CHAPTER ONE

INVENTORY

INVENTORY

The initial step in the preparation of the Airport Master Plan for Cox Field Airport (PRX) is the collection of information that will provide a basis for the analysis to be completed in subsequent chapters. The inventory of existing conditions at Cox Field Airport will serve as an overview of the airport, its facilities, its role in regional and national aviation systems, and the relationship to development which has occurred around the airport in the past.

This Master Plan includes a comprehensive collection and evaluation of information relating to the airport and the surrounding area, including the following:

- Physical inventories and descriptions of facilities and services now provided at the airport.
- An overview of existing regional plans and studies to determine any potential influence on the development and implementation of the Airport Master Plan.
- Background information pertaining to the City of Paris, Lamar County, other surrounding communities, and the State of Texas. Analysis of these areas includes descriptions of recent development which has taken place on or adjacent to the airport environs and plans for future development which may impact the airport.
- Population and socioeconomic information which provides an indication of the market and possible future development in the region and at the airport.

The inventory of existing conditions serves primarily as the foundation upon which most of the analysis conducted in later chapters is formed. This information was obtained through on-site investigations of the airport and interviews with city officials, airport management, airport tenants, representatives from various government agencies, and local and regional economic agencies. The resources used for this report are documented for the reader to research. Select items utilized in later analysis were deemed appropriate to be put into an appendix.

AIRPORT CHARACTERISTICS

The purpose of this section is to summarize various studies and data collected to provide an understanding of the characteristics of the airport and the regional area. Within this section is a description of the airport's history, administration, setting, ground access systems, surrounding land use, climate, role, and economic impact. This information serves as an important baseline when developing forecasts for critical airport infrastructure to support demand over the planning period.

AIRPORT HISTORY

Cox Field Airport was opened in August of 1943 as Cox Field and was used by the United States Army Air Forces as a training base. At the end of WWII, the airfield was determined to be excess for the military and was turned over to the local government for civil use. Since that time, the airport has been under the control of the City of Paris.

The airport has been upgraded, updated, and improved since its inception as a military airfield. **Table 1A** presents historical information for capital improvements made at Cox Field since 1990 with federal, state, and local funding. Since that time, several notable improvements have been made, including the construction of the terminal building, pavement and drainage improvements, navigational aid improvements, and hangar construction.

AIRPORT ADMINISTRATION

Cox Field Airport is owned and operated by the City of Paris. The City does not oversee day-to-day operation and maintenance of the airport as those responsibilities have been contracted with the airport's fixed base operator (FBO).

The Cox Field Airport Advisory Board was established in 1970 to act in an advisory capacity to the Paris City Council in relation to airport operation and facilities. The board is charged to provide recommendations for changes and/or additions to airport facilities, to lease structures, and the use of airport property in general. Placement on the seven-member board requires a city council appointment. Service appointments are three-year staggered terms.

TABLE 1A
Historical Capital Improvements
Cox Field Airport

Year	Project Description	Total	Federal Funds	State Funds	Local Funds
1990	Conduct Airport Master Plan	$45,000	$40,500	$0	$4,500
1992	Extend TW A; overlay access road; construct helipad & helipad access road; grade RW & TW shoulders; install fencing.	$424,738	$382,264	$0	$42,474
1994	Install lighted guidance signs for RW/TW intersections	$0	$0	$82,922	$9,213
1996	Install segmented circle; drainage improvements; erosion controls; construct terminal building; complete Taxiway A; construct helipad; overlay entrance road	$286,300	$257,670	$0	$28,630
1996	Reconstruct and overlay hangar access TW; overlay taxilanes; install segmented circle; erosion control	$750,000	$0	$483,000	$267,000
1997	Reconstruct RW 17-35 ends; rehab RW 17-35; rehab TW A and TW B; replace MIRL RW 17-35; seal PCC apron joints; prepare ALP/Exhibit A; install PAPI-4 RW 17; install tiedowns	$2,308,000	$2,077,200	$0	$230,800
1998	Continued projects under 1997	$2,063,000	$1,856,700	$0	$206,300
2000	Install security fencing	$10,000	$0	$0	$10,000
2001	Install new water lines in terminal area; provide drainage and dirt for new hangars; install taxilanes around new hangar area	$166,667	$150,000	$0	$16,667
2003	RAMP: Security gate operator	$2,400	$0	$1,200	$1,200
2006	Design/construction for hangar and taxilane	$26,735	$22,868	$0	$3,867
2007	RAMP: hangar, drainage, terminal bldg repairs; pavement and marking repair	$12,264	$0	$6,132	$6,132
2008	RAMP: continued from 2007	$23,662	$0	$11,831	$11,831

Source: TxDOT Aviation records
Acronyms:
RW – Runway
TW – Taxiway
ALP – Airport Layout Plan
PAPI – Precision approach path indication
VASI – Visual approach slope indicator
RAMP – Routing Airport Maintenance Program administered by TxDOT

AIRPORT SETTING

As depicted on **Exhibit 1A**, Cox Field Airport is located in the southeast quadrant of The City of Paris and encompasses 1,537 acres. The airport is located approximately six miles east/southeast of the central business district in the City of Paris, which is the county seat and largest city in Lamar County. The City of Paris is located in northeast Texas approximately 100 miles northeast of the Dallas/Fort Worth Metroplex.

Lamar County is located on the western edge of the Pineywoods ecological area of Texas in the upland, separating the tributaries of the Red and Sulphur Rivers. It is bounded on the north by Choctaw County (Oklahoma), on the west by Fannin County, on the east by Red River County, and on the south by Delta County.

Located in the heart of Red River Valley, Paris was founded in 1839, became the Lamar County seat in 1844, and was officially incorporated in 1845. Since that time, Paris has grown to play a major role in the economy within northeast Texas. Paris is home to numerous parks including Bywaters Park, Wade Park, and Record Park. Rich in culture and recreation, Paris is also home to Lake Crook and Lake Gibbons as well as the Sam Bell Maxey State Historic Structure.

REGIONAL ROUTES AND AIRPORT ACCESS

The City of Paris is served by a loop Highway 286 and is directly served by U.S. Highways 82 and 271, as well as Texas State Highways 19 and 24. U.S. Highway 271 directly connects Paris with Mount Pleasant to the southeast (36 miles) and Hugo, Oklahoma to the north (26 miles). U. S. Highway 82 traverses Paris in an east/west fashion directly linking to Bonham (39 miles) and Sherman/Dennison to the west and Clarksville to the east (30 miles). Interstate Highway 30 traverses east/west through the region approximately 38 miles to the south. As a result, the City of Paris is conveniently accessible to all parts of the state as well as the entire Southwest market region.

As previously mentioned, Cox Field Airport is located in the southeast quadrant of the City of Paris. Direct access to the airport is provided by exiting U.S. Highway 271 onto FM 1508, then onto Collier Drive. Collier Drive extends directly from FM 1508 to the airport terminal building parking lot. All airport facilities are located on the west side of the airfield system.

CLIMATE

Weather conditions are important to the planning and development of an airport. Temperature is an important factor in determining runway length requirements, while wind condition and speed are used to determine optimum runway orientation. The need for navigational aids and lighting is determined by the percentage of time that visibility is impaired due to cloud coverage and other conditions.

The Cox Field Airport climate is temperate without a dry season. The average high daily temperature ranges from 51.2 degrees Fahrenheit (F) in January to 94.4 degree F in August. Average low temperatures range between 29.9 degrees F in January to 71.9 degrees F in July. On average, the area receives approximately 47.8 inches of precipitation per year. A large portion of the annual precipitation results from thunderstorm activity. Thunderstorms occur throughout the year, but are most frequent during the spring and early summer months. Severe weather can be common during

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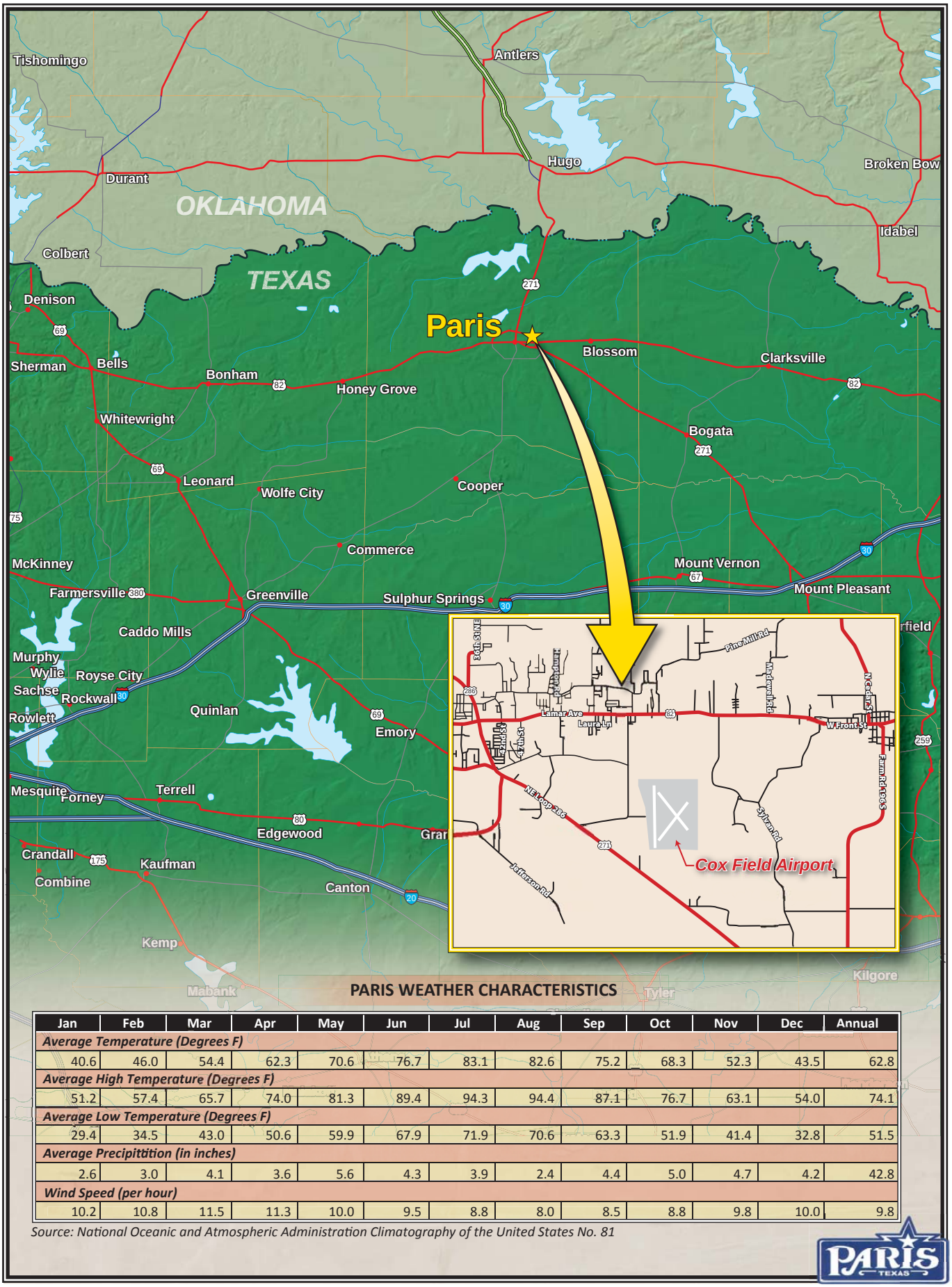

