



# Chapter 1

## *Inventory of Existing Conditions*

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### 1 | Section 1 - Introduction

This 2016 Airport Action Plan was prepared in an effort to establish a plan for the future development of LRU. Since the development of the previous action plan in 2008 and master plan update in 1997 LRU has undergone significant changes including: the addition of UAS research flights, a dramatic increase in military operations, a change in FBOs, and the completion of several improvement projects. Notable projects since 2008 include the reconstruction of Runway 12-30 with Portland Cement Concrete, the reconstruction and relocation of Taxiway A, installation of a new Automated Weather Observing System (AWOS), a city fire station located at the airport, and new fuel storage tanks. There have also been updates to FAA design criteria.

For these reasons, and to help chart a course for the future, the City of Las Cruces in conjunction with the Federal Aviation Administration (FAA), and the New Mexico Department of Transportation-Aviation Division (NMAD) supported the development of this Airport Action Plan which provides guidance for LRU through 2034. This Airport Action Plan has been funded by the FAA Airport Improvement Program (AIP) grant FAA 3-35-0024-028-2014 and NMAD Grant, LRU-15-01 and the City of Las Cruces.

**The City of Las Cruces in conjunction with the FAA and NMAD have supported the development of this Airport Action Plan**

## Section Overview

1.2|Part 01 - Airport Location

1.2|Part 02 - Airport Role

1.2|Part 03 - Airport History

## 1 | Section 2 - Airport Background

The Las Cruces International Airport (LRU) is owned and operated by the City of Las Cruces and is located within south-central New Mexico on the West Mesa of the City of Las Cruces (City). Las Cruces International serves a diversity of needs for general aviation users, military operations, unmanned aircraft systems (UAS) flight testing, and maintains a CFR Part 139 certification. LRU has three runways, offers a precision instrument approach, and has two fixed-base operators (FBO).

### Key sources of information used as references for this chapter include:

- 1997 Airport Master Plan
- 2008 Airport Action Plan
- 2008 Airport Layout Plan
- 2009 New Mexico Airport System Plan Update
- 2012 FAA General Aviation Airports: A National Asset
- 2015-2019 National Plan of Integrated Airport Systems
- FAA Terminal Area Forecast, Issued January 2015
- Construction plans and NEPA documentation plans from past LRU Projects
- City of Las Cruces Development Codes, Chapter 38 Zoning, last updated March 31, 2015
- 1989 Las Cruces Extra-Territorial Zoning (ETZ) Ordinances
- Doña Ana County General Code Chapter 250: Land Use and Zoning, amended October 23, 2007
- City of Las Cruces Comprehensive Plan 2040
- West Mesa Industrial Park Master Plan and Development Strategy October 1995
- Cultural Resource Survey, February 2015 conducted by Hammerstone Archaeological Services
- Biological Evaluation, February 2015, conducted by Rocky Mountain Ecology, LLC
- NMAD Pavement Condition Management System Update
- U.S. Census Bureau TIGER Data, 2014
- Doña Ana County Geographic Information System (GIS) Data
- City of Las Cruces Geographic Information System (GIS) Data
- LRU Airport Certification Manual
- LRU Airport Records and Airport Management
- On-site visual inspection of LRU



## 1.2 | Part 01 - Airport Location

Las Cruces International is within the City of Las Cruces and Doña Ana County (**Figure 1-1**). Las Cruces is situated in south-central New Mexico approximately 200 miles south of Albuquerque,

30 miles north of the border to Mexico, and 45 miles north-west of El Paso, Texas. The Airport is situated directly off of US Interstate 10 on the West Mesa of the City approximately 8 miles west of downtown Las Cruces (**Figure 1-2**).



**Figure 1-1. Location of LRU.**  
The City of Las Cruces is located in Doña Ana County (yellow) in south-central New Mexico.

Map Created by Delta Airport Consultants, Inc., March 2015  
Data Source: ESRI Topographic Map (updated December 2014), U.S. Census TIGER Data, City of Las Cruces, Doña Ana County



**Figure 1-2. Regional Context.**  
LRU is 200 miles south of Albuquerque, 30 miles north of the border to Mexico and 45 miles north west of El Paso.

Map Created by Delta Airport Consultants, Inc., March 2015

Data Source: ESRI Topographic Map (updated December 2014), U.S. Census TIGER Data, City of Las Cruces, Doña Ana County

LRU is classified by the NPIAS as a General Aviation Airport

The NMAASP classifies LRU as a Regional General Aviation Airport

## 1.2 | Part 02 - Airport Role

The 2015-2019 National Plan of Integrated Airport Systems (NPIAS) lists LRU as a general aviation (GA) airport. The 2012 FAA Report General Aviation Airports: A National Asset identifies LRU as a regional general aviation airport.

Eighty-five percent of NPIAS airports are classified as general aviation. GA airports in the NPIAS account for 36 percent of the nation’s GA fleet and are the most convenient source of air transportation for approximately 19 percent of the population, especially in rural areas.

The 2009 New Mexico State Airport System Plan (NMAASP) further categorized airports into the following classifications: primary commercial service, non-primary commercial service, limited commercial service, regional general aviation, community general aviation, and low activity general aviation airports. LRU is classified as a regional general aviation airport. Regional general aviation airports serve general aviation business activity with jet or multi-engine aircraft.

### *Understanding... Airport Classifications*

Federal airport classifications are published within the **National Plan of Integrated Airport Systems (NPIAS)** as required by the Airport and Airways Improvement Act of 1982. This FAA planning document is updated biannually in an effort to identify the nation’s airport needs over a 10-year planning period and classify airports based on their significance to the air transportation system.

Only those airports within the NPIAS are eligible to receive federal **Airport Improvement Program (AIP)** funding. As of 2014, there are 5,148 public-use airports in the United States. Of these, 3,345 (65 percent) have been deemed significant to air transportation and have therefore been included in the NPIAS. An abbreviated summary of classification criteria is shown below.

<i>Commercial-Primary</i>	<i>Commercial Non-Primary</i>	<i>Cargo</i>	<i>Reliever</i>	<i>General Aviation</i>
<i>&gt;10,000 annual enplanements</i>	<i>2,500-10,000 annual enplanements</i>	<i>Only cargo, Landing weight &gt;100 million lbs.</i>	<i>&gt;25,000 itinerant ops, 100+ based aircraft</i>	<i>No scheduled commercial service, at least 10 based aircraft</i>

Likewise, the State of New Mexico classifies the role of airports within the New Mexico Airport System Plan (NMAASP).



## 1.2 | Part 03 - Airport History

LRU was constructed in 1942 by the Civil Aviation Administration under the Development of Landing Areas for National Defense (DLAND) program. Known at the time as Las Cruces Municipal Airport, LRU included three runways, each 150 feet wide and four taxiways each at 50 feet wide.

During World War II, the airport served as an auxiliary airfield to the nearby Deming Army Airbase, approximately 40 miles west of the City of Las Cruces.

In 1955, the ownership of the 2,180 acre airport was transferred from the Department of the Interior to the City of Las Cruces.

In the 1960s LRU, known at the time as Las Cruces West, was one of three airports within the region. In the mid-1960s operations for Las Cruces East and the University Airport were consolidated and operations were moved to what is now known as Las Cruces International Airport.

Prior to its first master plan effort in 1974, LRU installed a non-directional radio transmitter, constructed a taxiway, and began improving the facilities at the Airport. With the master plan in place, LRU made more focused improvements which included updating road access, taxiways, tie-downs, additions to the terminal building, T-hangar construction, lighting projects, and many planning and maintenance projects. Land acquisition and a few land releases bring the total acres to 2,193 at present.

Other key historical highlights include the addition of an access road to Interstate 10 in 1986, the annexation of the Airport into Las Cruces city limits, the installation of the instrument landing system (ILS) on Runway 30 in 1992, the installation of new weather reporting equipment in 2010, reconstruction of Runway 12-30 in 2010, relocation of Taxiway A in 2013, and upgrading the fuel farm in 2014. From a safety standpoint, LRU purchased aircraft rescue and firefighting (ARFF) safety equipment in 1994 and 2006 and the City constructed a fire station located adjacent to the Airport in 2014. The installation of perimeter fencing in 1998 also increased the safety of those who use and/or live near the Airport. Relative to planning for the future, the Airport has taken several steps to enhance its success. Those steps include creating an Action Plan in 2008, performing wildlife hazard assessments in 2010, collecting airport data for Airports Geographic Information System (AGIS) in 2011, and major reconstructions of Runway 12-30 and Taxiway A in 2010-2012. Key milestones in LRU airport history are detailed (**Figure 1-3**).

LRU has participated in FAA's Airport Improvement Program (AIP) since 1982. This program currently funds 95 percent of all eligible projects. **Table 1-1** provides a listing of all grants that Las Cruces International has received since 1982.

LRU also participates in a funding program offered through NMAD which pays 2.5 percent of the remaining five percent that the AIP does not cover and may provide funding for projects that are not eligible under AIP. Grant history for the NMAD can be seen in **Table 1-2**.

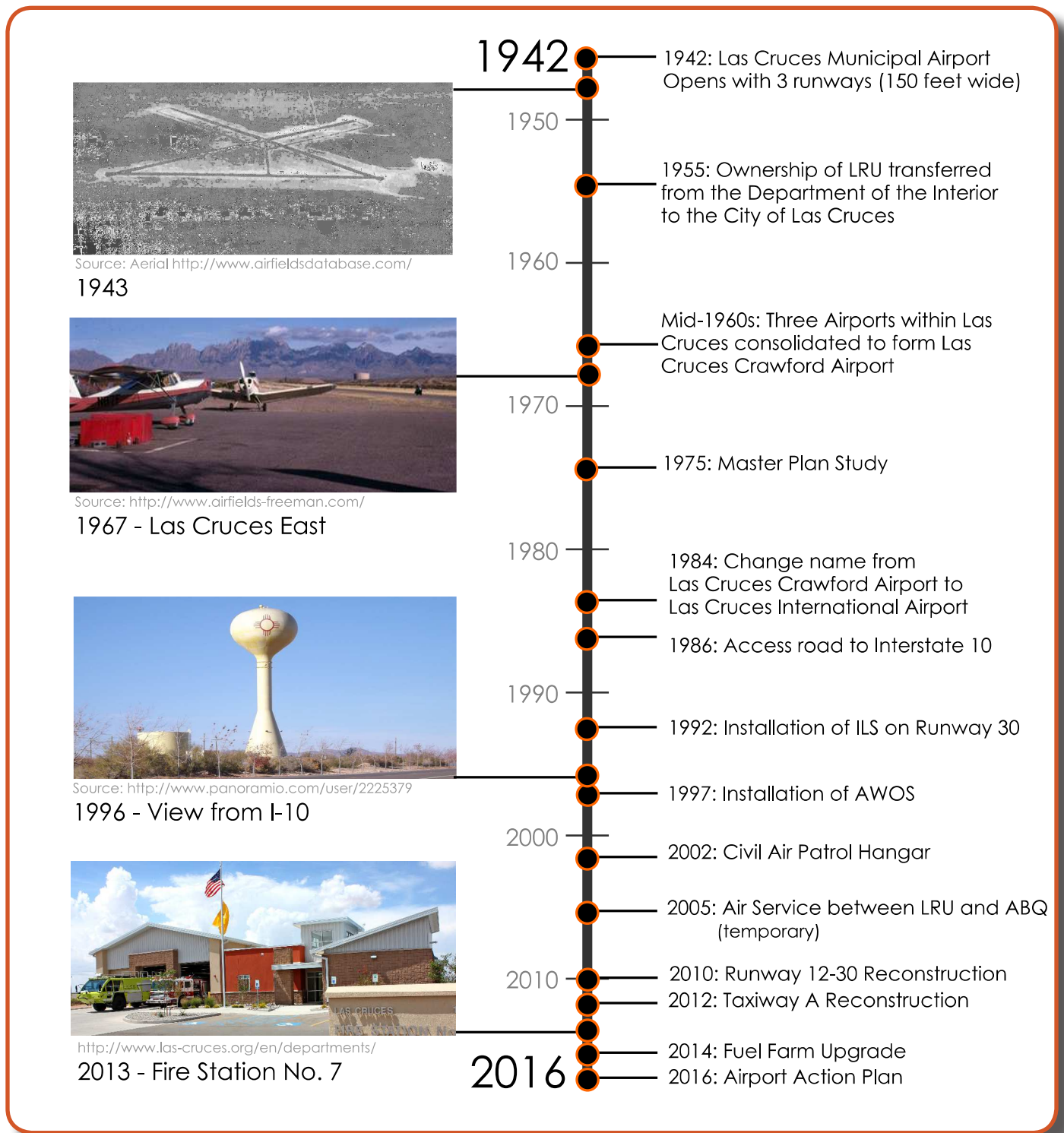


Figure 1-3. Airport History Timeline.

Source: 2008 Airport Action Plan, AIP & NMAD Grant History, and historic imagery.



**Table 1-1. Airport Improvement Program (AIP) Grant History.**

REQUEST YEAR	DESCRIPTION	GRANT AMOUNT
1982	Rehabilitate and Extend Runway, Improve Airport Drainage	\$ 435,079
1983	Construct Apron, Rehabilitate Apron, Improve Airport Drainage	\$ 456,560
1984	Airport Master Plan	\$ 58,949
1985	Construct, Extend, and Rehabilitate Taxiway, Construct and Extend Runway, Construct Apron, Improve Service Road, Improve Airport Drainage	\$ 457,124
1986	Improve Access Road	\$ 141,585
1988	Land Acquisition, Install Instrument Approach Aid, Improve Airport Drainage	\$ 1,207,499
1989	Construct and Rehabilitate Apron, Install Apron Lighting, Rehabilitate Taxiway, Improve Airport Drainage	\$ 743,425
1990	Rehabilitate Runway 12-30, Install Runway and Apron Lighting	\$ 636,256
1991	Install Guidance Signs	\$ 22,347
1994	Install Guidance Signs	\$ 56,729
1994	Acquire Aircraft Rescue & Fire Fighting Safety Equipment	\$ 87,467
1997	Rehabilitate Taxiway B&C, Install Apron Lighting, Install Weather Reporting Equipment, Improve Airport Drainage	\$ 1,153,716
1998	Install Perimeter Fencing	\$ 118,293
2000	Rehabilitate Runway Lighting, Install Apron Lighting, Taxiway Lighting, and Guidance Signs, Install Emergency Generator	\$ 554,272
2001	Rehabilitate Runway 8-26 and Improve Runway 30 Safety Areas	\$ 1,878,340
2002	Rehabilitate Apron, Runway, and Taxiway	\$ 300,000
2003	Construct Taxiway (Taxilane)	\$ 150,000
2006	Acquire Aircraft Rescue & Fire Fighting Vehicle, Install Airfield Guidance Signs	\$ 847,505
2007	Construct Taxiway [phase 1 design new west taxiway]	\$ 37,762
2009	Rehabilitate Runway [Engineering] - 12/30	\$ 601,449
2009	Rehabilitate Runway [Pavement] - 12/30	\$ 8,097,163
2009	Rehabilitate Runway [phase 2 complete construction South of 4/22] - 12/30	\$ 2,733,661
2010	Install Weather Reporting Equipment	\$ 213,648
2010	Wildlife Hazard Assessments	\$ 79,714
2011	Rehabilitate Taxiway [Recon Taxiway A]	\$ 5,483,879
2011	Collect airport data for Airports Geographic Information System	\$ 418,589

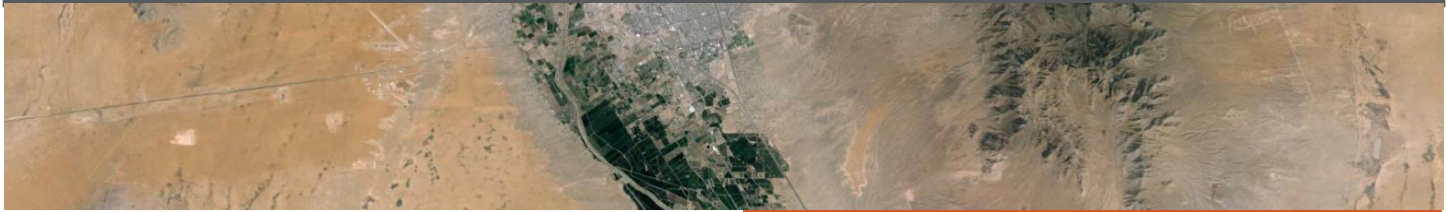
Source: FAA AIP Grant Records

Table 1-2. New Mexico Department of Transportation - Aviation Division (NMAD) Grant History.

REQUEST YEAR	DESCRIPTION	GRANT AMOUNT
2000	Airport Pavement and NAVAID Hardware	\$ 95,621
2002	Construct Civil Air Patrol Hangar	\$ 125,000
2003	Taxilane Construction	\$ 48,334
2005	Procure Airline Services between Las Cruces International Airport and the Albuquerque International Airport	\$ 200,000
2006	ARFF	\$ 15,000
2006	Airport Action Plan	\$ 48,750
2006	Guidance Signs, Miscellaneous NAVAID Rehabilitation	\$ 7,500
2008	Engineering Design – West End Taxiway	\$ 994
2009	Design/Rehab of Runway 12-30	\$ 88,012
2010	Wildlife Assessment	\$ 2,493
2010	Replace AWOS	\$ 6,250
2011	Fuel Farm Upgrade	\$ 173,415
2012	Maintenance Grant	\$ 9,553
2012	e-ALP	\$ 11,015
2012	Rehabilitate Taxiway A – Construction – Phase II	\$ 144,312
2013	Maintenance Grant	\$ 8,998
2014	Fuel Farm Upgrade	\$ 537,291
2014	Maintenance Grant	\$ 8,994

Source: NMAD Grant Records





## 1 | Section 3 - Regional Context

### 1.3 | Part 01 - Surrounding Airports

There are four public use NPIAS airports within approximately 50 miles of LRU, one military airport, and three airports not classified in the NPIAS. The public airports classified by the NPIAS include:

- **Hatch Municipal Airport (E05)** is located approximately 30 miles northwest. It is classified as a GA airport in the 2015 – 2019 NPIAS. The 2009 NMAPS classified the Hatch Municipal Airport as a Community GA airport.
- **Doña Ana County Airport at Santa Teresa (5T6)** is located approximately 30 miles southeast. It is classified as a GA airport in the 2015-2019 NPIAS. The 2009 NMAPS classified this airport as a Regional GA airport.
- **El Paso International Airport (ELP)** is located in El Paso, Texas, is approximately 45 miles southeast of Las Cruces International. The 2015-2019 NPIAS classifies this airport as a small hub primary airport. El Paso is the closest commercial airport to LRU.
- **Biggs Army Airfield at Fort Bliss (BIF)** is located just outside of El Paso International airport 45 miles southeast of LRU.

A map of these and other non-NPIAS airports within the vicinity of LRU can be seen in **Figure 1-4**.

### *Section Overview*

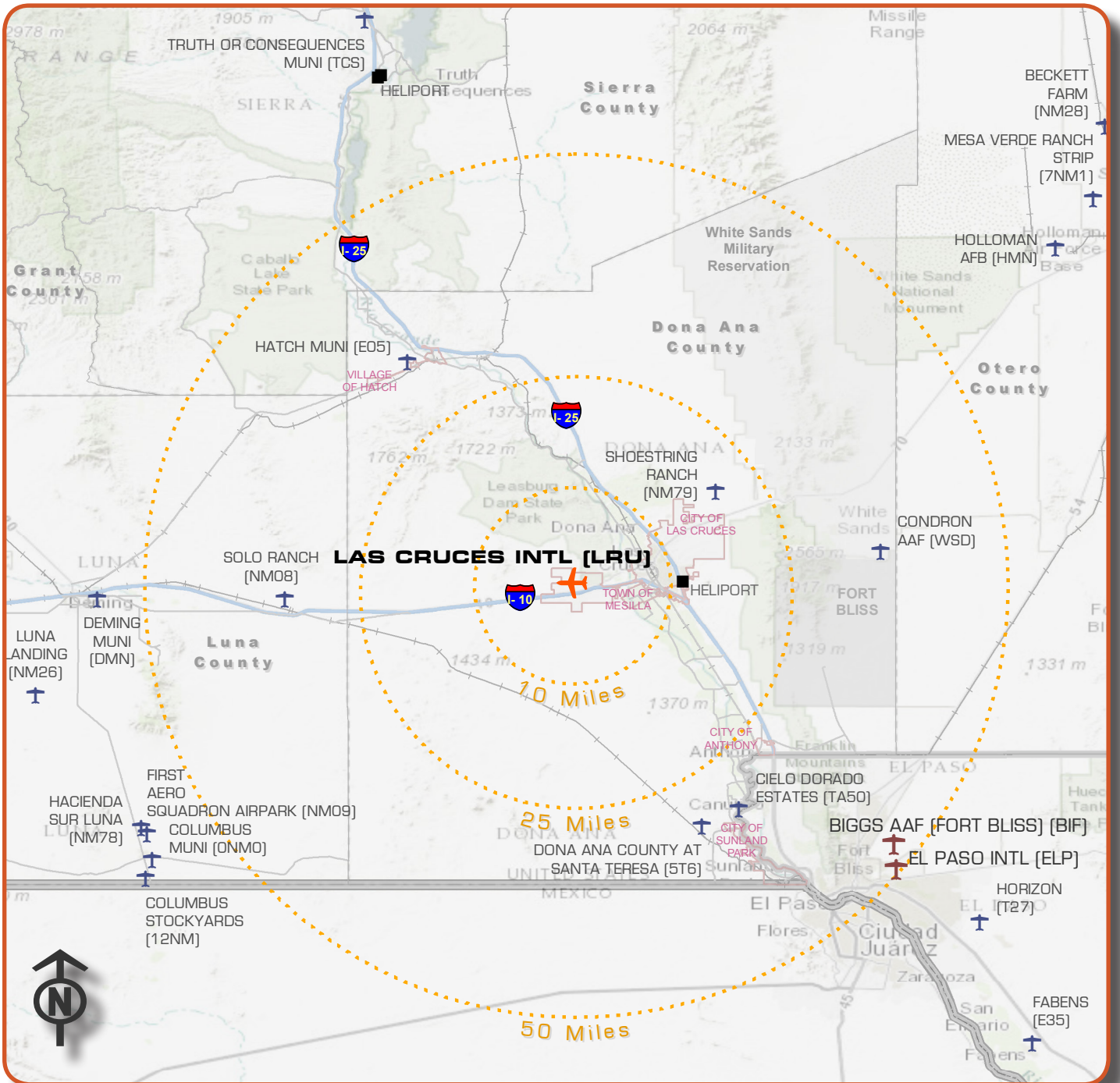
1.3|Part 01 - Surrounding Airports

1.3|Part 02 - Climate and Topography

1.3|Part 03 - Service Area and Demographic Profile

1.3|Part 04 - Surrounding Land Use

There are four public, one military, and three non-NPIAS airports within approximately 50 miles of LRU.



