CHAPTER ONE INVENTORY

The initial step in the preparation of the Master Plan for Santa Fe Municipal Airport (SAF) is the collection of information pertaining directly to or influencing the airport and the area it serves. The information summarized in this chapter will be used in subsequent analyses within this study and includes:

- Background information related to the City of Santa Fe and surrounding region, including descriptions of the local geography, regional climate, and surface transportation systems.

- Physical inventories and descriptions of current facilities and services offered at Santa Fe Municipal Airport. The analysis will include airside and landside infrastructure and services as well as local and regional airspace, competing airport facilities, air traffic control, and aircraft operating procedures.

- Santa Fe Municipal Airport's role in regional, state, and national aviation systems. Development at the airport since the completion of the previous Master Plan will also be discussed.

- Socioeconomic data including population, employment, and income activity sectors will be analyzed. These sectors typically offer an indication of future trends that could influence commercial and general aviation activity at the airport.

- A review of existing local and regional plans and studies which will be utilized later in the process to determine their potential influence on the development and implementation of the Master Plan.

The information outlined in this chapter provides a foundation for all subsequent chapters. Much of the information was obtained through on-site inspections of the airport and interviews with airport staff, commercial operators, and other tenants. Information was also obtained from outside resources including documents prepared by the Federal Aviation Administration (FAA), New Mexico Department of Transportation – Aviation Division (NMDOT), City of Santa Fe, Santa Fe County, and other pertinent regional planning and economic development agencies.

REGIONAL SETTING

The City of Santa Fe, capital of New Mexico and seat of Santa Fe County, is located in the north-central quadrant of the state at the foot of the Sangre de Cristo Mountains. Known as one of the great destination cities in the United States, Santa Fe offers an appealing mix of activities associated with a rich multi-cultural history, vibrant art market, and active outdoor scene. The regional setting is ideal for supporting tourism as well as local resident lifestyles.

With a population of approximately 70,000 residents, Santa Fe is the state's fourth most populous city. Santa Fe County boasts a population of over two times that amount, with over 150,000 residents. The City of Santa Fe is the principal city of a Metropolitan Statistical Area (MSA) which encompasses all of Santa Fe County. The city is also part of the larger Albuquerque-Santa Fe-Las Vegas Combined Statistical Area (CSA). Albuquerque, the most populous city in New Mexico, is located approximately 60 miles southwest of Santa Fe in Bernalillo County.

Known as one of the great destination cities in the United States, Santa Fe offers an appealing mix of activities associated with a rich multi-cultural history, vibrant art market, and active outdoor scene.

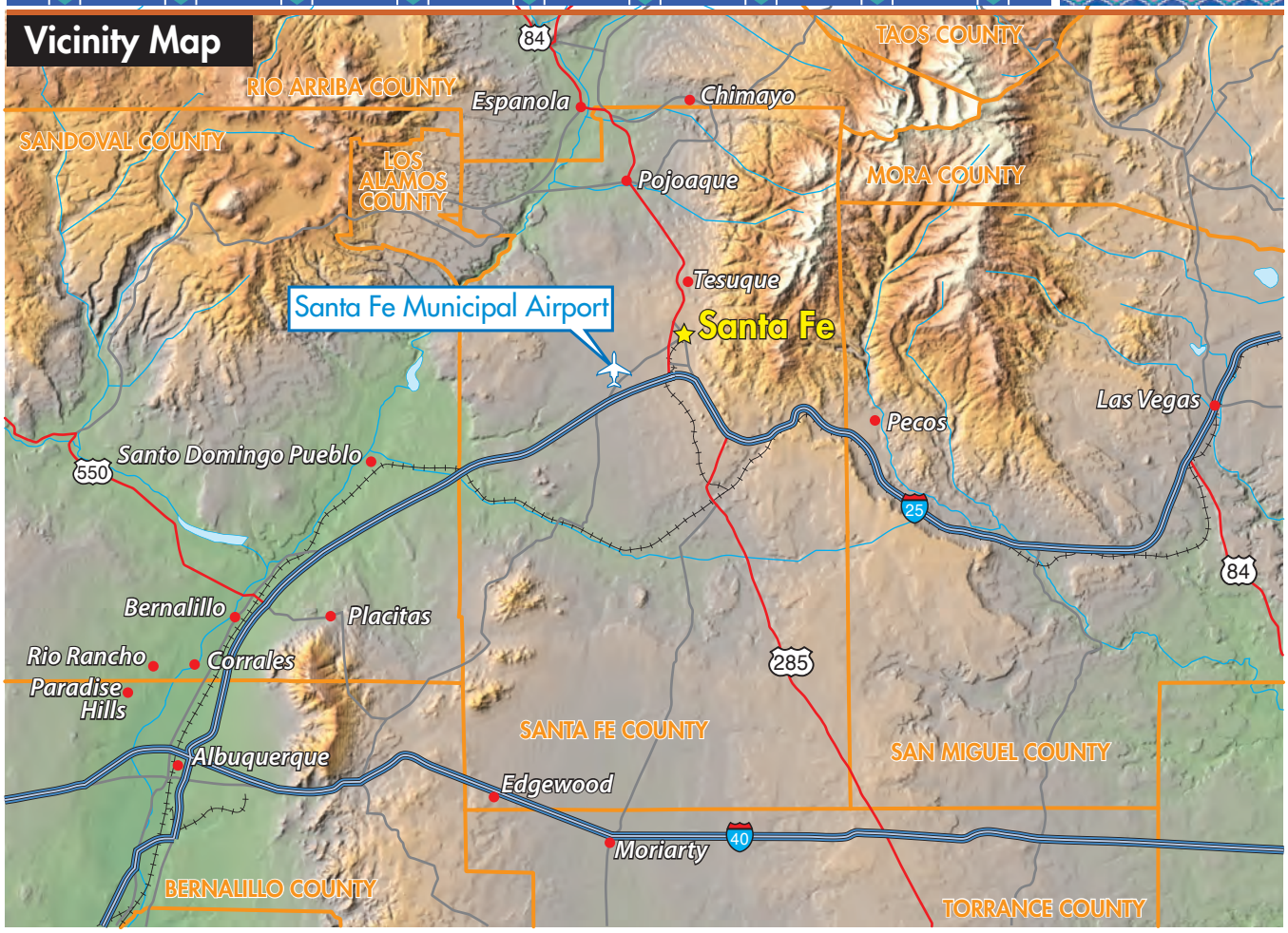
AIRPORT LOCATION

As depicted on **Exhibit 1A**, Santa Fe Municipal Airport is located in the western quadrant of the City of Santa Fe, approximately nine miles southwest of the city's central business district (CBD). Santa Fe Municipal Airport encompasses approximately 2,128 acres of property which support an extensive airfield system and landside facilities. The airport is situated at 6,348 feet above mean sea level (MSL).

REGIONAL TRANSPORTATION NETWORK

Primary regional access to the City of Santa Fe is provided by U.S. Interstate 25. Interstate 25 is a predominantly north-south national highway system in the western United States, stretching from Interstate 10 at Las Cruces, New Mexico northward to the Montana/Wyoming border. This highway system links Santa Fe to regional cities such as Albuquerque to the south and Denver, Colorado to the north.

Vicinity Map



Location Map

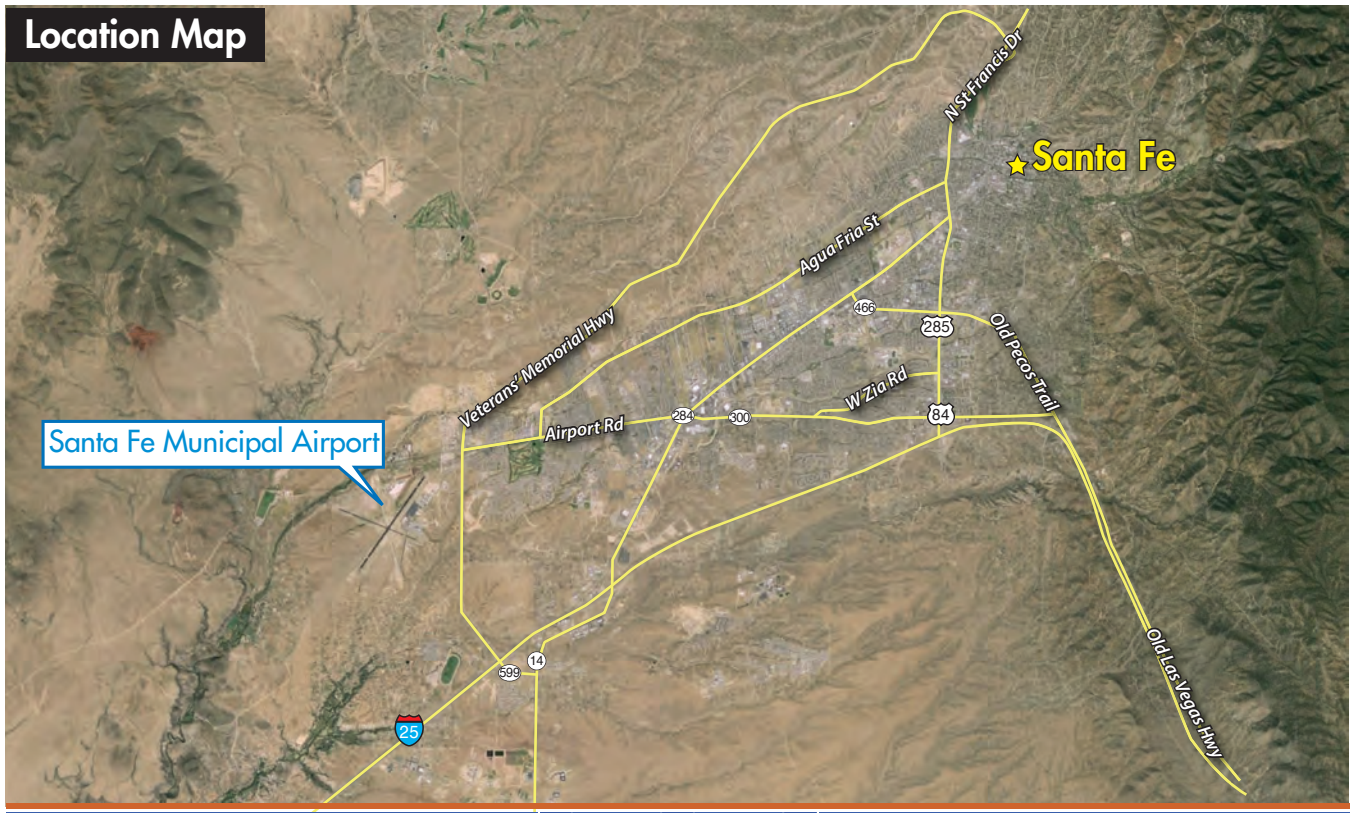


Exhibit 1A
LOCATION MAP

U.S. Route 84 (east-west highway) and U.S. Route 285 (north-south highway) are regionalized highway systems further linking Santa Fe to locations in New Mexico and points beyond.

Primary access to Santa Fe Municipal Airport is provided by State Highway 284, also known as Airport Road/Rodeo Road within the City of Santa Fe. The airport can also be accessed from Interstate 25 by utilizing State Highway 599 (Veterans Memorial Highway). The airport entrance is located immediately west of the intersection of State Highways 284 and 599 via Aviation Drive, a two-lane paved roadway that leads directly to the terminal area.

It should be noted that a new airport entrance (Jaguar Drive) is currently under design and construction that will provide direct access to the airport via a roadway extending west from State Highway 599. The new roadway will connect to Aviation Drive in the existing terminal parking area. As of July 2015, the State Highway 599/Jaguar Drive interchange is nearly complete, with off-ramps constructed and the bridge deck being poured.

REGIONAL CLIMATE

Weather conditions must be considered in the planning and development of an airport. Temperature is a significant factor in determining runway length needs, while local wind patterns can affect the operation and capabilities of the runway system. The need for navigational aids and lighting can be determined by the visibility and cloud ceiling conditions.

The City of Santa Fe experiences a semi-arid climate, with cold winters and warm summers. A semi-arid climate is characterized as an intermediate between a desert climate and a humid climate and supports short and scrubby vegetation, with semi-arid areas dominated by either grasses or shrubs. The temperate climate boasts blue skies throughout the year with the city experiencing, on average, 285 sunny days. There are four distinct seasons with frequent, dramatic summer thunderstorms and occasional winter snowstorms.

Table 1A lists common climate data for Santa Fe. The average annual daily high temperature is 64.9 degrees Fahrenheit (F), ranging from 42.9 degrees F in January to 86.1 degrees F in July. Average low temperatures range between 18.2 degrees F in January to 55.7 degrees F in July, leading to an average daily low temperature of 36.0 degrees F. Average annual precipitation in the area is 13.69 inches. Winds in the area are generally from the north and southwest, averaging 9.3 miles per hour (mph).

The 24-hour average temperature in the city ranges from approximately 30 degrees F in December and January to 71 degrees F in July. Due to the relative aridity and elevation, average diurnal temperature variations exceed 25 degrees F in every month, and over 30 degrees F much of the year. Occasional shower and thunderstorm activity occurs during the summer months, and are most prevalent in July and August with the arrival of the monsoon season. The spring and fall are typically drier, and winters are usually mild with little rain. The region does experience winter weather in the form of snow, usually occurring between November and March.

TABLE 1A
Climate Summary
Santa Fe, New Mexico

Period	Avg. High Temp. (F)	Avg. Low Temp. (F)	Avg. Daily Temp. (F)	Avg. Precip. (in.)	Avg. Snowfall (in.)	Wind Speed (mph)
January	42.9	18.2	30.6	0.64	4.0	9.5
February	47.8	22.2	35.0	0.54	3.1	9.8
March	55.8	27.1	41.5	0.89	3.6	10.0
April	64.4	33.3	48.9	0.71	0.8	11.0
May	73.3	41.8	57.6	1.06	0.0	10.6
June	83.8	50.8	67.3	1.12	0.0	9.9
July	86.1	55.7	70.9	2.14	0.0	8.5
August	83.7	54.2	69.0	2.08	0.0	8.0
September	77.4	47.2	62.3	1.59	0.0	8.2
October	66.7	36.7	51.7	1.29	0.7	8.5
November	53.1	25.7	39.4	0.89	2.6	8.6
December	43.5	18.6	31.1	0.74	6.1	8.6
Annual	**64.9**	**36.0**	**50.4**	**13.69**	**20.90**	**9.3**

Source: *Western Regional Climate Center* and www.weather.com

AIRPORT HISTORY

In 1941, the federal government began providing funds for the construction of airports across the country with the threat of war increasing. In January of that year, the Army and Civil Aeronautics Administration agreed on a 1,450-acre site to build a new airport in Santa Fe. Construction began in April and by May 1942, construction of the airport site was completed.

The airport was originally constructed to accommodate five miles of combined runway length (three miles to be surfaced) that were 150 feet wide and able to accommodate the heaviest bombers in the United States military fleet. During the war, the facility was used by the Army for transition training into the B-24 bomber. After the war, the government had no need to continue operating the facility and deeded it over to the City of Santa Fe for $1.00. Shortly after this time, the first terminal building was constructed at the airport.

The mid-1950s saw an array of improvements made to the facility. The city reached a 20-year agreement with Santa Fe County in 1955 to use its bonding capacity to build new runways and a new terminal facility that would also include an airport traffic control tower (ATCT). The airport was renamed to Santa Fe County Municipal Airport during the period, as it was under control of both the city and county.

Construction of the joint terminal and ATCT facility as well as other airfield improvements started in January 1957, and by the end of that year, the improvements were completed and included extending and resurfacing of the principal runways and taxiways, construction of new parking and loading ramps, and the construction of a new terminal building. The ATCT was commissioned in July 1958. This massive project gave the city and county one of the nicest airports in the southwest United States for a community of this size.

With the onset of a new terminal, commercial airline activity increased in size and scope and included both Continental and Trans-World Airlines (TWA), with 10 scheduled flights per day. Passenger travel was estimated at 2,000 enplanements per month by the late 1950s. In addition to commercial airline activities, several hangar facilities were being constructed at the airport during this time to accommodate an array of aviation activities.

In the late 1970s, the agreement between the city and county for joint control of the airport expired, and the airport reverted back to being in sole possession of the city once again. Since this time, continued improvements to the airfield system have been implemented and a variety of facilities constructed that support many different aviation activities that take place on the airport.

In 2010, the City of Santa Fe annexed many areas of land on the west side of the city, which included the airport. At this time, Santa Fe Municipal Airport lies within the city limits of the City of Santa Fe.

To this day, Santa Fe Municipal Airport continues to provide facilities and activities to support both commercial service and general aviation aircraft. Over the years, several airlines have provided service to the airport and include TWA, Continental, Trans Texas, United Express, Pioneer, Texas International, Great Lakes, Frontier, and American Eagle. In addition, the airport is home to the New Mexico Army National Guard (NMANG), whose primary mission is to offer medical evacuation to military personnel as well as assist state agencies performing search and rescue missions in the area. In 2013, approximately $40 million was spent on expanding and improving the NMANG Air Support Facility to accommodate its based aircraft as well as transient aircraft that utilize the facility.

Santa Fe Municipal Airport continues to provide facilities and activities to support both commercial service and general aviation aircraft.

CAPITAL IMPROVEMENT HISTORY

To assist in funding capital improvements, the FAA has provided funding assistance to Santa Fe Municipal Airport through the Airport Improvement Program (AIP). The AIP is the mechanism for funding federal grants through the Aviation Trust Fund, which was established in 1970 to provide funding for aviation capital investment programs, including aviation development, facilities and equipment, and research and development. The Aviation Trust Fund also finances a portion of the operation of the FAA.

The NMDOT also provides funding assistance to the airport by providing matches to FAA grants and, in some instances, funding a project through a state grant only. **Table 1B** presents historical information for capital improvements at Santa Fe Municipal Airport since 2000 utilizing federal and state funding. The federal and state grants that the airport has received during this time has helped to fund engineering and construction work, airfield enhancements, terminal area development, equipment purchases, and planning and environmental studies.

