Gallatin Field Airport

2007 MASTER PLAN UPDATE





CHAPTER ONE INVENTORY







Chapter 1 – Existing Conditions

I. History of Gallatin Field

Belgrade's first airport, Seifert Airport, named in recognition of Gallatin County aviation pioneer Wayne Seifert, was built in 1928 near Belgrade, but subsequently relocated because of high-tension wires. Siefert, together with E.R. Kahla, secured land for a second airport through a lease agreement with the State of Montana and the Belgrade Chamber of Commerce. Located one-half mile north of Belgrade near the current site of Gallatin Field, the airport opened in 1929 with six runways 100 feet wide and 1,200 to 1,300 feet long.

By 1937, two generations of Americans had grown accustomed to incredible aviation accomplishments. Lindberg and the Wright Brothers were history, "aviators" were now known as "pilots," and "those daring young men in their flying machines" were now flying "airliners." World War II was just around the corner, and the aviation industry was about to revolutionize transportation and the progress of man in unimaginable fashion.

The vision of men in Bozeman and the Gallatin Empire was equal to that of men the width and breadth of America. The Bozeman Chamber of Commerce, Bozeman City Commission, Montana State College, and local service clubs began steering towards realization of a major air facility for Gallatin County.

On October 23, 1940, Bozeman City Manager August H. Lake called a meeting to advise those present that they had been appointed to serve on the Bozeman Airport Commission. The new members were: Dean Chaffin, Ernest Anderson, Gardner (Pete) Waite, Eric Therkelsen, and Frank Hoey.

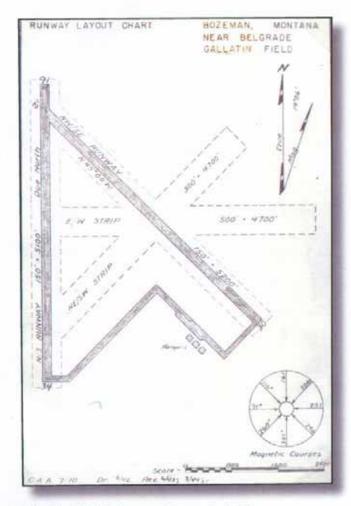
There was some discussion regarding the desirability of having an airport for Bozeman. Mr. Lake said that the City of Bozeman had taken a lease from the State of Montana on a small portion of land at the site of the Belgrade Airport and had constructed a hangar on this ground for the benefit of the Civilian Pilot Training (CPT) program currently being offered by Montana State College.

Mr. Waite was authorized to check the ownership of adjoining lands and interview the owners to see if additional land might be purchased.

Within the next two weeks, the airport commission met several times. Chaffin, Therkelson, and Waite traveled to Butte for a meeting with Mr. Paul Morris of the Civil Aeronautics Administration where they were informed that some federal funding might be available for their airport if they could finalize the land purchases and airport plans before November 22nd.

Mr. Morris authorized the Army Engineers at Fort Peck to send a crew to Bozeman to survey the site and assist with the necessary drawings. Options to purchase the necessary land were obtained and on November 22, 1940, Mr. Morris traveled to Bozeman to meet with the Airport Commission. Following a luncheon meeting at the Baxter Hotel, the group adjourned to the lounge where maps were spread on the table and Mr. Morris and his associates studied the entire proposal.

After studying the windrose chart, he laid out four prospective runways. He then gave instructions to the Army Engineers present on how to fill out the government application forms. He then left for Spokane.



Gallatin Field Runway Layout 1944

The Bozeman Airport Commission met the filing deadline and on December 19, 1940, received official word that Bozeman had been alloted \$47,000 in federal funds for construction of the basic airport.

The Civil Aeronautics Administration (CAA) financed construction of Gallatin Field in 1941 in order to provide a training school for pilots just prior to World War II. In 1941, the airport included four runways. John F. Lynch and his brother, Charles offered the initial Fixed Base Operator (FBO) service to the airport. In late 1941, John Lynch took charge of the fastest growing air school in Montana.

During the spring of 1941, plans for the new airport were progressing well. To help promote the facility, the Bozeman Airport Commission decided to hold an Aviation Week. In addition to promoting the new airport, it was hoped that the event would show the County Commissioners how important the airport was to the community and pave the way for some county funding.

At a meeting held at the Baxter Hotel on May 7, 1941, it was suggested that a name be chosen for the new airport. The name 'Sacajawea Field' was suggested but it was felt that the name "Sacajawea" belonged more or less to Three Forks and that it might be better to choose the name 'Gallatin Field.' After quite a little discussion, it was duly moved and carried that they name the airport Gallatin Field.

The Aviation Week was held June 9 to 15 and was a huge success. Seventy people attended the banquet and nearly 5,000 attended the Field Day program at the Belgrade Airport. Northwest Airlines had a twenty-one passenger Douglas Airliner on the field and made several complimentary flights. John Lynch did some aerial acrobatics and there were many planes on the field during the day.

It soon became apparent that the City alone could not maintain the airport. On July 8, 1941, a special meeting was called for the Airport Commission to appear before the County Commission to present a budget for an airport fund. The group went to the Commissioners' office and was given a hearing.

All possible arguments were used in making a request that the Commissioners levy at least a portion of one mill for the purpose of maintaining the Bozeman airport. The County Commission consisted of P.H. Gaffney, Chairman, Wm. Alberda, and Lee Frank. Mr. Gaffney did all of the talking for the Board and he flatly refused to listen to any of their arguments and said that they would refuse to make any levy for airport purposes.

The group returned to Mr. Chaffin's office and decided that the results of this meeting should be given some publicity throughout the county. Gallatin Field became a city-county airport in 1942. In 1944, Gallatin County purchased one-

half interest in the land.

The 1940s heralded the beginning of the airport's major construction era and included 5,200 feet of paved Runway 12-30, 5,100 feet of paved Runway 16-34, turf Runways 3-21 (4,700 feet) and 7-25 (4,700 feet), Taxiways A and B. The apron and lighting on Runways 16-34, 12-30 and Taxiways A and B were also completed during the 1940s. A 35-foot by 75-foot quonset hut was built in 1947 as a temporary "depot" for Northwest Airlines, which began regular commercial service in June of that year.

An airport administration building, designed by Fred Willson, was constructed for \$153,000 in 1950-1951. This building, originally funded by a county bond issue, was expanded and remodeled in 2005 with federal funding. It currently houses Aircraft Rescue and Fire Fighting (ARFF) operations, Transportation Security Administration (TSA) personnel, and the Gallatin County Sheriff's Airport Office. Gallatin County levied a 0.9 mill tax for airport construction and maintenance throughout the 1950s.



1951 Terminal Building

New construction, to meet the growth of Gallatin Field, was made possible by an airport bond issue in 1960. The bonds funded a project that consisted of the reconstruction of 150-foot by 5,410-foot Runway 12-30 including new medium-intensity lighting, a new 120-foot by 640-foot general aviation apron, air carrier apron reconstruction and expansion and reconstruction of Taxiway "A". Runway 12-30 was extended to 6,500 feet in 1963, permitting use of the airport by transport aircraft such as the Douglas DC-6 and Lockheed Electra. Taxiways "C" and "D," were constructed in 1965.

A number of improvements were made in the late 1960s to accommodate jet service. The main Runway 12-30 was extended to 9,000 feet; Taxiway "C" was widened and strengthened, including new lighting, and the air carrier apron was again expanded and overlaid. The \$606,000 for the improvements was paid for by a bond issue and

the Federal Aviation Administration. The Airport was additionally supported by a City and County tax levy for maintenance, operations, and administration.

A FAA planning grant in 1972 resulted in development of the first Master Plan for Gallatin Field. Runway 16-34, the N-S Runway, was abandoned due to lack of use and cost of maintenance.

The Montana Legislature passed legislation authorizing the establishment of Airport Authorities in Montana, and by November 1972, Gallatin Field became an Airport Authority.

The Airport Authority sold revenue bonds in 1974 to finance a new FBO building, relocate Federal Aid Secondary (FAS) 290, now known as Dry Creek Road, relocate the existing FBO buildings and construct a new general aviation apron. The turf Runway 3-21 was relocated east of the General Aviation apron to permit closing the old crosswind runway for anticipated construction of a new terminal building.



Gallatin Field Terminal - 1977

In 1976, the Authority again sold \$2,400,000 of revenue bonds to construct a new 40,000 square foot terminal building; build a new air carrier apron; widen, strengthen, and extend taxiways; construct a new terminal access road; and extend water and sewer utilities to the terminal buildings. The Authority provided land to the Town of Belgrade for construction of a sewage treatment facility (lagoons) and shared in the cost of a 500,000-gallon water tank with the town. Total cost of the project was \$4,400,000.

Gallatin Field was the recipient of a regional award for environmental design presented by the FAA in 1978. M.M. Martin, FAA director stated, "The building is highly functional and an outstanding example of the use of design, art, and architecture to enhance the compatibility of airport structures with their surrounding environment."