**Figure 1-4. Airports within the Region.**  
 There are eight airports and one heliport within 50 miles of LRU.

Map Created by Delta Airport Consultants, Inc., May 2015

Data Sources: ESRI Topographic Map (updated December 2014), U.S. Census TIGER Data, City of Las Cruces, Doña Ana County



Table 1-3. Surrounding Airports within the NPIAS and Military.

AIRPORT	DIST. FROM LRU (MILES)	RUNWAY				SURFACE MATERIAL	LIGHTING / APPROACH AIDS	INSTRUMENT APPROACHES	FUEL	BASED AIRCRAFT	ANNUAL OPS
		NUMBER	LENGTH (FEET)	WIDTH (FEET)							
Hatch Muni. Airport	30	11-29	4,110	60	Asphalt	VGSI Approach Lights – NSTD	N/A	N/A	0	2,500	
Doña Ana County at Santa Teresa Airport	30	10-28	9,550	100	Asphalt	MED NPI VGSI REIL	RNAV	100LL A1+	147	41,500	
El Paso International Airport	45	04-22	12,020	150	Asphalt	HIGH & MED VGSI REIL MALSR	04 – RNAV & LOC/DME 22 – ILS or LOC 26 – RNAV, HI-VOR/ DME or TACAN, VOR	100LL A1+ B+	282	90,596	
		08L-26R	5,499	75							
		08R-26L	9,027	150							
Deming Municipal Airport	50	04-22	5,675	60	Asphalt	MED NPI/BSC VGSI	All – RNAV 26 -VOR	100LL A1+	19	28,655	
		08-26	8,018	75							
Biggs Army Airfield*	44	03-21	13,554	150	PEM	HIGH VGSI REIL ALSF1	RNAV VOR	N/A	N/A	N/A	

Source: FAA 5010 Master Record, AIRNAV.COM

Notes: PEM = Porous European Mix  
 VGSI = Visual Glide Slope Indicator;  
 MED (medium) & HIGH = intensity of runway edge lighting  
 NPI = Non-precision instrument runway markings  
 BSC = Basic runway markings  
 LIRL/MIRL/HIRL = Low/Medium/High Intensity Runway Light  
 PAPI = Precision Approach Path Indicator

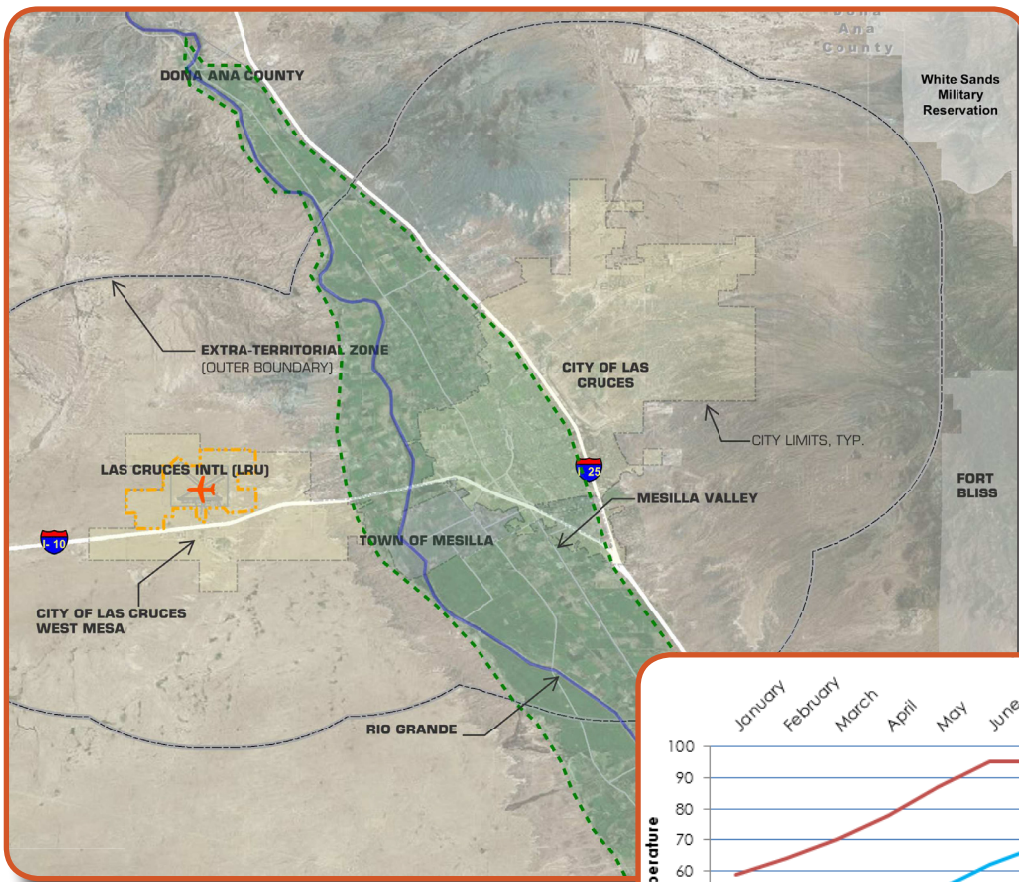
REIL = Runway End Identifier Light;  
 RNAV = Area Navigation  
 LOC = Localizer  
 ILS = Instrument Landing System  
 MALSR = Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights;  
 ALSF1 = Approach Lighting System for Category 1 runway  
 VOR = VHF Omnidirectional Radio  
 \*Airport not in the NPIAS

### 1.3 | Part 02 - Climate and Topography

Las Cruces International is situated on the West Mesa eight miles from the City. The area gets low precipitation and much of the surrounding area is rugged desert. Five miles to the east is the Rio Grande River. The Rio Grande irrigates the Mesilla Valley (Figure 1-5).

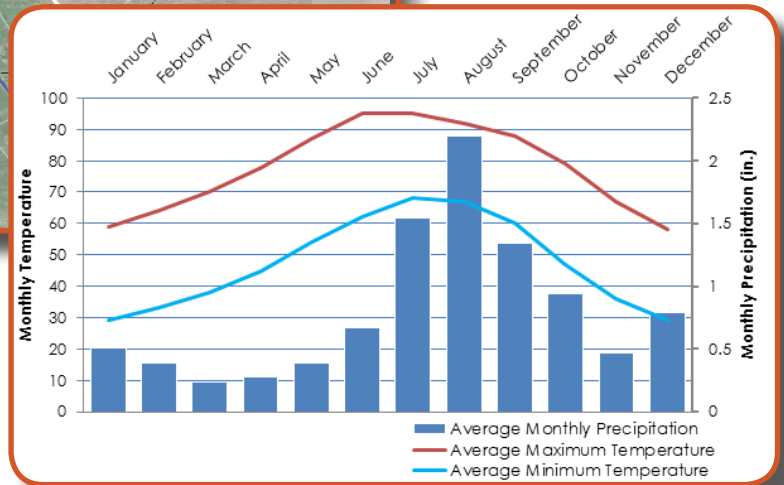
The climate of Las Cruces is sunny and arid, receiving the majority of the 9.75 inches of average annual precipitation during the summer months. Precipitation in Las Cruces is one of the lowest in the United States.

Temperatures in this arid environment are highly variable throughout the day, with approximately 30°F of variation between average maximum and minimum temperatures. Average low temperatures within January and December are below freezing while maximum temperatures in May, June, July, and August average above 90°F (Figure 1-6). The mean maximum temperature of the hottest month, June, is 94.6°F according to the NOAA Climatology of the United States.



**Figure 1-5. Topography of the City of Las Cruces and Mesilla Valley.**

Map Created by Delta Airport Consultants, Inc, March 2014  
 Data Source: ESRI Aerial Map (updated December 2014), City of Las Cruces



**Figure 1-6. Average monthly temperature and precipitation levels within the City of Las Cruces.**

Source: U.S. Climate Data Center



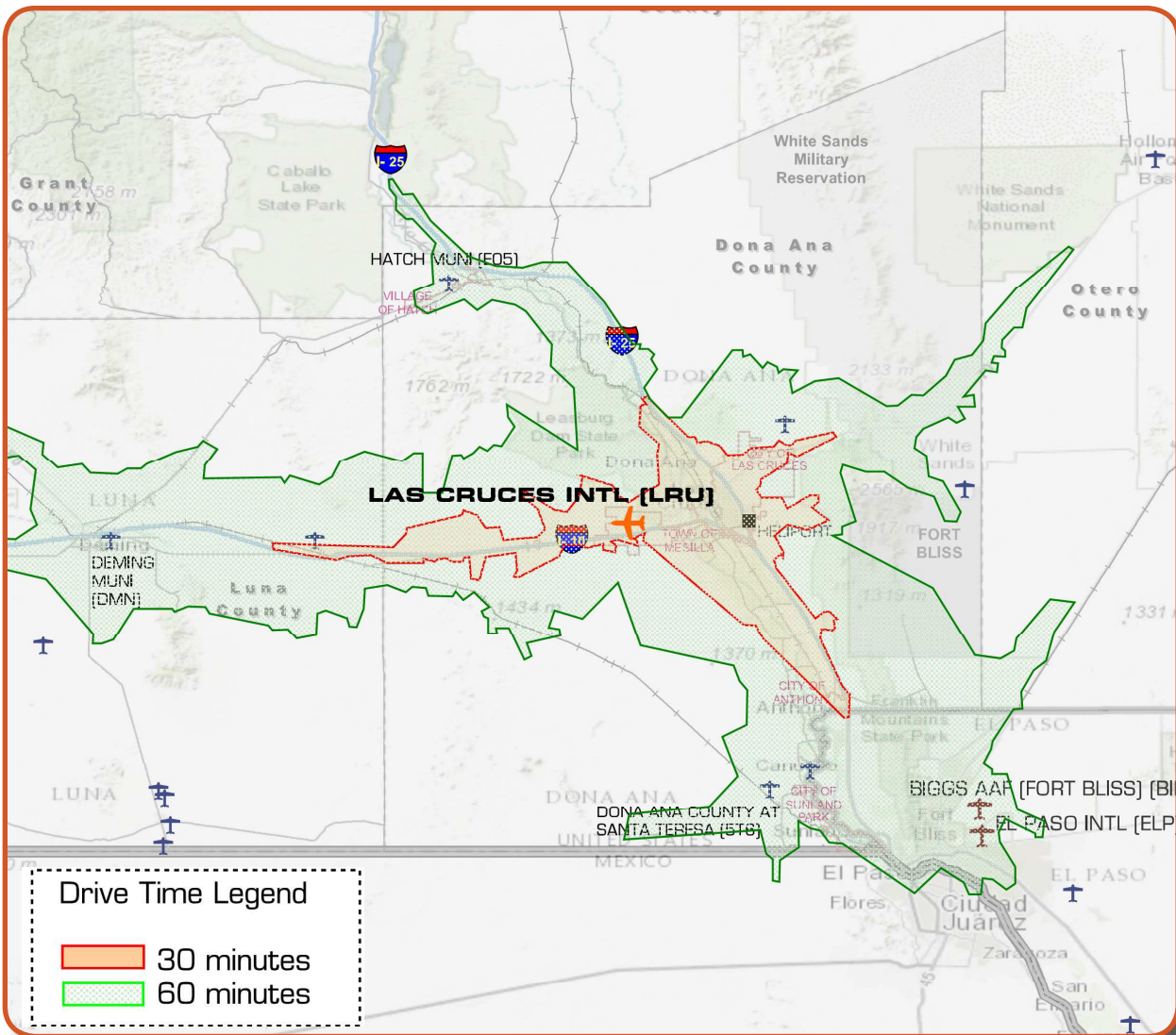
### 1.3 | Part 03 - Service Area and Demographic Profile

LRU serves general aviation within south-central New Mexico and the service area catchment can be classified as according to the drive time to LRU, as seen in **Figure 1-7**.

Areas within 30 driving minutes include the City of Las Cruces, Mesilla Valley, and central portions of Doña Ana County. There are no other airports within the 2009 NMSP closer than 30 minutes of the Airport.

Within a 60 minute drive of LRU are businesses and residents of Luna County, a majority of Doña Ana county, as well as portions of the El Paso metro area. Within 60 minutes of LRU there is El Paso International which provides commercial service. Regional GA airports to the north, east, and south are approximately 60 minutes from LRU. For this reason it is unlikely that LRU’s service area would extend beyond the 60 minute drive time to 90 minutes or higher.

New Mexico State University (NMSU) is within the 30 minute average drive time.



**Figure 1-7. Service areas within 30 and 60 minute drive time of LRU.**

Map Created by Delta Airport Consultants, Inc., May 2015

Data Sources: ESRI Topographic Map (updated December 2014), U.S. Census TIGER Data, MVEDA Analytics

The population and number of households within a 30 and 60 minute drive is increasing

Population & Housing

The population within a 30 minute drive time of LRU has increased at an annual rate of 2.03% from 2000-2010, from 113,469 in 2000 to 138,759 in 2010, according to the 2010 U.S. Census Profile and Mesilla Valley Economic Development Alliance (MVEDA). Population within this service area is anticipated to continue growth at a much reduced average annual rate of 0.67% from 2014 to 2019, increasing from 142,603 to 147,476.

The number of households has increased from 41,922 in 2000 to 53,987 in 2010 for an annual increase of 2.56%. Not included within the U.S. census data are students living within the dormitories at New Mexico State University (NMSU) which had approximately 3,500 beds in 2010 according to the 2009 NMSU Housing Master Plan.

Local Economy

According to the 2008-2012 American Community Survey and MVEDA, within 30 minutes of LRU, the largest employment industry is educational services followed by health care, retail, and public administration. The local employment base is highly impacted by New Mexico State University which has approximately 18,500 students and 1,200 academic staff.

The population and number of households within 60 minutes of LRU have been increasing more slowly. Population has increased from 520,452 in 2000 to 588,373 people in 2010 for an average annual increase of 1.23%. Households have increased at an average annual rate of 1.66% from 175,038 in 2000 to 206,308 in 2010. Population within this service area is anticipated to continue growth at an average annual rate of 0.87% from 2014 to 2019 increasing from 613,940 to 640,764.

Median household income in 2014 is \$38,163 within 30 minutes of LRU and \$36,100 within 60 minutes. Median household income for the 30 and 60 minute drivetimes are forecasted to increase to \$43, 472 and \$41, 388 respectively in 2019.

Within 60 minutes of LRU, education, health care, and retail remain the top three employment industries followed by food services, public administration, construction, and manufacturing.

According to MVDEA and Dun & Bradstreet, Inc. there are a total of 8,188 businesses within 30 minutes of LRU and 34,594 businesses within 60 minutes of LRU.



### 1.3 | Part 04 - Surrounding Land Use

LRU is within the jurisdictional boundary of the City of Las Cruces on the west mesa eight miles to the west of downtown. This portion of the City was annexed from Doña Ana County in 1990 and is contiguous with the remainder of Las Cruces only along the I-10 corridor. The airport and the adjacent West Mesa Industrial Park (WMIP) constitute a majority of this annexed land and are governed by the City of Las Cruces Development Codes, Chapter 38, updated March 31, 2015.

Lands outside of the City of Las Cruces are governed by the Extra-Territorial Zone (ETZ) which extends five miles from the City limits, with the exception of state and federal lands being used for public purpose. The ETZ is governed by a joint authority of elected officials from Doña Ana County and the City of Las Cruces and an appointed Commission. Zoning within the ETZ is controlled by the 1989 Las Cruces Extra-Territorial Zoning Ordinances.

Outside of the ETZ lies Doña Ana County. Doña Ana County consists largely of Performance District (PD) zoning which is designed to provide flexibility in land use provided that it is in line with surrounding land uses and the standards for the proposed use are met. Zoning within Doña Ana County is governed by Doña Ana County General Code Chapter 250: Land Use and Zoning, amended October 23, 2007.

The airport is zoned M-3C, heavy industry with conditional use. Uses within this zone would typically include manufacturing, transportation and wholesale trade. The West Mesa Industrial Park (WMIP) is situated immediately to the south of the airport and has a Special Overlay zoning designation WMIP. Four large areas around the airport are zoned HC, Holding Conditional, and there is an area of C-3C, Commercial High Intensity on the eastern border of airport property. The Holding zone designation is applied to lands which are not yet developed and whose owners do not have plans to develop. These areas allow for only low intensity development

including the construction of one single-family dwelling unit. The parcels near the airport which are zoned Holding Conditional are permitted additional conditional land uses.

The WMIP is an approximately 1,800 acre industrial park located immediately south of airport property. The City of Las Cruces has produced a separate Master Plan and Development Strategy specifically for WMIP. The uses allowed within the overlay include all light industrial uses and manufacturing activities permitted in the M-1 Light Industrial Zoning. Three Foreign Trade Zones (FTZ), are within the industrial park which, although physically on U.S. soil, are considered not within the U.S. Customs space for tariff purposes. One of these is intended for airport and aviation-related businesses while the other two are designated for serving existing industry, and for industrial uses.

To the north and west the Airport borders the ETZ. Lands within the portions of the ETZ adjacent to Las Cruces are primarily vacant and unzoned with the exception of a pocket of residential development along the northeast property line.

Growth and development within the lands around the airport are focused to the east of the airport along the Mesilla Valley. To protect the operation of LRU from encroachment that could inhibit operation or growth of the Airport, an Airport Operations District (EAO) and Airport Operations Overlay Zone District have been developed within the ETZ and the City respectively.

Existing land uses and zoning around the airport are compatible with airport operations.

The Airport is zoned M-3C

Special overlay zones are in place to protect Airport ops

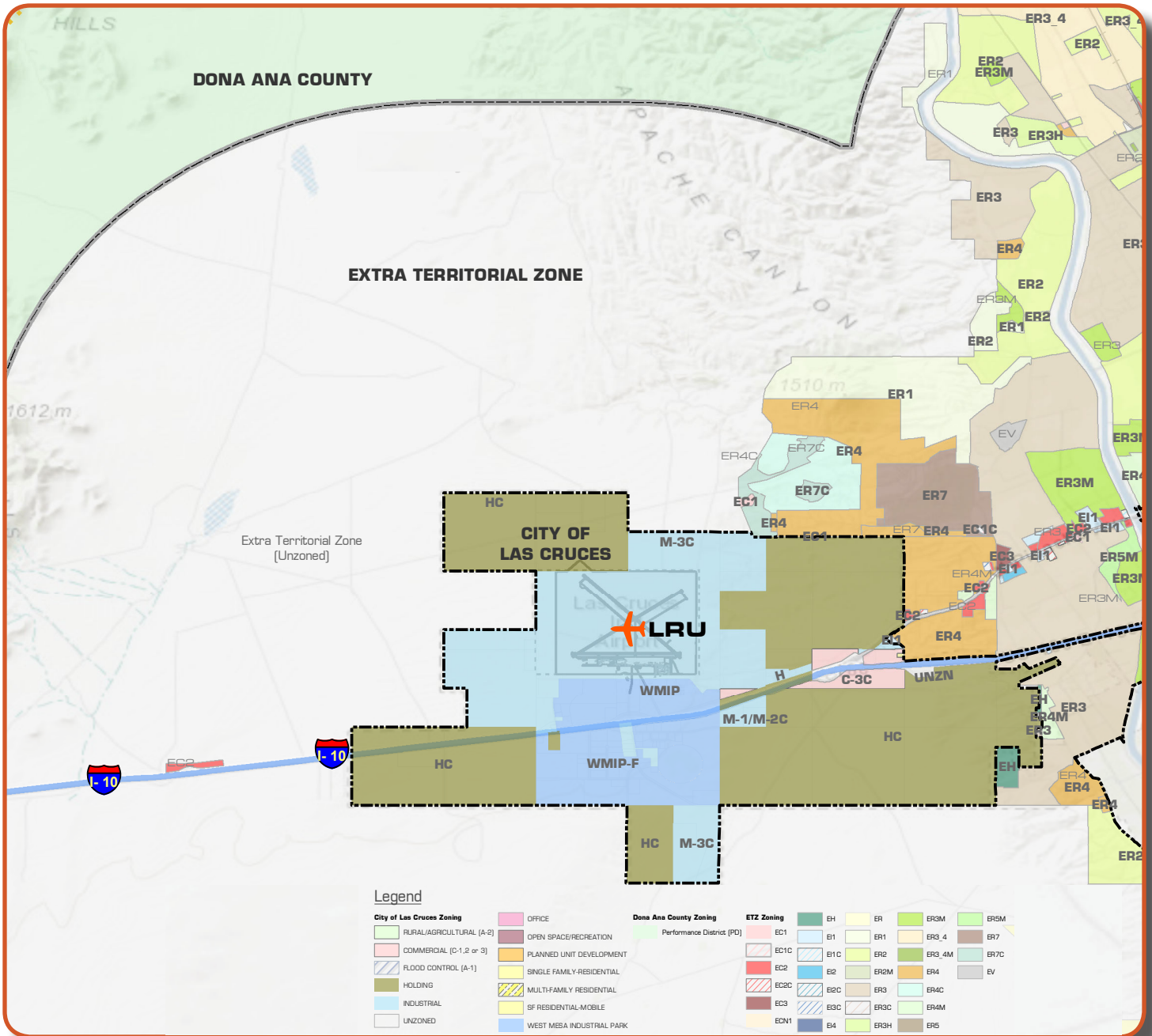
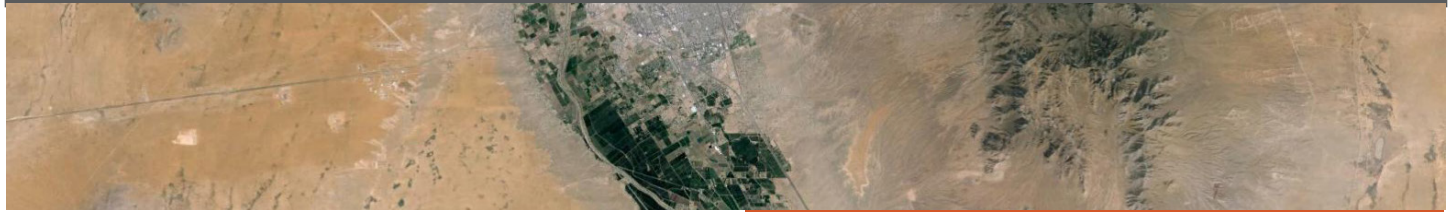


Figure 1-8. Zoning within the Surrounding Communities.

