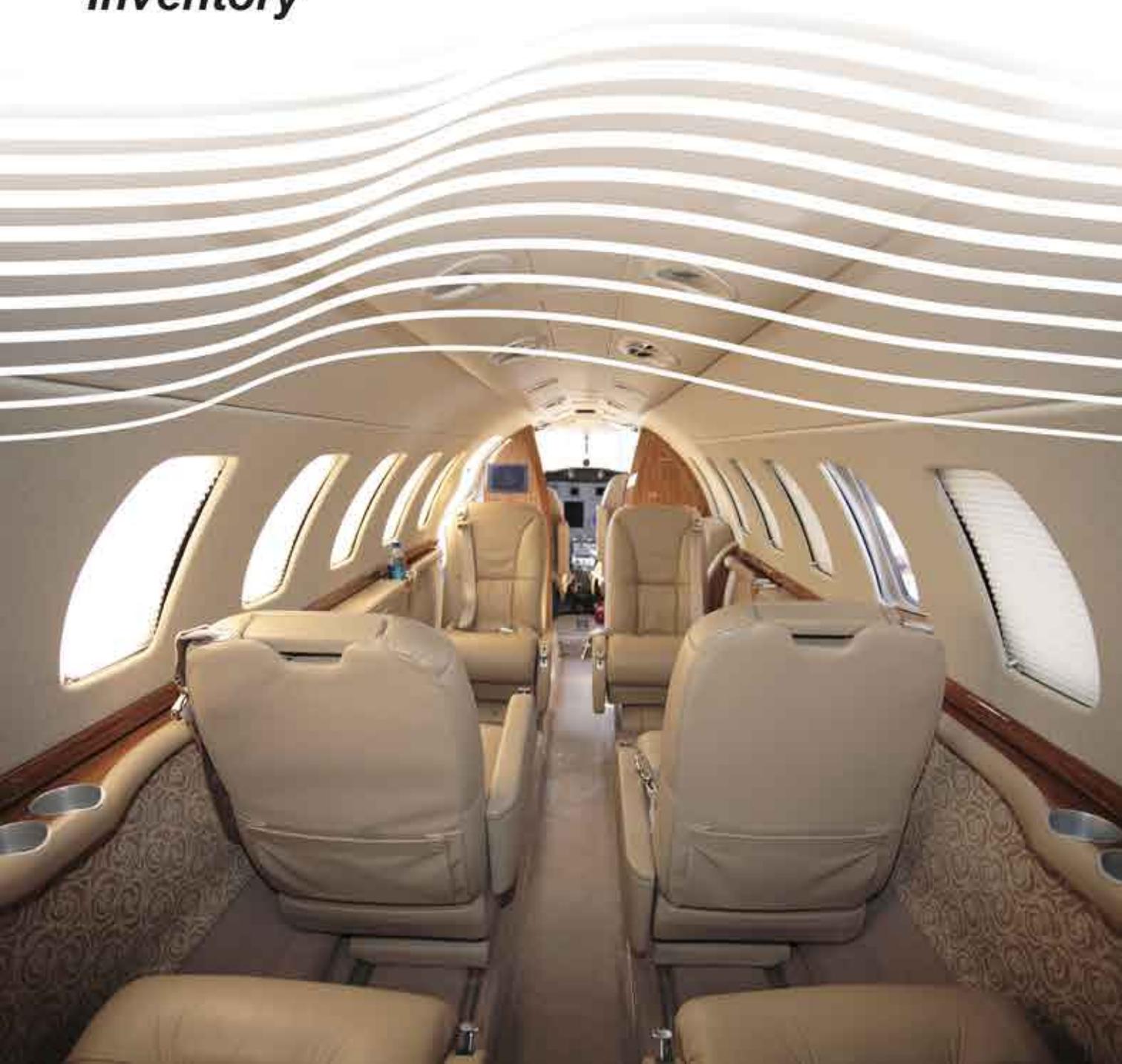


Update Airport Layout Plan Chapter Two

Inventory



Chapter Two – Inventory

2.0 Introduction

This chapter is intended to provide background information and an inventory of the H.H. Coffield Regional Airport and its environs. Quality, relevant baseline information in this regard is necessary for plan integrity.

Data herein was obtained from investigation and interviews, consulting firm experience with the Airport and its projects and TXDOT consultation, along with various other governmental agencies and websites.

The Airport is owned, operated, and sponsored by the City of Rockdale, Texas, managed and guided by Mr. Kelvin Knauf, City Manager.

2.1 Brief Area History

The area around the central Texas region that came to be known as Rockdale is part of the Post Oak Belt, a rectangular strip of land composed of clay, sand, and sandstone and covered with post oak trees that extends from down near present day Bastrop up through Lee, Milam, and Robertson counties.

By the 1500's, the Rockdale region was home to several nomadic Indian tribes including the Yeagues, the Huecos, the Caddos, the Apaches, and Tonkawas. A popular San Gabriel River crossing just a few miles northwest of Rockdale is now open to the public through a business venture know as Apache Pass.

European exploration near what would become the town of Rockdale began in the early 1700's. Father Isidro Felix de Espinosa and Domingo Ramón crossed the San Gabriel and Little Rivers in 1716, when the Spanish sent expeditions to hold Texas against the possibility of French settlement.

In the 1820's through the 1870's, small numbers of hearty settlers found their way to the region that was to become Rockdale. However, until the coming of the railroad in 1873, population in the Rockdale area was sparse. A few settlements sprang up in what is now Milam County before the Civil War era. Lexington was the largest of the pre-civil war settlements with some 150 inhabitants. There were no improved roads and the major public road in the area ran from Lexington to Davilla and northward to Belton.

The only available transportation in the Rockdale region prior to 1870 was horse/oxen drawn. The country was unfenced wilderness, with the exception of a few small farms, and for the most part was fertile. The country was sparsely settled, with a few farmers along the streams, who had modest houses, usually log and sometimes lumber, hauled by ox wagon from Bryan, then the nearest railroad town.

In 1873, the International - Great Northern Railroad acquired right-of-way in Milam County and a 400 acre town site that would later be named Rockdale was surveyed out into thirty-five blocks of lots. Specific strips of land on both sides

of the rail were marked off for a passenger depot, warehouses and holding pens for freight, supply and livestock transport. The business section of the new town went on sale in late 1873 and the town was booming the following year.

In May of 1874, Rockdale had enough citizens to call for incorporation as authorized per the Texas election code, and on May 8 of that month and year, the vote passed by a majority. While the new frontier town in Milam County was known as Rockdale it was not officially dedicated by the Railroad until July 15, 1874. The first mayor of Rockdale was Alfred A. Burck.

2.2 Brief Airport History

In July, 1987 Episcopal Bishop Maurice Benitez was joined by Mayor Bill Avrett and Councilmen Fred Marshall and Wallace Jones to officially present the city of Rockdale with a gift of the then privately-owned H.H. Coffield Municipal Airport. A businessman and entrepreneur, H.H. *Pete* Coffield, upon his passing named the Episcopal Foundation of Texas, a private not-for-profit foundation, the property recipient with the intention of creating a community airport. The news of that day indicated that community was gratefully proud of one of their own and that one of the primary purposes for the gift was to collocate a business/industrial park with the airport, assisting with overall economic development activities.

2.3 Airport Role

This planning effort is intended to instruct and supplement state and federal airport planning efforts. This plan is a more detailed look at the Airport, while national and state planning step back and generally consider the role the Airport plays in the overall system of airports.

Federal Planning

The H.H. Coffield Airport (RCK) is part of the U.S. national transportation system, but is not part of the Federal Aviation Administration's National Plan of Integrated Airport Systems (NPIAS). Of the nation's nearly 5,200 public-use airports, the NPIAS comprises nearly 3,400 airports which are considered significant to the capacity of the national airspace system.

Because of NPIAS non-participation, the City as sponsor is ineligible to receive federal funding for airport improvements under the Airport Improvement Program (AIP).

Funds to pay for NPIAS improvements originate with the AIP program. AIP is a user-fee based program, funded through the Airport and Airways Trust Fund and originated through the Airport and Airway Improvement Act of 1982, as amended. This grant-in-aid program provides the funding to execute most federal, state and local airport planning. This planning effort, along with planning done by TXDOT may be used to consider RCK participation in the NPIAS.

State Planning

RCK is eligible to receive funding through TXDOT and other state agencies. The *Texas Airport System Plan Update* (revised 2010) identifies RCK as a Basic Service Airport in the Texas system of airports. Table 2-2 notes system plan objectives for RCK as *Basic Service* per TXDOT's *Policies and Standards*. Explanation of the terms used in the table and analysis for compliance will be conducted throughout the remainder of this planning effort.

TXDOT finalized its *Economic Impact of General Aviation in Texas* in 2011 which quantifies the following airport-related direct and indirect economic impact:

- Economic Activity: \$187,293
- Salaries, Wages and Benefits: \$82,958
- Employment: 2.

2.4 Airport Inventory

RCK is located within city limits of the City of Rockdale, Milam County, in east-central Texas. The Airport is found at the confluence of Farm to Market Road 908 and Texas State Highway 77.

RCK is approximately 66 miles northeast from Austin, Texas, and 52/132 miles due west from College Station and Houston, respectively. The nearest airports are:

- Cameron Municipal (T35; 16 miles, 20 min)
- Caldwell Municipal (RWV; 26 miles, 37 min)
- Taylor Municipal (T74; 25 miles, 32 min)
- Hearne Municipal (LHB; 28 miles, 38 min).

The field is located near 30°57' 54" North, 96°59' 22" West. RCK properties approximate 70 acres.

RCK is not equipped with a rotating beacon near the terminal area. A rotating beacon alternates green and white, indicating nighttime availability

of a public-use, civilian airport. RCK is not equipped with an Automated Weather Observing System (AWOS). An AWOS provides real-time local weather information for the flying public. The Airport has a segmented circle, but in a non-standard configuration and location. The segmented circle sometimes indicates traffic pattern, and found within the circle is a lighted windcone displaying wind vector information. Supplemental windcones are not found near either runway end.