TABLE 1B
Capital Improvement History Since 2000
Santa Fe Municipal Airport

Grant Number	Description	Year
FAA GRANTS		
3-35-0037-15	Runway 10-28 Reconstruction	2000
3-35-0037-16	Terminal Building Improvements	2001
3-35-0037-17	Runway 15-33 Reconstruction	2001 & 2002
3-35-0037-18	Fencing Improvements; Taxiway and Apron Rehabilitation	2001 & 2002
3-35-0037-19	Airport Master Plan Study	2002
3-35-0037-20	Fencing Improvements; Taxiway Rehabilitation; Snow Plow Purchase	2001
3-35-0037-21	Runway 2-20 Rehabilitation; Taxilane Rehabilitation	2002
3-35-0037-24	ARFF Vehicle Purchase; Airfield Guidance Signage Updates	N/A
3-35-0037-25	Part 150 NEM Study	N/A
3-35-0037-26	Runway 33 Approach Protection (Land Acquisition); Runway 2-20 and Apron Rehabilitation	N/A
3-35-0037-28	Runway 15-33 Reconstruction; Taxiway J Construction; ARFF Station Design; Apron Improvements	2007
3-35-0037-29	ARFF Station Construction; Taxiway F Design	2008
3-35-0037-30	Taxiway F Reconstruction and Relocation (ARRA funded)	2009
3-35-0037-31	Taxiway F Reconstruction and Relocation	2009
3-35-0037-32	Apron Reconstruction	2009
3-35-0037-33	Apron Reconstruction	2010
3-35-0037-34	Taxiway A and C Design; Pavement Maintenance	2011
3-35-0037-35	Wildlife Hazard Assessment Study	2011
3-35-0037-36	Taxiway A Phase I Improvements	2011
3-35-0037-37	Taxiway A Phase II Improvements; Taxiway F Design; Sweeper Purchase	2011
3-35-0037-38	Runway 10-28 Lighting Improvements	2011
3-35-0038-39	Taxiway F Construction (Extension)	2013
3-35-0037-40	Runway 2-20 Lighting Improvements; Airport Master Plan Study	2014
STATE GRANTS		
N/A	Terminal Area Improvements	2000
N/A	Fencing Improvements; Terminal Building Improvements	2002
N/A	Runway 15-33 Reconstruction	2004
N/A	Runway 2-20 Rehabilitation	2004
N/A	Snow Removal Equipment Purchase	2004
N/A	ARFF Vehicle Purchase	2007
SAF-07-001	Runway 15-33 Reconstruction; Taxiway Construction; ARFF Station Design	2007
SAF-07-003	Airport Entrance Security Lighting Upgrades	2008
SAF-08-001	Terminal Improvements	2008
SAF-09-001	Taxiway F Design	2009
SAF-09-002	ARFF Station Construction	2009
SAF-10-001	Radar Improvements	2010
SAF-10-002	Taxiway F Construction	2010
SAF-10-003	Apron Reconstruction	2010
SAF-10-004	Runway 2-20 Improvements (Re-striping)	2010
SAF-11-001	Wildlife Hazard Assessment Study	2011
SAF-11-002	Taxiway A Design; Taxiway C Reconstruction	2011
SAF-11-003	Runway 10-28 Lighting Improvements Design; Environmental Assessment for Taxiway	2011
SAF-11-004	Runway 2-20 Rehabilitation	2011
SAF-12-01	Taxiway A and C Reconstruction	2012
SAF-12-02	Maintenance Items	2012
SAF-12-03	Sweeper Purchase; Taxiway F Design; Taxiway A Phase II Reconstruction	2012
SAF-13-01	Runway 10-28 Lighting Improvements	2013
SAF-13-02	Maintenance Items	2013
SAF-13-03	Runway 2-20 Lighting Improvements	2013
SAF-13-04	Airfield Improvements (Pavement Re-marking)	2013
SAF-14-01	Taxiway F Construction	2014

Source: Airport Records; FAA; NMDOT

HISTORICAL AIRPORT ACTIVITY

At commercial service airports, the number of passenger boardings (enplanements) is a key indicator of operational strength and are typically the basis for federal grants-in-aid. Enplanement activity is also a good barometer of operational conditions as they can be used to measure the strength of commercial passenger airline services. The airport's based aircraft and annual operations (takeoffs and landings) in aggregate and type are also important aeronautical activity measures to factor. These indicators will be used in subsequent analyses in this Master Plan to project future aeronautical activity and determine future facility needs. Each of the activity segments is briefly described below.

PASSENGER ENPLANEMENTS

Commercial service airports provide local and regional access to the national and international aviation systems. As such, these airports are vital to interstate commerce as well as a key component to local and regional economic infrastructure. These facilities support and can even drive growth in all socioeconomic categories.

Currently, an airport must reach 10,000 annual enplanements to be eligible for a minimum one million dollars in annual entitlement funds.

An enplanement includes any revenue passengers that board an aircraft for a fare at the airport. This statistic is important in that it is utilized by the FAA to determine the annual level of entitlement funding dedicated to the airport under the AIP. Currently, an airport must reach 10,000 annual enplanements to be eligible for a minimum one million dollars in annual entitlement funds. Historical enplanement data is provided on **Exhibit 1B**. Airline passenger enplanements will typically be influenced by many factors, including number of airlines serving the airport, frequency of daily departures, types of aircraft used, and diversity of number of non-stop destinations.

Santa Fe Municipal Airport is currently served by two regularly scheduled airlines offering an average of six daily departures. It should be noted that the airline schedule is seasonal in nature, with more flights being offered in the summer months and fewer flights in the winter months. The following are the airlines currently providing daily service at the airport and their non-stop destinations:

- American Eagle (Dallas/Fort Worth International Airport and Los Angeles International Airport). It should be noted that American Eagle is ceasing service to Los Angeles International Airport in September 2015.
- United Express (Denver International Airport).

AIRCRAFT OPERATIONS

Aircraft operations, being a takeoff or landing, are classified as either local or itinerant. Local operations consist mostly of aircraft training operations conducted within the airport traffic pattern and touch-and-

Year	IFR Itinerant Operations					VFR Itinerant Operations					Total Itinerant Operations					Total Local Operations			Total Operations	Annual Enplanements
	AC	AT	GA	MIL	SUB	AC	AT	GA	MIL	SUB	AC	AT	GA	MIL	SUB	GA	MIL	SUB		
1995	0	1,445	6,349	334	8,128	0	1,856	31,276	1,738	34,870	0	3,301	37,625	2,072	42,998	45,266	1,857	47,123	90,121	12,126
1996	0	1,539	6,238	379	8,156	5	867	30,434	1,587	32,893	5	2,406	36,672	1,966	41,049	42,968	1,748	44,716	85,765	17,341
1997	0	2,923	7,093	328	10,344	2	482	26,209	1,403	28,096	2	3,405	33,302	1,731	38,440	36,651	1,393	38,044	76,484	20,868
1998	0	4,175	8,026	414	12,615	12	502	26,338	1,370	28,222	12	4,677	34,364	1,784	40,837	34,229	1,938	36,167	77,004	22,139
1999	0	4,021	8,385	421	12,827	0	520	26,699	1,340	28,559	0	4,541	35,084	1,761	41,386	40,888	1,894	42,782	84,168	26,823
2000	0	7,884	7,604	391	15,879	1	709	27,077	1,384	29,171	1	8,593	34,681	1,775	45,050	37,764	1,776	39,540	84,590	43,687
2001	0	8,881	8,060	550	17,491	0	519	23,276	1,364	25,159	0	9,400	31,336	1,914	42,650	33,914	1,850	35,764	78,414	40,808
2002	2	6,107	8,271	555	14,935	0	270	26,503	1,509	28,282	2	6,377	34,774	2,064	43,217	42,283	1,972	44,255	87,472	18,153
2003	0	6,733	8,172	584	15,489	0	161	25,182	1,187	26,530	0	6,894	33,354	1,771	42,019	36,683	1,836	38,519	80,538	17,528
2004	0	7,145	8,395	508	16,048	0	546	24,682	1,268	26,496	0	7,691	33,077	1,776	42,544	38,973	1,914	40,887	83,431	19,199
2005	0	5,682	8,587	521	14,790	0	832	23,279	1,532	25,643	0	6,514	31,866	2,053	40,433	32,226	2,338	34,564	74,997	10,386
2006	1	5,016	9,116	586	14,719	0	1,267	23,022	1,762	26,051	1	6,283	32,138	2,348	40,770	32,886	2,760	35,646	76,416	9,432
2007	0	5,008	9,323	707	15,038	0	1,761	22,311	2,003	26,075	0	6,769	31,634	2,710	41,113	35,202	3,041	38,243	79,356	10,902
2008	5	3,081	7,915	881	11,882	4	1,544	19,993	1,897	23,438	9	4,625	27,908	2,778	35,320	35,390	3,006	38,396	73,716	0*
2009	0	3,139	7,251	823	11,213	0	1,269	18,809	1,761	21,839	0	4,408	26,060	2,584	33,052	33,449	3,611	37,060	70,112	9,534
2010	20	5,295	6,963	772	13,050	0	1,134	18,947	1,986	22,067	20	6,429	25,910	2,758	35,117	36,379	4,150	40,529	75,646	43,589
2011	20	5,786	6,708	708	13,222	0	851	17,768	1,195	19,814	20	6,637	24,476	1,903	33,036	31,313	2,640	33,953	66,989	43,302
2012	23	5,973	6,088	822	12,906	0	1,143	16,855	1,307	19,305	23	7,116	22,943	2,129	32,211	30,418	2,827	33,245	65,456	47,709
2013	2	8,454	6,028	616	15,100	0	1,205	17,156	1,702	20,063	2	9,659	23,184	2,318	35,163	33,443	3,326	36,769	71,932	64,468
2014	0	6,932	6,693	766	14,391	0	1,065	15,726	1,685	18,476	0	7,997	22,419	2,451	32,867	30,047	3,471	33,518	66,385	74,551

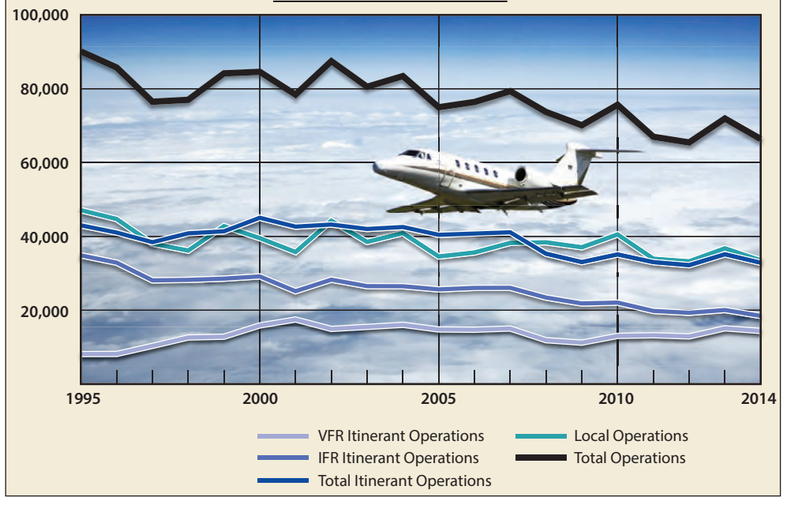
Source: FAA Operational Network (OPSNET)
database access on 3.16.15 at - https://aspm.faa.gov/

Key:

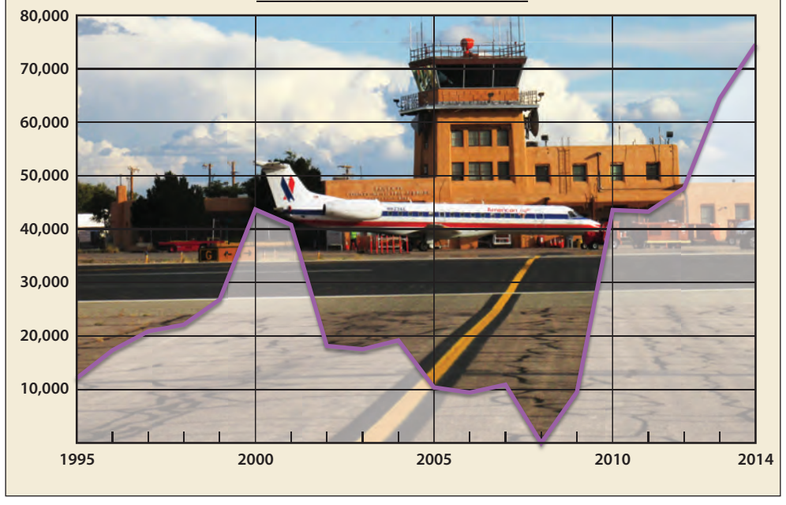
AC - Air Carrier (commercially operated aircraft having seating capacity more than 60 seats or a maximum payload capacity of 18,000 pounds)
AT - Air Taxi (commercially operated aircraft having 60 or fewer passenger seats or less than 18,000 pounds maximum payload capacity)
IFR - Instrument Flight Rules
VFR - Visual Flight Rules
GA - General Aviation
MIL - Military
SUB - Subtotals

* No scheduled service for year

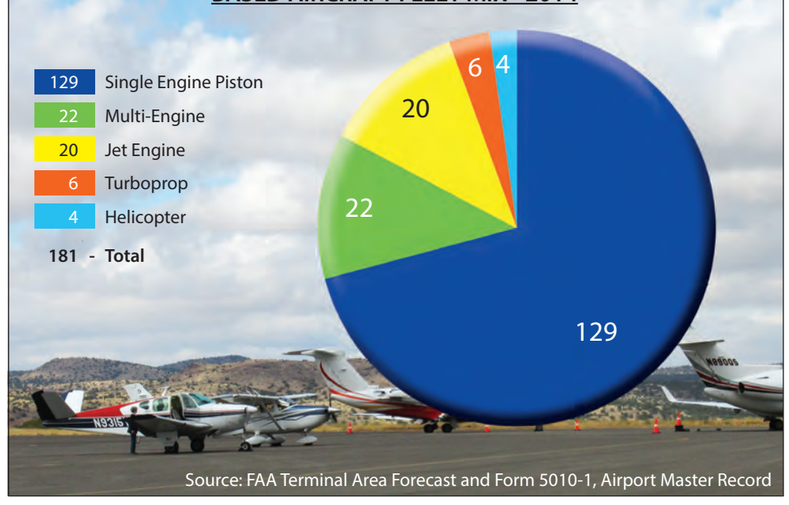
ANNUAL OPERATIONS



ANNUAL ENPLANEMENTS



BASED AIRCRAFT FLEET MIX - 2014



This page intentionally left blank

go and stop-and-go operations. Itinerant operations are arriving or departing aircraft which have an origin or destination away from the airport.

Aircraft operations are further sub-classified into four general categories: air carrier, air taxi, general aviation, and military. Air carrier operations are defined as those conducted commercially by aircraft having a seating capacity of 60 or more and/or a maximum payload capacity of 18,000 pounds. Air taxi operations can include small commercial service aircraft operations as well as general aviation type aircraft for the "on-demand" commercial transport of persons and property in accordance with Title 14 Code of Federal Regulations (CFR) Part 135 and Subchapter K of Title 14 CFR Part 91.

Commercial service operations at Santa Fe Municipal Airport fall under air taxi categories. Air carrier operations typically include mainline passenger and cargo airlines. Commercial service operations counted as air taxi are represented by regional airlines utilizing small regional jets or turboprop aircraft while hauling under the banner of the mainline carriers. General aviation operations include a wide array of aircraft use ranging from personal to business and corporate uses. Military aircraft also operate at the airport.

Exhibit 1B also presents the annual aircraft operations as counted by the ATCT at Santa Fe Municipal Airport since 1995. The exhibit includes two categories of itinerant operations: instrument flight rules (IFR) and visual flight rules (VFR) operations. IFR operations are those conducted during instrument weather conditions or during VFR but under a completed instrument flight plan.

BASED AIRCRAFT

Identifying the current number of based aircraft is important to Master Plan analysis, yet it can be challenging because of the transient nature of aircraft storage. According to the FAA's *Terminal Area Forecast* (TAF), there are currently 181 civilian based aircraft at the airport ranging from small single engine piston aircraft up to larger business jets. Based aircraft fleet mix information is also presented on **Exhibit 1B**.

AIRPORT ADMINISTRATION

Santa Fe Municipal Airport is owned and managed by the City of Santa Fe. Santa Fe has an elected mayor and city council form of government. The airport is an independent division within the city's Transportation Department. The mission of the Transportation Department is to operate the city's airport, parking, and transit systems in a safe, reliable, accessible, and cost-effective manner which accommodates all citizens and visitors while protecting the environment and cultural heritage of the city. A full-time airport manager, who reports to the director of the Transportation Department, has responsibility for the overall management, maintenance, and operations of the airport. In addition, one administrative assistant and three airport maintenance technicians are employees at the airport.

The Santa Fe Municipal Airport Advisory Board is a seven-member citizen board that is appointed by the Mayor. The Airport Advisory Board informs and makes recommendations to the governing body of the City of Santa Fe on the short and long term planning and development goals of the airport. Board members serve staggered three-year terms. The Airport Advisory Board meets on the first Thursday of every month.

AIRPORT SYSTEM PLANNING ROLE

Airport planning exists on many levels: national, state, and local. Each level has a different emphasis and purpose. On the national level, Santa Fe Municipal Airport is included in the *National Plan of Integrated Airport Systems* (NPIAS). On the regional and state levels, the airport is included in the *New Mexico Airport Systems Plan*, last updated in 2009. The local planning document is the Airport Master Plan, which was last updated and approved in 2002.

FEDERAL AIRPORT PLANNING

The role of the federal government in the development of airports cannot be overstated. Many of the nation's existing airports were either initially constructed by the federal government or their development and maintenance was partially funded through various federal grant-in-aid programs to local communities. The system of airports existing today is due, in large part, to the existence of federal policy that promotes the development of civil aviation. As part of a continuing effort to develop a national airport system to meet the needs of civil aviation and promote air commerce, the United States Congress has continually maintained a national plan for the development and maintenance of airports.

On the national level, Santa Fe Municipal Airport is included in the NPIAS as a nonhub, primary commercial service airport. This designation includes 251 airports nationwide that provide regularly scheduled passenger commercial service and record less than 0.05 percent of total U.S. passenger enplanements but have more than 10,000 annual enplanements. Overall, the NPIAS identifies 3,331 existing airports which are considered significant to the national air transportation system. The NPIAS is published and used by the FAA in administering the AIP, which is the source of federal funds for airport improvement projects across the country. The AIP program is funded exclusively by user fees and user taxes, such as those on fuel and airline tickets. The 2015-2019 NPIAS estimates that $33.5 billion worth of needed airport improvements are eligible for AIP funding across the country over the next five years. An airport must be included in the NPIAS to be eligible for federal funding assistance through the AIP.

On the national level, Santa Fe Municipal Airport is included in the NPIAS as a nonhub, primary commercial service airport.

The NPIAS supports the FAA's strategic goals for safety, system efficiency, and environmental compatibility by identifying specific airport improvements. The current NPIAS identifies approximately $21.2 million in development needs at Santa Fe Municipal for the five-year planning horizon. This figure is not a guarantee of federal funding; instead, this figure represents development needs as presented to the

FAA by the airport administration in the annual airport capital improvement program. Of the $33.5 billion in airport development needs identified by the NPIAS nationally, approximately 15 percent, or $5.1 billion, is proposed for the 251 small hub commercial service airports, which includes Santa Fe Municipal Airport.