Map Created by Delta Airport Consultants, Inc., March 2015

Data Source: ESRI Topographical Map (updated December 2014), City of Las Cruces GIS Data, Doña Ana County GIS Data, U.S. Census Tiger Data





## 1 | Section 4 - Description of Existing Facilities

### 1.4 | Part 01 - Existing Airport Layout

The Las Cruces International Airport consists of approximately 2,193 acres. Key elements and amenities include:

- three runways
- parallel and connecting taxiway system
- two fixed-base operations
- several aircraft storage T-hangars, conventional hangars, shade hangars, aircraft parking aprons
- a fuel storage area
- runway and taxiway edge lighting, visual and navigational aids
- electrical vault
- automobile parking
- airport rescue and firefighting facilities (ARFF), tenant facilities, an airport administrative office, and airport maintenance facilities.

These features are depicted on the Airport Layout Drawing, **Figure 1-9**.

### *Section Overview*

1.4|Part 01 - Existing Airport Layout

1.4|Part 02 - Existing Design and Operating Characteristics

1.4|Part 03 - Airside Facilities

1.4|Part 04 - Buildings, Facilities, and Support Services

1.4|Part 05 - Utilities

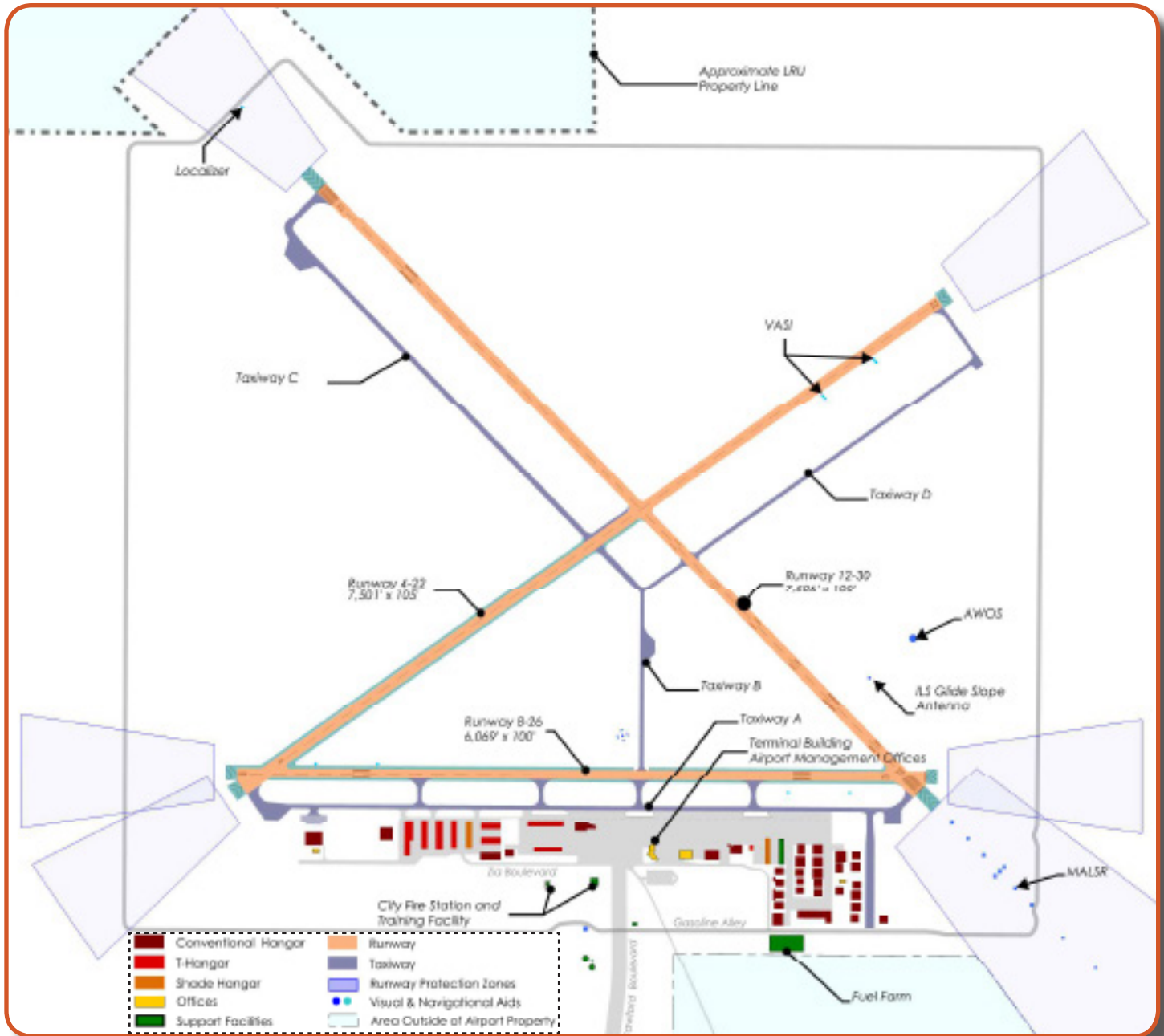


Figure 1-9. Airport Layout Drawing

Map Created by Delta Airport Consultants, Inc., March 2015



## 1.4 | Part 02 - Existing Design and Operating Characteristics

### Airport Operational Criteria

The 2008 Airport Action Plan identified and planned development at LRU based upon an Airport Reference Code (ARC) of C-II based on the typical approach speed and wingspan of critical aircraft. Examples of aircraft operating at LRU based upon instrument flight plan logs are identified in **Table 1-4**.

LRU no longer has scheduled commercial service but the City maintains its 14 CFR Part 139 certificate. This regulation requires the City as airport owner to provide ongoing evidence of compliance with standards outlined in the regulation and to be issued an airport operating certificate by FAA. FAA requires that LRU maintain and comply with a Certification Manual which outlines airport personnel training and responsibilities, ARFF equipment, and certain airfield operational and safety standards.

**Table 1-4. Typical Aircraft Operating at LRU.**

AIRCRAFT	ARC	APPROACH SPEED (KNOTS)	WINGSPAN (FEET)	MAX. TAKEOFF WEIGHT (LBS)
Eclipse Aviation 500	B-I	91	37.20	5,950
Hawker Beechcraft 400 Beechjet	B-I	120 <sup>1</sup>	43.50	16,100
Cessna Citation 1SP	B-I	108	47.10	11,850
Cessna Citation CJ1	B-I	108	46.80	10,700
Bombardier Learjet 31	B-I	113	43.08	17,000
Cessna Mustang	B-I	100	43.20	8,645
Beechcraft Premier 1A	B-I	108	44.50	12,500
Embraer Phenom 100	B-I	105	40.30	10,472
Cessna Citation Excel <sup>2</sup>	B-II	108	54.08	16,630
Cessna Citation Ultra Encore	B-II	107	52.20	16,300
Cessna Citation CJ2	B-II	118	49.83	12,500
Hawker-Siddeley HS 125 Series 700A	C-I	125	47.00	24,200
Bombardier Learjet 45	C-I	123	47.10	19,500
Cessna Citation CJ3	C-II	124	53.25	13,870
Gates Learjet 35A/36A	D-I	143	39.50	18,300

Source: FAA Aircraft Characteristics Database

Notes: <sup>1</sup>Based on stall speed x 1.3, <sup>2</sup>Cessna (<http://cessna.txtav.com/en/citation>)

### Airspace Description

**Class E, controlled airspace, surrounds LRU from 700 AGL-18,000 MSL feet**

There are six airspace classifications. A controlled area which accommodates jet traffic at low altitudes or airspace corridors identified as federal airways is designated as Class E. This is the classification for LRU, which has controlled airspace starting at 700 feet Above Ground Level (AGL) and extending vertically to 18,000 feet Mean Sea Level (MSL). Above 18,000 feet is Class A airspace. **Figure 1-10** shows the Class E airspace surrounding LRU. The established Visual Flight Rules (VFR) en route airways and associated reporting points in the vicinity of LRU are shown in **Figure 1-11**.

### Understanding...Airspace

The airspace over the United States, to an altitude of approximately 60,000 feet MSL (Flight Level – FL600), is separated into two parts, terminal and en route airspace. Terminal airspace is that area around the nation’s major airports extending to a specified altitude that may encompass an area of 60 miles in diameter and include several airports. En route airspace is the area within which aircraft transit from one terminal airspace to another. There is no specified bottom altitude for en route airspace and the top extends to the upper performance limits of civil aircraft. U.S. airspace is further divided into several different categories, each with its own rules and regulations.

The airspace categories are designated Class A, B, C, D, E, and G, transition areas and continental control area (Figure 2-9). The Class B, C, and D areas are ascribed to Airport Traffic Areas (ATA). Each class of ATA has a given radius, with Classes B and C having extensions (transition areas) to encompass the final portion of an instrument approach procedure.

Victor airways are low altitude airways, used by both VFR and IFR aircraft traffic, defined in straight line segments between either two very high frequency omnidirectional range (VOR) stations, or a VOR and a VOR intersection. Victor airways have a floor of 1,200 feet above ground level (AGL) and a ceiling of 17,999 feet MSL. They are normally eight nautical miles wide

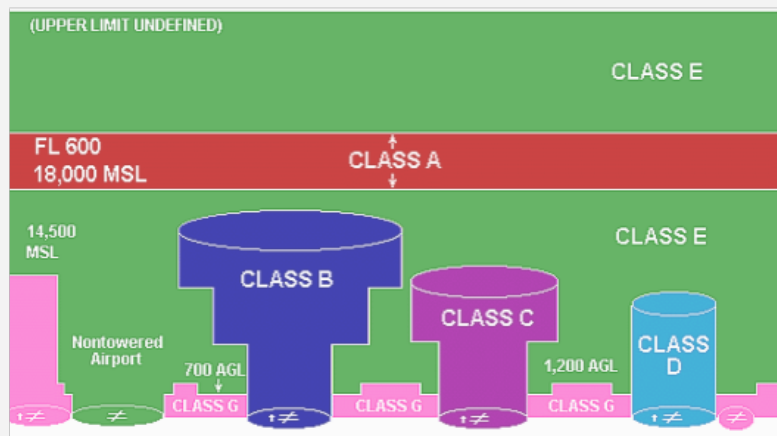






Figure 1-11. VFR airspace

Source: Skyvector.com



## Air Traffic Control (ATC) Procedures and Communications

There is currently no air traffic control tower at Las Cruces International. Recent plans were developed for a tower, but due to funding availability and airport activity levels the tower was not constructed. The airport uses an Automated Weather Operating System (AWOS-III), a lighted wind cone, and segmented circle to provide pilots with information about wind conditions and local traffic patterns. Pilots near the airport also use UNICOM frequency (122.7) to obtain conditions and to alert other aircraft of their positions and intentions. The Albuquerque Air Route Traffic Control Center handles aircraft arriving and departing under Instrument Flight Rules (IFR). **Table 1-5** provides information about the various frequencies for LRU communications.

**Table 1-5. Communication Frequencies at LRU**

AIRPORT COMMUNICATIONS	FREQUENCIES
CTAF/UNICOM	122.7
Albuquerque Center APP/DEP Control	128.2
AWOS	119.025

Source: FAA Airport/Facility Director

Notes: CTAF-Common Traffic Advisory Frequency

UNICOM-Universal Communications

APP-Approach

DEP-Departure

AWOS-Automated Weather Advisory System

## Fixed-Base Operations

Two Fixed Based Operators (FBO), Southwest Aviation and Francis Aviation support the Las Cruces International Airport. Southwest Aviation occupies all of a City-owned building, approximately 11,600 square feet, located west of the terminal building on the large parking apron. They provide fuel services, hangar rental, flight training, aircraft rental, and aircraft maintenance. Southwest Aviation owns one hangar east of the terminal building and owns several T-hangars west of their FBO hangar.

Francis Aviation recently started FBO services at LRU and also provides full services. They currently operate out of the City-owned terminal building.

**LRU has two FBOs:  
Southwest Aviation  
and Francis Aviation**

## Obstructions to Air Navigation

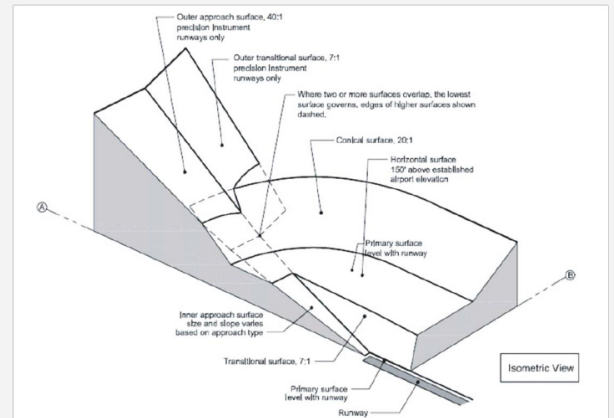
There are no current obstructions to the Part 77 surfaces

Fixed or mobile objects of greater height than those heights or surfaces outlined in 14 CFR Part 77.23 are classified as obstructions to air navigation and considered as hazards unless determined otherwise by the FAA. In order to fully protect LRU environs from potential hazards to air navigation, it is important that an obstruction analysis evaluate penetrations based on the Part 77 imaginary surfaces. An airspace analysis to determine if there are any obstructions to the Part 77 imaginary surfaces was undertaken as part of this Action Plan and concluded that there are no current obstructions to Part 77 surfaces.

### Understanding...Obstructions to Air Navigation

**FAR Part 77:**

- Establishes standards for determining obstructions in navigable airspace
- Sets forth the requirements for notice to the Administrator of certain proposed construction or alteration
- Provides for aeronautical studies of obstructions to air navigation to determine their effect on the safe and efficient use of airspace
- Provides for public hearings on the hazardous effect of proposed construction or alteration on air navigation
- Provides standards for establishing antenna farm areas.

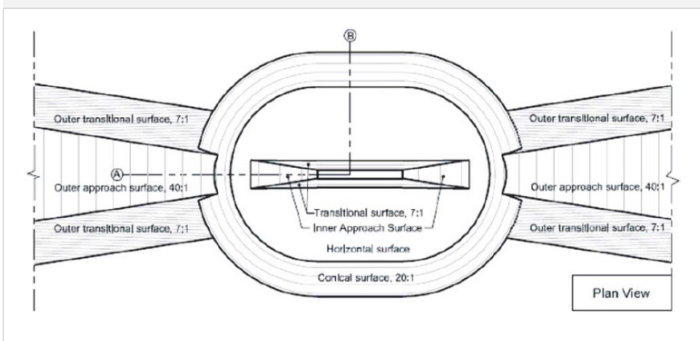


Source: Federal Aviation Administration

Obstructions to air navigation are any existing or proposed objects, fixed or mobile, in greater height than the imaginary surfaces outlined within FAR Part 77.23 (Part 77). The imaginary surfaces established under FAR Part 77 include:

- Primary Surface
- Approach Surface
- Transitional Surface
- Horizontal Surface
- Conical Surface

The standards apply to all objects, whether manufactured, natural growth, or terrain.



Source: Federal Aviation Administration





## 1.4 | Part 03 - Airside Facilities

Airside facilities are those that serve aircraft at Las Cruces International. At LRU these facilities include:

- Runways
- Taxiways
- Aprons
- Airfield Visual Aids and Lighting
- Navigational Aids
- Weather Equipment

### Runways

LRU has three runways, shown in **Figure 1-12** and further detailed in **Table 1-6**. Runway 12-30 is the primary runway. It is oriented in a northwest-southeast direction and is 7,506 feet long and 100 feet wide. The rehabilitation completed in 2010 included using concrete instead of asphalt which is on the other two runways. Runway 12-30 supports a wheel bearing capacity of 70,000 pounds single wheel and 120,000 pounds dual wheel. This primary runway has an instrument landing system and MALSR approach lights to Runway 30.

Runway 8-26 is oriented in an east-west direction and is 6,069 feet long and 100 feet wide. Its asphalt construction supports a wheel bearing capacity of 70,000 pounds single wheel and 120,000 pounds dual wheel. This runway was rehabilitated in 2004.

Runway 4-22 is oriented in a northeast-southwest direction and is 7,501 feet long and 105 feet wide. It was rehabilitated in 2007. Its asphalt construction supports a wheel bearing capacity of 30,000 pounds single wheel gear and is closed to aircraft that exceed this weight. Runway 4-22 is not under the purview of the airport's 14 CFR Part 139 certification manual.

LRU has three runways:  
RW 12-30,  
RW 4-22, and  
RW 8-26

Runway 12-30  
is the primary  
runway



*Intersection of Runways 26 and 30.  
Image by Delta Airport Consultants*



*Looking down Runways 8 and 4.  
Image by Delta Airport Consultants*



*Approach to Runway 12.  
Image by Delta Airport Consultants*

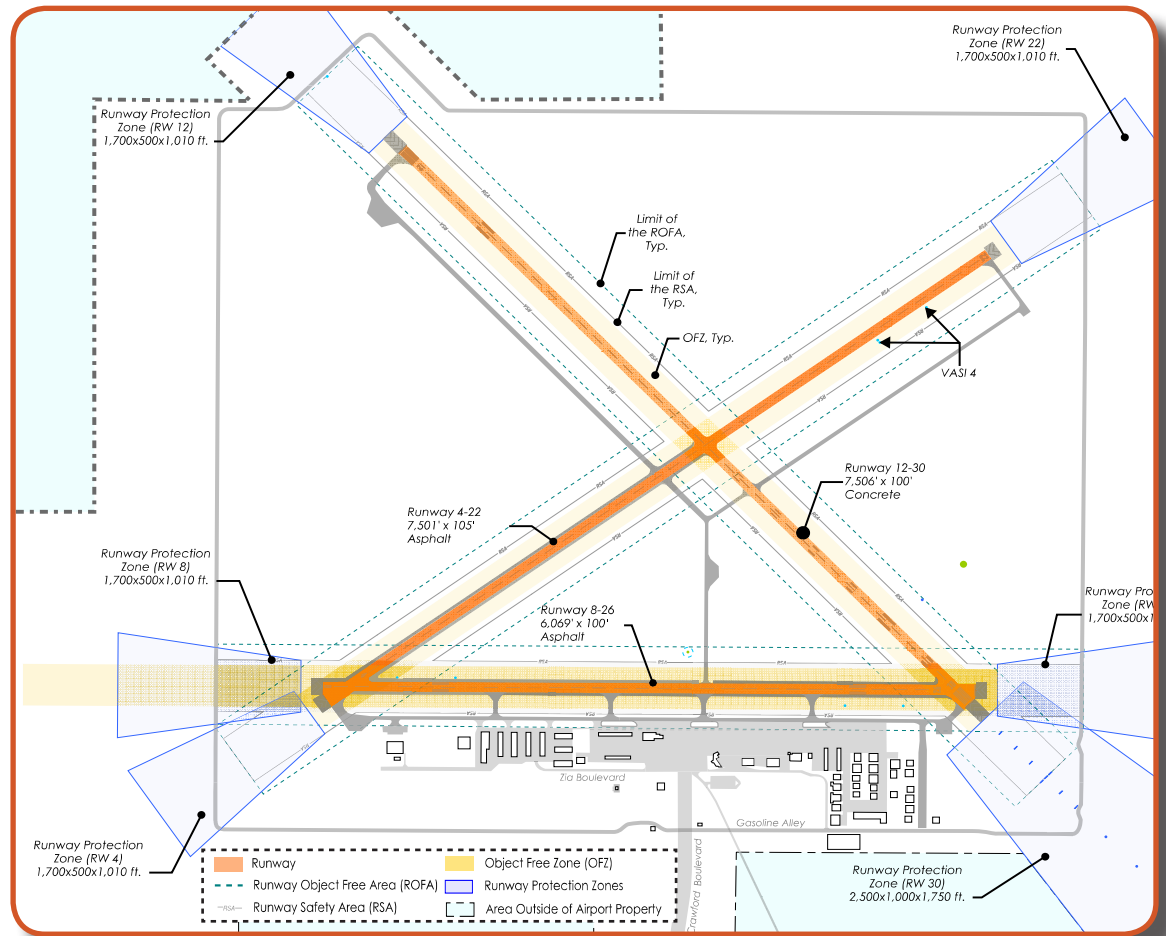


Figure 1-12. Runways at LRU.

Map created by Delta Airport Consultants, Inc. June 2015

Table 1-6. Existing Runway Data.

Runway	4	22	8	26	12	30
Length (feet)		7,501		6,069		7,506
Width (feet)		105		100		100
Surface		Asphalt		Asphalt		Concrete
Displaced Threshold		None		None		None
Runway End Elevation (MSL) – (feet)	4435.9	4451.7	4436.5	4435.9	4456.9	4435.9
Lighting		MIRL		MIRL		HIRL
Marking		Basic		Basic		NPI PIR
Approach Aids		VASI-4 (RW 22)		VASI-2		REIL MALSR
RDC		C-II		C-II		C-II

Source: FAA Form 5010, December 2014

Notes: HIRL – High Intensity Runway Lights  
 REIL – Runway End Identifier Light  
 MSL – Mean Sea Level

RDC – Runway Design Code  
 MALSR – Medium Approach Light System with  
 Runway Alignment Indicator Lights



## 1 - Runways: Wind Analysis

Wind is a key factor that influences runway orientation and the number of runways needed. Ideally a runway should be aligned with the prevailing wind. Wind conditions affect all aircraft to varying degrees. Generally, the smaller the aircraft, the more it is affected by wind, particularly crosswind components. More than one runway is sometimes necessary to achieve the desired 95 percent coverage. The maximum allowable crosswind component for runways is specified in FAA Advisory Circular 150/5300-13A, Airport Design and depends upon the Runway Design Code. For C-II runways like those at LRU, the maximum allowable crosswind component is 16 knots. However, since many smaller and slower aircraft also use LRU it is important to also examine conditions for lesser crosswind components such as 10.5 knots and 13 knots as indicated in the Advisory Circular.

All runways provide adequate wind coverage for 16 knot conditions during all-weather conditions

**Table 1-7** and **Table 1-8** provide information about the wind coverage for each runway at LRU and combination of runways for all-weather and IFR conditions. All weather is the primary consideration for airport design, but it is also worthwhile to look at crosswind conditions solely during instrument flight rule weather conditions.

When the three runways are analyzed independently, only Runway 8-26 provides adequate wind coverage during all weather conditions for all crosswind components reviewed. When multiple runways are in operation, any two of the LRU runways combined provide the required coverage during all weather conditions for all crosswind components considered. In fact, coverage is over 98 percent for all cases.

During IFR conditions, no single runway provides 95 percent coverage for all crosswind components considered. During IFR conditions, the least favorable two-runway combination for small aircraft is Runway 12-30 and 4-22 since the coverage is less than 95 percent. All other two runway combinations and crosswind components exceed the desired 95 percent.