Runway 17-35

Runway 17-35 is ±2,967 feet long and 50 feet wide. It is constructed of asphalt with an unknown single-wheel gear (SWG) pavement strength. The wheel-gear (single, double, dual-double) nomenclature refers to a pavement design methodology which produces a pavement strength referenced to the number of wheels on a given aircraft strut. Design inputs in this regard include soil type and other soil characteristics, sub grade/base soil improvements, loading, frequency and mix of aircraft which are expected to use the pavement, pavement type and composition, planned pavement life, and other design criteria. In short, pavements were

Table 2-1
Texas State System Plan (2010)
Basic Airport Objectives

Objective/Feature	Minimum	Compliance	Current (Runway 17-35)
Airport Reference Code	A/B-I	No	No; Various Non-Standards
Runway Length/Width	3,200/60 feet	No	2,967/50 feet
Runway Strength	12,500 pounds SWG	No	Unknown (likely not sufficient)
Taxiway	Ramp/Ends	No	Apron abuts runway
Apron (Based)	300 Sq. Yards/Per	No	Apron wholly within ROFA
Apron (Itinerant)	300 Sq. Yards/Per	No	Apron wholly within ROFA
Approach	Visual	Yes	Visual
Lighting	MIRL/MIRL at Turns	No	Non-Standard LIRL
Visual Aid (Beacon)	Existing	No	Not in Place
Visual Aid (Windsock)	Existing	No	Not in Place
Visual Aid (Seg. Circle)	Existing	No	Not in Place
Facilities/Services	--	Yes	Fuel, Lounge

designed to accommodate a limited number of aircraft operations, over time without substantial surface rehabilitation. It is worth noting that the design allows for a limited number of aircraft operations with weights greater than 30,000 pounds.

The effective runway longitudinal gradient is 0.7 percent. The Runway 17 elevation is 474.0 feet above mean sea level (msl) and Runway 35 is 453.8 msl. FAA design standards require that the effective and the maximum runway longitudinal gradients not exceed certain percentages to ensure a runway is not too steep overall or within a shorter distance. Runway longitudinal line of sight is met. Line of sight provides that any two points five feet above runway centerline shall be mutually visible along the entire runway length.

Left traffic is established to both runway ends. Aircraft generally use all or portions of a rectangular flight pattern, of which the runway constitutes one side. Left turns are prescribed along this flight path.

The runway is equipped with a non-standard Low Intensity Runway Lighting (LIRL) system. The LIRL consists of a series of edge lights, generally located 10 feet from the edge of pavements for the length of the runway. The lights are spaced at regular 200-foot intervals, and along specific radii at taxiway intersections. Lights are frangibly-mounted (breakable) at the base to avoid substantial damage to the aircraft in the event of a deviation from the runway. The last 2,000 feet in either direction are directionally-lighted amber to indicate runway limits. Runway threshold lights are part of LIRL and are directionally lighted red and green to indicate runway limits.

Neither runway end is equipped with VGSI (Visual Glide Slope Indicator) lighting. The Precision Approach Path Indicator (PAPI) is a type of VGSI

used to provide lighted, visual information to the pilot as descent toward a runway end is made. The PAPI indicates a red and a white light when on the correct glideslope to either runway end, two red lights when below the glideslope and two white lights when above. Neither runway end is equipped with Runway End Identifier Lighting Systems (REILs). REILs are frangibly-mounted strobe lights situated near each runway end. This lighting system facilitates day or night runway end identification, in clear or semi-obscured weather conditions.

Each runway end is marked with elements appropriate for visual aircraft operation excluding aiming points, and including runway threshold bars. Runway marking elements include designation (the numbers), centerline, aiming point, touchdown zone and side markings. Runway markings are generally white.

Runway 17-35 exceeds FAA's recommended 95 percent coverage of wind in an all-weather, VFR and IFR conditions. FAA details the objectives of a wind coverage noting that the desirable wind coverage is 95 percent. That is; a runway, or runways, at a given alignment should have a crosswind component less than a given threshold 95 percent of the time. These thresholds are: 10.5 knots for small aircraft, 13 knots for larger general aviation aircraft, and 16 knots for larger turbo-prop and some jet aircraft and 20 knots for the largest turbine commercial and general aviation turbine aircraft. Data gathered from the weather reporting equipment at AUS was used to create the wind roses for the Airport. The roses are found in Chapter Seven.

No instrument approach procedures (IAPs) are written for either runway end. IAPs are FAA designed and prescribed three-dimensional paths in the sky for safe aircraft landing. These paths

necessarily avoid terrain, tall towers and other obstructions to allow safe aircraft operation.

Taxiways and Apron

No parallel or connecting taxiways associate with the runway with the exception of one connecting taxiway. This taxiway starts approximately 65 feet from the Runway 35 end is approximately 220 feet long, perpendicular to runway centerline, and terminates in front of the north-most hangar on the field. Both runway ends have circular non-standard turn pavements just beyond the marked runway ends. These pavements are marked unusable with yellow blast pad markings.

The apron approximates 3,000 square yards of asphalt with no marked tiedown positions. This apron abuts the runway and aircraft parking is no closer than 65 feet from runway centerline. The apron holdline located no closer than 65 feet from runway centerline. Taxiway and apron markings are generally yellow. This apron area includes fronting pavements for the two east-side hangars and the self-serve fueling location.

A depiction of the described facilities follows on Page 6.

Airport Services, Access and Utilities

An informal general aviation terminal, within the larger east-side hangar, fronts the western apron edge approximately 250 feet from runway centerline. This facility (± 200 square feet) is sub-optimal to suit the aviation traveler and local pilot with aged facilities and equipment and no restroom.

The hangar accommodating the general aviation terminal function noted above approximates 170 feet by 130 feet (22,100 total square feet) and is ± 30 feet tall. The hangar has likely reached the end of its useful live, as unsafe conditions have

been noted within. The hangar is approximately 130 feet from runway centerline.

South from this hangar and between the southern-most hangar of the field is the self-service fueling location, with a 10,000 gallon capacity, currently used with 100LL fuel. The pump is approximately 130 feet from runway centerline.

South from fueling is the third and final hangar approximating 60 feet by 50 feet (3,000 total square feet) and is ± 20 feet tall. The hangar has likely reached the end of its useful life, as unsafe conditions have been noted within. The hangar is approximately 105 feet from runway centerline.

The east-side terminal area described above is accessed via a 10 foot wide, 370 foot long paved, gated road from Farm to Market Road 908 to the northern apron extent. No formal auto parking exists. Buildings and facilities in this area are city-owned and maintained.

- (E) Existing
- Existing Property Line
- Building Restriction Line (BRL)
- Runway Protection Zone (RPZ)
- Approach Surface

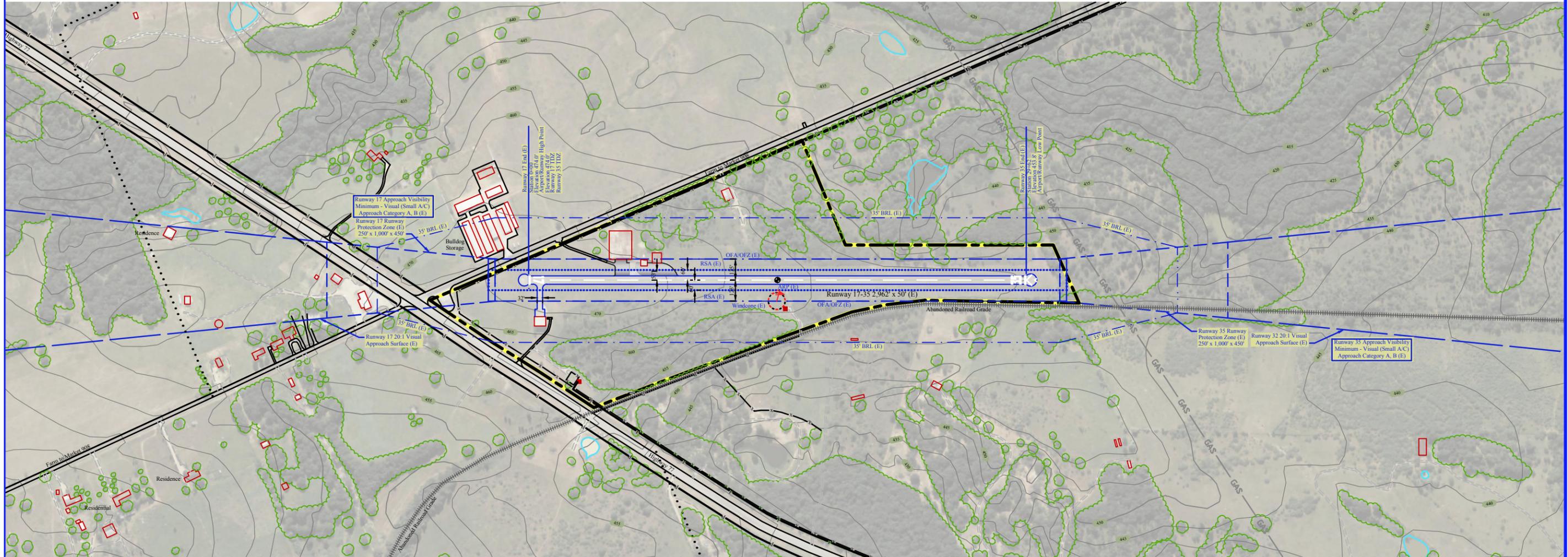
- Object Free Area (OFA)
- Runway Safety Area (RSA)
- Obstacle Free Zone (OFZ)
- Existing Fence
- Section Line

Legend

- Dirt Road
- Existing Paved Roads
- Existing Pavement
- Existing Buildings

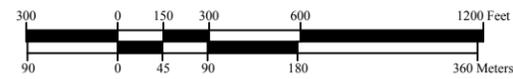
- Contour Line
- Airport Reference Point (ARP)

- Segmented Circle With Lighted Wind Cone
- Rotating Beacon



Yearly Change 0°7' West
Source: NOAA, Washington, DC

Graphic Scale



No.	Revision	Ckd	Date

**H.H. Coffield
Regional Airport**
Rockdale, TX

ADG AIRPORT DEVELOPMENT GROUP, Inc.
1776 South Jackson Street / Suite 950
Denver, Colorado 80210-3922
303.782.0882 / 303.782.0842 fax
www.ADGairports.com

TXDOT Contract Number: 2X1AV064

Project No.:	RCK1400M
Designed By:	SJM
Drawn By:	MTP
Approved By:	SMP
Date:	October 2012

**Existing
Airport Layout Plan**

North from the main terminal area on the west side of the runway is a single, newer hangar. It is privately-owned, approximating 55 feet by 65 feet (3,575 square feet), located 220 feet from runway centerline. The hangar is accessed via a ±330 foot long unimproved road from Highway 77. No formal auto parking exists in this area. A 60 foot by 50 foot ramp fronts this hangar.