The 1980s were a decade of continued growth for Gallatin Field. The Airport Improvement Program included the FAA providing a maximum of 90 percent of the funding for airport improvements. In addition to runway, taxiway, apron, and access road improvement projects, a 36-foot by 56-foot fire station was built, an addition to the snow removal equipment building was constructed, and a passenger terminal door replacement project was completed. The Gallatin Airport Authority also acquired snow removal equipment and additional land, installed security fencing, upgraded the taxiway lighting system, and purchased an emergency standby generator.

Population expansion in the Gallatin Valley during the 1990s caused continued growth to Gallatin Field. Major projects included rental car parking lot expansion, Phases I & II of the Terminal Expansion, construction of a holding bay on Taxiway A, employee and pay parking lot expansion, and construction of a deicing fluid storage on the commercial apron. These projects were paid for with Airport Improvement Program (AIP), Passenger Facility Charge (PFC), and local funding. Additionally, the air traffic control tower was constructed in 1997.

From 2000 to 2006, Gallatin Field continued to grow rapidly. Federal funding under the Airport Improvement Program changed whereby the FAA would provide a maximum of 95% of the funding for airport improvements. Gallatin Field constructed over \$29,500,000 of improvements during this period.

This growth resulted in numerous airside and land side expansions since 2000, including two expansions to the commercial apron, a concourse expansion to the terminal building, a new general aviation tie down apron, and the construction of the East Ramp and a cargo apron. General aviation hangar construction also resulted in several taxilane construction projects including sewer, water and utility construction. The funding for these enhancements was through the Airport Improvement Program, Passenger Facility Charge, and local Airport Authority dollars.

Since the 1993 Master Plan, passenger emplanements increased 92%, or 5.6% annually, on average from 175,042 in 1993 to 335,679 in 2005. The total number of aircraft operations increased from 47,100 in 1993 to 71,556 in 2005, an increase of 52% or 3.5% annually. From 1993 to 2005, based aircraft increased 133% from 113 to 263, a 7.3% annual increase.

The past 10 years also showed a change in the type of aircraft operated by the commercial airlines. Gallatin Field saw the last Boeing 727 commercial service aircraft

in 2002. It marked a shift to the Airbus A319, the A320, and 50 to 70 seat regional jets.

Commercial airlines now provide non-stop flights from Bozeman to 11 cities: Atlanta, Billings, Boise, Butte, Chicago, Denver, Detroit, Minneapolis/St. Paul, Missoula, Salt Lake, and Seattle/Tacoma. Today, Gallatin Field is served by Big Sky Airlines, Delta Air Lines, Delta Connection, Horizon Air, Northwest Airlines, and United Express. Additionally, current FBO service at the airport is provided by Arlin's Aircraft and Yellowstone Jet Center.

Through continued planning and development, Gallatin Field has produced a level of service that is respected throughout the Northwest by the flying public

and the businesses located on the airport. The care and thoroughness of past Airport Managers, John Lynch, 1941-1944; Joe Monger, 1955-1956; Edwin Iverson, 1957-1970; Frank Wolcott, 1970-1981; and Ted Mathis, 1981-present, along with Assistant Airport Director Brian Sprenger, 1999-present, current Airport Authority members, John McKenna Jr., Deborah Dietz, Greg Metzger, Steve Williamson, Richard Roehm, and the dedicated past board members,



Gallatin Field Terminal - 2006

Gallatin Field is positioned to continue its strong support of the flying public and the economy of the surrounding communities.

The Airport use, character, and environment has changed markedly since the time of the last Master Plan update in 1993. For a complete list of projects constructed from 1993 to 2006, see Table 1-1.

Table 1-1 Airport Development Projects 1993-2006

YEAR	PROJECT	FAA PROJECT NO.	COST
1993	Terminal Expansion Phase I	3-30-0010-15	\$5,300,801.20
1995	Phase II Terminal Expansion	3-30-0010-16	\$3,692,688.13
1995	Pavement Milling RW12-30	3-30-0010-17	\$153,452.88
1995	Land Acquisition - 6 Parcels (45, 46, 47, 48, 49, 50)	3-30-0010-18	\$680,147.59
1996	Pay Parking Lot (8,550 sy) - Public parking, including lighting	Non-AIP	\$115,419.14
1997	Air Traffic Control Tower	Non-AIP	\$994,953.39
1998	Water & Sewer Design	Non-AIP	\$1,998.00
1998	Construction of asphalt service road, asphalt aircraft parking apron, removal of existing chain link fencing and installation of new chain link fencing, construction of new asphalt taxiways, and milling and reconstruction of the asphalt public parking lot.	3-30-0010-19	\$434,997.83
1999	Construction of Holding Bay for Taxiway "A", Holding Bay for Runway 3-21, Access Road, Employee Parking Lot, Terminal Apron, Concrete Deicing Facility, Pay Parking Lot.	3-30-0010-20	\$1,344,822.71

YEAR	PROJECT	FAA PROJECT NO.	COST
2000	Widen & extend Taxiway H, Gate 7A access road, commercial apron expansion (concrete & asphalt), access road widening & lighting, GA apron fog seal	3-30-0010-21/PFC	\$1,415,737.94**
2000	4x4 Broom Vehicle Acquisition	3-30-0010-21/PFC	\$291,300.00*
2000	Snow Removal Equipment Storage Building	3-30-0010-21/PFC	\$596,626.87*
2000	Water Improvements from Belgrade along Highway 10 to GA hangar area, GA hangar area sewer improvements	3-30-0010-21/PFC	\$244,016.50
2001	Mill and overlay parallel taxiway system, old terminal apron and Taxilanes F, G, K, L, M, & N. Construct GA Taxilanes P, Q,& R. Widen Runway 3-21 to 75 feet and overlay.	3-30-0010-22	\$1,785,200.00
2002	Construct 36,000 SY concrete and asphalt cargo apron, 1,100 LF Taxiway O 50' wide, Aviation lane and security fence improvements	3-30-0010-23	\$2,279,600.00
2002	Turf Runway Construction	Non-AIP	\$176,225.00 *
2002	Spray Irrigation System for Turf Runway	Non-AIP	\$708,000.00
2002	Passenger Boarding Bridge and Walkway	Non-AIP	\$399,666.91
2002	Land Acquisition: Parcel 57A and 57H and 2 Hi-Speed 4x4 Airport Runway Snow Plow / Sander Vehicles	3-30-0010-025	\$2,077,700.00
2003	Mill and overlay Runway 12-30 and commercial apron. High intensity runway lights installed on Runway 12-30. Replace all runway and taxiway guidance sign faces. Construct new airfield lighting building.	3-30-0010-026	\$3,146,650.00
2004	Well Design - Install water well and pump house	Non-AIP	\$393,854.03
2004	Concourse expansion and security checkpoint modifications	3-30-0010-027	\$2,158,950.00
2004	Overlay and reconstruct GA Apron, new asphalt parking apron, new asphalt incursion road, new millings road	3-30-0010-028	\$2,583,750.00
2005	Old terminal remodel, fire station expansion, fire truck acquisition	3-30-0010-029	\$1,631,670.62
2004- 2006	Construct GA Taxilanes T & U and additional concrete apron at gate 8A. Land acquisition of parcels 53A, 54, & 28	3-30-0010-030	\$2,316,297.11
2005	Expand East Ramp for FedEx facility	PFC	\$288,851.65
2005	Commercial Apron & Employee Parking expansion.	PFC	\$499,243.31
2006	Interactive training	PFC	\$87,400.00
2006	Land acquisition - S&S Parcel 48, Witt Parcel 31	3-30-0010-31	\$484,133.00
2006	Prescott Avigation Easements	Non-AIP	3,200,000.00
2006	Master Plan	PFC	\$332,840.00
2006	Radar Station Construction	FAA/Local	\$3,000,000.00
		TOTAL 1993-2006	\$42,816,993.8

^{*}Includes only construction costs

^{**}Includes all engineering costs for AIP 21

II. Existing Facilities

Gallatin Field has three active runways: 12-30, 3-21, and 11-29. Runway 12-30 is a precision instrument runway and functions as the commercial service runway. It is also used by the general aviation fleet. Runway 3-21 is positioned perpendicular to Runway 12-30. Often called the crosswind runway, 3-21 serves small general aviation aircraft. The section of Runway 3-21 between 12-30 and Taxiway "A" is available for taxiing large aircraft weighing more than 200,000 lbs. Runway 11-29 is located 700 feet northeast and is parallel to Runway 12-30. Its separation allows for simultaneous visual flight rules (VFR) takeoff and landings to Runways 11 and 12 or Runway 29 and 30. Figure 1-1 shows the layout of the runway system at Gallatin Field.

The Airport is served by a Very high frequency Omnidirectional Range colocated with Distance Measuring Equipment (VOR/DME). Gallatin Field's VOR/DME is one of the only "High Altitude" VORs in the region, making it a vital navigation aid to aircraft using the Airport and to those navigating a route to elsewhere in the region. The VOR/DME is located north of Runway 12-30 at approximately mid-field.

The runways, taxiways, and airspace at Gallatin Field are controlled by the air traffic control tower (ATCT). The ATCT opened for operations in 1998 as a FAA contract tower. The ATCT operates daily from 6:00 am to 12:00 am local time. The FAA funds the tower operation from 7:00 am to 11:00 pm, local airport funding extends the operating hours.