**Table 1-7. Runway Wind Analysis for Operation During All-Weather Conditions.**

		KNOTS		
		10.5	13	16
Individual Runway	Runway 12-30	90.81%	94.49%	97.51%
	Runway 4-22	94.64%	97.38%	99.44%
	Runway 8-26	96.16%	98.02%	99.44%
All Runway's Combined	Runway 12-30, Runway 4-22, Runway 8-26	99.63%	99.92%	99.99%
Combos	Runway 12-30 & Runway 4-22	98.70%	99.66%	99.93%
	Runway 12-30 & Runway 8-26	98.00%	99.11%	99.69%
	Runway 4-22 & Runway 8-26	98.07%	99.24%	99.87%

Source:

**Table 1-8. Runway Wind Analysis for Operation During IFR Conditions.**

		KNOTS		
		10.5	13	16
Individual Runway	Runway 12-30	86.73%	88.55%	91.02%
	Runway 4-22	89.54%	92.50%	96.14%
	Runway 8-26	92.32%	94.67%	96.56%
All Runway's Combined	Runway 12-30, Runway 4-22, Runway 8-26	99.38%	99.88%	99.95%
Combos	Runway 12-30 & Runway 4-22	94.27%	96.08%	98.18%
	Runway 12-30 & Runway 8-26	95.13%	96.10%	96.95%
	Runway 4-22 & Runway 8-26	96.77%	98.76%	99.65%

Source:

## 2 - Runways: Numeral Designations

Runway numerals for each runway end are determined based on the runway heading from the approach direction to the runway end and are equal to one-tenth of the magnetic azimuth of the runway centerline, measured in the clockwise direction from magnetic north. Although the true heading of the runway will not change over time, the magnetic heading will change as the location of magnetic north shifts over time

**Table 1-9** provides a summary of the true heading for each runway and notes the 8.62°E of magnetic declination in order to determine magnetic azimuth. According to the National Geophysical Data Center the rate of change to the magnetic declination in this area is 6' W per year.

Currently Runway 4-22 and 12-30 are ready for a redesignation of runway numerals, however, both runways are within the allowable 3° of variation, per FAA Order 8260.19F, Flight Procedures and Airspace, effective January 2014

**Table 1-9. Runway Compass Reading Analysis.**

Runway	4	22	12	30	8	26
True Azimuth	54.64	234.65	135.00	315.01	89.97	269.98
Magnetic Declination	8.62 E	8.62 E	8.62 E	8.62 E	8.62 E	8.62 E
Current Magnetic Azimuth	46.02	226.03	126.38	306.39	81.35	0.1
Runway Designation	5	23	13	31	8	26

Source: National Geophysical Data Center Website (ngdc.noaa.gov) , FAA Datsheet (December 2014)



### 3- Runways: Runway Surfaces and Runway Protection Zones

Runway Protection Zones (RPZs) are airfield design elements intended to protect airspace, prevent incompatible land uses, and protect people and property on the ground within the vicinity of a runway end. RPZs are trapezoidal-shaped areas located on both the arrival and departure ends of a runway within the innermost portion of the FAR Part 77 approach surface. The dimensions of an RPZ are based on the type of aircraft expected to use a runway and its approach visibility minimums (**Table 1-10**). Airports are required by the FAA to control to the extent possible the land within an RPZ to prevent the creation of hazards to landing and departing aircraft. As per AC 150/5300-13A, “control” is exercised through the acquisition of property interest as well as the clearing and maintenance of RPZ areas of incompatible objects and activities.

The FAA prefers that the airport owner control the defined RPZ area to enhance protection of people and property on the ground. Such control includes the clearing and maintenance of incompatible objects and activities. While the City controls all RPZs through fee simple ownership, not all RPZs are dedicated airport property.

The city controls all RPZs through fee simple ownership

In addition to the Runway Protection Zones, a Runway Object Free Area (ROFA), Runway Safety Area (RSA), and Object Free Zone (OFZ) surround each runway. The extent of restrictions to operations and objects within these areas are determined in accordance with AC 150/5300-13A.

Runway surfaces and RPZs are shown within **Figure 1-12**.

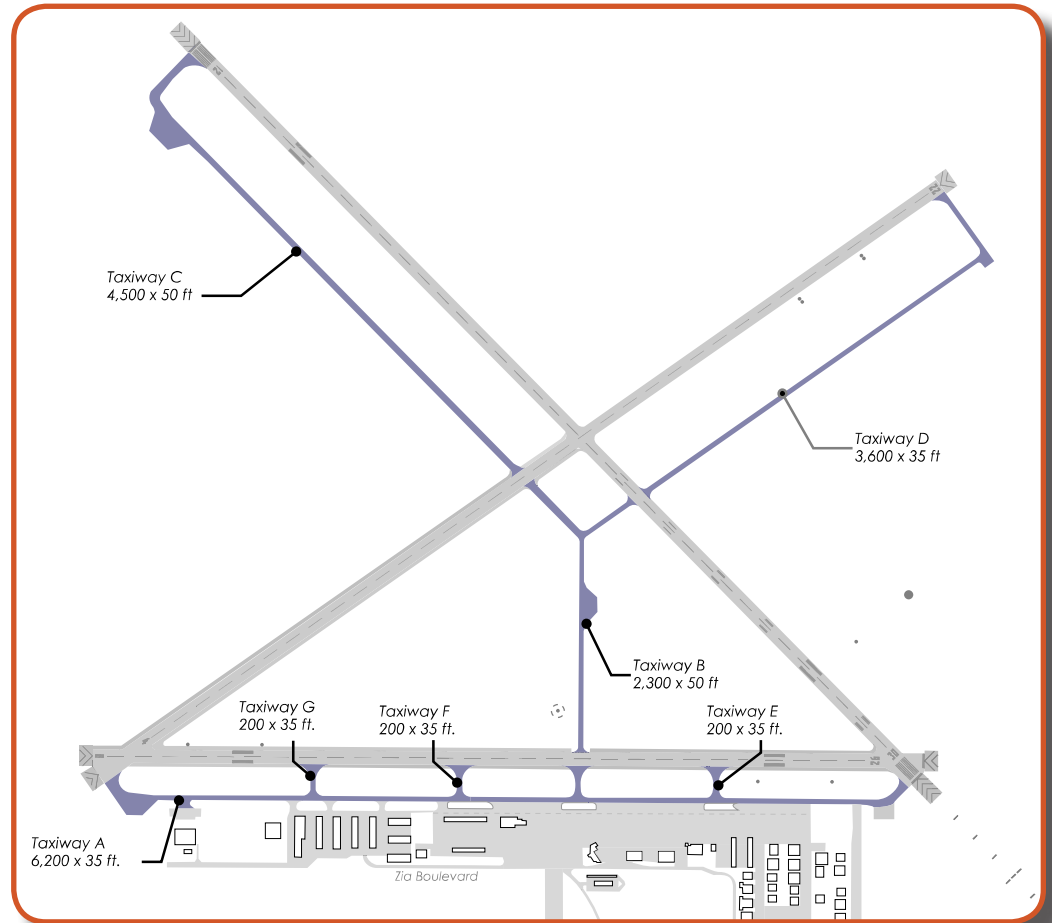
**Table 1-10. Runway Protection Zone (RPZ) Dimensions.**

RUNWAY END	LENGTH (FT)	INNER WIDTH (FT)	OUTER WIDTH (FT)	RPZ (ACRES)
Runway 12	1700	500	1010	29.465
Runway 30	2500	1000	1750	78.914
Runway 4	1700	500	1010	29.465
Runway 22	1700	500	1010	29.465
Runway 8	1700	500	1010	29.465
Runway 26	1700	500	1010	29.465

Source: 2008 Airport Layout Plan

## Taxiways

LRU has one full length parallel taxiway and six partial parallel taxiways. These taxiways allow access to the runways, aprons and exits. **Figure 1-13** shows all taxiway locations. All taxiways meet FAA standards for at least Taxiway Design Group 2, **Table 1-11**.



**Figure 1-13. Taxiway Locations**

Map created by Delta Airport Consultants, Inc.

**Table 1-11. Taxiways at LRU.**

TAXIWAY	LENGTH (FEET)	WIDTH (FEET)	SURFACE	STRENGTH	SAFETY AREA
A	6,200	35	ASPHALT	70S 120D	79 feet (22' each side of pavement)
B	2,300	50	ASPHALT	70S 120D	118 feet (35' each side of pavement)
C	4,500	50	ASPHALT	70S 120D	118 feet (35' each side of pavement)
D	3,600	35	ASPHALT	70S 120D	79 feet (22' each side of pavement)
E	200	35	ASPHALT	70S 120D	Within RW 8/26 & A Safety Area
F	200	35	ASPHALT	70S 120D	Within RW 8/26 & A Safety Area
G	200	35	ASPHALT	70S 120D	Within RW 8/26 & A Safety Area

Source: LRU Airport Certification Manual (May 2013).

**Taxiway A**

Full parallel taxiway to Runway 8-26 and provides access to the ends of Runways 8, 26, 30 and 4. The runway to taxiway separation for Taxiway A is 300 feet. Approximately 2,345 feet of Taxiway A lies contiguous to the north edge of the parking apron. Recently reconstructed and relocated to be consistent with FAA geometric design standards.

**Taxiway B**

Connects the center portion of the airfield to the parking apron area and crosses Runway 8-26 just south of Taxiway A. It runs from the intersection of Taxiways C and D.

**Taxiway C**

Partial parallel taxiway to Runway 12. Taxiway C runs from the end of Runway 12 to the intersection of Taxiways B and D.

**Taxiway D**

Partial parallel taxiway to Runway 22. Taxiway D runs from the Runway 22 threshold and to the intersection of Taxiways B and C.

**Taxiway E**

Connector taxiway from Runway 8-26 and Taxiway A. It is located approximately 1,500 feet from the Runway 26 threshold.

**Taxiway F**

Connector taxiway from Runway 8-26 and Taxiway A. It is located approximately 2,670 feet from the Runway 8 threshold.

**Taxiway G**

Connector taxiway from Runway 8-26 and Taxiway A, is located approximately 1,600 feet from the Runway 8 threshold.

### Aprons

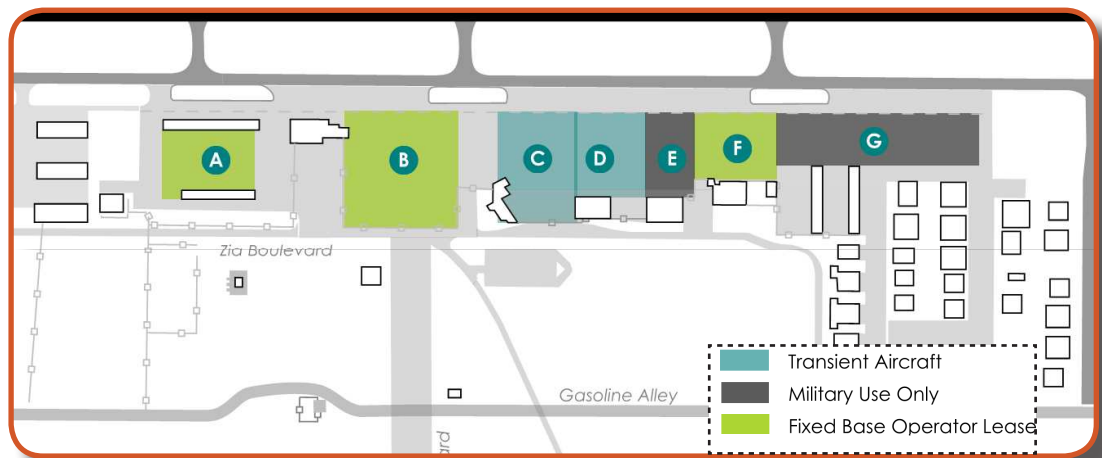
Aprons at LRU can be classified into three groupings: Fixed-base operation, general use transient, and military use. Military aprons serve the National Guard which is based at the airport and periodic U.S. Navy training activity. There are other private use aprons such as that used by the New Mexico State University and for private hangar activities.

Apron designations A through G are not official designations and are only used for purposes of identification in this document. LRU staff maintains approximately 77 apron tie downs for aircraft to use. Southwest Aviation has 30 of these in its leasehold area and the City owns 47 that are available for transient aircraft use and by the Navy during training activities.

**Table 1-12. Airport Aprons.**

APRON AREA	USE	TOTAL AREA (SF)	LEASE HOLDER
A	Fixed-base Operation	7,000	Southwest Aviation
B	Fixed-base Operation	16,000	Southwest Aviation
C	Fixed-base Operation	11,000	Transient
D	General Use	7,000	City
E	Military	5,500	National Guard
F	Fixed-base Operation	5,000	Southwest Aviation
G	Military	10,500	City

Source: Airport Management



**Figure 1-14. Apron Locations.**

Map Created by Delta Airport Consultants





## Pavement Condition

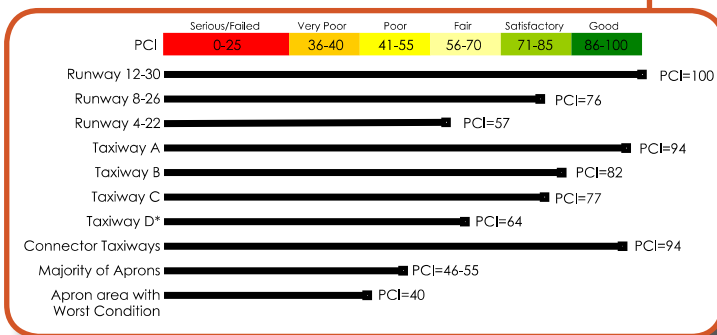
The New Mexico Department of Transportation (NMAD) sponsored a study in 2014 to determine the condition of pavements at New Mexico’s airports. Specifically, the State contracted a Pavement Condition Index (PCI) survey for the various pavements at each airport. Pavement inspections were conducted using the PCI survey procedure per FAA Advisory Circular 150/5380-6B, Guidelines and Procedures for Maintenance of Airport Pavements (AC 5380-6B), and ASTM D5340-12, Standard Test Method for Airport Pavement Condition Index Surveys.

During a PCI survey, visible signs of deterioration, distress, type, severity, and quantity are recorded and analyzed. The results of a PCI evaluation provide an indication of the structural integrity and functional capabilities of the pavement. Although only the top layer of the pavement is examined and no direct measure is made of the structural capacity of the pavement system, the PCI does provide an objective basis for determining maintenance and repair needs and for setting and scheduling rehabilitation priorities.

The PCI scale ranges from a value of 0 (representing a pavement in a failed condition) to a value of 100 (representing a pavement in excellent condition). Generally, pavements above a PCI of 70 that are not exhibiting significant load-related distress will benefit from preventive maintenance actions, such as crack sealing and surface treatments. Pavements with a PCI of 40 to 70 may require major rehabilitation, such as an overlay. Often, when the PCI is less than 40, reconstruction is the only viable alternative due to the substantial damage of the pavement structure.

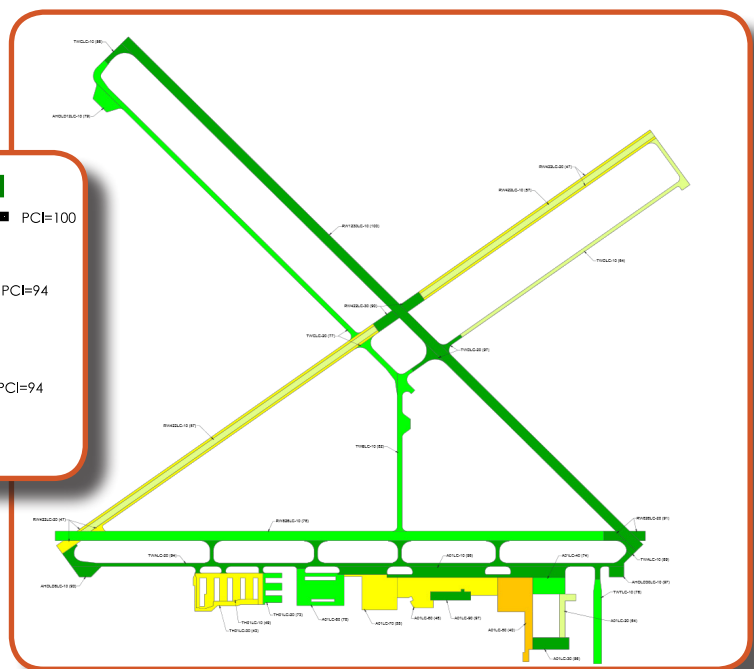
The PCI for various pavements at Las Cruces International can be seen in **Figure 1-16** below. As indicated, the most urgent needs for pavement rehabilitation are Runway 4-22 and several of the aircraft parking aprons.

Runway 4-22 and several aircraft parking aprons have the most urgent need for pavement rehabilitation



**Figure 1-15. PCI Values for Major Airfield Components.**

Source: 2014 Pavement Condition Index



**Figure 1-16. Pavement Condition.**

Source: 2014 Pavement Condition Index

## Airfield Visual Aids and Lighting

Visual aids and lighting aid the pilot in locating and operating on the airport. The City owns, operates and maintains several visual aids and lighting systems as noted below. In addition, the FAA owns and maintains a Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR) in the approach to Runway 30.



### Runway Edge Lights

Runway 12-30 is equipped with High Intensity Runway Lights(HIRL). Runways 8-26 and 4-22 are equipped with Medium Intensity Runway Lights (MIRL). Intensity controls for runway lights are available through the CTAF at 122.7.



### Taxiway Lights

All taxiways other than a portion of Taxiway D at LRU have Medium Intensity Taxiway Lights to help outline the edges during period of darkness or low visibility. Taxiway D north of Runway 12-30 has elevated edge taxiway retro reflective markers.



### Runway End Identifier Lights

Runway 12 has a set of Runway End Identifies Lights (REILs) which are omnidirectional, powered from the Runway 12-30 lighting circuit, and operate sunset to sunrise.



### Rotating Beacon

The rotating beacon, which rotates at 12 revolutions per minute has alternating green and white lenses at 180 degree separation. The beacon is located on top of a standard four-legged tower located south of the midpoint of Runway 8-26. The beacon operates sunset to sunrise.



### Medium Intensity Approach Lighting System with Rails [MALSR]

Runway 30 is equipped with a medium intensity approach lighting system with runway alignment indicator lights (MALSR). The lighting system is 2,400 feet long and consists of seven stations of steady burning lights and five stations of sequenced flashing lights. This lighting system helps reduce visibility minimums to Runway 30 to 1/2 mile. The system is owned and maintained by the FAA.



### Segmented Circle and Wind Cone

A lighted wind cone and segmented circle are installed on the airport on the north side of Runway 8-26 at the midpoint of the runway. There are four lighted supplemental wind cones located at the approach ends of Runway 8, Runway 26, Runway 12, and Runway 22.



### Visual Approach Lighting System

A Visual Approach Slope Indicator (VASI) is a system of lights that provides vertical visual guidance for aircraft during visual approaches and landings. Runway 22 has a four-unit VASI. Runways 8 and 26 each have a two-unit VASI but are currently inoperable. The VASIs on runway 8-26 are owned by LRU and the VASI on runway 22 is owned by the FAA. PAPIs will be the preferred replacement equipment (see image to the left).



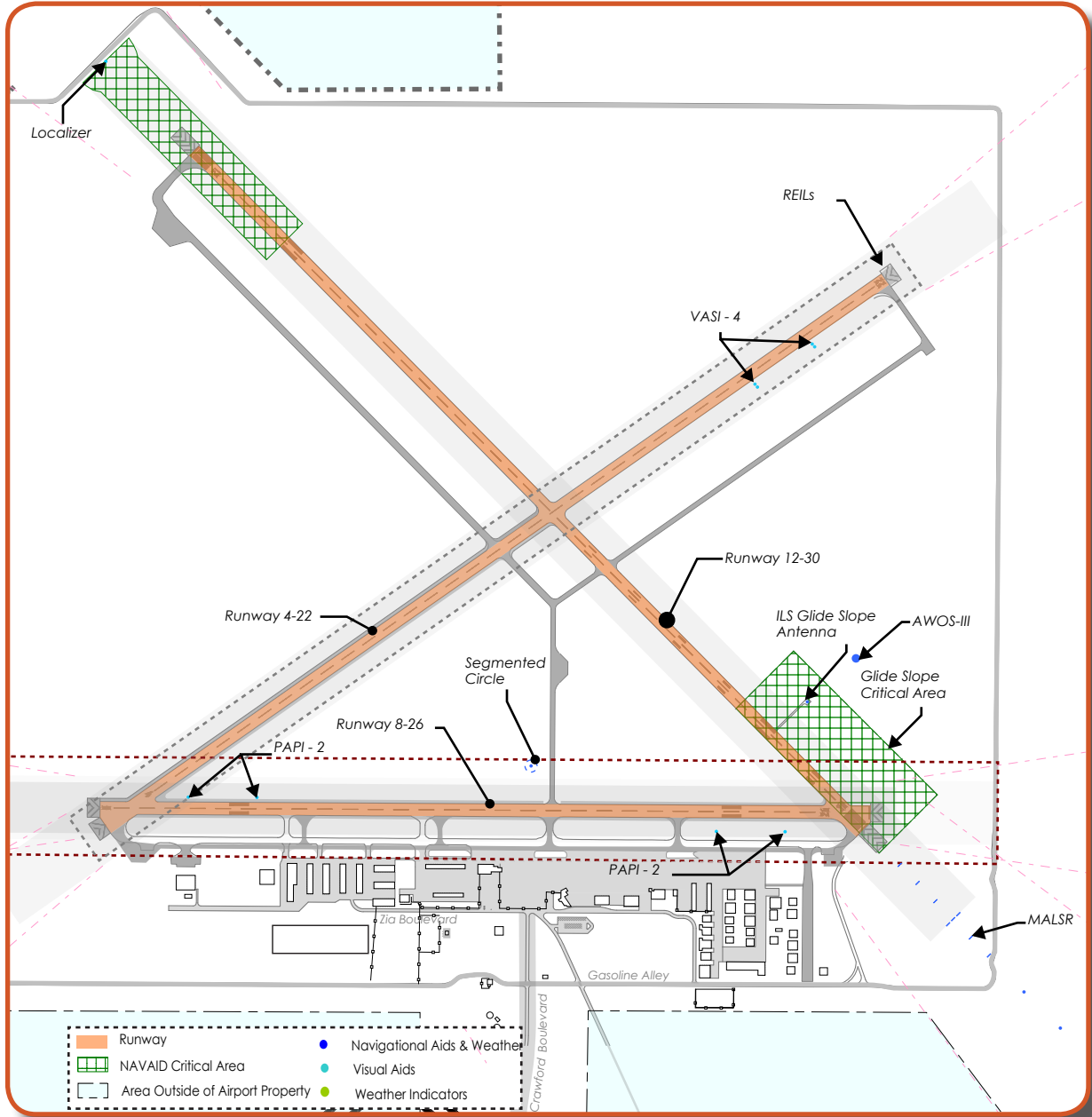
### Markings

The type of approach procedure used for each runway determines how runways are marked. Runway 30 has precision markings. Runway 12 has non-precision instrument markings. Non-precision runways over 4,000 feet long are required to have aiming points. Since Runway 12 is over 4,000 feet, it has aiming points. Runways 8-26 and 4-22 have basic visual markings.