Found near mid-field is a segmented/windcone and a city well. Both of these facilities are in non-standards locations.

City staff and volunteers provide for routine airfield safety and security inspections along with routine and preventive maintenance. The City Police Department and Volunteer Fire Department provide law enforcement and fire protection services for the Airport and its environs.

Electric, water and wastewater service is provided by the City. Landline telephone and broadband service are provided by CenturyLink.

Chain-link and three-strand barbed perimeter fencing partially surround the Airport. The eastern terminal area is equipped with a non-automatic gate and partial chain link fencing.

2.5 Environmental

Milam County covers approximately 1,021 square miles of east-central Texas ground. Farming, ranching and natural resources extraction are the primary means of economic subsistence. Cotton, corn, grain sorghum, oat, wheat, peanut, melon and pecan are primary agricultural products. Oil/gas extraction, lignite mining, aluminum smelting and the manufacture of clothing, furniture, wood, metal and plastics products are also primary.

County topography is nearly level to rolling hills. Elevation ranges from 306 to 648 feet. The

Brazos, Little River, San Gabriel Rivers, along with numerous other watershed creeks drain Milam County. The western part of the county is in the Northern Blackland Prairie and the eastern within the Southern Claypan Area. High terraces have formed along most large streams within the Northern Blackland Prairie, containing the more productive soils. Soils range from deep clays in the western portion of the county to deep sandy loams and sands in the eastern part.

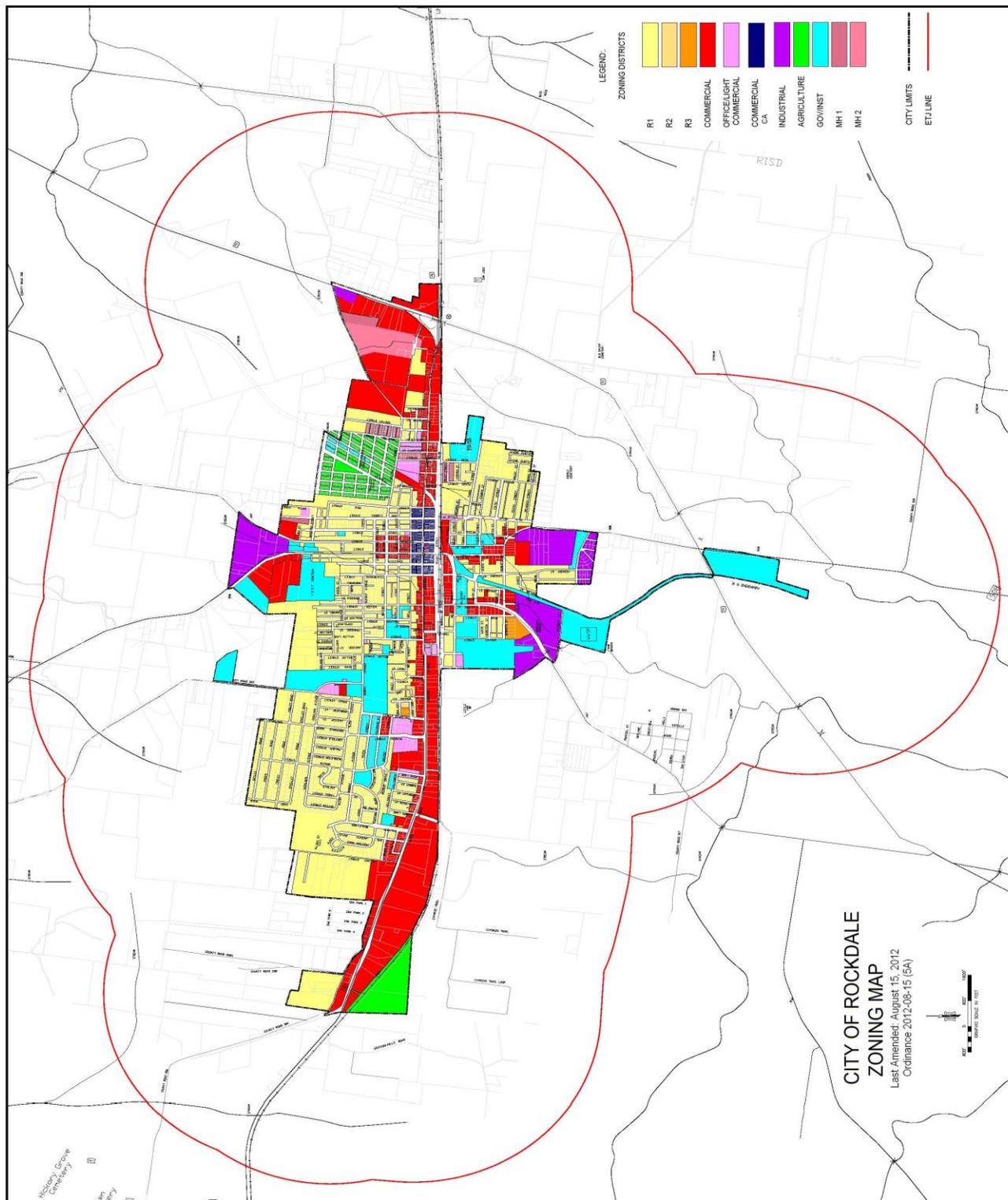
The average winter temperature is 51 degrees Fahrenheit (°F) and the average daily minimum temperature is 40°F. The lowest recorded temperature (at Cameron, TX) occurred on January 17, 1930, was minus 7°F. In summer, the average temperature is 84°F. Annual precipitation totals 34 inches, of which 52 percent or 18 inches, falls between the months of April to September.

The state climatologist notes that the mean maximum temperature during the hottest month (August) is 95.9°F.

Land Use and Zoning

The City of Rockdale has established *GOV/INST* zoning for airport properties and Milam County agricultural land uses (no zoning) with sparsely scattered residential surround Airport property as depicted on Figure 2-1. The City has accepted TXDOT funds, and as such is obligated to grant assurance compliance with respect to compatible land use and height restriction around the airport. TXDOT and FAA recommend that the City codify airport-related land use and height zoning or other compatible land use controls, as reasonable per City purview, around the airport to ensure mitigation of airport operations and neighboring sensitivities. Recommendation, template forms and ordinance and overlay district discussion in this regard is found in Appendix B.

Figure 2-1
Existing Area Land Use



National Environmental Policy Act (NEPA)

The 1969 National Environmental Policy Act (NEPA) established a U.S. National environmental policy and the Council on Environmental Quality (CEQ). The primary result of this legislation as it relates to the City as sponsor, is the requirement to prepare for FAA, as lead agency, environmental clearance documents for an AIP project, generally termed the: *Proposed Federal Action*.

Because the City is obligated to comply with grant assurances, federal and state environmental agencies have jurisdiction, and compliance mandates conformity to NEPA in this regard.

FAA promulgated the *Environmental Desk Reference for Airport Actions* along with other guidance documents to ensure conformity with NEPA. Implementation conformity in this regard results in an FAA-generated environmental finding through one or more of these processes and documents. (1) a Categorical Exclusion (CE), (2) an Environmental Assessment (EA) or (3) an Environmental Impact Statement (EIS).

Twenty-three environmental impact categories are subject to analysis based upon the specific proposed project's stated purpose and need, along with reasonable project alternatives. Impact category significance is characterized in terms of threshold impacts; that is, a record of decision or a finding of a no significant impact is given if the quality or quantity of impacts does not reach an identified threshold.

A review and description of each environmental impact category along with a limited baseline data gathering effort constitutes the remainder of this section.

The first impact category is Air Quality.

1. Air Quality

Pursuant to the Clear Air Act (CAA), the U.S. Environmental Protection Agency (EPA) established six criteria pollutants into the National Ambient Air Quality Standards (NAAQS):

1. Carbon Monoxide (CO)
2. Lead (Pb)
3. Nitrogen Dioxide (NO₂)
4. Ozone (O₃)
5. Particulate Matter (PM₁₀, PM_{2.5})
6. Sulfur Dioxide (SO₂).

Sampling and monitoring for these criteria pollutants is occasionally performed statewide, and any quantity of pollutant which exceeds the threshold specified per CAA and its derivatives, results in a geographic area being placed into Non-attainment, with CAA. Non-attainment areas are managed by the state of Texas through their State Implementation Plan (SIP). The SIP is essentially an EPA-approved remediation plan, which specifies actions that the state will take to reach future attainment with CAA. CAA mandates that no federal agency will participate in a project that does not conform to the SIP, within a non-attainment area.

Air quality in the Rockdale area is generally excellent with ambient concentrations of NAAQS pollutants well below established standards. In accordance with FAA Order 5050.4A *Airport Environmental Handbook*, no air quality analysis is required for general aviation or small commercial service airports with less than 180,000 annual forecast operations.

Based on the above, it is assumed that there will not be any significant adverse impacts to baseline air quality.

Fugitive dust control during earthmoving activities is often noted as a best practice for construction activities.

2. Biotic Resources

For NEPA environmental analysis purposes, biotic resources refer to area flora and fauna, including their habitat. This impact category instructs reference to state-listed unique or rare species of concern and their habitat(s). Should consultation reveal potential for impact, species-specific mitigation is often required.

Current query to the Texas Parks and Wildlife specific to Milam County reveals several species of concern, per Table 2-2. These species may or may not be found within the area of concern. Field visits by a qualified biologist, possibly through a biological or ecological assessment or other investigation may be required to make positive identification of reference species and/or habitat.

3. Coastal Barriers

Barrier islands and landforms often provide protection from wind-driven weather and surf and effectively protect coastal areas from damage. As a result the Coastal Barrier Act of 1982 provided protections for the Coastal Barrier Resource System. Given that the Airport is at a distance

from any coastal areas, no analysis in this regard has been completed, nor is any anticipated.

4. Coastal Zone Management

Coastal areas consist of waters and land which are: nationally designated as important resources, effectively protected via the Coastal Zone Management Act of 1972, and are provided protections by the Coastal Zone Management Program. Given that the Airport is at a distance from coastal areas, no analysis in this regard has been completed, nor is any anticipated.

