

Airport Master Plan Montgomery-Gibbs Executive Airport

Draft Working Paper 1— Inventory, Surveys, & Data Collection July 2017

Prepared by:



Table of Contents

1.1	Introduction	1
1.2	Background	2
	Airport System Planning Role Airport History Airport Setting Airport Overview Surrounding Airports	
1.3	Population Data	10
	Population Trends	
1.4	Airport Activity and Organizational Structure	11
	Ownership and Operations Policies and Plans Airport Economic Benefits Existing and Historical Aircraft Operations Historical and Existing Based Aircraft Fleet Mix and Critical Aircraft	12 13 14 15
1.5	Regional Setting and Land Use	17
	Land Use Zoning Montgomery-Gibbs Executive Airport ALUCP Community Plans Climate and Topography Wind Coverage	
1.6	Airside Facilities	
	Runways Displaced Threshold Safety Areas and Object Free Areas Runway Protection Zones Lighting and Navigational Aids (NAVAIDS) Instrument Approach Procedures and Electronic Aids to Navigation Additional Equipment Aircraft Hangars and Parking Areas Airfield Signage and Markings Airspace and Air Traffic Control Noise Abatement Procedures	
1.7	Support Facilities	
	Fixed Base Operators (FBO) Aircraft Fueling Aircraft Maintenance Air Charter Services Flight Instruction and Flying Clubs Emergency Services Additional Facilities	



1.8	Landside Facilities	39
	Airport Administration Building Hotel Restaurant Access, Circulation and Parking Utilities	
	Hotel Restaurant	
	Access, Circulation and Parking	40 40
	Utilities	40
1.9	Stakeholder Feedback	41
1.10) Key Considerations	42
	Airside Airspace Landside	42
	Airspace	42
	Landside	42
	Environmental Other Concerns and Considerations	
	Other Concerns and Considerations	

Figures

- Figure 1.1 Airport History
- Figure 1.2 Airport Local Setting
- Figure 1.3 Regional Access Routes
- Figure 1.4 Local Access
- Figure 1.5 Existing Facilities
- Figure 1.6 Airspace Environment & Adjacent Airports
- Figure 1.7 San Diego and Surrounding County Populations
- Figure 1.8 San Diego County Population Forecast
- Figure 1.9 Existing Operations Split by Class
- Figure 1.10 Historical and Existing General Aviation Operations
- Figure 1.11 Historical and Existing Air Taxi and Military Operations
- Figure 1.12 Historical Based Aircraft
- Figure 1.13 Surrounding Land Use
- Figure 1.14 Surrounding Zoning
- Figure 1.15 Runway Wind Coverage
- Figure 1.16 MYF Airfield
- Figure 1.17 Plan and Profile Views of an Example Displaced Threshold
- Figure 1.18 Airspace Classification
- Figure 1.19 Airspace Environment
- Figure 1.20 Historic Fuel Sales by Type (Gallons)

Tables

- Table 1.1 Surrounding Public-Use and Military Airports
- Table 1.2 Airport Tenants and Services Provided
- Table 1.3 Airport Management Documents
- Table 1.4 Based Aircraft Characteristics
- Table 1.5 Transient Aircraft Characteristics
- Table 1.6 Public Facilities within 1/2 Mile of MYF
- Table 1.7 Temperature and Precipitation
- Table 1.8 Runway System Characteristics
- Table 1.9 Taxiway Width
- Table 1.10 Runway and Taxiway Safety Area Dimensions (per Standards)
- Table 1.11 MYF Runway Protection Zones (RPZ) (per Standards)
- Table 1.12 Runway Lighting
- Table 1.13 MYF IAPs and Minimums
- Table 1.14 Aircraft Hangars and Parking Areas
- Table 1.15 City-Owned Vehicles and Equipment
- Table 1.16 Public Parking at MYF



1.1 Introduction

The City of San Diego owns and operates two General Aviation (GA) airports in San Diego County – the Montgomery–Gibbs Executive Airport and Brown Field Municipal Airport. The City is preparing an Airport Master Plan for each of the facilities in order to establish a long–term plan by determining the extent, type and schedule of development needed. The Federal Aviation Administration (FAA) offers a number of objectives as a guide in the preparation of a master plan:

- Understand the issues, opportunities and constraints of the airport
- Consider the impact of recent national and local aviation trends
- Identify the capacity of airport infrastructure
- Determine the need for new improvements
- Estimate costs and identify potential funding sources
- Develop a schedule for implementation of proposed projects
- Comply with federal, state and local regulations

The Airport Master Plan will include a report of existing and future conditions, an Airport Layout Plan (ALP) and a schedule of priorities and funding sources for proposed improvements. This Working Paper documents the first step in the Airport Master Plan for Montgomery–Gibbs Executive Airport (hereafter referred to by its FAA identifier of "MYF" or "the Airport"), which involves gathering and organizing information on existing conditions of the Airport and the surrounding community. The Working Paper provides a summary of existing Airport facilities, air traffic activity and the surrounding airspace environment. Additionally, general information regarding the Airport's setting in the community and the larger aviation network is provided. This includes local economic and development characteristics, weather and environmental conditions, and the demographics of the surrounding area. The information obtained in this first step of the master planning process will provide a foundation for subsequent analysis.

Unless otherwise indicated, all photographs in this document were taken by C&S Engineers, Inc. 2017.





1.2 Background

Airport System Planning Role

Airport planning occurs at the national, state, regional, and local level. The following section identifies the Airport's role based on previous reports, with the goal of the master planning process to guide planning practices at the local level.

The Airport is included in the National Plan of Integrated Airport Systems (NPIAS), which identifies airports that are significant to the national air transportation system and therefore eligible for grant funding under the Federal Aviation Administration's Airport Improvement Program (AIP). The NPIAS 2017–2021 Report, produced by the U.S. Department of Transportation (DOT), documents the projected facility improvements and needs for 3,332 existing and eight proposed airports. It estimates that \$32.5 billion in infrastructure development will be eligible for federal aid over the next five years. In administering funding, the FAA uses the NPIAS, which supports the FAA's strategic goals for safety, system efficiency, and environmental compatibility by identifying the specific airport improvements that will contribute to achievement of those goals.

Due to MYF's proximity to downtown San Diego and the large population served, it is classified by the NPIAS as a regional reliever airport. A reliever airport is one that is in place to accommodate overflow and general aviation traffic that would otherwise cause congestion at a neighboring airport, in this case San Diego International (SAN). Approximately 530, or 16 percent of the airports in the NPIAS, are classified as regional and they account for 12.2 percent of the cost of the AIP. The Airport is one of 151 regional airports classified as a reliever to a primary airport, and one of only six regional relievers to have more than 400 based aircraft¹. The closest regional reliever airport with a comparable number of based aircraft is Whiteman Airport in Los Angeles, California, approximately 125 miles to the northwest. For the first five years of the planning period (through 2021), MYF is projected to remain a regional reliever and require an estimated \$18,288,889² for developments.

At the state level, the California Aviation System Plan 2010 System Needs Assessment identified MYF as the only Metropolitan General Aviation Airport in San Diego County. Enhancements recommended in the plan include a 423-foot runway extension and an increase in weight-bearing capacity.

The San Diego County Regional Airport Authority (SDCRAA) developed the Regional Aviation Strategic Plan (RASP) in 2010 and 2011 to take a comprehensive look at the civilian airports in the San Diego County region. The RASP explored a scenario that proposed to preserve SAN's Airfield capacity for commercial passenger service by making improvements and accommodating GA traffic at Gillespie Field Airport, MYF, and Brown Field Municipal Airport. The improvements at the Airport would include a new Fixed Base Operator (FBO) as well as new corporate aircraft hangars. One issue with this scenario is that the existing runway length at MYF is incapable of handling many high-end corporate GA aircraft³.

Airport History

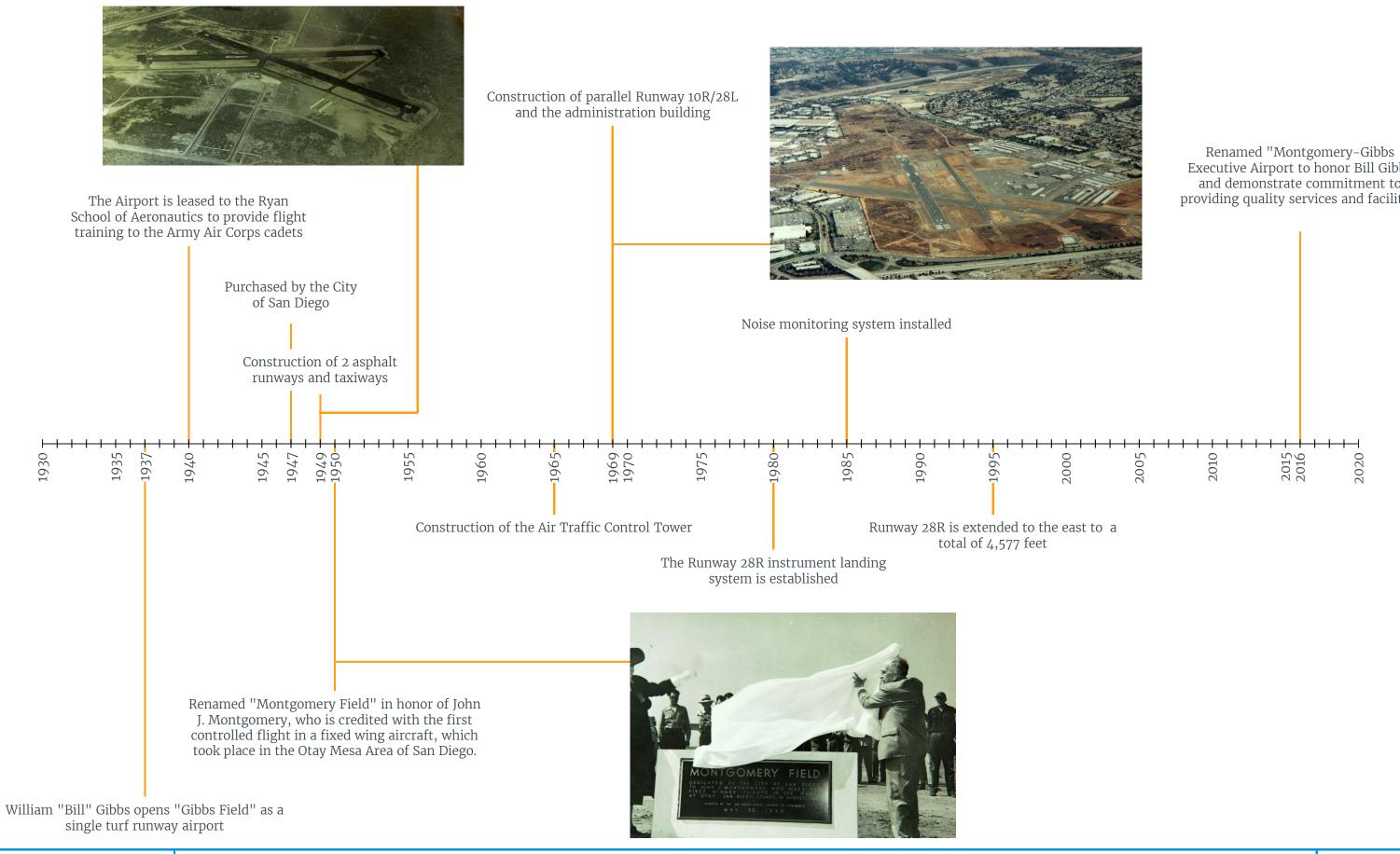
Montgomery-Gibbs Executive Airport was founded in 1937 by William "Bill" Gibbs as a single runway, turf airfield. Through the years, it has changed names several times, expanded, and grown into one of the largest GA reliever airports in the U.S. Some of the highlights the Airport's history are presented on **Figure 1.1**.

2 United States of America. U.S. Department of Transportation. Federal Aviation Administration. National Plan of Integrated Airport Systems (NPIAS) Report Airports 2017-2021. N.p., n.d. Web. 14 Mar. 2017.

3 San Diego Regional Airport Authority, (2010) Regional Aviation Strategic Plan



¹ Based aircraft are defined as those stored at an airport and not transient.



SD Airports

Figure 1.1

Airport History

Montgomery-Gibbs Executive Airport Master Plan

Executive Airport to honor Bill Gibbs and demonstrate commitment to providing quality services and facilities



Airport Setting

The Airport is located approximately six miles north of downtown San Diego, California, 20 miles south of Escondido, California, 11 miles west of El Cajon, California, and 22 miles north of Tijuana, Mexico. The regional setting and access routes are depicted on **Figure 1.3** on the following page.

The Airport is located in southwest San Diego County, in the Kearny Mesa community planning area. It is the closest GA airport to downtown San Diego. It is easily accessible via Interstates 5 and 15 from the north and south and by Interstate 8 from the east and west. The Airport's local setting is shown on **Figure 1.2**.