### Airfield Signage

Consistent with FAA requirements, LRU has installed lighted signs on the airfield that identify the remaining runway distance, runway exits, critical area hold positions, taxiway locations, and directions to key components of the airfield. To support the location and content of these signs, LRU has developed and maintains a Sign Plan per FAA requirements.



**Figure 1-17. Visual Aids, Navigational Aids, and Weather Equipments.**

Map Created by Delta Airport Consultants, Inc. May 2015



## Navigational Aids

LRU is equipped with ground based navigational aids located on the Airport. The Airport has a localizer system and a glide slope system. Together these two systems form an Instrument Landing System (ILS). The localizer provides horizontal guidance to the runway and glide slope provides vertical guidance.

### Localizer

LRU has a localizer system that serves approaches to Runway 30. The system consists of an eight element localizer antenna array and a localizer equipment shelter. The antenna array is located outside the runway safety area off the end of Runway 12 in line with the runway centerline. The localizer shelter is located the same distance from the runway end as the antenna, but is approximately 275 feet west of the antenna array. The localizer system is owned and maintained by the FAA and is in good condition.

### Glideslope

LRU has a glide slope system for Runway 30 approaches. The system consists of a capture effect antenna array and a glide slope equipment shelter. Both are located approximately 1,000 feet from the Runway 30 threshold between the runway and parallel taxiway, Taxiway A. The glide slope system is owned and maintained by the FAA and is in good condition.

LRU operates  
an AWOS-3  
system



### Weather Equipment

LRU has an Automated Weather Observation System (AWOS). The system reports current altimeter settings, wind data, temperature, dew point, density altitude, visibility, cloud/ceiling data, and type of precipitation. The system is an AWOS-3 and provides detailed data to pilots via a recorded message accessed by a specified radio frequency or telephone contact. Altimeter settings, wind data, temperature, dew point, density altitude, visibility, and cloud/ceiling data are available. The LRU AWOS-3 frequency is **119.025** and the system is located northeast of Runway 30. The system is owned and maintained by LRU.

### Instrument Approaches

LRU has many navigational aids to assist aircraft and pilots. Runway 12-30, the primary runway, has a published GPS and Category I ILS approach. The ILS approach is designed to provide precise guidance to an aircraft approaching Runway 30. Runways 12 and 30 have published GPS approaches. Aircraft equipped with GPS receivers can determine navigational information such as altitude and speed for the airport approach.

LRU has instrument  
approaches to both  
Runway 30 and  
Runway 12

The Very high frequency Omnidirectional Range (VOR) provides an azimuth and the military's Tactical Air Navigation (TACAN) provides distance. A combination of the two aids is called a VORTAC and it provides distance and navigational information to civil and military pilots. Pilots flying to LRU use the Deming VORTAC to the west, the Truth or Consequences VORTAC to the north, and the El Paso and Newman VORTAC to the south.

Instrument approaches for LRU are shown in **Figure 1-17, Figure 1-18, and Figure 1-19.**

The ILS approach to Runway 30 provides minimums as low as 200 feet above the threshold and 1/2 mile visibility. These represent the best minimums available for a Category I ILS approach.

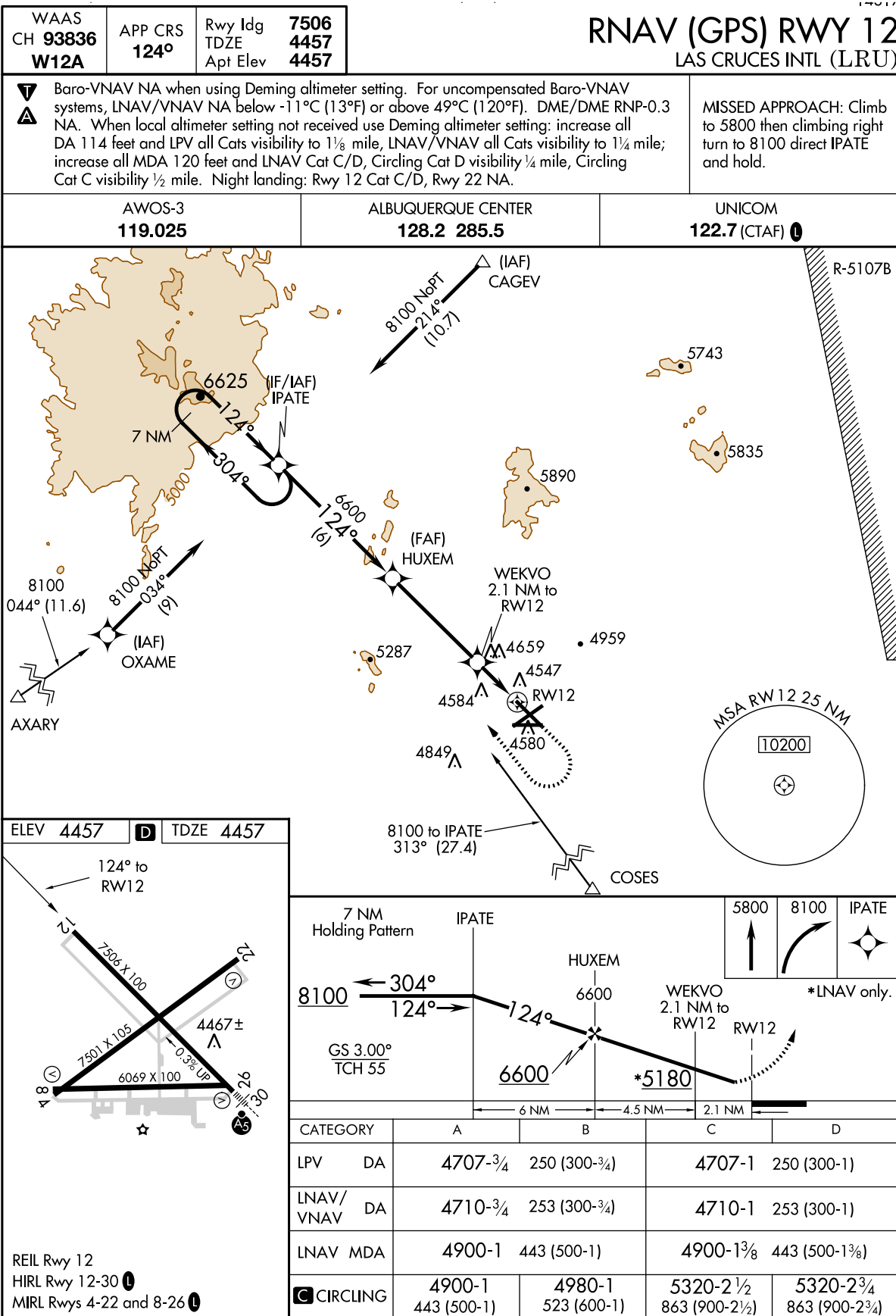


Figure 1-18. Runway 12 RNAV (GPS) Instrument Approach

Source: Airmav.com

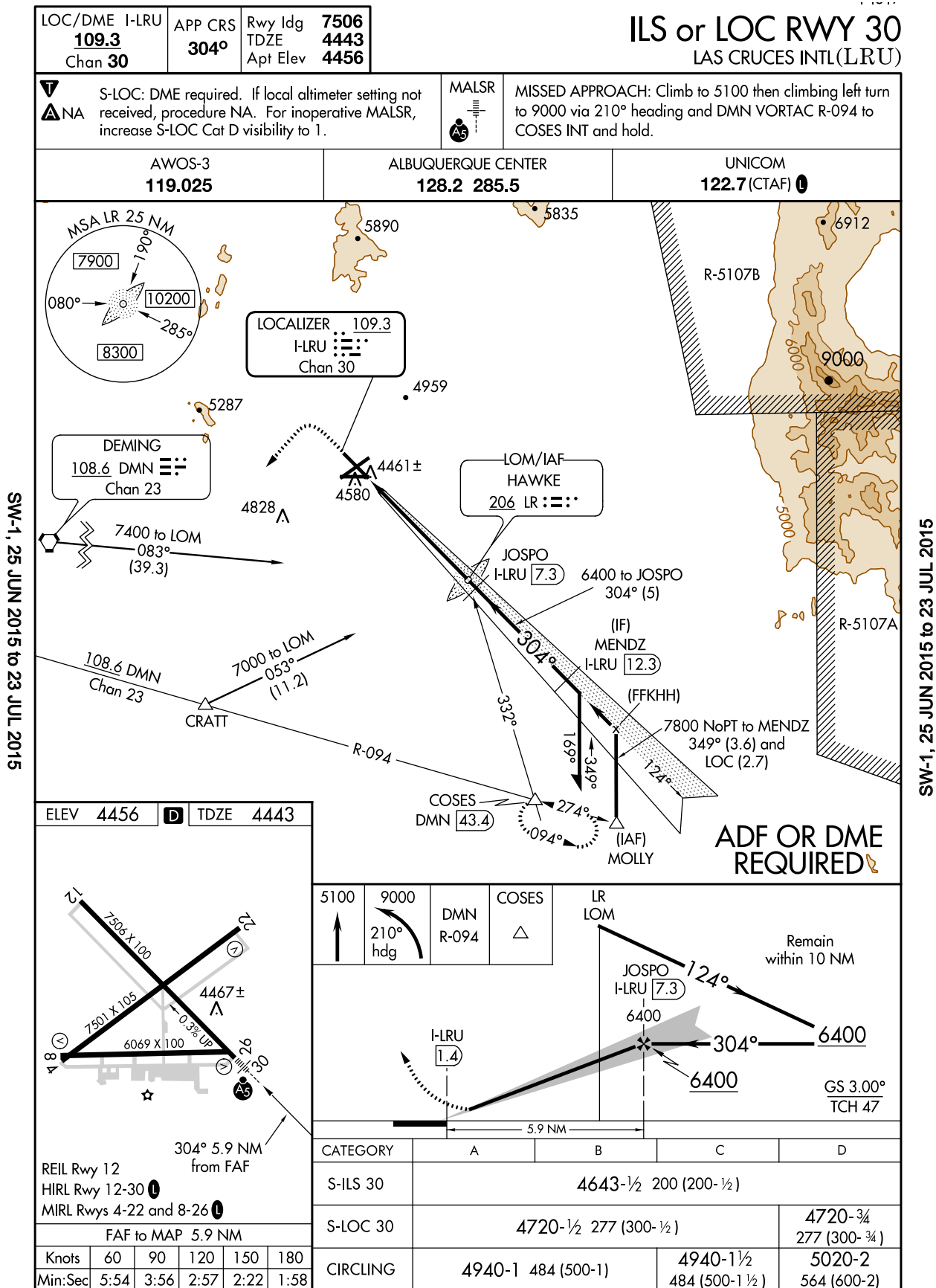
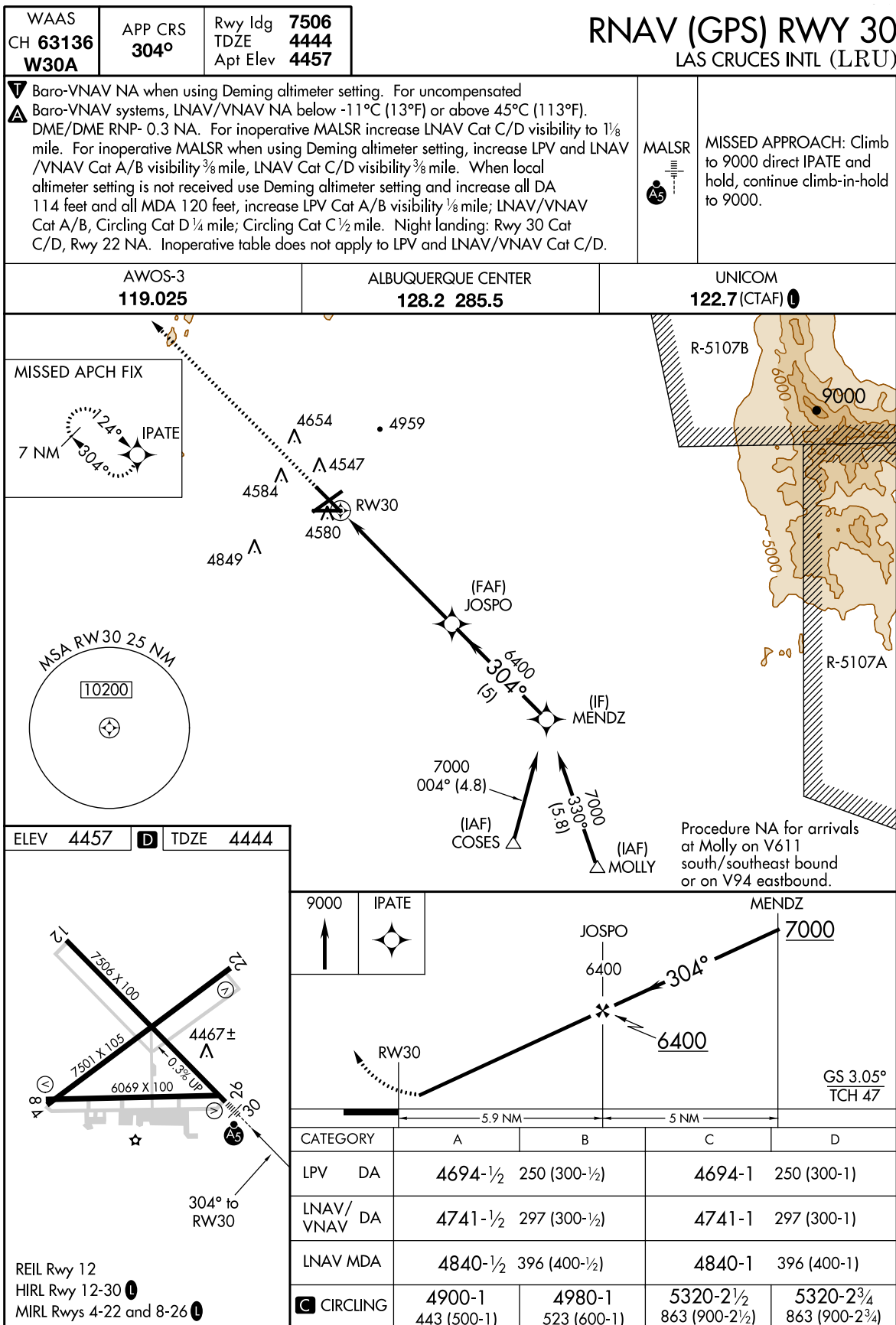


Figure 1-19. Runway 30 ILS or LOC Instrument Approach

Source: Airmav.com





SW-1, 25 JUN 2015 to 23 JUL 2015

Figure 1-20. Runway 30 RNAV (GPS) Instrument Approach

Source: AirNAV

## 1.4 | Part 04 - Buildings, Facilities, and Support Services

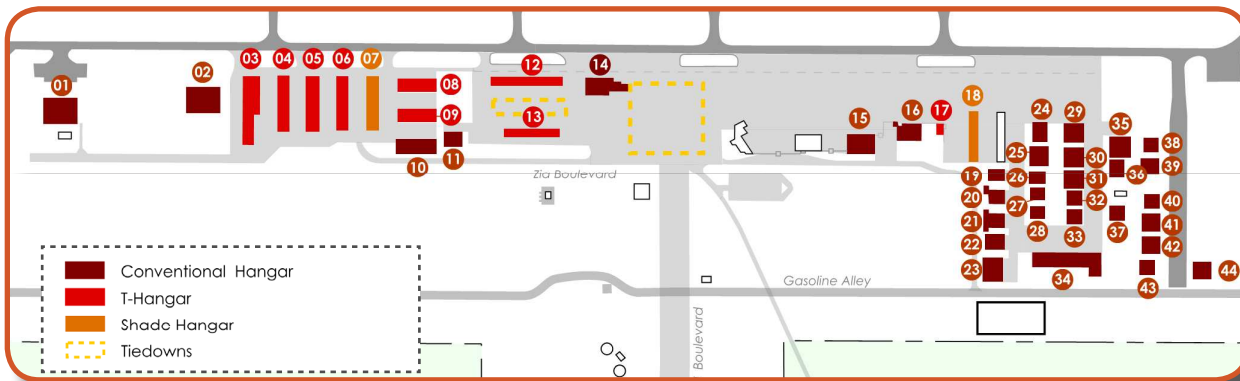
### Aircraft Storage

LRU has several aircraft hangars of various ownership/tenancy and a wide range of age. **Table 1-13** and **Figure 1-20** show the location, size, and ownership of each hangar. In Addition, Some of the aprons also provide tie-down locations.

LRU has three types of hangars: T-hangars, conventional hangars, and shade hangars. There are 71 T-hangar units, totaling 92,400 square feet. Approximately 207,400 square feet of space is provided by 35 conventional hangars. Two of these hangars are owned by the City of Las Cruces. The National Guard leases one of the hangars from the City. LRU has 21,000 square feet, consisting of 20 bays of shade hangars. The City owns one additional shade hangar not used for aircraft but rather for City airport operations and maintenance equipment.

**Table 1-13. Hangars at LRU.**

Hangar Number	Description	Total Area (SF)	Ownership
1	Conventional Hangar	15,000	NMSU
2	Conventional Hangar	12,000	Private
3	T-Hangars (9)	18,400	Southwest Aviation
4	T-Hangars (10)	12,000	Southwest Aviation
5	T-Hangars (10)	12,000	Southwest Aviation
6	T-Hangars (10)	12,000	Southwest Aviation
7	Shade Hangar (10 bays)	12,000	Southwest Aviation
8	T-Hangars (7)	9,075	Private
9	T-Hangars (7)	9,075	Private
10	Conventional Hangar	10,200	Private
11	Conventional Hangar	4,800	Private
12	T-Hangars (10)	11,025	Southwest Aviation
13	T-Hangars (7)	7,200	Southwest Aviation
14	Conventional Hangar (adjacent to FBO offices)	4,800	Southwest Aviation
15	Conventional Hangar	9,000	City/National Guard
16	Conventional Hangar	6,800	Southwest Aviation
17	T-Hangar (1)	1,500	Southwest Aviation
18	Shade Hangar (10 bays)	9,000	City
19	Conventional Hangar	3,600	Private
20	Conventional Hangar	4,900	Private
21	Conventional Hangar	7,200	Private



**Figure 1-21. Aircraft Storage.**

Map Created by Delta Airport Consultants

Hangar Number	Description	Total Area (SF)	Ownership
22	Conventional Hangar	3,600	Private
23	Conventional Hangar	8,000	Private
24	Conventional Hangar	4,500	Private
25	Conventional Hangar	6,400	Private
26	Conventional Hangar	3,000	Private
27	Conventional Hangar	3,600	Private
28	Conventional Hangar	3,000	Private
29	Conventional Hangar	20,500	Private
30	Conventional Hangar	6,400	Private
31	Conventional Hangar	6,400	Private
32	Conventional Hangar	6,400	Private
33	Conventional Hangar	3,900	Private
34	Conventional Hangar	3,900	Private
35	Conventional Hangar	6,400	Private
36	Conventional Hangar	4,800	Private
37	Conventional Hangar	6,400	Private
38	Conventional Hangar	3,600	Private
39	Conventional Hangar	6,400	Civil Air Patrol
40	Conventional Hangar	3,600	Private
41	Conventional Hangar	6,400	Private
42	Conventional Hangar	3,600	City
43	Conventional Hangar	6,400	Private
44	Conventional Hangar	6,400	Private

Source: Delta Airport Consultants, Inc., Airport Management

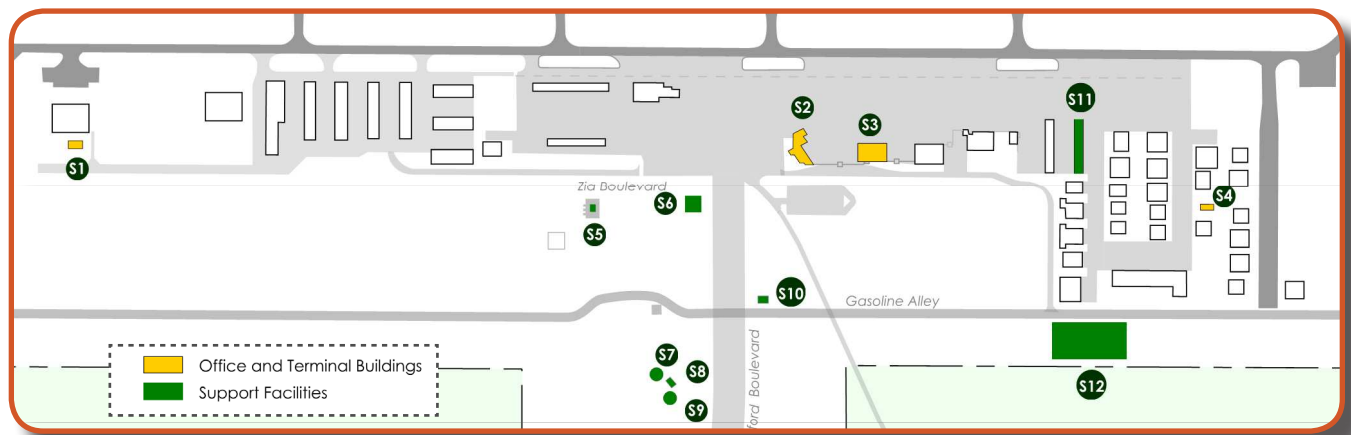
### Support Facilities & Services

Support facilities and services at LRU include offices, fuel farm, aircraft rescue and fire fighting, and maintenance storage. The location of support facilities, description of use and approximate size can be seen in **Table 1-14** and **Figure 1-22**.

**Table 1-14. Support Facilities at LRU.**

Number	Description	Total Area (SF)
S1	Office	1,800
S2	Terminal Building	
S3	Offices	9,300
S4	Ops/Maintenance Building	
S5	City Fire Training Tower	
S6	City Fire Station	30,000
S7	Ground Storage Tank	-
S8	Pump House	-
S9	Elevated Water Tank	-
S10	Electical Vault	100
S11	Equipment Storage	9,000
S12	Fuel Farm	-
S13	Glide Slope Equipment Shelter (FAA)	100
S14	Localizer Equipment Shelter (FAA)	100
S15	MALSR Equipment Shelter (FAA)	100

Source: Site visit, January 2015, Airport Managements



**Figure 1-22. Support Facilities.**

Map Created by Delta Airport Consultants



## 1 - Support Facilities: Administrative Buildings and Offices

The City of Las Cruces built an airport terminal building in 1975 and remodeled it in 1984. The building was used in the past for scheduled commercial passenger service which is no longer available at LRU. The building has a conference room, City airport management office, restrooms, and an FBO operation (Francis Aviation) which leases a large portion of the building. The building is approximately 6,300 square feet.

