Sec. 6-219. - Zones.

In order to carry out the purposes of this division, airport approach surface zones, horizontal surface zones, conical surface zones and transitional surface zones are established as hereinafter defined and as shown on the airport zoning map. The surface of each of the zones constitutes a ceiling above which no structures or objects of natural growth are to be constructed or allowed to grow.

(1)

Approach surface zone. The approach surface zone is an inclined plane located directly above the approach area. The dimensions of the approach area are measured horizontally. The approach areas for each particular runway are symmetrically located with respect to the extended runway centerlines and have lengths and widths as shown on the airport zoning map, which also show the slopes of the respective approach surface zones.

(2)

Horizontal surface zone. The horizontal surface zone is a plane, circular in shape, with its height one hundred fifty (150) feet above the established airport elevation and having a radius from the airport reference point as indicated on the airport zoning map.

(3)

Conical surface zone. The conical surface zone extends upward and outward from the periphery of the horizontal surface zone with a slope of 20:1 measured in a vertical plane passing through the airport reference point. Measuring radially outward, from the periphery of the horizontal surface zone, the conical surface extends for a horizontal distance as shown on the airport zoning map.

(4)

Transitional surface zones. The transitional surface zones are inclined planes with a slope of 7:1 measured upward and outward in a vertical plane at right angles to the centerline of the runway. The transitional surface zones, symmetrically located on either side of the runway, extend upward and outward from a line on either side of the runway, which is parallel to and level with the runway centerline. These parallel lines are at a horizontal distance from the runway centerline equal to one-half of the minimum width of each approach area as shown on the airport zoning map.

The 7:1 transitional surface also extends from the edges of all approach surfaces upward and outward to the intersection with the horizontal surface, or the conical surface zones, for the entire ten-thousand-foot length of noninstrument approaches. The approach surfaces for instrument runways have a 7:1 transitional surface for their entire length of fifty thousand (50,000) feet. At the outer extremity of the approach, the transitional surface extends a distance of five thousand (5,000) feet, measured horizontally from the edge of the approach surfaces and at right angles to the runway centerline extended. This is shown on the airport zoning map.

(Code 1976, § 11-3003)

Section 220-1. - Runway Protection Zone (RPZ) Overlay district.

(a)

Purpose and intent. An ordinance regulating the use and design of property at and in the vicinity of DeKalb-Peachtree Airport (PDK). The purposes of this runway protection zone (RPZ) overlay are to:

(1)

Prevent the establishment and/or expansion of uses, structures, or vegetation, which constitute hazards or obstructions to, or be vulnerable to impact from aircraft operating to, from or near an airport; and to

(2)

Allow for appropriate uses surrounding the airport that further the City's economic development.

(b)

Overlay District Boundaries. A detailed runway protection zone boundary indicating the location of zones is maintained on the Zoning Map.

(c)

Restrictions and requirements.

(1)

The following generalized land uses are defined as incompatible within the RPZ and are therefore prohibited:

a.

Residential development;

b.

Any use that would attract and congregate people including but not limited to, retail commercial development, industrial development, institutions, and places of worship;

c.

Water uses such as lakes, ponds, and landfills that significantly increase the potential for interference of airborne fowl with landing and departing aircraft;

d.

Construction activities and land uses, which would produce smoke and/or dust in such a manner so as to impair visibility of pilots using the airport;

e.

High intensity exterior lighting, including, but not limited to, lighting for signage, private drives, parking lots and security, which is located in such a manner as to impair the visibility of pilots using the airport is prohibited unless such lighting is properly shielded;

f.

Land uses which create electrical interference with navigational signals or radio communication between the airport and aircraft.

(2)

Height limit: Ten feet below the approach-departure clearance surface, with a maximum height of 35 feet.

(d)

Modification or expansion of existing uses, structures, or vegetation.

(1)

Before any existing use, structure, or vegetation may be replaced, substantially altered, rebuilt, allowed to grow higher than permitted height (vegetation), or replanted within the RPZ, a permit must be secured. No such permit shall be granted that would:

a.

Allow establishment or creation of a flight hazard or use not authorized by this Section 220-1;

b.

Permit a nonconforming use, structure, or vegetation to become higher; or

c.

Become a greater hazard to air navigation or become less compatible in use than it was on the effective date of this Section, or than it is when the application for a permit is made.

(2)

The Planning and Development Director will determine which projects require submittal to the FAA's notice criteria tool based on the scope of the project as it relates to 14 CFR Part 77.9. Before any permit is issued as required by this Subsection, the applicant shall file with the Federal Aviation Administration FAA Form 7460-1 and provide to the City a copy of all responses received from the Federal Aviation Administration by the applicant as a result of filing Form 7460-1.

(Ord. No. 743 , 12-19-17; Ord. No. 757 , 12-18-18)

Chapter 1 – Introduction

1.1 Introduction

The following report presents the Airport Master Plan Update for DeKalb Peachtree Airport (PDK or the airport) located in Chamblee, Georgia. This report was prepared in accordance with the requirements of the Federal Aviation Administration (FAA), the Georgia Department of Transportation (GDOT), and DeKalb County (Sponsor). All portions of this document are based upon the guidelines set forth in FAA Advisory Circulars (AC) 150/5070-6B, *Airport Master Plans* and AC 150/5300-13A, *Airport Design.*

The intent of this master plan is to provide the framework needed to guide future airport development of PDK Airport.

PDK's vision is to be the Southeast's finest general aviation airport. Along with its mission statement, PDK's vision translates into goals established in the master plan that support modernization of airport facilities, enhance compatible land use, foster economic development, respond to aeronautical demand, and ensure the safety and security of the traveling public.

PDK is a general aviation airport in northeast metropolitan Atlanta, Georgia within the city limits of Chamblee of DeKalb County. The airport is bordered by Chamblee Tucker Road to the north, Buford Highway to the east, Dresden Drive to the south and Clairmont Road to the west. Immediately surrounding the airport are the metropolitan cities of Dunwoody, Doraville, and Brookhaven. The airport is located near the major business districts of Atlanta, including 8 miles north of Decatur, 12 miles northeast of downtown Atlanta, 8 miles east of Buckhead, 6 miles east of Lindbergh and 4 miles southeast of Perimeter Center. Interstate 285 is reachable by Peachtree Industrial Boulevard in 4 miles and Interstate 85 is reachable by Clairmont Road in 3 miles.

PDK's prime location has made it the business travelers' choice when visiting the metropolitan area, which is why the airport has been the busiest general aviation airport in the state since its transition from Naval Air Station to general aviation airport in 1959.

1.2 History

The Chamblee area was settled in the 1820s as an agricultural community. The first rail line through Chamblee was established in 1845. The town was incorporated as the City of Chamblee in 1908.

The land PDK was built upon originally contained woods and several farms. In 1917, the land became the location of Camp Gordon, a World War I (WWI) training camp. After WWI, the property was sold and in 1940, DeKalb County purchased the property with the intention of building an airport.

World War II (WWII) began and shortly thereafter, the U.S. Navy leased the entire property and constructed a Navy Reserve training station. Eventually, the airport became large enough to commission as a full Naval Air Station. The Naval Air Station continued to operate at PDK for 20 years until it was handed over to the County in 1959.

Following its transition from a military base into a general aviation airport and under the guidance of PDK's first airport manager, Henry Doc Manget, Jr., planning and construction began rapidly to convert the

facility into civilian uses during the rise of the Jet Age. In 1966, the Navy control tower was replaced by a new and modern facility. In 1968, a 5,000-foot all-weather runway and parallel taxiway system was constructed. At the same time, land areas were developed for aircraft storage and major leaseholders. By 1972, over 300 aircraft were based at PDK, increasing to 530 by 1986. In 1980, the airport commissioned its instrument landing system which provided a much higher degree of safety during poor weather. In 1988, the primary runway was extended 1,000 feet and a new modern air traffic control tower was constructed. Over time, older military facilities have been modernized or replaced to support the growing general aviation needs of the community.

In the post-WWII years, industry came to Chamblee and slowly transitioned the community from a farming community into what it is today. The General Motors Corporation (GM) moved to Chamblee in 1948, which prompted the paving of what has become Peachtree Industrial Boulevard. The addition of the GM plant signaled a period of substantial industrial growth in the Chamblee area. Industrial growth also meant demand for housing. The construction of many neighborhoods primarily consisted of American Small Houses, in the late 1940s and early to mid-1950s. More housing as well as commercial development came to Chamblee from the late 1950s through the 1970s as the Atlanta suburbs expanded into the area.[3] Close-in neighborhoods to PDK include areas commonly referred to as Ashford Park, Brookhaven, Briarcliff Woods, Drew Valley, and Sexton Woods.

Although, Chamblee is the closest city to the airport, additional cities in the nearby vicinity include Brookhaven to the west, Doraville and Dunwoody to the north, and Decatur to the south.

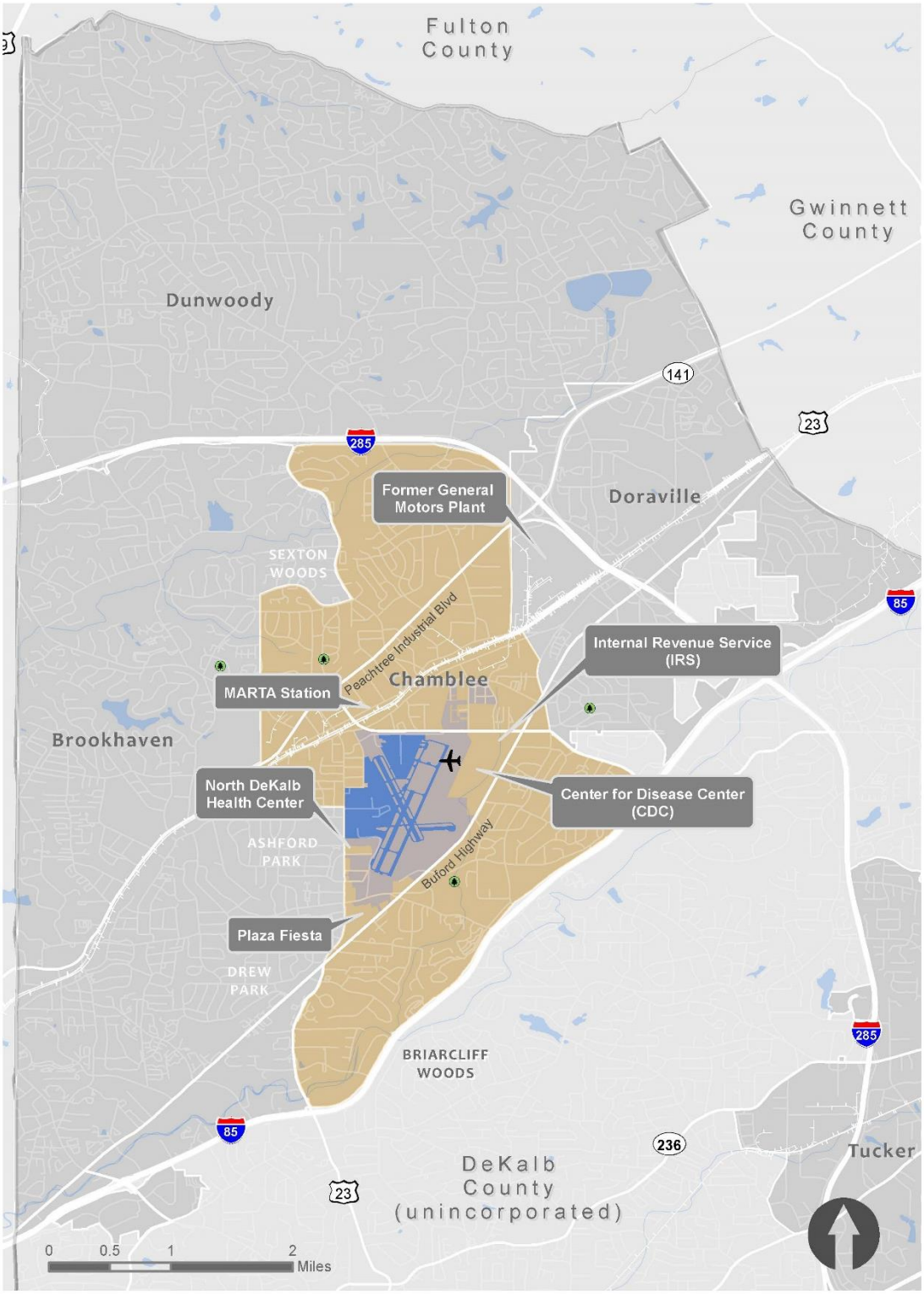
Currently, land uses surrounding PDK are a mixture of single-family residential, multi-family apartments and condominiums, commercial, industrial, institutional and public uses. Nearby major non-residential uses include: Chamblee Metropolitan Atlanta Rapid Transit Authority (MARTA) Station, North DeKalb Health Center, Plaza Fiesta, Center for Disease Control (CDC), and the Internal Revenue Service (IRS). Dresden Park, Brook Park, Keswick Park, Blackburn Park, and Briarwood Recreational Center are also in the vicinity. In nearby Doraville, the GM plant was closed in 2008 and is currently being redeveloped into a mixed-use transit-oriented development.

The commercial corridors of Peachtree Industrial and Buford Highway are comprised of restaurant, auto dealership/shops, and miscellaneous retail businesses. The Peachtree Industrial corridor follows CSX and MARTA railroad tracks north toward Interstate 285 (I-285). I-285 is Atlanta's perimeter major road and circles the eastern and northern areas near PDK. Another interstate (I-85) parallels the Buford Highway corridor east of the airport, traveling north and south.

The location relative to the surrounding area is depicted in **Figure 1-1**.

[3] *Architectural Survey of the DeKalb Peachtree Airport Study Area, DeKalb County, Georgia, Brockington Associates, 2004.*

Figure 1-1: Location Map



Source: Michael Baker International, 2019.

1.3 PDK Characteristics

PDK is a public-use facility owned by DeKalb County and maintained by DeKalb County Airport Division. The airport serves a variety of general aviation users. Airport development is guided the DeKalb County Board of Commissioners in compliance with guidelines and regulations of the FAA and GDOT.

In 2018, PDK had 355 based aircraft comprised of 258 single-engine, 39 multi-engine 46 jets and 12 helicopters. In addition, the airport will routinely accommodate 50 to 60 visiting aircraft on an average day and upwards to 230 aircraft visiting aircraft during special events such as the 1996 Olympics, 2013 Final Four, and the recent Super Bowl LIII held in 2019.

According to airport records, PDK accommodated 151,132 general aviation operations in 2018, of which 72.3% where itinerant and 27.7% where local. Businesses operating at PDK include corporate flight departments, charter operations, aircraft maintenance and avionics repair, fixed wing helicopter training, aircraft scenic services and Fixed Based Operators (FBOs). Other activity consists of medical evacuation service and local new station helicopter units. The airport does not accommodate Part 121 commercial airline service or regular military activity.

The existing airport facilities include three active runways, taxiways, hangars, airport services, administration building and various airport users and businesses. A range of business and organizations make up the diverse list of airport users housed at the airport. There are three fixed based operators (FBOs) at the Airport: Atlantic Aviation, Epps Aviation, and Signature Flight. These businesses are an anchor to the general aviation activities providing a variety of services to travelers and aircraft at the airport.

In addition to the three FBOs, over 25 other businesses operate on the airport's property. These businesses include aircraft maintenance, car rental agencies, legal services, aircraft charter services, helicopter touring services and training, building and design consultants, an Aircraft Rescue Fire Fighting (ARFF) station, 10 flight training schools, one park, a Public Safety K-9 facility, DeKalb County Sanitation, two restaurants, and number of corporate businesses with based aircraft.

1.4 PDK's Role in the National Transportation System

The following sections review the aeronautical roles of PDK within the national transportation system.

FAA National Plan of Integrated Airport Systems Role

In the United States, there are 5,136 public-use airports. Of these there are 3,321 airports that are identified by the FAA's *2019-2023 National Plan of Integrated Airport Systems* (NPIAS) as important to national air transportation and eligible to receive grants under the FAA Airport Improvement Program (AIP). The NPIAS groups airports into two categories: Primary and Nonprimary. Primary airports are airports receiving scheduled air carrier service with more than 10,000 passengers a year. Primary airports are further grouped into four subcategories: large hub, medium hub, small hub and nonhub. Nonprimary airports primarily support general aviation aircraft. **Table 1-1-1** presents the NPIAS service level classifications and their criteria.

Table 1-1-1: FAA NPIAS Classifications

Airport Classifications		Hub Type: Percentage of Annual Passenger Boardings	Common Name
Commercial Service: Publicly owned airports that have at least 2,500 passenger boardings each calendar year and receive scheduled passenger service	**Primary:** Have more than 10,000 passenger boardings each year	**Large:** 1% or more	**Large Hub**
		Medium: At least 0.25%, but less than 1%	**Medium Hub**
		Small: At least 0.05%, but less than 0.25%	**Small Hub**
		Nonhub: More than 10,000, but less than 0.05%	**Nonhub Primary**
	Non Primary	**Nonhub:** At least 2,500 and no more than 10,000	**Nonprimary Commercial Service**
Nonprimary (PDK's Role) (Except Commercial Service)		Not Applicable	**Reliever (PDK's Role)** **General Aviation**

Source: 2019-2023 NPIAS.

In the FAA NPIAS, PDK is categorized as a *Nonprimary General Aviation – Reliever Airport*. The term "reliever" means that PDK relieves congestion from nearby Hartsfield-Jackson Atlanta International Airport (ATL) by offering an alternative airfield for use by general aviation aircraft.

As reported in the *2019-2023 NPIAS*, the term "reliever" is defined in the FAA's authorizing statute at *49 U.S.C., section 47102*, as "an airport the Secretary designates to relieve congestion at a commercial service airport and to provide more general aviation access to the overall community." The term "reliever" is relevant in a small number of contexts but is increasingly problematic because only a small number of commercial service airports still experience significant congestion. Regardless, because the term is still defined and used in statute, the FAA continues to report the current designations in the NPIAS.

In 2012, the FAA further defined the roles of General Aviation airports in *General Aviation Airports: A National Asset* (known as the ASSET report). This comprehensive study developed the following categories of general aviation airports: National, Regional, Local, Basic, and Unclassified. **Table 1-1-2** presents these categories and their descriptions. PDK is classified in the ASSET report as a *National* airport.

Table 1-1-2: FAA ASSET Categories

Category	Criteria
National **(PDK's Role)**	Supports the national and state system by providing communities with access to national and international markets in multiple states and throughout the United States.
Regional	Supports regional economies by connecting communities to statewide and interstate markets.
Local	Supplements communities by providing access to primarily intrastate and some interstate markets.
Basic	Links the community with the national airport system and supports general aviation activities (e.g., emergency services, charter or critical passenger service, cargo operations, flight training and personal flying).
Unclassified	Airports that do not fit into any other category.

Source: "General Aviation Airports: A National Asset" and ASSET 2: In-Depth Review of the 497 Unclassified Airports"

Georgia Aviation System Plan Role

The *Georgia Aviation System Plan* is a state level planning document prepared by GDOT. Most recently updated in 2019, the system plan evaluated all public-use general aviation airports in Georgia and classified each according to the type of aviation demand served. **Table 1-1-3** presents the system plan airport role classifications.

Table 1-1-3: Georgia Aviation System Plan Airport Levels

Airport Level	Description
Level I	Minimum Standard General Aviation Airport
Level II	Business Airport of Local Impact
Level III (PDK's Role)	Business Airport of Regional Impact

Source: Georgia Aviation System Plan, 2019.

PDK is classified as a Level III airport, a *Business Airport of Regional Impact* and of significant importance to the state's aviation needs.

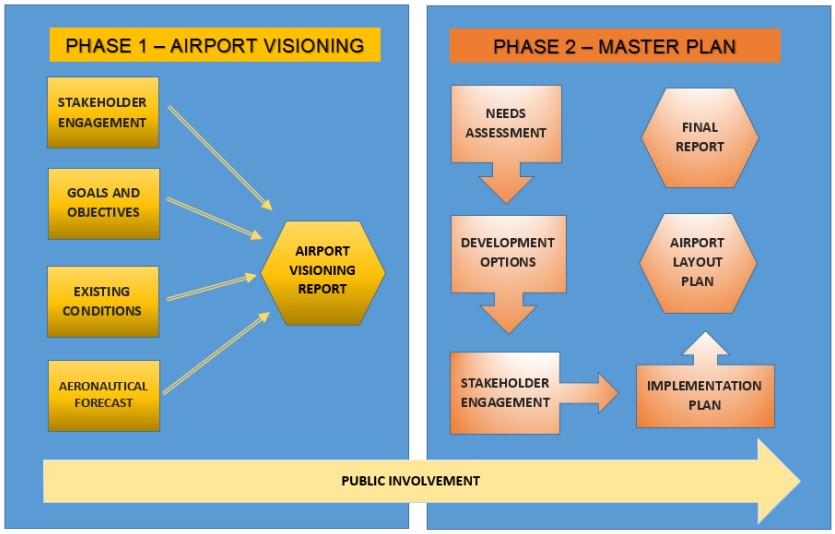
1.5 The Master Plan Process

This Master Plan report provides an outline of the development actions necessary to maintain airport facilities. This document along with the ALP drawing set provides officials responsible for scheduling, budgeting, and funding of the airport improvements with a planning guide and general timeline for development. To accomplish the objectives and allow for timely and orderly development, this process was separated into two phases as depicted in **Figure 1-2** below.

Phase 1 – Airport Visioning.

Airport visioning is the exercise of developing broad goals and objectives of the master plan through a process of stakeholder involvement, inventory of existing conditions, and preparation of a 20-year aeronautical forecast. Phase 1 does not identify recommend improvements, rather it sets the stage for Phase 2 by promoting an understanding of the current state of the airport, what the airport can expect growth wise, and how the airport's role in the transportation system and community will shape its goals and objectives moving forward.

Figure 1-2: Master Plan Process



Phase 2 – Master Plan.

Once the goals and objectives are established and the aeronautical forecast is reviewed and approved by GDOT, Phase 2 of the master plan begins. Phase 2 compares the forecasted aeronautical demand to the existing airport facilities and determines what needs may exist at PDK now and into the future. Phase 2 also focuses on modernization of facilities, evaluates potential economic development opportunities, and reviews FAA guidelines for safe, efficient use of aeronautical facilities.

As necessary, development options are created that identify alternative scenarios for implementing proposed improvements and consider factors such as time, cost, and environmental impacts. These alternatives are reviewed by the airport stakeholders for suggestions and feedback. A final preferred alternative is selected by the airport. Once the list of preferred improvements is identified, an implementation plan is created which identifies the timing, cost, and funding sources of planned improvements.

A major feature of the master plan is the Airport Layout Plan (ALP). The ALP is PDK's blueprint for the future and is updated and submitted to GDOT for approval. As a federal block grant state, GDOT reviews and approves the ALP on behalf of the FAA. Normally, GDOT's approval of the FAA is "conditional", meaning further steps may be required before a project is implemented, such as providing additional justification or determining environmental impacts.

The final products of the master plan are:

- Airport Layout Plan Drawing Set
- Master Plan Technical Report

1.6 Stakeholder Participation

This master plan includes a public involvement plan that was designed to involve airport users, the business community, planning partners, neighborhoods, and the general public as airport stakeholders.

As participants in the master planning process, the airport stakeholders provide meaningful input to the airport as it develops its master plan. The public involvement effort strives to establish new forums for information exchange while also taking advantage of existing groups and organizations. Outreach techniques were designed to encourage participation in the public process and to generate meaningful feedback. The plan provides tools for both disseminating project-related information and gathering public input that reflects community concerns and interests.

The key components of PDK's Public Involvement Plan are:

- **Project Website.** A repository for project updates, project schedule, sign up for email updates, online surveys, and master plan documents. The website address is www.pdkmasterplan.com.
- **Goals/Vision/Existing Conditions Survey.** An online survey was conducted early in the project to learn various viewpoints of airport stakeholders which helped guide development of goals and objectives and master plan initiatives.
- **Citizen's Advisory Committee Meetings.** A Citizen Advisory Committee (CAC) was formed to serve as an advisory body for overall direction and guidance in the development of the master plan. The CAC consists of individuals appointed by the County Commissioners and the Mayors of Brookhaven, Chamblee, Doraville and Dunwoody who have an interest in the airport and its operations. The CAC meets regularly to discuss plan developments and to provide input at decision-making milestones.
- **Technical Advisory Committee Meetings.** A Technical Advisory Committee (TAC) was formed to provide the project team with guidance on key technical components of the project. The TAC is comprised of airport users with substantial knowledge of the technical aspects of the airport. Members of the TAC were appointed by airport management and represent corporate pilots, flight schools, PDK - Airport Association, FBOs airport businesses, PDK Air Traffic Control Tower, National Business Aircraft Association (NBAA), Aircraft Owners & Pilots Association (AOPA), and tie down/T-hangar tenants. Additionally, staff from the FAA and the GDOT were invited to participate.
- **Intergovernmental Advisory Committee Meetings.** An Intergovernmental Coordinating Committee (ICC) was formed to serve as a high-level, policy-oriented group to communicate the master plan process to the local governments within the airport vicinity. The ICC includes planning and/or economic development staff from the Cities of Brookhaven, Chamblee, Doraville and Dunwoody, as well as DeKalb County, MARTA and the Atlanta Regional Commission.
- **Public Workshops.** Workshops will be held at major milestones to disseminate project related information to a greater audience and to provide a question-and-answer forum.
- Updates and presentations to the **PDK Airport Advisory Board.**
- A presentation of the plan to the **DeKalb County Board of Commissioners**.

1.7 Master Plan Goals and Objectives

Goals and objectives of the master plan have been developed based on stakeholder input in accordance with the existing *PDK Airport Vision and Mission Statement* established by DeKalb County. These ideals are:

Airport Vision: PDK's vision is to be the Southeast's finest general aviation airport.

Airport Mission Statement: Provide for the operations of a business-oriented airport in a safe, efficient, and fiscally responsible manner. Preserve the quality of life of the community, investing into its employees, recognizing a partnership among residents, general aviation, and general aviation interests.

In support of these ideals, the master plan focuses on the following five objectives.

Objective 1. Enhance Airport Communications to Airport Stakeholders.

During the initial proceedings of PDK's Public Involvement Plan, airport strengths and weakness were discussed with the committees (ICC, CAC TAC) and during a public workshop kickoff meeting. A common theme developed during this initial feedback that stated the airport should do more to enhance its communications effectiveness with its stakeholders. Not only should the airport improve communications during the master plan process but during its day-to-day operations as well. Based upon this feedback, the master plan will continually seek to improve effectiveness of study-related communications over the course of the project and the airport will pursue ways to improve day-to-day communications with its stakeholders.

Objective 2. Modernization of Airport Facilities.

Much of the infrastructure at PDK was constructed by the military in the 1940s during WWII and during the 1960s through 1980s as the airport grew into a busy general aviation airport. These facilities should be evaluated for their current efficiency, function, and useful life. The master plan should outline how airport infrastructure would be improved over the next 20 years to adequately support the needs of stakeholders.

Objective 3. Insure and Enhance Compatible Land Use.

PDK is located in a highly desirable community of metropolitan Atlanta. The airport is within the City of Chamblee and adjacent to Brookhaven, Doraville, Dunwoody and Unincorporated DeKalb County. As part of the master plan process, communication of future plans, goals and objectives is essential in order to create and foster a mutually beneficial environment that increases PDK's equity as a community asset and improves quality of life for its citizens while also maintaining safe, efficient use of the airport.

Objective 4. Foster Economic Development and Strong Economic Tax Base.

PDK offers a transportation gateway that attracts desirable economic development to the community and provides a valuable tax base. PDK is the third largest payer of property taxes in DeKalb County. A 2012 economic impact study found that PDK's total economic output is more than $211 million annually and supports 1,834 total full-time jobs. From 1978 to 2018, over $83 million has been invested in capital improvements by PDK, GDOT, and the FAA. PDK should identify airside, landside, and airspace

improvements and recommend options to further optimize the economic aspects of the airport while preserving compatible land use and enhancing the safety and operational capability of the airport.

Objective 5. Respond to Aeronautical Demand.

In support of PDK's vision to be the finest general aviation airport in the southeast, it is important that PDK understands and responds to the transportation needs of the community and makes necessary improvements to support this demand. This includes ensuring the airport facilities adequately serve the existing airport activity in a functionally efficient manner and establishes an implementation schedule for short, intermediate, and long-term improvements based upon the goals and objectives of the airport master plan.

Objective 6. Ensure Safety and Security of the Traveling Public.

Most importantly, the plan should identify improvements that ensure safety and security of the traveling public. This includes identifying improvements necessary to ensure that airport design guidelines are followed for runway safety areas, runway object free areas, runway protection zones, and obstructions to airspace. Advances in technology and safety guidelines should be reviewed to support potential improvements to airport lighting, airfield markings, taxiway geometry, fencing and access control, visual and navigational aids and enhanced poor weather safety.

1.8 Key Issues Discovered During the Master Plan

During the proceedings of the master plan, the following key issues were identified and evaluated in the master plan.

- Over the planning period, there is a projected demand for 132 additional based aircraft, including 85 single engine, 13 multi engine, 28 jet and 6 helicopter aircraft. Meeting this demand would require additional aircraft storage space.
- During preparation of the plan, COVID-19 affected airport operations initially. Operations have since recovered to pre-COVID levels.
- The most demanding aircraft with at least 500 takeoffs and landings at PDK is the Gulfstream 550 corporate aircraft.
- The pending decommissioning of the PDK VOR navigational aid will open the eastern side of the airport to future landside storage space; however, challenges exist including remediation of an inert landfill and providing airside and landside access to this area.
- A county-owned sanitation facility should be removed from the northern runway safety and object free area of Runway 3R-21L. Potential options for relocation were reviewed however a preferred site was not selected.
- Based upon a review of runway protection zone requirements, the protection zone north of Runway 3R-21L will be revised in the airport layout plan. Certain airport-owned land north of Chamblee Tucker Road will become available for future non-aeronautical uses. Future non-aeronautical uses are subject to approval by the Georgia Department of Transportation and zoning requirements of City of Chamblee.

- Previously planned runway incursion mitigation projects already underway are reflected in the plan.
- The airport administration building is showing signs of its age and requires major improvements to meet code. Alternatives for renovation or reconstruction of the building were evaluated including a proposed parking deck to increase parking capacity in the core airport area.
- Aging airport-owned storage hangars (t-hangars) are recommended for replacement with modern structures.
- The airfield pavements are showing signs of their age. A phasing plan has been developed to prioritize projects for preservation of pavements.

1.9 Summary of Proposed Improvements

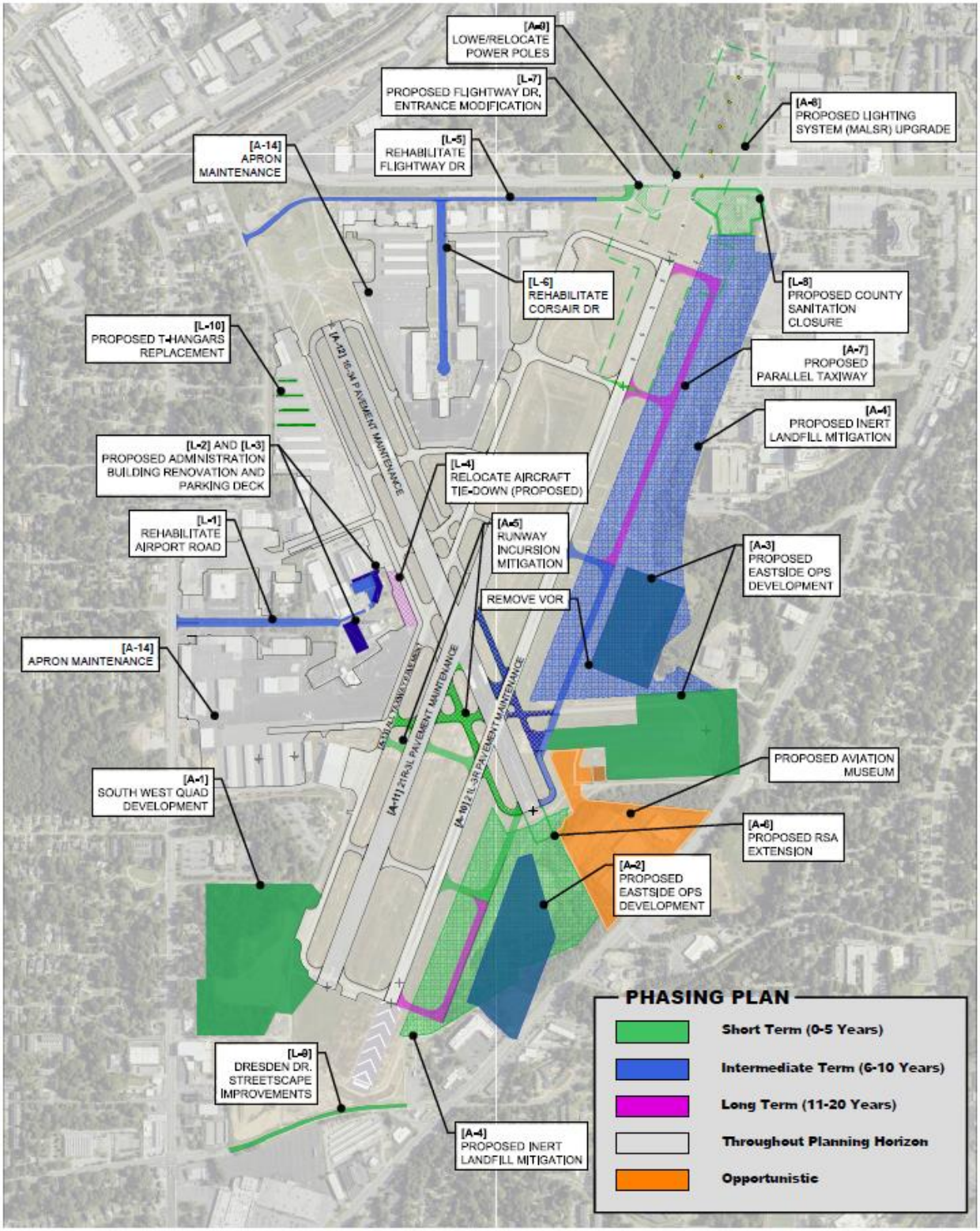
Overall, the Master Plan will provide an overview of the airport's needs over the twenty-year planning period including issues related to cost, timing and funding. Major improvement recommended in the plan are shown on **Table 1-4** and **Figure 1-3**.

Table 1-4: Master Plan Project Summary

Project ID	Project Description
[A-1]	Southwest Quadrant Development: 8 additional corporate size hangars and new exclusive PDK Aircraft Rescue Firefighting ARFF Station
[A-2]	Proposed Eastside (second phase) – Proposed Aeronautical Development
[A-3]	Proposed Eastside Ops – Proposed Aeronautical Development.
[A-4]	Proposed Inert Landfill Removal: Remove landfill and replace with developable compliant fill.
[A-5]	Runway Incursion Mitigation: Reconfigure and improve aircraft circulation on airfield to mitigate pilot confusion and improve overall safety.
[A-6]	Runway 34 RSA: Correct incompliant Runway Safety Area (RSA) grading and design standard for Runway 34
[A-7]	Proposed Parallel Taxiway (Eastside): Establish parallel taxiway to serve Runway 21L-3R and the proposed East Ops Development.
[A-8]	Proposed MALSR Upgrade: Enhance approach lighting system.
[A-9]	Obstruction Removal: Relocate Chamblee Tucker street lighting poles.
[A-10]	21L-3R Pavement Maintenance: Preserve and maintain airfield runway pavement.
[A-11]	21R-3L Pavement Maintenance: Preserve and maintain airfield runway pavement.
[A-12]	16-34 Pavement Maintenance: Preserve and maintain airfield runway pavement.
[A-13]	Taxiway Maintenance: Preserve and maintain airfield taxiway pavement.
[A-14]	Apron Maintenance: Preserve and maintain airfield apron pavement.
[L-1]	Rehabilitate Airport Road: Preserve and maintain Airport Road.
[L-2]	Admin Building Renovation: Upgrade Airport Administration Building.
[L-3]	Admin Parking Deck: Build parking deck for Airport users and visitors.
[L-4]	Remove Tiedowns (Park Area]: Relocate Tiedowns.
[L-5]	Relocate Flightway Drive Entrance: Relocate Flightway Drive entrance out of Runway 21L-3R Object Free Area (OFA).
[L-6]	Rehabilitate Corsair Drive: Preserve and maintain Corsair Drive
[L-7]	Rehabilitate Flightway Drive: Preserve and maintain Flightway Drive.
[L-8]	Remove County Sanitation: Relocate County Sanitation out of Runway 21L-3R Object Free Area (OFA).
[L-9]	Dresden Drive Streetscape: Beautify the portion of Dresden Drive fronting PDK Airport.
[L-10]	Proposed NW T-Hangar Replacement: Replace T-Hangar with new T-Hangars.

Source: Michael Baker International, 2020.

Figure 1-3: Airport Improvement



Source: Michael Baker International, 2021.

Chapter 2 - Inventory of Existing Conditions

2.1 Introduction

The purpose of the inventory is to summarize existing conditions of all facilities at PDK as well as to summarize other pertinent information relating to the community, airport background, airport role, surrounding environment, and various operational characteristics. The information in this chapter provides the baseline for determining future facility needs. This chapter will provide an inventory of the following:

- Airport Characteristics,
- Airside Facilities,
- General Aviation Facilities,
- Airspace and Air Traffic Control,
- Environmental Considerations, and
- Zoning and Municipal Boundaries,

The necessary inventory data has been collected from various sources, including:

- Interviews with airport management,
- Interviews with airport users and tenants,
- Airport site visits,
- Research and review of previous airport planning analyses and studies, and
- Review of aerial photography, mapping, and city and county Geographic Information System (GIS) data.

2.2 Airport Characteristics

2.2.1 Meteorological Data

Due to the effect of weather on aircraft performance and airfield design, an overview of meteorological characteristics for the Chamblee area is presented in the following section.

Climate

The field elevation at DeKalb-Peachtree Airport is 998 feet above Mean Sea Level (MSL). Located north in the Piedmont region of Georgia, weather conditions are generally mild, characterized by warm summers and largely cool winters. According to the National Oceanic and Atmospheric Administration (NOAA), for period 1981-2010, the average temperatures range from 88.2^{o} Fahrenheit (F) to 68.9^{o} F during the summer. During the winter the temperatures range from 53.6^{o} F to right about the freezing level at 34.8^{o} F. The mean daily maximum temperature of the hottest month is 89.4^{o} F.

Further information regarding airport wind conditions will be presented in Chapter 4, *Facility Requirements*.

2.3 Airside Facilities

The airside facilities support all arriving and departing operations of aircraft. Runways, taxiways, navigational aids (NAVAIDS), visual aids, signage, and lighting comprise the airside facilities.

2.3.1 Runways and Taxiways

The airport is served by three runways: Runway 3R-21L, Runway 3L-21R, and Runway 16-34. In addition, Helipad Charlie and a system of taxiways make up the airfield. These airside facilities are shown on **Figure 2-1**.

Runways 3R-21L and 3L-21R align with the prevailing winds and are the most utilized runways on the airfield. Runway 16-34 is primarily used to support smaller aircraft in crosswind weather conditions.

Airport runways are named using their magnetic compass orientation. Runway 3R-21L and Runway 3L-21R are aligned in a northeast/southwest 030°/210° direction. Since these runways are parallel, a left (L) and right (R) designation are added to each runway end. Runway 16-34 is aligned in a northwest/southeast 160°/340° direction. Over time, the runway naming designations will change due to drift of the magnetic north pole.

A fourth runway, Runway 9-27 was oriented in an east/west 090°/270° direction. The runway was closed in 2012 due to low utilization and the need for additional aircraft storage space.

Runway 3R-21L

Runway 3R-21L is a concrete runway measuring 6,001 feet in length by 100 feet in width. Runway 3R-21L has straight-in instrument approach procedures, which are necessary for poor weather conditions. The runway surface is grooved for better drainage and traction during wet conditions. For obstacle clearance, the landing threshold of Runway 21L is displaced 999 feet towards the south. In 2018, an Engineered Materials Arresting System (EMAS) was installed on the south end of the runway. EMAS is a bed of high energy absorbing materials that provide enhanced runway safety in the event of an aircraft overrun.

Runway 3L-21R

Runway 3L-21R is an asphalt runway measuring 3,146 feet long and 150 feet wide. Runway 3L-21R has a visual runway basic runway markings. Runway 3L-21R does not have displaced thresholds. No straight in instrument approaches serve this runway.

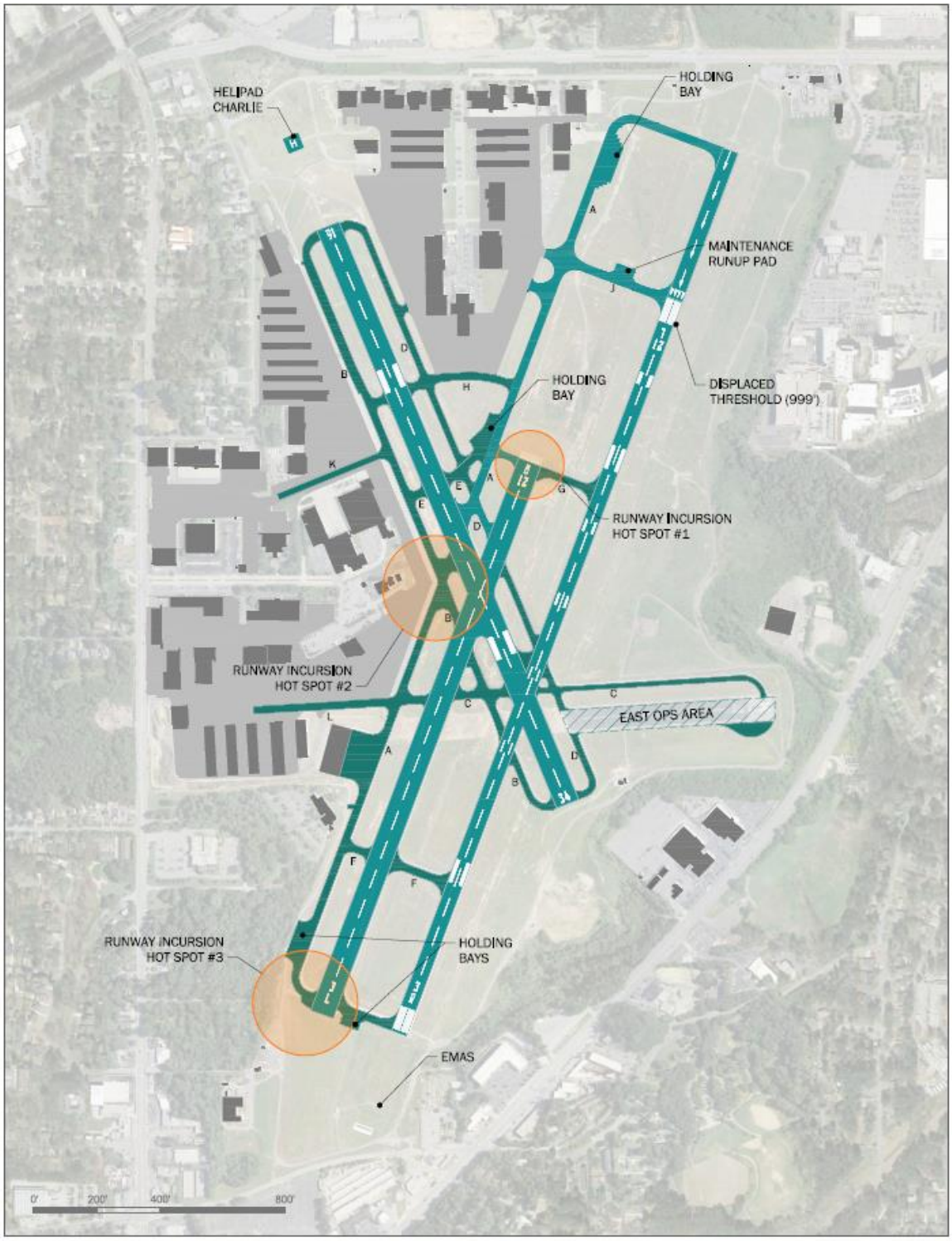
Runway 16-34

Runway 16-34 measures 3,967 feet in length and 150 feet in width and is constructed of asphalt. Runway 16-34 is a visual runway and has basic runway markings with touchdown points. Runway 16-34 does not have displaced thresholds. No straight-in instrument approaches serve this runway.

Helipad Charlie

Helipad Charlie measures 56 feet in length by 56 feet in width and is constructed of concrete. The helipad has a standard heliport identification symbol with Touchdown and Liftoff Area (TLOF) markings. No instrument approaches serve this runway.

Figure 2-1: Runways and Taxiways



Source: Michael Baker International, 2018.

2.3.2 Taxiway System

In addition to the runways, the airside facility at PDK consists of a taxiway system that provides access between the airside surfaces and the landside aviation use areas. These taxiways are depicted on **Figure 2-1**. All runways have parallel taxiways with a separation that varies but is at least 200 feet from runway centerlines. Taxiway A located on the west side of the Runway 3L-21R is 50 feet wide. Taxiway B, situated on the west side of Runway 16-34, is 50 feet wide. Taxiway C, positioned across the central node of the airfield, is approximately 35 feet wide. Taxiway D, positioned on the east side of Runway 16-34, is 40 feet wide. The airport has seven additional connector taxiways that join the runways and parking apron areas. The taxiways are paved with a combination of asphalt or concrete in certain segments.

The taxiway system has runup pads near the thresholds of Runway 3L-21R and 3R-21L on Taxiways A and E. These runup pads allow pilots to conduct pre-take-off flight checks. In addition, a runup pad is located on Taxiway J, which is primarily used by aircraft undergoing engine maintenance checks.

The FAA Airport Diagram identifies three taxiway "hot spots" at PDK. Hot spots are locations designated for enhanced awareness of potential runway incursions. A runway incursion is an occurrence involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and take-off of aircraft. These hotspots are identified on **Figure 2-1**.

2.3.3 Pavement Strength and Condition

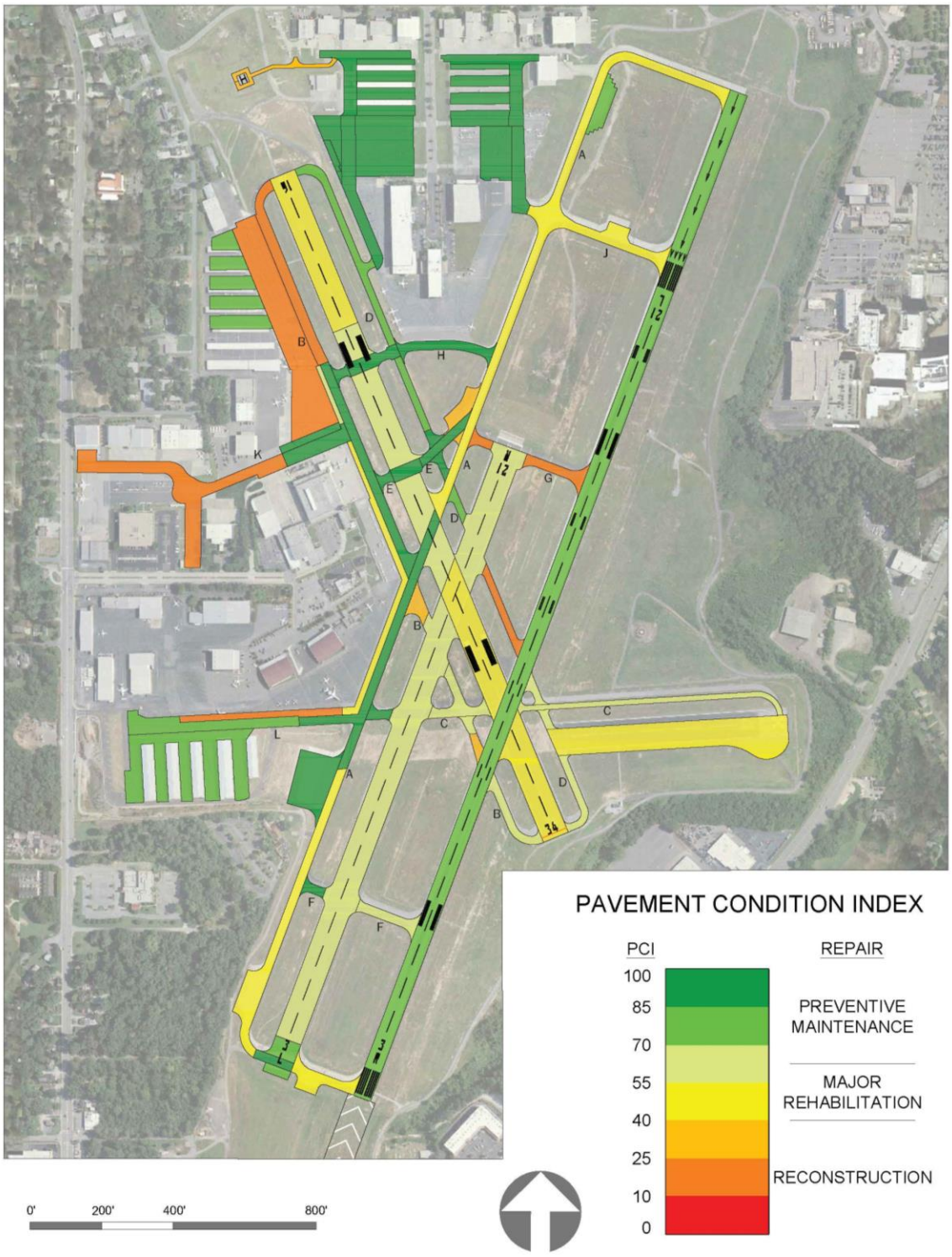
The integrity of pavement throughout airport property is crucial to ensuring safe and effective operations. Pavement strength requirements factor three key elements:

- Aircraft weight expected to use airport,
- Frequency of airport operations, and
- The landing gear geometry of each aircraft.

The Pavement Condition Index (PCI) is based on a visual inspection of pavement condition. The GDOT recently completed a statewide inventory of airport pavements in 2018. The draft findings were published in the 2019 Georgia Airport Pavement Management Report. Per the 2019 report, PDK had an overall PCI of 66.9. The runways had an average PCI of 65.2, the taxiways had PCI values ranging from 45 PCI to 81 PCI. On a 100-point scale, with 100 being perfect condition, the runway and taxiways are in good to fair condition. The apron areas and helipad had average 79.4 PCI. According to the report's pavement condition distribution, reconstruction of 1,400,000 square-feet of pavement area out of 4,609,035 square-feet is recommended at PDK. This information is presented in **Figure 2-2**.

According to FAA's 5010 Form, Airport Master Records, 2019, Runway 3L-21R and Runway 16-34 have a pavement strength of 20,000 pounds single-wheel loading. Runway 3R-21L has pavement strengths of 46,000 pounds single-wheel and 75,000 pounds dual-wheel loading.

Figure 2-2: Pavement Condition Index



Source: 2019 GDOT Pavement Condition Report.

2.3.4 Navigational Aids (NAVAIDs)

NAVAIDs provide visual and/or electronic guidance to pilots approaching the airport. PDK's NAVAID capabilities are described as follows.

Instrument Landing System (ILS)

Runway 21L is equipped with an ILS precision approach equipment, providing aircraft receivers with both horizontal and vertical electronic course guidance to the runway. The ILS equipment is comprised of an end-fire glideslope antenna (vertical course guidance) located on the eastside of Runway 21L, and a localizer antenna (horizontal course guidance) located directly off the end of Runway 3R. The current published approach minimums provide guidance to 1,334 feet MSL (400 feet Above Ground Level (AGL)) and 7/8 statute mile visibility.

Area Navigation (RNAV) and Global Positioning System (GPS)

RNAV non-precision approaches utilize GPS technology for horizontal course guidance. GPS is a space-based navigation system comprised of satellites, transmitting stations, and user receivers. An aircraft receiver can track the position of the aircraft by calculating and comparing the signal distance from several satellites. Aviation GPS equipment often depicts position and area information, such as airspace and terrain, on a moving map display in the cockpit. Because no ground facilities are required at airports to operate this navigational system, the system is reliable in all weather conditions and all terrain and is typically accurate to within 100 feet.

Wide Area Augmentation System (WAAS) is a GPS-based navigation system, which augments the existing GPS signals with additional information, providing the user highly accurate position and tracking information. Localizer Precision with Vertical Guidance (LPV) instrument approaches utilize WAAS technology to provide both vertical and horizontal course guidance to aircraft receivers. Like RNAV GPS navigation, LPV and other future WAAS approaches are available in all weather and all terrain conditions.

Runway 21L has two RNAV/GPS approaches. The 21L RNAV (GPS) Y instrument approach provides guidance down to 1,461 feet MSL (500 feet AGL) and 1-1/4 statute mile visibility. The 21L RNAV (RNP) Z instrument approach provides guidance down to 1,502 feet MSL (600 feet AGL) and 1 3/8 statute mile visibility. Runway 3R is not WAAS capable and has an RNAV approach with 1,334 feet MSL (400 feet AGL) and 1 statute mile visibility minimums.

There are no GPS LPV approaches at PDK.

Runway 3L-21R and Runway 16-34 solely provide visual approach capabilities.

Very High Frequency Omni-directional Range (VOR)

VORs are ground based navigation stations which emit both a steady 360° signal, as well as a rotating 360° signal. These signals are compared by the aircraft receiver to determine aircraft position, and course information is transmitted to the cockpit instruments.

At PDK, a VOR/Distance Measuring Equipment (DME) non-precision approach to the airport is based on the Peachtree VOR (identifier PDK), located on the eastside of Runway 21L end. This approach provides guidance down to 1,600 feet MSL (700 feet AGL) and one statute mile visibility. The approach is a circling approach, meaning it does not provide a straight-in approach to a specific runway end, rather, it brings

an aircraft to the airport from the east and the aircraft must circle to a runway once visual contact is established.

As stated in Federal Register /Vol. 81, No. 143 issued July 26, 2016, the PDK VOR is listed as a candidate for discontinuance in FAA Fiscal Years (FY) 2021-2025. Recent correspondence with the FAA indicates that the VOR will likely be decommissioned in 2022. A RNAV A procedure is proposed by FAA to serve as an overlay replacement to the VOR procedure upon its cancellation.

Table 2-1 summarizes the Instrument Approach Procedures at PDK and the lowest descent minimums and lowest visibility minimums for each approach. Descent and visibility minimums will vary based on the technical requirements of each approach.

Table 2-1: Instrument Approaches

	Runway Ends Served		Lowest Descent Minimums (Lowest AGL and Visibility)	
Approach Type	**21L**	**3R**	**21L**	**3R**
ILS or LOC	●		ILS: 400 ft & 7/8 sm LOC: 500 ft & ¾ sm CIR: 600 ft &1 sm	
RNAV (RNP)		●		RNP.10: 400 ft & 1 sm RNP.30: 500 ft & 1 3/8 sm
RNAV (RNP) Z	●		RNP.30: 600 ft & 1 3/8 sm	
RNAV (GPS) Y	●		LNAV/VNAV: 500ft & 1 ¼ sm LNAV: 600 ft & ¾ sm CIR: 600 ft & 1 sm	
VOR	Circling Only	Circling Only	700 ft &1 sm CIR	700 ft & 1 sm CIR

Source: FAA instrument procedures published for use from 31 January 2019 to 28 February 2019.

2.3.5 Airfield Visual Aids

Visual aids at an airport provide additional information for identification and safe operation. Shown in **Figure 2-3,** PDK is equipped with a rotating beacon, a wind cone, and precision approach path indicators (PAPIs) for visual cues of airport conditions.

Rotating Beacon

A rotating beacon is located west of Runway 3R-21L. High intensity lamps mounted on an assembly rotate 360° every six seconds, giving the illusion of emitting flashes of light. The designation for PDK, a civilian land airport, is alternating green and white lights in equal duration. The rotating beacon is operational

from sunset to sunrise and during Instrument Meteorological Conditions (IMC). Currently PDK is evaluating upgrades to the existing beacon.

Wind Cone

A lighted wind cone is located just north of Taxiway D and east of Runway 21R. It provides visual surface wind information to pilots. Since the airport has an ATCT, the wind cone does not have a segmented circle to indicate airport traffic pattern. Supplemental wind cones are found near the touchdown points of Runway 3L, 21R and on top of a helicopter hangar near Helipad Charlie.

Precision Approach Path Indicators (PAPIs)

Runway 16-34 is equipped with four-box PAPIs located on the left side of each runway threshold. Runway 3L-21R has two-box PAPIs. Runway 3R-21L has a four-box PAPI on the left and two-box PAPI on the left. These landing aids help pilots to visually establish their aircraft on the proper approach glide path for landing by emitting a row of red and white lights that indicate when the aircraft is vertically aligned properly with the runway. A four-box PAPI system emits three to four white lights if the aircraft is higher than the glide path and three to four red lights if the aircraft is lower than the proper glide path, indicating to the pilot an adjustment of altitude is needed. The Airport is evaluating upgrades to the existing PAPI system.