Airports that apply for and accept AIP grants must adhere to various grant assurances. These assurances include maintaining the airport facility safely and efficiently in accordance with specific conditions. The duration of the assurances depends on the type of airport, the useful life of the facility being developed, and other factors. Typically, the useful life for an airport development project is a minimum of 20 years. Thus, when an airport accepts AIP grants, they are obligated to maintain that facility in accordance with FAA standards for at least that long.

STATE AIRPORT PLANNING

The primary planning document for the State of New Mexico is the *New Mexico Airport Systems Plan* (NMASP). The most recent plan was completed in 2009. The plan provides the NMDOT with a tool to identify and monitor performance metrics; assess the needs of the state's airports; help justify funding for airport improvements; and provide information to airport sponsors and others concerning the value, use, and needs of the state's public use airports.

The NMASP identified six airport classifications as serving varying roles for the New Mexico airport system and are defined as follows:

Primary Commercial Service: These airports have scheduled major/national or regional/commuter commercial air service, more than 10,000 annual enplanements, and a full range of general aviation activity, including business jets.

Non-Primary Commercial Service: These commercial service airports average between 2,500 and 10,000 annual enplanements and also serve general aviation needs.

Limited Commercial Service: These airports average less than 2,500 annual enplanements and include those airports participating in the FAA's Essential Air Service (EAS) program. While these airports in this category have a commercial service element, they also serve high levels of general aviation needs.

Regional General Aviation: These airports primarily serve general aviation activity with a focus on business aviation needs including jet and multi-engine operations. These airports support the system of commercial service airports and are intended to provide significant coverage to the State's population.

Community General Aviation: These airports serve a supplemental contributing role for the local economy in which they are located. Community GA airports focus on providing aviation access for small business, recreation, and personal flying activities.

Santa Fe Municipal Airport is classified as a Primary Commercial Service Airport in the NMASP.

Low Activity General Aviation: These airports provide a limited economic contribution due to lower activity levels. These airports are considered to provide emergency or remote access and primarily serve recreational and personal flying activities.

Santa Fe Municipal Airport is classified as a Primary Commercial Service Airport in the NMASP. These airports have the highest levels of aviation activity in New Mexico, including commercial service and general aviation, and are located in the largest population areas of the state. The minimum facility and service requirements are listed in **Table 1C**.

TABLE 1C
Facility and Service Criteria
NMASP - Primary Commercial Service Airports

Airport Criteria	Minimum Objectives
Airport Reference Code	C-III or greater
Runway Length	75 percent of large aircraft at 90 percent useful load
Runway Width	100'
Runway Strength	60,000 lbs. single wheel loading
Taxiway	Full parallel
Instrument Approach	Precision or Near-Precision (LPV)
Visual Aids	Rotating beacon, lighted windcone/segmented circle, REILs, VGSI, MALSR
Lighting	HIRL, MIRL
Weather Reporting Aids	AWOS, ASOS
Wind Coverage	95% combined coverage
Services	Phones; restrooms; FBO - full service; 24/7 Av-Gas and Jet A fuel; rental cars; maintenance - full service; public transportation; perimeter fencing.
Facilities	Terminal with public restrooms; conference rooms; pilot lounge; hangar storage for 80% of based aircraft and 25% of transient; auto parking; emergency response plan.

REIL: Runway End Identification Lights
VGSI: Visual Glide Slope Indicator
MALSR: Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights
HIRL/MIRL: High/Medium Intensity Runway Lights
AWOS/ASOS: Automated Weather Observation System/Automated Surface Observation System
FBO: Fixed Base Operator
Source: New Mexico Airport System Plan (2009)

LOCAL PLANNING ROLE

The Airport Master Plan is the primary local planning document. The Master Plan is intended to provide a 20-year vision for airport development based on aviation demand forecasts. The most recent update to the airport planning document is the 2002 Airport Master Plan. It should be noted that the study concluded in 2002, but the base year information was 2000, as the process typically takes two years to

complete. Over time, the forecast element of a Master Plan typically becomes less reliable due to changes in aviation activity and/or the economy. As a result, the FAA recommends that airports update their Master Plans every five to 10 years, or as necessary to address any significant changes. Therefore, this is an appropriate time to update the Airport Master Plan and revisit the development assumptions from the previous planning study.

One component of the Airport Master Plan is a set of airport layout plans (ALP) drawings that are used to depict existing and future development on the airfield. The airport's ALP drawings are being updated during this Master Plan process.

TITLE 14 CFR PART 139 CERTIFICATION

An airport must have an Airport Operating Certificate (AOC) if it is serving air carrier aircraft with more than nine seats or serving unscheduled air carrier aircraft with more than 30 passenger seats. Title 14 CFR Part 139 (Part 139) describes the requirements for obtaining and maintaining an AOC. This includes meeting various Federal Aviation Regulations (FARs) now codified under the CFR.

Airports are classified in the following categories based on the type of air carrier operations served:

- **Class I Airport** – 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** – 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** – 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** – an airport certificated to serve unscheduled passenger operations of large air carrier aircraft. A Class IV airport cannot serve scheduled air carrier aircraft regulated under CFR Part 121.

Santa Fe Municipal Airport is currently classified as a Class I CFR Part 139 commercial service airport. This designation supports the regularly (or irregularly) scheduled operations of large and/or small air carrier aircraft conducting commercial passenger services at the airport.

Part 139 regulations (which implemented provisions of the *Airport and Airway Development Act of 1970*, as amended on November 27, 1971) set standards for: the marking and lighting of areas used for operations; firefighting and rescue equipment and services; the handling and storing of hazardous materials;

the identification of obstructions; and safety inspection and reporting procedures. It also required airport operators to have an FAA-approved Airport Certification Manual (ACM).

The ACM is a required document that defines the procedures to be followed in the routine operation of the airport and for response to emergency situations. The ACM is a working document that is updated annually as necessary. It reflects the current condition and operation of the airport and establishes the responsibility, authority, and procedures as required. There are required sections for the ACM covering administrative detail and procedural detail. Santa Fe Municipal Airport has a current, approved ACM. The ACM includes the following information:

- General Information
- Organization and Management
- Airport Information
- Maintenance and Inspection Program
- Hazardous Materials
- Aircraft Rescue and Firefighting
- Snow and Ice Control
- Airport Emergency Plan
- Wildlife Hazard Management
- Maintenance and Certification Manual

AIRPORT INVENTORY

This section provides a description of the existing facilities at Santa Fe Municipal Airport. These facilities can be divided into two distinct categories: airside and landside. Airside facilities include those directly associated with aircraft operations, such as runways, taxiways, lighting and signage, weather, and instrument approach aids. Landside facilities include those necessary to provide a safe transition from surface to air transportation and support aircraft servicing, maintenance, and operational safety on the ground.

AIRSIDE FACILITIES

Airside facilities are depicted on an aerial photograph for visual reference on **Exhibit 1C**. A summary of the facility data is provided on **Exhibit 1D** and discussed in detail in the following sections.

Runways

Santa Fe Municipal Airport is served by three active runways, all intersecting near the mid-point of each runway. Runway 2-20 is the airport's primary runway. Runway 15-33 is the crosswind runway, and Runway 10-28 is the other crosswind runway primarily serving general aviation operations. Runways 2-20 and 15-33 are certified to accommodate air carrier aircraft operations.

Runway 2-20: Runway 2-20 is 8,366 feet long by 150 feet wide and oriented northeast-southwest. The asphalt pavement has a porous friction course (PFC) surface treatment and is reported as being in good condition by official FAA publications. Runway 2-20 has precision markings providing threshold bars, runway end designations, touchdown zone, aiming point, centerline, and edge markings. As the airport's

Santa Fe Municipal Airport

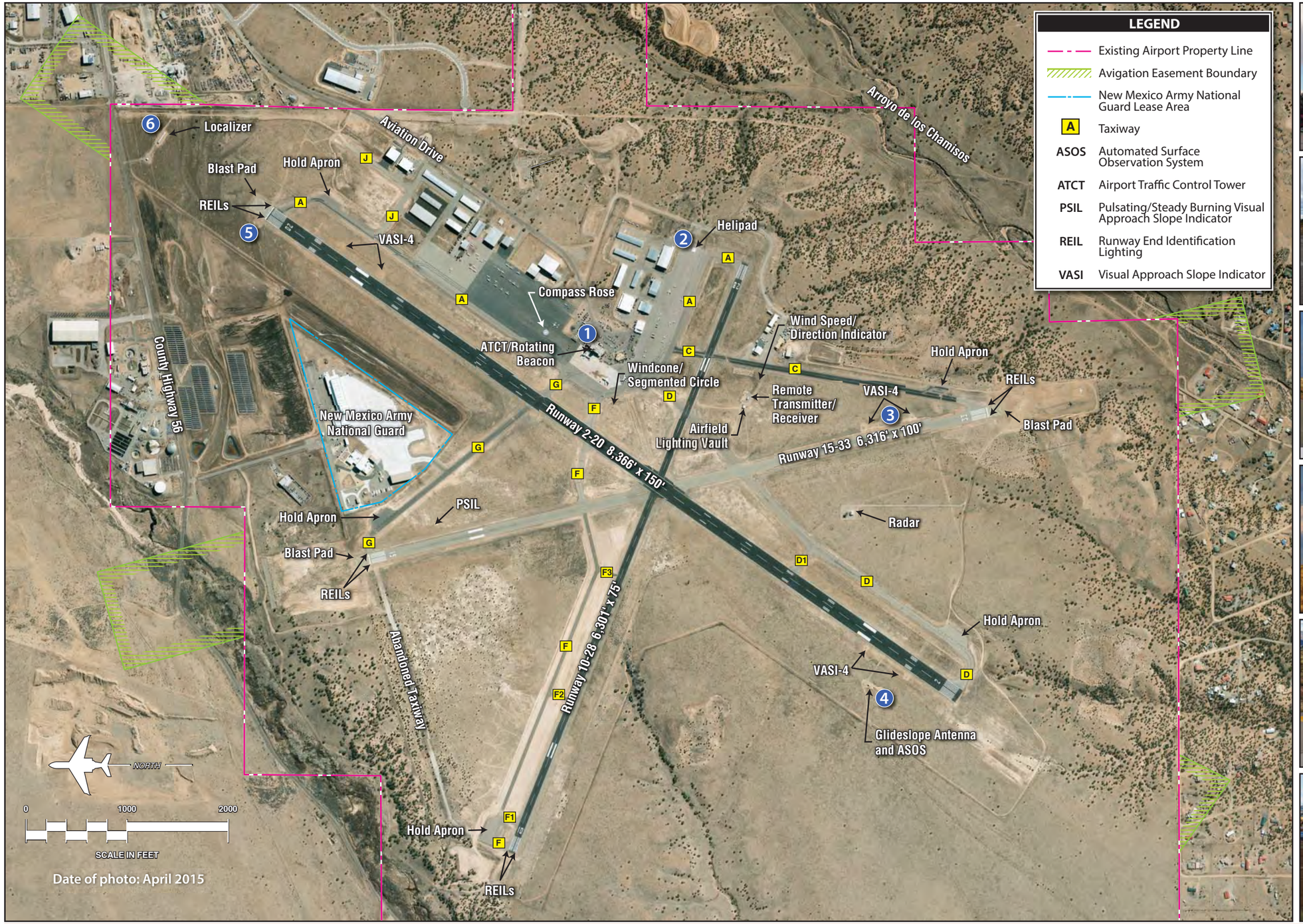


Exhibit 1C
AIRSIDE FACILITIES

This page intentionally left blank

	Runway 2-20	Runway 15-33	Runway 10-28
RUNWAYS			
Runway Length (feet)	8,366	6,316	6,301
Runway Width (feet)	150	100	75
Displaced Threshold	None	None	None
Runway Pavement Surface Material	Asphalt	Asphalt	Asphalt
Runway Pavement Surface Treatment	Porous Friction Courses	Grooved	Porous Friction Courses
Runway Pavement Condition (Reported)	Good	Excellent	Good
Runway Pavement Markings	Precision (Both Runways)	Non-Precision (Both Runways)	Non-Precision (Both Runways)
Runway Lighting	MIRL	MIRL	MIRL
Usable for Air Carrier Operations	Yes	Yes	No
Traffic Pattern*	Left (Both Runways)	Left (Both Runways)	Left (Both Runways)
Runway Pavement Strength (lbs)			
Single Wheel Loading (SWL)	48,000	48,000	30,000
Dual Wheel Loading (DWL)	65,000	65,000	N/A
Dual Tandem Wheel Loading (DTWL)	105,000	105,000	N/A
TAXIWAYS			
Taxiway Lighting	MITL on Taxiways A, C, D, D1, F, F1, F2, F3, and G; Edge Reflectors on Taxiway J		
Markings	Taxiway Centerline on all Taxiways		
VISUAL APPROACH/LIGHTING AIDS			
	VASI-4L (Both Runways)	VASI-4R (Runway 33)	REILs (Runway 10)
	REILs (Runway 20)	REILs (Both Runways)	
STRAIGHT-IN INSTRUMENT APPROACHES			
	ILS or LOC Runway 2	RNAV (GPS) Runway 15	RNAV (GPS) Runway 28
	RNAV (GPS) Runway 2	RNAV (GPS) Runway 33	
	RNAV (GPS) Runway 20	VOR Runway 33	
WEATHER AND NAVIGATIONAL AIDS			
	ASOS, ATCT, Lighted Windcones, Segmented Circle, Rotating Beacon, Localizer, Glideslope Antenna, CTAF/UNICOM, Remote Transmitter/Receiver		

* As published

KEY

MIRL - Medium Intensity Runway Lighting
MITL - Medium Intensity Taxiway Lighting
REIL - Runway End Identification Lighting
VASI - Visual Approach Slope Indicator
ILS - Instrument Landing System
LOC - Localizer
RNAV - Area Navigation
GPS - Global Positioning System
VOR - Very High Frequency Omnidirectional Range
ASOS - Automated Surface Observation System
ATCT - Airport Traffic Control Tower
CTAF - Common Traffic Advisory Frequency
UNICOM - Universal Communication

longest runway and served by a precision instrument landing system (ILS), Runway 2-20 is the primary runway.

Runway 2-20 has a pavement strength of 48,000 pounds single wheel loading (SWL), which refers to the design of certain aircraft landing gear that has a single wheel on each main landing gear strut. The runway pavement has also been strength-rated at 65,000 pounds dual wheel loading (DWL), and 105,000 pounds for dual tandem wheel loading (DTWL).

As the airport's longest runway and served by a precision instrument landing system (ILS), Runway 2-20 is the primary runway.

Runway 15-33: Oriented in a northwest-southeast manner, crosswind Runway 15-33 is 6,316 feet long and 100 feet wide. The runway is constructed of asphalt pavement with a grooved surface treatment and is reported in FAA publications as in excellent condition. Runway 15-33 has non-precision markings which include threshold bars, runway end designations, touchdown zone, and centerline markings. The published pavement strength is the same as primary Runway 2-20: 48,000 pounds SWL, 65,000 pounds DWL, and 105,000 pounds DTWL.

Runway 10-28: Oriented nearly east-west, crosswind Runway 10-28 is 6,301 feet long and 75 feet wide. The runway is also asphalt with a PFC surface treatment and is reported in FAA publications to be in good condition. Runway 10-28 has non-precision markings, which include threshold bars, runway end designations, touchdown zone, and centerline markings. The published pavement strength is 30,000 pounds SWL.

Taxiways

The taxiway system at Santa Fe Municipal Airport consists of parallel, connector, and entrance/exit taxiways as depicted on **Exhibit 1C**. Parallel taxiways are primarily designed to efficiently and quickly route aircraft between the runway and the originating/destination location. While there are no full length and fully parallel taxiways serving the runway system at the airport, there are several quasi-parallel taxiways that serve portions of the runway system. Taxiway A serves as a quasi-parallel taxiway on the east side of Runway 2-20 leading to the Runway 20 threshold and the north side of Runway 10-28 leading to the Runway 28 threshold. Taxiway A has a separation of 400 feet from Runway 2-20 (centerline to centerline) and a separation of 375 feet from the Runway 10-28 centerline. The southern portion of Taxiway D serves as a quasi-parallel taxiway serving the east side of Runway 2-20 leading to the Runway 2 threshold. This taxiway is situated 400 feet from the runway centerline. Finally, newly constructed Taxiway F serves as a quasi-parallel taxiway for the western portion of Runway 10-28, ultimately leading to the Runway 10 threshold. This taxiway is located 240 feet north of the runway centerline.

Taxiway C extends from Taxiway A south of the terminal area, crossing Runway 10-28, and ultimately leads to the Runway 33 threshold on the south side of the airport. Taxiway G extends northwest from Taxiway A near the terminal building and crosses Runway 2-20 before providing access to the Runway 15 threshold. The New Mexico Army National Guard is also provided airfield access via Taxiway G.

There are four entrance/exit taxiways linking Runway 2-20 with Taxiways A and D. The taxiways are designated as A, G, F, D1, and D (moving northeast to southwest). For Runway 15-33, Taxiways G, F, D, and C (moving northwest to southeast) provide entrance/exit taxiway capability to the runway. Finally, Taxiways A, C, D, F3, F2, F1, and F (moving east to west) provide entrance/exit taxiway capability on Runway 10-28.

Taxiway J and other undesignated taxiways and taxilanes serve more remote areas on the airfield and lead to hangar complexes and aircraft parking aprons. All active taxiways and their associated dimensions are listed in **Table 1D**.

TABLE 1D
Taxiway Data
Santa Fe Municipal Airport

Designated Taxiways	Length (feet)	Width (feet)
A	6,000	50
C	3,100	50
D	4,400	50
D1	400	50
F	4,900	35-50
F1	240	35
F2	240	35
F3	240	35
G	2,700	50
J	1,500	35-50

Source: Airport Records

Hold aprons are available on Taxiways A, C, D, F, and G serving the Runway 20, 33, 2, 10, and 15 thresholds, respectively. The hold aprons allow pilots to perform flight checks, including engine run-ups, and a location where ATCT personnel can instruct pilots to wait for clearance to enter the runway.

Helipad

A civilian helipad is located on the east side of the airport at the edge of a large aircraft parking apron. It is situated approximately 500 feet north of the Runway 28 threshold.

Pavement Markings

Pavement markings aid in the movement of aircraft along airport surfaces and identify closed or hazardous areas on the airport. As previously discussed, Runway 2-20 has precision markings which identify the runway designation, edges, centerline, threshold, touchdown zone, and aiming point. Runways 15-

33 and 10-28 have non-precision markings that include threshold bars, runway designation, centerline, and aiming points.

Taxiway and taxilane centerline markings are provided to assist pilots in maintaining proper clearance from pavement edges and objects near the taxiway/taxilane edges. Taxiway markings at Santa Fe Municipal Airport include the following:

- Centerline;
- Leadoff lines on normally used exits;
- Dashed type edge markings along the portion of Taxiway A which is contiguous to aircraft parking aprons and the terminal ramp.