Airport Reference Code

An airport is designed to serve the most demanding aircraft utilizing the airport with 500 or more annual operations. An operation is defined as either a takeoff or a landing.

The Airport Reference Code (ARC) is a coding system used to relate airport design criteria to operational and physical characteristics of the airplanes intended to operate at the airport. For airports with two or more runways, it is generally most practical to design some components for a less demanding ARC. For example, at Gallatin Field, Runway 12-30 has a more demanding ARC than Runway 3-21. Taxilanes for GA aircraft are designed using an ARC that relates to the size of airplanes that use the area while the parallel system and Runway 12-30 are designed using an ARC relating to larger, more demanding commercial airplanes.

The ARC has two components relating to the design aircraft. The first component is the Aircraft Approach Category. The Approach Category relates to the aircraft

approach speed. According to the FAA Advisory Circular (AC) 150/5300-13, Airport Design, an aircraft's approach category is based upon 1.3 times its stall speed in landing configuration at the aircraft's maximum certified weight. Approach Categories are represented by a letter to designate the aircraft approach to landing speed and are as follows:

- Category A: Speed Less than 91 knots.
- Category B: Speed 91 knots or more but less than 121 knots.
- Category C: Speed 121 knots or more but less than 141 knots.
- . Category D: Speed 141 knots or more but less than 166 knots.
- · Category E: Speed 166 knots or more.

The second component of an ARC is the Airplane Design Group (ADG). The ADG relates to the airplane wingspan and is represented by a roman numeral and are listed below:

- . Group I: Up to but not including 49 feet.
- · Group II: 49 feet up to but not including 79 feet.
- · Group III: 79 feet up to but not including 118 feet.
- Group IV: 118 feet up to but not including 171 feet.
- Group V: 171 feet up to but not including 214 feet.
- · Group VI: 214 feet up to but not including 262 feet.

The ARC is further subdivided into those airports serving large and small airplanes. A small airplane is an airplane of 12,500 pounds or less maximum certified takeoff weight. A large airplane includes all airplanes with a maximum certified takeoff weight greater than 12,500 pounds.

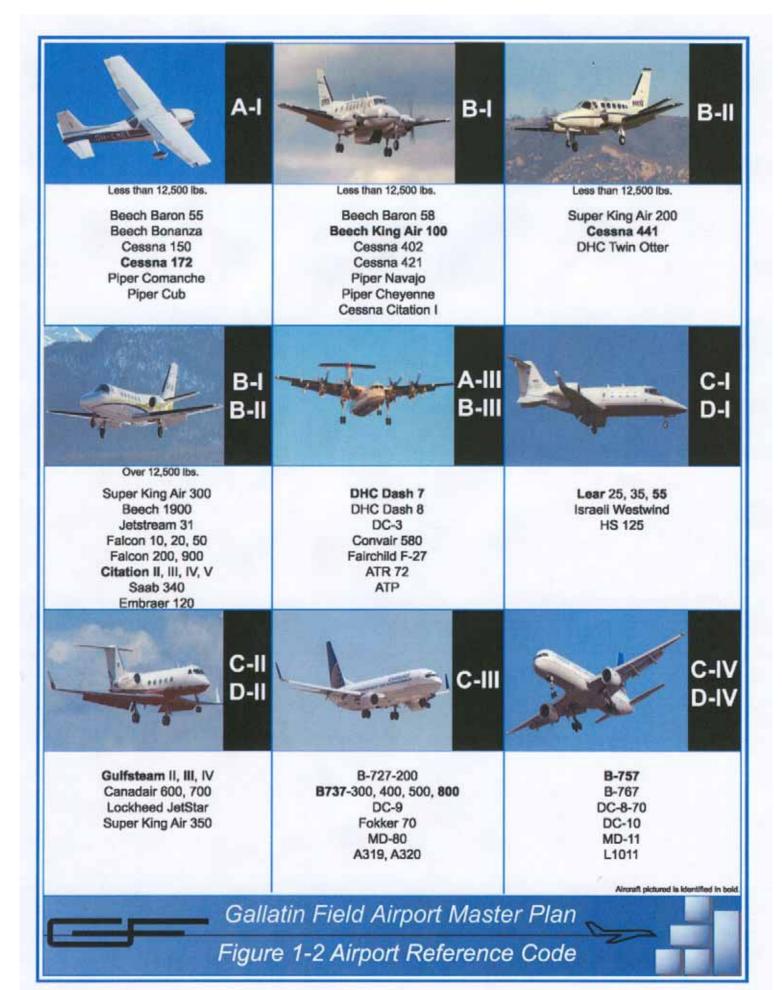
Generally, runway standards are related to aircraft approach speed, airplane wingspan, and designated or planned approach visibility minimums. Taxiway and taxilane design standards are related to the airplane's wingspan or airplane design group. Listings of common airplanes and their associated airport reference code are shown in Figure 1-2.

Currently, the ARC for the Parallel Taxiway System and Runway 12-30 at Gallatin Field is C-III with an ultimate ARC of C-IV. The ARC for Runway 3-21 and its associated Taxiways is B-I, with an ultimate ARC of B-II. The turf Runway 11-29 is designed to meet ARC B-I Small. Although the facilities are designed to meet an ARC, the runways and taxiways can be utilized by larger and heavier aircraft on occasion.



Chapter 1 - 7

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Airspace

To ensure a safe and efficient airspace environment for all aspects of aviation, the FAA has established an airspace structure that regulates and establishes procedures for aircraft using the National Airspace System. The U.S. airspace structure provides for two basic categories of airspace, controlled and uncontrolled, and identifies them as Classes A, B, C, D, E, and G. Figure 1-3 generally illustrates each airspace type in three-dimensional form.

Class A airspace is controlled airspace and includes all airspace from 18,000 feet mean sea level (MSL) to Flight Level 600 (approximately 60,000 feet MSL). Class B airspace is controlled airspace surrounding high capacity commercial service airports. Class C airspace is controlled airspace surrounding lower activity commercial service and some military airports. Class D airspace is controlled airspace surrounding airports with an air traffic control tower, including Gallatin Field when the tower is open. All aircraft operating within Class A, B, C, and D airspace must be in contact with the air traffic control tower facility responsible for that particular airspace.

Class E is controlled airspace that encompasses all instrument approach procedures and low altitude federal airways. Only aircraft conducting instrument flights are required to be in contact with air traffic control when operating within Class E airspace. While aircraft conducting visual flights in Class E airspace are not required to be in radio communications with air traffic control facilities, visual flight can only be conducted if minimum visibility and cloud ceilings exist. Class G airspace is uncontrolled airspace that does not require contact with an air traffic control facility.

For aircraft arriving or departing the Gallatin Field area using VOR facilities, a system of Federal Airways, referred to as Victor airways, has been established. Victor airways are corridors of airspace eight miles wide that extend upward from 1,200 feet Above Ground Level (AGL) to 18,000 MSL and extend between VOR navigational facilities. There are several Victor airways in the Gallatin Field Area. The Victor airways and local airspace is depicted on Figure 1-4.

Several types of navigational aids are available for aircraft enroute to the Airport: Very high frequency Omnidirectional Range beacons (VOR), nondirectional beacons (NDB), Loran-C, area navigation (RNAV), and the global positioning system (GPS).

VORs provide azimuth readings to pilots, allowing them to navigate along Victor airways.

NDBs transmit low/medium frequency signals that are

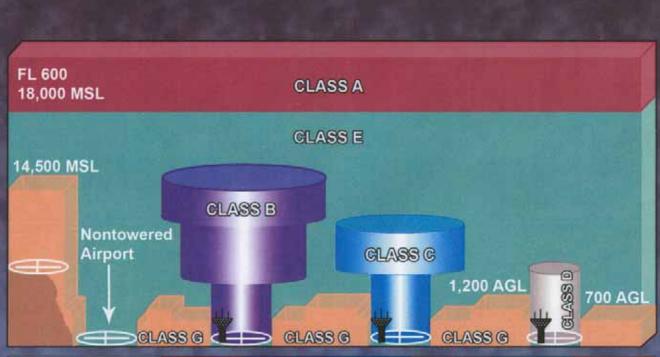
processed into a bearing indicator. Loran-C consists of ground based transmitting stations. By measuring the time signals take to be received from multiple ground stations your location can be determined. There is little or no growth anticipated in the use of Loran-C in the short term. RNAV is commonly used to VORTAC-based area navigation. It allows you to fly to predetermined points without overflying VOR/DME or VORTAC Facilities by setting intermediate points to navigate toward.



Intersection of Runway 30-21

The latest enroute navigational aid available to pilots is GPS. GPS is being increasingly used in civilian aircraft navigation. A system of satellites has been deployed to transmit electronic signals which aircraft may in turn use to calculate their relative location. The FAA is proceeding with a program to gradually replace all traditional enroute navigational aids with GPS. A wide area augmentation system (WAAS) is being installed to meet navigation performance requirements for domestic enroute, terminal, non-precision approach and precision approach flight phases. WAAS is designed to enhance the accuracy, integrity, and availability of GPS signals, contributing to increased aviation system capacity and efficiency. The augmentation improves signal accuracy from 100 meters to less than 10 meters and provides the availability and integrity needed to use GPS signals as the primary means of navigation.

