University-Oxford Airport

AIRPORT LAYOUT PLAN NARRATIVE REPORT

Oxford, MS

January 2020

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CHAPTER 1
INTRODUCTION

1.1 INTRODUCTION

Development of the Airport Layout Plan Update for the University-Oxford Airport was undertaken by the University of Mississippi for the purpose of examining the Airport's existing and future role and to provide direction for long term development of the Airport. Financial assistance for the preparation of the Airport Layout Plan Update was provided by the Mississippi Department of Transportation and the Federal Aviation Administration. The University of Mississippi is obligated, through federal grant assurances, to maintain an up-to-date Airport Layout Plan (ALP).

1.2 PURPOSE OF STUDY

The purpose of this study is to determine the aviation needs of the University-Oxford Airport and its service area for the next 20 years and to ensure safety standards and facility requirements are met and /or planned for. The study is part of the continuing planning process necessary to assure adequate and compatible airport improvements as required to meet the growing aviation demands associated with the Airport.

1.3 GOALS AND OBJECTIVES

The overall goal of this study is to provide the University of Mississippi with an effective planning tool to guide the future development of the University-Oxford Airport. This Airport Layout Plan Update provides local officials with such guidance while ensuring that the development of the Airport is accomplished in a manner that respects the local environment and is consistent with the financial policies of the University of Mississippi. Accomplishment of this goal requires the evaluation of existing airport activity and facilities, and determination of actions needed to maintain an adequate, safe and reliable airport facility to meet the needs of the University of Mississippi, City of Oxford, and the surrounding areas.

The objectives of this ALP were to:

- Inventory existing airside, landside and other support facilities and services currently at the Airport, as well as, the local and regional economic development and growth affecting the Airport;
- Update historical aviation data and develop new forecasts based on historical trends and major changes anticipated for the future;
- Document the methodology, findings, analysis and conclusions for the technical investigation of concepts and alternatives which were performed to develop the proposed plan;
- Propose a viable, phased 5, 10, and 20-year financial plan for achieving the planned airport development and implementation schedule;
- Identify anticipated airport funding needs and proposed airport development policies for consideration by the University-Oxford Airport.

1.4 AIRPORT LAYOUT PLAN NARRATIVE REPORT ORGANIZATION

The Airport Layout Plan Narrative Report for the University-Oxford Airport is organized into functional chapters on the following plan elements:

- Introduction – Purpose of study and overall goals and objectives;
- Existing Conditions – Inventory existing airport facilities and services including airside, landside and airport related land uses;
- Aviation Demand Forecasts – Develop forecasts of aeronautical demand for the short-term (5 years), medium (10 years) and long range (20 year) periods;
- Facilities Requirements – Determine existing airport facilities' ability to accommodate the forecasted aeronautical demands and identify needed improvements to provide the required safety and capacity of airport facilities;
- Recommended Capital Improvement Program – A schedule and cost estimates of the proposed development will be prepared, as well as funding sources for the recommended facilities requirements.

The organization and format of the Airport Layout Plan Update is designed to provide an easily readable, yet comprehensive presentation of the complete plan.

CHAPTER 2
EXISTING CONDITIONS

Preparation of the Airport Master Plan Update for the University-Oxford Airport requires collection and analysis of various data relating to the airport, as well as the area it serves. This includes an inventory of the existing airport facilities, airspace and pertinent local and regional conditions as well as historical information. The data presented was collected through on-site inspections, interviews with airport staff members, the Federal Aviation Administration (FAA), the Mississippi Department of Transportation (GDOT), internet sites, and a review of previous reports, maps, and aerial photographs. Data contained in this chapter will be used as references to conduct additional analyses in subsequent chapters.

2.1 AIRPORT BACKGROUND

2.1.1 Airport Setting

The University-Oxford Airport is located in Lafayette County, approximately two miles northwest of the central business of Oxford, as illustrated in **Figure 2-1**. The airport is located about 2 miles north of US Highway 278 West and is situated on approximately 300 acres of land. The field elevation is 452 feet MSL and the existing airport reference point (ARP) is latitude N34° 23’ 03.6”, longitude W89° 32’ 12.5”. The location ID is UOX.

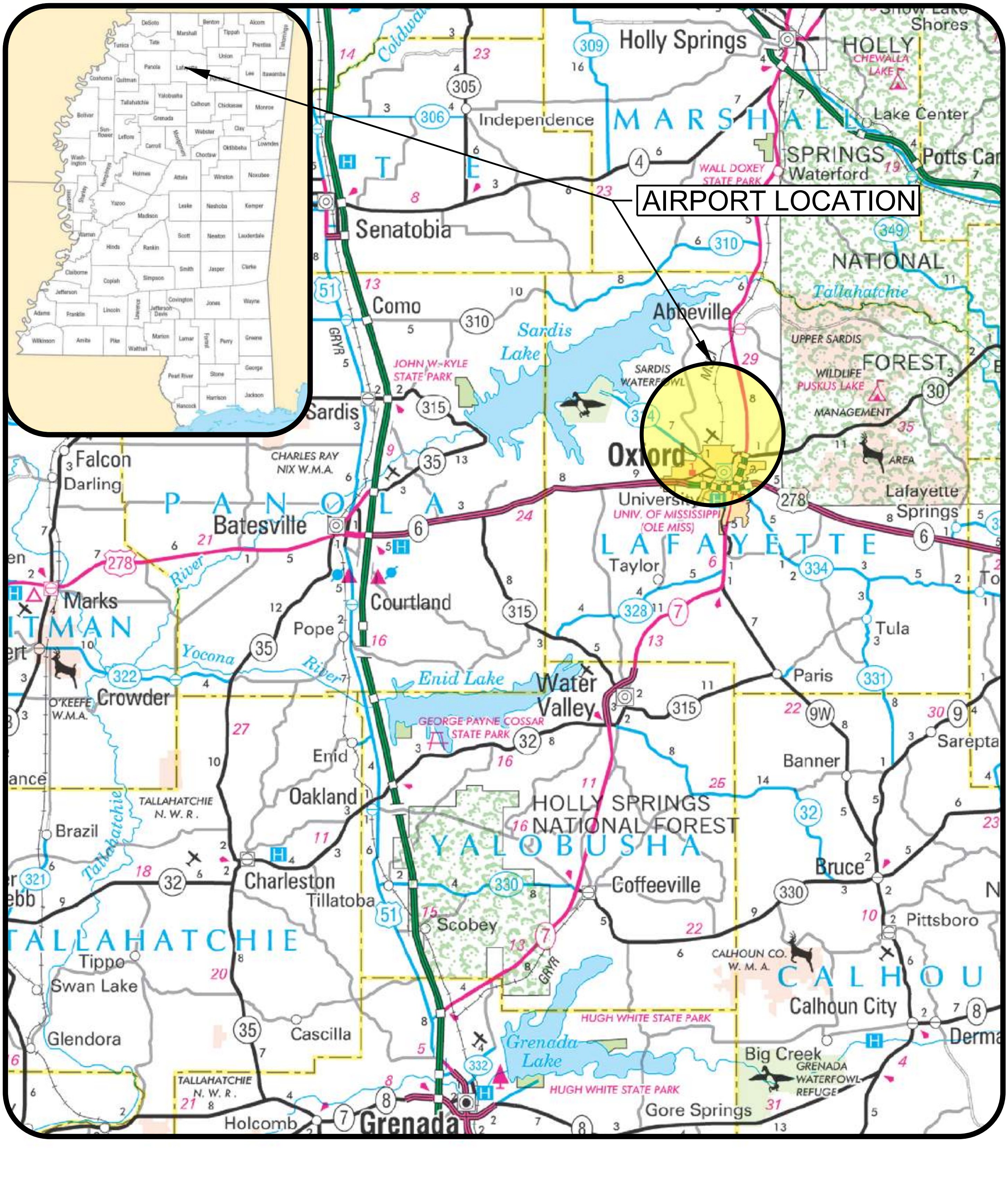
2.1.2 Airport Ownership and Management

The airport is currently owned and operated by the University of Mississippi. An airport manager is stationed at the airport manages the day to day operation of the airport.

2.1.3 Airport Role

The University-Oxford Airport operates as a public-use airport facility owned and operated by the University of Mississippi. At the national level, it is included in the Federal Aviation Administration’s (FAA) National Plan of Integrated Airport System (NPIAS) as a Non-Primary General Aviation service airport. It is further grouped in the local category of non-primary airports based on activity, geographic factors, and public interest functions. The NPIAS includes a total of 3,328 airports according to the last updated report presented in 2019-2023. The University-

Oxford Airport is one of 73 airports in Mississippi that is included in the NPIAS. An airport must be included in the NPIAS to be eligible for federal funding.



Location Map Figure 2-1

2.2 AIRSIDE FACILITIES

For this Airport Layout Plan Narrative Report, an inventory of the Airport's main airside facilities was completed. The information presented in this section was collected through interviews, airport visits and official sources. The airfield facilities of the Airport include the areas where aircraft operate, including the runway, taxiways, and aprons. **Figure 2-2** presents the current airside facilities, which depicts the general layout and major elements of the University-Oxford Airport. **Table 2-2** summarizes airside facility data.

2.2.1 Runways

The runway system at the University-Oxford Airport consists of a single runway, designated Runway 9/27. Runway 9/27 is 5,600 feet in length by 100' feet wide, and constructed of asphalt. The runway maintains non-precision runway markings and medium intensity lighting (pilot controlled) in accordance with FAA standards. Runway marking elements include the landing designator, centerline, threshold, aiming point, and edge stripes. The runway currently meets airport design standards for line-of-site. In 2017 a Pavement Condition Index (PCI) Evaluation was performed for Runway 9/27. The evaluation revealed that Runway 9-27 had a composite PCI of 66 which is considered as "Fair" based on the standard PCI rating scale. The field analysis noted longitudinal and transverse cracks in the asphalt surface. As a result of the PCI study, a crack seal and marking project was completed on Runway 9/27 in 2018. At time of this report, the runway is considered to be in "Satisfactory" condition.

2.2.2 Taxiways

The University-Oxford Airport has a taxiway system consisting of one full parallel taxiway southwest of the runway and five transverse connector taxiways. The taxiway nomenclature is Taxiway Alpha for the parallel taxiway and Taxiway Bravo, Charlie, and Delta for the connector taxiways. **Figure 2-2** depicts the overall taxiway system layout.