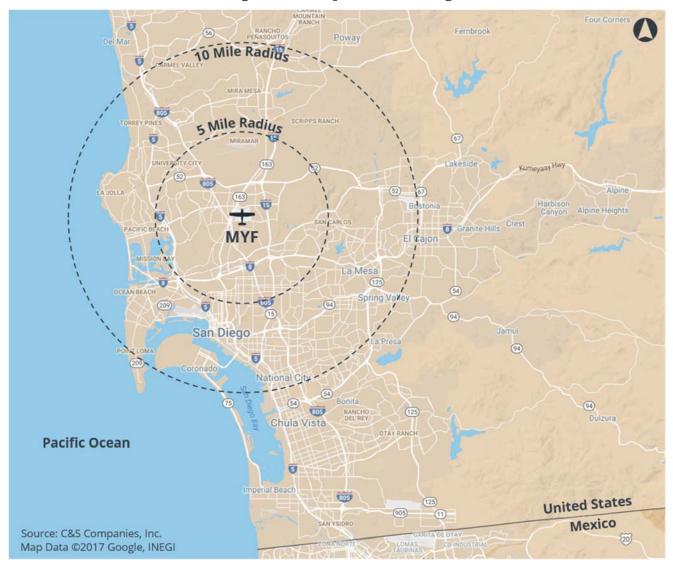


Figure 1.2 – Airport Local Setting

The Airport is situated on 549-acres bound by Balboa Avenue to the north, Ruffin Road to the east, Aero Drive to the south, and Kearny Villa Road to the west. It is directly in-between State Route 163 on the west and Interstate Route 15 to the east. Local access to the Airport is depicted on **Figure 1.4**. The Airport primarily serves the west central area of San Diego County.



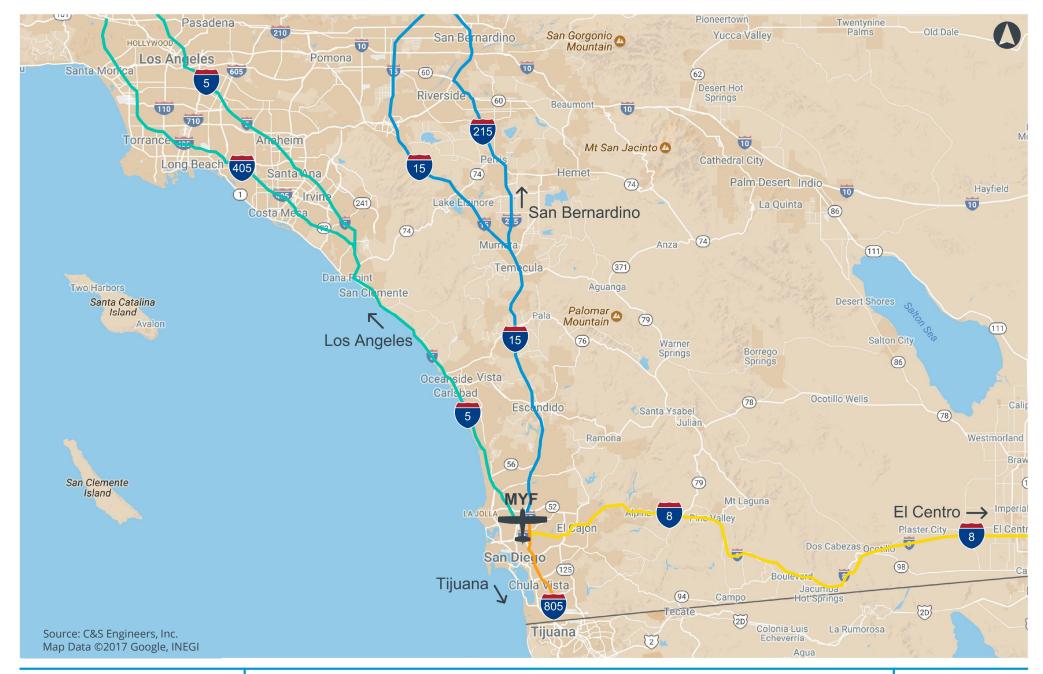




Figure 1.3 Regional Access Routes



Montgomery-Gibbs Executive Airport Master Plan



Figure 1.4 – Local Access

Airport Overview

The Airport consists of multiple facilities that can be categorized into the following components:

Airside: The airside consists of three runways (Runways 10L/28R, 10R/28L, and 5/23) and 12 taxiways, including a full parallel taxiway serving Runways 10L/28R and 10R/28L. In addition to the runways and taxiways there are several aircraft run-up areas, a helicopter landing area, and various

navigational aids (NAVAIDS). The airside also includes aircraft parking aprons, tie-downs, T-hangars, conventional hangars, and the FAA Airport Traffic Control Tower (ATCT).

Landside: Landside facilities at the Airport include the administration building which is made up of offices for both the airport staff and a number of City employees that work for the Airports Division. This building provides the general public with a lounge on the first floor and a restaurant located on the second floor.

Support Facilities: Support facilities include those relating to aircraft maintenance, refueling, flight instruction, and aircraft sales. Most of the services are provided by FBOs at the Airport.

Figure 1.5 illustrates the existing facilities at the Airport, which are discussed in subsequent sections of this Working Paper.



MYF ATCT









Montgomery-Gibbs Executive Airport Master Plan

Figure 1.5 Existing Facilities

To be completed after aerial survey is available



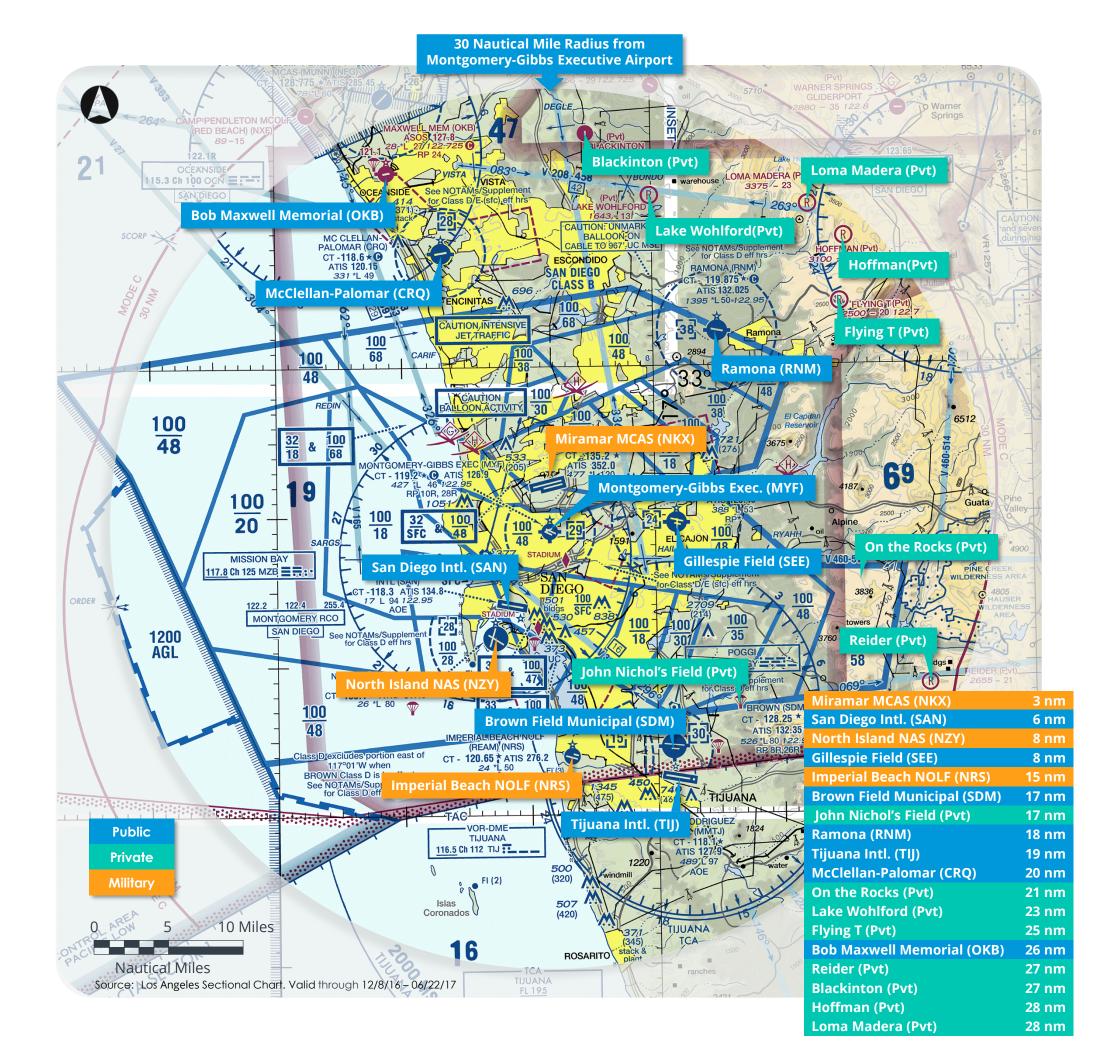
Surrounding Airports

There are three military, six private, and seven public-use airports that are within a 30-nautical mile (NM) radius of the Airport. The locations of the surrounding airports and associated airspace are depicted on **Figure 1.6**. Descriptions of the surrounding public-use and military airports are included in **Table 1.1**. The nearest medium to large-hub commercial service airports outside of the 30-NM radius are John Wayne Airport, 63 NM to the northwest, and Los Angeles International Airport 93 NM to the northwest.

Airport Name (Location Identifier) OwnershipLocation Distance from MYFNPIAS ClassificationRunway Hea Runway Dime (Surface Two	ensions
(bulldet i)	
Miramar MCAS (NKX)*San Diego, CAN/A6L/24R: 12,000Marine Corps Air Station3 NM north(Military)6R/24L: 8,001(Porous Europe)	te) RNAV (GPS), l' x 200' TACAN,
San Diego International (SAN) San Diego County Regional Airport AuthoritySan Diego, CA 6 NM southwestPrimary 	
North Island NAS (NZY)*San Diego, CAN/A18/36: 8,001'Naval Air Station8 NM southwest(Military)11/29: 7,501'(Porous Europe(Porous Europe)	ean Mix) RNAV (GPS), x 200' VOR, TACAN,
Gillespie Field (SEE)El Cajon, CANational/9L/27R: 5,342 (AsphaltCounty of San Diego8 NM eastReliever(Asphalt9R/27L: 2,738 (Asphalt	t) x 100' RNAV (GPS), t) LOC 8' x 60'
Imperial Beach NOLF (NRS)*Imperial Beach, CAN/A8/26: 2,240'Naval Outlying Field15 NM south(Concret9/27: 4,997'(Porous Europer)	te) TACAN x 336'
Brown Field Municipal (SDM)San Diego, CANational/ (Asphalt-Con 17 NM southeast8L/26R: 7,972 (Asphalt-Con 8R/26L: 3,180 (Asphalt	ncrete) RNAV (GPS), o' x 75' VOR-A
Ramona (RNM)Ramona, CARegional/9/27: 5,001'County of San Diego18 NM northeastReliever(Asphalt	
Tijuana International (TIJ)Tijuana, MexicoN/A9/27: 9,711'Mexico19 NM southeast(Foreign)(Asphalt	
McClellan-Palomar (CRQ) County of San DiegoCarlsbad, CA 20 NM northwestPrimary/ Nonhub6/24: 4,897' 	x 150' ILS, LOC, RNAV (GPS), VOR-A
Bob Maxwell Memorial (OKB) City of OceansideOceanside, CA 26 NM northwestLocal/GA6/24: 2,712' (Asphalt* Military facility non public use * Source: EAA Airfield Eacility Directory (t) GPS, VOR-A

* Military facility, non-public-use, Source: FAA Airfield Facility Directory (AFD)







Montgomery-Gibbs Executive Airport

Airports having <u>Control Towers</u> are shown in <u>Blue</u>, all others in <u>Magenta</u>. Consult Chart Supplement for details involving airpor lighting, navigation aids, and services. All times are local. For additional symbol information refer to the Chart User's Guide.