5. Compatible Land Use

The compatible land use impact category primarily relates to aviation noise; and, if the determining analysis for noise does not rise to the threshold level to substantiate mitigation, then category impacts for compatible land use will likely reach similar conclusions. Important to the determining analysis are:

1. Community disruption
2. Business relocations
3. Induced socioeconomic impacts
4. Wetland or floodplain impacts
5. Critical habitat alternations.

Table 2-2
State of Texas Threatened or Endangered Species in Milam County, Texas

Species (Common Name)	Taxon	State Status
Houston Toad	Amphibian	Endangered
Peregrine Falcon	Bird	Threatened
American Peregrine Falcon	Bird	Threatened
Whooping Crane	Bird	Endangered
Bald Eagle	Bird	Threatened
Wood Stork	Bird	Threatened
Interior Least Tern	Bird	Endangered
Blue Sucker	Fishes	Threatened
Red Wolf	Mammals	Endangered
Smooth Pimpleback	Mollusks	Threatened
False Spike Mussel	Mollusks	Threatened
Texas Fawnsfoot	Mollusks	Threatened
Navasota Ladies'-Tresses	Plants	Endangered
Timber/Canebrake Rattlesnake	Reptiles	Threatened
Alligator Snapping Turtle	Reptiles	Threatened
Texas Horned Lizard	Reptiles	Threatened

As discussed in the upcoming noise impact category portion of this section, existing or proposed noise sensitive land uses surrounding airports is generally a sub-optimal condition, without mitigation.

Noise impacts notwithstanding, other land use concerns are important. Given that the federal government is not provided the constitutional authority to make local or regional land use decisions, FAA/TXDOT relies upon sponsors to provide reasonable protections. FAA/TXDOT provides advisory guidance and mandates grant assurance compliance. Grant assurances specify that the City will take reasonable steps to protect the H.H. Coffield Regional Airport from incompatible land uses. As described earlier, these steps usually involve development of land use plans and zoning which keeps incompatible land uses, like some kinds of residential use, at a distance from RCK. This coupled with height restriction zoning to protect an airport's airspace are the two relevant grant assurances in this regard.

Potential wildlife attractants such as landfills, sewage treatment facilities and such, should be located more than 10,000 feet from any airfield pavements.

This document and its process will provide land use compatibility recommendations as specified by the City.

6. Construction

Airport construction impacts may consist of dust, aircraft and equipment emissions, modified storm water discharges, spills and noise.

A National Pollution Discharge Elimination System (NPDES) permit is generally required based upon the amount of area (no more than one, or five acres) disturbed. The permit specifies actions

taken to manage quantities and rates of storm water runoff and sediment control measures.

In addition to the NPDES permit, the state may require a general permit for discharges, pursuant to an overall Storm Water Pollution and Prevention Plan (SWPPP). Not all state requirements above apply and a determination may be solicited upon specific project identification.

7. Section 4(f) Resources

Section 4(f) refers to that section within the Department of Transportation Act of 1966, and its derivatives, stating that if a given project requires use of a publicly-owned park, recreational area or wildlife or waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance, is approvable if (1) there is no other prudent or feasible alternative which would avoid use, and (2) project planning includes all possible mitigation to minimize harm.

Consultation with the U.S. Environmental Protection Agency (EPA), the U.S. National Park Service (NPS), the U.S. Fish and Wildlife Service (FWS), and the Texas State Historic Preservation Officer (SHPO) may be necessary to determine appropriateness and proximity of any Section 4(f) lands and potential project impact as they may substantiate threshold impacts.

There are no state parks within Milam County. The nearest state park is Lake Somerville State Park, some 40 miles due southeast of RCK. At its closest point, the nearest federal lands of subject, the Balcones Canyonlands National Wildlife Refuge northwest of Austin, is approximately 65 miles due west of RCK. Several smaller city parks dot Rockdale proper.

8. Federal Endangered/Threatened Species

While the Biotic Resources portion of this section identified the relevant state species, this portion deals exclusively with Federal endangered, threatened or candidate species along with critical habitat, all pursuant to the Endangered Species Act. Table 2-3 identifies these species in Natchitoches Parish.

Field visits by a qualified biologist, through a biological or ecological assessment or other investigation, may be required to make positive identification of the reference species and/or habitat. Consultation with FWS is prerequisite to project impact category threshold determination.

10. Farmlands

Farmlands of prime, unique or of state or local importance, so designated through scoring via Farmland Conversion Impact Rating Form (AD1006) with the United States Department of Agriculture (USDA) National Resources Conservation Service (NRCS) may require mitigation. Farmland has historically been identified in the area and project specific threshold category impacts should be considered through NRCS consultation.

11. Floodplains

Executive Order (U.S.) 11988 and DOT Order 5650.2 specify that airport development should

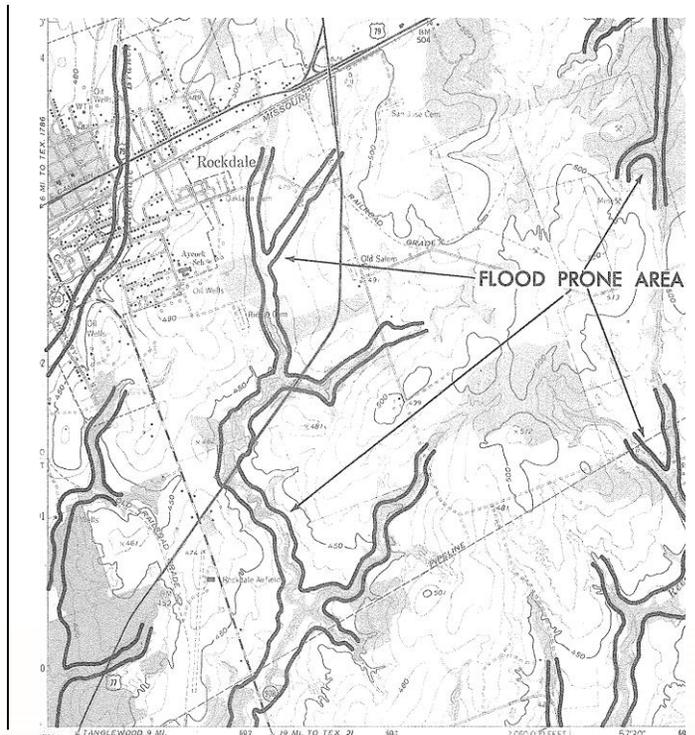
Table 2-3
US Threatened or Endangered Species in Milam County, Texas

Species (Common Name)	Taxon	State Status
Houston toad	Amphibian	Endangered
Whooping Crane	Bird	Endangered
Bald Eagle	Bird	Threatened
Interior Least Tern	Bird	Endangered
Navasota Ladies'-Tresses	Plants	Endangered
Navasota Ladies'-Tresses	Plants	Endangered

9. Environmental Justice

Analysis to determine potential disproportionate and/or adverse effects on low-income or minority populations is prerequisite to project impact category threshold determination per (U.S.) Executive Order 12898 and DOT Order 5610.2. Demographic, Census or state and local population, ethnicity and employment data, along with public outreach are used to determine threshold impact significance.

Given that the Airport has relatively low activity, baseline category impacts may not reach thresholds of significance, providing that there is no comment of relevance during a project public consultation process.



remain outside the base, 100-year floodplain. Zones A, AE and/or V on a Flood Insurance Rate Map (FIRM) produced the Federal Emergency Management Agency (FEMA).

A FIRM does not exist for Milam County, but the County has supplemental quadrangle-based mapping with general areas of flooding concern identified as shown on the previous page.

12. Hazardous Materials

Hazardous, for purposes herein, refers to industrial wastes, petroleum products, dangerous goods and other contaminants. EPA maintains online databases to search known contaminated sites in accordance with the following legislation:

1. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
2. Resource Conservation and Recovery Act (RCRA)
3. Toxic Substances Control Act
4. Oil Pollution Act
5. Community Environmental Response Facilitation Act (CERFA).

Impact category significance relates primarily to the number of hazardous materials, substances and wastes storage, handling and spills and the quantity of subject material. Should investigation reveal sufficient hazardous materials, substance or wastes, permitted remediation or mitigation may be necessary.

Project specific consultation with the state may be necessary to determine threshold impact significance. EPA's *EnviroMapper* revealed several instances of reporting associated with the Alcoa facilities at Alcoa Lake, some 5 miles due south of RCK.

An Environmental Site Assessment (Phase I) should precede purchase of land with AIP funds. This effort provides field reconnaissance, inventories environmental data and provides

limited assurance that the site is free of hazardous materials. Should a recognized environmental condition be noted, progression to Phase II sampling work, and potentially Phase III remediation may be necessary.

13. Historic Properties

An historic property for purposes herein is defined as any prehistoric or historic district, site, building, structure or object included in, or eligible for inclusion in the National Register of Historic Places (NHRP). Section 106 of the National Historic Preservation Act (NHPA) provides for a consultative process with the Louisiana State Historic Preservation Officer (SHPO) to determine effect and impact category significance. Also, analysis pursuant to the Archaeological Resources Protection Act (ARPA), Archaeological and Historic Preservation Act and the Native American Graves Repatriation Act may be necessary.

Potential for a historic site may require execution of a phased (classed) Cultural Resource Survey or other archaeological/historic investigation to I: Identify, II: Evaluate, and III: Mitigate cultural, historical or archaeological sites of significance.

The nearest historic site, the International and Great Northern Railroad Passenger Depot at 11 North Main Street in Rockdale is noteworthy, as is the San Xavier Mission Complex Archeological District.

This district is (1) listed, (2) on privately-owned land, (3) likely accommodated three missions and one presidio within the 1740-50's time periods; its location is not publicly available.

14. Induced Socioeconomic Impacts

A given project's potential to cause induced or secondary socioeconomic impacts on the community via these factors should be identified:

1. Shifts in patterns of population movement or growth
2. Public service demands
3. Changes in business and economic activities
4. Other factors identified by the public.

Given that the Airport has relatively low activity, baseline category impacts are not expected to reach thresholds of significance, provided that there is no public comment of relevance during project specific consultation.

15. Light Emissions and Visual Effects

Disturbance of area sensitive land uses due to airport lights or activities is of primary concern for this impact category. Given that the Airport has relatively low activity, baseline category impacts are not expected to reach thresholds of significance, providing that there is no public comment of relevance during project specific consultation.

