INFORMATION COLLECTION AND ANALYSIS

The initial step in preparing an airport Master Plan, for the Blosser Municipal Airport (Airport), is the collection and analysis of information that pertains specifically to the Airport and the area it serves. The evaluation and inventory of the existing conditions and facilities serves as an overview of the Airport and the role it serves in local, state and national aviation systems. The inventory also serves as a tool for determining future development of the Airport and the surrounding areas. The information outlined in this chapter provides a foundation for all subsequent chapters.

Airport entrance at the intersection of U.S. 81 Expressway at Blosser Drive.

The basis of a Master Plan requires the collection of existing Airport information and information about the surrounding area. Examples of information obtained:

- Physical inventories, facility descriptions and services currently provided by the Airport.
- Background information pertaining to the Concordia area. This information consists of recent developments at and around the Airport.
- Reviewing existing regional plans and studies affecting transportation and Airport related services to determine their impact on the Airport.
- Population and economic factors which influence the market and future Airport development.

An accurate and complete inventory is essential to a Master Plan's success for the reason that the findings and assumptions made are dependent on the collected information. This information was obtained from site visits and interviews with representatives of the Airport Advisory Board, City Manager, City Commission, Kansas Department of Transportation (KDOT) Division of Aviation, and the Federal Aviation Administration (FAA).

Information was also obtained from available documents and studies concerning the Airport and Concordia area, including the *Blosser Municipal Airport Master Plan 1997 Update*, and the current approved *1997 Airport Layout Plan (ALP)*, the *Kansas Airport System Plan 2009 (KASP)*, and the *Kansas Aviation Economic Impact Study 2010 (KAEIS)*.

AIRPORT SETTING

Serving as the county seat of Cloud County, Concordia, Kansas is located in the Republican River Valley of the State of Kansas. The City of Concordia (City) is a community with a proud past looking forward to an even more promising future.

Concordia lies approximately halfway between I-70 and I-80 on U.S. 81 Highway, now a 4-lane expressway (81 Expressway). Blosser Municipal Airport (Airport) can be accessed from both the north and south via the 81 Expressway and Blosser Drive intersections. Both access points lie immediately off the 81 Expressway. The access road, Blosser Drive, consists of a 15 foot wide, asphalt paved road that's in fair condition. 81 Expressway is situated on the west side of the Airport and runs directly through the heart of Concordia. 81 Expressway is the only north/south 4-lane highway connecting I-70 and I-80 located between Kansas City and Denver.

The Airport is on a 209 acre site located approximately two (2) miles south of Concordia's downtown business district. Exhibit 1A on page 1-3 depicts the Airport in its regional and national setting. Concordia (in driving distance) is 175 miles west of Topeka, 480 miles east of Denver, 150 miles north of Wichita, 224 miles northwest of Kansas City, Kansas and 110 miles southwest of Lincoln, Nebraska.

AIRPORT HISTORY

The aviation history of Blosser Municipal Airport (Airport) dates back to as early as 1930. The rich and exciting history of the Airport began with Charles H. Blosser and his wife Isabell developing and operating a private airport on the south edge of Concordia, Kansas on Blosser's private property. That private airport named, *Blosser Field.*

Sometime in 1945, a public survey of Concordia citizens was conducted to determine which post World War II community construction project should receive first consideration. A municipal airport for Concordia was determined in that survey to be the most important and number one project that the Concordia community should pursue. That was published in the May 25, 1945 edition of the *Concordia Blade-Empire* newspaper.

In 1945, the citizens of Concordia and the Concordia Chamber of Commerce formed an *Airport Promotional Committee* to work with Blossers and City of Concordia (City) in facilitating moving *Blosser Field* from a private operation to a public operation so that, among other things, grant funds could be obtained from the *United States Department of Commerce, Civil Aeronautics Administration* (now the F*ederal Aviation Administration*) to help cover the high costs of greatly enhancing the Airport. At that time, longer and more substantial runways and other airport enhancements were much needed. To accomplish those major things, the grading, drainage and turfing of the primary runway, two (2) crosswind runways, and taxiway were needed. Building areas needed to be determined and excavated. Incidentals such as runway boundary markers, segmented circle marker system for wind direction indicator and property boundary fencing were also needed.

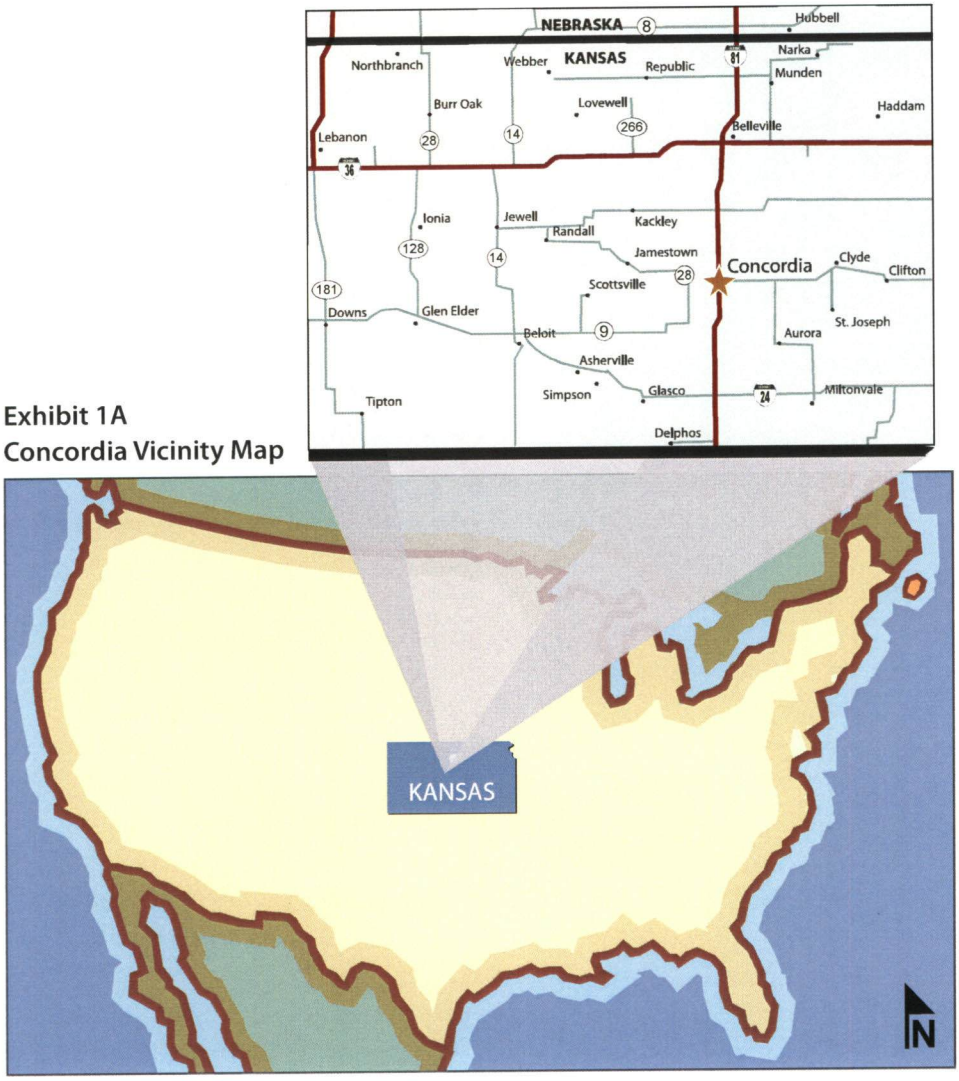


Exhibit 1A
Concordia Vicinity Map

The *Airport Promotional Committee* worked with representatives of the *Civil Aeronautics Administration* and determined that *Blosser Field* would work well for the location of the proposed new municipal airport. With that determination, the *Airport Promotional Committee* requested the City Council to call a special election to vote on $100,000 of bonds for the purchase and improvement of the proposed airport site. That bond election occurred on June 5, 1945 and resoundingly passed. The vote was 1,075 for the airport bonds and 236 opposed, better than a four (4) to one (1) majority.

In March 1946, the City used the approved bond proceeds to acquire from Blossers a public easement on *Blosser Field* that covered 197.7 acres of land to facilitate development of a municipal airport sponsored by the City. That easement cost $21,000 and Blossers retained authority in how their property could be used if the proposed use was for other than airport and aviation

purposes. The City then submitted its first grant application for then unofficially named *Concordia Municipal Airport.* Total estimated project cost was $88,933. On February 24, 1948, the City was awarded a 50% of project cost grant in the amount of $44,466.50 from the *Civil Aeronautics Administration* of which the City matched that with $44,466.50 of airport bond proceeds. In 1978, to honor Charles and Isabell Blosser, the City passed Ordinance Number 2081 that, among other things, officially named the first coined *Concordia Municipal Airport, Blosser Municipal Airport.*

Airport Development Timeline

The development history of Blosser Municipal Airport (Airport) and City of Concordia (City) involvement is summarized in the following timeline:

1930 Charles H. Blosser and his wife, Isabell formally dedicated their privately developed airport named *Blosser Field* in 1930 with a community celebration on May 24th and 25th. Prior to the dedication, Blossers privately constructed a private Conventional Hangar 100 feet long by 50 feet wide. After that, *Blosser Field* depicted on Federal aviation maps as an approved private airport owned and operated by Blossers. *Blosser Field* originally located on a portion of the Blosser's 160-acre farm located just south of Concordia. Located in Appendix B of this Master Plan is a copy of an advertisement for the formal dedication of *Blosser Field* published in the *Concordia Blade-Empire* newspaper; an early promotional brochure for *Blosser Municipal Airport*; and a copy of an aerial photo of *Blosser Field.*

1945 On June 5, 1945, the City conducted a special election for Concordia voters to consider authorization of a $100,000 bond issue for the purpose of acquiring land easement, developing, and equipping a municipal airport. The proposition to authorize issuance of said bonds carried with 1,075 voting YES and 236 voting NO. That outcome is greater than a four (4) to one (1) majority vote.

1946 In March 1946, the City used the 1945 voter approved airport bond proceeds to acquire from Charles and Isabell Blosser a public easement on *Blosser Field* that covered 197.7 acres of land to facilitate development of a municipal airport sponsored by the City. That easement cost the City $21,000 and Blossers retained authority in how their property could be used if the proposed use was for other than airport and aviation purposes. The new public airport was unofficially called *Concordia Municipal Airport.* In 1978, to honor the Blossers, the City officially named the Concordia airport, *Blosser Municipal Airport.*

1947 City constructed ten (10) Nested T-Hangars of wooden construction and Airport Administration Building constructed; grading, seeding, and some Airport fencing completed.

1948 City received grant from *United States Department of Commerce, Civil Aeronautics Administration* (CAA) for the grading, drainage and turfing of primary Runway 17/35, crosswind Runway 12/30, and crosswind Runway 3/21, taxiway and building areas, furnishing and installing fencing, boundary markers, and segmented circle marker system for wind direction indicator.

1954 Because it is not for airport or other aviation use, Charles and Isabell Blosser granted the City permission to locate an Armory building on the public easement area of the Airport and appropriately transfer needed Airport property. The *Kansas Military Board* then acquired approximately seven (7) acres of Airport property from the City for location of an Armory facility for use by the *Kansas Army National Guard*. Deed for that property dated July 6, 1954 and the property exchanged hands for a cost of $1.00.

1955 Construction of the Armory facility located at the Airport for the *Kansas Army National Guard* completed September 20, 1955. The Concordia Armory was one (1) of 37 Armories constructed throughout Kansas using a combination of local City funds and State of Kansas Armory Bonds paid for with State appropriations. The City contributed $74,000 toward construction cost and the State of Kansas provided $40,000 using Armory Bonds.

1961 Runway lighting installed on the north/south aligned primary Runway 17/35. That runway is still a turf surface at this date.

1962 Because it is not for airport or other aviation use, Charles and Isabell Blosser granted the City permission to locate a weather observation station on the public easement area of the Airport and lease needed Airport property for that. The *United States Weather Bureau* then initiated development of a manual weather observation station at the Airport. On June 8, 1962, the City leased the entire Frank Carlson Building being used as the Airport Administration Building (constructed in 1962) to the United States of America for location of the *Concordia Weather Bureau Station*. Related lease cost to the *Weather Bureau* is $1.00 per year with the City providing all building maintenance at no cost to the *Weather Bureau* The *Weather Bureau Station* first established in Concordia on May 1, 1885 at 204 West 6th Street then moved to the Concordia Post Office Building located at 622 Washington Street on June 10, 1915.

1967 City received *Federal Aviation Administration* (FAA) grant for the construction of an asphalt paved primary Runway 17/35 (3,000 feet long by 50 feet wide with pavement strength of 4,000 pounds Single Wheel Gear), low intensity runway lights and threshold lights, apron, connecting taxiway, storm drainage, seeding, and aviation fueling facilities.

1967 On August 31, 1967, the City Commission accepted the agricultural use consent granted by Charles and Isabell Blosser on August 21, 1967. That Blosser permission allowed the City to lease for agricultural purposes surplus portions of the Airport public easement not used for airport or other aviation uses.

1969 *Republican Valley Aerial Farming*, owned and operated by Duane Donovan, located at the Charles H. Blosser 1930 vintage Conventional Hangar. That hangar constructed on Blosser private property located northwest and adjacent to Airport property. Donovan's business operation at the Airport offered aerial spraying services to agricultural producers located throughout the North Central Kansas Region.

1970 *Weather Bureau* changes its name to *National Weather Service* and deems the weather observation station at the Airport a *National Weather Service Office* (NWSO).

1973 Combined Terminal Building (TB-1) and Maintenance Hangar (MH-1) constructed to accomodate Airport visitors, pilots and Fixed Based Operator (FBO).

1975 Partial concrete access taxiway and concrete ramp constructed.

1976 City Commission approved Ordinance Number 1999 thus establishing the *City of Concordia Airport Advisory Board*, providing for City Commission appointment of five (5) Advisory Board Members, and defining the functions, responsibilities, and duties of the Advisory Board.

1976 *National Weather Service* (NWS) installed new meteorological radar system at the Airport NWS Office for weather observation in the North Central Kansas area. That system was a model 74C *Solid State Metric Radar System* provided by *Enterprise Electronic Corporation* of Enterprise, Alabama and installed on a steel, lattice tower approximately 90 feet high to the mounting platform. Topeka had the first 74C Radar installation in Kansas, Concordia the second, and Goodland the third. William P. Matthes was the first and only official Electronic Technician permanently stationed at the Concordia NWS Office, arriving in November 1970.

1977 City Commission approved Ordinance Number 2046 thus authorizing expansion of the *Airport Advisory Board* from five (5) to nine (9) Members and changing the Regular Meeting requirement from one (1) meeting per month to one (1) meeting per quarter.

1977 Seal coat applied to the asphalt primary Runway 17/35.

1977 In October 1977, the City contracted with *Bucher, Willis & Ratliff* (BWR) of Kansas City, Missouri to serve as Airport Consultant and help the City and Concordia community formulate the first Airport Master Plan for the Airport.

1978 Non-Directional Radio Beacon (NDB), radio navigation aid operating at a frequency of 335.00 megahertz, installed to serve as an Airport navigational aid for aircraft pilots.

1978 City Commission approved Ordinance Number 2081 that, among other things, officially names the first coined *Concordia Municipal Airport, Blosser Municipal Airport* and authorizes certain local regulations at the Airport.

1978 In December 1978, the City and Concordia community completed the first Airport Master Plan for the Airport titled, *Master Plan Blosser Municipal Airport - Concordia, Kansas*. The City's Airport Consultant for that Master Plan was *Bucher, Willis & Ratliff* (BWR) of Kansas City, Missouri. The Master Plan took slightly over one (1) year to complete. Total cost was $21,600. Of that cost, *Kansas Department of Transportation, Division of Aviation* paid $18,000 and the *Concordia Industrial Development Association, Inc.* paid the local match of $3,600.

1982 City constructed one (1) metal Conventional Hangar (CH-1) with dimensions of 60 feet long by 60 feet wide, and two (2) additional metal Conventional Hangars with dimensions of 60 feet long by 50 feet wide (CH-2 & CH-3). Those hangars all have double entry and connecting taxiways.

1982 Airport light beacon installed north and adjacent of the Terminal Building on an existing tower approximately 50 feet high. The rotating light beacon equipped with optical system projecting two (2) beams of light, one green and one white, 180 degrees apart, and flashing at a rate of 12 flashes per minute. That light scheme designates the Airport as a civilian airport open to the public, informs pilots that the Airport is land based, and has a lighted primary runway. The beacon has 1,000 watt bulbs and, depending on weather conditions, can be seen a maximum radius of approximately 40 miles from the Airport. Proceeds of the 1982 *Airport Air Show* honoring the 87th birthday of Charles H. Blosser paid for the beacon equipment and installation costs.

1982 *Republican Valley Aerial Farming* constructed a new concrete block with wood-frame roof Conventional Hangar (100 feet long by 60 feet wide) on private property located northwest and adjacent to Airport property. The business operation then moved from the Charles H. Blosser Conventional Hangar, constructed on Blosser private property located northwest and adjacent to Airport property, to that new Conventional Hangar. The new Conventional Hangar located on 0.86 acres of private land previously owned by Blosser and purchased by Duane Donovan.

1984 *Federal Aviation Administration* (FAA) issued a grant to enhance primary Runway 17/35. The project lengthens the runway 600 feet to the south and widens the runway 10 feet. Project resulted in primary Runway 17/35 being 3,600 feet long by 60 feet wide.

1990 City upgraded Airport fueling facilities. Two (2) 6,000-gallon underground fuel storage tanks installed with fuel pumps and leak detection and monitoring systems to meet *Environmental Protection Agency* (EPA) standards. City offers 87-octane motor gasoline (Mogas) for older aircraft and 100-octane low lead aviation fuel.

1991 In April 1991, the City contracted with *Bucher, Willis & Ratliff* (BWR) of Kansas City, Missouri to serve as Airport Consultant and help the City and Concordia community update the first Airport Master Plan for the Airport dated December 1978. The Federal Aviation Administration (FAA) recommends that a community the size of Concordia update its Airport Master Plan approximately every ten (10)

years. In 1989, Federal regulations for aviation and airports changed thus making most existing Airport Master Plans and related Airport Layout Plans (ALPs) nonconforming to FAA standards.

1992 On July 8, 1992, the Airport was severely damaged during a devastating summer storm. The storm struck shortly after 1:00 a.m. and lasted about 30 minutes producing winds clocked as high as 110 miles per hour with sheets of rain and some hail. About half of the Airport's aircraft hangars and 12 aircraft were destroyed. The *National Weather Service* (NWS) Office Building lost one third (1/3) of its roof along with outdoor weather sensors. Cost to repair damage at the Airport was approximately $1.0 million.

1992 *Republican Valley Aerial Farming* replaces its 1982 vintage Conventional Hangar, destroyed during the devastating windstorm of July 8, 1992, with a metal Conventional Hangar, 80 feet long by 64 feet wide.

1992 On September 1, 1992, the *National Weather Service* (NWS) commissioned the Automated Surface Observing System (ASOS) located at the Airport. *Blosser Municipal Airport* was a NWS test site for the new ASOS weather observation system and was one of the first ASOS sites commissioned in the United States.

1993 Beldon M. Blosser repairs damage to the private vintage 1930s Conventional Hanger (100 feet long by 50 feet wide) previously owned by Isabell Blosser and the late Charles H. Blosser located northwest and adjacent to Airport property. That Hangar damaged by the devastating windstorm of July 8, 1992. Beldon Blosser also completes construction of an office addition (44 feet long by 25 feet wide) and an Executive Hangar addition (75 feet long by 50 feet wide) to the east side of the existing Conventional Hanger. That facility named *Blosser Office & Hangar Complex* with address of 2015 Lincoln Street, Concordia.

1994 City replaced existing Nested T-Hangars of wooden construction (damaged by the July 8, 1992 windstorm) with a new Standard T-Hangar of metal construction (TH-1) having dimensions of 285 feet long by 33 feet wide. TH-1 is a 10-place aircraft hangar with sliding doors providing an opening 40 feet wide.

1995 *National Weather Service* (NWS) decommissioned the *Enterprise Electronics 74C Solid State Metric Radar System* used for weather observation and removed the system. The NWS donated remaining radar tower structure (steel, lattice tower approximately 90 feet high to the mounting platform) to the City of Concordia.

1995 *National Weather Service* (NWS) closed the NWS Office located at the Airport.

1996 Brian Donovan (son of business founder, Duane Donovan) purchases *Republican Valley Aerial Farming* and renames the business, *Aerial Ag Service*. To date, Donovan continues operating the business from private property located adjacent and northwest of the Airport.

1997 In October 1997, the City and Concordia community completed the update of the first Airport Master Plan for the Airport dated December 1978. That update titled, B*losser Municipal Airport 1997 Airport Master Plan Update.* The City's Airport Consultant for the Master Plan update was B*ucher, Willis & Ratliff* (BWR) of Kansas City, Missouri. The Master Plan update took almost six and one half (6 ½) years to complete. Total cost was $24,800. Of that cost, the Federal Airport Improvement Program (FAIP) administered by the Federal Aviation Administration (FAA) paid $22,320 and the City paid $2,480.

2000 Primary Runway 17/35 pavement is sealed and marked.

2005 City installed new automated fuel dispensers and related debit/credit card reader equipment.

2005 Primary Runway 17/35 (3,600 feet long by 60 feet wide) received a mill and asphalt overlay.

2005 *Kansas Army National Guard* completed a major renovation of its Concordia Armory facility located adjacent to Airport property. The $630,810 total cost of that renovation paid for with a combination of Federal and State of Kansas funds.

2007 On September 19, 2007, the City Commission approved a Settlement Agreement with Beldon M. Blosser and *Beldon M. Blosser Trust Number One* (Blosser Trust) dated August 1, 2000 concerning, among other things, reaffirmation that Blossers have property reverter rights and retained authority in how the City's public easement on certain Airport property could be used if the proposed use was for other than airport and aviation purposes. On September 14, 2007, the Blosser Trust, acting through its Trustees Beldon M. Blosser and Marilyn J. Blosser, husband and wife, gave to the City a Quit Claim Deed which specifies that the Blosser Trust retains property reverter rights and authority concerning the Airport public easement until September 30, 2032. Prior to that Blosser Trust action, on September 5, 2007, the City Commission approved Resolution Number 2007-1781 that authorizes City Commission Policy Statement Number 2007-1 effective September 30, 2007. That Policy Statement establishes policies concerning the operation, administration, and improvement of the Airport. Located in Appendix C of this Master Plan is a copy of City Commission Policy Statement Number 2007-1, Blosser and City Settlement Agreement, and Blosser Quit Claim Deed to the City.

2007 Eighty seven (87)-octane motor gasoline (Mogas) provided at the Airport removed then replaced with Jet A-1 fuel. Airport still offers 100-octane low-lead aviation fuel. *Clay Center Municipal Airport* and *Salina Municipal Airport* continue to offer Mogas for local and itinerant pilots operating aircraft in the North Central Kansas Region.

2008 Comprehensive remodeling improvements made to the combined Airport Terminal Building (TB-1) and Maintenance Building (MH-1). The Terminal Building area completely remodeled and modernized. The Maintenance Hangar attached to Terminal Building also remodeled and updated with a bi-fold door that

is 50 feet wide. A donation of $106,500 from the *Charles H. and Isabell Blosser Foundation* to the City initiated the remodeling improvements.

2008 Airport rotating light beacon moved from dilapidated tower located just north of Terminal Building and placed atop the vacated radar tower (steel lattice tower is approximately 90 feet high to its mounting platform) that was once used by the *National Weather Service*. Dilapidated tower then demolished.

2008 In March 2008, the City contracted with *HWS Consulting Group, Inc.* (HWS) of Manhattan, Kansas (HWS became *Alfred Benesch & Company* in 2010) to serve as Airport Consultant and help the City and Concordia community formulate the second update of the first Airport Master Plan for the Airport dated December 1978 then updated January 1997. Estimated cost of the project is $123,300. The Federal Aviation Administration (FAA) recommends that a community the size of Concordia update its Airport Master Plan approximately every ten (10) years.

2008 City Commission approves Ordinance Number 2008-2971 that allows people living outside the incorporated limits of Concordia but within the boundaries of Cloud County to be Members of the *Concordia Airport Advisory Board.*

2008 *Cloud County Health Center* approaches the *Concordia Airport Advisory Board* about the possibility of locating a new 25-bed critical access hospital at the Airport with suitable proximity that allows the hospital facility to have direct taxiway access to primary Runway 17/35. The proposed project is to better facilitate air ambulance services using fixed wing aircraft for medical emergency transport of rural patients that are critically injured or ill.

2009 *City of Concordia Planning Commission* makes formal recommendation to the *City of Concordia Airport Advisory Board* concerning implementation of aviation zoning regulations and related future land uses at *Blosser Municipal Airport.*

2010 On September 14, 2010, *Cloud County Community College* (CCCC) leased the west Conventional Hangar and central office space of the former *Blosser Office & Hangar Complex* located on private property. CCCC leased that for location of some college classes concerning the CCCC *Wind Energy Technology* (WET) Program. CCCC located the *Air Foils & Composites* portion of the WET Program in that leased space.

2011 On April 27, 2011, at the request of Cloud County Health Center (CCHC), the Concordia Airport Advisory Board (AAB) at a Regular Quarterly Meeting, unanimously voted to recommend to the Concordia City Commission that the City authorize the additional cost of $9,350 for a Supplemental Agreement with *Alfred Benesch & Company, Inc.* of Manhattan, Kansas (serving as City's Airport Consultant) to now amend the Airport Master Plan DRAFT to, if needed for the CCHC proposed new hospital, accommodate the Airport Park Site with taxiway connectivity to the primary runway and additional aircraft apron area. On May 4, 2011, the City Commission at a Regular Commission Meeting publicly considered and approved that AAB recommendation by unanimous vote.

2011 On August 8, 2011, the City purchased 56 acres of property located adjacent and on the south end of Airport property. If local funding becomes available for the Airport, that City land acquisition from Lynn L. Mosher and Patricia L. Mosher, husband and wife, could provide owner friendly land via the City to help extend the length of the proposed new primary Runway 18/36. The Mosher Land now provides developable property in an area called the Airport South Development located near the southwest corner of Airport property and along the U.S. Highway 81 Expressway. That property provides opportunity for possible taxiway access to the existing and proposed new primary Runway to help foster commercial development in the Concordia community. The Mosher Land also provides ample property for development of a proposed new City Cemetery to be located near the southeast corner of Airport Property.

2011 September 30, 2011, the *Connecting Taxiway Rehabilitation and Apron Expansion Project* completed.

2011 On October 3, 2011, the Kansas Military Board deeded to the City of Concordia (City) at no cost 2.65 acres of its Kansas Army National Guard Armory seven (7) acre property located adjacent to the Blosser Municipal Airport (Airport). That land plus 11.53 acres of Airport land provides an ample site at the Airport North Development area for Cloud County Health Center (CCHC) to develop a new 25-bed critical access hospital that has direct taxiway access to primary Runway 17/35. The deed has no restrictions however, in verbal negotiations, the Kansas Adjutant General and his staff desires that the new CCHC parking lot be located between the new hospital and the Armory building so that excess parking space can be used by citizens during community events conducted at the Armory; the new City street constructed to the CCHC parking lot also provide good access to the Armory; and an electric security gate provided at the termination of the new City street so that authorized Armory personnel can access the east side of the Armory and Airport property.

2012 In April, the Federal Aviation Administration (FAA) published that primary Runway 17 and primary Runway 35 now have Radio Navigation (RNAV) Global Positioning System (GPS) approach procedures that are now Wide Area Augmentation System (WAAS) enabled.

2012 On June 20, 2012, the *Beldon M. Blosser Trust Number One*, acting through its Trustee, Marilyn J. Blosser, consented to the City of Concordia (City) leasing 11.53 acres of Blosser Municipal Airport (Airport) property to Cloud County Health Center (CCHC) for development of a new 25-bed critical access hospital with that having direct taxiway access to primary Runway 17/35. Among performing other duties and obligations prescribed by the *Ground Lease Agreement,* CCHC will pay the City an upfront rent payment of $500,000 for the initial thirty (30) year term of the Ground Lease and two (2) succeeding fifteen (15) year renewal terms. All rent funds related to the *Ground Lease Agreement* restricted solely to payment of the cost of improvements to Airport facilities.

2013 The City and Concordia community completed the second update of the first *Airport Master Plan for Blosser Municipal Airport* dated December 1978 and first updated January 1997. The second update is titled *Blosser Municipal Airport Master Plan 2013 Update. Alfred Benesch & Company* (previously HWS Consulting Group, Inc.) of Manhattan, Kansas served as the City's Airport Consultant. The Master Plan update took almost five (5) years to complete with the City Commission publicly approving the final draft on February 6, 2013 at a Regular Meeting of the City Commission. The base cost of the Master Plan was $123,300. There was an additional cost of $9,350 for a Supplemental Agreement to accomplish additional professional work needed concerning the possible Airport Park Site as a location of the new hospital proposed by Cloud County Health Center (CCHC). Total cost of the Master Plan was $132,650. The Federal Airport Improvement Program (FAIP) administered by the Federal Aviation Administration (FAA) paid 95 percent (95%) of the $123,300 base cost, or $117,135, with the City paying the required five percent (5%) local match of $6,165. The City paid 100 percent (100%) or $9,350 of the cost for the Supplemental Agreement. The City's total cost for the Airport Master Plan was $15,515.

AIRPORT NAMESAKE

Charles H. Blosser as pilot in his 1928 Lincoln Page bi-wing aircraft. Photography courtesy of Marilyn J. Blosser

Charles Henry Blosser (1895—1989) is the namesake of *Blosser Municipal Airport* (Airport). A longtime airplane enthusiast, Blosser privately owned and ran a private airport approved by the Federal government, then known as *Blosser Field*, until transferring it to the City of Concordia (City) to be expanded and operated as a municipal airport.

Blosser was born September 7, 1895, at Malta Bend, Missouri, to Quincy and Bettie Gauldin Blosser. Malta Bend is located approximately 84 miles east of Kansas City. In 1907, Blosser's childhood family moved to Norway, Kansas, from Saline County, Missouri. In September 1917, Blosser enlisted in the United States Army during World War I (1914 to 1918) then returned home in February 1919. On October 20, 1921, he was married to Isabell A. Collins at Belleville, Kansas. Isabell was born in Cuba, Kansas, raised in Belleville and daughter of Frank B. and Pearl (Sherman) Collins. Blosser attended *Kansas State University* in Manhattan, Kansas and was a member of the *Presbyterian Church, Masonic Lodge, Isis Shrine of Salina, Elks Lodge, Moose Lodge, American Legion, Veterans of Foreign Wars, Veterans of World War I of the U.S.A., Society of Forty Men and Eight Horses* (The Forty & Eight) and the *United Flying Octogenarians.*

In 1923, Blosser purchased and learned to fly his first aircraft, a *Lincoln Standard* with a 1916 vintage *Curtiss OXX-6* engine. In 1927, Blosser was issued Private Pilot License Number 7,445. Prior to 1927, a license was not required to fly an aircraft. Blosser taught his wife to fly an airplane, but Isabell never applied for a pilot's license. Instead, Isabell became Blosser's navigator and first lieutenant. Interesting to note, the *United States Department of Commerce, Aeronautics Branch* began pilot certification with the first license issued on April 6, 1927. The recipient was the chief of the *Aeronautics Branch*, William P. MacCracken, Jr. who received Private Pilot License Number 1. Orville Wright, who was no longer an active flier, declined the honor.

Blosser's flight instructor, Bennie Howard gave Blosser only three (3) hours of flying instruction and four (4) rules for flying:

- Always keep the ground in sight.
- Always have in mind a place to land in case of an emergency.
- Treat an airplane like it is a mule and always remember a mule will be good to its owner for 20 years just to get a chance to kick the hell out of him.
- Strive to be the oldest pilot, not the bravest.

In later years, Blosser often smiled as he mused that all four (4) of Howard's rules for flying in 1923 were probably no longer the most appropriate for flying the modern aircraft of the late 1900s.

In 1928, Blosser purchased the last *Lincoln Page* bi-wing aircraft built by Ray Page, Serial Number 281. That aircraft has a 1918 vintage *Curtiss OX-5* water cooled engine, Serial Number 723, rated at 90 horsepower which provides the *Lincoln Page* aircraft a top airspeed of 85 miles per hour or 90 miles per hour with a tail wind. The Certificate of Registration Number for the *Lincoln Page* is N418V. The only instruments in the *Lincoln Page* are an altimeter along with temperature and oil gauge for the engine. Over the years, Blosser owned several aircraft, including a *Laird Swallow* and a *Luscombe,* but the 1928 *Lincoln Page* was his favorite, probably due to fond memories.

Charles and Isabell were very good friends of Raymond and Ethel Page. Blossers first met Charles A. Lindberg in Lincoln, Nebraska when Page was giving Lindberg his first flying lessons at Page's *Lincoln Airplane and Flying School.* When Raymond died of cancer, Ethel did not want to sell the last *Lincoln Page* aircraft but at the respectful urging of Blosser, Ethel finally sold the aircraft to Blosser because she knew he would take care of it. Blosser so loved the *Lincoln Page* aircraft that he personally flew it at least every September 7th on his birthday. The last known occasion that Blosser flew the *Lincoln Page* was September 7, 1980 on his 85th birthday.

On May 24, 1930, Blosser and his wife, Isabell, publicly dedicated their private airport called *Blosser Field*, which was located just south of Concordia on a portion of a 160 acre farm the Blossers purchased. The formal dedication included, among many other things, an *Air Races and Jubilee.* The May 29, 1930 edition of the *Concordia Blade-Empire* newspaper reported that the event attracted approximately 10,000 people to Concordia. After that, *Blosser Field* was shown on Federal government aerial aviation maps as a Federally approved private airport.

April 7, 1931, Blosser was elected Mayor of Concordia and served a term from 1931 to 1933. Blosser received a conclusive 1,155 votes where his two (2) opponents Bennett and Wilson respectively received 435 and 128 votes, those totaling 563 votes. The April 9, 1931 edition of the *Kansan* newspaper states, *The results of the City election was decisive in giving the world evidence that the City of Concordia is in a progressive class, and not now living in the one-horse shay era.*

In 1935, Blosser was honored by the *Concordia Chamber of Commerce* and other civic groups for his heroic services during the *Republican River* flood in June of that year. During a four (4) day period,

Blosser flew over the raging river and flooded areas assisting flood-stricken victims. He acted as a spotter for rescue boats (including one boat operated by his brother, Martin Blosser), dropped food to stranded individuals and acted as a shuttle service by flying people back and forth across the flooded river. Twenty-eight (28) people were rescued during that time largely due to the spotting efforts of Blosser. He also was instrumental in making Kansas a member of the *United States Bureau of Reclamation*. Blosser worked with the late United States Senator for Kansas, Frank Carlson and the *Bureau of Reclamation* in getting flood control along the *Republican River.*

In 1946, the City of Concordia acquired from Blossers a public easement on the private *Blosser Field* for developing an expanded municipal airport. That ultimately became known as B*losser Municipal Airport.* During that public easement acquisition, Blossers retained authority in how their property could be used if the proposed use was for other than airport and aviation purposes. Over the years, Blossers granted permission to the City to use surplus *Blosser Municipal Airport* property for development of an Armory for the *Kansas Army National Guard* and for a building to house a *United States Weather Bureau Station*. Located in Appendix B of this Master Plan is a copy of an advertisement for the formal dedication of *Blosser Field* published in the *Concordia Blade-Empire* newspaper; an early promotional brochure for *Blosser Municipal Airport;* and a copy of an aerial photo of *Blosser Field.*

In 1947, the City applied to the *United States Department of Commerce, Civil Aeronautics Administration* (CAA) for Federal financial aid to cover 50% of the cost to grade, drain and turf three (3) landing strips, taxiway areas and building areas; furnish and install fencing; furnish segmented circle marker system for wind direction indicator; furnish and install landing strip; seed disturbed areas; and perform needed incidental and appurtenant work at the Airport. The CAA denied that application because *Blosser Field* still existed and depicted on Federal aviation maps.

An official of the CAA in Kansas City suggested that because Blosser was one of the first pilots located in the North Central Kansas Region and because he privately developed and built one of the first aircraft landing strips in that area, the City should name its municipal airport, B*losser Municipal Airport* in exchange for Blossers causing *Blosser Field* to be removed from the Federal aviation maps. With the involved parties agreeing to do that, the City's grant application for Airport funding was finally approved by the CAA then accepted by the City on March 1, 1948.

Less than one percent (1.0%) of the United States population has some form of aircraft pilot's license, with the total number resting around 800,000 people with valid medical certificates. In the early 1970s, Blosser learned that only some 50 pilot licenses in the number range of his Private Pilot License Number 7,445 existed. In November 1988, when Blosser was 93 years old, George M. Boyd, Director of Aviation for the Kansas Department of Transportation said, *Blosser is the oldest licensed pilot in the United States. He no longer can fly by himself but still takes the controls once the plane is off the ground.* That reported in the November 11, 1988 edition of *The Salina Journal.*

In 1988, Blosser awarded the *Kansas Governor's Aviation Honors Award.* That Award was created to preserve the memory of outstanding aviation contributions by citizens of the State of Kansas. Then

Kansas Governor, Mike Hayden commented, *Charles Blosser's contributions to aviation in Kansas are widely recognized and I am proud that the members of the Kansas aviation community have acknowledged him with this honor.* The intent of the *Award* is to recognize and record for future generations the many individual efforts that have been made in the pioneering, growth and development of aviation and space exploration in Kansas of which Blosser was instrumental. On November 11, 1988, Clay Lacy, who flew around the world in approximately 37 hours in a *Boeing 747SP,* personally presented Blosser with the *Award* at the *9th Annual Wright Brothers Celebration* in Wichita, Kansas.

November 16, 1990, Blosser was inducted into the *Kansas Aviation Hall of Fame* at the *11th Annual Wright Brothers Celebration* in Wichita, Kansas. That *Hall of Fame* was created to preserve the memory of extraordinary citizens of Kansas who have made contributions to aviation of statewide or national significance. Additionally, any Kansan inducted into the *National Aviation Hall of Fame* will automatically be inducted into the *Kansas Aviation Hall of Fame.* The induction into the *Kansas Aviation Hall of Fame* is a great honor for Blosser because the selection board is comprised of members of the *Kansas Commission on Aerospace Education,* the *Aviation Advisory Committee* of the *Kansas Department of Transportation*, the *Kansas State Historical Society* and the *Wichita Aeronautical Historical Association.*

Blosser was a leader in the field of aviation by making aircraft more accessible, more acceptable and more desirable to people. He promoted flying by doing airshows in the 1920s and 1930s when people were anxious to see the sight of an aircraft in flight. He worked for *American Eagle Aircraft Corporation* of Kansas City, Kansas as a salesman and helped in establishing dealerships across the United States. His job also involved participating in goodwill tours, visiting large cities to acquaint people with flying and aircraft. Blosser's many airplane trips with Isabell sometimes led them to great adventures and meetings with pioneer aviators such as Charles A. Lindberg and Amelia Earhart.

Charles Blosser died December 30, 1989 at Saint Joseph Hospital in Concordia, Kansas when he was 94 years old. During his life, Blosser was a true aviation pioneer; supported by his wife Isabell of 68 years, *Charlie* promoted aviation throughout the United States especially in Concordia and around Kansas.

On June 19, 1990, *Cloud County Historical Society* officials moved the late Charlie Blosser's 1928 *Lincoln Page* biplane from its hangar at *Blosser Municipal Airport* into its new home at the *Cloud County Ernest Lagasse Museum Annex* in Concordia. Isabell Blosser loaned the locally and nationally known historic aircraft to the *Cloud County Historical Society.* Isabell watched the *Museum* crew place her late husband's most prized possession into the *Museum Annex* and later commented, *It broke my heart to roll it out for maybe the last time. I thought of the hundreds and hundreds of times we rolled it out of the hangar. I lost Charlie in December (1989), but I thought maybe he was looking down this morning. I knew he would want it here.*

In 1994, Isabell Blosser made an initial contribution of $1.0 million to provide endowment funding for the recently created private and charitable foundation named, *Charles H. Blosser and Isabell Blosser Foundation* (Foundation). In establishing the *Foundation* Isabell said, *People have always been good to Charlie and me and by their help and cooperation, many kindnesses and favors have been extended to us personally and through business during our lives in Cloud County. I am grateful for these kindnesses and hope this Foundation will be used as a means to extend help and assistance to our fellowmen.*

In addition to the many things the *Foundation* lists regarding support for local efforts in the Cloud County area, the *Foundation* also provides assistance to the *Wichita Aeronautical Association.* According to *Foundation* Trustee, Robert Steimel, as of July 5, 2012, the *Foundation* has given $824,108 to various projects. Of that total amount, $106,500 was for projects at Blosser Municipal Airport and $60,000 for projects at Belleville Municipal Airport located 18 miles north of Concordia in Belleville, Kansas (Isabell's hometown). The other two (2) *Foundation* Trustees are Marilyn J. Blosser and Carmen Johnson both of Concordia. Isabell Blosser was 96 years old when she died on March 24, 1996 at *Mount Joseph Senior Community* in Concordia, Kansas but Isabell's and Charles' Foundation lives on to help do great things in the Concordia area.

The *Beldon M. Blosser Trust Number One* (Blosser Trust), among other things, is the guardian of the late Charles and Isabell Blosser's values concerning Blosser Municipal Airport (Airport) and continues the aviation development legacy of the Blossers. For example, on June 20, 2012, the Blosser Trust, acting through its Trustee Marilyn J. Blosser approved and consented to the execution and delivery of a *Ground Lease Agreement* between the City of Concordia and Cloud County Health Center (CCHC) thus allowing a new 25-bed critical access hospital to be constructed on Airport property. That historic action by the Blosser Trust provides CCHC and its Emergency Department direct taxiway access to the Airport's existing and proposed new primary runway to help facilitate, among other things, fixed wing aircraft that provide air ambulance services for critically injured or ill patients, transportation of specialty physicians, air freight of patient specific emergency supplies such as blood and plasma, distribution of medical supplies during public health emergencies, and responses to natural disasters.

A book published in 1976 by local Concordia citizen, Mildred Barber and titled, *Why Live to be a Hundred if You Can Do It in Fifty* is a very good read about the *Charles and Isabelle Blosser Family.* Barber graduated from the *University of Kansas* in Lawrence, Kansas with a Bachelor of Science Degree in Education and was an English teacher at *Concordia High School.* Most all of the information in this *Airport History* section concerning Blossers was provided by the *Cloud County Historical Society Museum* located in Concordia, Kansas; past editions of the *Concordia Blade-Empire* and *Kansan* newspapers; the *World War I National Museum* located in Kansas City, Missouri; Marilyn J. Blosser and Robert Steimel of Concordia, Kansas; and Barber's book.

AREA CLIMATE

Weather is the day-to-day state of the atmosphere in a region and based on short-term variation (minutes to weeks), whereas climate is defined as statistical weather information that describes the variation of weather at a given place for a specified long interval (months to years). Climate conditions are important in the planning and future development of an airport. Temperature is a critical factor in determining runway length requirements. Wind direction and wind speeds are used to determine optimum runway orientation. The determining factor for the requirement of Navigation Aids (NAVAIDs) and airport lighting is dependent upon the amount of time the visibility is impaired by sunset, cloud cover or other visibility disabling conditions.

Concordia lies in the transition zone between the *Humid Subtropical Climate* (hot, humid summers and generally mild to cool winters) and *Humid Continental Climate* (large seasonal temperature differences, with warm to hot, and often humid summers with cold, sometimes severely cold winters) in North America. Between that mix of climates, on average, Concordia experiences hot, humid summers and cold, dry winters. The average annual temperature in Concordia is 53.2 degrees Fahrenheit (53.2 °F). On average, the community receives 28.8 inches of precipitation per year. Snowfall averages 21.7 inches per year. January is the coolest month with an average temperature of 15.7 °F while July is the warmest month with an average temperature of 91.2 °F. May and June are the wettest months with a respective 4.3 and 4.5 inches of precipitation. The hottest temperature recorded in Concordia was 116 °F in August 1936; the coldest temperature recorded was -33 °F in January 1886. Exhibit 1B above graphically depicts the average high and low temperatures and average precipitation for Concordia.