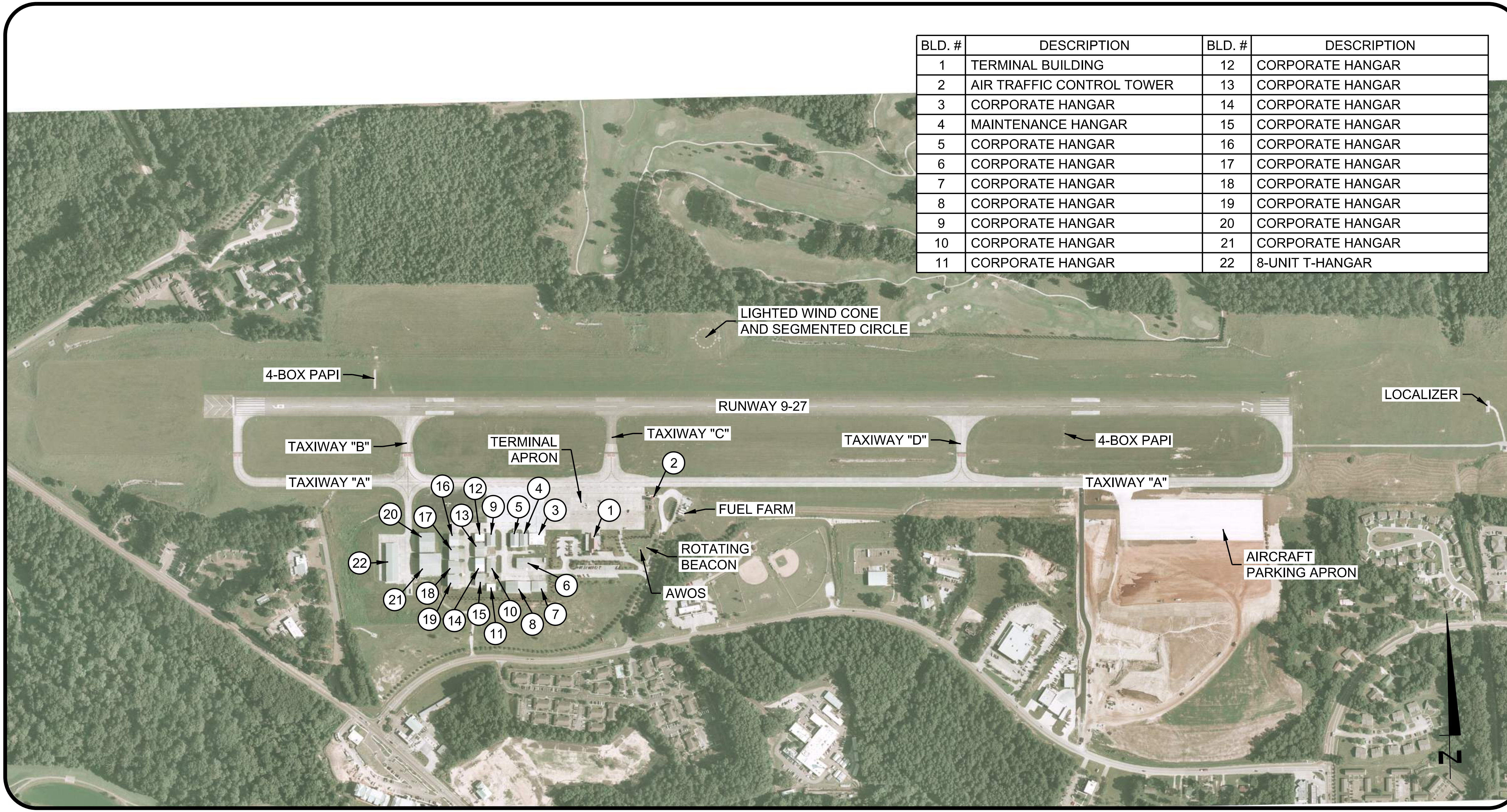
2.2.3 Aprons

There are two public aircraft aprons at UOX. Locations are identified in Figure 2-2: Existing Facilities Map. The function of an aircraft apron is to provide areas for aircraft parking, loading, unloading, and fueling.

The terminal or "West" apron serves as the primary aircraft parking apron at UOX serving the transient parking needs for the terminal building. The eastern portion of this apron has a concrete surface and is approximately 520' X 220'. This apron section is in poor condition related to age and some load related distresses (block cracking and unraveling). The middle portion of this apron also has a concrete surface and is approximately 300' X 220'. This apron was constructed in 2015 and is in excellent condition. There are nine (9) striped aircraft tie-downs for aircraft parking. The western portion of this apron has an asphalt surface and is approximately 350' X 190'. This apron section was constructed in 2012 and is in good to excellent condition. There are fourteen (14) striped aircraft tie-downs for aircraft parking.

The "East" apron is located adjacent to and south of the Runway 27 end. This apron has a concrete surface, eighteen (18) striped tie-downs, and is approximately 750' X 215'. This apron was constructed in 2015 and is in excellent condition. Currently, there is no hangar development along the apron but long-range plans call for more hangars to be constructed in the future as demand dictates.

BLD. #	DESCRIPTION	BLD. #	DESCRIPTION
1	TERMINAL BUILDING	12	CORPORATE HANGAR
2	AIR TRAFFIC CONTROL TOWER	13	CORPORATE HANGAR
3	CORPORATE HANGAR	14	CORPORATE HANGAR
4	MAINTENANCE HANGAR	15	CORPORATE HANGAR
5	CORPORATE HANGAR	16	CORPORATE HANGAR
6	CORPORATE HANGAR	17	CORPORATE HANGAR
7	CORPORATE HANGAR	18	CORPORATE HANGAR
8	CORPORATE HANGAR	19	CORPORATE HANGAR
9	CORPORATE HANGAR	20	CORPORATE HANGAR
10	CORPORATE HANGAR	21	CORPORATE HANGAR
11	CORPORATE HANGAR	22	8-UNIT T-HANGAR



Existing Facilities Map Figure 2-2

2.3 ELECTRONIC, VISUAL, AND COMMUNICATION AIDS

Pilots rely on electronic and visual navigation and communication aids (collectively referred to as navigational aids or NAVAIDs) to conduct safe operations. The following sections describe the instrument procedures, en-route aids, visual aids, and communication aids utilized at UOX.

2.3.1 Instrument Approaches

The FAA currently publishes GPS and LOC (Localizer) Instrument Approach Capabilities (IAPs) for the Airport designed to assist pilots in navigating to a runway for landing during poor weather conditions, as summarized in **Table 2-1**. Existing IAPs include Area Navigation (RNAV) GPS procedures for Runways 9 and 27 and a LOC (Localizer) approach for Runway 9. Following are the approach plates for instrument procedures at the Airport. The visibility and ceiling minima vary depending on aircraft equipment and aircraft approach category. The table shows the lowest values.

TABLE 2-1: Standardized Instrument Approach Procedures

Instrument Approach	Category	Visibility Minima	MDA/DA
LOC RWY 9	Non-Precision	1 mile	502’
RNAV (GPS) LPV - RWY 9	Non-Precision	¾ mile	250’
RNAV (GPS) LPV - RWY 27	Non-Precision	1 mile	488’

Source: FAA Instrument Approach Plates

2.3.2 Visual Aids

Visual aids provide additional information for identification and safe operation at an airport. The University-Oxford Airport is equipped with a rotating beacon, a lighted wind cone, and PAPIs, for visual cues of airport conditions.

Rotating Beacon

The University-Oxford Airport is equipped with a rotating beacon, located just northwest of the terminal building. High intensity lamps mounted on an assembly rotate 360° every six seconds, giving the illusion of emitting flashes of light. The designation for UOX, a civilian land airport, is alternating green and white lights in equal duration. The rotating beacon is operational from sunset to sunrise and during IMC.

Wind Cone

The lighted wind cone and segmented circle is located north of the runway, approximately 300 feet from the centerline and equal distance from both Runway thresholds.

Precision Approach Path Indicators

Runway 9/27 is equipped with a 4-light PAPI system located on the left side of the thresholds. These landing aids help pilots visually establish aircraft on the proper approach glide path for landing, by emitting one red light and one white light when the aircraft is vertically aligned properly. The PAPI system emits two red lights if the aircraft is lower than the glide path and two white lights if the aircraft is higher than the proper glide path, indicating to the pilot an adjustment of altitude is needed. According to the FAA 5010 Airport Master Record the Runway 9 PAPI system is set to a 3.00° glidepath and the Runway 27 is set to a 3.60° glidepath.

2.4 WEATHER REPORTING FACILITIES

The airport is equipped with an Automated Weather Observation Station (AWOS-III) weather reporting system located just north of the terminal apron. The AWOS is a modern weather collection and reporting system that measures the following meteorological conditions:

- Wind velocity and direction,
- Temperature and dewpoint,
- Visibility,
- Cloud cover and sky conditions,
- Barometric pressure, and
- Prevalent weather conditions (fog, thunderstorms, rain)

The AWOS equipment gathers meteorological data every minute and automatically transcribes current conditions via a designated radio frequency. The automatic transcription is also available via telephone and aviation weather websites.