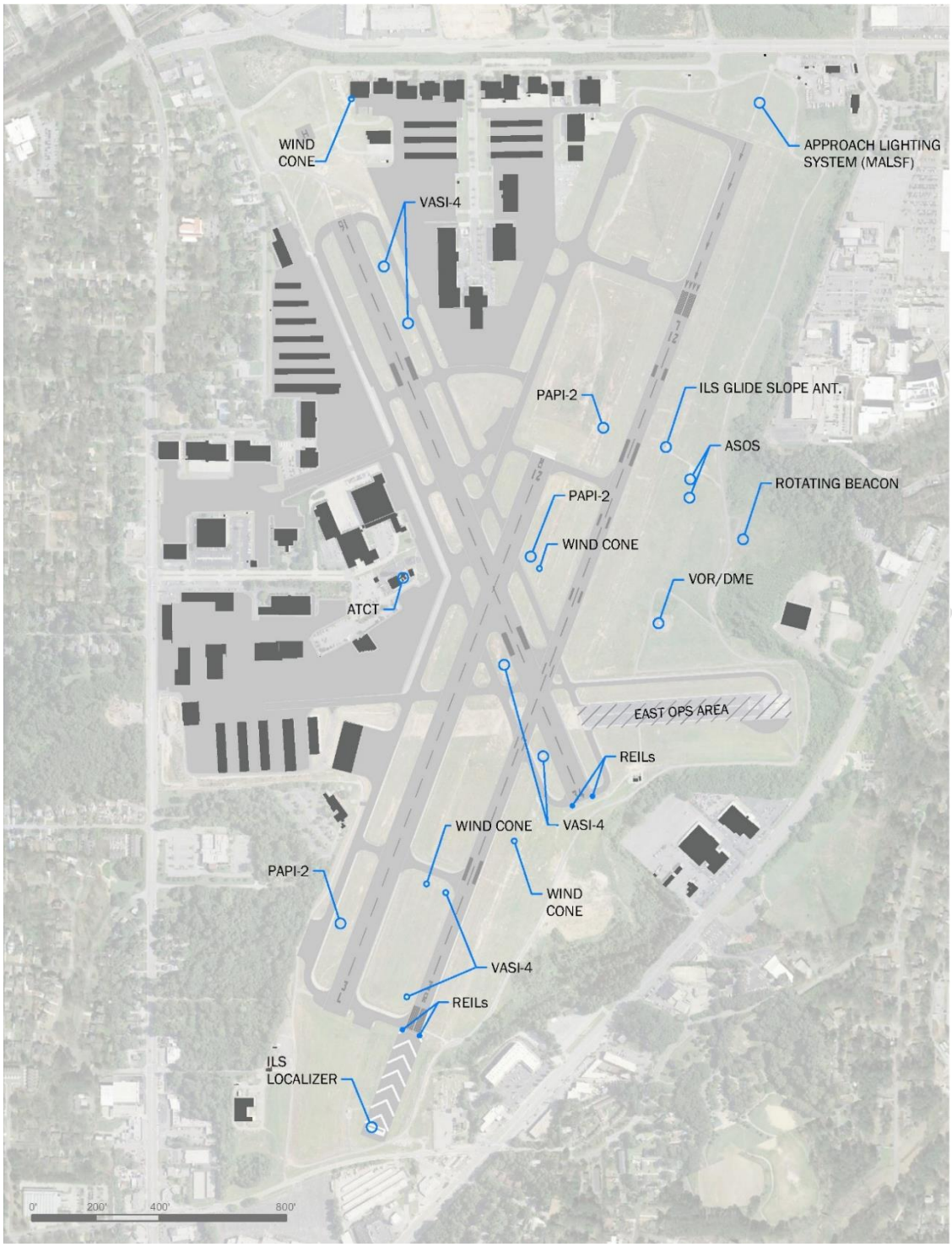
2.3.6 Weather Reporting Facilities

The airport is equipped with an Automated Surface Observing System (ASOS) weather reporting system, located east of Runway 3R-21L near the rotating beacon. The ASOS is a modern weather collection and reporting system which 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 ASOS equipment gathers meteorological data every minute and automatically transcribes current conditions via a designated radio frequency. The conditions are also available via telephone and aviation weather websites.

Figure 2-3: NAVAIDs



Source: Michael Baker International, 2018.

Table 2-2, provides a summary of existing airside facilities.

Table 2-2: Summary of Existing Airside Facilities

Item	Existing Condition			
Airport Role	FAA - GA/National GASP - Level III			
Airport Elevation	988 ft			
Airport Property	745 ac			
Max Mean Temp. of Hottest Month	89.4° F (July)			
Airport Reference Point	33-52-32.2 N, 84-18-07.1 W			
Magnetic Declination	5° 14’ W changing by 0° 3’ W per year (2019)			
Instrument Approach Procedures	ILS; LOC; RNAV; GPS; VOR-DME			
Weather Reporting	ASOS			
	Runway 3R-21L	**Runway 3L-21R**	**Runway 16-34**	**Helipad Charlie**
Runway Length	6,001 ft	3,746 ft	3,967 ft	n/a
Runway Width	100 ft	150 ft	150 ft	56 x 56 ft
Pavement Type	Concrete - Grooved	Asphalt	Asphalt	Concrete
Strength	SW - 46,000 lbs DW- 75,000 lbs	SW - 20,000 lbs	SW - 20,000 lbs	n/a
Effective Gradient	0.20%	0.40%	0.20%	n/a
Lighting	HIRL	MIRL	MIRL	PERI
Marking	Precision	Basic	Basic	Standard
Taxiway Pavement Type	Asphalt and Concrete			
Taxiway Width	40-50 ft			
Taxiway Lighting	MITL			

Source: Michael Baker International, 2019.
Max. Mean Temperature of the hottest month determined from the 1981-2010 U.S. Climate Normal station USW00053863

2.4 General Aviation Facilities

Landside facilities are the based facilities that support the travelers, pilots, and aircraft handling functions. Facilities include the administration building, fixed base operators (FBOs), aircraft maintenance, aircraft hangars, aircraft fueling facilities, aircraft apron parking, vehicle parking and emergency services. These facilities and businesses support and provide services for aircraft operators at the airport. Landside facilities at PDK are shown in **Figure 2-4**.

2.4.1 Airport Businesses

PDK is home to over 25 prominent businesses including aeronautical and non-aeronautical organizations. Businesses include Atlantic Aviation, Epps Air Service and Signature Flight Support, Hertz and Enterprise car rental, Pilot Stuff Supplies and Accessories, a provider of aviation supplies; Hertz, car rental facility; and Angel Flight, a group of volunteer pilots that provide medical related flights to patients.

There are ten flight schools and one helicopter flight school currently based at PDK. All flight schools offer a comprehensive flight training programs for career and recreational pilots.

DeKalb County

DeKalb County Airport Division provides airport operational and management supervision of the airport facility and is responsible for overall maintenance of PDK grounds as well as leasing tiedowns, aircraft hangar rentals, and land lease-holds throughout the property. Several county T-hangar buildings and tiedowns are found on the north, northwest, and west side of the airfield.

2.4.2 Fixed Based Operation (FBO) and Fuel Storage

A full range of services are available at PDK. This includes aircraft fueling, flight training, aircraft maintenance, aircraft storage, and many other services. The airport is served by three full-service FBOs, Atlantic Aviation, Epps Aviation and Signature Flight Support. The airport also has one partial service FBO which is PDK Self-Serve Avgas.

Atlantic Aviation

Atlantic Aviation is a full-service FBO that provides a variety of general aviation services. Atlantic Aviation is located on the west side of Runway 3L-21R adjacent to the ATCT. At the time of this study, Atlantic Aviation is currently in the process of demolishing two of their conventional hangars and terminal building and constructing a new 17,097 square-foot terminal in its place. Aside from their new terminal building, Atlantic Aviation operates out of approximately 61,681 square-foot facility spread over five hangar buildings that provides offices, aircraft space, pilot lounge, and type I deicing services located southwest portion of the airport. Atlantic Aviation provides full-service Jet A and Avgas fuel.

Epps Aviation

Epps Aviation is the first full-service host FBO to service PDK since 1965. It operates out of the northwest portion of the airport adjoining the Administration Building where they service their main customers out of an approximate 51,122 square-feet of office and hangar building. Epps Aviation maintains four corporate hangars, an executive hangar, three T-hangars, and a maintenance hangar engrossing approximately 178,795 square-feet. In 1996, Epps Aviation became an authorized sales and services

provider for Pilatus aircrafts marketing to U.S. Southeast and Canada. The company serves full-service Jet A and Avgas fuel 24 hours per day.

Signature Flight Support

Signature Flight Support is the third full-service FBO housed at PDK and is located north on the airfield between Runway 16-34 and Runway 3L-21R. Signature's services and amenities include conference rooms, passenger lounge, flight planning, aircraft maintenance, aircraft charter, deicing, fuel and more. Signature encompasses 87,650 square-feet of hangar and office space and subleases 94,000 square-feet of ramp.

2.4.3 Airport Administration

The airport administration office is located on Airport Road near the ATCT. These facilities include the Airport Director's Office, Security Office, Noise Information Office, and conference rooms. The Administration Building also houses several businesses including flight schools, Bird Bath, Angel Flight of Georgia, and an airport restaurant, The Downwind.

2.4.4 Airport Maintenance

The PDK airport maintenance building is in the southwest corner of airport property perpendicular to Runway 3L. The area includes a building and maintenance area to store maintenance supplies, equipment, and vehicles. The maintenance building was construction in 2001 and includes 16,087 square feet of floor space.

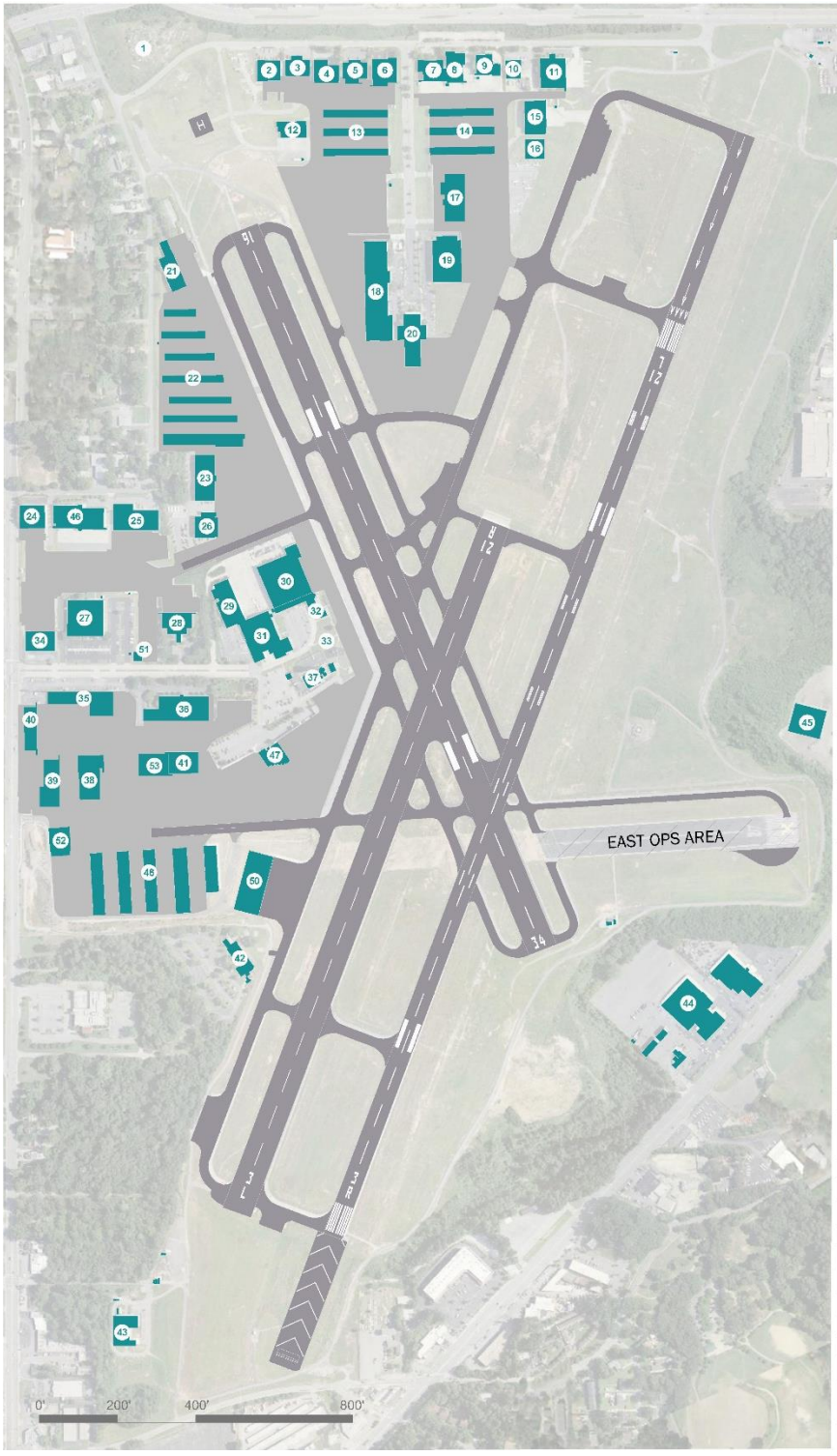
2.4.5 Emergency Services

DeKalb County Fire-Rescue Services, identified as Station 15, is located within the north portion of Airport property on Flightway Drive. Since PDK is not a FAR Part 139 certified airport (i.e., air carrier), a dedicated Airport Rescue and Fire Fighting (ARFF) station is not required but PDK benefits greatly from the location of the station at the airport. Station 15 not only provides fire and rescue services at PDK but to the surrounding community as well.

Today, Station 15 houses the office of the Battalion Chief; Engine 15, a structural fire response truck and a Rosenbauer Panther 4X4 Aircraft Rescue and Firefighting (ARFF) fire truck. The all-terrain ARFF truck carries 1,500 gallons of water which is mixed with Aqueous Film Form Foam (AFFF) fired from bumper and roof turrets. Also, the ARFF truck carries 500 pounds of what is called Purple "K" or "PK" which is a dry chemical that smothers an aircraft fire similar to AFFF.

Station 15's direct access to PDK's ramps allows quick access to the airfield in the event of airport emergencies.

Figure 2-4: Facility Inventory



#	Facility Inventory
1	Public Safety K-9 Facility
2	Helicopter Express
3	Helicopters, Inc.
4	2005 Flightway (Hangar 15)
5	PDK LLC Corporate Hangar
6	RCM Hangar
7	Flightway One Corporate Hangar
8	Colonial Pipeline
9	Hangars Glen Corporate Hangar
10	DeKalb County Fire Station #15
11	Helicopter Express
12	Bluember Aviation
13	County T-Hangars
14	County T-Hangars
15	Peachtree Aviation
16	Peachtree/Aviation II Corporate Hangar
17	Waffle House Corporate Hangar
18	Signature Flight Support Hangar
19	Southern Company
20	Signature Flight Support FBO Terminal
21	Nonami Corporate Hangar
22	County/Epps T-Hangars
23	Epps Air Service
24	U.S. Transport Corporate Hangar
25	Epps Air Hangar
26	Epps Air Hangar
27	Airport Road LLC
28	Rollins Corporate Hangar
29	Epps Air Service Maintenance
30	Epps Air Service FBO Terminal
31	Epps Air Service
32	Airport Administration
33	Doc Manget Park
34	The Maintenance Group
35	Atlantic West
36	Atlantic West
37	Air Traffic Control Tower
38	Atlantic West Hangar
39	Atlantic West Hangar
40	Atlantic West Hangar
41	Atlantic West Hangar
42	57th Fighter Group Restaurant
43	PDK Airport Maintenance Facility
44	Pope Automotive Group
45	DeKalb County Sanitation
46	Avionics Sales (Jet Fueling)
47	Atlantic West FBO Terminal
48	County T-Hangars
49	DeKalb County Sanitation
50	Select Corporate Hangar
51	Flight School Hangar
52	Atlantic West Hangar
53	Atlantic West Hangar

Source: Michael Baker International, 2018.

2.4.6 Aprons

General aviation aprons also known as ramps, provide a location for based aircraft storage, loading and unloading passengers, FBO operations, and itinerant aircraft storage. Because aprons endure a variety of activity, they should be designed to allow for a changing mix of transient and parked aircraft. A few key elements that effect apron design include ground equipment access, aircraft circulation and characteristics, safety, obstruction and visual clearance.

There are five aircraft apron areas at PDK shown in **Figure 2-5**, located in the northern and western regions of the airport. Together, these ramps consist of 364,166 square yards of allowable space for aircraft circulation and storage.

West Ramp

The West Ramp is located immediately south of the ATCT. The apron is approximately 135,775 square yards of paved surface. It is leased to and operated by Atlantic Aviation, one of the airport's FBOs, to store itinerant and based aircraft.

Clairmont Ramp

Clairmont Ramp is located at the corner of Airport Road and Clairmont Road near the main entrance of the airport. This apron is about 31,729 square yards in size and is used for aircraft tie-downs that accommodate a variety of aircraft sizes.

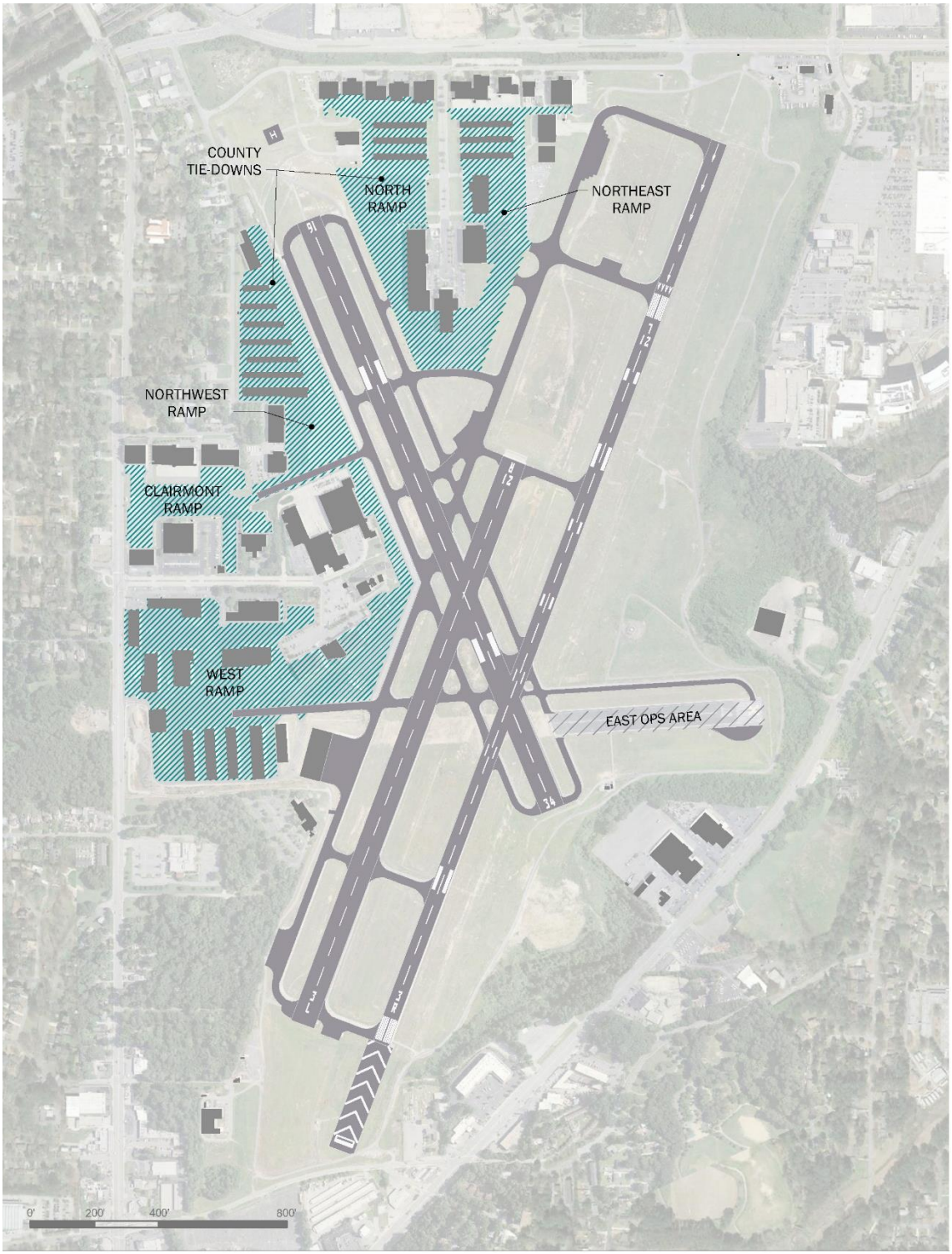
Northwest Ramp

The Northwest Ramp is located immediately north of the ATCT. The ramp area adjacent to the Airport Administration Building is used exclusively Epps Aviation. This apron space, measuring 79,617.5 square yards, services large-to-medium size jets and small aircrafts. The northern portion of the Northwest ramp provides aircraft parking for based aircrafts leased from DeKalb County.

North and Northeast Ramps

Collectively, the North and Northeast Ramp are located north on within Airport property and together total 117,043 square yards. They are used for tiedown spaces, aircraft maneuvering and transient aircraft parking. There is approximately 57 tiedown spaces in this combined ramp area. Signature Flight Support, which is the third FBO housed at PDK, leases the ramp area adjacent to Taxiway H while DeKalb County T-hangars and tie-down sit north of Signature Flight Support.

Figure 2-5: Aprons



Source: Michael Baker International, 2018.

2.4.7 Auto Parking

There are several vehicular parking lots available at PDK. The two public parking lots are located adjacent to the Administration Building and ATCT, both individual lots consisting of 71 spaces, totaling 142 spaces.

2.4.8 Airport Access

Regional access to PDK is provided from Interstate 85 approximately two miles east of PDK and Interstate 285 Interchange approximately three miles northeast of PDK which intersects with Interstate 85 northeast of PDK. PDK is bordered by Clairmont Road to the west; Dresden Drive NE to the south, Buford Highway NE to the east and Chamblee-Tucker Road along the northern side of the airport. New Peachtree Road connects Clairmont Road and Chamblee-Tucker Road northwest of PDK. The Metropolitan Atlanta Rapid Transit Authority (MARTA) station sits at the intersection of Peachtree Road and Chamblee-Tucker Road.

There are two primary vehicular access points to PDK. The main entrance is at Clairmont Road and Airport Road which navigates to the Administration Building. Corsair Drive runs from Flightway Drive and anchors where Signature Flight Support FBO is located.

2.4.9 Airport Utilities

The availability and capacity of the utilities serving the airport are factors to determining the development potential of the airport, as well as the land immediately adjacent to the facility. Utility availability is critical especially when considering future airport expansion abilities for both landside and airside.

The airport utilities include electrical, natural gas, water and sewer, and telephone service. Georgia Power provides electrical power for the airport. DeKalb County Watershed provides water, sewer and wastewater management to the airport. Atlanta Gas Light provides natural gas service and AT&T provides telephone services.

Access to utilities are readily available in the existing general aviation terminal areas.

2.4.10 Airport Waste and Recycling Facilities

Airport waste management and recycling facilities are provided by DeKalb County Watershed.

2.5 Airspace and Air Traffic Control

The FAA is responsible for the control and use of navigable airspace within the United States. The FAA has established the National Airspace System (NAS) in efforts to protect persons and property on the ground and to establish a safe and efficient airspace environment for civil, commercial, and military aviation. The NAS is made up of a network of air navigation facilities, Air Traffic Control (ATC) facilities, airports, technology, and appropriate rules and regulations that are needed to operate the system.

Airspace is broken down into two categories: regulatory and non-regulatory. Within the regulatory airspace category, there are two types of airspace: controlled and uncontrolled. Categories and types of airspace are defined based on their complexity or density of aircraft movement, or the nature of the operation conducted within the airspace, which dictates the level of safety required and the level of national and public interest.

The purpose of controlled airspace is to provide adequate separation between IFR and VFR aircraft, thus, IFR services are available, but not required, within all controlled airspace.

DeKalb Peachtree Airport resides inside a complicated metropolitan airspace environment as shown on **Figure 2-6**. Immediately within the vicinity of PDK are several airports, including Gwinnett County Airport (LZU) east of the PDK near Lawrenceville; Dobbins Air Reserve Base/Naval Air Station (MGE) and Cobb County Airport (RYY) both northwest of PDK in Marietta; and Fulton County Airport (RYY) west of PDK near Mableton. Excluding MGE, each of these airports serves as a general aviation reliever for ATL, located south of PDK near College Park. ATL, being the world's busiest airport, is enclosed within Class B airspace. The structure of this airspace resembles an upside-down wedding cake and is tailored to meet ATL's requirements. At the center, the airspace structure extends from the surface to 12,500' MSL. Further from the center, the floor of the airspace begins at progressively higher levels ranging from 2,500' MSL up to 10,000' MSL. Class B airspace stipulates certain operating rules and pilot/equipment requirements.

In the vicinity of PDK, ATL's Class B airspace begins at 5,000' MSL in the south quadrant, 6,000' MSL in the east quadrant and 7,000 ft in the west and north quadrants. Because PDK has an air traffic control tower, Class D airspace, centered on PDK, extends from the surface to 3,500' MSL. Class D airspace has specific operating rules and equipment requirements. The radius of PDK's airspace is approximately 5 statute miles. During the hours PDK's air traffic control tower is closed, the airspace at PDK and its vicinity changes to a combination of Class E and G airspace. Class E airspace at PDK during those periods begins at 700' AGL with Class G airspace underlying it. More detailed information regarding classes of airspace and their use may be found in the FAA publication *Aeronautical Information Manual, Chapter 3 - Airspace*.

Air traffic control requirements generally specify aircraft departing or arriving at PDK must establish two-way communications with PDK ATCT during the hours of the facility's operation. Furthermore, if the aircraft is flying Instrument Flight Rules (IFR), the pilot will also communicate with Atlanta Terminal Radar Approach Control (TRACON) enroute to or from the airport.

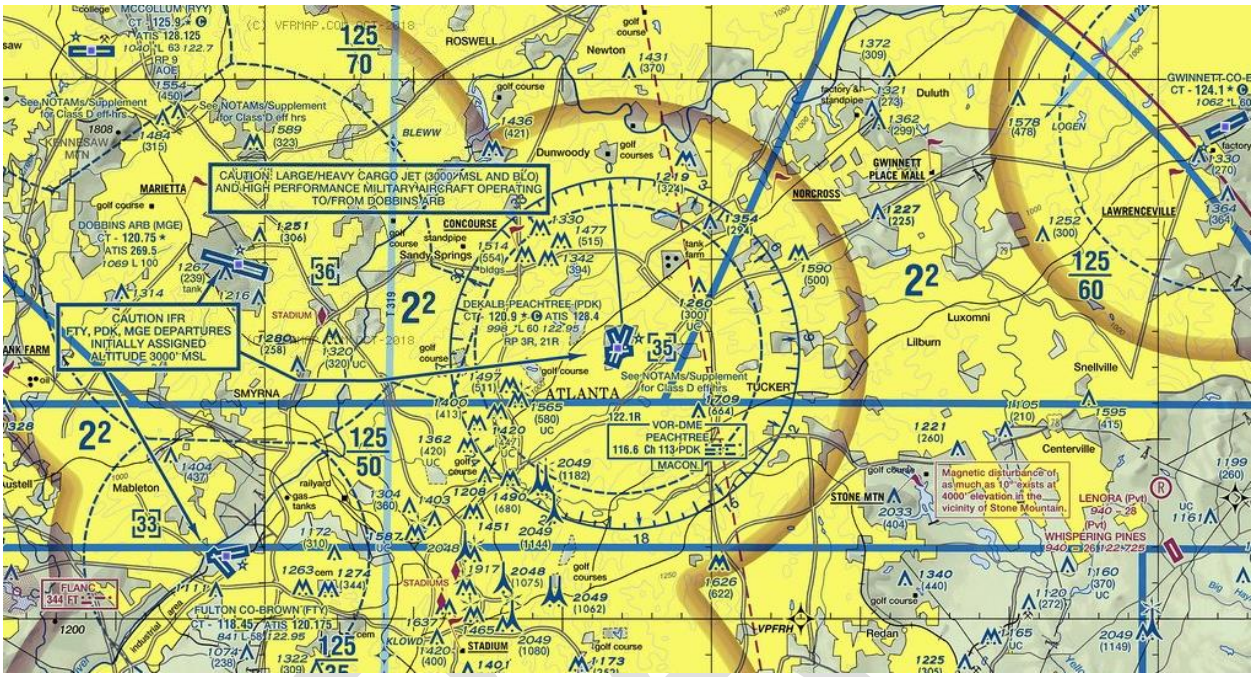
Tower controllers issue a variety of instructions to pilots, including specifying entry navigation into the air traffic landing pattern, to departure instructions toward an intended route of flight. With respect to IFR departures, PDK ATCT will typically assign a specific runway, heading, and altitude for the aircraft to follow until the ATC services for that aircraft are transferred to Atlanta TRACON. Atlanta TRACON then vectors the aircraft to its enroute segment of flight.

PDK ATCT operates from 6:30 a.m. to 11:00 p.m. Monday to Friday and from 7:00 a.m. to 11:00 p.m. on Saturday and Sunday, local time. During the hours PDK ATCT is closed, the pilot intending to fly IFR will either receive clearance from Atlanta TRACON on the ground prior to take-off, or in the air upon taking off flying VFR. The specific departure procedures given by PDK ATCT and Atlanta TRACON for departing IFR aircraft are related to the Standard Operating Procedures signed between the two entities.

In addition to airspace classifications and ATC responsibility, a notable airspace feature is the presence of tall towers south of the airport. The tallest towers are found south of the intersection of Interstate 85 and Highway 400 in areas commonly referred to as Druid Hills, Northwest Decatur, and East Atlanta neighborhoods. The tallest towers stand 2,049' MSL and are greater than 1,100' AGL.

To the south, under IFR, ATC has responsibility for traffic deconfliction and obstruction avoidance, and therefore will normally turn aircraft expeditiously to avoid both the tall obstructions and traffic flow related to ATL. Under Visual Flight Rules (VFR), the pilot is responsible for maintaining separation from other aircraft and to remain clear of obstructions.

Figure 2-6: Airport Airspace



Source: FAA Air Traffic, Atlanta Sectional Chart, 2018

2.6 Domestic and International Arrivals and Destination

Table 2-3 and

Table 2-4 lists while Figure 2-7: Top 25 Flight Plan Arrival Airports (2017)**Figure 2-7** and **Figure 2-8** displays the top 25 arrival and destination markets flown to and from PDK in 2017. Based on the top 25 arrival and destination cities, Birmingham-Shuttlesworth International (AL), McKinnon St. Simons Island (GA), and Teterboro (NJ/NYC) account for the top three markets; making up approximately 25% of arrival and departure flight plans generated. With the exception of St. Louis, majority of the top 25 domestic flights generated from or arriving to PDK are east of the Mississippi River with the bulk deriving within 250 nautical miles of the Airport. Although the occurrences are low, the Airport also serves the international markets as well. **Figure 2-9** and **Figure 2-10** displays international flight plans. Based on 2017 international flight plan arrival and destination records, the top three international markets include Bahamas, Canada and Turks And Caicos Islands. International flights originating from PDK typically serves a more extensive market than those arriving at the Airport. Based on **Figure 2-10** flight range can stretch as far as 4,000 nautical miles to Europe.

Table 2-3: Top 25 Flight Plan Arrival Airports (2017)

Rank	Airports	State	Flight Plans
1	BIRMINGHAM-SHUTTLESWORTH INTL	AL	667
2	MCKINNON ST SIMONS ISLAND	GA	667
3	TETERBORO	NJ	643
4	SAVANNAH/HILTON HEAD INTL	GA	531
5	DEKALB-PEACHTREE	GA	442
6	CHARLOTTE/DOUGLAS INTL	NC	363
7	NASHVILLE INTL	TN	327
8	NORTHWEST FLORIDA BEACHES INTL	FL	311
9	PALM BEACH INTL	FL	296
10	CHARLESTON AFB/INTL	SC	277
11	CINCINNATI MUNI AIRPORT LUNKEN FIELD	OH	259
12	HUNTSVILLE EXECUTIVE AIRPORT TOM SHARP JR	AL	243
13	SPIRIT OF ST LOUIS	MO	224
14	RALEIGH-DURHAM INTL	NC	221
15	MC GHEE TYSON	TN	211
16	NAPLES MUNI	FL	209
17	HILTON HEAD	SC	208
18	WASHINGTON DULLES INTL	VA	192
19	EXECUTIVE	FL	188
20	ASHEVILLE RGNL	NC	186
21	GWINNETT COUNTY - BRISCOE FIELD	GA	183
22	GAINESVILLE RGNL	FL	180
23	OPA-LOCKA EXECUTIVE	FL	179
24	DESTIN EXECUTIVE	FL	176
25	LOVELL FIELD	TN	175

Source: Michael Baker International, 2019

Table 2-4: Top 25 Flight Plan Destination Airports (2017)

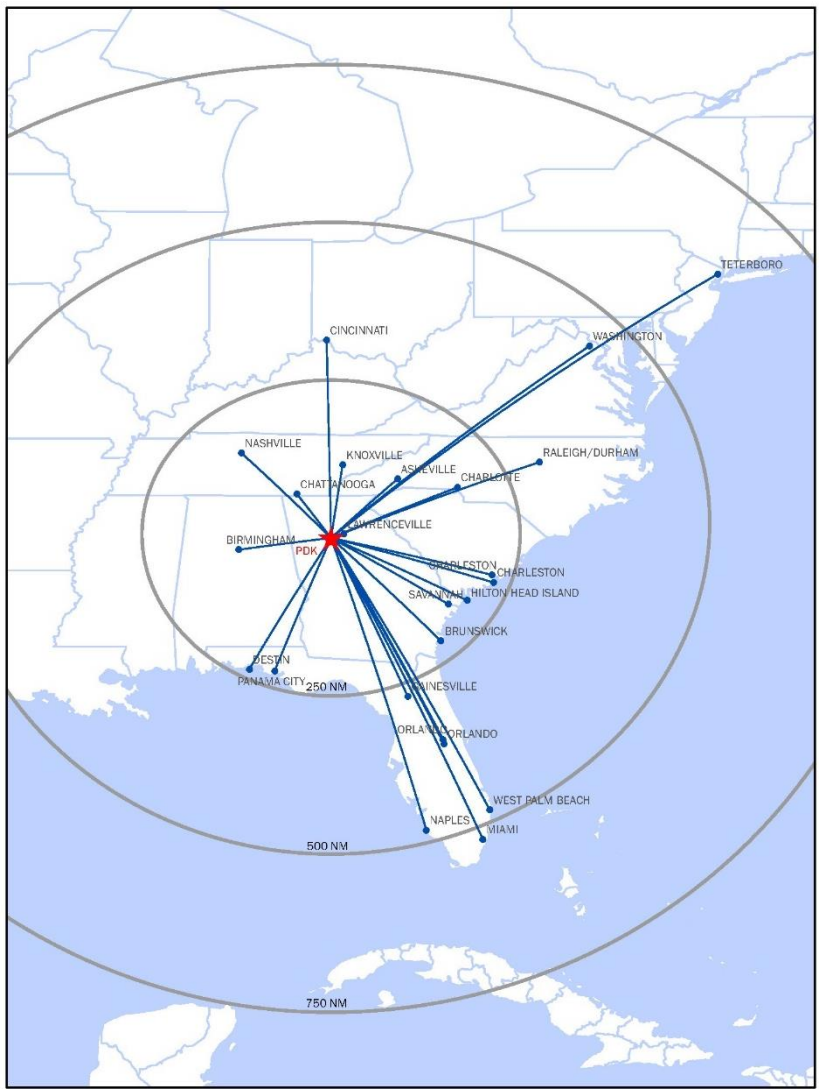
Rank	Airports	State	Flight Plans
1	BIRMINGHAM-SHUTTLESWORTH INTL	AL	653
2	MCKINNON ST SIMONS ISLAND	GA	649
3	TETERBORO	NJ	630
4	SAVANNAH/HILTON HEAD INTL	GA	518
5	DEKALB-PEACHTREE	GA	442
6	NASHVILLE INTL	TN	343
7	NORTHWEST FLORIDA BEACHES INTL	FL	334
8	CHARLOTTE/DOUGLAS INTL	NC	333
9	CINCINNATI MUNI AIRPORT LUNKEN FIELD	OH	288
10	CHARLESTON AFB/INTL	SC	277
11	PALM BEACH INTL	FL	274
12	GAINESVILLE RGNL	FL	253
13	RALEIGH-DURHAM INTL	NC	238
14	EXECUTIVE	FL	236
15	MC GHEE TYSON	TN	229
16	HILTON HEAD	SC	213
17	GWINNETT COUNTY - BRISCOE FIELD	GA	207
18	ASHEVILLE RGNL	NC	199
19	ORLANDO INTL	FL	193
20	DESTIN EXECUTIVE	FL	187
21	NAPLES MUNI	FL	179
22	WASHINGTON DULLES INTL	VA	178
23	OPA-LOCKA EXECUTIVE	FL	177
24	LOVELL FIELD	TN	175
25	CHARLESTON EXECUTIVE	SC	174

Source: Michael Baker International, 2019

Figure 2-7: Top 25 Flight Plan Arrival Airports (2017)

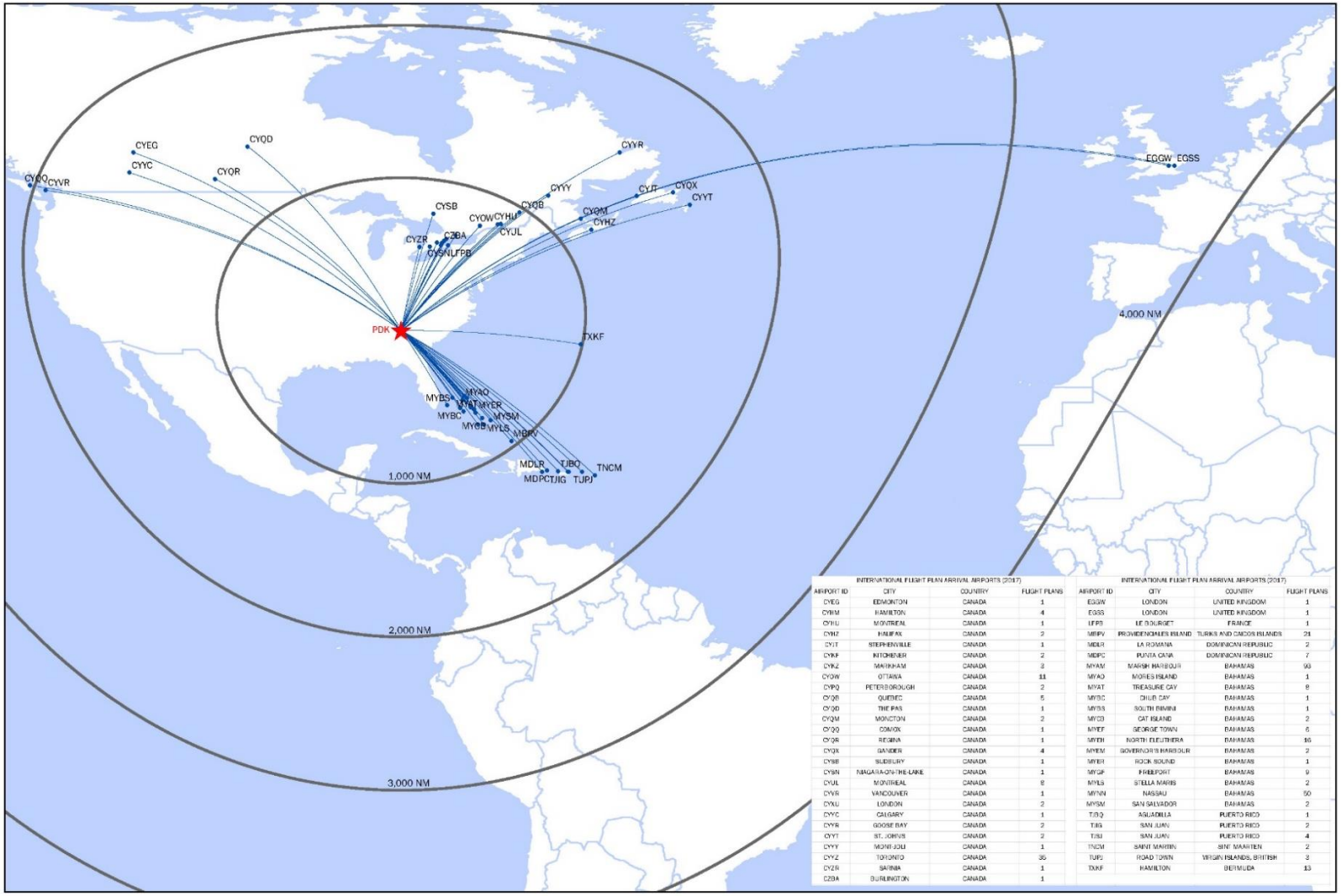
Source: Michael Baker International, 2019

Figure 2-8: Top 25 Flight Plan Destination Airports (2017)



Source: Michael Baker International, 2019

Figure 2-9: International Plan Arrival Airports (2017)



INTERNATIONAL FLIGHT PLAN ARRIVAL AIRPORTS (2017)

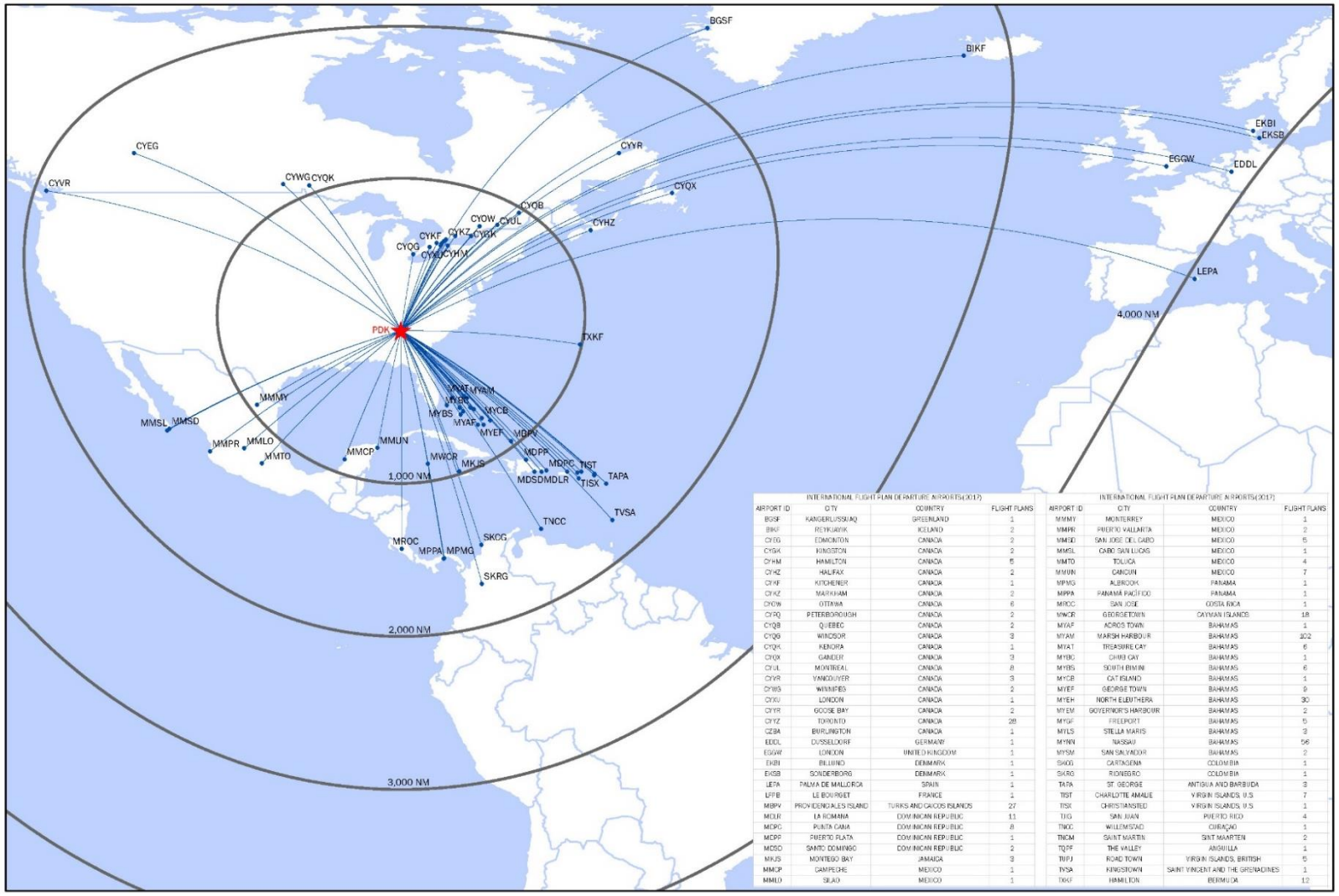
AIRPORT ID	CITY	COUNTRY	FLIGHT PLANS
CYEG	EDMONTON	CANADA	1
CYHM	HAMILTON	CANADA	4
CYHU	MONTREAL	CANADA	1
CYHZ	HALIFAX	CANADA	2
CYJT	STEPHENVILLE	CANADA	1
CYKF	KITCHENER	CANADA	2
CYKZ	MARKHAM	CANADA	2
CYOW	OTTAWA	CANADA	11
CYPQ	PETERBOROUGH	CANADA	2
CYQB	QUEBEC	CANADA	5
CYQD	THE PAS	CANADA	1
CYQM	MONCTON	CANADA	2
CYQQ	COMOX	CANADA	1
CYQR	REGINA	CANADA	1
CYQX	GANDER	CANADA	4
CYSB	SUDBURY	CANADA	1
CYSN	NIAGARA-ON-THE-LAKE	CANADA	1
CYUL	MONTREAL	CANADA	8
CYVR	VANCOUVER	CANADA	1
CYXU	LONDON	CANADA	2
CYYC	CALGARY	CANADA	1
CYYR	GOOSE BAY	CANADA	2
CYYT	ST. JOHN'S	CANADA	2
CYYY	MONT-JOLI	CANADA	1
CYYZ	TORONTO	CANADA	35
CYZR	SARNIA	CANADA	1
CZBA	BURLINGTON	CANADA	1

INTERNATIONAL FLIGHT PLAN ARRIVAL AIRPORTS (2017)

AIRPORT ID	CITY	COUNTRY	FLIGHT PLANS
EGGW	LONDON	UNITED KINGDOM	1
EGSS	LONDON	UNITED KINGDOM	1
LFPB	LE BOURGET	FRANCE	1
MBPV	PROVIDENCIALES ISLAND	TURKS AND CAICOS ISLANDS	21
MDLR	LA ROMANA	DOMINICAN REPUBLIC	2
MDPC	PUNTA CANA	DOMINICAN REPUBLIC	7
MYAM	MARSH HARBOUR	BAHAMAS	93
MYAO	MORES ISLAND	BAHAMAS	1
MYAT	TREASURE CAY	BAHAMAS	8
MYBC	DIUB CAY	BAHAMAS	1
MYBS	SOUTH BIMINI	BAHAMAS	1
MYCB	CAT ISLAND	BAHAMAS	2
MYEF	GEORGE TOWN	BAHAMAS	6
MYEH	NORTH ELEUTHERA	BAHAMAS	16
MYEM	GOVERNOR'S HARBOUR	BAHAMAS	2
MYER	ROCK SOUND	BAHAMAS	1
MYGF	FREEPORT	BAHAMAS	9
MYLS	STELLA MARIS	BAHAMAS	2
MYNN	NASSAU	BAHAMAS	50
MYSM	SAN SALVADOR	BAHAMAS	2
TJBQ	AGUADILLA	PUERTO RICO	1
TJIG	SAN JUAN	PUERTO RICO	2
TJSJ	SAN JUAN	PUERTO RICO	4
TNCM	SAINT MARTIN	SINT MAARTEN	2
TUPJ	ROAD TOWN	VIRGIN ISLANDS, BRITISH	3
TXKF	HAMILTON	BERMUDA	13

Source: Michael Baker International, 2019

Figure 2-10: International Plan Destination Airports (2017)



INTERNATIONAL FLIGHT PLAN DEPARTURE AIRPORTS (2017)

AIRPORT ID	CITY	COUNTRY	FLIGHT PLANS
BGSF	KANGERLUSSUAQ	GREENLAND	1
BIKF	REYKJAVIK	ICELAND	2
CYEG	EDMONTON	CANADA	2
CYGK	KINGSTON	CANADA	2
CYHM	HAMILTON	CANADA	5
CYHZ	HALIFAX	CANADA	2
CYKF	KITCHENER	CANADA	1
CYKZ	MARKHAM	CANADA	2
CYOW	OTTAWA	CANADA	6
CYQG	PETERBOROUGH	CANADA	2
CYQB	QUEBEC	CANADA	2
CYQG	WINDSOR	CANADA	3
CYQK	KENORA	CANADA	1
CYQX	GANDER	CANADA	3
CYUL	MONTREAL	CANADA	8
CYVR	VANCOUVER	CANADA	3
CYWG	WINNIPEG	CANADA	2
CYXU	LONDON	CANADA	1
CYYR	GOOSE BAY	CANADA	2
CYYZ	TORONTO	CANADA	28
CZBA	BURLINGTON	CANADA	1
EDDL	DUSSELDORF	GERMANY	1
EGGW	LONDON	UNITED KINGDOM	1
EKBI	BILLUND	DENMARK	1
EKSB	SONDERBORG	DENMARK	1
LEPA	PALMA DE MALLORCA	SPAIN	1
LFBI	LE BOURGET	FRANCE	1
MBPV	PROVIDENCIALES ISLAND	TURKS AND CAICOS ISLANDS	27
MDLR	LA ROMANA	DOMINICAN REPUBLIC	11
MDPC	PUNTA CANA	DOMINICAN REPUBLIC	8
MDPP	PUERTO PLATA	DOMINICAN REPUBLIC	1
MDSD	SANTO DOMINGO	DOMINICAN REPUBLIC	2
MKJS	MONTEGO BAY	JAMAICA	3
MMCP	CAMPECHE	MEXICO	1
MMLO	LEAO	MEXICO	1

INTERNATIONAL FLIGHT PLAN DEPARTURE AIRPORTS (2017)

AIRPORT ID	CITY	COUNTRY	FLIGHT PLANS
MMMY	MONTERREY	MEXICO	1
MMPR	PUERTO VALLARTA	MEXICO	2
MMSD	SAN JOSE DEL CABO	MEXICO	5
MMSL	CABO SAN LUCAS	MEXICO	1
MMTO	TOLUCA	MEXICO	4
MMUN	CANCUN	MEXICO	7
MPMG	ALBROOK	PANAMA	1
MPPA	PANAMA PACIFICO	PANAMA	1
MROC	SAN JOSE	COSTA RICA	1
MWCR	GEORGETOWN	CAYMAN ISLANDS	18
MYAF	ACKLINS TOWN	BAHAMAS	1
MYAM	MARSH HARBOUR	BAHAMAS	102
MYAT	TREASURE CAY	BAHAMAS	6
MYBC	CHUB CAY	BAHAMAS	1
MYBS	SOUTH BIMINI	BAHAMAS	6
MYCB	CAT ISLAND	BAHAMAS	1
MYEF	GEORGE TOWN	BAHAMAS	9
MYEH	NORTH ELEUTHERA	BAHAMAS	30
MYEM	GOVERNOR'S HARBOUR	BAHAMAS	2
MYGF	FREEPORT	BAHAMAS	15
MYLS	STELLA MARIS	BAHAMAS	3
MYNN	NASSAU	BAHAMAS	56
MYSM	SAN SALVADOR	BAHAMAS	2
SKCG	CARTAGENA	COLOMBIA	1
SKRG	ROIONEGRO	COLOMBIA	1
TAPA	ST. GEORGE	ANTIGUA AND BARBUDA	3
TIST	CHARLOTTE AMALIE	VIRGIN ISLANDS, U.S.	7
TISX	CHRISTIANSTED	VIRGIN ISLANDS, U.S.	1
TJIG	SAN JUAN	PUERTO RICO	4
TNCC	WILLEMSTAD	CURAÇAO	1
TNCM	SAINT MARTIN	SINT MAARTEN	2
TQPF	THE VALLEY	ANGUILLA	1
TRPJ	ROAD TOWN	VIRGIN ISLANDS, BRITISH	15
TVSA	KINGSTOWN	SAINT VINCENT AND THE GRENADINES	1
TXKF	HAMILTON	BERMUDA	12

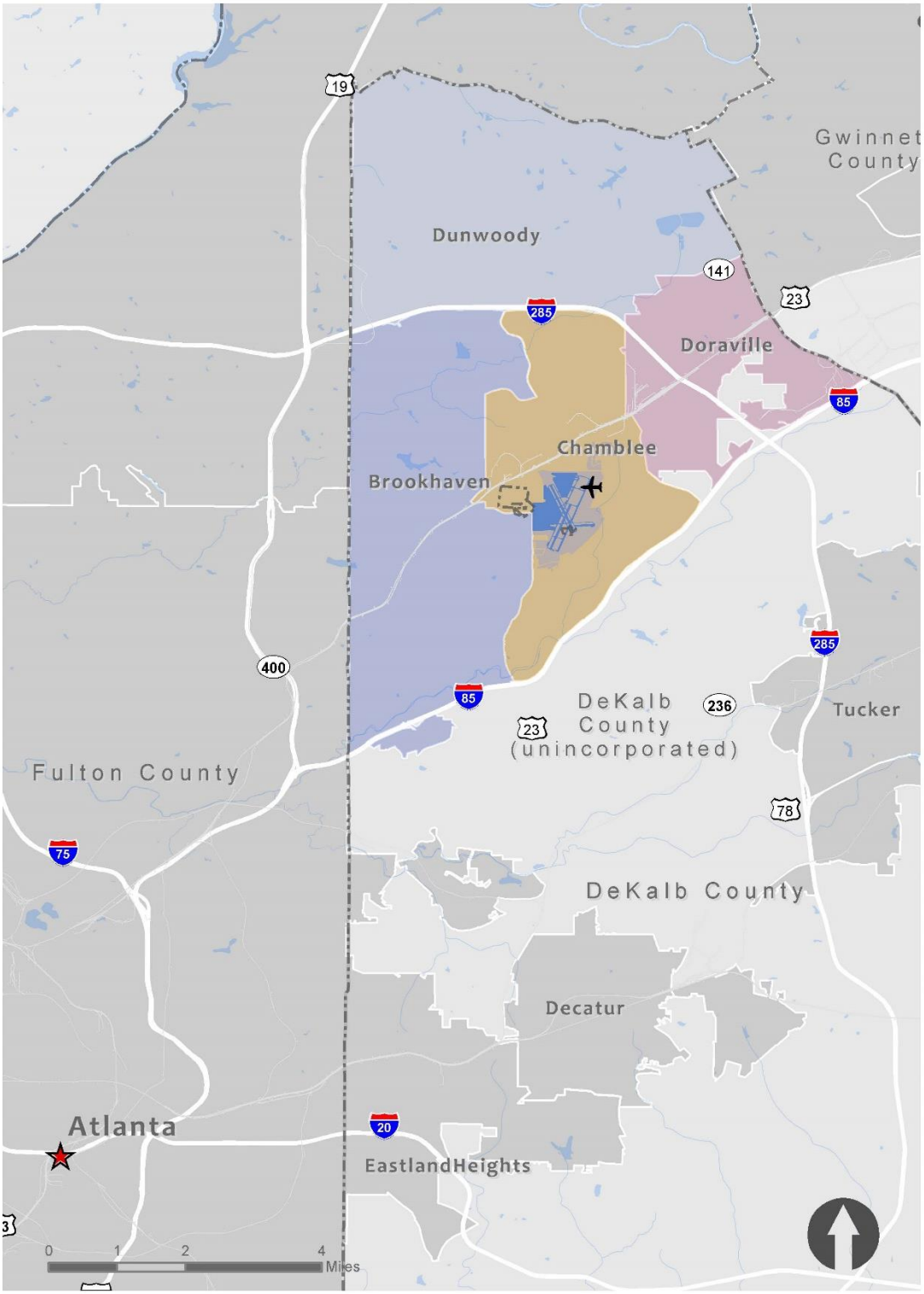
`Source: Michael Baker International, 2019

2.7 Zoning and Municipal Boundaries

Municipal Boundaries

PDK is located within I-285 (Perimeter) in the city limits of Chamblee in DeKalb County approximately 10 miles from downtown Atlanta. Located in Northern DeKalb County, the city of Chamblee is adjacent to Dunwoody to the north, Doraville to the northeast and Brookhaven to the west. In efforts to boost a pro-business environment and develop influential solutions to the local region's economy city leaders from the four municipalities has established a multi-city public-private planning organization titled the Peachtree Gateway Partnership (PGP) in 2016. PDK's municipal boundaries are depicted in **Figure 2-11**.