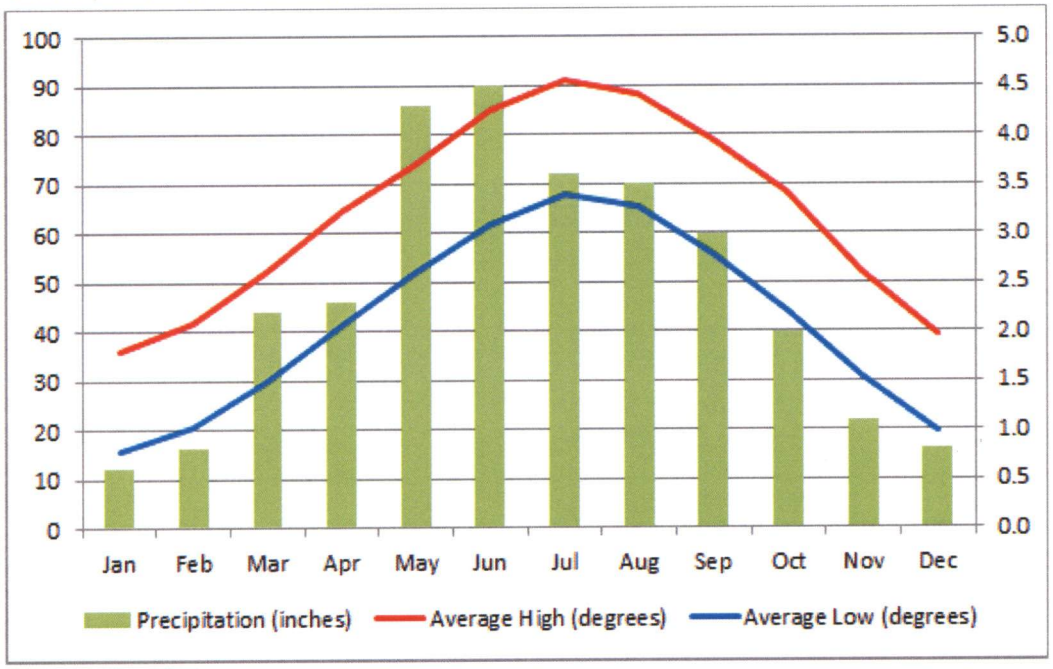


Exhibit 1B
Average Temperature and Precipitation for Concordia, Kansas

The average annual wind speed is 12 Miles Per Hour (MPH) with the windiest months being March and April with respective average wind speed of 13.7 and 13.8 MPH. Each winter, on average the risk of frost is from October 13th through April 20th but frost can occur sooner or later than those dates. The frost free growing season in the Concordia area is approximately 176 days. Table 1A below contains a variety of climate data for Concordia, Kansas.

Table 1A

Climate Data for Concordia, Kansas

Temperature (°F)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average	25.9	31.0	41.3	52.8	62.8	73.5	79.5	77.0	67.4	56.1	41.5	29.6	53.2
Average Maximum	36.0	41.7	52.5	64.4	73.8	85.0	91.2	88.4	79.0	68.1	52.1	39.3	64.3
Record High	78	86	97	100	102	109	114	116	112	102	85	82	116
Average Minimum	15.7	20.3	30.0	41.2	51.9	61.9	67.8	65.5	55.7	44.0	30.8	19.8	42.1
Record Low	-33	-25	-11	14	24	41	46	41	29	14	-15	-26	-33
Days with Max Temp of 90 Degrees or Higher	0.0	0.0	0.0	<0.5	1.0	9.0	18.0	14.0	5.0	1.0	0.0	0.0	47.0
Days with Min Temp Below 32 Degrees	29.0	24.0	18.0	5	<0.5	0.0	0.0	0.0	<0.5	3.0	17.0	28.0	125.0
Heating and Cooling	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
Heating Degree Days	1,212	952	735	373	149	8	0	0	53	290	705	1,097	5,574
Cooling Degree Days	0	0	0	7	81	263	450	377	125	14	0	0	1,317
Growing Degree Days	0	2	180	200	521	709	919	986	604	303	28	0	4,452
Precipitation - Inches	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
Precipitation	0.6	0.8	2.2	2.3	4.3	4.5	3.6	3.5	3.0	2.0	1.1	0.8	28.8
Days with Precipitation of 0.01 inches or More	5	5	8	9	11	10	9	9	8	6	6	5	90
Monthly Snowfall	5.6	5.4	3.4	0.7	0.0	<0.05	<0.05	0.0	<0.05	0.3	2.1	4.2	21.7
Temperature (°F)	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
Average Wind Speed	11.9	12.1	13.7	13.8	12.1	11.7	11.3	10.9	11.3	11.7	11.9	11.6	12.0
Clear Days	6	8	10	7	11	13	11	16	8	10	7	9	116
Partly Cloudy Days	2	4	3	4	4	6	8	3	2	4	4	4	48
Cloudy Days	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent of Possible Sunshine	64	63	63	65	67	76	78	76	70	68	59	57	67
Avg. Relative Humidity	57.5	72.0	70.5	68.5	69.5	72.0	69.0	68.5	70.0	67.5	67.0	71.0	73.0

Source: *National Weather Service* and *National Climatic Data Center*

AIRPORT SYSTEM ROLE

Airport planning exists on many levels such as local, regional, state and national. Each level has a different emphasis and purpose. This Airport Master Plan is the primary local planning document for Blosser Municipal Airport (Airport). When formulating a Master Plan it is essential that the City of Concordia (City), Concordia community, Airport Advisory Board and Airport Consultant thoroughly understand the system role of the Airport in the North Central Kansas Region, the State of Kansas (State) and the United States (Nation) and dovetail that system role into the local Master Plan.

Regional System Role

Exhibit 1C below depicts Blosser Municipal Airport (Airport) located in a rural region of Kansas that can be easily accessed from the north/south U.S. Highway 81 Expressway (81 Expressway). Interstate 70 (I-70) is located approximately 45 miles south of the Airport and provides access eastward to Kansas City, Kansas and westward to Denver, Colorado. Interstate 80 (I-80) is located approximately 90 miles north, which also provides access westward to Denver and eastward to Lincoln/Omaha, Nebraska area. The 81 Expressway is the only north/south 4-lane highway located between Kansas City and Denver that connects I-70 to I-80.

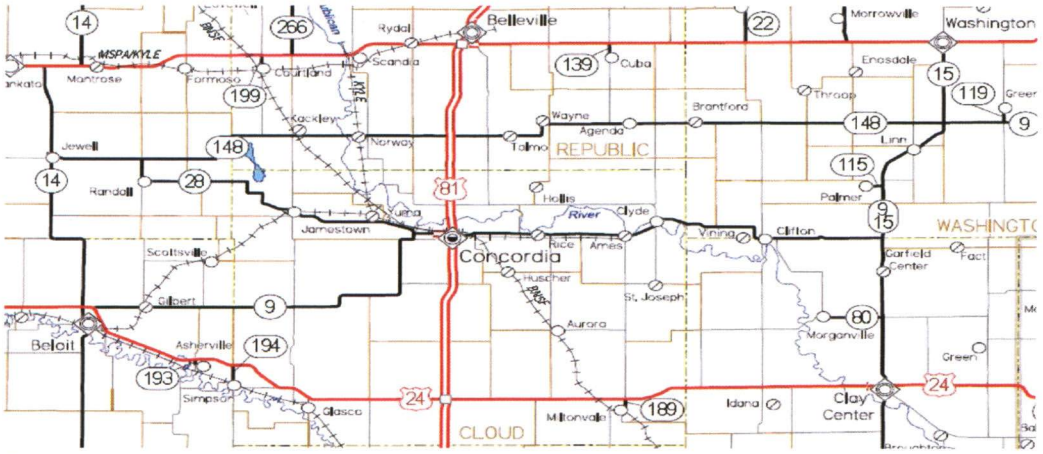


Exhibit 1C
Official State of Kansas Transportation Map - Concordia Excerpt

Two (2) major east/west highways in the North Central Kansas Region are U.S. Highway 24 (US-24), located approximately 12.4 miles south of the Airport; and U.S. Highway 36 (US-36), located 19.1 miles north of the Airport. East/west Kansas Highway 9 (K-9), located approximately 2.8 miles north of the Airport; and Kansas Highway 148 (K-148), located approximately 10.4 miles north of the Airport; also intersects with the 81 Expressway. The 81 Expressway and intersecting system of highways provides excellent ground transport connectivity of the North Central Kansas Region to the Airport.

Concordia also has very good connectivity to the National railway system. Railways serving Concordia are Burlington Northern Santa Fe (BNSF), RailAmerica (Kyle Railroad, a shortline railway) and the Union Pacific (UP). The BNSF mainline railway is upgraded to high speed rail.

According to a *Customer Sales by Zip Code Survey* (Survey) conducted in July and August 2005 by the *Wal-Mart Supercenter* located in Concordia, the market area of Concordia (July 2011 population 5,302) contains a total population of approximately 37,420 people. That market area reaches into the southern region of Nebraska. The Survey data collection includes customer zip code, total sales by date, total number of transactions by date, total sales for the survey period, average sales per customer, and average sales per day. That detailed data is deemed confidential by *Wal-Mart*.

State System Role

Blosser Municipal Airport (Airport) is an integral component to the State of Kansas (State) system of airports. The Airport does more than serve the business and recreational needs of the North Central Kansas Region. The Airport provides access to the Nation's air transportation network, provides community benefits, and generates economic activity.

In 2008, the Kansas Department of Transportation Division of Aviation (KDOT Aviation) commissioned and worked to develop a comprehensive plan for the Kansas system of 142 public airports. That planning process updated the previous Airport System Plan for Kansas completed in 1995. The purpose of the resulting *Kansas Airport System Plan 2009* (KASP) is to make sure that the State has an adequate and efficient system of airports to serve the aviation needs of Kansas well through the 21st Century by: defining each Kansas airport's role in the State's aviation system, assessing the infrastructure needs of Kansas airports; establishing related funding needs, helping justify funding for airport improvements; and providing information for governmental and other entities concerning the value, use, and needs of the public use airports in Kansas. The Airport is one of 142 Kansas airports analyzed in the KASP. Of those, 79 airports are included in the Federal Aviation Administration (FAA) National Plan of Integrated Airport Systems (NPIAS).

Kansas AVIATION
Kansas Airport System Plan

The KASP is intended to provide KDOT Aviation with a useful decision making tool. With annual requests from Kansas airports for grants that far exceed available financial resources, the KASP provides KDOT Aviation with information to:

- Help determine which Kansas system airports are most essential to Kansas transportation needs and economic objectives.
- Identify projects which have the greatest potential to improve the performance of the Kansas airport system.
- Demonstrate how investment improves the performance of the Kansas airport system relative to established measures and benchmarks.

The KASP report summarizes and compiles specific information about the Airport coupled with related findings and recommendations. Also, the KASP provides a general understanding of the specific actions and improvements that will enable the Airport to best fulfill its role within the Kansas system of airports. Further, in June 2008, the Kansas Legislature adopted the *Kansas Long Range Transportation Plan* (LRTP) which works in concert with the KASP. The LRTP examines all transportation needs of the State and sets the direction for making improvements and investments in all modes of transportation.

Using the Kansas LRTP themes and input from KDOT Aviation and the Kansas Aviation Advisory Committee (KAAC), the KASP identified and adopted five (5) goals. These goals are as follows:

- Preserve the aviation system
- Provide a modern network of airports
- Provide a network of airports that is accessible by the air and the ground
- Support local and statewide economic growth
- Support the promotion of aviation education

At the onset of the airport initial role analysis, all Kansas airports were equally evaluated in terms of their propensity to serve aviation demand, regardless of the size of the airport, annual enplanements, or type of existing aviation services. Demand factors were applied to each airport and its associated city or county in order to measure demand for aviation and aviation-related services.

Table 1B

Pavement Condition Index (PCI) Scale

PCI Score	Condition
86 to 100	Excellent
71 to 85	Very Good
56 to 70	Good
41 to 55	Fair
26 to 40	Poor
11 to 25	Very Poor
0 to 10	Failed

Source: *Kansas Airport System Plan 2009* (KASP)

The following summarizes the factors used to determine each Kansas airport's current role, by system performance category:

- **Preservation**
  - o Primary runway length
  - o Pavement Condition Index (PCI) of 70 or greater
  - o Clear approaches (no obstructions) to the primary runway
  - o Total number of permanently based aircraft
  - o Percent of total aircraft operations that are itinerant operations coming from beyond a 30 minute drive time of an airport
  - o Adopted Emergency Response Plan
  - o Adopted Wildlife Management Plan
  - o Adopted Security Plan

- **Modernization**
  - o Most demanding airport approach type available and/or published (visual, non-precision, near precision and precision)
  - o Fuel facility offers Aviation 100 Low Lead Gasoline (Avgas) and Jet A Fuel offered if needed
  - o Fueling facility provides 24 hours per day, seven (7) days per week service
  - o Weather observation on-site which is either an Automated Surface Observing System (ASOS) or Automated Weather Observing System (AWOS)
  - o Number of permanently based jet aircraft
  - o Located within 50 Nautical Miles (NM) of an alternate airport with an Instrument Landing System (ILS) approach or a Localizer Performance with Vertical Guidance (LPV) approach with approach minimums of 300 feet and visibility of one (1) mile.
- **Accessibility**
  - o Has instrument approach
  - o Total population served within a 30 minute drive time of an airport
  - o Total employment served within a 30 minute drive time of an airport
  - o Total number of square miles served within a 30 minute drive time of an airport
  - o Capable of supporting air ambulance services
  - o On site weather reporting
  - o State park(s) within 20 mile radius
  - o Located in a community that has a hospital and/or clinic
  - o Capable of supporting physician aircraft
  - o Is included in the National Plan of Integrated Airport Systems (NPIAS)
- **Economic Support**
  - o Industry and business groups with 20 employees or more served within a 30 minute drive time of an airport
  - o Total Gross Regional Product (GRP) captured within a 30 minute drive time of an airport
  - o Total retail sales captured within a 30 minute drive time of an airport
  - o Airport has ground transportation available
  - o Percent of population and area within a 45 minute drive time of an airport with a primary runway with length that is 5,000 feet or greater.
  - o Percent of population within a 45 minute drive time of an airport meeting business user needs
  - o Airport located in a community that has a dedicated economic development staff
  - o Airport located within five (5) miles of an industrial park

- **Education**

  - o Total number of registered pilots located within a 30 minute drive time of an airport
  - o Airport supports aircraft fly-ins
  - o Airport has staff that attend airport education training
  - o Airport has community outreach programs
  - o Airport has flight training
  - o Airport has Airframe and Powerplant (A&P) services

To add to the process of sorting Kansas airports based on their current function, a Geographic Information System (GIS) mapping analysis was used. To conduct the GIS analysis and to compare Kansas system airports by the various evaluation factors, a 30-minute drive time was established for all airports. This drive time correlates to the Federal Aviation Administration's (FAA's) National Plan of Integrated Airport Systems (NPIAS) criteria of a 30-minute service area for General Aviation (GA) airports.

A Kansas *Business Airport* as defined by the *Kansas Airport System Plan 2009* (KASP) must basically have the following attributes:

- A Primary Runway 5,000 feet long
- Provide Jet A fuel
- Have either a Precision or Localizer Performance with Vertical Guidance (LPV) approach

To develop an initial role for each Kansas airport, based on the results of the analysis, the airport scores were reviewed. Airports were separated into five (5) roles based on the number of standard deviations above or below their respective scores relative to the average score. The initial roles serve as the baseline, with possible refinement as the evaluation of the Kansas airport system is conducted in later tasks of the KASP planning process. The five (5) roles for airports in the Kansas airport system are identified as follows:

- **Commercial Service Airports** accommodate scheduled major and national, or regional and commuter commercial air carrier service.
- **Regional Airports** accommodate regional economic activities, connect the state and national economies, and serve all types of General Aviation aircraft.
- **Business Airports** accommodate local business activities and General Aviation users.
- **Community Airports** serve a supplemental role in local economies, primarily serving smaller business, recreational, and personal flying.
- **Basic Airports** serve a limited role in the local economy, primarily serving recreational and personal flying.

BUSINESS AIRPORT – Corporations around the United States and the world are increasingly employing business jets and other aircraft to enhance their ability to quickly and efficiently conduct business with regional operations, clients, and suppliers. Kansas airports that can accommodate these aircraft benefit their communities through increased access by large corporations with business aircraft fleets. Similarly, airports that can act as a base for business aircraft are an asset to their respective community, and can be used to help attract new businesses.

Cessna Citation II jet aircraft similar to business jet aircraft used by executives of the Alstom Power Air Pre Heater Company, Inc. to visit the Alstom manufacturing facility located in Concordia, Kansas. This typical jet aircraft must land at Salina Municipal Airport then the Alstom executives drive to Concordia.

Business aircraft users generally require a certain set of aviation facilities for safe and convenient operations at an airport. According to the *Kansas Airport System Plan 2009* (KASP), those required facilities are a primary runway at least 5,000 feet in length, jet fuel availability, and a precision or Localizer Performance with Vertical Guidance (LPV) approach.

According to the KASP, a Kansas *Business Airport* is intended to accommodate local business activities and General Aviation (GA) services including recreational and personal flying. Table 1C located on page 1-27 identifies minimum airside facilities, landside facilities and service objectives for airports in the *Business Airport* category as defined by the KASP. The analysis process in the KASP discovered that there is a large area located in the North Central Kansas Region not served by an airport that meets the requirements and deliver the services of a KASP defined *Business Airport*.

Blosser Municipal Airport (Airport) is centrally located in that *Business Airport* vacuum deemed as an underserved area. The Airport infrastructure currently does not meet the required specifications of a Business Airport but can be enhanced to do that. Therefore, the KASP determined that the initial airport role of the Airport within the Kansas and United States system of airports is that of a *Business Airport*. The KASP also determined that the future role of the Airport should be that of a *Business Airport*.

In the North Central Kansas Region, the KASP determined that each of all of the rural airports surrounding the Airport is defined as a *Community Airport*. Those Kansas *Community Airports* are:

- Belleville Municipal Airport (RPB)
- Washington County Memorial Airport (K38)
- Clay Center Municipal Airport (CYW)
- Minneapolis City County Airport (45K)
- Moritz Memorial Airport (K61) in Beloit
- Mankato Airport (TKO)

The *Kansas Airport System Plan 2009* (KASP) determined that the initial airport role and future role of Blosser Municipal Airport (Airport) within the Kansas and United States system of airports is that of a *Business Airport*.

The *Kansas Airport System Plan 2009* (KASP) identified the obvious need in the North Central Kansas Region for an airport capable of supporting business user needs.

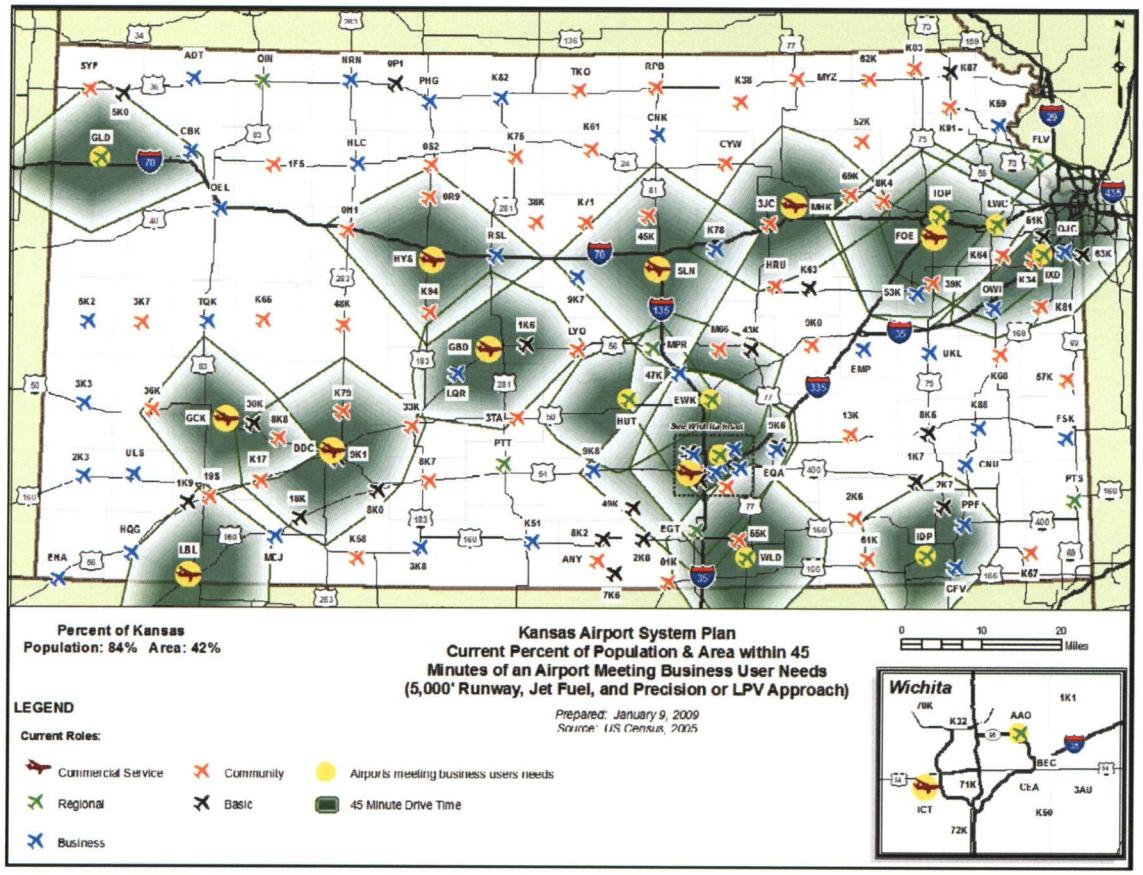


Exhibit 1D

Kansas Population and Area within 45 Minutes of an Airport Meeting Business User Needs

Source: *Kansas Airport System Plan 2009* (KASP)

See the Subsection titled, *Area Airports* located on page 1-123 for a map depicting the location of these airports in relationship to Concordia and aviation resources available at each respective Community Airport.

Table 1C

Kansas Airport System Plan 2009 (KASP):

Minimum Objectives for Initial Airport Role Classification of *Business Airport*

Airport Criteria	Minimum Objectives
Airside Facilities	
Primary Runway Length	5,000 feet
Primary Runway Width	75 feet
Taxiway	Turnarounds
Primary Runway Surface	Paved, All Weather Surface
Primary Runway Pavement Condition Index (PCI)	70 or Greater
Approach Capability	Precision or Localizer Performance with Vertical Guidance (LPV)
Visual Aids	Rotating Light Beacon; Lighted Wind Cone; Runway End Identifier Lights (REILs); Generic Visual Glideslope Indicators (GVGIs) and; Approach Lighting System (ALS)
Lighting	Medium Intensity Runway Lights (MIRLs) Low Intensity Taxiway Lights (LITLs)
Weather Observation	Automated Surface Observing System (ASOS) or Automated Weather Observing System (AWOS) on site
Landside Facilities	
Apron	100 feet by 100 feet
Terminal Building	Restrooms; Pilots Lounge
Hangars	Ample for 100% of Based Aircraft
Auto Parking	Ample Auto Parking for Airport Users and Visitors
Services	
Fixed Base Operator (FBO)	Full Service FBO - Not An Objective; Limited Service FBO - Not An Objective
Fuel	100 Low Lead Aviation Gasoline (Avgas); Jet A Fuel as Needed; Available 24 hours per Day, 7 days per Week
Transportation	Link to Ground Transportation
Planning Documents	Security Plan; Snow Removal Plan

It is important to note that in some instances, local needs and circumstances may justify the City of Concordia (City) and Concordia community to develop facilities and services at the Airport in excess of the Airport's recommended KASP role. It is also possible that the City and Concordia community may not have the ability or the desire to upgrade the Airport to provide all facilities and services identified as being desirable for the Airport to completely fill its KASP recommended role in the Kansas system of airports.

Air Ambulance Services Utilizing Fixed Wing Aircraft - Due to the geography of Kansas and rural distribution of the state population, the speedy access to emergency medical care is paramount to the State of Kansas (State) and its citizens. Airports that serve communities with hospitals or clinics promote the quality of life while enhancing medical support throughout the state. The KASP analysis of the airport system indicates that all Kansas communities that have a hospital and/or clinic are currently served by an airport. The KASP target established for this Kansas airport system benchmark is to maintain this coverage.

Fixed wing air ambulance aircraft offer more room and equipment to better treat patients who are critically injured or ill and can fly in more weather conditions and faster than helicopter emergency air transport.

An airport capable of meeting the demands of air ambulance services utilizing fixed wing aircraft as defined by the *Kansas Airport System Plan 2009* (KASP) must have at minimum the following attributes:

- Meet FAA design standards for Airport Reference Code (ARC) B-II category aircraft
- A primary runway 4,800 feet long by 75 feet wide OR adequate primary runway dimensions to support air ambulance aircraft desiring to utilize the airport
    - o In the case of Blosser Municipal Airport, aircraft operated by *Children's Mercy Hospital* of Kansas City, Missouri requires a minimum primary runway 4,000 feet long by 60 feet wide
- On site weather observation, ASOS or AWOS
- Have either a Precision or LPV approach

However, the KASP analysis of Kansas airports determined that only 86 percent (86%) of Kansas population and 44 percent (44%) of Kansas area are currently within a 30 minute drive time of an airport capable of supporting air ambulance services utilizing fixed wing aircraft. Airports that are capable of accommodating those types of emergency transport services provide lifesaving aid to residents of Kansas. Because of that, the current coverage percentages are deemed a deficiency in the Kansas system of airports.

The Kansas target established by the KASP for the air ambulance service benchmark is to have 94 percent (94%) of population and 72 percent (72%) of area within a 30 minute drive time access of an airport capable of supporting air ambulance services utilizing fixed wing aircraft. Using those criteria, Exhibit 1E Located on Page 1-29 identifies areas of Kansas appropriately served by airports capable of supporting air ambulance services utilizing fixed wing aircraft.

The *Kansas Airport System Plan 2009* (KASP) identified the obvious need in the North Central Kansas Region for an airport capable of supporting air ambulance services that utilize fixed wing aircraft.

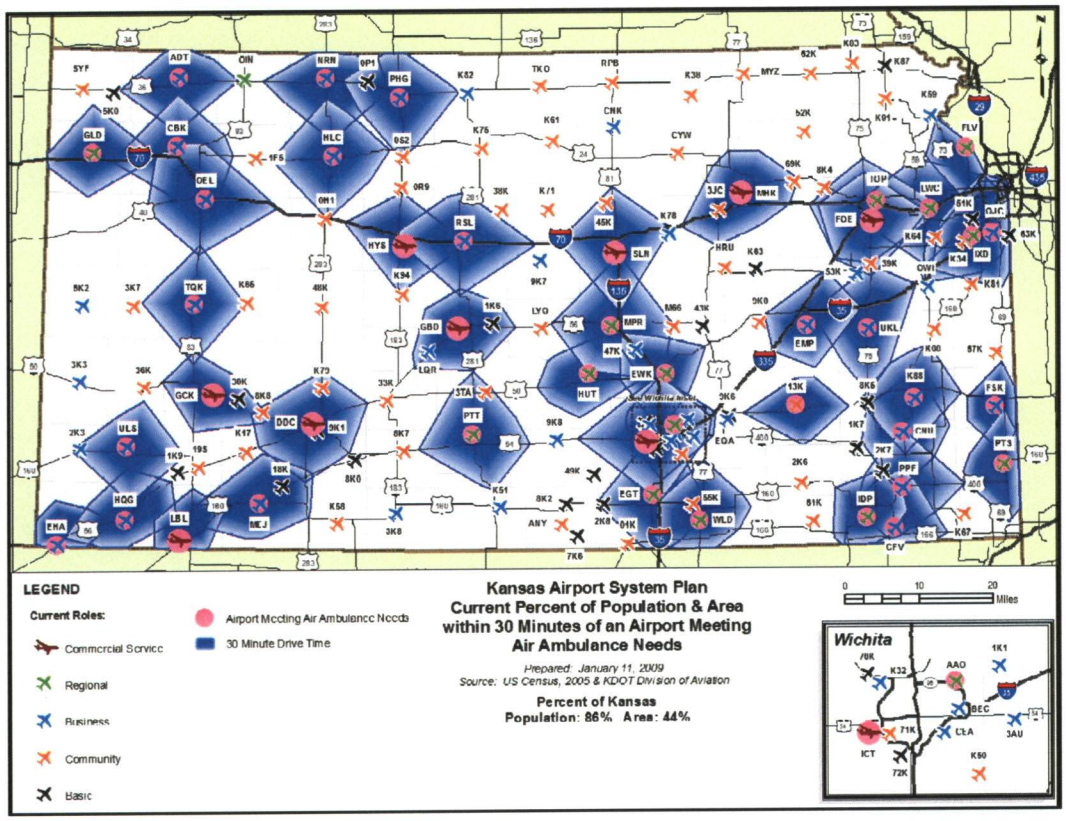


Exhibit 1E
Kansas Population and Area Within 30 Minutes of an Airport Capable of Supporting Air Ambulance Services Utilizing Fixed Wing Aircraft
Source: *Kansas Airport System Plan 2009* (KASP)

The analysis process in the KASP discovered that there is a large area located in the North Central Kansas Region not served by an airport that meets the KASP requirements for air ambulance services. Blosser Municipal Airport (Airport) is centrally located in that air ambulance service vacuum deemed as an underserved area but the current Airport infrastructure does not meet the requirements for air ambulance services utilizing fixed wing aircraft. Therefore, the KASP recommends that the Airport should ideally be improved to meet the air ambulance target coverage. It should be noted that the air ambulance recommendations include both KASP recommendations to meet airport facility and service objectives as well as those recommendations made by KDOT Aviation to meet State transportation goals.

Physician Aircraft Support - The KASP also determined that access to airports by physicians using General Aviation (GA) fixed wing aircraft is imperative, especially in rural and less populated areas of Kansas. While emergency medical access via air ambulance services and hospitals served by a local airport are key to the health and welfare of all Kansans, many rural and remote communities rely on doctors from larger metropolitan areas that visit for specialty clinics and routine medical care. Frequently, small towns in rural areas are served by perhaps a handful of general practitioners, with few, if any, local specialists. While this generally means that patients with ongoing medical problems have little or no access to nearby specialist care, it also occasionally leaves entire communities without local opticians, dentists, and other standard-care specialists.

The *Outreach Aircraft Program* provides transportation for KU Medical Center providers to and from specialty clinics in various locations statewide. These clinics ensure that Kansans in every corner of the state can access specialty medical care without lengthy trips. At times, the *Outreach Aircraft* may be used to facilitate face-to-face collaboration for additional projects. Blosser Municipal Airport cannot currently accommodate this *Cessna Citation 550 Bravo* jet aircraft utilized by KU Medical Center.

Fortunately, many doctors avail themselves of either personal aircraft or those of services that work to shuttle doctors by air to hold specialty clinics in rural communities. Airports that possess facilities and services to accommodate these doctors naturally enable convenient access to their communities for their services. Utilizing Federal Aviation Administration (FAA) runway design standards for aircraft and data such as the maximum daily hot temperature and elevation, the KASP determined runway dimensions needed to accommodate physician aircraft for airports in Kansas.

Prior analysis indicates that 92 percent (92%) of Kansas population and 64 percent (64%) of Kansas area are within a 30 minute drive time of an airport capable of supporting physician aircraft. The KASP target established for this benchmark is to have 97 percent (97%) of Kansas population and 81 percent (81%) of Kansas area covered.

The existing aviation infrastructure at Blosser Municipal Airport (Airport) meets the demands of physician aircraft as defined by the *Kansas Airport System 2009* (KASP).

The need for Kansas airports that can support physician aircraft is not just a theory. For many years, Kansans in rural areas are receiving better care due to the *University of Kansas (KU) Medical Center Outreach Programs* and supporting aircraft. The *KU Outreach Aircraft Program* allows physicians, faculty and other medical center personnel the chance to collaborate on projects across the state to better serve Kansans. Medical professionals are able to fly out to rural areas to care for patients who might not otherwise be served.

The *KU Outreach Aircraft* enables physicians and other providers to offer advanced levels of health care to people in rural communities and underserved areas. It decreases travel time tremendously for Kansas patients, because it brings health care providers to them. The *Outreach Aircraft* allows doctors of the *KU School of Medicine* to personally see more than 2,500 rural patients per year via approximately 300 annual flights

The existing aviation infrastructure at Blosser Municipal Airport (Airport) meets the demands of physician aircraft as defined by the KASP. However, the primary runway specification for *KU Outreach Aircraft* is a runway at least 5,000 feet long. Implementation of this Master Plan initially accomplishes a primary runway length of 4,800 feet with an ultimate length of 5,000 feet.

It is very important to note that citing in this Master Plan the very positive and progressive things that the *KU Outreach Aircraft Program* is accomplishing for people who live in rural Kansas does not imply that the *Outreach Program* will someday provide such medical services in Concordia. Currently, the *KU Medical Center Outreach Program* does not have a relationship with the *Cloud County Health Center* (CCHC) to serve the Concordia community and construction of a new primary runway 5,000 feet long at the Airport does not start such a medical relationship nor guarantee such a medical relationship will happen between KU and the Concordia healthcare community. Rather, such relationships are first formed between the *KU Medical Center* and a community's hospital board of directors and medical staff. The *KU Outreach Aircraft Program* example only implies that rural communities should carefully consider their local airport infrastructure and determine if their local airport specifications can accommodate modern aircraft operations that can bring very innovative and helpful services to their remote locations well into the future.

Conclusion - In order to continue to serve the current and future aviation needs of surrounding communities, the North Central Kansas Region and the State of Kansas (State), the KASP identified several important projects for Blosser Municipal (Airport). Table 1D located on Page 1-33 summarizes the KASP recommendations for the Airport. Recommended enhancements for the Airport include projects needed to meet each of the KASP recommendations concerning the Airport's future role in the Kansas system of airports. Many of these projects are eligible for Federal and/or State grant funding. While these recommended projects are included as part of the KASP, it is recognized that execution of these projects is dependent on the desires of Concordia citizens, the City of Concordia (City) and Airport Advisory Board and the availability of local financial resources.

A copy of the KASP Executive Summary is located in Appendix D of this Master Plan. The entire KASP publication is located on the Internet at www.ksdot.org/divaviation/technical_report.asp.

National System Role

Blosser Municipal Airport (Airport) is included in the Federal Aviation Administration (FAA) National Plan of Integrated Airport Systems (NPIAS). The NPIAS was established in 1951. The NPIAS includes a total of 3,332 existing airports and 48 proposed airports for a total of 3,380 airports located in the United States. The Airport is one of 79 Kansas airports included in the NPIAS. Within the 79 total NPIAS airports in Kansas, the Airport is one of the 71 classified, *Reliever and General Aviation Airports.* Kansas has eight (8) additional *Primary and Non-Primary Commercial Service Airports.* Fourteen (14) public-use airports included in the *Kansas Airport System Plan 2009* (KASP) are not included in the NPIAS. Within the General Aviation classification, FAA further defines the Airport in the Airport System Strategic Evaluation Task (ASSET) categories as a *Basic Airport.* This airport type is defined by ASSET as an airport supporting General Aviation activities such as emergency service, charter or critical passenger service, cargo operations, flight training, and personal flying.

In the United States, there are 997 publicly owned, public-use airports that are not included in the NPIAS. Of those, 14 are located in Kansas. These publicly owned airports are not included in the NPIAS because they do not meet the minimum criteria of having ten (10) based aircraft; are located within 20 miles of a NPIAS airport; are located at inadequate sites; cannot be expanded and improved to provide safe and efficient airport facilities; or do not have adequate justification showing a significant National interest.

The NPIAS identifies airports and the airport developments necessary to anticipate and meet present and future requirements in support of civil needs. An airport must be included in the NPIAS to be eligible for Federal funding assistance through the Federal Airport Improvement Program (FAIP). The FAA primarily categorizes airports based on the availability of commercial service. Airports are categorized as Commercial or General Aviation (GA), with notation only as to whether they meet primary commercial aviation activity. Entry into the NPIAS is established by specific entry criteria and procedures. NPIAS airports are categorized by the type and level of service they provide to a community. These services levels include:

Table 1D

Kansas Airport System Plan 2009 (KASP) - Recommendations for Blosser Municipal Airport

Item Description	Existing	KASP Future Objective	KASP Recommendation
Airside Facilities			
Primary Runway Length	3,600 feet	4,000 to 5,000 feet	Extend 400 to 1,400 feet
Primary Runway Width	60 feet	75 feet	Widen 15 feet
Primary Runway Surface	Asphalt	Paved, All Weather Surface	Maintain Standard
Taxiway Type	2-Turnarounds	2-Turnarounds	Maintain Standard
Pavement Condition Index (PCI)	92	70 or Greater	Maintain Standard
Approach Type	Non-Precision	Precision or Localizer Performance with Vertical Guidance (LPV)	Obtain Precision or LPV
Runway Lighting	Medium Intensity Runway Lights (MIRLs)	MIRLs	Maintain Standard
Taxiway Lighting	Low Intensity Taxiway Lights (LITLs)	LITLs	Maintain Standard
Approach Light System (ALS)	None	Desire ALS	Install ALS
Generic Visual Glideslope Indicators (GVGI	None	Precision Approach Path Indicator (PAPI) and Runway End Identification Lights (REIL)	Install 2 PAPI Install 2 REIL
Rotating Light Beacon	Yes	Rotating Light Beacon	Maintain Standard
Lighted Wind Cone	Yes - Not Lighted	Lighted Wind Cone	Install Lighed Wind Cone
Weather Observation	Automated Surface Observing System (ASOS)	ASOS or Automated Weather Observing System (AWOS)	Maintain Standard
Radio Communications Outlet (RCO) or Ground Communications Outlet (GCO)	No	GCO	Install GCO
Landside Facilities			
Hangar Spaces	Yes	100% of Based Aircraft	Maintain Standard
Apron Space	Yes	100 feet by 100 feet	Maintain Standard
Terminal	Yes	Terminal	Maintain Standard
Services			
Fixed Base Operator (FBO)	Yes	Not an Objective	No Recommendation
Auto Parking	Yes - Not Ample	Ample Auto Parking	Construct Auto Parking
Fuel	100 Low Lead Aviation Gas & Jet A Fuel	100 Low Lead Aviation Gas & Jet A Fuel as needed	Maintain Standard
Restrooms	Yes	Restrooms	Maintain Standard
Pilot's Lounge	Yes	Pilot's Lounge	Maintain Standard
Security Plan	No	Security Plan	Develop Security Plan
Snow Removal Plan	No (Have Informal Plan)	Snow Removal Plan	Develop Snow Removal Plan
Ground Transportation Link	Yes	Link To Ground Transportation	Maintain Standard

• **Commercial Service Airports** – Defined as airports which enplane over 2,500 or more passengers annually and receive scheduled passenger service. These airports are further subdivided into primary or non-primary categories:

o *Primary Commercial Service Airports* – These airports enplane at least 10,000 passengers per year and are grouped into four (4) subcategories: large, medium, small-hub, and non-hub airports. Currently, three (3) airports in Kansas are classified as a *Primary Commercial Service Airport*: Manhattan Regional Airport (MHK), Forbes Field Airport (FOE) in Topeka, and Wichita Mid-Continent Airport (ICT).

o *Non-Primary Commercial Service Airports* – These airports enplane at least 2,500 but less than 10,000 passengers annually. These airports account for 0.1% of all enplanements within the United States. Currently, Kansas has five (5) airports classified as *Non-Primary Commercial Service Airport:* Dodge City Regional Airport (DDC), Garden City Regional Airport (GCK), Hays Regional Airport (HYS), Liberal Mid-America Regional Airport (LBL), and Salina Municipal Airport (SLN).

• **General Aviation Airports** – Communities that do not receive scheduled commercial service or do not meet criteria for commercial service having at least 2,500 annual enplanements may be designated as *General Aviation Airports*. The remaining Kansas airports not listed above are designated *General Aviation Airports*.

o *Reliever Airports* – Aviation access is often constrained and more expensive at larger, more congested *Commercial Service Airports* located in metropolitan areas. Designated as *General Aviation (GA) Reliever Airports*, these specialized facilities help to address operational capacity shortfalls in larger metropolitan areas. According to FAA guidelines, *GA Reliever Airports* must have 100 or more based aircraft or 25,000 itinerant operations annually, and the airport relieved must be in an area with 250,000 people or 250,000 enplanements and is operating at 60% or more capacity. The four (4) *GA Reliever Airports* in Kansas are: New Century AirCenter Airport (IXD) and Johnson County Executive Airport (OJC), both in Olathe and serve as a Reliever Airport to Kansas City International Airport (KCI); and Newton City/County Airport (EWK) and Colonel James Jabrara Airport (AAO) in Wichita, both serve as a *Reliever Airport* to Wichita Mid-Continent Airport.

Communities with an airport that do not receive scheduled commercial service or that do not meet the criteria for classification as a *Commercial Service Airport* may be included in the NPIAS as a *General Aviation Airport* if the airport accounts for enough aviation activity (having usually at least ten (10) locally based aircraft) and is at least 20 miles from the nearest NPIAS airport. These 2,560 airports, with an average of 31 based aircraft, account for 34 percent (34%) of the Nation's GA fleet. GA airports are the closest source of air transportation for about 19 percent (19%) of the United States population and are particularly important to rural areas. Exhibit 1G on Page 1-36 depicts GA airports located throughout the United States.

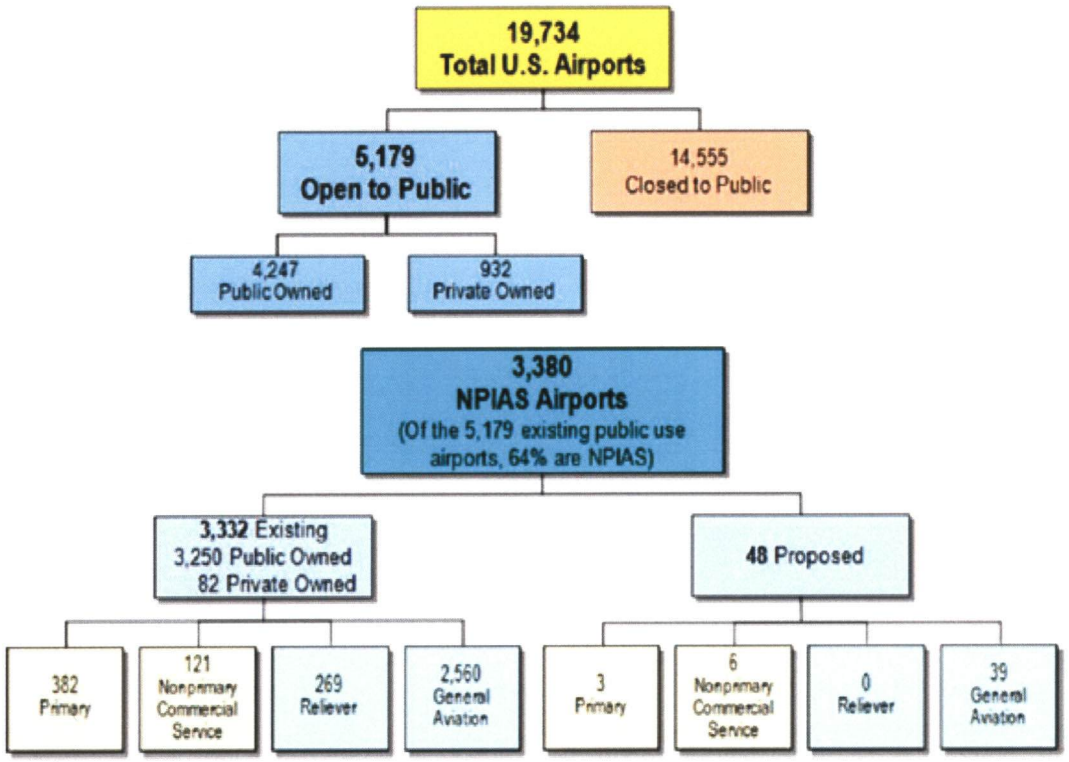


Exhibit 1F

Existing and Proposed Airports by Ownership and Use in the United States (As of February 2010)

Source: Federal Aviation Administration (FAA) Report to Congress - National Plan of Integrated Airport Systems (NPIAS) 2011 to 2015

General Aviation (GA) includes all aviation except scheduled passenger or air cargo operations. GA includes personal transportation, business and corporate flights, air taxi and helicopter operations. In Kansas, GA aircraft are flown for a wide variety of uses in addition to those listed above, including agricultural spraying, aerial utility patrol, flight instruction, military training and exercises, emergency medical evacuation and firefighting.