PARIS WEATHER CHARACTERISTICS

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Temperature (Degrees F)												
40.6	46.0	54.4	62.3	70.6	76.7	83.1	82.6	75.2	68.3	52.3	43.5	62.8
Average High Temperature (Degrees F)												
51.2	57.4	65.7	74.0	81.3	89.4	94.3	94.4	87.1	76.7	63.1	54.0	74.1
Average Low Temperature (Degrees F)												
29.4	34.5	43.0	50.6	59.9	67.9	71.9	70.6	63.3	51.9	41.4	32.8	51.5
Average Precipittition (in inches)												
2.6	3.0	4.1	3.6	5.6	4.3	3.9	2.4	4.4	5.0	4.7	4.2	42.8
Wind Speed (per hour)												
10.2	10.8	11.5	11.3	10.0	9.5	8.8	8.0	8.5	8.8	9.8	10.0	9.8

Source: National Oceanic and Atmospheric Administration Climatography of the United States No. 81

Exhibit 1A
VICINITY MAP/CLIMATIC DATA

these months as Paris is located in Tornado Alley. Winds are most often from the south, averaging between eight and 11.5 miles per hour (mph). Climatic data is presented on **Exhibit 1A**.

AREA LAND USE AND CONTROL

Land utilization around the airport is an important factor when considering the existing and potential needs of an airport. By understanding the types of land uses surrounding the airport, more appropriate recommendations can be made for the future.

Land surrounding Cox Field Airport is under the jurisdiction of the City of Paris as well as Lamar County. Most of the land near the airport is open and/or utilized for agricultural purposes with sporadic rural residential uses. **Exhibit 1B** presents the local land use zoning for the region.

AIRPORT HEIGHT AND HAZARD ZONING

Height and hazard zoning establishes height limits for new construction near the airport and within the runway approaches. It is based upon an approach plan which describes artificial surfaces defining the edges of airspace, which are to remain free of obstructions for the purpose of safe air navigation. It requires that anyone who is proposing to construct or alter an object that affects airspace must notify the Federal Aviation Administration (FAA) prior to its construction. Height restrictions are necessary to ensure that objects will not impair flight safety or decrease the operational capability of the airport. Title 14 of the Code of Federal Regulations (CFR) Part 77, Objects Affecting Navigable Airspace, defines a series of imaginary surfaces surrounding airports. The imaginary surfaces consist of the approach zones, conical zones, transitional zones, and horizontal zones, and their respective dimensions are based upon the type of approach serving each particular runway at an airport.

The current height and hazard zoning in place for all three runways at the airport was adopted by the City of Paris in 1977. The ordinance calls for protecting Runway 17-35 for precision instrument approaches and protecting Runways 3-21 and 14-32 for ultimate non-precision instrument approaches.

AIRPORT SYSTEM PLANNING ROLE

Airport planning exists on many levels: national, state, and local. Each level has a different emphasis and purpose. Locally, this Master Plan is the primary airport planning document.

At the national level, the airport is included in the National Plan of Integrated Airport Systems (NPIAS). The NPIAS includes a total of 3,364 airports which are important to national air transportation. Cox Field Airport is classified as a general aviation air-

port within the NPIAS and is one of 219 Texas airports included in the NPIAS. As a part of the Federal system, Cox Field Airport is eligible for Federal grants as a part of the Airport Improvement Act. The State of Texas participates in the Federal Block Grant Program, which transfers the oversight authority of general aviation airports from the FAA to the Texas Department of Transportation – Aviation Division (TxDOT). In this capacity, TxDOT administers Federal grants as well as State airport grants. Eligible airport improvement projects for general aviation airports in Texas can receive 90 percent grant funding assistance with the remaining 10 percent being the responsibility of the local sponsor (ex. the City of Paris). The Federal and State funding sources and roles are detailed later in the study.

At the state level, the airport is included in the *Texas Airport System Plan* (TASP). In Texas, there are 303 airports, 219 of which are NPIAS-classified. Cox Field Airport is classified as a Business/Corporate airport within this system. Business/Corporate airports are designed to accommodate general aviation activity up to and including turbine aircraft. These airports are typically in areas where sufficient population or economic activity can support a moderate to high level of business/corporate activity or provide relief to commercial service airports. The TASP provides for specific minimum design standards for runway length, taxiways, apron size, approaches, airfield lighting, terminal services, aircraft fuel, and hours of operation.

ECONOMIC IMPACTS

The last formal economic impact study for the airport was completed in 2005 by TxDOT. This study analyzed the direct and indirect economic impacts of all public-use airports in Texas, including Cox Field Airport.

The total economic impact of the airport includes the direct effects of employment, payroll, and sales. Indirect benefits would include visitor spending, which leads directly to off-airport employment, payroll, and sales. The cumulative economic benefit of an airport includes a multiplier effect which is essentially the recycling of money within the local economy to create more jobs in nearly every economic sector.

The *2005 Economic Impact Study* estimated that Cox Field Airport had a total economic impact of $4.2 million annually on the local economy. In addition, approximately 27 jobs with a total payroll of $977,000 were supported by on-airport spending and visitors using general aviation services at Cox Field Airport. The direct output attributable to the airport was estimated to be approximately $2.2 million. Approximately $2.0 million was generated via indirect and induced impacts associated with airport activities.

AIRPORT FACILITIES

This section presents a description of the existing facilities at Cox Field Airport. Airport facilities can be divided into two distinct categories: airside

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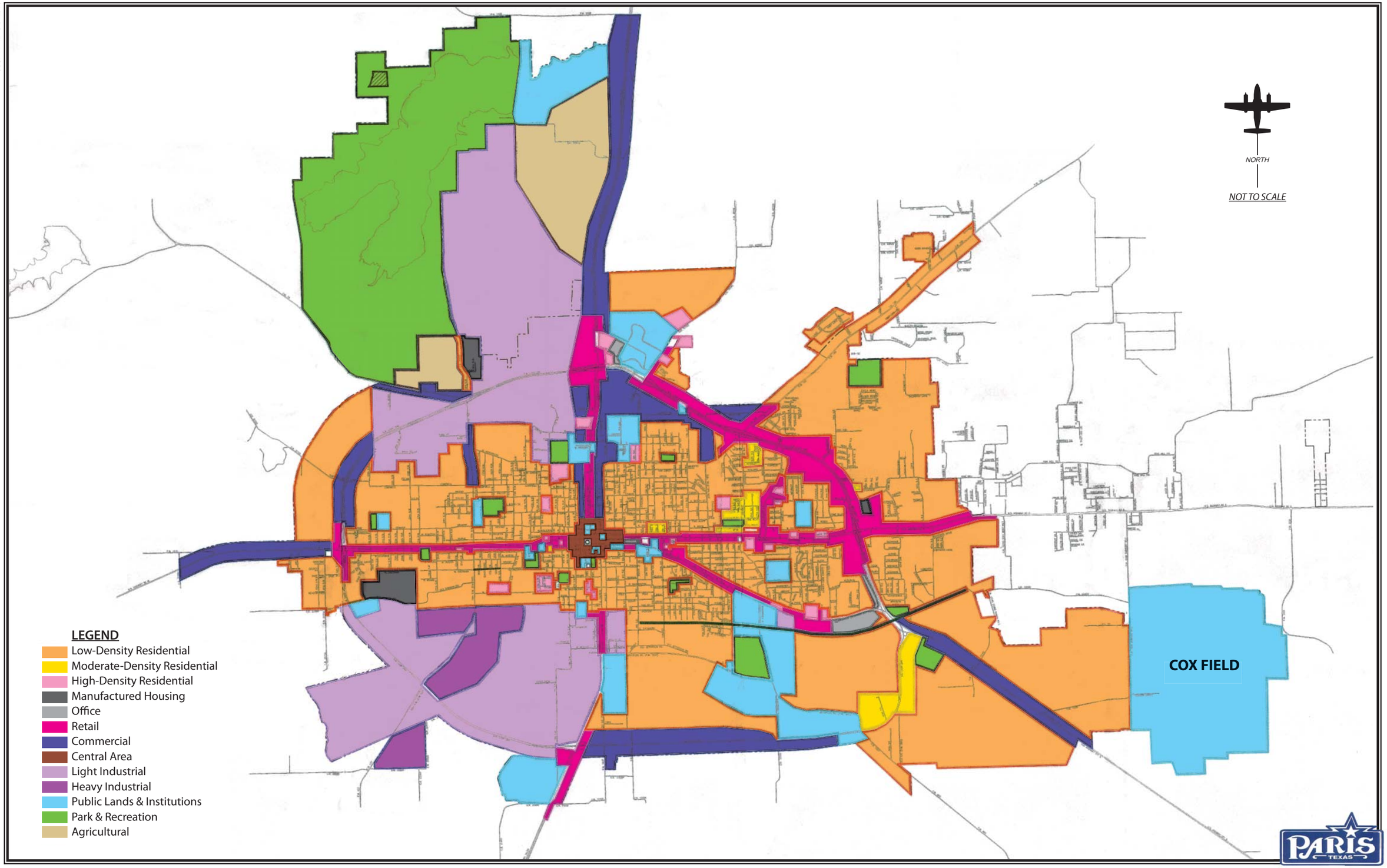

