



Montgomery Flight – 1904



Moffett Field – 1933



China Clipper – 1936



Hiller XH-44 – 1944



NASA Ames Research Center – 1981

Northern Wings

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Wooden propeller making is not a lost art *Craftsmanship reigns at Wings of History museum shop*



-- Northern Wings Photo

Herb Robbins works on wooden propeller at Wings of History Museum

Airplane propellers are still made the old-fashioned way – out of wood – at the Wings of History air museum in San Martin. The craftsmanship that produced most aircraft propellers from the time of the Wright Brothers into the mid-1930s is not a lost art.

At the Ole Fahlin Memorial Propeller Shop on the grounds of the antique air museum just across the street from South County Airport, prop maker Guy Watson and two assistants – Herb Robbins and Howard Pomeranz -- turn out more than a dozen wooden propellers a year, mostly for owners of antique and experimental aircraft.

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SJC passenger terminal expansion on time, on budget

New ticket counters open in Terminal A

Since last year, visitors to Mineta San Jose International Airport have watched the steel frame of the passenger terminal of the future take shape.

Sandwiched between the nearly completed North Concourse and the old Terminal C, the new Terminal B will be the centerpiece of the airport when the James M. Nissen passenger complex opens in the summer of 2010.

It's still a work in progress. But a milestone was reached May 13 when

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Cathedral-like North Concourse is almost finished at SJC – Northern Wings Photo

Board of Directors Profile

After 57 years in aviation, Jerry Bennett still enjoys his lifelong love of flying

Aero Club Director Jerry Bennett has been around airplanes and airports since he was 14 years old, when he went to work washing and fueling aircraft at a private airport in Ohio, in exchange for flying lessons.



Jerry Bennett

20 years as deputy director of San Jose International Airport.

Today, Bennett, now a resident of Morgan Hill, maintains his certified flight instructor rating. He also has commercial, single- and multi-engine land and instrument ratings.

In 2006, the FAA awarded Bennett the Wright Brothers Master Pilot Award for more than 50 years as a certificated active pilot.

Bennett's pilot time began in 1952 when at age 15 he took his first flight lesson in a Piper J-3 Cub. He made his first solo flight on his 16th birthday the following year.

After high school, Bennett spent four years in the Air Force enlisted ranks, stationed throughout the Pacific and Far East. After his discharge in 1961 in Ohio, he headed west to San Jose where his older brother Jim lived and flew for Pan Am.

He soon got a job with the San Jose Airport Department, becoming only the 14th employee hired by airport manager Jim Nissen since the airport was founded in the late 1940s.

Over the years, he became known as "Mr. Airport" around SJC. He met his wife, Patricia, at the airport in 1962 when she worked for Pacific Airlines, then the field's only air

carrier. They were married two years later.

In 1976, Bennett was promoted to deputy director of SJC, responsible for the day-to-day operations of the airport, both airside and landside.

He retired from the San Jose's airport in 1996 to become Santa Clara County's director of aviation, managing Reid-Hillview, South County and Palo Alto airports.

By the time he retired from the county in 2003, Bennett had secured more than \$6.5 million in FAA funds for improvements to the three airports.

For the next 52 years, he worked continuously in military and civilian aviation before retiring as director of the Santa Clara County Airports in 2003. But the job he held the longest was

20 years as deputy

Aviation Events

Reid-Hillview Airport Day

June 27. The Reid-Hillview Airport Association will hold its annual airport open house, featuring aircraft displays, a pancake break fast and burgers and hotdogs for lunch. <http://www.rhva.org/>

Take Flight With Kids

Aug. 8 at Reid-Hillview Airport, San Jose. Volunteer pilots will give free flights to several hundred children with special needs and their family/friends.

<http://www.takeflightforkids.com/>

California International Air Show

Aug. 7-9 at Salinas Municipal Airport, featuring the U.S. Navy Blue Angels and a large number of other air show performers. <http://www.salinasairshow.com>

Palo Alto Airport Day

September 12. The Palo Alto Airport Association will sponsor its annual airport open house at the bayside airfield.

<http://www.paloaltoairport.aero/>

California Capital Airshow

Sept. 12-13 at Mather Airport, Rancho Cordova. This year's show will feature the U.S. Air Force Thunderbirds jet demonstration team. www.californiacapitalairshow.com

Reno National Championship

Air Races

Sept. 16-20. Reno-Stead Airport, Reno, Nev. The 46th annual air races and air show will feature six classes of races around the pylons in the desert north of Reno. The Navy Blue Angels will headline the air show performances. <http://www.airrace.org/>

Crystal Eagle Dinner

Oct. 24 at the Hiller Aviation Museum, San Carlos. The Aero Club of Northern California will hold its 27th annual Crystal Eagle Dinner to honor someone whose achievements are among the highest in aviation.

<http://www.aeroclubnorcal.org/>

Yanks Air Museum plans new facility in Greenfield

Southern California-based Yanks Air Museum plans to build another air museum and airport near the southern Salinas Valley town of Greenfield.