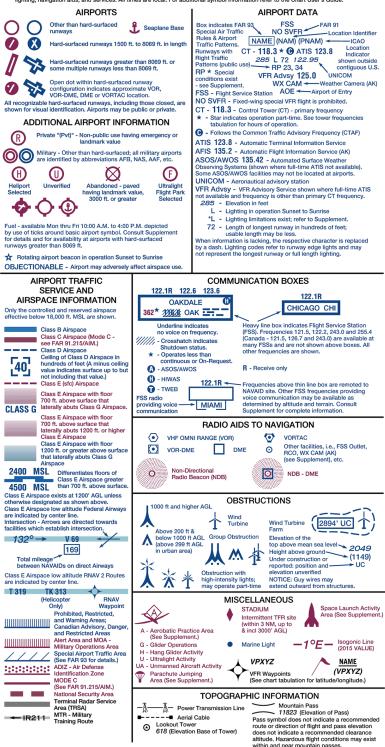


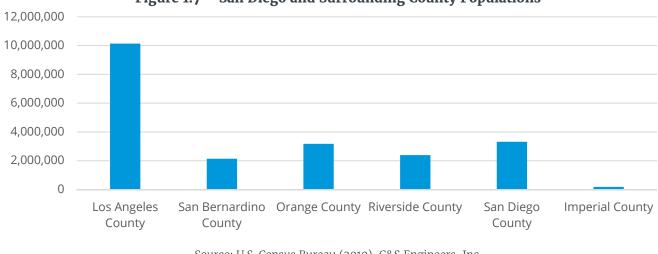
Figure 1.6 Airspace Environment & Adjacent Airports

1.3 Population Data

This section provides background on the socioeconomic characteristics of the area surrounding the Airport.

Population Trends

San Diego is the second most populous county in California, second only behind Los Angeles County. Population levels in 2016, estimated by the United States Census Bureau for both San Diego County and the surrounding counties, are presented on **Figure 1.7**.





Source: U.S. Census Bureau (2010), C&S Engineers, Inc.

The San Diego County Economic Forecast produced by the California Department of Transportation estimates that the population of San Diego County will increase by 597,740 people in the 20-year period from 2017 to 2037. This would bring the total population to 3,936,040. The forecasted increase is presented on **Figure 1.8**.

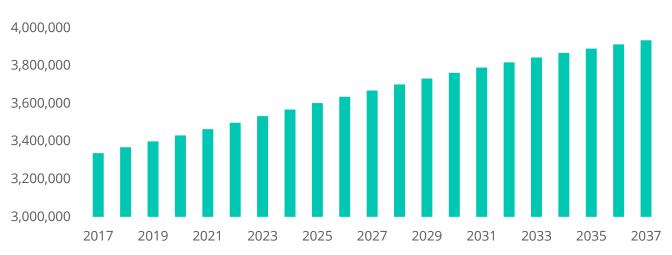


Figure 1.8 – San Diego County Population Forecast

Source: California Department of Transportation, (2016) San Diego County Economic Forecast, C&S Engineers, Inc.



1.4 Airport Activity and Organizational Structure

Ownership and Operations

Montgomery-Gibbs Executive Airport is a public-use airport owned and operated by the City of San Diego. The Airports Division is a branch of the City's Real Estate Assets Department and oversees the operations at City owned airports. The Airport is home to a number of facilities, including two FBO's, that are owned or leased by tenants. They provide a variety of services such as aircraft maintenance, refueling, flight training, hangar rentals, air charter, and medical transport. **Table 1.2** lists the current tenants at the Airport as well any services they provide.

Tenant Name	Service Provided
San Diego Police Air Support Unit	Air Support, Surveillance, Aerial Security, Search and Rescue
Advanced Aircraft Services	Aircraft Maintenance
Spiders Aircraft Service	Aircraft Maintenance
Coast Aircraft	Aircraft Maintenance, Hangar Rental, tie-downs
Aviation Unlimited	Aircraft Sales
San Diego Air Tours	Biplane Rides
Crownair Aviation (FBO)	Full Service 100LL/Jet-A, Self Service 100LL, Aircraft Maintenance, tie-downs
Gibbs Flying Service (FBO)	Full Service 100LL/Jet-A, Aircraft Maintenance, tie- downs
National Air College	Flight Training
San Diego Fire-Rescue Air Operations	Fire Fighting, Air Rescue, Patient Transport
ATP Flight School	Flight Training
Learn to Fly San Diego	Flight Training
San Diego Flight Training International	Flight Training
Coast Flight Training and Management	Flight Training, Aircraft Management
Armed Forces Aero Club	Flying Club
Plus One Flyers	Flying Club
Corporate Helicopters of San Diego	Helicopter Tours, Sales, Filming, Construction Projects
Four Points by Sheraton	Hotel
Marv Golden	Pilot Supplies
Casa Machado	Restaurant
So	urce: City of San Diego

Table 1.2 -	Airport	Tenants	and	Services	Provided
Laoic 1.2	mpore	1 chanto	MILM	OCLATCO	LIOVIGEG

Some of the tenants mentioned above occupy office space in the administration building including:

- San Diego Air Tours
- Casa Machado



Policies and Plans

To enhance operational efficiency, the Airports should develop, maintain and implement a number of management documents. **Table 1.3** identifies the documents currently in place at the Airport as well as the date they were published.

Document	Year
Master Plan Update	2004
Real Estate Assets Department Airports Division: Business Plan (FY 2017) ¹	2015
City of San Diego Airports: Operations, Policies, and Procedures	2015
City of San Diego Airports Division: Minimum Operating Standards (DRAFT)	2017
Hangar Policies	2017

Table 1.3 – Airport Management Documents

1. Update in progress Source: City records, C&S Engineers, Inc.

The following is a brief description of the purpose and content of the documents listed above.

Master Plan: See introduction at the beginning of this Working Paper. The last previously prepared Airport Master Plan for the Airport was never brought to City Council for approval. However, this effort did result in an FAA approved ALP.

Real Estate Assets Department Airports Division: Business Plan: The plan is intended to ensure that the City's Airports System is operated safely and efficiently, is in compliance with all appropriate regulations, is financially self-sufficient, encourages airport business growth and opportunities, is customer focused both internally and externally, maximizes the City's return on investment for airport property, and is managed by professional airport management staff. This plan is meant to be a "living and working" document that adapts as conditions change. The plan is updated each fiscal year and the approval process for the 2018 plan is already underway.

City of San Diego Airports: Operations, Policies, and Procedures: Is intended to guide day-to-day operations of the City of San Diego Airports. This document is used by airport management to conduct the daily business of the City of San Diego Airports in an efficient manner, consistent with the policies of the FAA, the state of California, and the City of San Diego.

City of San Diego Airports Division Minimum Operating Standards (DRAFT): The purpose is to provide the threshold entry requirements (qualifications, levels of service, facilities, insurance) for those desiring to provide commercial aeronautical services to the public and to insure that those who have undertaken to provide commodities and services as approved are not exposed to unfair or irresponsible competition. They contain the minimum levels of service, facilities, staffing, insurance, and environmental compliance that must be met by the prospective service provider. The uniform application of these standards relates primarily to the public interest by discouraging substandard entrepreneurs and mandating insurance coverage levels, thereby protecting the Airport, airport patrons, and established aeronautical activities.

Hangar Policy: Published responses to common hangar ownership questions including insurance requirements, waiting list rules, applicable fees, and hangar subleases.



Airport Economic Benefits

In addition to serving as a vital community asset, airports provide an economic benefit to their communities through direct and indirect impacts. Direct impacts include those related to on-airport businesses and government agencies and those attributed to visitor spending and tourism. Indirect impacts mainly include the re-circulation of employees spending their earnings locally and the on-airport businesses purchasing goods and services locally.

As a whole, the air transportation sector in San Diego County was directly responsible for 1,926 jobs⁴ in 2015. This includes a combination of scheduled air transportation, nonscheduled air transportation, and both freight and passenger transport. County-wide, air transportation generates total direct economic activity valued at about \$742.6 million in industry output. In addition, air transportation directly accounts for over \$130.8 million in labor income (both employee compensation and proprietor income). This total does not account for other jobs that are supported and facilitated by air transportation. This would include both suppliers and business-to-business vendors, and industries that rely on air transportation to bring customers and products into the San Diego regional market.

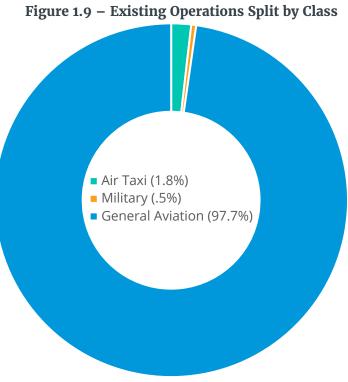
Airport-specific information will be provided under a subsequent section of the Airport Master Plan.



⁴ ADE, Inc.; data from IMPLAN Pro input-output model, May 2017.

Existing and Historical Aircraft Operations

Historical aviation activity at the Airport was gathered using the FAA's Operations Network (OPSNET). The network includes the FAA Terminal Area Forecast (TAF), which provides historical and forecasted aircraft operational data. Aircraft operations, from the 2016 calendar year, are broken down by user class on Figure 1.9. Historical activity levels by user class are summarized on Figure 1.10 and Figure 1.11. The operations indicate a slight decrease in total aviation activity from the year 2007. General aviation operations continue, by a large majority, to be the largest user class generating activity. Air taxi and military operations reached a 10-year low point in 2011, but their 2016 levels have seen an increase of 62 percent and 181 percent respectively. Even with this gradual increase, they continue to account for only a small margin (less than three percent) of the total traffic.



Source: FAA TAF, C&S Engineers, Inc.

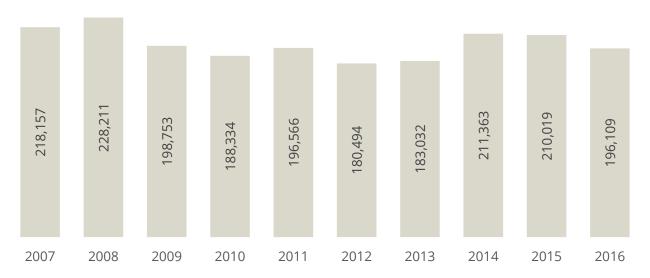


Figure 1.10 – Historical and Existing General Aviation Operations

Source: FAA OPSNET data from 01/01/2007 to 12/31/2016. Air carrier operations were negligible (less than 15 per year) and combined with air taxi operations.

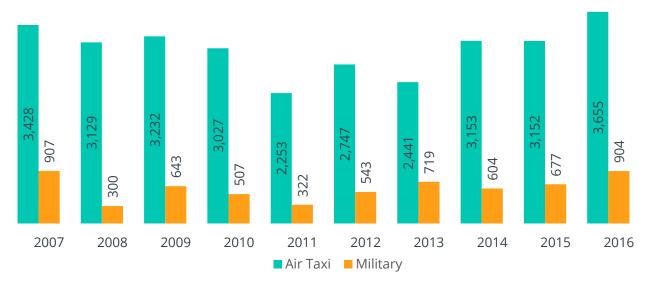


Figure 1.11 - Historical and Existing Air Taxi and Military Operations

Source: FAA OPSNET data from 01/01/2007 to 12/31/2016. Air carrier operations were negligible (less than 15 per year) and combined with air taxi operations.

Historical and Existing Based Aircraft

A based aircraft is one that is based at the Airport either permanently or at least for the majority of the year. It is important to evaluate not only the number of aircraft based at the Airport, but the type of aircraft as well. Based aircraft, especially those owned by flight schools and flying clubs, can make up a large number of the aircraft operations. Historical based aircraft information for MYF was retrieved from the FAA TAF while current information was collected from the FAA National Based Aircraft Inventory Program. Historical based aircraft numbers are presented on Figure 1.12. As of 05/08/2017, MYF had 604 validated based aircraft. Approximately 83 percent of the based aircraft are single-engine (SE) piston aircraft.

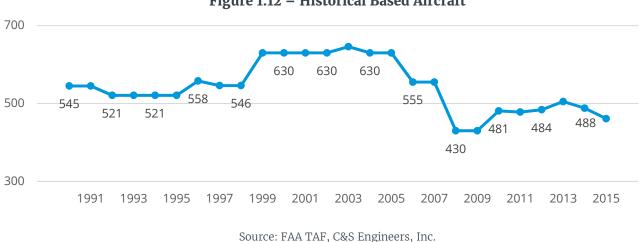


Figure 1.12 – Historical Based Aircraft

Historical aviation activity is documented in detail in this Master Plan as part of Working Paper 2 -Forecast of Aviation Demand.

Fleet Mix and Critical Aircraft

The selection of the appropriate FAA airport design standards is based upon the critical aircraft, sometimes referred to as the design aircraft. The critical aircraft is defined by the FAA as the most demanding aircraft that performs, or is projected to perform, at least 500 annual operations at the airport facility. The previous ALP identified the Beechcraft King Air 200 as the critical aircraft for Runway 10L/28R and Runway 5/23. Runway 10R/28L is only 60-feet wide and unsuitable for use by aircraft the size of the King Air 200. It has been assigned a separate critical aircraft, the Cessna 421.

