Welcome to General Mitchell International Airport



General Mitchell International Airport Self-Guided Tour Booklet

Mitchell B-25 Airplane

Upon your arrival you may have noticed the Mitchell B-25 aircraft. This "Mitchell Bomber" (named after General Billy Mitchell) aircraft memorial is located along the airport entrance next to the parking structure. The plane, a North American B-25 (used in World War II), was restored and donated to Milwaukee County's General Mitchell International Airport by the Wisconsin Air National Guard and the Mitchell Field Rotary Club in 1959. The "Mitchell Bomber" was again restored in 1991 by the Wisconsin Air National Guard.

Fun Facts...

GMIA is

- ✓ the largest airport in Wisconsin, 2,386 acres
- ✓ totally funded by people who use the airport; no property tax dollars are used to support the airport

✓GMIA Flights

- ✓8 airlines serve Mitchell International
- ✓ approximately 155 daily departures
- ✓ nonstop or direct flights to 90 major destinations

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Self-Guided Tour Booklet

See how we've grown . . .





MKE's Aviation History

Let's begin our aviation journey with a quick peek at some historical moments here at Mitchell Airport . . .

July 5, 1919 — Milwaukee established the first county-operated airport on the site where Currie Park and Golf Course are now located.

August 27, 1919 — The Lawson Airliner, assembled at the airport, departed on a demonstration flight to the East Coast.

June 7, 1926 — Airmail service began for the Milwaukee area.

It was soon realized that the current airfield was too small but that it couldn't expand due to a small river that was located to the east and a railroad line that cut through on the west.

October 5, 1926 — the Milwaukee County Board approved the \$150,000 purchase of a 163 -acre site located in the southeast corner of the county as the site for a new airport facility. It was named Hamilton Airport.

This land was owned by Thomas Hamilton, a local aviator who operated a propeller manufacturing business and small airport. The site included a small wood frame hangar building, which can now be identified by a historical marker near the present location of the fixed base operator (FBO) on East Layton Avenue.

July 1927 — The first airport terminal, the Hirschbuehl Farmhouse, opened on the Hamilton Airport.

July 1927 — Northwest Airways, now known as Northwest Airlines Inc., initiated air service from Milwaukee to Chicago and Minneapolis/ St. Paul.

August 20, 1927 — World famous aviator Charles A. Lindbergh visited the Milwaukee Airport.

1938 to July 1940 — A new terminal building was constructed by the Works Progress Administration



(WPA). The two-story brick structure was built at a cost of \$177,000 and offered a centrally located control tower.

In 1941, the name of the Milwaukee County Airport was changed to "General Mitchell Field" after Milwaukee's military aviation advocate, Brigadier General "Billy" Mitchell.

July 30, 1947 — Milwaukee County, aware of the growth of the general aviation aircraft industry, purchased the Curtiss Wright Airport located in the northwest corner of the county.

1958 — The Curtiss Wright Airport airfield was renamed "Lawrence J. Timmerman Airport," after county aviation advocate and County Board Chairman Lawrence J. Timmerman.

Early 1950's — Mitchell Field Airport experienced growth in the number of flight operations, including the large propeller-driven StratoCruisers and Constellations. Due to congestion at the Layton Avenue terminal building, construction began on a larger terminal facility to be situated on Howell Avenue.

July 19, 1955 — A new three-concourse, twolevel structure opened at a cost of \$3.2 million. The structure had a capacity of 23 aircraft

MKE's Aviation History Con't.

gates. The airfield then included 1,530 acres of land for runways and taxiways.

July 1961 — Milwaukee entered the "jet age" with the arrival of a Northwest Orient Airlines Boeing 720 four engine jet aircraft (similar to a Boeing 707 jet).

Late 1970's — Deregulation and continued growth prompted Milwaukee County to begin the renovation of the existing terminal building with new and larger shops and enlarged ticketing and baggage claim areas.

1983 — Mitchell Field entered the "space age" and welcomed Eastern Airlines' "Spirit of Milwaukee," an advanced technology Boeing 757 jet aircraft that utilized the same computer system as that of the American Space Shuttle.

In keeping with the international processing facilities at the airport (Customs, Immigration and Agriculture) and its increased national recognition, a new name was also appropriate.

June 19, 1986 — the Milwaukee County Board of Supervisors officially changed the name of General Mitchell Field to General Mitchell International Airport.