Taxiway markings also include aircraft hold line positions located on the entrance/exit and connecting taxiways. Enhanced taxiway centerline markings have been installed at all hold line positions. All hold line position markings are glass beaded, highlighted in black, and double sized in accordance to FAA regulations. The hold line positions function to keep aircraft from entering the runway environment without clearance. The location of hold lines is established by the design aircraft for a runway. The hold lines on entrance/exit taxiways associated with Runway 2-20 range from 250 to 300 feet from runway centerline. For Runway 15-33, the hold lines are located 250 feet from the runway centerline. The hold lines associated with Runway 10-28 are located approximately 130 to 180 feet from the runway centerline.

It should be noted that the Taxiway A interface with Runway 20, Taxiway C interface with Runway 33, and Taxiway G interface with Runway 15 are less than a 90-degree angle. As such, the aircraft holding position locations are not fully parallel with the runway alignment. The same scenario applies to the hold lines associated with Taxiway C as it crosses Runway 10-28, Taxiway D as it crosses Runways 10-28 and 15-33, and Taxiways F and G as they cross Runway 2-20. FAA standards suggest that all runway hold line positions be aligned fully parallel with the runway centerline so that the pilot has full range of view in both runway directions.

Aircraft movement areas on various parking aprons are identified with centerline markings. Aircraft tiedown positions are identified on various apron surfaces as well.

Blast pads marked with yellow chevrons also serve the departure end of Runway 20 and each end of Runway 15-33. The blast pad is a surface adjacent to the end of a runway provided to reduce the erosive effect of jet blast or propeller wash. The blast pad associated with Runway 20 is 200 feet long by 150 feet wide. Each end of Runway 15-33 is equipped with a 150-foot long by 120-foot wide blast pad.

Airfield Lighting and Signage

Airfield lighting and signage systems extend an airport's usefulness into periods of darkness and/or poor visibility. A variety of lighting and signage systems are installed at Santa Fe Municipal Airport for this purpose. These lighting systems, categorized by function, are summarized as follows.

Identification Lighting: The location of the airport at night is universally identified by a rotating beacon. The rotating beacon projects two beams of light, one white and one green, 180 degrees apart. The rotating beacon at Santa Fe Municipal Airport is located atop the ATCT. The ATCT is situated approximately 1,500 feet northeast of the intersection of all three runways.

Runway and Taxiway Lighting: Runway and taxiway edge lighting utilize light fixtures placed near the edge of the pavement to define the lateral limits of the pavement. 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 runways and aircraft parking areas.

Runways 2-20, 15-33, and 10-28 are equipped with medium intensity runway lights (MIRL). Each of these runway ends is also equipped with threshold lighting to identify the landing threshold. Threshold lighting consists of specially designed light fixtures that are red on one half of the lens and green on the other half of the lens. The green portion of the fixture is turned towards the approach surface and is intended to be seen from landing aircraft, while the red portion is visible to aircraft on the runway surface.

All taxiways associated with the three runways are equipped with medium intensity taxiway lighting (MITL). Taxiway J is not provided with MITL, but does have elevated edge reflectors.

Airfield Signage: The airport has a runway/taxiway signage system that assists pilots in identifying their location on the airfield and directing them to their desired location. The presence of runway/taxiway signage is an essential component of a surface movement guidance control system necessary for the safe and efficient operation of the airport. The signage system installed at Santa Fe Municipal Airport includes runway and taxiway designations, holding positions, routing/directional, and runway end and exits. All airfield signs are lit.

Visual Glide Slope Approach Aids: Visual approach aids consist of a series of lights that, when interpreted by pilots, give an indication of being above, below, or on the designated descent path to the runway. A four-box visual approach slope indicator (VASI-4) is installed on both ends of Runway 2-20 and a VASI-4 serves the approach end of Runway 33. The VASI-4s associated with Runway 2-20 are located on the left side of each respective runway end, which is standard. The VASI-4 on Runway 33 is located on the right side of the runway. A pulsating/steady burning visual approach slope indicator (PSIL) is installed on the left side of the approach end of Runway 15; however, this system is permanently out of service.

A standard three-degree glideslope is provided by the VASI-4s and PSIL serving each respective runway. There are no visual approach aids installed on Runway 10-28.

Runway End Identification Lights: Runway end identification lights (REILs) provide rapid and positive identification of the approach end of a runway. The system consists of two synchronized flashing lights, located laterally on each side of the runway threshold, facing the approaching aircraft. A REIL system has been installed on each end of Runway 15-33 as well as the approach ends of Runways 10 and 20.

Pilot-Controlled Lighting: The airport's lighting system is connected to a pilot-controlled lighting (PCL) system. When the ATCT is closed, the PCL system allows pilots to increase the intensity of the lighting on Runway 2-20 and activate the MIRL on Runways 15-33 and 10-28 with the use of the aircraft's radio transmitter. The PCL can be accessed on the common traffic advisory frequency (CTAF) 119.5 MHz.

Weather and Communication Aids

Santa Fe Municipal Airport is equipped with a lighted windcone and segmented circle which provides pilots with information about wind conditions. These facilities are located approximately 800 feet north-east of the intersection of all three runways. Additional supplemental windcones are spread out on the airfield, allowing wind conditions to be interpreted by pilots along the runway system.

An automated surface observation system (ASOS) is located at the airport. The ASOS automatically records the following weather conditions:

- Wind speed, gusts, and direction
- Temperature
- Dew point
- Altimeter setting
- Density altitude
- Visibility
- Precipitation
- Sky condition
- Cloud height

This information is transmitted at regular intervals on the airport's automated terminal information service (ATIS) frequency (128.55 MHz) or via a local telephone number (505-474-3117), where a computer-generated voice will present airport weather information. ATIS broadcasts are updated hourly and provide arriving and departing pilots with the current surface weather conditions, communication frequencies, and other important airport-specific information. The ASOS system is located approximately 900 feet north of the Runway 2 threshold.

Santa Fe Municipal Airport utilizes a CTAF, which was mentioned in the previous section. This radio frequency (119.5 MHz) is used by pilots in the vicinity of the airport to communicate with each other about approaches to or departures from the airport when the ATCT is closed. In addition, a universal communications (UNICOM) frequency (122.95 MHz) is also available in which a pilot can obtain information from airport businesses that monitor that frequency.

Approach and departure control services for arriving and departing aircraft on an instrument flight plan are provided by Albuquerque Center Approach/Departure Control on radio frequency 132.8 MHz. A radio communications outlet (RCO) is also available for pilots utilizing Santa Fe Municipal Airport and

allows them to contact Albuquerque Center Approach/Departure Control via another radio frequency (122.2 MHz).

A remote transmitter/receiver (RTR) is also located on the airfield. The RTR is an unmanned facility which is used to expand air/ground communication coverage and to facilitate direct contact between pilots and air traffic control (ATC) controllers. The RTR facility is located approximately 1,200 feet southeast of the intersection of all three runways. In addition, an ancillary wind speed/direction indicator is located in this general area.

Navigational Aids

Navigational aids are electronic devices that transmit radio frequencies, which pilots of properly equipped aircraft can translate into point-to-point guidance and position information. The types of electronic navigational aids available for aircraft flying to or from Santa Fe Municipal Airport include the very high frequency omnidirectional range (VOR), global positioning system (GPS), and localizer and associated glideslope antenna.

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. Military tactical air navigational aids (TACANs) and civil VORs are occasionally combined to form a VORTAC. The VORTAC provides distance and direction information to both civilian and military pilots. The Santa Fe VORTAC is located approximately five nautical miles south of the airport.

GPS is another navigational aid for pilots. GPS was initially developed by the United States Department of Defense for military navigation around the world. GPS differs from a VOR in that pilots are not required to navigate using a specific ground-based facility. GPS uses satellites placed in orbit around the earth to transmit electronic radio signals, which pilots of properly equipped aircraft use to determine altitude, speed, and other navigational information. With GPS, pilots can directly navigate to any airport in the country and are not required to navigate to a specific ground-based navigational facility.

A localizer and glideslope antenna are located on the airport and provide the necessary components for the ILS serving Runway 2. The localizer antenna emits signals that provide the pilot with course deviation left or right of the runway centerline and the degree of deviation. The glideslope antenna provides a signal indicating whether the aircraft is above or below the desired glide path. At Santa Fe Municipal Airport, the localizer is situated approximately 1,300 feet northeast of the Runway 20 threshold. The glideslope antenna is located approximately 900 feet north of the approach end of Runway 2.

LANDSIDE FACILITIES

At a commercial service airport, such as Santa Fe Municipal Airport, landside facilities typically include a terminal building, fixed base operators (FBOs), specialized aviation service operators (SASOs), aircraft

storage hangars, aircraft parking aprons, and various support facilities, such as fuel storage, automobile parking, aircraft rescue and firefighting (ARFF) and fencing/gates. The landside facilities at the airport are identified on **Exhibit 1E**.

Passenger Terminal Building

The passenger terminal building was originally constructed in 1957 and contains approximately 10,000 square feet of space. The area of the terminal building utilized by passengers is contained on one floor, which allows passengers to board and deplane aircraft from the ground level. The main entrance to the terminal is from the curbside on the east side of the building. The facility consists of several features related to commercial passenger service activities that include the following:

- Airline ticketing takes place in the southwest area of the terminal facility.
- Across from the ticketing area are rental car and shuttle counters.
- A waiting area containing limited seating is available across from the airline ticketing counters.
- The passenger hold room/waiting area is located on the west side of the terminal after passing through a small security area administered by the Transportation Security Administration (TSA). The hold room/waiting area contains 60 seats.
- The baggage claim area is located adjacent to the secured doors that proceed to the aircraft parking apron for ground level boarding.
- A restaurant facility occupies the north side of the terminal building with access gained through the waiting area after passing through the main entrance.
- Additional services are located to the right of the main entrance to the terminal and include vending machines, telephones, and public restrooms.

Passengers looking to board an aircraft are provided access to the single boarding gate through double doors on the west side of the building located adjacent to the main passenger waiting area. Arriving passengers pass through the same exterior doors in order to enter the main terminal lobby. Airport administrative offices are located south of the airline ticket counters in the southwest corner of the terminal building. These offices are separated into multiple work areas.

It should be noted that the terminal building received its last major renovation in 2004, with a previous renovation in 1988. The City of Santa Fe is currently exploring design alternatives to expand the facility in order to better meet passenger demand and safety/security requirements.

The terminal building received its last major renovation in 2004, with a previous renovation in 1988.

The passenger terminal building is directly accessible from Aviation Drive, which is a two-lane paved roadway that provides access to the terminal area and associated vehicle parking lots. A two-way circulation pattern has been established adjacent to the east side of the terminal building to allow for passenger drop-off and vehicle circulation.

Building Number	Hangar Type	Number of Units	Building Size (sq. ft.)
1	Conventional	N/A	12,100
2	Conventional	N/A	10,300
3	T-Hangars	18	19,500
4	T-Hangars	10	13,800
5	Linear Box Hangars	10	27,000
6	Linear Box / T-Hangars	1 / 6	12,600
7	Linear Box Hangars	2	11,000
8	Linear Box Hangars	2	11,000
9	Conventional	N/A	12,000
10	Conventional	N/A	21,200
11	Executive	N/A	7,200
12	Executive	N/A	5,200
13	Conventional	N/A	11,000
14	Conventional	N/A	25,200
15	Executive	N/A	4,500
16	Executive	N/A	9,700
17	Conventional	N/A	12,500
18	Conventional	N/A	22,400
19	Conventional	N/A	12,700
20	T-Hangars	4	7,900
21	Linear Box Hangars	4	16,900
22	T-Hangars	10	11,500
23	T-Hangars	12	13,500
24	Conventional	N/A	11,000
25	Conventional	N/A	23,100
26	Executive	N/A	4,000

Exhibit 1E
LANDSIDE FACILITIES

This page intentionally left blank

Aircraft Hangar Facilities

Hangar facilities at Santa Fe Municipal Airport are comprised of conventional hangars, executive hangars, T-hangars, and linear box hangars. Conventional hangars provide a large open space, free from roof support structures, and have the capability to store several aircraft simultaneously. Conventional hangars are often utilized by airport businesses, such as FBOs and large aircraft maintenance providers. Conventional hangars are typically 10,000 square feet or larger.

Executive hangars provide the same type of aircraft storage as conventional hangars, but are typically smaller than 10,000 square feet. These hangars are normally utilized by individual owners to store several aircraft or by smaller airport businesses. This type of hangar is becoming more popular at general aviation airports and often is included in a larger contiguous facility that contains several separate hangar facilities.

There are 26 separate hangar facilities at Santa Fe Municipal Airport providing approximately 348,800 square feet of hangar, maintenance, and office space.

T-hangars and linear box hangars provide for separate aircraft storage facilities within a larger hangar complex. These hangars typically provide space for only one aircraft and are used for private storage only.

As shown on **Exhibit 1E**, there are 26 separate hangar facilities at Santa Fe Municipal Airport providing approximately 348,800 square feet of hangar, maintenance, and office space. Conventional hangar space at the airport totals approximately 173,500 square feet in 11 separate hangars. There are five separate executive hangar facilities totaling approximately 30,600 square feet. Finally, 10 T-hangar and linear box hangar facilities are on the airport and provide 79 separate storage units comprising approximately 144,700 square feet.

Aircraft Parking Aprons

There are several designated aircraft parking apron areas at Santa Fe Municipal Airport, as depicted on **Exhibit 1E**. The passenger terminal parking apron is located adjacent to the west side of the terminal building. This area is comprised of space for commercial aircraft to park, deplane, and board passengers and encompasses approximately 8,900 square yards. This also includes space for parking and circulation of airline support equipment. There are currently three parking positions for commercial service aircraft. The passenger terminal parking apron is constructed of concrete.

The east aircraft parking apron extends east of the terminal area adjacent to the north side of Taxiway A and consists of approximately 50,000 square yards of pavement comprised of asphalt. Within this area, there are 75 marked aircraft tiedown positions which are used by local and transient aircraft for parking. Additional unmarked parking for larger aircraft is also included on the east aircraft parking apron. On the east edge of this parking apron is the marked concrete-paved helipad. The pavement in

the east portion of the apron area is strength-rated at approximately 30,000 pounds SWL to accommodate smaller aircraft, while the west portion of the apron contains a 90,000-pound DWL strength rating that is better equipped to handle larger aircraft.

An additional 68,100 square yards of parking space is provided on the north aircraft parking apron. This apron area extends north of the terminal building and is adjacent to the east side of Taxiway A. The north aircraft parking apron contains approximately 80 marked aircraft tiedown positions and ample space for larger aircraft.

The far north aircraft parking apron is also located adjacent to the east side of Taxiway A and contains 12 marked aircraft tiedown positions as well as a large area for additional aircraft parking and circulation. This apron area is comprised of approximately 24,000 square yards of space.

The north and far north aircraft parking aprons are constructed of asphalt and, similar to the east aircraft parking apron, these two aprons also have areas that contain different pavement strength ratings, one for lighter aircraft (30,000 pounds SWL on the east) and another for heavier aircraft (90,000 pounds DWL on the west, closer to Taxiway A). There are additional parking apron areas located throughout the airport in close proximity to conventional, executive, T-hangars, and linear box hangars.

All totaled, there are approximately 151,000 square yards of aircraft parking apron offered at the airport. Within these areas, approximately 167 marked tiedown positions are offered for general aviation aircraft. Additional unmarked areas can be configured to meet the demands of larger business jet aircraft. As previously discussed, three parking positions are available for commercial service aircraft on the passenger terminal parking apron.

Aviation Services

Those businesses that choose to locate on airport property or adjacent to the airport provide a significant impact not only to the airport, but also to the region. Encouraging businesses to locate in the vicinity of an airport is a good practice for a number of reasons. First, the business will benefit from being near a commerce and transportation hub. Second, the community will benefit because the airport will develop a buffer of industry and manufacturing that will restrict incompatible land uses, such as residential housing, from locating too close to the airport. Thirdly, business development on and around airports can generate a direct revenue stream to the airport. Some airports have done this successfully, leading to airport self-sufficiency.

American Eagle currently provides non-stop daily departures to Dallas/Fort Worth International Airport and Los Angeles International Airport. As previously noted, non-stop service to Los Angeles International Airport is ending in September 2015. American Eagle utilizes 44-seat and 50-seat Embraer ERJ-140-series regional jets and Bombardier CRJ-200 regional jets.

United Express currently provides non-stop daily departures to Denver International Airport and utilizes 50-seat Embraer ERJ-140-series regional jets. United Express is adding another flight to Denver in September 2015.

Landmark Aviation is a full-service FBO at the airport that provides a variety of aviation services. While maintaining several hangar facilities at the airport, it operates its main FBO activities from a facility directly south of the passenger terminal building adjacent to the east aircraft parking apron. This facility provides offices, conference rooms, flight planning, a pilot's lounge, and other amenities. Full-service Jet A and 100LL fuels are provided from 6:00 a.m. to 9:00 p.m., seven days per week. Landmark Aviation also operates a self-service fuel facility for 100LL that is accessible 24 hours per day, seven days per week.

Jet Center at Santa Fe conducts FBO activities at the airport, providing for an array of aviation services. It is currently in the process of constructing two hangar facilities and a terminal complex directly north of the passenger terminal building adjacent to the north aircraft parking apron. Full service Jet A and 100LL fuels are provided from 6:00 a.m. to 9:00 p.m., seven days per week.

There is a full range of specialty aviation businesses located throughout the airport that provide aviation services including on-demand air ambulance operations, aircraft maintenance, avionics, rental cars, hangar space/leasing, aircraft parts, flight instruction and training, and other services. In addition, a restaurant is located in the terminal building that caters to commercial passenger service as well as local customers. The City of Santa Fe provides airport management and oversees the day-to-day operations at the airport.

The **New Mexico Army National Guard (NMANG)** also has a strong presence at Santa Fe Municipal Airport and operates from an Air Support Facility situated on 34 acres on the northwest side of the airport. The primary mission is to offer medical evacuation to military personnel. The unit can also assist state agencies performing search and rescue missions in the area. Currently, the unit operates nine UH-60 Blackhawks and one C-12 (King Air) aircraft. The facilities have been updated in the past to include a large hangar complex to store and maintain the helicopter squadron. The New Mexico Army National Guard facilities are provided access to the airfield via a controlled-access gate adjacent to Taxiway G.

The New Mexico Army National Guard (NMANG) also has a strong presence at Santa Fe Municipal Airport and operates from an Air Support Facility situated on 34 acres on the northwest side of the airport.