**Terminal/Administrative Building**



**Aerial View of Buildings and Facilities**



## 2 - Support Facilities: Aircraft Rescue and Fire Fighting (ARFF)

LRU is served by the City’s fire station number 7 located near the intersection of the airport entrance road and gasoline alley. This two bay facility was built in 2014 to assist with both the Mesa Industrial Park and the Airport.

Because LRU does not have a control tower, ‘911’ will be called in the event of an emergency situation to notify responders. If appropriate, a NOTAM will be issued to advise incoming aircraft of the emergency and a notice of the emergency will be transmitted over the CTAF to advise aircraft in the vicinity of the airport. Airport

personnel will monitor the CTAF for the duration of the emergency to advise any incoming aircraft as appropriate. Airport tenants and ground personnel will be notified of the emergency via telephone, radio, or in-person contact.

The Airport Certification Manual establishes the safety and firefighting standards for LRU in accordance with 14 CFR Part 139 for an airport with a Class IV Airport Operating Certificate. Firefighting equipment meets Index A requirements per 14 CFR Part 139 and includes the equipment list in Table 1-15.

**Table 1-15. ARFF Equipment.**

VEHICLE MANUFACTURER	VEHICLE TYPE	CAPACITY	EQUIPMENT CAPACITY
Rosenbauer	4x4 ARFF	Water Capacity : 1500 gallons	VHF Radio (ATC/CTAF Frequency) Local Fire Frequency
		Foam Capacity: 200 gallons	Hydraulic Rescue Kit/Holmatro Tool Hand-held Fuselage Penetrator/Nozzle
		Dry Chemical Capacity: 450 lbs. KHCO <sub>3</sub>	First Aid (EMT) Supplies Emergency Response Guide
	Class A Pumper	-	VHF Radio (ATC/CTAF Frequency) Local Fire Frequency Hydraulic Rescue Kit/Holmatro Tool Hand-held Fuselage Penetrator/Nozzle First Aid (EMT) Supplies Emergency Response Guide

Source: Airport Management



*City Fire station 7, which is owned and operated by the City of Las Cruces serves LRU.*



*City Fire training tower adjacent to the fire station.*



### 3 - Airport Maintenance

Mowing, sweeping and general maintenance of the airfield are tasks performed by Las Cruces' two full time airfield maintenance employees. The City owns several pieces of equipment to help operate and maintain the airport. These include:

**Figure 1-23. Ground Support Equipment**

EQUIPMENT	MANUFACTURED
Dodge Ram 4x4 Pickup truck with beacon and Unicom radio	1999
Two Ford F-150 4x4 pickup trucks with beacon and Unicom radio	2009
Dump truck	
McCormick tractor	2004
Ford tractor	1993
Tymco regenerative air sweeper	2006
Kubota tractor	2011
Four lighted runway closure X's	
Land Pride mower attachment	2012
Alamo mower attachment	2015
Side broom attachment	2011
Various small maintenance equipment—herbicide sprayer, small hand tools, etc.	N/A

Source: Airport Management

### 4 - Parking

Access to LRU is by car. The main access road (Crawford Blvd) connects directly to Interstate 10. Access is also from a frontage road that runs along the north side of Interstate 10. It is also classified as a collector and is an additional route to Crawford Boulevard. The airport terminal area has an extensive system of roads that provide access to all airport buildings. The major road through the terminal area is Zia Blvd. The City owns covered parking with 46 spaces including two disabled. This covered parking is located in the center of the landside area in front of the terminal building (airport administration). Tenants on the airport such as New Mexico State University and Southwest Aviation also have places for auto parking adjacent to their buildings.

## 5 - Fuel Storage

LRU has two City owned fuel tanks in the fuel farm and two FBO owned fuel tanks

The fuel farm is located on the southeast side of the airport on Gasoline Alley. There are four above ground storage tanks within the fenced fuel farm. Two of the tanks (one 12,000 gallon 100LL and one 12,000 gallon Jet A) are owned by Southwest Aviation. These two tanks are currently not in compliance with regulations and are not being used. The City built two new tanks in 2014 (one 12,000 gallon 100LL and one 12,000 gallon Jet A). Francis Aviation purchases fuel from these tanks. In addition to the fuel storage tanks, each FBO also owns a fleet of fuel trucks.







## 1.4 | Part 05 - Utilities

Las Cruces International is located on the West Mesa eight miles west of the City of Las Cruces along with the West Mesa Industrial Park (WMIP).

### Electrical Power

El Paso Electric provides the electrical service to the WMIP, the airport, and all businesses and hangars at the Airport.

### Internet

Fastwave provides internet access at the Airport.

### Natural Gas

Natural gas is available through the Rio Grande Natural Gas Association. An interstate gas line is used to get the gas to the Airport.

### Sanitary Sewer

LRU has a sewer system in the main portion of the terminal area and a septic system for most of the hangars on the east and west ends of the Airport.

### Telephone

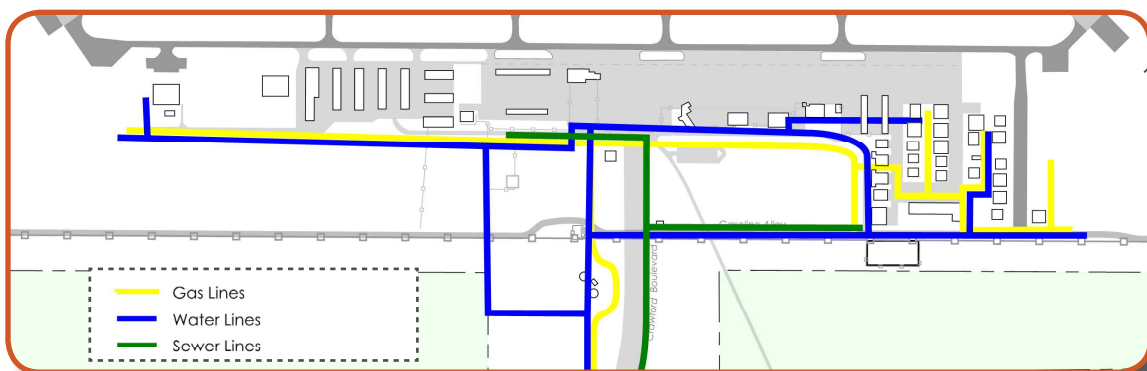
Century Link provides the telephone service. All businesses and hangars have the option to use this service.

### Water

The City of Las Cruces provides water to all businesses at the Airport.

### Solid Waste

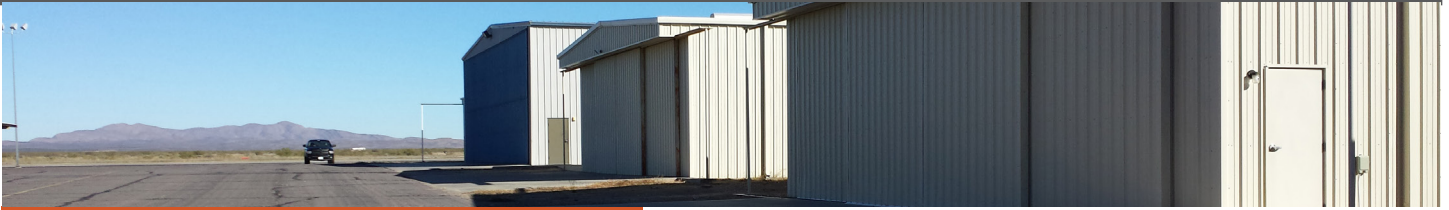
Solid Waste Collection is by the City of Las Cruces.



**Figure 1-24. Utilities at LRU.**

Source: WMIP Master Plan

Map Created by Delta Airport Consultants



## *Section Overview*

- 1.5|Part 01 - Air Quality
- 1.5|Part 02 - Coastal Resources
- 1.5|Part 03 - Compatible Land Use
- 1.5|Part 04 - Construction Impacts
- 1.5|Part 05 - Department of Transportation Act:  
Section 4(f)
- 1.5|Part 06 - Farmlands
- 1.5|Part 07 - Fish, Wildlife and Plants
- 1.5|Part 08 - Floodplains
- 1.5|Part 09 - Hazardous Materials, Pollution  
Prevention, and Solid Waste
- 1.5|Part 10 - Historical, Architectural,  
Archaeological and Cultural Resources
- 1.5|Part 11 - Light Emissions and Visual Impacts
- 1.5|Part 12 - Natural Resources, Energy Supply,  
and Sustainable Design
- 1.5|Part 13 - Noise
- 1.5|Part 14 - Secondary (Induced) Impacts
- 1.5|Part 15 - Socioeconomic impacts,  
Environmental Justice, and Children's  
Environmental Health and Safety  
Risks
- 1.5|Part 16 - Water Quality
- 1.5|Part 17 - Wetlands
- 1.5|Part 18 - Wild and Scenic Rivers
- 1.5|Part 19 - Summary

## **1 | Section 5 - Environmental Overview**

This section provides an overview of environmental baseline conditions at LRU. It identifies existing environmental sensitivities and will provide a benchmark for environmental considerations during the creation of proposed development alternatives in this Airport Action Plan.

A review of publically available data and previous environmental analyses serves as the source of information presented in this section. Additionally, field studies were conducted to identify any cultural resources, wetlands, threatened and endangered species, and to assess water quality.

This effort addresses and contains appropriate discussion of the 18 environmental impact categories included in FAA Order 1050.1E, Environmental Impacts: Policies and Procedures. While some thresholds which determine whether an impact is considered significant are discussed in this section, the assessment of impacts is not included.



## 1.5 | Part 01 - Air Quality

The U.S. Environmental Protection Agency (EPA) has established two primary laws that apply to air quality: the Clean Air Act (CAA) and the National Environmental Policy Act (NEPA).

### Clean Air Act

Pursuant to the CAA, parts of Doña Ana County are designated as non-attainment areas for two of the six criteria pollutants for which National Ambient Air Quality Standards (NAAQS) have been established: ozone and PM-10 (particulate matter). Sunland Park, New Mexico was designated non-attainment for 1-hour ozone in 1995; Anthony, New Mexico was designated non-attainment for PM-10 (particulate matter) in 1991. According to the New Mexico Environment Department, the high levels of PM-10 are largely due to dust storms in the County caused by natural events such as wind and dry conditions. However, as the population in the area grows and development increases, any increase in these dust storms could be caused by human activities. Las Cruces International Airport is within Doña Ana County but is not located in either of these two non-attainment areas; therefore development at the airport is not subject to further demonstrating general conformity with the New Mexico State Implementation Plan (SIP) in order to be eligible for federal funding and approval.

### National Environmental Policy Act (NEPA)

NEPA requires consideration of air quality impacts for reasonable alternatives throughout the planning period. According to the FAA Air Quality Handbook, NAAQS analysis would be required at general aviation airports with more than 180,000 annual general aviation operations. For the base year, 2014, the number of annual operations at LRU was 81,843. Forecasted operations at LRU are discussed in the next Chapter and are below the NEPA threshold; therefore no further NAAQS analysis would be required for future airport projects.

## 1.5 | Part 02 - Coastal Resources

Federal activities involving or affecting coastal resources are governed by the Coastal Barriers Resources Act (CBRA), the Coastal Zone Management Act (CZMA), and Environmental Order (E.O.) 13089, Coral Reef Protection. New Mexico is a land-locked state and does not have protected coastal areas; therefore, future development on the airport is not anticipated to affect federally or state-protected coastal areas.

### Understanding... Air Quality

*The National Ambient Air Quality Standards (NAAQS) has six air pollutant criteria:*

- Carbon Monoxide (CO)
- Ozone (O<sub>3</sub>)
- Lead (Pb)
- Particulate Matter (PM)
- Nitrogen Dioxide (NO<sub>2</sub>)
- Sulfur Dioxide (SO<sub>2</sub>).

*Geographical areas are classified as attainment, non-attainment, and maintenance areas based on whether they are meeting, above, or have recently improved to within the NAAQS standards respectively. Federal agencies cannot fund or approve projects within non-attainment and maintenance areas unless they demonstrate general conformity with the State Improvement Plan (SIP).*

## 1.5 | Part 03 - Compatible Land Use

Zoning and land use are discussed in 1.3|Part 04 - Surrounding Land Use.

### Land Use: Public Safety and Noise Compatibility

The airport is zoned M-3C, Heavy Industry with Conditional Use, and is surrounded by commercial, industrial, and vacant/unzoned areas. The land uses on and around the airport are generally considered to be compatible with airport operations. Aside from the small pockets of commercial and residential land use to the southeast and the northeast, lands are vacant.

The Runway Protection Zone (RPZ) off the end of each runway has passive land uses and there are no public gathering spaces within the airport vicinity. The property within the existing RPZs for each of the four runway ends at LRU is entirely on airport or City property, which satisfies FAA preference for airport owner control over RPZs.

### Land Use: Operational Safety

Wildlife and bird attractants, such as wetlands, bodies of open water, waste disposal sites, and certain crops, can cause safety hazards at airports. FAA guidance recommends that airports serving turbine-powered aircraft, such as LRU, maintain a separation distance of 10,000 feet from the edge of the Air Operations Area (AOA) and any hazardous wildlife attractant. There are no known wetlands, bodies of water or landfills on or within 10,000 feet of the AOA at Las Cruces International.

airport operations and pose a safety concern. The City of Las Cruces Development Code includes an Airport Operations Overlay Zone District (AOD) and the ETZ Ordinances have an Airport Operations District (EAO) which protects the 14 CFR Part 77 surfaces. These ordinances also restrict uses which may interfere with navigational signals or radio communication for pilots, impair pilot visibility, create bird strike hazards or otherwise interfere with air operations. The Airport, City, and County staffs should continue to coordinate regularly with each other to ensure these ordinances protect up-to-date airspace surfaces.

Structures such as cell towers, wind turbines, vegetation, terrain, and tall buildings can inhibit

### Future Land Use

The City of Las Cruces Comprehensive Plan 2040 does not contain a future land use map, although it does include a conceptual Future Concept Map and lists as one of its goals to “Create a Future Concept Map and planning process to reflect the desired development pattern for the city.” The conceptual Future Concept Map in the Comprehensive Plan designated the City boundaries which contain the Airport and WMIP as “Special Planning Area”, surrounded on all sides by “Rural.” While it is only conceptual, the Future Concept Map included in the Comprehensive Plan could suggest the desired land use for the Airport property and vicinity.

The Doña Ana County comprehensive plan was adopted in 1994. One goal listed in the plan is to adopt and implement a land use plan. According to County representatives contacted in March 2015, the County is currently working to update its comprehensive plan.

It is recommended that land use planning in the area be a regional effort in order to discourage the encroachment of incompatible land uses, such as residential, on and around the airport as growth and development continues to expand east of the Airport.



## 1.5 | Part 04 - Construction Impacts

Airport construction may cause various environmental effects primarily due to dust, aircraft, and heavy equipment emissions, storm water runoff containing sediment and/or spilled or leaking petroleum product, among other impacts. Significant construction impacts would most likely occur when unusual circumstances exist (e.g., excavating environmentally sensitive areas, construction-induced traffic congestion that would substantially degrade air quality). A significant impact would occur when the severity of construction impacts cannot be mitigated below FAA's threshold levels for the affected resource (i.e., air quality, water quality, etc.). The anticipated construction impacts of the proposed development must be considered during each project's environmental review.

## 1.5 | Part 05 - Department of Transportation Act: Section 4(f)

There are federal lands on all sides of the airport property, most of which are owned by the Bureau of Land Management. The United States Fish and Wildlife Service (USFWS) lists nine national wildlife refuges in New Mexico. The closest to LRU is San Andres National Wildlife Refuge located east of Las Cruces in the San Andres Mountains, approximately 35 miles "as the crow flies" from the airport. Aguirre Springs National Recreation Area is located east of the Organ Mountains, over 20 miles "as the crow flies" from the airport. The Picacho Hills Country Club is situated approximately three miles northeast of the airport. The proposed airport development is anticipated to be located on airport property and there are no plans to use these or any other federal lands.

A Class III cultural resources survey was conducted on airport property in February 2015. See Appendix C. The survey report recommended several resources as eligible for listing on the National Register of Historic Places (NRHP); it also recommended that a significant area to the southwest of airport property be avoided completely as there is a high likelihood of cultural resources throughout this area. Section 4(f) does apply to archaeological sites which are eligible for listing on the NRHP and which warrant preservation in place. In April 2015, the New Mexico Department of Cultural Affairs, Historic Preservation Division, concurred with the recommendations in the survey report (see Appendix C).

Any future development at the Airport would likely also have to avoid the remaining sites found to be eligible for listing on the NHRP; alternatively, additional analysis and testing of the areas must be conducted before any construction could occur there.

### Understanding... DOT Section 4(f)

*Section 4(f) of the Department of Transportation Act of 1966 states that a federally funded project requiring the use of land from:*

- *a publicly-owned land from a public park or recreation area*
- *a national or state wildlife or waterfowl refuge*
- *a historic site of national, state, or local significance*

*shall not be approved unless there is no feasible and prudent alternative for the use of such land. A significant impact would occur pursuant to NEPA when a proposed project either involves more than a minimal physical use of a Section 4(f) property or is deemed a "constructive use" substantially impairing the 4(f) property.*

### 1.5 | Part 06 - Farmlands

The Farmland Protection Policy Act (FPPA) of 1984 regulates federal actions that have the potential to convert farmland to non-agricultural uses. A biological evaluation conducted in December 2014 (see Appendix B) concluded that no prime

farmland exists within the project area. Therefore no future coordination with the US Department of Agriculture (USDA) would be necessary for any development proposed within this area.

### 1.5 | Part 07 - Fish, Wildlife and Plants

Section 7 of the Endangered Species Act requires federal agencies to ensure that any proposed action does not jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of associated habitat.

cereus) have the *potential* to occur within or near the project area, as suitable habitat was identified during the biological evaluation. Therefore, future development could have temporary impacts to these four species, if they are found to be present in the project area.

A biological evaluation (see Appendix B) was conducted in December 2014 within the established 774-acre action area; the action area extends 100-feet from the planning area boundary to account for potential adjacent bird nests and drainage. The report concluded that no federally listed threatened, endangered, or proposed species are likely to occur within the project area; and, no federal candidate species or their habitats are likely to occur within the project area. Two state listed species protected under the New Mexico Wildlife Conservation Act (the Common ground dove and the Peregrine falcon) and two state listed rare plants and their habitats (the Sand prickly pear and the Night blooming

The report notes that any future construction is not likely to adversely impact any plant community given the monotypic and expansive nature of the vegetation in the project area; likewise, the report concludes that future construction is not likely to significantly impact mammal, bird and reptile species since widely available habitat exists adjacent to the project area. However, if construction takes place during the migratory bird breeding and nesting season (April through August), direct impacts to nesting birds could be incurred.

The full biological evaluation report is included as Appendix B.

### 1.5 | Part 08 - Floodplains

Floodplains are the lowlands and relatively flat areas that are prone to the 100-year flood, which is a flood which has a one-percent chance of occurring within a given year. Executive Order 11988 directs Federal agencies to take action to reduce the risk of flood loss, minimize the impact of floods on human safety, health and welfare, and restore and preserve the natural and beneficial values served by floodplains. Federal Emergency Management Agency (FEMA)

Flood Insurance Rate Map (FIRM) numbers 35013C0626E, 35013C0625E, and 35013C0650E show that the airport property and its immediate surroundings are outside of the 100-year floodplain. The Biological Evaluation conducted as part of this planning study (see Appendix B) confirms that there are no 100-year floodplains within the project area.



## 1.5 | Part 09 - Hazardous Materials, Pollution Prevention, and Solid Waste

### Airport Property

The Airport is the only known entity located on airport property which reports to the Environmental Protection Agency (EPA) for water dischargers.

The hazardous substances known to be found at the airport are aircraft and ground equipment

fuel and fire-fighting chemicals. The airport fuel farm has four fuel storage tanks. Two of these are owned by Southwest Aviation and are out of compliance with state environmental regulations as of 2013 and cannot be retrofitted to meet the new requirements. The other two tanks are owned by the City and were installed in 2014.

### Airport Vicinity

A search of the EPA Enviro-mapper database conducted in March 2015 identified no facilities generating hazardous waste and no hazardous waste clean-up sites within one-half mile of the airport. Similarly, no Superfund or Brownfield sites are located in the vicinity of the airport.

The Corralitos Landfill is situated approximately five miles west of the airport along Interstate 10. Solid waste in Doña Ana County and the City of Las Cruces is managed by the South Central

Solid Waste Authority (SCSWA). The solid waste system includes the Corralitos Landfill and a transfer station and recycling center, as well as several County and City drop-off sites for garbage and recyclables. SCSWA offers recycling services to business customers for a fee. The solid waste provider for the airport is the City of Las Cruces. The Airport participates in the City's recycling program.

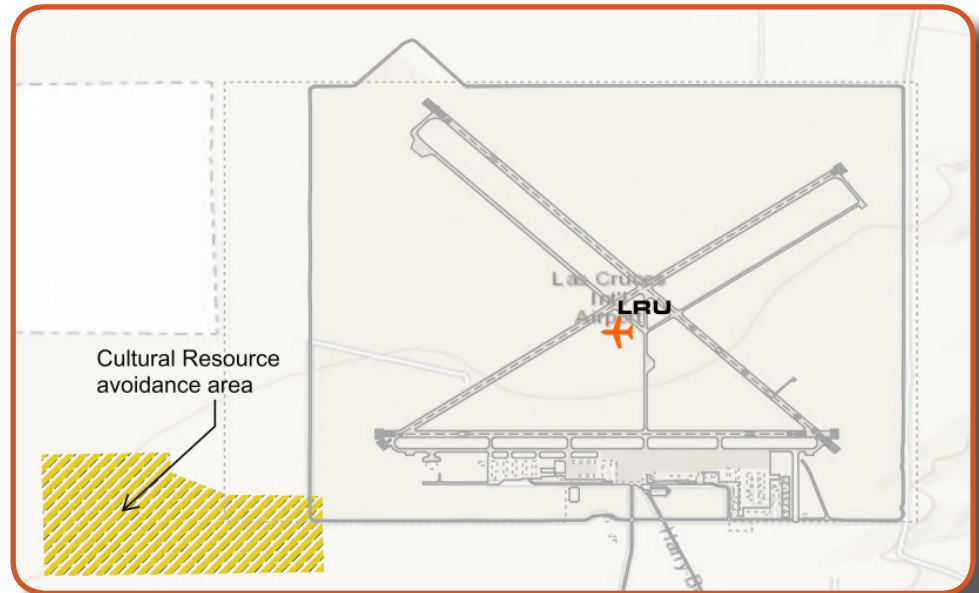
### 1.5 | Part 10 - Historical, Architectural, Archaeological and Cultural Resources

The National Historic Preservation Act of 1966, as amended, and the Archeological and Historic Preservation Act of 1974 are the two laws that establish the requirements for determining historic, architectural, archaeological, and cultural resource significance within the airport vicinity.