Exhibit 1B
VICINITY LAND USE MAP

and landside. Airside facilities include those directly associated with aircraft operations. Landside facilities include those necessary to provide a safe transition from surface to air transportation and support aircraft servicing, storage, maintenance, and operational safety.

AIRSIDE FACILITIES

Airside facilities are depicted on **Exhibit 1C**. These facilities include runways, taxiways, airport lighting and marking, and navigational aids.

Runways

Cox Field Airport is typical of most airports originally constructed for military training, having three runways oriented in a triangular manner. Runway 17-35 is the primary runway, measuring 6,002 feet long by 150 feet wide. Crosswind Runways 14-32 and 3-21 both measure 4,624 feet long by 150 feet wide. The airport is also served by a dedicated helipad. The helipad is 40 feet by 40 feet square and located south of the terminal area adjacent to the west side of Taxiway A.

Exhibit 1D presents data specific to each runway. Other than the length and widths of each surface, the following items are included as detailed:

- *Pavement type* – Indicates the surface material type.
- *Pavement condition* – FAA's current rating of runway pavement material.
- *Pavement strength* – Based on the construction of the pavement, a runway can provide differing load bearing capacity. Single wheel gear loading (SWL) refers to having one wheel per landing gear strut.
- *Pavement markings* - Pavement markings aid in the movement of aircraft along airport surfaces and identify closed or hazardous areas on the airport. Runway markings provide pilots with designation and centerline stripes in basic form, while non-precision markings add threshold bars and aiming points.
- *Lighting* – Runway lighting is placed near the pavement edge to define the lateral limits of the pavement surface. Medium intensity runway lighting (MIRL) is typical of general aviation airports. Runway end lights also demark end of pavements. Only Runway 17-35 is served with runway end lights.
- *Elevation* – Each runway end is situated at a specific point above mean sea level (MSL). Those listed on the exhibit identify the MSL location of each runway end.
- *Gradient* – Runway gradient describes the effective slope of a runway surface. Runway pavement should be moderately sloped to allow for effective drainage, but not so as to reduce visibility from end to end.
- *Traffic Pattern* – Runway traffic patterns are established to control movements in the immediate vicinity of the airport

area. Left hand patterns are standard and allow the pilot to make left hand turns throughout the traffic pattern.

Taxiways

The taxiway system at Cox Field Airport includes a nearly full-length parallel taxiway to Runway 17-35, connecting taxiways providing access to the crosswind runways and the main apron, and entrance/exit taxiways connecting the parallel taxiway and Runway 17-35.

Parallel Taxiway A serves Runway 17-35 and extends from the north end of the runway to approximately 1,900 feet from the south end of the runway. At that point, Taxiway A acutely angles to intersect Runway 17-35. As a result, aircraft departing Runway 35 will back-taxi from Taxiway A to Runway 35.

Connecting Taxiways B and C serve to link both crosswind runways with the main ramp. Taxiway B serves as the direct link extending from the main ramp eastward through Runway 17-35 approximately 1,700 feet. At that point, a Y-intersection occurs in which Taxiway B continues southeast to Runway 32. Taxiway C extends from the Y-intersection to Runway 21. Taxiways A, B, and C are 50 feet wide with one exception. The entrance/exit taxiway serving Runway 17 is 35 feet wide.

Taxiway lighting is not uniformly provided at Cox Field Airport. Only a portion of Taxiways A and B between the main parking apron and Runway 17-35 are served by medium intensity taxiway lighting (MITL). Taxiway A is served by centerline reflectors.

Taxiway and taxilane centerline markings are provided to assist pilots in maintaining proper clearance from pavement edges and objects near the taxiway/taxilane edges. Taxiway markings also include aircraft holding positions located on the connecting taxiways. For Runway 17-35, the hold-lines are marked 250 feet from the runway centerline to points along parallel Taxiway A and connecting Taxiway B. The holdlines are located only 170 feet east of Runway 17-35 on the connecting taxiways linking to crosswind Runways 3 and 14 thresholds. Illuminated taxiway and runway designations and directional signage are provided on Taxiway A and Runway 17-35.

Airfield Approach and Navigational Aids

***Identification Lighting*:** The location of the airport at night is universally identified by a rotating beacon. The rotating beacon projects two beams of light, one white and one green, 180 degrees apart. The rotating beacon at Cox Field Airport is located on top of a scaffold structure 30 feet above ground level (AGL) adjacent to Hangar H north/northwest of the terminal building, as depicted on **Exhibit 1C**.

***Visual Approach Lighting*:** A four-box precision approach path indicator (PAPI) is located on Runway 17. The PAPI-4 consists of four boxed units

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LEGEND
Airport Property Line
Easement

RCAG Antenna Array 1
Runway 14-32 4,624' x 150'
Runway 3-21 4,624' x 150'
Tetrahedron 3
4 AWOS-3
Segmented Circle/ Lighted Windcone 2
Taxiway B
PAPI-4 5
9
Runway 17-35 6,002' x 150'
8
A-1
7
VASI-4 6
Taxiway A
Helipad (40' x 40')
10 Airport Beacon
Little Sandy Creek
Collier Drive
Airport Road
FM 1508
to U.S. 271
NORTH
0 1000 2000
SCALE IN FEET
271

1 RCAG Antenna Array

2 Lighted Windcone/ Segmented Circle

3 Tetrahedron

4 AWOS-3

5 PAPI-4

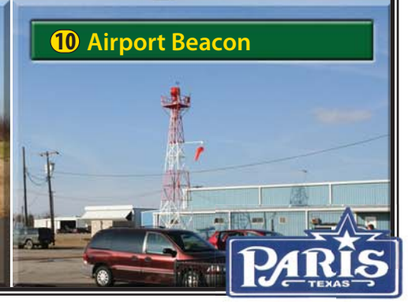
6 VASI-4

7 Taxiway/Runway Signage/ Taxiway Lighting

8 Taxiway Hold Lines

9 Runway End Lighting

10 Airport Beacon



PARIS TEXAS

Exhibit 1C
EXISTING AIRFIELD FACILITIES

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RUNWAY 17-35

DATA	
Length	6,002'
Width	150'
Pavement Type	Asphalt
Pavement Condition	Fair/Poor
Pavement Strength	30,000 lbs SWL
Markings	Nonprecision
Lighting	MIRL
Elevation	541' MSL (17); 526.3' MSL (35)
Gradient	0.20%
Traffic Pattern	Standard Left

RUNWAY 3-21

DATA	
Length	4,624'
Width	150,
Pavement Type	Concrete
Pavement Condition	Fair/Poor
Pavement Strength	26,000 lbs SWL
Markings	Poor (Faded)
Lighting	None
Elevation	530.3' MSL (3); 546.2' MSL (21)
Gradient	.3% Up (3); 0.4% (21)
Traffic Pattern	Standard Left

RUNWAY 14-32

DATA	
Length	4,624'
Width	150,
Pavement Type	Concrete
Pavement Condition	Fair/Poor
Pavement Strength	26,000 lbs SWL
Markings	Poor (Faded)
Lighting	None
Elevation	539.5' MSL (14); 547.3' MSL (32)
Gradient	0.20%
Traffic Pattern	Standard Left

HELIPAD

DATA	
Length	40'
Width	40'
Pavement Type	Concrete
Pavement Condition	Fair
Pavement Strength	N/A
Markings	Fair
Lighting	None
Elevation	N/A
Gradient	N/A
Traffic Pattern	Standard Left

PARIS TEXAS

Exhibit 1D
RUNWAY DATA

configured in a linear fashion located on the left side (east side) of the runway approximately 850 feet south of the runway threshold. A four-box visual approach slope indicator (VASI) is located on the left side (west side) of Runway 35. The VASI-4 serving Runway 35 consists of two sets of two boxed units that are located approximately 1,100 and 1,300 feet north of the runway threshold. The VASI-4 associated with Runway 33 is located approximately 500 and 1,000 feet from the displaced threshold.

The PAPI and VASIs consist of a system of lights that, when interpreted by pilots, give an indication of being above, below, or on the designed descent path to the runway. The descent path to the runway ends is a three percent slope. These systems have a range of five miles during the day and up to 20 miles at night.