16. Noise

Aircraft noise is often one of the most concerning or objectionable environmental impact for a given project or airport environ. Existing and future noise impacts should be evaluated based upon industry standards, as related to the human environment and potentially sensitive species and historic properties, with mitigation provided as appropriate.

FAA has adopted and prescribes use of the Day-Night average sound Level) DNL noise metric as the cumulative metric of choice for baseline analysis and/or for a given proposed federal action. The DNL noise metric uses the amount of aircraft noise, measured in decibels (db) over a 24-hour period, with an increase of 10 db for each aircraft operation occurring between the hours of 10:00 p.m. to 7:00 a.m.

FAA's Integrated Noise Model (INM) is the noise modeling software of choice for depiction of the geographic distribution of aircraft noise. INM is designed to show the geographic distribution of an average day's aircraft noise about the landing area or runway. Noise, in this regard, is louder and more intense closer to the landing area or runway and diminished with distance. Db value increments typically produced for simple analysis by INM are 75, 65 and 55 db.

Using INM, the area around the runway within which 65 db modeled noise occurs using the DNL methodology can be depicted in plan view. The limits of this 65 db area are inscribed with a line noted as 65 DNL.

FAA has selected 65 DNL as the threshold impact category value of noise significance for most general aviation airports, including RCK. Noise sensitive land uses within the modeled 65 DNL are potentially of environmental consequence.

FAA environmental guidance notes that a noise modeling effort is generally not required when the 65 DNL is not expected to extend past airport property limits. And, the 65 DNL generally does not extend past airport property limits when no more than 90,000 average yearly operations and/or 700 annual jet-powered operations occur.

700 annual jet-powered operations may occur within the 20-year time frame of this planning process; however, noise contours will be not be produced for this planning. Given that the airport has relatively low activity, baseline category impacts are not expected to reach thresholds of significance; however, noise sensitive land uses surround the airport and mitigation measures and techniques will be recommended, as necessary.

17. Social Impacts

Health and safety risks to children and other socioeconomic impacts including residential relocation, division or disruption of established communities, change of surface transportation patterns, disrupting orderly and planned development along with creation of a notable change in employment levels are all related to social impact analysis to the human environment.

Given that the Airport has relatively low activity, baseline category impacts are not expected to reach thresholds of significance, providing that there is no public comment of relevance during project specific consultation.

18. Solid Waste

The Solid Waste Disposal Act of 1965 defines solid waste as garbage, refuse or sludge from a waste treatment facility, water supply treatment facility, or an air pollution control facility including solid, liquid, semisolid or contained gaseous material resulting from industrial, commercial, mining, and agricultural or community activities.

Airport construction activities produce solid wastes and consultation with appropriate area agencies should reveal the ability of local disposal or transfer facilities to accommodate expected loads and load types. Project specific analysis, pursuant to the proposed federal action, should be undertaken to ensure that solid wastes related to airport construction activities can be locally accommodated and should describe transport, containment and control to the final destination.

19. Water Quality

Point source discharges of water into the environment, such as from sanitary sewer systems or collection basin drainage along with non-point discharges such as storm water runoff from airfield surfaces may drain pollutants such as oils and pesticides into the natural

environment and be cause for consequential water quality impacts. U.S. EPA, FWS and state agencies should be consulted on a project-specific basis in accordance with the following legislation:

1. Federal Water Pollution Control Act as amended by the Clean Water Act (CWA)
2. Clean Water Act (CWA)
3. Safe Drinking Water Act (SDWA)
4. Fish and Wildlife Coordination Act.

A Water Quality Certificate from EPA, and NPDES and LPDES Permit from the State may be necessary on a project-specific basis along with an EPA determination for any drinking water impacts. Documentation related to an airport-specific spill response plan, often maintained through airport certification may be necessary.

Water quality analysis in this regard may require supplemental analysis related to wetlands, floodplains, aquatic species impacts and other NEPA impact categories along with ground water protection.

20. Wetlands

A wetland is defined by a qualified wetland delineation specialist as having all three of the necessary components, (1) hydrology (2) vegetation and (3) soil type. A wetland system may be defined as jurisdictional or non jurisdictional by the U.S. Army Corps of Engineers (USACE) depending upon whether it is connected or adjacent to U.S. navigable waters.

In the event impacts to jurisdictional wetland by a proposed federal action are apparent, USACE may issue a Section 404 permit pursuant to CWA. This permit, along with other necessary environmental clearances allows construction activities to proceed. Wetland banking is often a suitable compensatory mitigation technique, involving purchase and protection of nearby, suitable wetlands as replacement.

EPA, FWS, the National Marine Fisheries Service (NMFS) and equivalent state and local agencies should also be consulted regarding wetland habitat and species impacts.

21. Wild and Scenic Rivers

Rivers or sections thereof, designated Wild and Scenic per the Wild and Scenic Rivers Act of 1968 are those designed by the Departments of Interior or Agriculture, which exhibit remarkable scenic, recreational, geologic, fish, wildlife, historic or cultural value.

A portion of the Rio Grande River in west Texas is the only river in the state of Texas so designated.

22. Cumulative Effects

Any resource-specific impacts from a proposed federal action (as individually described in the previous 22 impact categories) added to the past, present and other reasonably foreseeable actions within a defined time period and geographic area for that resource should be described in a cumulative impacts analysis. These analyses should include federal and non-federal participation and be specific to each of the impact categories, as appropriate.

2.6 Area Airspace, Airports and Navigational Aids

The operating airspace environment surrounding RCK is important given that the Airport is part of the state and national system. A description of the local airspace surrounding the Airport along with nearby public-use airports and navigational aids follows.

Airspace

FAA is charged with oversight of the nation's civil navigable airspace and has established various regulatory and non-regulatory airspace classes and areas, endeavoring to create a safe operating environment for all types of aviation users.

U.S. airspace classifications are shown in Figure 2-2. Regional airspace surrounding the Airport is shown on Figure 2-3; Class E airspace surrounds RCK down to 1,200 feet above ground level (agl). RCK is an uncontrolled facility; that is, no local air traffic control tower is available.

Victor Airway 583 originates from a nearby navigational facility and overflies RCK. This and other victor airways constitute FAA-predefined paths established between navigational aids for ease of aircraft operation at altitudes between 1,200 and 17,999 feet agl.

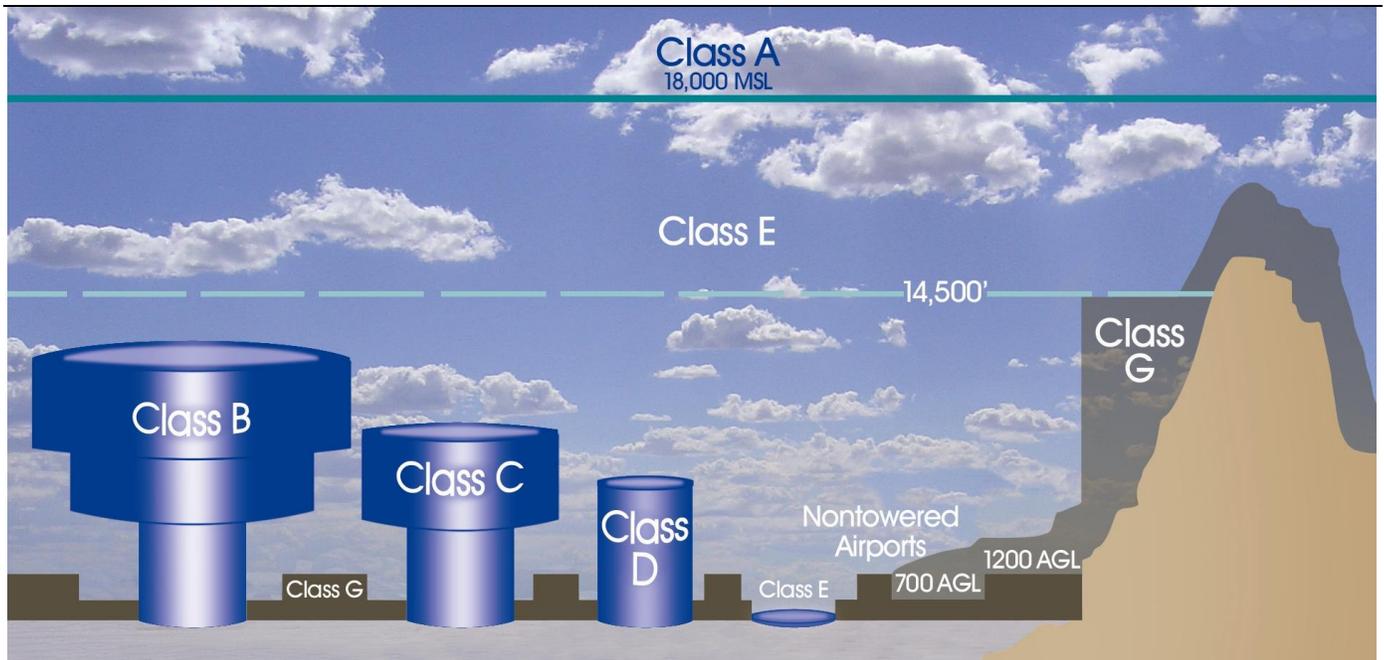
In order to land an aircraft at the H.H. Coffield Regional Airport under general aviation, visual flight rules, the aircraft operator must have a flight visibility of greater than 3 miles and at a minimum, maintain clouds 500 feet below, 1,000 feet above and 2,000 horizontal of the aircraft. However, below 1,200 feet agl, the aircraft operator must have a flight visibility of greater than 1 mile and maintain the aircraft clear of clouds during the day, or during nighttime operations, must have a flight visibility of greater than three miles and at a minimum, maintain clouds 500 feet below, 1,000 feet above and 2,000 horizontal of the aircraft.

Aircraft operators may remotely control airfield lighting systems via the Common Traffic Advisory Frequency (CTAF) of 122.9 MHz. This frequency is assigned to RCK and select other nearby airports by FAA as the frequency from which a pilot may elect to announce location and intentions.

Area Airports and Navigational Aids

RCK is near a number of general aviation and commercial service airports along with enroute and local navigational facilities.