There are a number of other public and private use airports located within the immediate area which have been depicted within the area airspace on Figure 1-4.



Airspace Features	Class A	Class B	Class C	Class D*	Class E**	Class G
ATC Facility	ARTCC	TRACON	TRACON or ATCT	ATCT	ARTCC	None
Operations Permitted	IFR	IFR & VFR	IFR & VFR	IFR & VFR	IFR & VFR	IFR & VFR
Entry Requirements	ATC Clearance	ATC Clearance	ATC Clearance for IFR. All require radio contact	ATC Clearance for IFR. All require radio contact	ATC Clearance for IFR. All require radio contact	None
VFR Minimum Distance From Clouds	N/A	Clear of Clouds	500' below, 1,000' above, and 2000' horizontal	500' below, 1,000' above, and 2000' horizontal	500' below, 1,000' above, and 2000' horizontal	Clear of Clouds
Aircraft Separation	All	All	IFR, SVFR, and runway operations	IFR, SVFR, and runway operations	IFR & SVFR	None

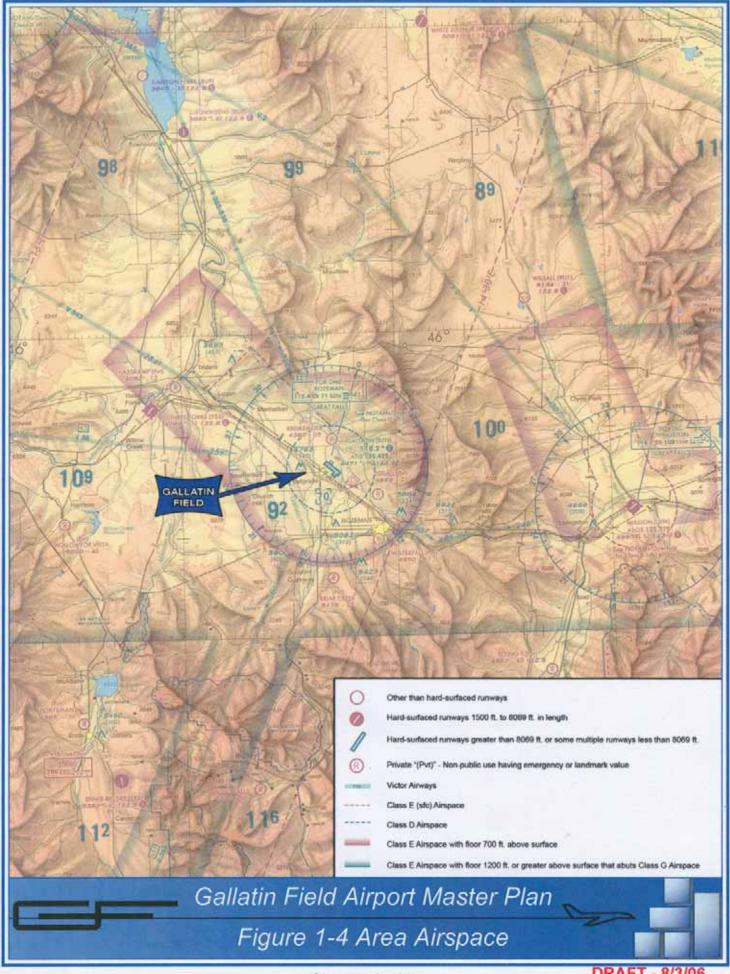
Gallatin Field is Class D Airspace when ATCT is open 6:00 AM to 12:00 AM.

Courtesy of FAA

Gallatin Field Airport Master Plan Figure 1-3 Airspace Classification



^{**} Gallatin Field is Class E Airspace when ATCT is closed.



Runway Navaids & Approaches

Runway 12-30 has an asphalt surface that is grooved for increased braking and skid resistance. The Runway has High Intensity Runway Lighting (HIRL) and distance-togo signs. Runway 12 is classified as a precision approach category I (CAT I) runway. Runway 12 is served by an Instrument Landing System (ILS) consisting of a glideslope, localizer, Medium-intensity Approach Lighting System with Runway alignment indicator (MALSR). A CAT I runway is defined as being a runway with an instrument approach procedure which provides for approaches to a decision height of not less than 200 feet and visibility of not less than 1/2 mile. The decision height for ILS Runway 12 is 211 feet with a visibility minimum of 1/2 statute mile. Runway 30 has Runway End Identifier Lights (REIL) and is striped as a precision instrument runway. Runway 30 also has a published GPS approach. Runway 3-21 also has an asphalt surface but is unlighted. Runway 11-29 is a turf runway and also unlighted. Table 1-2 lists the characteristics of the runways at Gallatin Field.

Runway 12 has four published approaches and Runway 30 has one. These approaches are published in the Terminal Procedures Publications produced by the National Aeronautical Charting Office. The approaches are listed to the right.

- VOR Approach Runway 12,
- VOR/DME or GPS Approach Runway 12,
- NDB Approach Runway 12,
- ILS Approach Runway 12, and
- RNAV (GPS)-A Runway 30.

Runway 11-29 and Runway 3-21 do not have a published approach at this time.

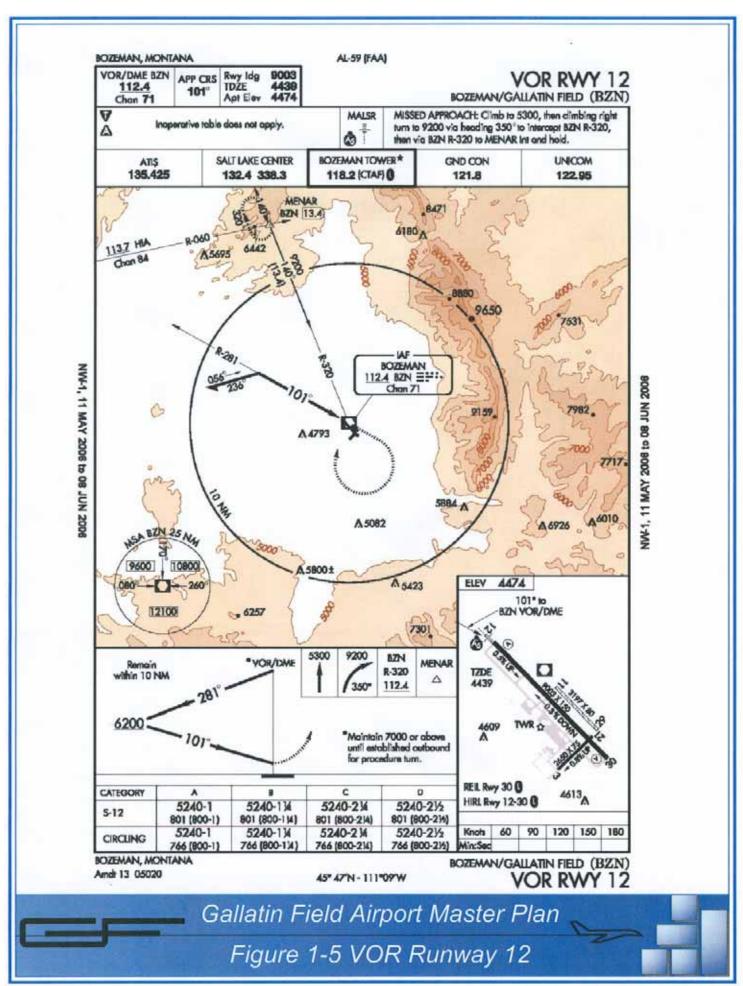
Copies of the Terminal Procedures publications are shown in Figures 1-5 through 1-9.

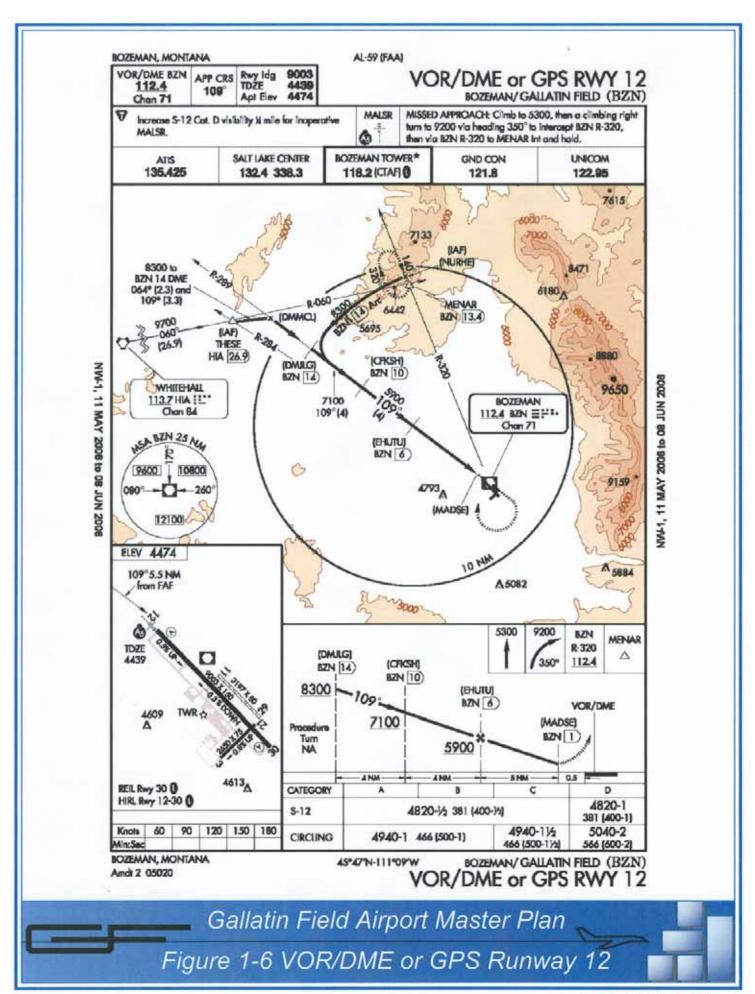
In April of 2006, construction of a radar station on the airport began. The new Airport Traffic Control Beacon Interrogator (ATCBI-6) "Beacon-Only" facility will be located north of Runway 12-30. It will provide surveillance support to Salt Lake City Air Route Traffic Control Center (ARTCC).