Aircraft Characteristics

The Beechcraft King Air 200 has a wingspan of 54.5 feet, a Maximum Takeoff Weight (MTOW) of 12,500 pounds (lbs.), and an approach speed of 97 knots (kts.). These specifications classify the King Air 200 in Approach Category B (approach speeds 91 knots or more but less than 121 knots) and Airplane Design Group II (aircraft with wingspans up to 49 feet but less than 79 feet and tail heights up to 20 feet but less than 30 feet). A sample of the based and transient aircraft as well as their characteristics is presented in **Table 1.4** and **Table 1.5**. Fleet mix will be covered in further detail under Working Paper 2 – Forecast of Aviation Demand of this Master Plan.

Table 1.4 – Based Aircraft Characteristics						
Aircraft	Туре	MTOW (lbs.)	Approach Speed (kts.)	Wingspan (ft.)	AAC	ADG
Cessna 172	SE	2,450	61	36.1	А	Ι
Cirrus SR22	SE	3,400	78	38.4	А	Ι
Beechcraft 200	Turboprop	12,500	98	54.5	В	II
Eclipse 500	Jet	5,950	90	37.25	А	Ι

Source: FAA Aircraft Characteristics Database, FAA National Based Aircraft Inventory Program, C&S Engineers, Inc.

Table 1.5 – Transfent Aircraft Characteristics						
Aircraft	Туре	MTOW (lbs.)	Approach Speed (kts.)	·	AAC	ADG
Embraer Phenom 100	Jet	10,582	112	40.0	В	Ι
Cessna XLS+	Jet	20,200	111	56.0	В	II
Beechcraft 350	Turboprop	15,000	107	57.9	В	II
Beechcraft 1900	Turboprop	17,120	113	58	В	II

Table 1.5 – Transient Aircraft Characteristics

Source: FAA Aircraft Characteristics Database, FAA Operations Network (OPSNET), C&S Engineers, Inc.

1.5 Regional Setting and Land Use

The following sections provide information regarding land use, zoning, land use compatibility, consistency with other plans, and the Airport's climatological setting.

Land Use

Land uses surrounding the Airport were inventoried to understand existing compatibility. **Figure 1.13** presents the variety of land-uses surrounding the Airport. Land use shape files were retrieved from the San Diego Regional Planning Associations website. Land use immediately to the north of the airport property boundary is mostly industrial with a pocket of residential directly north of the Runway 23 threshold. To the east of the property, there is a mix of industrial, public-use, and open space. On the eastern side of Interstate 15 (I-15), approximately .5 miles from the Airport boundary, land use is mostly residential. The land uses directly south of MYF are industrial and public-use, with a large amount of residential use beginning roughly 500 feet from the property line. To the west of the Airport (west of California State Route 163) are mostly industrial and commercial land uses with some residential land use located between Ruffner Street and Interstate 805 (I-805). West of I-805 is predominately-residential land use.

As indicated by guidance provided in FAA Advisory Circular (AC) 150/5070-6B, *Airport Master Plans*, public facilities within the vicinity of the Airport were identified and are presented in **Table 1.6**.



Facility	Direction from Airport
Fire Station	
San Diego Fire-Rescue Department: Station 28	West
Library	
Serra Mesa-Kearny Mesa Branch Library	South
Police Station	
San Diego Police Department: Traffic Division	Southeast
Schools	
Coleman University	North
Brightwood College	North
National University	Southwest
San Diego Community College District North Campus	South
Angier Elementary School	South
Wegeforth Elementary School	South
St. Columbia Catholic School	South
Soille San Diego Hebrew Day School	South
Coleman Tech Charter High School	South
Rock School of Ministry	Southeast
Kavod Elementary School	Southeast
University of Phoenix, San Diego	East
Grace Christian School	East
Places of Worship	
New Life Church	Northwest
Korean Hope Church	Northwest
San Diego Christian Worship	Northeast
Flood Church	East
Saint Columbia Catholic Church	South
San Diego Korean Cathedral	South
Pacific Hope Church	South
Door of Hope Christian Church	South
Gracewave Church	South
Afghan Community Islamic Center	South
Grace Brethren Church-Kearny	Southwest

Table 1.6 – Public Facilities within ½ Mile of MYF

Source: San Diego Regional Planning Association, C&S Engineers, Inc.



Zoning

The City of San Diego General Plan classifies the Airport as "unzoned" indicating that it falls under a separate set of rules than other land uses. Guidance relating to off-airport land-use compatibility is contained in the Airport Land Use Compatibility Plan (ALUCP). Zoning surrounding the Airport is depicted on **Figure 1.14**.

Montgomery-Gibbs Executive Airport ALUCP

Airport land use compatibility plans are established in order to promote compatibility between airports and the surrounding land uses. In San Diego County, the Board of the SDCRAA is responsible for producing these plans for all public-use and military airports. The purpose of the plan is to provide for the orderly development of the Airport and the surrounding community, as well as to safeguard the general welfare of the inhabitants within the vicinity of the Airport and the public in general⁵. The plan identifies Airport Influence Areas (AIA) and has specific requirements to be followed by local agencies when development is proposed within these areas. The ALUCP is based on the ALP most recently approved by the FAA. Any changes to the ALP occurring as a result of this master planning process will be reviewed by the Airport Land Use Commission (ALUC) to determine potential impacts to the ALUCP.

Community Plans

The City of San Diego is broken up into various communities, each with their own planning group, community plans, and/or regulations. The Airport is referenced and potentially affected by the community plans of three surrounding neighborhoods including Serra Mesa, Kearny Mesa, and Clairemont Mesa.

Kearny Mesa Community Plan

The plan recognizes that while the Airport is technically within the boundaries of the Kearny Mesa planning area, the land use policies are contained in the ALUCP. This plan requires that any proposed development be reviewed for compatibility with both MYF and the Marine Corps Air Station Miramar, per the specifications in the ALUCP. The main concerns of the community include aircraft noise, approach patterns, crash hazards, and future airport expansion.

Serra Mesa Community Plan

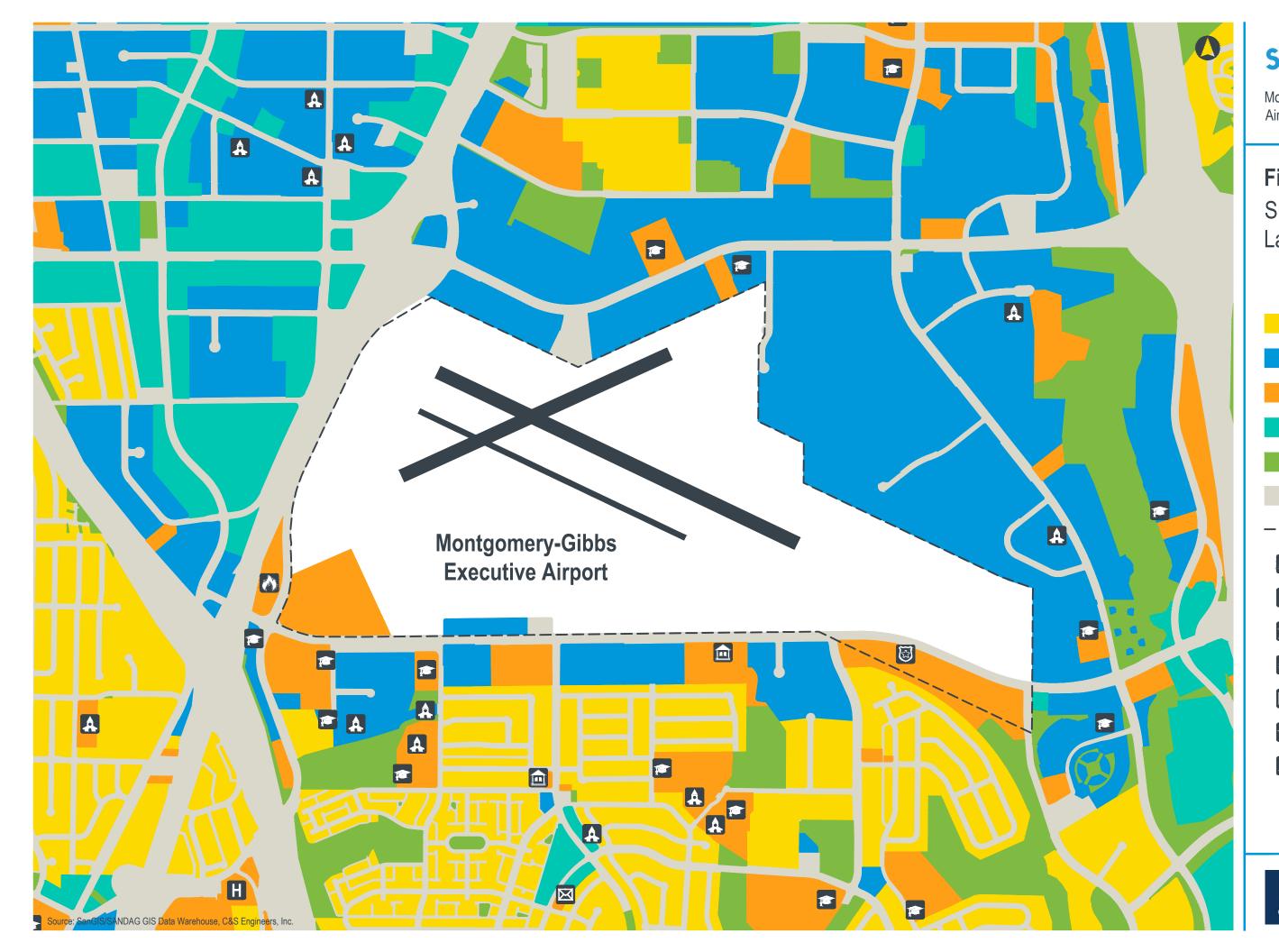
While the Airport does not fall within the limits of the Serra Mesa planning area, arriving and departing aircraft pass overhead and thus the Airport is discussed in the plan. The concerns stated in the plan include noise, approach patterns, and crash hazards. The plan recognizes that while aircraft noise levels may not exceed federal and state recognized annoyance level standards it is still an important issue to residents.

Clairemont Mesa Community Plan

The Clairemont Mesa Community Plan is similar to the Serra Mesa plan in that it is affected by the Airport even though MYF is outside of the official planning area. The main concerns of the community regarding the Airport are noise and potential crash hazards. It refers to the MYF ALUCP for development regulations for both airport development and any development in the designated AIAs.



^{5 2010,} Montgomery Field Airport Land Use Compatibility Plan





Montgomery-Gibbs Executive Airport Master Plan

Figure 1.13 Surrounding Land Use

Legend

Residential

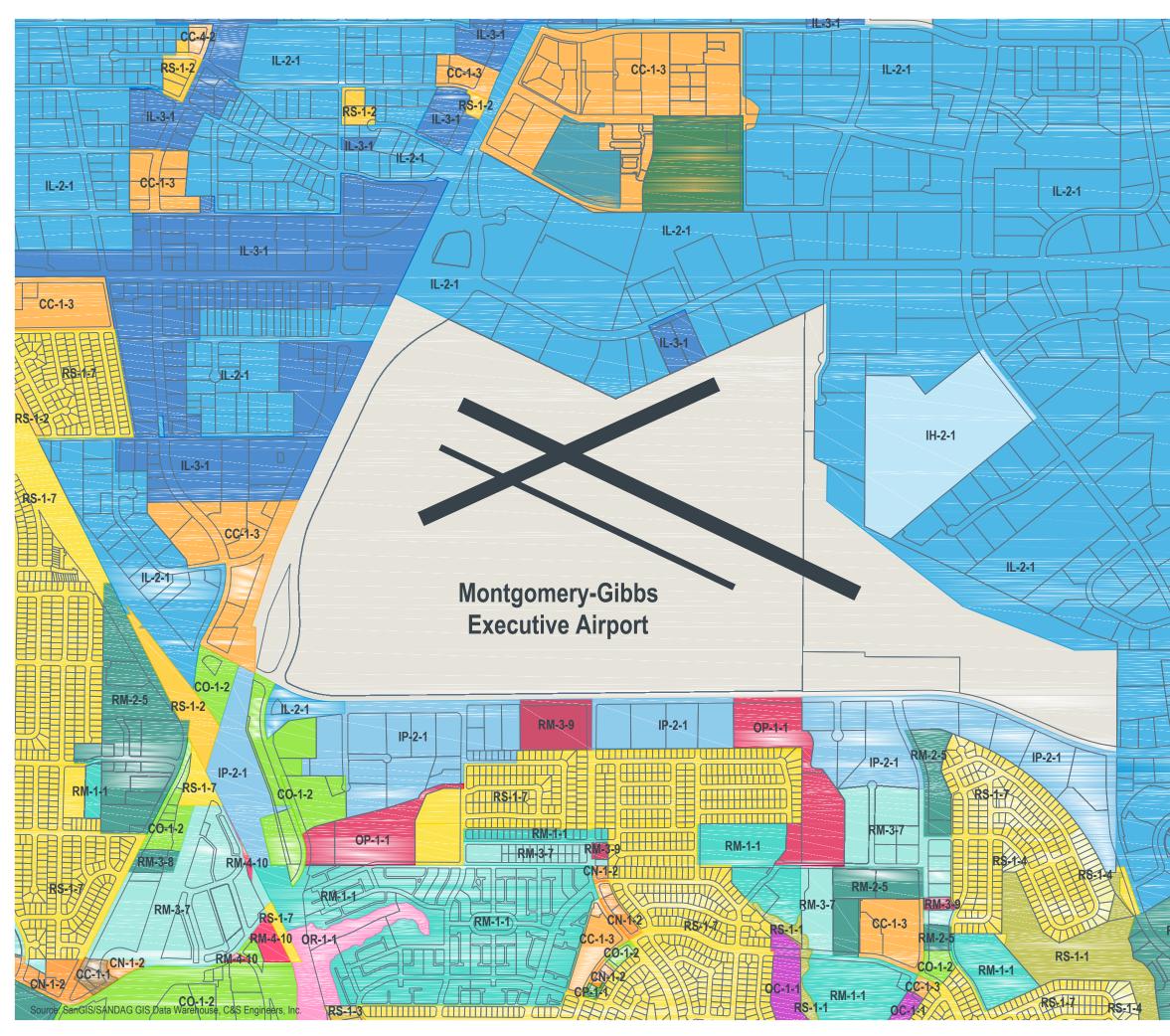
- Industrial Employment
- Institutional & Public and Semi-Public Facilities
- Commercial