***Pilot-Controlled Lighting*:** At nighttime, runway lighting is preset to medium intensity. Through a pilot-controlled lighting system, pilots can increase or decrease the intensity of the airfield lighting system and approach aids from the aircraft with use of the aircraft's radio transmitter. Pilots utilizing Cox Field Airport can access the pilot-controlled lighting system via the common traffic advisory frequency (CTAF) 122.975 MHz via aircraft radio.

Weather Aids

Cox Field Airport has one lighted wind cone and a segmented circle located 700 feet east of Runway 17-35, approximately midfield. The wind cone provides information to pilots regarding wind conditions, such as direction and intensity. The segmented circle consists of a system of visual indicators designed to provide traffic pattern information to pilots when viewed from above. A tetrahedron is a larger, more sophisticated visual wind indicator located 300 feet north of the segmented circle.

Cox Field Airport is equipped with an Automated Weather Observing System (AWOS) that is owned and maintained by the City of Paris. An AWOS automatically records weather conditions such as wind speed, wind gusts, wind direction, temperature, dew point, altimeter setting, density altitude, visibility, precipitation, and cloud height. This information is then transmitted at regular intervals on radio frequency 119.675 MHz. The AWOS is located approximately 850 feet east of the intersection of Runway 17-35 and Taxiway B.

Navigational Aids

Navigational aids are electronic devices that transmit radio frequencies, which pilots of properly equipped aircraft can translate into point-to-point guidance and position information. Electronic aids available for navigating to or from Cox Field Airport include a very high frequency omnidirectional range (VOR), non-directional beacon (NDB), and global positioning system (GPS).

The VOR, in general, provides azimuth readings to pilots of properly

equipped aircraft transmitting a radio signal at every degree to provide 360 individual navigational courses. Frequently, distance measuring equipment (DME) is combined with a VOR facility (VOR/DME) to provide distance as well as direction information to the pilot. Military tactical air navigation aids (TACANs) and civil VORs are commonly combined to form a VORTAC. The VORTAC provides distance and directional information to both civil and military pilots. The Paris VOR-DME is located approximately six miles south of Cox Field Airport. The Sulphur Springs VOR-DME is located 26.7 miles south/southwest of PRX, while the Bonham VORTAC is located approximately 40 miles to the west of Cox Field Airport.

The NDB transmits non-directional radio signals whereby the pilot of an aircraft equipped with direction-finding equipment can determine bearing to or from the NDB facility in order to track to the beacon station. The only NDBs in the region are located at airports in Hugo and Antlers, Oklahoma to the north. Regional navigational aids are depicted on **Exhibit 1E**.

GPS is an additional navigational aid for pilots that was initially developed by the United States Department of Defense for military navigation around the world and is currently being utilized more and more in civilian aircraft. GPS varies from the VOR and NDB in that pilots are not required to navigate using a specific facility. GPS uses satellites placed in orbit around the earth to transmit electronic signals, which properly equipped aircraft use to determine altitude, speed, and other navigational information. With GPS, pilots can directly navigate to any airport in the country and are not required to navigate using a specific navigational facility. The FAA is proceeding with a program to gradually replace all traditional enroute navigational aids with GPS over the next 20 years.

The civilian GPS has been improved with the wide area augmentation system (WAAS), which was launched in 2003. The WAAS uses a system of reference stations to correct signals for the GPS satellites for improved navigation and approach capabilities. The present GPS provides for enroute navigation and instrument approaches with both course and vertical navigation. The WAAS upgrades are expected to allow for the development of approaches to most airports with cloud ceilings as low as 200 feet above the ground and visibilities as low as one-half mile.

Instrument Approach Procedures

Instrument approach procedures are a series of predetermined maneuvers established by the FAA which utilize electronic navigational aids (such as those discussed in the previous section) to assist pilots in locating and landing at an airport during low visibility and cloud ceiling conditions. The capability of an instrument approach is defined by the visibility and cloud ceiling minimums associated with the approach. Visibility minimums define the horizontal distance

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① STAN STAMPER MUNICIPAL AIRPORT (HHW)

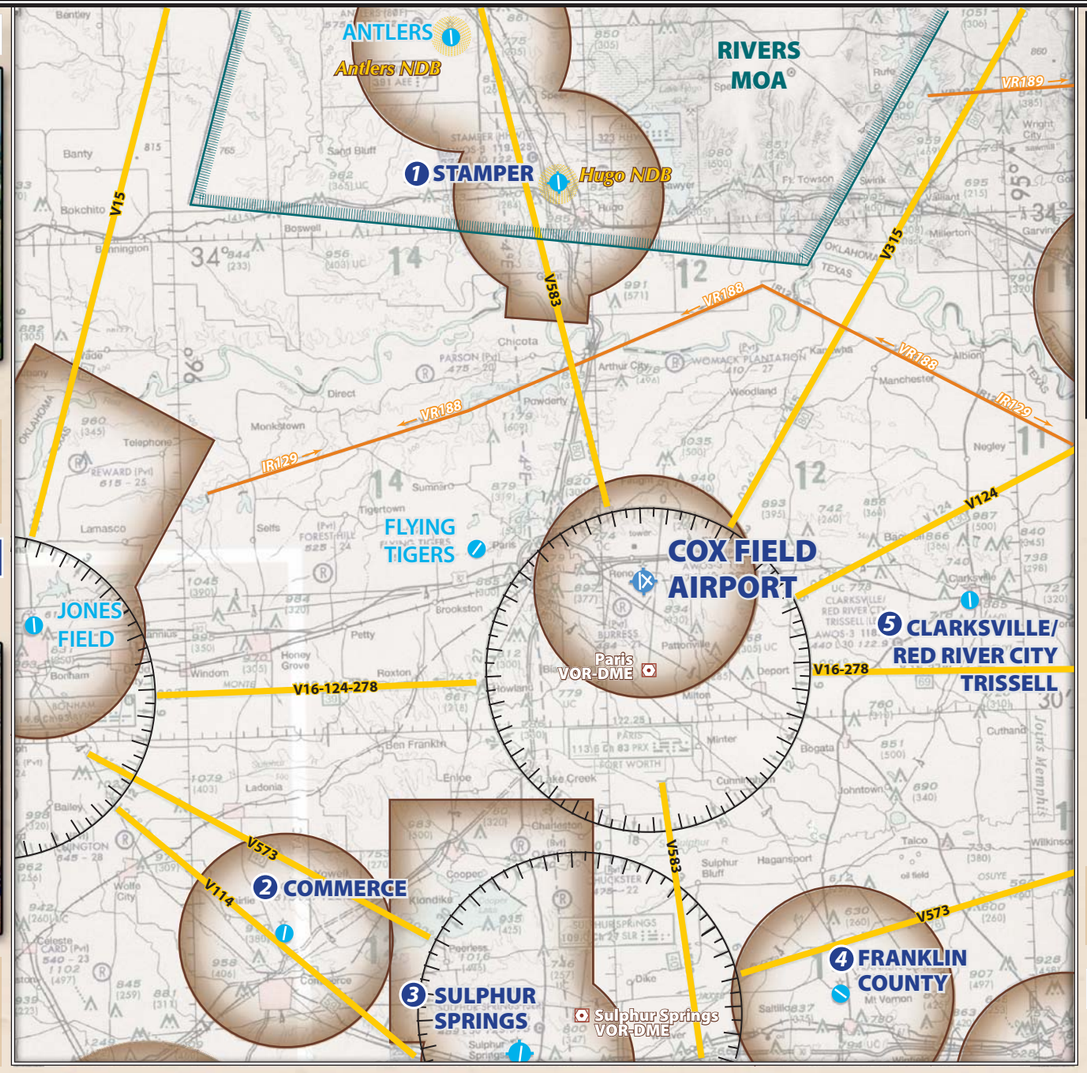
Airiport Sponsor:	City of Hugo,OK
Distance from Cox Field.	24nm North
Classification	General Aviation
Runway 17-35:	
Length	4,007′
Width	75′
Surface Type	Asphalt
Strength Rating	12,500 lbs. SWL
Marking	Nonprecision
Edge Lighting	Medium Intensity
Visual Navaids	None
Based Aircraft	13 (No jets)
Estimated Annual Operations	1,500
Services Provided	Fuel (100LL and JetA)

Instrument Approaches	*Minimums*	
Type	Cloud Height (ft AGL)	*Visibility (in miles)*
NDB or GPS Runway 35		
Approach Category A/B Only.	689	1

② COMMERCE MUNICIPAL AIRPORT (2F7)

Airiport Sponsor:	Commerce, Texas
Distance from Cox Field.	30 nm Southwest
Classification	General Aviation
Runway 18-36:	
Length	5,909′
Width	60′
Surface Type	Asphalt
Strength Rating	13,000 lbs. SWL
Marking	Nonprecision
Edge Lighting	Medium Intensity
Visual Navaids	None
Based Aircraft	7 (No jets)
Estimated Annual Operations	3,800
Services Provided	Self Serve 100LL

Instrument Approaches	*Minimums*	
Type	Cloud Height (ft AGL)	*Visibility (in miles)*
VOR/DME-A		
Circling Only (A and B only)	564	1(A/B); 1.50(C)t



LEGEND

- Airport with hard-surfaced runways1,500' to 8,069' in length
- Non-Directional Radiobeacon (NDB)
- VHF Omnidirectional Range - Distance Measuring Equipment (VOR-DME)
- Compass Rose
- Class E Airspace with floor 700 ft. above surface
- Victor Airways
- Military Training Routes
- Prohibited, Restricted, Warning, and Alert Areas

Source: Dallas-Ft Worth Sectional Chart, US Department of Commerce, National Oceanic and Atmospheric Administration March 12, 2009

⑤ CLARKSVILLE/RED RIVER COUNTY - J D TRISSELL FIELD (LBR)