Figure 2-11: Municipal Boundaries



Source: Michael Baker International, 2018.

Zoning

As part of grant assurances to the FAA, the airport is required, to the extent reasonable, to adopt zoning laws and restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft.

Existing zoning adjacent to the airport property varies from residential to light industrial. Zoning north of the airport property consists of multi-family residential and commercial properties. Zoning to the east of the airport property consists of light industrial, heavy commercial, single-family residential, and multi-family residential. The southern and western boundaries of the airport property are adjacent to heavy commercial properties.

Height Zoning

Federal Aviation Regulation (FAR) Part 77, *Objects Affecting Navigable Airspace,* establishes standards and notification requirements for objects affecting navigable airspace. Part 77 establishes the standards for "imaginary" surfaces in relation to the airport and to each runway. The size of each surface is based on the type of approach available or planned for that runway.

DeKalb County Code of Ordinances Section 6-219 establishes the "Zones." This ordinance protects the airport's Part 77 imaginary surfaces by defining the surfaces and establishing the procedures for removal or marking of objects that penetrate the surfaces, and the penalties associated with the violation of the surfaces. Additionally, the ordinance identifies land uses and zoning designations that are compatible within the airport operations areas. A copy of the ordinance is provided in **Appendix A**.

The City of Chamblee has a Runway Protection Zone (RPZ) overlay district codified in Section 220-1 of their municipal code. This ordinance protects the airport's RPZ and identifies compatible land uses within the airport the RPZ boundary. A copy of the ordinance is provided in **Appendix B.**

2.8 Environmental Considerations

The protection and preservation of the local environment are essential concerns for the master planning process. The final section of this chapter provides a review of environmental sensitivities that could factor into recommendations of future improvements at PDK. For any project that includes a federal action, the project must be reviewed for environmental considerations in accordance with the National Environmental Policy Act (NEPA). This overview follows the guidelines of FAA Orders 1050.1F and 5050.4B, and reviews the following environmental factors:

- Air Quality,
- Biological Resources,
- Climate,
- Coastal Resources,
- Department of Transportation Act, Section 4(f),
- Farmlands,
- Hazardous Materials, Solid Waste, and Storm Water Pollution Prevention Plan (SWPPP),
- Historical, Architectural, Archaeological, and Cultural Resources,
- Natural Resources and Energy Supply,
- Noise and Compatible Land Use,
- Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks,
- Visual Effects (including light emissions), and
- Water Resources (including floodplains, wetlands, groundwater, surface waters and rivers).

Available information about the existing environmental conditions at PDK has been derived from current and former field investigations. These field investigations were undertaken to evaluate the presence/absence of various environmental resources near a project being proposed at the time of the survey. This environmental overview provides a more general description of the environmental constraints located on and adjacent to the airport property. Further analysis of these considerations will be presented in later sections of the master plan.

2.8.1 Air Quality (g)

The oversight of air quality conditions at PDK is the responsibility of the U.S. Environmental Protection Agency (EPA), the Georgia Department of Natural Resources – Environmental Protection Division (GDNR-EPD), and the Capital Region Planning Commission (CRPC) under the federal Clean Air Act (CAA). The U.S. EPA establishes, enforces, and periodically reviews the National Ambient Air Quality Standards (NAAQS) and approves State Implementation Plans (SIPs) that will demonstrate compliance with the NAAQS.

Each future project at the Airport must be evaluated for its potential to result in increased emissions of six common air pollutants. Specifically, each project must be evaluated for its potential to result in increased air emissions from both a project construction standpoint and an airport operations standpoint. If the project is determined to be below the de minimis thresholds established for each of the six criteria pollutants, then no mitigation is necessary. However, if it is determined that implementation of the project would result in increased air emissions that exceed the de minimis thresholds, then mitigation measures must be considered to ensure that the project is in compliance with the CAA.

2.8.2 Biological Resources

Plant Communities

For each of the future planned projects at the Airport described in this master plan the Proposed Action must be evaluated for its potential to result in adverse impacts to the existing plant communities, local wildlife, and fish communities. The Airport property encompasses an area of approximately 745 acres. The airport property includes four main habitat types: developed lands (including all runways, taxiways, aprons, structures, and parking lots), mowed/maintained habitat, scrub/shrub habitat, and mixed pine-hardwood forest habitat shown in **Figure 2-12.**

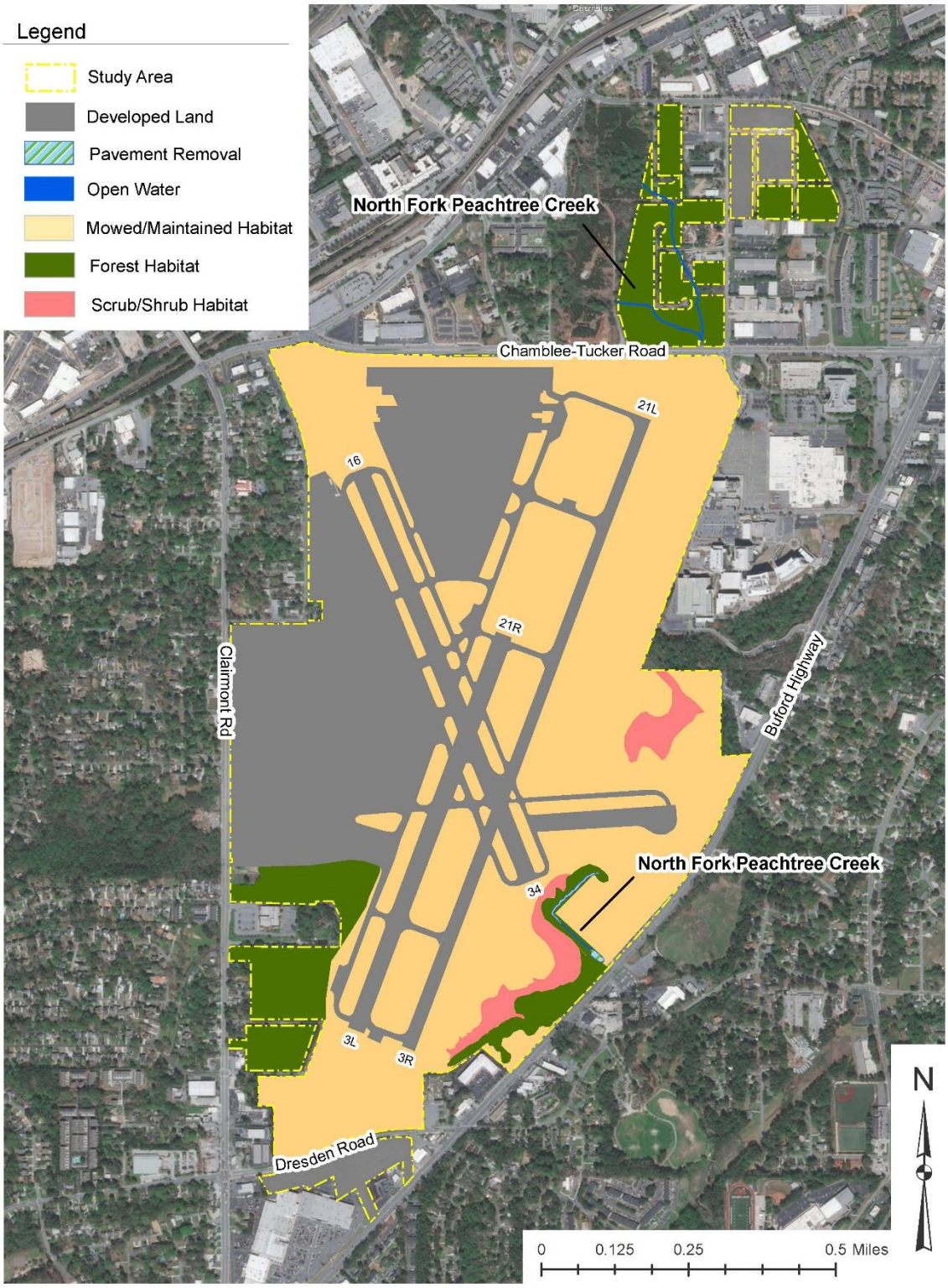
The general aviation areas located along the western boundary contains the largest amount of developed lands on the property. This portion of the property contains an extensive network of aprons, vehicular parking lots, several T-hangars, various sized corporate hangars, administrative buildings, an ATCT and several offices of aviation-related businesses. The northern portion of the property also contains a large area of developed lands. This area contains large aircraft aprons, six T-hangars, several corporate hangars of various sizes, and office buildings for several aviation-related businesses.

In between the paved surfaces, the airfield consists of mowed/maintained habitat. This habitat type consists mostly of emergent grass communities including non-woody, herbaceous species. The airfield is mowed on a consistent basis to prevent woody vegetation from becoming established and resulting in the creation of air navigation obstructions. This habitat is also maintained in order to reduce the attraction of these areas to wildlife species that prefer habitats that contain thick, tall grassy meadows.

Along the northeast boundary of the property, north of Chamblee-Tucker Road, there is an undeveloped parcel owned by the Airport that consists of pine-hardwood forest and developed habitats. This area also contains an intermittent stream resource, an unnamed tributary to North Fork Peachtree Creek. The eastern boundary of the airport property consists mostly of mowed/maintained habitat and scrub/shrub habitats east of the perimeter access road. Two segments of North Fork Peachtree Creek are located on existing Airport property. The first segment is approximately 2,400 feet long and it is located within the undeveloped parcel north of Chamblee-Tucker Road. The second segment meanders onto the Airport property just south of the CDC building. Approximately 1,100 linear feet of this segment is located on the property before the resource flows towards the southeast and underneath Buford Highway where it leaves the Airport property.

The southwest portion of the Airport property consists of mostly mowed/maintained and scrub/shrub habitats; however, there is some mixed pine hardwood-forest habitat located adjacent to Buford Highway and along both sides of Bragg Street. There is an intermittent stream located along the north side of the rear gate access road (see **Figure 2-12**). The southern portion of the Airport property consists of mowed/maintained habitat located within the Runway Protection Zone (RPZ) at the Runway 3L End. Additional mixed pine-hardwood forest habitat was identified within the southwest portion of the airport property.

Figure 2-12: Habitats



Michael Baker International, 2018.

Fish Communities

There is only one water body, a tributary to North Fork Peachtree Creek, located on the airport property that supports fish communities. Approximately 1,100 feet of this perennial stream are located within the current boundary of the airport property. This segment of the stream is located just south of the CDC building and flows southeast underneath Buford Highway where it exits the airport property. Therefore, any future projects that would result in culverting or piping any segment of this resource would require fish passage consideration, which would likely require that the structure to be installed be buried approximately 20 percent in order to allow fish to easily pass through the structure.

2.8.3 Wildlife

Federally Protected Species

Section 7 of the Endangered Species Act of 1973 (ESA) requires federal agencies to ensure that any action authorized, funded, or carried out by them is not likely to jeopardize the continued existence of listed species or modify their critical habitat.[1] In accordance with Section 7 of the ESA, county listings of federally and state-protected species were reviewed via the Information for Planning and Consultation (IPaC) maintained by the USFWS and the Georgia Rare Species and Natural Community database maintained by the GADNR-WRD to determine the potential for federally protected species being located on the airport property. According to the data provided by the USFWS and the GADNR-WRD, DeKalb County is located within the potential range of the following federally threatened vegetations:

- Pool sprite *(Amphianthus pusillus)*,
- Michaux's sumac *(Rhus michauxii)*,
- Black-spored quillwort *(Isoetes melanospora).*

Based on the results found from the Ecological field surveys, it has been determined that there is no suitable habitat for federally protected species located on the DeKalb-Peachtree Airport property. Therefore, future projects are the airport would not have the potential to result in adverse impacts to federally protected species.

Critical Habitat

The USFWS Critical Habitat Portal confirmed that there is no critical habitat for federally protected species located in DeKalb County, GA. Therefore, future projects at the airport would not have the potential to adversely affect critical habitat.

Migratory Birds

The Migratory Bird Treaty Act (MBTA) requires that federal agencies identify any areas potentially used by birds protected under the MBTA and characterize these areas along with their significance to migratory birds. The USFWS's IPaC database lists eleven 11 migratory birds of concern potentially occurring within DeKalb County shown in **Table 2-5**. There is no suitable habitat for the King Rail located on the airport property, as there is no marsh habitat present. There is no suitable habitat for the blue-winged warbler, cerulean warbler, eastern whip-poor-will, or red-headed woodpecker located within the project study

[1] USFWS (May 2010). Digest of Federal Resource Laws of Interest to the U.S. Fish and Wildlife Service – ESA. Accessed on 10/1/2018: https://www.fws.gov/international/laws-treaties-agreements/us-conservation-laws/endangered-species-act.html.

area, as the forested habitats that these birds prefer typically include an open understory. The forested areas identified on the airport property consist of a dense understory of shrubs and woody vines.

The scrub/shrub habitats located on the airport property provides suitable habitat for the prairie warbler, while the forested habitats provide suitable habitat for the Kentucky warbler, prothonotary warbler, and wood thrush.

Table 2-5: Migratory Birds

Name	Scientific Name	PDK	DeKalb County
Bald-eagle	*Haliaeetus Leucocephalus*		●
Blue-winged Warbler	*Vermivora Pinus*		●
Cerulean Warbler	*Dendroica Cerulea*		●
Eastern Whip-poor-will	*Antrostomus Vociferus*		●
Kentucky Warbler	*Oporornis Formosus*	●	●
King Rail	*Rallus Elegans*		●
Prairie Warbler	*Dendroica Discolor*	●	●
Prothonotary Warbler	*Protonotaria Citrea*	●	●
Red-Headed Woodpecker	*Melanerpes Erythrocephalus*		●
Rusty Blackbird	*Euphagus Carolinus*		●
Wood Thrush	*Hylocichla Mestelina*	●	●

Source: U.S Fish and Wildlife Services

Due to the presence of suitable habitat for four of the migratory birds listed by the USFWS as species of concern, precautions may be implemented potential construction contracts to reduce the likelihood that inadvertent adverse impacts to migratory birds would occur. Although the take of migratory birds resulting from an activity is not prohibited by the MBTA when the underlying purpose of that activity is not to take migratory birds, the USFWS recommends that steps be taken to help prevent an incidental take of migratory birds. A list of voluntary mitigation measures that could be implemented by the Airport to prevent an incidental take of migratory birds is provided, below:

1. Conduct activities outside of the bird nesting season to avoid the need for active nest relocation or destruction, when appropriate;
2. Perform nest surveys prior to conducting clearing activities during the breeding season;
3. If possible, contact a federally-permitted rehabilitator (https://www.nwrawildlife.org/page/Find_A_Rehabilitator) to provide assistance in relocating an active nest.

2.8.4 Climate

Although there are no federal standards for aviation-related greenhouse gas (GHG) emissions, it is well established that GHG emissions can affect climate. The Council on Environmental Quality (CEQ) has indicated that climate should be considered in NEPA analyses, and in 2016 the CEQ released final guidance for federal agencies on how to consider the impacts of their actions on global climate change in their NEPA reviews. A Notice of Availability for that guidance was published on August 5, 2016 (81 Federal Register 51866). However, pursuant to Executive Order 13783, "Promoting Energy Independence and Economic Growth," of March 28, 2017, the guidance has been withdrawn for further consideration. For future projects at the airport, GHG emissions from construction-related activities aircraft operations should be considered.

2.8.5 Coastal Resources (g)

DeKalb County is not one of the counties located within the coastal zone of Georgia. Therefore, future projects at the airport would not result in direct, indirect, or cumulative impacts on coastal resources, under the Coastal Zone Management Act (CZMA), Coastal Barrier Resources Act (CRBA), or the Coastal Barrier Improvement Act (CBIA).

2.8.6 Section 4(f) Properties

"Section 4(f) of the U.S. Department of Transportation (DOT) Act of 1966 prohibits federal agencies from using land from publicly owned parks, recreation areas (including recreational trails), wildlife and waterfowl refuges, or public and private historic properties, unless there is no feasible and prudent alternative to that use and the action includes all possible planning to minimize harm to the property resulting from such a use."[2] There is one publicly owned park, Doc Manget Memorial Airport Park, located on the airport property. The park is located near the airport administrative buildings and below the ATCT. There are no recreation areas or trails located on or adjacent to the airport property. In addition, there are no wildlife or waterfowl refuges located near the airport property.

Figure 2-13: Doc Manget Memorial Airport Park

Section 4(f) prohibits the use of public and private historic properties unless there is no feasible and prudent alternative. Adverse impacts to historic properties can be visual or audible in nature, therefore, future projects implemented at the airport may adversely affect historic properties even though they are contained entirely on the property. As a result, surveys for historic properties that may be eligible for listing on the National Register of Historic Places (NRHP) must be conducted prior to implementation of future airport projects. These historic resources

[2] Federal Transit Administration (March 166, 2016). *Section 4(f) of the Department of Transportation Act*. Accessed on October 1, 2018 at: https://www.transit.dot.gov/regulations-and-guidance/environmental-programs/section-4f-department-transportation-act.

surveys will need to identify a project-specific Area of Potential Effects (APE), identify any structures within the APE that are 50 years old or older and eligible for listing on the NRHP, and then a determination needs to be made as to whether project implementation would result in adverse impacts to any resources identified.

2.8.7 Farmlands (g)

For the purposes of the Farmland Protection Policy Act (FPPA), farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to the FPPA can also be forest land, pastureland, cropland, or other land, but not water or urban built-up land. Farmland soils are considered a non-renewable resource, and conversion of farmland to an airport facility would be an irreversible commitment of resources as long as that facility remains in place. PDK is located within a U.S. Census Bureau urban area (GA03817); therefore, the FPPA does not apply.

2.8.8 Hazardous Materials, Solid Waste, And Pollution Prevention

Hazardous Materials

Hazardous materials are substances defined and regulated by the Comprehensive Environmental Response, Compensation, and Liability Act, as amended by the Superfund Amendments and Reauthorization Act, and substances defined and regulated by the Toxic Substances Control Act. In general, hazardous materials are substances that, because of their quantity, concentration, physical, chemical, or infectious characteristics, may present substantial danger to public health or welfare, or to the environment, when released or otherwise improperly managed.[3]There are three Fixed Base Operators (FBOs) at the airport, all of which provide full-service fueling services (i.e. Avgas and Jet A fuel) to their customers. There is also one self-service fueling facility located on the airport property to the west of the airfield and north of airport Road. As a result, there are eight aboveground fuel farms containing Avgas and Jet A fuel located throughout the airport property. Additionally, many of the aviation-related businesses at the airport are classified as either handlers of hazardous materials or small quantity generators of hazardous materials. Therefore, future projects at the airport need to be evaluated for their potential to result in adverse impacts to hazardous materials facilities.

Solid Waste

The DeKalb County Landfill is located approximately 24 miles south of the airport property, and the landfill accepts commercial waste such as concrete products. Therefore, future projects at the airport that would result in the generation of solid waste would be supported by the presence of the DeKalb County Landfill, which would be capable of accepting any construction waste produced by the project.

Pollution Prevention

The construction of additional paved surfaces at the airport would increase the impervious surfaces at the airport. Therefore, the airport would be required to update its current Stormwater Pollution Prevention Plan (SWPPP) to account for the additional impervious surfaces to be constructed on the airport property. In addition, any clearing and grubbing activities associated with future projects would result in the exposure of loose soils immediately following construction activities. Best Management Practices (BMPs) would need to be used to reduce the amount of sedimentation and erosion on the construction site. Silt fencing would need to be installed around the perimeter of the disturbed areas to prevent sediments

[3] Resource Conservation and Recovery Act (RCRA) Subtitle C, 40 CFR Part 251.

from escaping the construction sites, and each site would be grassed with native grasses to stabilize the cleared areas.

2.8.9 Historic Resources

The National Historic Preservation Act of 1966 (NHPA) mandates that districts, sites, buildings, structures, and objects that are significant to American history, architecture, archaeology, engineering, and culture be cataloged on the NRHP. Section 106 of the NHPA, Protection of Historic and Cultural Resources, requires federal agencies to consider the effects of their actions on resources listed on the NRHP, as well as on resources that are determined to be eligible for listing on the NRHP.

Impacts to cultural resources can occur by physically altering, damaging, or destroying a resource or by altering characteristics of the surrounding environment that contribute to the resource's significance. Resources can also be impacted by neglecting the resource to the extent that it deteriorates or is destroyed. Adverse effects occur when these activities intersect with identified NRHP-eligible resources within the Area of Potential Effects (APE).

Based on the information provided on the GNARGIS website, there are currently no recorded historic resources located on Airport property.

2.8.10 Natural Resources and Energy Supply

In accordance with FAA guidelines, federal agencies must evaluate potential changes in energy requirements and the use of consumable natural resources at an airport for any proposed construction activities. Energy supply requirements typically fall into two categories: those that relate to changing demand from stationary facilities (e.g., major airfield lighting and terminal building heating demands) that might exceed local supplies or capacities; and those involving the increased movement of air and ground vehicles to the extent that demand exceeds energy supplies. An evaluation of potential impacts on natural resources includes considerations such as the local availability of construction materials and the use of scarce or unusual consumable natural resources for construction of the proposed project.

Future projects at the airport are not likely to result in a permanent increase in demand for energy supplies. Construction activities typically result in a temporary increase in demand for petroleum products in the form of fuel to operate the construction equipment. However, this temporary increase in demand for petroleum products would not represent a significant increase in demand for energy resources. Any future project at the airport that would result in a change in aircraft fleet mix or the number of aircraft operations, an evaluation of the potential impacts to natural resources and energy supply would be necessary.

2.8.11 Noise and Compatible Land Use

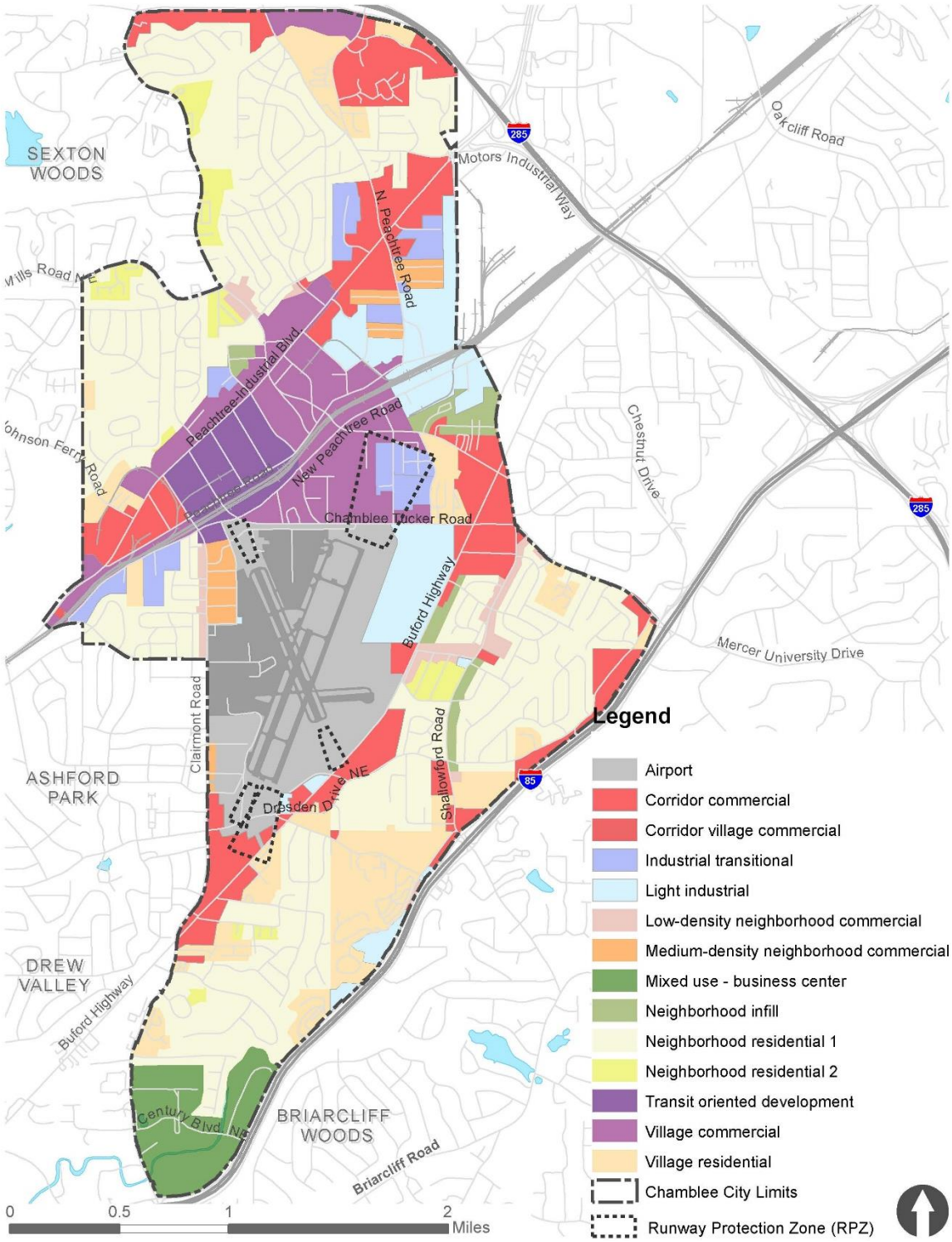
Airport land use compatibility planning means controlling land uses in and around airports to promote use and development that does not create restrictions to the airport, or hazards to persons or property on the ground and the flying public. Land uses should be controlled within the airport, runway protection zones, approach areas and the general vicinity of the airport.

The City of Chamblee Comprehensive Plan (adopted 3/17/15; amended 9/20/16) was reviewed to determine the existing zoning and future land use plans on and adjacent to PDK Airport. Land use

immediately surrounding the airport is regulated by the City of Chamblee, City of Brookhaven, City of Doraville and unincorporated DeKalb County. Properties adjacent to the airport are zoned Corridor Commercial, Village Commercial, Neighborhood Commercial, Light Industrial, Neighborhood Residential 1, and Transit-Oriented Development. Land uses within the Runway Protection Zones (RPZ), to the north are used for Industrial Transitional and Village Commercial while the land use within the southern RPZ is largely used for Commercial Corridor and Medium-Density Neighborhood Commercial.

Land use within the existing airport property is classified as "Airport/Transportation" use shown **Figure 2-14**. As a result, all future projects within the airport boundary must be compatible with an airport/transportation facility.

Figure 2-14: City of Chamblee Land Use Plan



Source: City of Chamblee, 2018.

The compatibility of existing and planned land uses is often associated with the extent of the airport's noise impacts. Noise is considered unwanted sound that can disturb routine activities (e.g., sleep, conversation, student learning) and can cause annoyance. Aviation noise primarily results from the operation of fixed and rotary wing aircraft, such as departures, arrivals, overflights, taxiing, and engine run-ups.4 FAA policy is that airports are to be constructed and operated such that they minimize current and future noise impacts on surrounding communities [49 U.S.C. §47101(a)(2)]. Accordingly, the FAA pursues a program of aircraft noise control, in cooperation with the aviation community. The FAA has established several programs and activities aimed at addressing these constraints, which includes limiting the number of people exposed to significant noise levels.

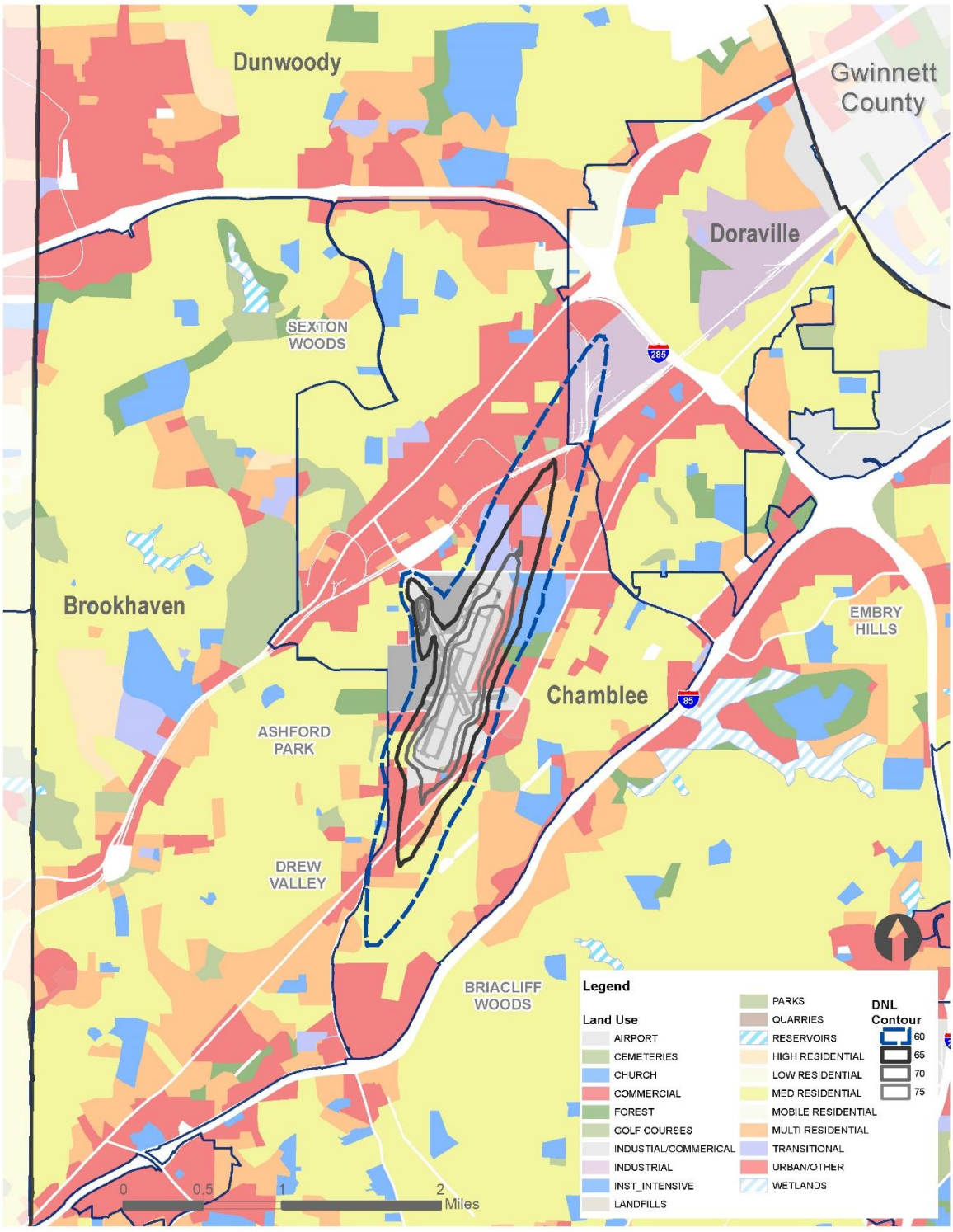
The FAA's significance threshold for noise is an action that would increase noise by a Day Night Average Sound Level (DNL) by 1.5 dB or more for a noise sensitive area that is newly exposed to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above the DNL 65dB level due to a DNL 1.5dB or greater increase, when compared to the no action alternative for the same timeframe.5 Noise control measures include noise reduction at the source; i.e., development and adoption of quieter aircraft, soundproofing and buyouts of buildings near airports, operational flight control measures, and land use planning strategies.

In order to prevent or reduce adverse noise impacts to the adjacent noise receptors (i.e. single-family, multi-family, and high-density multi-family communities) future airport development actions that result in fleet mix changes, number of aircraft operations, air traffic changes or new approaches to the airport should be evaluated for their potential to produce increases of more than 1.5 dB or more inside the 65 DNL in comparison the existing condition existing condition. **Figure 2-15** illustrates the most recent airport DNL noise contours prepared by the Airport in 2017 which reflects 2016 operations overlaid onto a land use base map.

In addition to aviation noise impacts, construction noise impacts could occur when the equipment being used during construction-related activities on the airport property produces enough unwanted sound that adjacent property owners are adversely affected. Construction noise impacts should be considered for any major improvements proposed in the master plan.

[4] FAA. 2015. *FAA Order 1050.1F Desk Reference*. July 2015.
[5] *Ibid.*
[6] FAA, *Environmental Desk Reference*

Figure 2-15: 2016 Noise Contours and Existing Land Use



Source: Michael Baker International, 2019.

2.8.12 Socioeconomic Impacts and Environmental Justice

In accordance with 40 CFR 1508.14, NEPA documentation must address social impacts of a proposed project. An evaluation of the "human" environment considers the relationship of people with their natural and physical environments because people are typically affected by changes in these two types of environments.[6] In accordance with E.O. 12898*, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, federal agencies to identify community issues of concern during the study process, particularly those issues relating to decisions having an impact on low-income or minority populations.

Each of the future planned projects must be evaluated for its potential to result in adverse impacts to the socioeconomic, environmental justice, and children's environmental health.

2.8.13 Visual Effects

FAA Order 1050.1F defines visual effects as "the extent to which the proposed action or alternative(s) would either: 1) produce light emissions that create an annoyance or interfere with activities; or 2) contrast with, or detract from, the visual resources and/or the visual character of the existing environment." Furthermore, visual effects are usually difficult to define and assess because they involve subjectivity. Although aviation-related and aerospace actions do not typically result in adverse visual effects, they can occur in specific circumstances. Adverse visual impacts are divided into two categories: (1) light emission effects; and (2) visual resources and visual character.

Light emissions include any light that emanates from a source into the surrounding environment. Navigational aids, terminal lighting, parking facility lighting, airfield and apron lighting are all examples of airport sources of light emissions. Visual resources include traditional cultural properties, buildings, and other natural or manmade landscape features that are visually important or have unique characteristics. Structures or objects that obscure or block other landscape features would be considered visual resources. Visual resources also can include collections of various individual resources that can be viewed at once or in concert from the area surrounding the site of the proposed action or alternative(s). In some instances, the nighttime sky may be considered a visual resource. Visual character refers to the overall makeup or the existing environment where the proposed action or alternative(s) would be located. Developed areas in proximity to densely populated areas have an urban visual character, whereas less developed areas may have a visual character that is better defined by the landscape features as opposed to manmade structures.

There are no special purpose laws or requirements that address visual effects. However, some visual resources are protected under federal, state, or local regulations. In addition to NEPA, some other laws that protect resources that may be adversely affected by visual effects include Section 106 of the National Historic Preservation Act, Section 4(f) of the DOT Act, the Wild and Scenic Rivers Act, and state and regional coastal protection acts. Visual resources may also be protected and managed on federal resource lands, such as U.S Forest Service Resource Management Plans and the Bureau of Land Management Visual Resource Management System. There are also state and local regulations, policies, and zoning ordinances that may apply to visual effects. The airport property consists of various sources of lighting that is mostly contained within the existing boundaries. Types of lighting includes taxiway and runway lighting, Runway

End Indicator Lights, a rotating beacon, apron lighting, roadway streetlamps, and exterior building lights.

There are no known visually sensitive resources located in the vicinity of the airport that are not already affected by the presence of the existing facility; therefore, it is unlikely that future projects at the airport would result in adverse light emission impacts to adjacent property owners. However, visual impacts could occur if an NRHP-eligible historic property is identified in the vicinity of the airport and a future project might result in the clearing of forested habitats that create a new sightline to the airport property.

2.8.14 Waters of the U.S.

Wetlands and Surface Waters

Jurisdictional waters of the U.S. identified on the airport property three intermittent streams, two wetlands, and one perennial stream. One intermittent stream is located on the undeveloped parcel located north of Chamblee-Tucker Road. This resource extends from approximately 470 feet west of Cataline Drive to a point approximately 841 feet east of Catalina Drive.

The second intermittent stream is located just north of the rear property access road east of Runway 3R-21L and connects two jurisdictional wetlands. Approximately 385 feet of this intermittent stream are located on the airport property. The first jurisdictional wetland serves as the headwaters for the second intermittent stream and is located northwest of the pipe installed underneath the driveway leading into the abandoned parking lot northwest of the American Fueling Systems business. The second jurisdictional wetland is the at limit of the second intermittent stream and the third intermittent stream. The third intermittent stream flows from southwest to northeast through the forested habitat located south of the Runway 34 End. Approximately 850 feet of this resource are located on the airport property.

Floodplains

Executive Order (E.O.) 11988, Floodplain Management, requires that efforts be made to avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of floodplains. It also requires that efforts be made to avoid direct or indirect support of development in floodplains wherever there is a practicable alternative, and it prohibits floodplain encroachments that would cause a substantial flood risk, a critical interruption of an emergency transportation facility, or an adverse impact on the floodplain's natural values.

Development in a FEMA-designated 100-year floodplain is permitted by federal regulations if hydrologic and hydraulic analyses demonstrate that the development would not result in an increase of more than one foot of the Base Flood Elevation (BFE). However, floodways must retain the ability to convey the 100-year flood by remaining unobstructed.

Based on a review of the FEMA floodplain maps, there are Zone A, Zone AE, and Zone Z floodplains located on the undeveloped parcel north of Chamblee-Tucker Road. These floodplains are associated with the intermittent stream and North Fork Peachtree Creek that flow through this parcel. There is also an area of Zone AE floodplains located along the east Airport boundary associated with the 1,100-foot segment of North Fork Peachtree Creek south of the CDC building. Future projects at the airport that would result in the filling of floodplains would require a hydrologic and hydraulic analysis to determine if the impacts would result in a greater than 1-foot rise in the base flood elevation. If so, a Conditional Letter of Map Revisions would be requested from the Federal Emergency Management Agency (FEMA). If not, a No-Riser certification would be issued by FEMA.

Groundwater

The Safe Drinking Water Act (42 U.S.C. 300 (f)-300j-26) prohibits federal agencies from funding actions that would contaminate a U.S. EPA-designated sole source aquifer or its recharge area. There are no aquifers or recharge areas on or adjacent to the airport property; therefore, any future project at the airport would not result in adverse impacts to groundwater sources or recharge areas.

Wild and Scenic Rivers

The National Wild and Scenic Rivers Act of 1968 (16 U.S.C. Parts 1271-1287) protects rivers that are listed as significant resources for their wild, scenic, or recreational values, along with those that are under consideration for inclusion on the list. In addition, under a 1979 Presidential Directive, federal agencies are required "… to take care to avoid or mitigate adverse effects on rivers identified in the Nationwide Inventory." There are no federally protected wild, scenic, or recreational rivers, nor are there any rivers listed on the Nationwide River Inventory in the vicinity of the airport. The only river listed on the National Wild and Scenic River System within Georgia is the Chattooga River. The southern limit of the protected portion of the Chattooga River is located approximately 80 miles northeast of the airport property; therefore, future projects at the airport would not result in adverse impacts to Wild and Scenic Rivers.

Chapter 3 – Aeronautical Demand Forecasts

3.1 Introduction

The master plan update for PDK includes an aeronautical demand forecasting effort. Forecasts were developed using the most recently available information and are referenced in later sections of this study to determine short- and long-term facility requirements and to provide the preliminary justifications for recommended improvements. The forecasts are presented over a 22-year planning period and have a base year of 2018 and extend through 2040. A 22-year planning period was selected so that 20 years of capital and financial planning could be conducted following the completion of this Master Plan Update. The activity at PDK remained relatively consistent between 2016 and 2018, although the construction of the Engineered Materials Arresting System (EMAS) bed on the south end of Runway 3R-21L partially impacted the activity at PDK for a few months in 2018. As the second busiest airport in the State of Georgia in terms of operations behind the Hartsfield-Jackson Atlanta International Airport (ATL), PDK serves as the premier airport for general aviation and corporate activity in the Atlanta area and was the 11th busiest airport in the country for business jet operations for the one-year period between November 1, 2017 and October 31, 2018 (refer to **Table 3-1**). PDK is classified as a General Aviation Reliever Airport for ATL in the Federal Aviation Administration's (FAA's) National Plan of Integrated Airport Systems (NPIAS). The airport has more based aircraft than any other airport in Georgia and is home to several flight schools and corporate flight departments of Atlanta-based companies. The number of businesses, facilities, and amenities and services has continued to grow at PDK over the years and is expected to continue to grow as the Atlanta area continues to grow as a worldwide gateway for aviation activity. Today, there are over 25 businesses located at PDK, two restaurants, and an aviation park (Doc Manget Memorial Aviation Park).

With professional NFL football (Atlanta Falcons), MLB baseball (Atlanta Braves), NBA basketball (Atlanta Hawks), and MSL soccer (Atlanta United FC), as well as several popular NCAA athletic teams located nearby, PDK frequently attracts a high volume of corporate traffic for professional and college sporting events. Between November 1, 2017 and October 31, 2018, the busiest day for corporate jet activity at PDK was January 9, 2018 with 225 corporate jet operations, which was the day immediately after the 2018 NCAA College Football Playoff National Championship game that was held at the Mercedes-Benz Stadium in Atlanta between the Alabama Crimson Tide and the Georgia Bulldogs. On January 30, 2000, Super Bowl XXXIV (34) was held at the Georgia Dome in Atlanta between the St. Louis Rams and the Tennessee Titans. On the following day (January 31, 2000), there were 298 corporate jet operations at PDK, which was the second busiest day for corporate jet operations at PDK since 2000. On October 20, 2010, PDK experienced 311 corporate jet operations, which was the busiest day since at least 2000 and coincided with the National Business Aviation Association's (NBAA's) Annual Meeting and Convention that was held at the Georgia World Congress Center. Other planned sporting events at the Mercedes-Benz Stadium include Super Bowl LIII (53) in February 2019, the 2020 NCAA Men's College Basketball Final Four in April 2020 and is one of many possible U.S. stadiums for the 2026 FIFA World Cup. These events draw massive crowds and are mentioned because of how they represent events when PDK experiences the greatest level of peaking and the greatest demands are placed on the airport to accommodate visiting passengers

and their aircraft. Although events like those do not occur on a regular basis throughout the year, they should be recognized because of how they affect the operation of PDK and the demands of those who want to utilize PDK during those events.

Table 3-1: Business Jet Operations (11/1/2017 to 10/31/2018)

Rank	Code	City	State	NPIAS Category	Business Jet Operations
1	TEB	Teterboro	NJ	Reliever	142,371
2	DAL	Dallas	TX	Primary	61,565
3	VNY	Van Nuys	CA	Reliever	58,346
4	HPN	White Plains	NY	Primary	58,244
5	IAD	Washington	VA	Primary	55,410
6	LAS	Las Vegas	NV	Primary	52,740
7	HOU	Houston	TX	Primary	50,059
8	PBI	West Palm Beach	FL	Primary	49,456
9	MDW	Chicago	IL	Primary	47,687
10	APA	Denver	CO	Reliever	42,106
11	**PDK**	**Atlanta**	**GA**	**Reliever**	**39,481**
12	SDL	Scottsdale	AZ	Reliever	35,633
13	OPF	Miami	FL	Reliever	35,042
14	SNA	Santa Ana	CA	Primary	33,944
15	BED	Bedford	MA	Reliever	32,581
16	APF	Naples	FL	General Aviation	30,721
17	SJC	San Jose	CA	Primary	30,204
18	BFI	Seattle	WA	Primary	29,414
19	BNA	Nashville	TN	Primary	29,315
20	SAT	San Antonio	TX	Primary	29,089

Sources: FAA Traffic Flow Management System Counts (TFMSC) database and Michael Baker International, Inc., 2019.

As explored throughout this master plan, there is a desire to identify sites on the airport property where aeronautical demand can be accommodated in a flexible manner. The closure of Runway 9-27 created new land development opportunities on both sides of the parallel runways where hangars, aprons, and other facilities have and can continue to be constructed to accommodate additional based aircraft and businesses. DeKalb County (owner of PDK) is currently exploring opportunities to develop several hangars in the southwest quadrant of PDK. The airport recently conducted a survey to determine what the demand is for new based aircraft tenants, the results of which indicated that there is an immediate demand for several aircraft to relocate to PDK which would conduct several thousand additional operations on an annual basis. Airport management also maintains a based aircraft waiting list where individuals or organizations must pay a fee to be included. Therefore, the growth potential at PDK is highly dictated by the availability of hangar space to accommodate new based aircraft ranging from small pistons and helicopters to long-range corporate jets, as well additional apron space to better accommodate visiting aircraft during peak times. PDK is also an origin/destination for international general aviation traffic in the Atlanta area with prior notification to the U.S. Customs and Border Protection (CBP) which serves the airport on an on-call basis.

In Boeing's Pilot & Technician Outlook 2018-2037, the company projects that a total of 790,000 new pilots and 754,000 new maintenance technicians will be needed to support the global demands of civilian commercial, business, and helicopter demands by 2037. As an increasing number of pilots reach their mandatory retirement age in the U.S. and in other countries (e.g., currently age 65 in the U.S. for commercial pilots), many organizations like the Air Line Pilots Association (ALPA) are concerned about the potential for pilot shortages and are advocating for a renewed interest in pilot training programs. It is anticipated that much of that training and maintenance activity will continue to occur at PDK to support the global demands.

There are numerous factors to consider as part of the forecasting effort for PDK and several different opportunities for growth amongst the aviation sectors that exist at the airport. These types of historical and anticipated trends are explored throughout this chapter to determine how they may influence the forecasts of aviation demands for PDK. The following forecasting elements are presented herein:

- Forecasting Limitations
- Historical and Baseline Activity Analysis
- Factors and Opportunities Affecting Activity Levels
- Based Aircraft Forecasts
- Operations Forecasts
- Instrument Operations Forecast
- Peak Activity Forecasts
- Forecast Summary

3.2 Forecasting Limitations

Forecasting aviation activity is a complex process that considers a multitude of factors, both controllable and beyond an airport's control. Forecasts are not to be construed with predictions of the future, but rather an educated guess of future activity based on a variety of predictors, calculations, assumptions, and subjective judgment. The accuracy of the estimates decline as the planning term is extended, potentially because of unforeseen local or geopolitical events, natural disasters, and/or climatological events.

The FAA's forecast approval process typically constitutes an approval for planning purposes only, which allows the airport sponsor to depict projects that are consistent with the long-term growth expectations on the Airport Layout Plan (ALP) Drawing Set. In most cases, prior to issuing a grant, the FAA will require updated information demonstrating that a proposed project is justified by activity at the time, or by activity that would directly result from the implementation of the proposed project. This policy helps to ensure that funding is directed towards critical projects throughout the U.S.

3.3 Historical and Baseline Activity Analysis

Many elements compose the broad definition of General Aviation (GA) activity. In simplest terms, GA includes all segments of the aviation industry except those conducted by scheduled air carriers and the U.S. military. GA activities may include pilot training, sightseeing, aerial photography, law enforcement, and medical flights, as well as business, corporate, and personal travel. GA operations are divided into the categories of local or itinerant. Local operations are arrivals or departures performed by aircraft that remain within the airport traffic pattern, or those that occur within sight of the airport. Local operations are most often associated with training activity and flight instruction (e.g., touch-and-goes). Itinerant operations are arrivals or departures that do not remain within the airport traffic pattern and/or that originate from another airport. The FAA defines an operation as either a single aircraft landing or takeoff. Under this definition, touch-and-goes are considered two operations (one takeoff plus one landing) and are deemed local operations. Itinerant operations are typically comprised of private, business/corporate, and air taxi flight activity, but may also include law enforcement and medical flights. A summary of the historical and baseline operations and based aircraft values is presented below.

3.3.1 Historical and Baseline Operations

Table 3-2 and **Figure 3-1** summarize the historical Airport Traffic Control Tower (ATCT) records for PDK between 1990 and 2018 as obtained from the FAA's Operations Network (OPSNET) database. The information in the OPSNET database is generated from ATCT-reported activity counts and thus closely resembles the records maintained by the ATCT staff at PDK. The values shown in 2018 reflect the one-year period from November 1, 2017 to October 31, 2018 and reflect the baseline conditions for this forecasting effort (i.e., the starting values from which the forecasts are projected from). The decline in itinerant and local activity since that time is not uncommon of many GA airports throughout the U.S. and was caused by multiple factors including federal legislation, noise and airspace concerns, reduced GA flying due to increasing costs of fuel, maintenance (e.g., for aging aircraft), new aircraft, liability, and aircraft storage fees, at least one economic recession (i.e., the Great Recession), business closures, and hurricanes and other natural disasters. Much of the reduction in local GA activity since 2000 is often attributed to events such as the terrorist attacks on September 11, 2001, sharp fuel price increases after Hurricane Katrina damaged Gulf Coast Refineries in August 2005, and the economic recession of the late 2000s. Although some of those factors were impossible to predict, their resulting consequences had considerable impacts on aviation activity throughout the U.S. The recession resulted in a decline in itinerant GA activity at PDK as many corporations grounded their aircraft fleet and individuals had less disposable income for private air transportation. The total activity levels at PDK have continued to trend upward in recent years as the cost of aviation fuel has gone down, the economy has continued to improve and there are rising levels of disposable income, and the Atlanta area continues to grow (particularly in the aviation sector).

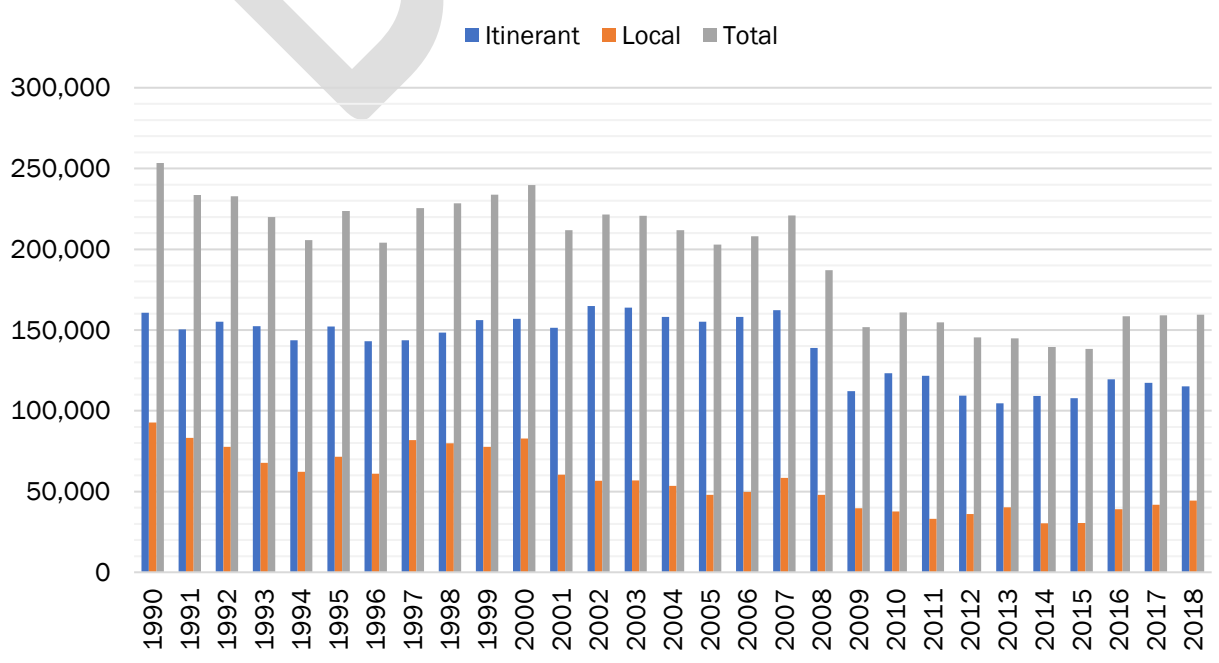
Historical flight plan activity data from the FAA's Traffic Flow Management System Counts (TFMSC) database is presented in **Table 3-3**. Flight plans are filed by aircraft that intend to fly within Instrument Flight Rules (IFR) controlled airspace, which includes most jets and turboprops. The 2018 numbers represent the baseline IFR operations numbers for PDK; however, the temporary closures of Runway 3R-21L in 2018 for the construction of the EMAS bed resulted in a reduction of what the actual IFR operations would have been if the runway was not closed. During times when the runway was closed or when the available takeoff/landing length was reduced, many corporate aircraft few into other GA airports in the Atlanta area. Now that the EMAS bed construction is complete, it is anticipated that there will be increased utilization of Runway 3R-21L by corporate aircraft conducting IFR operations moving forward. For example, Ultimate Air Shuttle currently provides one flight per weekday between PDK and Cincinnati Municipal Airport-Lunken Field (LUK) and is adding two flights per day Monday through Thursday between PDK and Charlotte/Douglas International Airport (CLT) and one flight on Fridays beginning March 18, 2019. Various Average Annual Growth Rates (AAGRs) are shown in the table to highlight specific growth trends over time. Since 2012, IFR jet activity has shown the strongest growth trend at PDK and the recent growth rates are slightly higher than those projected for the nation in the FAA Aerospace Forecast Fiscal Years 2018-2038 (FAA Aerospace Forecast) for 'Active General Aviation and Air Taxi Hours Flown' by 2038 (i.e., the FAA Aerospace Forecast projects an AAGR of 2.70 percent for GA turbojet hours flown between 2018 and 2038). **Figure 3-2** illustrates a five-year summary of the historical IFR flight plan activity data for PDK.

Table 3-2: Historical and Baseline Operations (1990-2018)

Year	Itinerant						Local				Total
	Air Carrier	Air Taxi	GA	MIL	Total	% of Total	Civil	MIL	Total	% of Total	
1990	0	748	159,401	485	160,634	63.39%	92,731	33	92,764	36.61%	253,398
1991	0	1,020	148,895	448	150,363	64.36%	83,172	108	83,280	35.64%	233,643
1992	0	1,631	151,993	1,421	155,045	66.62%	77,662	25	77,687	33.38%	232,732
1993	0	1,196	150,626	499	152,321	69.24%	67,629	43	67,672	30.76%	219,993
1994	0	2,799	140,322	433	143,554	69.77%	62,132	53	62,185	30.23%	205,739
1995	0	3,723	148,021	445	152,189	68.05%	71,448	4	71,452	31.95%	223,641
1996	10	3,522	139,185	386	143,103	70.12%	60,916	77	60,993	29.88%	204,096
1997	7	3,871	138,870	853	143,601	63.68%	76,881	5,029	81,910	36.32%	225,511
1998	0	3,928	144,085	462	148,475	65.01%	79,864	34	79,898	34.99%	228,373
1999	9	5,167	150,567	383	156,126	66.79%	77,603	16	77,619	33.21%	233,745
2000	0	8,254	148,292	389	156,935	65.44%	82,875	15	82,890	34.56%	239,825
2001	0	10,997	139,919	393	151,309	71.43%	60,523	2	60,525	28.57%	211,834
2002	0	15,756	148,662	462	164,880	74.44%	56,576	38	56,614	25.56%	221,494
2003	24	17,631	145,740	474	163,869	74.24%	56,847	13	56,860	25.76%	220,729
2004	28	16,508	141,295	344	158,175	74.71%	53,547	3	53,550	25.29%	211,725
2005	20	18,521	136,172	351	155,064	76.40%	47,891	7	47,898	23.60%	202,962
2006	18	19,673	138,219	278	158,188	76.06%	49,794	0	49,794	23.94%	207,982
2007	19	21,121	106,634	225	162,313	73.50%	58,519	6	58,525	26.50%	220,838
2008	1	17,310	56,445	163	138,955	74.31%	47,830	207	48,037	25.69%	186,992
2009	1	12,460	99,271	314	112,046	73.85%	39,658	10	39,668	26.15%	151,714
2010	13	13,519	109,290	446	123,268	76.59%	37,640	41	37,681	23.41%	160,949
2011	22	13,688	107,526	507	121,743	78.65%	32,978	63	33,041	21.35%	154,784
2012	36	14,136	94,726	522	109,420	75.23%	35,967	57	36,024	24.77%	145,444
2013	38	14,976	89,090	458	104,562	72.23%	40,120	72	40,192	27.77%	144,754
2014	34	16,018	92,559	537	109,148	78.21%	30,186	220	30,406	21.79%	139,554
2015	33	17,900	88,957	797	107,687	77.89%	30,427	140	30,567	22.11%	138,254
2016	35	20,566	98,109	786	119,496	75.38%	38,913	116	39,029	24.62%	158,525
2017	54	21,748	94,775	626	117,203	73.68%	41,816	47	41,863	26.32%	159,066
2018	49	20,058	94,563	429	115,099	72.17%	44,337	57	44,394	27.83%	159,493
Average Annual Growth Rate (AAGR)											
1990-2000	N/A	27.14%	-0.72%	-2.18%	-0.23%	0.32%	-1.12%	-7.58%	-1.12%	-0.57%	-0.55%
2000-2010	N/A	5.06%	-3.01%	1.38%	-2.39%	1.59%	-7.59%	10.58%	-7.58%	-3.82%	-3.91%
2010-2018	18.04%	5.06%	-1.79%	-0.48%	-0.85%	-0.74%	2.07%	4.20%	2.07%	2.19%	-0.11%

Sources: FAA OPSNET database and Michael Baker International, Inc., 2019.
Note: The 2018 numbers represent the activity from 11/1/2017 to 10/31/2018.