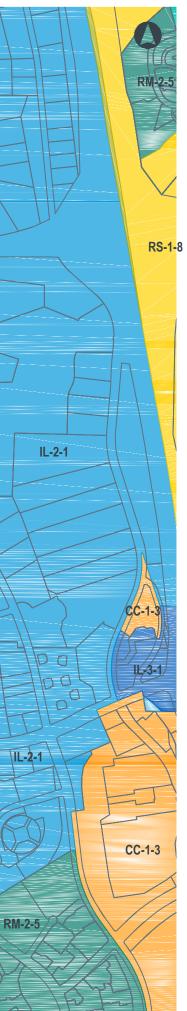
Park, Open Space, & Recreation

- Street & Highway System
- Airport Property Line
- Fire Station
- H Hospital
- Library
- Police Station
- Post Office
- School
- Place of Worship











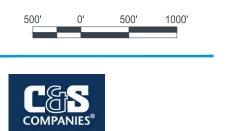
Montgomery-Gibbs Executive Airport Master Plan

Figure 1.14 Surrounding Zoning

Legend¹

U
CC-1-1
CC-1-3
CC-4-2
CN-1-2
CO-1-2
CP-1-1
IH-2-1
IL-2-1
IL-3-1
IP-2-1
OC-1-1
OP-1-1
OR-1-1
RM-1-1
RM-2-5
RM-3-7
RM-3-8
RM-3-9
RM-4-10
RS-1-1
RS-1-2
RS-1-3
RS-1-4
RS-1-7
RS-1-8
Unzoned

1. Refer to the City of San Diego Municipal Code, Chapter 13 for descriptions of each zoning designation.



Climate and Topography

The Airport is situated in the Kearny Mesa community of San Diego at an elevation of 427.3 feet above mean sea level (MSL). As the name Mesa implies, the area is generally level and is surrounded by steep walled valleys. The climate is classified as semi-arid and often referred to as Mediterranean. Proximity to the Pacific Ocean results in warm summers and mild winters.

There is an Automated Surface Observing System (ASOS) based at the Airport that gathers basic minute-by-minute, 24-hour weather information to be used for weather reporting. According to the Summary of Monthly Normals from 1981-2010, the mean maximum temperature of the hottest month is 80.9°F in the month of August while the mean minimum temperature was 44.3°F in the month of January. January, the wettest month, sees an average of 2.68 inches of precipitation and accounts for 21.4 percent of the average annual precipitation of 12.51 inches See **Table 1.7** for a summary of the temperature and precipitation averages.

Table 1.7 – Temperature and Precipitation				
	August			
Hottest Month	(80.9°F mean maximum			
	temperature)			
	January			
Coldest Month	(44.3°F mean minimum			
	temperature)			
Mean Annual Temperature	63.0°F			
	January			
Wettest Month	(Average 2.68 inches			
	rainfall)			
Mean Annual Precipitation	12.51 inches			

Source: National Climatic Data Center, 1981-2010 Normals,

C&S Engineers, Inc.

Wind Coverage

The FAA provides guidance in FAA AC

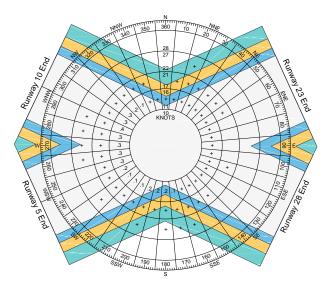
150/5300-13A, *Airport Design*, on determining whether the existing runway orientation is sufficient for the fleet mix. The process was followed below.

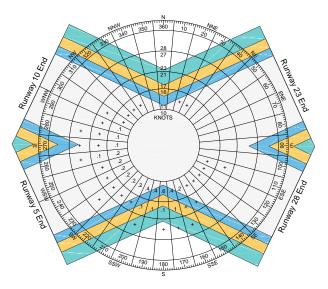
A wind analysis was conducted using historical wind data obtained from the National Oceanic and Atmospheric Administration (NOAA) National Climatic Data Center (NCDC). Observations for this data were taken at the Airport over the 10-year period from 2006 to 2016. Maximum crosswind components are dictated by the Airport Reference Code (ARC). The ARC signifies the design standards to which an airport is built. The ARC at the Airport is a B-II, which has a maximum allowable crosswind component of 13 knots. However, numerous planes use the Airport that have a maximum crosswind component greater than 13 knots and so the percent coverage has been shown up to 20 knots. The wind roses for the Airport as well as the percent coverage for each weather condition are presented on **Figure 1.15** There is a wind rose presented for three weather conditions; All Weather, Instrument Flight Rules⁶ (IFR), and Visual Flight Rules⁷ (VFR). The numbers in each box indicate the number of wind readings that were registered at that speed and direction. If there is a plus sign, it indicates that less than 100 readings have been recorded at that specific speed and direction. A crosswind runway is recommended when an airport's primary runway orientation provides less than 95 percent wind coverage. Due to the Airport's existing crosswind runway, the percent wind coverage is sufficient under All Weather, VFR, and IFR conditions.

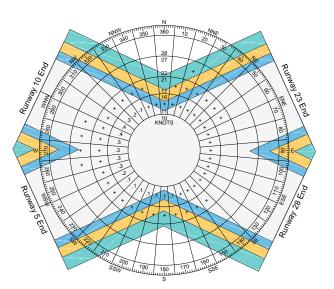


⁶ IFR apply when visibility is poor and cloud ceilings are low

⁷ VFR apply when weather is clear (cloud ceiling greater than 3,000 feet above ground level and visibility greater than five statute miles)







All Weather Wind Coverage							
	Percent Coverage						
Crosswind Component	Runway 10/28	Runway 5/23	Combined				
10.5 Knots	98.65%	98.42%	99.49%				
13 Knots	99.35%	99.31%	99.82%				
16 Knots	99.89%	99.91%	99.96%				
20 Knots	99.98%	99.99%	100.00%				

IFR Wind Coverage						
	Percent Coverage					
Crosswind Component	Runway 10/28	Runway 5/23	Combined			
10.5 Knots	97.11%	97.85%	98.39%			
13 Knots	98.43%	98.88%	99.34%			
16 Knots	99.57%	99.74%	99.84%			
20 Knots	99.92%	99.96%	99.99%			

VFR Wind Coverage							
	Percent Coverage						
Crosswind Component	Runway 10/28	Runway 5/23	Combined				
10.5 Knots	98.97%	98.58%	99.69%				
13 Knots	99.53%	99.41%	99.91%				
16 Knots	99.94%	99.93%	99.99%				
20 Knots	99.99%	99.99%	100.00%				

SD Airports

Montgomery-Gibbs Executive Airport Master Plan

Figure 1.15 Runway Wind Coverage

Source: Data reported at MYF for the period between 2007-2016 and provided by the National Oceanic & Atmospheric Administration, National Climatic Data Center



1.6 Airside Facilities

Airside facilities include those that directly support airport operations including runways, taxiways, NAVAIDS, and apron areas. A diagram of MYF's runways and taxiways is shown on **Figure 1.16. Table 1.8** provides a summary of the existing airside facilities that are described in the subsequent text.

Runways

The airfield consists of three paved runways, one 4,577-foot runway with a precision approach, a 3,401-foot parallel runway, and a 3,400-foot crosswind runway. The details and characteristics of each runway are described in **Table 1.8**. Additional information about each of the individual components will be discussed in subsequent sections.

Tat	ole 1.8 – Runway System	Characteristics	
Characteristics	Runway 10L/28R	Runway 10R/28L	Runway 5/23
Use	Primary	Secondary	Crosswind
Length x Width (feet)	4,577 x 150	3,401 x 60	3,400 x 75
Displaced Threshold (feet)	N/A / 1,176	N/A	390 / N/A
Condition	TBD^{1}	TBD^1	TBD^{1}
Pavement Condition Index	TBD^{1}	TBD^{1}	TBD^{1}
Pavement Condition Number	TBD^{1}	TBD^{1}	TBD^{1}
Pavement Strength (pounds) Single Wheel Dual Wheel Tandem	12.0 SWL ¹	12.0 SWL ¹	12.0 SWL ¹
Composition	Asphalt	Asphalt	Asphalt / Treated
Wind Coverage (All Weather) 13 knots	99.35%	99.35%	99.53%
Markings	Basic / Precision	Basic / Basic	Basic / Basic
Edge Lighting	MIRL	N/A	N/A
Approach Lighting	PAPI / MALSR, PAPI	N/A / REIL	N/A
Instrument Approaches	None / ILS,LOC,GPS	N/A	N/A

Table 1.8 – Runway System Characteristics

Source: FAA Airport Master Record Form 5010 (AFD EFF 03/02/2017) and C&S Engineers, Inc.

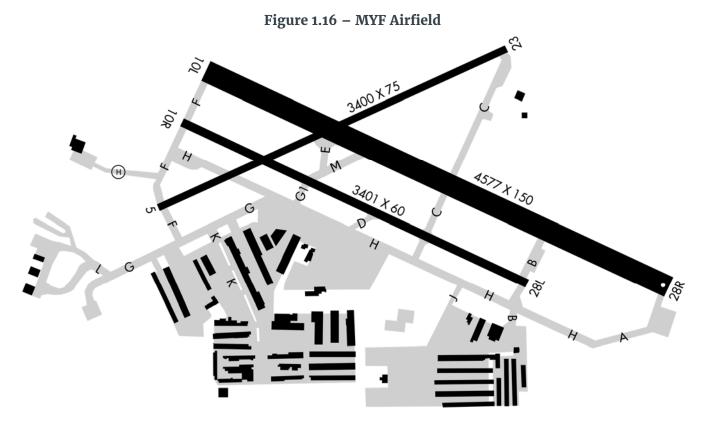
¹Pavement strength and condition are being evaluated as a part of a Pavement Maintenance Management Plan (PMMP) which will be included in this report as an appendix. The sections of this table marked "TBD" will be updated once the PMMP is completed.

As part of City Resolution 280194, an administrative restriction was placed on all runways at MYF limiting the operation of aircraft above 20,000 lbs. maximum gross certified takeoff weight. However, the restriction prescribed no mechanism that could be utilized by the City for its enforcement. The weight restriction will be further evaluated as part of the master planning process.



Taxiways

Runways 10L/28R and 10R/28L share a full-length parallel taxiway while Runway 5/23 is served by a partial length parallel taxiway. The airfield is also developed with a network of connectors and cross-field taxiways equipped with medium intensity taxiway edge lights (MITL). All the taxiways meet the ARC B-II standard separation of 240-feet from runway to taxiway centerline. Both the taxiway and runway locations can be viewed on **Figure 1.16** while **Table 1.9** lists the characteristics of each taxiway. Information regarding the taxiway conditions will be provided within the Pavement Maintenance Management Plan Appendix to this Master Plan.



Source: FAA Airfield Facility Directory (AFD)

Table 1.9 – Taxiway Width

Taxiway	A	В	C	D	E	F	G	G1	H	J	K	L	M
Width (feet)	50	50	50	40	50	50	50	50	40	40	40	40	50
Source: C&S Engineers, Inc., Google Earth 2016													

Displaced Threshold

A displaced threshold is placed at the end of a runway with the purpose of changing the point at which an approaching aircraft will touch down on the runway. They are generally put in place in order to move the approach path of an aircraft away from an obstruction, such as a tower or building, that penetrates the FAA defined threshold-siting⁸ surface. The portion of the runway marked as a displaced threshold is permitted to be used during takeoff, but not during landing. See **Figure 1.17** for a graphical depiction of a displaced threshold.