TABLE 2-2: EXISTING AIRSIDE FACILITIES

Item	Existing Conditions
Airport Role	FAA - GA/Non-Primary
Airport Elevation	452.0 ft MSL
Airport Property	300 ac
Max Mean Temp. of Hottest Month	89.3° F
Airport Reference Point (latitude/longitude)	34-23-03.60 N / 89-32-12.50 W
Instrument Approach Procedures	RNAV – GPS (LPV) / LOC
Weather Reporting	AWOS 3-PT
Runway 9/27	
Runway Length	5,600 ft
Runway Width	100 ft
Pavement Type	Asphalt
Strength - Gross Weight (in Thousands)	38 SWL/55 DWL/90 2D
Lighting	MIRL
Marking	Non-Precision
Parallel Taxiway	
Taxiway Pavement Type	Asphalt
Lighting	MITL

2.5 METEOROLOGICAL DATA

2.5.1 Instrument Approaches

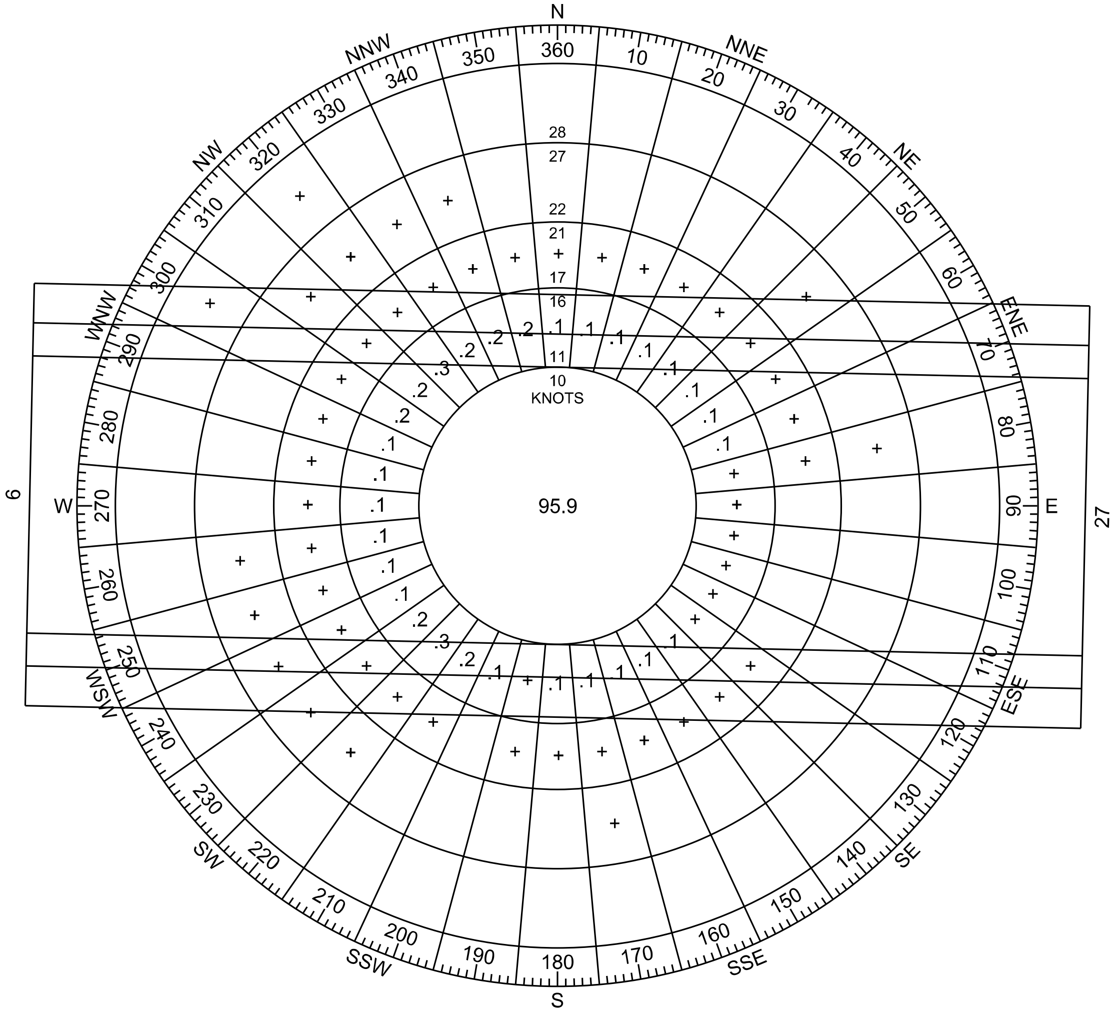
Oxford, Mississippi has a warm and humid climate as well as abundant rainfall. Average temperatures range from a low of 30 degrees Fahrenheit in January to a high of 90 degrees Fahrenheit in July. The mean max temperature of the hottest month as depicted on the ALP drawing set is 90 degrees Fahrenheit.

2.5.2 Wind Analysis

Wind coverage indicates what percentage of the time that the crosswind components are within acceptable velocity. For the purpose of runway wind analysis, a crosswind component can be defined as the wind that occurs at a right angle to the runway centerline. The desirable wind coverage for an airport is ninety-five percent (95%). If the airfield were utilized solely by small aircraft, the critical crosswind component would be 10.5 knots. Where types of aircraft classified as larger than utility (generally those aircraft weighing in excess of 12,500 pounds) are using the facility, a crosswind component of 13 and 16 knots is used. University-Oxford Airport is projected to serve aircraft in excess of 12,500 pounds. Therefore, a crosswind component of 13 and 16 knots is used for the wind analysis.

The wind data for the wind rose is based on data contained in the National Climatic Data Center (NCDC) and received from the University-Oxford Airport. It is recognized that local variations in wind pattern do occur, however, this reporting station is reasonably representative of the wind patterns present.

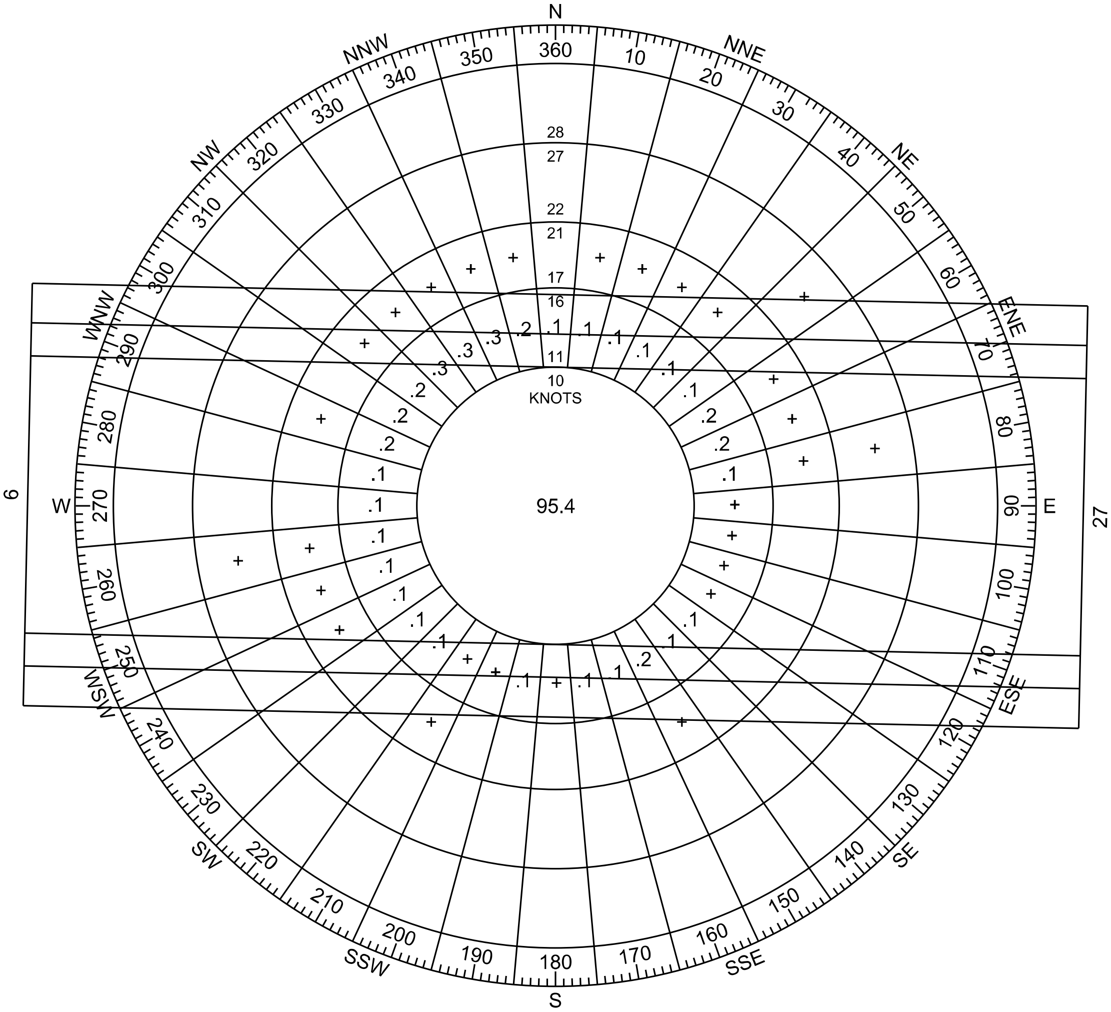
As the All Weather Wind Rose indicates, Runway 9/27 provides 99.11 percent wind coverage for the 13 knot crosswind component and 99.91 percent wind coverage for the 16 knot crosswind component. The All Weather Wind Rose is presented in Figure 2-3. During IFR conditions, Runway 9/27 provides 99.06 percent wind coverage for the 13 knot crosswind component and 99.90 percent wind coverage for the 16 knot crosswind component. The IFR Wind Rose is illustrated in Figure 2-4. This exceeds the FAA guidelines for recommended wind coverage.



ALL WEATHER WIND ROSE			
RUNWAY	10.5 KNOT	13 KNOT	16 KNOT
9/27	97.95%	99.11%	99.91%

219,957 OBSERVATIONS MADE
OVER THE PERIOD OF 2009-2018
STATION # 720541 UNIVERSITY-OXFORD AIRPORT

All Weather Wind Rose Figure 2-3



IFR WIND ROSE			
RUNWAY	10.5 KNOT	13 KNOT	16 KNOT
9/27	97.91%	99.06%	99.90%

21,584 OBSERVATIONS MADE
OVER THE PERIOD OF 2009-2018
STATION # 720541 UNIVERSITY-OXFORD AIRPORT

IFR Wind Rose Figure 2-4

2.6 LANDSIDE FACILITIES

The landside facilities at UOX include one terminal building, fuel storage, and hangars for aircraft storage. These facilities support and provide services for aircraft operators at the airport. The landside facilities at the Airport are depicted on **Figure 2-2**.

2.6.1 Terminal Building

The terminal building is located in the terminal area on the southwest side of the airport and is occupied by the University-Oxford Airport. The University is acting as the airport's only FBO and offers a variety of services, including low-lead \aviation gasoline (100LL) and Jet-A fuel, pilot supplies, pilot lounge, vending, flight planning area and weather computer.

2.6.2 Hangars

The airport has one 8-Unit T-Hangar and nineteen (19) corporate hangars. All of the hangar buildings are located on the southside of the airfield. There is a high demand for hangar space as evidenced by the current T-Hangar waiting list. The CIP plan calls for more hangars to be constructed in the future as demand dictates.

2.6.3 Fuel Storage

The aircraft fuel storage facilities at the Airport for public use are owned and operated exclusively by the University-Oxford Airport. The fuel farm is located on the southside of the airfield east of the terminal apron. The fuel farm consists of three 12,000-gallon aboveground tanks, one for Avgas (100 LL) and the other two for Jet-A. The Airport is also equipped with a Jet-A fuel truck.