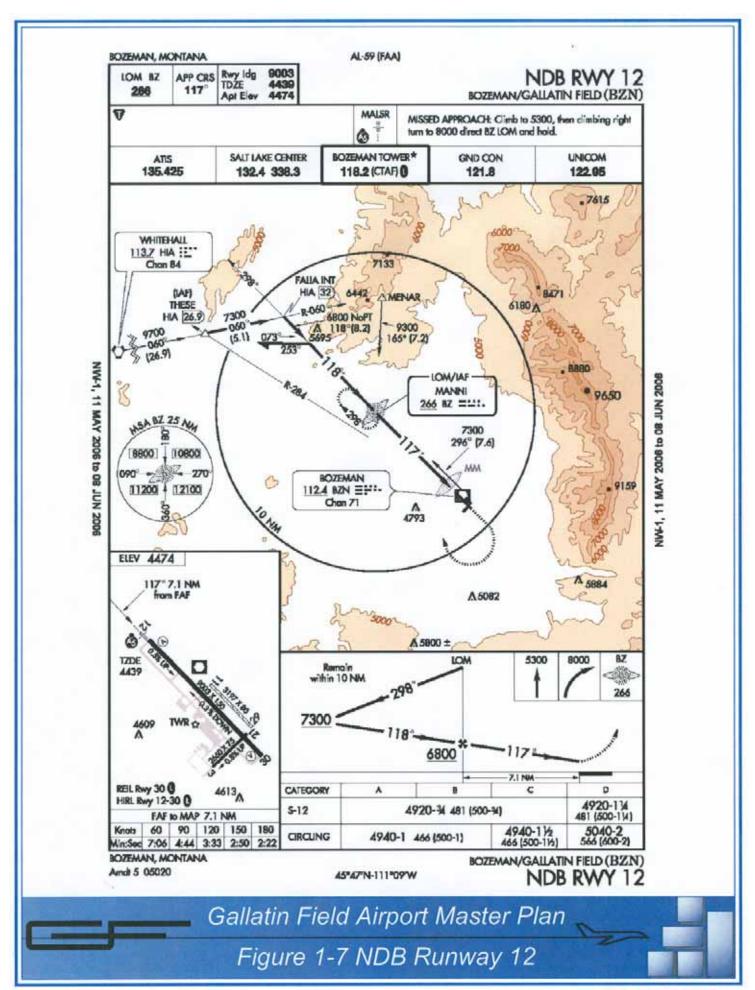
The ATCBI-6 will allow Salt Lake Center (SLC) to see aircraft below 12,000 feet that were previously not visible by the existing radar due to terrain obstructing the radar's line of sight. Currently, while an aircraft is on the ILS approach to Runway 12 and below 12,000 feet, no other aircraft can occupy the airspace. The new ATCBI-6 will allow SLC to see approaching aircraft in the local airspace and provide proper separation. Salt Lake Center's ability to see aircraft with the aid of the Bozeman radar will increase the capacity of Runway 12 during IFR conditions.

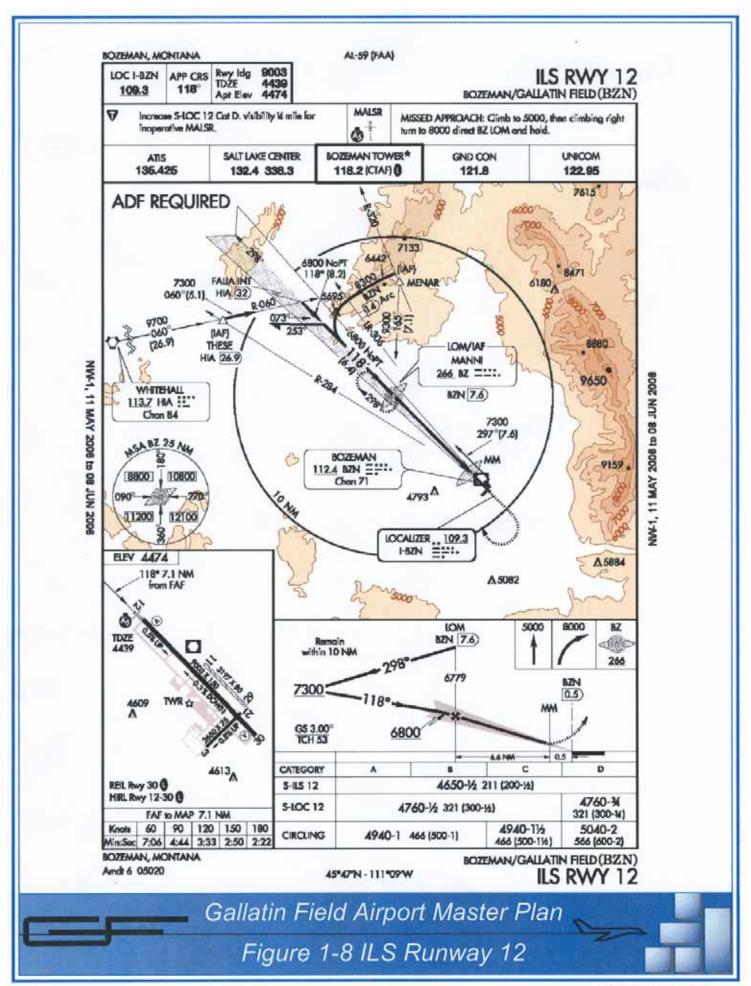
Table 1-2 Runway Characteristics

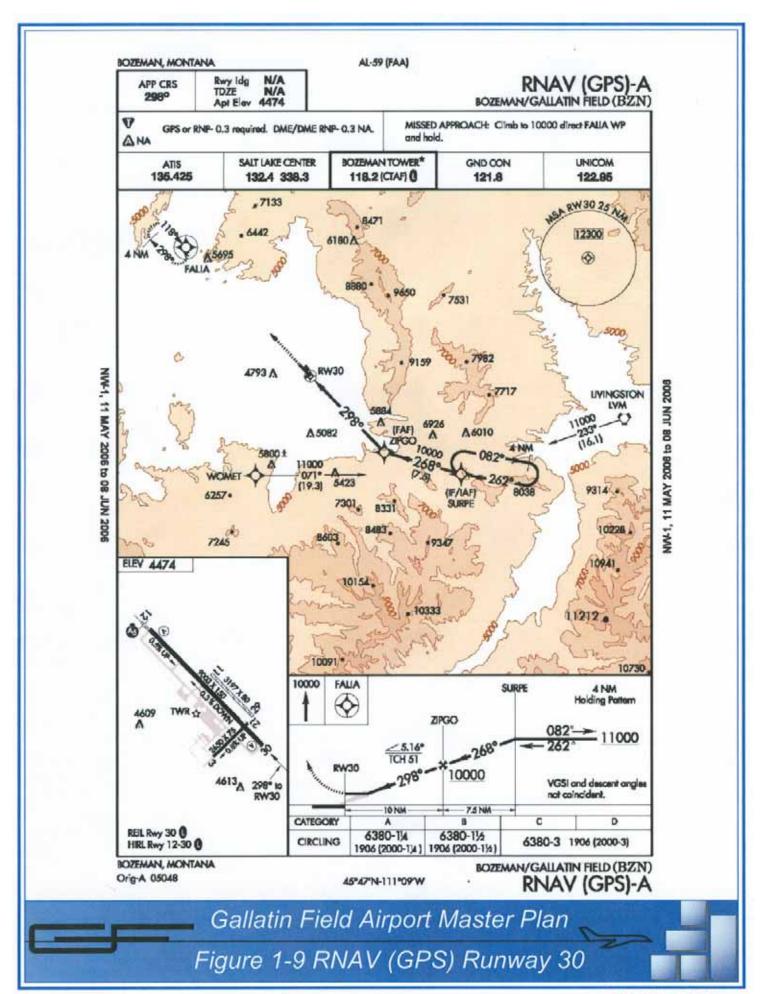
	RUNWAY 12-30	RUNWAY 3-21	RUNWAY 11-29
RUNWAY WIDTH X LENGTH (feet)	150 x 8,998	75 x 2,649	80 x 3198
% GRADIENT	0.41	0.67	0.4
AIRPORT REFERENCE CODE (ARC)	C-III	B-I	B-I SMALL
INSTRUMENT & APPROACH AIDS	VOR/DME	NONE	NONE
	ILS (RW 12)		
VISUAL AIDS	MALSR (RW 12) VASI-4 (RW 12-30) REIL (RW 30)	NONE	NONE
LIGHTING	HIGH INTENSITY	NONE	REFLECTIVE
MARKING	PRECISION INST.	NON- PRECISION	NONE
SURFACE	ASPHALT - GROOVED	ASPHALT	TURF
SINGLE WHEEL (lbs)	+75,000	65,000	
DUAL WHEEL (lbs)	+200,000	85,000	
DUAL TANDEM (lbs)	350,000	150,000	