A Class III cultural resources survey was conducted on airport property February 2015. The survey encountered seven previously-recorded sites, three newly-discovered sites, and 24 isolated manifestations. All sites are recommended as eligible for inclusion to the National Register of Historic Places (NRHP), with the exception of LA 78981, a rock alignment, which no longer exists. No further treatment was recommended for the 24 isolated occurrences as they are unlikely to be historically significant. Additionally, the survey report recommends that an area to the southwest of airport property be avoided completely as there is a high likelihood of cultural resources throughout this area. The New Mexico Department of Cultural Affairs, Historic Preservation Division, concurred with the recommendations in the survey report in April 2015 (see Appendix C). The entire cultural resources survey report is included as Appendix C.

Any future development at the Airport would likely also have to avoid the remaining sites found to be eligible for listing on the NHRP, or additional analysis and testing of the areas must be conducted before any construction could occur there.

**Table 1-16. Cultural Resources at LRU.**



Map Created by Delta Airport Consultants, Inc. May 2015  
 Data from 2014 Cultural Resource Survey





## 1.5 | Part 11 - Light Emissions and Visual Impacts

Airports convey a significant amount of light, including approach lighting systems. Visual impacts are difficult to define because of the subjectivity and may create an annoyance to people in the vicinity or interfere with their normal activities. The airport property is in a remote, rural location with no residential development in the vicinity. As there are existing lights at this

operating airport, future airport development is not likely to create significant light emissions and visual impacts. Nevertheless, future development projects involving the installation, replacement, or relocation of airfield lighting should be evaluated for adverse light emissions and visual impacts to the surrounding lands.

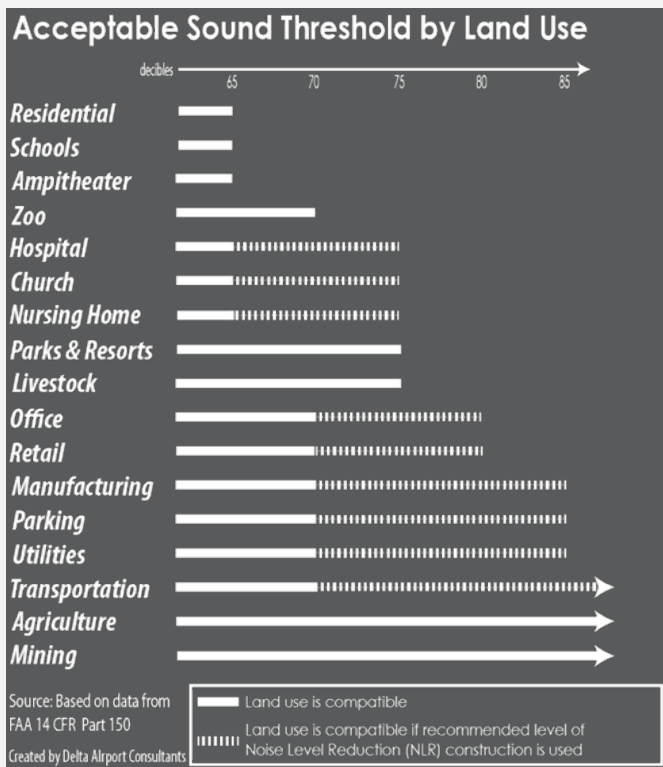
## 1.5 | Part 12 - Natural Resources, Energy Supply, and Sustainable Design

Executive Order 13123, Greening the Government through Efficient Energy Management, encourages Federal agencies to expand the use of renewable energy within its facilities and in their activities; and to encourage the development of facilities that exemplify the highest standards of design including the principles of sustainability. In addition, any proposed development at LRU should be examined to identify any proposed major changes in stationary facilities or the movement of aircraft and ground vehicles that would have a measurable effect on local supplies of energy or natural resources. According to FAA, most airport development projects will not produce changes in energy use or other natural resource consumption resulting in significant impacts.

The on-airport electrical vault supplies the electricity needed for airport lighting and operations. A 2015 design effort to install Precision Approach Path Indicators (PAPI) on Runway 8-26 uses Light-Emitting Diode (LED) bulbs. LEDs have several advantages over incandescent bulbs, including lower energy consumption, longer lifetime, and improved physical robustness. Fire Station 7, which services the airport and the West Mesa Industrial Park, is designed to Leadership in Energy and Environmental Design (LEED) certification standards. Sustainable measures will be further discussed and evaluated in the subsequent chapter about Sustainable planning for the Airport.

## Understanding...Noise

Noise is typically the most significant off-airport environmental impact associated with aircraft operations. Noise is measured in decibels (dB). The Day Night Average Sound Level (DNL or Ldn) is an average cumulative sound level that provides a measure of the total sound energy during a 24-hour period.



### 1.5 | Part 13 - Noise

Airport development actions that change airport runway configurations, the number of aircraft operations and/or their movements, aircraft types using the airport, or aircraft flight characteristics may affect the existing and future noise levels at the airport. Day/night average sound level (DNL) is the FAA-prescribed metric for determining cumulative noise energy. Generally, the FAA considers DNL 75 and higher to be incompatible with most land uses, while below DNL 65 is compatible with most land uses. Above 65 DNL, noise sensitive land uses (such as residential, schools, churches, and hospitals) are typically discouraged. A significant noise impact would occur if a proposed project would cause noise-sensitive areas to experience an increase in noise of DNL 1.5 decibels (dB) or more at or above DNL 65 dB noise exposure.

LRU is located in a remote area with no noise-sensitive land uses in its vicinity. Therefore, noise impacts from future development are not anticipated. However, the noise contours for the Preferred Alternative selected in this Airport Action Plan may need to be generated during an environmental analysis to ascertain their extent.



## 1.5 | Part 14 - Secondary (Induced) Impacts

Major development proposals can involve the potential for induced or secondary impacts on surrounding communities. Examples include: shifts in patterns of population movement and growth; public service demands; and changes

in business and economic activity to the extent influenced by airport development. Any proposed development should be assessed for potential secondary (induced) impacts.

## 1.5 | Part 15 - Socioeconomic impacts, Environmental Justice, and Children's Environmental Health and Safety Risks

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, and the accompanying Presidential Memorandum, and Order DOT 5610.2, Environmental Justice, require FAA to provide for meaningful public involvement by minority and low-income populations and analysis that identifies and addresses potential impacts on these populations which may be disproportionately high and adverse. Additionally, pursuant to E.O. 13045, Protection of Children from Environmental Health Risks and Safety Risks, Federal agencies are directed as appropriate to prioritize environmental health risks which may disproportionately affect children. Any proposed development at LRU must be analyzed to assess impacts to low-income or minority populations, or to children's health and safety.

There are no schools or residences in the immediate vicinity of the airport, therefore significant impacts from any future development are not anticipated.

2013 data from the U.S. Census American Community Survey (ACS) was consulted for demographic information about the City of Las Cruces. Over half (57%) of the population of Las Cruces is "Hispanic or Latino"; twenty-three percent of residents earn an income which classifies them as below the poverty line. As there are no residential or commercial development in the immediate vicinity of airport property, any future development is unlikely to affect this population.

### 1.5 | Part 16 - Water Quality

The Clean Water Act (CWA) provides the authority to establish water quality standards, control discharges, develop waste treatment management plans and practices, and prevent or minimize the loss of wetlands. Section 404 of the CWA regulates Waters of the United States (WOUS) and is administered by the United States Army Corps of Engineers (USACE). Section 401 of the CWA regulates water quality and is administered by the Surface Water Quality Bureau of the New Mexico Environment Department. Water quality regulations and the issuance of permits before construction projects at LRU will normally identify any deficiencies in the proposed development with regard to water quality or any additional information necessary to make judgments on the significance of impacts.

There are no perennial surface water bodies within or adjacent to the project area. Stormwater runoff generally flows east toward the Mesilla Valley and

the Rio Grande River. However, according to the Biological Evaluation conducted as part of this planning effort, no drainages were observed in the project area that could potentially reach the Rio Grande River.

A water detention structure is located in the western portion of the airport property which collects stormwater runoff from airfield pavements. This structure is grassy and does not possess indicators of wetlands, according to the on-airport biological evaluation conducted in December 2014 (see Appendix B).

The biological evaluation also concluded that no drainages or Waters of the United States (WOUS) are present within the project area.

The obtaining of the appropriate permits and the use of Best Management Practices (BMP) during construction will help to mitigate any water quality impacts of future development.

### 1.5 | Part 17 - Wetlands

USFWS National Wetlands Inventory (NWI) data consulted in February 2015 indicates that one Freshwater Forested/Shrub Wetland patch is present within the project area, near the Runway 30- end; however, during field verification in December 2014, the feature was confirmed not to

exist. The field survey confirmed that no wetlands or wetland indicators (hydrophytic vegetation or wetland hydrology) are present within the project area. A water detention feature is located in the western portion of airport property. No water was noted in the feature during the field visit.

### 1.5 | Part 18 - Wild and Scenic Rivers

Select rivers can be classified by Congress as National Wild and Scenic Rivers in order to protect them from development that could substantially affect their nature or health. There are four federally-listed Wild and Scenic rivers in New Mexico: the Rio Grande, the Rio Chama, the Pecos, and the east fork of the Jemez River. None

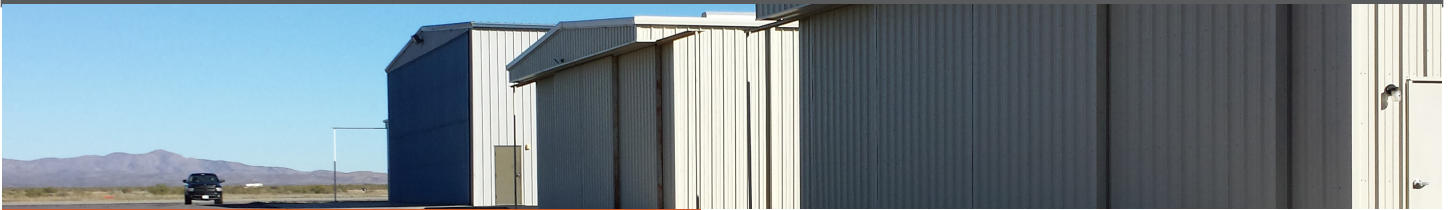
of these is located near the airport. Projects at LRU will not impact any Wild and Scenic rivers, or other federally listed river segment; therefore there is no cause for notification of federal agency or for further environmental review.



## 1.5 | Part 19 - Summary

Table 1-17. *Environmental Overview Summary.*

ENVIRONMENTAL IMPACT CATEGORY	COMMENTS
Air Quality	LRU is not within a designated Non-Attainment or Maintenance area and has annual operations less than 180,000; a General Conformity Determination and emissions analysis is not anticipated to be required for proposed development.
Coastal Resources	LRU is not in the Coastal Zone; New Mexico is not within the Coastal Barriers Resource System
Compatible Land Use	The commercial, industrial and vacant/unzoned land uses around the airport are generally considered to be compatible with airport operations.
Construction Impacts	BMPs should be employed and construction impacts would be temporary.
Department of Transportation: Section 4(f)	There are no known Section 4(f) resources on or near the airport.
Farmlands	As the proposed development would remain on airport or City property, no impact to farmlands is anticipated and no NRCS consultation is required.
Fish, Wildlife, and Plants	No impacts to federally-listed species are anticipated but impacts to four state-listed species are possible; impacts to migratory birds are possible if construction occurs between April and August. Agency coordination is recommended for the proposed development.
Floodplains	There are no 100-year floodplains on or near airport property.
Hazardous Materials, Pollution Prevention, and Solid Waste	No known hazardous waste sites are in the airport vicinity; two FBO-owned fuel tanks do not meet state standards.
Historic, Architectural, Archaeological and Cultural Resources	Any future development at the Airport would have to avoid the sites recommended for avoidance, or additional analysis and testing of the areas must be conducted before any construction could occur there.
Light Emissions and Visual Impacts	Light emissions and visual impacts of the proposed development should be considered.
Natural Resources and Energy Supply	Any changes in energy use or other natural resource consumption resulting in significant impacts should be analyzed.
Noise	Noise contours may be generated during the environmental effort for the proposed development; however adverse impacts are not anticipated.
Secondary (Induced) Impacts	The proposed development plan should be assessed to determine whether it would result in secondary (induced) impacts to the surrounding community.
Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks	No impacts are anticipated as no residential development is located in the airport vicinity.
Water Quality	BMPs should be employed and appropriate permits obtained before development can begin.
Wetlands	A field survey conducted in winter 2014 confirms the absence of wetlands on airport and in the vicinity.
Wild and Scenic Rivers	There are no Wild and Scenic rivers in the vicinity of the airport.



## Section Overview

- 1.6|Part 01 - Operations
- 1.6|Part 02 - Based Aircraft
- 1.6|Part 03 - Enplanements

## 1 | Section 6 - Aviation Trends and Historic Data

Historical levels of aviation activity at Las Cruces indicate trends in aviation demand that will be used as a basis of the airport’s forecast analysis provided in Chapter 2 of this Master Plan. Historic trends were reviewed for 15 years of historic data from 2000-2014 using the FAA TAF issued January 2015. 2014 is the base year. Metrics of aviation activity and their definitions include the following:

- **Enplanement** – a revenue passenger boarding a scheduled certificated aircraft
- **Operation** – an aircraft takeoff or landing
- **Air Carrier operation** – an aircraft operation conducted by a scheduled Part 121 certificated scheduled aircraft
- **Commuter operation** – an aircraft operation conducted by a scheduled Part 135 certificated aircraft
- **Air taxi operation** – an aircraft operation conducted by an unscheduled Part 135 certificated aircraft
- **Local operation** – a takeoff or landing by an aircraft that is operating entirely within the local traffic pattern and within sight of the airport; or departing or arriving from a practice area within 20 miles of the airport
- **Itinerant operation** – an aircraft takeoff or landing other than local

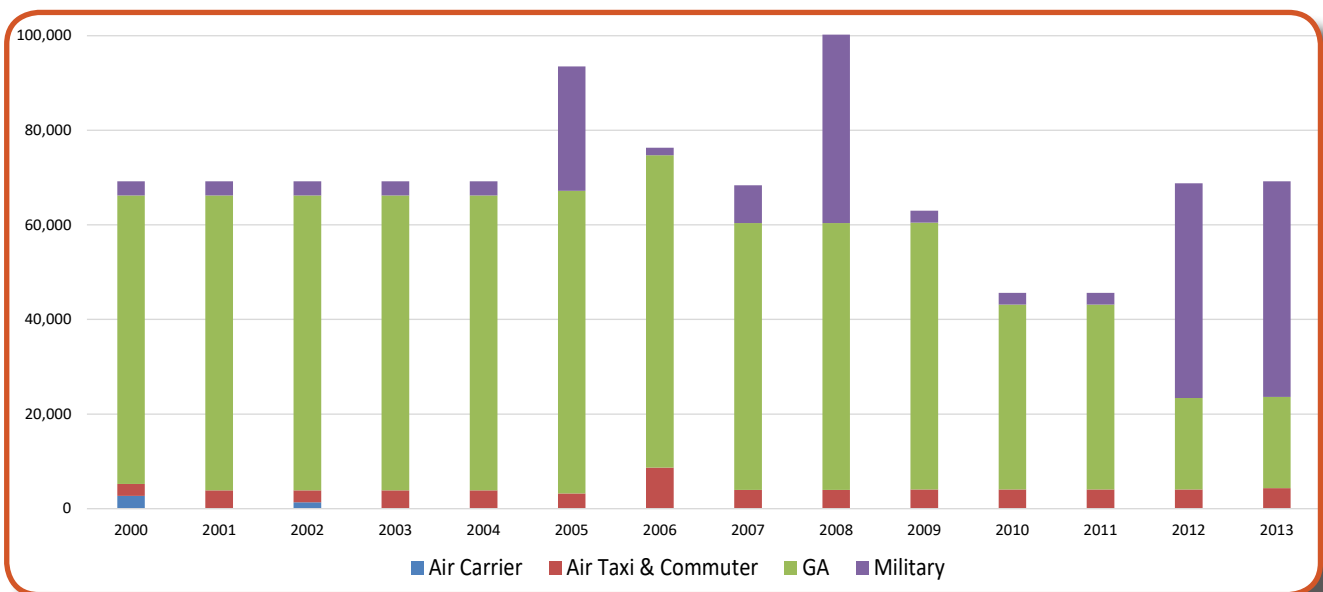


Figure 1-25. Historic Total Operations (2000-2014).

Source: FAA TAF published Jan. 2015, Airport Records



## 1.6 | Part 01 - Operations

Las Cruces International Airport serves a diverse group of users and has undergone a significant shift in operational demand over the past several years. These changes, observations of trends, and special airport uses include the following and are reflected in the activity levels shown in **Figure 1-24**.

- The availability and extent of scheduled air carrier and commuter service has been sporadic for many years. This service is not currently available. Air carrier service stopped in the year 2000 but was resumed in 2009 for service from LRU to/from Albuquerque for a short period of time.
- Military operations have varied. Although, the Navy does not train every year at LRU, the Navy has been conducting its annual training at LRU in recent years with up to 24 of their T-34 aircraft. This aircraft is propeller-driven and derived from a Beechcraft Model 35 Bonanza.
- The U.S. Army National Guard owns and operates four UH-72 Lakota helicopters from their base at Las Cruces International airport.
- Termination of a general aviation flight school due to the departure of one of the two FBOs in 2011 resulted in a decrease in general aviation operations.
- The airport entered into a lease for a second FBO in 2014 and it is yet unknown what specific impact this will have on airport operations.
- The number of based aircraft has been fairly stable over the past ten years.

**Table 1-18. Historic Total Operations.**

Fiscal Year	Itinerant Operations					Local Operations			FAA Total Operations
	Air Carrier	Air Taxi & Commuter	GA	Military	Total	Civil	Military	Total	
2000	2,700	2,500	21,000	3,000	29,200	40,000	0	40,000	69,200
2001	0	3,860	22,350	3,000	29,210	40,000	0	40,000	69,210
2002	1,360	2,500	22,350	3,000	29,210	40,000	0	40,000	69,210
2003	0	3,860	22,350	3,000	29,210	40,000	0	40,000	69,210
2004	0	3,860	22,350	3,000	29,210	40,000	0	40,000	69,210
2005	0	3,200	24,000	26,308	53,508	40,000	0	40,000	93,508
2006	0	8,699	26,000	1,592	36,291	40,000	0	40,000	76,291
2007	0	3,968	26,000	8,014	37,982	30,400	0	30,400	68,382
2008	0	3,968	26,000	39,840	69,808	30,400	0	30,400	100,208
2009	84	3,968	26,000	2,544	32,596	30,400	0	30,400	62,996
2010	0	4,072	22,500	2,486	29,058	16,582	0	16,582	45,640
2011	0	4,072	22,500	2,486	29,058	16,582	0	16,582	45,640
2012	4	4,072	10,000	45,396	59,472	9,300	0	9,300	68,772
2013	4	4,322	9,995	45,598	59,919	9,293	0	9,293	69,212
2014	4	3,580	10,000	53,800	67,884	12,000	0	12,000	79,884

Source: FAA TAF published Jan. 2015, Airport Records

The IFR logs over the past three years indicates the highest number of operations are from B-II and D-I aircraft. For example, a based Learjet 31 (D-I) has the highest number of operations of all aircraft using the airport. These logs also indicate 2910 operations by turbo-prop aircraft and 1293 operations by jet aircraft.

Although not part of the official airport operational count, the New Mexico State University Unmanned Aircraft Systems Flight Data Test Center operates at the airport. The Center conducts less than one flight a week and uses that portion of Runway 4-22 north of Runway 12-30 for its testing. The extent, future growth, and how this activity can work in partnership with other airport operations will be reviewed as part of this Master Plan.

The planning of facilities such as apron parking and terminal buildings are typically based on peaking activity levels of an airport. Since Las Cruces does not have detailed counts that provide peaking levels, further planning within this Master Plan will be based upon certain assumed percentages that the airport planning industry has adopted. These are: peak month is 12 percent of annual operations; design day is the peak month divided by 30; the busiest day is 1.25 times the design day; and, design hour operations are 15 percent of design day operations. Since the amount of activity at Las Cruces is so significantly impacted by Navy training, it will be helpful to identify peaking levels with and without this military activity. Years 2013 and 2014 reflect these two situations.

**Table 1-19. Peak Operations Data (2013-2014).**

	WITH MILITARY ACTIVITY		WITHOUT MILITARY ACTIVITY	
	2013	2014	2013	2014
Peak Month	8,305	9,586	2,833	3,130
Design Day	277	320	94	104
Busy Day	346	399	118	130
Design Hour	52	60	18	20

Source: Delta Airport Consultants, Inc.





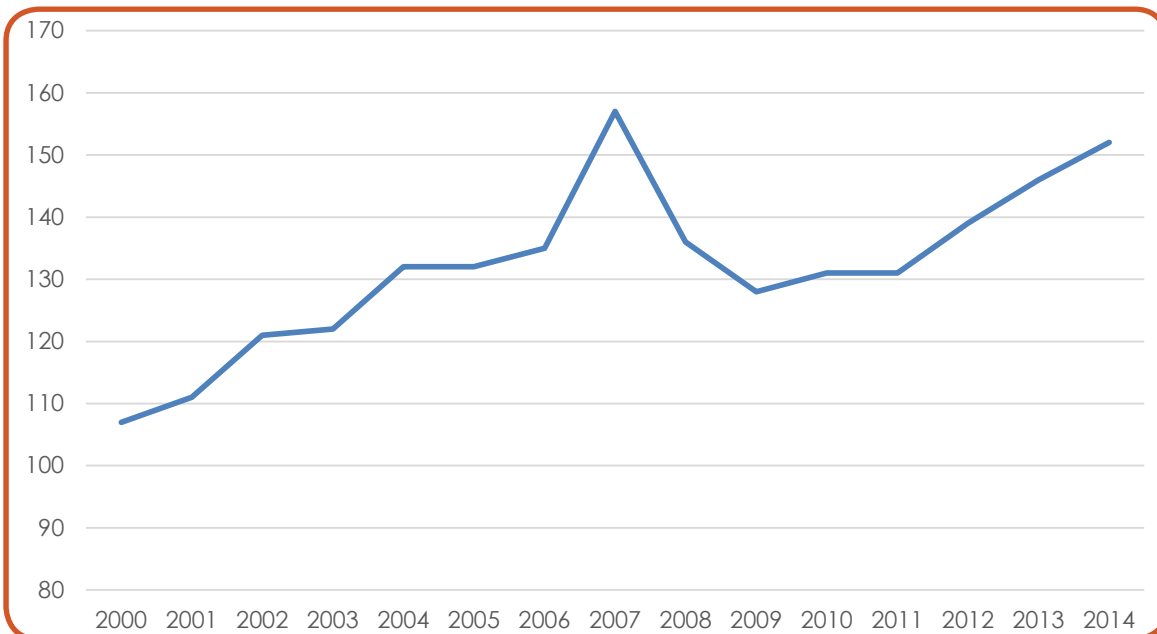
## 1.6 | Part 02 - Based Aircraft

Based aircraft from 2000-2014 has shown a steady increase of 2.1 percent average annual growth. The number of based aircraft has increased from 107 in the year 2000 and reached a maximum in the year 2007 with 157 based aircraft. In 2014, there were 152 based aircraft including 113 single engine, 15 multi-engine, 11 ultra-light aircraft, five helicopters, four gliders, and four military aircraft.