2.6.4 Perimeter Fencing

The airport is fully enclosed, with a Wildlife/Security 8' chain link fence with three strands of barb wire on top. There is also a 6' chain link fence with three strands of barb wire on top surrounding the terminal area.

CHAPTER 3
AVIATION DEMAND FORECASTS

3.1 INTRODUCTION

Facility planning requires a definition of demand that may be expected to occur during the useful life of the facility's crucial components. For the University-Oxford Airport, this involves projecting aviation demand for a 20-year timeframe. In this report, forecasts of based aircraft, based aircraft fleet mix, and annual airport operations are projected.

The forecasts generated may be used for a multitude of purposes; including facility needs assessments as well as environmental evaluations. The forecasts will be submitted to the FAA for review and approval to ensure accuracy and reasonable projection of aviation activity. The intent of the projections is to enable the University-Oxford Airport to make facility improvements to meet demand in the most efficient and cost-effective manner possible.

It should be noted that aviation activity can be affected by numerous outside influences on local, regional and national levels. As a result, forecasts of aviation demand should be used only for advisory purposes. It is recommended that planning strategies remain flexible enough to accommodate any foreseen facility needs.

3.2 NATIONAL AVIATION OVERVIEW

Published annually by the Federal Aviation Administration (FAA), the *FAA Aerospace Forecast: Fiscal Years 2018-2038* is an important guide for projecting aviation operations and based aircraft. The Aerospace Forecast presents national trends in aviation demand over the forecast period based on economic conditions, historical trends, and international economic and aviation projections.

The Aerospace Forecast indicates that despite continuing decreases in rotorcraft deliveries that started to stabilize in 2017, the total active general aviation fleet is projected to remain stable and the general aviation hours flown is expected to increase through 2038. Most of the increase in general aviation hours flown will occur in the business jet fleet with a slight decrease in the fixed-wing piston fleet. The active general aviation fleet is projected to remain stable over the forecast period. The declines in the fixed-wing piston fleet are expected to be offset by increases in the turbine, experimental, and light sport fleets, growing at an average rate of 2.0 percent per year over the forecasting period for the turbine- powered fleet. Further analysis indicates that the turbojet fleet is expected to increase 2.2 percent per year. The growth in U.S. GDP and corporate profits are catalysts for the growth in the turbine fleet.

An average annual rate decrease of 0.8 percent is forecasted through 2038 with regard to the fixed-wing piston aircraft fleet. Unfavorable pilot demographics, overall increasing cost of aircraft ownership, coupled with new aircraft deliveries not keeping pace with retirements of the aging fleet are the drivers of the decline. However, large growth in the light-sport-aircraft market of 3.6 percent growth annually is expected through 2038. Overall, the number of active pilots is expected to decrease at approximately 0.4 percent per year over the forecast period. The number of general aviation flight hours is expected to increase an average of 0.8 percent per year over the forecast period. This increase will be fueled by a 2.7 percent increase in hours flown by jet aircraft. Also supporting this increase is expected strong growth in the turbine-powered fleet.

The National Aerospace Forecast is considered when developing demand forecasts for the University-Oxford Airport. As a general aviation facility, the airport could experience growth and contraction similar to those projected on the national scale.

3.3 BASED AIRCRAFT

The aviation facilities at an airport should accurately reflect the aviation needs of the airport. Nationally the entire general aviation fleet is expected to grow at a very low rate. The local growth at a given airport is normally related to local economic conditions. Forecasting based aircraft requires the assumption that the airport facilities will keep pace with the demand of aviation use, and will not limit the number of based aircraft to be accommodated in the future. The Airport records as inventoried in September 2019 shows 26 validated based aircraft. Of these, 16 are single engine aircraft, 7 multi-engines and 3 business jets. Since the State of Mississippi does to have a Statewide Aviation System Plan with forecasts, two methods were used to develop projections of based aircraft at the University-Oxford Airport including:

- FAA Terminal Area Forecasts (TAF)
- Market Share Analysis

These methods are important for forecasting future based aircraft at the University-Oxford Airport. The preferred methodology will be chosen and will guide future development decisions at the airport. The current validated based aircraft count as determined by the Airport was used as the base year for each of the forecast methods. A brief discussion of each methodology is provided below:

Method 1 – FAA Terminal Area Forecasts – Projections from the FAA Terminal Area Forecast dated February 2019 was examined as part of this forecast update. The TAF is prepared to assist the FAA in planning for the agency's internal budgeting and staffing requirements. TAF projections are made at the individual airport level and are derived, in part, on national and regional FAA aviation forecasts. Although updated annually, the TAF usually does not provide detailed forecasts for many of the nation's smaller general aviation airports. Accordingly, the TAF for the University-Oxford Airport was found to reflect static (unchanging year-over-year) projections of aviation activity growth through the year 2045. Therefore, the TAF was determined not to provide a suitable forecast for the University-Oxford Airport.

Method 2 – Market Share Analysis – The Market Share method examines the University-Oxford Airport current based aircraft levels as a share of the national southern region of general aviation fleet, as calculated in the FAA's Terminal Forecast. The Terminal Area Forecast (TAF) issued in January 2018 projects national operations ranging from 32,436 in 2019 to 38,447 in 2039, representing a 0.85% Average Annual Growth Rate (AAGR). The current 2019 market share for the University-Oxford Airport of the nation is 0.080%. This market share projected through the planning period reveals a total of 31 based aircraft by 2039. This also represents a 0.85% AAGR.

Recommended Based Aircraft Forecast – After review of the three methods, Method 2 (Market Share Analysis) was chosen for the recommended growth rate expected at the University-Oxford Airport for planning purposes. This is within the FAA's guidelines of forecast not differing from the TAF by more than 10 percent in the 5-year forecast period and 15 percent in the 10-year forecast period.

TABLE 3-1: GENERAL AVIATION BASED AIRCRAFT FORECASTS

Year	Method 1	Method 2	Recommended
2019 (Base Year)	26	26	26
2024	26	27	27
2029	26	29	29
2039	26	31	31

3.4 BASED AIRCRAFT DISTRIBUTION

The distribution of aircraft by number and type of engines is necessary in estimating the requirements for hangar and apron space. Consideration was given to the existing conditions and national trends, both historic and predicted, in the development of this forecast. The recommended forecast recognized that, nationally, the turboprop, and business jet fleets are growing at a faster rate than the single engine piston and multi-engine aircraft fleets.

The number of based aircraft is forecasted to increase from a total of 26 for 2019 to a total of 31 by the year 2039. The exact numbers and type of aircraft actually based at the Airport in any of the planning periods may vary from what is shown. However, it is believed that the totals and mix of aircraft shown are a reasonable representation and may be adopted for planning purpose.

TABLE 3-2: BASED AIRCRAFT BY CATEGORY

Year	Single Engine	Multi-Engine	Jet	Helicopter	Total
2019 (Base Year)	16	7	3	0	26
2024	16	7	4	0	27
2029	17	8	4	0	29
2039	17	9	5	0	31

3.5 GENERAL AVIATION OPERATIONS FORECAST

Similar to the methodology used in developing the based aircraft forecast, the projections for aircraft operations were prepared. The methods considered include the Market Share Analysis and Operations per Based Aircraft.

The FAA's 2019 Terminal Area Forecast (TAF) is used in this forecast effort as a record of historic and current operations. For the University-Oxford Airport, the TAF estimates 59,294 annual operations in 2019 and shows no increases or decreases throughout the forecast period. This will be used as the base year of operations for all forecast methodologies.

Method 1 - Market Share Analysis

The Market Share method examines the University-Oxford Airport's current operations levels as a share of national southern region operations as calculated in the FAA's Terminal Area Forecast. The Terminal Area Forecast (TAF) issued in January 2018 projects national operations increasing from 23,305,832 in 2019 to 26,495,043 in 2039, representing a 0.64% Average Annual Growth Rate(AAGR). The current 2019 market share for the University-Oxford Airport of the nation is 0.25%. This market share projected through the planning period reveals a total of **26,177 operations** by 2039. This also represents a 0.64%AAGR.

Method 2 - Operations per Based AircraftMethod

Forecasting operations as a factor of the number of aircraft based at the airport is one of the most effective methods of projecting levels of general aviation operations. Dividing a historic given year's operations by based aircraft reveals the Operations Per Based Aircraft (OPBA) for that year.

Calculating the OPBA from 2018 reveals a total of 2,280 OPBA. FAA Order 5090.3C *Field Formulation of the National Plan of Integrated Airport Systems (NPIAS)* provides guidance that rural general aviation airports with little itinerant traffic might have 250 operations per based aircraft and busier general aviation airports with more itinerant traffic might have 350 operations per based aircraft. This indicates that the University-Oxford Airport has an above average ratio of operations per based aircraft. Multiplying the 2019 OPBA value by the forecasted based aircraft of 31 in 2039 reveals a forecasted **70,680 operations** in 2038. This represents an AAGR of 0.88%.

Preferred Forecast Methodology

The Market Share forecast provides the preferred planning methodology. It's 0.64% AAGR provides a reasonable growth trend for this type of facility. Mirroring the growth trend forecasted at the national level, it is reasonable to expect a growth trend throughout the 20-year planning period and reach **70,680 operations** by 2039.

TABLE 3-3: GENERAL AVIATION OPERATIONS FORECASTS

Year	Method 1	Method 2	Recommended
2019 (Base Year)	59,294	59,294	59,294
2024	61,191	61,560	61,191
2029	63,149	66,120	63,149
2039	67,190	70,680	67,190

3.6 GENERAL AVIATION OPERATIONS BY TYPE

Aircraft operations are divided into two types: local and itinerant. Local operations are classified as arrivals and departures of aircraft which operate in the local traffic pattern or within sight of the tower. These flights are known to be departing for or arriving from flights in local practice areas within a 20-mile radius of the airport. Local flights also include simulated instrument approaches or low passes at the airport executed by any aircraft. Itinerant operations are defined as all other operations other than local. The current ratio of local to itinerant operations is 63 percent local versus 37 percent itinerant operations. This estimated operational split was based on the FAA Terminal Area Forecast.

This ratio is expected to remain constant throughout the study period as shown on the Table below:

TABLE 3-4: FORECASTS OF GENERAL AVIATION OPERATIONS BY TYPE

Year	Local	Itinerant	Total
2019 (Base Year)	37,355	21,939	59,294
2024	38,550	22,641	61,191
2029	39,784	23,365	63,149
2039	42,330	24,860	67,190

3.7 SUMMARY OF GENERAL AVIATION FORECASTS

The aviation forecasts made in this chapter reflect accepted methods of forecasting coupled with sound aviation planning judgments. These forecasts were based on the most recent data available. The forecasts presented in this chapter will adequately describe future conditions concerning general aviation operations at the University-Oxford Airport.