Vehicle Parking

Santa Fe Municipal Airport has dedicated parking areas for vehicles adjacent to the north, east, and south sides of the terminal building that are accessible via Aviation Drive extending from the east side of the airport. Vehicle parking in the immediate vicinity of the terminal building includes public, employee, handicapped-accessible, taxi/shuttle, and rental car spaces.

Directly to the east of the terminal building, approximately 90 marked vehicle parking positions are provided. Farther to the east, it is estimated that an additional 200 vehicle parking spaces are available in an unpaved area across from the Aviation Drive loop in the terminal area.

Additional paved vehicle parking is available adjacent to the north side of the terminal building and includes 68 marked spaces. The paved parking area immediately south of the terminal building is for rental cars and consists of 30 marked spaces. The servicing of rental cars, including washing and vacuuming, is performed along the south side of the terminal building.

Additional paved vehicle parking spaces are provided farther south adjacent to the Landmark Aviation FBO facility and include 18 positions. Farther east of this area is another paved parking lot that provides 30 vehicle positions that can accommodate FBO functions, commercial passenger service, and other airport tenants.

To the north of the airport are additional marked vehicle parking positions situated in proximity to various aircraft storage hangars. Approximately 45 vehicle positions are located in this area, with direct access to Aviation Drive. This parking area is utilized for general aviation activities.

Vehicle parking in the terminal area is under the control of the City of Santa Fe's Parking Division. Four pay stations have been located throughout the parking lot areas. These pay stations print a parking permit for a length of time commensurate with the payment, and those permits are displayed on the windshield.

Other unmarked parking areas on the airport are located adjacent to hangar facilities. Access to these areas can only be obtained through controlled-access gates in various locations on airport property.

Fuel Facilities

There are four fuel farms on the airport that currently store aviation fuel. Landmark Aviation operates one fuel farm that is located near the entrance to the terminal area adjacent to Aviation Drive. It consists of four aboveground storage tanks providing for 36,000 gallons of Jet A fuel storage and 12,000 gallons of 100LL storage.

A second fuel farm is located on the Jet Center at Santa Fe leasehold adjacent to the south side of Aviation Drive prior to the airport terminal area. This fuel farm consists of two aboveground tanks providing for 12,000 gallons of Jet A fuel storage and 12,000 gallons of 100LL storage. Future plans call for an additional 20,000 gallons of Jet A fuel storage at this location.

The third fuel farm sits adjacent to the north aircraft parking apron and consists of a 1,000-gallon aboveground 100LL storage tank that accommodates self-service fueling at the airport. Landmark Aviation operates this fueling facility.

The fourth fuel farm is located on the southeast side of the airport and is operated by TriState CareFlight, the on-demand air ambulance operator at the airport. This fuel farm is utilized for the sole purpose of providing fuel to the company's helicopter operations and is not associated with the re-sale of fuel for commercial activities at the airport.

The two FBOs on the airport provide full-service fueling capabilities via fuel trucks. Landmark Aviation has a fleet of four fuel delivery trucks that consist of two 100LL fuel trucks that store 900 gallons and 700 gallons, and two Jet A fuel trucks, both of which have capacities of 5,000 gallons. Jet Center at Santa Fe also operates fuel delivery trucks. Two trucks, one with a 900-gallon capacity and one with a 750-gallon capacity, deliver 100LL, and two 5,000-gallon capacity trucks deliver Jet A fuel.

Aircraft Rescue and Firefighting

As a certificated airport under Title 14 CFR Part 139, Santa Fe Municipal Airport is required to provide ARFF services during air carrier operations. Each certificated airport maintains equipment and personnel based on an ARFF index established according to the length of aircraft and scheduled daily flight frequency. There are five indices, designated as A through E, with A applicable to the smallest aircraft and E the largest (based on aircraft length).

As a certificated airport under Title 14 CFR Part 139, Santa Fe Municipal Airport is required to provide ARFF services during air carrier operations.

According to the ACM, Santa Fe Municipal Airport is required to meet ARFF Index A, the minimum designated index, based on less than five average daily departures of air carrier aircraft requiring Index B (aircraft length of at least 90 feet but less than 126 feet). Index A requires one vehicle carrying at least 450 pounds of potassium-based dry chemical and water with a commensurate quantity of aqueous fire fighting foam (AFFF) to total 100 gallons for simultaneous dry chemical and AFFF foam application. The primary ARFF vehicle at the airport meets Index A requirements and also Index B requirements. According to requirements, at least one ARFF vehicle must be capable of responding from the fire station to the mid-point of the farthest runway within three minutes of the alarm and initiate discharge of an extinguishing agent. Under FAA regulations, ARFF services must be provided 15 minutes prior through 15 minutes following all commercial airline flights.

The ARFF facility is located approximately 500 feet south of the intersection of Runway 10-28 and Taxiway C in the southeast area of the airport. It is provided immediate access to the airfield via Taxiway C. The ARFF facility is manned 24 hours per day, seven days per week. The ARFF facility is owned and staffed by the City of Santa Fe and houses the following equipment:

- Primary ARFF Vehicle – CR-1 (2006 Rosenbauer Panther) with:
  - 1,500 gallons of water
  - 200 gallons of AFFF (rated at three percent)
  - 500 pounds of dry chemical (Purple K)

- 375 to 1,200 gallon-per-minute (gpm) roof turret
- 300 gpm bumper turret
- 60 gpm dual agent hand line

➢ Backup ARFF Vehicle – CR-2 Rapid Intervention Vehicle (1988 Class A Pumper)
- 500 gallons of water

Snow and Ice Control

Snow and ice removal is a necessary function at times for Santa Fe Municipal Airport. While significant accumulation is relatively rare, snow and ice events require immediate and coordinated efforts to ensure that the airfield system can accommodate aircraft movements. In support of snow and ice control, the airport has acquired several pieces of snow removal equipment (SRE) including two Oshkosh snow plows and a multi-tool vehicle (i.e., front-end loader) used to remove snow rows from the edge of the runways.

Runway 2-20, being the primary runway and only precision instrument runway, is considered top priority for SRE operations. The ACM lists the normal snow removal priority as follows:

1. Runway 2-20
2. Taxiways A, D, G between Runway 2-20 and Taxiway A, and F
3. A path for the ARFF vehicle to the nearest priority taxiway
4. Commercial airline parking apron
5. Runways 15-33 and 10-28
6. Taxiways C and remainder of G
7. Public use general aviation taxilanes, parking aprons, and tiedown areas
8. Terminal access roads and parking lot

Fencing / Gates

Santa Fe Municipal Airport's perimeter is fenced with six-foot tall chain link fencing with three-stand barbed wire across the top. The fencing does not always follow the legal property boundary due to the layout of physical features and infrastructure development.

A combination of automatic and manual gates is situated around the airfield in order to prevent inadvertent entry. All vehicle gates which enter onto the movement area are controlled-access and locked at all times. According to the ACM, there are 12 automatic controlled-access gates in the terminal area and 13 manual gates around the perimeter of the airport.

Maintenance Facilities

Airport maintenance facilities are located in two separate facilities that make up one larger complex in the southeast area of the airport, adjacent to the ARFF facility. Access to these facilities is provided by a controlled-access roadway that wraps around the east side of the approach end of Runway 28. These facilities house SRE equipment as well as other support vehicles and equipment needed to help maintain the airport. A maintenance yard is also included adjacent to these facilities that provides for the outside storage of airport equipment.

Utilities

The availability and capacity of the utilities serving the airport are factors in determining the development potential of the airport, as well as the land immediately adjacent to the facility. Utility availability is a critical element when considering future expansion capabilities for both airside and landside components. **Table 1E** presents the utilities and providers serving Santa Fe Municipal Airport.

TABLE 1E
Utility Services
Santa Fe Municipal Airport

Utility	Service Provider
Electric	Public Service Company of New Mexico
Gas	New Mexico Gas Company
Water	City of Santa Fe
Sewer	City of Santa Fe

Source: Airport Records

VICINITY AIRSPACE

Airspace within the United States is broadly classified as either controlled or uncontrolled. The difference between controlled and uncontrolled airspace relates primarily to requirements for pilot qualifications, ground-to-air communications, navigation and air traffic services, and weather conditions. Six classes of airspace have been designated in the United States, as shown on **Exhibit 1F**. Airspace designated as Class A, B, C, D, or E is considered controlled airspace and Class G airspace is commonly uncontrolled airspace. Aircraft operating within controlled airspace are subject to varying requirements for positive air traffic control. Airspace in the vicinity of Santa Fe Municipal Airport is also depicted on **Exhibit 1F**.

Class A Airspace: Class A airspace includes all airspace from 18,000 feet mean sea level (MSL) to flight level (FL) 600 (60,000 feet MSL). This airspace is designated in FAR Part 71.193, for positive control of aircraft. The Positive Control Area allows flights governed only under IFR operations. The aircraft must have special radio and navigation equipment, and the pilot must obtain clearance from an ATC facility to enter Class A airspace. In addition, the pilot must possess an instrument rating.

Class B Airspace: Class B airspace has been designated around some of the country's busiest commercial service airports, such as Dallas/Fort Worth International Airport. Class B airspace is designed to regulate the flow of uncontrolled traffic, above, around, and below the arrival and departure airspace required for high-performance, passenger-carrying aircraft at busy commercial service airports. This airspace is the most restrictive controlled airspace encountered by pilots operating under VFR. There is no Class B airspace in the immediate vicinity of Santa Fe Municipal Airport.

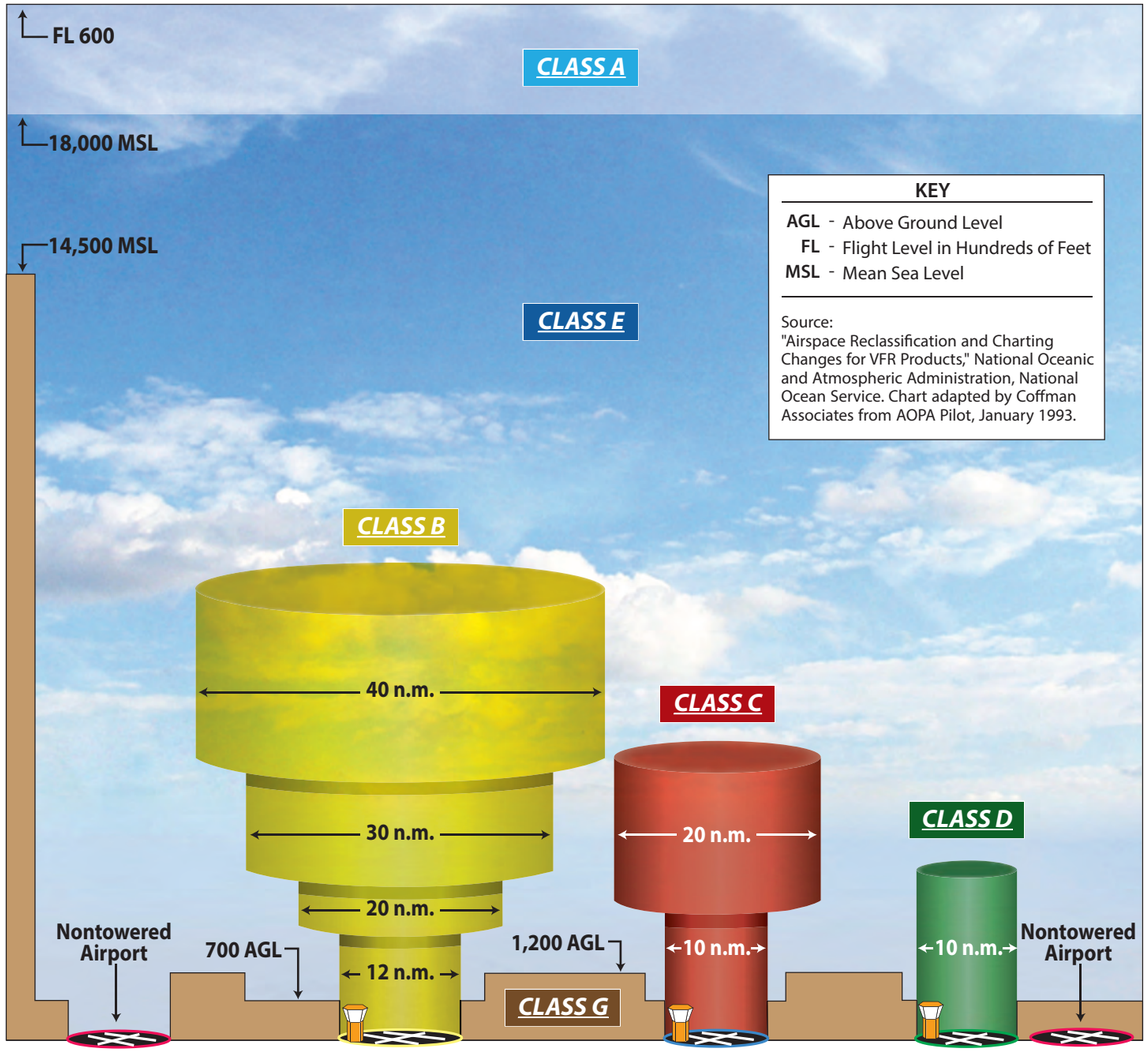
In order to fly within Class B airspace, an aircraft must be equipped with special radio and navigation equipment and must obtain clearance from air traffic control. Moreover, a pilot must have at least a private pilot's certificate or be a student pilot who has met the requirements of FAR Part 61.95, which requires special ground and flight training for Class B airspace. Helicopters do not need special navigation equipment or a transponder if they operate at or below 1,000 feet and have made prior arrangements in the form of a Letter of Agreement with the FAA controlling agency. Aircraft are also required to have and utilize a Mode C transponder within a 30-nautical-mile range of the center of Class B airspace. A Mode C transponder allows the ATCT to track the altitude of the aircraft.

Class C Airspace: The FAA has established Class C airspace at 120 airports around the country as a means of regulating air traffic in these areas. Class C airspace is designed to regulate the flow of uncontrolled traffic above, around, and below the arrival and departure airspace required for high-performance, passenger-carrying aircraft at some commercial service airports. In order to fly inside Class C airspace, the aircraft must have a two-way radio, an encoding transponder, and have established communication with ATC. Aircraft may fly below the floor of Class C airspace or above the Class C airspace ceiling without establishing communication with ATC. Albuquerque International Sunport constitutes the closest Class C airspace in the vicinity of Santa Fe Municipal Airport.

Class D Airspace: Class D airspace is controlled airspace surrounding airports with an ATCT. The Class D airspace typically constitutes a cylinder with a horizontal radius of five nautical miles from the airport, extending from the surface up to a designated vertical limit, typically set at approximately 2,500 feet above the airport elevation. **Exhibit 1F** shows the Class D airspace surrounding Santa Fe Municipal Airport. The Class D airspace consists of controlled airspace extending upward from the surface to and including 8,800 feet MSL.

Class E Airspace: Class E airspace consists of controlled airspace designed to contain IFR operations near an airport and while aircraft are transitioning between the airport and enroute environments. Unless otherwise specified, Class E airspace terminates at the base of the overlying airspace. Only aircraft operating under IFR are required to be in contact with air traffic control when operating in Class E airspace. While aircraft conducting visual flights in Class E airspace are not required to be in radio communications with air traffic control facilities, visual flight can only be conducted if minimum visibility and cloud ceilings exist. Class E airspace helps to buffer the Class D airspace at the airport in order to protect approaches to the various runways, generally having a floor of 700 feet above ground level (AGL).

Class G Airspace: Airspace not designated as Class A, B, C, D, or E is considered uncontrolled, or Class G, airspace. ATC does not have the authority or responsibility to exercise control over air traffic within this



KEY

AGL - Above Ground Level
FL - Flight Level in Hundreds of Feet
MSL - Mean Sea Level

Source:
"Airspace Reclassification and Charting Changes for VFR Products," National Oceanic and Atmospheric Administration, National Ocean Service. Chart adapted by Coffman Associates from AOPA Pilot, January 1993.

DEFINITION OF AIRSPACE CLASSIFICATIONS

CLASS A Generally airspace above 18,000 feet MSL up to and including FL 600.

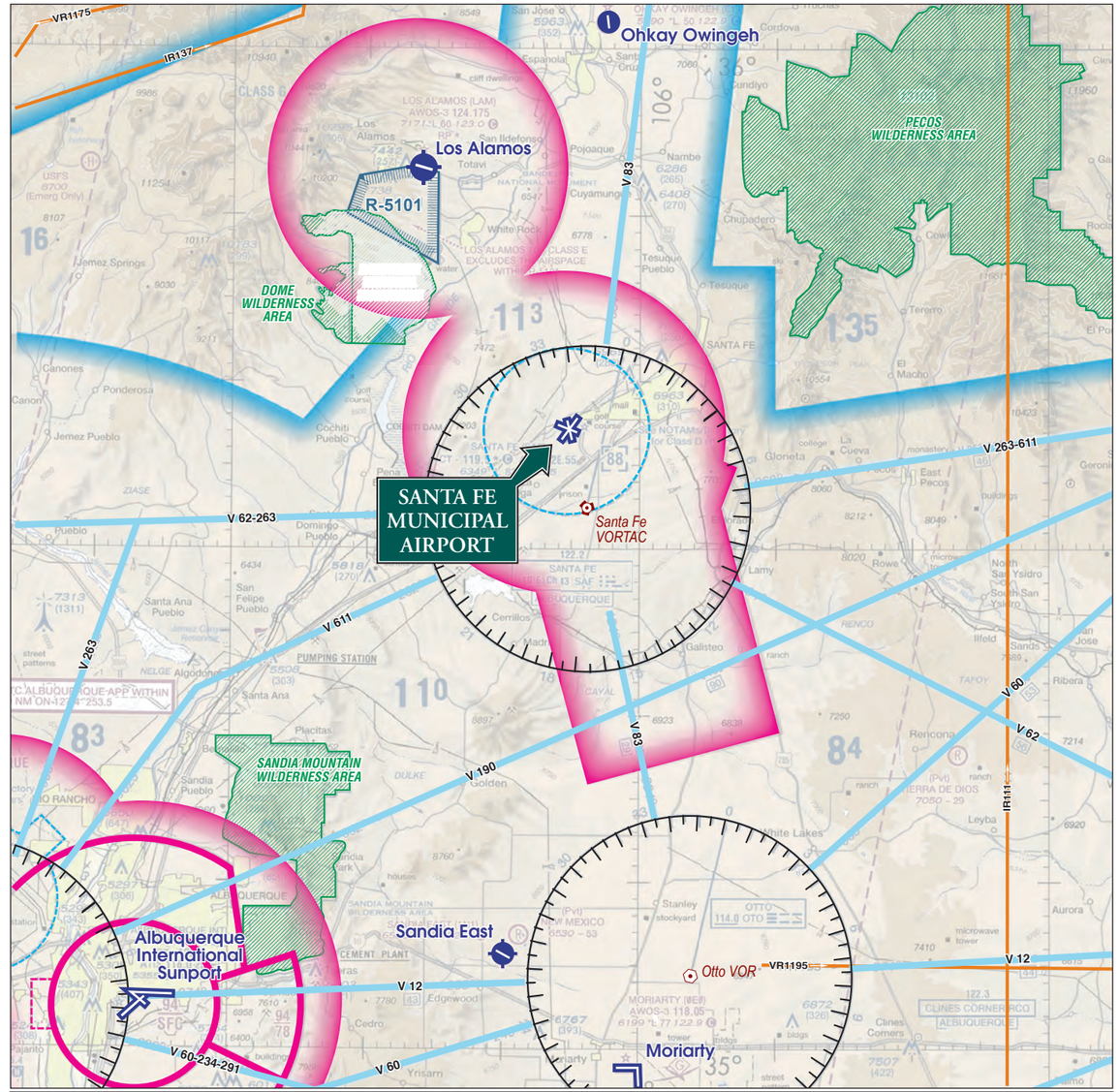
CLASS B Generally multi-layered airspace from the surface up to 10,000 feet MSL surrounding the nation's busiest airports.