October 1989 — A new Airport Systems Cargo Complex was opened to provide security and ground support services for cargo carriers. The complex also provides services for loading and unloading freight and houses a vehicle maintenance shop, which provides maintenance for ground support equipment.

December 14, 1990 — A 2,250-space parking structure addition was opened to help accommodate the growing demand from travelers.

December 14, 1990 — A new 16-gate expansion of Concourse D opened, bringing Mitchell International's total number of gates to 42. This included a new 425-foot moving walkway to convey passengers swiftly from the Concourse D entrance to the new gate area.

November 2002 — Another 3,000 space addition to the parking garage opens. Three works of art and 750 ft. moving walkway were installed in the parking structure.

January 2003 — New Rental Car center opens.

October 2004 — New \$4.5 Million Ground Run Up Enclosure (GRE) unveiled at GMIA.

December 2004 — Concourse D security checkpoint expanded from two security lanes to six.

January 2005 — Governor Doyle/Senator Kohl dedicate new Airport Amtrak passenger rail station.

October 2005 — GMIA opens new Cellular Phone Waiting Lot.

July 2006 — Concourse C Stem expansion completed.

August 2006 — Concourse E security checkpoint expanded from three lanes to four.

December 2006 — Concourse D stem renovation completed, creating new ground-level boarding gates.

July 2007 — 8 new gates added to Concourse C. Total airport gates = 48.

Parking

The Airport has a six-level parking structure that provides secure parking for approximately 9,000 vehicles. The structure is divided into Hourly (short-term) and Daily (long-term) parking areas and is connected to the main terminal by two enclosed skywalks with elevator service. If you plan to use the parking structure, the rule of thumb is to park in the Daily (long-term) area if your stay is longer than five hours.

A prominent feature of the parking structure is a 750 ft. moving walkway that runs from the west side of the structure to the skywalk leading into the terminal. The walkway is enclosed in a heated and air-conditioned glass



Parking Fun Facts...

- ✓ The parking structure has 35 acres of floor space.
- ✓ Over 9,000 parking stalls are available on a year-round basis.
- ✓An estimated 7,200 vehicles travel on the terminal drive each day.

corridor. The neon artwork of Stephen Antonakos is located within and adjacent to the corridor and the painted metal sculptures of Milwaukee artist Evelyn Patricia Terry are located in each of the 12 elevator lobbies. You will also find artist Dennis Oppenheim's *Submerged Vessels* inside the atrium that connects the moving walkway to the skywalk.

Other unique features include a ground-level pedestrian access way (which is a hardscaped, lighted pathway), and architectural screens that visually tie together the old and new sections of the structure.

There is a ramped entrance to the Hourly (short-term) section of the structure, an entry helix to the Daily (long-term) section, and an exit helix and cashier plaza. A space-control system has been installed to indicate which floors have the most parking spaces available. Each floor is further divided into three areas to assist parkers in finding a space.

Additional parking is available in the Surface and Remote parking lots. The Surface lot, located south of the parking structure, along the

Parking Con't.

road leading into the Airport, provides 699 parking spaces and is within walking distance of the terminal. The Remote Lot is located west of Howell Avenue and provides approximately 1,750 parking spaces. A free shuttle bus runs a continuous circuit to the terminal.

Parking for tall vehicles is available in the Surface Lot.

The first 30 minutes of parking in the Hourly and Surface Lot are free. The policy encourages people who drive to the airport to use the parking facilities when dropping off or picking up passengers or luggage instead of creating congestion on the front drives by parking in the traffic lanes. There is a 15-space short term Cell Phone Waiting Area that opened in October 2005 and is located inside the Surface Lot. It is designed for drivers who are waiting for a cellular phone call to pick up an arriving passenger.

As you leave the parking structure to enter the terminal building, you will find yourself in one of two areas. One is the baggage claim area on the ground level. The other is the concession mall on the second level. The ticketing/ check-in area is located across the roadway east of the baggage claim area on the ground level or down one level from the concession mall via the escalator or elevator.



Amtrak Station

In January 2005, an Amtrak passenger rail station opened at Milwaukee County's General Mitchell International Airport (GMIA).

The station serves rail passengers connecting to The station at GMIA is one of four Amtrak staflights at the airport, along with rail-only passengers using Amtrak's Hiawatha Service that provides seven daily round trips between Chicago and Milwaukee with stops in Glenview, IL and Sturdevant, WI. GMIA provides a free shut- Liberty International Airport in New Jersey. tle bus connection between the airport and every train that stops at the rail station.