TABLE 3-5: SUMMARY OF GENERAL AVIATION FORECASTS

Item	Forecast			
	2019	**2024**	**2029**	**2039**
Based Aircraft	26	27	29	31
Aircraft Operations				
General Aviation Local	37,355	38,550	39,784	42,330
General Aviation Itinerant	21,939	22,641	23,365	24,860
General Aviation Total	**59,294**	**61,191**	**63,149**	**67,190**

CHAPTER 4
FACILITY REQUIREMENTS

4.1 INTRODUCTION

The chapter identifies the requirements for airfield and landside facilities to accommodate the forecast demand levels at the University-Oxford Airport. In order to meet the demand levels, an assessment of the ability of existing airport facilities to meet current and future demand was conducted. The facility requirements were based on information derived from FAA advisory circulars and design standards, the sponsor’s future vision of the airport, the condition and functionality of existing facilities, and other pertinent information.

The time frame for addressing development needs usually involves short-term (up to five years), medium-term (six to ten years), and long-term (eleven to twenty years) planning periods. Long-term planning primarily focuses on the ultimate role of the airport and is related to development. Medium-term planning focuses on a more detailed assessment of needs, while the short-term analysis focuses on immediate action items. Most important to consider is that a good plan is one that is based on actual demand at an airport rather than time-based predictions. Actual activity at the airport will vary over time and may be higher and lower than what the demand forecast predicts. Using the three planning milestones (short-term, medium-term, and long-term) the airport sponsor can make an informed decision regarding the timing of development based on the actual demand. This approach will result in a financially responsible and demand-based development of the Airport.

4.2 DESIGN STANDARDS

Airport design standards provide basic guidelines for a safe, efficient, and economic airport system. The standards cover the wide range of size and performance characteristics of aircraft that are anticipated to use an airport. Various elements of airport infrastructure and their functions are also covered by these standards. Choosing the correct aircraft characteristics for which the airport will be designed needs to be done carefully so that future requirements for larger and more demanding aircraft are taken into consideration. while at the same time remaining mindful that designing for large aircraft that may never serve the airport is not economical.

4.2.1 Critical Aircraft and Reference Code

The selection of appropriate FAA design standards for the development and location of airport facilities is based primarily upon the characteristics of the aircraft which are currently using or are expected to use an airport. The critical design aircraft is used to define the design parameters for an airport. The design aircraft may be a single aircraft or a composite aircraft representing a collection of aircraft classified by the three parameters: AAC, ADG, and TDG. In the case of an airport with multiple runways, a design aircraft is selected for each runway.

The critical design aircraft is the most demanding aircraft type, or grouping of aircraft with similar characteristics, that account for at least 500 annual itinerant (non-training) operations. Planning for future aircraft use is of particular importance since the design standards are used to plan separation distances between facilities. These future standards must be considered now to ensure that short term development does not preclude the reasonable long-range potential needs of the airport.

According to FAA AC 150/5300-13A, *Airport Design*, "airport designs based on existing aircraft can severely limit the ability to expand the airport to meet future requirements for larger, more demanding aircraft. Airport designs that are based on large aircraft never likely to be served by the airport are not economical." Selection of the current and future critical design aircraft must be realistic in nature and supported by current data and realistic projections.

Critical Design Aircraft

The FAA maintains the Traffic Flow Management System (TFMSC) database which documents certain aircraft operations at certain airports. Information is added to the TFMSC database when pilots file flight plans and/or when flights are detected by the National Airspace System, usually via radar. It includes documentation of commercial traffic (air carrier and air taxi), general aviation, and military aircraft. Due to factors, such as incomplete flight plans and limited radar coverage, TFMSC data does not account for all aircraft activity at an airport by a given aircraft type. Therefore, it is likely that there are more operations (touch and go's, for example) at an airport that are captured by this methodology. TFMSC data is available for activity at the University-Oxford Airport and was utilized in this analysis.

A review of IFR flight data from the FAA TFMSC reports over the past three years indicates that the majority of the operations at the airport are in the B-I/II Aircraft AAC/ADG. This would include aircraft such as the Beechcraft King Air 90/200/350, Cessna Citation CJ2/CJ3/CJ4, and Cessna Citation II/Bravo. Further review of the TFMSC data indicates that there were greater than 500 operations of C-II aircraft during the captured time period. This would include aircraft such as the Bombardier Challenger 300/600, Bombardier CRJ 200/700, Learjet 75, and Gulfstream G200. For this report we will assume that the Challenger 600 is the existing and forecasted critical aircraft for Runway 18/36 with an ARC of C-II. Table 4-11 below presents the TFMSC operational mix at the Airport for aircraft utilizing the facility over a three-year period (2017-2019).

Table 4-1
TFMSC Operational Mix

Deaign Categories	2017	2018	2019
Approach Category A	3,690	2,277	1,263
Approach Category B	6,129	5,798	3,226
Approach Category C	652	690	502
Approach Category D	209	205	102
Total	**10,680**	**8,970**	**5,093**
Airplane Design Group I	5,525	4,743	2,350
Airplane Design Group II	3,239	3,509	1,807
Airplane Design Group III	43	79	44
Airplane Design Group IV	-	-	-
Total	**8,807**	**8,331**	**4,201**

4.3 Airside Facility Requirements

All airports are comprised of both airside and landside facilities. Airside facilities consist of those facilities that are related to aircraft arrival, departure, and ground movement, along with navigational aids, airfield lighting, pavement markings, and signage.

4.3.1 Runway Length

AC 150/5325-4B, Runway Length Requirements for Airport Design, provides guidelines to determine runway length requirements based on performance curves of the critical aircraft. For aircraft weighing 60,000 pounds or less, the runway length is determined by family groupings of aircraft having similar performance characteristics. The first family grouping is identified as small aircraft, which is defined by the FAA as airplanes weighing 12,500 pounds or less at maximum takeoff weight (MTOW). The second family grouping is identified as large aircraft, which is defined by the FAA as aircraft exceeding 12,500 pounds but weighing less than 60,000 pounds. For aircraft weighing more than 60,000 pounds, the required runway length is determined by aircraft-specific length requirements.

With an existing runway length of 5,600, Runway 9-27 can accommodate 100 percent of the small airplanes. However, the potential need to extend the runway may exist in the distant future in order to accommodate large aircraft weighing more than 12,500 pounds but less than 60,000 pounds, and aircraft weighing more than 60,000 pounds (i.e. larger corporate jets such as the Gulfstream IV and V). Therefore, a planned runway extension will be depicted on the ALP for planning purposes only. A runway extension is not currently justified, but the City has considered the potential impacts of a longer runway in their land use planning efforts. Thus, it is reasonable to continue protecting land needed for a potential runway extension at some point in the future.

4.3.2 Declared Distances

At the time of the runway extension, declared distances will be used to meet runway approach and departure surface clearance requirements. Table 4-2 shows the declared distances for when Runway 9/27 is extended to 6,500 feet. In all cases the Declared Distances equal the total runway length.

Table 4-2
Declared Distances – Ultimate Runway Length

Declared Distance	Runway 9	Runway 27
TORA	5,600’	6,500’
TODA	5,600’	6,500’
ASDA	6,500’	6,500’
LDA	6,500’	5,600’

4.3.3 Runway Width

The required runway width is a function of airplane approach category, airplane design group, and the approach minimums for the design aircraft expected to use the runway on a regular basis. The existing runway pavement width of 100 feet for Runway 9-27 meets the existing and future FAA design standards and should be maintained over the planning period.

4.3.4 Runway Pavement Strength

Pavement strength requirements for airfield pavements are related to design aircraft weight. No geotechnical evaluation was performed as part of this ALP Update. However, the pavement strength is reported to be 38,000 pounds single-wheel gear, 55,000 dual-wheel gear, and 90,000 pounds dual-tandem gear in the FAA 5010 master data record. Although the existing pavement strength is sufficient to accommodate the aircraft operations currently using the runway, foreseeable conditions could require the need for additional runway pavement strength within the planning period to accommodate larger business jets. It is recommended that a geotechnical evaluation be completed along with a Pavement Classification Number (PCN) analysis to accurately reflect the pavement strength as shown in the FAA 5010 master record.

4.3.5 Runway Gradient – Modification of Standards

Pavement strength requirements for airfield pavements are related to design aircraft weight. No geotechnical evaluation was performed as part of this ALP Update. However, the pavement strength is reported to be 38,000 pounds single-wheel gear, 55,000 dual-wheel gear, and 90,000 pounds dual-tandem gear in the FAA 5010 master data record. Although the existing pavement strength is sufficient to accommodate the aircraft operations currently using the runway, foreseeable conditions could require the need for additional runway pavement strength within the planning period to accommodate larger business jets. It is recommended that a geotechnical evaluation be completed along with a Pavement Classification Number (PCN) analysis to accurately reflect the pavement strength as shown in the FAA 5010 master record.

4.3.6 Taxiway Requirements

The University-Oxford Airport is currently served by one full parallel taxiway and five taxiway connectors to the runway. There are also several stub taxiways serving the apron area. The following taxiway improvements are recommended:

- Extend parallel taxiway 900 feet in conjunction with the planned runway extension
- All existing taxiway connectors that provide direct access from the apron to the runway will be removed to prevent runway incursions in accordance with FAA design standards
- Taxiway pavements should be rehabilitated and/or overlaid as needed to maintain a suitable movement surfaces

Taxiways are geometrically designed based on the Taxiway Design Code (TDG) of the critical aircraft identified for the taxiway segment. There may be more than one TDG for taxiway infrastructure at an airport. According to FAA Advisory Circular (AC) 150/5300-13A-Change 1, Airport Design, the minimum recommended runway to taxiway centerline separation for a runway with an RDC of C-II is 300 feet with a minimum recommended width of 35 feet. The existing parallel taxiway meets FAA design standards. As noted above, taxiway connectors with a direct access from the apron to the runway will be removed in the future to meet FAA guidance of runway incursion prevention.

4.3.7 Runway Protection Zones/Approaches

Property located adjacent to a runway's threshold is critical to the safe operation of aircraft. Structures or vegetation that are located too close to a runway end can be an obstruction to air navigation and may become a hazard. To ensure the safety and compatibility of people and property with airport operations, the FAA has established criteria that define the size, shape, and height of areas beyond the ends of runways that should remain clear of structures and vegetation. These standards also provide guidance to communities and to airport management concerning compatible land uses and land ownership. The runway protection zone (RPZ) defines the size and shape of these areas while the approach slope defines the required height limitations associated with these areas.