Figure 3-1: Historical and Baseline Operations (1990-2018)



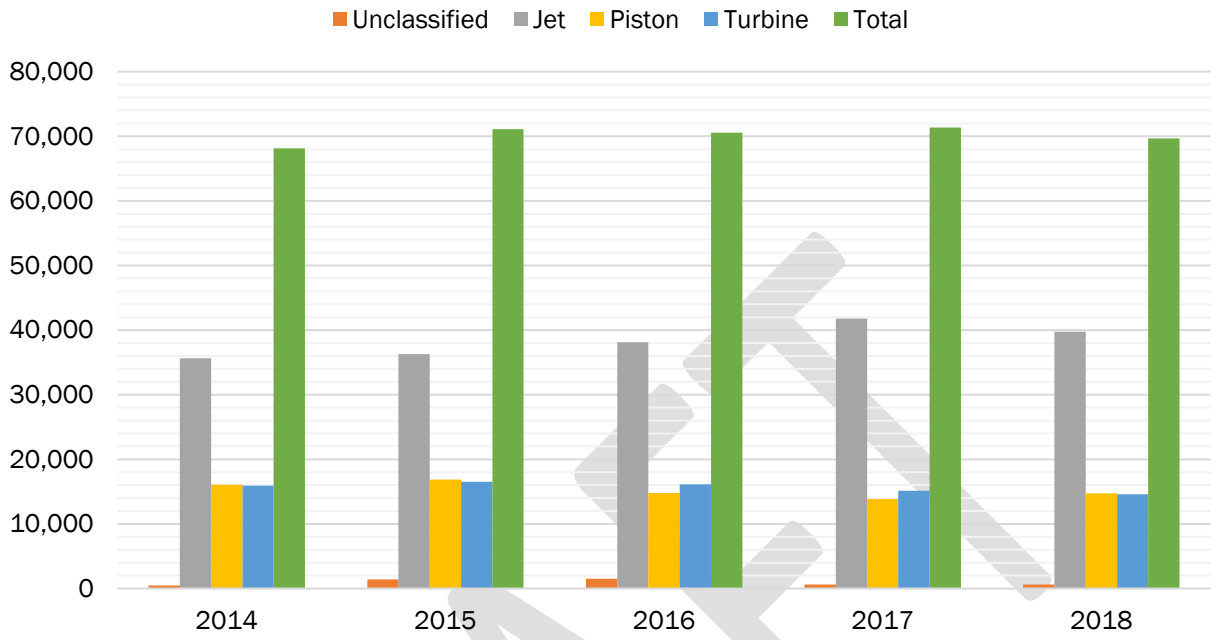
Sources: FAA OPSNET database and Michael Baker International, Inc., 2019.
Note: The 2018 numbers represent the activity from 11/1/2017 to 10/31/2018.

Table 3-3: Historical Flight Plan Activity by Aircraft Type (2000-2018)

Year	Unclassified	Jet	Piston	Turbine	Total Instrument	Total Operations	% of Total
2000	1,844	42,463	25,865	16,237	86,409	239,825	36.03%
2001	2,782	41,034	26,208	15,723	85,747	211,834	40.48%
2002	3,968	44,582	28,746	15,811	93,107	221,494	42.04%
2003	3,274	45,173	28,621	14,905	91,973	220,729	41.67%
2004	1,851	46,203	28,664	14,184	90,902	211,725	42.93%
2005	1,016	49,026	30,817	13,996	94,855	202,962	46.74%
2006	543	48,922	30,703	14,123	94,291	207,982	45.34%
2007	439	49,254	29,829	14,343	93,865	220,838	42.50%
2008	655	41,780	24,747	15,428	82,610	186,992	44.18%
2009	564	30,891	22,088	13,773	67,316	151,714	44.37%
2010	462	35,054	19,873	15,199	70,588	160,949	43.86%
2011	464	34,973	17,335	14,906	67,678	154,784	43.72%
2012	553	33,832	17,706	14,643	66,734	145,444	45.88%
2013	523	33,577	16,847	15,484	66,431	144,754	45.89%
2014	496	35,620	16,050	15,949	68,115	139,554	48.81%
2015	1,411	36,279	16,880	16,542	71,112	138,254	51.44%
2016	1,528	38,139	14,787	16,101	70,555	158,525	44.51%
2017	603	41,766	13,861	15,130	71,360	159,066	44.86%
2018	639	39,729	14,733	14,564	69,665	159,493	43.68%
Average Annual Growth Rate (AAGR)							
2000-2010	-12.93%	-1.90%	-2.60%	-0.66%	-2.00%	-3.91%	1.99%
2010-2018	4.14%	1.58%	-3.67%	-0.53%	-0.16%	-0.11%	-0.05%
2012-2018	2.44%	2.71%	-3.02%	-0.09%	0.72%	1.55%	-0.82%
2014-2018	6.54%	2.77%	-2.12%	-2.25%	0.56%	3.40%	-2.74%

Sources: FAA TFMSC database and Michael Baker International, Inc., 2019.
Note: The 2018 numbers represent the activity from 11/1/2017 to 10/31/2018.

Figure 3-2: Historical Flight Plan Activity Data by Aircraft Type (2014-2018)



Sources: FAA TFMSC database and Michael Baker International, Inc., 2019.
Note: The 2018 numbers represent the activity from 11/1/2017 to 10/31/2018.

3.3.2 Historical and Baseline Based Aircraft

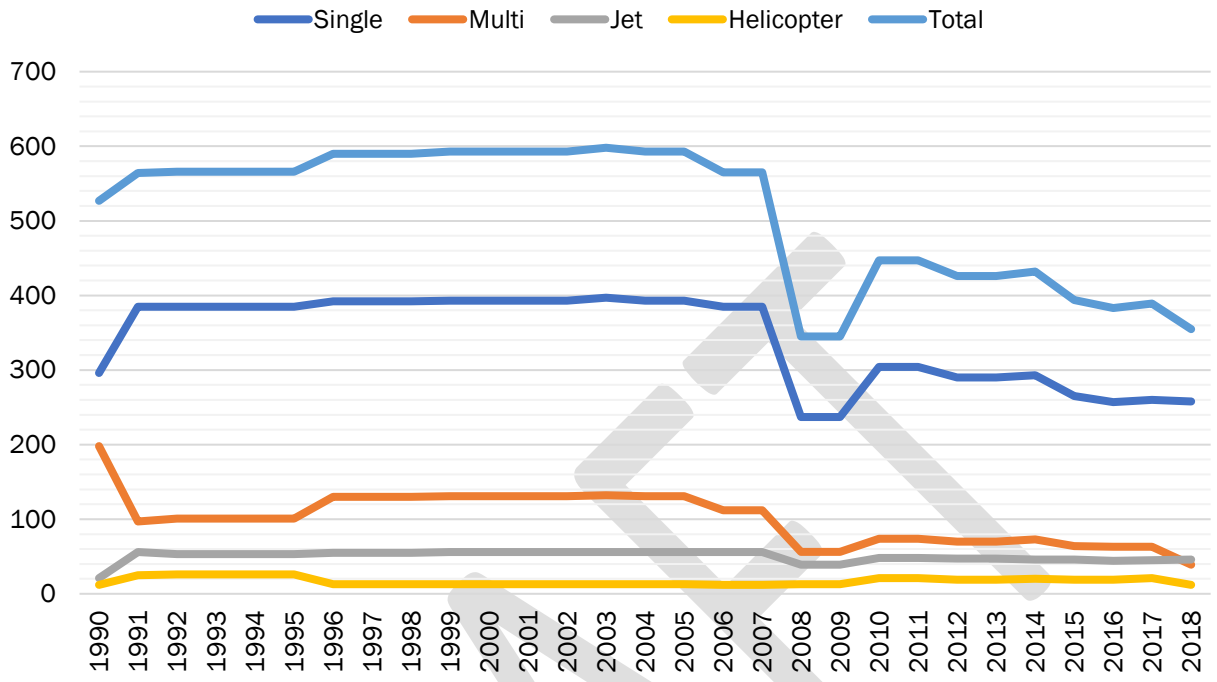
Table 3-4 summarizes the historical and baseline based aircraft counts for PDK. The counts for the years prior to 2018 were obtained from the FAA's 2017 Terminal Area Forecast (TAF) and the 2018 numbers were provided from an updated count of the based aircraft by airport personnel and was verified by the FAA through the National Based Aircraft Inventory Program. The single-engine and multi-engine aircraft shown in the table consist of both piston engine and turboprop engine aircraft. The significant decline in multi-engine aircraft over the years at PDK is consistent with what has been occurring nationwide with multi-engine piston aircraft as very few of those aircraft continue to be produced. Single-engine piston aircraft continue to comprise most of the based aircraft fleet at PDK and that trend is expected to continue for reasons including the based aircraft waiting list where individuals or organizations must pay a fee to be included and because of the high degree of flight training activity that occurs at the airport. As new areas on the airport property continue to be planned and prepped for hangar development, it is anticipated that the number of based single-engine pistons, jets, and helicopters will grow during the planning period of this Master Plan Update. **Figure 3-3** illustrates the based aircraft counts between 1990 and 2018. The Great Recession that began at the end of 2007 had the biggest single impact on based aircraft levels at PDK, which was a common trend at airports throughout the country.

Table 3-4: Historical and Baseline Based Aircraft (1990-2018)

Year	Single-Engine		Multi-Engine		Jet		Helicopter		Other		Total Based Aircraft	Total Operations	OPBA
	Based	% of Total	Based	% of Total	Based	% of Total	Based	% of Total	Based	% of Total			
1990	296	56.17%	198	37.57%	21	3.98%	12	2.28%	0	0.00%	527	253,398	480.83
1991	385	68.26%	97	17.20%	56	9.93%	25	4.43%	1	0.18%	564	233,643	414.26
1992	385	68.02%	101	17.84%	53	9.36%	26	4.59%	1	0.18 %	566	232,732	411.19
1993	385	68.02%	101	17.84%	53	9.36%	26	4.59%	1	0.18%	566	219,993	388.68
1994	385	68.02%	101	17.84%	53	9.36%	26	4.59%	1	0.18%	566	205,739	363.50
1995	385	68.02%	101	17.84%	53	9.36%	26	4.59%	1	0.18%	566	223,641	395.13
1996	392	66.44%	130	22.03%	55	9.32%	13	2.20%	0	0.00%	590	204,096	345.93
1997	392	66.44%	130	22.03%	55	9.32%	13	2.20%	0	0.00%	590	225,511	382.22
1998	392	66.44%	130	22.03%	55	9.32%	13	2.20%	0	0.00%	590	228,373	387.07
1999	393	66.27%	131	22.09%	56	9.44%	13	2.19%	0	0.00%	593	233,745	394.17
2000	393	66.27%	131	22.09%	56	9.44%	13	2.19%	0	0.00%	593	239,825	404.43
2001	393	66.27%	131	22.09%	56	9.44%	13	2.19%	0	0.00%	593	211,834	357.22
2002	393	66.27%	131	22.09%	56	9.44%	13	2.19%	0	0.00%	593	221,494	373.51
2003	397	66.39%	132	22.07%	56	9.36%	13	2.17%	0	0.00%	598	220,729	369.11
2004	393	66.27%	131	22.09%	56	9.44%	13	2.19%	0	0.00%	593	211,725	357.04
2005	393	66.27%	131	22.09%	56	9.44%	13	2.19%	0	0.00%	593	202,962	342.26
2006	385	68.14%	112	19.82%	56	9.91%	12	2.12%	0	0.00%	565	207,982	368.11
2007	385	68.14%	112	19.82%	56	9.91%	12	2.12%	0	0.00%	565	220,838	390.86
2008	237	68.70%	56	16.23%	39	11.30%	13	3.77%	0	0.00%	345	186,992	542.01
2009	237	68.70%	56	16.23%	39	11.30%	13	3.77%	0	0.00%	345	151,714	439.75
2010	304	68.01%	74	16.55%	48	10.74%	21	4.70%	0	0.00%	447	160,949	360.06
2011	304	68.01%	74	16.55%	48	10.74%	21	4.70%	0	0.00%	447	154,784	346.27
2012	290	68.08%	70	16.43%	47	11.03%	19	4.46%	0	0.00%	426	145,444	341.42
2013	290	68.08%	70	16.43%	47	11.03%	19	4.46%	0	0.00%	426	144,754	339.80
2014	293	67.82%	73	16.90%	46	10.65%	20	4.63%	0	0.00%	432	139,554	323.04
2015	265	67.26%	64	16.24%	46	11.68%	19	4.82%	0	0.00%	394	138,254	350.90
2016	257	67.10%	63	16.45%	44	11.49%	19	4.96%	0	0.00%	383	158,525	413.90
2017	260	66.84%	63	16.20%	45	11.57%	21	5.40%	0	0.00%	389	159,066	408.91
2018	258	72.68%	39	10.99%	46	12.96%	12	3.38%	0	0.00%	355	159,493	449.28
Average Annual Growth Rate													
1990-2000	2.88%	1.67%	-4.05%	-5.17%	10.31%	9.01%	0.80%	-0.38%	N/A	N/A	1.19%	-0.55%	-1.72%
2000-2010	-2.54%	0.26%	-5.55%	-2.84%	-1.53%	1.29%	4.91%	7.92%	N/A	N/A	-2.79%	-3.91%	-1.16%
2010-2018	-2.03%	0.83%	-7.69%	-5.00%	-0.53%	2.38%	-6.76%	-4.03%	N/A	N/A	-2.84%	-0.11%	2.81%

Sources: FAA 2017 TAF, airport personnel, and Michael Baker International, Inc., 2019.

Figure 3-3: Historical and Baseline Based Aircraft (1990-2018)



Sources: FAA 2017 TAF, airport personnel, and Michael Baker International, Inc., 2019.

3.4 Factors and Opportunities Affecting Activity Levels

This section describes past and present trends that may influence PDK's operations and based aircraft levels during the 22-year planning period. Several historical and anticipated trends have been presented in earlier sections of this chapter, such as the significant need for new pilot training to support worldwide aviation activity, the based aircraft waiting list, and events in the Atlanta area that produce peaks at PDK. There are also other trends that the FAA recommends identifying and evaluating as part of a forecasting effort including economic conditions, airport-specific factors (e.g., annual fuel flowage), the FAA Aerospace Forecast Fiscal Years 2018-2038, General Aviation Manufacturers Association (GAMA) trends, and other relevant forecasts for PDK. Although drones, multi-modal transportation, private space travel, and autonomous vehicles were popular discussion items for airports at the time of this writing, those types of trends were not anticipated to have any substantial impacts on the forecasts presented in this Master Plan Update and were therefore not evaluated in this chapter.

3.4.1 Economic Conditions

The economic conditions surrounding an airport have the potential to influence activity levels. For example, the growth or decline in a local population may correlate to the growth or decline in operations and based aircraft levels at an airport. **Table 3-5** summarizes historical and forecast population of the 10-county area covered by the Atlanta Regional Commission (ARC) and historical data for the City of Atlanta (refer to **Figure 3-4**). The forecasts were produced by the ARC in 2017 with a base year of 2016 and a forecast year of 2040. It is noted that the U.S. Census Bureau reported a July 1, 2017 population of 753,253 for DeKalb County and 486,290 for the City of Atlanta. According to information from DeKalb County, the population of the county grew the largest amount between 2017 and 2018 since between 2000 and 2001. DeKalb County CEO Michael Thurmond indicated that "DeKalb County is becoming the preferred location for many residents and business," and "emphasized county strengths including an extensive interstate highway system, the second busiest airport in the state, a strong public transit network, improving public school system, numerous higher education and technical schools and incomparable healthcare facilities like the CDC, Emory, DeKalb Medical and Children's Healthcare of Atlanta" (obtained from a press release on dekalbcountyga.gov dated August 22, 2018). "The City of Atlanta, which lost population between 1970 and 2000, is growing again amid a boom in multifamily housing. The city added 10,100 residents in the past year (2017 to 2018), compared to 9,700 the year before, and has grown by 9.00 percent since 2010." (obtained from a press release on atlantaregional.org dated August 22, 2018). The U.S. Census Bureau lists Atlanta as the 10th fastest growing cities in the country between 2016 and 2017 and the Atlanta Metropolitan Statistical Area (MSA) as the ninth most populated MSA in the country. By 2040, the ARC projects the top employment sectors in the 10-county area to be health care, retail, education, scientific, and other professional services.

With the airport's proximity to Downtown Atlanta and the growing 10-county area, it is anticipated that the projected population and employment growth will result in additional aviation activity at PDK. Although the historical population growth of the area has not produced increasing GA activity over the long-term, the activity at PDK appears to have stabilized and is trending upwards. As shown in **Figure 3-5**, the historical unemployment rate of the City of Atlanta, DeKalb County, and State of Georgia has tracked similarly to that of the country since at least 2006. Georgia continues to be a popular state for business relocations and start-ups. The 2011 Georgia Statewide Airport Economic Impact Study estimated the total economic impact of airports in the state to be $62.63 billion annually and PDK's impact to be $211.7 million annually, both of which would be much higher if reevaluated under the economy in 2018/2019. Consequently, the economic conditions surrounding PDK and the growth in the aviation industry surrounding the Atlanta area should result in increasing levels of activity and based aircraft at the airport over the course of the 22-year planning period.

Figure 3-4: 10-County Region

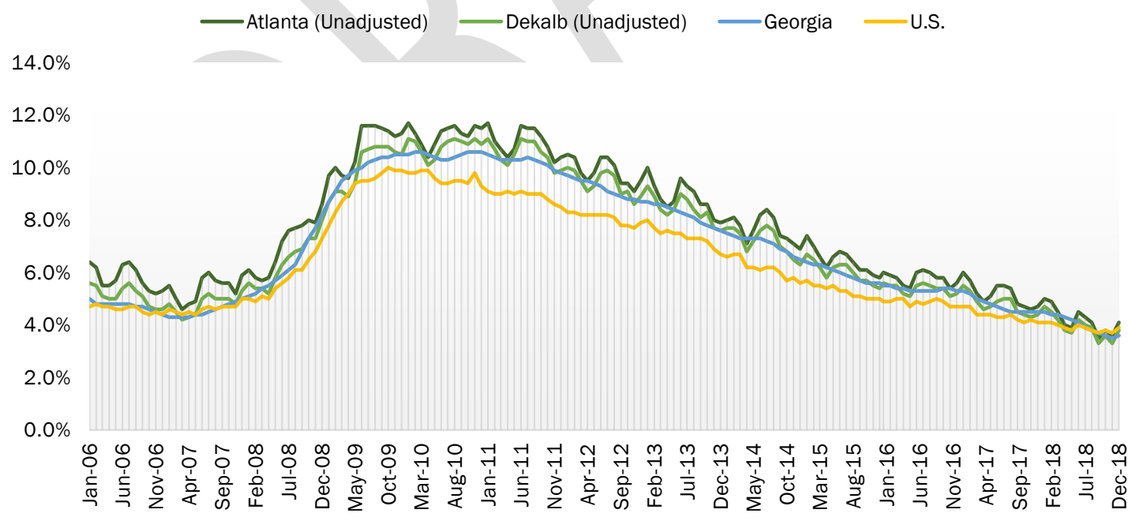
Source: Michael Baker International, Inc., 2019.

Table 3-5: Historical and Forecast Growth Rates (1970-2040)

Year	Region	Cherokee	Clayton	Cobb	DeKalb	Douglas	Fayette	Fulton	Gwinnett	Henry	Rockdale	City
1970	1,500,823	31,059	98,126	196,793	415,387	28,659	11,364	605,210	72,349	23,724	18,152	495,039
1980	1,896,182	51,699	150,357	297,718	483,024	54,573	29,043	589,904	166,808	36,309	36,747	424,922
1990	2,557,800	91,000	184,100	453,400	553,800	71,700	62,800	670,800	356,500	59,200	54,500	415,200
2000	3,429,379	141,903	236,517	607,751	665,865	92,174	91,263	816,006	588,448	119,341	70,111	416,474
2010	4,107,750	214,346	259,424	688,078	691,893	132,403	106,567	920,581	805,321	203,922	85,215	420,003
2016	4,401,800	n	270,600	737,500	725,000	139,000	112,300	985,700	877,100	223,600	90,900	439,600
2017	4,480,100	247,400	275,300	750,300	733,900	140,900	114,000	1,002,800	894,000	229,000	92,500	449,500
2018	4,555,900	254,500	279,400	758,300	744,530	142,800	116,200	1,020,370	910,700	234,800	94,300	459,600
2040	5,918,557	392,411	327,552	885,062	874,424	201,325	143,255	1,264,376	1,350,358	351,691	128,103	N/A
Average Annual Growth Rate (AAGR)												
1970-2000	2.79%	5.19%	2.98%	3.83%	1.59%	3.97%	7.19%	1.00%	7.24%	5.53%	4.61%	-0.57%
2000-2010	1.82%	4.21%	0.93%	1.25%	0.38%	3.69%	1.56%	1.21%	3.19%	5.50%	1.97%	0.08%
2010-2016	1.16%	1.91%	0.71%	1.16%	0.78%	0.81%	0.88%	1.15%	1.43%	1.55%	1.08%	0.76%
2016-2018	1.74%	2.96%	1.61%	1.40%	1.34%	1.36%	1.72%	1.74%	1.90%	2.47%	1.85%	2.25%
2018-2040	1.20%	1.99%	0.73%	0.71%	0.73%	1.57%	0.96%	0.98%	1.81%	1.85%	1.40%	N/A

Sources: Atlanta Regional Commission and Michael Baker International, Inc., 2019.

Figure 3-5: Historical Unemployment Rates (2006-2018)



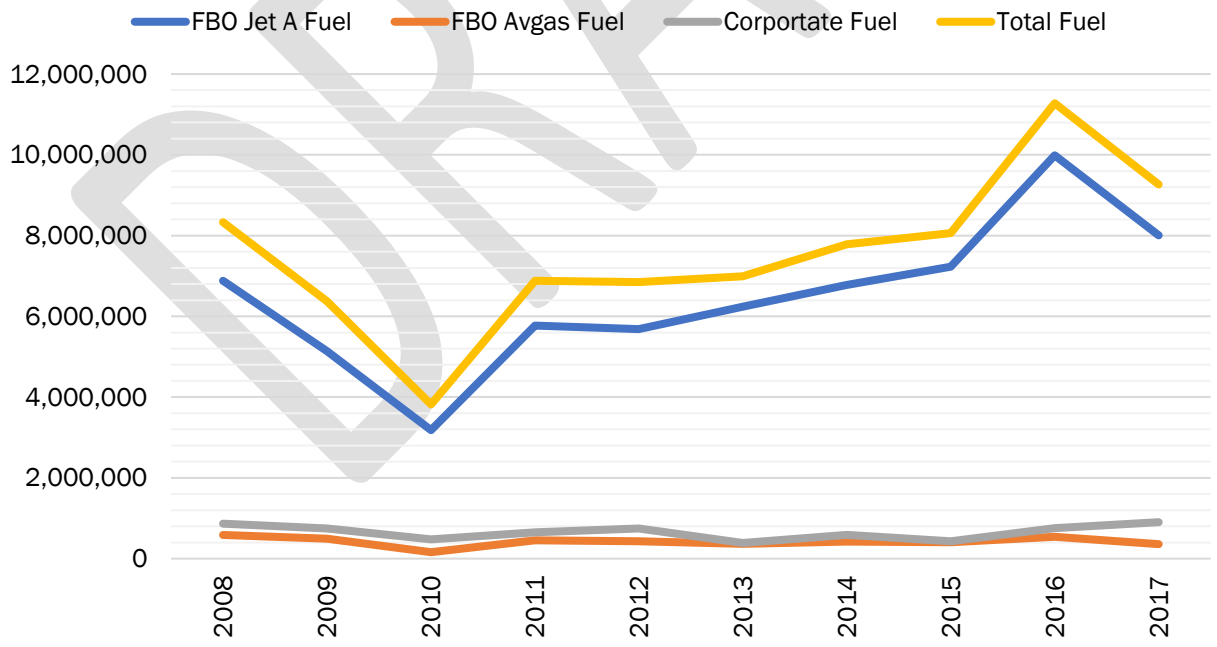
Sources: U.S. Bureau of Labor Statistics and Michael Baker International, Inc., 2019.

3.4.2 Airport-Specific Factors

As shown in **Figure 3-6** and **Table 3-6**, the fuel flowage at PDK also dropped during the economic recession and began to increase again starting in 2011. Compared to 2008, there were 2,948,121 more gallons of fuel pumped at PDK in 2016 despite there being 28,467 fewer operations. Most of the fuel pumped is Jet A, which reflects both the growth in based jets at PDK since 2008 and the increased prevalence of GA jet activity in the Atlanta area. The airport's revenues from rental cars more than doubled from 2008 to 2017 and the total number of gallons pumped per operation also increased. These important airport-specific trends are revealing for the recent activity at PDK. They illustrate strong growth over a short period of time and help to frame what has occurred at PDK as aviation activity has continued to grow in the Atlanta area.

As mentioned, the airport recently conducted a survey to determine what the demand is for new based aircraft tenants. Based on 31 responses that were received, all 31 individuals are interested in basing an aircraft in a hangar at PDK if space becomes available and would collectively conduct more than 2,000 operations at the airport each year. The respondents included a mix of individuals who would purchase a new aircraft if hangar space were available, would relocate from another airport, or would relocate from an existing hangar or tiedown at PDK to a new hangar. The aircraft include a mix of pistons and turboprops. The survey, combined with the based aircraft waiting list where individuals or organizations must pay a fee to be included, illustrates the immediate growth that would occur at PDK if new hangars were available.

Figure 3-6: Historical Fuel Flowage in Gallons (2008-2017)



Sources: Airport Records and Michael Baker International, Inc., 2019.

Table 3-6: Aircraft Fuel Flowage and Rental Car Revenue (2008-2017)

Year	FBO Jet A Fuel		FBO Avgas Fuel		Corporate Fuel		Total Gallons	Total Operations	Gallons Per Operation	Rental Car Revenue
	Gallons	% of Total	Gallons	% of Total	Gallons	% of Total				
2008	6,876,920	82.57%	585,859	7.03%	866,185	10.40%	8,328,964	186,992	44.54	$63,998
2009	5,137,644	80.61%	492,373	7.73%	743,273	11.66%	6,373,289	151,714	42.01	$51,776
2010	3,182,001	83.32%	159,411	4.17%	477,600	12.51%	3,819,012	160,949	23.73	$49,195
2011	5,774,268	83.91%	455,053	6.61%	652,548	9.48%	6,881,869	154,784	44.46	$86,826
2012	5,680,566	82.93%	426,681	6.23%	742,348	10.84%	6,849,594	145,444	47.09	$76,204
2013	6,239,430	89.22%	366,688	5.24%	387,455	5.54%	6,993,573	144,754	48.31	$88,950
2014	6,773,836	87.06%	418,573	5.38%	587,856	7.56%	7,780,266	139,554	55.75	$90,698
2015	7,232,596	89.73%	401,612	4.98%	426,302	5.29%	8,060,509	138,254	58.30	$77,288
2016	9,987,603	88.57%	538,023	4.77%	751,459	6.66%	11,277,085	158,525	71.14	$113,912
2017	8,007,488	86.41%	357,299	3.86%	902,147	9.74%	9,266,934	159,066	58.26	$135,224
Average Annual Growth Rate (AAGR)										
2008-2017	1.71%	0.51%	-5.35%	-6.46%	0.45%	-0.73%	1.19%	-1.78%	3.03%	8.67%
2012-2017	7.11%	0.82%	-3.49%	-9.15%	3.98%	-2.12%	6.23%	1.81%	4.35%	12.15%
2008-2016	4.78%	0.88%	-1.06%	-4.74%	-1.76%	-5.41%	3.86%	-2.04%	6.03%	7.47%

Sources: Airport Records and Michael Baker International, Inc., 2019.

3.4.3 FAA Terminal Area Forecast (TAF)

The FAA develops a TAF each year for all airports in the NPIAS. Depending upon the subject airport's level of service (i.e., commercial or general aviation), the TAF may present forecasts of passenger enplanements, operations, and based aircraft. The FAA website indicates that the "TAF system is the official forecast of aviation activity at FAA facilities. These forecasts are prepared to meet the budget and planning needs of FAA and provide information for use by state and local authorities, the aviation industry, and the public." **Table 3-7** illustrates the growth projections for ATL and the four GA Reliever airports to ATL as obtained from the FAA's most recent edition of the TAF (2017 TAF). As identified in the NPIAS, the four GA Reliever airports to ATL include PDK, Fulton County Airport-Brown Field (FTY), Cobb County International Airport-McCollum Field (RYY), and Gwinnett County Airport-Briscoe Field (LZU). Although the TAF illustrates growth of over one percent per year for operations at ATL between 2018 and 2040, the TAF illustrates slower growth for the four GA Reliver airports, with PDK projected to experience the strongest AAGR of 0.42 percent. All four GA Reliever airports are projected to experience much higher based aircraft growth rates between 2018 and 2040 compared to operations. This information is utilized in subsequent portions of this chapter to evaluate potential growth scenarios for PDK and to compare the selected operations and based aircraft forecast to the TAF.

Table 3-7: FAA 2017 TAF Growth Projections (2000-2040)

Operations					
Year	**PDK**	**FTY**	**RYY**	**LZU**	**ATL**
2000	238,740	118,265	108,199	113,130	922,016
2010	156,157	70,817	65,294	70,807	956,546
2018	159,454	49,571	62,680	98,022	879,757
2020	160,680	49,934	62,852	98,302	908,428
2038	173,294	53,337	64,422	100,895	1,227,304
2040	174,896	53,728	64,600	101,191	1,269,418
Average Annual Growth Rate (AAGR)					
2000-2010	-4.16%	-5.00%	-4.93%	-4.58%	0.37%
2010-2018	0.26%	-4.36%	-0.51%	4.15%	-1.04%
2018-2038	0.42%	0.37%	0.14%	0.14%	1.68%
2020-2040	0.42%	0.37%	0.14%	0.14%	1.69%
Based Aircraft					
Year	**PDK**	**FTY**	**RYY**	**LZU**	**ATL**
2000	593	310	311	280	6
2010	345	128	275	304	3
2018	395	87	295	224	3
2020	405	94	298	231	3
2038	512	158	342	306	3
2040	524	168	348	314	3
Average Annual Growth Rate (AAGR)					
2000-2010	-5.27%	-8.47%	-1.22%	0.83%	-6.70%
2010-2018	1.71%	-4.71%	0.88%	-3.75%	0.00%
2018-2038	1.31%	3.03%	0.74%	1.57%	0.00%
2020-2040	1.30%	2.95%	0.78%	1.55%	0.00%

Sources: FAA 2017 TAF and Michael Baker International, Inc., 2019.

3.4.4 GAMA Trends

The General Aviation Manufacturers Association (GAMA) is a trade organization that monitors and reports on the GA industry. GAMA tracks quarterly shipments and billings for GA aircraft deliveries. The first nine months of 2018 saw the largest increase in deliveries of all aircraft types since the Great Recession. **Table 3-8** summarizes the comparison of shipments between the first nine months of 2017 and 2018 as obtained from GAMA. GAMA develops an annual report each year that presents forecasts for GA aircraft including the size of the fleet and hours flown. They utilize the forecasts from the latest FAA Aerospace Forecast, which is currently for Fiscal Years 2018-2038. The FAA Aerospace Forecasts are utilized to evaluate potential growth scenarios for PDK in subsequent sections of this chapter.

Table 3-8: GA Aircraft Deliveries Comparison (First Nine Months of 2017 and 2018)

Year	Fixed-Wing				Rotorcraft		
	Piston	Turboprop	Jet	Total	Piston	Turbine	Total
2017	724	374	433	1,531	190	471	661
2018	784	395	446	1,625	220	510	730
Average Annual Growth Rate (AAGR)							
2017-2018	8.3%	5.6%	3.0%	6.1%	15.8%	8.3%	10.4%

Source: GAMA.

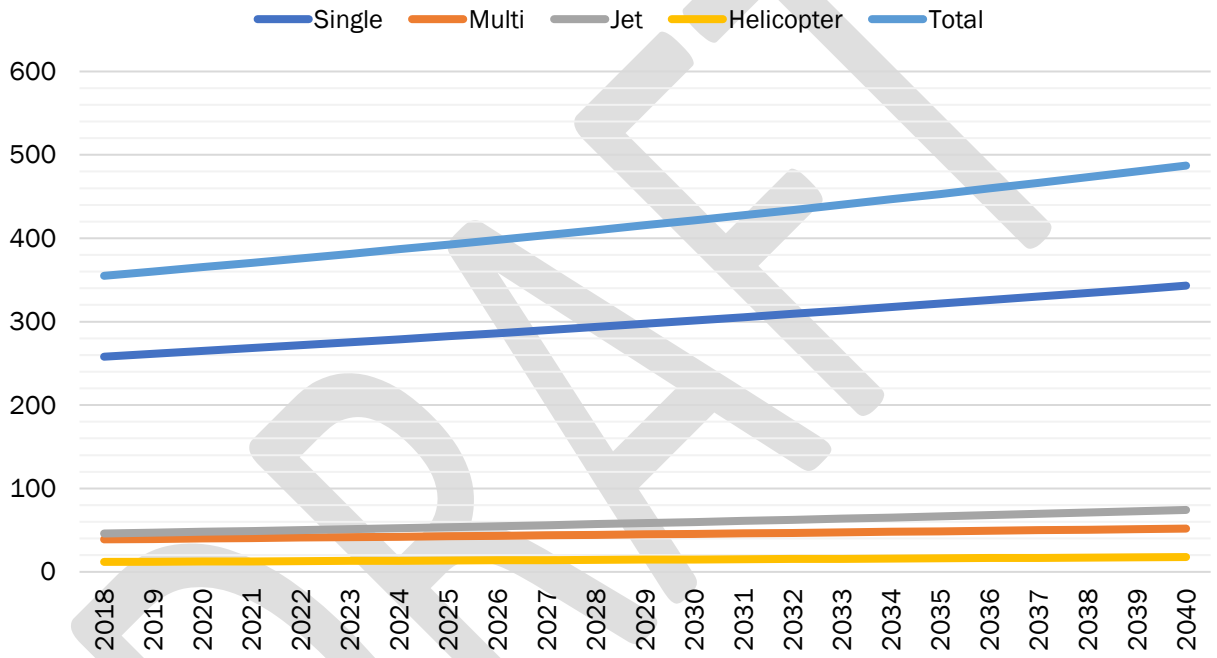
3.5 Based Aircraft Forecasts

There were more than 60 T-hangars constructed at PDK in 2013 to help fulfill the demands of a waiting list for hangar space at the airport. Based on 31 responses that were received during the recent survey effort, all 31 individuals are interested in basing an aircraft in a hangar at PDK if space becomes available. Of the 31, 20 would be new based aircraft at PDK including nine that would relocate their aircraft from another airport and 11 that would purchase new aircraft. The new based aircraft would consist of 18 single-engine pistons, one multi-engine piston, and one single-engine turboprop. Although the survey did not evaluate the demand for corporate aircraft hangar space at PDK, DeKalb County is exploring opportunities to develop several hangars in the southwest quadrant of the airport. Therefore, the ability to provide hangar space is the only factor affecting the growth in based aircraft at PDK. The 2017 TAF projects the based aircraft fleet to grow stronger at PDK than the nation from 2018 to 2038. The FAA Aerospace Forecast Fiscal Years 2018-2038 projects virtually no growth in the nationwide GA fleet from 2018 to 2038 and a decline in fixed-wing piston aircraft. The 2017 TAF AAGR of 1.31 percent from 2018 to 2038 is close to the anticipated AAGR of the 10-County population from 2018 to 2040 (i.e., 1.20 percent).

As shown in **Figure 3-7** and **Table 3-9**, the forecasts of based aircraft growth for PDK employed the growth rate of 1.31 percent for single-engines and multi-engines, which includes a combination of pistons and turboprops. The growth rates for jets and helicopters were obtained from the FAA Aerospace Forecast Fiscal Years 2018-2038 for Active General Aviation and Air Taxi Aircraft. This forecast adds 132 additional

based aircraft to PDK's fleet over the 22-year period including 85 single-engines, 13 multi-engines, 28 jets, and six helicopters. This forecast produces growth rates that are consistent with the FAA's expectations for PDK and was conducted in an unconstrained manner (i.e., without assuming facilities can or cannot be provided at PDK to accommodate the additional based aircraft). It also shows what may be expected for a busy GA airport in a major metropolitan area where there are 26 "2018 Fortune 1000" companies have headquarters, of which 15 of those companies are Fortune 500 companies including The Home Depot (#23), United Parcel Service (UPS) (#44), Delta Air Lines (#75), and The Coca-Cola Company (#87).

Figure 3-7: Based Aircraft Forecasts (2018-2040)



Source: Michael Baker International, Inc., 2019.

Table 3-9: Based Aircraft Forecasts (2018-2040)

Year	Single-Engine		Multi-Engine		Jet		Helicopter		Other		Total Based Aircraft
	Based	% of Total	Based	% of Total	Based	% of Total	Based	% of Total	Based	% of Total	
2018	258	72.68%	39	10.99%	46	12.96%	12	3.38%	0	0.00%	355
2019	250	71.71%	40	11.32%	47	13.47%	12	3.50%	0	0.00%	349
2020	253	71.61%	40	11.31%	48	13.57%	12	3.51%	0	0.00%	354
2021	257	71.51%	41	11.29%	49	13.67%	13	3.53%	0	0.00%	359
2022	260	71.41%	41	11.28%	50	13.78%	13	3.54%	0	0.00%	364
2023	264	71.31%	42	11.26%	51	13.88%	13	3.55%	0	0.00%	370
2024	267	71.21%	42	11.24%	52	13.98%	13	3.56%	0	0.00%	375
2025	270	71.11%	43	11.23%	54	14.08%	14	3.57%	0	0.00%	380
2026	274	71.01%	43	11.21%	55	14.19%	14	3.59%	0	0.00%	386
2027	278	70.91%	44	11.20%	56	14.29%	14	3.60%	0	0.00%	391
2028	281	70.81%	44	11.18%	57	14.40%	14	3.61%	0	0.00%	397
2029	285	70.71%	45	11.16%	58	14.50%	15	3.62%	0	0.00%	403
2030	289	70.60%	46	11.15%	60	14.61%	15	3.64%	0	0.00%	409
2031	292	70.50%	46	11.13%	61	14.72%	15	3.65%	0	0.00%	415
2032	296	70.40%	47	11.12%	62	14.83%	15	3.66%	0	0.00%	421
2033	300	70.29%	47	11.10%	64	14.94%	16	3.67%	0	0.00%	427
2034	304	70.19%	48	11.08%	65	15.05%	16	3.69%	0	0.00%	433
2035	308	70.08%	49	11.07%	67	15.15%	16	3.70%	0	0.00%	439
2036	312	69.97%	49	11.05%	68	15.27%	17	3.71%	0	0.00%	446
2037	316	69.87%	50	11.03%	70	15.38%	17	3.72%	0	0.00%	452
2038	320	69.76%	51	11.01%	71	15.49%	17	3.74%	0	0.00%	459
2039	339	70.57%	51	10.67%	73	15.13%	17	3.64%	0	0.00%	480
2040	343	70.46%	52	10.65%	74	15.24%	18	3.65%	0	0.00%	487
Growth Rates											
AAGR 2018-2038	1.31%	-0.14%	1.31%	-0.14%	2.20%	0.74%	1.80%	0.34%	N/A	N/A	1.45%
AAGR 2018-2040	1.31%	-0.14%	1.31%	-0.14%	2.20%	0.74%	1.80%	0.35%	N/A	N/A	1.45%
AAGR 2020-2040	1.31%	-0.14%	1.31%	-0.14%	2.20%	0.74%	1.80%	0.35%	N/A	N/A	1.45%
Increase 2018-2038	76	N/A	12	N/A	25	N/A	5	N/A	0	N/A	118
Increase 2018-2040	85	N/A	13	N/A	28	N/A	6	N/A	0	N/A	132
Increase 2020-2040	78	N/A	12	N/A	26	N/A	5	N/A	0	N/A	122

Source: Michael Baker International, Inc., 2019.

3.6 Operations Forecasts

The 2017 TAF projects an AAGR of 0.42 percent for total operations at PDK between 2018 and 2038, which is significantly less than the 2017 TAF AAGR of 1.31 percent for total based aircraft. As described throughout this chapter, there is a high demand for based aircraft hangar storage at PDK. As new hangars continue to be developed, it is anticipated that a combination of existing tenants and new tenants will occupy them. PDK is also the premier GA airport in the Atlanta area and attracts a significant amount of visiting traffic during popular sporting and other events. With the known demand for based aircraft hangar storage at PDK and the growing number of major events that are held in the Atlanta area each year, it is anticipated that operations at PDK would increase similarly to based aircraft.

Table 3-10 and **Figure 3-8** present seven forecasts for operations growth at PDK during the planning period. These forecasts were developed by applying growth rates from various trends presented within this chapter and include national, local, and airport-specific trends. A description of each forecast is provided below.

1. **TAF** – Applied the 2017 TAF growth rate for operations at PDK.
2. **Based Aircraft** – Applied the growth rate utilized for the based aircraft forecast.
3. **Population** – Applied the forecast growth rate for the 10-county region.
4. **OPBA** – Applied the 2018 OPBA factor to the based aircraft forecast.
5. **TFMSC** – Applied the historical growth rate in flight plan activity from 2012 to 2018.
6. **Average** – Applied the average of the five previous forecasts.
7. **Average (Smoothed)** – Applied an even growth rate to the previous forecast.

After reviewing the forecasts and comparing them to the 2017 TAF, all the forecasts were found to be consistent with the TAF. According to the FAA's June 2008 Review and Approval of Aviation Forecasts guidance, total operations and based aircraft forecasts are considered consistent with the TAF if they differ by less than 10 percent in the five-year forecast period and 15 percent in the 10-year forecast period. Therefore, it was determined that the growth rate from the based aircraft forecast would be selected to forecast total operations for PDK for the 22-year planning period. That maintains the OPBA at the same number throughout the planning period and increases operations from 159,493 in 2018 to 218,797 by 2040.

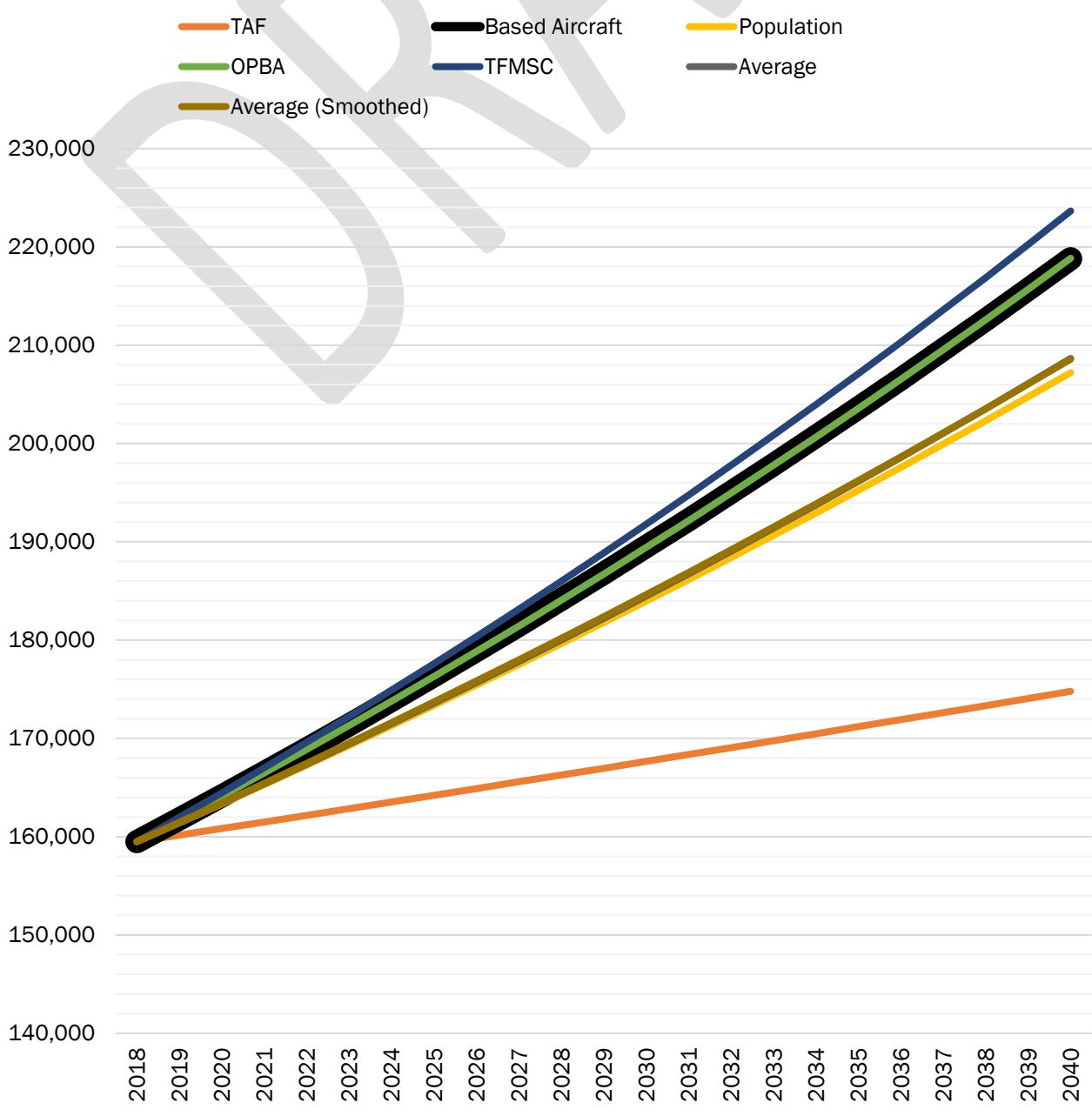
Table 3-11 illustrates the forecast of local and itinerant operations during the planning period. This forecast was produced by keeping air carrier and military operations at the same levels throughout the planning period and splitting the remaining activity by their respective percentages in 2018. **Table 3-12** illustrates the forecast of operations by aircraft type. This forecast was produced by increasing the turboprop, jet, and helicopter operations at the growth rates in the FAA Aerospace Forecast Fiscal Years 2018-2038 for Active General Aviation and Air Taxi Aircraft and the piston aircraft comprised the remainder. The number of helicopters in 2018 was estimated from a previous noise modeling effort for PDK. The number of jet operations is forecast to increase from 39,729 in 2018 to 64,125 by 2040. This forecast is further analyzed in the next chapter of this Master Plan Update to identify the critical aircraft for each runway.

Table 3-10: Total Operations Forecast (2018-2040)

Year	TAF	Based Aircraft	Population	OPBA	TFMSC	Average	Average (Smoothed)	Total Based Aircraft	OPBA
2018	159,493	159,493	159,493	159,493	159,493	159,493	159,493	355	449.28
2019	160,158	161,801	161,401	161,787	161,963	161,422	161,450	360	449.32
2020	160,826	164,143	163,333	164,115	164,471	163,378	163,431	365	449.35
2021	161,497	166,519	165,287	166,479	167,018	165,360	165,436	371	449.39
2022	162,170	168,929	167,264	168,878	169,605	167,369	167,466	376	449.41
2023	162,847	171,374	169,266	171,313	172,232	169,406	169,521	381	449.44
2024	163,526	173,855	171,291	173,785	174,899	171,471	171,601	387	449.46
2025	164,208	176,371	173,341	176,294	177,608	173,564	173,706	392	449.47
2026	164,892	178,924	175,415	178,841	180,358	175,686	175,838	398	449.48
2027	165,580	181,514	177,514	181,427	183,151	177,837	177,995	404	449.49
2028	166,271	184,141	179,637	184,052	185,988	180,018	180,179	410	449.49
2029	166,964	186,806	181,787	186,717	188,868	182,228	182,390	416	449.49
2030	167,660	189,510	183,962	189,422	191,793	184,470	184,628	422	449.49
2031	168,360	192,253	186,163	192,168	194,763	186,741	186,893	428	449.47
2032	169,062	195,036	188,391	194,956	197,780	189,045	189,187	434	449.46
2033	169,767	197,859	190,645	197,786	200,843	191,380	191,508	440	449.44
2034	170,475	200,722	192,926	200,660	203,953	193,747	193,858	447	449.42
2035	171,186	203,628	195,234	203,577	207,112	196,147	196,236	453	449.39
2036	171,900	206,575	197,570	206,539	210,319	198,581	198,644	460	449.36
2037	172,617	209,565	199,934	209,545	213,576	201,047	201,081	466	449.32
2038	173,336	212,598	202,326	212,598	216,884	203,549	203,549	473	449.28
2039	174,059	215,675	204,747	215,698	220,243	206,084	206,046	480	449.23
2040	174,785	218,797	207,197	218,845	223,654	208,656	208,574	487	449.18
Average Annual Growth Rate (AAGR)									
2018-2038	0.42%	1.45%	1.20%	1.45%	1.55%	1.23%	1.23%	1.45%	0.00%
2018-2040	0.42%	1.45%	1.20%	1.45%	1.55%	1.23%	1.23%	1.45%	0.00%
2020-2040	0.42%	1.45%	1.20%	1.45%	1.55%	1.23%	1.23%	1.45%	0.00%

Source: Michael Baker International, Inc., 2019.

Figure 3-8: Total Operations Forecast (2018-2040)



Source: Michael Baker International, Inc., 2019.

Table 3-11: Forecast of Local and Itinerant Operations (2018-2040)

Year	Itinerant						Local				Total
	Air Carrier	Air Taxi	GA	MIL	Total	% of Total	Civil	MIL	Total	% of Total	
2018	49	20,058	94,563	429	115,099	72.17%	44,337	57	44,394	27.83%	159,493
2019	49	20,350	95,937	429	116,765	72.17%	44,980	57	45,037	27.83%	161,801
2020	49	20,645	97,332	429	118,455	72.17%	45,631	57	45,688	27.83%	164,143
2021	49	20,945	98,746	429	120,169	72.17%	46,293	57	46,350	27.83%	166,519
2022	49	21,250	100,181	429	121,909	72.17%	46,964	57	47,021	27.83%	168,929
2023	49	21,558	101,637	429	123,673	72.17%	47,644	57	47,701	27.83%	171,374
2024	49	21,872	103,114	429	125,463	72.17%	48,335	57	48,392	27.83%	173,855
2025	49	22,189	104,612	429	127,279	72.17%	49,035	57	49,092	27.83%	176,371
2026	49	22,512	106,132	429	129,122	72.17%	49,746	57	49,803	27.83%	178,924
2027	49	22,839	107,674	429	130,990	72.17%	50,466	57	50,523	27.83%	181,514
2028	49	23,171	109,238	429	132,886	72.17%	51,198	57	51,255	27.83%	184,141
2029	49	23,507	110,825	429	134,810	72.17%	51,940	57	51,997	27.83%	186,806
2030	49	23,849	112,434	429	136,761	72.17%	52,692	57	52,749	27.83%	189,510
2031	49	24,195	114,067	429	138,740	72.17%	53,456	57	53,513	27.83%	192,253
2032	49	24,547	115,724	429	140,749	72.17%	54,230	57	54,287	27.83%	195,036
2033	49	24,903	117,405	429	142,786	72.17%	55,016	57	55,073	27.83%	197,859
2034	49	25,265	119,110	429	144,852	72.17%	55,813	57	55,870	27.83%	200,722
2035	49	25,632	120,839	429	146,949	72.17%	56,622	57	56,679	27.83%	203,628
2036	49	26,004	122,594	429	149,076	72.17%	57,442	57	57,499	27.83%	206,575
2037	49	26,381	124,374	429	151,234	72.17%	58,274	57	58,331	27.83%	209,565
2038	49	26,764	126,180	429	153,423	72.17%	59,119	57	59,176	27.83%	212,598
2039	49	27,153	128,0412	429	155,643	72.17%	59,975	57	60,032	27.83%	215,675
2040	49	27,547	129,871	429	157,896	72.17%	60,844	57	60,901	27.83%	218,797
Average Annual Growth Rate (AAGR)											
2018-2038	0.00%	1.45%	1.45%	0.00%	1.45%	0.00%	1.45%	0.00%	1.45%	0.00%	1.45%
2018-2040	0.00%	1.45%	1.45%	0.00%	1.45%	0.00%	1.45%	0.00%	1.45%	0.00%	1.45%
2020-2040	0.00%	1.45%	1.45%	0.00%	1.45%	0.00%	1.45%	0.00%	1.45%	0.00%	1.45%

Source: Michael Baker International, Inc., 2019.

Table 3-12: Forecast of Operations by Aircraft Type (2018-2040)

Year	Piston	Turboprop	Jet	Helicopter	Total Operations
2018	95,688	14,564	39,729	9,512	159,493
2019	96,704	14,812	40,603	9,683	161,801
2020	97,726	15,063	41,496	9,858	164,143
2021	98,756	15,319	42,409	10,035	166,519
2022	99,792	15,580	43,342	10,216	168,929
2023	100,835	15,845	44,296	10,399	171,374
2024	101,884	16,114	45,270	10,587	173,855
2025	102,940	16,388	46,266	10,777	176,371
2026	104,002	16,667	47,284	10,971	178,924
2027	105,071	16,950	48,324	11,169	181,514
2028	106,146	17,238	49,387	11,370	184,141
2029	107,227	17,531	50,474	11,574	186,806
2030	108,314	17,829	51,584	11,783	189,510
2031	109,407	18,132	52,719	11,995	192,253
2032	110,505	18,441	53,879	12,211	195,036
2033	111,610	18,754	55,064	12,430	197,859
2034	112,720	19,073	56,276	12,654	200,722
2035	113,835	19,397	57,514	12,882	203,628
2036	114,955	19,727	58,779	13,114	206,575
2037	116,080	20,062	60,072	13,350	209,565
2038	117,211	20,403	61,394	13,590	212,598
2039	118,346	20,750	62,745	13,835	215,675
2040	119,485	21,103	64,125	14,084	218,797
Average Annual Growth Rate (AAGR)					
2018-2038	1.02%	1.70%	2.20%	1.80%	1.45%
2018-2040	1.01%	1.70%	2.20%	1.80%	1.45%
2020-2040	1.01%	1.70%	2.20%	1.80%	1.45%

Source: Michael Baker International, Inc., 2019.

3.7 Instrument Operations Forecast

According to the FAA report, Forecasting Aviation Activity by Airport, instrument operations consist of "arrivals, departures, and overflights conducted by an FAA approach control facility for aircraft with an Instrument Flight Rule (IFR) flight plan or special Visual Flight Rule (VFR) procedures." The historical flight plan activity data from the FAA's TFMSC database was previously presented in **Table 3-13** and consisted of 69,665 operations in 2018. The forecasts of instrument operations considered not only the projected growth in jets and turboprops throughout the planning period, but also some anticipated growth for the piston activity at the airport. Therefore, all future growth in jet and turboprop activity was incorporated into the forecast and 15.40 percent of future piston activity was added which represents the 2018 share of piston and unclassified aircraft instrument operations to total operations. The resulting forecast is presented in **Table 3-13** and increases instrument operations from 69,665 in 2018 to 104,423 by 2040.