The approximately 1,600 square-foot heated station includes restrooms and a seating area. Covered walkways lead from the drive-up area to a 400-foot passenger-boarding platform. The station is located on the western edge of the airport along existing Canadian Pacific Railway lines and includes parking for 300 vehicles.

tions serving airports in the U.S. The three other airports are Baltimore Washington International Airport (BWI), Burbank-Glendale-Pasadena Airport in California and Newark

Along with offering the best on-time performance of any Amtrak route at more than 90%, ridership on Amtrak's Hiawatha Service continues to increase, setting records over the past few years.



Air Traffic Control Tower

A 200-plus-foot tall air traffic control tower was dedicated on July 7, 1986. The tower is located west of the parking structure and can be easily seen as you approach the Airport.

The Federal Aviation Administration (FAA), an agency of the federal government, operates the tower. The FAA is charged with maintaining the safety of air travel throughout the United States. The tower houses the tower cab (on top), the radar room, electronic equipment rooms and offices. The radar room controllers interpret numbered blips on a radarscope and perform the critical function of directing aircraft as they approach and depart Milwaukee and other outlying airports within approximately a 30-mile radius and up to 10,000 feet. The controllers in the control tower cab maintain radio contact with pilots, directing those who are operating aircraft within the Mitchell Airport traffic area, and directing other aircraft movement on the ground.

Control Tower Fun Facts...

- ✓ Height is 200' 4-1/2" The same as an 18-story building!
- ✓ 92 modules were used to construct the tower 23 in each of the 4 legs
- ✓ Of the tower structure's four legs:
 - one contains the elevator it takes 33 seconds to go from ground level to the tower cab
 - one contains general utilities
 - one contains stairs there are 245 steps from the ground level to the tower cab
 - one contains electrical power
- ✓ On a clear night, you can see the lights of Chicago, Illinois and Muskegon, Michigan



The Terminal — Lower Level

Ticketing/Check-In Lobby (Departures)

At the ticket counter, passengers check in for their flights. They obtain their seat assignments and check their baggage so that it can be placed into the "belly" of the airplane. Passengers can also purchase tickets and make reservations for future flights. Arrangements can also be made for the handling of pets, oddsized baggage, skis, bicycles or any other "unusual" item passengers wish to take with them on their trip. Directly opposite the counter are monitors, which display flight information, along with self check-in machines for passengers who have electronic tickets and would like to check themselves in and print their own boarding pass. Other passenger services in this area include telephones and skycap service. Skycaps assist passengers with luggage and wheelchair service.

Directly across the road from ticketing is the baggage claim area.

Baggage Claim Lobby (Arrivals)

Incoming baggage from aircraft is unloaded to airline baggage carts and then distributed onto one of the five baggage belts. Monitors in the claim areas provide information for the retrieval of bags. Services found in this area include: airline baggage service offices, directline hotel telephones, visitor information, and a coordinator to assist in providing ground transportation to deplaning passengers. Directly across the road from baggage claim is the ground transportation area.

Ground Transportation

Ground transportation for travelers includes taxicabs, courtesy cars, limousines, buses, rental cars and Amtrak. A coordinator directs visitors to available taxicabs, limousines or bus service. Scheduled bus transportation runs between Milwaukee's Mitchell Airport and Chicago's Midway and O'Hare airports, and also between Milwaukee and Madison. The Amtrak station serves rail passengers connecting to the airport from Chicago, northern Illinois and Milwaukee. The Airport provides a free shuttle bus between the Airport and the Airport Amtrak station.

Glass Elevators

If there are small children in your group, you might want to ride in one of the glass elevators located at the west end of the skywalks, just before entering the parking structure. There are also glass elevators that connect the ticketing lobby and the concession mall located at the north and south ends of each.

The Terminal — Upper Level

In the upper level of the terminal, you will find Concourses C, D, and E, which have gates for the aircraft. The concourses all branch off from the concession mall, a large public space of interesting and useful shops for things travelers want or need. There are newsstands, gift shops, clothing stores and a used book store. The mall also houses a bank, a shoeshine parlor, and the Mitchell Gallery of Flight aviation history museum. Other features include family rest rooms and conference rooms. Hungry passengers and visitors can head for the restaurant, cocktail lounge, coffee shops and a food court.

In addition, the concession mall sometimes houses special events or exhibits.

Start your tour from the south end of the

mall (see map) and walk north:

Concession Mall Fun Facts...