Table 4-2 provides data concerning the RPZ's dimensional standards and Table 4-3 provides runway approach data such as approach slope dimensions and the obstruction clearance slopes associated with each runway end at University-Oxford Airport. The obstruction clearance slope indicates the slope to the top of the controlling obstruction within the runway's approach. It should be noted that the Airport has fee-simple ownership of property within the existing RPZ's on the approach end of Runway 9 and Runway 17.

Table 4-3
Runway Protection Zone Dimensions

Existing			
Runway	**Length (Ft)**	**Inner Width (Ft)**	**Outer Width (Ft)**
9	1,700	1,000	1,510
27	1,700	500	1,010
Proposed			
Runway	**Length (Ft)**	**Inner Width (Ft)**	**Outer Width (Ft)**
9	1,700	1,000	1,510
27	1,700	500	1,010

Source: Federal Aviation Administration Advisory Circular 150/5300-13A-Change 1, Airport Design

Table 4-4
Runway Approach Data

Existing					
Runway	Length (Ft)	Inner Width (Ft)	Outer Width (Ft)	Approach Slope	Approach Type
9	10,000	500	3,500	34:1	Non-Precision
27	10,000	500	3,500	34:1	Non-Precision
Proposed					
Runway	Length (Ft)	Inner Width (Ft)	Outer Width (Ft)	Approach Slope	Approach Type
9	10,000	500	3,500	34:1	Non-Precision
27	10,000	500	3,500	34:1	Non-Precision

Source: FAR Part 77, Objects Affecting Navigable Airspace.

4.3.8 Navigational, Visual, and Communication Aids

The University-Oxford Airport has several navigational, visual, and communication systems in place to support the safe operation of aircraft. This section provides a description of the requirements for these navigational aids to meet the existing and forecast demand.

Instrument Landing System

Runway 9-27 is equipped with an Instrument Landing System Localizer (LOC) for instrument approaches to Runway 9. The LOC supports approaches with visibility minimums as low as 1 mile with a 502-foot ceiling. Components of the ILS include the localizer antenna (located east of the Runway 27 end). The localizer will need to be relocated with the Runway 27 extension.

Area Navigation/Global Positioning System (RNAV/GPS)

Area Navigation (RNAV) Global Positioning System (GPS) approaches are provided for both runway ends. Currently, the RNAV procedures support approaches with visibility minimums as low as ¾-mile for Runway 9 and 1-mile for Runway 27. The RNAV procedures sufficiently accommodate the existing and forecast demand at the Airport without modification.

Approach Lighting System

Both runway ends are equipped with four-light Precision Approach Path Indicator (PAPI) light systems, which provide vertical guidance for aircraft on approach to both runway ends. The PAPI systems are sufficient and do not require any modifications.

Automated Weather Observation System (AWOS-III PT)

An Automated Weather Observing System (AWOS) is available at the airfield to inform pilots of the weather conditions at the airport. The AWOS provides automated aviation weather observations 24 hours a day. The AWOS provides pilots with information regarding temperature, wind speed and direction, thunderstorm advisories, and other information that allows pilots to make better decisions and conduct safer operations. The AWOS-III PT is located on the south side of the airport near the apron and terminal building.

4.4 CORPORATE AND GENERAL AVIATION REQUIREMENTS

The purpose of this section is to determine the space requirements needed during the planning period for the following types of facilities normally associated with corporate and general aviation terminal areas:

- Terminal Building
- Aircraft Parking Aprons
- Hangars
- Access Roads
- Vehicle Parking
- Fuel Facilities

4.4.1 Terminal Building

The existing terminal building is approximately 6,000 square feet and located adjacent to the aircraft parking apron close to midpoint of the Runway 9-27 centerline. Facilities within the terminal building include a public lobby, pilot’s lounge, conference room and public restrooms. The terminal building currently services a diverse clientele and fleet mix, from individual pilots flying small single engine piston aircraft to pilots and their passengers on charter operations or corporate flights flying larger business jet aircraft. Parking for passengers visiting or departing from the Airport is available in the designated parking lot in front of the building.

Although the exiting terminal facility is adequate to meet the current needs of the Airport, in the future, general aviation operations are anticipated to grow. It is anticipated that the increased operations and cascading effect of improved airfield infrastructure for larger aircraft will attract new general aviation activity. The increased operations will occur primarily in corporate, business, and large-aircraft charter operations. Therefore, an expansion of the terminal or a new updated terminal may be required in the future to better accommodate the airport needs.

4.4.2 Aircraft Parking Apron

The airport has two aircraft aprons both located south of Runway 9-27. The main apron or primary public use apron is located adjacent to the terminal building and labeled (E4) on the ALD. The main apron is approximately 30,000 square yards and is used to accommodate transient aircraft as well as a portion of the locally based aircraft. The eastern portion of this apron has a concrete surface and is approximately 520’ X 220’. The middle portion of this apron also has a concrete surface and is approximately 300’ X 220’ with nine (9) striped aircraft tie-downs for aircraft parking. The western portion of this apron has an asphalt surface and is approximately 350’ X 190’. There are fourteen (14) striped aircraft tie-downs on this section of apron.

The second apron area is located to the east of the primary public use apron adjacent near the Runway 27 end. This apron has a concrete surface, eighteen (18) striped tie-downs, and is approximately 750’ X 215’. This apron is primarily used to accommodate the occasional overflow parking from the University of Mississippi football game day traffic.

The existing aprons are sufficiently sized to accommodate the forecast demand throughout short and immediate planning horizon. However, for long-range development, an apron expansion has been depicted on the East Apron (P1). This apron expansion is approximately 12,000 square yards and will be constructed in the future as demand dictates.

4.4.3 Hangars

The airport has one 8-Unit T-Hangar and nineteen (19) corporate hangars. All of the hangar buildings are located on the southwest side of the airfield.

Long-range development plans depict hangar development along the East Apron. The types of hangars and development schedule will be in response to future demand and user needs. The following hangars are depicted on the ALD:

- (5) 100’ X 100’ – Corporate Hangars

4.4.4 Automobile Parking

The existing automobile parking area should be sufficient to accommodate the owners of based aircraft, plus additional spaces for airport employees and visitors to the terminal building. The amount of spaces appears to be sufficient to accommodate based aircraft, airport employees, and visitors.

4.4.5 Fuel Facilities

The fuel farm is located on the southside of the airfield east of the terminal apron. The fuel farm consists of three 12,000-gallon aboveground tanks, one for Avgas (100 LL) and the other two for Jet-A. The Airport is also equipped with a Jet-A fuel truck. The existing fuel systems is sufficient for the foreseeable future.

CHAPTER 5
IDENTIFICATION AND EVALUATION OF ALTERNATIVES

The purpose of this section of the report is to propose and evaluate feasible airport development alternative configurations that would enable the airport to meet its needs as outlined in the previous sections. This section provides the methodology used to develop the airside and landside configuration recommended in this ALP Update. The following is a summary of the major planned development needs at the University-Oxford Airport.

- The primary runway length may be insufficient for future anticipated aircraft types. An ultimate runway extension to 6,500 feet to accommodate regular business jet traffic in a Challenger 600 or similar aircraft (RDC C-II) should be considered for an unconstrained airport.

- Accommodate future and ultimate terminal area requirements including new T-Hangars, Conventional Hangars, and aircraft parking apron meeting Design Group II aircraft requirements.

5.1 AIRSIDE ALTERNATIVES

Primary airside facility improvements identified are a 900-foot extension of Runway 9/27 along with associated parallel taxiway extension. This extension is recommended in the future to accommodate larger Category C aircraft such as the Challenger 600 and Gulfstream IV/V. The following sections briefly describe these recommendations, the alternatives considered, and the rationale for selection of the preferred alternative.

5.1.1 RUNWAY 9 EXTENSION – ALTERNATIVE 1

Alternative 1 would construct a 900-foot long extension at the approach end of Runway 9 for a total runway length of 6,500 feet, construct a 900-foot long extension to the parallel taxiway, and improve the Runway 9 Safety Area (RSA) to C-II design standards. The Runway 9 extension is depicted in Figure 5-1.

Alternative 1 would require the acquisition of approximately 30acres to the west of the approach of Runway 9 to allow the Airport to own and control all the property within the ultimate Runway Protection Zone (RPZ). The RSA and RPZ would have to be extended from the newly constructed runway end to fully comply with the FAA design standards. Under this proposal, Old Sardis Road and County Road 1056 would have to be relocated to accommodate the runway extension and satisfy the RSA and RPZ requirements. The FAA has adopted interim guidance regarding compatible land uses within RPZs. According to the interim guidance, airports should avoid introducing land uses such a public roadways into an RPZ that may create a safety hazard to air transportation. This alternative would require Old Sardis Road and County Road 1056 to be rerouted around ultimate RPZ in order to meet the interim guidance on land uses with an RPZ.

5.1.2 RUNWAY 27 EXTENSION – ALTERNATIVE 2

Alternative 2 would construct a 900-foot long extension at the approach end of Runway 27 for a total runway length of 6,500 feet, construct a 900-foot long extension to the parallel taxiway, improve the Runway 27 Safety Area (RSA) to C-II design standards , and relocate the localizer. In conjunction with the runway extension, the Runway 27 threshold would be displaced 900 feet to provide clearance over terrain that is approximately 3,400 feet east of the Runway 27 end. The Runway 27 extension is depicted in Figure 5-2.