Figure 2-2
US National Airspace Classifications



Austin-Bergstrom International Airport (KAUS) celebrated its groundbreaking in November 1994 following closure of the former Bergstrom Air Force Base the previous year. The first passengers used the facility in May 1999. AirTran, Alaska, American, Delta, Frontier, JetBlue, Southwest, United and US Airways and their various commuter code-shares provide non-stop service across the country. KAUS is the region's commercial and cargo service airport.

Georgetown Municipal Airport (GTU) is a NPIAS reliever to KAUS and accommodates a good portion of the Austin area's general aviation activity. GTU is home to several Fixed Base Operators (FBO) and Specialty Aviation Shops. GTU is frequented by corporate aircraft and is somewhat operationally limited by its 5,000 foot runway length.

Similarly, the Austin Executive Airport (EDC) is a privately-owned, public-use business corporate non-NPIAS airport accommodating an increasing portion of the Austin area's general aviation

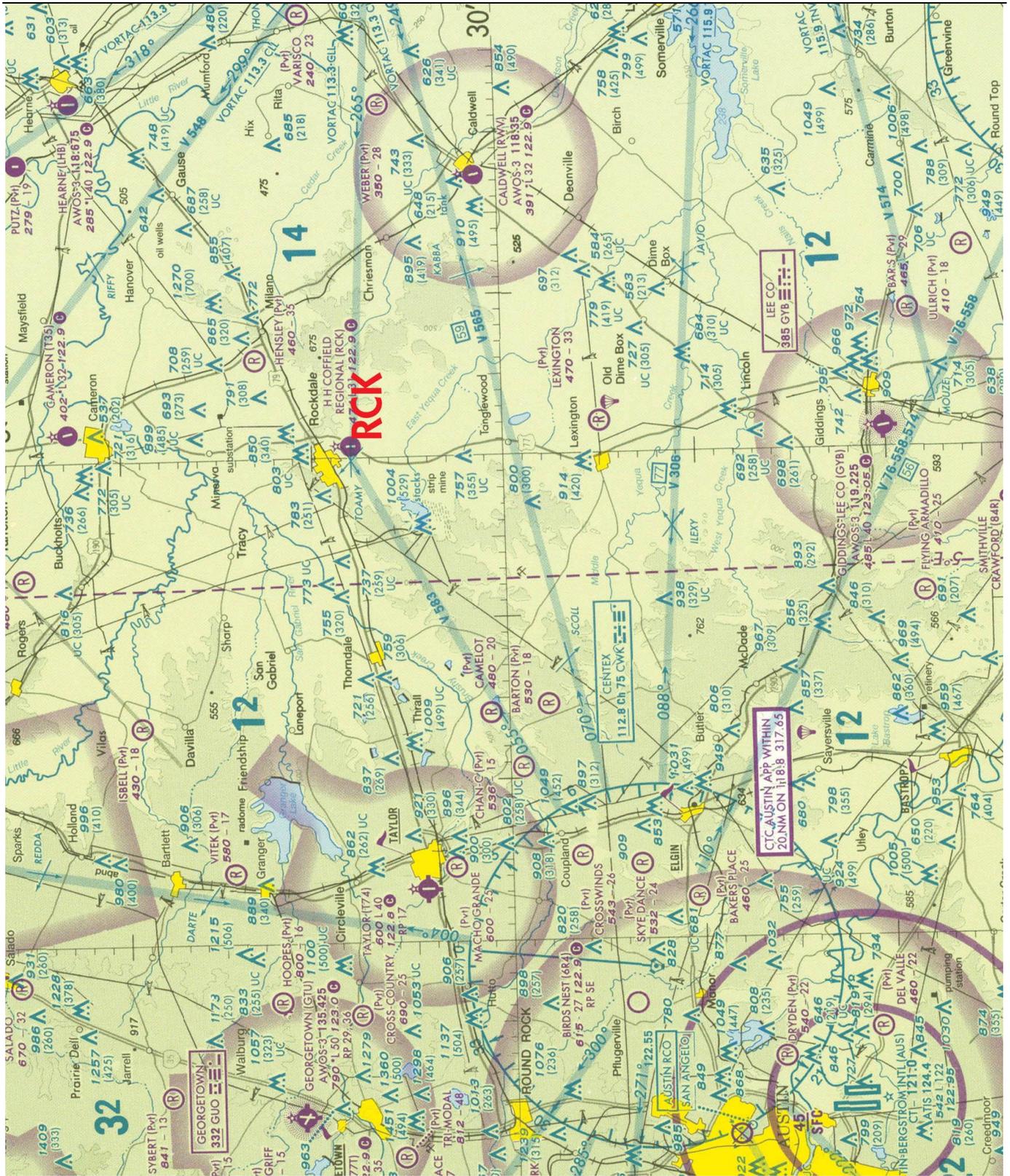
activity. EDC was recently constructed at the Bird's Nest (6R4) Airport and is somewhat frequented by larger corporate aircraft.

Closer to RCK from Austin proper is the community of Taylor and its Taylor Municipal Airport (T74). T74 is a NPIAS Community Service Airport with increasing operations and based aircraft counts.

There are three NPIAS basic service airports in the Rockdale vicinity; Cameron Municipal Airpark (T35), Hearne Municipal Airport (LHB) and Giddings-Lee County Airport (GYB), Texas. Caldwell Municipal Airport (RWV) is a non-NPIAS basic service facility and the closest to RCK. These facilities are smaller general aviation airports with service accommodations for smaller aircraft and limited approach capability.

The Centex and College Station Very-High Frequency Omni-Directional Range with Tactical Aircraft Control (VORTAC) navigational facilities are near EDC and College Station, respectively.

Figure 2-3
Area Airspace from Sectional Chart



These navigational facilities provide 360-degree radio interrogation capability for aircraft navigation and are shown as compass roses on the following page. The Georgetown and Lee County Non Directional Beacons (NDBs) are near their respective communities. These facilities enable properly-equipped aircraft to 'home' to a location.

Table 2-4 lists the page 17 area public-use airports navigational aids.

Table 2-4 Area Airports and Navigational Aids			
Airport	Runway(s) Description Approach Procedure	Services	Distance Direction
Austin-Bergstrom Int'l (KAUS), Austin, TX	Runway 17R/35L; 12,248' x 150' Runway 17L/35R 9,000' x 150'; ILS Precision Instrument	All Fuel, Repair Controlled Field	44 Miles Due Southwest
Georgetown Muni. (GTU) Georgetown, TX	Runway 18/36 5,000' x 100' Runway 11/29 4,100' x 75' GPS-RNAV Non Precision	Fuel, Major Repair Controlled Field	36 Miles Due West
Austin Executive (EDC) Austin, TX	Runway 13/31; 6,025' x 100' Runway 16/34 1,550' x 25' GPS-RNAV Non Precision	Fuel, Major Repair Uncontrolled Field	33 Miles Due Southwest
Taylor Municipal (T74) Taylor, TX	Runway 17/35; 4,000' x 75' VOR-DME Non Precision	Fuel, Major Repair Uncontrolled Field	24 Miles Due West
Cameron Muni. Airpark (T35) Cameron, TX	Runway 16/34; 3,200' x 50' Visual	Fuel, Major Repair Uncontrolled Field	15 Miles Due North
Hearne Municipal (LHB) Hearne, TX	Runway 18/36; 4,001' x 75' GPS-RNAV Non Precision	No Fuel, No Repair Uncontrolled Field	24 Miles Due Northeast
Caldwell Municipal (RWV) Caldwell, TX	Runway 15/33; 3,252' x 50' RNAV/VOR-DME Non Precision	100LL, No Repair Uncontrolled Field	16 Miles Due Southeast
Giddings-Lee County (GYB) Giddings, TX	Runway 17/35; 4,000' x 75' RNAV/VOR-DME Non Precision	Fuel, Major Uncontrolled Field	28 Miles Due South
Navigational Aid	Facility Frequency	Distance	Direction
Centex VORTAC	112.8 MHz	32 Miles	Due Southwest
College Station VORTAC	113.3 MHz	30 Miles	Due East
Georgetown NDB	332 kHz	36 Miles	Due West
Lee Co NDB	385 kHz	28 Miles	Due South



2.7 Based Aircraft and Operations

TXDOT inspects the airport on an annual basis to assess facilities and activity. Data from the annual airport inspection for the year ended September 16, 2011 indicates that the Airport accommodates **2,400 total annual aircraft operations**, including 800 itinerant general aviation operations and 1,600 local general aviation operations. Investigation for this planning document and consultation with the City and airport users concurs that approximately 2,400 annual operations are occurring. The inspection notes and on-site airport management confirms that approximately 70 percent of aircraft operations are locally-executed and 30 percent are itinerant. **8 aircraft currently base** at the airport, all of which are single-engine.

The H.H. Coffield Regional Airport has historically been an underutilized general aviation airport and current year operations approximate past year operations, with no known activity spikes. This aircraft activity information is sub-optimal, in that better estimates would be helpful. Unfortunately, costs to monitor aircraft activity do not compete well with other projects from a cost/benefit perspective. Acoustical noise counters are

available, but this equipment has operational weaknesses, which again lead to educated estimates.

This lack-of-accurate-counts-circumstance is not limited to the H.H. Coffield Regional Airport, as reasonable estimates of aviation activity at low-activity, non-towered airports have historically been lacking nationwide.

2.8 Airfield Design Standards

FAA specifies a runway coding system for airport design that relates airport design criteria to the operational and physical characteristics of aircraft using the airport, termed the Airport Reference Code (ARC).

The code has two designators. The first designator, represented by a letter, is the Aircraft Approach Category. It relates to aircraft approach speed, an aircraft operational characteristic ($1.3 \times V_{so}/V_{ref}$ {the speed of an aircraft in the landing configuration}). The second designator, Airplane Design Group, is represented by a roman numeral. It is related to aircraft wingspan and aircraft tail height; physical characteristics. The ARC is associated with a particular runway; a field with multiple runways may have multiple codes.