- ✓ 35,000 people pass through the terminal every day!
- ✓ Nearly 8 million people fly into or out of GMIA
- ✓ There are 176 public telephones at GMIA
- ✓ There are 32 sets of public restrooms at GMIA (with 120 rolls of toilet tissue used daily, about 3,000 miles of tissue used annually)
- ✓ Terminal utility bills average \$66,500 per month for electricity (\$800,000 per year) and monthly water bills average \$5,300 in the winter and \$9,000 in the summer.
- ✓ The airport has 256,000 square feet of carpeting.
- ✓ The concession mall and ticketing area add up to 169,000 square feet.
- ✓ There are 3,000 tons of structural steel used in the terminal.

The Gravity Well

At the south end of the concession mall, visitors can find the gravity well, a display of centrifugal force in which a coin is launched and travels in smaller and smaller, faster and faster circles until it is drawn into the center of the well. The coins that are collected help fund the Mitchell Gallery of Flight Museum. Bring your pennies.

Pteranodon

From the prehistoric dinosaur era, Pterosaurs were the first and largest animals to conquer flight. Not a dinosaur, but a near relative, Pteranodon (pronounced ter-RAN-o-don) lived approximately 65-68 million years ago in North America and Japan. The adult Pteranodon had a wingspan of 25 to 30 feet and weighed 30 to 35 pounds. The display is in front of the food court. Don't forget to look up!

What's a FIDS? Mitchell's Flight Information Display System

The bank of monitors mounted in the center and south end of the main concession mall provides people who use the airport with information on when flights will be arriving or departing. Information displayed includes destination or origin city, flight number, arrival or departure time,

The Terminal — Upper Level Con't.

flight status (on time, delayed, boarding, etc.) Departing aircraft information is on the north side of the display and arriving aircraft information is on the south side.

Milwaukee Clock

The old-fashioned four-sided clock hanging in the center of the main concession mall near the Travelers Aid desk is a replica made especially for the airport. Clocks in this style graced the city during the late 1800s. The airport serves as a gateway to and first impression of Milwaukee for many visitors, so we proudly display this example of the region's architectural heritage.

Traveler's Aid Society

The counter for the Traveler's Aid Society is centrally located near the flight information displays in the center of the concession mall. The Society, strives to meet the immediate crisis situations of travelers, visitors, and the general public. The desk is staffed from 5 AM to 12 PM. The volunteers assist people in cases of lost tickets, missed connections, illness, lack of funds, language difficulties and many other travel-related situations. They also help those who are physically or mentally ill, runaways, homeless, etc., and make referrals to other services and elsewhere for those in need.

Flight View — MKE Arrivals Screens

This bank of screens is another source of flight information for both travelers and for those waiting for flights to arrive. These screens allow travelers to watch the radar positions of in-flight airplanes scheduled to arrive at MKE. Three of the four screens focus on a region of the country with the fourth screen showing the entire country. Another interesting feature of the screens is that they also display current weather systems throughout the country.

Curtiss 1911 Pusher

The Curtiss 1911 Pusher airplane, located in the concession mall near the entrance to the Brooks Brothers store, reflects the aviation history of Milwaukee and southeastern Wisconsin. It is an authentic reproduction of the type of airplane owned and flown by Milwaukee's first pilot, John Kaminski. Waukesha residents Dale and Dean Crites built this airplane replica in 1974. The plane has been flown in many air shows and events, including the annual EAA AirVenture Oshkosh.

Communities Mosaic of Culture

Over 700 Milwaukee Public School third graders created the "Communities Mosaic of Culture" murals located within the concession mall at the entrance to the north skywalk. The mosaics are the result of a literacy program, sponsored by We Energies, that uses art, history, and visual arts to encourage students to research, read, write and present. Students worked with professional

The Terminal — Upper Level Con't.

artists to develop their ideas and drawings. The murals consist of thousands of buttons, beads, and various odds and ends to create the colorful collage. The airport's mural is located within the concession mall at the entrance to the north end skywalk.

The Mitchell Gallery of Flight

The Mitchell Gallery of Flight, an aviation museum, is located in the north section of the concession mall. It features displays and exhibits unique to local aviation history. The 24' x 60' Gallery provides air travelers and visitors alike with a unique and informative aviation experience.

A non-profit organization, the Friends of the Mitchell Gallery of Flight, has been formed to administer the project. The organization plans the displays, directs display programs, fundraisers, and membership activities.

