the contractor would handle the bidding process, not the city, and would co-ordinate the architecture, engineering and construction together.

“Additionally, we stressed that by being a design/build contract, we could start putting shovels in the ground literally within months of selecting

sub-contractors and approving designs. Given that everyone recognised the pent-up desire to see the airport look and function better – and that we were committed to doing it faster and at less cost than originally planned – they gave us their approval.”

In practice, the airport’s plan meant all the main elements of the original proposal remained in place, and that fast-track construction would begin when as little as 30% of the structural designs were complete. The contractor chosen to oversee the project was Hensel Phelps Construction Co.

“Once we knew the basic footprint of buildings, the earth work and foundation work started,” enthuses Sherry. “We didn’t know what the top of the building was going to look like, but we knew what the bottom was going to look like.”

And then Sherry got lucky, at precisely the same time that everybody else in the world was feeling considerably less so, for as the global economic meltdown savaged the construction industry, and over time, bids for sub-contracting work got lower and lower.

“From day one of the contract, in order to keep to our commitments on cost, we were constantly looking for ways to reduce the scope of the project, cutting this and that out. What we noticed was that as the recession got under way, people became more and more willing to work for less than we anticipated,” adds Sherry.

“The result was a period when we stated adding scope back in, and then when the recession really hit, and the business side of the house was scary, we said, ‘stop adding,’ and that’s how we arrived at where we are today.”

By that point, the number of travellers passing through San José had dropped from 10.7 million in 2007 to closer to 8.3 million in 2009 – a decline representing a 25% reduction in the airport’s operating revenue or approximately \$40 million.

“There was some heartburn along the way, no doubt about that, but in the end we really brought the airport into the modern age and today it behaves and really acts like a Silicon Valley institution,” quips Sherry.

And the renovation is already paying dividends. In March, Alaska Airlines launched direct service from SJC to Maui and Kona, in April a new Mexican carrier, Volaris, started international service to Guadalajara, and in May, JetBlue initiated services to Boston.

Now that the project is done, Sherry anticipates Terminal B receiving LEED silver certification.

“It’s been quite a mission,” concedes Sherry. “We wanted a terminal that not only looked modern but is modern. I think I can say with a high degree of confidence that we have one of the most modern and technologically advanced airports in the world.”

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