Table 2-5
Aircraft Approach Category and Airplane Design Group

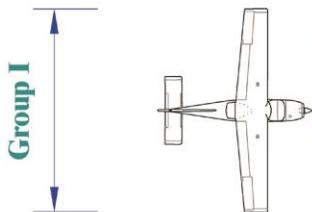
Approach Category	Aircraft Speed Range (Knots)	
A	Less than 91	
B	More than 91, but less than 121	
C	More than 121, but less than 141	
D	More than 141, but less than 166	
E	More than 166	
Airplane Design Group	Aircraft Wingspan Range	Aircraft Tail Height Range
I	Up to but not including 49'	Up to but not including 20'
II	49' up to but not including 79'	20', up to but not including 30'
III	79' up to but not including 118'	30', up to but not including 45'
IV	118' up to but not including 171'	45', up to but not including 60'
V	171' up to but not including 214'	57', up to but not including 60'
VI	214' up to but not including 262'	66', up to but not including 80'

Table 2-5 presents ARC components and Figure 2-6 presents aircraft representative of each a given ARC. The most demanding aircraft or group

of aircraft with similar approach speed and wingspan characteristics that use the airport regularly, generally conducting at least 500

Figure 2-6
Representative ARC Aircraft

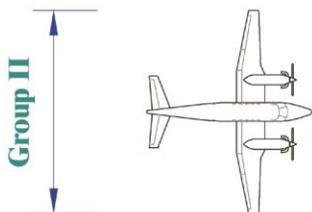
Personal Aircraft



Representative Aircraft

- Beechcraft Bonanza 35, 36
- Cessna 150, 172, 402, 414
- Beechcraft Baron
- Beechcraft King Air 90, 200
- Cessna 182, 206, 401, 421
- Cessna Citation I, CJI
- Piper Navajo-34, Cheyenne-42

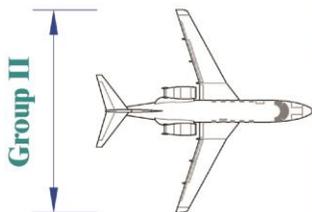
Business Aircraft



Representative Aircraft

- DHC Twin Otter
- Beechcraft 1900
- Cessna Citation II, III, V
- Dassault Falcon 50, 200
- Embraer 145 RJ; ATR 42, 72
- Rockwell Aero Commander 560, 680
- DeHavilland Dash-7, 8

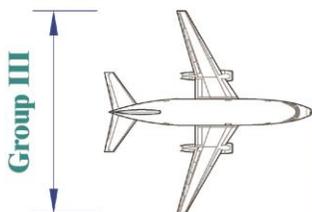
Corporate Aircraft



Representative Aircraft

- Gates Lear 24, 25
- IAI Westwind 1124
- Bombardier 600, 601
- Gulfstream III
- Starship 1
- Cessna Citation X
- Gates Lear 35

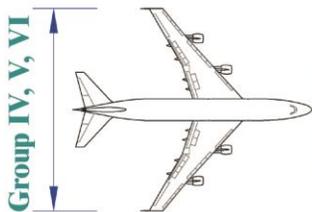
Commercial Aircraft



Representative Aircraft

- Airbus 318-321
- Boeing 727, 737
- McDonnell Douglas DC-9
- MD-82; MD-83
- Gulfstream II, IV, V

Transport Aircraft



Representative Aircraft

- Airbus 300, 310
- Boeing 757, 767
- Lockheed Hercules C-130
- Airbus 330, 340, 380
- Boeing 747; Boeing 777
- Antonov 124, 225
- Lockheed Galaxy C-5

annual takeoffs and landings, is termed the design aircraft. Runway 17-35's design aircraft is **ARC A/B-I**.

In addition to ARC, aircraft weight is another design criterion. Runway 17-35's pavement strength is currently unknown, but presumed to be less than 12,500 pounds SWG. Aircraft which weigh less than 12,500 pounds are termed utility aircraft. Those aircraft weighting more than 12,500 pounds are termed non-utility aircraft. Therefore, the **utility** designation applies in both instances.

The final design criterion necessary to apply the appropriate design standards at the Airport is instrument approach capability. Instrument approach capability is defined for purposes herein as the ability of an aircraft to land using an approved IAP with visibilities either greater than or equal to ¾ mile, or less than ¾ mile. No runway ends currently have an instrument approach procedure with less than or equal to ¾ mile visibility; therefore, **greater than or equal to ¾ or mile** design standards applies.

Design standards encompass various areas, zones, surface gradients and separations standards; select standards are described and tabulated within Table 2-7: (Note that these are the minimum specification and exceeding the specification is generally acceptable.)

1. A Runway Protection Zone (**RPZ**) is a trapezoidal area off each runway end, established to enhance protection of people and property.
2. The Runway Safety Area (**RSA**) and Taxiway Safety Area (**TSA**) are established to ensure that the ground surface adjacent to runways and taxiways is suitably prepared to reduce the risk of damage in the event of an aircraft deviation from paved surfaces. Safety area specifications are dimensional, grade-specific and material-specific.
3. The Runway Object Free Area (**ROFA**) and Taxiway Object Free Area (**TOFA**) are established to ensure the safety of aircraft operations by having an area free of objects, except those frangibly-mounted objects, necessary for air navigation or ground maneuvering purposes. The Obstacle Free Zone (**OFZ**) is a volume of

Table 2-7
Select Airport Design Standards

Standard/Specification	Standard	Existing
Runway Width	60 Feet	50 Feet
Effective Runway Longitudinal Grade	Within ±2% Maximum	Within ±2% Maximum
Runway Pavement Strength (Pounds)	Recommended 12,500 SWG	Less than 12,500 SWG
Runway Protection Zones	250' x 450' x 1,000'	250' x 450' x 1,000'
Runway Safety Area Width/Beyond End	120'/240'	120'/240'
Runway Object Free Area Width/Beyond End	250'/240'	250'/240'
Taxiway Safety Area Width	49'	49'
Taxiway/Taxilane Object Free Area Width	89'/79'	89'/79'
Runway to Parallel Taxiway	150'	N/A
Runway to Aircraft Holdline	125'	65'
Runway to Aircraft Parking	125'	65'
Obstacle Free Zone Width/Beyond End	250'/200'	250'/200'
Runway AOCS (20:1) (Approximate)	250'x700' x 5,000'	250' x 700' x 5,000'
Part 77 Primary Surface Width/Beyond End	250'/200'	250'/200'
Part 77 Approach Surfaces Dimension/Slope	250'x1,250 x 5,000'; 20:1	250'x1,250 x 5,000' 20:1

airspace up to 150 feet above airport elevation, centered on runway centerline, primarily established to preclude taxiing and parked aircraft. The runway holdline is typically located to coincide with limits of the OFZ.

4. The purpose of the Approach and Departure Clearance Surfaces (**AOCS/DOCS**) is to provide obstacle clearance for visual approaches and for instrument approach procedures. These surfaces are three-dimensional trapezoids with 20:1 or 34:1 surfaces extending upward and outward near the end of each runway.

FAR Part 77 and TERPS

Title 14 Part 77 of the Code of Federal Regulations, termed FAR Part 77 *Objects Affecting Navigable Airspace*, specifies various imaginary surfaces designed to protect the airspace around the Airport from objects of natural growth or man-made features, termed obstructions. These surfaces are the primary, approach, transitional, horizontal and conical as described in Section 77.25 and as follows:

1. The primary surface is longitudinally centered on the runway. The elevation of any point on the primary surface is the same as the elevation of the nearest point on centerline. The width of the primary surface is based on the type of approach available or planned for each runway.
2. The approach surface is a surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary surface. An approach surface is applied to each end of each runway based on the type of approach available or planned for that runway end.
3. The transitional surfaces extend outward and upward at right angles to the runway centerline and runway centerline extended at a slope of 7:1 (± 8.13 degrees) from the sides of the primary surface and from the sides of the approach surfaces.

4. The horizontal surface is a level horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging arcs of 10,000 feet from the center of each end of the primary surface of each runway and connecting the adjacent arcs with lines of tangency.
5. The conical surface extends outward and upward from the periphery of the horizontal surface at a slope of 20 to 1 (± 2.86 degrees) for a horizontal distance of 4,000 feet.

Upcoming chapters contain a depiction of these surfaces and the table on the previous page contains dimensional information for the primary and approach surfaces.

In addition to these surfaces, parts of Section 77.23 provide for additional obstruction identification guidance; an object with a height of 500 feet above the ground surface, an object with a height of 200 feet above the ground surface within three nautical miles of the airport reference point (approximate geometrical center of the field) and other objects within terminal instrument airspace are considered obstructions. A determination in this regard is made by FAA via proponent filing of FAA Form 7460 *Notice of Proposed Construction or Alteration*.

2.9 Socioeconomics

A review of historical socioeconomics can provide insights into the future use of the airport. Socioeconomic data was gathered from the U.S. Bureaus of the Census, U.S. Department of Labor, and Bureau of Economic Analysis. The following paragraphs summarize population, employment, income and other appropriate data often important in providing correlation to utilization of the Airport. The majority of existing and new airport users reside in Natchitoches

Parish, the airport service area for purposes herein.

Following is an overview of various economic influences which may affect the utility of the H.H. Coffield Regional Airport.

A History of Coal and Lignite

Coal was discovered in the Rockdale area in the late 1860's but the first mine wasn't opened until long after the arrival of the second railroad line in Rockdale in the 1890's.

By the early 1900's, there were some 12 different mines operating in Milam County including The Black Diamond (later called the Vogel and Lorenz mine), the Santa Fe Mine, the Texas Coal Company and others. These mines employed hundreds of Mexican nationals who came seeking work. Using hand-cranked winches, coal was hauled up and loaded into a wagon pulled to the surface by a mule. This was hard work and cave-ins were common in those days.

For the most part, the mine workers were Hispanics fleeing the revolution in their homelands. These coal miners named their settlement, just north of the International - Great Northern Railroad tracks, La Recluta or 'Recruitment.'

In 1913, Rockdale experienced a mine cave-in that trapped several men in the International Mine. Eight men and one mule awaited rescue for six days. All except one man were rescued alive.

In 1952, after the development of a process by which lignite could be dried and carbonized to produce a cheap fuel, the Aluminum Company of America (Alcoa) constructed a four-potline smelter and three-unit power plant on a 7,000-acre site near Rockdale that ushered in another period of rapid growth. The sleepy little town of

around a 1,000 residents swelled to over 5,000 people in just a few short months.

Under an agreement with McAlester Fuel Company and Texas Power & Light Company (TU Electric), Alcoa purchased the mine site to build the world's first aluminum-producing plant to use lignite as a fuel to generate electrical power.

At the Rockdale plant, Alcoa produced a 1,500 pound "pig" of aluminum as well as sheet ingot used by various other companies to produce aluminum plate, sheet and foil. Alcoa also produced atomized aluminum powder used in making rocket propellants for the NASA Space program.