While the FAA airport category designations depicted in Exhibit 1F are useful to the FAA in making funding decisions, the categories do not adequately describe the function or role of each airport in the Kansas system, especially airports in the General Aviation (GA) category. GA airports do not serve the same function or role, nor should they be designed to do so. GA airports have varying levels of activity, facilities, and services and meet a wide variety of needs. Some GA airports are used extensively by large business-class aircraft, others are used primarily by small aircraft for recreational purposes, others are used for emergency medical air transport, and others are used by small businesses for aerial photography, aerial inspection, and aerial application. The FAA's airport category designations do not relate to the manner in which airports function within a state airport system. FAA classifications provide little guidance on the types of facilities that should be developed and/or maintained to fulfill system roles.

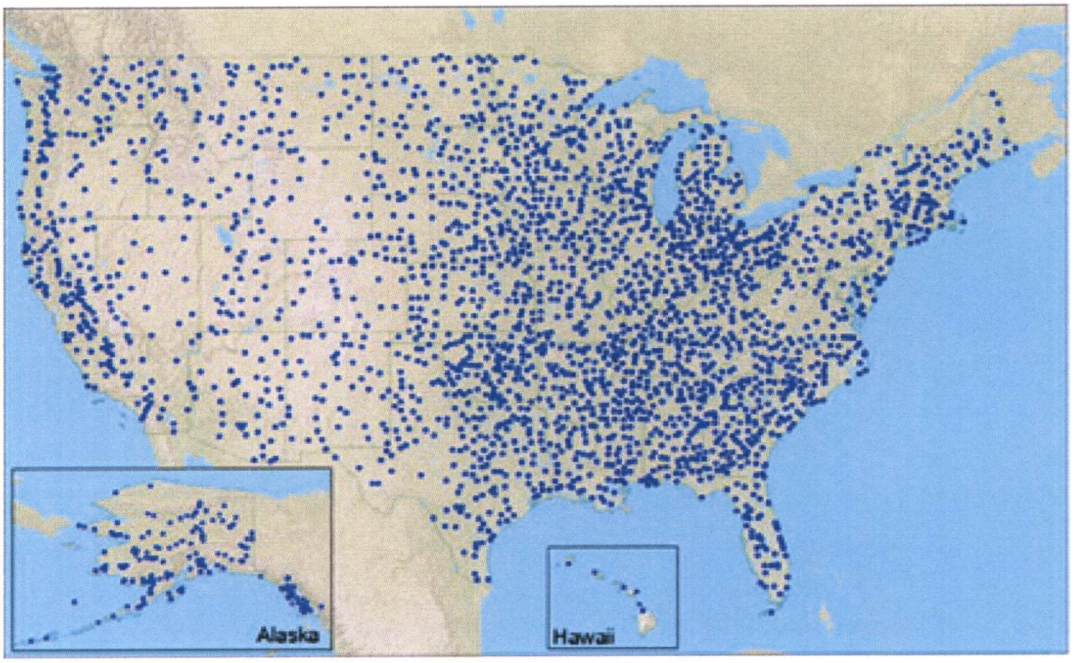


Exhibit 1G
General Aviation (GA) Airport Locations in the United States
Source: National Plan of Integrated Airport Systems (NPIAS) 2011 to 2015

The National Plan of Integrated Airport Systems (NPIAS) identifies existing and proposed airports that are significant to United States air transportation and thus eligible to receive Federal grants under the Federal Airport Improvement Program (FAIP). The NPIAS also includes estimates of the amount of FAIP money needed to fund infrastructure development projects that will bring these airports up to current design standards and add capacity to congested airports. Every two (2) years, the FAA is required to provide the United States Congress with a five (5)-year estimate of FAIP eligible development. The NPIAS comprises all *Commercial Service* airports, all *Reliever* airports, and selected *General Aviation* airports.

The general principles guiding Federal involvement have remained unchanged since a National airport system was envisioned in the F*ederal Airport Act of 1946.* According to the NPIAS, the airport system should have the following attributes to meet the demand for air transportation in the United States:

- Airports should be safe and efficient; located at optimum sites; and developed and maintained to appropriate standards.
- Airports should be affordable to both users and government, relying primarily on user fees and placing minimal burden on the general revenues of local, state, and Federal Government.
- Airports should be flexible and expandable, able to meet increased demand and to accommodate new aircraft types.

- Airports should be permanent, with assurance that they will remain open for aeronautical use over the long term.
- Airports should be compatible with surrounding communities, maintaining a balance between the needs of aviation and the requirements of residents of neighboring areas.
- Airports should be developed in concert with improvements to the air traffic control system.
- The airport system should support National objectives for defense, emergency readiness, and postal delivery.
- The airport system should be extensive, providing as many people as possible with convenient access to air transportation, typically not more than 20 miles travel to the nearest NPIAS airport.
- The airport system should help air transportation contribute to a productive National economy and international competitiveness.

The NPIAS is used by FAA in administering the FAIP. It supports the goals identified in the *FAA Flight Plan 2009 to 2013* for safety and capacity by identifying airports and airport improvements that will help achieve those goals. Fifty-seven percent (57%) of the development is intended to rehabilitate existing infrastructure and keep airports located in the United States up to standards for the aircraft that use them. Forty-three percent (43%) of the development in the NPIAS is intended to accommodate growth in travel, including more passengers, cargo and activity, and larger aircraft.

Airport System Role Conclusion

During formulation of the Airport Master Plan for Blosser Municipal Airport (Airport), the current and planned future role of the Airport to support the North Central Kansas Region, the State of Kansas airport system and the United States airport system will be considered. In summary, the following airport roles and needs will be carefully considered when formulating enhancement and development recommendations for Blosser Municipal Airport (Airport):

Proposed enhancements at Blosser Municipal Airport will allow air ambulance services utilizing fixed wing aircraft such as this *Beechcraft King Air 200* to use the Airport to help transport patients who have a critical injury or illness. Photograph courtesy of *Children's Mercy Critical Care Transport Department of Children's Mercy Hospital,* Kansas City, Missouri

- The Airport is part of the National Plan of Integrated Airport Systems (NPIAS) and is categorized in that as a General Aviation (GA) airport with a further Airport System Strategic Evaluation Task (ASSET) classification of *Basic Airport.*

- The *Kansas Airport System Plan 2009* (KASP) determined that the Airport is deemed a *Business Airport* in the Kansas system of Airports and should be further developed as such.
- The KASP determined that the Airport infrastructure should be enhanced to a level giving the Airport full capability of supporting air ambulance services utilizing fixed wing aircraft.
- The existing aviation infrastructure at the Airport meets the demands of physician aircraft as defined by the KASP. However, the KASP airport specifications for accommodating physician aircraft do not meet the primary runway length specification of 5,000 feet that is currently desired by the *University of Kansas (KU) Medical Center Outreach Aircraft Program.*
- The highway system in the North Central Kansas Region demands that the Airport have an appropriate ground transportation link to that.

AIR TRAFFIC ACTIVITY

The number of based aircraft and the total annual operations (takeoffs and landings) are the primary indicators of aeronautical activity at airports serving General Aviation. These indicators will be used in the aviation forecasts analysis in this Master Plan to project future facility needs.

Based Aircraft and Aircraft Operations

Exhibit 1H located on Page 1-39 illustrates the historical based aircraft at Blosser Municipal Airport (Airport) from 1980 (when data was first collected) to the year 2008. Based aircraft totals had a significant increase from 1980 to 1983 where it reached its peak Airport usage, and then progressively decreased to its present based aircraft numbers. Historical information for the Airport stated that the Airport had 15 based aircraft in 1980 and rose to its peak of 27 aircraft in 1984. From Blosser Municipal Airport's peak operation period the Airport has continually decreased to its current inventory of nine (9) based aircraft.

Proposed enhancements at the Blosser Municipal Airport will allow jet aircraft such as this *Dassaykt Falcon 50* to utilitize the Airport

A list of the current based aircraft is shown in Table 1E on page 1-39. General Aviation operations include a wide range of aircraft use, from personal to business and corporate. Aircraft operations (takeoffs and landings) at an airport are classified as local or itinerant. Local operations consist mostly of aircraft training operations conducted within an airport traffic pattern and touch-and-go and stop-and-go operations or operations from the locally based agricultural spray operators. Itinerant operations are originating or departing aircraft that are not conducting operations within an airport traffic pattern.

Table 1E

Current Based Aircraft

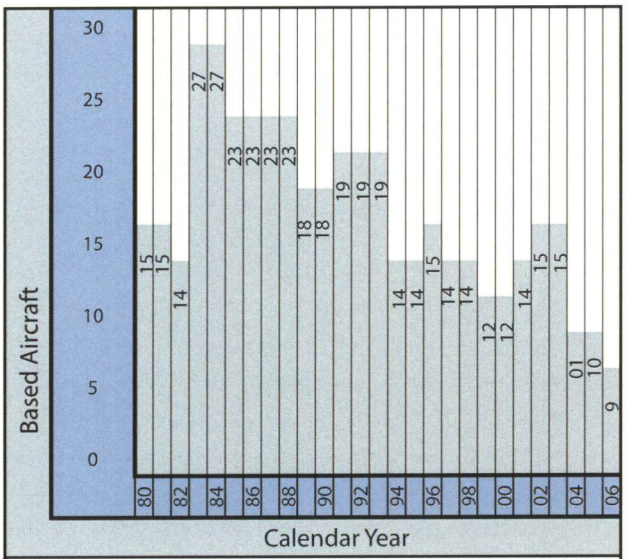
Item #	Hangar #	Make	Model	Registration #	Aircraft Type
1	TH1-A	Aeronca	65-LB	N31945	Fixed Wing - Single Engine
2	TH1-B	Piper	PA-22-135	N1213C	Fixed Wing - Single Engine
3	TH1-C	Dream Classic	103	Not Yet Registered	Ultra-Light
4	TH1-D	Team Air Bike	Not Known	N290JM	Ultra-Light
5	TH1-F	Cessna	180-H	N3431Y	Fixed Wing - Single Engine
6	TH1-G	Vans Aircraft	RV-6	N707BF	Fixed Wing - Single Engine
7	CH1-A	Beech	S-35	N6019F	Fixed Wing - Single Engine
8	CH1-B	Cessna	150-M	N9388U	Fixed Wing - Single Engine
9	MH1-A	Grumman Ag Cat	G-164B	N6771Q	Fixed Bi Wing - Single Engine

Local operations at the Airport comprise of approximately 75 to 80 percent of the total annual operations.

From the Federal Aviation Administration (FAA) Office of Aviation Policy and Plans Terminal Area Forecast Airport Operations Data, total General Aviation annual operations fluctuated from a high of 22,250 operations in 1995 to a low of 3,435, currently. At peak operation, the Airport had approximately 1,590 annual operations per based aircraft. Currently the Airport has approximately 382 operations per based aircraft per year.

Current Operational Fleet Mix

A detailed report of General Aviation (GA) activity is available from GCR & Associates, Inc. from January 1, 2004 to May 6, 2008. A compilation of the itinerant operations data is shown in Table 1F on page 1-41. The data combines GA aircraft ownership databases to provide an active view of which GA aircraft are operating at the Airport. The data is obtained from FAA's records of filed flight plans of aircraft flying under Instrument Flight Rules(IFR). All IFR operating aircraft will have filed Flight Plans, but most aircraft operating under Visual Flight Rules (VFR) do not file flight plans. Therefore, this data is representative of the aircraft utilizing the Airport, but it is not inclusive of all of the aircraft that utilize the Airport.



Source: Federal Aviation Administration (FAA) Office of Aviation Policy & Plans Terminal Area Forecast Airport Operations Data

Exhibit 1H
Historical Based Aircraft

From Table 1F, located on page 1-41, itinerant aircraft traffic to and from the Airport consists of aircraft in the Airport Reference Code (ARC) B-II, B-I and A-I categories. The largest aircraft to utilize the Airport as documented by GCR & Associates in the last four (4) years is a Beech 1900C, which has a 57.9 foot wing span, tail height of 15.5 feet, and a 17,120 pound maximum takeoff weight (ARC B-II). The most frequent, largest aircraft is a Beech King Air B200, which has a 54.5 foot wing span, a tail height of 15.0 foot, and a 12,500 pound maximum takeoff weight (ARC B-II). The Beech C90 King Air is flown by EagleMed, LLC a Type 1 licensed air ambulance service that services Cloud County, the State of Kansas, and the Midwest. Although the Airport receives operations from a multitude of twin engine aircraft and a limited number of turboprop aircraft and jet aircraft (ARC B-II and B-I categories), there are currently insufficient aircraft operations at the Airport to establish those types of aircraft as the current or existing Critical Design Aircraft. The Critical Design Aircraft, in accordance with FAA design criteria, is the largest and most critical aircraft that performs 500 or more itinerant operations at an airport with operations defined as either landing or a takeoff.

The majority of the aircraft utilizing the Airport consist of light twin engine or single engine and ultra light aircraft that primarily fit into the ARC A-I category. The largest critical based aircraft is a Piper PA-23. The Piper PA-23 has a wing-span of 37 feet, tail height of 10.3 feet, and a maximum takeoff weight of 3,800 pounds. The Piper PA-23 is the current based Design Aircraft for the Airport.

GCR Associates, Inc. of New Orleans, Louisiana has a long history of providing technical and planning services to the aviation community. GCR worked for the Federal Aviation Administration to design, develop, and manage a sophisticated database application of all official facility information for the 18,000 airports located throughout the United States.

AIRPORT LAND

The City of Concordia (City) worked since 1946 to obtain ample land for development of a municipal airport in Concordia. The City acquired land using both fee-for-easement and fee-for-title.

Summary of Airport Land Acquired by the City of Concordia

In considering and summarizing Blosser Municipal Airport (Airport) land, it is important to note that the *Beldon M. Blosser Trust Number One* (Blosser Trust) has land reverter rights and retained authority with respect to how the City's public easement on certain Airport land could be used if the proposed use is for other than airport and aviation purposes. On September 14, 2007, the Blosser Trust, acting through its Trustees Beldon M. Blosser and Marilyn J. Blosser, husband and wife, gave to the City a Quit Claim Deed which specifies that the Blosser Trust retains land reverter rights and authority concerning the Airport public easement until September 30, 2032. Prior to that Blosser Trust action, on September 5, 2007, the City Commission approved Resolution Number 2007-1781 that authorizes City Commission Policy Statement Number 2007-1 effective September 30, 2007. That Policy Statement establishes policies concerning the operation, administration, and improvement of the Airport. Located in Appendix C of this Master Plan is a copy of City Commission Policy Statement Number 2007-1, Blosser and City Settlement Agreement, and Blosser Quit Claim Deed to the City.

Table 1F

Itinerant Operations January 1, 2004 - May 6, 2008

Company/Owner	N-Number	Make	Model	Class	ARC	Operations
BK Aviation Group, LLC	N42PH	Cessna	550	Jet	B-II	4
FBL Leasing Services, Inc.	N68FB	Beech	B200	Turbo	B-II	4
High Plains Pizza, Inc.	N258VB	Cessna	441	Turbo	B-II	4
Jonda, LLC	N655JG	Beech	B200	Turbo	B-II	6
P & S Transport, LLC	N280RA	Beech	B200	Turbo	B-II	4
Phelps-Tointon, Inc.	N933RT	Beech	B200	Turbo	B-II	2
Shannair, Inc.	N220TT	Beech	B200	Turbo	B-II	4
Steven Aviation, LLC	N485K	Beech	B200	Turbo	B-II	8
TRM Transportation, LLC	N253RM	Beech	1900C	Turbo	B-II	2
University of Kansas	N100KU	Cessna	550	Jet	B-II	2
Van Ness Management, LLC	N88VN	Beech	B200	Turbo	B-II	6
				Total ARC B-II Operations:		**46**
Ballard Aviation, Inc.	N426EM	Beech	C90A	Turbo	B-I	4
Capital Holdings 149 ,LLC	N6162X	Cirrus	SR22	Piston	B-I	4
Capital Holdings 149, LLC	N6162X	Cirrus	SR22	Piston	B-I	4
Cessna Aircraft Company	N327CM	Cessna	510	Jet	B-I	4
ICM, Inc.	N425CL	Cessna	425	Turbo	B-I	4
Ratcliff Ranch & Investment Company	N926FS	Cessna	425	Turbo	B-I	4
Midwest Corporate Aviation Aircraft Sales, LLC	N959MC	Beech	C90	Turbo	B-I	4
Midwest Corporate Aviation, Inc.	N91LW	Beech	C90	Turbo	B-I	6
Winfield Consumer Products, Inc.	N668VB	Cessna	525	Jet	B-I	10
Winfield Consumer Products, Inc.	N94HL	Cessna	525	Jet	B-I	8
				Total ARC B-I Operations:		**52**
Piarco Aviation, LLC	N423KH	Cessna	T182	Piston	A-I	2
440 Papa, LLC	N440P	Piper	PA-31-310	Piston	A-1	8
Sprint Auction Company, Inc.	N6074M	Piper	Aerostar	Piston	A-1	16
A&M Aircraft Sales	N403AT	Diamond Aircraft	DA40 F	Piston	A-I	2
Adams, Henry L.	N5861S	Beech	35-C33	Piston	A-I	4
Airflex Aviation, Inc.	N3083H	Beech	A36	Piston	A-I	4
Angel Aviation	N6LH	Cessna	421B	Piston	A-I	4
Belleville Flyers, Inc.	N73579	Cessna	172M	Piston	A-I	16
J S Holdings, Inc.	N250TT	Piper	PA-31T	Turbo	A-I	2
Kansas Air Center, Inc.	N4101N	Piper	PA-31-350	Piston	A-I	6
Tramair, LLC	N5868S	Beech	95-B55	Piston	A-I	12
Source: GCR & Associates, Inc.				**Total ARC A-I Operations:**		**76**

Following is a summary of land tracts gathered by the City for the continued development of the Airport. Airport land having Blosser Trust reverter rights is clearly defined. Appendix E of this Master Plan contains legal descriptions of those properties and a land reference map dated August 2012.

• **TRACT A - 9.15 Acres, 2007 Blosser Deed, 1985 Blosser Deed:** Fee title acquired from the Trustees of the Beldon M. Blosser Trust Number One by Quitclaim Deed dated September 14, 2007, and filed of record September 21, 2007, at 12:10 o'clock p.m. in Volume 152 at pages 715-716, Deed Records of Cloud County, Kansas, conveying the described parcel to the City of Concordia, Kansas, subject to the following reservation stated in the deed:

> o The aforesaid grant by Grantors to Grantee is for the purpose to exercise upon, across, under, over and through the above-described Tracts all powers and authority conferred upon Grantee by law and in particular, K.S.A. 3-113, et seq. as amended to equip, improve, operate, maintain and regulate a municipal airport for aviation purposes; provided, however, that if Tract 1 or Tract 2 hereof shall cease to be used solely for airport purposes on or before September 30, 2032, Grantors, their legal representatives, successors, heirs and assigns shall have the right at their election to re-enter and retake Tracts 1 and 2 and thereafter, all right, title, and interest, and claim in Tract 1 and Tract 2 shall revert to Grantors, their legal representatives, successors, heirs, and assigns.

The above- described deed supersedes the previous source of title, which was a fee title subject to right of reverter acquired from Charles H. Blosser and Isabell Blosser by quitclaim deed dated July 22, 1985, and filed of record July 23, 1985, at 1:00 o'clock p.m. in Volume 123 at pages 237-8, Deed Records of Cloud County, Kansas, conveying and quitclaiming the described parcel to the City of Concordia, Kansas, provided that if the parcel shall cease to be used for airport purposes, it shall revert to the grantors, their legal representatives, successors, heirs and assigns.

NOTE: A Tract of 8.03 acres that lies within the bounds of this conveyance was previously subject to a Clear Zone easement granted in 1962 and modified in 1969.

•**TRACT B – 190.35 Acres, Blosser Deed, 1946 Condemnation (originally 197.7 acres):** Fee title acquired from the Trustees of the Beldon M. Blosser Trust No. 1 by Quitclaim Deed dated September 14, 2007, and filed of record September 21, 2007, at 12:10 o'clock p.m. in Volume 152 at pages 715-716, Deed Records of Cloud County, Kansas, conveying the described parcel to the City of Concordia, Kansas, subject to the following reservation stated in the deed:

> o The aforesaid grant by Grantors to Grantee is for the purpose to exercise upon, across, under, over and through the above-described Tracts all powers and authority conferred upon Grantee by law and in particular, K.S.A. 3-113, et seq. as amended to equip, improve, operate, maintain and regulate a municipal airport for aviation purposes; provided, however,

that if Tract 1 or Tract 2 hereof shall cease to be used solely for airport purposes on or before September 30, 2032, Grantors, their legal representatives, successors, heirs and assigns shall have the right at their election to re-enter and retake Tracts 1 and 2 and thereafter, all right, title, and interest, and claim in Tract 1 and Tract 2 shall revert to Grantors, their legal representatives, successors, heirs, and assigns.

The above described deed supersedes the previous source of title, which was a possessory right in the nature of a permanent easement acquired in 1945 from Charles H. Blosser and Isabell Blosser, husband and wife, by eminent domain, Cloud County, Kansas, District Court case Number 11,049, acquiring for the City of Concordia the right to use the parcel for airport purposes in perpetuity.

NOTE: The tract acquired in 1945 was 197.7 acres, more or less. In 1954, the City of Concordia, with permission of Charles H. Blosser and Isabell Blosser, deeded 7.1 acres, more or less, of this tract to the Kansas Military Board for development of an Armory Building for location of the Kansas Army National Guard in Concordia.

• **TRACT C – 10.11 Acres, 1985 Williams Deed:** Fee title acquired from E. Dean Williams and Joyce A. Williams by warranty deed dated December 30, 1985, and filed of record January 7, 1986, at 3:40 o'clock p.m. in Volume 123 at page 611, Deed Records of Cloud County, Kansas, conveying the described parcel to the City of Concordia, Kansas.

• **TRACT D – 12.62 Acres, 1985 Blosser Easement:** Clear zone easement acquired from Charles H. Blosser and Isabell Blosser, husband and wife, by agreement dated July 22, 1985, and filed of record July 23, 1985, at 1:10 o'clock p.m. in Volume 58 at pages 245-248, Miscellaneous Records of Cloud County, Kansas, granting to the City of Concordia, Kansas, a perpetual avigation easement and right-of-way for the unobstructed and unrestricted flight of aircraft in, through and across the airspace over the described land. The grantors for themselves and their heirs, successors and assigns further covenant that they will not erect, maintain or allow any buildings, structures, or objects to remain or be placed on the described real estate or permit any growths thereon, reserving for themselves, their heirs, successors and assigns the right of use of the described land for crop farming purposes. Grantors further covenant that they will not use or suffer the said land to be used by any assembly of persons or in such manner as might attract or bring together an assembly of persons thereon. Grantors further give to grantee a continuing right of entry for the purpose of removing and preventing the construction or erection of any buildings, structures or facilities and the growth of any trees or other objects upon the land other than those expressly excepted as set forth above. The easement is expressly termed a covenant running with the land.

• **TRACTS E1 & E2:** Denote previously existing easements that were partially extinguished by later fee-for-title conveyances. Tract E1 denotes an easement from Blosser, was fully extinguished with purchase of Tracts A and D. Tract E2 denotes that part of an easement from Peltier that was partially extinguished by purchase of Tract C.

• **TRACT F – 3.32 Acres, 1963 Peltier Easement (originally 8.03 acres):** Clear zone easement acquired from Frank A. Peltier and Agnes Peltier by agreement dated August 9, 1963, and filed of record September 13, 1963, at 3:25 o'clock p.m. in Volume 23 at pages 593-595, Miscellaneous Records of Cloud County, Kansas, granting to the City of Concordia, Kansas, a perpetual avigation easement and right of way for the unobstructed and unrestricted flight of aircraft in, through and across the airspace over and above the described tract. Grantors covenant that the grantors, their heirs, executors, administrators, devisees, successors and assigns will not erect, maintain, or permit within the north 94 feet of the easement any structure, growth or other object higher than the elevation of the north and south runway of the airport, and that they will not erect, maintain or permit within that part of the easement lying south of the north 94 feet thereof any structure, growth or other object higher than an inclined plane, rising from the ground level at a point 94 feet south of and parallel to the north boundary of said easement at the rate of one foot of rise in each twenty feet of distance toward the south. The Grantors reserve the right to use said land for crop farming purposes and may bring farm machinery on the land temporarily as necessary to carry out farming tasks. Grantors further covenant that they will not use or suffer the said land to be used by any assembly of persons or in such manner as might attract or bring together an assembly of persons thereon. Grantors further covenant that they will not use or permit or suffer the use of the described tract so as to create electrical interference with radio communications between aircraft and the radio installation upon the airport, or make it difficult for fliers to distinguish the airport, or otherwise endanger the landing, taking off or maneuvering of aircraft. Grantors further give to grantee a continuing right of entry for the purpose of removing and preventing the construction or erection of any buildings, structures or facilities, the grazing of any animal, and the growth of any trees or other objects upon the land other than those expressly excepted as set forth above. Easement to remain in effect as long as the airport is in operation and used for aviation purposes.

NOTE: This easement was extinguished in part by the acquisition of Tract C, described above. The remaining 3.32 acres covered by this easement are shown on the Airport Property Reference Map.

• **TRACT G – 7.1 Acres, 1954 Kansas Military Board Easement:** Avigation easement acquired from the Kansas Military Board by agreement dated June 12, 1954, and filed of record July 16, 1954, at 2:00 o'clock p.m. in Volume 11 at pages 146-147, Miscellaneous Records of Cloud County, Kansas, granting to the city a perpetual and assignable easement and right-of-way for the unobstructed passage of aircraft through and across the air space above the described tract. Grantor further agrees that no structure or obstruction of any kind will be constructed, or allowed to be constructed, on the described tract which would during construction or after completion constitute a hazard to the safe flight of aircraft on or around Concordia Municipal Airport. Determination of flight hazard to be in accordance with the Civil Aeronautics Administration Obstruction Marking Manual. Grantor further agrees that it will not use the described tract in such manner as to create electrical interference with radio communications between aircraft and the airport, or establish or permit any glaring lights, smoke or other condition that would interfere with flyers using the airport, or impair the visibility in the vicinity of the airport.

A supplement to this agreement dated November 23, 1956, and filed of record December 3, 1956 at 3:15 o'clock p.m. in Volume 14 at pages 307-308, Miscellaneous Records of Cloud County, Kansas, states that the agreement will be construed to mean that no building or structure will be erected on any of the land covered by said easement lying within 300 feet of the center line of the Northwest-Southeast landing strip or within 350 feet of the center line of the North-South landing strip as then located.

Summary of Airport Land and Adjacent City of Concordia Land for Development Purposes

Over the years the City of Concordia (City) obtained land located adjacent to Blosser Municipal Airport (Airport) property that could be used, among other things, for economic development projects that would bring additional revenue to the Airport on an annual basis. This land is mostly located on the west and south boundaries of Airport land. However, Tract A, Tract C, Tract D and Tract E described below are located on Airport land and are discussed in this section because those parcels could be considered for economic development and/or other projects that would bring additional revenue to the Airport on an annual basis. It is the desire of the City and the Airport Advisory Board to locate certain businesses on or near the Airport. For example:

- Businesses providing goods and/or services to aviation such as sale of fuel, oil and oxygen; aircraft maintenance and repair; aircraft rental and sales; avionics maintenance, repair and sales; aeronautics manufacturing; aircraft painting and overhaul; etc.

- Businesses that use aviation in their daily operation such as passenger taxi and charter services; freight services; consultants; air ambulance services; healthcare providers utilizing air ambulance services; aerial application, photography, tourism and utility easement patrol; etc.

Following is a summary of land tracts acquired by the City that could help facilitate continued development of the Airport by providing additional Airport and City revenue and help the Concordia community to economically grow and prosper. Appendix F of this Master Plan contains a land reference map drawing (dated November 2012) that depicts the following tracts of land:

- **TRACT 1 – 2.65 Acres, Airport North Development:** On October 3, 2011, the Kansas Military Board deeded to the City at no cost approximately 2.65 acres of its Kansas Army National Guard Armory (Concordia Armory) seven (7) acres of land located adjacent to Airport land located in the northwest quadrant of the Airport. Tract 1 can be used for economic development and other purposes that will annually provide land lease revenue to the City. Tract 1 City land plus 11.53 acres of Airport land (see Tract 2 below) provides an ample 14.18 acre site in the *Airport North Development* area for Cloud County Health Center (CCHC) to develop a new 25-bed critical access hospital that has direct taxiway access to primary Runway 17/35. Crosswind Runway 12/30 must be decommissioned per this Airport Master Plan in order to use the northeast portion of Tract 1 for other than aviation purposes.

The deed for Tract 1 has no restrictions, however, in verbal negotiations on November 1, 2010 at a meeting in Topeka, Kansas at the Kansas Adjutant General's Office, the Adjutant General and his staff desires the following from the City in exchange for the Tract 1 land:

- Locate the proposed new street to the new CCHC hospital far enough north of the Concordia Armory's north boundary line so that the Concordia Armory has ample area for development of a proposed cold storage expansion; and
- If the Airport west boundary becomes fenced, install and maintain a gated and electronically locked access on the Airport west fenced boundary having proximity to the proposed cold storage expansion (This location is also the Tract 2 east boundary.) so that Concordia Armory staff can access the east side of the proposed new cold storage building with ground vehicles via Tract 2 land and Airport land; and
- Provide the main Concordia Armory building with good access to the proposed new street infrastructure; and
- Construct the main and/or staff parking lot for the new CCHC hospital between the Armory and the new hospital in such a manner that people attending community events at the Concordia Armory during low CCHC usage of the parking lot (evenings, weekends, etc.) can also use the CCHC parking lot.

The land contained in Tract 1 of the *Airport North Development* is not subject to right of reverter by the *Beldon M. Blosser Trust Number One* (Blosser Trust); therefore, no authorization is needed from the Blosser Trust for the City to develop this land for economic development and/or other purposes.

- **TRACT 2 – 11.53 Acres, Airport North Development:** Approval of this Airport Master Plan and related future development of the Airport will result in the decommissioning of crosswind Runway 12/30. That action will provide approximately 11.53 acres of Airport land located in the northwest quadrant of Airport land for economic development and/or other purposes that will annually provide land lease revenue to the Airport. Tract 2 Airport land plus 2.65 acres of City land (see Tract 1 above) provides an ample 14.18 acre site in the *Airport North Development* area for Cloud County Health Center (CCHC) to develop a new 25-bed critical access hospital that has direct taxiway access to primary Runway 17/35.

  Tract 2 contains 11.53 acres of Airport land that is subject to right of reverter (see Tract B in previous Chapter One section titled, *Summary of Airport Land Acquired by City of Concordia*) and authorization is needed from the *Beldon M. Blosser Trust Number One* (Blosser Trust) for the City to develop this parcel for other than Airport and/or aviation purposes. Right of reverter reservation stated on the deed for the Tract 2 Airport land is as follows:

- *The aforesaid grant by Grantors to Grantee is for the purpose to exercise upon, across, under, over and through the above-described Tracts all powers and authority conferred upon Grantee by law and in particular, K.S.A. 3-113, et seq. as amended to equip, improve, operate, maintain and regulate a municipal airport for aviation purposes; provided, however, that if Tract 1 or Tract 2 hereof shall cease to be used solely for airport purposes on or before September 30, 2032, Grantors, their legal representatives, successors, heirs and assigns shall have the right at their election to re-enter and retake Tracts 1 and 2 and thereafter, all right, title, and interest, and claim in Tract 1 and Tract 2 shall revert to Grantors, their legal representatives, successors, heirs, and assigns.*

- **TRACTS 3 & 4 – 44.52 Acres, Airport East Development:** There is approximately 44.52 acres of Airport land located on the east-central portion of Airport property. That area is named, *Airport East Development*. The east boundary line of this parcel is located adjacent to N. 150th Road that runs north/south. N. 150th Road extends along the entire east side of Airport property. Of the total acreage, Tract 3 contains 34.87 acres of Airport land and Tract 4 contains 9.65 acres of Airport land. That Airport land could be developed for economic development and/or other purposes and would annually provide land lease revenue to the Airport. Airport Land contained in Tract 3 and Tract 4 provides opportunity for possible taxiway access to the existing and proposed new primary runway and gated access to N. 150th Road that would help foster commercial development in the Concordia community.

  Airport land contained in the *Airport East Development* is subject to right of reverter (see Tract B in previous Chapter One section titled, *Summary of Airport Land Acquired by City of Concordia*) and authorization is needed from the *Beldon M. Blosser Trust Number One* (Blosser Trust) for the City to develop this parcel for other than Airport and/or aviation purposes. Right of reverter reservation stated on the deed for the Tract 3 and Tract 4 Airport land is as follows:

  - *The aforesaid grant by Grantors to Grantee is for the purpose to exercise upon, across, under, over and through the above-described Tracts all powers and authority conferred upon Grantee by law and in particular, K.S.A. 3-113, et seq. as amended to equip, improve, operate, maintain and regulate a municipal airport for aviation purposes; provided, however, that if Tract 1 or Tract 2 hereof shall cease to be used solely for airport purposes on or before September 30, 2032, Grantors, their legal representatives, successors, heirs and assigns shall have the right at their election to re-enter and retake Tracts 1 and 2 and thereafter, all right, title, and interest, and claim in Tract 1 and Tract 2 shall revert to Grantors, their legal representatives, successors, heirs, and assigns.*

- **TRACT 5 – 20.65 Acres, Airport South Development:** On August 8, 2011, the City purchased fee-for-title approximately 56 acres of land located adjacent and on the south end of Airport land. If local funding becomes available for Airport development, that City land acquisition from Lynn L. Mosher and Patricia L. Mosher, husband and wife (Mosher Land), would provide owner friendly land via the City to help extend the length of the proposed

new primary Runway 18/36. The Mosher Land also provides ample land for development of a proposed new City Cemetery to be located near the southeast corner of Airport property, and possible developable land located adjacent the southwest corner of Airport property for economic development and/or other purposes.

The Mosher Land now provides 20.65 acres of developable land in an area called the *Airport South Development* located adjacent the southwest corner of Airport land and along the U.S. Highway 81 Expressway (81 Expressway). Land contained in Tract 5 provides opportunity for possible taxiway access to the existing and proposed new primary runway and direct access to the 81 Expressway which would help foster commercial development in the Concordia community.

Tract 5 developable land located in the *Airport South Development* is not subject to right of reverter by the *Beldon M. Blosser Trust Number One* (Blosser Trust), therefore, no authorization is needed from the Blosser Trust for the City to develop this land for economic development and/or other purposes.

- **TRACT 6 – 11.19 Acres, Airport Park Development:** In 1947, the Cloud County Commission (County) conveyed an 18 acre tract of land located on the west-central boundary of the Airport to the City of Concordia (City) with a stipulation

  - *"...provided that in the event the City should abandon said land as a public park or refuse to maintain it as such, that title thereto will thereupon revert to Cloud County, Kansas, provided however: that this restrictive covenant shall not be construed as preventing said City from erecting upon said lands any building or buildings it deems necessary and using the same for any public purpose so long as the same shall not prevent or hinder the use of said park by the public."*

  This area then became developed and known as *Airport Park*. The year 2012 Cloud County Commission publicly indicated interest in authorizing the City to develop the 11.19 acre east portion of *Airport Park* for economic development purposes. That Tract 6 developable area is called the, *Airport Park Development*. The remaining 6.81 acre west portion of *Airport Park* contains Airport Pond and related watercourse that is not developable.

  The approximate 11.19 acres of Tract 6 that is developable land is subject to permission from the Cloud County Commission for the City to develop this land located in the *Airport Park Development* for economic development and/or other purposes. However, said Tract 6 developable land is not subject to right of reverter by the *Beldon M. Blosser Trust Number One* (Blosser Trust), therefore, no authorization is needed from the Blosser Trust for the City to develop this land for economic development and/or other purposes.

- **TRACT 7 – 6.51 Acres, Airport Park Development:** There is approximately 6.51 acres of Airport land located near the southeast corner of the U.S. 81 Expressway (81 Expressway) and Blosser Drive stoplight intersection. That Tract 7 land is located in an area named the, *Airport Park Development.* Tract 7 is bordered by the 81 Expressway on the west, Blosser Drive on the north and east, and Airport Park on the south. That Airport land is a prime business location and could be developed for economic development and/or other purposes. Said development

of Tract 7 would help foster commercial development in the Concordia community and would annually provide land lease revenue to the Airport.

Airport land contained in Tract 7 of the *Airport Park Development* is subject to right of reverter (see Tract B in previous Chapter One section titled, *Summary of Airport Land Acquired by City of Concordia*) and authorization is needed from the Beldon M. Blosser Trust Number One (Blosser Trust) for the City to develop this parcel for other than Airport and/or aviation purposes. Right of reverter reservation stated on the deed for the Tract G Airport land is as follows:

- *The aforesaid grant by Grantors to Grantee is for the purpose to exercise upon, across, under, over and through the above-described Tracts all powers and authority conferred upon Grantee by law and in particular, K.S.A. 3-113, et seq. as amended to equip, improve, operate, maintain and regulate a municipal airport for aviation purposes; provided, however, that if Tract 1 or Tract 2 hereof shall cease to be used solely for airport purposes on or before September 30, 2032, Grantors, their legal representatives, successors, heirs and assigns shall have the right at their election to re-enter and retake Tracts 1 and 2 and thereafter, all right, title, and interest, and claim in Tract 1 and Tract 2 shall revert to Grantors, their legal representatives, successors, heirs, and assigns.*

AIRPORT FACILITIES

Airport facilities can be functionally classified into two broad categories, airside and landside.

Airside

The airside category includes those areas and facilities directly associated with aircraft operations.

Landside

The landside category includes primary support areas and facilities necessary to provide a safe transition from different means of transportation (surface or air).

AIRSIDE FACILITIES

Airside facilities include runways, taxiways, airport lighting and Navigation Aids (NAVAIDS). Table 1G, on page 1-50 summarizes airside facilities data for Blosser Municipal Airport (Airport).

Runways

The Airport is supported by a primary runway and two (2) crosswind runways. Primary Runway 17/35 serves as the primary runway for aircraft operations. Crosswind Runways 12/30 and 3/21 are turf runways that provide for crosswind landings and takeoffs.

Primary Runway 17/35 is aligned in a north-south direction and is approximately 3,600 feet long and 60 feet wide. The approach slopes for both the primary Runway 17 approach and the primary Runway 35 approach are set at 20:1, that according to the most current Airport Layout Plan (ALP) completed in 1997.

Table 1G

Airside Facilities Data

	Runways		
	Primary	Crosswind	
	17/35	12/30	3/21
Runway Length (feet)	3,600	2,263	1,628
Runway Width (feet)	60	265	255
Runway Surface	Asphalt	Turf	Turf
Runway Load Bearing Strength (pounds)	8,000 SWG[1]	N. A.	N. A.
Runway Lighting	MIRL[2]	None	None
Taxiway Lighting	MITL[3]	N. A.	N. A.
Pavement Markings			
Runway	Non-Precision	N. A.	N. A.
Taxiway	Non-Precision	N. A.	N. A.
Visual Approach Aid and Lighting	Threshold Lights	None	None
Navigation Aids	NDB[4], Wind Cone, Segmented Circle, Lighted Wind Tee, Rotating Light Beacon		
Instrument Approach Procedures	GPS[5] & NDB[4]	None	None

[1]SWG - Single Wheel Gear
[2]MIRLs - Medium Intensity Runway Lights
[3]MITLs - Medium Intensity Taxiway Lights
[4]NDB - Non-Directional Radio Beacon
[5]GPS - Global Positioning System that is Wide Area Augmentation System (WAAS) enhanced

A common website used by pilots and others needing aeronautical information regarding airport information, www.airnav.com states that there is an obstruction 2,007 feet off of the primary Runway 35 end and 160 feet above the ground level. According to that website, an 11:1 slope is required to clear that object. The current effective runway gradient of primary Runway 17/35, according to the Master Plan completed in 1997, is 0.41% (Effective Runway Gradient is the ratio of the elevation difference to the total runway length). Primary Runway 17/35 has turnarounds located on both the north and south ends of the runway. The runway is also supplied with runway threshold lights and Medium Intensity Runway Lights (MIRLs) for lighted guidance. The pavement is delineated with non-precision markings. The runway ends consist of runway numeral designators and threshold bars. A 50 foot wide connecting taxiway, located approximately in the center of the runway, connects the runway with the apron area. The Airport also has a Non-Directional Radio Beacon (NDB) approach. NDB is a radio transmitter that the Airport uses as an aviation Navigation Aid (NAVAID).

Primary Runway 17/35 is constructed of asphalt pavement and has a Single Wheel Gear (SWG) bearing strength of 8,000 pounds.

Crosswind Runway 12/30 is aligned in a northwest-southeast bearing and has an approximate length of 2,263 feet and has a width of 265 feet. Crosswind Runway 3/21 is aligned in a southwest-northeast bearing and is approximately 1,628 feet in length and has a width of 255 feet. Both crosswind runways are of turf construction.

Taxiways

The taxiway system at the Airport consists solely of one center connecting taxiway and turnarounds at each end of primary Runway 17/35. The taxiway connects the General Aviation ramp to the primary Runway 17/35. Existing conditions force aircraft landing at the Airport, on any of the runways, turf or asphalt, to use primary Runway 17/35 to taxi to the apron area. The taxiway is constructed of asphalt pavement. The connecting taxiway is approximately 240 feet long by 50 feet wide. No parallel taxiways exist to primary Runway 17/35, crosswind Runway 12/30, or crosswind Runway 3/21. In 2011, a new concrete taxiway with an expanded apron was constructed that connected primary Runway 17/35 to the hangar apron and the fueling station. The new connecting taxiway is approximately 240 feet long by 35 feet wide.

Airfield Lighting

Airfield lighting systems extend an airport's usefulness into periods of darkness and/or poor visibility. The Airport has two (2)of the three (3) types of installed lighting systems – identification lighting with runway and taxiway lighting. The third type of airfield lighting is approach lighting. All three (3)types of airfield lights are described in the following paragraphs.

Identification Lighting is used to identify the location of the Airport at night. This is universally done by a rotating light beacon which projects two beams of light, one white and one green, 180 degrees apart. Also known as an Airport Beacon, the rotating light beacon is located just north of the Terminal Building on top of the ninety (90) foot tall former weather observation radar tower, which is located on Airport property. Also see *Airport Rotating Light Beacon* discussion located on page 1-53.

Runway and Taxiway Lighting utilizes light fixtures placed near the pavement edge to define the lateral limits of the pavement at night. This lighting is essential for safe operations during night and/or times of low visibility in order to maintain safe and efficient access to and from the runway and aircraft parking areas. Primary Runway 17/35 is equipped with Medium Intensity Runway Lights (MIRLs). The runway lighting can be controlled (turned on and off) by pilots utilizing radio transmitters, in an aircraft, on frequency 122.8 megahertz (MHz). The taxiway connecting primary Runway 17/35 to the apron area also consists of a runway guidance sign that is lighted.

Approach Lighting Systems (ALSs) are used in the runway approaches as additional Navigation Aids (NAVAIDs) for the final portion of Instrument Flight Rule (IFR) approaches and as visual guides for nighttime approaches under Visual Flight Rules (VFR) conditions. The approach lighting system provides the pilot with visual cues concerning aircraft alignment, roll, height and position relative to the threshold. Currently the Airport does not have any Approach Lighting Systems. ALSs may be installed to lower instrument procedure approach minimums.

A Medium Intensity Runway Light (MIRL) at Blosser Municipal Airport

Pavement markings aid in the movement of aircraft along airport surfaces and identify closed or hazardous areas on the airport.

Pavement Markings

Primary Runway 17/35 is marked in accordance with non-precision marking requirements. Non-precision runways are runways having an existing instrument approach procedure utilizing air navigation facilities with only horizontal guidance for which a straight in or side step non-precision approach procedure is approved. The non-precision markings in place identify the runway centerline, runway designators (runway numerals), runway threshold and aircraft holding positions. Taxiway and apron taxiway centerlines are provided to assist aircraft moving between the apron, terminal and hangar area and primary Runway 17/35.