Airiport Sponsor:	City of Clarksville-Red River County, Texas
Distance from Cox Field	20 nm East
Classification	General Aviation
Runway 18-36:	
Length	3,000′
Width	50′
Surface Type	Asphalt
Strength Rating	10,000 lbs. SWL
Marking	Basic
Edge Lighting	Medium Intensity
Visual Navaids	none
Based Aircraft	8 (No Jets)
Estimated Annual Operations	3,300
Services Provided	Self Serve 100LL

Instrument Approaches	*Minimums*	
Type	Cloud Height (ft AGL)	*Visibility (in miles)*
None		

④ FRANKLIN COUNTY AIRPORT (F53)

Airiport Sponsor:	Franklin County, Texas
Distance from Cox Field.	27 nm Southeast in Mount Vernon
Classification	General Aviation
Based Aircraft	16
Estimated Annual Operations	4,300
Services Provided	Self Service Fuel (100LL); JetA
Runway 18-36:	
Length	3,900′
Width	60′
Surface Type	Asphalt
Strength Rating	12,500 lbs. SWL
Marking	Nonprecision
Edge Lighting	Medium Intensity
Visual Navaids	PAPI-2 (out of service indefinitely)

Instrument Approaches	*Minimums*	
Type	Cloud Height (ft AGL)	*Visibility (in miles)*
RNAV (GPS) Runway 13		
Approach Category A/B Only	749	1 (A); 1.25(B)
RNAV (GPS) Runway 31		
Approach Category A/B Only	412	1

③ SULPHUR SPRINGS MUNICIPAL AIRPORT (SLR)

Airiport Sponsor:	Sulphur Springs, Texas
Distance from Cox Field.	30 nm South
Classification	General Aviation
Runway 18-36:	
Length	5,001′
Width	75′
Surface Type	Asphalt
Strength Rating	12,000 lbs. SWL
Marking	Nonprecision
Edge Lighting	Medium Intensity
Visual Navaids	REIL (18)
Based Aircraft	55 (1 jet)
Estimated Annual Operations	17,900
Services Provided	Full Service Fuel (100LL and JetA); Self Serve 100LL Major airfram/powerplant maintenance

Instrument Approaches	*Minimums*	
Type	Cloud Height (ft AGL)	*Visibility (in miles)*
RNAV (GPS) Runway 36		
Approach Category A, B, & C Only	511	1 (A/B); 1.50(C)
VOR-A		
Circling Only (A, B, & C)	571	1 (A/B); 1.50(C)
VOR/DME-B		
Circling Only (A, B, & C)	451 (A); 471 (B/C)	1 (A/B); 1.50(C)

PARIS TEXAS

Exhibit 1E
VICINITY AIRSPACE AND
AIRPORTS WITHIN 30 NAUTICAL MILES

that the pilot must be able to see to complete the approach. Cloud ceilings define the lowest level a cloud layer (defined in feet above the ground) can be situated for a pilot to complete the approach. If the observed visibility or cloud ceilings are below the minimums prescribed for the approach, the pilot cannot complete the instrument approach.

Three instrument approach procedures have been approved for Cox Field Airport serving Runway 17-35. Both ends of Runway 17-35 are served by RNAV (GPS) instrument approach procedures, while Runway 35 is also served by a VOR approach procedure. **Table 1B** presents the minimums for each instrument approach approved for use at Cox Field Airport.

TABLE 1B
Instrument Approach Data
Cox Field Airport

	Weather Minimums by Aircraft Type							
	Category A		Category B		Category C		Category D	
	Cloud Height (feet AGL)	Visibility (miles)	Cloud Height (feet AGL)	Visibility (miles)	Cloud Height (feet AGL)	Visibility (miles)	Cloud Height (feet AGL)	Visibility (miles)
RNAV (GPS) Runway 17								
LPV	250	1.00	250	1.00	250	1.00	250	1.00
LNAV/VNAV	305	1.00	305	1.00	305	1.00	305	1.00
LNAV	499	1.00	499	1.00	499	1.25	499	1.50
Circling	492	1.00	492	1.00	492	1.50	552	2.00
RNAV (GPS) Runway 35								
LPV	250	0.75	250	0.75	250	0.75	250	0.75
LNAV/VNAV	393	1.25	393	1.25	393	1.25	393	1.25
LNAV	328	1.00	328	1.00	328	1.00	328	1.00
Circling	412	1.25	452	1.25	452	1.50	552	2.00
VOR Runway 35								
Straight	348	1.00	348	1.00	348	1.00	348	1.25
Circling	412	1.00	452	1.00	452	1.50	552	2.00

Aircraft categories are established based on 1.3 times the stall speed in landing configuration as follows:
Category A: 0-90 knots
Category B: 91-120 knots
Category C: 121-140 knots
Category D: 141-166 knots
AGL - Above Ground Level
RNAV - Area Navigation
GPS - Global Positioning System
LPV - Localizer Performance with Vertical Guidance
LNAV - Lateral Navigation
VNAV - Vertical Navigation
VOR - Very High Frequency Omnidirectional Range
DME - Distance Measuring Equipment

Source: FAA U.S. Terminal Procedures SC-5 (July 2008)

AREA AIRSPACE

The FAA Act of 1958 established the FAA as the responsible agency for the control and use of navigable airspace within the United States. The FAA has established the National Airspace System (NAS) to protect persons and property on the ground and to establish a safe environment for civil, com-

mercial, and military aviation. The NAS is defined as the common network of U.S. airspace, including air navigational facilities; airports and landing areas; aeronautical charts; associated rules, regulations, and procedures; technical information; and personnel and material. Components shared jointly with the military are also included as part of this system.

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

- Class A airspace is controlled airspace and includes all airspace from 18,000 feet MSL to Flight Level 600 (approximately 60,000 feet MSL).

- Class B airspace is controlled airspace surrounding high-activity commercial service airports (i.e., DFW Airport).

- Class C airspace is controlled airspace surrounding lower-activity commercial service (i.e., Austin – Bergstrom International Airport) and some military airports.

- Class D airspace is controlled airspace surrounding low-activity commercial service and general aviation airports with an airport traffic control tower (ATCT) (Collin County Regional Airport at McKinney and Addison Airport).

All aircraft operating within Classes A, B, C, and D airspace must be in constant contact with the air traffic control facility responsible for that particular airspace sector.

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

- Class G airspace is uncontrolled airspace that does not require communication with an air traffic control facility.

Airspace within the vicinity of Cox Field Airport is depicted on **Exhibit 1E**. The airport operates in Class E airspace with a floor of 700 feet AGL and extending to 18,000 feet MSL. The Class E airspace completely encircles the airport with an approximate seven-mile radius.

Victor Airways

Victor Airways are designated navigational routes extending between VOR

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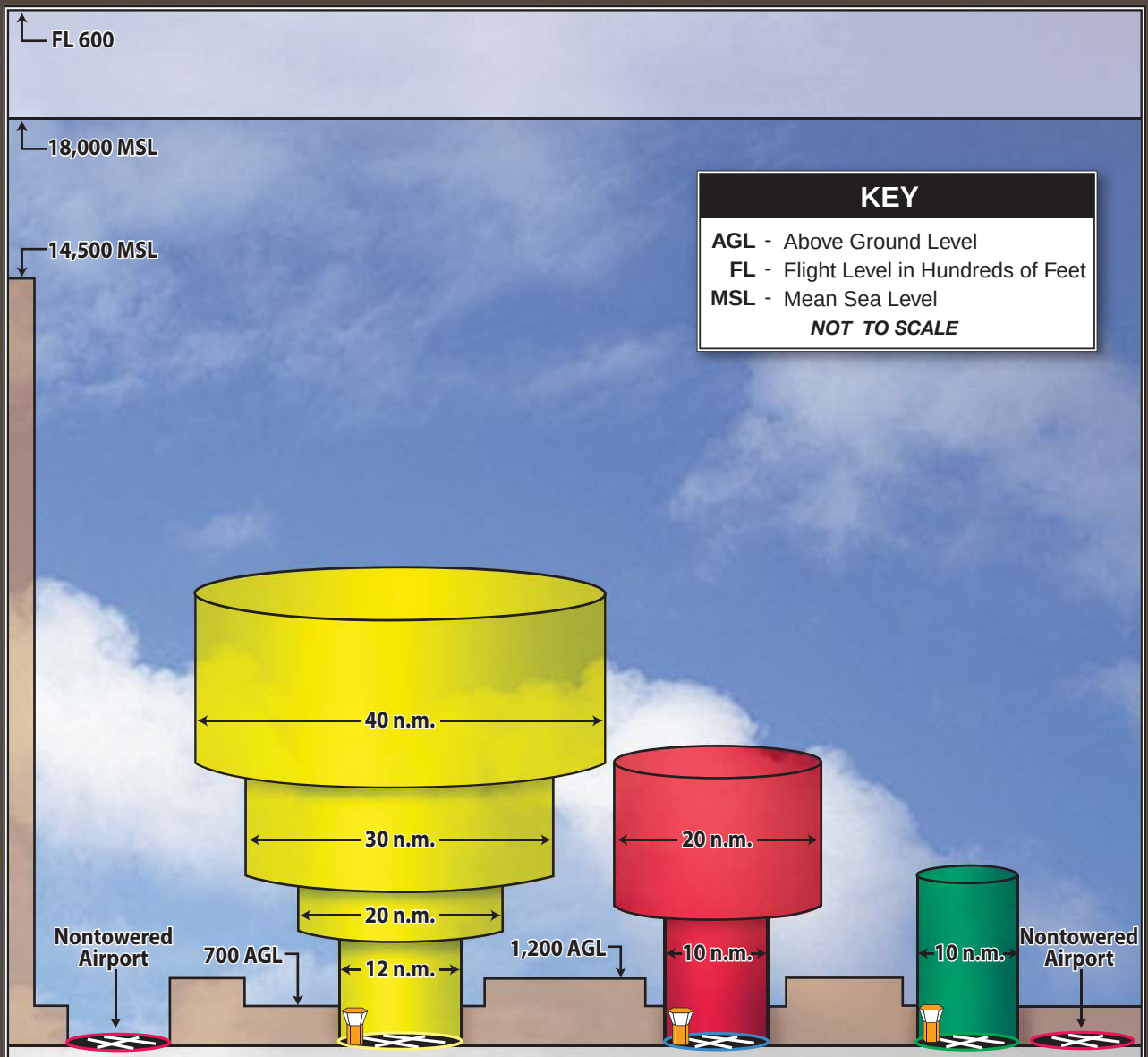

CLASSIFICATION	DEFINITION
CLASS A	Generally airspace above 18,000 feet MSL up to and including FL 600.
CLASS B	Generally multi-layered airspace from the surface up to 10,000 feet MSL surrounding the nation's busiest airports.
CLASS C	Generally airspace from the surface to 4,000 feet AGL surrounding towered airports with service by radar approach control.
CLASS D	Generally airspace from the surface to 2,500 feet AGL surrounding towered airports.
CLASS E	Generally controlled airspace that is not Class A, Class B, Class C, or Class D.
CLASS G	Generally uncontrolled airspace that is not Class A, Class B, Class C, Class D, or Class E.