You can share in retaining the rich aviation heritage unique to Milwaukee. Various levels of membership in the Friends of the Mitchell Gallery of Flight are available. For questions or additional information, please call or write:

Friends of the Mitchell Gallery of Flight General Mitchell International Airport 5300 South Howell Avenue Milwaukee, WI 53207 414-747-5300



The Concourses



Due to increased security, you are no long able to walk through the security checkpoint without a boarding pass that allows access to the concourses. We have provided an overview of each concourse on these pages.

Upon entering any of the three concourses – C, D, or E, passengers must pass through a screening device as required by federal law. Parcels, purses and any carry-on baggage must be inspected by an X-ray machine. People must also walk through a metal detector. Selected bags may be hand-searched or subjected to a "sniffer," a machine that checks for explosives residue. Each of the three concourses has a gift shop and a snack bar/ lounge. The airline gate holding areas have seating available for those passengers waiting to board. Airline representatives at these holding areas assist passengers in the boarding process.

Aircraft Ramps

Just outside of the windows of the gate areas and most visible from the entrance to Concourse C are the ramps (or tarmacs) where aircraft are serviced. Before departure, aircraft are refueled, in-flight galley kitchens are restocked with food and beverages, airline personnel clean and inspect the plane, baggage and/or freight are loaded and unloaded, and lavatories are serviced. Various types of planes can be seen on the ramps, including MD-88, B-757, DC-8, A-319, B-717, B-737, and DC-9, along with smaller aircraft, such as the Embraer and Canadair regional jets.

Concourse C

A variety of aircraft use this concourse, including regional jets and larger commercial jets. There is a list of all airlines who use the gates at the entrance to the concourse. In the 2005 renovation of Concourse C, the design team chose to express ideas of transparency, motion and light throughout the concourse. Artist Carlos Alves used the main corridor of the concourse as a canvas by incorporating twelve handmade mosaic tile medallions and metal inserts into the terrazzo floor.

At the entrance to the concourse is the security checkpoint. Only passengers with a boarding pass are allowed beyond this point.

Administration Building

The offices and facilities of the Airport Administration, Maintenance and Engineering staffs are located in a wing just off Concourse C prior to the security-screening checkpoint. These employees manage the day-to-day activities at General Mitchell International Airport and those at Lawrence J. Timmerman Airport, which serves smaller aircraft.

International Arrivals Terminal

Visible to the west of Concourse C is the International Arrivals Terminal, which serves primarily as a gateway for travelers returning from charter vacation trips to cities outside of the United States. This building contains the offices and screening facilities of federal Customs, U.S. Immigration and the Department of Agriculture. Up to 300 returning international passengers can be processed per hour at this facility.

Fixed Base Operator

Also visible from Concourse C are two locations of the airport's Fixed Base Operator (FBO), Signature Flight Support, that handles private aircraft at the airport. The main office and ramp is at the north end of the Airport on Layton Avenue. The other is located on the northwest quadrant of the Airport along Howell Avenue.



This is one of the colorful mosaic floor medallions done by Artist Carlos Alves who designed the terrazzo and ceramic tile floor that extends the length of the concourse. The floor gives visitors a "sense of place" by depicting the rural-tourban view of southeastern Wisconsin as seen from the window of an airplane.



Concourse D

A variety of aircraft use this concourse, including regional jets and larger commercial jets. There is a list of all airlines who use the gates at the entrance to the concourse.

At the entrance to the concourse is the security checkpoint. Only passengers with a boarding pass are allowed beyond this point.

Moving Walkway (Lower Level)

After passing through the security checkpoint on Concourse D, an escalator takes you down to a 425 foot moving walkway. The walkway, which opened in 1991, is helpful to passengers who will be using the gates at the east end of Concourse D. People who have a difficult time walking or who have heavy luggage to carry will especially benefit from using the walkway. Passengers can get from one end of the concourse to the other in four and a half minutes while standing on the conveyor and in two and a half minutes while walking on it. The \$6 million walkway has a high-tech look. At the end of the walkway, escalators lead up to the atrium waiting area. With its open space and trees, the atrium is a favorite place for visitors to watch take-offs and landings, and sometimes hosts special events.

American-Soviet Mural Project "Clay: A Healing Way"

Just north of the atrium, there is a clay mural created through The American-Soviet Mural Project, which was directed by Wisconsin teacher Joel Pfeiffer. The mural was made by the people of Leningrad on July 30, 1989. The mural symbolizes the efforts of people working together and supporting each other in ways that build the community. A similar mural, which used over 8,000 pounds of clay, was created by 5,000 Americans on July 11, 1989 at the Milwaukee Summerfest grounds. That mural, now on display in the Riverport in Leningrad, was given to the Soviet people as a peace-through-art offering.