Navigation Aids

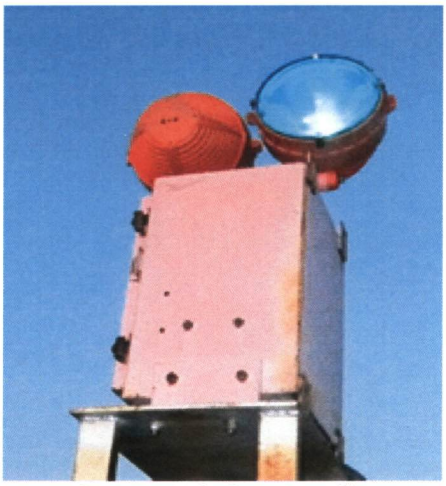
A Navigation Aid (NAVAID) is a visual device located on an airport that people and pilots see or an electronic device located on or off the airport that transmits radio frequencies that properly equipped aircraft and pilots translate the navigational data into point-to-point guidance and position information.

Visual NAVAID Devices located at Blosser Municipal Airport (Airport) are:

• **Segmented Circle with Lighted Wind Tee:** A segmented circle with lighted wind tee serves as a basic visual indicator system at uncontrolled airports (airport without a control tower) such as the Airport designed to provide traffic pattern information. It is located in a position at the Airport affording maximum visibility to pilots in the air and on the ground. It has a wind direction indicator via lighted wind tee. There are eight (8) segment markers located on the circumference of the segmented circle indicating the directions of north, northeast, northwest, south, southeast, southwest, east and west. Some segmented circles also have a landing direction indicator, a landing strip indicator, and traffic pattern indicators installed in it. The Airport segmented circle and wind tee were installed in 1948.

Segmented circle, Lighted Wind Tee and Non-Lighted Wind Cone at Blosser Municipal Airport

• **Non-Lighted Wind Cone:** A non-lighted wind cone provides visual information to aircraft pilots concerning wind direction and wind strength. A wind cone is a long, hollow tube-like device made of fabric mounted on a free-wheeling pivot atop a pole or tower. It turns in the direction from which the wind is blowing and indicates the approximate wind direction and strength. The wind cone is also called a *wind sock* or a *wind sleeve*. The wind cone is mounted atop a pole located within the segmented circle at the Airport. Installation date is unknown.



Airport Rotating Light Beacon at Blosser Municipal Airport

• **Airport Rotating Light Beacon:** An aeronautical rotating light beacon is used to aid aircraft pilots in locating the Airport from the air at night and in bad weather conditions. The Airport rotating light beacon displays flashes of white and/or colored light according to uniform standards of the International Civil Aviation Organization (ICAO). These flashes indicate the location and type of airport.

In 1982, the Airport light beacon was installed north and adjacent of the Terminal Building on a tower approximately 50 feet high. The beacon is equipped with an optical system projecting two (2) beams of light, one green and one white, 180 degrees apart, and flashing at a rate of 12 flashes per minute. That light scheme designates the Airport as a civilian airport, open to the public, informs pilots that the Airport is land based and has a lighted primary runway. The light beam is set at five degrees (5°) above the horizon. Proceeds of the *1982 Airport Air Show* honoring the 87th birthday of Charles H. Blosser paid for the beacon equipment and installation costs.

In 2008, the City of Concordia (City) moved the Airport rotating light beacon from its dilapidated tower located just north of the Terminal Building and placed it atop the vacated radar tower, approximately 90 feet high to its mounting platform, which was once used by the N*ational Weather Service*. The dilapidated tower was then demolished.

The rotating light beacon is a National Airport Equipment Company make with model number, N-1000A. The beacon has 1,000 watt light bulbs which, depending on weather conditions, can be seen a maximum radius of approximately 40 nautical miles (NM) from the Airport.

Electronic NAVAID Devices available to pilots for flying aircraft to or from the Airport include:

• **Very High Frequency Omni-Directional Range (VOR) with Tactical Aircraft Control and Navigation (TACAN):** The combined electronic devices of Very High Frequency Omni-Directional Range (VOR) with Tactical Aircraft Control and Navigation (TACAN) produce a navigation aid identified as a VORTAC facility which provides distance and direction information to civil and military pilots. In general, the VOR provides azimuth readings to pilots of properly equipped aircraft by transmitting a radio signal at every degree to provide 360 individual navigational courses. Distance Measuring Equipment (DME) such as a TACAN is combined with a VOR facility to provide distance as well as direction information to the pilot. Military control TACANs and civilian VORs are commonly combined to form a VORTAC.

Two (2) nearby VORTACs, from surrounding airports, can be utilized for navigation to Blosser Municipal Airport (CNK). One can be utilized from Salina, Kansas (SLN) VORTAC operating on a frequency of 117.10 megahertz (MHz), and the other from Mankato, Kansas (TKO) VORTAC operating on a frequency of 109.80 MHz.

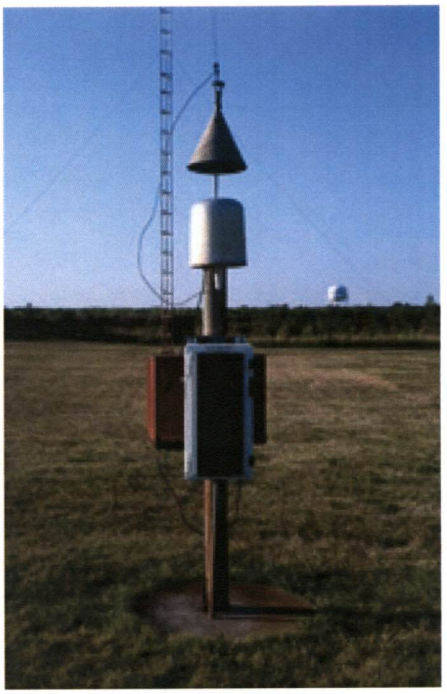
• **Non-Directional Radio Beacon (NDB):** Radio beacons are simple transmitters operating in the long-wave radio spectrum of 200 to 450 kilohertz (kHz) that repeat some identifying signal for an airport over and over for aircraft navigational purposes. The Non-Directional Radio Beacon (NDB) for aviation transmits non-directional radio signals so that the pilot of properly equipped aircraft can determine the bearing to or from the airport where the NDB transmitter is located.

The NDB approach procedure is the least common ground-based non-precision approach. As the name implies, NDB approaches are approach procedures which use a NDB as the primary Navigation Aid (NAVAID). The NDB can be located either on an airport or at a remote location. NDB navigation is a very old 1927 vintage technology.

NDB operation is very simple, yet flying a NDB approach precisely is difficult. Approach minimums for a NDB approach are higher than those for a Very High Frequency Omni-Directional Range (VOR) or other ground based NAVAIDs. This is because NDB signals are less precise and they are subject to several types of interference. The needle of the aircraft Automatic Direction Finder (ADF) always points to the NDB station. The aircraft NDB equipment does not provide Distant Measuring Equipment (DME) information so pilots have to be more aware of their big picture position.

In 1977, the NDB was installed at the Airport operating at a frequency of 335.00 megahertz (MHz) and 25 watts. Twenty Four (24) hours per day the NDB transmits the Airport identifier of CNK using International Morse Code (-.-. -. -.-) and has no voice identification. The current Airport NDB equipment is a Northrop-Wilcox make with model number, 785E and serial number, 280. The NDB has a Parallel Symmetrical T Antenna with a height of approximately 56 feet.

The Airport identifier transmission of CNK can be received, depending on weather conditions, a maximum radius of approximately 15 to 25 nautical miles (NM) from the Airport. The direction accuracy is one (1) second or better. The Federal Communications Commission (FCC) Federal Registration Number (FRN) for the NDB is 0010235414, Call Sign is WRLB2387, and Station Class is RLB – Aeronautical Radio Beacon. The current FCC license expires on April 4, 2019. The NDB signal is monitored via alarm system 24 hours per day by the City of Concordia Police Department.



Non-Directional Radio Beacon (NDB) at Blosser Municipal Airport

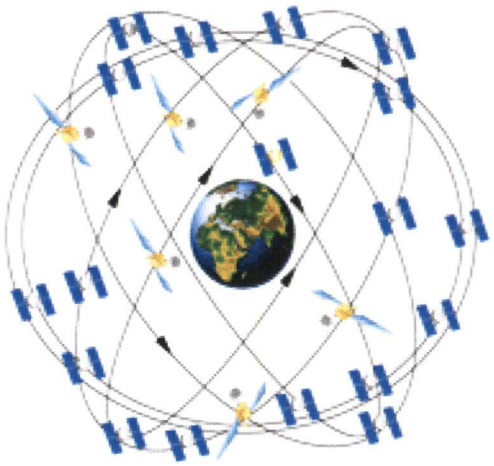
Pilots flying to or from the Airport can utilize any of the five (5) surrounding NDBs located at Kansas airports in Concordia (CNK), Belleville (RPB), Clay Center (CYW) and Washington (DBX). Hebron, Nebraska (HJH) also has a NDB. Exhibit 1S on page 1-124, is a portion of the Sectional Aeronautical Chart (Wichita, Kansas) depicting the regional airspace of Blosser Municipal Airport (Airport) and locations of those surrounding airports with a NDB transmitter. On that map, the surrounding airports of Mankato (TKO), Beloit (K61) and Salina (SLN) do not have NDB transmitters.

• **Long Range Navigation version C (LORAN-C):** This is a ground based en route navigation aid that utilizes a system of transmitters located in various locations across the continental United States. Long Range Navigation version C (LORAN-C) is the surviving LORAN technology and operates in the 90 to 110 kilohertz (kHz) frequency band. LORAN-C receivers in aircraft pinpoint their location by triangulation with three LORAN-C transmitters, approximately 75 of which are located throughout the world. With 29 ground stations covering all of North America, LORAN-C long-range signals provide an economical navigation system, although less precise than Global Positioning System (GPS) with its correction systems. LORAN-C varies from Very High Frequency Omni-Directional Range (VOR) navigation as pilots are not required to navigate using a specific instrument location. Using VOR, pilots must navigate to and from a specific VOR location. With LORAN-C, a properly equipped aircraft can navigate to any airport in the United States.

There is renewed interest in LORAN as backup to the satellite-based GPS system, should GPS navigation be compromised. An Enhanced LORAN (eLORAN) uses more advanced receivers and transmission modes, which improves LORAN accuracy to eight (8) meters. The eLORAN receivers accept all signals within range as well as a new set of correction signals.

LORAN services in the United States are operated by the United States Department of Transportation, and LORAN support was to be discontinued in year 2000. However, due to numerous studies on GPS vulnerabilities and National security concerns regarding dependence on a sole-means GPS system, the Department of Transportation has extended LORAN operations for the foreseeable future.

• **Global Positioning System (GPS):** is a space based Navigation Aid (NAVAID) for aircraft pilots en route to an airport. The Global Positioning System (GPS) is a radio navigation system consisting of a constellation of satellites and a network of ground stations used for monitoring and control. A minimum of 24 GPS satellites orbit the Earth at an altitude of approximately 11,000 miles and transmit electronic signals which properly equipped aircraft use to accurately determine position, altitude, velocity, time and other navigational information anywhere in the world and in all weather conditions. GPS was initially developed by the United States Department of Defense for military navigation



around the world. Increasingly over the last few years, GPS has been utilized more in civilian aircraft. GPS is similar to Long Range Navigation version C (LORAN-C) as pilots can directly navigate to any airport in the United States and are not required to navigate using a specific navigational facility.

The original GPS system had a horizontal accuracy of approximately 328 feet. GPS now has a horizontal accuracy of approximately 50 feet. GPS alone does not meet the Federal Aviation Administration (FAA) navigation requirements for accuracy, integrity, and availability. However, with the introduction of the latest Global Positioning System Localizer Performance with Vertical Guidance (GPS-LPV) equipment, airports are beginning to acquire published approach procedures with better visibility minimums that would otherwise not be possible without the installation of new ground based, instrument approach equipment at the airport. Since the new GPS-LPV technology is satellite based, it does not require a lot of expensive ground based equipment to be installed at the Airport.

• **Wide Area Augmentation System (WAAS):** The Wide Area Augmentation System (WAAS) is an extremely accurate navigation system developed by the Federal Aviation Administration (FAA) for civil aviation and certified by FAA in 2003. Before WAAS, the United States National Airspace System (NAS) did not have the potential to provide horizontal and vertical navigation for approach operations for all users at all locations. With WAAS, that capability is a reality. WAAS provides service for all classes of aircraft in all phases of flight - including en route navigation, airport departures, and airport arrivals. This includes vertically-guided landing approaches in instrument meteorological conditions at all qualified locations throughout the NAS. Exhibit 1I located on page 1-57 is a diagram of the WAAS infrastructure located in North America.

Unlike traditional ground based Navigation Aids (NAVAIDs), the WAAS covers nearly all of the NAS. The WAAS provides augmentation information to Global Positioning System (GPS) receivers to enhance the accuracy and reliability of position estimates. WAAS corrects for GPS signal errors caused by ionosphere disturbances, timing, and satellite orbit errors, and it provides vital integrity information regarding the health of each GPS satellite. The signals from all GPS satellites in view are received across the NAS at many widely-spaced Wide Area Reference Stations (WRS) sites. WAAS uses a series of 38 WRS receiver sites located throughout North America. The WRS locations are precisely surveyed so that any errors in the received GPS signals can be detected.

The GPS information with errors collected by the WRS sites is forwarded to the Wide Area Master Station (WMS) via a terrestrial communications network, where the major sources of GPS errors are analyzed. There are three (3) WMSs located in North America. At the WMS, the WAAS augmentation messages are generated. These correction messages contain information that allows GPS/WAAS receivers to remove errors in the GPS signal, allowing for a significant increase in location accuracy and reliability. The augmentation messages (correction messages) are sent from the WMS to ground uplink stations for transmission to navigation payloads on two (2) Geostationary (GEO) satellites. There are four (4) Ground Uplink Stations located in North America. The GEO satellites re-transmit the correction message on a GPS-like signal to a WAAS enabled aircraft receiver, which applies the correction. The GPS/WAAS receiver processes the WAAS augmentation message as

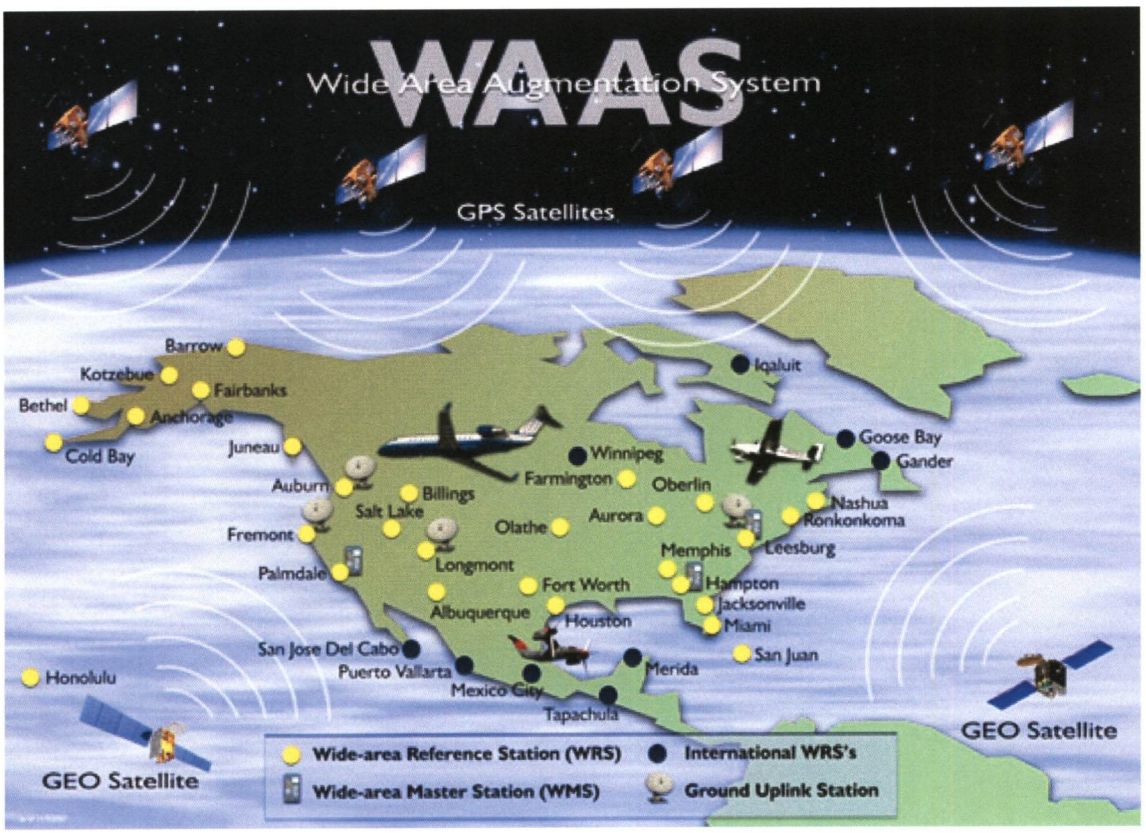


Exhibit 1I
Wide Area Augmentation System (WAAS) Infrastructure in North America

part of estimating position. The GPS-like signal from the navigation transponder is also used by the WAAS receiver as an additional source for calculation of the user's position.

WAAS also provides indications to GPS/WAAS aircraft receivers of where the GPS system is unusable due to system errors or other effects. Further, the WAAS system was designed to the strictest of safety standards. Pilots are notified within six (6) seconds of any issuance of hazardously misleading information that would cause an error in the GPS position estimate.

While basic GPS typically has a horizontal error of within 50 feet, the corrected WAAS position calculation is usually within (10) feet horizontal. Approximately 95 percent (95%) of the time, a WAAS-capable receiver can give pilots a position accuracy of better than ten (10) feet which is five (5) times better than just GPS alone. In addition to the correction message, the GEO satellites broadcast a positioning message that can be used by a WAAS-enabled receiver. This means pilots typically have two (2) additional satellites always in view over North America. While GPS requires pilots to perform a check to ensure that the aircraft has sufficient positioning information, WAAS-enabled equipment has no such requirement because of the additional GEO satellites and the number of GPS satellites assured of being in view.

WAAS allows GPS to be used as a primary means of navigation from aircraft takeoff through Category I precision approach. Other modes of transportation also benefit from the increased accuracy, availability, and integrity that WAAS delivers. The benefits of WAAS to civil aviation are substantial. WAAS improves the efficiency of aviation operations due to:

- Greater runway capability,
- Reduced separation standard which allow increased capacity in a given airspace without increased risk,
- More direct en route flight paths,
- New precision approach services,
- Reduced and simplified equipment on board aircraft, and
- Significant government cost savings due to the elimination of maintenance costs associated with older, more expensive ground-based Navigation Aids (NAVAIDs) such as a Non-Directional Radio Beacon (NDB), Very High Frequency Omnidirectional Radio Range (VOR), Distant Measuring Equipment (DME) and most Category 1 Instrument Landing Systems (ILSs)

Airfield Approach Procedures

There are four general types of approaches that an aircraft may employ while landing at an airport:

- **Visual approaches** are those that are made during good visibility and clear weather, without the aid of specialized navigational equipment.
- **Non-precision approaches** are those that are made using Navigation Aids (NAVAIDs) such as Localizer, Very High Frequency Omni-Directional Radio Range (VOR) and Non-Directional Radio Beacon (NDB) that offer only lateral guidance to a runway.
- **Near-precision approaches** are non-precision Localizer Performance with Vertical Guidance (LPV) approaches that provide both lateral and vertical guidance to a runway.
- **Precision approaches** are those that offer both lateral and vertical guidance to a runway, and offer the widest range of poor weather availability.

While each of these approach types have their own procedures for making a safe landing, of particular importance is the approach slope for each. Visual approaches have an approach of 20:1; that is, the aircraft is flown along a path that descends one foot for every 20 feet of horizontal travel. Non-precision and near-precision approaches utilize either a 20:1 or 34:1 approach slope, depending on the Navigation Aids (NAVAIDs) installed at the airport. Precision approaches typically have a slope of 50:1.

If the approach to a runway is obstructed by an object such as a tree, power line, roadway, or antenna, pilots are notified and the Federal Aviation Administration (FAA) records that a steeper approach is required to clear the obstruction safely. A runway whose actual slope deviates from the slope normally employed for the relevant approach type is deemed to be obstructed, and thus does not have a clear approach.

In addition, under certain circumstances the approach to a runway can have what is known as a close-in obstruction. A close-in obstruction is one that is within the first 200 feet of the end of the runway and interferes with an approach of any slope. In many cases, a close-in obstruction requires the runway threshold to be displaced, thus shortening the effective runway length that can be used for landing. Close-in obstructions are noted in FAA records for each airport.

Blosser Municipal Airport (Airport) has no close-in obstructions. Primary Runway 17 has no obstructions and the approach is deemed clear. However, primary Runway 35 has obstructions which are trees and the approach is not deemed clear. According to the *Kansas Airport System Plan 2009* (KASP) only 36 percent (36%) of Kansas airports have clear approaches to both ends of their primary runway.

The Federal Aviation Administration (FAA) prescribes and publishes a series of predetermined aircraft maneuvers by reference to flight instruments with specified protection from obstacles from the Initial Approach Fix (IAF), or where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and, if a landing is not completed, to a position at which holding or en route obstacle clearance criteria apply. FAA Approach Procedures define safe and practical methods of navigating aircraft with prescribe intended flight tracks, operational altitudes, and minimums. When discussing Approach Procedures, two (2) categories of flight rules are used:

• **Visual Flight Rules (VFR)** are a set of FAA rules and regulations under which a pilot operates an aircraft in weather conditions generally clear enough to allow the pilot to see through the cockpit where the aircraft is going, control the aircraft's altitude, navigate, and avoid obstacles and other aircraft. Specifically, the weather must be better than basic VFR weather minimum specified by FAA in Visual Meteorological Conditions (VMC). The pilot must be able to operate the aircraft with visual reference to the ground, and by visually avoiding obstructions and other aircraft. If the weather is below VMC, pilots are required to use Instrument Flight Rules (IFR), and operation of the aircraft will primarily be through referencing the aircraft instruments rather than pilot visual reference. In a control zone a VFR flight may obtain a clearance from Air Traffic Control (ATC) to operate as Special VFR.

• **Instrument Flight Rules (IFR)** are rules and regulations established by the FAA to govern flight under conditions in which aircraft flight by outside visual reference is not safe. IFR flight depends upon flying by reference to instruments in the aircraft, and navigation is accomplished by reference to electronic signals. IFR is also a term used by pilots and controllers to indicate the type of flight plan an aircraft is flying, such as an IFR or Visual Flight Rule (VFR) flight plan. IFR permits an aircraft

to operate in Instrument Meteorological Conditions (IMC), which have much lower weather minimums than VFR. Procedures and training are significantly more complex as a pilot must demonstrate competency in conducting an entire cross-country flight in IMC conditions, while controlling the aircraft solely by reference to instruments. As compared to VFR flight, instrument pilots must meticulously evaluate weather, create a very detailed flight plan based around specific instrument departure, en route, and arrival procedures, and dispatch the flight.

Visual Approach Procedures (VAP) as conducted under Instrument Flight Rules (IFR), authorizes the aircraft pilot to proceed visually and clear of clouds to the airport. The pilot must, at all times, have either the airport or the preceding aircraft in sight. A Visual Approach must be authorized and under the control of the appropriate Air Traffic Control (ATC) facility, if any. Reported weather conditions at the airport must be a cloud ceiling at or above 1,000 feet and visibility of three (3) miles or greater. The International Civil Aviation Organization (ICAO) definition adds that the Visual Approach can commence when, "*either part or all of an instrument approach is not completed.*"

The Visual Approach allows a pilot to fly under Visual Flight Rules (VFR) to the runway without having to perform an Instrument Approach Procedure (IAP). This can greatly reduce pilot and controller workload, and expedite traffic by shortening flight paths to the airport. Taking a shorter route to the airport in lieu of flying a complicated IAP can increase pilot safety. Controllers also benefit from Visual Approaches, for whom a Visual Approach is an essential tool in the effort to maximize traffic flow especially at busier airports.

Instrument Approach Procedures (IAP) are a series of predetermined maneuvers established by the Federal Aviation Administration (FAA) using visual and electronic Navigation Aids (NAVAIDs) under Instrument Flight Rules (IFR) that assist pilots in locating and landing at an airport during low visibility and low cloud-ceiling conditions.

For many years there were only two (2) types of instrument approaches for aircraft. The first kind was the Precision Approach (PA), so named because it uses both lateral and vertical guidance. The second was the Non-Precision Approach (NPA), which offers only lateral guidance. Pilots flying a Non-Precision Approach learn the "dive-and-drive" drill, which calls for a quick descent from Final Approach Fix (FAF) to Minimum Descent Altitude (MDA). The MDA must be strictly maintained until the runway is in sight and the aircraft is in position for a normal descent and landing. The challenge comes with the demands of the Non-Precision Approach in actual instrument required conditions. Even for experienced pilots, the combination of low altitude, low airspeed, and looking outside the aircraft for the runway during a Non-Precision Approach can be challenging. Controlled Flight Into Terrain (CFIT) accidents can and do happen.

Approach Procedures with Vertical Guidance (APV) is now a third type of Instrument Approach Procedure (IAP) being used. The traditional Precision Approaches (PA) and Non-Precision Approaches (NPA) rely on ground-based navigation aids, such as the localizer transmitter and glide slope transmitter which are expensive to install and maintain. However, the APV is based on signals from the Global Positioning System (GPS) satellite constellation and the Wide Area Augmentation System (WAAS).

WAAS improved on GPS to the point where WAAS approaches can provide minimums equivalent to Category I Instrument Landing System (ILS) minimums, for example, Decision Height (DH) minimums as low as 200 feet Above Ground Level (AGL). Together, GPS and WAAS eliminate the need for airport-specific navigation aids, such as a Non-Directional Radio Beacon (NDB), which means that more airports in more places can benefit from having one or more APV approaches.

APV approaches include vertical guidance and can, in some cases, provide approach minimums equivalent to Category I ILS, however, the FAA does not classify an APV as a Precision Approach. Officially, the APV is different because APV does not meet the International Civil Aviation Organization (ICAO) and Federal Aviation Administration (FAA) Precision Approach definition. That definition applies mostly to localizer and glide slope transmitters. In addition, FAA and ICAO definitions for a Precision Approach carry a great deal of documentation, definition, and associated costs. Rather than try to change these standards and the associated international agreements, both ICAO and FAA adopted the term APV.

Area Navigation (RNAV) Instrument Approach Charts resulted from the development of Wide Area Augmentation System (WAAS) enabled GPS approaches. One new term on certain Approach Charts is Area Navigation (RNAV) (GPS) rather than WAAS published in the upper right-hand corner of an Approach Chart. In doing that, FAA broke with 40 years of tradition to improve the Approach Chart format. In the past, FAA named approaches for the primary navigation sensor and listed that term in the upper right corner of the Approach Chart, for example, VOR RWY 24 or ILS RWY 6. With the advent of WAAS, it quickly became clear that continuing this format would double the size and number of Approach Chart booklets. The solution was to use the term, RNAV (GPS) with the runway number, for example, RNAV (GPS) RWY 24. This format allows Approach Chart makers to publish GPS and WAAS approaches on the same page, with the minimums associated with GPS only or WAAS on the same Approach Chart.

An Approach Chart with the RNAV (GPS) notation means that an aircraft must have certified and approved Area Navigation (RNAV) equipment in order to use that approach procedure. A pilot must then look at the approach minimums section of the Approach Chart to determine whether it is a GPS or WAAS approach.

Global Positioning System (GPS) Approaches require new terminology:

• **Lateral Navigation (LNAV)** is the basic GPS approach. Like the traditional Non-Precision Approach (NPA), an approach with LNAV minimums provides only lateral guidance. LNAV approaches lack vertical guidance and can be flown via "dive and drive" down to a Minimum Descent Altitude (MDA). The main difference between a LNAV approach and a traditional Very High Frequency Omni-Directional Range (VOR) or Non-Direction Radio Beacon (NDB) approach is the source of the navigational guidance. In VOR and NDB approaches, guidance is from a ground based Navigation Aid (NAVAID). With LNAV, the navigational guidance comes from space based GPS.

• **Lateral Navigation with Vertical Guidance (LNAV+V)** is not an approach defined by the International Civil Aviation Organization (ICAO) and Federal Aviation Administration (FAA) so a pilot will not see LNAV+V depicted on a published Approach Chart. However, a pilot may see LNAV+V on an aircraft moving maps navigator or electronic Horizontal Situation Indicator (HSI). Some Wide Area Augmentation System (WAAS) enabled GPS units provide advisory vertical guidance in association with GPS approaches. The LNAV+V notation is simply the navigation equipment manufacturer's term for a GPS approach that includes an artificially created Advisory Glide Path from the Final Approach Fix (FAF) to the touchdown point on the runway.

The Advisory Glide Path can provide a stabilized approach and eliminate the need for "dive and drive" descent to the MDA, but a pilot must understand clearly that an approach with the LNAV+V notation is not the same as LNAV with Vertical Navigation (VNAV) approach (LNAV / VNAV) or a Localizer Performance with Vertical Guidance (LPV) approach. Like any Non-Precision Approach, a GPS approach with the LNAV+V notation on an aircraft moving map navigator is flown to the published MDA, which in this case is the MDA associated with LNAV minimums. It is still a GPS approach, flown to LNAV minimum heights, and the advisory of "+V" is simply a means for the pilot to achieve a predictable rate of descent.

Wide Area Augmentation System (WAAS) and Other Approaches With Vertical Guidance enable aircraft pilots to fly lower when approaching an airport. The improved accuracy of WAAS enabled the Federal Aviation Administration (FAA) to develop the following approach procedures:

• **Localizer Performance with Vertical Guidance (LPV)** is a WAAS approach that provides vertical guidance to a Decision Height (DH) as low as 200 feet Above Ground Level (AGL). The LPV approach is flown to a DH and uses the same criteria as an Instrument Landing System (ILS) approach. The difference is that LPV approach is based upon the WAAS system positioning signal instead of a ground based localizer and glide slope transmitter.

This development means that the approach guidance source is available to every airport in the continental United States with no requirement for additional navigation equipment. In other words, every runway end is a potential candidate for a vertically guided approach. The only limiting factor is airport infrastructure: To be eligible for an LPV approach an airport must still meet the standards for runway length, width, obstacle-free zones, and no glide slope intrusions. FAA plans call for additional GPS based approaches to be added at airports and most will be LPV approaches.

It is the intent of the FAA to put LPV approaches with a 200-foot Decision Height (DH) and as low as one half (½) statute mile visibility where the airport infrastructure and environment can accommodate it. The next steps in the LPV evolution are summarized below:

o **Current:**

- Category I (CAT I) Instrument Landing System (ILS) is limited to a DH of 200 feet and ½ mile visibility minimums
- LPV is limited to a DH of 200 feet and ½ mile visibility minimums

o **Next Steps:**

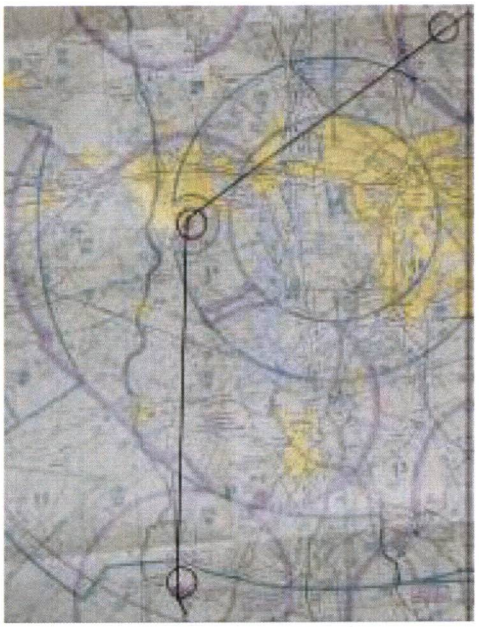
- If an airport's ILS has a DH of 200 feet and ½ mile visibility minimum, and
- Airport has an Area Navigation Global Positioning System (RNAV (GPS)) approach with a DH of 250 feet and ¾ mile visibility minimum, then
- The airport is a candidate for an LPV approach to a DH of 200 feet and ½ mile visibility minimum.

• **Lateral Navigation with Vertical Navigation (LNAV/VNAV)** is an Approach Procedure with Vertical Guidance (APV) in the International Civil Aviation Organization (ICAO) sense of the term, and the approach is flown to a Decision Altitude (DA) rather than a Minimum Descent Altitude (MDA). However, this is not a WAAS approach; in fact, LNAV/VNAV existed before the WAAS system was certified. In the past, only aircraft equipped with a Flight Management System (FMS) and certified Barometric Vertical Navigation (Baro VNAV) systems could use the approach minimums associated with LNAV/VNAV. However, LNAV/VNAV approaches can now also be flown using WAAS certified navigational equipment.

• **Localizer Performance (LP)** is an approach that pilots will see on future Approach Charts. As with an Instrument Landing System (ILS) approach, there may be places where an obstruction, terrain or infrastructure limitations at an airport would require a high Decision Altitude (DA). Just as there are localizer-only approaches, in the future there will be equivalent WAAS procedures with published LP approach minimums. A WAAS LP approach will provide accurate lateral guidance, but no vertical guidance. The improved lateral accuracy of the LP approach will allow Decision Height (DH) approach minimums as low as 300 feet Above Ground Level (AGL) without any vertical guidance. The first LP approaches were published in summer 2009.

Conclusion Concerning Airfield Approach Procedures - Satellite navigation, which has improved the efficiency of the National Airspace System (NAS), has been a remarkable success story. For one, the Federal Aviation Administration (FAA) can build efficient Area Navigation (RNAV) routes without concern about installing a ground based Navigation Aid (NAVAID) in a particular airport location. Instead of considering additional cost for new equipment and operating that, the decision is based on optimum aircraft routing. Exhibit 1J located on page 1-63 depicts the Decision Height (DH) and visibility minimums of the various approaches previously discussed.

With WAAS, there is now ILS-like accuracy available throughout North America without relying upon ground-based NAVAIDs. FAA also has the ability to add hundreds of new instrument approaches each year instead of dozens. It's currently a great time for General Aviation (GA) airports to have enhanced approach procedures and for people to be an instrument pilot!



Aeronautical Charts are prepared and issued primarily for air navigation. The chart shows selected terrain, cultural, and hydrographic features and supplemental information required for air navigating, piloting, or planning air operations. It contains all or part of the following: latitude, longitude, topographical features, hazards and obstructions, visual and electronic navigation aids, air routes, designated airspaces, and airfields. Commonly used aeronautical charts for aircraft using Blosser Municipal Airport (Airport) are as follows:

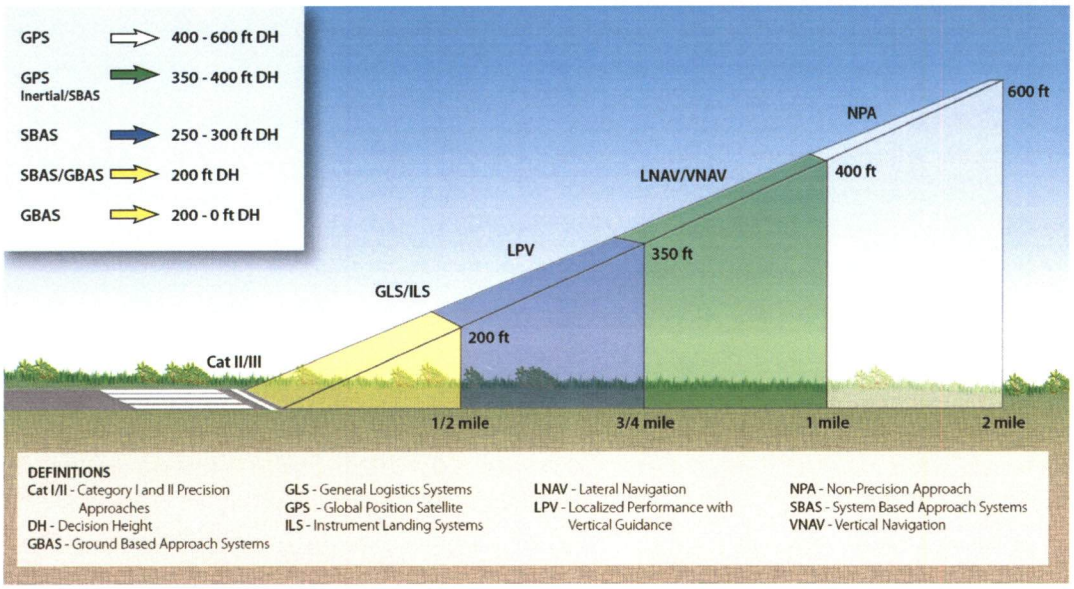


Exhibit 1J
Instrument Approach Types
Source: Federal Aviation Administation (FAA), November 2008

• **Sectional Aeronautical Charts** are the primary navigational reference medium used by the Visual Flight Rule (VFR) pilot community. The 1:500,000 scale Sectional Aeronautical Chart Series published by the Federal Aviation Administration (FAA) and private commercial vendors is designed for visual navigation of slow to medium speed aircraft. The topographic information featured consists of the relief and a judicious selection of visual checkpoints used for flight under VFR. The checkpoints include populated places, drainage patterns, roads, railroads, and other distinctive landmarks. The aeronautical information on Sectional Aeronautical Charts includes visual and radio aids to navigation, airports, controlled airspace, restricted areas, obstructions, and related data. Sectional Aeronautical Charts for the United States are updated every six (6) months, however, most Alaska Charts are updated annually. Exhibit 1S on page 1-124 of this Master Plan depicts a portion of the Wichita VFR Sectional Aeronautical Chart that includes Blosser Municipal Airport (Airport).

• **En Route Low Altitude Charts** provide aeronautical information for aircraft navigation under Instrument Flight Rules (IFR) below 18,000 feet Mean Sea Level (MSL). The En Route Low Altitude Chart includes low frequency (LF), medium frequency (MF) and Very High Frequency (VHF) Navigation Aid (NAVAID) airways; controlled airspace, radio aids, minimum en route and obstruction altitudes, distances, reporting points, restricted areas and related data. The FAA revises these Charts every 56 days.

• **Approach Charts** are an aeronautical chart that provides information about airport flight patterns, visual navigational aids, electronic navigational aids and their frequencies, etc. to assist a pilot during aircraft flight descent. The Approach Chart is used in making an aircraft approach to an airfield under either Instrument Flight Rules (IFR) and/or Visual Flight Rules (VFR) to a point

where a safe landing can be made. The Approach Chart is also called an Approach Plate. Appendix G of this Master Plan contains copies of the Approach Charts for Blosser Municipal Airport.

Approach Procedures at Blosser Municipal Airport (Airport) are designed and published by the Federal Aviation Administration (FAA). Airports having longer runways and a precision approach offer the highest degree of accessibility. Airports with a non-precision approach provide a higher degree of accessibility from the air than do airports served by only a visual approach. According to the Approach Charts, approach procedures for the Airport are as follows:

• **NDB-A Approach** – With the Airport having a ground based Non-Directional Radio Beacon (NDB) equipment, the Federal Aviation Administration (FAA) designed and published a NDB-A approach procedure for the Airport. The NDB-A approach procedure does not designate a specific runway number at the Airport and only has circling approach minimums. This is because the final approach course is not aligned within the needed 30 degrees (30°) of any runway heading. The NDB-A approach allows an aircraft to descend to the Minimum Descent Altitude (MDA) using the aircraft's Automatic Direction Finder (ADF) equipment for course guidance. Once the airport is in sight, the pilot maneuvers visually to align the aircraft with the landing runway. This maneuver is called a circling approach.

• **RNAV (GPS) Runway 17 and Runway 35** – Primary Runway 17 and Primary Runway 35 both have an Area Navigation (RNAV) Global Positioning System (GPS) approach. That RNAV (GPS) approach is enhanced with the Wide Area Augmentation System (WAAS). For straight in landing, Primary Runway 17 and Primary Runway 35 have both a WAAS Localizer Performance (LP) approach and a WAAS Lateral Navigation (LNAV) approach. The FAA first published WAAS approaches for the Airport during April 2012. Those WAAS approaches cost FAA approximately $75,000 to design and publish. There are 142 airports in Kansas and only 37 of those currently have WAAS approaches.

Weather Observation

The primary concern of the aviation community is safety, and weather conditions often threaten that safety. In aviation, weather observation service is a combined effort of the National Weather Service (NWS) a division under the National Oceanic and Atmospheric Administration (NOAA), the Federal Aviation Administration (FAA), the United States Department of Defense (DOD), and other aviation groups and individuals. Because of the increasing need for worldwide weather services, foreign weather organizations also provide vital input.

While weather forecasts are not 100 percent accurate, meteorologists, through

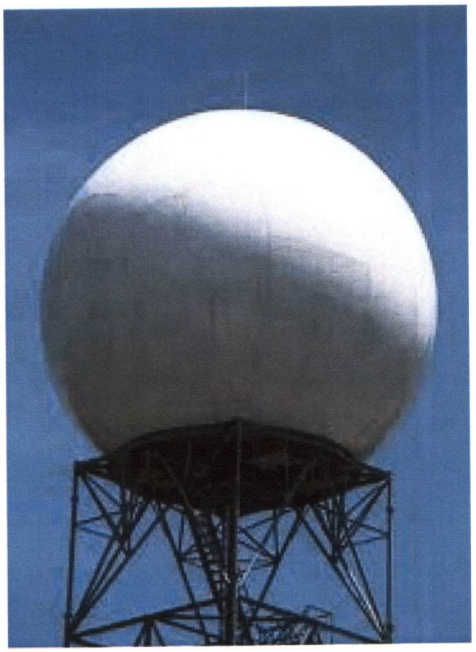
careful scientific study and computer modeling, have the ability to predict the weather patterns, trends, and characteristics with increasing accuracy. Through a complex system of weather services, government agencies, and independent weather observers, pilots and other aviation professionals receive the benefit of this vast knowledge base in the form of up-to-date weather reports and forecasts. These reports and forecasts enable pilots to make informed decisions regarding weather and flight safety.

National Weather Service (NWS) - The National Weather Service (NWS) is a component of the National Oceanic and Atmospheric Administration (NOAA). NOAA is a Bureau of the United States Department of Commerce. NWS provides weather, hydrologic, and climate forecasts and warnings for the United States, its territories, adjacent waters and ocean areas, for the protection of life and property and the enhancement of the national economy. NWS data and products form a National weather information database and infrastructure which can be used by other governmental agencies, the private sector, the public, and the global community. It is accomplished by providing warnings and forecasts of hazardous weather, including thunderstorms, flooding, hurricanes, tornadoes, winter weather, tsunamis, and climate events. The NWS is the sole United States official voice for issuing warnings during life-threatening weather situations.

The headquarters of the NWS is located in Silver Spring, Maryland with regional headquarters located in Kansas City, Missouri; Bohemia, New York; Fort Worth, Texas; Salt Lake City, Utah; Anchorage, Alaska; and Honolulu, Hawaii. With some 5,000 employees in 122 weather forecast offices, 13 river forecast centers, nine (9) National centers, and other support offices around the country, NWS provides a National infrastructure to gather and process weather data worldwide. Each year, NWS collects some 76 billion weather observations and issues approximately 1.5 million weather forecasts and 50,000 warnings. In Kansas, there is a NWS Weather Forecast Office (WFO) located in Dodge City, Goodland, Topeka and Wichita. The Topeka WFO www.crh.noaa.gov/top covers the Concordia, Kansas area.

Concordia National Weather Service Office (NWSO) - The *Weather Bureau Station* first established in Concordia on May 1, 1885 at 204 West 6th Street then moved to the *Concordia Post Office Building* located at 622 Washington Street on June 10, 1915. Because it is not an airport or aviation use, Charles and Isabell Blosser granted the City of Concordia (City) permission to locate a weather observation station on the public easement area of the Airport and lease needed Airport property for that. The *United States Weather Bureau* then initiated development of a manual weather observation station at the Airport. On June 8, 1962, the City finalized leasing the entire Frank Carlson Building (built in 1962) located at the Airport to the *United States of America* for location of the *Concordia Weather Bureau Station*. Related lease cost to the *Weather Bureau* was $1.00 per year with the City providing all building maintenance at no cost to the *Weather Bureau*. With this new location, the *Weather Bureau* became a *First Order Station* and went from being staffed with one (1) person, eight (8) hours per day and *on call* to operating 24 hours per day, with a staff of approximately five (5) people. In 1970, the *United States Weather Bureau* changed its name to *National Weather Service* (NWS) and deemed the weather observation station at the Airport a *National Weather Service Office* (NWSO).