Taxiways & Taxilanes

Runway 12-30 is served by a parallel taxiway system including Medium Intensity Taxiway Lights (MITL) and a guidance sign array. The parallel taxiway system includes Taxiways A, B, C, D, and E. Taxiway A is parallel to Runway 12-30 and connected to the runway's thresholds. The separation distance between the centerline of Runway 12-30 and the centerline of Taxiway A is 750 feet. On the east end of Taxiway A there is a holding bay. The holding bay is designed to allow aircraft deicing as well as run-up operations prior to takeoff. Taxiways B, C, D, and E serve as intermediate runway entrance and exit taxiways for Runway 12-30.

In addition to the parallel taxiway system, Gallatin Field serves the general aviation fleet with several taxilanes. These taxilanes serve as access routes to the hangar areas located south of the runway. The characteristics of the parallel system and taxilane system are described in Table 1-3 and displayed in Figures 1-1 and 1-10.

General Aviation Facilities

General aviation facilities at Gallatin Field serve local, itinerant, military, and corporate express pilots. The General Aviation (GA) apron has parking areas for small to large fixed wing aircraft and helicopters. The GA apron has two concrete hard stands designed to park large aircraft such as the Boeing Business Jet or the Global Express. It has tie down locations for small planes as well as medium sized multi-engine aircraft. The apron consists of 436,500 square feet of asphalt apron, 55,250 square feet of concrete apron, and two 2,350 square foot hard stands.

Located on the GA apron are two Fixed Based Operators (FBO). The two FBOs, Arlin's Aircraft Service and



General Aviation Apron Tie-Downs - 2006

Yellowstone Jetcenter, are located at either end of the GA apron. The FBOs both sell jet fuel and AvGas, delivered by fuel trucks from the fuel farm.

An additional tie-down apron, primarily for based aircraft, is located at the east end of the GA apron. It has tie-down locations for 32 small aircraft. At the north end of this tie-down apron is a self-fueling station with two dispensing units. The self-fueling station provides AvGas and is operated by Arlin's Aircraft Service. The tie down apron has 125,900 square feet of space available for parking and fueling aircraft.

The GA apron has six (6) front line hangar buildings. Four of the hangars are operated by the FBOs for storage, maintenance and passenger facilities. The remaining two hangars are operated by flight schools. In total, there are three flight schools and two charter services working on the GA apron.

Gallatin Field Airport has many private aircraft storage hangars located south of the GA apron. The hangar area has 62 storage buildings. The buildings in the south hangar area, East Ramp, and the General Aviation area include 130 hangar doors and enough storage space to house the based aircraft at Gallatin Field. Ten aircraft owners currently elect to park their airplane outside on the tie-down aprons. The characteristics of the general aviation aprons are listed in Table 1-4 and displayed in Figure 1-10.



General Aviation Hangars - 2006

In 2001, the Airport constructed an additional apron east of Runway 3-21 known as the East Ramp. While the East Ramp is primarily used by GA Aircraft, it was designed and constructed to provide a location for larger size hangars and aircraft. There are currently four buildings on the East Ramp, three storage hangars, and an office building. Two additional hangars have been approved for construction on the East Ramp.

Table 1-3 Taxiway & Taxilane Characteristics

TAXIWAY	WIDTH	DESIGN GROUP	SURFACE	SINGLE WHEEL (lbs)	WHEEL (lbs)	TANDEM (lbs)
A	75' - 90'	IV	ASPHALT	75,000+	200,000+	345,000
B, C, D	75'	IV	ASPHALT	75,000+	200,000+	330,000
E	90'	IV	ASPHALT	75,000+	200,000+	345,000
F	40'	1	ASPHALT	27,000		
G	25'		ASPHALT	30,000		
Н	35'	II	ASPHALT	50,000		
J	25' - 35'	1	ASPHALT	26,000		
K,L,N,M	25'	1	ASPHALT	26,000		
0	50'	III	ASPHALT	75,000+	200,000+	400,000+
P,Q,R,S,T	25'		ASPHALT	75,000+		
U	35	11	ASPHALT	75,000+	200,000+	400,000+

Table 1-4 General Aviation Aprons

DESCRIPTION	WIDTH	LENGTH	SURFACE	SINGLE WHEEL (lbs)	DUAL WHEEL (lbs)	DUAL TANDEM (lbs)
GENERAL AVIATION	50'	1,105'	CONCRETE	55,000	75,000	
GENERAL AVIATION	395'	1,384'	ASPHALT	75,000+	180,000	300,000
G A CONCRETE PADS	37.5'	62.5'	CONCRETE	75,000+	180,000	380,000
BASED AIRCRAFT TIE- DOWN APRON	185	681'	ASPHALT	75,000+		
EAST RAMP	125'	1,000'	CONCRETE	75,000+	180,000	380,000
EAST RAMP	395'	1,000*	ASPHALT	75,000+	200,000	400,000



East Ramp - 2006



East Ramp / Cargo Facilities

Gallatin Field offers numerous options for cargo operators on the airport. There are three independent cargo carriers, operating at the Airport: FedEx, UPS, and DHL. In addition to these carriers, the commercial airlines carry a substantial amount of cargo to and from the Airport.

In 2001, the East Ramp was constructed. It was expanded in 2005 to serve the new FedEx building. Prior to constructing their new facility, FedEx occupied a building on the GA Apron where it received air cargo in two Cessna Caravans several times a week. This building was used for cargo sorting and loading of delivery vans. Moving their operations to the cargo apron has made more room on the GA Apron for general aviation aircraft to use.

UPS and DHL currently use the GA Apron for cargo operations. Their cargo is loaded and unloaded daily on

the GA Apron in vans. The cargo flights for DHL and UPS are operated by Ameriflight; each company has one cargo flight daily. The construction of a new access road to the East Ramp, and the installation of a new automatic gate at this location will be completed in July of 2006. After completion of the gate, these cargo operators will also move their loading and unloading processes to the East Ramp. Moving the cargo operators off the GA Apron has allowed more room for general aviation aircraft to operate on the GA Apron and reduces the vehicle traffic on the GA Apron.

Table 1-5 displays the FedEx apron area characteristics. In 2005, 3,225,000 lbs of cargo passed through the airport, up from 2,346,000 lbs in 2000. Cargo specific operations have decreased from 1,454 in 2,000 to 1,196 in 2005.

Table 1-5 FedEx Apron

DESCRIPTION	WIDTH	LENGTH	SURFACE	SINGLE WHEEL (lbs)	DUAL WHEEL (lbs)	DUAL TANDEM (lbs)
ASPHALT	175'	240'	ASPHALT	75,000+	200,000+	400,000+



FedEx Facility at Gallatin Field - Constructed in 2005

Commercial Passenger Terminal Facilities

The commercial passenger terminal facilities include the Terminal building, Commercial Apron, and employee and

passenger parking facilities. The Terminal contains operating space for airport administration, airlines, rental car companies, gift shop, ground transportation, restaurant and lounge, and TSA.

Airport administration, airline ticketing and baggage handling, gift shop, and rental car facilities are all located on the first (ground) floor of the Terminal building. The second floor contains

Rental Car Offices

Ticket Counters

Total First Floor

Restrooms

Vestibules

TSA

passenger waiting areas, Gallatin Fig. the restaurant and lounge.

Security personnel operate checked baggage screening on the first floor at the airline ticket counters. Passenger and carry-on luggage screening is conducted on the second floor.