Table 3-13: Instrument Operations Forecast (2018-2040)

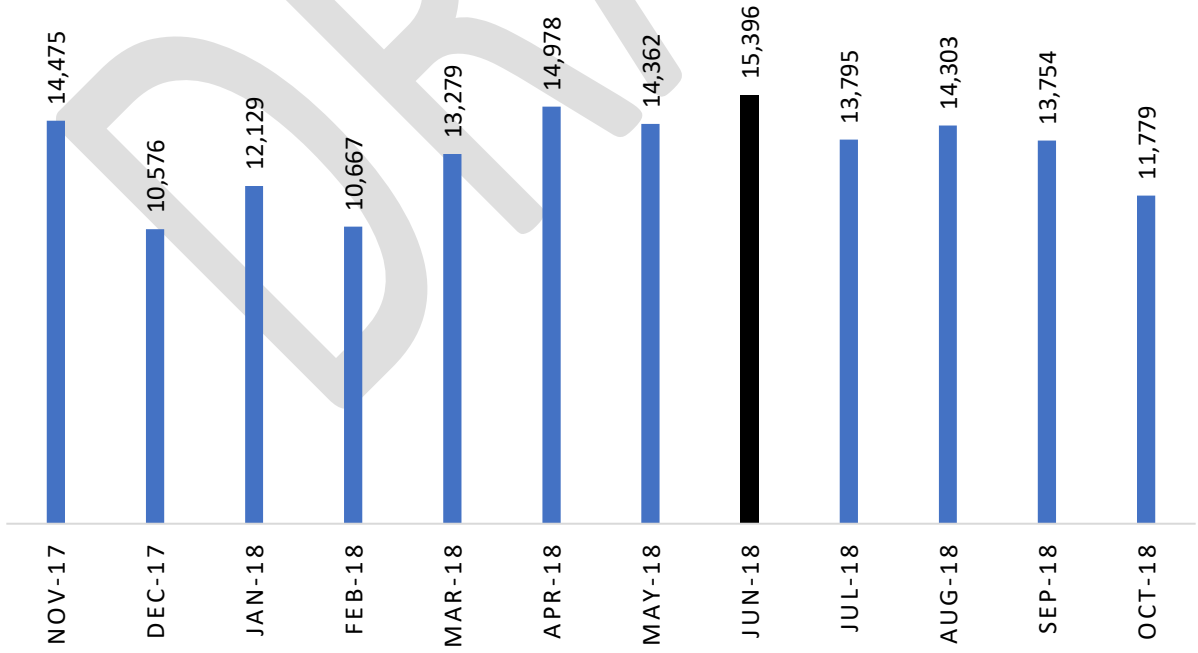
Year	Piston	Turboprop	Jet	Total	Total Operations	% of Total
2018	15,372	14,564	39,729	69,665	159,493	43.68%
2019	15,535	14,812	40,603	70,950	161,801	43.85%
2020	15,699	15,063	41,496	72,259	164,143	44.02%
2021	15,865	15,319	42,409	73,593	166,519	44.20%
2022	16,031	15,580	43,342	74,953	168,929	44.37%
2023	16,199	15,845	44,296	76,339	171,374	44.55%
2024	16,367	16,114	45,270	77,752	173,855	44.72%
2025	16,537	16,388	46,266	79,191	176,371	44.90%
2026	16,708	16,667	47,284	80,658	178,924	45.08%
2027	16,879	16,950	48,324	82,154	181,514	45.26%
2028	17,052	17,238	49,387	83,678	184,141	45.44%
2029	17,226	17,531	50,474	85,231	186,806	45.63%
2030	17,400	17,829	51,584	86,814	189,510	45.81%
2031	17,576	18,132	52,719	88,427	192,253	46.00%
2032	17,752	18,441	53,879	90,072	195,036	46.18%
2033	17,930	18,754	55,064	91,748	197,859	46.37%
2034	18,108	19,073	56,276	93,457	200,722	46.56%
2035	18,287	19,397	57,514	95,198	203,628	46.75%
2036	18,467	19,727	58,779	96,973	206,575	46.94%
2037	18,648	20,062	60,072	98,783	209,565	47.14%
2038	18,830	20,403	61,394	100,627	212,598	47.33%
2039	19,012	20,750	62,745	102,507	215,675	47.53%
2040	19,195	21,103	64,125	104,423	218,797	47.73%
Average Annual Growth Rate (AAGR)						
2018-2038	1.02%	1.70%	2.20%	1.86%	1.45%	0.40%
2018-2040	1.01%	1.70%	2.20%	1.86%	1.45%	0.40%
2020-2040	1.01%	1.70%	2.20%	1.86%	1.45%	0.40%

Source: Michael Baker International, Inc., 2019.

3.8 Peak Activity Forecasts

As an airport with an ATCT, it was possible to review historical activity to determine actual peak month and peak day values for PDK. As shown in **Figure 3-9**, the peak month for total activity at PDK during the one-year period between November 2017 and October 2018 was June with 15,396 operations or 9.65 percent of total annual activity. **Table 3-14** further analyzes the 2018 activity data for the peak month and day for itinerant, local, and total activity at PDK. There are max peak values and average peak values shown in the table. The max peak values occur very infrequently and therefore do not represent typical peaking situations for the airport. For example, the airport has experienced more than 500 daily itinerant operations only 10 times since 2012 and more than 300 daily local operations only nine times since 2012. The average peak values are more representative of what the airport experiences as peaks routinely throughout the year. Therefore, the calculated average peak values were used to determine the Average Peak Month (APM) and Average Day Peak Month (ADPM) forecasts for itinerant, local, and total activity over the course of the 22-year planning period (refer to **Table 3-15**). Aircraft flight track radar data from 2016 was reviewed to calculate the Average Day Peak Hour (ADPH) forecasts. The day with the most recorded flight tracks in 2016 was November 27 with 295 records and the busiest hour on that day had 31 records, which represented 10.51 percent of the daily activity. That value was applied to determine the ADPH forecasts throughout the planning period. According to FAA Values for FAA Investment and Regulatory Decisions, A Guide (updated September 2016), GA aircraft average 1.9 passengers per flight, which includes everything from small pistons to large corporate jets. That value was applied to determine the forecast of ADPM and ADPH itinerant passengers during the planning period.

Figure 3-9: 2018 Monthly Peaking Analysis for Total Activity



Sources: FAA OPSET database and Michael Baker International, Inc., 2019.

Table 3-14: 2018 Monthly and Daily Peaking Analysis

Month	Itinerant Peaking Activity					Local Peaking Activity					Total Peaking Activity				
	Annual	Month	% Annual	Day	% Annual	Annual	Month	% Annual	Day	% Annual	Annual	Month	% Annual	Day	% Annual
Nov-17	115,099	10,492	9.12%	413	0.36%	44,394	3,983	8.97%	166	0.37%	159,493	14,475	9.08%	569	0.36%
Dec-17	115,099	8,275	7.19%	510	0.44%	44,394	2,301	5.18%	284	0.64%	159,493	10,576	6.63%	693	0.43%
Jan-18	115,099	9,055	7.87%	467	0.41%	44,394	3,074	6.92%	266	0.60%	159,493	12,129	7.60%	673	0.42%
Feb-18	115,099	8,029	6.98%	472	0.41%	44,394	2,638	5.94%	279	0.63%	159,493	10,667	6.69%	726	0.46%
Mar-18	115,099	10,007	8.69%	463	0.40%	44,394	3,272	7.37%	308	0.69%	159,493	13,279	8.33%	715	0.45%
Apr-18	115,099	10,871	9.44%	495	0.43%	44,394	4,107	9.25%	339	0.76%	159,493	14,978	9.39%	774	0.49%
May-18	115,099	10,041	8.72%	521	0.45%	44,394	4,321	9.73%	308	0.69%	159,493	14,362	9.00%	827	0.52%
Jun-18	115,099	10,293	8.94%	475	0.41%	44,394	5,103	11.49%	294	0.66%	159,493	15,396	9.65%	769	0.48%
Jul-18	115,099	9,644	8.38%	464	0.40%	44,394	4,151	9.35%	254	0.57%	159,493	13,795	8.65%	679	0.43%
Aug-18	115,099	10,059	8.74%	439	0.38%	44,394	4,244	9.56%	220	0.50%	159,493	14,303	8.97%	602	0.38%
Sep-18	115,099	9,329	8.11%	442	0.38%	44,394	4,425	9.97%	208	0.47%	159,493	13,754	8.62%	628	0.39%
Oct-18	115,099	9,004	7.82%	467	0.41%	44,394	2,775	6.25%	266	0.60%	159,493	11,779	7.39%	691	0.43%
Max	**Max**	**10,871**	**9.44%**	**521**	**0.45%**	**Max**	**5,103**	**11.49%**	**339**	**0.76%**	**Max**	**15,396**	**9.65%**	**827**	**0.52%**
Average	**Average**	**9,592**	**8.33%**	**469**	**0.41%**	**Average**	**3,700**	**8.33%**	**266**	**0.60%**	**Average**	**13,291**	**8.33%**	**696**	**0.44%**

Sources: FAA OPSNET database and Michael Baker International, Inc., 2019.

Table 3-15: Peak Activity Forecasts (2018-2040)

Year	Itinerant Peaking Activity						Local Peaking Activity				Total Peaking Activity			
	Annual	APM	ADPM	ADPH	ADPM Passenger	ADPH Passenger	Annual	APM	ADPM	ADPH	Annual	APM	ADPM	ADPH
2018	115,099	9,592	469	49	891	94	44,394	3,700	181	19	159,493	13,291	650	68
2019	116,765	9,730	476	50	904	95	45,037	3,753	184	19	161,801	13,483	659	69
2020	118,455	9,871	483	51	917	96	45,688	3,807	186	20	164,143	13,679	669	70
2021	120,169	10,014	490	51	930	98	46,350	3,862	189	20	166,519	13,877	679	71
2022	121,909	10,159	497	52	944	99	47,021	3,918	192	20	168,929	14,077	688	72
2023	123,673	10,306	504	53	957	101	47,701	3,975	194	20	171,374	14,281	698	73
2024	125,463	10,455	511	54	971	102	48,392	4,033	197	21	173,855	14,488	708	74
2025	127,279	10,607	519	55	985	104	49,092	4,091	200	21	176,371	14,698	719	76
2026	129,122	10,760	526	55	1,000	105	49,803	4,150	203	21	178,924	14,910	729	77
2027	130,990	10,916	534	56	1,014	107	50,523	4,210	206	22	181,514	15,126	740	78
2028	132,886	11,074	541	57	1,029	108	51,255	4,271	209	22	184,141	15,345	750	79
2029	134,810	11,234	549	58	1,044	110	51,997	4,333	212	22	186,806	15,567	761	80
2030	136,761	11,397	557	59	1,059	111	52,749	4,396	215	23	189,510	15,793	772	81
2031	138,740	11,562	565	59	1,074	113	53,513	4,459	218	23	192,253	16,021	783	82
2032	140,749	11,729	574	60	1,090	115	54,287	4,524	221	23	195,036	16,253	795	84
2033	142,786	11,899	582	61	1,105	116	55,073	4,589	224	24	197,859	16,488	806	85
2034	144,852	12,071	590	62	1,121	118	55,870	4,656	228	24	200,722	16,727	818	86
2035	146,949	12,246	599	63	1,138	120	56,679	4,723	231	24	203,628	16,969	830	87
2036	149,076	12,423	607	64	1,154	121	57,499	4,792	234	25	206,575	17,215	842	88
2037	151,234	12,603	616	65	1,171	123	58,331	4,861	238	25	209,565	17,464	854	90
2038	153,423	12,785	625	66	1,188	125	59,176	4,931	241	25	212,598	17,717	866	91
2039	155,643	12,970	634	67	1,205	127	60,032	5,003	245	26	215,675	17,973	879	92
2040	157,896	13,158	643	68	1,222	128	60,901	5,075	248	26	218,797	18,233	892	94
Average Annual Growth Rate (AAGR)														
2018-2038	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%
2018-2040	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%
2020-2040	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%

Source: Michael Baker International, Inc., 2019.

3.9 Forecast Summary

As mentioned earlier in this chapter, the FAA considers total operations and based aircraft forecasts consistent with the TAF if they differ by less than 10 percent in the five-year forecast period and 15 percent in the 10-year forecast period. As shown in **Table 3-16**, the recommended forecasts of this Master Plan Update are considered consistent with the TAF because they do not exceed those thresholds. Note that the comparisons to the 2017 TAF were made based on adjustments that reflect actual values in 2018 but incorporate the same AAGR factors from the 2017 TAF through 2040. The recommended forecasts are used throughout the remainder of this study to plan for the long-term development of PDK.

Table 3-16: Forecast Summary (2018-2040)

Year	Year +	Operations			Based Aircraft		
		TAF	Recommended	Difference	TAF	Recommended	Difference
2018	0	159,493	159,493	0.00%	355	355	0.00%
2019	1	160,158	161,801	1.03%	360	360	0.13%
2020	2	160,826	164,143	2.06%	364	365	0.26%
2021	3	161,497	166,519	3.11%	369	371	0.40%
2022	4	162,170	168,929	4.17%	374	376	0.53%
2023	**5**	**162,847**	**171,374**	**5.24%**	**379**	**381**	**0.67%**
2024	6	163,526	173,855	6.32%	384	387	0.80%
2025	7	164,208	176,371	7.41%	389	392	0.94%
2026	8	164,892	178,924	8.51%	394	398	1.08%
2027	9	165,580	181,514	9.62%	399	404	1.22%
2028	**10**	**166,271**	**184,141**	**10.75%**	**404**	**410**	**1.36%**
2029	11	166,964	186,806	11.88%	409	416	1.50%
2030	12	167,660	189,510	13.03%	415	422	1.64%
2031	13	168,360	192,253	14.19%	420	428	1.79%
2032	14	169,062	195,036	15.36%	426	434	1.94%
2033	15	169,767	197,859	16.55%	431	440	2.08%
2034	16	170,475	200,722	17.74%	437	447	2.23%
2035	17	171,186	203,628	18.95%	443	453	2.38%
2036	18	171,900	206,575	20.17%	448	460	2.53%
2037	19	172,617	209,565	21.40%	454	466	2.68%
2038	20	173,336	212,598	22.65%	460	473	2.84%
2039	21	174,059	215,675	23.91%	466	480	2.99%
2040	22	174,785	218,797	25.18%	472	487	3.15%
Average Annual Growth Rate (AAGR)							
2018-	N/A	0.42%	1.45%	N/A	1.31%	1.45%	N/A
2018-	N/A	0.42%	1.45%	N/A	1.31%	1.45%	N/A
2020-	N/A	0.42%	1.45%	N/A	1.31%	1.45%	N/A

Source: Michael Baker International, Inc., 2019.

Working Paper #2

DeKalb Peachtree Airport
2020-2040 Airport Master Plan

Chapter 4 – Facility Requirements

October 7, 2020

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Facility Requirements

4.1 Introduction

This chapter establishes the general facility requirements to ensure that the Dekalb Peachtree Airport (PDK) will be able to adequately accommodate forecasted aviation demand over the 20-year planning period. The identification of future facility requirements with respect to capacity, safety standards, security, efficiency, and demand for services determines the starting point for the creation of airport development alternatives. Some requirements are driven by regulations and FAA guidance documents, where other requirements are defined by the future airport development vision and goals of the airport owner, as well as the role of the airport in the community and in the Georgia Statewide Aviation System Plan.

This facility requirements chapter includes an assessment of the aviation and non-aviation components of PDK including the runway and taxiway system, navigational aids and approaches, Fixed Base Operator (FBO) facilities and services, aircraft storage facilities and supporting infrastructure. PDK is included in the FAA NPIAS, therefore, it is necessary for the airport to comply with FAA design standards and current Advisory Circulars such as FAA No. 150/5300-13A, *Airport Design*. With the changing FAA design standards and changes in activity levels since the previous ALP Update was completed in 2011, it was necessary to conduct a comprehensive evaluation of the airport's needs over the course of the 20-year planning period for this Master Plan Update that extends to 2040. An analysis of the following airport components is presented herein:

- Georgia Aviation System Plan Requirements,
- Planning Horizon,
- Critical Aircraft Assessment,
- Wind Coverage Analysis,
- Airfield Capacity Analysis,
- Airfield Design Standards,
- General Aviation Facilities, and
- Airport Support Facilities.

4.2 Georgia Aviation System Plan Requirements

The Georgia Aviation System Plan was published by the Georgia Department of Transportation Aviation Programs in 2019. The plan provides the state with a top down analysis of its airports and provides recommendations to improve the overall state system. The plan recommends facility improvements at each public airport in Georgia, including PDK, which is classified by GDOT as a Level III airport, a Business Airport of Regional Impact and of significant importance to the state's aviation needs. **Table 4-1** displays the Georgia Aviation System Plan objectives for a Level III airport and the existing conditions at PDK. These objectives will be further evaluated in later sections of this chapter.

Table 4-1: Georgia Aviation System Plan - Level III Objectives

Facility Requirement	Actual	Minimum Objective	Objective Met
Runway Length	6,001 feet	5,500 feet	Yes
Runway Width	100 feet	100 feet	Yes
Taxiway	Full Parallel	Full Parallel	Yes
Primary Runway PCI	73	70 or Greater	Yes
Primary Runway Safety Area	1,000 feet x 500 feet	1,000 feet x 500 feet	Yes
Runway to Taxiway Separation	300 feet	300 feet	Yes
Lighting System			
-Runway	HIRL	HIRL (for precision approaches or MIRL)	Yes
-Taxiway	HITL	MITL	Yes
-Approach Lighting System	MALSF	ALS	Yes
Approach Type	Precision (ILS)	Near-Precision	Yes
Weather Reporting	ASOS	AWOS or ASOS	Yes
Navigation Aids			
-Rotating Beacon	Rotating Beacon	Rotating Beacon	Yes
-VGSI	VASIs/PAPIs	PAPIs	No
--Segmented Circle	None	Segmented Circle	No
-Wind Cone	Wind Conde	Wind Cone	Yes
Airfield Signage	Hold Position, Location, Guidance	Hold Position, Location, Guidance	Yes
Fencing	Full Perimeter	Full Perimeter	Yes
Hangared Aircraft Storage	232	70% of Based Aircraft Fleet	No
Apron Parking/Storage	177	30% of Based Aircraft Fleet Plus and Add'l 75% for Transient Aircraft	No
General Aviation Terminal/Administration	20,000 SF w/ Restrooms, Conference Area, Pilot's Lounge	2,500 SF of Public Use Space including Restrooms, Conference Area, and Pilot's Lounge	Yes
Fuel	AvGas and Jet A	AvGas and/or Jet Fuel	Yes
FBO	Full Service	Full Service	Yes
Maintenance	Full Service	Full Service	Yes
Rental	On-site	Available	Yes
Source: *2009 Georgia Aviation System Plan*.			

4.3 Planning Horizon

Specific components of the airfield and landside system can be evaluated to determine their capacity to accommodate future demand using the updated aviation demand forecast established for PDK. This is determined by establishing planning horizon milestones to consider across the planning period. The time frame for addressing development needs usually involves short-term (five years), medium-term (10 years), and long-term (20 year) planning periods. The short-term analysis focuses on the immediate action items, the medium term focuses on the more detailed analysis and the long term primarily focuses on the ultimate role of the airport.

As presented previously in the Aeronautical Demand Forecasts Chapter, actual activity at the airport will vary over time and may be higher or lower than what the demand forecast predicts. Using the time frames as milestones allows the Airport the flexibility to make decisions and develop facilities according to need generated by actual demand levels. **Table 4-2** displays the planning horizon activity levels for PDK.

Table 4-2: Planning Horizon Activity Levels

Item	Base Year 2018	5 Year Short-term 2025	10 Year Mid-term 2030	20 Year Long-term 2040
Total Based Aircraft	355	392	422	487
Annual Operations (Combined Local & Itinerant)				
General Aviation	159,007	175,885	189,024	218,311
Military	486	486	486	486
Total Operations	159,493	176,371	189,510	218,797

Source: Michael Baker International, 2019.

4.3.1 Critical Aircraft Assessment

In addition to understanding the trends within the industry, it is also important to understand the significance of the Critical Aircraft when planning an airport. According to FAA AC 150/5000-17, *Critical Aircraft and Regular Use Determination*, the critical aircraft is the most demanding aircraft type, or grouping of aircraft with similar characteristics, that make Regular Use of the airport. Regular Use is defined as, 500 annual operations, including both itinerant and local operations but excluding touch-and-go operations. An operation is either a takeoff or landing of an aircraft.

The current and conditionally approved Airport Layout Plan (ALP) identifies the existing and ultimate critical aircraft for PDK as the Gulfstream III. This aircraft is classified in FAA AC 150/5300-13 as Airplane Design Group (ADG) II Aircraft Approach Category (AAC) C, and Taxiway Design Group (TDG) 2.

Table 4-3 shows aircraft types with more than 500 total operations in the calendar year 2018 that logged IFR operations at PDK as reported by the FAA Traffic Flow Management System Counts (TFMSC) database for the calendar year 2018. The table also lists corresponding AAC, ADG, and TDG for each aircraft which

is listed in FAA AC 150/5300-13. Note that the information in the table is not an exhaustive list of all jet or turboprops operations at PDK but represents a sample.

Table 4-3: Aircraft with More Than 500 Annual Operations Calendar Year 2018

ID	Aircraft	AAC	ADG	TDG	Total Operations
BE36	Beech Bonanza	A	I	1A	971
C172	Cessna Skyhawk 172/Cutlass	A	I	1A	785
EA50	Eclipse 500	A	I	2A	955
P28A	Piper Cherokee	A	I	1A	1,953
SR22	Cirrus SR 22	A	I	--	2,361
PC12	Pilatus PC-12	A	II	1A	5,637
BE40	Raytheon/Beech Beechjet 400/T-1	B	I	1A	2,218
BE58	Beech 58	B	I	1A	1,174
BE9L	Beech King Air 90	B	I	1A	1,526
C25A	Cessna Citation CJ2	B	I	2	640
C525	Cessna CitationJet/CJ1	B	I	1A	1,381
B350	Beech Super King Air 350	B	II	2	1,989
BE20	Beech 200 Super King	B	II	2	1,863
C208	Cessna 208 Caravan	B	II	1A	611
C25B	Cessna Citation CJ3	B	II	2	913
C550	Cessna Citation II/Bravo	B	II	2	741
C560	Cessna Citation V/Ultra/Encore	B	II	1A	1,792
C56X	Cessna Excel/XLS	B	II	1B	4,444
C680	Cessna Citation Sovereign	B	II	1B	1,219
C68A	Cessna Citation Latitude	B	II	1B	849
C750	Cessna Citation X	B	II	1B	657
E55P	Embraer Phenom 300	B	II	1B	2,384
F2TH	Dassault Falcon 2000	B	II	1B	781
F900	Dassault Falcon 900	B	II	1B	572
H25B	BAe HS 125/700-800/Hawker 800	C	I	1B	1,494
LJ45	Bombardier Learjet 45	C	I	--	504
LJ60	Bombardier Learjet 60	C	I	--	777
CL30	Bombardier (Canadair) Challenger 300	C	II	1B	1,406
CL35	CL35 - Bombardier Challenger 300	C	II	--	1,126
CL60	Bombardier Challenger 600/601/604	C	II	1B	997
G280	Gulfstream G280	C	II	1B	665
LJ75	Learjet 75	C	II	--	778
LJ35	Bombardier Learjet 35/36	D	I	--	745
GLF	Gulfstream IV/G400	D	II	2	1,121
GLF5	Gulfstream V/G500/550	D	III	2	726

Source: FAA Traffic Flow Management System Counts (TFMSC) calendar year 2018..

Based on 2018 operations and from the airfield design perspective, the most demanding aircraft shown in the table is the Gulfstream Model G550. Compared to the other aircraft listed, this aircraft is the most demanding in terms of approach speed, tail height, and wing span characteristics. The Gulfstream 550 is identical to the Gulfstream 500 and is considered an ultra-long-range corporate jet. This aircraft is comparable to the types of corporate jets that the General Aviation Manufacturers Association (GAMA) in their *2019 GAMA Annual Report* expect to experience demand growth in the coming years based on current aircraft orders and deliveries. Other aircraft include the Gulfstream 400, Challenger 300, Citation X and the Learjet 35. The Gulfstream G550 and the family of similar aircraft are expected to remain at or above the minimum Regular Use thresholds. These aircraft fall in the same family aircraft grouping of aircraft with similar characterics the Gulfstream 550 or less demanding. This aircraft is classified in FAA AC 150/5300-13 as a D-III aircraft with a TDG2 wheel configuration and is the representative critical aircraft for primary Runway 3R-21L. A small turboprop ARC B-I category King Air 90 was selected for the secondary parallel Runway 3L-21R and Runway 16-34. **Table 4-4** displays a comparison of the previous and existing critical aircraft.

Table 4-4: Primary Runway - Previous vs. Existing/Future Critical Aircraft

Item	Old ALP	Current/Future
Critical Aircraft	Gulfstream III 	Gulfstream G550 
Aircraft Type	Two jet engine business aircraft	Two jet engine business aircraft
Aircraft Approach Category (AAC)	C	D
Airplane Design Group (ADG)	II	III
Taxiway Design Group (TDG)	2	2
Wingspan	77.83’	99.58’
Tail Height	24.50’	25.67’
Length	83.08’	99.75’
Cockpit to Main Gear (CMG) Distance	37.39’	45’
Wheelbase	37.39’	45’
Main Gear Width (MGW) Outer to Outer	15.57’	16’
Approach Speed (V_{REF})	125 Knots	145 Knots
Max Takeoff Weight (MTOW)	69,700 lbs.	99,600 lbs.
Main Gear Type	Dual	Dual
Wake Category	Medium	Medium

Sources: FAA AC 150/5300-13A, Airport Design, Boeing Aircraft Performance Manual, and Michael Baker International, Inc., 2019. Photo:

4.4 Wind Coverage Analysis

Runway orientation is a key factor for airport safety and efficiency. Wind speed and direction influences runway orientation and the number of runways. Wind conditions also affect the aircraft in varying degrees (i.e. small aircraft are more sensitive to crosswind conditions).

Historical wind conditions have been evaluated to determine the percentage of wind coverage for runways at PDK. Ample wind coverage of the runway is important because aircraft takeoff and land into the wind, and extensive crosswinds are not conducive to safe or optimum flight operations. The FAA AC 150/5300-13A, *Airport Design,* recommends that 95% wind coverage across runways be achieved.

The 95% wind coverage is computed based on the crosswind not exceeding 10.5 knots (kts) (12 miles per hour (mph)) for the aircraft designed for Runway Design Codes (RDC) of A-I and B-I; 13 kts (15 mph) for ARCs A-II and B-II; 16 kts (18 mph) for ARCs A-III, B-III, C-I through D-III; and 20 kts (23 mph) for ARCs A-IV through D-VI; these velocities are termed the maximum aircraft crosswind component. If 95% wind coverage is not provided at an airport for the maximum crosswind component, then the addition of a crosswind runway should be considered.

The FAA suggests that a period of at least 10 consecutive years of onsite wind data should be examined when evaluating airfield wind coverage. For this analysis, wind data for the Atlanta area for years 2008-2017 was obtained from the National Oceanic and Atmosphere Administration's National Climatic Data Center. Wind coverage percentages take into account the approach and visibility minimums associated with each runway. This information is presented in **Table 4-5**, *Wind Coverage*. Wind coverage is only included for the crosswind speed that corresponds to the approach category and airplane design group that would utilize that runway. In the case of DeKalb Peachtree Airport, the RDC is D-III for the primary runway and B-I for the secondary runways; therefore, 10.5 knots (kts), 13 kts, and 16 kts crosswind components were analyzed. A review of prevailing winds shows that the parallel runways, Runway 3L-21R and 3R-21L, do not provide adequate crosswind coverage for aircraft having a 10.5 kts maximum crosswind component (93.57%). Therefore, Runway 16-34 is necessary as a crosswind runway for these aircraft. Aircraft having a maximum crosswind component of 10.5 kts are generally smaller aircraft that fall into the A and B AAC design groups. When wind data is analyzed by combining both the parallel runways and Runway 16-34, greater than 95% wind coverage is achieved.

Table 4-5: Wind Coverage

Flight Rules	Runway Direction	Wind Coverage Percentage (%) Allowable Crosswind Component (Knots)		
		10.5 KTS	13 KTS	16 KTS
All Weather	3-21 (L/R)	93.57	96.35	99.12
	16-34	96.71	98.47	99.70
	Both	**98.09**	**99.33**	**99.86**
VFR	3-21 (L/R)	92.96	96.02	99.08
	16-34	96.59	98.46	99.74
	Both	**97.99**	**99.33**	**99.88**
IFR	3-21 (L/R)	96.59	97.97	99.34
	16-34	97.40	98.57	99.53
	Both	**98.63**	**99.40**	**99.79**

Sources: National Climatic Data Center, 2008-2017; Michael Baker International, 2018.
Notes:
IMC – Ceiling less than 1,000 ft AGL and visibility less than three miles
VMC – Ceiling greater than 1,000 ft AGL and visibility greater than three miles

4.5 Airfield Capacity Analysis

This section evaluates whether the existing airfield configuration can accommodate forecasted levels of demand over the planning period. According to the FAA, airfield capacity is defined by the number of aircraft operations conducted at the airfield over a defined period at an acceptable level of delay. An acceptable level of delay is essentially a policy decision about the tolerability of delay being longer than some specified amount, considering the technical feasibility and economic practicality of available remedies.

Estimates of airfield capacity were developed in accordance with the methods presented in FAA AC 150/5060-5, *Airport Capacity and Delay*. This methodology, generally known as the "handbook methodology" does not account for every possible situation at an airport, but rather the most common situations observed at U.S. airports at the time the advisory circular was adopted. FAA AC 150/5060-5 provides a methodology for determining the hourly capacity, Annual Service Volume (ASV), and aircraft delay. According to FAA Order 5090.3C *Field Formulation of the National Plan of Integrated Airport Systems (NPIAS)*, recommends that the handbook methodology should be used where capacity is not a constraining factor. The hourly capacity and ASV was calculated for existing conditions and for the last year of planning period at PDK. The results are used for planning purposes to determine if airfield capacity improvements are needed.

- **Hourly Airfield Capacity** – An airport's hourly airfield capacity represents the maximum number of aircraft that can be accommodated under conditions of continuous demand during a one-hour period. Using peak hour forecasts, the hourly airfield capacity is determined for both Visual Flight Rules (VFR) and Instrument Flight Rules (IFR) activity.
- **Annual Service Volume (ASV)** – The ASV estimates the annual number of operations that the airfield configuration should be capable of handling with minimal delays. Consistent with FAA

Order 5090.3C *Field Formulation of the National Plan of Integrated Airport Systems (NPIAS)*, delay may be considered minimal when the average delay per operation is four minutes or less. The ASV accounts for peaking characteristics in its calculation of 12-month demand as well as periods of low-volume activity.

- **Delay** – The average anticipated delay is based on a ratio of forecast demand to the calculated ASV. According to the FAA AC 150/5060-5, "as demand approaches capacity, individual aircraft delay is increased. Successive hourly demands exceeding the hourly capacity result in unacceptable delays."

4.5.1 Capacity Factors

Fundamental to any airfield, capacity analysis entails the following eight factors:

Characteristics

The configuration and number of runways, parallel taxiways, and exit taxiways have a direct influence on an airfield's ability to accommodate various types of aircraft in a given time frame. The type of navigational aids, lighting, radar, and other instrumentation is extremely important to runway capacity, particularly during inclement weather.

Runway Use - Configuration

At airports equipped with two or more runways, it is not uncommon for more than one configuration to be used under normal operating conditions. Inadequate runway instrumentation and poor visibility may also require changes in runway use. Ultimately, the airfield should use a configuration that affords the highest hourly capacity, however, due to varying conditions, this configuration cannot be used 100 percent of the time. The airport's estimated Annual Service Volume (ASV) becomes a function of the time period is used on an average annual basis.

Meteorological Conditions

Runway capacity is highest during good weather when visibility is at its best and visual flight rules (VFR) are in effect. When visibility and ceilings are below specific minimums (3 miles visibility and 1,000-foot ceiling), instrument flight rules are imposed resulting in greater separations between aircraft and longer runway occupancy times. Meteorological factors such as fog, intense storms, strong crosswinds, and excessive water on the runways have a major impact on runway capacity and may even cause a closure of the airfield at times.

Aircraft Fleet Mix Index

The fleet mix affects airfield capacity because an aircraft's size, weight, approach speed, and braking ability affect the length of time the aircraft occupies the runway and the manner in which air traffic control personnel direct activity. Individual aircraft operating at the airport are differentiated into categories based on weight (A, B, C and D), which in turn are utilized to estimate the overall "mix index" for the airport. Larger aircraft (C and D) require more airspace, thus decreasing capacity to some degree.

Taxiway configuration

Similar to runways, taxiways can restrict the level of traffic and airfield may accommodate. Proper placement of exit taxiways based on the airport's fleet mix can reduce runway occupancy times and preserve optimum capacity levels

"Touch and Go" Operations

Practice landings and takeoffs are normally associated with pilot training and may significantly affect runway capacity. A runway will typically be able to accommodate more of these type operations is a given time period than the normal landing and takeoff activity.

Arrival/Departures

The percentage of the time that a runway is used for landings will also have a significant impact on capacity. Since departures can be handled typically at a faster rate than landings, runway capacity will be reduced when arrival demand increases.

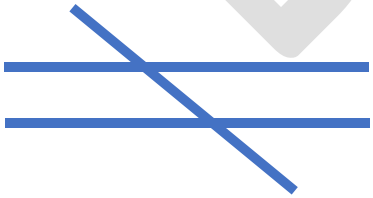
Airspace

The location of the airport with respect to neighboring airports and various natural and made-made obstructions (trees, towers, buildings, etc.) may restrict the way in which aircraft arrive and depart from an airport. Operations at one airport can conflict with operations at another, thereby causing the capacity of both airports to suffer.

4.5.2 Annual Service Volume (ASV)

The determination of the ASV is simplified by identifying one of the several runway configurations applicable to the airport. Utilizing the airport's estimated aircraft mix index, which is the percentage of the airport's Class C aircraft plus three times the percentage of Class D aircraft, it is possible to identify an approximate optimal operational limit for the airfield. Class C aircrafts are defined as large aircraft over 12,500 lbs but less than 300,000 lbs while Class D aircrafts exceed over 300,000 lbs. As the weight category of the aircraft increases, particularly as the mix between large and heavy aircraft increases, the wake turbulence separation standards increase. Therefore, the capacity of the airfield decreases. The purpose of this preliminary analysis, PDK typically operates as a "parallels plus crosswind runway" configuration. The calculated aircraft mix index using 2018 operational estimates, is approximately 21 percent. **Table 4-6** shows the hourly capacity and the annual serve volume for a "parallels plus crosswind runway" configuration. The row highlighted in blue shoes the hourly capacity. PDK's theoretical ASV is 275,000 operations.

Table 4-6: Mix Index vs. Annual Capacity

Runway Configuration	Mix Index	Hourly Capacity Operations/Hour		Annual Service Volume (ASV)
		VFR	IFR	
	0 to 20	197	59	355,000
	21 to 50	145	57	275,000
	51 to 80	121	56	260,000
	81 to 120	105	59	285,000
	121 to 180	94	60	340,000

Source: Adapted from AC 150/5060-5 Change 2

According to Chapter 3, *Aeronautical Forecast*, PDK may see approximately 218,797 annual operations by the end of the 20-year study period. The ASV of an airport is used primarily as a tool in the airport planning process to identify the need for advanced planning of airfield capacity relief. Airport capacity may be affected by the following factors: runway configuration, aircraft mix index, taxiway configuration, airfield operational characteristics, and prevailing meteorological conditions. By comparing existing and projected annual operations (demand) to the ASV (capacity), the planning, design, and construction of the new facilities may by timed more effectively. Towards, this effort, the following guidelines are typically utilized during master planning:

- 60 percent ASV – This level of activity is considered the threshold at which planning for capacity improvements should begin.

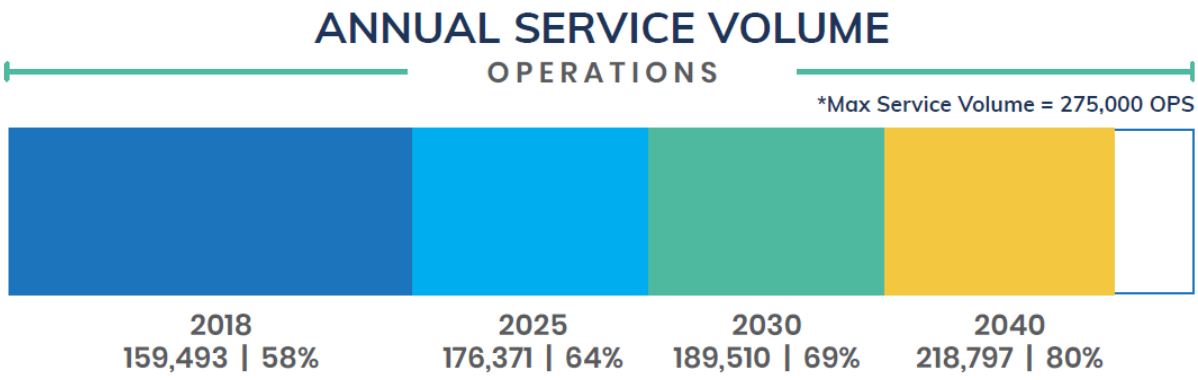
- 80 percent ASV – This level of activity is considered the threshold at which planning for capacity improvements should be complete and construction of these capacity enhancing improvements should be initiated.

- 100 percent ASV – This constitutes the total number of operations that the facility is capable of accommodating. In order to avoid extensive delays, capacity-enhancing improvements should be completed prior to this point.

Based on the forecast versus the calculated ASV, an ASV is highly dependent on current aviation activity and layout of the airfield. PDK is already nearing the 60% threshold of operational capacity in 2018 and will reach the 80% threshold by 2040. PDK's ASV should be used only as a benchmark for operational characteristics and should be recalculated and examined periodically. In practice, PDK would never experience round-the-clock peak hourly demand. In the Alternative Chapter, potential improvements to address operation capacity should be considered.

- **Figure 4-1**, graphically illustrated the airport's ASV.

Figure 4-1: Annual Service Volume



4.5.3 Aircraft Delay

It should be noted that actual capacity enhancements should not be implemented prior to a detailed examination of aircraft delay, which normally becomes a factor when the airfield reached 80 percent of its estimated ASV. Which equates to roughly one min of delay incurred per aircraft operation. As the demand/capacity ratio approached and exceeds 1.0, delay per aircraft increases exponentially. By comparing the existing and projected annual operations which the theoretical ASV for PDK, it is evident that a more detailed analysis of capacity enhancing improvements to the runway/taxiway system will be needed during the 20-year planning period.

4.5.4 Hourly Capacity

Utilizing similar planning guidelines, long-range hourly VFR and IFR capacities where determined for PDK. Depending on the runway use configuration, "parallels plus crosswind runway", the hourly capacity is estimated to be 145 and 57 operations under VFR and IFR weather minima, respectively. These long-range estimates assume: arrivals equal departures, full length parallel taxiway capability is provided, no airspace conflicts exist, and the airport is equipped with at least one precision instrument approach. A more detailed analysis of hourly VFR and IFR capacities may reveal marginally different capacities, either higher or lower; however, the percent variation should not exceed ±5 percent.

4.6 Airfield Design Standards

FAA airfield design standards (e.g., required separations and safety area dimensions) are determined based on the approach speed, tail height and wingspan of the identified critical aircraft. As shown in **Table 4-7**, each runway is assigned a Runway Design Code (RDC) that is a function of the critical aircraft's Aircraft Approach Category (AAC), the Airplane Design Group (ADG), and the visibility minimums expressed in Runway Visibility Range (RVR). The RDC provides the information required to determine the applicable standards. The Aircraft Approach Category (AAC) is based on the reference landing speed (VREF) when specified, or in cases where a V_{REF} is not specified, the AAC is determined based on 1.3 times the stall speed (V_{SO}) at the maximum certificated landing weight. The ADG is a design parameter based on the wingspan and tail height of the aircraft. The first portion of **Table 4-7** summarizes the parameters that define the AAC and the ADG and highlights the AAC and ADG corresponding to the forecasted critical aircraft.

Table 4-7 also describes the RVR visibility minimums and the associated instrument visibility category. The details of the available instrument procedures were provided in the Inventory Chapter. Runway 3R-21L currently has RVR 4,000 minimums however RVR 2,400 minimums are desired. All other runways have RVR 5,000 minimums.

Table 4-7: Aircraft Approach Categories and Airplane Design Groups

Aircraft Approach Category (AAC) (knots)			
Category	Approach Speed		
A	< 91		
B	91 to 120		
C	121 to 140		
D	141 to 165		
E	> 166		
Aircraft Design Group (ADG) (feet)			
Category	Wing Span	Tail Height	
I	< 48	< 20	
II	49 to 78	20 to 29.9	**Runway Design Code**
III	79 to 117	30 to 44.9	
IV	118 to 170	45 to 59.9	
V	171 to 213	60 to 65.9	
VI	> 214	> 66	
Visibility Minimums			
Runway Visual Range RVR (feet)	Instrumental Flight Visibility Category (statute miles)		
5,000	Not Lower than 1 mile		
4,000	Lower than 1 mile but not lower than ¾ mile		
2,400	Lower than ¾ mile but not lower than ½ mile		
1,600	Lower than ½ mile but not lower than ¼ mile		
1,200	Lower than ¼ mile		

Source: FAA AC 150/5300-13A, Airport Design, 2019

Therefore, based upon these criteria, the RDCs for PDK are as follows:

- Runway 3R-21L – D-III 4000 (Existing) D-III 2400 (Proposed),
- Runway 3L-21R – B-I 5000 Small Aircraft (Existing and Proposed), and
- Runway 16-34 – B-I 5000 Small Aircraft (Existing and Proposed).

4.6.1 Runway Safety and Object Free Areas

Within the airfield environment, certain areas must graded and/or free of non-essential non-frangible objects for safety purposes. These areas are described below.

Runway Safety Area (RSA)

The RSA is defined in FAA AC 150/5300-13A, as a "surface surrounding the runway prepared or suitable for reducing risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway and it provides greater accessibility for fire-fighting and rescue equipment during such incidents." The RSA is centered on the runway, dimensioned in accordance to the Runway Design Code and visibility minimums. It is necessary for the RSA to be cleared and graded, and free of obstacles not fixed by

navigational reasons. Necessary objects within the RSA that measure greater than 3 inches above grade must be mounted on frangible (break-away) structure.

RSAs for PDK's runway system are depicted on **Figure 4-2**.

3R-21L RSA. The standard RSA dimensions for Runway 3R-21L measure 500 feet width either side of runway centerline and extend 1,000 feet beyond each runway end. The current RSA at the approach end of Runway 3R is limited to 500 feet, due to Dresden Road to the south, while the RSA at the approach end of Runway 21L is limited to 410 feet beyond the displaced threshold due to Chamblee Tucker Road to the north. In 2019, an Engineered Materials Arresting System (EMAS) was installed to mitigate the inadequate RSA to the south. The northern extent of the RSA has been mitigated using the application of Declared Distances: the Take Off Run Available (TORA), Accelerate Stop Distance Available (ASDA) and the Landing Distance Available (LDA) have all been reduced 5,411 feet. In addition to the limitation of Chamblee Tucker Road to the north, a County Sanitation Storage Facility resides within a portion of the RSA and OFA and should be considered for relocation.

In terms of width, the previous ALP RDC for Runway 3R-21L is C-II which required an RSA width of 500-feet. However, according to the AC design standards, for ARC C-II aircraft an RSA width of 400-feet is permissible. Today, the ARC for Runway 3R-21L is D-III, and the 400-ft width exception is not allowed: a 500-foot width is required.

3L-21R and 16-34 RSAs. For ARC B-I Small runways, the FAA design guidelines call for the RSA to be 120 feet wide and extend 240 feet beyond the runway ends. The existing RSA width for Runway 3L-21R and Runway 16-34 meets requirements. The existing runway pavement width for each runway is in fact wider than the required RSA width. For the approach end of Runway 34, the RSA prior to the threshold is limited to 220' feet due to unsuitable grading. The airport plans on addressing Runway 34 runway safety area within the short-term planning period.

Runway Object Free Area (ROFA)

The purpose of the ROFA is to clear above-ground objects protruding above the nearest point of the RSA. Except where precluded by other clearing standards, it is acceptable for objects that need to be located in the ROFA for air navigation or aircraft ground maneuvering purposes to protrude above the nearest point of the RSA, and to taxi and hold aircraft in the ROFA. To the extent practicable, objects in the ROFA should meet the same frangibility requirements as the RSA. Objects non-essential for air navigation or aircraft ground maneuvering purposes must not be placed in the ROFA. This includes parked aircraft.

As depicted in **Figure 4-2** the current ROFA dimensions for a D-III runway, Runway 3R-21L call for an area 800 feet wide and extending 1,000 feet beyond the runway end. For RDC B-I Small the ROFA should be 250 feet wide and extends 240 feet past the runway end. The ROFA for Runway 3R-21L has similar constraints as the RSA and extends over Chamblee Tucker Road to the north and Dresden Drive to the South. The existing Runway 3L-21R ROFA as depicted on the previous ALP spans wider than the required standard of 400 feet wide. The airport meets current and future ROFA standards for Runway 3R-21L and Runway 16-34.

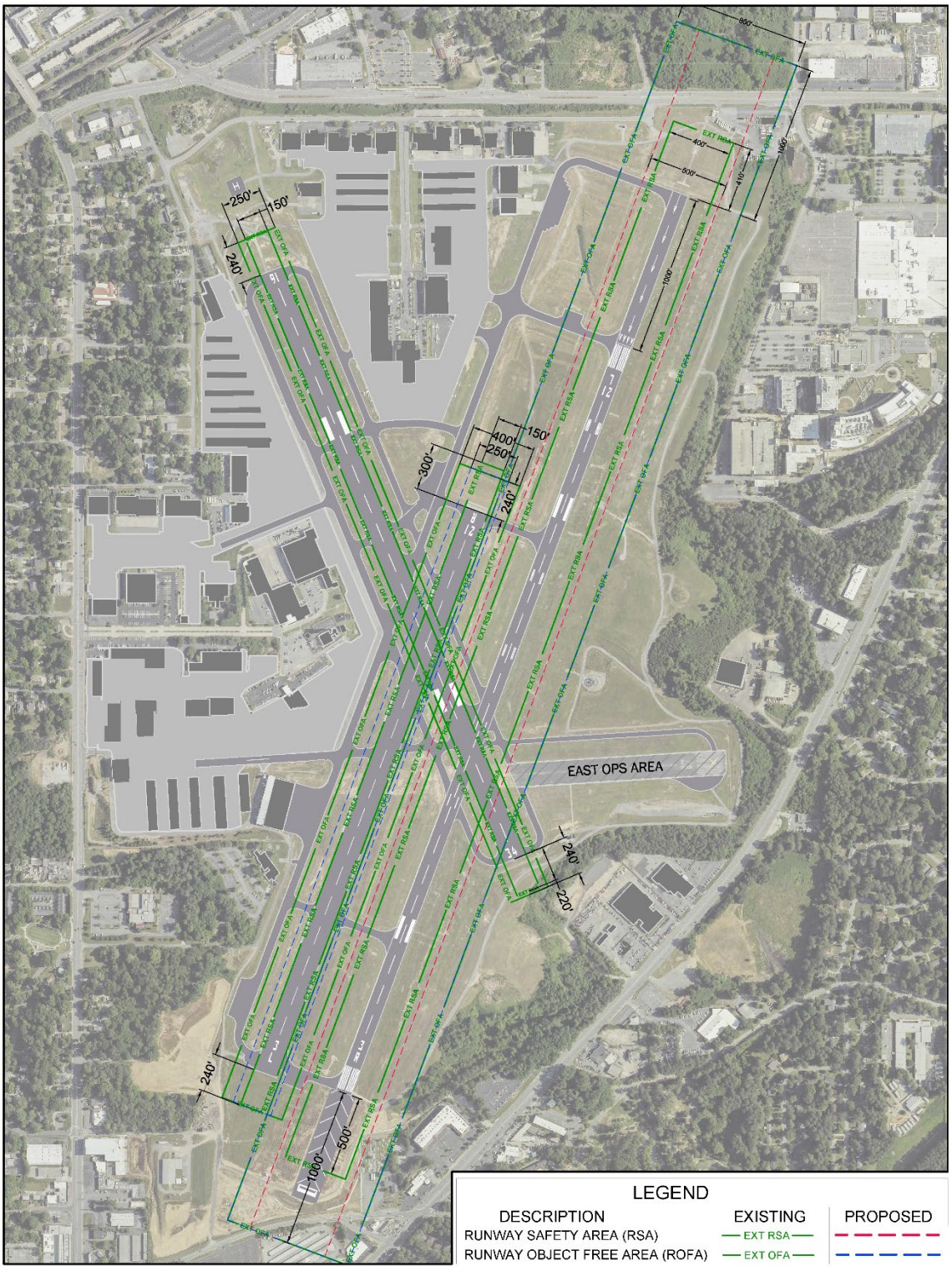
Taxiway Safety Area (TSA)

Taxiway safety areas are similar to the RSAs in that they are designed for the unintended extrusion of aircraft from the taxiway pavement. Taxiway safety areas must be clear and graded, capable of supporting aircraft, drained, and ultimately must be free of object except those necessary because of their purpose. The length of the taxiway safety area is the same length as the taxiway while the width is based on the ADG of the most demanding aircraft designed to use the surface. Presently the TSA at PDK is designed as TDG II.

Taxiway Object Free Area (TOFA)

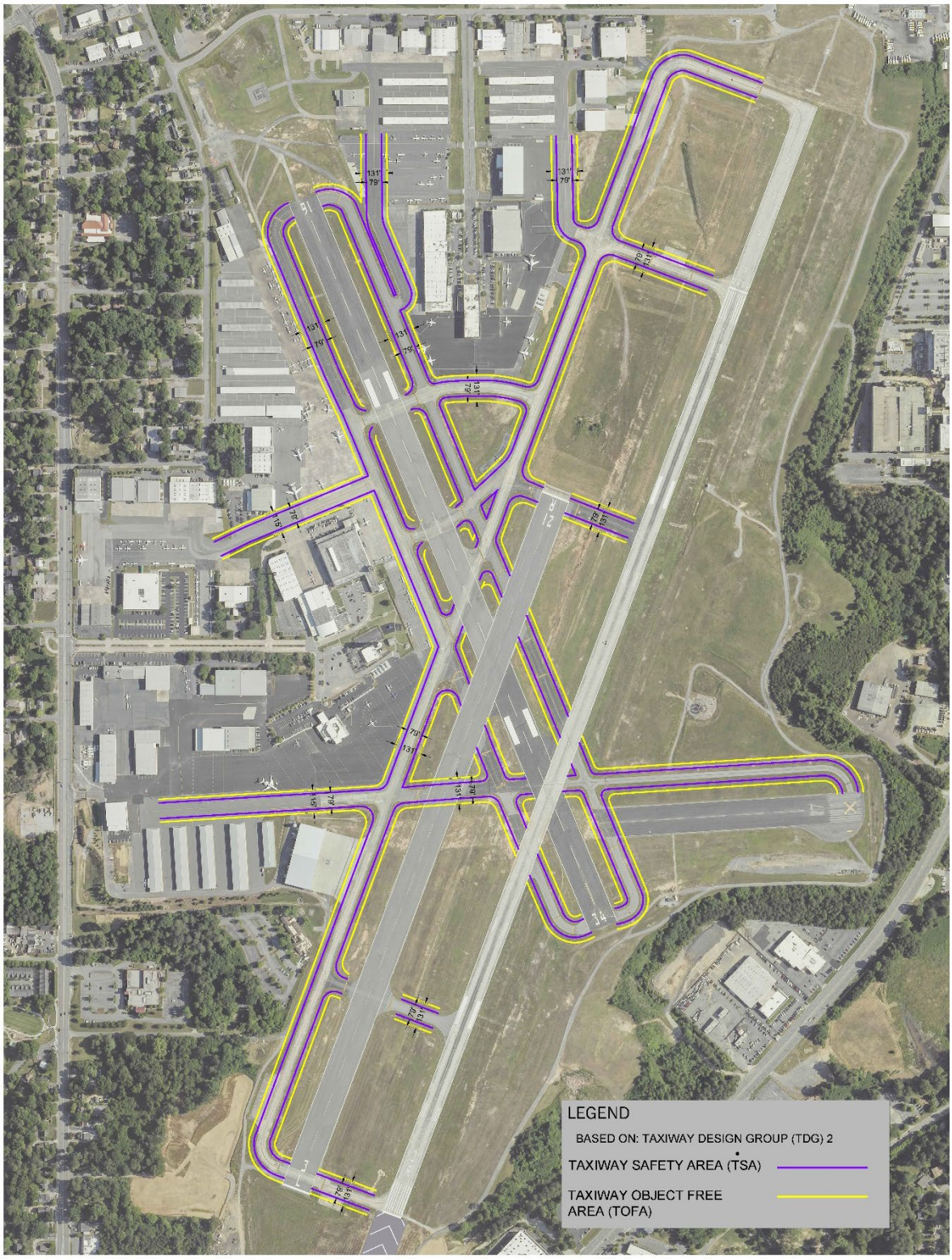
The taxiway object free area encompasses the taxiway safety area and increases safety to taxiing aircraft by restricting objects above ground. Service roads, parked aircraft, and all above ground objects except those necessary for aircraft taking off/landing or ground maneuvering purposes cannot be located in a taxiway object free area. Like the TSA the TOFA length runs along the taxiway length. The width of the TOFA is based on the most demanding aircraft designed to use the designed to use the surface. Presently the TOFA at PDK is designed as TDG II. **Figure 4-3**, visually shows the taxiway safety and object free areas.

Figure 4-2: Runway Safety and Object Free Areas



Source: Michael Baker International, 2019.

Figure 4-3: Taxiway Safety and Object Free Areas



Source: Michael Baker International, 2019.

4.6.2 Runway Protection Zones (RPZs)

RPZs are trapezoidal-shaped areas centered on the extended runway centerline and beginning 200 feet beyond the physical ends of the runway or displaced threshold. The RPZ has been established by the FAA to provide an area clear of obstructions and incompatible land uses, in order to enhance the protection of people and property on the ground. Although development within the RPZ is not prohibited, the FAA provides guidelines for introduction of new or modified uses within the RPZ. In FAA's September 27, 2012 Memorandum *Interim Guidance on Land Uses Within a Runway Protection Zone,* the following land uses are discouraged within RPZ's:

- Buildings and structures (Examples include, but are not limited to: residences, schools, churches, hospitals or other medical care facilities, commercial/industrial buildings, etc.),
- Recreational land use (Examples include, but are not limited to: golf courses, sports fields, amusement parks, other places of public assembly, etc.),
- Transportation facilities. (Examples include, but are not limited to: Rail facilities - light or heavy, passenger or freight),
- Public roads/highways,
- Vehicular parking facilities,
- Fuel storage facilities (above and below ground),
- Hazardous material storage (above and below ground),
- Wastewater treatment facilities, and
- Above-ground utility infrastructure (i.e. electrical substations), including any type of solar panel installations.

Figure 4-4 displays the existing RPZs at PDK. RPZ dimensions are prescribed in FAA AC 150/5300-13A, Airport Design. Their dimensions are a function of Aircraft Approach Category and lowest instrument approach visibility minimums.

Runway 3R-21L RPZ

Runway 3R. Runway 3R lowest instrument approach visibility minimums are 1 mile and the Aircraft Approach Category is D. The RPZ begins 200-feet prior to the pavement edge and measures 500 ft inner width, 1,010 ft outer width and is 1,700 ft in length.

Runway 3R overlies Dresden Dr., a shopping plaza, storage center and parking lot. There are no planned changes to the RPZ location or dimensions.

Runway 21L. Runway 21L lowest visibility minimums are 7/8 mile and the aircraft approach category is D. However, it is desired to lower the approach visibility minimums to ½ mile since Runway 21L has a precision ILS. Because Runway 21L has a 1,000-foot Displaced Threshold, two RPZs are required: an Approach RPZ and a Departure RPZ. The Approach RPZ begins 200-feet prior to the landing threshold and measures 1,000 ft inner width, 1,750 ft outer width and is 2,500 ft in length. The Departure RPZ begins 200 feet prior to the pavement edge and measures 500 ft inner width, 1,010 ft outer width and 1,700 ft in length.

The previous ALP for PDK did not depict separate Approach and Departure RPZs for Runway 21L. Rather one RPZ was depicted based upon aircraft approach category C and ½ mile lowest visibility minimums

measured from 200 feet beyond pavement edge. These dimensions are the same as the current Approach RPZ for category D; however, the location of the RPZ in the previous ALP was based upon the assumption that the 1,000-foot Displaced Threshold would one day be reduced to zero displacement. Also, since the construction of the Displaced Threshold, the FAA created separate Approach and Departure RPZ standards as described in FAA AC 150/5300-13A. In order to reduce the Displaced Threshold, Chamblee Tucker Road would have to be relocated, which is not feasible. The Displaced Threshold will always be in place and thus the Approach RPZ location begins at 200 feet prior to the current landing threshold rather (1,000 feet south) than at the pavement edge.

As a result of efforts in the 1990's to relocate residential land uses, the airport owns major portions of the 21L RPZ. Certain commercial and industrial land uses remain within today's RPZ boundaries as well as Chamblee Tucker Road and West Hospital Avenue. Current zoning is in place by City of Chamblee to prevent future incompatible land uses.