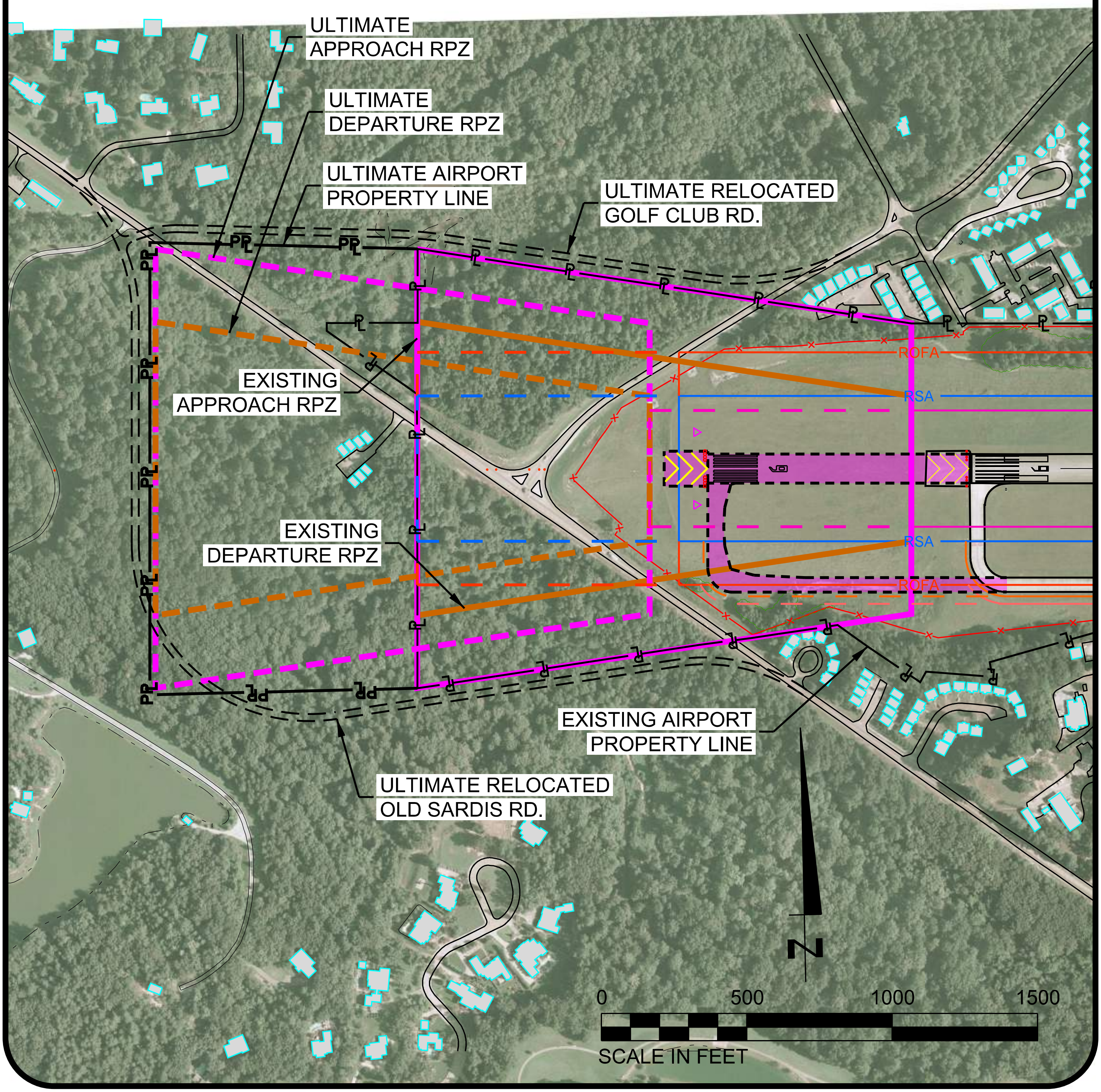
Alternative 2 would not require the acquisition of any property nor affect any public roads. Since the Runway 27 threshold would be displaced, the Airport would own and control all the property within the ultimate Runway Protection Zone (RPZ). The RSA would have to be extended from the newly constructed runway end to fully comply with the FAA design standards and the localizer would need to be relocated.

Of the two alternatives considered, the extension of Runway 27 to the east was determined to be the most viable alternative. The extension of the Runway 9 end to the west was eliminated due to its potential costs and impacts to property owners and public roads. A more detailed Alternatives Analysis will be completed as part of the Environmental Assessment for each runway end along the existing runway alignment.

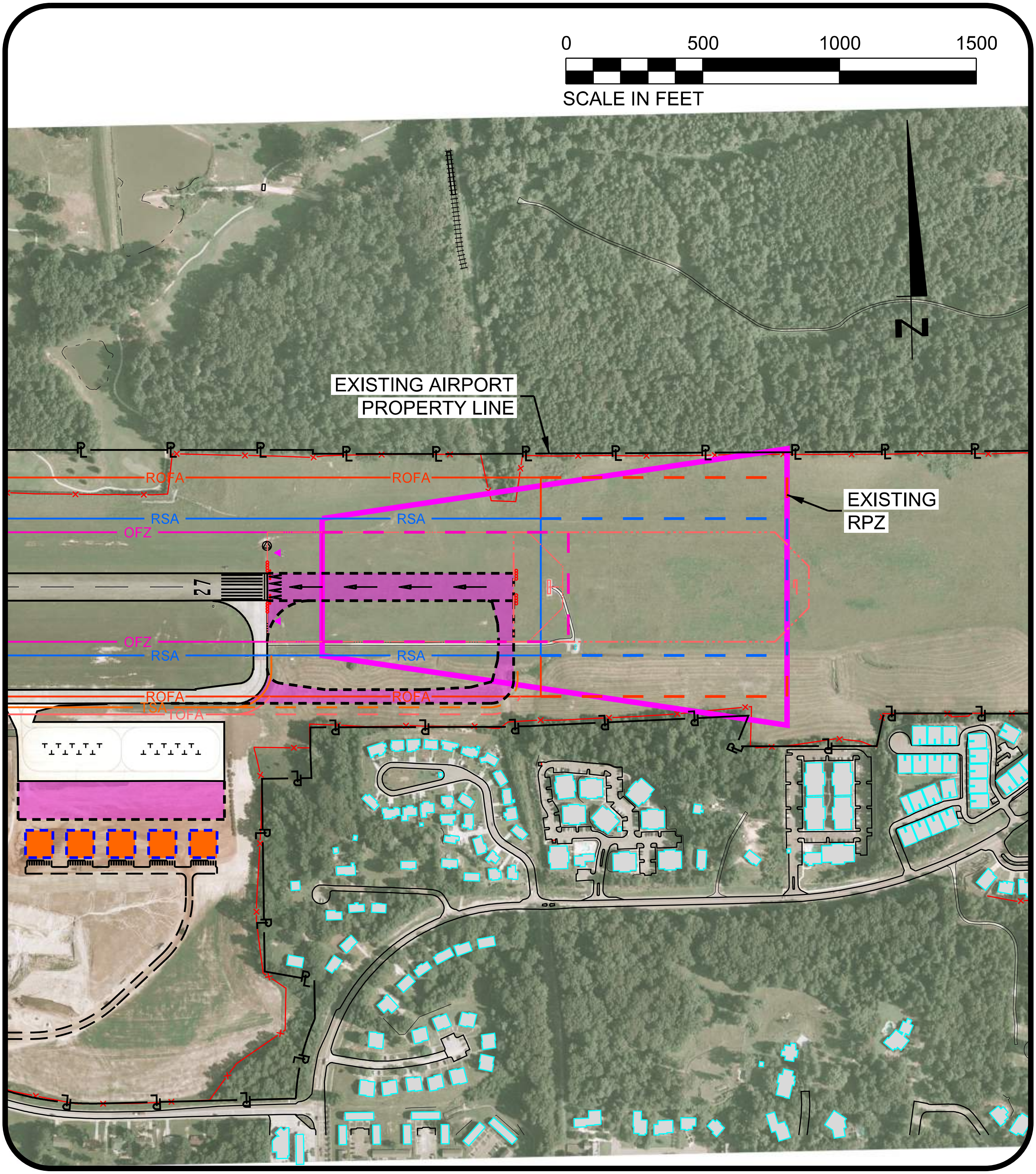
5.2 LANDSIDE ALTERNATIVES

The University-Oxford Airport has good potential for development of landside improvements on the south side of the airfield. The Airport's consultant worked closely with the University-Oxford Airport in developing a preferred terminal development plan that meets the short-term and long-term needs of the Airport. Terminal area development includes aircraft parking aprons, aircraft hangars, airport access roads, and vehicle parking directly related to aeronautical activity. The preferred development plan is depicted on Figure 5-2 and included on the ALD.

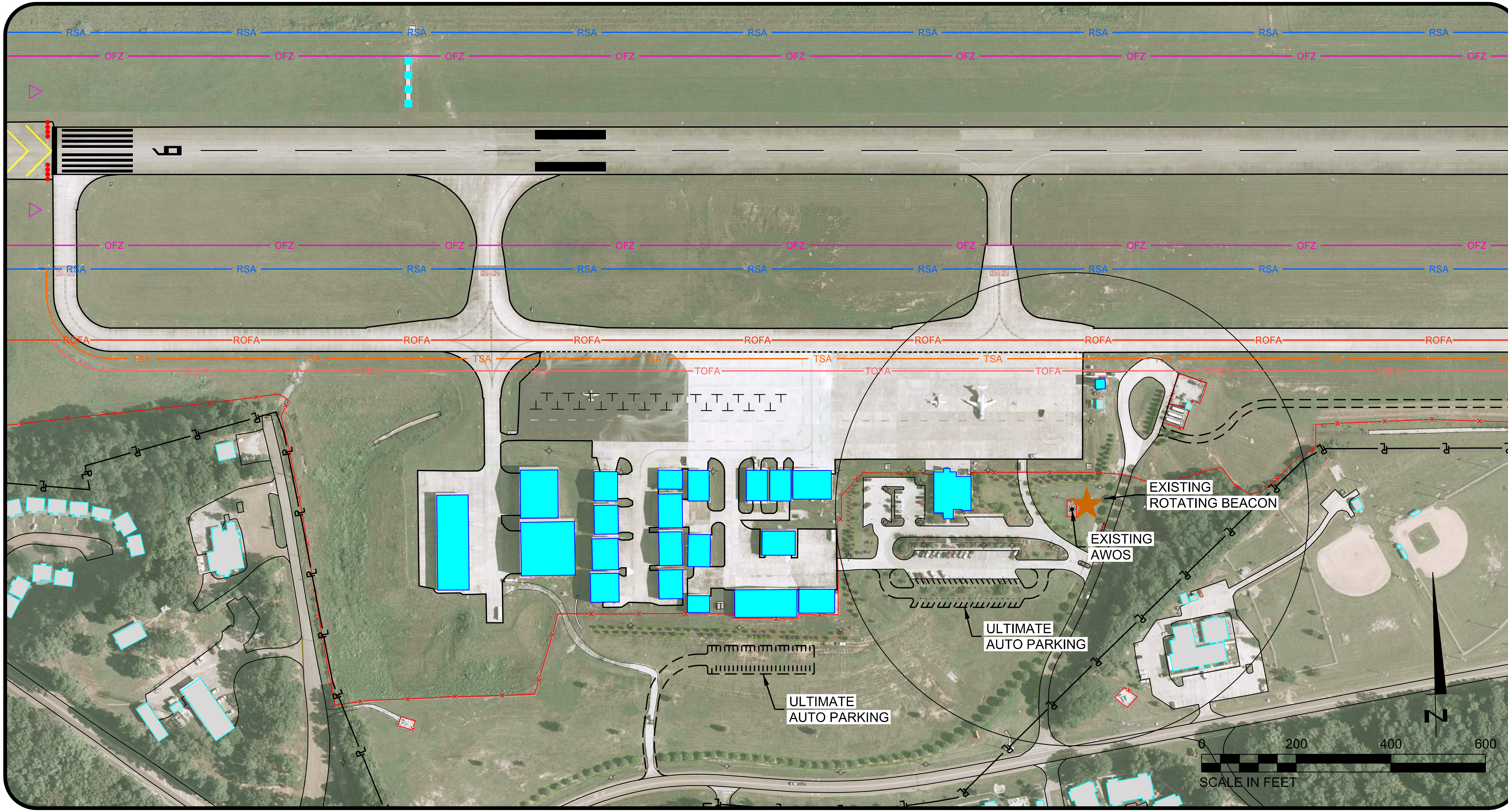
APPROXIMATE LAND TO BE ACQUIRED = 31.4± ACRES