Airline boarding gates are located on the first and second

floors. There are four passenger boarding bridges and gates located on the second level and two ground loading gates on the first level. All passenger waiting areas located on the second floor. In the passenger waiting area, there is a snack bar and news stand for passengers' convenience. A layout of the first and second floors of the terminal

building is shown in Figures 1-11 and 1-12. The uses and

areas of the terminal building are listed in Table 1-6.



areas, Gallatin Field Airport Terminal Building

Table 1-6 Commercial Passenger Terminal Aircraft Facilities

	PASSENGER TERM	INAL USE BY AREA*	
First FI	oor	Second Floor	
Use	Area (square feet)	Use	Area (square feet)
Administration Offices	1,535	Concourse	10,002
Airlines	3,150	Custodian/Storage	320
Baggage Makeup	7,600	Lobby	2,743
Baggage Stripping	3,854	Restrooms	1,470
Baggage Screening	1,360	Restaurant/Lounge	5,932
Concourse	1,215	Security Screening	1,900
Conference Rooms	1,917	Snack/News Stand	200
Custodian	652	Total Second Floor	22,567
Gift Shop	954	*Areas exclude stairs, elevators, and partitions.	
Lobby, Arrivals	7,920		
Lobby, Departures	8,940		
Lobby, Rental Car	3,395		

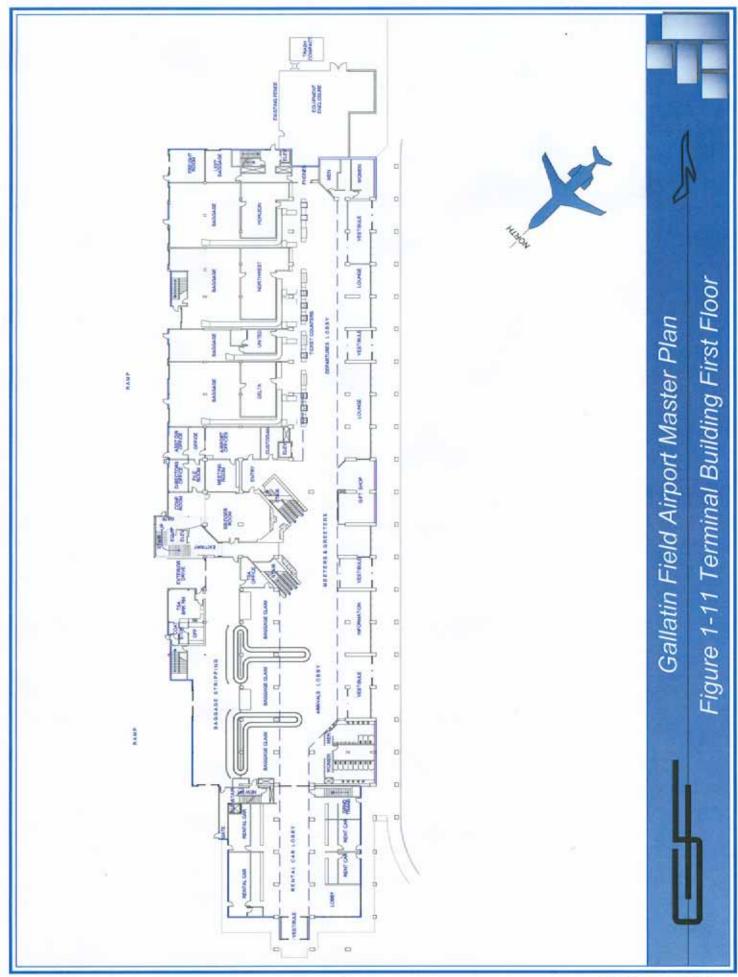
2,691

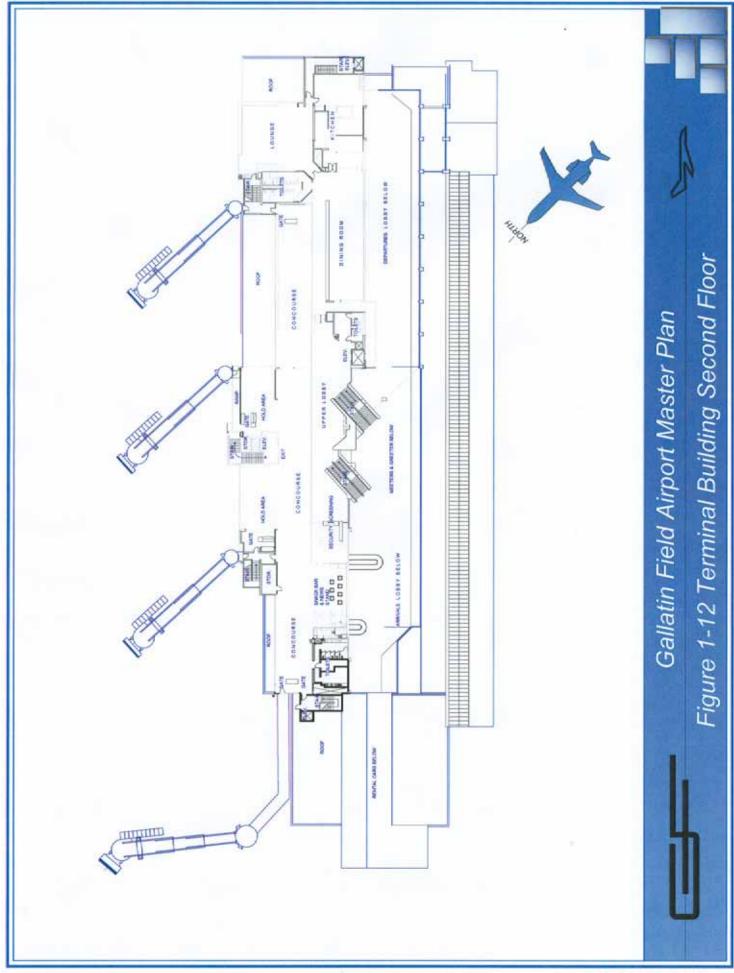
1,767

1,032

2,558

51,855





Commercial aircraft apron facilities at the Terminal building include a concrete parking apron for passenger boarding and an asphalt apron for aircraft to taxi as well as be parked when not loading or unloading passengers. Deicing materials and equipment are stored at the east end of the commercial apron. While most aircraft deicing operations are conducted on the commercial apron, some deicing is conducted on the holding bay at the east end of Taxiway A. A building for airline storage of equipment is also located on the commercial apron. Table 1-8 shows the characteristics of the Commercial Apron.

Parking areas for passengers, employees, and rental cars are provided around the Terminal building. Parking areas are described in detail in the following section.

Access, Circulation & Parking

Access to the airport is granted by Highway 10 from Bozeman or Belgrade. The main access road into the Airport, Gallatin Field Road, passes the GA area and FBOs and then to the terminal area. Around the Terminal, there is parking for the public, employees, and rental cars. The access road runs past the Terminal building and then loops

around the pay parking lot. The configuration allows for passengers to be dropped off at the front of the Terminal and then for vehicles to leave the airport or move to the parking lot. Figure 1-13 displays the landside facilities.

Immediately east of the Terminal is the employee parking lot. Expanded in 2005, the 87,000 square foot lot has 220 parking stalls for employees working at the Terminal. The pay parking lot is located south of the Terminal. On the north

end of the lot is a bus lane used by hotel shuttles. The pay parking lot is operated by Standard Parking. Parking rates are listed in Table 1-7. The parking lot was expanded to its current size in 1999. It now covers 304,000 square feet and has parking stalls for 776 vehicles. During holidays and peak travel times, the lot is often full. An overflow lot has been used on an as needed basis. The overflow lot is a grass area south of the pay parking lot. deliniated by fence posts.

Table 1-7 Parking Rates

Parking Rates	The state of
0 - 30 Minutes	Free
31 - 60 Minutes	\$1.50
Each Additional Hour	\$0.75
Max. Daily Rate	\$5.50
Max. Weekly Rate	\$27.50

Rental car parking is located on the west end of the Terminal building. The lot is separated for return rental cars and cars ready to rent. The return lot covers 79,000 square feet and has parking for 233 vehicles. The ready lot covers

60,650 square feet and has parking for 178 vehicles.

South of the rental car parking are the Car Condominiums. Car Condominiums are 12-space garages, each 73 feet by 45 feet. Each unit is privately owned and has individual parking for twelve vehicles. Combined. there are 180 vehicle spaces in the complex.



Commercial Apron - 2006

Table 1-8 Commercial Passenger Terminal Apron Facilities

DESCRIPTION	WIDTH	LENGTH	SURFACE	SINGLE WHEEL (lbs)	DUAL WHEEL (lbs)	DUAL TANDEM (lbs)
CONCRETE	150'	730'	CONCRETE	75,000+	160,000	350,000
ASPHALT	193'	930'	ASPHALT	75,000+	200,000+	400,000+
ADDITIONAL PARKING APRON	300'	200'	ASPHALT	75,000+	200,000+	400,000+

Support Facilities

Support facilities on the airport include Aircraft Rescue and Fire Fighting (ARFF), airport maintenance and administration, and fuel storage. ARFF operations are carried out under Part 139 certification. The ARFF operations are located in what was referred to as the Old Terminal building. This building was remodeled in 2005 and is now called the Airport Fire Safety and Security (AFSS) Building. Prior to moving ARFF operations. the fire station was located at the east end of the commercial apron. Its new location is nearly centered on Runway 12-30 and adjacent to Taxiway A. This new centralized location will help reduce response times to the east side of the airport. In addition to the remodel, a 56' x 39' ARFF truck storage building was built. The equipment storage building houses two fire trucks. The older truck, manufactured by Oshkosh, was purchased in 1990 under AIP 11. The second truck was purchased in 2005 from E-One, under AIP 29. Both trucks have 1,500 usable gallons of water and 200 gallons of Aqueous Film Forming Foam (AFFF) to meet Part 139 requirements.