CLASS C Generally airspace from the surface to 4,000 feet AGL surrounding towered airports with service by radar approach control.

CLASS D Generally airspace from the surface to 2,500 feet AGL surrounding towered airports.

CLASS E Generally controlled airspace that is not Class A, Class B, Class C, or Class D.

CLASS G Generally uncontrolled airspace that is not Class A, Class B, Class C, Class D, or Class E.



LEGEND

- Airport with other than hard-surfaced runways
- Airport with hard-surfaced runways 1,500' to 8,069' in length
- Airports with hard-surfaced runways greater than 8,069' or some multiple runways less than 8,069'
- Non-Directional Radiobeacon (NDB)
- VORTAC
- VHF Omni Range (VOR)
- VOR-DME
- Compass Rose
- Class C Airspace
- Class D Airspace
- Class E Airspace
- Class E Airspace with floor 700 ft. above surface
- Class E Airspace with floor 1200 ft. or greater above surface
- Victor Airways
- Wilderness Area
- Military Training Routes
- Prohibited, Restricted, Warning, and Alert Areas

NORTH

NOT TO SCALE

Source: Albuquerque Sectional Chart, US Department of Commerce, National Oceanic and Atmospheric Administration October 16, 2014

Exhibit 1F
AIRSPACE

This page intentionally left blank

airspace. Class G airspace lies between the surface and the overlaying Class E airspace (700 to 1,200 feet AGL). The airspace surrounding Santa Fe Municipal Airport reverts to Class G when the tower is closed.

SPECIAL USE AIRSPACE

Special use airspace is defined as airspace where activities must be confined because of their nature or where limitations are imposed on aircraft not taking part in those activities. The designation of special use airspace identifies for other users the areas where military activity occurs, provides for segregation of that activity from other fliers, and allows charting to keep airspace users informed. These areas are depicted on **Exhibit 1F**.

Victor Airways: Victor Airways are designated navigational routes extending between VOR facilities. Victor Airways have a floor of 1,200 feet AGL and extend upward to an altitude of 18,000 feet MSL. Victor Airways are eight nautical miles wide.

As previously discussed, the Santa Fe VORTAC is located approximately five nautical miles south of Santa Fe Municipal Airport. The following Victor Airways lead to and from the VORTAC facility in close proximity to the airport:

- V83, the closest Victor Airway, is located just east of the airport and continues northward.
- V62-263 traverses airspace approximately five miles south of the airport and continues westward.
- V263-611 extends east of the Santa Fe VORTAC and is located approximately five miles southeast of the airport.

Restricted Airspace: Restricted areas contain airspace identified by an area on the surface of the earth 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 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, or guided missiles. Penetration of restricted areas without authorization from the using or controlling agency may be extremely hazardous to the aircraft and its occupants. Restricted areas are published in the Federal Register and constitute Title 14 CFR Part 73, *Special Use Airspace*. The closest Restricted Area is R-5101, approximately 15 nautical miles northwest of the airport and is associated with the Los Alamos National Laboratory. This area is restricted from the ground to an elevation of 12,000 feet.

Wilderness Areas

Two wilderness areas exist in proximity to Santa Fe Municipal Airport. Aircraft are requested to maintain a minimum altitude of 2,000 feet above the surface of designated wilderness areas, which can include National Parks and breeding grounds. FAA Advisory Circular (AC) 91-36D defines the “surface” as the highest terrain within 2,000 feet laterally of the route of flight or the uppermost rim of a canyon or valley.

The airport is located approximately 20 nautical miles southwest of the Pecos Wilderness Area and approximately 25 nautical miles northeast of the Sandia Mountain Wilderness Area.

AIRSPACE CONTROL

As previously discussed, Santa Fe Municipal Airport has an ATCT, which is privately staffed under FAA-contract by Robinson Aviation, Inc., an aviation services company that specializes in air traffic control operations. The ATCT is situated atop the passenger terminal building and is located approximately 1,500 feet northeast of the intersection of all three runways at the airport. The ATCT currently operates from 7:00 a.m. to 9:00 p.m., seven days a week. Current ATCT services include ground control (121.7 MHz), ATC (119.5 MHz), and ATIS information (128.55 MHz). Outside of its operational hours, there are no formal ATC services available at the airport. When the ATCT is closed, air traffic advisories are made using the CTAF, which is the same frequency as the tower (119.5 MHz).

The ATCT currently operates from 7:00 a.m. to 9:00 p.m., seven days a week.

The ATCT located on the airfield controls air traffic within Class D airspace that surrounds the airport. Approach and departure control services for arriving and departing aircraft on an instrument flight plan are provided by Albuquerque Center on radio frequency 132.8 MHz.

In 2010, the FAA constructed an air traffic control radar beacon (ATCBI-6 Interrogator). This is a ground-based system that enables ATCT personnel the ability to locate and identify aircraft in the area. This has greatly reduced airline delays as previously the Albuquerque Center Approach/Departure Control could not see aircraft on the ground at the airport.

INSTRUMENT APPROACH PROCEDURES

Instrument approach procedures are a series of predetermined maneuvers established by the FAA and using electronic navigational aids that assist pilots in locating and landing at an airport, especially during instrument flight conditions. There are currently eight published instrument approaches, including a precision ILS instrument approach to Runway 2, as previously noted. Precision instrument approaches provide vertical descent information and course guidance information to the pilot. Non-precision approaches only provide course guidance to the pilot.

The capability of an instrument approach is defined by the visibility and cloud ceiling minimums associated with the approach. Visibility minimums define the horizontal distance the pilot must be able to see in order to complete the approach. Cloud ceilings define the lowest level a cloud layer (defined in feet above the ground) can be situated for the pilot to complete the approach. If the observed visibility or cloud ceilings are below the minimums prescribed for the approach, the pilot cannot complete the instrument approach. **Exhibit 1G** summarizes FAA-approved and published instrument approach procedures, including associated weather minimums for Santa Fe Municipal Airport.

	WEATHER MINIMUMS BY AIRCRAFT TYPE							
	Category A		Category B		Category C		Category D	
	Cloud Height (feet AGL)	Visibility (miles)	Cloud Height (feet AGL)	Visibility (miles)	Cloud Height (feet AGL)	Visibility (miles)	Cloud Height (feet AGL)	Visibility (miles)
ILS or LOC Runway 2								
Straight ILS	200	0.75	200	0.75	200	0.75	200	0.75
Straight LOC	497	1	497	1	497	1.25	497	1.5
Circling	492	1	492	1	572	1.5	672	2.25
RNAV (GPS) Runway 2								
LNAV MDA	291	1	297	1	297	1	297	1
Circling	492	1	512	1	532	1.5	692	2.25
RNAV (GPS) Runway 15								
LNAV MDA	402	1	402	1	402	1.25	402	1.25
Circling	492	1	512	1	532	1.5	692	2.25
RNAV (GPS) Runway 20								
LNAV MDA	552	1	552	1	552	1.5	552	1.75
Circling	552	1	552	1	552	1.5	692	2.25
RNAV (GPS) Runway 28								
LNAV MDA	613	1	613	1	613	1.75	613	2
Circling	572	1	572	1	572	1.75	692	2.25
RNAV (GPS) Runway 33								
LNAV MDA	416	1	416	1	416	1.25	416	1.25
Circling	492	1	512	1	532	1.5	692	2.25
VOR Runway 33								
Straight	416	1	416	1	416	1.25	416	1.25
Circling	492	1	512	1	512	1.5	672	2.25
VOR/DME-A								
Circling	612	1	612	1	612	1.75	672	2.25

Aircraft categories are established based on 1.3 times the stall speed in landing configuration as follows:

Category A: 0-90 knots (ex. Cessna 172)
Category B: 91-120 knots (ex. Beechcraft King Air)
Category C: 121-140 knots (ex. Beoing 737, Regional Jets, Challenger 604)
Category D: 141-166 knots (ex. Gulfstream IV)

Abbreviations:

AGL - Above Ground Level
ILS - Instrument Landing System
LOC - Localizer
GPS - Global Positioning System
LNAV - Lateral Navigation
RNAV - Area Navigation
MDA - Minimum Descent Altitude (Used for non-precision approaches)
VOR - Very High Frequency Omnidirectional Range
DME - Distance Measuring Equipment

The most sophisticated instrument approach at the airport is the ILS approach to Runway 2. The ILS Runway 2 approach provides visibility minimums as low as ¾-mile and cloud ceilings of 200 feet. Generally, this type of approach is considered the minimum for a commercial service airport. Larger medium and large hub airports will typically have even more sophisticated instrument approaches offering lower visibility minimums.

The ILS Runway 2 approach provides visibility minimums as low as ¾-mile and cloud ceilings of 200 feet.

Instrument approaches based on GPS have become very common across the country. GPS is inexpensive, as it does not require a significant investment in ground based systems by the airport or FAA. Santa Fe Municipal Airport is served by GPS approaches to each end of Runway 2-20, Runway 15-33, and Runway 28. The GPS approaches provide for visibility minimums down to one-mile with varying cloud ceiling heights. It should be noted that the GPS approaches serving Runways 15, 20, and 28 are not authorized during nighttime conditions.

The VOR Runway 33 approach utilizes the Santa Fe VORTAC facility located approximately five nautical miles to the south of the airport. This ground based facility emits frequencies that properly equipped aircraft can utilize to track to the airport.

The final published approach at the airport provides circling minimums which allows pilots the flexibility to land on the runway most closely aligned with the prevailing wind at that time. It utilizes the Santa Fe VORTAC and has a distance measuring equipment (DME) component. This circling instrument approach procedure is non-precision in nature, meaning it only provides horizontal guidance to the pilot.

DEPARTURE PROCEDURES

Departure procedures are preplanned instrument procedures which provide obstruction clearance from the terminal area to the appropriate enroute structure. These procedures can either provide obstacle clearance protection information to pilots through obstacle departure procedures (ODPs) or increase airspace efficiency and reduce communications and departure delays through standard instrument departures (SIDs). There are three departure procedures specific to Santa Fe Municipal Airport that include the Poake One Departure, Tafoy Two Departure, and Ziase Two Departure.

LOCAL OPERATING PROCEDURES

Santa Fe Municipal Airport is situated at 6,348 feet MSL. The traffic pattern at the airport is maintained to provide the safest and most efficient use of the airspace surrounding the airport. While aircraft can be expected to operate over most areas of the region, the density of aircraft operations is higher near the airport. This is the result of aircraft following the established traffic patterns for the airport. A traffic pattern is the directional traffic flow that is prescribed for aircraft landing or taking off from an airport. Essentially, the traffic pattern defines which side of the runway aircraft will operate. The traffic patterns

for Runways 2-20, 15-33, and 10-28 are published as standard left-hand patterns; however, ATCT personnel will sequence aircraft into the traffic pattern as necessary in order to maximize the safety and efficiency of the airspace system. It is common for the ATCT to utilize a right-hand traffic pattern for Runways 10, 15, and 20.

According to ATCT personnel, runway use is determined to be approximately 60 percent for Runway 2-20, 35 percent for Runway 15-33, and five percent for Runway 10-28. The traffic pattern altitude for smaller general aviation aircraft is 1,000 feet AGL. For larger general aviation jets, commercial service, and military aircraft, the pattern altitude is 1,700 feet AGL.

NOISE ABATEMENT RULES AND PROCEDURES

In an effort to reduce noise impacts in areas adjacent to Santa Fe Municipal Airport, pilots are encouraged to adhere to voluntary noise abatement procedures.

In an effort to reduce noise impacts in areas adjacent to Santa Fe Municipal Airport, pilots are encouraged to adhere to voluntary noise abatement procedures. The voluntary noise abatement program was initiated in 2001 and has been updated more recently in 2009. Airport staff has provided a list of rules and procedures to reduce the noise impacts on surrounding neighbors of the airport. **Table 1F** outlines these rules and procedures.

TABLE 1F
Voluntary Noise Abatement Program
Santa Fe Municipal Airport

➢ Safety and ATC instructions always take precedence over any voluntary noise abatement program guidelines.
➢ The Voluntary Noise Abatement Program promotes good relations between users of the airport and the surrounding community.
ALL AIRCRAFT
➢ **Voluntary Quiet Hours: 10:00 PM to 6:30 AM.** All operators should refrain from flying between 10:00 PM and 6:30 AM whenever possible. If conducting operations during this period, mission planning and conduct should include consideration and use of runways, traffic patterns, and departure and arrival procedures consistent with the intent of this noise abatement program.
➢ The City of Santa Fe and Santa Fe County contain over 300 historically significant sites. To promote site preservation, **flight over populated areas should be conducted to 2,000' AGL or higher whenever possible**.
ADDITIONAL FIXED WING PROCEDURES
➢ On departure, pilots should **climb straight ahead using best rate of climb to a minimum of 7,000' MSL** before turning on course or before turning to crosswind for practice traffic patterns. Obtaining clearance for an early turnout to avoid over-flight of noise sensitive areas is also acceptable.
➢ **Request traffic patterns that avoid flight over known noise sensitive areas**, when possible and consistent with safe operations. When conducting multiple approaches, pilots may request other runways and traffic patterns to reduce repeated noise impacts on individual locations.

TABLE 1F (Continued) Voluntary Noise Abatement Program Santa Fe Municipal Airport
➢ When there is only one aircraft in the pattern, pilots conducting multiple VFR traffic patterns during periods when the control tower is closed should attempt to **vary runways and patterns** used, consistent with safety and other operational factors.
ADDITIONAL ROTARY WING PROCEDURES
➢ Arriving and departing VFR rotary wing aircraft should **avoid over-flight of homes** within known noise sensitive areas near the airport. Maintain a **minimum of 2,000' lateral distance** from these areas whenever possible. This guideline does not preclude straight-in or practice IFR approaches in VFR conditions.
➢ The preferred runway for VFR helicopter operations is Runway 15-33.
ADDITIONAL MILITARY AND AIRLINE PROCEDURES
➢ Additional fighter/trainer aircraft should **limit practice approaches to one, followed by one additional approach to a full stop** landing.
➢ Airline **first-flight-of-the-day turboprop engine run-ups** done prior to passenger loading are to be accomplished at the **Runway 15 run-up area**.
Source: Airport Records

REGIONAL AIRPORTS

A review of public-use airports within the vicinity of Santa Fe Municipal Airport has been made to identify and distinguish the type of air service provided in the area surrounding the airport. Information pertaining to each airport was obtained from FAA Form 5010-1, *Airport Master Record*. **Exhibit 1H** provides information on public-use airports within 50 nautical miles of Santa Fe Municipal Airport.

There are seven public-use airports within a 50-nautical mile radius, as presented on the exhibit. The nearest airports to Santa Fe Municipal Airport that provide commercial airlines services are Los Alamos Airport, located 18 nautical miles to the northwest, and Albuquerque International Sunport, located 43 nautical miles to the southwest. These two facilities also offer services to general aviation aircraft.

Other general aviation airports are located in proximity to Santa Fe Municipal Airport and include Ohkay Owingeh Airport, Sandia Airpark Estates East Airport, Moriarty Airport, Double Eagle II Airport, and Las Vegas Municipal Airport. Of these, Double Eagle II Airport offers the most comparable services to general aviation aircraft when compared to Santa Fe Municipal Airport.

Even with the existence of several aviation facilities in the regional area, Santa Fe Municipal Airport is positioned well due to the full range of services it has to offer at the airport as well as in the community. In addition, it is home to one of the longest runways in the region, which allows it to support a wide range of aircraft. The vicinity airports each have unique qualities that may serve a specific segment of aviation. These factors must be considered carefully in determining the service area for Santa Fe Municipal Airport, which will be discussed in the next chapter.