Runway 9 Extension Figure 5-1



Runway 27 Extension Figure 5-2



Runway 27 Extension Figure 5-2

6.0 PROPOSED DEVELOPMENT PLAN

The development plan organizes the airport improvement projects into a schedule designed to meet the demand throughout the 20-year planning period. The capital improvement program is based on near (0-5 year) and long term (6-20 year) planning periods. The development costs are broken into amounts eligible for Federal and State funding programs and amounts requiring local participation. Particular focus was given to detailing estimated costs for short-term development projects and these costs are shown on a year-to-year basis. Long-Term projects would be planned for the future and would be included in future CIP updates as demand dictates or as priorities change. The CIP should be reviewed annually to adjust priorities and proposed funding years and budgets.

6.1 Near Term Development – (2020 To 2024)

TABLE 6-1: NEAR-TERM DEVELOPMENT PROJECTS AND COST ESTIMATES

Map ID	Project Description	Total	Federal (90%)	State (5%)	Local (5%)
	Fiscal Year 2020				
A	Terminal Apron Rehabilitation	$1,238,650	$114,785	$61,932	$61,932
	Fiscal Year 2021				
B	Runway Pavement Rehabilitation – Design Only	$115,000	$103,500	$5,750	$5,750
	Fiscal Year 2022				
C	Runway Pavement Rehabilitation - Construction	$2,915,000	$2,623,500	$145,750	$145,750
	Fiscal Year 2023				
D	Fuel Farm Access Road	$550,000	$495,000	$27,500	$27,500
	Fiscal Year 2024				
E	Automobile Parking Expansion	$380,000	$342,000	$19,000	$19,000
	NEAR-TERM TOTAL	$5,083,650	$4,575,285	$254,182	$254,182

A. Terminal Apron Rehabilitation

"Several concrete areas on the Air Carrier Apron are deteriorating and producing loose aggregate; these areas must be repaired" as identified in the FAA Part 139 inspection conducted on July 9, 2019. The loose aggregate is a Foreign Object Debris (FOD) hazard. The project will replace failing concrete and seal the remaining concrete joints.

B. Runway Pavement Rehabilitation – Design Only

The project would provide the professional engineering design services for the mill and overlay reconstruction of the runway pavement. The project includes the engineering design services and preparation of plans, specifications, and detailed construction cost estimates.

C. Runway Pavement Rehabilitation – Construction

The project consists of mill and overlay reconstruction of the runway pavement. The asphalt runway surface has significant cracking and is highly oxidized. The project includes the bid, construction phase services, and resident project inspection.

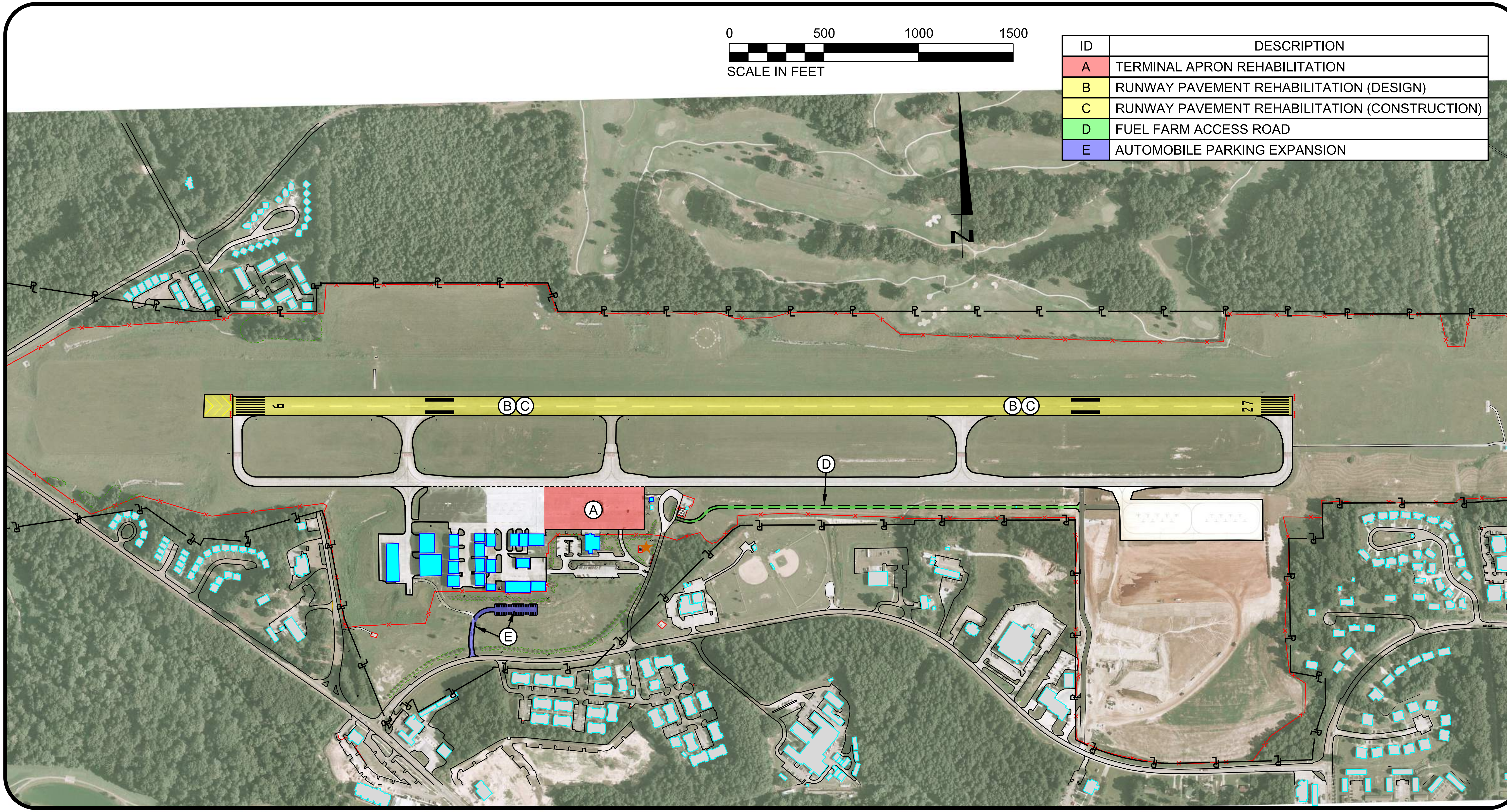
D. Fuel Farm Access Road

A secure road to provide vehicular access from the fuel farm to the East Ramp expansion area. The current layout requires the undesired use of the taxiway for secure movement between the fuel farm and East Ramp location.

E. Automobile Parking Expansion

The University of Mississippi is a frequent destination as it hosts many significant events; from a Division I athletic competition, to educational research conferences. Often the terminal parking overflows during these events resulting in overflow parking disturbing the grass fronting the airport terminal.

Figure 6-1 depicts Short Term Development projects in a graphical format.



ID	DESCRIPTION
A	TERMINAL APRON REHABILITATION
B	RUNWAY PAVEMENT REHABILITATION (DESIGN)
C	RUNWAY PAVEMENT REHABILITATION (CONSTRUCTION)
D	FUEL FARM ACCESS ROAD
E	AUTOMOBILE PARKING EXPANSION

Near-Term Development (2020-2024)

Figure 7-1

6.2 Long Term Development (2025 To 2030)

TABLE 6-2: LONG-TERM DEVELOPMENT PROJECTS AND COST ESTIMATES

Map ID	Project Description	Total Cost	Federal (90%)	State (5%)	Local (5%)
A	East Apron Expansion	$4,500,000	$4,050,000	$225,000	$225,000
B	East Apron Auto Parking	$500,000	$450,000	$25,000	$25,000
C	100’x100’ Corporate Hangar	$950,000	$855,000	$47,500	$47,500
D	Runway 9/27 Extension Justification Study	$20,000	$18,000	$1,000	$1,000
E	Environmental Assessment – Runway 9/27	$150,000	$135,000	$7,500	$7,500
F	Runway 9/27 Extension	$13,500,000	$12,150,000	$675,000	$675,000
	LONG-TERM TERM TOTAL	**$19,620,000**	**$17,658,000**	**$981,000**	**$981,000**

A. East Apron Expansion

The project consists of the design, bid and construction of an approximate 160,000 square foot concrete apron. The proposed apron will be located to the south of the existing east apron.

B. East Apron Auto Parking

The project consists of the design, bid and construction of automobile parking for the east apron. The planned project will be located between the east apron access road and the apron.

C. 100’x100’ Corporate Hangar

This project will add needed corporate hangar capacity. Box hangar space has been at capacity for several years and demand is forecasted to increase.

D. Runway 9/27 Extension Justification Study

The runway extension justification report will validate the Airport’s need to extend Runway 9/27, which is necessary to safely accommodate current and future users of the airport.

E. Environmental Assessment – Runway 9/27 Extension

This project would provide the necessary documentation for FAA's environmental approvals related to the proposed Runway 9/27 extension and unconditional approval of the portion of the ALP depicting the runway extension.

F. Runway 9/27 Extension

Extend Runway 9/27 approximately 900 feet to the east and construct a partial parallel taxiway in conjunction with the runway extension. The project also includes new runway and taxiway edge lights; relocated localizer, PAPIs, and signs. The runway extension is necessary to safely accommodate current and future users of the airport.

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