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

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Exhibit 1F
AIRSPACE CLASSIFICATION

facilities. Victor Airways have a floor of 1,200 feet AGL and extend upward to an altitude of 18,000 feet MSL. Victor Airways are eight nautical miles wide. Three Victor Airways are associated with the Paris VOR-DME: V16-278 traverses east and west, V583 traverses north and south, and V315 extends to the northeast.

Military Operations Areas (MOAs)

A Military Operations Area (MOA) is an area of airspace designated for military training use. This is not restricted airspace as civil pilots can use the airspace; however, they should be on alert for the possibility of military traffic. A pilot may need to be aware that military aircraft can be found in high concentrations, conducting aerobatic maneuvers and possibly operating at high speeds at lower elevations. The activity status of a MOA is advertised by a *Notice to Airmen* (NOTAM) and noted on Sectional Charts.

The closest MOA to Cox Field Airport is the Rivers MOA located approximately 25 nautical miles to the north and encompassing Hugo's Stamper Airport. The Rivers MOA may have activity in designated airspace between 8,000 feet AGL to 18,000 feet MSL. It is published in use Monday-Friday from 9:00 a.m. to 9:00 p.m. and can be utilized on the weekends with an issued NOTAM.

Air Traffic Control

Cox Field Airport currently does not have an ATCT; therefore, no formal terminal air traffic control services are available at the airport. Aircraft operating in the vicinity of the airport are not required to file any type of flight plan or to contact any air traffic control facility unless entering airspace where contact is mandatory. Air traffic advisories and certain weather information can be obtained using the CTAF, channel 122.975 MHz, also known as UNICOM.

Enroute air traffic control services are provided by Dallas/Fort Worth Air Route Traffic Control Center (ARTCC), which controls aircraft in a large area. A remote communications air-to-ground (RCAG) antenna array has been located on Cox Field Airport. The RCAG antenna array is located in the eastern portion of the airfield to the north of Taxiway C, as depicted on **Exhibit 1B**.

LANDSIDE FACILITIES

Landside facilities are the ground-based facilities that support the aircraft and pilot/passenger handling functions. These facilities typically include the terminal building, aircraft storage and maintenance hangars, aircraft parking aprons, automobile parking, and support facilities such as fuel storage, aircraft rescue and fire-fighting (ARFF), utilities, and security fencing. Landside facilities at Cox Field Airport are identified on **Exhibit 1G**.

Terminal Building

The airport terminal building was constructed in 1996 and provides approximately 5,330 square feet. The structure houses FBO operations (airport administration and operations offices), a waiting lobby, a pilot lounge area, a conference room, a vending area, and restroom facilities. The terminal building is in a central location on the west side of the airport and due west of the main aircraft parking apron.

Aircraft Parking Aprons

Cox Field Airport is served by one large aircraft parking apron east of the terminal building. The apron consists of 23,111 square yards of pavement and provides eight aircraft tiedowns. A self-serve fuel farm providing 100LL Avgas is located on the northern portion of the apron.

Aircraft Hangar Facilities

Hangar facilities at Cox Field Airport are comprised of conventional, box, shade, and T-hangars. Conventional hangars provide a large open space, free from roof support structures, and have the capability to accommodate multiple aircraft simultaneously. Conventional hangars are typically 10,000 square feet or larger. These hangars are often owned or leased by an airport business such as an FBO or corporate flight department. Executive box hangars have the same open space design as conventional hangars, but are typically smaller than 10,000 square feet. Executive box hangars are typically utilized by individual aircraft owners to store multiple aircraft or by smaller airport businesses. T-hangars and shade hangars provide for separate storage spaces within a larger contiguous facility. Shade hangars are similar to T-hangars; however, the structure is only roofed and not enclosed.

There are 15 separate hangar facilities at the airport totaling approximately 117,250 square feet. Two conventional hangars are located on the airport encompassing approximately 29,000 square feet. These hangars are privately owned and operated. Executive box hangars make up a majority of the storage facilities on the airport and include aviation activities such as private aircraft storage, aircraft maintenance, and corporate flight departments. The ten executive hangars total approximately 51,100 square feet. Three separate T-hangar facilities providing 23 individual hangar units are located at the airport. The T-hangars encompass approximately 29,900 square feet of storage space. Finally, a covered shade hangar providing six individual spaces and 7,250 square feet of storage space is also provided. Hangar facilities are identified on **Exhibit 1G** and details are presented in **Table 1C**.

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Exhibit 1G
LANDSIDE FACILITIES

TABLE 1C
Hangar Facility Data
Cox Field Airport

ID	Type	Size (ft^2)	Owner
A	T-hangar (6units)	8,000	City of Paris
B	Executive Box (7)/Shade Hangars(6)	14,500	City of Paris
C	T-hangar (7units)	10,400	City of Paris
D	Executive Box Hangar	6,000	City of Paris
E	Executive Box Hangar	6,400	Private
F	Executive Box Hangar	2,000	Private
G	Executive Box Hangar	6,000	Private
H	Conventional Hangar	10,000	City of Paris
I	T-hangar (10 units)	11,500	City of Paris
K	Executive Box Hangar	2,000	Private
N	Executive Box Hangar	4,550	Private
S	Executive Box Hangar	7,000	Private
W	Executive Box Hangar	5,100	Private
AAA	Executive Box Hangar	4,800	Private
T	Conventional Hangar	19,000	Private

Total Shade Hangar Space	7,250 ft^2
Total T-hangar Space	29,900 ft^2
Total Executive Box Hangar Space	51,100 ft^2
Total Conventional Hangar Space	29,000 ft^2
Total Hangar Space	117,250 ft^2

Automobile Parking

Cox Field Airport has one designated parking area for public automobile parking adjacent to the north side of the terminal building that is accessible via Collier Drive. The paved parking lot is dedicated for 24-hour parking and includes a total of 41 marked automobile parking spaces, with two being designated for handicap parking. Another parking lot with eight spaces is provided adjacent to a private hangar to the north of the terminal building.

Fuel Facilities

The City of Paris owns the only fuel storage facilities on the airport and leases the facility to the FBO for resale of fuel. The fuel farm consists of two underground storage tanks, one dedicated for Avgas and one for Jet A fuel. Both storage tanks have a capacity of 10,000 gallons. The fuel farm is located approximately 200 feet north of the terminal building.

The FBO operates two fuel trucks, one for Avgas and one for Jet A fuel. Both vehicles have a 2,500-gallon capacity dedicated for based and transient aircraft fueling. When not being used, both trucks are parked in a dedicated spill containment area adjacent to the fuel farm (Facility M on **Exhibit 1G**).

A self-service fuel facility offering Avgas fuel sales is also provided on the airport. The self-serve island is located on the northern portion of the apron, as depicted on **Exhibit 1G**.

Aircraft Rescue and Firefighting (ARFF)

There are no ARFF facilities permanently based at Cox Field Airport. The City of Paris provides fire fighting services for Cox Field Airport. Fire Station No. 4 is the closest facility serving the airport and is located approximately five miles northwest.

Utilities

Water services at the airport are provided by the City of Paris. There are no sanitary sewer and natural gas utilities available at the airport; however, an on-airport septic system provides wastewater treatment for the terminal building.

Fencing/Gates

The airport is enclosed with two types of perimeter fencing. Four-foot chain link fence with steel tubing across the top, wrought iron fence line areas adjacent to the main ramp, and an eight-foot barbed-wire fence are located in more remote areas around the airport. There are two fenced gates in the terminal area which are automated, electric gates. One gate is located adjacent to the terminal building, and the other from Collier Drive prior to entering the terminal loop road.

AIRPORT BUSINESSES

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

Airfield Access Businesses

Airfield access businesses are defined as those businesses that directly serve aviation demand at Cox Field Airport. Typically, these businesses will have a hangar and direct access to the runway system. Often, these businesses are identified as FBOs.

J. R. Aviation is the airport's sole FBO and provides aircraft fueling and limited maintenance service. As is the case at many general aviation airports, the owner of the airport, in this case the City of Paris, charges the airport FBO to also oversee the day-to-day operation and management of the airport. J. R. Aviation is also charged with providing airport management services, including airfield mowing/maintenance.

C and B Aviation provides limited aircraft maintenance at Cox Field. This business performs maintenance on

aircraft based at Cox Field and also for J. R. Aviation.