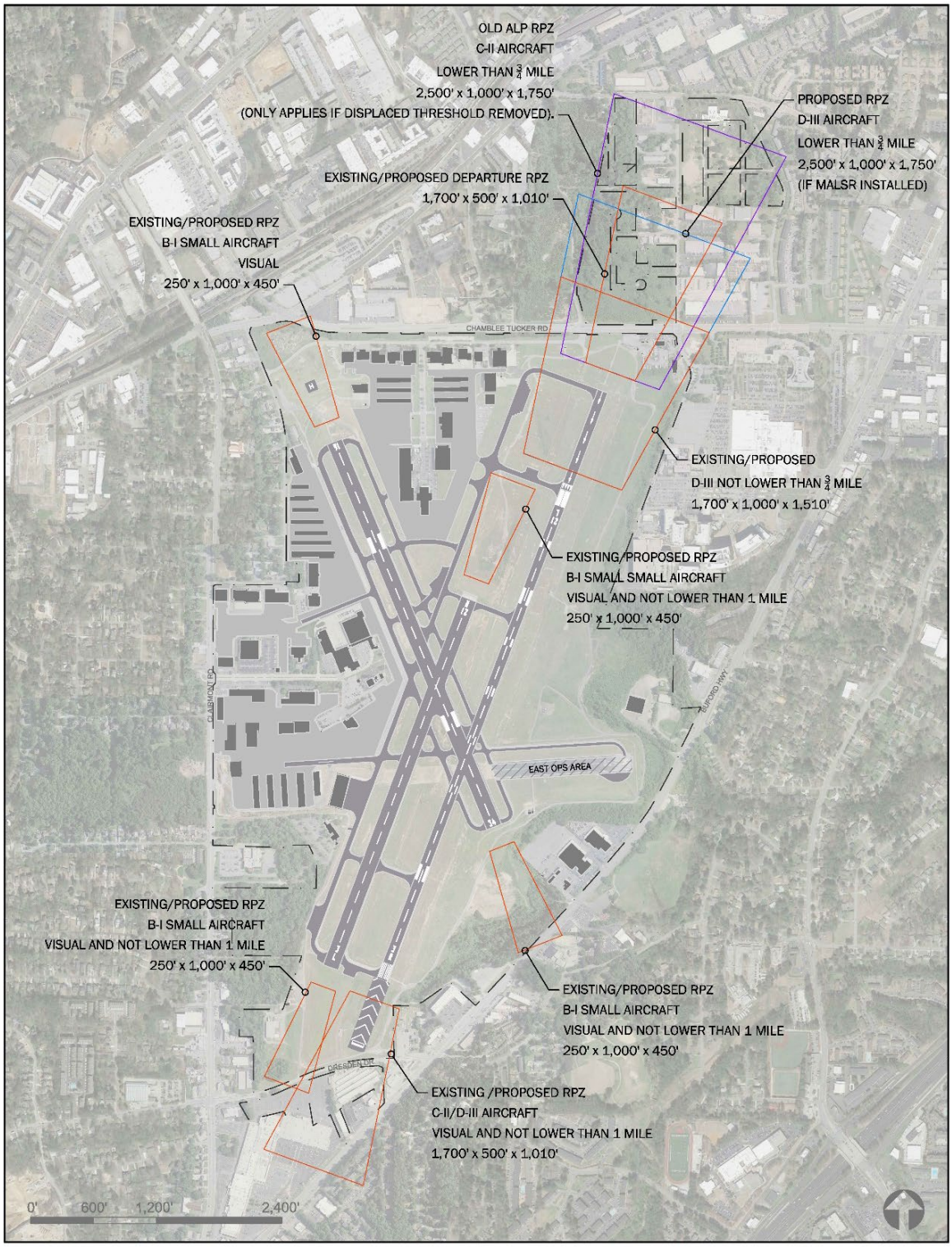
Runway 3L-21R RPZ

Runway 3L-21R has only visual approaches to either end of the runway, so the size of both RPZs are the same. Each RPZs begins 200 feet beyond the end of the runway pavement and extends to a length of 1,000 feet. The inner width of the RPZs are 250 feet, while the outer width is 450 feet. The size of the RPZs meet standards for ARC approach category B-I Small aircraft with the current runway having an approach visibility minimum of visual and ultimately not lower than 1 mile.

Runway 16-34

Runway 16-34 is the crosswind runway designed for aircraft ranging up to the ARC B-I Small category and are also identical at each runway end. The RPZs began 200 feet past the end of the runway pavement and extends to a length of 1,000 feet. The inner width of both RPZs are 250 feet with an outer width of 450 feet. Runway 16 includes a small portion of Chamblee Tucker Rd. to the north while Runway 34 crosses Buford Highway to the east. Both runway ends do not have any incompatible land uses such as places of assembly or residence since majority of the RPZ is owned by the airport.

Figure 4-4: Runway Protection Zone (RPZ)



Source: Michael Baker International, 2019.

4.6.3 Facility Requirements

To recognize facility needs, it is critical to understand and interoperate the forecast aviation demand into specific components. This section taps into current facility condition and addresses improvements to existing facilities needed to effectively accommodate the projected demand at the Airport. This section explores two analysis: (1) dealing with airfield infrastructure and (2) those dealing with landside facilities. The analysis of airfield requirements focuses on the on the determination of needed facilities and spatial consideration to the current and future operations at PDK.

Airfield Design Standards

The types of aircraft that presently operate at PDK, and those expected to use the Airport in the future influences the planning and design of Airport infrastructure. This information aids in the selection of FAA specified design standards for PDK, which consist of runway and taxiway dimensional requirements, protection surfaces and runway separation standards. These standards are based on the existing and future critical aircraft. According FAA AC 150/5300-13A, the initial phase is defining a runway's design configuration to determine the RDC. Depending on the type of aircrafts being served at the Airport, each runway may have its own RDC. **Table 4-8** illustrates the key design standards for PDK presently and throughout the planning period for each runway.

Table 4-8: Airfield Design Standards

Design Requirements	FAA Standards		Existing		
	D-III	**B-I Small**	D-III Runway 3R-21L	B-I Small Runway 3L-21R	B-I Small Runway 16-34
Runway Approach Visibility Minimums			RW 3R: > 1 MILE RW 21L: > ¾ MILE	RW3L: VIS RW 21R: VIS	RW 16: VIS RW 34: VIS
Runway Width (feet)	**150'**	**60'**	100'	150'	150'
Runway Safety Area (RSA)					
RSA Width	**500'**	**120'**	400'	150'	150'
RSA Length Beyond Departure End	**1,000'**	**240'**	RW 3R: 500' RW 21L: 410'	RW 3L: 240' RW 21R: 300'	RW 16: 240' RW 34: 220'
Runway Object Free Area (ROFA)					
ROFA Width	**800'**	**250'**	800'	400'	250'
ROFA Length Beyond Departure End	**1,000'**	**240'**	1,000'	240'	240'
Runway Protection Zone (RPZ)					
RPZ Length	**1,700'**	**1,000'**	1,700'	1,000'	1,000'
RPZ Inner Width	**Visual: 500' > ¾ Mi: 1,000'**	**250'**	RW 3R: 500' RW 21L: 1,000'	250'	250'
RPZ Outer Width	**Visual: 1,010' > ¾ Mi: 1,510'**	**450'**	RW 3R: 1,010' RW 21L: 1,510'	450'	450'
Runway Centerline to:					
Holding Position	**250'**	**125'**	250'	130'	150'
Parallel Taxiway Centerline	**400'**	**150'**	745'	250'	200'
Parallel Runway Centerline	**700'**	**700'**	500'	500'	N/A

Source: Michael Baker International, Inc., 2019.

4.6.1 Runway Length Analysis

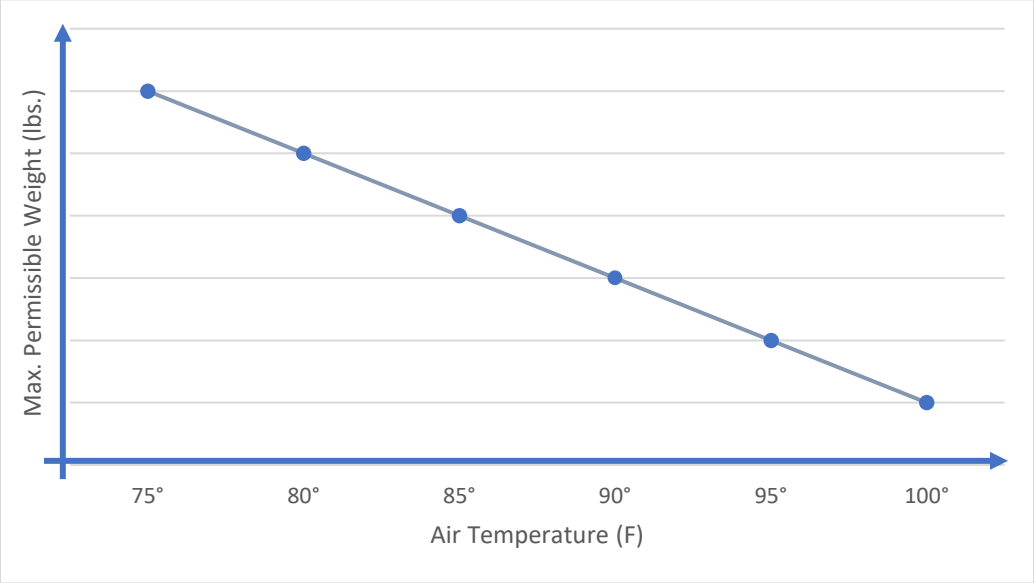
Runway length requirements were evaluated in accordance with FAA AC 150/5325-4B, *Runway Length Requirements for Airport Design* (Runway Length AC). The required runway length was estimated according to Chapter 2 and Chapter 3 of FAA AC 150/5325-4. The data provided in this document provided runway length requirements for typical engines and operating conditions. The runway length calculations are based on the mean daily maximum temperature of the hottest month, and the field elevation. The airport's service level and role within the NPIAS is key to establishing the type of aircraft the facility will most likely accommodate. Within the NPIAS (2019-2023), the airport's service level is established as nonprimary General Aviation – Reliever airport, which are typically high capacity general aviation airports designed by the FAA to relieve congestion at the primary commercial airport.

The critical aircraft (or family of aircraft) conducting at least 500 itinerant operations establishes the runway length requirements at an airport, as per FAA AC 150/5325-4A, Runway Length Requirements for Airport Design. The forecast operational fleet mix indicates the Gulfstream 550 aircraft is the design aircraft for the primary runway. Since the Gulfstream 550 has a Maximum Takeoff Weight (MTOW) of greater than 60,000 lbs, the runway length calculation is based upon the individual aircraft rather than a family grouping of aircraft, per the guidance stated in Table 1-1 of FAA AC 150/5325-4A.

Presently, the existing length of the primary runway 3R-21L is 6,001 feet. The runway length calculations are based on the mean daily maximum temperature of the hottest month which is 95° F and the field elevation of 998.4 feet mean sea level (MSL) and max takeoff weight (MTOW) of the Gulfstream 550.

Based upon runway length takeoff charts provided by the manufacture, the maximum design takeoff weight and the mean maximum temperature of the hottest day, the required takeoff runway length for the Gulfstream 550 is approximately 7,220 feet. Seeing that air temperature closely affects the max permissible weight, as air temperatures increase the allowable payload weight for takeoff also increases. Being that PDK, does not offer a 7,220-foot runway, the critical aircraft's maximum takeoff weight is reduced due to runway length. The primary runway, Runway 3L has a takeoff run available of 6,001 feet and in the opposite direction, 3R has a takeoff run available of 5,411 feet (reduced due to runway safety area requirements). At 95° F, per flight manuals, the G550 would be limited to a max takeoff weight of approximately 75,000 lbs. Accordingly, the airport requires prior permission of aircraft having a MTOW of more than 75,000 lbs.

Figure 4-5: Aircraft Weight vs. Air Temperature



Source: Michael Baker International, 2019

The secondary runway, Runway 3L-21R is 3,746 feet in length while the crosswind Runway 16-34 is 3,967 feet by 150 feet in length. The runways are primarily utilized by light aircraft in crosswind conditions and flight training (i.e., touch and go operations). The most demanding (critical) aircraft for Runway 3L-21R and Runway 16-34 is the King Air 90 turboprop which has a MTOW of 10,950 lbs. Based upon the guidance in FAA AC 150/5325-4A, Table 1-1, the runway length calculation should be based upon a family grouping of small aircraft with approach speeds greater than 50 knots and cabins with less than 10 passengers. Therefore Chapter 2, Paragraph 205, Figure 2-1 of FAA AC 150/5325-4A should be utilized for runway length calculations. The result of this computation for the mean maximum temperature is a minimum runway length of 3,200 ft to support 75% of the small family grouping of aircraft, up to 4,200 ft to support 100% of the small family grouping of aircraft. Therefore, Runway 3L-21R and Runway 16-34 both provide adequate runway length for 75% of the small airplane fleet and are deficient by 354 ft and 133 ft respectively for 100% of the small airplane fleet. This deficiency does not need to be addressed since there will be few instances where the primary runway could not be utilized by small airplanes with more demanding runway lengths.

Table 4-9 summarizes the existing runway lengths at PDK versus the maximum length required to support the needs of the critical aircraft. There are no plans to lengthen any runways at PDK.

Table 4-9: Maximum Runway Length Requirements

Runway	Existing Runway Length (Feet)	Required Runway Length (Feet)	
	Total Length	Maximum Length	Deficiency
3R-21L	6,001	7,220	1,120
3L-21R	3,746	3,200 - 4,100	0-354
16-34	3,967	3,200 - 4,100	0-133

Source: FAA AC 150/5325-4A, *Runway Length Requirements for Airport Design*; Gulfstream 550 Takeoff Chart

4.6.2 Runway Width

The primary Runway 3R-21L is currently 100 feet wide and both the parallel Runway 3L-21R and crosswind Runway 16-34 are 150 feet wide. FAA design standards call for a runway width of at least 150 feet to serve aircraft up to ARC D-III and 60 feet for aircraft serve B-I Small aircraft. Since the airport's current critical aircraft, Gulfstream 550, maximum certificated takeoff weight falls below 150,000 lbs, FAA standards allow 100-foot runway width for Runway 3R-21L. Although secondary Runways 3L-21R and 16-34 exceed the standard width of 60-feet, potential modifications will only be made to runway width once both runways have reached their useful lifespan. Reducing runway width requires major investments in adjusting taxiway geometry, drainage, signage and lighting.

4.6.3 Pavement Condition and Strength

An important feature of airfield pavement is its ability to withstand repeated use by the most weight-demanding aircraft operating at the airport. The Pavement Condition Index (PCI) is based on a visual inspection of pavement condition. The Georgia Department of Transportation recently completed a statewide inventory of airport pavements. The findings of the study were illustrated in Chapter 2. The current published weight bearing capacity for Runway 3L-21R and Runway 16-34 is 20,000 lbs. for aircraft with single-wheel configuration. While Runway 3R-21L is 46,000 lbs. single wheel, 75,000 lbs dual wheel. All published pavement strengths are within the parameters of the critical aircrafts designated for each runway. With an exception of Runway 3R-21L which constructed with concrete, both Runway 3L-21R and Runway 16-34 are built of asphalt. According to FAA Form 5010, all three runway surfaces are in good condition however routine maintenance and rehabilitation is necessary and will. Certain rehab projects are planned in the near term as summarized in **Table 4-10.**

Table 4-10: Near Term Pavement Rehabilitation Projects

Year	Project
2020	Rehabilitate Runway 16-34, including Connecting Taxiways & Taxiway B Design.
2021	Rehabilitate Runway 16-34, including Connecting Taxiways & Taxiway B Design.
2022	Rehabilitate Taxiway K including Drainage Improvements.
2022	Rehabilitate Interior Airport Roads

Source: Michael Baker International, 2019.

4.6.4 Taxiways

Taxiways are paths established for the taxiing of airplanes from one part of the airfield to another. The layout of the taxiway system should be designed so that it efficiently supports the volume of taxiing airplanes without impacting airfield capacity. The system should also be designed to provide safe taxi route that minimize runway crossings, limits the distance between ramp and runways to decrease the amount of fuel used to arrive at the end of a runway, and are spaced according to design standards that provide wingtip and wingspan clearances from other aircrafts and surfaces.

Previous FAA taxiway design guidance was based only on the Airplane Design Group (ADG) and did not take into consideration the size of the aircraft undercarriage. The current guidance described in FAA AC 150/5300-13A is based on the Taxiway Design Group (TDG) which takes into account the aircraft Main Gear Width (MGW) and the Cockpit to Main Gear Distance (CMG). Taxiways should be designed for

"cockpit over centerline" taxiing with sufficient pavement to provide a small amount of error. The error allowance is considered by providing a Taxiway Edge Safety Margin (TESM), which is measured from the outside of the landing gear to the taxiway edge. Taxiway design that required "judgmental oversteering," where the pilot must internally steer the cockpit outside the marker centerline, should be eliminated whenever feasible.

In order to meet the requirements of the critical aircraft, all non-compliant taxiways should be designed to TDG 2 dimensional standards. Taxiways should be designed according to the following general design considerations:

- Judgmental oversteering should be eliminated whenever feasible.
- The aircraft nose gear steering angle should not be more than 50 degrees.
- Taxiway intersection should follow the three-node design concept, where the pilot of the aircraft is presented with no more than three choices. The three-node concept increases situational awareness.
- Taxiway intersection angles should be 90 degrees wherever possible. Where 90 degrees intersections are not possible, standard angles should be used.
- Wide expanses of pavement, particularly near the intersection with a runway or other taxiway should be avoided.
- The number of runway crossing should be minimized.
- Taxiway/Runway intersections should be located in the outer thirds of the runway.
- Right angle intersections should be used to increase visibility. Acute angle runway may be used to increase the efficiency of the runway, however, they should not be used as runway entrance of crossing points.
- Dual purpose pavements where runways are used as taxiways should be avoided. Runways should be clearly marked as runways.
- Taxiway designs should not lead directly from an apron to a runway without requiring a turn.

4.6.5 Taxiway Design Considerations

As mentioned, the design standards associated with taxiways are determined by the Taxiway Design Group (TDG) and the ADG of the critical aircraft. As determined earlier, the applicable ADG for the airport is ADG III. **Table 4-11** displays the various taxiway design standards related to ADG III. The table also highlights taxiway design standards are based on the Cockpit to Main Gear (CMG) distance of the critical aircraft anticipated to use those taxiways and Main Gear Width (MGW). The current TDG of the most demanding aircraft falls under category 2. Taxiways and taxilane pavements should be designed to the most appropriate TDG design standards.

Taxiway A. Full-length parallel taxiway for Runway 3R-21L and Runway 3L-21R. Taxiway A is constructed at 50 feet and has a runway to taxiway centerline spacing of 250 feet of Runway 3L-21R and approximate 750 feet from Runway 3L-21R, which exceed FAA separation requirements for airplanes of both ARC B-I Small and D-III. Based on GDOT Pavement Condition Report done in 2019, south and northern portions of Taxiway A are in fair condition and may require rehabilitation, while the mid segment of Taxiway A, which is in front of the ATCT is in good condition.

Taxiway B. Full-length parallel taxiway for west side of Runway 16-34 and has a width of 50 feet. The runway centerline to taxiway centerline spacing is approximately 200 feet. Therefore, this taxiway also exceeds FAA standards for ARC B-I Small aircrafts. Over the course of x years there has been inconsistent improvements to Taxiway B. Nonetheless, the pavement is considered to be in fair to good condition for majority of the taxiway length. A northern portion of Taxiway B adjacent to the county's t-hangars along with some areas of the node where Taxiway B intersects with Runway 3R-21L and Taxiway A should be recommended

Taxiway C. Previously served as the full-length parallel taxiway for Runway 9-27. Since the removal of Runway 9-27, Taxiway C connects the West Ramp with the East Ops Area. Taxiway C also serves as a runway exit taxiway. Taxiway C is 40 feet wide north of decommissioned Runway 27 and expands to approximately 50 feet wide within the central area of the airfield.

Taxiway D. Full-length parallel taxiway for the east side of Runway 16-34 and crosses both Runway 3L-21R and Runway 3R-21L. This taxiway, which is 40 feet wide has a runway centerline to taxiway centerline spacing of 200 feet. At 200 feet, this taxiway provides more than necessary separation for small airplanes of ARC B-I. Although, the pavement on the northern and southern portion of the taxiway are in excellent to good condition, the middle segment spanning between Runway 3R-21L and Runway 3L-21R needs major rehabilitation.

Taxiway E. Serves as an exit taxiway for Runway 16-34. Taxiway E commences at Taxiway B, intersects Taxiway D and ends at Taxiway A. This small taxiway is in excellent pavement condition.

Taxiway F. Taxiway F is constructed at a width of 50 feet and serves as an exit taxiway for both parallel runways.

Taxiway G. Taxiway G is located in the central area of the airfield and provides access to both Runway end 21R and 21L.

Taxiway H. Taxiway H is located north on the airfield between Taxiway D and Taxiway A. Taxiway H, spans 50 feet wide and provides access to the north ramp.

Taxiway J. Taxiway J is located north of the airfield and act as a connector taxiway from Taxiway A and Runway end 21L.

Taxiway K. Provides access to the Northwest Ramp and the Clairmont Ramp. Taxiway K is defined as a non-movement area.

Taxiway L. Provides access to the West Ramp and the West Hangars. Taxiway L is defined as a non-movement area.

Table 4-11: Taxiway Requirements

Taxiway	Requirement		Required Taxiway Dimensions (feet)				Taxiway Protection (feet)		Required Taxiway Separation (feet)		Meets Standards
									Taxiway Centerline to:		
	ADG	TDG	Taxiway Width	Taxiway Edge Safety Margin	Taxiway Shoulder Width	Taxiway Fillet*	Taxiway Safety Area	Taxiway Object Free Area	Parallel Taxiway/Taxilane Centerline	Fixed or Movable Object	
A	III	2	35’	7.5’	15’	Varies	118’	186’	152’	93’	Exceeds
B	III	2	35’	7.5’	15’	Varies	118’	186’	152’	93’	Exceeds
C	III	2	35’	7.5	15’	Varies	118’	186’	152’	93’	Meets
D	III	2	35’	7.5’’	15’	Varies	118’	186’	152’	93’	Meets
E	III	2	35’	7.5’	15’	Varies	118’	186’	152’	93’	Exceeds
F	III	2	35’	7.5’	15’	Varies	118’	186’	152’	93’	Exceeds
G	III	2	35’	7.5	15’	Varies	118’	186’	152’	93’	Exceeds
H	III	2	35’	7.5’’	15’	Varies	118’	186’	152’	93’	Exceeds
J	III	2	35’	7.5’	15’	Varies	118’	186’	152’	93’	Exceeds
K	III	2	35’	7.5’	15’	Varies	118’	162’	152’	93’	Exceeds
L	III	2	35’	7.5’	15’	Varies	118’	162’	152’	93’	Exceeds

Source: Michael Baker International, 2019

4.6.6 Airfield Marking and Lighting

The lighting and pavement marking play a significant role on an airfield. Airfield lights and pavement markings provide pilots with visual reference to obstruction, pavement edges, and aids pilots at night or in poor visibility conditions. They also assist in the ground movement of aircrafts. The current inventory of these systems is mentioned in Chapter 2 of this report.

Runway Lighting

Runway lighting provides pilots with a rapid and positive identification of the runway and its alignment. According to FAA AC 150/5340-30J, Design and Installation Details for Airport Visual Aids, MIRLs are recommended for runway with either visual or non-precision instrument approaches, whereas High Intensity Runway Lights (HIRLs) are generally recommended for runways with precision instrument approaches.[1] Presently, the primary Runway 3R-21L has high intensity runway lighting system (HIRL) along the runway edges while both Runway 3L-21R and Runway 16-34 are equipped with medium intensity runway lights (MIRL).

Medium intensity taxiway lighting (MITL) are provided at airports where runway lighting systems are used. PDK, is equipped with MITL on all taxiways. This system is vital for the safe and efficient ground movement of aircraft to and from the runway. Any future taxiways constructed on the airfield should also be provided with MITL. The Airport anticipates replacing all incandescent lights and upgrading the airfield lighting to a LED light system within the short term planning period.

Markings

PDK, the second busiest airport in Georgia has experienced intense runway and taxiway utilization which in turn, amounted to deprivation of the airfield markings. In 2018, the Airport has undergone airfield pavement re-marking for both all taxiways and runways. Runway markings are designated according to the type of instrument approach available on the runway. FAA AC 150-5340-1M, Standards for Airport Markings, provides guidance necessary to design airport markings. Runway 3R-21L is equipped with precision runway markings. The threshold on the end of Runway 21L is displaced, with white arrows serving as the runway centerline leading to the displaced threshold. Both the crosswind and training runways are equipped with basic markings. Should a GPS instrument approach be installed on Runway 16-34, nonprecison runway marking should be implemented.

Taxiway and apron areas also require markings to assure that aircraft assure that pilots maintain a property clearance from pavement edges and objects near the taxiways. Yellow centerline stripes and taxiway edge markings are currently painted on all taxiway and apron surfaces the Airport. Taxiway markings also include hold lines, found at the entrances and exits taxiways serving the runways. The location of the hold line markings are in direct relationship to the RDC of that specific runway that it serves.

4.6.7 Navigational Aids (NAVAIDS) and Visual Aids (VISAIDS)

The term NAVAIDS generally refers to ground- or satellite-based equipment that is able to communicate position information, approach guidance, and surface weather conditions to aircraft while in-flight. This includes all non-precision and precision instrument approach procedures to runways, as well as weather equipment such as an Automated Surface Observation System (ASOS). The term VISAIDS generally refers

[1] FAA AC 150/5340-30J, Design and Installation Details for Airport Visual Aids.

to ground-based equipment that the pilot can see while in-flight to determine the correct approach slope to a runway and also wind conditions. This section will address the potential need for enhanced facilities in the future. The key objective is to enhance operational flexibility and safety at the Airport during all weather conditions, while being cognizant of the cost/benefit relationship of each potential improvement option.

Navigational Aids (NAVAIDs)

As mentioned in Chapter 2, the following instrument approaches are provided at PDK.

- **Runway 21L**
  - Precision ILS approach (3/4-mile visibility)
  - Non-precision RNAV/GPS Y (>1-mile visibility)
  - Non-precision RNAV (RNP) Z (>1-mile visibility)
- **Runway 3R**
  - Non-precision RNAV (RNP) (1-mile visibility)
- **Runway 3L-21R**
  - Visual Approach
- **Runway 16-34**
  - Visual Approach

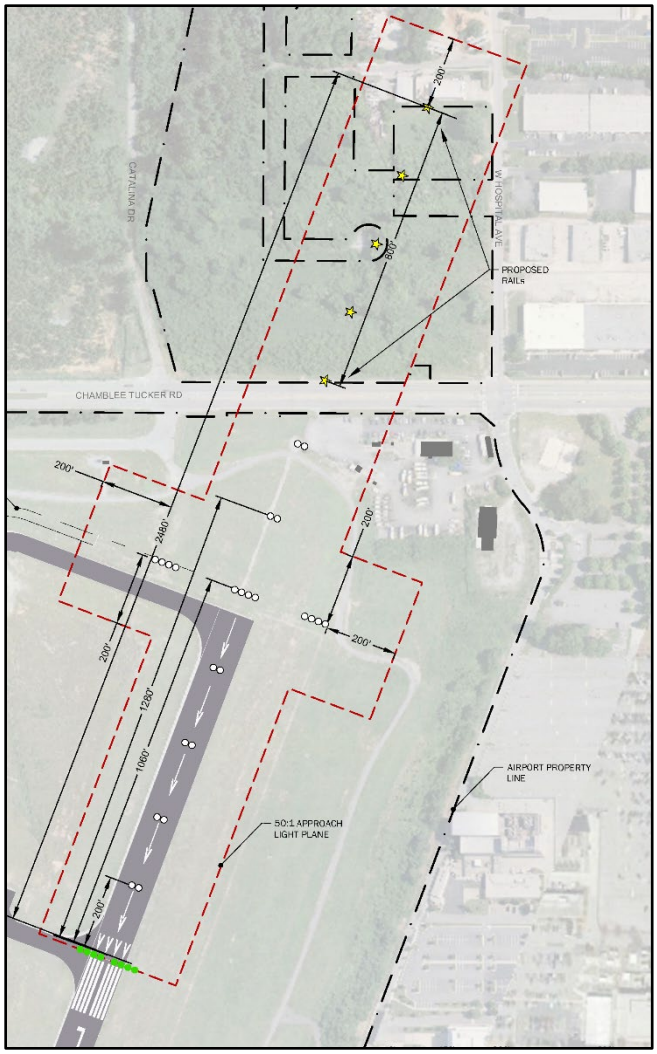
There are currently no published instrument approaches to secondary Runway 3L-21R, and no procedure is recommended for the runway at the time due to the runway's design characteristics coupled with the available approach to the primary runway. Further, the Airport along with airport users have expressed desire for improved landing minimums at the airport. It should also be noted that the feasibility of implementing a future instrument approach procedure and a determination of the visibility minimums that can be achieved for each desired runway end will be based on several factors but dictated primarily by the surrounding terrain in the area.

Runway 21L currently utilizes a Medium Intensity ALS with Sequenced Flashing Lights (MALSF) approach light system which allows a minimum of ¾-mile however, due to obstructions within the approach the approach minimum is artificially higher at 7/8-mile with a 400-feet ceiling heights. Installing a Medium Intensity ALS with Runway Alignment Indicator Lights (MALSR) could not only improve the visibility but also the minimums. A MALSR consists of a configuration of light signals (RAILS) extending into the approach area from the runway threshold to aid pilots transitioning from instrument flight to visual flight and landing. The MALSR, in conjunction with the localizer and glideslope antennas, comprise the Instrument Landing System (ILS), which provides for approaches when visibility conditions are as low as ½-mile and cloud ceiling heights as low as 200 feet. As displayed in **Figure 4-6**, the Sequenced Flashing Runway Alignment Indicator Lights (RAILS) which are a part of the proposed MALSR system and extends to the north side of Chamblee Tucker Road on airport property.

During this master plan process, an obstruction survey will be sent to the FAA to evaluate Runway 3R approach. Runway 3R, currently has an instrument approach of 1-mile visibility but proves to be a difficult curved approach for pilots to maneuver due to Atlanta Hartsfield Jackson Airport's airspace to south. Because very few aircraft are able to land on Runway 3R, this study will examine the feasibility of adding

a GPS approach to Runway 3R. The Airport and its users have also, shown interest in installing an instrument approach to Runway 34 which will also be examined in the next chapter.

Figure 4-6: MALSR Approach Lighting System



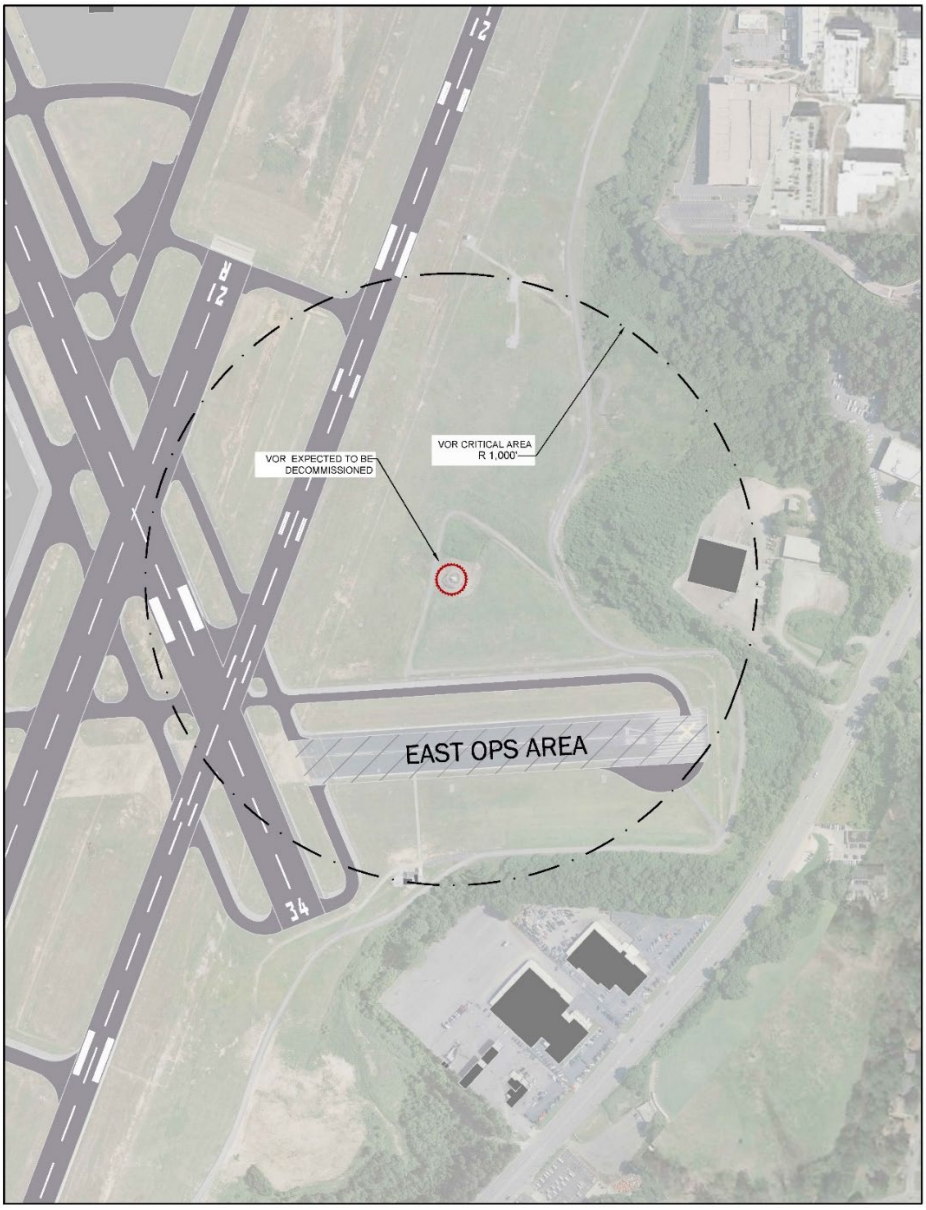
Source: Michael Baker International, 2020.

VOR/DME

The PDK VOR/DME antenna is located on the airport on the east of Runway 3R-21L and north of the East Ops Area shown in **Figure 4-7**. The VOR station broadcasts a VHF radio composite signal including the navigation signal and station's identifier. The navigational signal allows for pilots to navigate to and from PDK. The Airport VOR/DME is on a radio frequency 116.6 MHz with a variance of 05W. However, as part of the FAA's NEXTGEN (Next Generation), the FAA is moving opposite of ground-based navigation systems (VOR) to a satellite-based system. For this reason, PDK VOR is on the FAA list to be decommissioned, or removed from service within the short-term planning period; however the DME equipment will remain in place.

In compliance with Order 6860.1, *VOR, VOR/DME, AND VORTAC SITING CRITERIA*, to avoid the facility from interfering with airfield operations, the siting requirements call for the VOR to be at minimum 500-feet from any runway and/or minimum of 250-feet from taxiways. Furthermore, the VOR includes a 1,000-foot critical area that prevents any possible obstruction i.e. trees, fencing, powerlines or structures from being within 500-feet from the facility. Once the VOR is removed from airport grounds, a large area of airport property east of Runway 3R-21L becomes available for potential airport development. It is assumed the existing DME equipment housed within the VOR can be relocated to the ILS glideslope shelter.

Figure 4-7: PDK VOR Site



Source: Michael Baker International, 2020.

4.6.8 Visual Aids

An evaluation of the existing visual aids was conducted for the following categories at PDK: rotating beacon, wind cone and precision approach path indicators.

Rotating Beacon

PDK is equipped with a rotating beacon, located west of Runway 3R-21L. The airport's rotating beacon projects a beam of light in two directions, 180 degrees apart. The optical lens system consists of one green and one clear lens. The main purpose of the airport rotating beacon is to indicate the location of the airport at night and during less than optimal visibility conditions. The rotating beacon at PDK is in good working condition and therefore requires no modification or upgrades at this time. However, due to proposed construction on the east side of the airfield, the location of the beacon would need to change.

Wind Cone

According to FAA AC 150/5340-4, *Design and Installation Details for Airport Visual Aids*, there are "Primary" and "Supplemental" wind cones that can be provided at airports. A "Primary" wind cone is typically located near the center of an airfield within a segmented circle, whereas several "Supplemental" wind cones may be located near each runway end. The primary lighted wind corn is located just north of Taxiway D, while supplemental wind cones are located near Runway 3L, 21R and on top of a helicopter hangar adjacent to Helipad Charlie. The functionality of wind cones is to provide visual surface wind information to pilots. Since PDK operates under an ATCT, installing a segmented circle is not necessary. The wind cones are in good condition.

Visual Glide Slope Indicators (VGSI)

To provide pilots with visual indication of above or below glideslope during landings to the runway, Visual Glide Slope Indicator (VGSI) are commonly provided at airports. Runway 3L-21R is utilizes two-light PAPIs, located on the left side of both thresholds. Runway 16-34 is equipped with four-light Visual Approach Slope Indicator (VASIs), located also on the left side of both threshold. According to FAA AC 150-5300-13A, *Airport Design*, VASIs have limiting capabilities; only providing guidance to heights of 200-feet and are now obsolete. Runway 3R-21L operates a two-light PAPI located on the right of Runway 21 threshold while Runway 3R uses four-light VASI found on the left side of Runway 3R. The existing VASIs at PDK have reached the end of their useful life and will be replaced during the year 2020.

4.7 General Aviation Facilities

The general aviation (GA) area accommodates a wide range of facilities and businesses. GA facilities are necessary to accommodate airport activity by all aviation segments except commercial passenger and air cargo service. GA facilities support operations for recreational flying, corporate aviation, military, law enforcement operations, and some portions of cargo activity. The requirements for the GA area are based on data presented in the inventory, activity forecasts, and information obtained during meetings with PDK airport staff. The primary components associated with general aviation needs include:

- Aircraft Parking (Hangar & Aircraft Tie-down Facilities)
- General Aviation Terminal
- Fixed Base Operator (FBO)

FAA AC 150/5300-13A states that: effective apron design tends to segregate based and itinerant aircraft so that maximum capacity can be prioritized in the configuration of the based aircraft apron, while flexibility can be prioritized in the configuration of the itinerant aircraft apron. In addition, Airport Cooperative Research Program (ACRP) General Aviation Facility Planning guidance suggests that the based aircraft apron requires minimal interaction with other facilities.

4.7.1 Based Aircraft Storage Preferences

There are three types of hangar facilities found at most airports – conventional hangars, T-hangars, and tie-downs/shade structures. Small single-engine aircraft can be accommodated in T-Hangars, which are generally designed to accommodate 5 to 20 aircraft in a single building. A lower cost option is the apron tie-down. However, apron tie-down parking positions do not protect aircraft from the environment. Multi-engine and turbo-prop aircraft are more expensive, and users generally prefer the protection provided by a T-Hangar or, in the case of larger aircraft, a conventional hangar. The general preference is to store jet aircraft in conventional hangars. Helicopters, depending on their use, are generally stored in conventional hangars or on the tie-down apron. Smaller helicopters may be accommodated with tie-down or in a conventional hangar.

To determine hangar and other storage requirements, an analysis of the existing facilities was conducted. The analysis of storage needs is depicted in **Table 4-12**. It was assumed that approximately 80 percent of all single-engine would be stored in T-hangars and 20 percent of single-engine will be subjected to tie-downs. It is ideal that 100 percent of multi-engine aircraft be sheltered, 30 percent of multi-engine will be placed in T-hangars while 70 percent of multi-engine will be placed in conventional hangars. It expected that 100 percent of jets will be stored in conventional hangars. Of the rotorcraft, it was assumed 50 percent of rotorcraft will be sheltered while the remaining 50 percent will be located on the ramp area.

Table 4-12: Aircraft Storage Type Preference Distribution

Storage Type	Single-Engine	Multi-Engine	Jet	Helicopter
Apron Tie-Down	20%	0%	0%	50%
T-Hangars	80%	30%	0%	0%
Conventional Hangar	0%	70%	100%	50%
Total	100%	100%	100%	100%

Source: Michael Baker International, 2019

The aircraft storage percentages were applied to the based aircraft forecasts for the 20-year planning period to identify the storage needs at the five-year benchmarks. **Table 4-13**, identifies the based aircraft requirements for each aircraft type. The number of based aircraft is forecasted to increase from 355 in 2018 to 487 by 2038.

4.7.2 Hangar Storage Requirements

The demand for hangar facilities is directly linked to the number and type of aircraft expected to be based at the airport, local climate conditions, security, and availability. Hangar facilities are typically grouped as conventional hangars or T-hangars. Conventional hangars are structures that can accommodate individual hangar units or multi-aircraft unit. These types of hangars provide a vast level of privacy, protection and security from the elements. T-Hangar is a series of smaller individual units within one structure. The percentage of based aircraft stored in hangars differs from airport to airport but is generally the highest in regions subject to extreme weather. Another significant component is the type of based aircraft anticipated to base at PDK. Pilots of smaller single-engine aircraft typically prefer T-hangars, while pilots of larger, more expensive and technologically advanced aircraft prefer conventional hangars. Some degree of based aircraft tiedown/apron storage is still desired for the airport to accommodate potential demand from recreational pilots or flight training organizations.

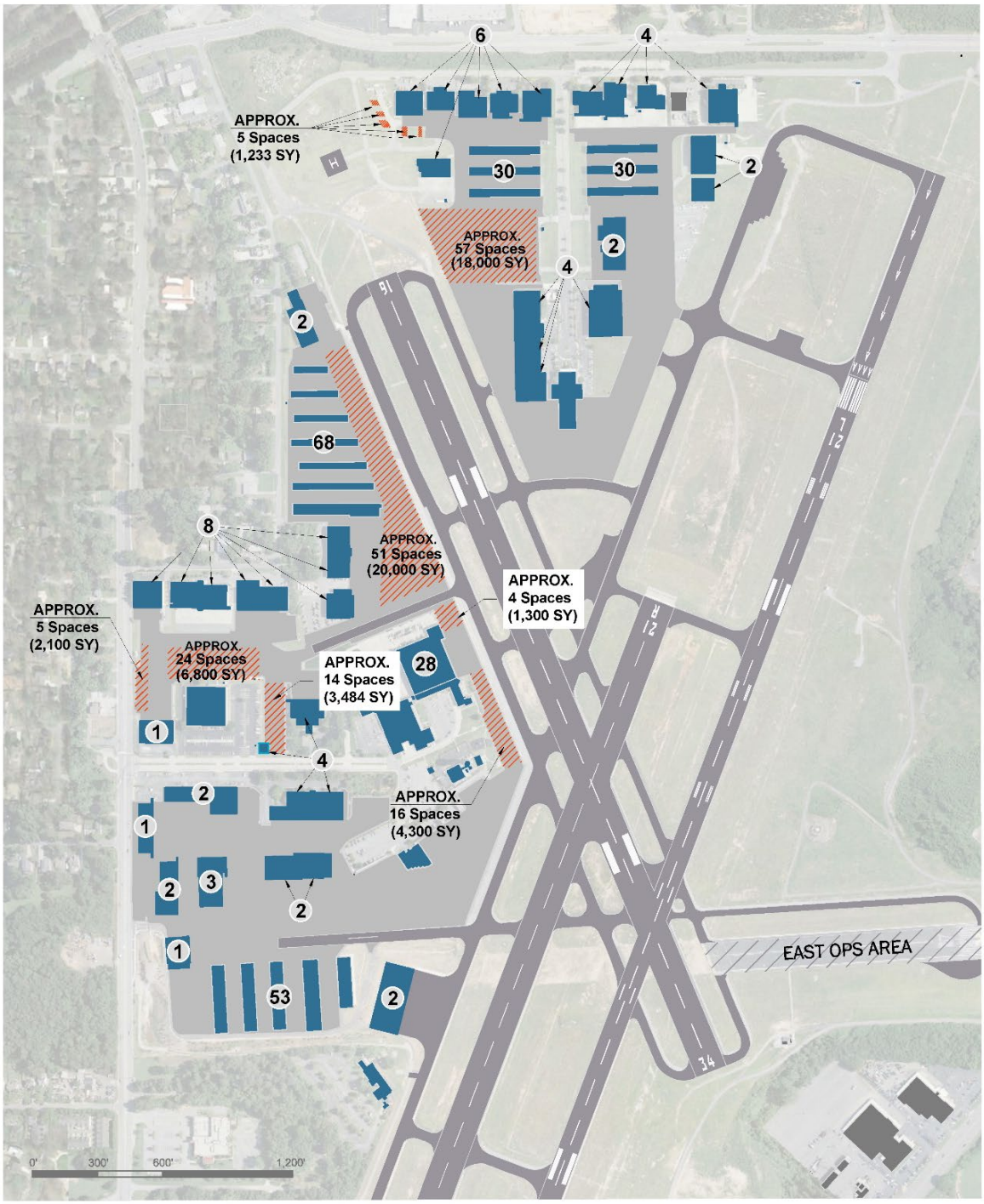
The aircraft storage preferences were applied to the based aircraft forecasts for the 20-year planning period to identify the storage needs during the five-year and ten-year benchmarks. **Table 4-13** displays the based aircraft storage requirements by aircraft type in addition to illustrating 2040 based aircraft capacity requirements. These include the addition of 109 T-hangar bays and 46 conventional box hangar spaces. Although, additional tie-down parking was not required, several apron tie-downs were included to provide supplementary space

Table 4-13: Aircraft Storage Demand

Storage Type	Single-Engine	Multi-Engine	Jet	Helicopter	Total	Existing Capacity	Demand
				2018			
Apron (Tie-Down)	51.6	0	0	6	**57.6**	176	**-118.4**
T-Hangar	206.4	11.7	0	0	**218.1**	181	**37.1**
Conventional Hangar	0	27.3	46	6	**79.3**	74	**5.3**
Total Spaces	258	39	46	12	**355**	431	**42.4**
				2025			
Apron (Tie-Down)	56.6	0	0	7	**63.6**	176	**-112.4**
T-Hangar	226.4	12.9	0	0	**239.3**	181	**58.3**
Conventional Hangar	0	30.1	54	7	**91.1**	74	**17.1**
Total Spaces	283	43	54	14	**394**	431	**75.4**
				2030			
Apron (Tie-Down)	60.2	0	0	7.5	**67.7**	176	**-108.3**
T-Hangar	240.8	13.8	0	0	**254.6**	181	**73.6**
Conventional Hangar	0	32.2	60	7.5	**99.7**	74	**25.7**
Total Spaces	301	46	60	15	**422**	431	**99.3**
				2040			
Apron (Tie-Down)	68.6	0	0	9	**77.6**	176	**-98.4**
T-Hangar	274.4	15.6	0	0	**290**	181	**109**
Conventional Hangar	0	36.4	74	9	**119.4**	74	**45.4**
Total	343	52	74	18	**487**	431	**154.4**

Source: Michael Baker International, 2019

Figure 4-8: Existing Aircraft Storage Count



Source: Michael Baker International, 2019.
Note: the aircraft storage count is based on an assumption of aircrafts that can fit within hangar.

Hangar storage needs are determined by developing a set of assumptions about storage preferences by aircraft type shown in **Figure 4-8**. As can be seen at PDK, hangar storage is generally preferred compared to apron tiedown storage because aircraft owners want to protect their expensive airplanes from weather conditions. Some degree of based aircraft tiedown/apron storage is still desired for the airport to accommodate potential demand from recreational pilots or flight training organizations. **Table 4-13** presents the assumptions used to establish based aircraft storage requirements for PDKs forecast of additional based. As shown, the construction of 26 T-hangar bays and 25,000 square feet of corporate hangar space would be needed to accommodate the forecast of 34 additional based aircraft by 2029. Presently, only a small portion (approximately 900 square yards) of the existing 22,500 square yard tie-down apron is currently occupied by based aircraft. Thus, the apron tie-down area for based aircraft is more than sufficient to accommodate long-term anticipated demand. The calculated requirements are used as minimum evaluation thresholds in the alternatives analysis so that a variety of flexible development options can be presented.

4.8 Airport Support Facilities

As described in AC 150/5070-6B, *Airport Master Plans*, support facilities include a wide range of functions intended to ensure the smooth, efficient, and safe operation of the airport. The FAA also provides design guidelines for these facilities in a variety of Advisory Circulars reports. Support facilities are those airport features that are not necessarily specific to aircraft operations, movement, and storage, but which are vital to ensuring the efficiency, safety, and persistency of aircraft activity. For PDK, the existing support facilities consist of the FBO terminal areas, airport fueling facilities, airport maintenance facility, automobile parking and access, and ATCT. In addition, the requirements for these facilities were also based on interviews with airport staff, airport tenants, and users which facilitated a better understanding of the existing and future facility requirements.

4.8.1 Airport Administration

Airport administration area typically includes offices for management, reception space, meeting rooms, storage, security monitoring and support space such as rest rooms. The administration building at PDK is centrally located between the West Ramp and Clairmont Ramp as illustrated on **Figure 4-9**. This building, which was constructed during WWII, was originally used for military offices and since 1959 has provided administrative space for DeKalb County, leased office space and the Downwind Restaurant. The administration building also adjoins Epps Air Service FBO.

The Administration Building, originally constructed in 1941, has seen renovations and updates over its lifespan; however, a number of nagging issues have raised the prospect of conducting a major rehabilitation or replacement of the current building The most critical issues include the following:

- Not Americans with Disabilities Act (ADA) friendly – no elevators with a restaurant and public spaces on the second floor,
- Asbestos in parts of the building,
- Antiquated fire suppression – no fire sprinklers within the building,
- Lack of central HVAC,
- Inadequate administration amenities/public spaces,

- Limited vehicular parking.

With a combination of the age structure along with its condition, a detailed analysis of this building will be conducted in a separate study.

Figure 4-9: Airport Administration Building

Source: Michael Baker International, 2019.

4.8.2 Fixed Based Operator (FBO)

Atlantic Aviation, Epps Aviation and Signature Flight Support are the three FBOs at PDK, providing traditional FBO services including a terminal, maintenance, car rentals and a variety of pilot and aircraft amenities. Requirements for individual airport businesses such as FBO's are determined by the leaseholder themselves.

4.8.3 Maintenance Requirements

The airport maintenance facility is located along Bragg Street and is used for the storage and maintenance of county-owned vehicles and equipment. Because airport maintenance facilities do not generate revenues, they are often located in remote areas that are unlikely to be attractive to a potential leaseholder. Interviews with airport management staff indicated the location of the existing airport maintenance facilities is the desired location and can be expanded to meet future needs.

4.8.4 Airport Rescue and Firefighting Requirements

Airport Rescue and Fire Fighting (ARFF) equipment is not required at airports that do not have scheduled passenger service with 10 or more passenger seats. However, Dekalb County Fire-Rescue Services Station 15 is located on the north end of Airport property along Flightway Drive. The most likely emergency

situations at general aviation airports are an aircraft accident, fuel or aircraft fire, or a hazardous material (fuel) spill.

Station 15 houses the office of the Battalion Chief; Engine 15, a structural fire response truck and a Rosenbauer Panther 4X4 Aircraft Rescue and Firefighting (ARFF) fire truck. Station 15 is housed in a converted aircraft hangar that is structurally more than 40 years old. Station's 15's location provides direct access to the airfield in the event of an airport emergency. Although not required for general aviation airports, 14 CFR § 139.319 - *Aircraft rescue and firefighting: Operational requirements*, lists response times that are a useful rule of thumb for ARFF ready-ness at PDK. In general, the ARFF vehicle should be capable of reaching the mid-point of the furthest runway and begin using extinguishing agent within three minutes of alarm. All other emergency vehicles should reach this point within four minutes. These response times should be considered as guidelines should the ARFF station be relocated elsewhere on the Airport.

Figure 4-10: Station 15 Emergency Vehicles

Source: Michael Baker International, 2019.

4.8.5 Airport Traffic Control Tower (ATCT)

The existing 100-foot ATCT was constructed in 1988 and is located on the west side of the airport shown in **Figure 4-11**. The ATCT is owned and operated by the FAA and acts as an important feature for managing the aircraft traffic at PDK. As discussed, the complex configuration of the adjacent airspace and airfield requires the presence of ATCT personnel at PDK. Without the presence of ATCT at PDK, the ability to manage aircraft traffic and to maintain the ability to utilize the airfield safely would be challenging. This is especially true considering the multiple taxiway intersections (nodes) that do not have right-angled turns. With the current and projected annual volume at PDK, there is a justified need for ATCT. Currently there are no known issues regarding the ATCT, and they are no plans to relocate or rebuild. Future developments on the airport should carefully consider the ATCT line of sight requirements.

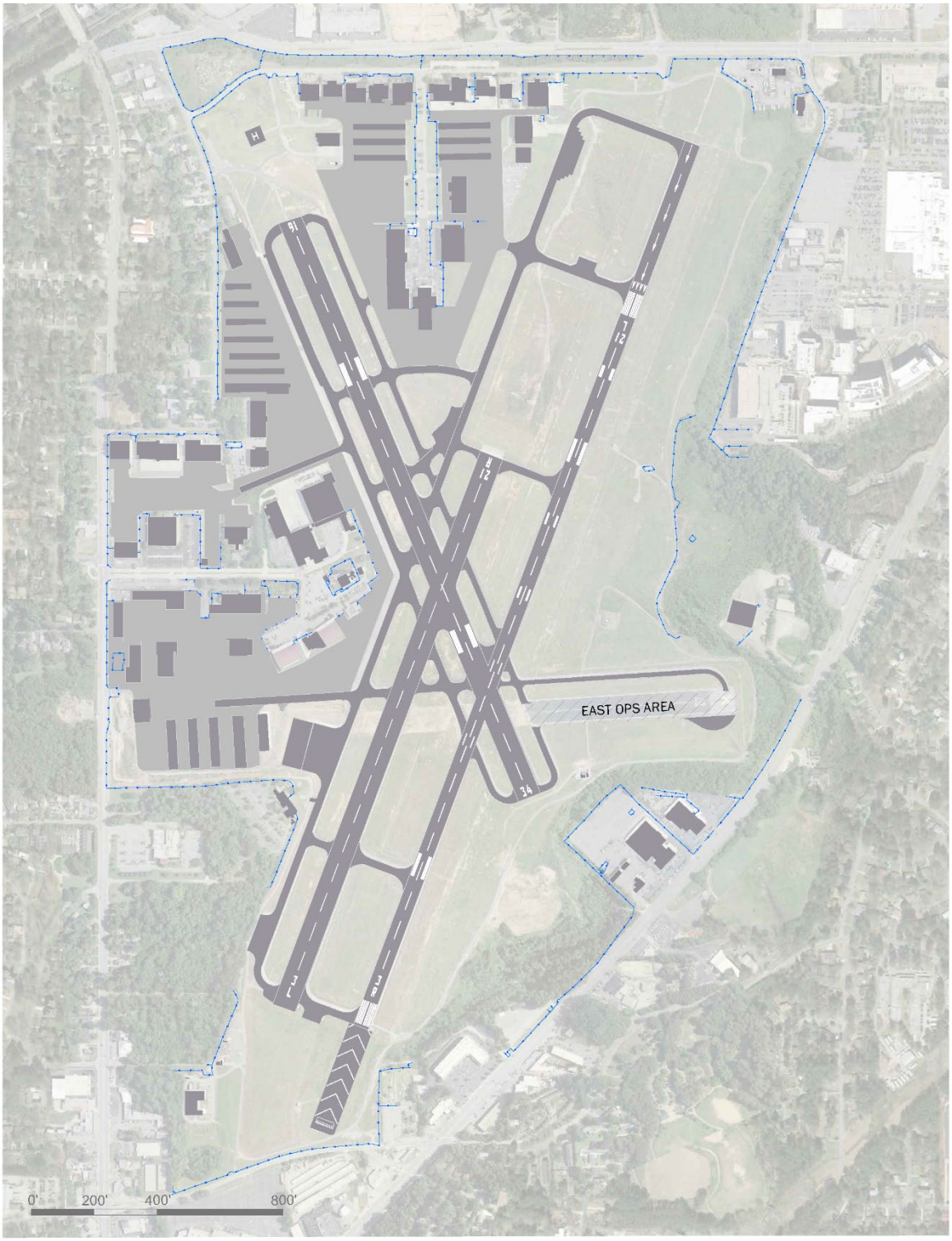
Figure 4-11: PDK Air Traffic Control Tower

Source: Michael Baker International, 2019.

4.8.6 General Aviation Fencing

PDK is protected by fencing around the perimeter of the airport, some of which follows the property line shown in **Figure 4-12**. The Airport is largely secured with 6-foot chain link fence with barbed wire. Elsewhere, mainly along Clairmont Road and some portions of Flightway Drive, consist of 6-foot coated wrought iron fencing. Currently there are points which allow unobstructed access to the ramps and taxiways. There are several gates located throughout the perimeter fence and requires either a proxy card for access. For those gates that does utilize access cards, swing gates are provided at locations along the perimeter.