**Table 1-20. Based Aircraft.**

Fiscal Year	No. of Based Aircraft
2000	107
2001	111
2002	121
2003	122
2004	132
2005	132
2006	135
2007	157
2008	136
2009	128
2010	131
2011	131
2012	139
2013	146
2014	152

Source: FAA Form 5010-1, January 2015



**Figure 1-26. Historic Based Aircraft (2000-2014).**

Source: FAA TAF published Jan. 2015, Airport Records

### 1.6 | Part 03 - Enplanements

As of 2014, LRU is classified by the NPIAS as a general aviation airport. The Airport currently does not have commercial service. Historically, LRU has provided commercial service and the airport maintains its Class IV 14 CFR Part 139 certification which permits commercial service operation.

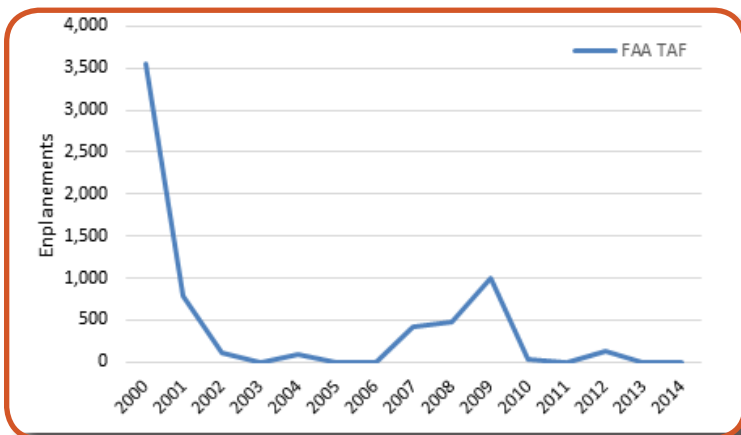
This provision of commercial service has varied throughout the history of the Airport reaching more than 8,100 annual enplanements in 1994 and maintaining over 3,500 up through the year 2000. In 2001, regular commercial service was no longer being provided at LRU; however, it was temporarily resumed in 2005.

Since 2001 a limited number of passenger enplanements have also occurred at LRU from unscheduled air taxi operations. In the base year, 2014, LRU had no commercial passenger enplanements.

**Table 1-21. Enplanements.**

Fiscal Year	No. of Enplanements
2000	3,560
2001	790
2002	117
2003	0
2004	95
2005	0
2006	0
2007	416
2008	471
2009	1,005
2010	36
2011	0
2012	124
2013	0
2014	0

Source: FAA Terminal Area Forecasts, January 2015



**Figure 1-27. Historic Enplanements (2000-2014).**

Source: FAA Terminal Area Forecasts, January 2015



## 1 | Section 7 - Financial Data

### 1.7 | Part 01 - Background

The City acts as the fiscal agent for the Airport and is responsible for maintaining its budgetary as well as revenue and expenditure accounts. Each year, the City staff prepares an annual budget for consideration and ultimate adoption by its governing body. The City's fiscal year runs from July through June and it uses the modified accrual basis of accounting for reporting financial results. As such, revenues are recognized when measurable and available and expenditures are recorded when the related fund liability is incurred.

LRU is an Operating Division of the Department of Transportation and the City has established discrete financial records and categories to account for the itemized revenues and expenses of the Airport. Daily operations of the Airport are funded through City general fund revenues, landing fees, facility rents, commercial fees, hangar space rental, and land rentals.

Businesses, organizations, individuals, and governmental entities engage in both aviation and non-aviation related activities at the Airport. The City maintains a host of lease and operating agreements that provide these entities the right to occupy and maintain space on the airport and/or offer aeronautical services to the public. The City deploys a property management and lease administration program to monitor and track these leases.

In order to provide a full complement of general aviation services to the public, the City has entered into Fixed Based Operator (FBO) lease and operating agreements with Francis Aviation and Southwest Aviation. It has also entered into lease and use agreements with Specialized Aviation Service Operators (SASOs) including Mesilla Valley Aircraft, LLC (aircraft maintenance and repair), Exclusive Aircraft Interiors (Upholstery), and Lynco Flight Services, LLC (hangar rental). The City also manages aircraft tiedowns, sunshade, and short-term hangar rentals. Other activities located at LRU include the U.S. Army National Guard and the Unmanned Aircraft Systems Flight Test Center (UAS FTC) operated by New Mexico State University.

### *Section Overview*

1.7|Part 01 - Background

1.7|Part 02 - Historical Airport Revenues

1.7|Part 03 - Historical Operating Expenses

1.7|Part 04 - Cash Flow Analysis

This analysis offers LRU a baseline financial performance of LRU. The evaluation of revenues and expenses over the past five years in order to provide a framework for understanding future expenditures and revenue streams. It is not intended to serve as a true Airport profit and loss statement; instead, it offers insight to emerging trends that could impact the future financial performance of LRU. The techniques utilized in this analysis are consistent with industry practices for similar studies. While it is believed that the approaches and assumptions are reasonable, it should be recognized that some assumptions regarding future trends and events might not materialize.

“The Financial Services Department maintains financial integrity and accountability to the citizens of Las Cruces through fiscal oversight and safeguarding public assets. Within the department, financial reporting and accounting personnel maintain financial data in compliance with Generally Accepted Accounting Principles (GAAP), auditing standards, and federal and state regulations. Closely related to, but separate from the Financial Services Department, is the Office of Management and Budget (OMB) which coordinates the preparation and development of the annual operating budget, the capital budget and the multi-year capital improvement program for the City.”

-City of Las Cruces Website



## 1.7 | Part 02 - Historical Airport Revenues

The City uses six distinct categories to monitor and evaluate its operating revenues. **Table 1-21** depicts the Airport's historical revenues from FY2011 through FY2013 along with Estimated and Expected Revenues for FY2014 and FY2015, respectively.

During this period, total Airport operating revenue experienced a decrease of \$11,399 from \$182,022 in FY2011 to \$170,623 in FY2015 (Budget); representing a decrease of two percent per year for this four year

period. Airport Facility Rentals decreased six percent per year during this study period from \$101,450 to \$80,000. Airport Commercial Fees, which includes fuel flowage fees and FBO operating fees increased from \$8,751 to \$21,500 partially offsetting the loss in revenue from Airport Facility Rentals. Airport Land Rentals witnessed a one percent decline per year from \$65,748 to 63,233. For FY2015(Budget), the City anticipates that 97 percent of its overall airport operating revenue is to be derived from the following sources:

- Airport Facility Rental – 47%
- Airport Land Rental – 37%
- Airport Commercial Fees – 13%
- Other – 3%

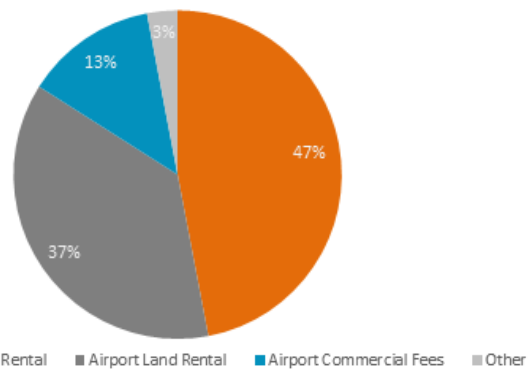


Figure 1-28. 2015 Revenue.

Table 1-22. LRU Historic Airport Revenues FY2011 – FY2015 (Budget).

	FY2011 Actual	FY2012 Actual	FY2013 Actual	FY2014 Estimated	FY2015 Budgeted	FY11-15 CAGR
BEGINNING BALANCE:	\$15,548	\$1,227	\$610,579	\$149,723	\$340,656	116%
OPERATING REVENUES:						
Aircraft Landing Fees	1,640	1,765	015	1,940	1,700	1%
Airport Facility Rental	101,540	71,653	66,238	85,906	80,000	-6%
Airport Commercial Fees	8,751	38,996	14,203	21,893	21,500	25%
Airport Land Rentals	65,748	49,847	74,054	77,787	63,223	-1%
Investment Income	377	(560)	5,975	7,176	500	7%
Other Revenue	3,966	3,079	2,947	5,973	3,700	-2%
<b>SUBTOTAL: OPERATING REVENUES</b>	<b>\$182,022</b>	<b>\$164,780</b>	<b>\$165,086</b>	<b>\$200,675</b>	<b>\$170,623</b>	<b>-2%</b>
PROJECTS/GRANTS						
Federal Aviation Administration	43,266	38,542	-	-	-	-
NM Dept. of Transportation	-	9,553	-	-	-	-
<b>SUBTOTAL: PROJECTS/GRANTS</b>	<b>\$43,266</b>	<b>\$48,095</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>-</b>
	\$225,288	\$212,875	\$200,675	\$200,675	\$170,623	-7%
<b>TOTAL RESOURCES:</b>	<b>\$240,836</b>	<b>\$214,102</b>	<b>\$775,665</b>	<b>\$350,398</b>	<b>\$350,398</b>	<b>21%</b>

Source: City of LRU Fiscal Years Ending 2011-2015 Financial & Budget Reports  
Delta Airport Consultants, Inc. Analysis

LRU retains the ability to adjust rental rates every one or five years based upon the Consumer Price Index (CPI)

The City makes annual General Fund contributions to LRU from its local tax base to provide sufficient resources for the Beginning Balance for Airport Operations and capital improvement projects. Although a 116 percent compound annual growth rate (CAGR) is posted for this line item, these funds are primarily obligated for capital projects. Fluctuations and increases in the amount of resources available for LRU at the beginning of each fiscal year are due to the timing of completion of the airport fuel farm project.

The City has entered into a total of thirty-seven land and nine facility leases at LRU. These agreements have been entered into with various businesses, individuals, non-profits, and governmental/higher education institutions. They afford lease holders a myriad of privileges including the right to finance, construct, and store private aircraft and/or provide aeronautical services to the public (Fixed Base Operators and Specialized Aviation Service Operators). In addition, leases also cover research and development functions for New Mexico State University; provide a base of operations for the National Guard, and enable the Civil Air Patrol to conduct its mission and services. The City began entering into long-term land leases in 1985 and has existing agreements which run through 2043. Current square foot rental rates range between \$0.02313 per square foot to \$0.42819 per square foot depending upon the date the lease was entered into, the privileges awarded, the overall size of land leased, and terms/conditions for adjustment of the base

rent. Based on City records, LRU retains the ability to adjust rental rates every one or five years based upon the Consumer Price Index (CPI). Southwest Aviation, Inc (SWA), one of two Fixed Base Operators (FBO) at LRU, leases approximately 16.5 acres of land from the City including t-hangars, offices, conventional hangars, a fuel farm, automobile parking, and an aircraft parking apron. SWA is also obligated to pay the City a fuel flowage fee of \$0.04 per gallon of fuel dispensed, a percentage of its aircraft parking fees and two percent of its gross receipts. While the fee structure described above is typical for an FBO, the resulting revenue to the City totals an estimated \$14,431.17 per year because of the relatively low rental rates paid by SWA for its facilities; \$0.02397 - \$0.02980 per square foot for land and facilities, \$312.10 per month for a fuel farm, and \$150.00 per month for t-hangars. SWA's base lease and operating agreement with the City expired in 2013. This entity has exercised its option to extend this agreement through 2018 and has the ability to exercise a second lease option to continue operations through 2023. The City also entered into an FBO agreement with Francis Aviation, Inc. in 2014. This entity leases a fuel farm area and a facility area encompassing a terminal area/offices and aircraft parking apron.

Within the next sixty months, a host of land and facility leases will expire and provide an opportunity for the City to ensure that its lease rate structure reflects current market conditions while remaining competitive with peer facilities.



## 1.7 | Part 03 - Historical Operating Expenses

The Airport's historical operating expenses for FY2011 through FY2015 (Budget) are presented in **Table 1-22**. During this period, salaries, benefits, capital outlay, and operating expenses increased \$56,352; three percent per year, from \$474,941 in FY2011 to \$531,293 in FY2015 (Budget).

Among the 43 categories utilized by the City to track the use of its resources for the operation, maintenance, and improvement of LRU, Salaries and Benefits consistently ranks as the largest category representing 53 percent of total operating expenses for LRU's FY2015(Budget). Salaries for Administrative classifications fell one percent per year during the period from \$69,480 to \$66,273 while Classified Pay classifications increased three percent each year from \$116,269 to \$128,640. It should be noted that due to the transfer of an administrative staff position to another office of the Transportation Department, Classified Salaries decreased to a low of \$82,849 in FY2014(estimated). For FY2015(Budget) this position was re-assigned to the Airport Division and the prior year budget savings were negated. Although many local governments experienced significant increases in healthcare premiums during this period, the City realized cost savings as evidenced by an eleven percent decline each year in its premiums for LRU employees decreasing approximately \$13,000 from \$36,950 to \$23,647.

Other major operating expense categories for LRU as of the FY2015(Budget) include Electricity (10.2 percent), Purchased Services (9.3 percent), and Motor Pool Fuel and Lubricants (7.1 percent).

Outlays for Projects and Grants varied throughout this five year period from \$58,073 in FY2011 to \$503,689 in FY2014(Estimated). These variations are a function of the required local match the City is obligated to commit in order to receive grant-in-aid funding through the Federal Aviation Administration (FAA) and/or New Mexico Department of Transportation, Aviation Division (NMAD). As depicted on **Table 1-22**, the City allocated funds toward ten capital improvement, planning, and/or maintenance grant funded projects at LRU during this five year period. The fuel farm replacement project accounted for the vast majority of funding allocated by the City during this period followed by the rehabilitation of Taxiway A pavement in fiscal years 2012-13.

Table 1-23. *Historic Salaries and Benefits (2011-2015).*

AIRPORT OPERATIONS	FY2011 Actual	FY2012 Actual	FY2013 Actual	FY2014 Estimated	FY2015 Budgeted
<b>SALARIES &amp; BENEFITS</b>					
Administration	\$69,480	\$65,230	\$61,292	\$63,022	\$66,273
Classified	116,269	125,383	111,199	82,849	128,640
Stand-by Pay	4,682	4,679	4,693	4,807	4,954
Clothing Allowance	180	180	180	180	-
Cell Phone Stipend	301	129	209	506	600
Scheduled Overtime	13,174	14,573	10,213	12,854	9,338
PERA	25,390	25,295	23,225	19,142	26,986
FICA - Social Security	10,993	11,291	10,467	9,375	12,851
FICA - Medicare	2,571	2,641	2,448	2,193	3,007
Worker's Compensation	8,477	9,035	33	19	40
Insurance Administration	37	38	58	345	1,184
Retiree Insurance	3,088	3,249	3,450	2,866	3,862
Health Insurance	36,950	31,815	25,160	16,644	23,647
Life and Disability Insurance	485	487	251	210	272
Dental Insurance	2,507	2,520	2,335	1,753	2,570
<b>SUBTOTAL: SALARIES &amp; BENEFITS</b>	<b>\$294,583</b>	<b>\$296,545</b>	<b>\$255,212</b>	<b>\$216,766</b>	<b>\$284,224</b>

Historic City of Las Cruces Fiscal Years Ending 2011-2015 Financial Budget Reports  
Delta Airport Consultants, Inc. Analysis

Note: CAGR-Compound Annual Growth Rate





Table 1-24. Historic Operating Expenses (2011-2015).

AIRPORT OPERATIONS	FY2011 Actual	FY2012 Actual	FY2013 Actual	FY2014 Estimated	FY2015 Budgeted
<b>OPERATING</b>					
Professional & Technical Services	13,835	23,286	13,628	9,744	14,850
Motor Pool Repair & Maintenance	15,948	23,927	17,477	13,799	15,000
Motor Pool Fuel & Lubricants	28,455	29,795	39,623	19,416	37,900
Radio Repair & Maintenance	4,259	5,084	3,300	2,712	6,000
Welding Repair & Maintenance	-	-	144	-	500
Electrical Repair	-	-	264	150	500
General Street Repair & Maintenance	500	-	731	201	1,000
Runway Maintenance	12,632	4,402	20,995	25,322	30,300
Postage & Freight	187	75	51	78	300
Advertising	261	1,245	545	562	1,500
Copying Fees	474	230	-	117	-
Printing	36	39	91	130	300
Landscaping Services	-	-	1,500	-	1,500
Purchased Services	9	85,469	31,408	11,877	49,541
Airport Weather Station Maintenance	9,262	2,093	1,430	1,681	4,000
Equipment Rentals	603	2,851	641	1,075	650
Travel General	3,035	3,370	2,629	2,323	3,000
Dues	1,175	1,055	1,000	800	1,000
General Utility Services	13,029	11,165	11,325	12,162	15,000
Electricity	58,016	51,507	48,241	49,714	54,000
Telephone	1,684	1,681	1,590	1,468	1,750
Telephone -- Cell Phone	1,043	1,100	1,656	340	-
Supplies General	5,540	64,317	4,420	3,017	5,000
Software	-	-	-	273	-
Minor Computer Equipment	1,321	187	2,099	2,100	1,401
Uniforms & Safety Wear	231	386	399	416	500
Liability Insurance	4,700	-	515	-	1,577
<b>SUBTOTAL: OPERATING</b>	<b>\$176,233</b>	<b>\$313,263</b>	<b>\$205,704</b>	<b>\$159,478</b>	<b>\$247,069</b>
<b>SUBTOTAL: CAPITAL OUTLAY</b>	<b>\$4,125</b>	<b>\$-</b>	<b>\$120,000</b>	<b>\$31,123</b>	<b>\$-</b>
<b>TOTAL OPERATING</b>	<b>\$474,941</b>	<b>\$609,809</b>	<b>\$580,916</b>	<b>\$407,367</b>	<b>\$531,293</b>

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Note: CAGR-Compound Annual Growth Rate

Table 1-25. *Historic Projects and Grants (2011-2015).*

AIRPORT OPERATIONS	FY2011 Actual	FY2012 Actual	FY2013 Actual	FY2014 Estimated	FY2015 Budgeted
PROJECTS & GRANTS					
Weather Station	4,125	1,170	-	-	-
Runway 12-30 Reconstruction	9,569	-	-	-	-
Wildlife Hazard Assessment	44,379	39,530	-	-	-
Rehab Taxiway A FY12	-	24,690	113,418	-	-
Electronic ALP	-	1,543	4,391	-	-
Airfield Maintenance Supplies & Services	-	9,553	-	-	-
Airport Fuel Farm	-	-	45,217	3,330	-
NMDOT State Aviation Div Maint Grant	-	-	991	(3)	1,000
Fuel Farm Phase II	-	-	-	499,360	37,933
Airport Action Plan Update	-	-	-	1,002	22,778
<b>TOTAL PROJECTS &amp; GRANTS</b>	<b>\$58,073</b>	<b>\$76,486</b>	<b>\$164,017</b>	<b>\$503,689</b>	<b>\$61,711</b>
<b>TOTAL EXPENDITURES</b>	<b>\$533,013</b>	<b>\$686,295</b>	<b>\$744,933</b>	<b>\$911,056</b>	<b>\$593,004</b>

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Note: CAGR-Compound Annual Growth Rate

## 1.7 | Part 04 - Cash Flow Analysis

**Table 1-26** provides a summary of cash flow from airport activities for the period FY2011-2015 (Budget). For purposes of this analysis, operating expenses and end of year accrual adjustments are subtracted from Airport revenues to provide an operating fund ending balance for each fiscal year evaluated during this period. Transfers In/Out amounts applied to the

operating fund ending balance to yield an overall ending balance for each fiscal year. LRU's ending balance for this period ranged from \$1,228 (FY2011) to \$610,577 (FY2012). As indicated, the variations in LRU's ending balance amounts are due primarily to General Fund allocations (Transfers In) to the Airport to fund capital projects.

**Table 1-26. LRU Historic Year-End Operating Results**

	FY2011 Actual	FY2012 Actual	FY2013 Actual	FY2014 Estimated	FY2015 Budgeted	CAGR
TOTAL AIRPORT REVENUE	\$ 240,836	\$ 214,102	\$ 775,665	\$ 350,398	\$ 511,279	21%
TOTAL AIRPORT EXPENSE	\$ 533,013	\$ 686,295	\$ 744,933	\$ 911,056	\$ 593,004	3%
ACCRUAL ADJUSTMENT	\$ (5,018)	\$ (255)	\$ 9,433	\$ 12,890	\$ -	
Operating Ending Balance	\$ (297,195)	\$ (472,447)	\$ 21,299	\$ (547,768)	\$ (81,725)	-28%
<b>TRANSFERS</b>						
In	\$ 320,000	\$ 1,104,601	\$ 150,000	\$ 910,000	\$ 150,000	
Out	(21,577)	(21,577)	(21,576)	(21,577)	(21,577)	
SUBTOTAL: TRANSFERS (IN/OUT)	\$298,423	\$1,083,024	\$128,424	\$888,423	\$128,423	-19%
Ending Balance	\$1,228	\$610,577	\$149,723	\$340,655	\$46,698	148%

Source: City of Las Cruces Fiscal Years Ending 2011-2015 Financial & Budget Reports  
Delta Airport Consultants, Inc. Analysis

Note: CAGR - Compound Annual Growth Rate

Between FY2011 – FY2015(Budget) the City expects to transfer \$2,634,601 to the Airport for operations and capital improvement projects. During this same period, airport operations generated revenues totaling \$883,186. As such, 67 percent of the funds transferred to the airport (\$1,770,625) were dedicated to airport operating expenses while the balance (\$863,976 – 33 percent) were allocated to capital projects. On a pure operating basis, results for FY2013 indicated positive financial returns for airport operations while the remaining four years losses ranging from \$81,725 (FY2015 Budget) to \$547,768 (FY2014 Estimated) were posted.

As a federally obligated public use airport sponsor, the City is required to establish its rates and charges at a level to achieve financial self-sufficiency for airport operations to the greatest extent possible. Based upon the Fund Transfers made to LRU, it is evident that self-sufficiency of airport operations is not attainable at this time. Further evaluation of the City's ratemaking methodology and fee structure is to be evaluated as part of this Action Plan. In addition, the City's process for allocating funds for LRU's capital program and assessing internal service charges are to also be reviewed as part of the Business Plan work element.