LOS ALAMOS AIRPORT (LAM)

Airport NPIAS Classification ..... General Aviation
FAA Asset Study Classification ..... Local
Location from SAF ..... 18 nm NW
Elevation ..... 7,171′
Weather Reporting..... AWOS-III
ATCT ..... No
Annual Operations..... 13,640
Based Aircraft..... 57
Enplaned Passengers..... 3,801

RUNWAYS	9-27
Length	6,000′
Width	120′
Pavement Strength (lbs.)	
SWL	43,000
DWL	NA
DTWL	NA
Lighting	NA
Marking	Non-Precision
Approach Aids	PAPI-2; REILs
Instrument Approach Procedures	RNAV (GPS) - 27

Services Provided: Commercial Passenger Service, Aircraft Fuel (100LL), Aircraft Maintenance, Tiedowns, Flight Training, Aircraft Rental

OHKAY OWINGEH AIRPORT (E14)

Airport NPIAS Classification ..... General Aviation
FAA Asset Study Classification ..... Basic
Location from SAF ..... 25 nm N
Elevation ..... 5,790′
Weather Reporting..... None
ATCT ..... No
Annual Operations..... 3,300
Based Aircraft..... 5
Enplaned Passengers..... None

RUNWAYS	16-34
Length	5,007′
Width	75′
Pavement Strength (lbs.)	
SWL	18,000
DWL	NA
DTWL	NA
Lighting	MIRL
Marking	Basic
Approach Aids	None
Instrument Approach Procedures	None

Services Provided: Aircraft Fuel (100LL and Jet A), Hangars, Tiedowns

SANDIA AIRPARK ESTATES EAST AIRPORT (1N1)

Airport NPIAS Classification ..... NA (Privately Owned)
FAA Asset Study Classification ..... None
Location from SAF ..... 32 nm S
Elevation ..... 6,565′
Weather Reporting..... None
ATCT ..... No
Annual Operations..... 4,100
Based Aircraft..... 82
Enplaned Passengers..... None

RUNWAYS	9-27
Length	4,830′
Width	30′
Pavement Strength (lbs.)	
SWL	NA
DWL	NA
DTWL	NA
Lighting	LIRL
Marking	Basic
Approach Aids	None
Instrument Approach Procedures	None

Services Provided: Aircraft Fuel (100LL), Aircraft Maintenance, Tiedowns

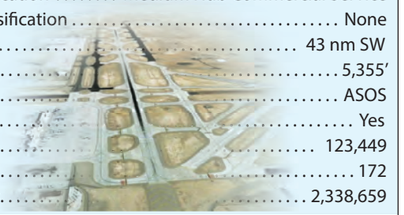
MORIARTY AIRPORT (0E0)

Airport NPIAS Classification ..... General Aviation
FAA Asset Study Classification ..... Local
Location from SAF ..... 39 nm S
Elevation ..... 6,204′
Weather Reporting..... AWOS-III
ATCT ..... No
Annual Operations..... 29,565
Based Aircraft..... 137 (100 gliders)
Enplaned Passengers..... None

RUNWAYS	8-26	18-36
Length	7,702′	6,201′
Width	75′	75′
Pavement Strength (lbs.)		
SWL	NA	30,000
DWL	NA	60,000
DTWL	NA	NA
Lighting	MIRL	None
Marking	Non-Precision	Basic
Approach Aids	None	None
Instrument Approach Procedures	None	None

Services Provided: Aircraft Fuel (100LL and Jet A), Tiedowns, Gliders

ALBUQUERQUE INTERNATIONAL SUNPORT (ABQ)

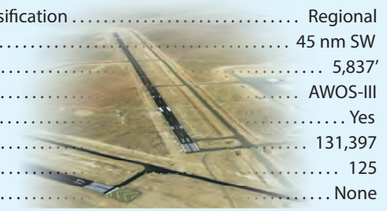


Airport NPIAS Classification ..... Medium Hub Commercial Service
FAA Asset Study Classification ..... None
Location from SAF ..... 43 nm SW
Elevation ..... 5,355′
Weather Reporting..... ASOS
ATCT ..... Yes
Annual Operations..... 123,449
Based Aircraft..... 172
Enplaned Passengers..... 2,338,659

RUNWAYS	3-21	8-26	12-30
Length	10,000'	13,793'	6,000'
Width	150'	150'	150'
Pavement Strength (lbs.)			
SWL	100,000	100,000	65,000
DWL	210,000	210,000	120,000
DTWL	360,000	360,000	155,000
Lighting	HIRL	HIRL	MIRL
Marking	Precision	Precision	Basic
Approach Aids	MALSR, PAPI-4, REILs	MALSR, PAPI-4, VASI-6, REILs	PAPI-4, REILs
Instrument Approach Procedures	ILS/LOC - 3, RNAV (GPS) - 3 RNAV (RNP) - 3,21	ILS/LOC - 8, RNAV (GPS) - 8 RNAV (RNP) - 8,26 VOR - 8	None

Services Provided: Commercial Passenger Service, Aircraft Fuel (100LL and Jet A), Aircraft Maintenance, Hangars, Tiedowns, Air Ambulance, Avionics, Cargo, Charter, Flight Instruction, Aircraft Rental

DOUBLE EAGLE II AIRPORT (AEG)



Airport NPIAS Classification ..... General Aviation Reliever
FAA Asset Study Classification ..... Regional
Location from SAF ..... 45 nm SW
Elevation ..... 5,837′
Weather Reporting..... AWOS-III
ATCT ..... Yes
Annual Operations..... 131,397
Based Aircraft..... 125
Enplaned Passengers..... None

RUNWAYS	4-22	17-35
Length	7,398′	5,993′
Width	100′	100′
Pavement Strength (lbs.)		
SWL	30,000	30,000
DWL	NA	NA
DTWL	NA	NA
Lighting	MIRL	MIRL
Marking	Precision	Non-Precision
Approach Aids	MALSR, PAPI-4	PAPI-4, REILs
Instrument Approach Procedures	ILS - 22 RNAV (GPS) - 22	None

Services Provided: Aircraft Fuel (100LL and Jet A), Aircraft Maintenance, Hangars, Tiedowns, Charter, Flight Instruction, Aircraft Rental

LAS VEGAS MUNICIPAL AIRPORT (LVS)

Airport NPIAS Classification ..... General Aviation
FAA Asset Study Classification ..... Basic
Location from SAF ..... 46 nm E
Elevation ..... 6,877′
Weather Reporting..... ASOS
ATCT ..... No
Annual Operations..... 11,350
Based Aircraft..... 9
Enplaned Passengers..... None

RUNWAYS	2-20	14-32
Length	5,006′	8,199′
Width	75′	75′
Pavement Strength (lbs.)		
SWL	20,000	20,000
DWL	NA	NA
DTWL	NA	NA
Lighting	MIRL	MIRL
Marking	Non-Precision	Non-Precision
Approach Aids	PSIL	PSIL
Instrument Approach Procedures	RNAV (GPS) - 2,20 VOR - 2,20	RNAV (GPS) - 32

Services Provided: Aircraft Fuel (100LL and Jet A), Hangars, Tiedowns

KEY

- ASOS - Automated Surface Observation System
- ATCT - Airport Traffic Control Tower
- AWOS - Automated Weather Observation System
- DWL - Dual Wheel Loading
- DTWL - Dual Tandem Wheel Loading
- HIRL - High Intensity Runway Lighting
- ILS - Instrument Landing System
- LIRL - Low Intensity Runway Lights
- LOC - Localizer
- MALSR - Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights
- MIRL - Medium Intensity Runway Lighting
- NPIAS - National Plan of Integrated Airport Systems
- PAPI - Precision Approach Path Indicator
- PSIL - Pulsating/Steady Burning Visual Approach Slope Indicator
- REIL - Runway End Identifier Lights
- RNAV - Area Navigation (GPS variant)
- SWL - Single Wheel Loading
- VASI - Visual Approach Slope Indicator
- VOR - VHF Omnidirectional Range

This page intentionally left blank

AREA LAND USE AND ZONING

The area land use surrounding Santa Fe Municipal Airport can have a significant impact on airport operations and growth.

The area land use surrounding Santa Fe Municipal Airport can have a significant impact on airport operations and growth. The following section identifies baseline information related to land use and zoning in the vicinity of the airport. By understanding the land use issues surrounding the airport, more appropriate recommendations can be made for the future of the airport.

FEDERAL LEGISLATION AND REGULATIONS

There are numerous federal laws and regulations related to airport land use compatibility. Airports that accept federal development grants are required to make every reasonable effort to comply with these laws and regulations. The following is a summary of the federal laws and regulations related to land use compatibility and zoning surrounding airports.

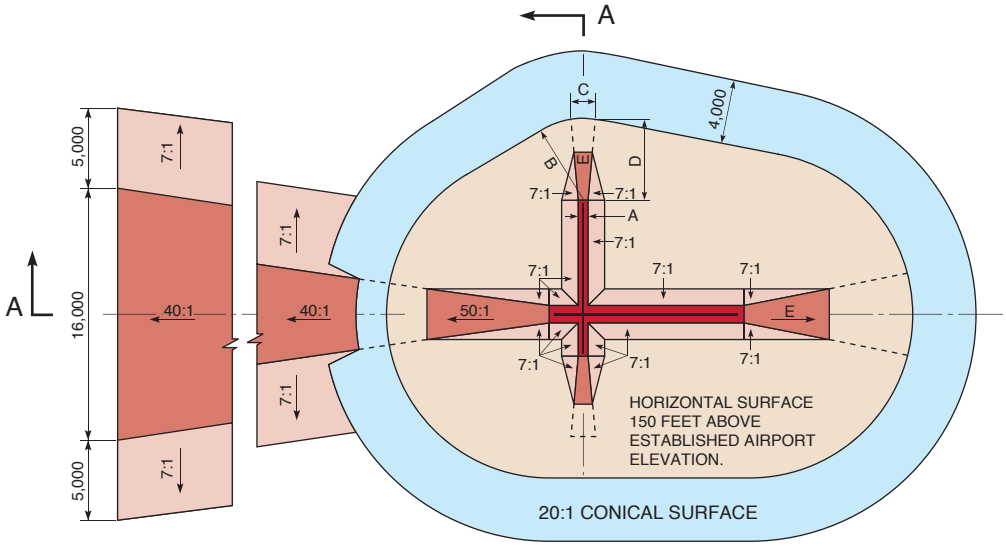
Airport and Airway Improvement Act of 1982 - United States Code (USC), Title 49

Upon acceptance of federal funds, this Act obligates the airport owners to operate and maintain the airport and comply with specific assurances, including maintenance of compatible land uses around airports. The implementation of this Act is handled through stipulations outlined in the grant documents signed by airport owners when they accept federal funds for a project.

Objects Affecting Navigable Airspace – Title 14 CFR Part 77

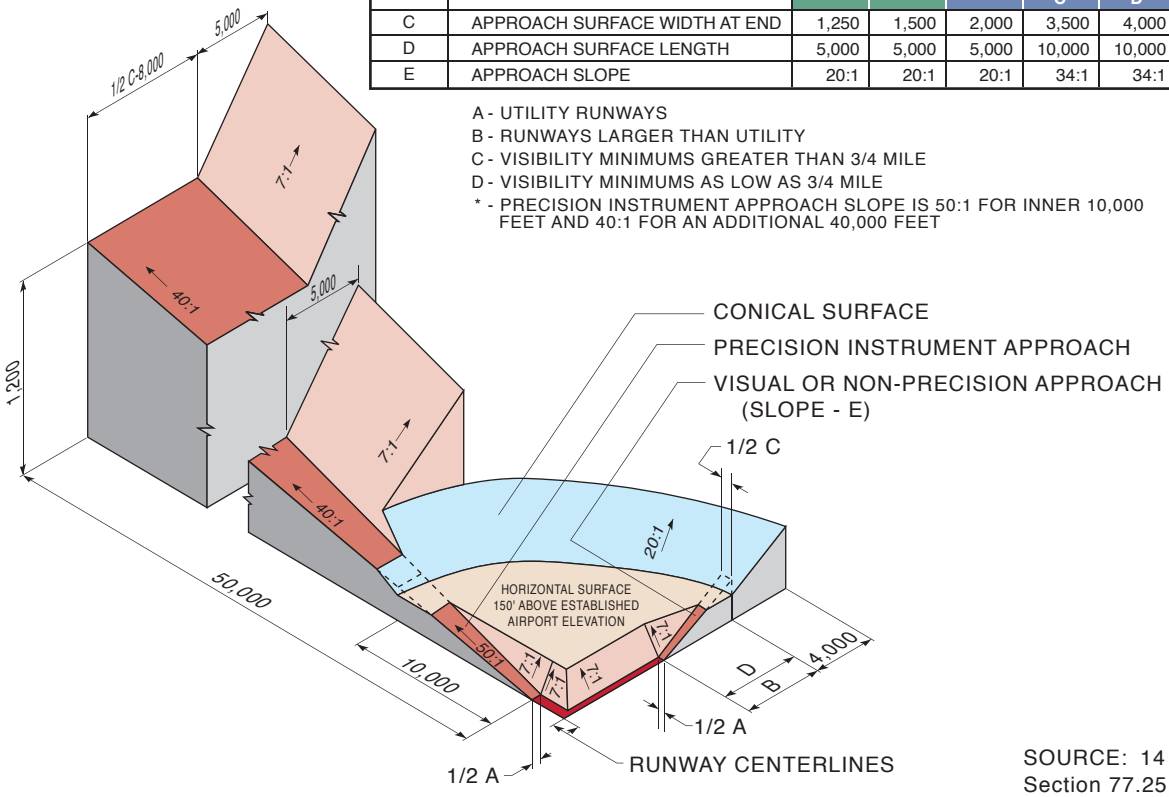
This federal regulation establishes standards for determining obstructions in navigable airspace. It sets forth requirements for construction and alteration of structures (i.e., buildings, towers, etc.). It also provides for studies of obstructions to determine their effect on the safe and efficient use of airspace, as well as providing for public hearings regarding these obstructions, along with provisions for the creation of antenna farm areas. It also establishes methods of identifying surfaces that must be free from penetration by obstructions, including buildings, cranes, cell towers, etc., in the vicinity of an airport. This regulation is predominately concerned with airspace-related issues. Implementation and enforcement of the elements contained in this regulation are a cooperative effort between the FAA and the individual state aviation agencies or the airports themselves.

The imaginary surfaces defined in Title 14 CFR Part 77 include the primary surface, transitional surface, approach surface, horizontal surface, and the conical surface. **Exhibit 1J** depicts a model example of the application of the Part 77 surfaces.



DIM	ITEM	DIMENSIONAL STANDARDS (FEET)					
		VISUAL RUNWAY		NON-PRECISION INSTRUMENT RUNWAY			PRECISION INSTRUMENT RUNWAY
		A	B	A	B		
					C	D	
A	WIDTH OF PRIMARY SURFACE AND APPROACH SURFACE WIDTH AT INNER END	250	500	500	500	1,000	1,000
B	RADIUS OF HORIZONTAL SURFACE	5,000	5,000	5,000	10,000	10,000	10,000
		VISUAL APPROACH		NON-PRECISION INSTRUMENT APPROACH			PRECISION INSTRUMENT APPROACH
		A	B	A	B		
					C	D	
C	APPROACH SURFACE WIDTH AT END	1,250	1,500	2,000	3,500	4,000	16,000
D	APPROACH SURFACE LENGTH	5,000	5,000	5,000	10,000	10,000	*
E	APPROACH SLOPE	20:1	20:1	20:1	34:1	34:1	*

A - UTILITY RUNWAYS
B - RUNWAYS LARGER THAN UTILITY
C - VISIBILITY MINIMUMS GREATER THAN 3/4 MILE
D - VISIBILITY MINIMUMS AS LOW AS 3/4 MILE
* - PRECISION INSTRUMENT APPROACH SLOPE IS 50:1 FOR INNER 10,000 FEET AND 40:1 FOR AN ADDITIONAL 40,000 FEET



ISOMETRIC VIEW OF SECTION A-A

SOURCE: 14 CFR Part 77, Section 77.25, Civil Airport Imaginary Surfaces.

Airport Noise Compatibility Planning – Title 14 CFR Part 150

This federal regulation provides guidance for controlling planning for aviation noise compatibility on and around airports. These procedures and standards are used by the airport to prepare noise exposure maps and noise compatibility programs. The Title 14 CFR Part 150 process enables communities to plan for compatible land use around airports to minimize the impact from incompatible land uses on the airport. The noise compatibility planning process is the only "regulatory" avenue available to local airport operators for addressing airport noise issues.

The Santa Fe County Sustainable Land Development Code, adopted in 2013, details the Airport Noise Overlay Zone which is intended to reduce the impact of aircraft noise on human health within the noise impact area surrounding Santa Fe Municipal Airport.

The *Santa Fe County Sustainable Land Development Code*, adopted in 2013, details the Airport Noise Overlay Zone which is intended to reduce the impact of aircraft noise on human health within the noise impact area surrounding Santa Fe Municipal Airport. The zone achieves this by limiting residential uses and by requiring noise insulation, noise disclosure statements, and noise easements, as applicable.

Airport Land Use Compatibility Planning – FAA Advisory Circular (AC) 150/5060-6

This document guides the development of a compatibility plan to ensure the environs surrounding an airport are not developed in a manner that could pose a risk to the airport's operations. This document specifically looks at land use and noise issues.

Airport Master Plans – FAA Advisory Circular (AC) 150/5070-6B

This document guides the development of airport master plans. The guiding principle of the airport planning process is to develop a safe and efficient airport through the use of acceptable standards. While there are many steps in the planning process, none of these steps should be treated in a piecemeal manner. The airside and landside issues must be equally evaluated to create a plan that provides for compatible airport and community development where possible.

A Model Zoning Ordinance to Limit Height of Objects Around Airports – FAA Advisory Circular (AC) 150/5190-4A

This advisory circular concerns itself with developing zoning ordinances to control the height of objects. It is based upon the surfaces described in Subpart C of Title 14 CFR Part 77, *Objects Affecting Navigable Airspace*. This document provides sample language and model ordinances for use by local airports.

Chapter 14 of the *Santa Fe City Development Code* includes provisions for an airport overlay zone and calls for administrative procedures to help protect height and hazard zoning within the vicinity of the airport based on the approach, transitional, horizontal, and conical surfaces outlined in Title 14 CFR Part 77. Any permit or variance granted for a structure may be so conditioned as to require the owner of the structure to install, operate, and maintain such markings and lighting as may be necessary to protect the operating environment adjacent to Santa Fe Municipal Airport. It should be noted that Article II, Section 3.4 of the *Santa Fe County Land Development Code*, adopted in 1996, establishes the same procedures in order to protect the airport.

Chapter 14 of the Santa Fe City Development Code includes provisions for an airport overlay zone and calls for administrative procedures to help protect height and hazard zoning within the vicinity of the airport based on the approach, transitional, horizontal, and conical surfaces outlined in Title 14 CFR Part 77.

Airport Design - Advisory Circular (AC) 150/5300-13A

This document provides the basic standards and recommendations for airport design. Topics include various runway and taxiway safety areas, the runway protection zones, threshold siting surfaces, runway length, and facility separation standards.

Grant Assurances

Pursuant to the provisions of Title 49, U.S.C., subtitle VII, as amended, assurances are required to be submitted as part of a project application by sponsors requesting funds. Upon acceptance of the grant offer by the sponsor, these assurances are incorporated in, and become part of, the grant agreement. There are 39 grant assurances, several of which address airport planning. The following are the primary land use compatibility grant assurances:

- Grant Assurance 21 requires, in part, that the sponsor:

  "…take appropriate action, to the extent reasonable, including the adoption of zoning laws, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft."

- Grant Assurance 20 relates to an airport sponsor's obligation for hazard removal and mitigation to address potential obstructions to the airspace around the airport. Grant Assurance 20 states that the airport sponsor will:

  "…take appropriate action to assure that such terminal airspace as is required to protect instrument and visual operations to the airport (including established minimum flight altitudes) will be adequately cleared and protected by removing, lowering, relocating, marking, or lighting or otherwise

mitigating existing airport hazards and by preventing the establishment or creation of future airport hazards."

LAND USE AND ZONING

Under ideal conditions, the development immediately surrounding an airport would be controlled and limited to compatible land uses. Compatible land uses would include light and heavy industrial development and some commercial development. Land use zoning is the most common land use control. The City of Santa Fe and Santa Fe County have in place a zoning plan for areas adjacent to Santa Fe Municipal Airport.

The City of Santa Fe and Santa Fe County have in place a zoning plan for areas adjacent to Santa Fe Municipal Airport.