Wisconsin Air National Guard

The 128th Wisconsin Air National Guard (ANG) Air Refueling Squadron Base, located on the eastern edge of the airport, maintains and operates the KC-135 aircraft. The KC-135 is the military version of the Boeing 707 jet. Specially equipped, this jet can complete inflight refueling to other military aircraft by using an extended boom from the KC-135 tanker. Fighter aircraft in-flight refueling activities are coordinated and monitored by the Tactical Control Flight Facility. Military flight activities such as these are conducted within a restricted area.

Concourse E

A variety of aircraft use this concourse, including regional jets and larger commercial jets. There is a list of all airlines who use the gates at the entrance to the concourse.

At the entrance to the concourse is the security checkpoint. Only passengers with a boarding pass are allowed beyond this point.

Corporate Hangars

Just prior to entering Concourse E and looking to the southwest, you will see some of the corporate hangars located at the Airport. Various Milwaukee area companies use these large hangars to store multimillion dollar business aircraft. Some of these planes are as fast as commercial airliners and have just as long a flight range.

Maintenance Building

The building located southwest of the Terminal houses facilities for three different divisions of Milwaukee County: Central Automotive Maintenance, Highway Maintenance, and Airport Maintenance. The airport Maintenance section includes the electrical, mechanical and carpentry facilities for the Airport. Here, the large snow removal equipment is stored along with trucks, tractors, plows, brooms, mowers, and various other equipment. Part of the duties of the maintenance group include keeping the 360 acres of airport concrete free of snow, debris, etc. The Airport's rotary plows can move 3,000 tons of snow per hour! Maintenance also must mow more than 1,000 acres of grass during summer months.

Airport Fire Station

The fire station, visible from the gates on the south end of Concourse E, is centrally located on the airport to provide crash/fire rescue vehicles ready access to the runways and taxiways. The station is staffed 24 hours a day by firefighters who respond to emergencies and operate the specialized vehicles. Firefighters are required by federal regulations to be on the scene of an accident anywhere on the airfield within three minutes. These sophisticated radio-equipped vehicles are capable of fighting aircraft, fuel or structural fires. The larger fire trucks carry a total

Other vehicles at the fire station respond to medical emergencies at the Airport. Additional firefighting assistance and vehicles are available through a mutual aid fire protection agreement with the military bases adjacent to the Airport and with nearby communities.

of 5,000 gallons of water that when combined with chemicals produce fire suppressant foam.



The Airfield

The airfield is the largest part of the airport and consists of all the runways, taxiways, perimeter roadways and holding areas for aircraft. Paint markings, lighting and navigational aids are used in combination to assist a smooth flow of traffic on the airfield.

Paint markings and lighting vary with color. White paint is used on the runways and yellow is used on the taxiways and on the terminal ramp to indicate aircraft parking areas. Runways or taxiways have centerline, distance and holding markings. Airfield lighting is also color-coded, with runway lights white, taxiway lights blue and threshold lights green or red. All of these lights can be adjusted for high, medium or low intensity by air traffic controllers in the control tower.

There are many kinds of **navigational aids** at the airport. Approach lighting, located at the end of the primary runways, is used by a pilot for landing reference. Because aircraft must fly into the wind, the airfield **windsock** is used to indicate wind direction and speed, which helps to determine which runway is to be used during takeoffs and landings.

The primary runways use an **Instrument Landing System** (ILS), which assists approaching pilots landing in bad weather or in poor visibility.

This system consists of a:

Marker Beacon, which tells the pilots how far out they are from the end of the runway.

Glide Slope, which tells the pilots if they are too low or high during the landing approach.

Localizer, which tells the pilots if they are too far to the left or right in approaching the runway.

There are five **runways** at General Mitchell International Airport, ranging in size from 9,700 feet long (a little less than two miles) and 200 feet wide, to the shortest runway of 3,500 feet long (about two-thirds of a mile long) and 100 feet wide. There is a total of 144 miles of runways. The primary ILS runways have a grooved surface that reduces the possibility of an aircraft hydroplaning on a wet runway surface.

The airport's ramps and runways can accommodate large aircraft such as the Boeing 747. The surfaces of ramps and runways are strong and thick enough to withstand such aircraft weight.