The Runway 28R threshold is displaced 1,176 feet and the Runway 5 threshold is displaced 390 feet. The displaced threshold was placed on the end of Runway 28R in 1995 when the runway was extended. The intent of the displaced threshold was to increase the length of runway available for takeoff, but keep the landing distance the same. According to City Resolution 280194⁹, keeping the landing threshold at the current location would allow the Airport to continue to accommodate the existing aircraft fleet mix while limiting the use of larger aircraft that may not comply with previously established noise and weight limitations. As noted in the Serra Mesa Community Plan¹⁰, increasing the available takeoff distance would also allow departing aircraft to achieve a higher altitude prior to passing over residential areas.

A review of historical records found no explanation as to why the Runway 5 landing threshold was displaced. It was most likely added to avoid obstructions or provide additional space between the existing hangar development located south of Runway 5 and the landing threshold.

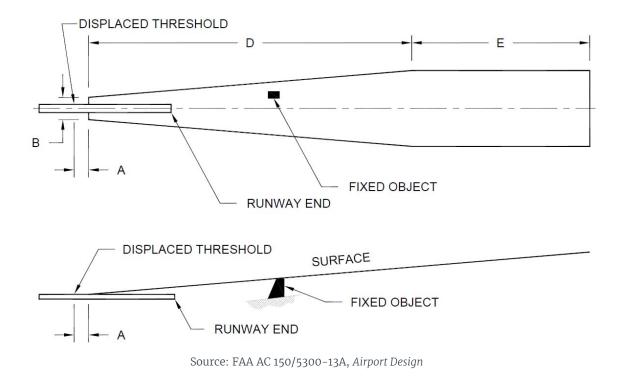


Figure 1.17 – Plan and Profile Views of an Example Displaced Threshold



⁸ The dimensions of the threshold-siting surface (TSS) are presented in Table 3-2 of FAA AC 150/5300-13A, Airport Design.

⁹ City Resolution 2800914/ R-92-2009, June 22, 1992.

¹⁰ Serra Mesa Community Plan, The Serra Mesa Community Planning Group and City of San Diego Planning Department, amended 2011.

Safety Areas and Object Free Areas

Runways and taxiways are surrounded by imaginary rectangular areas known as "safety areas" and "object free areas". The purpose of these areas is to minimize the probability of serious damage to aircraft that accidentally leave designated movement areas as well as to provide greater accessibility for firefighting and rescue equipment during such incidents. These areas require grading between one percent and five percent and must remain free of obstructions to enhance the safety of aircraft that undershoot, overrun, or veer off a runway or taxiway.

Runway design standards applicable to each runway are specified by the Runway Design Code (RDC). The RDC consists of three components related to the operational demands of aircraft:

- Aircraft Approach Category (AAC) approach speed
- Airplane Design Group (ADG) wingspan and tail height
- Runway Visibility Range (RVR) visibility minimums

The current ALP, last revised 1/10/2014, was completed prior to the most recent update to FAA AC 150/5300–13A, which established the above definition for RDC. Therefore, the ALP does not identify RDCs for each runway but lists separate ARCs (i.e., the RDC minus the approach visibility minimum). The ARCs for Runway 10L/28R and Runway 5/23 are listed as B–II. The ARC of Runway 10R/28L is identified as B–I. Based on the most current version of FAA AC 150/5300–13A, the ARC combined with the approach visibility minimums, determines the dimensions of the Runway Safety Area (RSA), Runway Object Free Area (ROFA), and Runway Protection Zones (RPZ). The dimensions of the Taxiway Safety Area (TSA) and Taxiway/Taxilane Object Free Areas (TOFA) are determined by the ADG of the critical aircraft, in this case, ADG II.

Table 1.10 lists the standard dimensions of the RSA, ROFA, TSA, and TOFA. Note that although the 2014 ALP listed Runway 10R/28L as an ARC of B–I, the critical aircraft used would qualify as "small" due to its MTOW below 12,500 pounds. The applicable, small aircraft standards from FAA AC 150/5300–13A were therefore applied. Working Paper 3 – Facility Requirements will look at each of these areas in greater detail to determine compliance with the most up–to–date FAA standards.

	Runway 10L/28R	Runway 10R/28L	Runway 5/23
Runway Safety Area			
Length Beyond Runway End	600'	240'	300'
Length Prior to Threshold	600'	240'	300'
Width	300'	120'	150'
Runway Object Free Area			
Length Beyond Runway End	600'	240'	300'
Length Prior to Threshold	600'	240'	300'
Width	800'	250'	500'
Taxiway Safety Area			
Width	79'	79'	79'
Taxiway Object Free Area			
Width	131'	131'	131'
Taxilane Object Free Area			
Width	115'	115'	115'
Source: FA	A AC 150/5300-13A. Airport I	esian C&S Engineers Inc	

Table 1.10 – Runway and Taxiway Safety Area Dimensions (per Standards)

Source: FAA AC 150/5300-13A, Airport Design, C&S Engineers, Inc.



Runway Protection Zones

As defined by FAA AC 150/5300–13A, the function of the Runway Protection Zone is to enhance the protection of people and property on the ground. This is best achieved by airport sponsor acquisition of property located within the RPZ and clearing it of incompatible land uses and obstructions. The RPZ is a trapezoidal shape centered on and extending out from the runway centerline. The dimensions of an RPZ are determined by the type of aircraft that the runway accommodates as well as the approach visibility minimums. Each runway has a separate approach and departure RPZ whose dimensions are identical unless visibility minimums are lower than one mile (which is the case for Runway 28R). RPZ dimensions for each runway end are outlined in **Table 1.11**.

Recently, hangars located within the Runway 23 departure RPZ were relocated to comply with FAA design standards.

	Table 1	Table 1.11 – MYF Runway Protection Zones (RPZ) (per Standards)								
	Runway 10L		Runway 28R		Runway	10R/28L	Runway 5/23			
	Approach Departure		Approach	Departure	Approach	Departure	Approach	Departure		
Length	1,000		2,500	1,000	1,000		1,000			
Inner Width	500		1,000	500	250		500			
Outer Width	700		1,750	700	450		700			
		Source: FAA A	AC 150/5300 - 100	13A Airport De	sian C&S Eng	ineers Inc				

FAA AC 150/5300–13A, Airport Design, C&S Engineers, Inc

Lighting and Navigational Aids (NAVAIDS)

Visual navigational aids are important for aircraft operating under VFR and Instrument Flight Rules¹¹ (IFR). The visual NAVAIDS at the Airport are documented on the following pages.



Wind Cone between Runways 10L/28R and 10R/28L

Wind Cone

A wind cone is a conical textile tube that provides pilots with a visual indication of wind direction and velocity. The Airport has the following wind cones in good condition:

- Between Runways 10L/28R and 10R/28L •
- West of Taxiway J •

Segmented Circle

A segmented circle is a visual aid designed to provide information about the traffic pattern to aircraft overhead. It is often co-located with a wind cone, as is the case at MYF. It is in good condition

Airport Beacon

A rotating beacon assists pilots in identifying the Airport at night. As a civilian airport, the beacon

alternates between white and green flashing lights. The MYF beacon is located in the southwest corner of the administration building parking lot and in poor condition.

¹¹ The term IFR refers to a set of rules governing the conduct of flight under instrument meteorological conditions (IMC) where pilots rely on instrumentation to navigate.



Medium Intensity Approach Lighting System

A Medium Intensity Approach Lighting System with Runway Alignment (MALSR) is installed on the Runway 28R end. This involves is a configuration of lights positioned uniformly along the extended runway centerline to provide visual guidance to an aircraft approaching to land on a precision instrument approach procedure. The brightness of the MALSR is controllable by pilots during hours when the ATCT is non-operational. There is a MALSR installed on the Runway 28R end to supplement the ILS approach. It is in good condition

Runway End Identifier Lights

Runway End Identifier Lights (REILs) are installed at an airfield to provide rapid and positive identification of the approach end of a particular runway. The system consists of a pair of synchronized flashing lights located laterally on each side of the runway threshold. REILs are installed on the Runway 28L end and are in good condition.

Precision Approach Path Indicator

A Precision Approach Path Indicator (PAPI) provides visual approach slope guidance during aircraft landing operations. The PAPI system consists of four light units, located



Runway 28R PAPI

adjacent to the runway and perpendicular to the runway centerline. PAPIs were recently installed on both the Runway 10L and Runway 28R ends.

Runway and Taxiway Edge Lighting

All taxiways are equipped with MITL. The Airport has several different runway lighting systems to facilitate operations at night or during periods of low visibility. A summary of runway lighting is presented in **Table 1.12**. Additional information on the condition of airfield lighting will be provided in Working Paper 3 – Facility Requirements.

Table 1.12 – Runway Lighting							
√ =	Available	* = Unavailable					
	10L / 28R	10R / 28L	5 / 23				
MIRL ¹	✓ ✓	× / ×	× / ×				
MALSR	× / √	× / ×	× / ×				
REIL	× / ×	× / √	× / ×				
PAPI	✓ ✓	× / ×	× / ×				

Source: FAA Airport Master Record Form 5010, C&S Engineers, Inc. Notes: 1. Medium Intensity Runway Lighting (MIRL)

Instrument Approach Procedures and Electronic Aids to Navigation

An instrument approach procedure (IAP) provides an aircraft transition from the en route flight environment to a point from which a safe landing may be accomplished. When cloud ceilings are low and visibility is poor, pilots use IAP's to land. Electronic NAVAIDS are utilized through instrumentation in the aircraft as a part of en route navigation and IAP's. Runway 28R is the only runway that offers an instrument approach and as such is the only runway with dedicated electronic NAVAIDS. **Table 1.13** lists the IAPs available at the Airport and the associated minimums. The electronic NAVAIDS available to pilots operating at the Airport include the following:

Instrument Landing System (ILS)

An Instrument Landing System (ILS) is an electronic ground-based system that provides both lateral and vertical guidance to an aircraft approaching and landing on a runway during periods of low ceilings and/or reduced visibility. The Glide Slope (GS), Localizer (LOC), and Distance Measuring Equipment (DME) are all electronic components that make up the ILS. Runway 28R is the only runway equipped with an ILS at the Airport.

Area Navigation (RNAV) / GPS

Area navigation was the precursor to Global Positioning System (GPS) and uses a network of satellites and land stations to create reference points that allow users with the proper receivers to determine their position in the sky. GPS navigation can now provide highly accurate navigational data based on satellites alone. This is hugely beneficial to airports because it allows them to have an IAP without installing expensive ground-based



Runway 28R Localizer Antenna

instrumentation. The Airport currently has one published straight-in RNAV (GPS) approach to Runway 28R as well as circling approaches available for the other runways.

Procedure Catego	Aircraft Approach Category
	Altitude (feet MSL)/Visibility (statute miles)
	ory A B
3-1L3 2	28R 623-1/2
ILS or LOC RWY 28R S-LOC	28R 800-1/2
Circlin	ng 880-1
LPV	623-1/2
RNAV(GPS)RWY 28R	NAV 750-3/4
LNAV	V 840-1/2
Circlin	

Source: Approach plates valid 02 MAR 2017 to 30 MAR 2017, C&S Engineers, Inc.

Additional Equipment

The Airport is also served by the following equipment:

Automated Surface Observing System: The ASOS is a weather-sensing suite designed to serve aviation and meteorological observing needs for safe and efficient aviation operations, weather forecasting, and climatology. The Airport's ASOS is located in the area between Runway 10L/28R and Runway 10R/28L.

Airfield Electrical Vault: The Airfield Electrical Vault is located on the apron, north of the administration building and directly west of the Aviation Unlimited building. It is in good condition.



ASOS



Aircraft Hangars and Parking Areas

As documented in **Attachment 1**, the Airport has several leaseholders that offer both hangars and tiedown storage for based and transient aircraft use. **Table 1.14** lists the different parking areas and the number of spaces available at each.

Lease Title / Area	Based / Transient	Tie- downs	T-Hangars	Box Hangars	Large Box Hangars (more than 1 aircraft)	Total
Coast Air	Based	4	36	1	1	42
Crownair	Both	N/A	_	16	26	42
Flattop East	Based	1	43	5	-	49
Flattop West	Based	8	21	3	1	33
Gibbs Aviation Services	Both	171	92	7	2	272
Marigold Spots	Based	1	25	1	-	27
National Air College	Based	45	24	20	1	90
Spiders – Sorbi	Both	N/A	-	_	2	2
City Tie-downs	Both	30	-	_	-	30
Total		260	241	53	33	587

Table 1.14 – Aircraft Hangars and Parking Areas

Source: C&S Engineers, Inc. Parking positions determined on Google Earth imagery dated 11/08/2016

Information specific to each lease area, including current challenges, can be found in **Attachment 1**.