Exhibit 1K depicts the current zoning for the City of Santa Fe. Additional zoning outside the city limits is under the land use planning jurisdiction of Santa Fe County. As indicated on the exhibit, the area immediately northeast of the airport is zoned Industrial/Mining. The wastewater treatment facility located north of the airport is contained in an area zoned Public Facilities/Institutional. Portions of land adjacent to the east side of the airport are zoned Commercial. The majority of property adjacent to the south and west sides of the airport are zoned for residential land uses, with a small area to the west zoned as Parks and Recreation.

Currently, most of the land north and northwest of the airport is undeveloped and associated with the Santa Fe River and its floodplain. To the west of the airport is the Santa Fe Equestrian Center. South and southwest of the airport are the communities of La Cieneguilla and La Cienega. These communities are primarily one acre or larger rural residences in areas that have traditionally been used for agriculture. East and northeast of the airport are development areas under the jurisdiction of the City of Santa Fe. Industrial-related development occupies much of the area northeast of the airport, and commercial land uses are located adjacent to State Highway 599. Residential land uses are located farther east of the highway.

The City of Santa Fe's future land use map is shown on **Exhibit 1L**. The airport is shown as Public/Institutional. Land between the airport and State Highway 599 are primarily designated as Business Park and Industrial. One area of Community Commercial is also called out on the east side of the airport. Land to the south, west, and north of the airport lies within the unincorporated area of Santa Fe County.

It should be noted that the *Santa Fe General Plan* (1999) has five implementing policies related to the airport that include the following:

- Policy 6-5-I-1 states that a "Santa Fe Municipal Airport Environs Map" should be prepared and that aviation activity and aviation needs should be monitored to determine if airport growth should continue to be limited and to determine if appropriate restrictions should be placed on surrounding land uses.

- Policy 6-5-I-2 calls for a noise study to be undertaken.
- Policy 6-5-I-3 requires that effective surface transportation linkages to the airport be maintained.
- Policy 6-5-I-4 relates to the annexation of the airport and surrounding land.
- Policy 6-5-I-5 talks about whether or not private airports should be allowed in the region.

Several of these policies have since been implemented, including the annexation of the airport, the preparation of a noise study and resultant noise contours, and the preparation of an Airport Master Plan and subsequent updates.

SOCIOECONOMIC CHARACTERISTICS

Socioeconomic characteristics are collected and examined to derive an understanding of the dynamics of growth within the vicinity of Santa Fe Municipal Airport. This information is essential in determining aviation demand level requirements, as most general aviation demand can be directly related to the socioeconomic condition of the area. Statistical analysis of population, employment, and income trends can define the economic strength of the region and the ability of the region to sustain a strong economic base over an extended period of time.

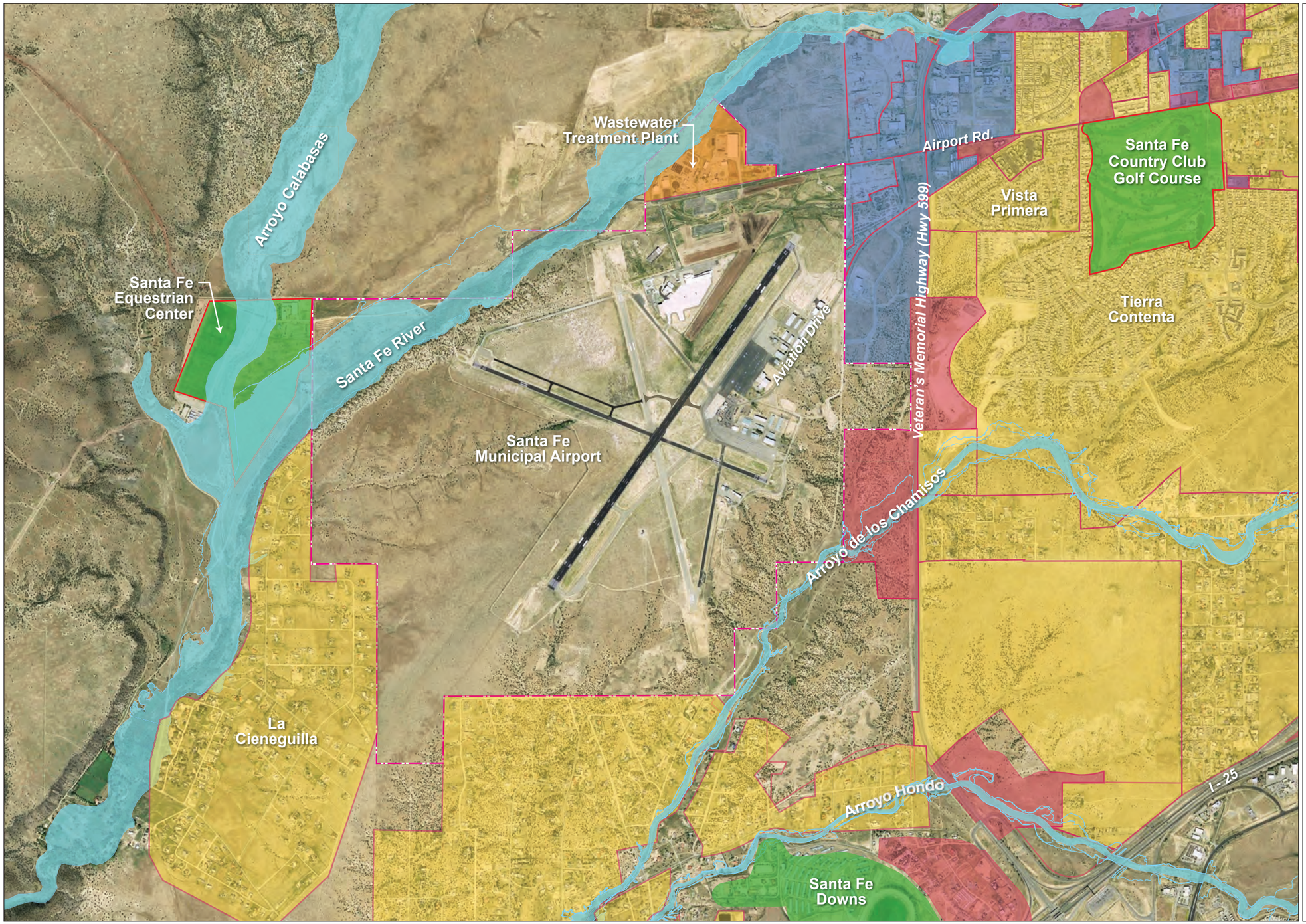
Whenever possible, local or regional data is used for analysis. For this study, socioeconomic data was gathered from various sources, including the University of New Mexico Bureau of Business and Economic Research, Bureau of Economic Analysis, United States Census Bureau, and Woods & Poole Complete Economic and Demographic Data. It should be noted that only historical figures are presented in this section. Future socioeconomic projections will be outlined in Chapter Two.

POPULATION

Population is one of the most important socioeconomic factors to consider when planning for future needs of an airport. Trends in population provide an indication of the potential of the region to sustain growth in aviation activity. Historical population data for the City of Santa Fe is presented in **Table 1G**. Additional population data for the Santa Fe County/MSA, the State of New Mexico, and the United States is also included.

As shown in the table, all reporting entities have experienced positive growth in population since 2000. During this time, the population of the City of Santa Fe has increased at an average annual growth rate (AAGR) of 1.01 percent. This translates to the addition of approximately 9,200 new residents. The Santa Fe County/MSA and the State of New Mexico experienced slightly higher AAGRs of 1.05 percent and 1.06 percent, respectively, during the same time period.

As a point of comparison, the United States population grew at 0.87 percent. These positive growth trends have been attributed to the availability of affordable quality homes, excellent educational institutions, and enjoyable recreational amenities.



LEGEND

- Residential
- Commercial
- Industrial / Mining
- Parks and Recreation
- Public Facilities / Institutional
- Floodplain
- Airport Property Line

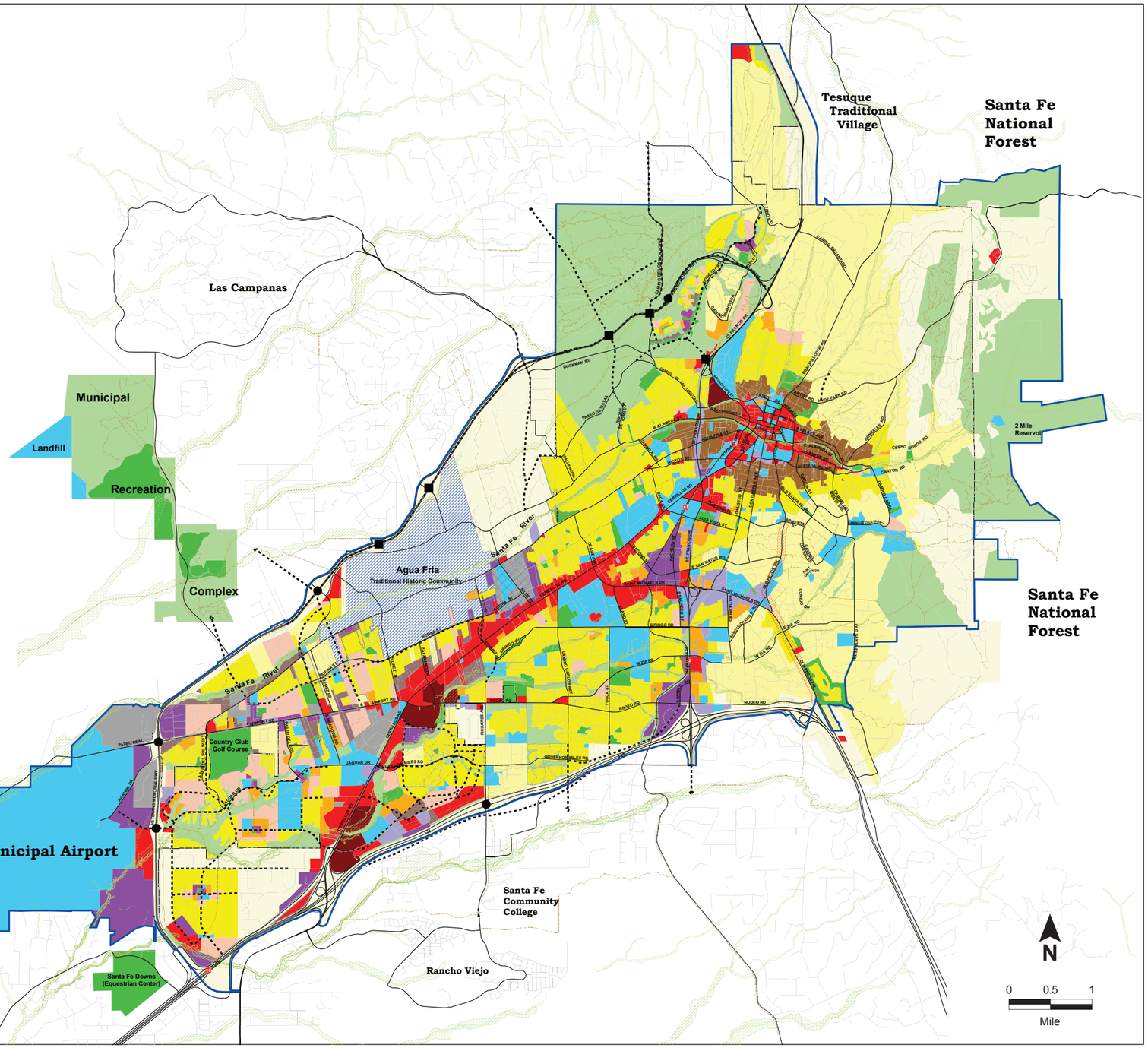
N
W E
S

Source: City of Santa Fe, GIS mapping

Photo Source: Google Earth 10/4/13
Photo edited to show parallel taxiway F

Exhibit 1K
EXISTING ZONING

This page intentionally left blank



LEGEND

Future Land Use

Residential

- 1 dwelling per acre
- 1-3 dwellings per acre
- 3-7 dwellings per acre
- 7-9 dwellings per acre
- 7-12 dwellings per acre
- 12-29 dwellings per acre

Commercial, Institutional & Industrial

- Regional Commercial
- Community Commercial
- Neighborhood Center
- Transitional Mixed Use
- Business Park
- Office
- Industrial
- Public/Institutional

Parks & Open Space

- Open Space
- Parks
- Natural Drainage Ways
- Siler Road Redevelopment District
- Old Pecos Trail Scenic Corridor
- Urban Area Boundary
- Trails
- Roads Proposed
- AT&SF Rail Road
- NM Rail Runner Stations
- Relief Route Over/Underpass Locations
- Proposed Interchange Locations

Printing Date: Tuesday, June 25, 2013 10:57am
ASD/ITT/GIS City of Santa Fe
200 Lincoln Ave./P.O. Box 909
Santa Fe, NM 87504-0909
Phone (505)955-6490 Email - gis@santafenm.gov
Prepared By: FD/ITT/GIS
Coordinate System:
NAD 1983 State Plane New Mexico Central FIPS 3002 Feet
Datum: North American 1983
Disclaimer: This information is for reference only. The City of Santa Fe assumes no liability for errors associated with the use of this data. Users are solely responsible for confirming data accuracy when necessary. Illustrative purposes only.

Source: City of Santa Fe Future Land Use
Adopted by City Council Resolution 1999-45
April 14,1999 as amended

Exhibit 1L
FUTURE LAND USE

This page intentionally left blank

TABLE 1G
Historical Population Statistics

	2000	2005	2010	2014	Average Annual Growth Rate
City of Santa Fe	61,109	66,983	68,161	70,297	1.01%
Santa Fe County/MSA	129,713	137,610	144,508	150,061	1.05%
State of New Mexico	1,821,204	1,932,274	2,059,192	2,110,540	1.06%
United States	282,162,411	295,516,599	309,326,295	318,698,773	0.87%

Source: U.S. Census Bureau; University of New Mexico Bureau of Business and Economic Research

EMPLOYMENT

Analysis of a region's employment base can be valuable in determining the overall well-being of the general area. In most cases, the area's makeup and health is significantly impacted by the availability of jobs, variety of employment opportunities, and types of wages provided by local employers. **Table 1H** provides historical employment characteristics from 2000 to 2014 in three analysis categories, including the Santa Fe County/MSA, State of New Mexico, and United States.

TABLE 1H
Historical Employment Statistics

	2000	2005	2010	2014	Average Annual Growth Rate
Santa Fe County/MSA	80,855	87,701	86,514	88,808	0.67%
State of New Mexico	961,571	1,049,640	1,059,190	1,098,762	0.96%
United States	165,370,927	172,557,295	173,044,746	185,151,833	0.81%

Source: Woods & Poole Complete Economic Demographic Data (2015)

Total employment in the region has grown at less than one percent annually since 2000. Between 2005 and 2010, the Santa Fe County/MSA experienced negative growth. This can be attributed to the economic recession that the United States experienced during that timeframe. Since 2010, the region has been experiencing positive trends in employment similar to the pre-2005 timeframe.

Although the recent downturn in the economy has affected the employment base, the greater area continues to sustain an economy that provides a variety of employment options serving multiple industries. Locally, the City of Santa Fe is a center of commerce for the region. Santa Fe is a hub for retail shopping, medical facilities, industry, government, casinos, opera, art, cultural festivals, and much more. The major employers in Santa Fe County are presented in **Table 1J**. Understanding the types of employment opportunities will aid in identifying demand for aviation services in the area.

TABLE 1J
Major Employers
Santa Fe County

Employer	Description	Employees
State of New Mexico	Government	19,749
Los Alamos National Laboratory	Security, Exploration, Energy	10,086
Christus St. Vincent Regional Medical Center	Health Services	2,021
Federal Government	Government	1,750
Santa Fe Public Schools	Education	1,708
City of Santa Fe	Government	1,513
Santa Fe Community College	Education	943
Santa Fe County	Government	846
Peters Corporation	Property Management	730
Hilton - Buffalo Thunder Resort and Casino	Recreation	700

Source: Santa Fe Chamber of Commerce

PER CAPITA PERSONAL INCOME

Table 1K presents the per capita personal income (PCPI) for the Santa Fe County/MSA since 2000. The PCPI for the State of New Mexico and United States is also provided for this time period. PCPI is determined by dividing the total income by population. In order for PCPI to grow, income growth must outpace population growth significantly. As shown in the table, the region has experienced positive growth in PCPI since 2000. Similar to employment trends, the PCPI decreased during the recession, but has returned to positive growth in recent years.

TABLE 1K
Historical Per Capita Personal Income (adjusted to 2009 dollars)

	2000	2005	2010	2014	Average Annual Growth Rate
Santa Fe County/MSA	$38,537	$43,235	$40,516	$41,945	0.61%
State of New Mexico	$28,169	$31,543	$32,636	$34,111	1.38%
United States	$36,794	$38,899	$39,492	$42,365	1.01%

Source: Woods & Poole Complete Economic Demographic Data (2015)

SUMMARY

This chapter has presented comprehensive data related to the airport, the community, and surrounding area. This information provides the foundation upon which the remaining elements of the Master Plan can be accomplished and is important to forecast future aviation activity and facility needs.

DOCUMENT SOURCES

A variety of different sources were utilized in the inventory process. The following listing reflects a partial compilation of these sources. This does not include data provided by airport management as part of their records, nor does it include airport drawings or photographs which were referenced for information. On-site inventory and interviews with airport staff and tenants contributed to the inventory effort.

Airport/Facility Directory, Southwest, U.S. Department of Transportation, Federal Aviation Administration, National Aeronautical Charting Office, June 2015.

Albuquerque Aeronautical Chart, U.S. Department of Transportation, Federal Aviation Administration, National Aeronautical Charting Office, October 2014.

National Plan of Integrated Airport Systems (NPIAS), U.S. Department of Transportation, Federal Aviation Administration, 2015-2019.

U.S. Terminal Procedures, Southwest, U.S. Department of Transportation, Federal Aviation Administration, National Aeronautical Charting Office, June 2015.

New Mexico Airport System Plan Update 2009. Prepared by Wilbur Smith Associates.

Woods & Poole Economics, *The Complete Economic and Demographic Data Source, 2015*.

A number of internet websites were also used to collect information for the inventory. These include the following:

U.S. Census Bureau
http://www.census.gov

Bureau of Economic Analysis, U.S. Department of Commerce
http://www.bea.gov

University of New Mexico Bureau of Business and Economic Research
http://bber.unm.edu/

City of Santa Fe
http://www.santafenm.gov

Santa Fe County
http://www.santafecountynm.gov

FAA Terminal Area Forecast (January 2015)
https://aspm.faa.gov/main/taf.asp

FAA 5010 Data:
http://www.airnav.com
http://www.gcr1.com/5010Web

New Mexico Department of Transportation – Aviation Division
http://www.dot.state.nm.us/en/Aviation.html

United States Department of Transportation – Bureau of Transportation Statistics
http://www.transtats.bts.gov/Data_Elements.aspx?Data=1