Townes Communications owns and operates the largest hangar on the airport (Hangar T). Townes utilizes the hangar in support of its Falcon 50 business jet flight department.

Air Direct operates its corporate flight department from a privately owned executive box hangar at Cox Field Airport (Hangar N). The flight department operates a Cessna Citation jet aircraft.

The City of Paris operates a firefighting and police firing range on the airport south of Collier Drive.

SOCIOECONOMIC CHARACTERISTICS

A variety of historical and forecast socioeconomic data, related to the regional area, has been collected for use in various elements of this Master Plan. This information provides essential background for use in determining aviation service level requirements. Aviation forecasts are often related to the population base, economic strength of the region, and the ability of the region to sustain a strong economic base over an extended period of time.

POPULATION

Population is one of the most important elements to consider when planning for future needs of the airport. Historical population data for the City of Paris is depicted in **Table 1D**. Historical and forecast population data for Lamar County is presented on **Exhibit 1H**.

As shown in the table, the City of Paris has experienced an increase in population growth over the last 20 years. The average annual growth rate (AAGR) of 0.33 percent was slightly slower than the AAGR of Lamar County (0.60%).

TABLE 1D
City of Paris and Lamar County Population

	Historical					Forecast		
Area	1990	2000	2005	2010	AAGR	2020	2030	AAGR
City of Paris	24,690	25,898	26,532	26,362	0.33%	28,048	30,190	0.68%
Lamar County	44,034	48,604	49,094	49,635	0.60%	51,709	54,122	0.43%

Source: Texas State Demographer/U.S. Census for historical; Forecast from Texas Water Development Board)

EMPLOYMENT

Analysis of an area employment base can be valuable in determining the overall well-being of that community. In most cases, the area make-up and health are impacted by the availability of jobs, variety of employment opportunities, and types of wages provided by local employers. **Exhibit 1H** presents employment data for Lamar County.

Total employment for Lamar County grew by 7,730 jobs between 1990 and 2010. This increase represents an AAGR of 1.44 percent. Locally, the City of Paris is the center of commerce for the area. Private industry with the highest number of employees are presented in **Table 1E**.

TABLE 1E
Ten Largest Private Employers
City of Paris, Texas

Company	Employees
Paris Regional Medical Center	1000
Kimberly-Clark	850
Campbell Soup Company	800
Turner Industries	700
Sara Lee Bakery Group	600
TCIM Teleservices	550
We-Pack Logistics Inc,	300
RK Hall Construction	250
Paris Packaging	176
Silgan Can Company	90

Source: Paris Economic Development Corporation

PER CAPITA
PERSONAL INCOME

Exhibit 1H presents historical and forecast income data for Lamar County. As presented in the exhibit, per capita personal income and mean household total personal income for the county has increased since 1970. The exhibit also presents total personal income and net earnings for the county over the last 40 years.

ENVIRONMENTAL INVENTORY

A review of the potential environmental impacts associated with proposed airport projects is an essential consideration in the Airport Master Plan process. The intent of this inventory is to identify potential environmental sensitivities or resources that might affect future improvements at the airport. The information contained in this section was obtained from internet resources, agency maps, and existing literature.

Research was done for each of the 23 environmental impact categories described within the FAA's *Environmental Desk Reference for Airport Actions*. It was determined that the following resources are not present with the airport environs or cannot be inventoried:

- Resources Not Present
  - Coastal Resources (Coastal Barriers and Coastal Zones) – the airport is inland and not subject to any coastal restrictions.
  - Department of Transportation Act: Section 4(f) - no publicly owned land from a public park, recreational area, or wildlife and waterfowl refuge of nation-

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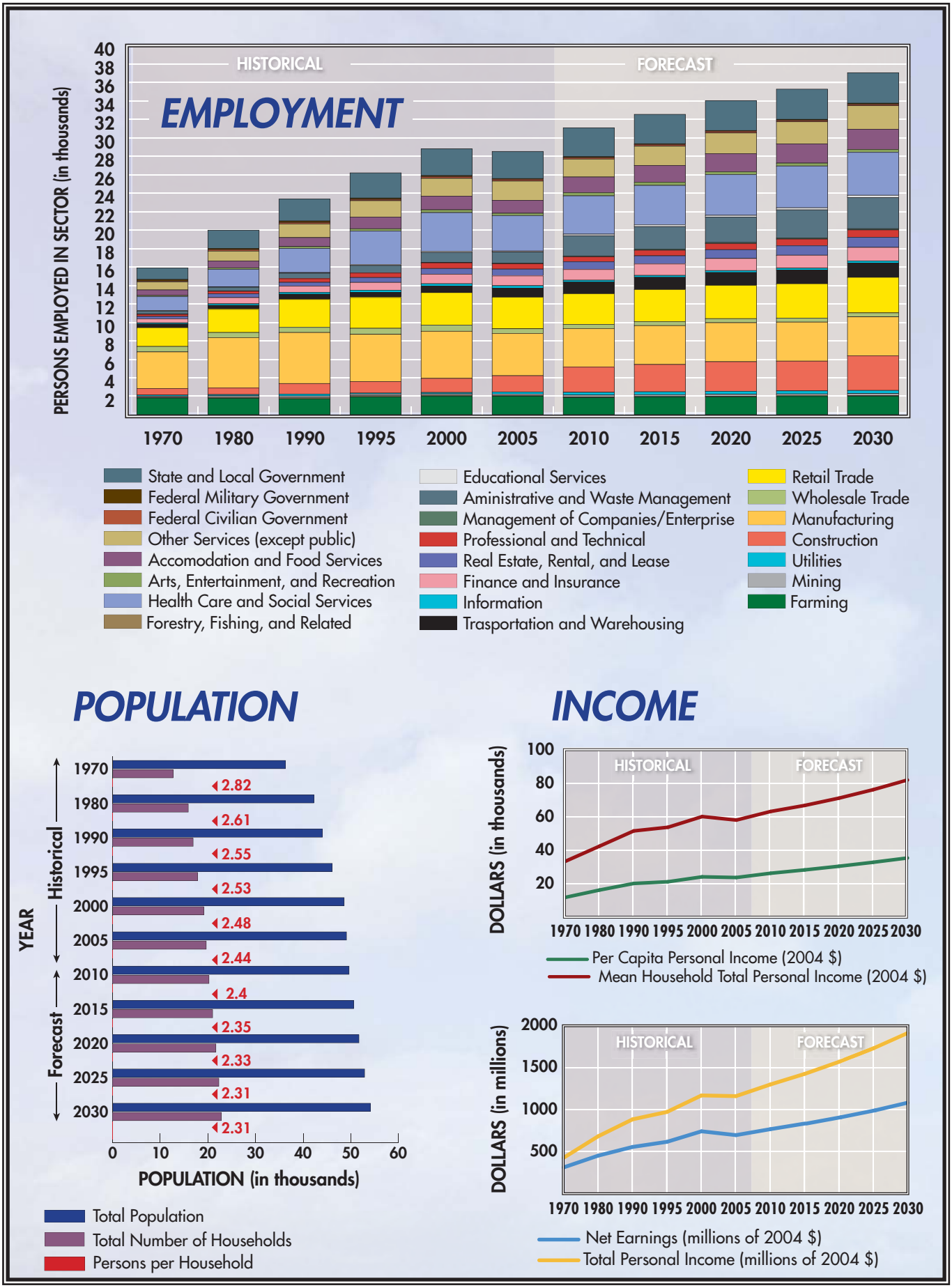

Exhibit 1H
LAMAR COUNTY
SOCIOECONOMIC FACTORS

al, state, or local significance; or any land from a historic site of national, state, or local significance is present within the airport environs. The closest potential Section 4(f) resources to the airport site are two city parks located in Paris, Texas.
    - Wild and Scenic Rivers – no wild or scenic rivers are located in proximity to the airport. The closest Wild and Scenic River in the state of Texas is a portion of the Rio Grande within Big Bend National Park, located approximately 450 miles southwest of the airport.
- Resources that weren't inventoried:
    - Construction Impacts
    - Energy Supply and Natural Resources
    - Light Emissions and Visual Impacts
    - Noise
    - Social Impacts
    - Solid Waste
    - Cumulative Impacts

The following sections provide a discussion of the remaining resource categories.

Air Quality

The U.S. Environmental Protection Agency (EPA) has adopted air quality standards that specify the maximum permissible short-term and long-term concentrations of various air contaminants. The National Ambient Air Quality Standards (NAAQS) consist of primary and secondary standards for six criteria pollutants which include: Ozone (O_3), Carbon Monoxide (CO), Sulfur Dioxide (SO_2), Nitrogen Oxide (NO), Particulate matter (PM_{10} and $PM_{2.5}$), and Lead (Pb). Various levels of review apply within both National Environmental Policy Act (NEPA) and permitting requirements. Potentially significant air quality impacts, associated with an FAA project or action, would be demonstrated by the project or action exceeding one or more of the NAAQS for any of the time periods analyzed.

According to the EPA's Greenbook, Lamar County is classified as an attainment area for all other criteria pollutants.

Compatible Land Use

As shown earlier on **Exhibit 1B**, land uses surrounding Cox Field Airport consist primarily of undeveloped cropland and pasture land to the north, south, and east. Development to the west of the airport is sparse and limited to low density residential and agricultural support land uses.

Compatible land use also addresses nearby features that could pose a threat to safe aircraft operations by attracting wildlife (e.g., landfills and ponds). The closest landfill to the airport is located approximately 11 miles northwest of the airport. Additionally, Little Sandy Creek and two of its tributaries are located on airport property, and several smaller farm ponds are located within the vicinity of the airport.