In 1976, the NWS installed a new meteorological radar system at the Airport NWSO for weather observation in the North Central Kansas area. That system was a model *74C Solid State Metric Radar System* provided by *Enterprise Electronic Corporation* of Enterprise, Alabama and installed on a steel, lattice tower approximately 90 feet high to the mounting platform. Topeka had the first *74C Radar* installation in Kansas, Concordia the second, and Goodland the third. The *74C Radar* had a maximum range of approximately 248 miles and was so sensitive, that it occasionally picked up a burning natural gas flame at the oil refinery located in McPherson, Kansas.



In 1995, the NWS decommissioned the *74C Radar System* used for weather observation then removed the radar dome and radar system. The NWS donated the remaining radar tower structure to the City. In February 1995, the NWS closed the NWSO in Concordia.

Two (2) gentlemen graciously provided information for this Concordia NWSO portion of the Airport Master Plan. Marvin D. Petersen was a Meteorological Technician arriving in Concordia during May 1962. William P. Matthes was the first and only official Electronic Technician permanently stationed at the Concordia NWSO, arriving in November 1970. Petersen and Matthes both continuously worked at the Concordia NWSO until it closed in 1995.

Local Weather Automated Observing Systems - A basic strength of automated observing systems for local weather reports is that critical aviation weather parameters are measured where they are needed most, at airport runway Touchdown Zones (TDZs). The data gathered from surface and upper altitude observations form the basis of all weather forecasts, advisories, and briefings. There are three types of weather observations: surface, upper air, and radar. General Aviation (GA) airports play a key role in data collection for weather reports and forecasts and are usually home to either an Automated Weather Observing System (AWOS) or an Automated Surface Observing System (ASOS). These instrument clusters are designed to represent weather conditions within a five (5) mile radius of the instruments' location. Differences between these two (2) automated weather surface observing systems are:

- ASOS is a product of a joint venture between the National Weather Service (NWS), Department of Defense (DOD) and Federal Aviation Administration (FAA). AWOS is normally funded at the state or local level.

- ASOS is comprised of a standard suite of weather sensors (with several exceptions) all procured from one contractor. AWOS is a suite of weather sensors of many different configurations that were either procured by the Federal Aviation Administration (FAA) or purchased by individuals, groups, airports, etc.

General Aviation (GA) airports play a key role in data collection for weather reports and forecasts and are usually home to either an Automated Weather Observing System (AWOS) or an Automated Surface Observing System (ASOS).

- ASOS is a more sophisticated weather observing system with a higher level of computer processing and more quality control than AWOS. ASOS provides necessary weather observation information for safer aviation operations and actual weather forecasting by the NWS.

Meteorological station locations such as an ASOS may be identified in three (3) ways. At least one of the following types of identifier is associated with each station. A large number of station locations have both an index number and a location indicator assigned to them.

- A station index five (5) digit number, assigned by the World Meteorological Organization (WMO),
- A location four (4) character indicator, assigned by the International Civil Aviation Organization (ICAO), and/or
- A location three (3) character identifiers, assigned by the FAA.

The ASOS program www.weather.gov/asos is a joint effort of the National Weather Service (NWS), the Federal Aviation Administration (FAA), and the Department of Defense (DOD). The Federally funded ASOS systems are installed at more than 900 airports and serve as the United States' primary surface weather observing network. After many years of research and development, the deployment of ASOS units began in 1991 and was completed in 2004. ASOS is designed to support weather forecast activities and aviation operations and, at the same time, support the needs of the meteorological, hydrological, and climatological research communities. The ASOS system is monitored and maintained by a NWS organization called the ASOS Operations and Monitoring Center www.amss.nws.noaa.gov located in Silver Spring, Maryland.

The primary function of the ASOS is to provide minute-by-minute observations and generate the basic Aviation Routine Weather Report (METAR) and Aviation Selected Special Weather Report (SPECI). This information is essential for safe and efficient aviation operations, and used by the public to plan day-to-day activities. ASOS also provides valuable information for the hydrometeorological, climatological, and meteorological research communities. Getting more information on the atmosphere, more frequently and from more locations is the key to improving forecasts and warnings. Thus, ASOS information helps the NWS increase the accuracy and timeliness of its forecasts and warnings which is the overriding goal of the NWS modernization.

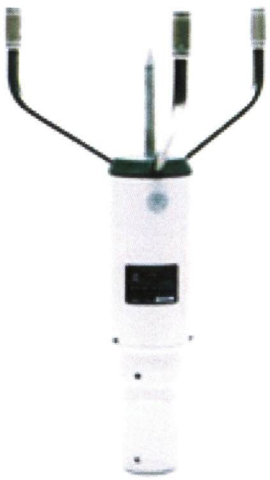
Freezing Rain Sensor for Automated Surface Observing System (ASOS)

With the largest and most modern complement of weather sensors, ASOS has significantly expanded the information available to forecasters and the aviation community. The ASOS network has more than doubled the number of full-time surface weather observing locations. The many sensors that comprise ASOS detect different weather elements and can update the official weather observation up to 12 times each hour. ASOS works non-stop, updating and communicating weather observations 24 hours a day, seven (7) days per week but does call in sick once in a while.

ASOS detects significant changes, disseminating hourly and special observations via the networks. Additionally, ASOS routinely and automatically provides computer-generated voice observations directly to aircraft in the vicinity of airports, using FAA Ground-To-Air (GTA) radio. These messages are also available via a telephone dial-in port. ASOS observes, formats, archives and transmits observations automatically. ASOS transmits a special report when conditions exceed preselected weather element thresholds, for example, the visibility decreases to less than three (3) miles. ASOS sensors also perform well at night, a difficult time for human observers to make accurate observations.

The field complement of ASOS sensors is typically located near the airport Touchdown Zone (TDZ) of the primary designated instrument runway. If the TDZ site is found unacceptable, the Center Field (CF) location is the second most desirable ASOS site. Every ASOS has the following sensors that collect meteorological data then reports the following respective basic weather elements:

- **Cloud Height Indicator Sensor:** cloud height and amount (clear, scattered, broken, overcast) up to 12,000 feet
- **Visibility Sensor:** visibility (fog, haze, etc.) to at least 10 statute miles (SM)
- **Precipitation Identifier Sensor:** type and intensity for rain, snow, and freezing rain
- **Pressure Sensors:** sea level pressure, ambient pressure, density altitude, station pressure, pressure altitude, pressure falling or rising rapidly and altimeter setting
- **Temperature Sensors:** ambient and dew point
- **Wind Direction and Speed Sensor:** speed, direction and character (gusts, squalls)
- **Precipitation Accumulation Sensor:** rainfall but not snow
- **Freezing Rain Sensor (optional):** indicates periods of freezing rain
- **Lightning Sensor (optional):** indicates lightning and thunderstorms
- **Selected Significant Remarks:** including variable cloud height, variable visibility, precipitation beginning and ending times, rapid pressure changes, pressure change tendency, wind shift, peak wind, severe storms, etc.



Ice-Free Wind Sensor for Automatic Surface Observing System (ASOS)

Like all modern technology, there are limitations as to what ASOS equipment can do. The main limitation is its ability to see around the horizon because ASOS eyes only see directly overhead. Should there be a storm front moving in with darkening conditions, ASOS will not detect it until the storm begins to move over the sensors. Likewise, ASOS cannot see patchy fog that is not located directly at the station location. Therefore, weather around the airport that has not encountered the sensors will not be measured.

The ASOS system is not designed to report clouds above 12,000 feet, virga, tornadoes, funnel clouds, ice crystals, snow pellets, ice pellets, drizzle, freezing drizzle, blowing obstructions such as snow, dust, or sand, snow fall and snow depth. Many of these elements are provided by other sources such as staffed Air Traffic Control (ATC) towers where human weather observers edit or augment the ASOS sensor observations. New ASOS sensors are being developed and added to ASOS locations for measuring some of these weather elements now requiring human observation.

As of year 2011, there are a total of 852 ASOS locations in the United States. The FAA, DOD, NWS, and the aviation industry established four (4) levels of ASOS service those being, A, B, C, and D:

- **Service Level D** is provided by stand-alone ASOS units located at approximately 428 smaller airports having lower air traffic counts and no Air Traffic Control (ATC) tower. There is no human augmentation or backup of missing ASOS reports at Level D sites. Only the basic weather elements of wind, visibility, precipitation, obscurations, sky conditions, temperature, dew point temperature, and barometric pressures with optional freezing rain and/or lightning are reported at these sites.

- **Service Level C** is located at approximately 296 full-time and part-time airports with an ATC tower. These ASOS locations offer basic Level D service, but when human weather observers are available (that is when the ATC tower is open), they will provide additional weather reports as part of the ASOS transmission. Those include:

o Thunderstorms,
o Tornadoes,
o Hail,
o Virga,
o Volcanic ash, and
o Tower visibility.

In the case of a part-time staffed ATC tower, ASOS human augmentation stops when the weather observers go home, then the airport reverts to Level D service.

Virga Precipitation

- **Service Level B** is installed at approximately 55 airports with an ATC tower where contract human weather observers are available 24 hours a day to provide weather report augmentation and backup. Level B sites have all the features of levels C and D, plus the following additional weather observer provided augmentations:

  o Tower visibility,
  o Runway Visual Range (RVR),
  o Freezing drizzle versus freezing rain,
  o Ice pellets,
  o Snow depth and "snow increasing rapidly" remarks,
  o Thunderstorm and lightning location remarks, and
  o Any observed significant weather not at the ASOS station.

- **Service Level A** is located at 73 major airports with an ATC tower, some of them in or near Class B airspace. In addition to Level B service, these installations have human weather observers who may report the following weather phenomena:

  o RVR reports in 10-minute intervals, or if no RVR is available, additional visibility increments of 1/8 mile, 1/16 mile, and 0 miles;
  o Sector visibility,
  o Variable sky conditions,
  o Cloud layers above 12,000 feet and cloud types;
  o Widespread dust, sand, and other obscurations; and
  o Volcanic eruptions.

Blosser Municipal Airport (Airport) is home to a meteorological instrument cluster for collecting and communicating surface weather observations. That system is an Automated Surface Observing System (ASOS) commissioned September 1, 1992 by the National Weather Service (NWS). The ASOS instrument cluster is located in the northeast quadrant of the Airport and the supporting equipment is located in the Kansas Army National Guard armory building. The NWS provides routine maintenance of that ASOS every 90 days, provides repairs as needed during the interim

of regular maintenance, and provides instrument and software upgrades as ASOS technology advances. Since the Airport is home to an ASOS, that technology is solely covered later in this Chapter rather than AWOS. The basic profile for the ASOS meteorological instrument cluster at the Airport is:

- World Meteorological Organization (WMO) Station Index Number: **72458**
- International Civil Aviation Organization (ICAO) Station Indicator Code: **KCNK**
- Federal Aviation Administration (FAA) Station Location Identifier: **CNK**
- Station Position (degrees, minutes, seconds): **39:33:05 North 097:39:02 West**
- Station Elevation (H_a): **1,486.2 feet above Mean Sea Level (MSL)**
- Upper Air Position (degrees, minutes, seconds): **39:33:00 North 097:39:15 West**
- Upper Air Elevation (H_p): **1,466.5 feet**
- This ASOS installation has the full array of standard ASOS sensors. Concerning optional sensors, this ASOS has the Freezing Rain Sensor but not the Lightning Sensor. The CNK ASOS receives lightning data from the Federal Aviation Administration (FAA) Automatic Lightning Detection and Reporting System (ALDARS). Information concerning ALDARS located in the subsection titled *Lightning Detection and Reporting* located on Page 1-75 of this chapter.
- ASOS Service Level: **D**
- Airport weather conditions reported at:
    - o Digital: www.crh.noaa.gov/data/obhistory/KCNK.html or http://aviationweather.gov
    - o Voice Telephone: 785-243-3441
    - o Voice Radio: 123.825 megahertz (MHz)

Automated Surface Observing System (ASOS) Instrument Installation at Blosser Municipal Airport

Aviation Weather Reports - There are two types of aviation weather reports: Aviation Routine Weather Report (METAR) and Aviation Selected Special Weather Report (SPECI). The identifier, METAR or SPECI specified at the beginning of the weather report differentiates them.

METAR is an international standard code format for reporting, recording and transmitting weather observations. Aircraft pilots use METAR weather reports in fulfillment of a part of a pre-flight weather briefing. Meteorologists use aggregated METAR information to assist in weather forecasting. Scheduled reports typically generated once an hour; if conditions change significantly, however, they can be updated in special reports called Aviation Selected Special Weather Reports (SPECIs). Raw METAR code is the most popular format in the world for the transmission of weather data. That code is highly standardized through the International Civil Aviation Organization (ICAO), which allows METAR to be understandable throughout most of the world. However, METAR is also available in plain English for those who prefer not to decode.

A universal Aviation Routine Weather Report (METAR) weather report contains the following elements in order as presented:

1. Type of Report
2. Station Identifier
3. Date and Time
4. Modifier (as required)
5. Wind
6. Visibility
7. Runway Visual Range (as required)
8. Present Weather Phenomena
9. Sky Condition
10. Temperature (ambient & dew point)
11. Altimeter
12. Remarks (as required)

A typical METAR report contains data for the temperature, dew point, wind speed and direction, precipitation, cloud cover and heights, visibility, and barometric pressure. A METAR report may also contain information on precipitation amounts, lightning, and other information that would be of interest to pilots or meteorologists such as Meteorlogical Colour States (condition of cloud height and ground visibility), and Runway Visual Range (RVR). In addition, a short period forecast called a *TREND* may be added at the end of the METAR. A TREND covers likely changes in weather conditions in the two (2) hours following the weather observation. These weather reports are in the same format as a Terminal Aerodrome Forecast (TAF).

METAR is the weather observer's interpretation of the weather conditions at a given site and time. METAR reports typically come from airports or permanent weather observation stations. The METAR is used by the aviation community and the National Weather Service (NWS) to determine the current flying category of an airport such as: Visual Flight Rules (VFR), Marginal Visual Flight Rules (MVFR), or Instrument Flight Rules (IFR). METAR is also used to produce the Terminal Aerodrome Forecast (TAF) for an airport (See *Terminal Aerodrome Forecast* section located on page 1-77).

METAR is a description of the meteorological elements observed at an airport at a specific routine time. METAR reports observed hourly between 45 minutes after the hour until the hour and transmitted between 50 minutes after the hour until the hour. Those weather reports are encoded as a METAR even if it meets SPECI criteria. METAR also includes a section containing the TREND forecast, which indicates the forecast change in meteorological conditions in the next two (2) hours.

SPECI is issued when there is significant deterioration or improvement in airport weather conditions, such as significant changes of surface winds, visibility, cloud base height, and occurrence of severe weather. The format of the SPECI report is similar to that of the METAR and the elements used have the same meaning. SPECI is an unscheduled report taken when any of the criteria listed in Table 1H on Page 1-76 are observed. The SPECI criteria are only applicable to stations that have the capability of evaluating the event. For example, visually evaluated elements, such as a tornado, are not applicable to non-staffed automated stations. SPECI contains all data elements found in a METAR plus additional plain language information which elaborates on data in the body of the report. All SPECIs are made as soon as possible after the relevant criteria are observed.

Lightning Detection and Reporting - Many automated weather observing stations at airports within the United States use data from the National Lightning Detection Network (NLDN) owned and operated by Vaisala. The National Weather Service (NWS) contracts with Vaisala to detect lightning then provide that data to the NWS. The Federal Aviation Administration (FAA) also contracts for NLDN data for the FAA's Automated Lightning Detection and Reporting System (ALDARS). ALDARS is a FAA program for detecting and reporting the location of thunderstorms within 30 Nautical Miles (NM) of an airport served by an Automated Surface Observing System (ASOS) or an Automated Weather Observing System (AWOS). Weather reports from these automated systems are intended for operational use within the aviation community, although many other sectors of society benefit from the reports. ALDARS receives commercially available lightning data provided by the NLDN and processes that data for inclusion into the surface weather observations generated by ASOS and AWOS stations.

Table 1H

Authorization Criteria for Aviation Selected Special Weather Report (SPECI)

Weather Condition	Authorizating Specifications
(1) WIND SHIFT	Wind direction changes by 45 degrees or more in less than 15 minutes and the wind speed is 10 knots or more throughout the wind shift.
(2) VISIBILITY	Surface visibility as reported in the body of the report decreases to less than, or if below, increases to equal or exceed: (a) 3 miles. (b) 2 miles. (c) 1 mile. (d) The lowest standard instrument approach procedure minimum as published in the *National Ocean Service (NOS) U.nited States Terminal Procedures.* If none published, use 1/2 mile.
(3) RUNWAY VISUAL RANGE (RVR)	The highest value from the designated RVR runway decreases to less than, or if below, increases to equal or exceed 2,400 feet during the preceding 10 minutes. United States military stations may not report a SPECI based on RVR.
(4) TORNADO, FUNNEL CLOUD, OR WATERSPOUT	(a) Is observed. (b) Disappears from sight, or ends.
(5) THUNDERSTORM	(a) Begins (a SPECI is not required to report the beginning of a new thunderstorm if one is currently reported.) (b) Ends.
(6) PRECIPITATION	(a) Hail begins or ends. (b) Freezing precipitation begins, ends, or changes intensity. (c) Ice pellets begin, end, or change intensity.
(7) SQUALLS	When squalls occur.
(8) CLOUD CEILING	The cloud ceiling (rounded off to reportable values) forms or dissipates below, decreases to less than, or if below, increases to equal or exceed: (a) 3,000 feet. (b) 1,500 feet. (c) 1,000 feet. (d) 500 feet. (e) The lowest standard instrument approach procedure minimum as published in the *National Ocean Service (NOS) United States Terminal Procedures.* If none published, use 200 feet.
(9) SKY CONDITION	A layer of clouds or obscurations aloft is present below 1,000 feet and no layer aloft was reported below 1,000 feet in the preceding METAR or SPECI.
(10) VOLCANIC ERUPTION	When an eruption is first noted.
(11) AIRCRAFT MISHAP	Upon notification of an Aircraft Mishap unless there has been an intervening observation.
(12) MISCELLANEOUS	Any other meteorological situation designated by the responsible agency or which, in the opinion of the observer, is critical.

Source: F*ederal Meteorological Handbook* (FMH) Number 1, titled *Surface Weather Observations and Reports*

Typical Lightning Sensor

Vaisala's NLDN is the most scientifically accurate and reliable information system for monitoring lightning activity across the Continental United States, 24 hours per day, and 365 days per year. Since 1989, the NLDN reported more than 25 million cloud-to-ground lightning flashes that occur every year. In North Central Kansas, the NLDN locates cloud-to-ground flash detection with an efficiency of greater than 95 percent (95%) and location accuracy within 656 to 820 feet. Vaisala's dedicated data service for more than 23 years has an uptime of 99.99 percent (99.99%) and it delivers lightning data within seconds of it being detected. NLDN also provides thunderstorm detection efficiency in excess of 99 percent (99%).

The NLDN uses 114 remote ground-based lightning sensors nationwide to triangulate cloud-to-ground lightning strikes. Data from the detection grid is fed into ALDARS, which in turn sends messages to each automated station at an airport informing it of the proximity of any lightning strikes. Lightning strikes within five (5) miles of the station result in a report of a thunderstorm at the station (TS). Lightning strikes more than five (5) miles but less than ten (10) miles from the station result in a report of a thunderstorm in the vicinity of the station (VCTS). Lightning more than ten (10) miles but less than 30 miles from the station results only in a remark of distant lightning (LTG DSNT). According to the NLDN, in the area of Blosser Municipal Airport (Airport), the average Lightning Flash Density is 9 to 15 cloud-to-ground flashes per square mile per year. Exhibit 1K located on page 1-78 is a diagram of the Average Lightning Flash Density for all areas of the Continental United States.

Some automated weather stations now have their own lightning sensor to actually measure lightning strikes at the weather observation site rather than requiring an external service such as NLDN. This thunderstorm sensor works by detecting both the flash of light and momentary change in the electric field produced by lightning. When both of these are detected within a few milliseconds of each other, the station registers a possible lightning strike. The station records a thunderstorm when a second possible lightning strike is detected by a sensor, within 15 minutes of the first.

Terminal Aerodrome Forecast (TAF) - In meteorology and aviation, Terminal Aerodrome Forecast (TAF) is a format for reporting weather forecast information, particularly as it relates to aviation. An aerodrome is a term for any location from which aircraft flight operations take place, regardless of whether they involve cargo, passengers or neither. TAFs apply to a five (5) Statute Mile (SM) radius from the center of an airport complex. Generally, TAFs can apply to a nine (9) or twelve (12) hour forecast; some TAFs cover an 18 or 24 hour period; and as of November 5, 2008, TAFs for some major airports cover 30 hour periods. The date/time group reflects the new 30 hour period in Coordinated Universal Time (UTC).

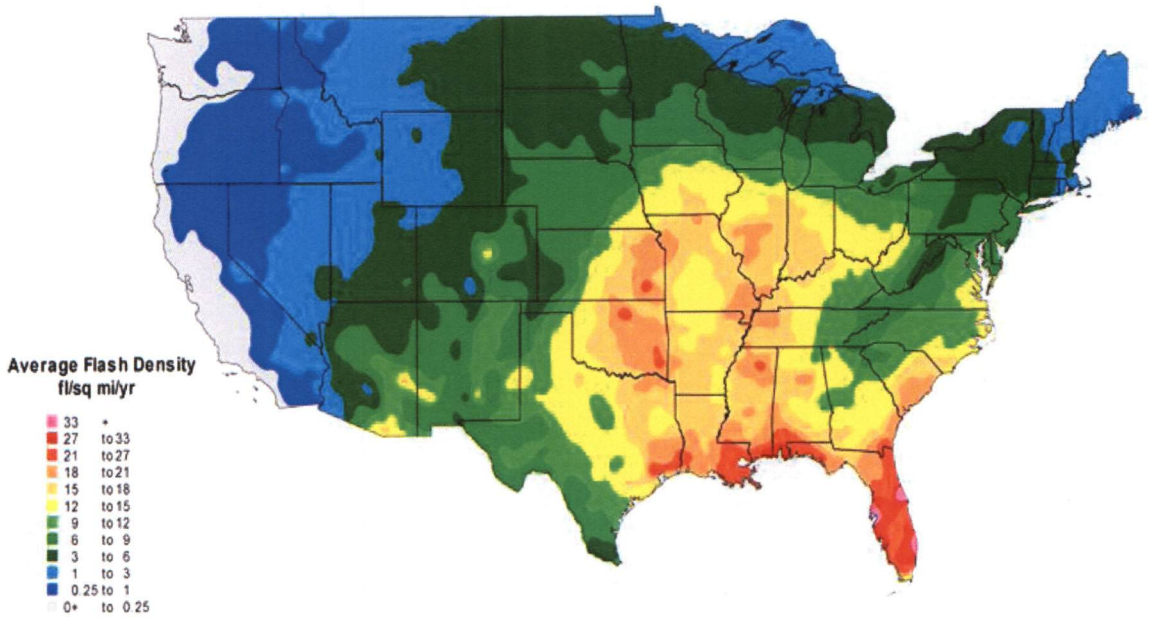


Exhibit 1K
Cloud-To-Ground Lightening Incidence (1997-2010)
Source: Vaisala's National Lightning Detection Network (NLDN)

TAFs complement METAR reports and use similar encoding as METAR reports. TAFs are produced by a human forecaster based on the ground. For this reason there are fewer TAF locations than there are METAR locations. TAFs can be more accurate than numerical weather forecasts, since TAFs take into account local, small-scale, geographic effects.

In the United States, the weather forecaster responsible for a TAF is not usually stationed at the location to which the TAF applies. The forecasters usually work from a centralized location responsible for many TAFs in a state or region, many of which are over 100 miles from the forecaster's location.

In contrast, a short period weather forecast called a Trend Type Forecast (TTF or TREND), which is similar to a TAF, is always produced by a person on-site where the TTF applies. A TTF is an aviation weather forecast written by a real person on location at a major airport or military base. A TTF is a professionally considered forecast for weather over a three (3) hour period and based on an actual weather report, such as an Aviation Routine Weather Report (METAR) or Aviation Selected Special Weather Report (SPECI). A TTF is similar to, or sometimes in addition to, a TAF. However during a TTF's validity period the TTF is considered superior to a TAF.

As of August 2012, a Terminal Aerodrome Forecast (TAF) is not issued or reported for Blosser Municipal Airport (Airport). If the Airport begins having a TAF, that forecast would be written by a person stationed at the National Weather Service (NWS) Weather Forecast Office located in Topeka, Kansas www.crh.noaa.gov.

LANDSIDE FACILITIES

Landside facilities include the aircraft parking aprons, fueling facility, Terminal Building, aircraft storage hangars, aircraft maintenance hangars, and lease facilities for business and industry. Landside facilities are depicted in Exhibit 1N located on page 1-107.

Terminal Building and Maintenance Hangar

In 1973, a 6,400 square foot building with dimensions of 80 feet long by 80 feet wide with sidewalls 12 feet high was constructed at Blosser Municipal Airport (Airport) to accommodate Airport visitors, pilots and the Fixed Base Operator (FBO). The building address is 2995 Blosser Drive. This building has 6,400 square feet of space and contains both the Terminal Building and the Maintenance Hangar. The building is connected to most all utilities, including water, sewer, electricity, natural gas, and telephone. However, the building does not have an optical fiber connection that would provide High Definition (HD) television and Internet access having a high speed and broad band capacity. The building does not have a security alert system or security cameras but seems well secured and lighted. A floor plan drawing of this building is located in Appendix H of this Airport Master Plan.

North End of Terminal Building located at Blosser Municipal Airport

In 2008, comprehensive remodeling improvements were made to the exterior and interior of the combined Airport Terminal Building and Maintenance Hangar. The Terminal Building area was completely remodeled and modernized with new walls, windows, restroom fixtures, paint, carpet, wiring, plumbing, lobby entrance doors, canvas awnings, etc. The Maintenance Hangar that is included with Terminal Building was also remodeled and updated. All of the exterior steel siding of the building was removed and replaced and both building areas were better insulated. A donation of $106,500 from the *Charles H. and Isabell Blosser Foundation* to the City initiated the remodeling improvements. In 2010, the City of Concordia paid the cost to have the steel roof of the building repaired with a rubberized coating.

Maintenance Hangar area of the entire building is single story, measures 60 feet long by 80 feet wide, and is located in the south 4,800 square feet of the building. The Maintenance Hangar has a bi-fold door located in the south end of the building that is 50 feet wide by 14.5 feet high for aircraft and automobile access. There is a steel walk-in door located on the east side of the bi-fold door. The aircraft maintenance area has floor drains for washing aircraft and is plumbed for compressed air supplied by an installed air compressor. Currently the air compressor, rated at two (2) horsepower (2.0 hp), does not pump ample air but the electric motor seems good.

The shop area does not have an overhead carriage hoist for lifting large aircraft assemblies and is not equipped with stationary mechanic equipment (tire machine, hydraulic press, engine stands, jacks, etc.) used by most FBOs and/or certified Airframe and Powerplant (A&P) Mechanics. The Maintenance Building is heated with two (2) radiant heat tubes and one (1) overhead, forced air furnace with both heating systems utilizing natural gas fuel. The Maintenance Hangar is not air conditioned and does not have a mechanical air ventilation system. The size of the Maintenance Hangar will not accommodate entry of Airport Reference Code (ARC) B-II aircraft.

Lounge in the Terminal Building at Blosser Municipal Airport is very modern, inviting and comfortable for Airport visitors and pilots

Terminal Building area of the entire building has two (2) stories, measures 20 feet long by 80 feet wide and is located in the north 1,600 square feet of the building. The Terminal Building provides heated and air conditioned space as a welcome area for pilots and guests to the Airport and operational space for the FBO. There are two (2) glass entry doors located in the north end of the Terminal Building for Airport visitors and pilots. One (1) steel door located on the east side of the Terminal Building provides the FBO with quick access to the aircraft apron and fueling area. The Terminal Building is complete with lobby, office area, refreshments area, water fountain, telephone, restrooms that are handicap accessible, lounge, and conference room. Community and aviation information is available in the lobby area. The FBO provides all of the fixtures, furnishings and equipment located in the Terminal Building.

Frank Carlson Building

The Frank Carlson Building was erected in 1962 to serve as the Administration Building for Blosser Municipal Airport (Airport). The building is 61 feet long by 30 feet wide and provides approximately 1,830 square feet of space. The building address is 2975 Blosser Drive. The building is constructed of concrete block, insulated, has a flat roof, single pane windows, two (2) restrooms that are not handicap accessible, heating and air conditioning system but the air conditioning is not working, and a partial basement with a concrete cap located on the southeast portion of the building that serves as a storm shelter. Electricity backup for the building is provided by two (2) generators those being:

- Empire Generator Corporation, Model Number 350 DGW-8E, Serial Number 463-137, installed in 1962 - This generator is located inside the Frank Carlson Building in a room isolated from the rest of the building and has a single exterior walk-in door on the north side of the building. The generator is rated at 35 kilowatts (kW) of power. The engine

for the generator runs on diesel fuel. This generator will operate but was disconnected from the building electrical service because the oil seals for the engine crankshaft are leaking a lot of oil and the engine should not be run until repaired.

- GENERAC, Model Number 0046753, Serial Number 4361682, installed in June 2007 – This generator is located outside the Frank Carlson Building on the west side of the building and is rated at 15 kilowatts (kW) of power. The engine for the generator operates on natural gas. This generator is totally operational.

Because it is not for an airport or aviation use, Charles and Isabell Blosser granted the City permission to locate a weather observation station on the public easement area of the Airport and lease needed Airport property for that. That permission allowed the City of Concordia (City) to co-locate an office of the *United States Weather Bureau* in the Airport Administration Building. The *Weather Bureau* then initiated development of a manual weather observation station at the Airport. On June 8, 1962, the City leased the entire Airport Administration Building to the *United States of America* for location of the *Concordia Weather Bureau Station*. Related lease cost to the Weather Bureau was $1.00 per year with the City providing all building maintenance at no cost to the *Weather Bureau*.

Interesting to note, the *Weather Bureau Station* was first established in Concordia on May 1, 1885 at 204 West 6th Street then moved to the *Concordia Post Office Building* located at 622 Washington Street on June 10, 1915 where it remained until moving to the Airport in 1962.

In 1995, the National Weather Service (NWS) closed the NWS Office located at the Airport and vacated the building. To date the building is still officially vacant of a fulltime function but does have the following incidental uses:

Vacated Frank Carlson Building located at Blosser Municipal Airport

- The *American Red Cross* has a variety of emergency supplies stored in one (1) office area of the building to support the Concordia community in the case of a natural or manmade emergency.
- The *Kansas-Nebraska Radio Club* occasionally meets in the Frank Carlson Building and has some of their radio communications equipment stored in the building.
- The *Concordia Police Department* has their radio communication repeater located in the building which is connected to an antenna located on the vacated radar tower.
- *Cloud County Emergency Management* has emergency radio communication equipment stored in the building and conducts an occasional meeting in the Frank Carlson Building.

- During severe storm warnings, the *Concordia Police Department* unlocks the building then notifies campers at Airport Park that the Frank Carlson Building storm shelter is available to them until the threatening storm danger passes.

Because of the radio equipment located in the Frank Carlson Building and occasional use of the building for meetings, the City maintains heat in the building during the winter months but does not air condition the building. Even though the City has encouraged incidental uses of the building until a fulltime aviation use can be found to occupy the building, the building is starting to become dilapidated but is currently structurally sound. The roof is leaking in several places, the heating and air conditioning system needs replaced, the building needs exterior wall cracks repaired, the north exterior door to the generator room needs replaced, entire building needs new paint, etc.

Vacated Radar Tower

In 1976, the National Weather Service (NWS) installed a new meteorological radar system at the Airport NWS Office for weather observation in the North Central Kansas area. The tower for that radar was erected just west of the Frank Carlson Building occupied by the NWS Office. That system was a model *74C Solid State Metric Radar System* provided by E*nterprise Electronic Corporation* of Enterprise, Alabama and installed on a steel, lattice tower measuring approximately 90 feet high to the mounting platform. Topeka had the first *74C Radar* installation in Kansas, Concordia the second, and Goodland the third. William P. Matthes was the first and only official Electronic Technician permanently stationed at the Concordia NWS Office, arriving in November 1970.

In 1995, the NWS decommissioned the *Enterprise Electronics 74C Solid State Metric Radar System* used for weather observation and removed the system. The NWS donated the remaining radar tower structure (steel, lattice tower approximately 84 feet high to the standing platform and 90 feet high to the mounting platform) to the City of Concordia (City).

In 2008, the Airport rotating light beacon was moved from the dilapidated tower located just north and adjacent the Terminal Building and

Vacated Radar Tower located at Blosser Municipal Airport

placed atop the vacated radar tower. Affixed to the radar tower are several unused brackets, decommissioned antennas and related cabling. The radar tower is also host to several radio communication antennas that are active, those itemized in Table 1I located below.

Table 1I

Radio Communication Antennas Installed On Vacated Radar Tower
Blosser Municipal Airport

Name of Organization	Antenna Installation Date	Type of Antenna	Antenna Use
Unified School District Number 333	2012	UHF Base	Receive Handheld Radio Communications
Unified School District Number 333	2012	UHF Directional	Transmit Handheld Radio Communications to Repeater Station
Kansas Department of Civil Air Patrol	2010	VHF Model DB 224	Emergency Communications
Kansas-Nebraska Radio Club	2010	UHF Directional	Transmit Communications to K-Link[1] Repeater System
Concordia Police Department	2009	VHF Model DB 224	Public Safety
CloudCountyEmergency Management	2007	VHF Model DB 224	Emergency Communications
Kansas-Nebraska Radio Club	1995	VHF Model DB 224	Amateur Radio and Emergency Communications

Abbreviation: VHF - Very High Frequency UHF – Ultra High Frequency
Note 1: K-Link information at, *http://ks0lnk.wavedsl.net/*

Aircraft Hangars

Many pilots and/or businesses who own or plan to own an aircraft want a hangar to protect their valuable investment in personal transportation from the elements. Airport hangars provide various uses, including individual aircraft storage, transient aircraft storage, commercial repair/maintenance buildings, and space for lease to businesses and industry with the need to locate on the Airport for easy access to aviation support services. Blosser Municipal Airport (Airport) having a variety of aircraft hangars available can attract new businesses and generate additional revenue for the Airport. In fact, a well-executed and successful hangar portfolio can be the key to a financially secure General Aviation (GA) airport.

Modern hangars vary a great deal in planning and design. The type of hangar used depends on the type and number of aircraft to be serviced and on the nature of the maintenance equipment. The most common hangars have a rectangular profile and are of arch or frame construction; they are often 80 feet to 100 feet wide at a General Aviation (GA) airport. At a Commercial Airport hangars are 200 feet to 300 feet wide. Depending on their function, the following types of hangars are distinguished:

- **Storage hangars:** where the main building is used for the parking, maintenance, and preventive inspection of aircraft and for the storage of detachable units and spare parts.

- **Maintenance Hangars** are for the repair of airplanes, helicopters, and aircraft engines. Maintenance Hangars include several production and everyday administrative premises, which are usually housed in annexes to the main hangar building.

Hangars are also subdivided according to the type of construction:

- **Stationary Hangars** are built at permanent and military base airports and helicopter stations, with supporting structural elements of metal or reinforced concrete.
- **Temporary Hangars** are designed for short-term service, usually constructed of wood; and collapsible, with structural elements of steel or light alloys designed for field airports. An efficient design for the latter type of hangar is the pneumatic framework design, which consists of a supporting framework (for instance, made up of tubular metal arches) and an outer covering of canvas or synthetic material.

Hangars have hoisting and transportation devices (such as carts and mobile cranes), means of communications and signaling, automatic fire extinguishers, and so on. Some stationary hangars have movable and non-movable platforms and gangways to make the maintenance and repair of the aircraft more convenient. These hangars normally have electric power and plumbed compressed air, sometimes plumbed oxygen is also available. The doors of the hangar are usually made of separate panels that automatically open horizontally or vertically. Accordion-type doors are also used. The apron in front of the hangar is linked via taxiway with the runway(s) of the airport.

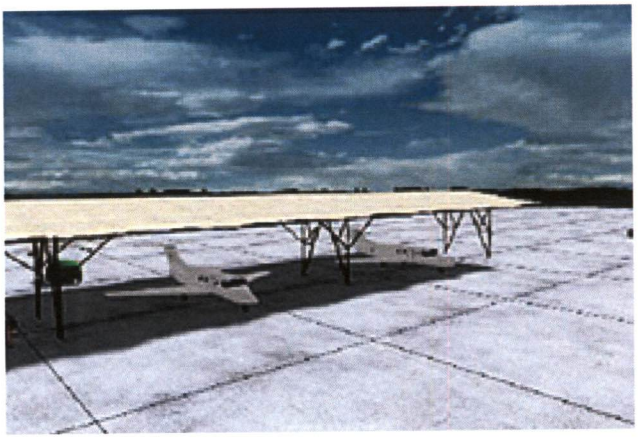
For hangar discussion in this Airport Master Plan, the following storage hangar definitions are needed:

- **Conventional Hangars** are normally a rectangular building designed to function just as an aircraft storage facility. This type of hanger normally just has electricity for minimal lights and electrical outlets and has one (1) aircraft door and one (1) walk-in door. Conventional hangars normally are not insulated, heated or air conditioned. Aircraft pilots and/or owners can perform very minor maintenance and cleaning of their aircraft in a Conventional Hangar.

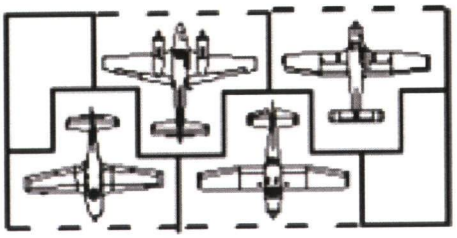
- **Executive Hangars** are normally a rectangular building designed to function as an aircraft storage and maintenance facility and have amenities that support operating a business in the hangar. Executive Hangars normally have all utilities including Internet access. Offices, restrooms, conference rooms, storage areas, shop areas, etc. are integrated into the hangar. Executive Hangars are insulated and have heating, mechanical air ventilating and air conditioning systems. Lighting in the aircraft storage area is most times more than ample. Executive Hangars are normally plumbed for compressed air, and depending on the stored aircraft, may also have plumbed oxygen.

- **Shade Hangars** are an open sided structure that provides aircraft with shade from the sun and temporary protection from rain, hail, etc. The roof can be steel or of various fabrics and synthetic materials. A Shade Hangar is mainly used to accommodate aircraft visiting an airport for a short period of time.

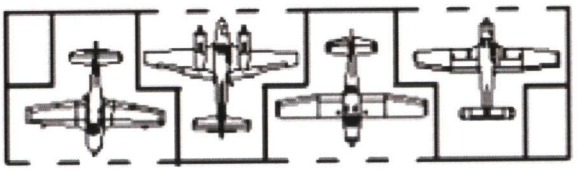
•**T-Hangars** are a rectangular building designed to function just as an aircraft storage facility. A T-Hangar differs from a Conventional Hangar in that a T-Hangar structure has an aircraft door on the opposing side of the building in a layout that allows aircraft to be staggered and compactly stored. This type of hanger normally just has electricity for minimal lights and electrical outlets and has one (1) aircraft door and no walk-in door. T-Hangars normally are not insulated, heated or air conditioned. Aircraft pilots and/or owners can perform very minor maintenance and cleaning of their aircraft in a T Hangar. There are two (2) types of T-Hangars, those being:



Typical Shade Hangar



Nested T-Hangar configuration nests the aircraft tail section into the center of the building structure. The overall length of the hangar is reduced, potentially saving on paving for taxiways and ramps.



Standard T-Hangar configuration is sometimes called "stacked" because the aircraft storage unit depth is equal to the building width and the units are stacked together. Since the Standard T-Hangar width is narrower, it is also longer than the Nested T-Hangar configuration thereby requiring longer taxiways on both sides of the hangar.

Exhibit 1L located on page 1-86 depicts the building layout for the hangar area at the Airport. Hangars at the Airport consist of Conventional Hangars and Standard T-hangars. The address for the Standard T-Hangars building is 2295 Blosser Drive. The Conventional Hangars currently do not have an assigned address. The Airport does not have Executive Hangars, Shade Hangars or Nested T-Hangars. Table 1J located on page 1-87 provides detailed information concerning the aircraft hangars located at the Airport. Two (2) privately owned hangars, one a Convention Hangar and the other an Executive Hangar are located off of Airport land and northwest of the primary Runway 17 approach. Both hangars have access to primary Runway 17/35 via taxiway and have been operating as through-the-fence operations for many years.

The City of Concordia (City) owns all aircraft hangars located at Blosser Municipal Airport and leases those hangars to private individuals and businesses.

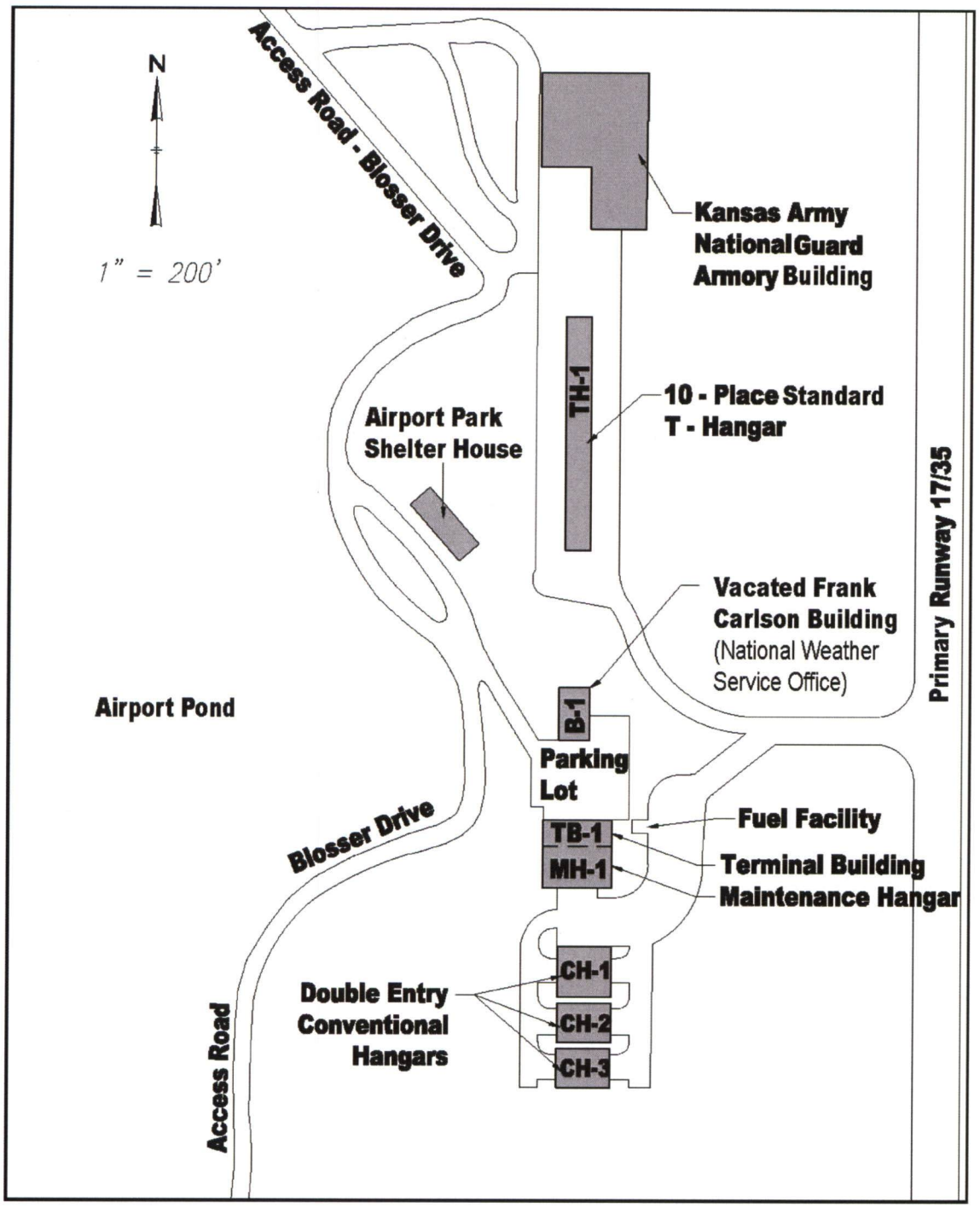


Exhibit 1L
Building Layout for Hangar Area

Table 1J

Aircraft Hangar Summary

Hangar Type	Hangar Number	Aircraft Stalls	Stalls Leased	Dimensions (Square Feet)	Hangar Ownership	Door Size Door Type	Year Built Condition
Maintenance Hangar & Terminal Building	MH-1[A]	1	1	60'x80' 4,800 sf	City	50'x14.5' Bi-Fold Door	1973 Very Good
Double Entry Convention Hangar	CH-1	2	2	60'x60' 3,600 sf	City	44'x11.5' Bi-Fold Door	1982 Good
Double Entry Convention Hangar	CH-2	2	0	60'x50' 3,000 sf	City	44'x11.5' Bi-Fold Door	1982 Good
Double Entry Convention Hangar	CH-3	2	0	60'x50' 3,000 sf	City	44'x11.5' Bi-Fold Door	1982 Good
Standard T-Hangar	TH-1	10	6	285'x33' 9,405 sf	City	40'x12.5' Sliding Door	1994 Very Good
Executive Hangar	N. A.	0	0	0	N. A.	N. A.	N. A.
Total		**17**	**9**	**23,805 sf**			

[A]MH-1 consists of a hangar and maintenance space that is 60 feet long by 80 feet wide located in the south portion of a building that is 80 feet long by 80 feet wide. That portion of the building is single story. The remaining area of the building located in the north portion is 20 feet long by 80 feet wide and serves as the Airport Terminal Building and provides operational space for the Fixed Based Operator (FBO). This portion of the building is two (2) stories.