Museum officials say the new facility won't replace the current museum at Chino Airport in Riverside, but will be an expansion of Yanks' operations.

Museum founders Charles and Judith Nichols bought the 440-acre ranch alongside Highway 101 to build both a new museum and a 4,250-foot runway for museum visitors and local pilots.

The museum will feature extensive graphic and multi-media systems as well as a collection of restored aircraft that will reflect the spectrum of American Aviation technology.

Other features of the complex will include a hotel, restaurants, spa, winery, service facilities and a recreational vehicle park.

The existing Chino facility houses the largest private collection of American WWII fighters and dive bombers in the world.

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Where wooden propeller-making is a work of art

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Some of the propellers are built from scratch. Others are restoration projects sent in from all over the country. "It takes as long to restore a prop as to build a new one," Robbins said.

The shop is a memorial to the late Ole Fahlin, one of the world's great propeller makers, who started the business in the early 1960s in Santa Clara. The first prop that Fahlin made in that shop is on the nose of the WACO-10 on display in the museum.

Over the years, the prop shop was moved to several locations in the Santa Clara Valley – including Hill Country in Morgan Hill – before relocating to the museum grounds. Fahlin propellers have graced large numbers of restored antique aircraft seen at air shows around the country. Many of the tools that Fahlin used over the years are still in use at the shop.

Watson started working with Fahlin in 1973 and took over the operation when Fahlin retired. Today, the shop builds propellers under the Watson label.

During an open house at the museum and airport last month, Robbins, a retired dentist from Los Gatos, explained how propeller making is done.

Most propellers are made of birch, but some are of mahogany, Robbins said.

First, the pieces of birch that will be laminated into the propeller blank are scraped and smoothed, then assembled in layers with plastic resin cement and tacks.

The assembled propeller blank is



Laminated wood to be cut with saw.



--Northern Wings Photos

Herb Robbins explains to museum visitors how the prop shop must finely balance wood propellers, this one from a Ryan PT-22.



Finished propeller hub.

placed in a press to solidify the layers for a week or two. When it is taken out, it is an elongated wood block, weighing 100 to 200 pounds, depending on the planned size of the finished propeller.

"There's a 30-pound prop buried inside there," Robbins said.

Then the woodworking begins.

The outline of the prop is traced along the wooden block, using patterns that date back as far as the 1920s. Following the pattern, the propeller is sawed out of the block.

In the next step, what they call a "chipper," a sort of router, is used to shape the prop, grinding away at the wood to carve the correct pitch to the blades. This varies along their length, so a protractor is used to guide cutting the precise angles necessary. Then the

center section is shaped on a mill.

The final step is fine tuning the wood to balance the prop perfectly. Tiny lead shots might be inserted into one blade. Or it might be such a tiny adjustment as applying more varnish to one blade than the other.

Using a propeller from a Ryan PT-22 that he has been restoring for more than four months, Robbins showed how delicately balanced it must be. With the prop on a stand holding it vertical with the blades horizontal, Robbins had a young visitor tape a penny to one tip. The weight of the coin, about 3 grams, was enough to start the propeller slowly rotating.

Visitors are welcome from 10 a.m. to 3 p.m. Tuesdays and Thursdays when the restoration and prop shops are open and 11 a.m. to 4 p.m. Saturdays and Sundays when the museum and gift shops are open.

The museum is located at 12777 Murphy Avenue, San Martin. Take the San Martin Avenue exit from Highway 101, turn left off San Martin Avenue to Murphy Avenue and follow it to the museum.

For more information, visit <http://www.wingsofhistory.org>.



--Northern Wings Photos

Construction continues inside Terminal B.

Steel frame of Terminal B takes shape.

SJC passenger terminal expansion to open in 2010

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the first improvements in years opened to the public. Passengers at Terminal A began using the new street-level ticketing and baggage check counters. The new lobbies have 60 percent more ticketing stations than the old facilities on the second floor. And there's a much longer curb for departing passengers to be dropped off with their luggage, easing that traffic jam.

Passengers who park in the garage and walk across the bridge to Terminal A now go down new escalators to check in at the new ticket counters. But then, they go

back upstairs to pass through security checkpoints. The area once used by the old upstairs ticket counters will be converted into expanded security checkpoints by fall.

Over the next year, the airport will complete Terminal B. But



Inside the North Concourse.

several gates in that terminal's North Concourse will go into use later this summer.

Across the street, construction is moving rapidly on the new 3,350-space rental car and public parking garage.

When Terminal B opens, the 1965-vintage Terminal C will be torn down.

Overall, San Jose is spending \$1.3 billion dollars on the passenger terminal modernization.

The passenger terminal complex is named for Nissen, who as manager between 1945 and 1975 built the airfield into a major airport.

The Aero Club of Northern California

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Chartered in 1981 as a chapter of the National Aeronautic Association



- To keep the public informed of the importance of aviation and space flight to the nation's economic progress, its security, and to international understanding.
- To support a vigorous aviation and space education program for students at all levels of learning.
- To recognize and honor those who make outstanding contributions to the advancement of aviation and space flight.

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