Farmland

Under the *Farmland Protection Policy Act* (FPPA), federal agencies are directed to identify and take into account the adverse effects of federal programs on the preservation of farmland, to consider appropriate alternative actions which could lessen adverse effects, and to assure that such federal programs are, to the extent practicable, compatible with state or local government programs and policies to protect farmland. The FPPA guidelines developed by the U.S. Department of Agriculture (USDA) apply to farmland classified as prime or unique, or of state or local importance as determined by the appropriate government agency, with concurrence by the Secretary of Agriculture.

Information obtained from the Natural Resource Conservation Service's (NRCS) Web Soil Survey indicates that soils indicative of important farmlands are present throughout the eastern portion of airport property.

Fish, Wildlife, and Plants

A number of regulations have been established to ensure that projects do not negatively impact protected plants, animals, or their designated habitat. Section 7 of the *Endangered Species Act* (ESA), as amended, applies to federal agency actions and sets forth requirements for consultation to determine if federal actions may affect a federally endangered or threatened species. The *Sikes Act* and various amendments authorize states to prepare statewide wildlife conservation plans for resources under their jurisdiction.

According to the U.S. Fish and Wildlife Service (USFWS) website, there are six species that are listed as threatened, endangered, or candidate species in Lamar County according to the ESA. In addition, the Texas Department of Wildlife and Parks lists an additional 15 species that are considered by the State of Texas as threatened or endangered and have the potential to occur in Lamar County. These are listed in **Table 1F**.

It is unknown whether or not any of these species are present within the airport environs.

Several of these species, including the blackside darter, blue sucker, creek chubsucker, and paddlefish are marine species whose habitat is not present at the airport. Additional field investigations may be required to determine the presence of the remaining species at the airport.

Floodplains

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 the floodplains.

A review of Federal Emergency Management Agency (FEMA) floodplain information indicates that no 100-year floodplains are located within the vicinity of the airport.

TABLE 1F
Threatened or Endangered Species in Lamar County, Texas

Common Name	Species	Federal Status	State Status
INSECTS			
American burying beetle	*Nicrophorus americanus*	Endangered	NL
BIRDS			
Least tern	*Sterna antillarum*	Endangered	Endangered
Texas prairie dawn-flower	*Hymenoxys texana*	Endangered	NL
American peregrine falcon	*Falco peregrinus anatum*	De-listed	Threatened
Bachman's Sparrow	*Aimophila aestivalis*	NL	Threatened
Bald eagle	*Haliaeetus leucocephalus*	De-listed	Threatened
Eskimo Curlew	*Numenius borealis*	NL	Endangered
Piping Plover	*Charadrius melodus*	NL	Threatened
Whooping Crane	*Grus americana*	NL	Endangered
Wood stork	*Mycteria americana*	NL	Threatened
FISHES			
Blackside darter	*Percina maculata*	NL	Threatened
Blue sucker	*Cycleptus*	NL	Threatened
Creek chubsucker	*Erimyzon*	NL	Threatened
Paddlefish	*Polyodon*	NL	Threatened
Shovelnose sturgeon	*Scaphirhynchus platorynchus*	NL	Threatened
MAMMALS			
Louisiana black bear	*Ursus americanus luteolus*	Threatened	Threatened
Red wolf	*Canis rufus*	NL	Endangered
REPTILES			
Alligator snapping turtle	*Macrocheyls temminckii*	NL	Threatened
Texas horned lizard	*Phrynosoma cornutum*	NL	Threatened
Timber/Canebrake rattlesnake	*Crotalus horridus*	NL	Threatened

NL – Not Listed

Source: USFWS online listed species database, http://www.fws.gov/southwest/es/EndangeredSpecies/lists/ListSpecies.cfm, accessed November 2010
Texas Department of Wildlife and Parks' *Rare, Endangered and Threatened Species of Texas*, http://gis2.tpwd.state.tx.us/ReportServer$GIS_EPASDE_SQL/Pages/ReportViewer.aspx?/Report+Project2/Report5&rs:Command=Render&county=Lamar, accessed December 2010.

Hazardous Materials and Pollution Prevention

Federal, state, and local laws regulate hazardous materials use, storage, transport, and disposal. These laws may extend to past and future landowners of properties containing these materials. In addition, disrupting sites containing hazardous materials or contaminates may cause significant impacts to soil, surface water, groundwater, air quality, and the organisms using these resources.

The EPA's *Enviromapper for Envirofacts* was consulted regarding the presence of impaired waters or regulated hazardous sites. According to the EPA *Enviromapper*, there are no known impaired waters under section 303(d) of the Clean Water Act or hazardous sites at the airport or within the airport environs.

Historical, Architectural, And Cultural Resources

The *National Historic Preservation Act* (NHPA) *of 1966*, as amended, the *Archaeological and Historic Preservation Act* (AHPA) *of 1974*, the *Archaeological Resources Protection Act* (ARPA), the *Native American Graves Protection and Repatriation Act* (NAGPRA) *of 199*, the *Antiquities Act of 1906*, the *Historic Sites Act of 1935*, and the *American Indian Religious Freedom Act of 1978* protect historical, architectural, archaeological, and cultural resources. In Texas, The Texas Historical Commission has oversight on Texas laws and regulations regarding historical, architectural, archeological, and cultural resource laws and regulations.

A review of the Texas Historical Commission's online historical sites atlas indicates that no identified National Register of Historic Places (NRHP) properties are located within the airport vicinity.

Environmental Justice Areas

The evaluation of environmental justice is a consideration of the potential of Federal actions, such as many airport improvements, to cause disproportionate and adverse effects on low-income or minority populations. Based on a review of U.S. Census Bureau data, the areas surrounding the airport do not contain high percentages of low-income or minority populations.

Water Quality

The *Clean Water Act* provides the authority to establish water quality standards, control discharges, develop waste treatment management plans and practices, prevent or minimize the loss of wetlands, and regulate other issues concerning water quality. Water quality concerns related to airport development most often relate to the potential for surface runoff and soil erosion, as well as the storage and handling of fuel, petroleum products, solvents, etc.

Little Sandy Creek is located on airport property and flows through the terminal area, as indicated on **Exhibit 1C**. The creek has not been determined to be in violation of established water quality standards or classified as impaired.

Congress has mandated (under the Clean Water Act) the National Pollutant Discharge Elimination System (NPDES). This program addresses non-agricultural storm water discharges. Through the use of NPDES permits, certain procedures are required to prevent contamination of water bodies from storm water runoff. The EPA can delegate this permit authority to individual states. In Texas, the Texas Commission on Environmental Quality (TCEQ) administers the TPDES program.

Cox Field Airport currently maintains a TPDES stormwater discharge multi-sector general permit for industrial activities (permit number TXR055926, effective November 30, 2005).

Wetlands

The U.S. Army Corps of Engineers regulates the discharge of dredged and/or fill material into waters of the United States, including adjacent wetlands, under Section 404 of the *Clean Water Act*. Wetlands are defined in Executive Order 11990, *Protection of Wetlands*, as "those areas that are inundated by surface or groundwater with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetation or aquatic life that requires saturated or seasonably saturated soil conditions for growth and reproduction." Wetlands can include swamps, marshes, bogs, sloughs, potholes, wet meadows, river overflows, mud flats, natural ponds, estuarine areas, tidal overflows, and shallow lakes and ponds with emergent vegetation. Wetlands exhibit three characteristics: the soil is inundated or saturated to the surface at some time during the growing season (hydrology), has a population of plants able to tolerate various degrees of flooding or frequent saturation (hydrophytes), and soils that are saturated enough to develop anaerobic conditions during the growing season (hydric).

Based on the National Resource Conservation Service's Web Soil Survey, the ten soil types are present at the airport, one of which is classified as partially hydric. The partially hydric soil area is located in the northeast portion of the airport and indicates there is a possibility for jurisdictional wetlands to be present on the airport property.

SUMMARY

The information discussed in this inventory chapter provides a foundation upon which the remaining elements of the planning process will be constructed. Information on current airport facilities and utilization will serve as a basis, with additional analysis and data collection, for the development of forecasts of aviation activity and facility requirement determinations.

Airport Facility Directory, South Central U.S., U.S. Department of Transportation, Federal Aviation Administration, National Aeronautical Charting Office, March 2010 Edition.

Dallas/Fort Worth Sectional Aeronautical Chart, U.S. Department of Transportation, Federal Aviation Administration, National Aeronautical Charting Office, March 2010.

National Plan of Integrated Airport Systems (NPIAS), U.S. Department of Transportation, Federal Aviation Administration, 2009-2013.

U.S. Terminal Procedures, South Central U.S., U.S. Department of Transportation, Federal Aviation Administration, National Aeronautical Charting Office, April-May 2010 Edition.

The Economic Impact of Cox Field Airport. Texas Department of Transportation - Aviation Division. Prepared by Wilbur Smith Associates. 2005.

The Complete Economic and Demographic Data Source 20010 (CEDDS),

Woods & Poole Economics, Inc., Washington, D.C.

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

City of Paris, Texas:
http://www.paristexas.gov/

Lamar County, Texas:
http://www.co.lamar.tx.us/

FAA Form 5010 Airport Master Record Data:
www.airnav.com
www.gcr1.com/5010web/

U.S. Bureau of Labor Statistics
www.bls.gov

Weatherbase:
http://www.weatherbase.com

City Data:
www.city-data.com

U.S. Census Bureau
www.census.gov

TxDOT – Aviation Division:
http://www.dot.state.tx.us/business/aviation/default.htm

Texas Workforce Commission
www.twc.state.tx.us

Texas State Demographer:
http://txsdc.utsa.edu/

U.S. Environmental Protection Agency, Green Book Nonattainment Areas for Criteria Pollutants,
http://www.epa.gov/oar/oaqps/greenbk/