Aircraft Parking Apron in front of the Administration Building



Airfield Signage and Markings

Airfield signage and markings are used for navigational and safety purposes. The following examples are found at the Airport.

Directional Signage

The Airport is equipped with location signs on all taxiways and at all runway ends and runway crossings. All of the signs are lit with the exception of those on Runway 5/23 and Taxiway C, north of Runway 10L/28R.

Informational Signage

Informational signage is in place to notify pilots and other users of important information such as tower or ground control frequencies, procedures, and hazards.

Airfield Markings

Airfield pavement markings provide information that is useful during aircraft takeoff, landing, holding and taxiing. Examples of airfield markings include runway hold positions, non-movement area boundaries, and taxiway edge markings.



Taxiway Signage

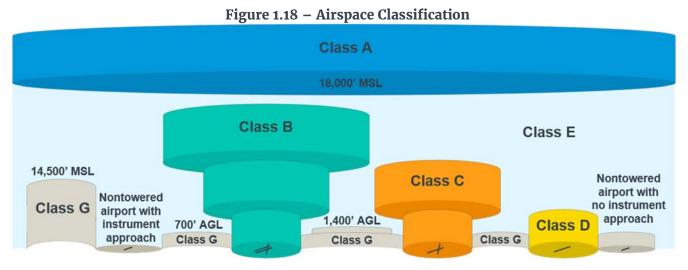


Airspace and Air Traffic Control

The ATCT is located in the northeast corner of the airfield and provides Air Traffic Control (ATC) services to the airport users. It is operational between the hours of 6:00 a.m. and 9:00 p.m. daily.

Aircraft navigate under VFR or IFR. VFR govern procedures when weather is greater than FAA specified minimums. To fly under VFR at MYF the visibility must be greater than three statute miles (SM) and the aircraft must remain 500 feet below, 1,000 feet above, or 2,000 feet horizontally clear of clouds. Flights operated under VFR navigate using a mixture of visual cues and instrumentation. They are not required to contact ATC unless entering controlled airspace. The term IFR refers to the set of rules governing conduct of flight under instrument meteorological conditions (IMC) where pilots rely solely on their instrumentation to navigate and are required to be in contact with ATC.

Whether a pilot flies under VFR or IFR depends on the weather conditions and the class(es) of airspace that will be flown through. The National Airspace System (NAS) is run and maintained by the FAA and categorizes airspace into the following classes (A, B, C, D, E, and G). Each class has specific requirements, restrictions, and dimensions. See **Figure 1.18** for a simplified example of the different types of airspace.

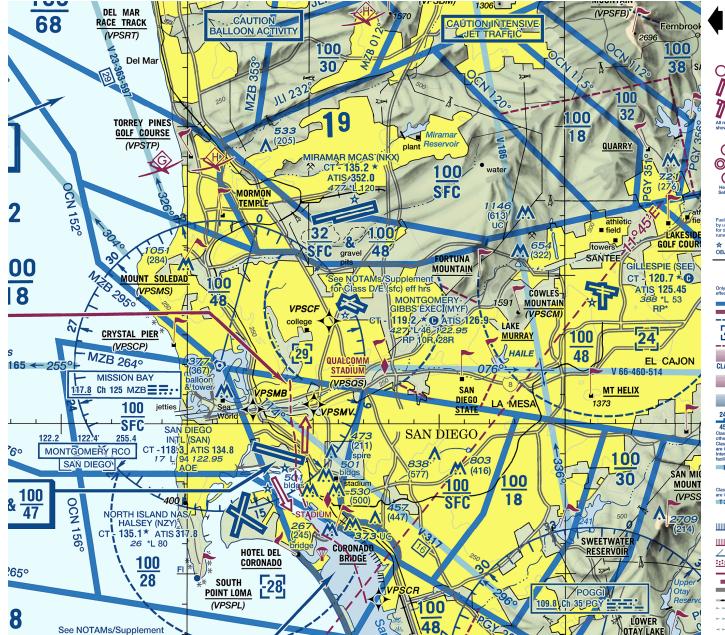


Source: FAAsafety.gov, C&S Engineers, Inc.

When the ATCT is in operation, the airspace surrounding MYF is designated as Class D. It begins at the surface, extends to 2,900 feet above the Airport, and surrounds it with a five SM radius. The MYF Class D airspace is superseded by the Miramar MCAS Class B airspace approximately two miles to the north and the SAN Class B airspace, approximately three miles to the south. This class of airspace is referred to as being "controlled" because aircraft using it must establish and maintain two-way radio communications with the ATCT before entering. Class E airspace exists from 2,901 feet MSL to 4,799 feet MSL. Class B airspace begins at 4,800 feet MSL and continues to 10,000 feet MSL. Class E fills in the space between the end of Class B and the beginning of Class A at 18,000 feet MSL.

Class B airspace surrounds the nation's busiest airports. It begins at the surface and generally extends to 10,000 feet MSL. It consists of different layers of varying size and is often described as resembling an upside down wedding cake. Entrance into Class B airspace requires prior clearance from ATC. The close proximity of two Class B airports, Miramar MCAS and SAN, creates a complicated combination of airspace surrounding MYF. **Figure 1.16** depicts the complicated airspace environment surrounding the Airport.





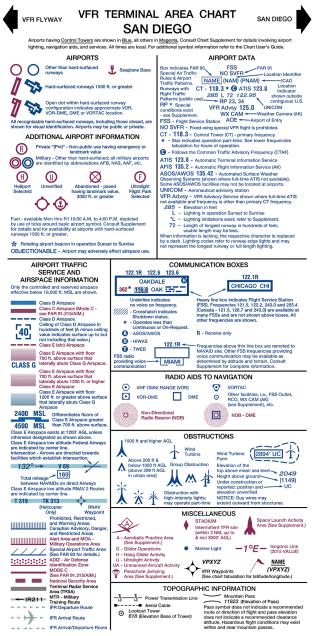




Figure 1.16 Airspace Environment



Source: San Diego VFR Terminal Area Chart, Effective 8 DEC 2016 to 22 JUN 2017

Montgomery-Gibbs Executive Airport Master Plan

Noise Abatement Procedures

Due to the high volume of residences in both the Clairemont Mesa and Kearny Mesa communities and the larger San Diego area, minimizing the impact of aircraft generated noise is an essential goal of the City. It is impossible to eliminate the effects of noise on the surrounding residential areas, but the City has taken steps to address and mitigate it. In 1985, a noise monitoring system was installed to document the noise produced by aircraft operations at MYF and determine ways of reducing it. MYF has voluntarily enacted noise abatement procedures that are designed to reduce the amount of noise pollution in the surrounding community. These following procedures are recommended:

- 1. Avoiding departures between the hours of 11:30 p.m. and 6:30 a.m.
- 2. Higher performance and louder aircraft are requested to use runway 28R/10L.
- **3.** VFR departures are to maintain runway centerline, climb using best rate of climb, reduce power before overflying residential areas, and reach 1,200 feet MSL (2,000 feet for twins) before turning crosswind.
- **4.** IFR departures are to climb to at least 400 feet AGL on runway centerline before turning to their assigned heading and are requested to reduce power before overflying residential areas.
- 5. VFR arrivals are to maintain pattern the following pattern altitudes until turning base
 - South of the Airport: 1,427 feet MSL for singles and 2,000 feet MSL for twins
- North of the Airport: 1,427 feet MSL for singles and 1,600 feet MSL for twins In addition to the general requirements listed above, the City has published recommended VFR arrival and departure procedures.



Noise Abatement Procedures Signage



1.7 Support Facilities

Fixed Base Operators (FBO)

MYF is home to two FBOs. Their location and services offered are summarized below. Additional information is provided in Attachment 1.

Gibbs Flying Service

The oldest aviation business located at the Airport, Gibbs Flying Service, was started in 1937 when Bill Gibbs relocated his pilot training business to the future site of Montgomery–Gibbs Executive Airport. Located east of John J. Montgomery Drive, it offers aircraft tie–downs, hangars, fueling, and aircraft maintenance services.

Crownair Aviation

Located west of the administration building is one of the largest leaseholds at the Airport, Crownair Aviation. They are a full-service FBO that caters to larger corporate business jets and turboprops as well as to smaller GA customers. Through a partnership with Epic Aviation, they are able to offer aircraft fueling, hangar rental, ground service equipment, aircraft maintenance, and aircraft/avionics sales.



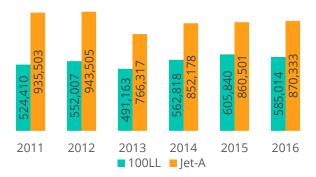
Gibbs Aviation Service Fuel Truck

Aircraft Fueling

There are no City-owned or operated aircraft refueling stations at the Airport. These services are instead provided by the FBO's. Both Gibbs Aviation Service and Crownair Aviation offer full-service 100-low-lead (100LL) Aviation Gasoline and Jet-A fuel. Additionally, Crownair Aviation has a 24/7 self-service 100LL fuel island located south of the intersection of Taxiways G and H. National Air College also sells a small amount of 100LL fuel.

Crownair Aviation sells the largest amount of Jet-A fuel while Gibbs Flying Service sells the most 100LL. Fuel flowage records were reviewed back to 2011 for each of the providers at the Airport and the total amount of each type of fuel sold each fiscal year (July 1 – June 30) is presented on **Figure 1.20**.

Figure 1.20 – Historic Fuel Sales by Type (Gallons)



Source: City records, C&S Engineers, Inc.



Aircraft Maintenance

MYF has several locations that offer aircraft maintenance services including Advanced Aircraft Service, Crownair Aviation, Corporate Helicopters, Gibbs Flying Service, and Spiders Aircraft Service. A more detailed description of the services offered at each location can be found in **Attachment 1**.

Air Charter Services

The Airport does not maintain a FAA Part 139 Certification, which would allow for scheduled commercial service flights. However, MYF does handle a notable amount of air charter operations. In the 2016 calendar year, the FAA recorded 3,655 air charter flights. Air charter refers to an aircraft that is rented as whole rather than selling seats individually. The size of aircraft used are typically much smaller than that used by a commercial airline and range anywhere from four to 20+ seats. Crownair Aviation handles most of the air charter flights and Gibbs Flying Service is equipped to handle some of the smaller air charter aircraft.

Flight Instruction and Flying Clubs

Flight Instruction

Flight instruction accounts for a large portion of the operations at MYF. In 2016, local operations (those remaining in the traffic pattern or within 20 miles of the Airport) accounted for 98,680 out of 200,668 operations, or roughly 49 percent. Flight schools at the Airport include ATP Flight School, Coast Flight, Corporate Helicopters, Learn to Fly San Diego, National Air College, and San Diego Flight Training International. The majority of the training fleet is made up of single-engine piston aircraft such as the Cessna 172, Piper Archer/Warrior/Arrow. There are also several small multi-engine piston aircraft such as the Piper Seminole/Seneca and Beechcraft Duchess.

Flying Clubs

Flying clubs offer an affordable alternative to aircraft ownership that allows more pilots to stay in the air. They generally charge a monthly membership fee and an hourly rate and give members access to a fleet of aircraft to choose. Flying clubs at the Airport include the Armed Forces Aero Club, Plus One Flyers, Golden Wings, and Consair Flyers Club



A Cessna 172 Touches Down on Runway 28L During a Training Flight



Emergency Services

Police

The San Diego Police Air Support Unit bases several helicopters out of a hangar on the western boundary of the airfield. They are used for search and rescue, aerial security, and air support to patrol operations.

Fire Fighting

The Airport does not have a dedicated Aircraft Rescue and Firefighting (ARFF) station. The closest station to the Airport is Station 28 located at Kearny Villa Road and Aero Drive, directly across the street from the western boundary of the Airport.

The Airport is home to San Diego Fire-Rescue Air Operations. They operate off a concrete pad just south of the ATCT and are planning to expand their facility in the near future. Their helicopters respond to over 400 emergencies each year including firefighting, air-rescue, shoreline rescue, and disaster assessment.



Mercy Air Helicopter

Medical

Mercy Air is a full-service air medical transport system. They have a helicopter based at the Airport that provides air ambulance services to local hospitals.

Additional Facilities

Aircraft Sales and Pilot Supplies

There are several businesses at the Airport to assist pilots in buying new aircraft of outfitting their old aircraft with new electronics and avionics. These include Advanced Aircraft Service, Aviation Unlimited, and Marv Golden.



1.8 Landside Facilities

The landside portion of an airport are those areas that do not play a direct role in the aircraft operations. This includes areas such as the terminal, offices, parking lots, entrance roads, and restaurants.