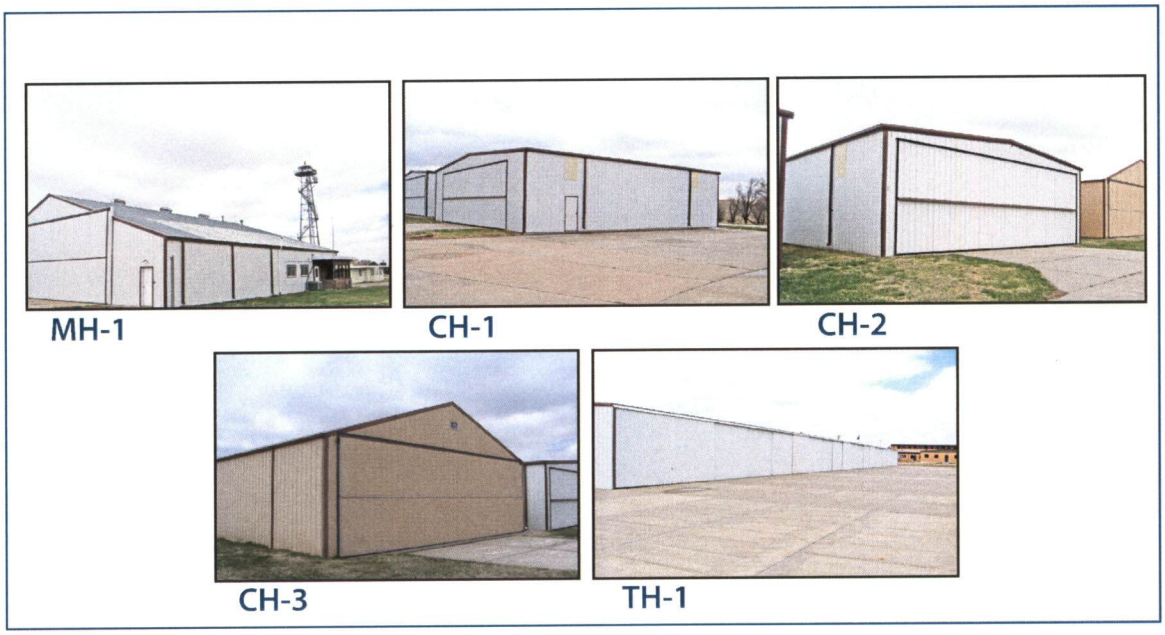


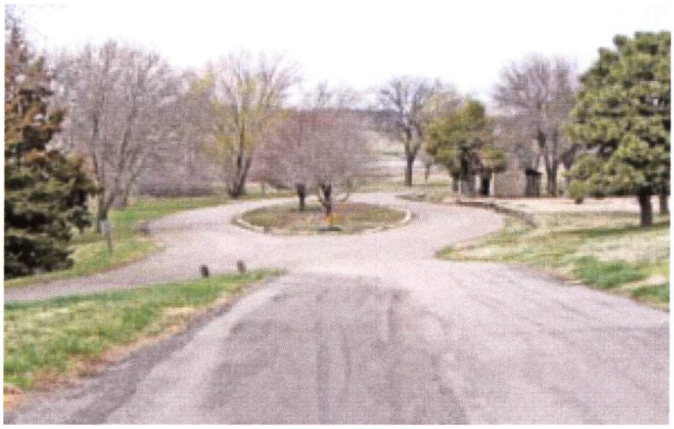
Exhibit 1M
Aircraft Hangars Located at Blosser Municipal Airport

Aircraft Apron

Aircraft Apron located on east side of Terminal Building

An aircraft apron to accommodate General Aviation (GA) operation at Blosser Municipal Airport (Airport) was originally constructed in 1975. The apron was approximately 150 feet long by 60 feet wide, constructed of concrete, and included four (4) tie-downs for outdoor parking of aircraft. A taxilane is also included in the dimensions of the apron that allows aircraft to access the Airport Terminal Building, Conventional Hangars, Maintenance Hangar, Standard T-Hangars, aircraft fueling area, and connecting taxiway to the primary runway. The apron is centrally located just east and adjacent of the Airport Terminal and fueling areas and north of the Conventional Hangars.

The size of the apron was severely insufficient to park aircraft and provide ample taxilane access to the Conventional Hangars, Standard T-Hangars, Maintenance Hangar, Terminal Building and fueling facility. Also, the pavement surface contained areas of both asphalt and concrete was in fair to poor condition. Because of those issues, in 2011 the apron was reconstructed and expanded. The additional new concrete apron area is approximately 260 feet long north/south by 125 feet long east/west.



At Terminal Building parking lot entrance looking northwest toward Blosser Drive and Airport Park shelter house

Airport Access Via Automobile and Walking

The Airport and Airport Park is ac-cessed by Blosser Drive immediately via two (2) entrances off of the U.S. Highway 81 Expressway (81 Expressway) which is a four-lane highway. The north entrance to the Airport is a stoplight intersection while the south entrance is traffic controlled by a stop sign. Blosser Drive is an asphalt road, 15 feet wide with no curb and gutter, and the pavement surface is in fair condition.

There is no sidewalk or walking trail system located in Airport Park that provides walking access to the Airport. Rather, pedestrians walk on the edge of Blosser Drive and in the grassy areas of Airport Park leading to the Airport. However, an excellent sidewalk system to the west and north portions of the Concordia community terminates at the north, stoplight entrance to Airport Park and the Airport.

Airport Parking Areas

There are two (2) parking areas located at the Airport for automobile and truck parking. These areas provide parking for vehicles at the vacated Frank Carlson Building and occupied Terminal Building. The Frank Carlson Building was initially used as the Airport Administrative Office then occupied by the National Weather Service (NWS) in 1962 until vacated by the NWS in 1995. There is no automobile parking available near the Airport Conventional Hangars or Standard T-Hangars for aircraft owners, pilots, maintenance personnel, etc to park their automobiles.

Terminal Building Parking Area is an asphalt parking lot located north and adjacent of the Terminal Building, south and adjacent of the vacated Frank Carlson Building previously occupied by the National Weather Service (NWS), and west of the Airport apron area. The parking lot is accessed via an entrance and short road off Blosser Drive. The east side of the parking lot has controlled access to the apron for Airport authorized personnel and vehicles.

At east edge of parking lot for Terminal Building looking west towards Airport Park

This parking lot is approximately 102 feet long (east/west) and 99 feet wide (north/south) and provides approximately 10,098 square feet of pavement for access driving lanes and vehicle parking. Approximately 15 regular sized vehicles can park in the Terminal Building parking lot. In 2006, the City of Concordia (City) enhanced this parking lot with a two (2) inch (2") asphalt overlay. Currently, the asphalt pavement for this parking lot is in fair condition.

At east edge of parking lot for Frank Carlson Building looking west at Blosser Municipal Airport

Frank Carlson Building Parking Area is an asphalt parking lot located east and adjacent of the Frank Carlson Building previously occupied by the National Weather Service (NWS). The parking lot is accessed via an entrance and short road off Blosser Drive then via a driving lane through the Terminal Building parking lot. From this parking lot there is no access to the airfield or aircraft apron.

This parking lot is approximately 55 feet long (east/west) and 23 feet wide (north/south) and provides approximately 1,265 square feet of pavement for vehicle parking.

Approximately five (5) regular sized vehicles can park in the Frank Carlson Building parking lot. In 2006, the City enhanced this parking lot with a two (2) inch (2") asphalt overlay. Currently, the asphalt pavement for this parking lot is in fair condition.

Utilities

The availability and capacity of the utilities serving the Airport are important in determining the development potential of Airport property. Of primary importance, is the availability of water, sewer and electricity sources at the Airport. Airport utilities itemization and respective providers are:

- **Water** provided by the City of Concordia (City) water system. The City does not have a water treatment plant.
- **Sanitary Sewer** is connected to the City sewer system. The City uses a tertiary type of sewage treatment plant.
- **Electric Power** provided by Prairie Land Electric Cooperative, Inc. Prairie Land is based out of Norton, Kansas and has a local office in Concordia.
- **Natural Gas** supplied by Kansas Gas Service (KGS), a division of Oneok, Inc. of Tulsa, Oklahoma. Kansas Gas Service headquartered in Overland Park, Kansas and has no local office in Concordia.
- **Telephone** – AT&T, Inc. provides telephone service to the Airport via standard telephone wire not optical fiber. AT&T is headquartered in Dallas, Texas, has a regional office located in Kansas City, Missouri and has no local office in Concordia.
- **Cable Television** infrastructure is not provided at the Airport.
- **Internet Access** is provided by the Fixed Base Operator (FBO) via a wireless modem and wireless access point through Verizon Wireless headquartered in New York, New York with a local office in Concordia. An optical fiber connection is not available at the Airport to provide high speed, broad band Internet access capacity at the Airport.

Support Services

Support services at the Airport are those services that help keep the Airport operational on a daily basis and aid the Airport during times of emergency. Such services and respective providers are:

The City of Concordia has fulltime Fire and Emergency Medical Services (EMS) that provide Blosser Municipal Airport with excellent 24/7 coverage that can handle most aviation emergency situations

- **General Maintenance** is provided by the City of Concordia (City) Public Works Department and the Fixed Based Operator (FBO).
- **Mowing and Snow Removal** Services provided by the City Public Works Department.
- **Fire Protection** provided by the City Fire Department. The Airport is within the City limits so the Airport has a Public Protection Classification of five (5)as determined by the Insurance Services Office, Inc. (ISO).
- **Emergency Medical Services (EMS)** provided by the City Fire Department.
- **Aviation Consultant Services** are provided by Alfred Benesch & Company, Inc. of Manhattan, Kansas and the Federal Aviation Administration (FAA), Airports Division, Central Region located in Kansas City, Missouri.

Fixed Base Operator (FBO)

A Fixed Base Operator (FBO) is a commercial business granted the right by an airport sponsor to operate on the airport and provide aeronautical services to the general public such as sale of fuel and oil, hangar rental, aircraft tie-down and parking services, aircraft rental, aircraft maintenance, flight instruction, and air taxi/charter operations. Some FBOs offer specialty services such as aircraft instrument and avionics maintenance, aircraft painting and overhaul, aerial application, aerial photography, aerial utility and pipeline patrol, etc. FBOs also provide non-aviation services such as access to restrooms, ground transportation services, food and drink refreshments, Internet access and lounge area with television.

In the aviation industry a FBO is a service center at an airport that may be a private enterprise or may be a department of the municipality that the airport serves. In common practice, an FBO is a primary provider of support services to General Aviation (GA) operators at a public-use airport either located on airport leasehold property or, in rare cases, adjacent to airport leasehold property as a through-the-fence operation. In many smaller airports serving GA in remote or modest communities, the community itself may provide fuel services and operate a basic FBO facility. Most FBO operators doing business at airports of high to moderate traffic volume are non-governmental organizations such as either privately or publicly held companies.

Though the term Fixed Base Operator originated in the United States, the term is becoming more common in the international aviation industry as business and corporate aviation grows. The term has not been officially defined as an international standard, but there have been recent uses of the term in International Civil Aviation Organization (ICAO) publications.

Blosser Municipal Airport (Airport) has a limited service FBO located in the Terminal Building and Maintenance Hangar both remodeled in 2008. The Airport FBO service is provided by *Aerial Ag Service of Concordia,* owned and operated by Brian Donovan. *Aerial Ag Service* is a private agricultural spray business. Donovan provides the following FBO services at the airport:

- 24-hour assistance;
- Community and aviation information available in the lobby area;
- Wireless Internet access;
- Aircraft oil and fuel;

- Aircraft storage;
- Make arrangements for aircraft charters;
- Access to restrooms and lounge area;
- Refreshment area with soda and bottled water machine, coffee maker, microwave and microwave popcorn;
- On-call relationship with a local Airframe and Powerplant (A&P) Mechanic that is available as needed for minor and emergency repairs and maintenance of aircraft.
- Ground transportation services such as Courtesy Car at the airport and helps make arrangements for rental car and public transportation.

The FBO can be contacted at Work: 785-243-3048, Cell: 785-243-3547 or cnkairport@gmail.com

Airframe and Powerplant Mechanic

Airframe and Powerplant Mechanic (A&P) refers to an individual who holds a mechanic certificate issued by the Federal Aviation Administration (FAA). The rules for certification, and for certificate holders, are detailed in Title 14 of the Code of Federal Regulations (14 CFR), Federal Aviation Regulation (FAR) Part 65, Subpart D titled, *Mechanics.* A&P Mechanics inspect, test, perform or supervise maintenance, preventive maintenance, repair, and alteration of aircraft and aircraft systems. Location of an A&P Mechanic at a General Aviation (GA) airport helps to stabilize then increase the number of based aircraft at the airport and increases the number of itinerant aircraft utilizing an airport.

Currently the Airport does not have a certified A&P Mechanic available fulltime to work on itinerant or based aircraft.

April 2012 edition of *Sport Aviation Magazine* named the Courtesy Car located at Blosser Municipal Airport as, *Airport Car of the Month.* That car was donated to the Airport by Ray Palmer of Glasco, Kansas Photograph courtesy Pat & Dee Murphy of Morrison, Colorado

Ground Transportation

The availability of ground transportation at a rural airport is critical to the usefulness and future economic viability of a General Aviation (GA) facility. A key component of the economic impact any airport brings to its local economy is directly tied to the ability of visitors arriving via aircraft to easily leave the airport and engage in local attractions and activities or conduct business in the host community and surrounding area. Readily available ground transportation from Blosser Municipal Airport (Airport) to the Concordia community and area highway system is an important characteristic of the Airport that adds a necessary and pleasing convenience for aircraft travelers thus resulting in more visitor attraction to the Airport and its host community of Concordia. A good ground transportation link allows for the itinerant aircraft transporting

visitors and pilots to better utilize the Airport, Concordia community and regional highway system. The Airport offers the following ground transportation linkages:

• **Courtesy Car Service** is provided by the Airport and Fixed Base Operator (FBO). The Airport has one (1) courtesy car available that is facilitated through the FBO stationed at the Airport. The car is a 1983 Lincoln Town Car with approximately 70,000 original miles. Ray Palmer of Glasco, Kansas donated the car at no cost to the Airport on March 18, 2009. At that time, Palmer was a Member of the Concordia Airport Advisory Board. While visiting the Airport, Pat and Dee Murphy of Morrison, Colorado took a photograph of the Airport Courtesy Car they used while in Concordia. Murphys submitted that photograph to the *Experimental Aircraft Association* (EAA) for consideration of being named *Airport Car of the Month* in an edition of *Aviation Sport Magazine* published by the EAA. That happened in the April 2012 edition of *Aviation Sport*.

There is no cost to use the Courtesy Car but donations to the Airport are appreciated. For 24/7 courtesy car service, the FBO can be contacted at Work: 785-243-3048, Cell: 785-243-3547 or cnkairport@gmail.com

Aviation Sport Magazine, April 2012 Edition

Airport Car of the Month

On a warm Sunday evening trip from Colorado to northern Michigan, we dropped into Concordia, Kansas. We were running short on fuel, daylight, and enthusiasm so as I refueled and tied down, my wife, Dee, dialed the number posted on the FBO door. Within minutes the resident ag pilot rolled up in this big, beautiful blue Lincoln Town Car. He said it was donated by a local farmer, and yes, we could keep it overnight.

It was spotless inside and out, had cushy seats, no dents, and everything worked (except the trunk lift cylinder, but a "hold open stick" was provided). We drove in luxury to a nearby motel. The next morning as I was loading our 170, a classic Bonanza taxied in and parked in front of the hangar. The pilot, Ray (Palmer), was the owner of the Town Car. He said he really likes Lincolns and had three of them, so he gave one to the airport. Ray and the folks of Concordia treated us so well, we RON'd there on our return flight to Colorado.

Pat Murphy, EAA Member 58802
Morrison, Colorado

Aviation Sport Magazine is a publication of the Experimental Aircraft Association (EAA)

• **Taxi Service** is provided by Concordia Public Transportation (CPT). This service is partially funded by the Kansas Department of Transportation (KDOT). CPT operates a van that provides taxi service within the corporate limits of Concordia which includes the Airport. Taxi service in Concordia is available Monday through Friday from 8:00 a.m. to 3:30 p.m. and transport cost is $1.00 each way. Taxi arrangements are made by calling CPT at 785-243-1872.

• **Rental Car Service** is provided by *Hertz Rental Car* through *Womack Sunshine Ford & Kawasaki* of Concordia. With as little as one (1) hour notice, from compact cars to Sport Utility Vehicles (SUVs) can be available at the Airport for rental. Pickup trucks are also available but require a two (2) week notice before date the truck is needed at the Airport. A 15-passenger van is also available for rental

on short notice. Rental vehicle arrangements are made by contacting the Womack Ford Hertz Agent at 785-243-1220, or via the Internet at www.hertz.com.

• **Courtesy Taxi Service** is provided by CloudCorp for business visitors to the communities of Cloud County. CloudCorp is the countywide, economic development organization for Cloud County. There is no cost for this business transportation service and donations are not requested. This service is available Monday through Friday from 8:30 a.m. to 5:30 p.m. and with ample notice can be available on Saturday and Sunday. Arrangements for this transportation are made by contacting CloudCorp at Office: 785-243-2010 or Cell: 785-243-8710.

With the said transportation options, the Airport has a very good ground transportation linkage to the Concordia community and regional highway system. The Courtesy Car and Rental Car option is often used. Recently, while on vacation, a pilot and his family rented a car for one (1) week, placed their aircraft in an Airport hangar, and then toured the North Central Kansas Region while visiting family.

Aviation Fuel

Aviation fuel is a specialized type of petroleum-based fuel used to power aircraft. It is generally of a higher quality than fuels used in less critical applications, such as heating or road transport, and often contains additives to reduce the risk of icing or explosion due to high temperatures, among other properties. Most aviation fuels available for aircraft are kinds of petroleum spirit used in engines with spark plugs or fuel for jet turbine engines, which is also used in diesel aircraft engines. Alcohol, alcohol mixtures and other alternative fuels may be used experimentally, but alcohol is not permitted in any certified aviation fuel specification.

Fuels have to conform to a specification in order to be approved for use in type certificated aircraft. The American Society for Testing and Materials (ASTM) developed specifications for automobile gasoline as well as aviation gasoline. These specifications are ASTM D 910 and ASTM D 6227 for aviation gasoline and ASTM D 439 or ASTM D 4814 (latest revision) for automobile gasoline. The production of aviation fuel falls into two categories: fuels suitable for turbine engines and fuels suitable for piston-engine aircraft. There are international specifications for these fuels.

- **Aviation gasoline (Avgas)** is used in piston engine aircraft where the emphasis is on anti-knock characteristics. The fuel must meet performance guidelines for both the rich mixture condition required for higher power during takeoff and the weak mixture which permits economic cruising. Avgas is used to power spark-ignited piston-engine aircraft. Avgas is formulated for stability, safety, and predictable performance under a wide range of environments, and is typically used in aircraft that use reciprocating or Wankel engines. The most commonly used Avgas is 100 octane Low Lead (100 LL). That fuel is dyed blue and contains a relatively small amount of tetraethyl lead (TEL) though the amount is greater than what was contained

in many automotive grades of leaded fuel before such fuel was phased out. As of January 2010, 100LL has a TEL content of 1.2 to 2 grams of TEL per United States gallon. One gram of TEL contains 600 milligrams of lead.

- **Motor gasoline (Mogas)** is the everyday unleaded petroleum spirit used in automobiles and is now more often a choice of aircraft owners rather than Avgas for a variety of reasons. The primary reason is cost. The savings in fuel prices between auto fuel and Avgas are quite significant. In an airplane using 15 gallons per hour, a savings of only 50 cents per gallon will be approximately $7.50 per flight hour less than the cost of using Avigation gasoline (Avgas). In 200 engine hours, this adds up to $1,500. Maintenance costs are also reduced when using Mogas. Many aircraft pilots use Mogas simply because their airplanes run better on it than they do on 100 Low Lead Avgas which, despite its name (100 Low Lead), contains twice as much lead as regular leaded auto fuel prior to the lead reductions which took place in 1986. This excess lead contributes to a host of problems, including fouled plugs and sticking valves.

Mogas that does not contain ethanol may be used in certified aircraft that have a Supplemental Type Certificate (STC) for automotive gasoline as well as in experimental aircraft and ultralight aircraft. Unleaded automobile gasoline without ethanol that is formulated to the ASTM D 4814 specifications is Mogas and is an approved aviation fuel recognized by the Federal Aviation Administration (FAA) through the STC engineering process. Some oxygenates other than ethanol are approved by FAA. Most of these applicable aircraft have low-compression engines which were originally certified to run on 80/87 octane Avgas and require only "regular" 87 octane, anti-knock index automotive gasoline. Examples of this include the popular Cessna 172 or Piper Cherokee with the 150 horsepower (hp) variant of the Lycoming O-320 engine.

Aircraft not initially certified to use Mogas must obtain a STC from the FAA approving a Mogas modification. The STC defines the product design change, states how the modification affects the existing type design, and lists tentative serial numbers. The STC also identifies the certification basis listing specific regulatory compliance for the design change such as engine modifications for Mogas. Information contained in the certification basis is helpful for those applicants proposing subsequent product modifications and evaluating certification basis compatibility with other STC modifications.

- **Jet fuel** used for turbine engines must remain at a viscosity that it can still be pumped at low temperatures, meet definite limits in terms of density and calorific value, burn cleanly and remain stable when heated to high temperatures. Jet fuel is a clear to straw-colored fuel, based on either an unleaded kerosene (Jet A-1), or a naphtha-kerosene blend (Jet B). It is similar to diesel fuel, and can be used in either compression ignition engines or turbine engines. Jet-A powers modern commercial airliners and is a mix of pure kerosene and anti-freeze and burns at temperatures at or above 120 degrees Fahrenheit (120° F). Kerosene-based fuels have a much higher flash point than gasoline-based fuels, meaning that they ignite at significantly higher temperatures. Jet fuel is a high-quality fuel, however, and if it fails the purity and other quality tests for use on jet aircraft, it is sold to other ground-based users with less demanding requirements, like railroad engines.

Fueling Facility

Any fueling operation can be very dangerous, and aviation fuel has a number of unique characteristics which must be accommodated. As an aircraft flies through the air, it can accumulate a charge of static electricity. If this is not dissipated before fueling, an electric arc can occur, which may ignite fuel vapors. To prevent this, aircraft are electrically bonded to the fueling apparatus before fueling begins, and are not disconnected until fueling is complete.

Automated fueling facility located near the Terminal Building at Blosser Municipal Airport

In 1990, at Blosser Municipal Airport (Airport), two (2) 6,000 gallon underground fuel storage tanks were installed with fuel pumps, leak detection and monitoring systems to meet Environmental Protection Agency (EPA) standards, and a two (2) product fuel dispenser (Fueling Facility). Originally the aviation fuel tanks were filled with Aviation gasoline (Avgas) 100 Low Lead (LL) for modern aircraft and Motor gasoline (Mogas) 87 octane for older aircraft. In 2005, the City of Concordia (City) installed a new automated fuel management system with keypad, card reader and receipt printer on the fuel dispenser so aviation fuel is readily available at all times without the assistance of the Fixed Base Operator (FBO).

In 2008 the City replaced the Mogas fuel with Jet A fuel. Short term, having Jet A fuel rather than Mogas, and also having Avgas 100 LL available at the Airport is a good and cost productive decision. However, in the long term that blend of fuel inventory offered modern aviation customers could have some negative impact on the itinerate aircraft operations (landings and takeoffs) at the Airport because other area airports such as Clay Center Municipal Airport (CYW) and Salina Municipal Airport (SLN) offer Avgas 100 LL, Jet A and Mogas. As discussed earlier in this section, Mogas is becoming a popular replacement for Avgas and may continue to do that well into the future.

The two (2) product fuel dispenser is a Gasboy make with Model Number 9853QTW2 and Serial Number DPGC010555. The *Kansas Department of Agriculture, Division of Weights and Measures* identification number for the fuel dispenser is 123331. The fuel management system with keypad, card reader and receipt printer is a Fuelmaster make with Model Number FM-028 and Serial Number 7477. The fuel management system is connected to a telephone line for remote monitoring and data reading. The telephone number for that is 785-243-1800. A fire extinguisher for an emergency and a cable on a retractable reel for electrically bonding aircraft to the fueling equipment before fueling are available at the Fueling Facility.

The City of Concordia (City) contracts with *Mid Kansas Cooperative Association, Inc.* (Mid Kansas) of Moundridge, Kansas to act as an independent contractor and help provide fueling services at the Airport. According to the *Airport Fueling Facilities Contract* (Agreement) dated June 24, 2009, the City provides for the exclusive use of Mid Kansas the Fueling Facility located at the Airport. In exchange for that, Mid Kansas agrees to:

- Be the operator of the Fueling Facility and will keep on hand at the Airport supplies of Avgas 100 LL and Jet A aviation fuels in sufficient quantity and of appropriate quality to adequately service aircraft fuel needs at the Airport;
- Maintain and provide all records required by the Kansas Department of Health & Environment and any other entity or agency;
- Provide all maintenance necessary to keep the Fueling Facility in operating condition and pay all related costs of that;
- Provide all required calibration and cathodic (corrosion) testing; and
- Maintain liability and casualty insurance with respect to the Fueling Facility and its operation in an amount not less than $1.0 million.

The initial term of the Agreement was for one (1) year and thereafter remains in effect from month to month subject to termination by the City or Mid Kansas upon 60 days written notice.

Oxygen Facility

The Airport does not have facilities or equipment to provide bottled oxygen or bulk oxygen for aircraft needs.

Air Traffic Control (ATC) tower at Kansas City International Airport (KCI)

Radio Communications

Radio communications are an important requirement for the safe and proper operation of aircraft at airports. Radio communications vary according to the type of airport, those being:

- **Controlled airports** have an operating Air Traffic Control (ATC) tower. Two-way radio communications are required. ATC is responsible for providing for the safe, orderly, and expeditious flow of air traffic at airports where the type of operations and/or volume of traffic requires such a service. Tower controllers issue taxi, departure, and arrival instructions for pilots to follow on specific ATC radio frequencies. Because of that, pilots operating from a controlled airport are required to maintain two-way radio communication with air traffic controllers, and to acknowledge and comply with their instructions. Pilots must advise ATC

if they cannot comply with the instructions issued and request amended instructions. A pilot may deviate from an air traffic instruction in an emergency, but must advise ATC of the deviation as soon as possible. Some airports have part-time ATC towers. When the tower is closed, usually at night, uncontrolled airport operating procedures apply. The tower frequency usually becomes the Common Traffic Advisory Frequency (CTAF) when the tower is closed. Aeronautical Sectional Charts depict controlled airports in blue color.

- **Uncontrolled airports** do not have an operating ATC tower. Two-way radio communications are not required, although it is a good idea to have that. At uncontrolled airports, pilots hear advisories on a Common Traffic Advisory Frequency (CTAF), but the responsibility for collision avoidance, landing and takeoff sequencing, and knowing the local airport procedures lies solely with the pilot. Uncontrolled airports are much more common than controlled airports. In fact, nearly 20,000 airports in the United States are uncontrolled, compared to approximately 500 that have an ATC tower. Millions of safe operations in all types of aircraft are conducted at uncontrolled airports in a variety of weather conditions. The process works well because pilots place safety first and use Federal Aviation Administration (FAA) required procedures. Radio communication at uncontrolled airports is not always easy, especially in metropolitan areas where there never seem to be enough radio frequencies to go around. It's not unusual for several airports within radio range to share the same CTAF. Pilots have to make sure they state the airport name at the beginning and end of each radio transmission for the sake of both clarity and safety. Aeronautical Sectional Charts depict controlled airports in magenta color.

Blosser Municipal Airport (Airport) is an uncontrolled airport and does not have an ATC tower.

Within the United States the Federal Communications Commission (FCC) regulates aeronautical stations which communicate with aircraft both in flight and on the ground under Code of Federal Regulations (CFR) Title 47 - *Telecommunications*, Chapter 1 – *Federal Communications Commission,* Part 87 - *Aviation Services,* Subpart I - *Aeronautical Enroute and Aeronautical Fixed Stations.* Radio stations used for this purpose are defined as Aeronautical Enroute Stations and they make up the ground portion of the Aeronautical Mobile Route (R) Service. The FCC rules conform to applicable statutes, international treaties, agreements and recommendations to which the United States is a party and relate to documents defined by the International Telecommunications Union (ITU) and the International Civil Aviation Organization (ICAO). The FCC designated Aviation Spectrum Resources Incorporated (ASRI) as the single licensee for frequencies assigned under the Aeronautical Enroute Service within the United States and its territories with some exceptions in Alaska. These stations may be authorized for either voice or data link communications between ground sites and aircraft.

The Aeronautical Mobile Route (R) Service is reserved for communications relating to the safety and regularity of flight along national and international civil air routes. A significant portion of these frequencies are combined as networked systems and provide the airlines with required pilot to dispatcher communications. Due to heavy use of this spectrum, radio frequency changes

Typical aviation radio communication base station

involve much coordination throughout the entire coverage area with multiple operators and are only entertained as a last resort. The use and operation of these frequencies by aircraft operators is governed by the FCC.

In General Aviation (GA), the most common types of radios operate using Very High Frequency (VHF). A VHF radio operates on frequencies between 118.0 megahertz (MHz) and 136.975 MHz and is classified by the number of channels the VHF radio can accommodate such as 720 or 760 channels. The 720 and 760 VHF radios uses a 0.025 MHz frequency spacing (example: 118.025 MHz up one frequency space to 118.050 MHz) with the 720 having a frequency range up to 135.975 and the 760 going up to 136.975. VHF radios are limited to line of sight transmissions. Therefore, aircraft at higher altitudes are able to transmit and receive at greater distances.

Two-way radio communications are not required at an uncontrolled airport, although it is a good operating practice for pilots to transmit their intentions on the specified frequency for the benefit of other aircraft traffic in the area. The key for pilots communicating at an airport without an operating ATC tower is selection of the correct common frequency which is called the Common Traffic Advisory Frequency (CTAF). A CTAF is a frequency designated for the purpose of carrying out airport advisory practices while operating to or from an airport without an operating ATC tower. The CTAF may be one (1) of the following:

Air Traffic Control (ATC) tower radio frequency becomes the CTAF when the tower is closed. This occurs at some airports having a part-time ATC tower that closes usually at night. Blosser Municipal Airport does not have an ATC so this is not applicable.

Flight Service Station (FSS) is an air traffic facility that provides information and services to aircraft pilots before, during, and after flights, but unlike ATC, is not responsible for giving aircraft instructions or clearances or providing separation. The people who communicate with pilots from an FSS are referred to as Specialists rather than Controllers. Typical FSS services may include providing preflight briefings including weather and Notices to Airmen (NOTAM); filing, opening, and closing flight plans; enroute communications; monitoring Navigation Aids (NAVAIDs); collecting and disseminating Pilot Reports (PIREPs); offering traffic advisories to aircraft on the ground or in flight; relaying instructions or clearances from ATC; Visual Flight Rules (VFR) search and rescue services; and assist lost aircraft and aircraft in emergency situations. In addition, at selected locations, a FSS provides Enroute Flight Advisory Service (Flight Watch), take weather observations, issue airport advisories, and advise United States Customs and Immigration of trans-border flights.

A FSS may also operate at mandatory airports to help coordinate traffic in the absence of air traffic controllers, and may take over a control tower radio frequency at a controlled airport when the tower is closed. In most cases, it is possible to reach Flight Service Stations (FSSs) either by radio in flight, or by telephone on the ground. Recently, FAA has been consolidating flight services into large regional centers, replacing former local FSSs with Remote Communications Outlets connected to a FSS regional center. An example of that is the Wichita, Kansas FSS established in 1929 that covered Blosser Municipal Airport (Airport) and was the second oldest FSS in the United States behind only the Cleveland, Ohio FSS. In June 2007, the Wichita FSS was combined with the FSS in Fort Worth, Texas and named, *Fort Worth Automated Flight Service Station* (Fort Worth AFSS). There are five (5) possible ways to reach a FSS:

All aircraft should monitor the Common Traffic Advisory Frequency (CTAF) when operating in the vicinity of uncontrolled airports such as Blosser Municipal Airport. The CTAF should be used for two reasons only:

- Collision avoidance
- Airport advisory

- **Telephone** - Call the FSS on a direct landline at 1-800-992-7433. A cell phone can be used to call a FSS but when calling 1-800-992-7433 from a cell phone may result in connection with anoher flight service. That issue depends on the cell antenna location that the cell phone is accessing. However, using the direct dial telephone number of 817-541-3474 for the Fort Worth AFSS eliminates that problem when using a cell phone.

- **Internet** – Pilots can access a FSS via computer and/or a Personal Digital Assistant (PDA) using an Internet portal and receive an interactive briefing. This gives pilots the ability to file flight plans online and see the same charts and weather maps on their computers as the FSS Specialist sees. If a NOTAM comes out or there is a significant change in the weather after a pilot's live or computer-based briefing, the FSS system will send the pilot an electronic alert to their computer and/or PDA.

- **Remote Communication Outlet (single frequency)** – This Radio Communication Outlet (RCO) uses a single radio frequency for two-way communication directly to the Specialist located at the FSS. This frequency can be found published on the Aeronautical Sectional Chart and airport directories.

  The Airport does not have a single frequency RCO.

- **Remote Communication Outlet (double frequency)** – This RCO uses both the VHF voice communication and VHF navigation frequencies to communicate with FSS. Referencing the State of Kansas Airport Diagram for Mankato Airport (TKO) the RCO frequency is 122.1R (receive) and 109.8T (transmit). A pilot transmits from the airplane on a frequency of 122.1 MHz and receives on 109.8 MHz. The FSS transmits on the VHF Omni-Directional Range (VOR) station frequency of 109.8 and the pilot will receive the FSS communication by listening to the Mankato Airport VOR frequency. A VOR is radio navigation land station in the aeronautical radio navigation service providing direct indication of the bearing (omni-bearing) of a VOR land station from an aircraft. It is important to note that the radio transmission and radio receive

communication are made in reference to the Specialist's seat at the FSS and not the pilot's seat in the aircraft. Pilots cannot ever transmit over a VOR frequency but can receive communication over a VOR frequency.

The Airport does not have a double frequency RCO.

- **Ground Communication Outlet** - Uncontrolled airports equipped with a Ground Communication Outlet (GCO) allow pilots to contact a FSS via VHF radio to a telephone connection to, among other things, obtain an instrument clearance or close a Visual Flight Rules (VFR) or Instrument Flight Rules (IFR) flight plan. With a GCO, pilots may also get an updated weather briefing prior to takeoff. Pilots use four (4) microphone key clicks on the aircraft VHF radio to contact the appropriate ATC facility or six (6) microphone key clicks to contact the FSS. The GCO system is intended to be used only by aircraft on the ground. All GCOs use the same frequency, which is 121.725 MHz. When a pilot uses a GCO they are actually placing a telephone call to the ATC or FSS through a VHF radio communication. Once connected to the ATC or FSS via telephone line, the ATC or FSS personnel talk to the pilot using their telephone. The pilot is required to use standard VHF radio frequency procedures when communicating over a GCO. Once connected to the ATC or FSS, if the GCO frequency is not used for one (1) minute, the GCO will automatically disconnect the call. The Airport does not have a GCO.

Typical Ground Communication Outlet (GCO) equipment

Universal Communication (UNICOM) is a nongovernment Air-To-Ground (ATG) radio communication station which may provide airport information at public use airports where there is no ATC tower or FSS. In the United States, UNICOM radio frequencies range from 122.700 MHz to 123.075 MHz. On pilot request, UNICOM radio base stations may provide pilots with weather information, wind direction, the recommended runway, or other necessary information. Important to note, UNICOM operators are not required to communicate with pilots, and if they do, there are no Federal Aviation Administration (FAA) standards for the information conveyed. If the UNICOM frequency is designated as the CTAF, it will be identified in appropriate aeronautical publications and charts.

The Airport UNICOM is an Amplitude Modulation (AM) communication radio operating in the Very High Frequency (VHF) range on one (1) selected channel and has its antenna mounted to the Terminal Building roof. That UNICOM is a E.F. Johnson Company make with Model Number COMCO 727; Serial Number 0727C052A 46410; and Federal Communication Commission (FCC) Identification Number ATH90F242-0727. The CTAF radio communication frequency at the Airport is 122.800 MHz.

MULTICOM - Despite the use of uppercase letters, MULTICOM is not an abbreviation or acronym. In United States and Canadian aviation, MULTICOM is a radio communication frequency allocation used as a CTAF by private aircraft near airports where no Air Traffic Control (ATC) or Universal Communication (UNICOM) radio frequency is available. In other words, MULTICOM is a frequency assigned to an airport that does not have a radio communication base station frequency assigned to it. The MULTICOM radio frequencies are only available for aircraft to aircraft communication between aircraft on the ground and in the air. When MULTICOM is used, there is no VHF radio base station at the airport to communicate with. Radio frequency allocations vary from region to region. In the United States, there are two MULTICOM radio frequencies: 122.900 megahertz (MHz) and 122.925 MHz. At uncontrolled airports without a published UNICOM radio frequency, pilots are to self-announce on the MULTICOM radio frequency.

Since the Airport has a UNICOM, in most all radio communication circumstances, MULTICOM would probably not be used when pilots communicate via VHF radio in the Airport area.

Perimeter Control

To delineate and adequately protect security areas of General Aviation (GA) airports from unauthorized access it is important to consider boundary measures such as fencing, walls, or other physical barriers, electronic boundaries such as sensor lines and alarms; and/or natural barriers. Physical barriers can be used to deter and delay the access of unauthorized persons onto sensitive areas of airports. Such structures are usually permanent and are designed to be a visual and psychological deterrent as well as a physical barrier. They also serve to meet Federal Aviation Administration (FAA) safety requirements in many cases. Where possible, security fencing or other physical barriers should be aligned with security area boundaries.

The choice of an appropriate security boundary design is not only affected by the cost of equipment, installation, and maintenance, but also by effectiveness and functionality, that is, its ability to actually prevent unauthorized access.

However, it is important to note that perimeter control methods alone will not necessarily prevent a determined intruder from entering, nor may they be appropriate for every airport facility. The strength of any security mechanism is dependent on the airport's overall Security Plan. Expending resources on a security enhancement such as complete perimeter fencing with access controls and not also implement airport facility and aircraft specific security controls such as aircraft tie-down chains with locks, locks on hangar doors, etc. may actually be detrimental to an airport's overall security position.

The perimeter control at Blosser Municipal Airport (Airport) is dilapidated and needs replacement.

Most of the perimeter fencing was installed in 1947 and 1948 when the Airport was first developed as a public-use General Aviation (GA) airport. The bulk of that fencing was four (4) and five (5) strand barbed wire. Over many years, that perimeter fencing served the Airport very well. However, currently the perimeter fencing is dilapidated, not continuous and related access control at the Airport is not effective.

Typical permanent fencing at Blosser Municipal Airport that does not provide adequate access control to sensitive areas of the Airport

Through-The-Fence Operations

Federal Aviation Administration (FAA) defines through-the-fence operations as:

"Those activities permitted by an airport sponsor through an agreement that permits access to the public landing area by independent entities or operations offering an aeronautical activity or to owner of aircraft based on land adjacent to, but not part of, the airport property. The obligation to make an airport available for the use and benefit of the public does not impose any requirement for the airport sponsor to permit ground access by aircraft from adjacent property."

Through-the-fence operations include businesses or individuals that have access to Blosser Municipal Airport (Airport) infrastructure from outside the Airport property boundary, or that utilize Airport property to conduct a business but do not rent business space at the Airport. More common types of through-the-fence agreements are for free-lance flight instruction, aircraft maintenance, and aircraft hangars. The development of neighboring Airport property for use by an individual or firm that utilizes the Airport can provide the Airport additional service, introduce airport friendly neighbors, and can possibly increase revenue for the Airport.

As a general principal, FAA will recommend that airport owners refrain from entering into any agreement which grants access to the public landing area by aircraft normally stored and serviced on adjacent property. Exceptions can be granted on a case to case basis where operating restrictions ensure safety and equitable compensation for use of the Airport. FAA's official policy concerning through-the-fence operations is as follows:

"FAA regulations do not permit "through-the-fence" operations and exceptions can be granted where operating restrictions ensure safety and equitable compensation for use of the airport."

FAA strongly discourages airport owners from entering into any agreement which grants access to the public landing area by aircraft normally stored and serviced on adjacent property. The reason for this FAA policy is that the existence of such agreements could result in the airport owner's inability to comply with their grant obligations and could jeopardize Federal funding of airport improvements. Through grant agreements with the Federal government, the City is obligated to retain control over the Airport property, insure that any development is in accordance with the approved Airport Layout Plan (ALP), insure fair and equitable treatment of all Airport users in a non-

Example of automated security gate used to appropriately manage through-the-fence operations at an airport

discriminatory manner, and manage the Airport facilities in such a manner as to derive sufficient revenue to make the Airport as self-sufficient as possible.

If the City of Concordia (City) decides that they want to pursue such a proposal, Benesch as the Airport Consultant recommends that the City attorney thoroughly review any proposed agreements to ensure that the City as the Airport sponsor will not be in violation of its grant agreements with FAA.

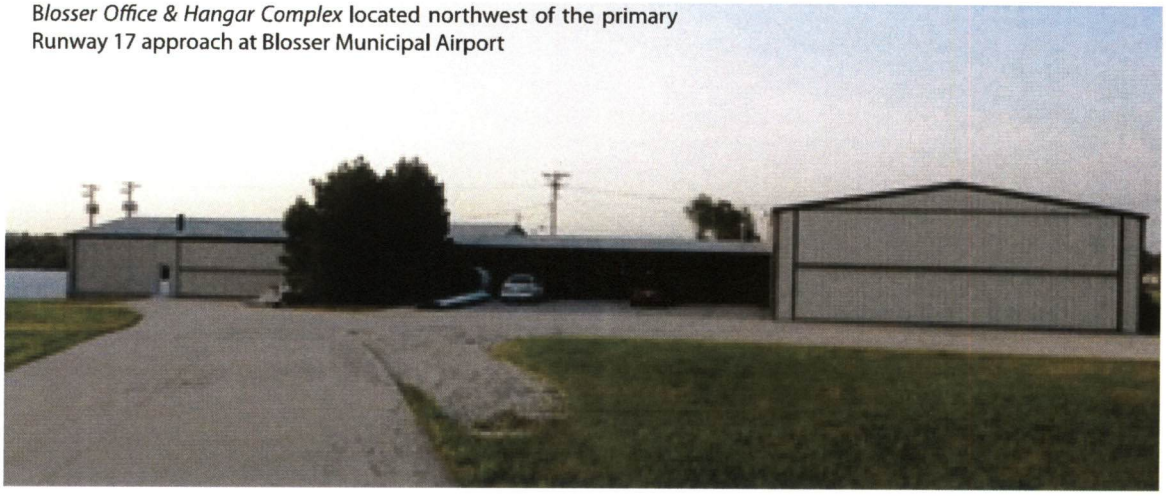
Currently there are only two (2) through-the-fence operations at Blosser Municipal Airport (Airport). The former *Blosser Office & Hangar Complex* (previously *Blosser Hangar*) first established in 1930 and *Aerial Ag Service* (previously *Republican Valley Aerial Farming*) first established in 1969.