Figure 4-12: PDK Security Fencing



Source: Michael Baker International, 2020.

4.8.7 Ground Access, Circulation

The access roadways in the vicinity of the airport are intended to provide adequate connection to and from the airport and the community. PDK's primary entrance is Airport Road to the west and Corsair Drive to the north. Both Interstate 85 and Interstate 285 are readily accessible from Clairmont Road and Peachtree Industrial Boulevard respectively. The City of Chamblee and City of Brookhaven have ongoing corridor studies for potential improvements to Clairmont Road and Buford Highway districts. Also, as a part of the hangar development plans in the southwest quadrant of the airport, streetscaping improvements are expected for the northern side of the Dresden Road.

All roadways within the airport property line must be maintained by the airport. The current condition of both Airport Road and Corsair Drive are considered average to poor condition. These roadways should be considered for overlay or rehabilitation within the five to ten year timeframe.

In addition to routine maintenance of existing airport roads, the intersection of Flightway Drive and Chamblee-Tucker Road should be considered for a minor modification to remove a small portion of the road that falls within the Object Free Area of Runway 3L-21R.

4.8.8 Automobile Parking

As mentioned in Chapter 2, they are two public parking lots are located adjacent to the Administration Building and ATCT, both individual lots consisting of 71 spaces, totaling 142 spaces. Users of the parking lots include, airport tenants, airport employees and neighborhood users who come to enjoy Doc Manget Memorial Park. The capacity of the public parking lots proves to be inadequate throughout parts of the day. Additional parking is recommended for this area of the airport. A separate study has considered the feasibility of constructing a parking deck within the vicinity of the air traffic control tower. Regarding other airport facilities, it is assumed that each of the FBOs as well as any private or corporate hangars will provide their own parking spaces based on their individual requirements.

4.9 Summary

Table 4-14, presents a summary of the identified facility requirements. The remaining section of this report present recommendations to satisfy these facility requirements at PDK.

Table 4-14: Summary of Facility Requirements

Project	Description
Critical Aircraft Assessment	Gulfstream 550 – Primary (D-III, TDG-2) King Air 90 – Secondary (B-I Small)
Wind Coverage	Runway 16-34 necessary to provide >95% crosswind coverage for small aircraft.
Airfield Capacity	Forecast operations reach 80% airfield capacity in 2040.
Runway Safety and Object Free Areas	Increase RSA width to Runway 3R-21L to 500' width. Improve Runway 34 RSA to meet standards. Relocate County Sanitation and portion of Flightway Drive from OFA. Review TDG-2 Taxiway OFA standards near parking ramps for conflicts.
Runway Protection Zone	Add Departure RPZ to Runway 21L. Revise Runway 21L Approach RPZ to 200' from landing threshold.
Runway Length and Widths	Maintain existing runway lengths and widths. Consider reduced secondary runway widths at end of pavement useful life.
Pavement Condition and Strength	Pavement rehabilitation projects for all runway pavement in accordance with guidelines of GDOT PCI Study.
Taxiway Geometry	Ongoing improvements to simplify taxiway geometry and eliminate hotspots.
Runway Lighting and Markings.	Upgrade Runway Edge Lighting to LED. Maintain existing markings.
Navigational Aids (NAVAIDs)	Upgrade Runway 21L approach lighting from MALSF to MALSR. Reduce 21L approach minimums to ½ mile when feasible.
VOR/DME	Plan for future use of decommissioned VOR critical area and move DME to glideslope equipment shelter.
Beacon	Relocate beacon as required for landside improvements.
Visual Glide Slope Indicator	Replace all VASI to PAPI (ongoing).
Airport Rescue Firefighting Station (ARFF)	Consider major facility renovation or replacement in short to intermediate term.
Airport Administration Building	Rehab or replace existing Airport Administration Building in short to intermediate term.
Aircraft Parking	Provide additional aircraft parking and storage to meet projected based aircraft demand.
Automobile Parking	Increase parking capacity adjacent to Administration Building and Manget Park.
Access Road	Overlay pavement in near to intermediate term.

Source: Michael Baker International, 2020.

Working Paper #3

DeKalb Peachtree Airport
2020-2040 Airport Master Plan

Chapter 5 – Airport Alternatives

December 8, 2020

Prepared by Michael Baker International

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Chapter 5 – Airport Alternatives

5.1 Introduction

The airport alternatives, development and analysis component of this Master Plan Update considers the facility requirements determined in the previous section, accepted airport standards, and the ultimate goals of the Airport, to produce long-range development alternatives. This process is iterative in nature in that it includes evaluation, in some cases, of multiple alternatives in an effort to identify the best overall improvement program for the Airport. Once the long-range development program has been determined, short-range improvements can be readily implemented without jeopardizing the ultimate concept. The program will evaluate how to best expand and improve existing Airport facilities in terms of overall efficiency and aesthetic quality, meeting demand and Airport's goals and visions while also accommodating the logical and efficient development of a future expanded Airport facility. The goal of this alternatives analysis is to optimize on-airport land use, maximize the capacity and economic viability of the existing facilities, and identify the facilities and practical stages of future development. Although the projects outlined in this chapter are designed to meet demand over the next 20 years, they provide growth opportunities beyond the planning period. The following areas will be addressed in this section of the report.

- Airfield,
- Instrument Approach Improvements,
- General Aviation,
- Support Facilities.

5.1 Airfield Improvement Alternatives

Airfield facility developments (runways and taxiways) create the most impact on the overall airport layout since they generally account for the largest land use and serve as the focal point for all other developments. Therefore, it is important to first identify the possible airfield alternatives while keeping in mind other needed improvements, such as terminal and hangar developments. Doing so leads to an airport layout that enhances the general working environment at the airport.

5.1.1 Runway 3R-21L Improvements

Previously, the *Facility Requirements* chapter identified several airfield developments for consideration herein. A primary recommendation dealt with the suggesting incremental improvements to the RSA, installing a MALSR approach lights and upgrading instrument approaches, and lastly RPZ modifications.

RSA Improvements

The RSA is defined by the FAA as:

Runway Safety Area (RSA) - A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershot, overshoot, or excursion from the runway. The RSA needs to be: (1) cleared and graded with no potentially hazardous ruts, humps, depressions, or other surface variations; (2) drained by grading or storm sewers to prevent water accumulation; and (3) capable, under dry conditions of supporting snow removal equipment, aircraft rescue and firefighting equipment, and the occasional passage of aircraft without causing structural damage to the aircraft.

Finally, the RSA must be free of objects, except for those that need to be located in the safety area because of their function.

The size of the RSA is a function of the Approach Category and Design Group as well as the minimums associated with the most critical approach to the runway. As mentioned in, Chapter 4, the current RSA at both approach ends of Runway 21L-3R requires 1,000 feet safety area beyond end of runway. The RSA at Runway 3R is limited to 500 feet, due to incompatible land use located south of Airport property. In efforts to combat RSA deficiencies to Runway 3R and increase the level of safety, the Airport has installed an Engineering Material Arresting System (EMAS) at Runway 3R in efforts to mitigate aircraft overruns. EMAS is a bed of crushable concrete used to decelerate and aircraft during a failed takeoff. The RSA at the approach end of Runway 21L also does not meet design standards, it is limited to 410 feet beyond the displaced threshold due to the County sanitation facility located on airport property and Chamblee Tucker Road. The ultimate determination for incremental improvements to the RSA was based on the following criteria: 1) no road relocations were considered appropriate to provide compliant RSA, 2) it is desired to maintain as much runway length as possible, and 3) installation of EMAS to Runway 21L is not feasible due to Chamblee Tucker Road north of Runway 21L. It is recommended to relocate the Country's sanitation facility out of RSA and respectively the ROFA.

The previous ALP airport reference code for Runway 3R-21L is C-II which requires an RSA width of 500-feet however, according to the AC design standards, for ARC C-II aircraft an RSA width of 400-feet is permissible. Today, the ARC for Runway 3R-21L is D-III, which requires an RSA width of 500-feet. In order to be compliant with FAA AC 150/5300-13A, the RSA should expand 50 feet on each side to satisfy 500-foot required width. Due to plan to relocate the County sanitation facility, the RSA should also extend north to front Chamblee Tucker Road.

Instrument Approach Improvements

The capability of the Airport to service aircraft traffic, especially corporate and business aircraft would be significantly improved with improvements to instrument approaches at PDK. The facility requirements along with Airport users have identified the desire to utilize Global Position System (GPS) and Wide Area Augmentation System (WAA) signals to establish a Localizer Performance with Vertical Guidance (LPV) instrument approach to Runway 21L. WAAS is a GPS-based non-precision navigation system, which augments the existing GPS signals with additional information, providing the user with highly accurate position and tracking information. Localizer Precision with Vertical Guidance (LPV) instrument approaches utilizes WAAS technology to provide both vertical and horizontal course guidance to aircraft receivers. Similar to RNAV GPS navigation, LPV approaches are available in all weather and all terrain conditions.

Further input from Airport users is the desire to improve instrument approach minimums. The lowest instrument approach minimums at PDK are ⅞ mile visibility and 400 feet descent height using the ILS approach. For the ILS, these minimums could be as low as ½ mile visibility and 200 feet descent height if obstacles are clear and suitable approach lighting is clear. If an LPV approach is developed, similar minimums of ½ mile visibility and 250-foot descent height may be achievable.

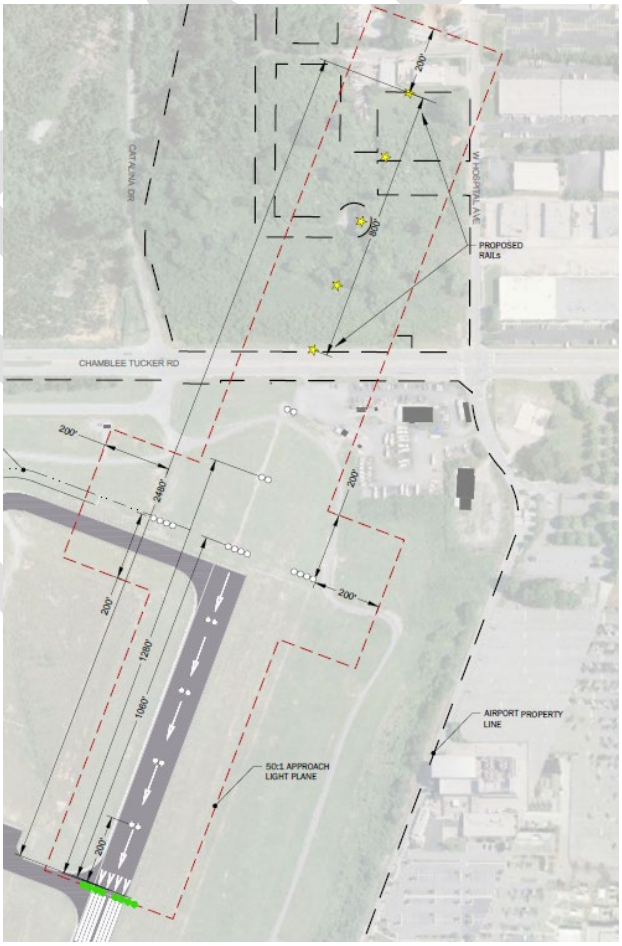
The improvements to instrument approaches could contribute to the reduction in the number of weather-related aborted landings, thus increasing airfield's overall annual service volume and/or throughput capacity. In wind conditions favoring Runway 21L when the reported weather visibility is less than ⅞ mile and/or below 400 feet ceiling height, aircraft currently may be required to redirect to another airport or

cancel flight until weather improves. An ILS and/or LPV having ½ mile visibility minimums would increase the required runway to taxiway separation to 400 feet. PDK's runway to taxiway separation for Runway 3R-21L surpasses the minimum separation requirements.

Runway 21L MALSR Upgrade

Runway 21L currently has an ILS approach complete with medium intensity approach lighting system with sequenced lights (MALSF). MALSF are commonly installed on runway ends with precision approaches to compliment an instrument landing system (ILS). MALSF lights provide visual guidance which aids pilots in identifying the approach end of a runway during times of reduced visibility such as inclement weather and nighttime conditions. Light beams are radiated in the directional pattern by which the pilot aligns the aircraft with the extended centerline of the runway on the approach for landing. The existing MALSF could be improved by adding five additional "lead-in" strobe lights to the system which would then upgrade the system to a medium intensity approach lighting system with runway alignment indicator lights (MALSR) displayed in **Figure 5-1**. By adding these lights, visibility minimums could potentially be lowered to ½ mile minimums if other factors such as obstruction clearing are satisfied. Further, installing the lead-in lights would improve situation awareness during nighttime hours when the runway lights compete with surrounding city lights.

Figure 5-1: Upgrade Approach Lights to MALSR



Source: Michael Baker International, 2019.

North RPZ Adjustments

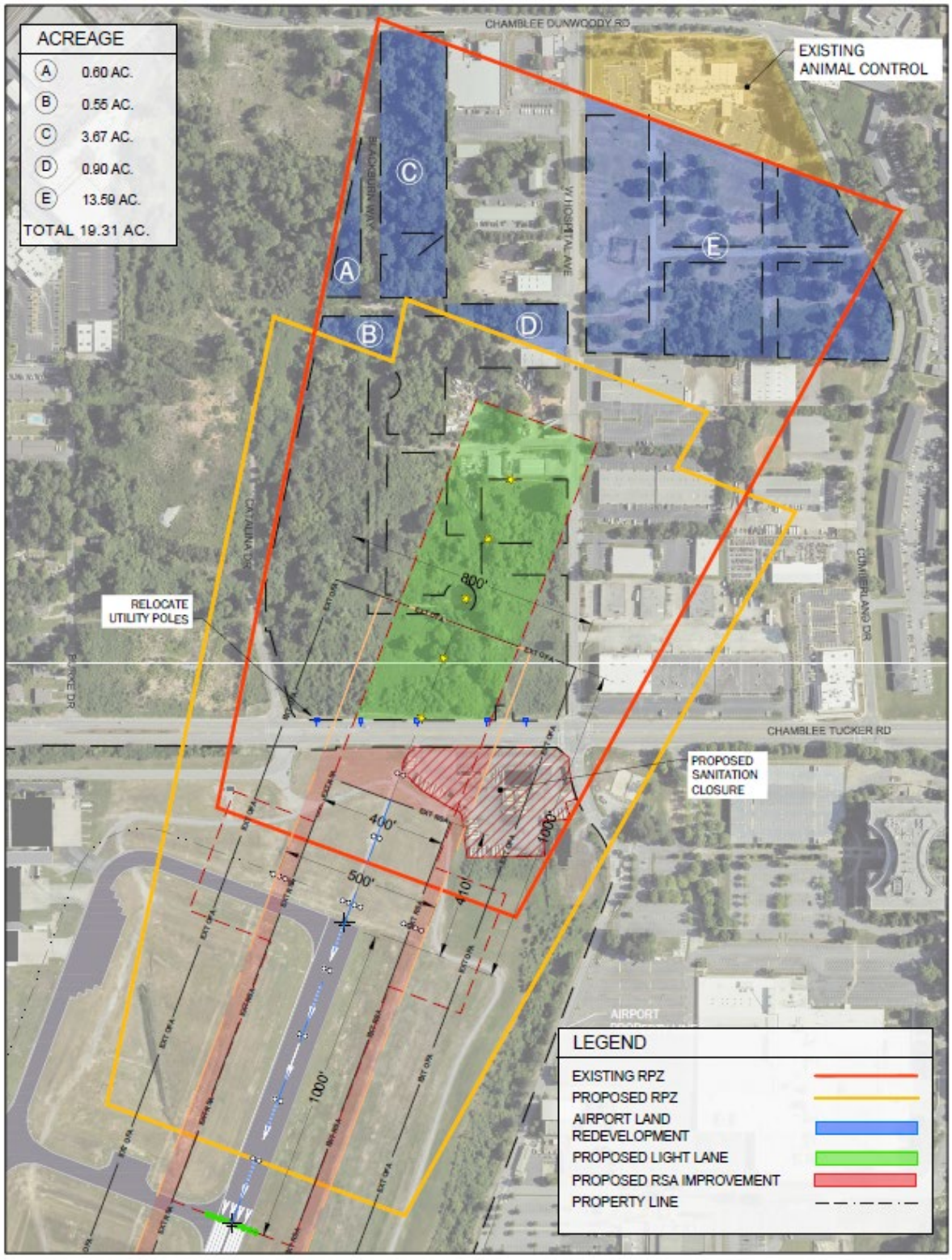
As mentioned, RPZs, are trapezoidal areas beyond each runway which follow strict land use criteria. FAA AC 150/5300-13A, defines the RPZ as, "An area at ground level prior to the threshold or beyond the runway end to enhance the safety and protection of people and property on the ground. Furthermore, the two-dimensional trapezoidal area should maintain free of items that attract grouping of people or property on the ground. The ideal situation is for the airport to own the entire footprint of the RPZ."

As mentioned in Chapter 4, dimensions of the Runway 21L north RPZ have changed from the previous ALP due to changes in airport design standards over time. Since Runway 21L has a 1,000-ft displaced landing threshold, two RPZs are required: an Approach RPZ and a Departure RPZ. As a result of this change in standards, the trapezoidal boundary of the Approach RPZ begins 200-ft from the landing threshold rather than 200-ft from the pavement edge. The reconfiguration of these boundaries results in 19.31 acres of land being removed from inside the RPZ. This potentially frees this land of the FAA RPZ land use guidelines described above and raises the potential to redevelop this land for non-aeronautical purposes. GDOT approval of the updated ALP, specifically the RPZ boundaries would be required prior any official revision of these boundaries.

RPZ Land Development

The potential adjustment of the 21L RPZ boundaries allows for approximately 19.31 acres of existing airport property to be removed from the RPZ. Refer to **Figure 5-2**. The land owned by the Airport was previously purchased in the 1990's during a noise and safety buyout of residential properties in this area. Existing land uses within the vicinity include vacant airport property, as well as neighboring industrial and commercial uses. The relocation of the sanitation site has been considered for a portion of this area should the RPZs boundaries be revised but ultimately the use of the property will be decided in the future. Since the Airport land was originally purchased using federal funds, the land is subject to FAA grant assurances and the Airport would require approval by GDOT to reuse this land for other purposes. That approval would not occur before the completion of the Master Plan. Therefore, this land will be designated on the ALP and future non-aeronautical land use and its ultimate use will be determined once a land release is approved by GDOT. Any future use would be subject to the terms of its release as well as existing noise and height restrictions.

Figure 5-2: RPZ Developable Land



Source: Michael Baker International, 2019.

County Sanitation Site Relocation

DeKalb County Sanitation Facility has a long-standing history of being at the Airport and is used to house empty sanitation trucks and trash bins that service the north portion of DeKalb County. As mentioned in the previous section, this facility is currently located within the RSA and ROFA of Runway 21L and poses as both an eye-sore and a safety concern for aircraft operations. It is suggested to relocate the approximately 3.06-acre County sanitation facility to another location on airport property. Five potential airport sites shown on both **Figure 5-3** and **Figure 5-4** were evaluated for the future location of the DeKalb County Sanitation.

Sanitation Alternative Site A

Alternative A sits south fronting Chamblee Dunwoody Road and directly east of Blackburn Way within the existing RPZ (see potential RPZ adjustments mentioned later). The site accounts for approximately 3.67 acres of highly vegetated land. A vacant single-family residence sits approximately 629 feet south of Chamblee Dunwoody Road, taking up .26 acres of land. Beyond the residential property, the raw land continues south 131 feet and extends 206 feet wide.

Sanitation Alternative Site B

Alternative site B is an undeveloped parcel of land also located within the existing RPZ of Runway 21L. The approximate 3.36-acre site is bounded to the west by W Hospital Avenue, to the north the DeKalb County Animal Shelter, to the east Beverly Drive, and Sport Imports Collision to the south.

Sanitation Alternative Site C

The approximately 4.16-acre site C, sites east of decommissioned Runway 27 and west of Buford Highway. This site has hilly topography with an approximate 59-foot slope and is highly vegetated.

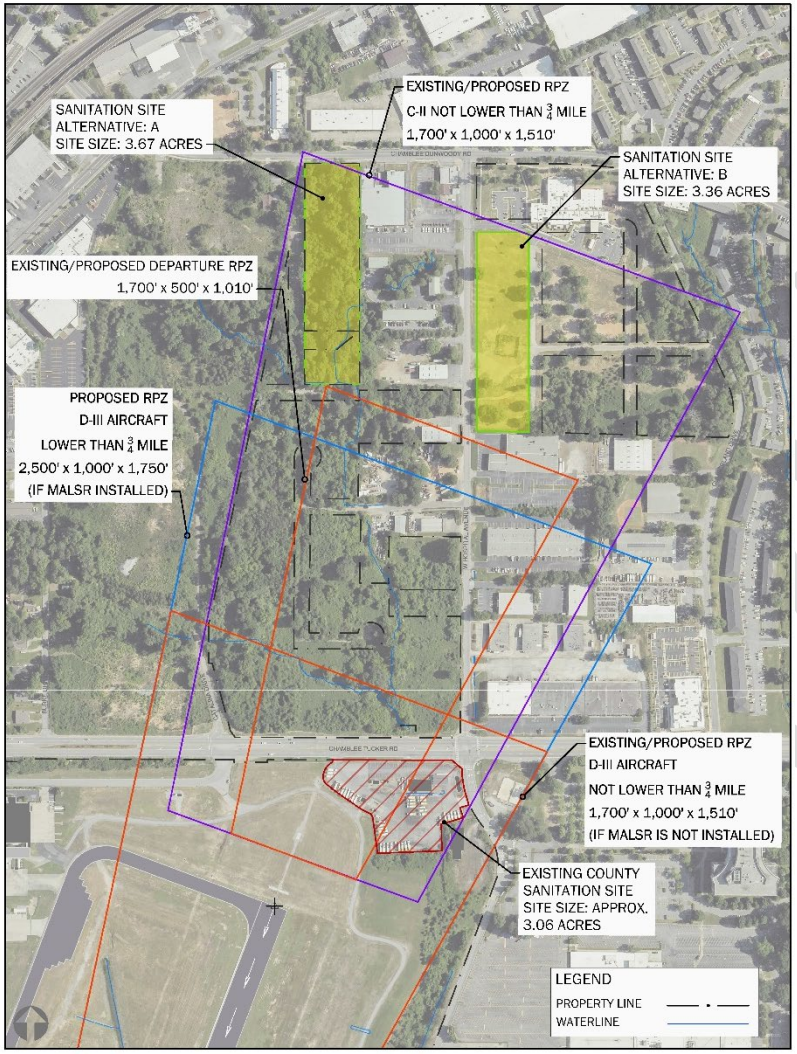
Sanitation Alternative Site D

Alternative Site D is located on Airport property which has been leased to American Car Center. The site encompassed approximately 3.47 acres and is wedged between PDK, Buford Highway on the east, and Diamond LT car dealership on the south which is also the airport leased land.

Sanitation Alternative Site E

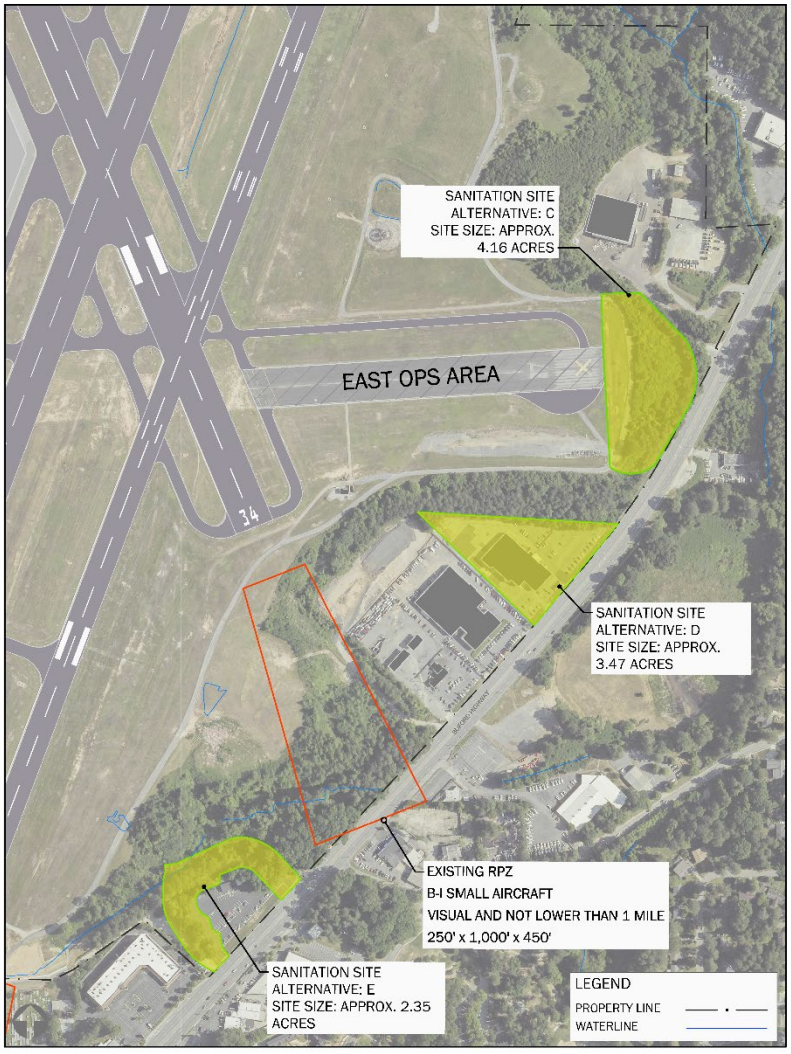
Site E is a heavily wooded and unleveled site that follows Braggs Street and wraps around Amigo Auto Sales lot on Buford Highway. The size of lot is approximately 2.35 acres.

Figure 5-3: North RPZ Protentional Developable Land



Souce: Michael Baker International, 2020.

Figure 5-4: North RPZ Protentional Developable Land



Souce: Michael Baker International, 2020.

Evaluation of Alternatives

Alternatives A and B provide the most accessible land for relocation of the sanitation facility; however, these areas are currently within the RPZ. To the extent feasible, the Airport must control land uses within these area to avoid congregations of people in accordance with FAA land use guidelines. Potential adjustments to the RPZ boundaries are discussed later in this chapter which could eliminate the land use concern. Alternatives C, D, and E are located on airport-owned land that is not being used for aeronautical purposes; however, each of these sites poses challenges regarding terrain and access that make them less likely to realistically support a sanitation facility.

5.1.2 Runway 16-34 Improvements

The *Facility Requirements* chapter identified a couple of airfield developments for consideration herein. A primary recommendation dealt with the suggesting incremental improvements to the non-standard RSA.

RSA Improvements

The airfield design standards alternative includes improvement to correct non-standard and non-preferential conditions for Runway 16-34 which include the RSA. The RSA beyond the end of Runway 34 currently extends 220 feet which is non-standard for RDC B-I Small with visibility minimums as low as not lower than 1 mile. According to AC 150-5300-13A, Airport Design, the FAA once issued Modification to Standards (MOS) "if actual, graded and constructed RSA that could not meet dimensional standards." Since then, applying modification to standards to non-standard RSA no longer proves valid. FAA recommends the Airport offers continuous effort in analyzing and addressing incremental improvements to the RSA.

Therefore, it is necessary to resolve the non-standard RSA. The county also proposes to expand the Runway Safety Area (RSA) located at the Runway 34 End of Runway 16-34. The dimensions of the existing RSA are 150 feet by 220 feet, and the standard dimensions would be 150 feet by 240 feet. The proposed improvements would include safety area grading and drainage adjustments within the limits of the safety area, as well as along its perimeter, to meet current FAA requirements. The RSA expansion portion of the project is necessary in order to relocate the existing airport perimeter road outside of the RSA / Runway Object Free Area (ROFA) limits.

Instrument Approach Upgrades

There are no existing published instrument approach procedures to Runway 16-34; only visual approaches. Based upon user input, a preliminary evaluation of the feasibility of implementing instrument approaches to Runway 16-34 was conducted by the FAA upon submittal of an aeronautical survey. Based on the results of the FAA feasibility analysis, an instrument approach to Runway 34 is not feasible due to obstructions and conflicts with ATL Class B Airspace. An approach to Runway 16 was found feasible from an obstruction and airspace perspective; however, changes to RPZ dimensions, traffic patterns and location of noise sensitive land uses make an approach to Runway 16 undesirable by the Airport.

5.1.3 Runway 3L-21R Improvements

There are no immediate improvements needed for Runway 3L-21R other than routine pavement maintenance and marking, signage and lighting upgrades.

5.2 General Aviation Development Options

An increase in general aviation activity at the Airport is projected over the next 20 years. Despite fluctuation in the number of general aviation operations over the years, the number of based aircraft at the Airport is expected to increase.

According to the information found within the, Inventory Chapter, 355 aircraft are currently stored in the various hangar facilities at the Airport. Therefore, based on the previous chapter, an additional 132 hangar spaces will be needed at PDK by the end of the planning period to meet the expected demand. Because the Airport lacks any facilities to accommodate based corporate aircraft growth the greatest need is anticipated to be for corporate hangars.

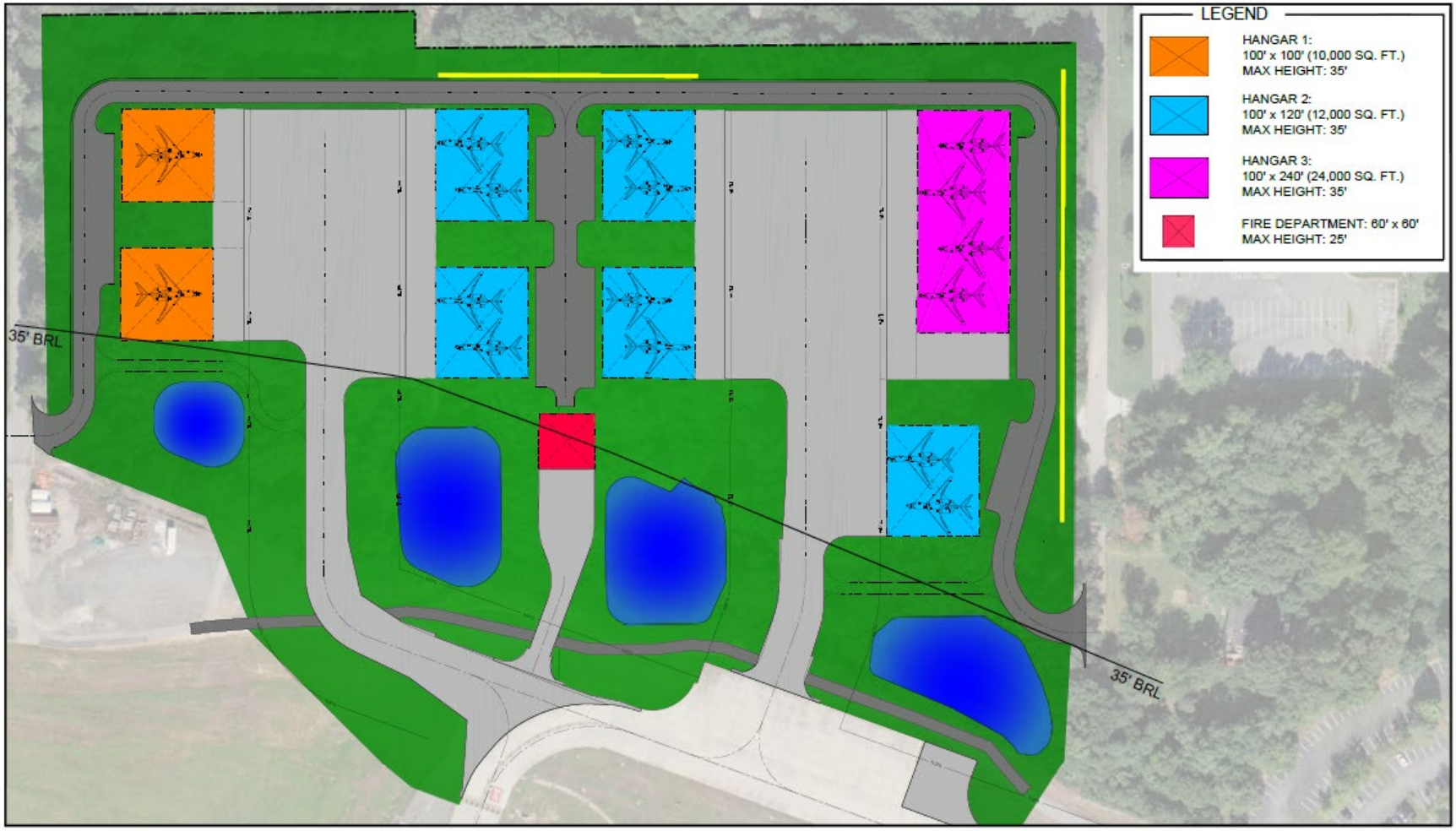
Several options exist to meet this demand for aircraft storage. Rectangular hangars such as FulFab and Erect-A-Tube provide pre-fabricated, lower cost solutions for aircraft storage that could be located on available airport property. Though it is projected that the Airport will need additional t-hangar units and corporate hangar space, actual demand could be significantly greater based on the level of growth. It is difficult to predict with certainty which type of hangars will be used for each aircraft type in the future. However, it is safe to assume that all the additional jet or rotor aircraft based at the Airport will be accommodated in either an FBO or corporate hangars. A development approach for general aviation development opportunities is proposed for two areas, Southwest Quadrant (ongoing) and the East Area Development. Both combine totals roughly 42.5 acres of existing Airport property. The following section explores in detail the opportunities presented in both project site locations.

5.2.1 Southwest Quadrant Improvements

This project in which was planned prior to the Master Plan is located in the southwest quadrant of the airport bounded by Taxiway A on the east, Clairmont Road on the west, West Hardee Avenue on the north, and West Bragg Street on the south. Shown in **Figure 5-5**, this undeveloped area of airport land would largely address general aviation storage demand at PDK.

The project generally consists of development of eight corporate size hangars: two 10,000 square foot hangars, five 12,000 square foot hangars and one 24,000 square foot hangar along with a new ARFF station and four detention ponds for runoff. The number of aircraft expected to be housed in these corporate hangar is largely dependent on the size of the aircraft however, at minimum sixteen jets can be accommodated with this configuration. Aircraft access is granted by two ADG III taxilanes. Vehicular access to this area of the airport will be given by means of West Hardee Avenue to the north and Bragg Street to the south. Auto parking is found along the perimeter road of the project site.

Figure 5-5: Southwest Quadrant Improvements



Source: Michael Baker International, 2019

The City of Chamblee has reviewed the proposed development and determined that the proposed development exceeded some of the City's Code Enforcement guidelines. To satisfy, the City of Chamblee code enforcement guidelines a variance application addressing the following matters (1) to remove the requirement to provide streetscaping on public street abutting the proposed development, (2) to increase the allowable height of the retaining walls in a front yard from 4 feet to 24 feet, (3) to allow barbed wire to be installed atop fencing, were required in order for City approval. To address the streetscaping issues, the Airport has agreed to improve streetscaping along Dresden Drive as part of this development illustrated in **Figure 5-6**.

Figure 5-6: Dresden Drive Streetscape

Michael Baker International, 2020.

5.2.2 VOR Development Area

As mention in the previous chapter, FAA is moving opposite of ground-based navigation systems (VOR) to a satellite-based system. For this reason, PDK VOR is on the FAA list to be decommissioned, or removed from service within the short-term planning period. In this regard, a large area east of Runway 3R-21L and north of the Ops Area would subsequently be available to expand general aviation infrastructure and to include a site for an aviation museum. Several alternatives have been established to investigate feasibility options to achieve the spaces needed in order to accommodate the anticipated based aircraft demand.

VOR Development Area Alternative 1

Southeast Development Alternative 1 is depicted in **Figure 5-7**. The features of this alternative are described below.

Alternative 1 proposes a node of corporate hangars directly north and south of the Ops Area. Four 12,000 square-foot corporate hangars north of the Ops Area and seven 12,000 square-foot immediately south of the Ops Area. The Ops Area will be converted to an ADG III taxiway to provide aircraft access to this area. T-hangar development is proposed along the east side of Runway 3R-21L where six 13-unit T-hangars, one 10-unit T-hangar, one 4-unit T-hangar and aircraft parking and tie-down area totaling 184,393 square-yard combined would be planned north and south of the T-hangar configuration. South of Runway 34, and east of Runway 3R-21L, is the site of 150,000 square-foot aviation museum. The proposed site for the aviation museum is bordered by the RPZ of Runway 34 towards to north, a proposed parallel taxiway to the west, Buford Highway and Independent Plaza shopping center on the south. A total of 11 acres is allocated for the proposed museum site.

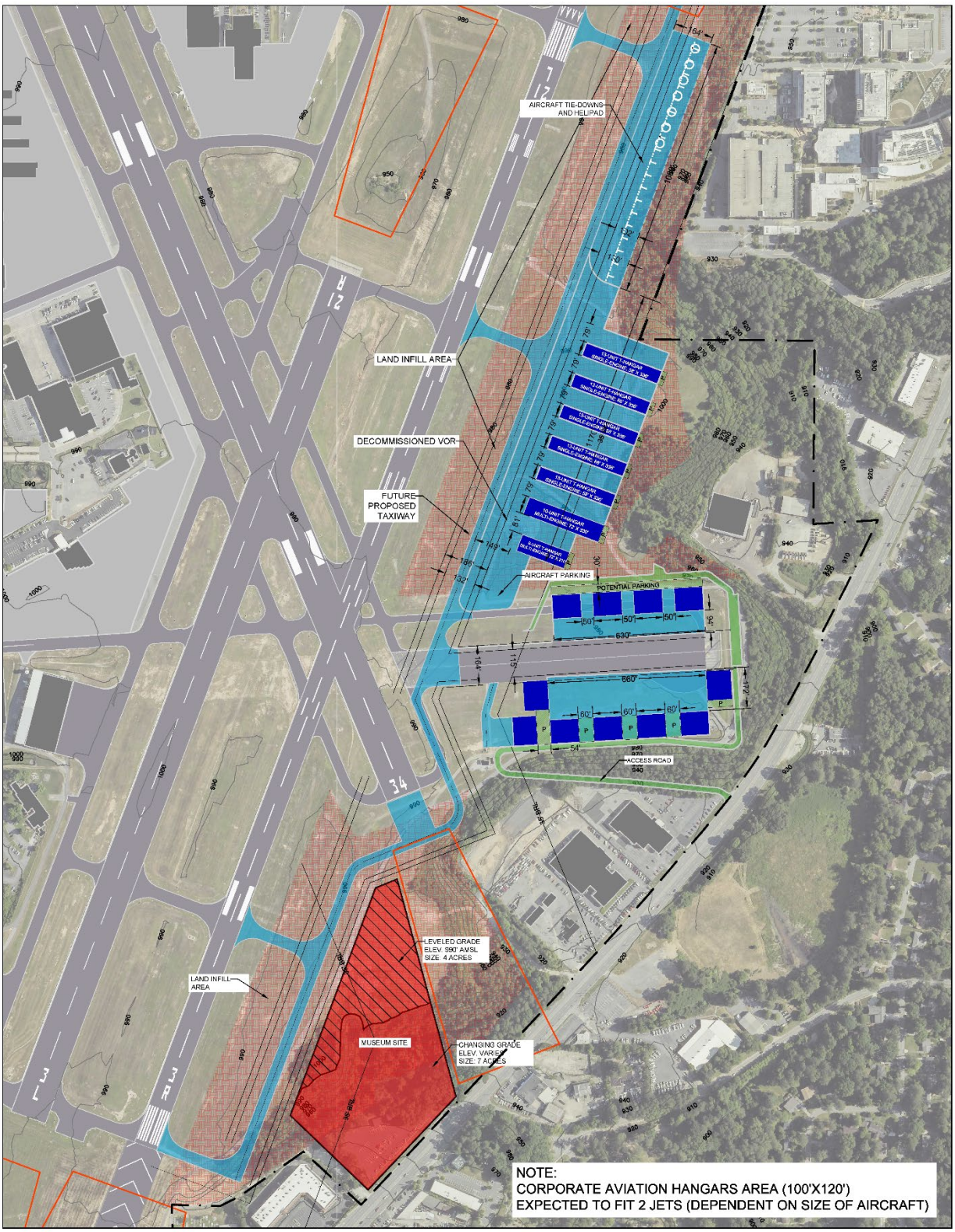
The table below highlights the number of aircraft hangar spaces that East Area Alternative 1 would be able to accommodates.

Table 5-1: East Area Alternative 1 Aircraft Hangar Space Count

Aircraft Type	Single Engine	Multi-Engine	Jet	Heli
Objective	**85 spaces**	**13 spaces**	**28 spaces**	**6 spaces**
Meets Objective	**x**	✓	**x**	✓
Difference	20 spaces needed	-	8 spaces needed	-

Note:
This table considers the expected number of jets (approximately 16) anticipated to be accommodated in the Southwest Quadrant development.
Helicopter assumes tie-down.

Figure 5-7: East Area Development Area Alternative 1



Source: Michael Baker International, 2019

VOR Development Area Alternative 2

Southeast Development Alternative 2 is depicted on **Figure 5-8**. The features of this alternative are described below.

Alternative 2, includes ten corporate hangars developed immediately around the Ops Area. Provided access by a new taxiway; five additional corporate hangars and aircraft/heli tie-down are proposed north of the Ops Area and parallel to Runway 3R-21L. A 150,000 square-foot aviation museum is proposed south of the Ops Area with access from Buford Highway. An additional 12,000 square foot hangar located south of the Ops Area would be included and used as hangar space for the aviation museum. Unlike the previous alternative, T-hangar development would occur east of Runway 3R-21L where five 13-unit single-engine T-hangars, are planned. Vehicular access to this area is provided by an access road connected to Buford Highway.

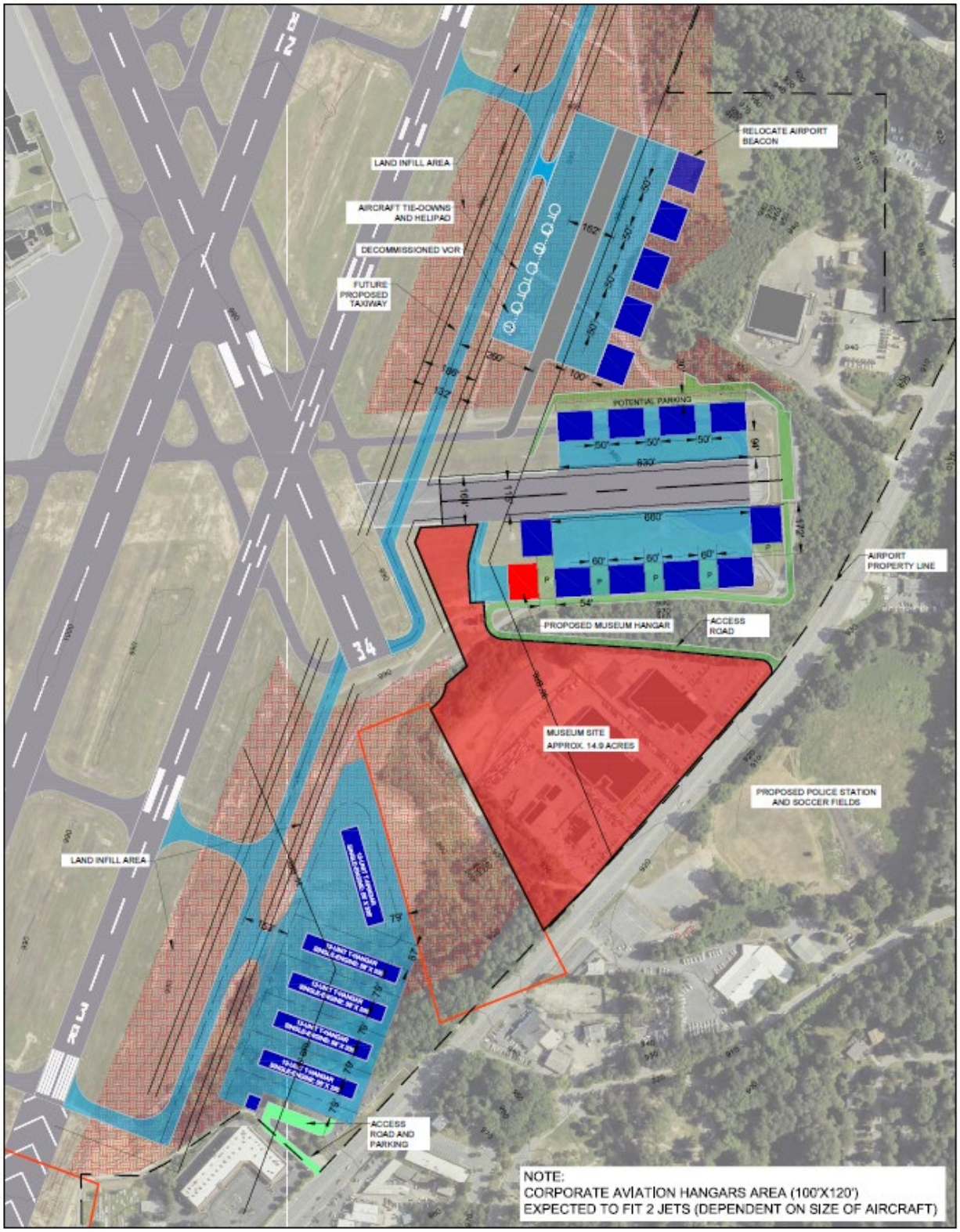
The table below highlights the number of aircraft hangar spaces that East Area Alternative 2 would be able to accommodate

Table 5-2: East Area Development Alternative 2 Aircraft Hangar Space Count

Aircraft Type	Single Engine	Multi-Engine	Jet	Heli
Objective	**85 spaces**	**13 spaces**	**28 spaces**	**6 spaces**
Meets Objective	**x**	**x**	✓	✓
Difference	20 spaces needed	13 spaces needed	-	-

Note:
This table considers the expected number of jets (approximately 16) anticipated to be accommodated in the Southwest Quadrant development.
Helicopter assumes tie-down.

Figure 5-8: East Area Development Alternative 2



Source: Michael Baker International, 201

VOR Development Area Alternative 3

Southeast Development Alternative 3 is depicted on **Figure 5-9**. The features of this alternative are described below.

Alternative 3 illustrates ten corporate hangars located around the Ops Area. Four 12,000 square foot hangar to the north while six 12,000 square foot hangars are planned to the south of Ops Area. The Ops Area will be refitted as an ADG III taxiway for aircraft movement. Parallel to Runway 3R-21L an additional five 12,000 square foot corporate hangars and a total of four T-hangars are expected. Aircraft entry to this area will be by way of Taxiway C as well as a proposed new parallel taxiway. Five T-hangars to accommodate single-engine aircraft is located south of Runway 34 and east of Runway 3R. A new access road from Buford Highway will be the point of entry for vehicular traffic. The proposed site for the aviation museum encompasses 14.9 acres of land east of Runway 34 and south of the Ops Area. Similar to Alternative 2, an additional 12,000 square foot hangar located south of the Ops Area will be incorporated and used for the aviation museum.

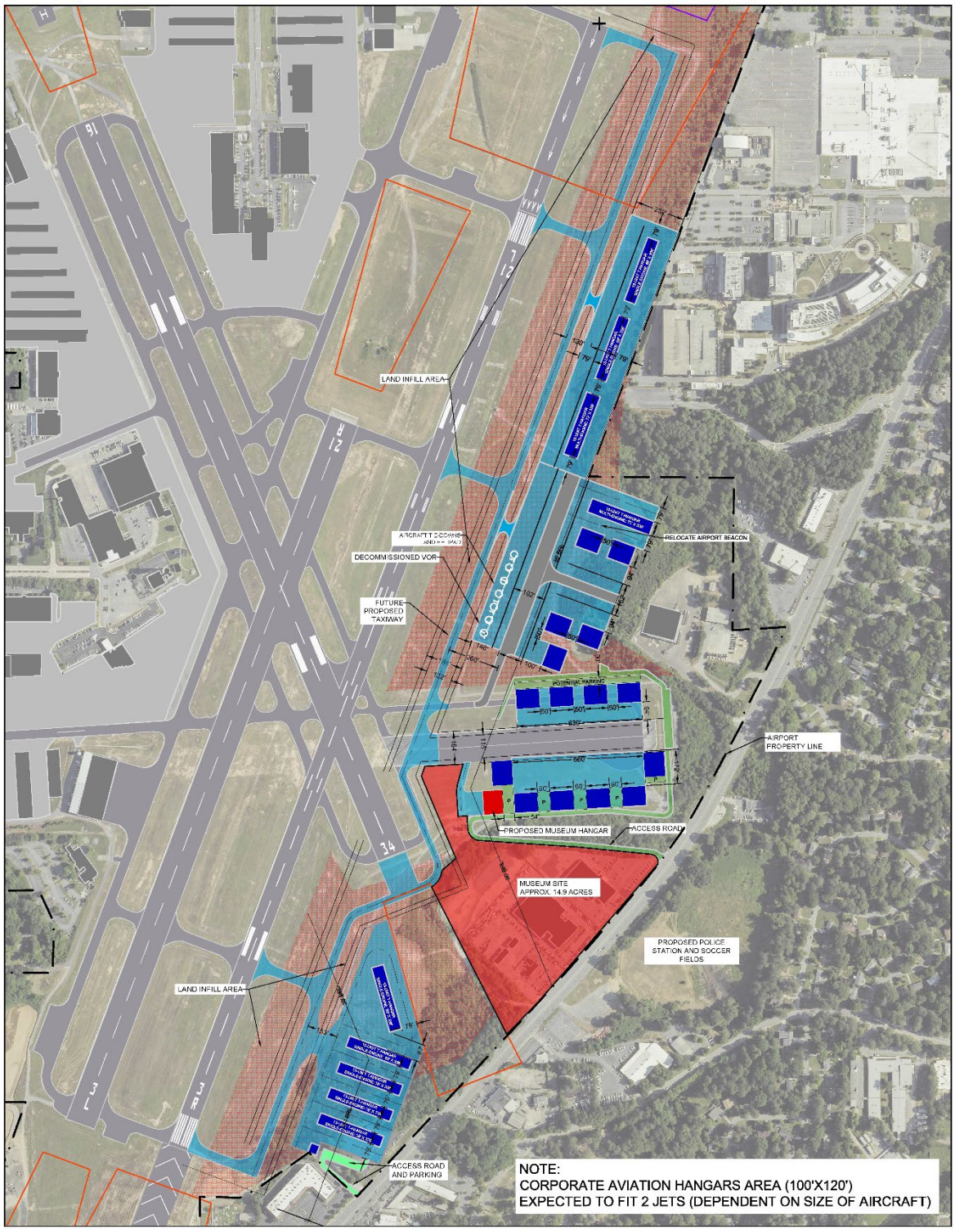
The table below highlights the number of aircraft hangar spaces that East Area Alternative 3 would be able to accommodate

Table 5-3: East Area Alternative 3 Aircraft Hangar Space Count

Aircraft Type	Single Engine	Multi-Engine	Jet	Heli
Objective	**85 spaces**	**13 spaces**	**28 spaces**	**6 spaces**
Meets Objective	✓	✓	✓	✓
Difference	6-unit surplus	7-unit surplus	-	-

Note:
This table considers the expected number of jets (approximately 16) anticipated to be accommodated in the Southwest Quadrant development.
Helicopter assumes tie-down.

Figure 5-9: East Area Development Alternative 3



Source: Michael Baker International, 2019

Preferred VOR Development Area Alternative

Southeast Development Alternative 2 is depicted on **Figure 5-8**.

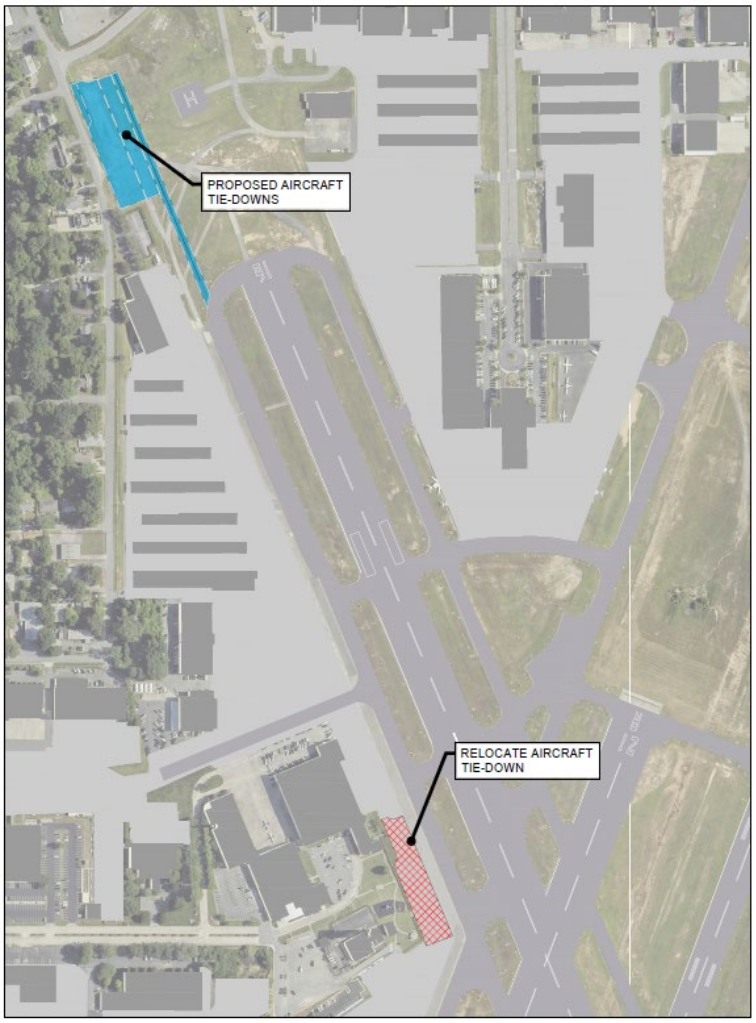
5.3 Northeast Quadrant Improvements

Previously, the *Facility Requirements* chapter identified two areas for consideration herein. A primary recommendation dealt with replacing providing additional storage for aircraft using tie-downs in addition to replacing County T-Hangars.

5.3.1 County Tiedown Relocation

Relocation of existing aircraft tie-downs located adjacent to the Airport Administration Building is proposed north of Airport County Hangars parallel to Runway 16. Shown in **Figure 5-10**, the proposed 13,535 square yard tie-down ramp is approximately 985 square-yards larger and is expected to accommodate roughly 20 single-engine aircraft. The major disadvantage of relocating the ramp to this location would be lack of flight training facilities and proximity to off airport land uses.

Figure 5-10: Relocated Tiedown Ramp

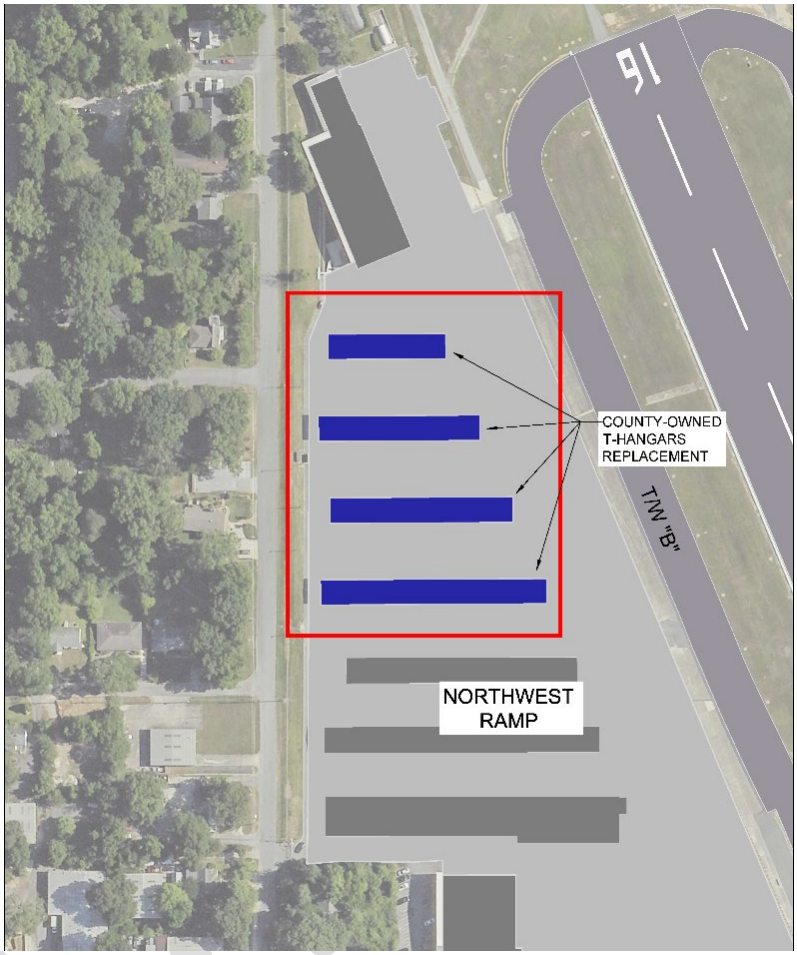


Source: Michael Baker International, 2020

5.3.2 County T-hangar

Figure 5-11 displays four T-hangars located northern portion of the Northwest ramp at PDK. These T-hangar have serviced well beyond their useful life. According to the previous chapter, the T-hangar should be replaced.