Airport Administration Building

The Airport Administration Building is a two-story building constructed in 1969. It is located at the end of John J. Montgomery Drive and directly adjacent to the transient aircraft apron. It serves several roles including housing the City of San Diego Airports Division Staff, operations center for MYF, and home to the restaurant Casa Machado as well as other businesses.



Fleet Vehicles and Equipment

t

The fleet vehicles owned and operated by the City are listed in **Table 1.15**. These vehicles are stored on the apron directly adjacent to the Airport Administration Building.

	Table 1.15 – City-Owned Vehicles and Equipment		
2008 Ford Taurus Fa	lition		
	air		
2009 Ford F-350 Go	od		
2012 Ford F-250 Go	od		
2007 Chevrolet 1500 Fa	air		

Source: City records, C&S Engineers, Inc.

Hotel

The Four Points by Sheraton hotel is located on the southwest corner of the airport property, at the intersection of Aero Drive and Kearny Villa Road is. It resides on land leased from the City, and the operator recently declared bankruptcy in May of 2015.



Restaurant

The second floor of the administration building is entirely occupied by Casa Machado Restaurant, which serves Mexican food. It offers an opportunity for pilots to grab a bite to eat without leaving the Airport and it allows anyone from the surrounding community to come and see the Airport in operation.

Access, Circulation and Parking

Vehicle Access

The Airport is accessed via Interstates 5 and 15 from the north and south and by Interstate 8 from the east and west. The Airport is bound by Balboa Avenue to the north, Ruffin Rd. to the east, Aero Drive to the south, and Kearny Villa Rd. to the west. Entrances to the Airport are located on Aero Drive with the intersections of John J. Montgomery Drive and Glenn H. Curtiss Drive

Multi-modal Access

There are sidewalks along Aero Drive from the intersection with Kearny Villa Road to the west and Interstate 15 to the east. The sidewalk on the Airport side of Aero Drive is incomplete, but one is available on the other side of the street. There is a sidewalk on John J. Montgomery Drive leading to the administration building, and an unimproved sidewalk (a graded dirt path) along Glenn H. Curtiss Road leading to the National Air College parking lot. There are crosswalks over Aero Drive at both John J. Montgomery Drive and Glenn H. Curtiss Road.

The Airport is served by Bus Route 25 (Fashion Valley – Kearny Mesa TC) and has stops at the intersection of Aero Drive with both John J. Montgomery Drive and Glenn H. Curtiss Drive Stops are made approximately every 30 minutes.

Parking

The Airport has several public parking areas available. Parking is free during the day with available overnight parking for a fee. The two main lots are located on both the east and west sides of the Administration Building. Additionally, there is free street parking along Glenn H. Curtiss Road, Gibbs Drive, and John J. Montgomery Drive. The different parking areas and number of spaces available are summarized in **Table 1.16**.

Location	Spaces
Lot East of Administration Building	145
Lot West of Administration Building	73
Street Parking Along Glenn H. Curtiss Road	56
Street Parking Along Gibbs Drive	80
Street Parking Along John J. Montgomery Drive	59
Total Public Parking Spaces Available	413

Table 1.16 – Public Parking at MYF

Source: C&S Engineers, Inc. Parking spaces determined on Google Earth imagery dated 11/08/2016

Utilities

Gas and electric services are provided by San Diego Gas and Electric (SDG&E). The Airport is supplied potable water by the Shepherd Canyon Pipeline.



1.9 Stakeholder Feedback

As part of the airport inventory process, steps were taken in order to solicit feedback from the surrounding airport community, users and tenants. A public advisory committee (PAC) has been assembled that includes several airport tenants as well as representatives from the surrounding community. The PAC will hold seven meetings at regular intervals throughout the master planning process, the first of which took take place on April 18, 2017. The PAC will act as a sounding board in the development of the Airport Master Plan, as well as be a conduit for information between various interest groups throughout the community. This interaction between the PAC and City is essential for the review and assessment of project information. The PAC meetings are also open to the public and have a period dedicated to hearing and acknowledging public comments. Separate Public Workshops will also be held throughout the master plan process.

1.10 Key Considerations

This section identifies some of the key considerations that the master planning process will review and attempt to resolve. The items summarized below were identified through an inventory of existing conditions as well as coordination with airport management and the PAC.

Airside

- Limited runway length
- Evaluation of the need for the displaced thresholds
- Inadequate aircraft run-up areas
- FAA designated "hot spots¹²"
- RSA and RPZ compliance
- Non-standard taxilane safety areas between hangars
- Unknown pavement weight capacity
- Pavement condition
- Lack of runway edge lighting on both visual runways
- Lack of available hangar and tie-down space
- Clay soil that is not ideal for development
- Land and hold short markings on Runway 5/23
- Review and adjustment of aeronautical fees

Airspace

- Aircraft generated noise and overflight impacts to the surrounding community
- Potential changes to IAPs

Landside

- Undevelopable land due to safety areas or environmental constraints
- Market rate evaluation of leases
- Potential impacts of Airport development on the surrounding community

Environmental

- City's Multi-Habitat Planning Area (MHPA) restrictions on development
- Vernal Pools
- Regulatory agency coordination

Other Concerns and Considerations

The first Public Advisory Committee meeting was held on April 18, 2017. The following topics were identified by members of the committee.

- Maintaining a balance between the airport user interests and the surrounding communities
- Review of safety procedures
- Continued support of GA facilities and users
- Minimum commercial standards and the cost of operating a business at the Airport
- The potential impact of new aircraft types and drones
- Community consensus on updated noise contours and noise-related impacts

¹² A "Hot Spot" is a location on an airport movement area with a history of potential risk of collision or runway incursion, and where heightened attention by pilots and drivers is necessary.



Attachment 1.

Lease Parcel Inventory



Lease Parcel Inventory Coast Aircraft



Quick Facts

Total Lease Area	~3 ac.
Number of Hangars	38
SF of Hangars	44,200 SF
Number of Tie-downs	4





SD

Description

Located in the southwest corner of the apron area. It consists of a number of modular Thangars and one large maintenance hangar with attached office space. There are several aircraft tie-downs mixed in with the Thangars. Advanced Aircraft Services is a maintenance shop operated on this leasehold that is a Factory Authorized Cessna Service Center and works on GA aircraft as well as some turboprop aircraft. This area is owned and operated by the City.

- Non-standard taxilane safety areas
- Hangars in fair condition
- Pavement in poor condition

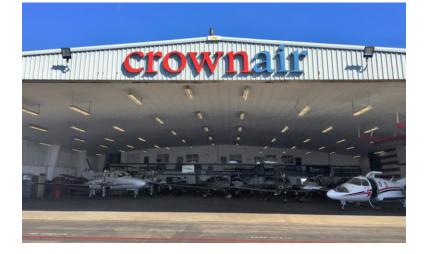


Lease Parcel Inventory

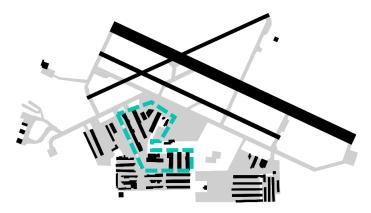
Crownair







SD



Quick Facts

Total Lease Area	~16.5 ac.
Number of Hangars	42
SF of Hangars	217,800 SF
Transient Aircraft Ramp	64,000 SF

Description

All of the hangars within this leasehold are mid- to large-size conventional hangars. The hangars and pavement are in good condition. The main business on this leasehold is Crownair Aviation, a full-service FBO catering to corporate aircraft. Crownair services include aircraft refueling, aircraft maintenance from single-engine piston to light jets, and transient aircraft tie-downs. Additional business within this lease include Coast Flight Training, Conquest Charter Inc., and Corporate Helicopters, the only helicopter repair service available at the Airport.

- Non-standard taxilane safety areas
- Limited parking
- Lack of office space





Lease Parcel Inventory

Flattop East









Quick Facts

Total Lease Area	~2.5 ac.
Number of Hangars	48
SF of Hangars	56,800 SF
Number of Tie-downs	1

Description

The Flattop East leasehold encompasses the first block of hangars at the corner of John J. Montgomery Drive and Gibbs Drive. This area is primarily filled with modular T-hangars, but has several single aircraft conventional hangars as well. This area is owned by the City and ground leased to individual tenants. Lessees are currently on month-to-month leases, but work is underway to transition to 15-year term leases.

- Non-standard taxilane safety areas
- Hangars in good to fair condition
- Pavement in poor condition





Lease Parcel Inventory

Flattop West







SD



Quick Facts

Total Lease Area	~2 ac.
Number of Hangars	25
SF of Hangars	33,300 SF
Number of Tie-downs	8

Description

The Flattop West leasehold is made up of the group of hangars north of the midway point of Gibbs Drive. The buildings are a mix of T-hangars and single aircraft conventional hangars with aircraft tie-downs dispersed in between. This area is owned by the City and ground leased to individual tenants. Lessees are currently on month-to-month leases, but work is underway to transition to 15-year term leases.

- Non-standard taxilane safety areas
- Hangars in good to fair condition
- Pavement in poor condition





Gibbs Flying Service

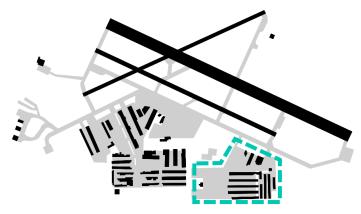






Airports

SD



Quick Facts

Total Lease Area	~23 ac.
Number of Hangars	101
SF of Hangars	182,200 SF
Number of Tie-downs	171

Description

The Gibbs Flying Service leasehold is the oldest at the Airport and consists of an FBO, a large aircraft tie-down area, conventional hangars, T-hangars, and a row of covered tie-downs. Services offered include aircraft fueling, aircraft cleaning and catering, and aircraft maintenance. They are certified to work on both single and multi-engine piston aircraft as well as the Allison and PT-6 turboprop engines.

- Hangars ranging from good to fair condition
- Erosion behind the maintenance shop and several T-hangars
- Pavement in poor condition and failing in several areas
- Non-standard taxilane safety areas



Lease Parcel Inventory Marigold Spots

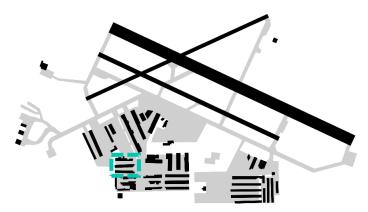






Airports

SC



Quick Facts

Total Lease Area	~2 ac.
Number of Hangars	26
SF of Hangars	40,900 SF
Number of Tie-downs	1

Description

This leasehold is located at the end of Glenn H. Curtiss Road. It is a mix of T-hangars and single aircraft conventional hangars. This area is owned by the City and ground leased to individual tenants. Lessees are currently on month-to-month leases, but work is underway to transition to 15-year term leases.

Challenges

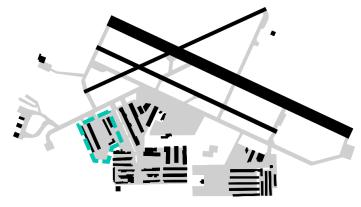
- Non-standard taxilane safety areas
- Hangars in good to fair condition
- Pavement in poor condition



Montgomery-Gibbs Executive Airport | Master plan

Lease Parcel Inventory National Air College





Quick Facts

Total Lease Area	~9.5 ac.
Number of Hangars	46
SF of Hangars	76,500 SF
Number of Tie-downs	45



Description

This leasehold on the southwestern portion of the airfield is currently operated as an FBO catering to based and transient aircraft hangar storage and tie-downs. Services also include flight training, ground instruction, and aircraft rental.



Airports

SD

Challenges

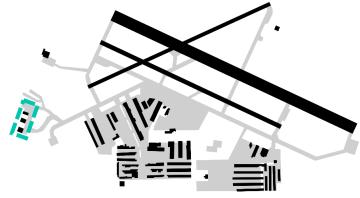
- T-hangars are in fair to poor condition
- Pavement in poor condition
- Main hangar in fair condition
- Non-standard taxilane safety areas
- Drainage issues



Montgomery-Gibbs Executive Airport | Master plan

Lease Parcel Inventory Spiders – Sorbi





Quick Facts

Total Lease Area	TBD
Number of Hangars	1
SF of Hangars	19,400 SF
Number of Tie-downs	TBD





SD

Description

This leasehold is on the far western edge of airport property. In the past it was surrounded by T-hangars that have since been removed in order to comply with the Runway 5 RPZ, leaving the Spiders maintenance shop and two abandoned conventional hangars as the only development in the area. They specialize in small, fabric, seaplane, and light-sport aircraft repairs.

- Pavement in poor condition
- Abandoned hangar with potential historical significance
- Separation from the center of the airfield
- Runway 5 RPZ limits the potential for future expansion