Blosser Office & Hangar Complex

Charles H. Blosser and his wife, Isabell formally dedicated their privately developed airport named *Blosser Field* in 1930 with a community celebration on May 24th and 25th. Prior to the dedication, Blossers privately constructed a private Conventional Hangar 100 feet long by 50 feet wide (Blosser Hangar). The hangar included a bi-fold door that is 50 feet long by 9.5 feet high. From 1969 to 1982, Blossers rented a portion of this Conventional Hangar to a private business named, *Republican Valley Aerial Farming* of Bloomington, Nebraska. That business provided aerial spraying services for agricultural crops and pastures.

In 1993, Beldon M. Blosser repaired damage to the Blosser's private vintage 1930s Conventional Hangar previously owned by Isabell Blosser and the late Charles H. Blosser. That hangar was damaged by the devastating windstorm of July 8, 1992. Blosser installed new steel siding, a new steel roof, insulation, replaced interior walls, rewired the hangar and installed new lighting. This hangar is plumbed for compressed air and water. The east portion of this hangar (25 feet by 50 feet) is heated and air conditioned.

Blosser Office & Hangar Complex located northwest of the primary Runway 17 approach at Blosser Municipal Airport



Beldon Blosser also completed construction of an office addition (44 feet long by 25 feet wide) and an Executive Hangar addition (75 feet long by 50 feet wide) to the east side of the existing and repaired Conventional Hangar. The Executive Hangar is of steel construction, insulated and has a bi-fold door 48 feet wide by 13 feet, 10 inches (13' 10") high. This hangar is very well lighted, heated but not air conditioned, plumbed for compressed air and water. The office area is of brick construction, insulated, and has two (2) restrooms, one (1) shower, refreshment area, conference area, two (2) offices, and is heated and air conditioned. The entire facility is named *Blosser Office & Hangar Complex* (Blosser Complex) with address of 2015 Lincoln Street, Concordia.

The last work completed by Beldon Blosser concerning the Blosser Complex was refurbishing a portion of the private taxiway extending from the Blosser Complex to the aircraft turnaround located adjacent to the primary Runway 17 approach. That taxiway is 1,387 feet long and originally constructed with asphalt pavement. Blosser replaced the first 732 feet of this taxiway pavement extending south from the Blosser Complex with concrete pavement. The remaining 655 feet of taxiway pavement extending on south to aircraft turnaround located adjacent to the primary Runway 17 approach remains in 396 feet of asphalt pavement that is in poor condition and 259 feet of existing concrete pavement that is in good condition.

Since Beldon Blosser passed away on November 24, 2009, there have been no aircraft stored in the Conventional Hangar or Executive Hangar of the Blosser Complex.

In 2010, *Cloud County Community College* (CCCC) leased the west Conventional Hangar and central office space of the former Blosser Complex located on private property. CCCC leased that for location of some college classes concerning the CCCC *Wind Energy Technology* (WET) *Program*. CCCC located the Air Foils & Composites portion of the *WET Program* in that leased space. Also in year 2010, *Secure Shred of North Central Kansas* located their business operation in the Executive Hangar portion of the Blosser Complex.

Aerial Ag Service Spraying Business

In 1969, *Republican Valley Aerial Farming*, owned and operated by Duane Donovan of Bloomington, Nebraska located at the Charles H. Blosser 1930 vintage Conventional Hangar (Blosser Hangar). That hangar constructed on Blosser private property located northwest and adjacent to Blosser Municipal Airport (Airport) property is connected, by an asphalt paved taxiway 1,387 feet long, to the aircraft turnaround located adjacent to the primary Runway 17 approach. Donovan's business operation at the Airport offered aerial spraying services to agricultural producers located throughout the North Central Kansas Region.

Brian Donovan of *Aerial Ag Service* spraying agricultural crops with his year 1976 *Grumman Ag Cat* bi-wing aircraft

In 1982, *Republican Valley Aerial Farming* purchased 0.86 acres of private land owned by Charles H. Blosser then constructed a new Conventional Hangar of concrete block with wood-frame roof (100 feet long by 60 feet wide) on that private property. Duane Donovan's new Conventional Hangar is located northwest and adjacent to Airport property approximately 1,160 feet southeast of the business' startup location at the Blosser Hangar and has a concrete paved taxiway approximately 220 feet long extending southeast to the aircraft turnaround located adjacent to the primary Runway 17 approach. The hangar and business address is 2111 Lincoln Street.

In 1992, *Republican Valley Aerial Farming* replaced its 1982 vintage Conventional Hangar, destroyed during the devastating windstorm of July 8, 1992, with a metal Conventional Hangar, 80 feet long by 64 feet wide. In year 2012, this is the continued location of the business.

In 1996, Brian Donovan (son of business founder, Duane Donovan) purchased *Republican Valley Aerial Farming* and renamed the business, *Aerial Ag Service*. Donovan uses one (1) aircraft to spray agricultural crops and pastures. That aircraft is a year 1976 Grumman Ag Cat bi-wing aircraft, Model Number G-164B with aircraft registration number N6771Q. To date in year 2012, Donovan continues operating the business from private property located adjacent and northwest of the Airport. Donovan also serves as the Fixed Base Operator (FBO) at the Airport.

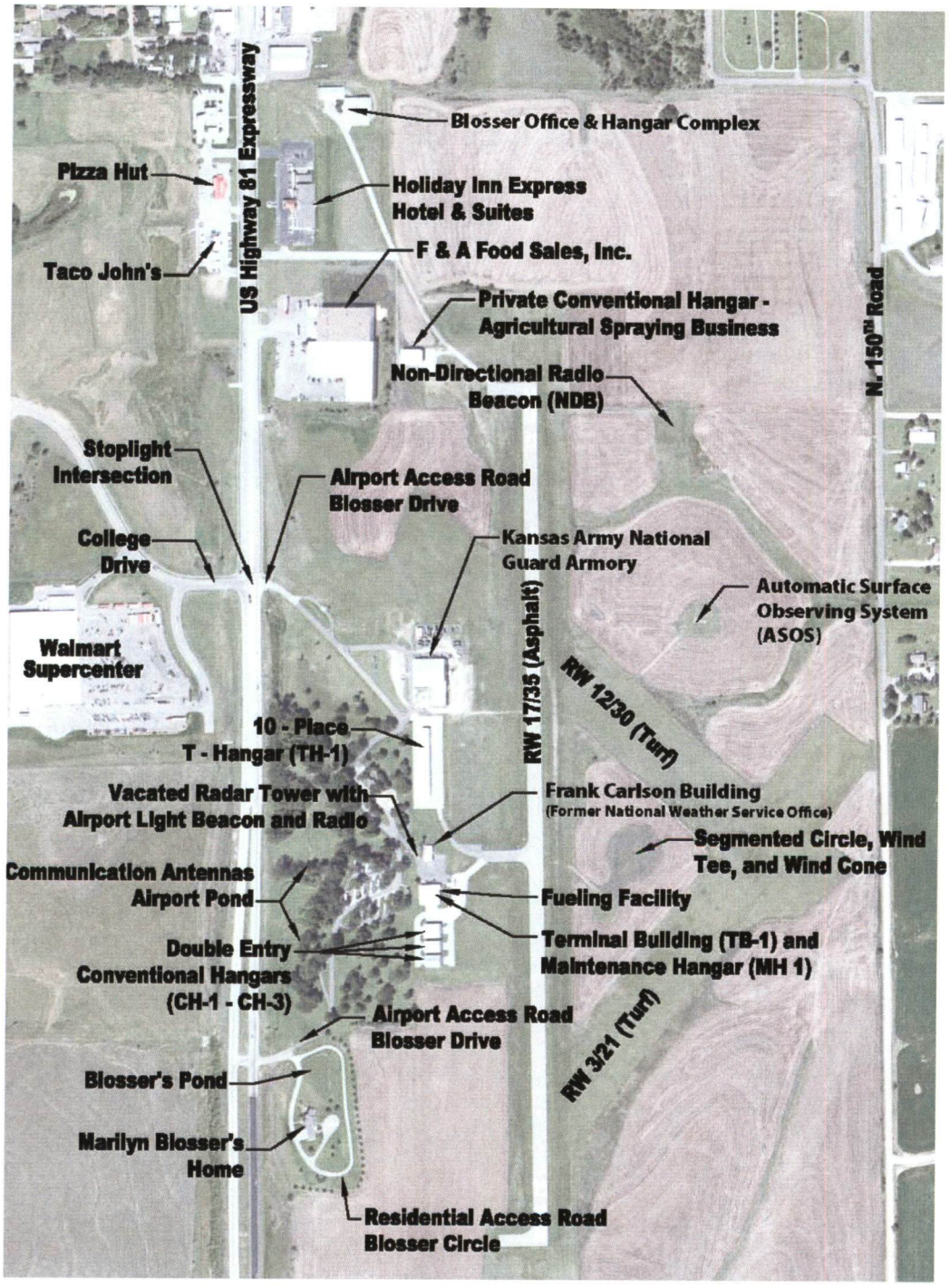


Exhibit 1N
Airside and Landside Facilities and Infrastrutucture

NATIONAL AIRSPACE SYSTEM AND RELATED CONTROL

The National Airspace System (NAS) of the United States is one of the most complex aviation systems in the world. The NAS consists of thousands of people, procedures, facilities, and pieces of equipment which enables safe and expeditious air travel in the United States and over large portions of the world's oceans.

The NAS requires approximately 14,500 air traffic controllers, 4,500 aviation safety inspectors, and 5,800 technicians to operate and maintain services. It has more than 19,000 airports and 600 Air Traffic Control (ATC) facilities. In all, there are 41,000 NAS operational facilities. In addition, there are over 71,000 pieces of equipment, ranging from radar systems to communication relay stations. On average, about 50,000 flights use NAS services each day. A flight through the NAS typically begins and ends at an airport which may be controlled by an ATC tower or uncontrolled thus having no ATC tower. On departure, the aircraft is in one of the six (6) classes of airspace administered by the Federal Aviation Administration (FAA), and different flight rules apply to each airspace class. Depending on the class of airspace and flight conditions, communication with controllers may or may not be required. Operation of each flight is always the responsibility of the pilot in command, but air traffic controllers give instructions for sequencing and safety as needed. Once the flight is airborne, control passes from the ATC tower controller who authorized the takeoff, if the airport is controlled, to the aircraft pilot.

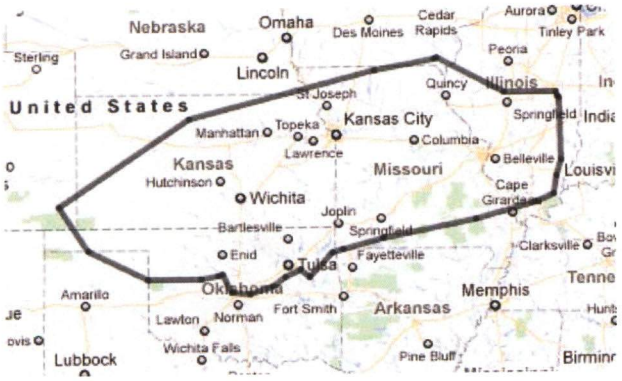


Exhibit 10
Coverage Area - Kansas City Air Route Traffic Control Center (ZKC)

The next step is typically Terminal Radar Approach Control or TRACON which may be identified as Approach or Departure. There is no TRACON covering Blosser Municipal Airport (Airport). Between the sectors administered by TRACONs are areas of Air Route Traffic Control Center (ARTCC) typically referred to on the aviation communication radio as *Center.* The ARTCC for the Airport is the Kansas City ARTCC (ZKC), also called Kansas City Center, located in Olathe, Kansas with communication radio frequency of 132.325 megahertz (MHz) and telephone number of 816-426-4600. The Kansas City Center is responsible for monitoring 195,000 square miles of airspace. Controllers are organized into teams that are assigned to one of six (6) geographic areas. Between 49 and 52 controllers are assigned to each team. Within each area, there are a total of approximately 40 different sectors which are further subdivided into three (3) altitude levels.

A flight is handed off from one Center to another until it nears its destination, when control is transferred to the TRACON serving the destination area, and ultimately to the ATC tower controller serving the airport. Some airports have no TRACON around them, so control goes directly to Center, and some flights are short enough that control is kept within one or more TRACONs without ever being passed to Center.

Airspace Classification

To promote a safe and efficient airspace environment in the United States for all aspects of aviation, the Federal Aviation Administration (FAA) established an airspace structure that regulates and establishes procedures for aircraft using the National Airspace System (NAS). The two (2) categories of airspace are: regulatory and non-regulatory. Within these two (2) categories there are four (4) types of airspace those being: controlled, uncontrolled, special use, and other airspace. Controlled airspace is a generic term that covers the different classifications of airspace and defined dimensions within which Air Traffic Control (ATC) service is provided in accordance with the airspace classification. In controlling airspace, aircraft operating at various altitudes is a very important factor.

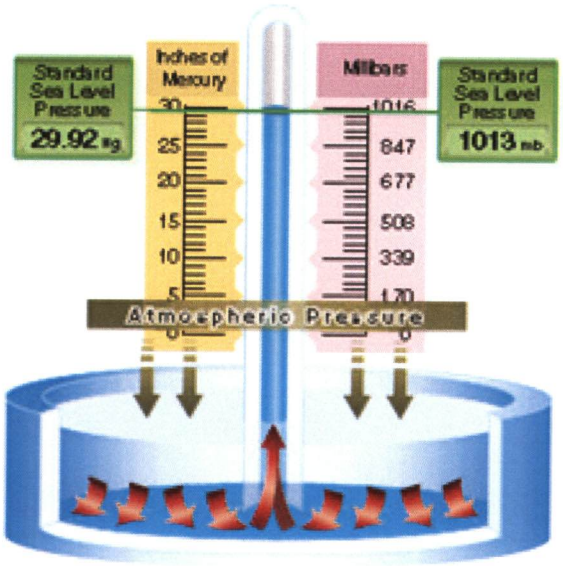


Exhibit 1P
Standard Sea Level Atmospheric Pressure

Historically, altitude has been measured using a pressure altimeter, which is essentially a calibrated barometer. An aircraft altimeter measures atmospheric air pressure, which decreases with increasing altitude following the barometric formula, and from that surrounding atmospheric pressure calculates and displays the corresponding altitude of the aircraft. To display altitude above Mean Sea Level (MSL), a pilot must recalibrate the altimeter according to the local air pressure at sea level, to take into account natural variation of atmospheric pressure over time and in different regions. If this is not done, two aircraft could be flying at the same altitude even though their altimeters appear to show that they are at considerably different altitudes. This is a critical safety issue. Using a Flight Level (FL) system which defines altitudes based on a standardized air pressure at sea level solves the problem of aircraft flying at the same altitude, though their altimeters indicate different barometric heights.

In the United States, a Flight Level (FL) system is used to define aircraft altitudes at and above the Transition Altitude (TA) of 18,000 feet Mean Sea Level (MSL). The TA is the altitude above sea level at which aircraft change from the use of altitude to the use of Flight Levels. When operating at or below the TA, aircraft altimeters are usually set to show the altitude above sea level. Above the TA, the aircraft altimeter pressure setting is normally adjusted to the International standard pressure setting of 29.92 inches of mercury (inHg) and aircraft altitude will be expressed as a Flight Level (FL).

The FL is a standard nominal altitude of an aircraft stated in hundreds of feet using three (3) digits. The FL altitude is calculated from the International standard atmosphere pressure datum

of 29.92 inches of mercury (in Hg) which is the average atmosphere pressure at sea level. That standard atmospheric pressure depicted in Exhibit 1P located on page 109. Therefore FL is not necessarily the same as the aircraft's true altitude either above Mean Sea Level (MSL) or Above Ground Level (AGL).

Simply, Flight Levels are described by a number, which is this nominal altitude (pressure altitude) in feet, divided by 100, while being a multiple of 500 feet, therefore always ending on zero (0) or five (5). For example, an apparent altitude of 32,000 feet is referred to as Flight Level 320 or FL320. To avoid collisions between two (2) aircraft due to their being at the same altitude, their actual altitudes (compared to ground level, for example) are not important; it is the difference in aircraft altitudes that determines whether the aircraft might collide. This aircraft altitude difference can be determined from the atmospheric air pressure at each aircraft, and does not require knowledge of the local air pressure on the ground.

According to Federal Aviation Regulations (FARs) Part 71 titled, *Designation of Class A, B, C, D, and E Airspace Areas; Air Traffic Service Routes; and Reporting Points* an itemized summary of airspace classes is as follows. Exhibit 1Q below depicts a profile view of the dimensions of various classes of airspace.

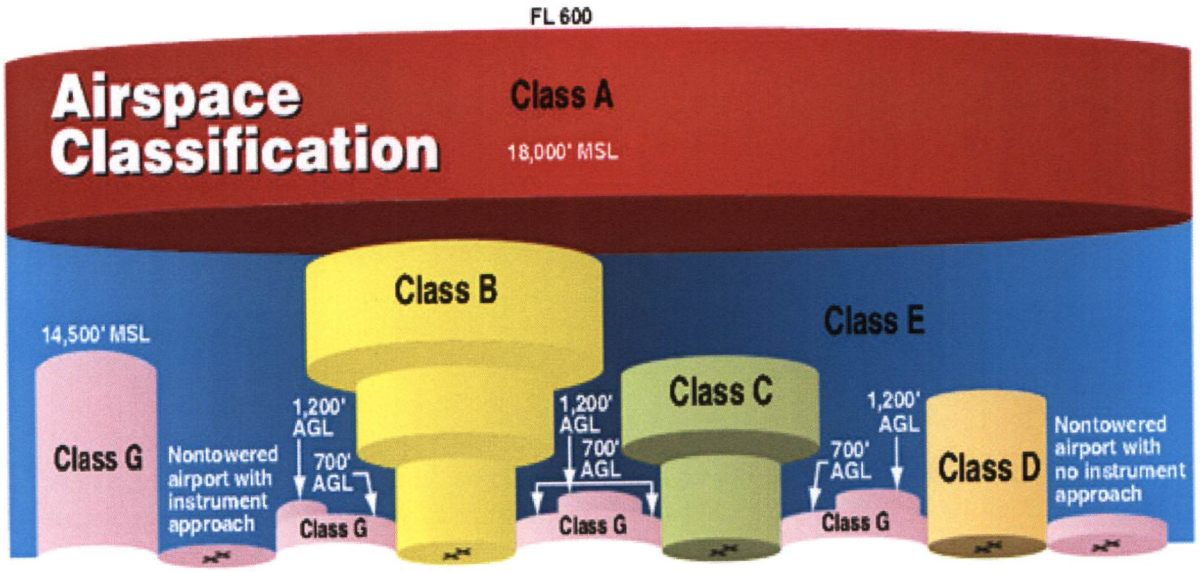


Exhibit 1Q
Airspace Classification Profile – Federal Aviation Administration (FAA)

Abbreviations: AGL – Above Ground Level FL – Flight Level MSL – Mean Sea Level

Source: *Pilot's Handbook of Aeronautical Knowledge 2008* by Federal Aviation Administration (FAA) Flight Standards Service

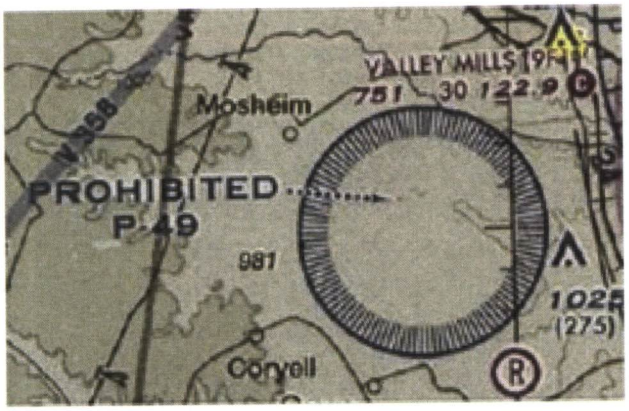
Controlled Airspace classes as defined by the FAA consists of:

- **Class A Airspace** is generally the airspace from 18,000 feet Mean Sea Level (MSL) up to and including Fight Level (FL) 600, including the airspace overlying the waters within 12 Nautical Miles (NM) of the coast of the 48 contiguous states and Alaska. Unless otherwise authorized, all operation in Class A airspace is conducted under Instrument Fight Rules (IFR).
- **Class B Airspace** is generally airspace from the surface to 10,000 feet MSL surrounding the nation's busiest airports in terms of airport operations or passenger enplanements. The configuration of each Class B airspace area is individually tailored, consists of a surface area and two (2) or more layers (some Class B airspace areas resemble upside-down wedding cakes), and is designed to contain all published instrument procedures once an aircraft enters the airspace. An Air Traffic Control (ATC) clearance is required for all aircraft to operate in the area, and all aircraft that are so cleared receive separation services within the airspace.
- **Class C Airspace** is generally airspace from the surface to 4,000 feet above the airport elevation (charted in MSL) surrounding those airports that have an operational ATC tower, are serviced by a radar approach control, and have a certain number of IFR operations or passenger enplanements. Although the configuration of each Class C area is individually tailored, the airspace usually consists of a surface area with a five (5) NM radius, an outer circle with a ten (10) NM radius that extends from 1,200 feet to 4,000 feet above the airport elevation, and an outer area. Each aircraft must establish two-way radio communications with the ATC facility providing air traffic services prior to entering the airspace and thereafter maintain those communications while within the airspace.
- **Class D Airspace** is generally airspace from the surface to 2,500 feet above the airport elevation (charted in MSL) surrounding those airports that have an operational ATC tower. The configuration of each Class D airspace area is individually tailored and when instrument procedures are published, the airspace is normally designed to contain the procedures. Arrival extensions for Instrument Approach Procedures (IAPs) may be Class D or Class E airspace. Unless otherwise authorized, each aircraft must establish two-way radio communications with the ATC facility providing air traffic services prior to entering the airspace and thereafter maintain those communications while in the airspace.
- **Class E Airspace** is the airspace that is not Class A, B, C, or D but is controlled airspace. Class E airspace extends upward from either the surface or a designated altitude to the overlying or adjacent controlled airspace. When designated as a surface area, the airspace is configured to contain all instrument procedures. Also in this class are Federal airways, airspace beginning at either 700 or 1,200 feet Above Ground Level (AGL) used to transition to and from the terminal or en route environment, and en route domestic and offshore airspace areas designated below 18,000 feet MSL. Unless designated at a lower altitude, Class E airspace begins at 14,500 MSL over the United States, including that airspace overlying the waters within 12 NM of the coast of the 48 contiguous states and Alaska, up to but not including 18,000 feet MSL, and the airspace above FL 600.

Uncontrolled Airspace as defined by the FAA is:

- **Class G Airspace** is the portion of the airspace that has not been designated as Class A, B, C, D, or E. It is therefore designated uncontrolled airspace. Class G airspace extends from the surface to the base of the overlying Class E airspace. Although ATC has no authority or responsibility to control air traffic, pilots should remember there are Visual Flight Rules (VFR) minimums which apply to Class G airspace.

Airspace in the vicinity of Blosser Municipal Airport (Airport) is depicted on the *Wichita, Kansas Sectional Aeronautical Chart* in Exhibit 1S located on page 1-124. That airspace surrounding the Airport is Class G, uncontrolled airspace.



Typical depiction of a Prohibited Area on a Sectional Aeronautical Chart

Special Use Airspace or Special Area of Operation (SAO) is the designation for airspace in which certain activities must be confined, or where limitations may be imposed on aircraft operations that are not part of those activities. Certain special use airspace areas can create limitations on the mixed use of airspace. The special use airspace depicted on instrument charts includes the area name or number, effective altitude, time and weather conditions of operation, the controlling agency, and the chart panel location. On National Aeronautical Charting Group (NACG) En Route Charts, this information is available on one of the end panels. Special use airspace usually consists of:

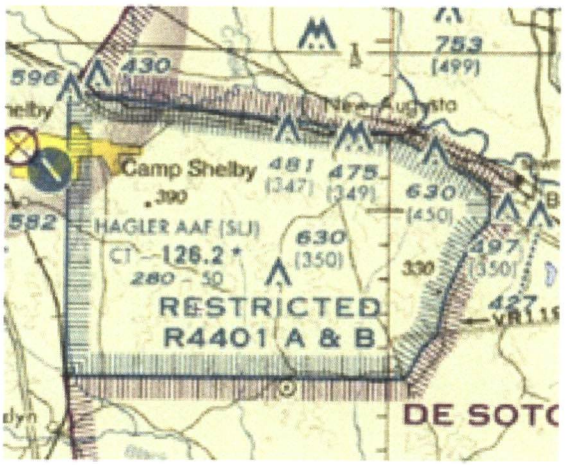
- **Prohibited Areas** contain airspace of defined dimensions within which the flight of aircraft is prohibited. Such areas are established for security or other reasons associated with the National welfare. These areas are published in the Federal Register and are depicted on aeronautical charts. The area is charted as a "P" followed by a number (for example, P-49). Examples of Prohibited Areas include Camp David and the National Mall in Washington, D.C., where the White House and the Congressional buildings are located.

  There are no Prohibited Areas located in the vicinity of Blosser Municipal Airport airspace.

- **Restricted Areas** are areas where airborne and/or ground based operations are hazardous to nonparticipating aircraft and contain airspace within which the flight of aircraft, while not wholly prohibited, is subject to restrictions. Activities within these areas must be confined because of their nature, or limitations may be imposed upon aircraft operations that are not a part of those activities, or both. Restricted Areas denote the existence of unusual, often invisible, hazards to aircraft such as artillery firing, aerial gunnery, high energy laser or guided missiles. Instrument Flight Rules (IFR) flights may be authorized to transit the airspace and are routed accordingly. Aircraft penetration of Restricted Areas without authorization from

the using or controlling agency may be extremely hazardous to the aircraft and its occupants. Air Traffic Control (ATC) facilities apply the following procedures when aircraft are operating on an IFR clearance, including those cleared by ATC to maintain Visual Flight Rules (VFR) on top, via a route which lies within joint-use restricted airspace:

- If the Restricted Area is not active and has been released to the Federal Aviation Administration (FAA), the ATC facility allows the aircraft to operate in the restricted airspace without issuing specific clearance for it to do so.
- If the Restricted Area is active and has not been released to the FAA, the ATC facility issues a clearance which ensures the aircraft avoids the restricted airspace.



Typical depiction of a Restricted Area on an Aeronautical Sectional Chart

Restricted Areas are depicted on an aeronautical chart with an "R" followed by a number (for example, R-4401) and are depicted on the en route chart appropriate for use at the altitude or Flight Level (FL) being flown. Restricted Area information can be obtained on the back of the chart.

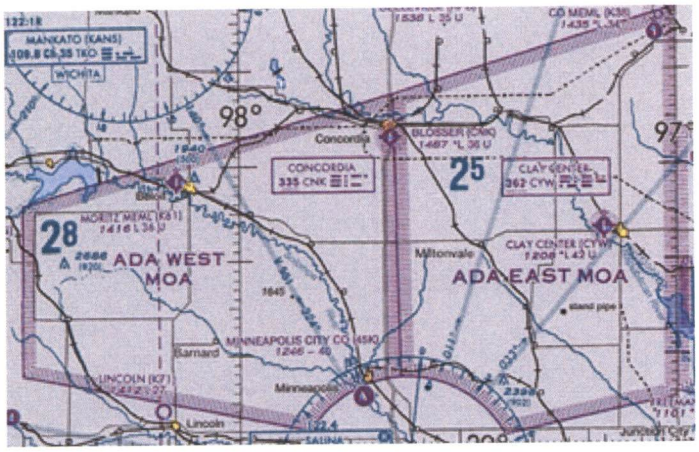
There are no Restricted Areas located in the vicinity of Blosser Municipal Airport airspace.

- **Warning Areas** are similar in nature to Restricted Areas; however, the United States government does not have sole jurisdiction over the airspace. A warning area is airspace of defined dimensions, extending from 12 Nautical Miles (NM) outward from the coast of the United States, containing activity that may be hazardous to nonparticipating aircraft. The purpose of such areas is to warn nonparticipating pilots of the potential danger. A Warning Area may be located over domestic or international waters or both. The airspace is designated with a "W" followed by a number (for example, W-237).

  There are no Warning Areas located in the vicinity of Blosser Municipal Airport airspace.

- **Military Operation Areas (MOAs)** consist of airspace with defined vertical and lateral limits established for the purpose of separating certain nonhazardous military training activities from IFR traffic. Whenever an MOA is being used, nonparticipating Instrument Flight Rules (IFR) traffic may be cleared through an MOA if IFR separation can be provided by ATC. Otherwise, ATC reroutes or restricts nonparticipating IFR traffic. MOAs are depicted on sectional, Visual Flight Rules (VFR) terminal area, and en route low altitude charts and are not numbered but named (for example, *Camden Ridge MOA*). However, the MOA is also further defined on the back of the sectional charts with times of operation, altitudes affected, and the controlling agency.

There are two MOAs located in the vicinity of Blosser Municipal Airport (Airport) airspace with those being the *ADA West MOA* and the *ADA East MOA*. The controlling agency for those MOAs is the Kansas City Air Route Traffic Control Center (ARTCC) located in Overland Park, Kansas. The *ADA East MOA* and *ADA West MOA* airspace is controlled from an altitude of 7,000 feet above Mean Sea Level (MSL) to 17,999 above MSL. Effective airspace control times are sunrise to sunset Monday through Friday with occasional use on weekends by Notice to Airmen (NOTAM)



Blosser Municipal Airport is located in two (2) Military Operation Areas (MOAs) those being the ADA West MOA and ADA East MOA

- **Alert Areas** are depicted on aeronautical charts with an "A" followed by a number (for example, A-211) to inform nonparticipating pilots of areas that may contain a high volume of pilot training or an unusual type of aerial activity. Pilots should exercise caution in alert areas. All activity within an alert area shall be conducted in accordance with regulations, without waiver, and pilots of participating aircraft, as well as pilots traveling through the area, shall be equally responsible for collision avoidance.

  There are no Alert Areas located in the vicinity of Blosser Municipal Airport airspace.

- **Controlled Firing Areas (CFAs)** contain activities, which, if not conducted in a controlled environment, could be hazardous to nonparticipating aircraft. The difference between CFAs and other special use airspace is that activities must be suspended when a spotter aircraft, radar, or ground lookout position indicates an aircraft might be approaching the area. There is no need to chart CFAs since they do not cause a nonparticipating aircraft to change its flight path.

  There are no Controlled Firing Areas located in the vicinity of Blosser Municipal Airport airspace.

Other Airspace Areas is a Federal Aviation Administration (FAA) general term referring to the majority of the remaining airspace. It includes:

- **Local Airport Advisory (LAA)** is a service provided by facilities, which are located on the landing airport, that have a discrete Ground-To-Air (GTA) radio communication frequency or the Air Traffic Control (ATC) tower radio frequency when the tower is closed; automated weather reporting with voice broadcasting and/or a continuous Automated Surface Observing Station (ASOS) or Automated Weather Observing System (AWOS) data display; other continuous direct reading instruments; or manual observations available to the Flight Service Station (FSS) Specialist and/or aircraft pilot.

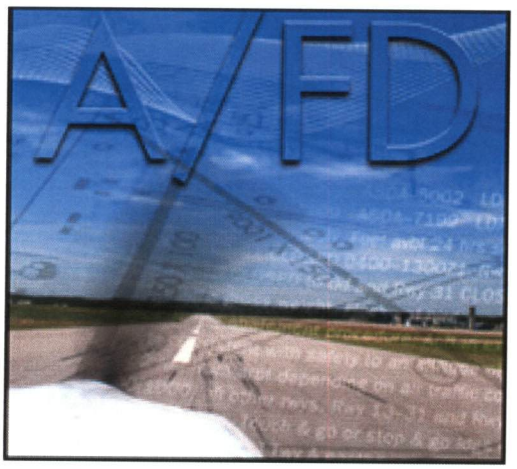
Blosser Municipal Airport (Airport) does not have an ATC tower to provide LAAs but does have a limited Universal Communication (UNICOM) GTA radio communication station operating at a frequency of 122.800 megahertz (MHz). On pilot request, the Airport UNICOM may provide pilots with information concerning the Airport. It is important to note that UNICOM operators are not required to communicate with pilots, and if they do, there are no Federal Aviation Administration (FAA) standards for the information conveyed.

The Airport does have an ASOS located on Airport property that provides LAAs concerning weather conditions within a five (5) mile radius of the Airport. The many sensors that comprise the ASOS detect different weather elements and can update the official weather observation LAA up to 12 times each hour. ASOS works non-stop, updating and communicating weather observations 24 hours a day, seven (7) days per week but does call in with a maintenance issue once in a while. Pilots can obtain a LAA from the Airport ASOS via GTA radio communication at a frequency of 123.825 MHz or via telephone by calling 785-243-3441.

- **Military Training Routes (MTRs)** are routes used by military aircraft to maintain proficiency in tactical flying. MTRs are usually established below 10,000 feet Mean Sea Level (MSL) for aircraft operations at speeds in excess of 250 knots. Some MTR segments may be defined at higher altitudes for purposes of route continuity. MTRs that are defined using Instrument Flight Rules (IFR) are identified as IR routes while those defined by and Visual Flight Rules (VFR) are identified as VR routes, with both MTR type followed by a number for further identification. MTRs with no segment above 1,500 feet Above Ground Level (AGL) are identified by four (4) number characters such as IR1206 or VR1207. MTRs that include one or more segments above 1,500 feet AGL are identified by three (3) number characters such as IR206 or VR207. IFR low altitude en route charts depict all IR routes and all VR routes that accommodate operations above 1,500 feet AGL. IR routes are conducted in accordance with IFR regardless of weather conditions. VFR sectional charts depict military training activities such as IR, VR, Military Operation Area (MOA), Restricted Area, Warning Area, and Alert Area information.

  There are no Military Training Routes (MTRs) in the vicinity of Blosser Municipal Airport.

- **Temporary Flight Restrictions (TFR)** are designated and issued by the Federal Aviation Administration (FAA) via a Notice to Airmen (NOTAM). The NOTAM for a TFR begins with the phrase, "FLIGHT RESTRICTIONS" followed by the location of the temporary restriction, effective time period, area defined in statute miles, and altitudes affected. The NOTAM also contains the FAA coordination facility and telephone number, the reason for the restriction, and any other information deemed appropriate. Pilots regularly check for NOTAMs as part of flight planning.



Some of the purposes for establishing a TFR are:

1. Protect persons and property in the air or on the surface from an existing or imminent hazard.
2. Provide a safe environment for the operation of disaster relief aircraft.
3. Prevent an unsafe congestion of sightseeing aircraft above an incident or event, which may generate a high degree of public interest.
4. Protect declared national disasters for humanitarian reasons in the State of Hawaii.
5. Protect the President, Vice President, or other public figures.
6. Provide a safe environment for space agency operations.

Since the terrorist's events of September 11, 2001, the use of TFRs has become much more common. There have been a number of incidents of aircraft incursions into TFRs, which have resulted in pilots undergoing security investigations and certificate suspensions. It is a pilot's responsibility to be aware of TFRs in their proposed area of flight.

There currently is not a Temporary Flight Restriction (TFR) issued at Blosser Municipal Airport (Airport). Aircraft pilots can visit the Federal Aviation Administration (FAA) website at www.tfr.faa.gov or call the Flight Service Station (FSS) at 1-800-992-7433 to determine the current TFR issuance status in the area of the Airport.

- **Parachute Jumping Areas (PJAs)** are published by the Federal Aviation Administration FAA in the *Airport/Facility Directory* (A/FD). Sites that are used frequently by individuals parachuting are also depicted on Sectional Aeronautical Charts. For a PJA to qualify for inclusion in FAA publications and be depicted on the appropriate aeronautical charts, the PJA must meet certain FAA criteria such as:

  1. Have been in operation for at least one (1) year;
  2. Operate year round (at least on weekends); and
  3. Log 4,000 or more parachute jumps each year.

  The FAA Regional Office may also nominate a PJA for publication and depiction on aeronautical charts if the PJA does not meet the said criteria.

  Title 14 Code of Federal Regulations (14 CFR) Aeronautics and Space, Part 105 *Parachute Operations* (14 CFR Part 105) contains FAA regulations concerning parachuting from aircraft. There is no restriction concerning aircraft flying through a Parachute Jumping Area (PJA). It is always the responsibility of the pilot flying through a PJA to listen for aircraft radio communication on the Common Traffic Advisory Frequency (CTAF) for information concerning, among other things, possible parachute operations; and carefully looking to see and avoid parachutists.

Individuals desiring to execute parachute operations over or onto airports must obtain prior approval from airport management and the airport Air Traffic Control (ATC) tower, if applicable. Also, the pilot of the jump aircraft is required by FAA to broadcast over the local CTAF a parachute operation notice five (5) minutes prior to an individual jumping, the aircraft altitude that the parachute jump is initiated from, when an individual actually jumps, and when the last parachutist or object leaves the aircraft. An airport sponsor such as the City of Concordia (City) who accepts Federal funding is obligated to make the airport facility available to all aeronautical activities, including parachuting or skydiving.

There are no regular Parachute Jumping Areas (PJAs) published in the A/FD or *Wichita, Kansas Sectional Aeronautical Chart* concerning the vicinity of Blosser Municipal Airport.

- **Published Visual Flight Rules (VFR) Routes** are for transitioning around, under, or through some complex airspace. Terms such as VFR flyway, VFR corridor, Class B airspace VFR transition route, and Terminal Area VFR route have been applied to such routes. These routes are generally found on VFR Terminal Area planning charts.

  There are no published VFR Routes in the vicinity of Blosser Municipal Airport.

- **Terminal Radar Service Areas (TRSAs)** are areas where participating pilots can receive additional radar services for navigation. The purpose of the service is to provide separation between all Instrument Flight Rules (IFR) operations and participating Visual Flight Rules (VFR) aircraft. The primary airport(s) within the TRSA become(s) Class D airspace. The remaining portion of the TRSA overlies other controlled airspace, which is normally Class E airspace beginning at 700 or 1,200 feet Above Ground Level (AGL) and established to transition to/from the en route/terminal environment. TRSAs are depicted on VFR Sectional Charts and Terminal Area Charts with a solid black line and altitudes for each segment. The Class D portion is depicted on the charts with a blue segmented line. Pilot participation in TRSA services is voluntary; however, pilots operating under VFR are encouraged to contact the radar approach control and take advantage of TRSA service.

There are no Terminal Radar Service Areas (TRSAs) in the vicinity of Blosser Municipal Airport.

- **National Security Areas (NSAs)** consist of airspace of defined vertical and lateral dimensions established at locations where there is a requirement for increased security and safety of ground facilities. Flight in NSAs may be temporarily prohibited by regulation under the provisions of Title 14 of the Code of Federal Regulations (14 CFR) *Aeronautics and Space*, Part 99, *Security Control of Air Traffic* (14 CFR Part 99) and prohibitions are disseminated via Notice to Airmen (NOTAM). Pilots are requested to voluntarily avoid flying through these depicted areas.

  There are no National Security Areas (NSAs) located in the vicinity of Blosser Municipal Airport.

Victor Airways are a special kind of Class E airspace defined by pre-determined routes flown by pilots under Instrument Flight Rules (IFR) and are like, *highways in the sky.* These Federal airway routes are eight (8) miles wide with course defined by the connection of radio navigation beacons called Very High Frequency Omni-Directional Range (VOR) radials in which aircraft may be flown. VOR stations radiate a radio signal in all directions and these stations are usually located at or near an airport. Victor Airways are, by definition, surrounded by Class E airspace from 1,200 feet Above Ground Level (AGL) up to, but not including, 18,000 feet Above Mean Sea Level (AMSL). Victor Airways are depicted as black solid lines on Instrument Flight Rules (IFR) Low-Altitude Enroute charts and as thick faded blue lines on Visual Flight Rules (VFR) Terminal Charts and Aeronautical Sectional Charts. Because these virtual airways are defined by VOR radials, they are identified by the letter "V" (which is named *Victor* in the phonetic alphabet) then a number, for example V551. North-south Victor Airways have odd numbers while east-west airways have even numbers.

For aircraft arriving or departing the Blosser Municipal Airport (Airport), Victor Airways are in the vicinity of the Airport. Victor Airways in the area of the Airport (V216, V532 and V551) are electronically defined by Very High Frequency Omni-Directional Range Tactile Air Navigation (VORTAC) station sites around the Airport found at the Lincoln Airport (LNK) located in Nebraska and 88.2 Nautical Miles (NM) north; Pawnee City Municipal Airport (50K) located in Nebraska and 75.3 NM northeast; Salina Municipal Airport (SLN) located in Kansas and 45.5 NM miles south; and Mankato Airport (TKO) located in Kansas and 30.4 NM northwest. Those Victor Airways are depicted on the *Wichita, Kansas Sectional Aeronautical Chart* published in Exhibit 1S located on page 1-124.

When it comes to operating aircraft in the National Airspace System (NAS), airspace permissions and restrictions do change. The United States President and other important people who require high security show up most everywhere from time to time, air shows open and close, natural disasters like forest fires suddenly command attention, runways close for repairs, etc. Airports and pilots must be aware of current events that might change normal airspace classifications with temporary flight restrictions.

Air Traffic Control

The primary purpose of the Air Traffic Control (ATC) system is to prevent a collision between aircraft operating in the National Airspace System (NAS) and to organize and expedite the flow of aircraft traffic. In addition to its primary function, the ATC system has the capability to provide (with certain limitations) additional services to pilots such as Notice to Airmen (NOTAM) and weather and navigation information. The ability to provide additional services is limited by many factors, such as the volume of aircraft traffic, frequency congestion, quality of radar, controller workload, higher priority duties, and the pure physical inability to scan and detect those situations that fall in this category.

When operating at an airport where ATC is being exercised by a control tower, pilots are required to maintain two-way radio communication with the ATC tower while operating within the Class B, Class C, and Class D airspace unless the ATC tower authorizes otherwise. Initial radio communication should be made about 15 miles from an airport with an ATC tower. However, if the aircraft radio fails in flight, the pilot in command may operate that aircraft and land if weather conditions are at or above basic Visual Flight Rules (VFR) weather minimums, visual contact with the ATC tower is maintained, and a clearance to land is received.

The various Classes of airspace in the NAS each have certain specified requirements before an aircraft can enter a certain Class of airspace. Basic requirements include, among other things, ATC clearance, Instrument Flight Rule (IFR) equipment, radio communication equipment and type of pilot certification. Table 1K located below itemizes the six (6) classes of airspace and respective basic requirements to enter each Class of airspace with an aircraft.

Table 1K

Requirements for Aircraft Operations in Various Classes of National Airspace System

Class Airspace	Entry Requirements	Equipment	Minimum Pilot Certificate
A	ATC Clearance	IFR Equipped	Instrument rating
B	ATC Clearance	Two-way radio, transponder with altitude reporting capability	Private - (However, a student or recreational pilot may operate at other than the primary airport if seeking private pilot certification and if regulatory requirements are met
C	Two-way radio communications prior to entry	Two-way radio, transponder with altitude reporting capability	No specific requirement
D	Two-way radio communications prior to entry	Two-way radio	No specific requirement
E	None for VFR	No specific requirement	No specific requirement
G	None	No specific requirement	No specific requirement

Abbreviations: ATC - Air Traffic Control IFR – Instrument Flight Rules VFR - Visual Flight Rules
Source: *Pilot's Handbook of Aeronautical Knowledge 2008* by Federal Aviation Administration (FAA) Flight Standards Service

If the aircraft communication radio fails in flight under IFR, the pilot should continue the flight by the route assigned in the last ATC clearance received; or, if being radar vectored, by the direct route from the point of radio failure to the fix, route, or airway specified in the vector clearance. In the absence of an assigned route, the pilot should continue by the route that ATC advised may be expected in a further clearance; or, if a route had not been advised, by the route filed in the flight plan.

Blosser Municipal Airport (Airport) does not have an ATC tower thus no formal terminal ATC services are available. Therefore, the airspace in vicinity of the Airport is uncontrolled and categorized as Class G airspace. When approaching to land at the Airport in Class G airspace:

- Each pilot of an airplane must make all turns of that airplane to the left unless the airport displays approved light signals or visual markings indicating that turns should be made to the right, in which case the pilot must make all turns to the right.
- Each pilot of a helicopter or a powered parachute must avoid the flow of fixed wing aircraft.