The Rockdale Alcoa site included a 914-acre, man-made lake which was one of the premier fishing lakes until its closure to the public. Alcoa also developed a large plant near Sandow (the Sandow Power Plant) using lignite to generate electricity for Alcoa.

Sandow is a mining community on Farm Road 1786 eight miles southwest of Rockdale in southern Milam County. At one time the site was a stop for mule drivers hauling freight from Matagorda. Freezeout, as the drivers named the community, had a trading post, a quarter-mile racetrack, and several saloons. A post office opened there in 1873 and was named Millerton in honor of Emil Miller, who had given land for a school. Millerton became a voting precinct in 1874. Its post office closed in 1876, reopened in 1889, and was finally discontinued in 1891, when mail was routed through Rockdale.

For 25 years, the Sandow mine provided lignite to several plants in Texas, including the central heating plants at the University of Texas and Texas A&M University, the San Antonio Public Service plant at New Braunfels, and the Texas

Power & Light plant at Trinidad. The abundance of cheap natural gas, however, undermined the lignite industry during the 1930's and 1940's, and in 1950 the mine at Sandow closed. Though the new business brought a much-needed economic boost to the region, Sandow did not develop as a commercial or residential center. Most of the employees of the Alcoa plant lived and shopped in Rockdale.

The Alcoa facilities are all that remain of Sandow on the 1988 county highway map.

Oil Exploration and Production

In the early 1920's, oil was discovered near Cattail Creek in nearby Minerva by Sam Whonstein that led to the Minerva oil boom. During its peak production years, the Minerva oil fields produced over 450,000 barrels per year supporting a local oil refinery.

Other wells were drilled south and east of Rockdale. Thousands of wellbores were drilled in the Rockdale region over a period of some 50 years. With the rapid growth of the oil and gas industry in Milam County (and throughout the state of Texas), a new energy source was available driving down the demand for lignite coal. This soon led to the closing of all of the lignite coal mines in Milam County. The oil industry of Milam County peaked in a few short years and is down significantly but still produces oil. Substantial oil reserves are known to exist in the region.

In 1999, the United Heritage Corp. acquired an option for over 3,200 acres in Minerva-Rockdale field, Milam County, Texas, to evaluate the field's 200 wellbores and 33 producing wells and update the 1995 estimate of 56 million bbl of oil-in-place reserves.

Exploration and production continue present day on acreage adjacent to the H.H. Coffield Regional Airport.

An added benefit for Rockdale and Milam County is the generation of aviation activity at the H.H. Coffield Regional Airport. Exploration and production companies, as well as other commercial enterprises, have sought and will continue to utilize local airports that offer all the amenities necessary for business aircraft operations – hangar rental, fuel sales, aircraft repairs, charter operations, etc.

Birthplace of Rodeo Bulldogging

Rockdale can also lay claim as the birthplace of bulldogging. It happened in 1903 when Bill Pickett, a famous African-American rodeo star, got the idea for bulldogging a steer as he watched bulldogs working alongside cowboys. When a stubborn Texas Longhorn refused to enter a corral and was panicking the rest of the herd, Pickett rode his horse at full speed alongside the troublesome steer, jumped off his horse and grabbed the steer by its horns. As the longhorn continued to fight him, Pickett bit it on its lower lip and tossed the animal to the ground. All early bulldoggers at rodeos used the lip-biting tactic, but it has been gradually phased out of the bulldogging event at modern rodeos.

Home of the First Motel in Texas

Rainbow Courts was created in 1918 and has been owned by members of the Bullock family since its opening day. It is officially recognized as the first motel in Texas. The original owner was Monroe Bullock, who was later joined by his brother Ira Benjamin Bullock. The property was passed to Marjorie Bullock, and in keeping with family tradition, was purchased by her daughter Joan and her husband Dan Ratliff in the 1990's. A Register from the 30's and 40's reflects room

prices from \$1.00 to \$4.50 alongside signatures of guests from all over the nation including playwright Tennessee Williams, who visited during 1934-36.

Education

The Rockdale Independent School District (ISD) includes an elementary, intermediate, junior and high school campuses. There are 1,700 students in the public school system. The schools have comprehensive programs to encourage activities in athletics; gifted/talented programs; music, art and band; physical education; pre-advanced/advanced placement courses and robotics.

Rockdale ISD creates a strong academic environment through:

- \$7,719 spent per pupil in current expenditures. The district spends 63 percent on instruction, 32 percent on support services, and 5 percent on other elementary and secondary expenditures;
- 15 students for every full-time equivalent teacher, matching the Texas state average of 15 students per full-time equivalent teacher;
- a dropout rate of 3 percent for grades 9-12 in 2009. The national grades 9-12 dropout rate in 2007 was 4.4 percent; and
- providing English Language Learners (ELL) to 5 percent of the student body. ELL students are in the process of acquiring and learning English Language skills.

The Texas Education Agency (TEA) awarded Rockdale High School (9-12) and Rockdale Elementary School (PK-5) with its second highest evaluation award – 'Recognized' – for the 2009 academic year, the most recent recording period.

Within the geographic triangle of Bryan/College Station, Austin and Houston, Rockdale high school graduates have a wide selection of post-

secondary educational opportunities to explore for technical or baccalaureate degrees such as Austin Community College, Baylor University, Blinn College, Mary Hardin-Baylor University, Saint Edward's University, Temple College, Texas A&M University, and the University of Texas at Austin.

Recreation

Rockdale has three diverse parks and a skateboard park in addition to five area lakes to offer residents and visitors outdoor recreation opportunities. Also, the city offers a community center, nine-hole golf course, swimming pool, rodeo arena and lighted tennis courts.

The state of Texas Parks and Wildlife offers outdoor enthusiasts nearby state parks at Bastrop, Buescher and Somerville. Each facility offers a diverse menu of camping, hiking and fishing activities – and more.

Apache Pass, less than 10 minutes northwest of Rockdale on FM Road 908, is a diverse dining, lodging and entertainment venue that spans the San Gabriel River, including a privately-owned 3,000-foot turf runway for residents of the adjacent airpark or to fly in for dinner or experience an outdoor concert.

Rockdale is host to the International and Great Northern Railroad Depot and Heritage Museum, located at 11 N. Main St., on the south side of the business district on the way to the H.H. Coffield Regional Airport. The Museum promotes the origins of the I&GN Railroad dating back to Rockdale's origins in the late 1870's.

Population

Milam County, Texas, mirrors the state of Texas in population growth for the state. The county has experienced and is projected to have steady growth into the next two decades. However, the

segment of the population in Milam County that forms the region's workforce has declined over the last five years - with the age 65 and over segment representing the largest percentage segment of the local population.

Employment

Rockdale is located on the intersection of U.S. Highways 77 and 79. This strategic location places the city in the middle of a commerce triangle 164 miles SE of Dallas; 132 miles NW of Houston; 140 Miles NE of San Antonio; 66 miles NE of Austin.

Within this commerce triangle reside almost 17,000,000 Texas residents and employers. The population center within a 30-mile radius of Rockdale is more than 87,000 people. It is a strategic location from which to recruit new business ventures or welcome expanding enterprises.

The larger employers in Rockdale include Walmart Supercenter, Renaissance Villa, Bland Construction, Brookshire Bros., Citizens National Bank, city of Rockdale, Classic Bank, Manor Oaks Nursing Center, Veolia ES Industrial Services,

Perry & Perry Builders Inc., Richards Memorial Hospital, Rockdale Federal Credit Union, Rockdale ISD, Rockdale Reporter, and Luminant – a Dallas-based energy provider of electricity and lignite mining in Milam County.

The distribution of employment segments within the Rockdale employment market, and number of jobs in each, range from Agriculture, forestry, fishing and hunting, and mining (71); Construction (288); Manufacturing (467); Wholesale trade (65); Retail trade (311); Transportation and warehousing, and utilities (55); Information (72); Finance, insurance, real estate, and rental and leasing (79); Professional, scientific, management, administrative, and waste management services (66); Educational, health and social services (404); Arts, entertainment, recreation, accommodation and food services (194); Other services (except public administration) (206); and Public administration (70). More than 58 percent of the eligible 16 years and older work force population is employed in the Rockdale area.

Rockdale is also served by the Municipal

Table 2-8
Area Socioeconomics

Population	1990	2000	2010	2020	2030
Milam County	22,946	24,238	24,757	28,014	29,238
Texas	16,986,335	20,851,820	25,145,561	28,005,788	31,830,589
United States (000)	248,710	281,422	308,745	324,927	403,687
Labor Force	2007	2008	2009	2010	2011
Milam County	12,197	11,965	11,509	11,476	11,193
Texas	11,411,891	11,653,877	11,968,199	12,269,727	12,451,504
Unemployment	2007	2008	2009	2010	2011
Milam County	4.2	5.5	10.8	10.2	9.6
Texas	4.4	4.9	7.5	8.2	7.9
Per Capita					
Personal Income	2006	2007	2008	2009	2010
Milam County	26,232	28,314	29,823	29,184	30,751
Texas	35,287	37,098	39,615	36,500	37,747

Development District (MDD), a governmental unit voted into existence by the public in May 2010. MDD began levying a one-half percent sales tax on October 1, 2010, on all items in the district which are subject to the general sales tax. The MDD jurisdiction includes the City of Rockdale and its extra-territorial jurisdiction (that area that extends outward from the city limits to one mile).

It is the mission of the MDD to aid the city and interested private or public entities in making the community a better place to live, work and do business. In so doing, the MDD may help develop and finance any permissible project as defined in Chapter 377 of the Texas Local Government Code and that benefits, strengthens and diversifies the economic base of Rockdale.

The Rockdale Municipal Development District is studying the possibility of moving the industrial park from its current location north of the city on Farm to Market Road 487 to a location close to H.H. Coffield Regional Airport.

Income

A measure of economic health is income levels and available disposable income often termed Per Capita Personal Income (PCPI). Recreational aviation activity is found to be more prevalent in areas with higher levels of income and PCPI. Table 2-8 illuminates the regional and statewide income situation. This data indicates the levels of Per Capita Personal Income (PCPI) lags significantly behind the state of Texas average during the past five years. Unemployment also outpaces the Texas average which can be an indicator of limited employment opportunities within Rockdale and Milam County; or business segments affected economically by the recent economic downturn have been slower to return to market values prior to the slowdown.