The AFSS Building also serves as office space for TSA operations and Sheriff's deputies working at the airport. TSA and the Sheriff's deputies occupy 1,500 square feet of the 6,490 square foot main floor of the building. The remaining areas are used by ARFF and maintenance personnel.



Airport Rescue and Fire Fighting (ARFF) Vehicle, purchased in 2005

Airport maintenance facilities are located near the access road to the airport. The maintenance buildings are comprised of a maintenance shop, equipment storage building, storage garage, and two sand sheds. The 4,350 square foot maintenance shop has 1,700 square feet for office space, locker room, and lunch room. The remainder of the building contains a wash bay, equipment maintenance bay, and project room. In 2000, a 21,000 square foot Snow Removal Equipment Building (SRE) was added to the maintenance shop. The SRE building houses all snow removal and maintenance equipment. It also serves as storage for a variety of supplies. The SRE building also contains a large wash bay to clean the vehicles used by Airport maintenance personnel. Outside the SRE Building there is a



Gallatin Field Maintenance Building and Maintenance Equipment

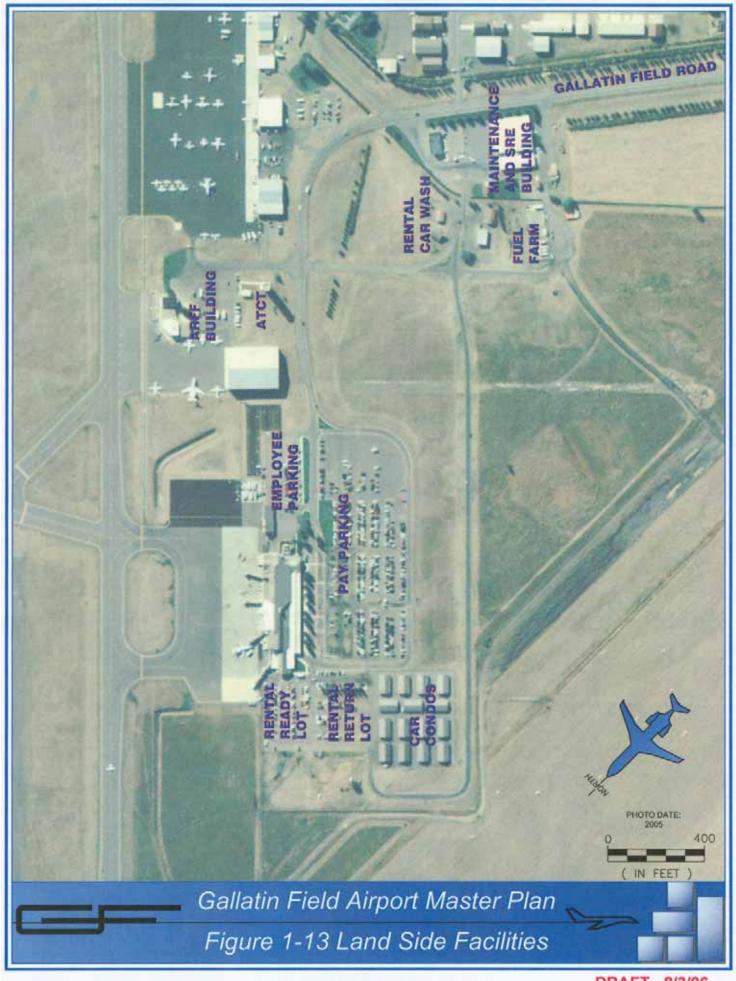
diesal tank for fueling equipment as well as a 300-gallon tank for pavement deicing fluid.

Airport administration offices are located in the Terminal building. In addition to administration, there is a six person custodial staff.

Fuel storage facilities are located to the west of the maintenance shop in the fuel farm. The fuel facilities are owned and operated by the FBOs, Arlin's Aircraft and Yellowstone Jetcenter. Each FBO has storage tanks for Jet A and AvGas fuel. There are 11 fuel tanks, both above and below ground, having a total available capacity of 152,000 gallons of fuel available. Table 1-9 lists the size and type of each fuel tank.

Table 1-9 Fuel Farm Storage Tanks (Gallons)

Туре	Above Grade	Below Grade			
AvGas	12,000				
AvGas		12,000			
Jet A	24,000				
Jet A	20,000				
Jet A		12,000			
Jet A		12,000			
Jet A		12,000			
Jet A		12,000			
Jet A		12,000			
Jet A		12,000			
JP8	12,000				
Tota	Total AvGas				
Tota	Total Jet A				
Tot	Total JP8				
	Total	152,000			

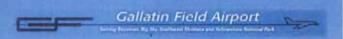




The Airport has many vehicles and support equipment to maintain and serve the Airport facilities. Table 1-10 lists the existing Airport support equipment.

Table 1-10 Airport Support Equipment

Vehicle Make	Vehicle Year	Vehicle Description
Oshkosh	1991	ARFF Truck
E-One	2005	ARFF Truck
Gator		ATV
Ford	1986	Catering Truck
Dodge	1998	Minivan
Ford	2001	Minivan
John Deere F680		Mower
Whoopy		Open Bed Lift
Chevrolet	1983	Pickup
GMC	1992	Pickup
GMC	2001	Pickup
Chevrolet	2002	Pickup
Chevrolet	2005	Pickup
John Deere F932		Small Broom/Mower
John Deere F932		Small Broom/Mower
Idaho Norland	1976	Snow Thrower
Oshkosh	1991	Snow Thrower
Ford	1983	Snowplow 12'
Oshkosh	1983	Snowplow 20'
Oshkosh	2002	Snowplow 20'
Oshkosh	2002	Snowplow 20'
Oshkosh	1982	Snowplow 20' Ramp
Ford	1987	Sweeper Broom - 12'
SMI	1982	Sweeper Broom - 18'
Oshkosh	2000	Sweeper Broom - 20'
Massey Fergusson	1996	Tractor
Case	2002	Tractor



III. Environmental Overview

The majority of the property owned by the Airport has had cultural resource surveys conducted on it. Findings have not found any significant cultural resources that need to be mitigated. The State Historic Preservation Office feels that the Old Terminal building, constructed in 1951, could be a candidate for the National Register of Historic Buildings. As a result of their findings, considerations to protect the historic qualities of the building have been and will continue to be considered in projects relating to this building.

Consultations with the United States Fish Wildlife and Parks have not produced any species of plants or animals occupying the Airport areas that require special attention. The Airport does not have an impact on any wild or scenic rivers. The only surface waters on Airport property are irrigation ditches that carry water part of the year and are not considered State waters. Spain-Ferris Fork Ditch runs through the airfield. This ditch ends in agricultural fields. Efforts are made during construction to ensure that erosion and storm water discharge not reach State waters. This is accomplished through several approved best management practices for storm water control including natural vegetative filters and the placement of straw bails and silt fences in areas that are likely to collect and transport sediment from construction activities.

Environmental impacts will be discussed in more detail under the proposed development alternatives.

IV. Regional Setting and Land Use

Gallatin Field Airport is located in Gallatin County in the southwest part of the state. Gallatin County is the most populated and fastest growing county in scenic southwest Montana. The County Seat of Bozeman at large encompasses over 50,000 people, yet has a small town feel. The Airport is located close to downhill skiing, blue ribbon trout streams. Yellowstone National Park, and a multitude of other outdoor activities in the pristine nearby wilderness areas. These qualities draw new residents and tourists alike. Nearly half of all the land in Gallatin County is under public ownership by the Gallatin National Forest, State of Montana, Bureau of Land Management or the National Park Service, Gallatin County is large and diverse, featuring everything from the spectacular scenery of Yellowstone National Park to lush farmland, and a growing economy of high-tech industries.

Gallatin Field is one of two commercial service airports in the county, and one of only 15 in the state. This makes the Airport an important factor in the county's economy. Business travel will increase as more businesses find that with the advent of technology, they can operate competitively in a national and world wide economy from Gallatin County. This is also helping grow the economy in the county to a diverse arrangement of businesses.

As the population continues to grow, so does the use of the Airport. Ensuring compatible land use around the Airport is very important to the future of the Airport operation. This has been done primarily through land acquisition. The Gallatin Airport Authority currently owns 1,984.5 acres of land in fee title. They also control 1,038.3 acres of land through clear zone easements, development rights and leases. In total, the Gallatin Airport Authority controls 3,032.8 acres of land surrounding the Airport. The lands controlled by the Airport Authority are displayed on Figure 1-14, Gallatin Field's Exhibit "A" drawing.

Recently, the Airport Authority, in conjunction with Gallatin County and the City of Belgrade, has created an avigation easement area that covers one hundred seven sections of land, approximately 246,528 acres. The City of Belgrade and Gallatin County will require an avigation easement be granted to the Airport Authority on any new subdivisions within this area. These easements will be filed with the Gallatin County Clerk and Recorder and will show on the title policies for the properties. The easement identifies height restrictions based on the ultimate Part 77 surfaces for the Airport and notifies landowners that they live close to the Airport. The avigation easement area boundary and easements created to date are displayed on Figure 1-15.

Additionally, to control land use, zoning has been created by the City of Belgrade over lands surrounding the Airport. Figure 1-16 displays the Belgrade City County Planning Jurisdiction and Future Land Use map, adopted in June of 2006.