Flights in and out of the Airport are currently conducted using Visual Flight Rules (VFR). VFR conditions exist at the Airport when the visibility is one (1) statute mile during the day and three (3) miles at night and the minimum cloud distance requirements (below 1,200 feet above ground level) must be 500 feet below, 1,000 feet above and 2,000 feet horizontal. For an aircraft at an altitude of 1,200 feet above the surface, but less than 10,000 feet Mean Sea Level (MSL), visibility must be five (5) statute miles and distance from clouds remain the same. Table 1L located on page 1-121 itemizes the VFR weather minimums for the various Classes of airspace.

Instrument Flight Rules (IFR) flights can be conducted in and out of the Airport since primary Runway17/35 has Global Positioning System (GPS) published approaches to both approaches, and a Non- Directional Radio Beacon (NDB) published circling approach to the Airport in general. The GPS approaches are enhanced by the Wide Area Augmentation System (WAAS). Typically, small General Aviation (GA) airports have no means to accurately measure and keep track of the number of instrument approaches conducted. A good rule of thumb is that 25 percent (25%) of all itinerant operations flying into a GA airport use instrument approaches. Local pilots also utilize the instrument approaches and, therefore, it is usually assumed that 10% of local operations are under IFR.

Air Traffic Control (ATC) advisories and weather information services are provided by the Common Traffic Advisory Frequency (CTAF) or a nongovernmental Air-To-Ground (ATG) radio communications station which may provide airport information for public use airports where there is no ATC tower. The Universal Communications (UNICOM) radio communication designated ATG voice radio frequency for the Airport is 122.8 megahertz (MHz). The Automated Surface Observing System (ASOS) designated frequency for the Airport is 123.820 megahertz (MHz). ASOS information is also available by calling 785-243-3441. En route ATC services are provided through the Kansas City Air Route Traffic Control Center (ARTCC) at radio communication frequency 134.9 MHz.

Table 1L

Basic Visual Flight Rules (VFR) Weather Minimums

Airspace		Flight Visibility	Distance From Clouds
Class A		Not Applicable	Not Applicable
Class B		3 statute miles	Clear of Clouds
Class C		3 statute miles	1,000 feet above 500 feet below 2,000 feet horizontal
Class D		3 statute miles	1,000 feet above 500 feet below 2,000 feet horizontal
Class E	At or above 10,000 feet MSL	5 statute miles	1,000 feet above 1,000 feet below 1 statute mile horizontal
	Less than 10,000 feet MSL	3 statute miles	1,000 feet above 500 feet below 2,000 feet horizontal
Class G	1,200 feet or less above the surface (regardless of MSL altitude) - Day, except as provided in section[1] 91.155(b)	1 statute mile	Clear of Clouds
	1,200 feet or less above the surface (regardless of MSL altitude) - Night, except as provided in section[1] 91.155(b)	3 statute miles	1,000 feet above 500 feet below 2,000 feet horizontal
	More than 1,200 feet above the surface but less than 10,000 feet MSL - Day	1 statute mile	1,000 feet above 500 feet below 2,000 feet horizontal
	More than 1,200 feet above the surface but less than 10,000 feet MSL - Night	3 statute miles	1,000 feet above 500 feet below 2,000 feet horizontal
	More than 1,200 feet above the surface and at or above 10,000 feet MSL	5 statute miles	1,000 feet above 1,000 feet below 1 statute mile horizontal

Abbreviations: MSL – Mean Sea Level
Note 1: Title 14 Code of Federal Regulations (14 CFR) *Aeronautics and Airspace*, Section 91.155b B*asic Visual Flight Rules (VFR) Weather Minimums* (14 CFR Section 91.155b)
Source: *Pilot's Handbook of Aeronautical Knowledge 2008* by Federal Aviation Administration (FAA) Flight Standards Service

Area Airports

A review of the airports located within approximately a 30 Nautical Miles (NM) radius of Blosser Municipal Airport (Airport) is completed to identify and distinguish the type of aviation services provided in the North Central Kansas Region surrounding the Airport. Those public use airports within 30 NM of the Airport are illustrated in Exhibit 1R located on page 1-123. Salina Municipal Airport (SLN), at 45.5 NM away, is also depicted because that airport is listed in the *Kansas Airport System Plan 2009* (KASP) as a *Commercial Service Airport* and in the National Plan of Integrated Airport Systems (NPIAS) as a *Non-Primary Commercial Service Airport* that is located within 50 NM and a 60 minute drive time of the Concordia community and the Airport. Those two (2) benchmarks are part of the KASP and are important to the Airport when Federal Aviation Administration (FAA) and/or Kansas Department of Transportation, Division of Aviation (KDOT Aviation) grant funding is under consideration. Information pertaining to each airport was obtained from www.airnav.com and the Federal Aviation Administration (FAA) Airport Master Record Program located at www.gcr1/5010web/ and called *AirportIQ 5010*. GCR, Inc. assimilates public use airport information submitted by an airport sponsor, such as the City of Concordia (City), on FAA Form Number 5010-1.

Mankato Airport (TKO)
Owner: City of Mankato
Distance From Blosser Airport: 30.4 NM
Fuel Types Sold: None
Total Number of Based Aircraft: 2
RWs: 09/27 – Turf – 2,505'x100'
17/35 – Asphalt – 3,540'x50'
FBO: None
NPIAS: No
KASP Role: Community Airport

Belleville Municipal Airport (RPB)
Owner: City of Belleville
Distance From Blosser Airport: 16.1 NM
Fuel Types Sold: 100LL
Total Number of Based Aircraft: 11
RWs: 14/32 – Turf – 1,415'x100'
18/36 – Asphalt – 3,507'x60'
FBO: Chester Flying Service
NPIAS: Yes
KASP Role: Community Airport

Washington County Memorial Airport (K38)
Owner: Washington County
Distance From Blosser Airport: 30.0 NM
Fuel Types Sold: 100LL
Total Number of Based Aircraft: 3
RWs: 17/35 – Concrete – 3,400'x60'
FBO: None
NPIAS: No
KASP Role: Community Airport

Moritz Memorial Airport (K61)
Owner: City of Beloit
Distance From Blosser Airport: 22.5 NM
Fuel Types Sold: 100LL
Total Number of Based Aircraft: 18
RWs: 08/26 – Turf – 1,658'x90'
04/22 – Turf – 2,381'x110'
17/35 – Concrete – 3,610'x60'
FBO: Travis Lattin
NPIAS: Yes
KASP Role: Community Airport

Minneapolis City County Airport (45K)
Owner: City of Minneapolis
Distance From Blosser Airport: 27.0 NM
Fuel Types Sold: None
Total Number of Based Aircraft: 2
RWs: 16/34 – Asphalt – 3,970'x 20'
FBO: None
NPIAS: No
KASP Role: Community Airport

Salina Municipal Airport (SLN)
Owner: Salina Airport Authority
Distance From Blosser Airport: 45.5 NM
Fuel Types Sold: 100LL, Jet-A & Mogas
Total Number of Based Aircraft: 137
RWs: 04/22 – Asphalt – 3,648'x75'
18/36 – Asphalt – 4,300'x75'
17/35 – Asphalt – 12,300'x150'
FBO: Continuously Attended
NPIAS: Yes
KASP Role: Commercial Service Airport

Clay Center Municipal Airport (CYW)
Owner: City of Clay Center
Distance From Blosser Airport: 24.9 NM
Fuel Types Sold: 100LL & Mogas
Total Number of Based Aircraft: 16
RWs: 17/35 – Asphalt – 4,199'x75'
FBO: Mike Spicer
NPIAS: Yes
KASP Role: Community Airport

Exhibit 1R

Area Airports Surrounding Blosser Municipal Airport

Blosser Municipal Airport (CNK)
Owner: City of Concordia
Fuel Types Sold: 100LL & Jet-A
Total Number of Based Aircraft: 9
RWs: 03/21 - Turf - 1,628'x255'
12/30 - Turf - 2,263'x265'
17/35 – Asphalt – 3,600'x60'
FBO: Brian Donovan
NPIAS: Yes
KASP Role: Business Airport

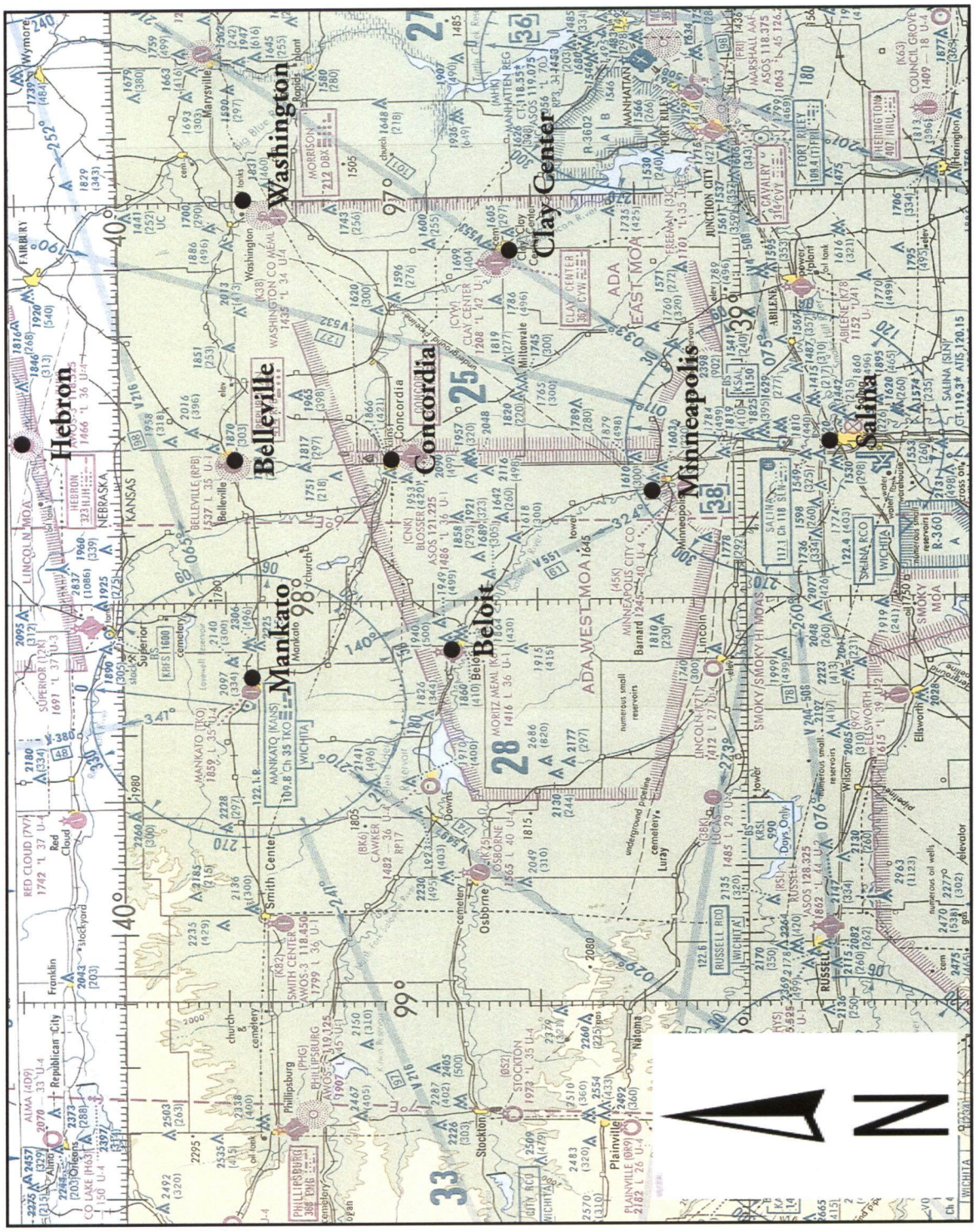


Exhibit 1S
Excerpt of Wichita, Kansas Sectional Aeronautical Chart

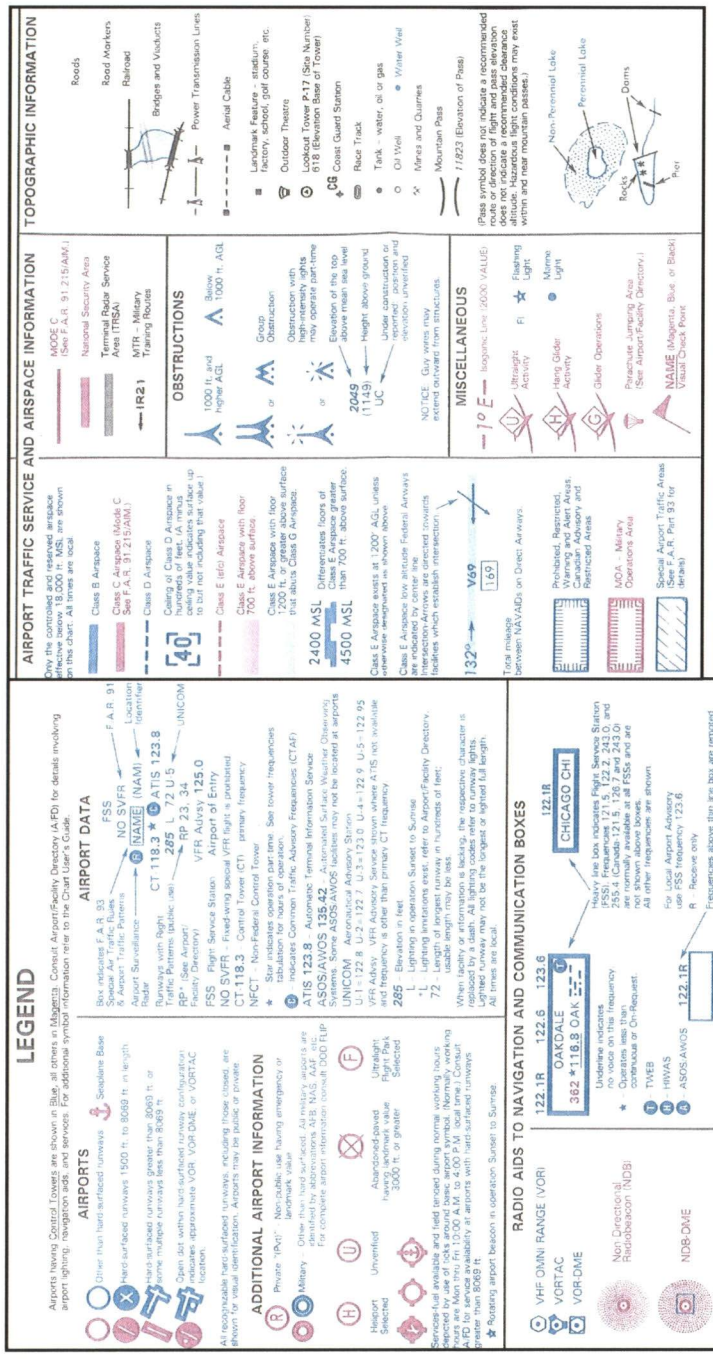


Exhibit 1S (Continued)
Excerpt of Wichita, Kansas Sectional Aeronautical Chart

Registered Aircraft

Table 1M

Number of Registered Aircraft Per County in North Central Kansas

County	Number of Registered Aircraft
Clay	17
Cloud	14
Dickinson	36
Jewell	10
Lincoln	15
Mitchell	19
Ottawa	10
Republic	11
Washington	7
Total	**139**
Average	**15.4**

Aside from looking at surrounding airports and the services and facilities they provide, it is also good to look at the number of total Federal Aviation Administration (FAA) registered aircraft in the surrounding counties. As the Blosser Municipal Airport (Airport) expands, prospers and offers more attractive aviation facilities, the Airport can expect to see some of the registered aircraft located in surrounding areas possibly relocate to the Airport.

As of April 2008, according to the Federal Aviation Administration (FAA) database at http://registry.faa.gov/aircraftinquiry/, the entire State of Kansas (State) has 6,711 total registered aircraft. The eight (8) counties that surround Cloud County account for 125 of those 6,711 registered aircraft. Cloud County itself has 14 registered aircraft and the Cloud County Region averages approximately 15 registered aircraft per county.

Just because a certain number of aircraft are registered in a particular county does not necessarily mean that all of those registered aircraft will be based at possibly the only public use airport located in the respective county. For example, in year 2008, of the 14 registered aircraft in Cloud County only nine (9) of those are based at the Airport. Circumstances causing that are aircraft owners with residence in Cloud County storing their Cloud County registered aircraft in a neighboring county or on their private property. An aircraft owner living in the far western portion of Cloud County may prefer to base their aircraft at Moritz Memorial Airport (K61) in Beloit, Kansas rather than at the Airport in Concordia. In the southwest portion of Cloud County near Glasco, there is a rural citizen that has two (2) aircraft based on his farm that has a private turf runway.

Airport Operating Certification

Compliance with Code of Federal Regulations (CFR), Title 14 A*eronautics and Space*, Subchapter G *Air Carriers and Operators For Compensation or Hire: Certification And Operations*, Part 139 *Certification of Airports* (14 CFR Part 139) is mandatory for an operator of an airport located in the United States that chooses to serve air carrier operations covered by the regulation. An airport operator may be a public entity, such as a county or city, or a private organization or individual. Specifically, 14 CFR Part 139 (Part 139) applies to operators of airports serving passenger-carrying operations of an air carrier certificated under 14 CFR Part 121 *Operating Requirements: Domestic, Flag, and Supplemental Operations* and 14 CFR Part 380 *Public Charters* if:

- Scheduled passenger-carrying operations are conducted in aircraft designed for more than nine (9) passenger seats, and

- Unscheduled passenger-carrying operations are conducted in aircraft designed for at least 31 passenger seats.

Airport operators can choose not to be certificated under Part 139. Part 139 is mandatory only if the airport operator chooses to serve the air carrier operations described above. The actions required by an airport operator to comply will vary depending on the type of air carrier operations served, whether the airport operator currently holds a Part 139 Airport Operating Certificate (AOC), and the status of the Airport Certification Manual (ACM) for that airport.

An aircraft that is being operated by an air carrier is categorized by Part 139 as a:

Large Air Carrier Aircraft is designed for at least 31 passenger seats; or

Small Air Carrier Aircraft is designed for more than nine (9) passenger seats but less than 31 passenger seats.

Part 139 also categorizes airports into four (4) AOC Classes with those being:

- **Class I Airport** is an airport certificated to serve scheduled operations of large air carrier aircraft that can also serve unscheduled passenger operations of large air carrier aircraft and/or scheduled operations of small air carrier aircraft.
- **Class II Airport** is an airport certificated to serve scheduled operations of small air carrier aircraft and the unscheduled passenger operations of large air carrier aircraft. A Class II airport cannot serve scheduled large air carrier aircraft.
- **Class III Airport** is an airport certificated to serve scheduled operations of small air carrier aircraft. A Class III airport cannot serve scheduled or unscheduled large air carrier aircraft.
- **Class IV Airport** is an airport certificated to serve unscheduled passenger operations of large air carrier aircraft. A Class IV airport cannot serve scheduled large or small air carrier aircraft.

The following Table 1N summarizes the types of air carrier operations that each Part 139 AOC Class can serve.

Table 1N

Air Carrier Operation Types and Related Airport Operating Certificate (AOC) Class

Type of Air Carrier Operation	Class I	Class II	Class III	Class IV
Scheduled Large Air Carrier Aircraft (30+ seats)	X			
Unscheduled Large Air Carrier Aircraft (30+ seats)	X	X		X
Scheduled Small Air Carrier Aircraft (10-30 seats)	X	X	X	

Blosser Municipal Airport (Airport) currently does not hold a Part 139 Airport Operating Certificate (AOC). Five (5) airports that hold an AOC with reasonable proximity to serve citizens and businesses of the Concordia area are itemized in Table 1O located on page 1-128.

Table 1O

Airports with Part 139 Airport Operating Certificate (AOC) Located Near Blosser Municipal Airport

Airport Name	FAA Airport Identifier	Location	AOC Class	[1]Distance From Concordia
Salina Municipal Airport	SLN	Salina, Kansas	Class II	52 miles
Manhattan Regional Airport	MHK	Manhattan, Kansas	Class II	84 miles
Central Nebraska Regional Airport	GRI	Grand Island, Nebraska	Class I	135 miles
Lincoln Airport	LNK	Lincoln, Nebraska	Class I	136 miles
Hays Regional Airport	HYS	Hays, Kansas	Class II	140 miles
Wichita Mid-Continent Airport	ICT	Wichita, Kansas	Class I	145 miles

Abbreviations: AOC – Airport Operating Certificate
Note1: Distance is *driving distance* from Concordia, Kansas
Source: Airport Operation Certification (AOC) Class retrieved from the *Part 139 Airport Certification Status List* (ACSL) published by the Federal Aviation Administration (FAA) and last updated September 27, 2012.

SOCIOECONOMIC FORECASTS

Local and regional forecasts developed for socioeconomic variables provide an indication of the potential for supporting growth in aviation activity. Three (3) variables often found to be most valuable in evaluating local and regional aviation traffic growth potential are population, employment and income. Employment and per capita personal income can be particularly useful because they reflect swings in the economy and are usually available on an annual basis. This information is essential in determining aviation service level requirements, as well as forecasting the number of based aircraft and annual aircraft activity at Blosser Municipal Airport (Airport).

For purposes of this Master Plan, economic and demographic data and projections were prepared and obtained from Woods & Poole Economics, Inc. of Washington, D.C. (www.woodsandpoole.com). Woods & Poole is an independent firm that specializes in long-term county economic and demographic projections. Woods & Poole projections rely on a very detailed database that is one of the most comprehensive county-level projections available.

Table 1P located on page 1-129 presents historic and forecast socioeconomic information used for future analysis in this Master Plan. Cloud County (County) experienced moderate population decreases between 1977 and 2007. Population for the County decreased approximately 24 percent (24%) or at an average annual declining rate of 0.80 percent (0.80%) over the 30 year period. Aviation demand can also be significantly influenced by other socioeconomic conditions of a community. Although, total population declined over the past 30 years, total employment, personal income, per capita personal income (PCPI) and mean household income have all seen moderate to strong increases over the last three (3) decades.

Table 1P

Historical and Forecast Socioeconomic Conditions

Year	Population	Total Employment	Personal Income (millions $)	Income per capita ($)	Mean Household Income ($)
1977	12,560	6,200	131.31	16,368	41,227
1987	11,370	5,950	137.26	20,688	50,243
1997	10,490	6,170	133.68	22,847	54,161
2007	9,550	6,110	155.47	26,831	61,656
Forecasts					
2012	9,240	6,210	165.10	28,967	65,600
2017	8,970	6,310	176.21	31,330	70,317
2022	8,720	6,410	188.78	33,976	76,022
2027	8,510	6,510	202.88	36,873	82,656

Source: *Cloud County, Kansas 2007 Data Pamphlet* by Woods and Poole Economic, Inc.

Forecasted population estimates indicate continued decrease in total population of Cloud County over the next 20 years. County population is projected to decrease from 9,550 currently in 2007 to 8,400 in 2030, a decrease of 1,150 people. This equates to only an average annual decrease of 0.52 percent (0.52%) over the next 20 years.

As like the previous three (3) decades, Cloud County is forecasted to see growth in total employment, personal income, PCPI and mean household income in the next twenty (20) years. This growth typifies a strong and diversified economic base.

Forecasts for total employment, PCPI, total personal income and mean household income indicates a continued growth rate over the forecasted period. Over the 20 year forecast horizon, total employment is expected to grow approximately 6.55 percent (6.55%) with total personnel income growing approximately 30.49 percent (30.49%). Adjusted PCPI is anticipated to increase 37.43 percent (37.43%) over the 20 year planning horizon where as the mean household income is projected to increase slightly less, at 34.06 percent (34.06%). Socioeconomic indicators present a favorable outlook for Cloud County, Concordia and the surrounding area.

MAJOR EMPLOYERS

Since flying began making the world a smaller place, the ability to traverse long distances quickly has become progressively faster, easier, safer and more efficient. Without the vital network of General Aviation (GA) gateways in the United States, rural locations around the Nation become out of reach for a larger part of the general public and smaller businesses. General Aviation (GA) airports support the growth and development of businesses in a community thus helping the community and surrounding area to prosper.

The major employers within Cloud County are listed in the Table 1Q located on page 1-130.

Table 1Q

Major Employers

Firm	# Employees	Products	Union
Unified School District Number 333	245	Elementary & Secondary Schools	Yes
Alstom Power Air Pre Heater, Inc.	225	Power Plant Manufacturing & Repair	No
Wal-Mart SuperCenter	200	Discount Department Store	No
Cloud County Health Center, Inc.	160	General Medical & Surgical Hospital	No
Cloud County Community College	143	Educational Institution	Yes
Cloud County	143	Local Government	No
Mount Joseph Senior Village	104	Nursing Care Facility	No
F & A Food Sales, Inc.	100	Food Distribution	No
Sunset Home, Inc	100	Nursing Care Facility	No
Nazareth Convent	81	Religious Institution	No
The Citizens National Bank of Concordia	60	Commercial Banking	No
City of Concordia	60	Local Government	No
Cloud Ceramics, Inc.	54	Face Brick	No
OCCK, Inc	41	Subcontract Work	No
Champlin Tire Recycling, Inc.	34	Tire Recycling	No
Meridian Way Wind Farm, LLC	25	Electricity Generation	No
AgMark, LLC	21	Unit Train Grain Loading Facility	No
Gerard Tank & Steel, Inc.	17	Steel Metal Fabrication	No

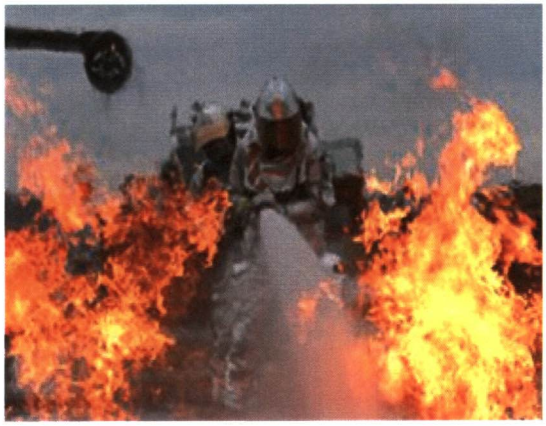
AIRPORT OPERATION PLANNING AND PROGRAM DOCUMENTATION

Airport operation planning and related programs are a systematic process used to establish guidelines for the safe and efficient operation and development of General Aviation (GA) airports that is consistent with local, state and national goals. These planning and related programs are normally conducted separate from the Airport Master Plan and Airport Layout Plan processes and related documentation. A key objective of GA airport planning is to assure a well maintained airport which promotes civil aviation safety and the effective use of airport resources in order to satisfy civil aviation demand and mobility in a financially feasible manner. Appropriate airport operation planning also positions airports for securing financial investment from local, state and Federal public resources and from private financial resources.

The primary types of airport operation planning may basically be classified as follows:

Emergency Response Plan is crucial in the event of an on-airport emergency. It is critical that an Emergency Response Plan (ERP) and related procedures be in place to notify the proper first responders, gather needed equipment and transportation, and provide for the continued safety of employees and the public. The diverse nature of possible on-airport emergencies, such as aircraft accidents, building fires, fuel spills, and medical emergencies, necessitates thoughtful and airport-specific planning. Complicating the matter is the fact that not every airport requires the same level of emergency planning. In response, individual airport sponsors formulate and adopt a written

ERP that instructs users in the procedures to be followed in the event of emergency at their specific airport.



Virtually no airport has sufficient resources to respond to every emergency situation independently. Each airport must depend to some degree on the resources from its surrounding communities. It is essential to prepare for emergencies that face an airport in order to be able to respond quickly, efficiently and effectively. While every contingency cannot be anticipated and prepared for, a strong ERP and related emergency preparedness program can assist in limiting the negative impact of these events, including liability and other post-emergency issues.

Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5200-31C *Airport Emergency Plan* provides guidance to the airport operator in the development and implementation of an Airport Emergency Response Plan (ERP).

The *Kansas Airport System Plan 2009* (KASP) identified that only 12 percent (12%) of all airports located in Kansas have an adopted ERP. There currently is no adopted Emergency Response Plan (ERP) for Blosser Municipal Airport.

Pavement Maintenance Program is a plan to provide a safe and operable airport pavement for the least possible cost. An effective Pavement Maintenance Program (PMP) will provide the City of Concordia (City) as a General Aviation (GA) airport owner with sufficient information to allow the City to assess how to obtain the greatest return for public funds expended for pavements at Blosser Municipal Airport (Airport). A pavement life cycle curve illustrates the useable life of an airport pavement by comparing pavement condition versus time. In the first several years of a pavement's life, the deterioration in pavement condition over time is relatively low. However, at a certain point in time, the deterioration of the pavement increases, resulting in an accelerated drop in pavement condition.

A deteriorated asphalt runway not capable of serving aircraft with jet engine(s) due to the possibility of damage from Foreign Object Debris (FOD)

An effective PMP is one that details the procedures the City should follow for the purpose of assuring proper pavement maintenance, both preventative and repair. The PMP must address key elements that will permit tracking of pavement maintenance activities. As with all successful endeavors, the City must be committed to providing sufficient resources if the maintenance program is to succeed.

United States Public Law (PL) 103-305, *Federal Aviation Administration Authorization Act of 1994,* Section 107, amended the United States Code (USC) Title 49 *Transportation*, Section 47105, *Project Grant Applications* by requiring airport sponsor assurances that address preventative maintenance for project applications involving airfield pavements. For any project to replace or reconstruct pavement, the City must provide assurance to the FAA that the City implemented an effective PMP. The amendment also provides for the submittal of reports addressing the pavement condition and the PMP.

The KASP made no determinations concerning the status of a Pavement Maintenance Program (PMP) at airports in Kansas. However, as a way to help protect public investment in airport pavements, the KASP did recommend that all airports in Kansas maintain a Pavement Condition Index (PCI) of 70 (See page 1-22 for detailed discussions of the PCI). There is currently an adopted PMP for Blosser Municipal Airport. The PMP documentation is titled, *Blosser Municipal Airport Pavement Maintenance Program* dated year 2006 and formulated by B*ucher, Willis & Ratliff Corporation* of Kansas City, Missouri.

Security Plan should be an integral part of any General Aviation (GA) airport and any project undertaken at such an airport. The most efficient and cost effective method of instituting security measures into any GA airport facility or operation is thorough advance planning and continuous monitoring. Operating and selecting, constructing, or modifying a GA airport facility without considering the security implications can result in security breaches and costly modifications and delays. GA airport operators should consider addressing future security needs such as access controls and lighting enhancements when planning new hangars or terminal buildings. Security concerns should be included and addressed in airport facility and land leases, airport rules and regulations, and the airport minimum standards document. In addition, GA airport construction projects can affect airfield security. Construction personnel and vehicle access during projects should be considered.

Aviation security is among an airport's top priorities. Even at airports not served by a passenger airline, preventing unauthorized access to aircraft and airport facilities, preventing criminal activity, and ensuring the protection of airport users, employees, and the general public is crucial. However, as is the case with many types of planning documents, not every airport requires the same level of security personnel and procedures. A small recreational GA airport often needs only to prevent aircraft and property theft, while a large commercial airport will typically have multiple levels of security personnel and equipment. As a

result, such security planning is typically done by the individual airport. Regardless of the level of security measures employed, possession of a written Security Plan is important to all airports, both as a means of protecting airport users and the public, and as an additional tool to protect private and/or public investment in airports.

An Airport Security Plan enhances the security of GA operations. Although the Blosser Municipal Airport (Airport) is not currently regulated by the Transportation Security Administration (TSA), guidelines issued by the Aviation Security Advisory Committee (ASAC) working group on GA security should be a basis for Security Plan development. The intent of a Security Plan is to help the City of Concordia (City), Airport Advisory Board, Airport tenants, and local law enforcement enhance security of the Airport grounds, facilities, equipment, aircraft, buildings and procedures. The Security Plan also identifies procedures to use in an emergency and to report suspicious behavior. Information Publication Number A-001 titled, *Security Guidelines for General Aviation Airports* dated May 2004 and published by the Transportation Security Administration (TSA) of the United States Department of Homeland Security provides General Aviation (GA) airport owners, operators, and users with guidelines and recommendations that address aviation security concepts, technology, and enhancements.

The KASP identified that 23 percent (23%) of applicable airports in Kansas have an adopted Security Plan. There is currently no adopted Security Plan for Blosser Municipal Airport.

Snow Removal Plan describes in detail snow and ice control and removal operations at GA airports. Snow and ice should be removed as soon as possible from airport runways and taxiways during or after a weather event. A snow plan should be concise, accurate, practical, and specific to the Federal Aviation Administration (FAA) regulations and recommendations under which an airport operates. FAA Advisory Circular (AC) 150/5200-30C *Airport Winter Safety and Operations* provides a guide for creating a Snow Removal Plan and suggests a list of items to include.

Winter weather can have a serious impact on safe airport operations, often resulting in conditions that may lead to incidents, accidents, or delays. For that reason, snow and ice control at an airport is extremely important, regardless of the size of the airport or the aircraft using it. Landing or taking off on a slippery surface is much more dangerous for an aircraft than driving on a slippery surface is for a ground vehicle, as aircraft are not able to brake in the same way. Snow and ice

control on the last third of the runway is especially critical, as this area must offer a clear pavement if a pilot decides to abort a takeoff.

The KASP determined that 90 of the 140 airports in Kansas have a Snow Removal Plan. There is currently no formally adopted Snow Removal Plan for Blosser Municipal Airport, however, an informal Snow Removal Plan is in place.

Wildlife Management Plan addresses hazards to aviation in the form of wildlife, which can damage aircraft or obstruct aircraft operations. Examples include bird strikes, wherein a bird damages an aircraft in flight, and the incursion of mammals, such as deer on runways. A way for airports to address wildlife hazards is to implement a Wildlife Management Plan, which contains specific procedures for mitigating incursions and bird strikes, such as perimeter fencing, removal of bird attractants, and animal deterrence measures.

Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5200-33 *Hazardous Wildlife Attractants on or Near Airports* contain standards and procedures for wildlife hazard management at airports and related development of a Wildlife Management Plan.

The KASP identified that six (6) percent (6%) of all airports in Kansas have an adopted Wildlife Management Plan. There is currently no adopted Wildlife Management Plan for Blosser Municipal Airport.

AIRPORT ECONOMIC IMPACTS

Airports are not only important to air travelers; they provide significant economic and quality of life benefits to the communities that an airport is located in or near. Airports create jobs for local residents. This is accomplished either directly through the labor needed to operate an airport, or indirectly through the associated businesses that spring up in the community due to the convenience of the airport. These businesses in turn generate important tax revenues for the city, county, state and Nation. Furthermore airports help keep existing businesses and employees in the community and attract new ones to the region.

The economic impact created by airports goes far beyond the revenue created directly by airport use. An airport creates new business and job opportunities; helps keep existing businesses, employers, and employees located in the region; provides greater accessibility to emergency medical services and air ambulance operations; facilitate agricultural aircraft spray operators protecting local crops for better production of the crops for the area farmers; provides convenience for Federal, state and local law-enforcement to transport and apprehend criminals; recreation; tourism; and also one of the more important aspects to General Aviation (GA), facilitates the hundreds of thousands of

Americans to fly their own aircraft and to create interests for others to begin to fly. All in all, airports, no matter how big or small create an overall better life for people and can provide positive economic impact.

The economic contribution of an airport should be publicly recognized so that actions to protect its continued operation can gain community support. For some, an airport is viewed as a recreational facility that is used by relatively few persons. However, a broader vision is more appropriate, as airports provide services that affect most all citizens. For example, an airport enables such activities as:

- Access to the National air transportation system.
- Transshipment of equipment, supplies, and personnel.
- Emergency ingress and egress transportation, including medical response.
- Shipment of time-sensitive items.
- Pilot training.
- Aircraft maintenance and storage.

The importance of air transportation, particularly in the business aviation sector, is growing. The ability to make just-in-time deliveries and to transport sales and customer service staff to quickly forming events is a critical business advantage. Communities with an airport that can support such business activity tend to economically grow and prosper.

Estimated Economic Impacts of All Kansas Airports

There is a strong relationship between the Kansas economy and aviation. The Kansas system of eight (8) Commercial Service airports and 132 General Aviation (GA) airports serves as an integral connection between Kansas businesses and residents and the ever expanding global economy. Airports in Kansas help to both lead and sustain growth and economic diversification. Airports are important economic catalysts, supporting thousands of jobs and billions of dollars in economic activity. Most of the largest employers in Kansas, as well as many smaller businesses, rely on the Kansas aviation system to reliably transport employees, customers, supplies, and products to and from their operations. Airports in Kansas serve as the base of operations for a variety of businesses, including airlines, air cargo companies, flight instructors, charters, concessionaires, government entities, and many others. The Kansas tourism industry also depends on the Kansas system of airports to accommodate thousands of visitors each year.

The Kansas Department of Transportation, Division of Aviation (KDOT Aviation), commissioned a Federal Aviation Administration (FAA) funded study to examine the relationship between the Kansas system of airports and the Kansas economy. That study named, *Kansas Aviation Economic Impact Study 2010* (KAEIS) and prepared by *Wilbur Smith Associates, Inc.* of Cincinnati, Ohio with assistance from *Burns & McDonnell,* of Kansas City, Missouri.

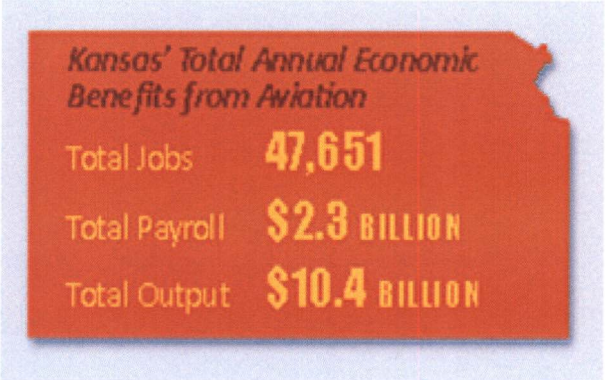
The KAEIS study follows an approved methodology that has successfully quantified the value of airports and airport systems throughout the United States. The economic contribution of each airport in the Kansas airport system was measured in terms of employment, payroll, and output. Through a comprehensive survey process, the direct economic benefits related to on-airport businesses and government tenants, and the indirect benefits associated with visitor-related expenditures, were calculated for each airport. The multiplier effect of these airport activities was also calculated using economic multipliers that are specific to Kansas. For example, when an airport employee purchases local goods and services, that spending and re-spending generates additional economic activity in the region of the airport location. The total economic impact of an airport is the sum of all direct, indirect, and induced (multiplier) impacts.

Kansas AVIATION
Kansas Aviation Economic Impact Study

- **Direct Economic impacts** are defined as the jobs and sales generated by businesses located at an airport, that is those jobs and sales which are dependent on access to the airport facility. The expenditures by these businesses for local goods, services, and capital improvements are also classified as direct impacts.
- **Indirect Economic impacts** are the jobs and revenues generated by businesses located elsewhere in the community, but are due to their use of the airport. This would include any sector of the local economy that serves users of the airport facility, or that uses an airport to transport goods, supplies, or personnel in order to enhance business opportunities and activities. Like on-airport businesses, these enterprises employ staff, purchase locally produced goods and services, and invest in capital projects. Businesses in this category can include hotels, restaurants, manufacturers, shippers, and retail stores whose existence is tied to the airport or to aviation. When assessing economic impact values, distinction is made between those generated as a result of the airport (direct) and those serving other segments of the local economy (indirect).
- **Induced Economic impacts** are those generated in a community caused by the recycling of spending from both the direct and indirect economic impacts. Airport businesses, users, employees, and the airport itself are, in essence, consumers whose expenditures support other businesses and employment in the community. Studies indicated that an aviation dollar spent in a region will create at least another 50 cents to approximately one (1) dollar of income in that region. This reaction is commonly referred to as the "multiplier effect." Thus, the induced economic impact of any activity is at least equal to the sum of the direct and indirect impacts, in terms of dollars.

Impact measures used in the KAEIS are:

- **Employment** measures the total number of full-time equivalent (FTE) jobs related to airport activity including on-airport construction. A part-time employee counts as one half of a full-time employee.
- **Payroll** measures the total annual wages and benefits paid to all workers whose salaries are directly attributable to airport activity.



- **Economic Activity (Output)** measures the value of goods and services related to airports in Kansas. The output of on-airport businesses is typically assumed to be the sum of annual gross sales and average annual capital expenditures.

When all of the impacts of the 140 airports in Kansas are added together, approximately 47,651 total jobs can be traced to the aviation industry. These employees receive more than $2.3 billion in total payroll, and generate nearly $10.4 billion in total economic activity. In addition, Kansas airports provide a number of health, welfare, and safety benefits, the impacts including aerial agricultural spraying, medical transport and emergency evacuation, flight training, law enforcement, wildlife management, military exercises, and search and rescue operations. Appendix I of this Airport Master Plan contains the Executive Summary of the *Kansas Aviation Economic Impact Study 2010* (KAEIS).

Estimated Economic Impacts of Blosser Municipal Airport

In formulating the *Kansas Aviation Economic Impact Study 2010* (KAEIS), Blosser Municipal Airport (Airport) underwent a detailed study. The methodology used to quantitatively estimate economic benefits of the Airport involved on-site data gathering and surveys mailed to the City of Concordia (City) and Airport tenants to tabulate the direct economic benefits of the Airport and its tenants. A survey also sampled spending habits of General Aviation (GA) visitors while traveling in Kansas to determine their indirect economic benefits. Kansas specific ratios were used to convert this spending into jobs and payroll.

As these first round economic benefits are released into the regional and statewide economy, additional second round benefits are created by the Airport. For example, when the Airport Fixed Base Operator (FBO) uses their Airport income to buy groceries, this spending helps support additional economic activity. This spending recirculates or multiplies until the benefits ultimately leak outside of the Airport region and eventually Kansas. Second round benefits for the KAEIS were calculated using Kansas specific multipliers. In general, for every $100 of first round benefits generated by aviation-related businesses, an additional second round benefit of $55 is created. The total economic benefit is the sum of first round and second round benefits.

Exhibit 1T
Economic Impacts of Blosser Municipal Airport

Source: Wilbur Smith Associates, Inc. of Cincinnati, Ohio with assistance from Burns & McDonnell, of Kansas City, Missouri

In first round economic impacts, the KAEIS estimated that the Airport has an annual Direct Output of $182,900 and Indirect Output of $87,500. Second round economic impacts resulted in an annual Induced Output (economic multiplier effect) of $166,600. The KAEIS also determined that the Total Economic Impact of the Airport is eight (8) Total Jobs, a Total Payroll of $134,000 and a Total Economic Output of $437,000. Those economic impacts of the Airport are summarized in Exhibit 1T above. The estimated economic impacts of the Airport are overall very positive for the City of Concordia (City) and the Concordia community.

To determine the economic impact position of Blosser Municipal Airport (Airport) as compared to rural airports in the area surrounding the Airport, data from the KAEIS was used. Table 1R on page 1-139 itemizes the foremost KAEIS data of the Airport and of six (6) surrounding rural airports. That analysis provides an economic benchmark for the Airport to compare future economic impact analysis to as future enhancements to the Airport are accomplished per this Airport Master Plan.

Table 1R

Estimated Economic Impacts of Blosser Municipal Airport and Surrounding Rural Airports

Area Airport	Direct Output	Indirect Output	Induced Output	Total Jobs	Total Payroll	Total Output
Belleville Municipal Airport	N.A.	N.A.	N.A.	4	$111,100	$692,100
Blosser Municipal Airport (CNK)	$182,900	$87,500	$166,600	8	$134,800	$437,000
Clay Center Municipal Airport	$612,500	$55,700	$413,200	14	$291,100	$1,081,400
Mankato Airport	N.A.	N.A.	N.A.	5	$167,600	$941,200
Minneapolis City County Airport	N.A.	N.A.	N.A.	6	$119,300	$866,100
Moritz Memorial Airport (Beloit)	$1,400,000	$44,600	$818,700	18	$577,300	$2,265,100
Washington County Memorial Airport	$932,600	$4,500	$508,600	13	$277,600	$1,445,700
Average:	**$782,000**	**$48,075**	**$475,775**	**9.7**	**$239,829**	**$1,104,086**
CNK Percent of Average:	**23.4%**	**182.0%**	**35.0%**	**82.5%**	**56.2%**	**39.6%**

Source: *Wilbur Smith Associates, Inc.* of Cincinnati, Ohio with assistance from *Burns & McDonnell*, of Kansas City, Missouri