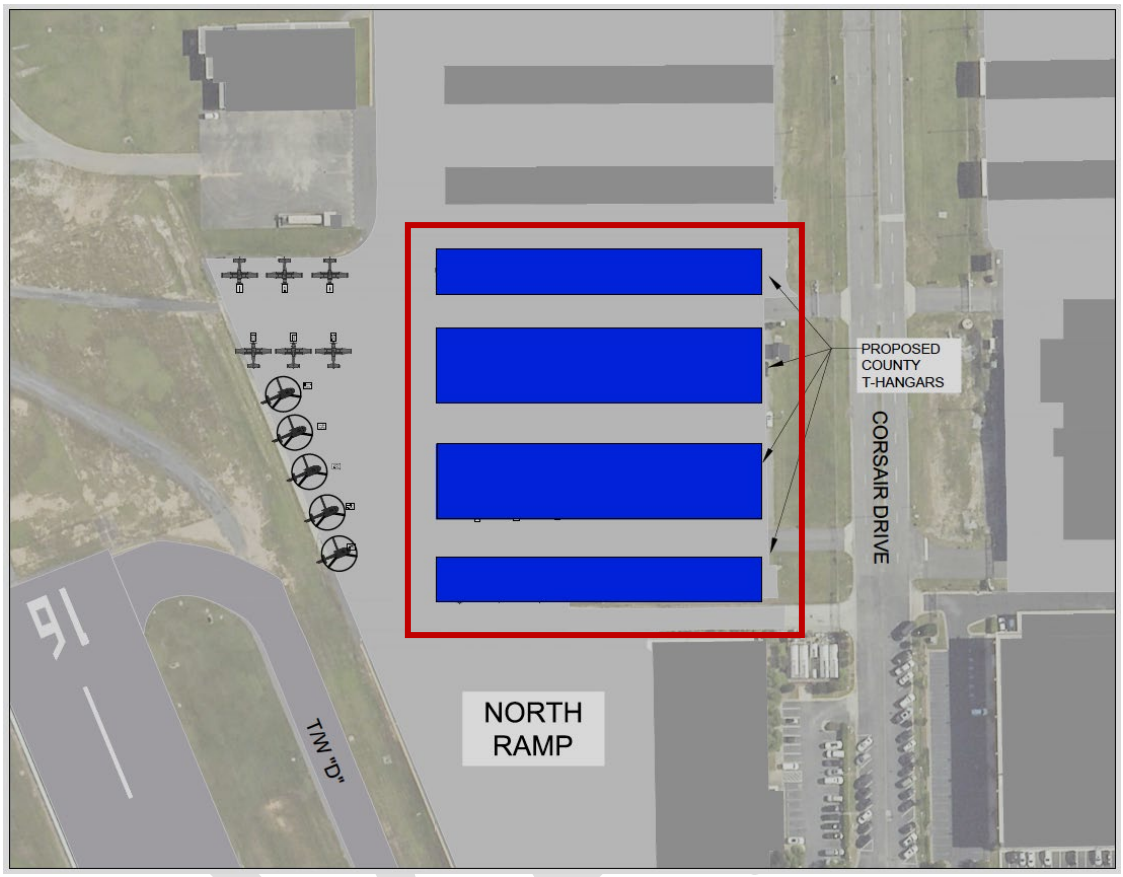
Figure 5-11: County T-Hangar Replacement



Source: Michael Baker International, 2019

In addition, a portion of the North Ramp is typically used for storing smaller single and multi-engine aircraft parked on tie-downs. The owners of these aircraft are typically owned by personal or small business owner who prefer individual space in T-hangars. The TAC along with other users of the Airport have disclose the desire for sheltered aircraft storage; therefore, the development of four County T-hangars is proposed for the North Ramp area east of Runway 16. The T-hangars will replace the existing 46 aircraft tie-down positions located on the ramp shown in **Figure 5-12**.

Figure 5-12: Proposed County T-Hangars



Source: Michael Baker International, 2019

5.4 Administration Building

This 22,000 square foot facility was constructed during World War II and was originally used for military offices. When DeKalb County gain acquisition over the Airport in 1959, the building was converted into the Airport's Administration facilities which once included the Airport's control tower. The Administration Building has undergone various incremental upgrades over the past decades. These upgrades have allowed the Airport to remain functional and for the Administration Building to remain within the same basic footprint. However, this World War II building has not only surpassed its useful life but inherited and adapted many significant issues over the decades such as:

- Non-ADA compliant - No elevators,
- Evidence of asbestos in areas of the building,
- No sprinkler system, a violation of Fire Code,
- Lack of central HVAC, relying solely on window units.

The Administration building, and its immediate vicinity have undergone a feasibility plan in order to evaluate and determine the future of the existing PDK Airport Administration facility building and surroundings given the needs and anticipated growth of the airport. The information gained from the study will be a catalyst to assist DeKalb County in making informed and thoughtful decisions on the building's fate. The findings from study are outlined below.

- **Site and Parking**: An above-ground parking deck is envisioned to accommodate administrative spaces displaced by renovation and new construction as well as creating a secure central location for people to park when visiting or working at the airport campus.
- **Structural**: The existing structure can be generally characterized to be in good condition. More investigation would be required if full renovation of the existing structure is preferred. If a vertical expansion of the building is desired, structural reinforcing would be required.
- **Roofing**: The roof appears to be approaching the end of its usable life and should be replaced.
- **Exterior Architecture**: If the building is renovated, windows should be replaced. Sound isolation strategies should be investigated. Weather barriers and drainage layers of the building facade should be tested to ensure future performance.
- **Mechanical**: All PTAC units should be removed. A new HVAC system should be installed. Steam boiler and steam radiators should be removed. Restroom exhaust systems should be brought up to current code.
- **Electrical**: A new 3-phase electrical service and distribution panelboard should be installed. Existing electrical panels and services are outdated.
- **Plumbing**: Existing plumbing should be scoped to evaluate its current condition. If they are free of breaks or clogs and in working order, they can remain in service. Portions of the domestic hot/cold water systems are beyond life expectancy and corroding. They should be replaced. All water heaters are beyond life expectancy and should be replaced.
- **Fire Protection**: No sprinkler system is present in the building. A new automatic wet pipe sprinkler system should be installed. No fire alarm is present. A code compliant fire alarm system should be installed.
- **Hazardous Materials**: Asbestos Containing Materials (ACM) and Lead Based Paint (LBP) were found throughout the building. These materials should be properly abated.
- **Interior Architecture**: All loadbearing walls should be re-finished. All non-loadbearing walls should be replaced during a renovation. All flooring should be replaced. All acoustical ceiling tile should be replaced. All light fixtures should be replaced with LED fixtures. Any damaged doors should be replaced.
- **Life Safety**: An enclosed fire-rated stairway should be created. An accessible area of refuge should be created in conjunction with rated stairway. All egress lighting should be checked and updated as needed. All egress paths should be verified as brought up to current code.
- **Accessibility**: The building does not meet all accessible building standards. The inclusion of an elevator would allow unrestricted access to the second floor. All toilet rooms do not meet current ADA standards and should be brought up to compliant levels.

Taken from the Administration Building Feasibility Study, the concepts below examine three possible alternatives for the Administration Building.

Administration Building Alternative 1: Full Building Renovation with New Addition

The 2-story, approximately 22,000 SF existing structure would be completely renovated. Shown in, **Figure 5-13**, this renovation

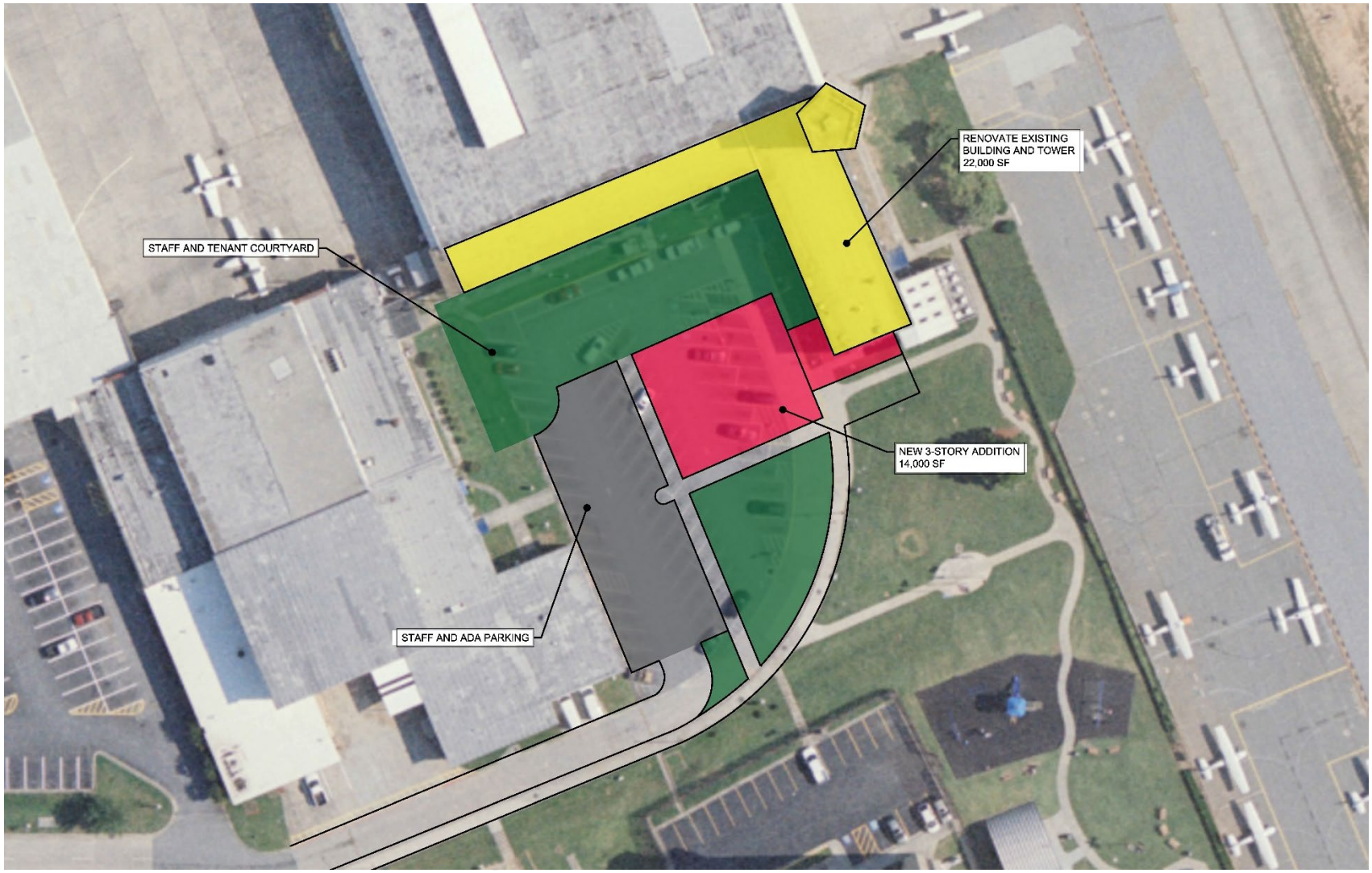
would bring the existing facility up to current building code standards as well as meet ADA compliance for all spaces and floors. This would entail, but not be limited to, the following:

- Abatement of all hazardous materials as noted in this report
- Removal of all non-load bearing walls
- Removal of all windows and vinyl siding infill, and replace with new storefront-type windows with sound-proof glazing
- Remove and replace all electrical systems
- Remove and replace all plumbing lines, abandoning lines under the slab
- Core and trench for new plumbing as needed
- Replacement of roofing membrane, insulation, roof decking if deficient, gutters and downspouts
- All new interior walls would be constructed of metal stud framing with painted gypsum wallboard
- Installation of new central heating and air conditioning system
- Installation of new fire sprinkler and fire alarm system

The addition would be approximately 14,000 SF to meet the overall requirements of the new program as defined by the current manager and staff of the facility. The addition would have the following spaces or features:

- Two-story to three-story structure Type II-B, steel and concrete construction
- Two elevators (one passenger and one freight)
- Two new egress stairways
- Office spaces for PDK staff
- Tenant space
- Large conference room

Figure 5-13: Full Building Renovation with New Addition



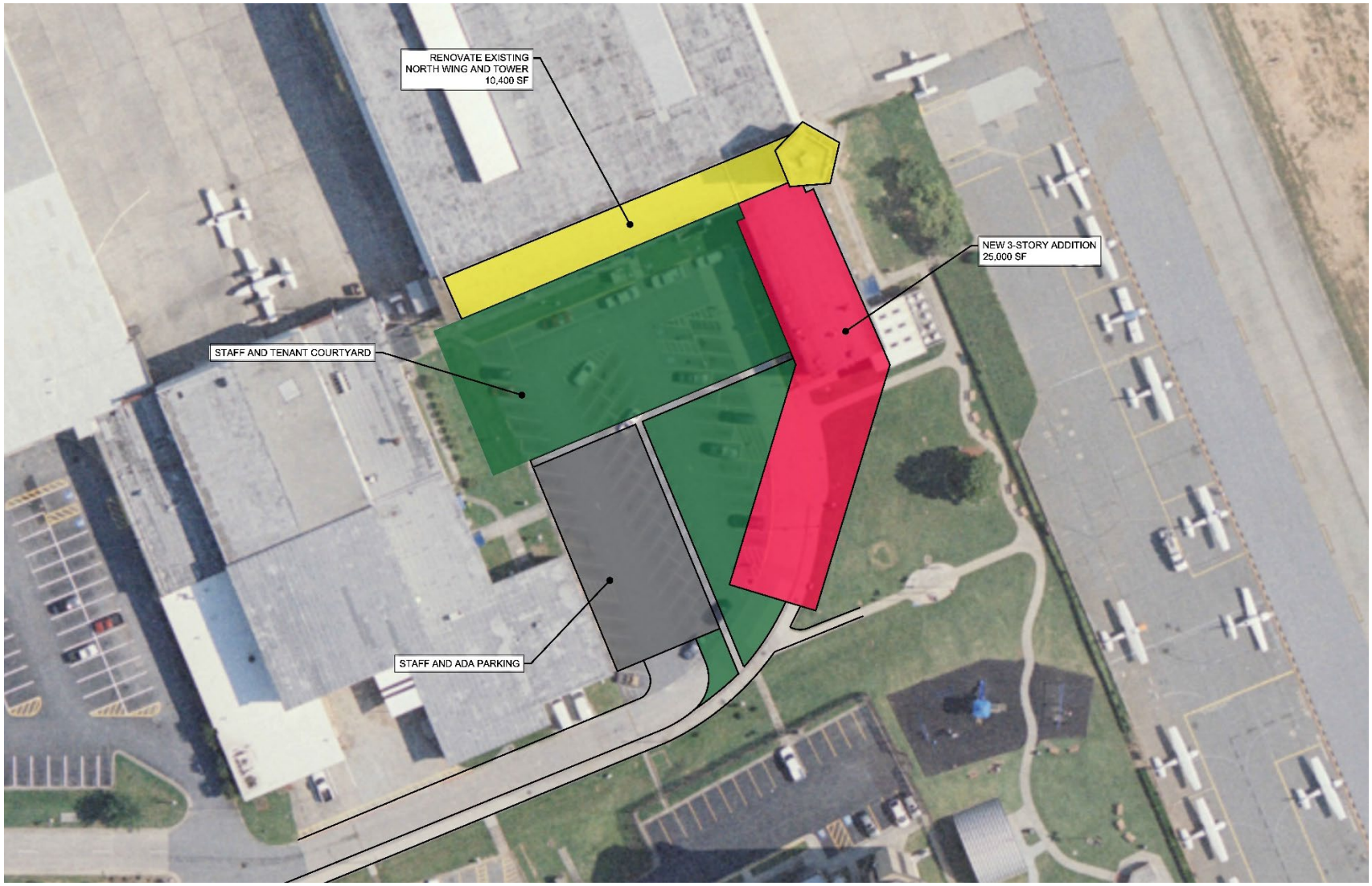
Source: Michael Baker International, 2019

Administration Building Alternative 2: Partial Building Renovation, Partial Building Demolition with New Addition

This scenario displayed in, **Figure 5-14**, envisions part of the existing building being salvaged and renovated while part of it is demolished. Because the north wing is integral to the existing airplane hangar construction and contains the structure for the old control tower, it seems appropriate that this two-story section remain while the east wing could be demolished to make way for a new and larger addition. This option recognizes and understands the nostalgic worth of the historic building while seeking to improve upon the limitations inherent with its construction and current condition.

The renovated portion/wing of the building would correspond to the criteria and parameters laid out in Option A above. The renovated area would be approximately 10,400 SF. The new wing/addition would be approximately 26,000 SF.

Figure 5-14: Partial Building Renovation, Partial Building Demolition with New Addition



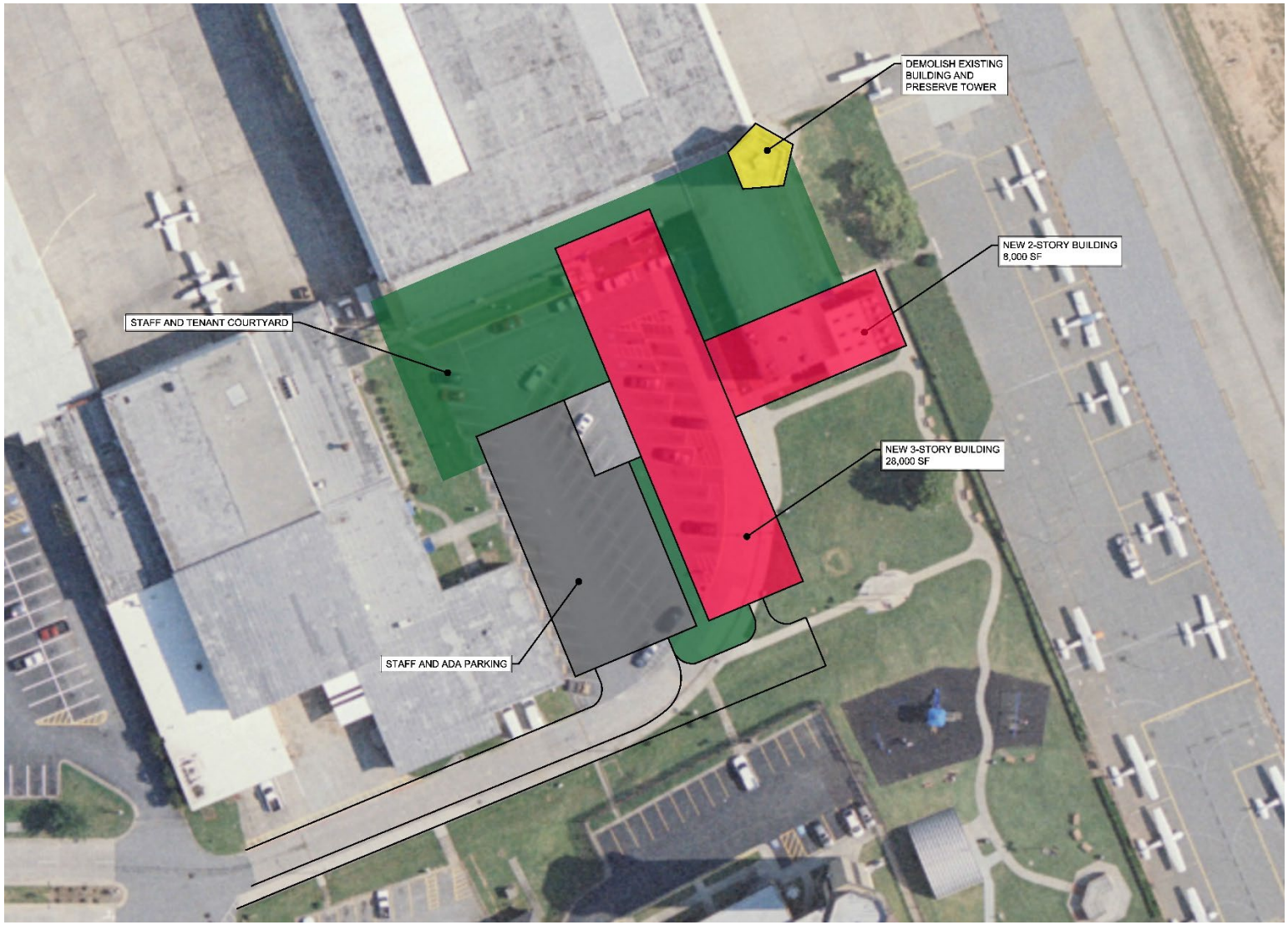
Source: Michael Baker International, 2019

Administration Building Alternative 3: Full Building Demolition and New Building Construction

Because of the limitations of the existing structure and the increase in programmatic needs, a full demolition and rebuild of a new facility should be considered illustrated in **Figure 5-15** as well despite the nostalgic and historic value of the existing building. Each previous section has attempted to document and define the existing conditions and made specific recommendations for solutions to current issues, but there remain many deficiencies with the existing building. A new administration facility would meet the current and future needs as documented in the proposed program of spaces of the PDK airport administration, its tenants, and visitors to the site.

An entirely new, ground-up facility would be potentially three stories and approximately 36,000 SF.

Figure 5-15: Full Building Demolition and New Building Construction



Source: Michael Baker International, 2019

5.4.1 Administration Vehicle Parking/Public Space

Parking will also be addressed in support of the provided for the Administration building scenarios. The existing parking options are two lot that total 147 usable spaces. The more utilized lot is located directly in front of the Administration building and contains 61 general use spaces, while the less utilized lot is further away from the Administration building and contains 71 general spaces. The remainder of parking spaces is split between handicap accessible, electric charging station and staff parking. Both lot are public and available for visitors of the PDK Administration building or the Doc Manget Memorial Aviation Park.

While some parking spaces, assumed to be staff and ADA-compliant will remain as surface spaces adjacent to the Administration building, a new 200-space above-ground parking deck is envisioned to accommodate administrative space displaced by renovation and new construction as well as creating a secure central location for people to park when visiting or working at the Airport. The new deck would be situated where the existing south surface lot is currently located. The geometry and space required for an efficient parking deck is well suited in this location. In order to provide adequate parking for the capacity determined within the study, the deck would likely be a two and a half story structure.

5.5 Aircraft Rescue Fire Fighting

Improvements to the Airport's existing ARFF station will be addressed within short-term planning. This hangar converted into an ARFF station is located north of the Airport south of Flightway Drive. Since the building wasn't originally designed as an ARFF station, users have expressed some issues regarding the building which include, inefficient access to the airfield along with inadequate crew quarters and vehicle storage. Because the existing ARFF station at the Airport services both the Airport and DeKalb County, it is expected for the existing station to remain at the Airport.

In conjunction with a previous project this master plan plans to provide an additional ARFF station on the Southwest Quadrant of the Airport. This project will improve incident response times to the southern portion of the airfield. Unlike the ARFF Station #15 located in the north portion of the Airport which is a joint use County and Airport Fire Station, this project represents a development of a new 3,600 SF aircraft rescue firefighting station which will be used exclusively for PDK's airfield.

5.6 Airport Security

Airport security is important in order to identify and reduce existing or potential risks, threats, targets and vulnerabilities to the airport facility. DeKalb County provides 24-hour security personnel for PDK. Security facilities at PDK are in the administration building located in the west basing area. It is expected for new administration building to include space for airport security

5.7 Environmental Considerations

During preparation of the Master Plan, environmental factors should be considered to determined potential environmental impacts of airport development alternatives and the identification of environmentally related permits that may be required for recommended development projects. Chapter 2, Inventory of Existing Conditions provides an overview of potential considerations at the Airport. These considerations generally fall into environmental categories in the FAA Order 1050.1F and the FAA 1050.1F Desk Reference. These categories include:

- Air quality,
- Biological resources,
- Determination of Transportation Act, Section 4(f),
- Hazardous materials, solid waste, and pollution prevention,
- Historical, architectural, archeological, and cultural resources,
- Land use,
- Natural resources and energy supply,
- Noise,
- Environmental Justice,
- Lighting Emissions and Visual effects, and
- Water resources.

Table 5-4 and **Table 5-5** provide a preliminary assessment of potential environmental factors of each proposed development concept and alternative divided into airside and landside projects. Airside project includes those projects most directed associated with aeronautical activities. Landside projects include those most directly association with airport support functions.

Table 5-4: Potential Environmental Considerations of Airside Improvements

NEPA Impact Categories	Potential Impact								
	Rehab Airfield Pavements	VOR Development Area (Alts 1-3)	Runway 34 RSA Improvement	Proposed Landfill Removal	Proposed Eastside Parallel Taxiway	Proposed Lighting System Upgrade	Remove/Relocate Aircraft Tie-Downs	NW T-Hangar Replacement	Convert County Tie-Downs to T-Hangar
Air Quality	N	Y	N	N	Y	N	N	N	N
Biological Resources	N	Y	Y	N	Y	N	N	N	N
Land Use Impacts	N	N	N	N	N	N	N	N	N
Construction Impacts	Y	Y	Y	Y	Y	Y	Y	Y	Y
Section 4(f) Resources	N	N	N	N	N	N	N	N	N
Endangered Species	N	N	N	N	N	N	N	N	N
Energy Supplies, Natural Resources and Sustainability	N	Y	N	N	Y	Y	Y	N	N
Environmental Justice	N	N	N	N	N	N	N	N	N
Farmlands	N	N	N	N	N	N	N	N	N
Hazardous Materials	N	Y	N	Y	Y	N	Y	Y	Y

Historical, Archaeological and Cultural Resources	N	Y	N	N	N	N	N	N	N
Induced Socioeconomic Impacts	N	N	N	N	N	N	N	N	N
Light Emissions and Visual Effects	N	Y	N	N	N	N	N	N	N
Noise	N	Y	N	N	Y	N	Y	N	N
Social Impacts	N	N	N	N	N	N	N	N	N
Solid Waste	Y	Y	Y	Y	Y	N	N	N	N
Water Quality	Y	Y	Y	Y	Y	N	Y	Y	N
Wetlands	N	Y	N	Y	Y	N	N	N	N
This table represents an initial opinion of potential environmental considerations not a final determination of impacts. Evaluation of federally funded projects occurs during the NEPA process prior to implementation of the project.									

Source: Michael Baker International, 2020.

Table 5-5: Potential Environmental Considerations of Landside Improvements

NEPA Impact Categories	Potential Impact			
	Rehab Interior Roads (Airport, Corsair, Flightway)	Admin Building and Parking Deck (Alts 1-3)	Relocate Flightway Drive Entrance	Remove County Sanitation
Air Quality	N	N	N	N
Biological Resources	N	N	Y	Y
Land Use Impacts	N	N	N	N
Construction Impacts	Y	Y	Y	Y
Section 4(f) Resources	N	Y	N	N
Endangered Species	N	N	N	N
Energy Supplies, Natural Resources and Sustainability	N	N	N	N
Environmental Justice	N	N	N	N
Farmlands	N	N	N	N
Hazardous Materials	N	Y	N	Y
Historical, Archaeological and Cultural Resources	N	Y	N	N
Induced Socioeconomic Impacts	N	N	N	N
Light Emissions and Visual Effects	N	N	N	N
Energy Supply & Natural Resources	N	N	N	N
Noise	N	N	N	N

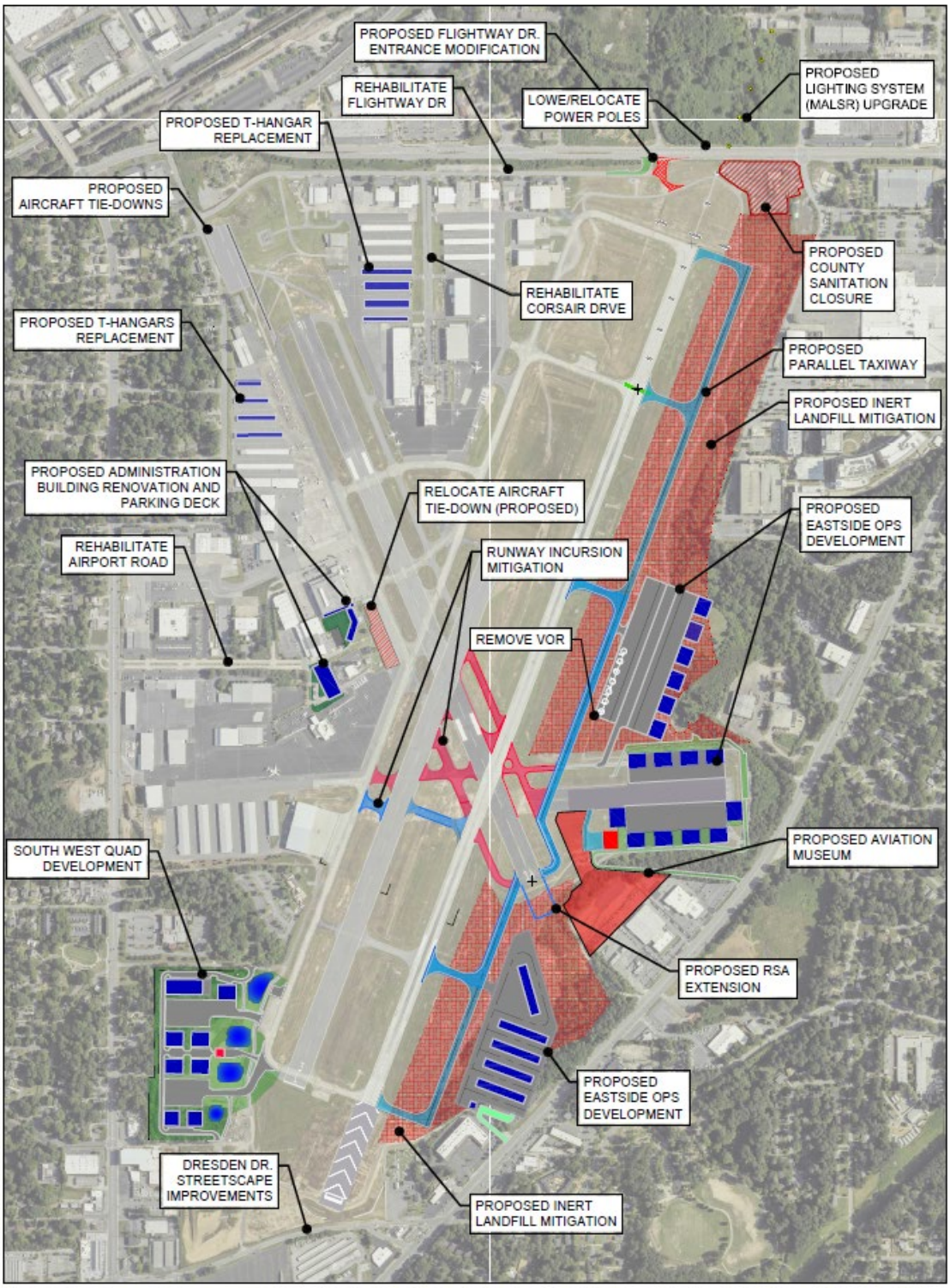
Social Impacts	N	N	N	N
Solid Waste	Y	Y	Y	Y
Water Quality	Y	Y	Y	Y
Wetlands	N	N	Y	N
This table represents an initial opinion of potential environmental considerations not a final determination of impacts. Evaluation of federally funded projects occurs during the NEPA process prior to implementation of the project.				

Source: Michael Baker International, 2020.

5.2 Preferred Alternative

Figure 5-16 presents the preferred alternative for airfield improvements at DeKalb Peachtree Airport.

Figure 5-16: PDK Improvements



Source: Michael Baker International, 2020

Chapter 6 – Airport Layout Plan

The ALP represents a group of drawings that serve as the primary tool to guide growth at the airport throughout the 20-year planning period and beyond. The ALP set was reduced from its full-size of 22" x 34" to be incorporated in this chapter for easy reference. The drawings in this ALP set include:

- Title Sheet,
- Airport Data Sheet,
- Existing Conditions Drawing,
- Airport Layout Drawing,
- Basing Area Plan – North,
- Basing Area Plan – Clairmont Ramp/North Central,
- Basing Area Plan – Central,
- Basing Area Plan – Southwest,
- Basing Area Plan – East 1,
- Basing Area Plan – East 2,
- Airport Airspace Drawings (3 Sheets),
- Inner Portion of Approach Surface Drawings (6 Sheets),
- Runway Departure Surface Drawing (3 Sheets)
- Off Airport Land Use Drawing,
- Exhibit "A" Airport Property Inventory Map, A
- Obstruction Tables (35 Sheets).

6.1 Title Sheet

This sheet serves as the ALP Drawing Set cover sheet and provides information to include the official airport name, airport owner, associated city and state and the party responsible for preparing the ALP set. An index of drawings, graphic representations of the airport location and the airport vicinity are also presented on the title sheet. Approval blocks are provided for the Airport Sponsor and GDOT. Reference **Drawing 1** in the ALP Drawing Set which follows this chapter.

6.2 Airport Data Sheet

The Airport Data Table provides basic airport data and key planning criteria for initial and ultimate timeframes. This table includes airport elevation, airport reference point, airport reference code, NAVAIDS, design aircraft and taxiway lighting. The table provides the mean maximum temperature of the hottest year for the airport site, which is utilized in runway length analysis. The table also includes designated roles within the state and federal aviation systems.

The Runway Data Table provides details related to the initial and ultimate runway and associated facilities. The table includes runway length/width, wind coverages, runway design code, critical aircraft, true bearing, effective gradient, runway lighting, pavement strength, and surface composition. The table also provides FAA design criteria for each runway based upon planned instrument approaches and weather minimums, including approach slopes, runway design code, approach reference code, departure and reference code. The table provides dimensions of safety elements, including RSA, OFA, OFZ, and RPZ.

The Declared Distance Table provides information pertaining to specific lengths of runway that are published for aircraft operations, specifically when taking off or landing.

Two wind roses are presented to demonstrate crosswind coverages of each runway end in All-Weather and IFR conditions. Ten years of weather data is collected from a weather station located at PDK for period of 2008-2017.

A reduced scale version of the Airport Layout Drawing is provided at the end of this chapter (reference **Drawing 2**).

6.3 Existing Conditions

The Existing Conditions Drawing is a graphical representation, to scale, of the current conditions of existing airport facilities at DeKalb Peachtree Airport. This drawing is similar to the Airport Layout Drawing however it does not depict proposed improvements. The intent of this drawing is to provide a less cluttered depiction of existing facilities than that of the ALP.

6.4 Airport Layout Drawing

The Airport Layout Plan Drawing (ALP) depicts all existing and planned future airport facility developments as proposed within the 20-year Airport Master Plan. To facilitate the review of planned facility improvements, separate ALPs depict existing/future and ultimate conditions respectively. Only the Future ALP is accepted, conditionally approved and retained on-file by the GDOT for future (i.e. FAA) funding authorization and/or participation. The ALP provides informational and dimensional data to demonstrate conformance with current and applicable FAA airport design standards as prescribed in FAA AC 150/5300-13A, *Airport Design*. Denoted or depicted ALP information includes, but is not limited to: runways, taxiways, airfield lighting, visual and electronic navigational aids, terminal facilities, hangars, other non-aviation or support buildings, aircraft parking areas, automobile and truck parking, and airport access elements, as well as general, aerial photogrammetric mapping and geodetic survey source notes.

A reduced scale version of the Airport Layout Drawing is provided at the end of this chapter (reference **Drawing 4**).

6.5 Basing Area Plans (North, Clairmont/North Central, Central, Southwest, Eastside)

The basing area plans also known as terminal area plans provide greater details of the existing and proposed basing areas at a scale of 1”=100’. Due to the location of facilities, the basing area plan is separated into “North,” “Clairmont/North Central”, “Central”, “Southwest,” and “Eastside” drawings. The Northside Terminal Area Plan depicts the proposed t-hangar basing area, one of the three FBO’s located at the airport, adjacent corporate hangars and helicopter basing area. Clairmont/North Central Terminal Area Plan depicts the proposed main airport terminal area, existing and proposed county t-hangars, additional FBO facilities, proposed new Administration Building and proposed tie-down area. The Southwest and Eastside Terminal Area Plan depicts the basing area for future aeronautical development. Elevations are based upon typical building heights for the size of hangars shown. Refer to **Drawings 5, 6, 7, 8 , 9** and **10** in the ALP Drawing Set provided at the end of this chapter.

6.6 Airport Airspace Drawings

These three sheets incorporate a graphic representation of the imaginary surfaces surrounding the airport as described within 14 CFR Part 77, Safe, Efficient Use, and Preservation of Navigable Airspace. The imaginary surfaces are established in relation to the airport elevation, the runway ends, runway end elevations, and define those areas where the height of objects should be regulated for the safe operation of aircraft. Imaginary surfaces include the following: Approach Surface, Transitional Surface, Horizontal Surface and Conical Surface. The size of each imaginary surface is based on the runway category and type of existing, or planned approach, whichever is the most demanding. Elevations of the Part 77 surfaces described in the drawing are based upon an airport elevation of 998.4 ft AMSL.

Obstruction data for these drawings were taken from the FAA Digital Obstacle File (DOF) and the FAA OE/AAA database. In some cases, obstruction data were verified using aerial survey obtained during the creation of the ALP; however, the majority of obstructions are from the FAA databases. Each obstruction is identified in the Obstruction Data Table. The table also includes the following: location (lat/long), type, city, height AGL, height AMSL, existing obstruction lighting, markings, FAA Aeronautical Study Number, amount of penetration, source of data and proposed action. Several obstructions noted in the table will need to be evaluated by the FAA to determine if the obstruction requires lighting, marking, lowering or removal. Refer to **Drawings 11, 12,** and **13** in the ALP Drawing Set provided at the end of this chapter.

6.7 Inner Portion of the Approach Drawings

The Inner Portion of the Approach Drawings depict natural and man-made features in the vicinity of and along the inner approach path to each runway end. The large-scale plan and profile views facilitate the identification of potential obstructions that lie within areas that should be free of objects that may preclude safe aircraft operations. The purpose of the drawing is also to identify land where acquisition or easements may be required. Obstructions identified in these drawings were obtained from an aeronautical survey that was captured on May 26, 2019 and the field survey was conducted from June 10, 2019 to June 14, 2019. In the future, additional field surveys at regularly scheduled intervals should be conducted to ensure clear approaches.

Each drawing identifies the boundaries of 14 CFR Part 77 Approach Surfaces, Threshold Siting Surfaces (as defined in Table 3-4 of FAA AC 150/5300-13) and the associated slopes related to each surface. The dimensions of these surfaces are dependent upon the type of instrument approaches planned to each runway end and the visibility minimums planned for that approach.

The Obstruction Data Tables identify each obstruction by number, type of obstruction, top elevation of the object, amount of penetration and proposed action. In the plan view, obstructions are identified using symbols representing the type of surface that is penetrated (Part 77 or Threshold Siting). Trees that will likely grow into the surfaces in the future are also identified. While all existing and future obstructions should be removed if possible, Threshold Siting penetrations are critical because not removing these penetrations may result in a displaced landing threshold. In the future, additional field surveys should be performed at regularly scheduled intervals to ensure clear approach and departure surfaces.

The drawings also provide the boundaries of the initial and ultimate runway protections zones. The dimensions of the RPZs are based upon the lowest visibility minimums of the planned instrument approaches and the approach category of the critical aircraft. The RPZ function is to enhance the

protection of people and property on the ground. Where practical, airport owners should own the property under the runway approach and departure areas to at least the limits of the RPZ. It is desirable to clear the entire RPZ of all above ground objects. Where this is impractical, airport owners, at a minimum, should maintain the RPZ clear of all facilities supporting incompatible land activities. See FAA Memorandum, *Interim Guidance on Land Uses Within a Runway Protection Zone*, dated 9/27/2012, for guidance on incompatible activities.

Separate drawings are provided for each runway end. Refer to Drawings **14**, **15**, **16, 17, 18** and 1**9** in the ALP Drawing Set provided at the end of this chapter.

6.8 Departure Surface Drawing

The Runway Departure Surface Drawings consists of large-scale plan views of departure surfaces for all runway ends at PDK. The Departure Surface Drawing depicts the ground contours along the extended runway centerline plus any significant natural or non-natural objects located along the extended runway centerline and also provides a top elevation for those objects. Commonly shown objects include buildings, roads, ditches, and trees. Surface penetration and disposition information is included in the associated obstruction data tables.

Separate drawings are provided for each runway end. Refer to Drawings **20**, 2**1** and **22** in the ALP Drawing Set provided at the end of this chapter.

6.9 Land Use Drawing

The land use drawing depicts existing land uses for off-airport property in the vicinity of the airport and proposed land uses within the airport property. The purpose of this plan is to provide land use compatibility guidance for municipalities within the vicinity of the airport in order to ensure compatibility with projected airport operations. Where conflicts are apparent and an incompatibility exists, mitigation measures are recommended.

The drawing includes airport noise contours produced in a separate noise study in 2016. The noise contours are expressed Day-Night Average Sound Level (DNL) metric. DNL is a 24-hour logarithmic average sound level expressed in decibels on the A-weighted scale, a scale which simulates human sound perception. An annual average of DNL is used by the FAA to describe airport noise exposures. Nighttime operations, those occurring between the hours of 10:00 p.m. and 7:00 a.m., are attributed a 10-decibel penalty (twice as loud) within the DNL calculation. The cumulative noise exposure levels at all reference points are then used to plot noise exposure contours for selected DNL values and superimposed onto a base map.

The FAA provides guidelines for evaluating various land uses inside aircraft noise exposure areas. These guidelines are reproduced here in **Table 6-1**. Land use compatibility of various activities is keyed to DNL values. The guidelines reflect the statistical variability of the responses of large groups of people to noise. Therefore, any particular noise level might not accurately assess one individual's perception of an actual noise environment. As **Table 6-1** describes, all land uses are considered compatible with noise levels of less than 65 DNL. Residential, mobile home, and transient lodging uses are discouraged from 65 DNL and higher. Other noise sensitive uses such as hospitals, nursing homes, and churches are also discouraged in 65 DNL or greater. In certain cases, these uses may be permitted if the habitable structure is designed with, or contains, adequate measures to achieve reduction of outdoor noise levels

(soundproofing). Land uses that are less sensitive to noise levels, such as commercial use, are considered compatible with noise levels of 70 DNL without soundproofing and up to 80 DNL with soundproofing.

Reference **Drawing 23** of the ALP Drawing Set provided at the end of this chapter.

Table 6-1: FAA Land Use Compatibility Guidelines

Land Use	Yearly day-night average sound level (DNL) in decibels					
	Below 65	65-70	70-75	75-80	80-85	Over 85
RESIDENTIAL						
Residential, other than mobile homes and transient lodgings	Y	N[1]	N[1]	N	N	N
Mobile home parks	Y	N	N	N	N	N
Transient lodgings	Y	N[1]	N[1]	N[1]	N	N
PUBLIC USE						
Schools	Y	N[1]	N[1]	N	N	N
Hospitals and nursing homes	Y	25	30	N	N	N
Churches, auditoriums, and concert halls	Y	25	30	N	N	N
Governmental services	Y	Y	25	30	N	N
Transportation	Y	Y	Y[2]	Y[3]	Y[4]	N
Parking	Y	Y	Y[2]	Y[3]	Y[4]	N
COMMERCIAL USE						
Offices, business and professional	Y	Y	25	30	N	N
Wholesale and retail—building materials, hardware and farm equipment	Y	Y	Y[2]	Y[3]	Y[4]	N
Retail trade—general	Y	Y	25	30	N	N
Utilities	Y	Y	Y[2]	Y[3]	Y[4]	N
Communication	Y	Y	25	30	N	N
MANUFACTURING AND PRODUCTION						

Manufacturing, general	Y	Y	Y[2]	Y[3]	Y[4]	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and forestry	Y	Y[6]	Y[7]	Y[8]	Y[8]	Y[8]
Livestock farming and breeding	Y	Y[6]	Y[7]	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
RECREATIONAL						
Outdoor sports arenas and spectator sports	Y	Y[5]	Y[5]	N	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusements, parks, resorts and camps	Y	Y	Y	N	N	N
Golf courses, riding stables and water recreation	Y	Y	25	30	N	N

Legend:

Y (Yes) – Land use and related structures compatible without restrictions

N (No) – Land use and related structures are not compatible and should be prohibited

NLR – Noise Level Reduction (outdoor to indorr) to be achieved through incorpation of noise attenuation into the design and construction of the structure.

25, 30, 35 – Land use and related structures generally compatible; measures to achieve NLR of 25, 30 ,35 db must be incorporated into design and construction of structure.

Notes:

1. When the community determines that residential or school uses must be allowed, measures to achieve an outdoor to indoor NLR of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide a NLR of 20 dB, thus, the reduction requirements are often stated as 5,10 or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. The use of NLR criteria will not, however, eliminate outdoor noise problems.
2. Measures to achieve NLR of 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low
3. Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
4. Measures to achieve NLR of 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
5. Land use is compatible provided special sound reinforcement systems are installed.
6. Residential buildings require an NLR of 25 dB.
7. Residential buildings require an NLR of 30 dB.
8. Residential buildings are not permitted

Source: 14 CFR Part 150

6.10 Exhibit "A" Property Inventory Map

Often referred to as "Exhibit A," the airport property map documents the current and future airport boundary in a graphical and tabular form. It serves as a record of property transactions for grant evaluation purposes and to analyze future aeronautical use of land acquired with federal funds.

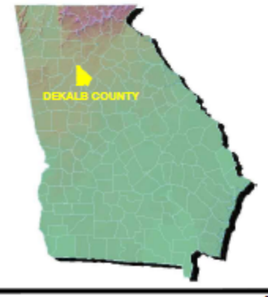
The drawing depicts the planned initial and ultimate boundary lines overlaid onto current and future airport facilities. Data tables provide a parcel numbering system, grantor, proposed property interest (fee simple, easement), type of conveyance, date of acquisition and purpose of acquisition. The tables also provide the deedbook and page that the transaction is recording at the courthouse and FAA grant number (if applicable). Any existing or future easements encumbered on the property should be recorded on this drawing. As land is acquired, the drawing should be updated frequently. An up-to-date Exhibit A is normally required to be attached to future FAA grant agreements. Reference **Drawing 24** of the drawing set provided at the end of this chapter.

Figure 6-1: Tile Sheet

DEKALB PEACHTREE AIRPORT
ATLANTA, GEORGIA

AIRPORT LAYOUT PLAN

VICINITY MAP
NOT TO SCALE



LOCATION MAP
NOT TO SCALE

PREPARED FOR:
DEKALB COUNTY BOARD OF COMMISSIONERS
DEKALB COUNTY GEORGIA

JUNE 2021

PREPARED BY:
Michael Baker INTERNATIONAL

INDEX OF SHEETS

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5	BASING AREA PLAN - NORTH	JUNE 2021
6	BASING AREA PLAN - CLAIRMONT KAMP / NORTH CENTRAL	JUNE 2021
7	BASING AREA PLAN - CENTRAL	JUNE 2021
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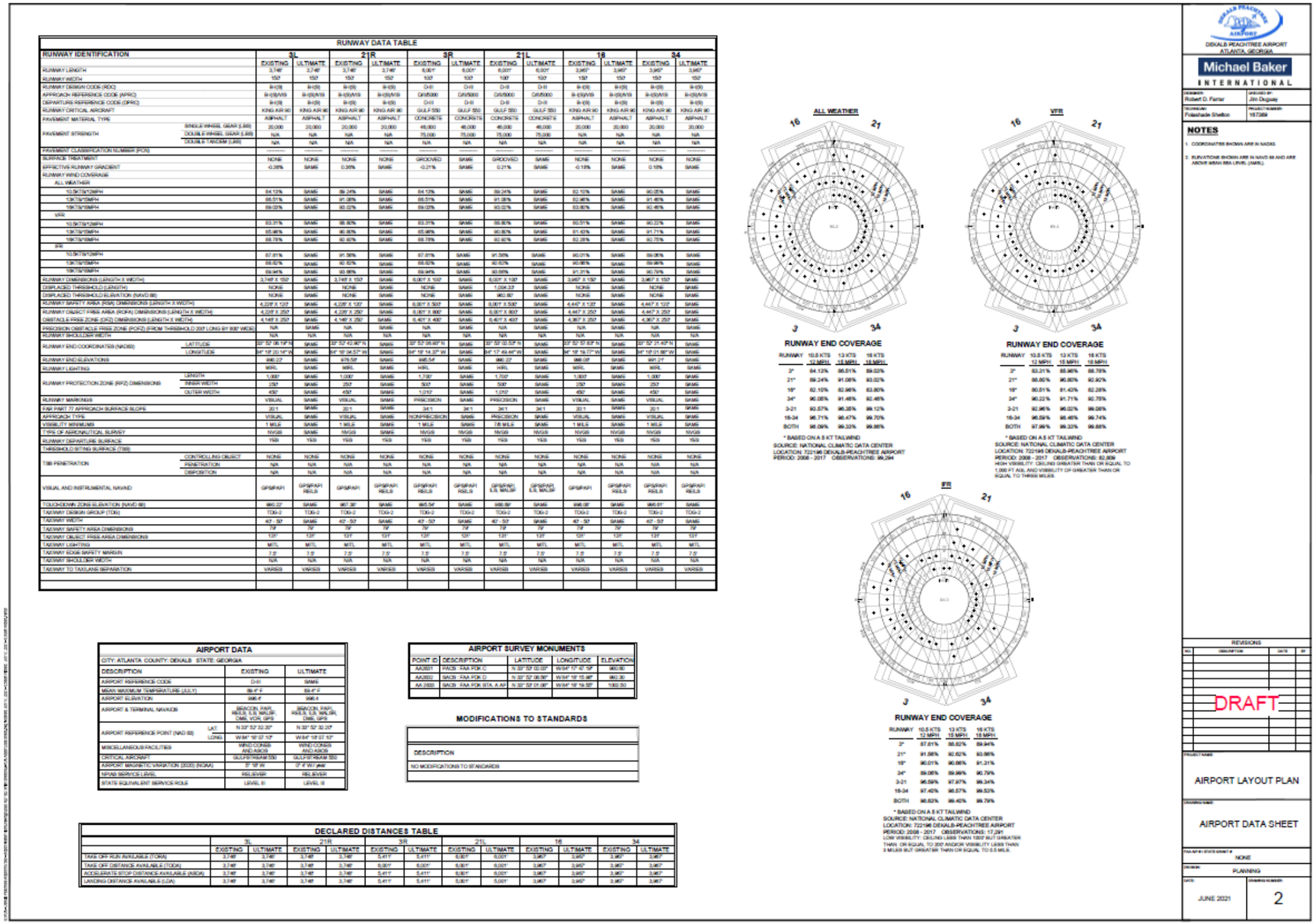
AIRPORT SPONSOR APPROVAL
THIS AIRPORT DRAWING IS APPROVED BY:
(SIGNATURE) _____ DATE: _____
NAME: _____
TITLE: _____

GEORGIA DEPARTMENT OF TRANSPORTATION APPROVAL
THIS AIRPORT DRAWING IS APPROVED BY:
(SIGNATURE) _____ DATE: _____
NAME: _____
TITLE: _____

DRAFT

THE PREPARATION OF THIS DOCUMENT WAS FINANCED IN PART THROUGH A PLANNING GRANT FROM THE FEDERAL AVIATION ADMINISTRATION AS PROVIDED UNDER SECTION 505 OF THE AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1982, THE CONTENTS DO NOT NECESSARILY REFLECT THE OFFICIAL VIEWS OR POLICY OF THE FAA. ACCEPTANCE OF THIS REPORT BY THE FAA DOES NOT IN ANY WAY CONSTITUTE A COMMITMENT ON THE PART OF THE UNITED STATES TO PARTICIPATE IN ANY DEVELOPMENT DEPICTED THEREIN NOR DOES IT INDICATE THAT THE PROPOSED DEVELOPMENT IS ENVIRONMENTALLY ACCEPTABLE IN ACCORDANCE WITH APPROPRIATE PUBLIC LAWS.

Figure 6-2: Airport Data Sheet



RUNWAY DATA TABLE

RUNWAY IDENTIFICATION		3L		21R		3R		21L		18		34	
		EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE
RUNWAY LENGTH		3,746'	3,746'	3,746'	3,746'	6,001'	6,001'	6,001'	6,001'	3,967'	3,967'	3,967'	3,967'
RUNWAY WIDTH		150'	150'	150'	150'	100'	100'	100'	100'	150'	150'	150'	150'
RUNWAY DESIGN CODE (RDC)		B-II(S)	B-II(S)	B-II(S)	B-II(S)	D-II	D-II	D-II	D-II	B-II(S)	B-II(S)	B-II(S)	B-II(S)
APPROACH REFERENCE CODE (APRC)		B-II(S/VIS)	B-II(S/VIS)	B-II(S/VIS)	B-II(S/VIS)	D-II(S/VIS)	D-II(S/VIS)	D-II(S/VIS)	D-II(S/VIS)	B-II(S/VIS)	B-II(S/VIS)	B-II(S/VIS)	B-II(S/VIS)
DEPARTURE REFERENCE CODE (DPRC)		B-II(S)	B-II(S)	B-II(S)	B-II(S)	D-II	D-II	D-II	D-II	B-II(S)	B-II(S)	B-II(S)	B-II(S)
RUNWAY CRITICAL AIRCRAFT		KING AIR 90	KING AIR 90	KING AIR 90	KING AIR 90	GULF 550	GULF 550	GULF 550	GULF 550	KING AIR 90	KING AIR 90	KING AIR 90	KING AIR 90
PAVEMENT MATERIAL TYPE		ASPHALT	ASPHALT	ASPHALT	ASPHALT	CONCRETE	CONCRETE	CONCRETE	CONCRETE	ASPHALT	ASPHALT	ASPHALT	ASPHALT
PAVEMENT STRENGTH	SINGLE WHEEL GEAR (LBS)	20,000	20,000	20,000	20,000	46,000	46,000	46,000	46,000	20,000	20,000	20,000	20,000
	DOUBLE WHEEL GEAR (LBS)	N/A	N/A	N/A	N/A	75,000	75,000	75,000	75,000	N/A	N/A	N/A	N/A
	DOUBLE TANDEM (LBS)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PAVEMENT CLASSIFICATION NUMBER (PCN)		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
SURFACE TREATMENT		NONE	NONE	NONE	NONE	GROOVED	SAME	GROOVED	SAME	NONE	NONE	NONE	NONE
EFFECTIVE RUNWAY GRADIENT		-0.38%	SAME	0.38%	SAME	-0.21%	SAME	0.21%	SAME	-0.18%	SAME	0.18%	SAME
RUNWAY WIND COVERAGE													
ALL WEATHER													
10.5KTS/12MPH		84.13%	SAME	89.24%	SAME	84.13%	SAME	89.24%	SAME	82.10%	SAME	90.05%	SAME
13KTS/15MPH		85.51%	SAME	91.08%	SAME	85.51%	SAME	91.08%	SAME	82.98%	SAME	91.45%	SAME
16KTS/18MPH		89.03%	SAME	93.02%	SAME	89.03%	SAME	93.02%	SAME	83.80%	SAME	92.46%	SAME
VFR													
10.5KTS/12MPH		83.31%	SAME	88.80%	SAME	83.31%	SAME	88.80%	SAME	80.51%	SAME	90.22%	SAME
13KTS/15MPH		85.46%	SAME	90.80%	SAME	85.46%	SAME	90.80%	SAME	81.43%	SAME	91.71%	SAME
16KTS/18MPH		88.78%	SAME	92.46%	SAME	88.78%	SAME	92.46%	SAME	82.28%	SAME	92.75%	SAME
IFR													
10.5KTS/12MPH		87.81%	SAME	91.56%	SAME	87.81%	SAME	91.56%	SAME	90.01%	SAME	89.06%	SAME
13KTS/15MPH		88.82%	SAME	92.82%	SAME	88.82%	SAME	92.82%	SAME	90.66%	SAME	89.94%	SAME
16KTS/18MPH		89.94%	SAME	93.66%	SAME	89.94%	SAME	93.66%	SAME	91.31%	SAME	90.79%	SAME
RUNWAY DIMENSIONS (LENGTH X WIDTH)		3,746' X 150'	SAME	3,746' X 150'	SAME	6,001' X 100'	SAME	6,001' X 100'	SAME	3,967' X 150'	SAME	3,967' X 150'	SAME
DISPLACED THRESHOLD (LENGTH)		NONE	SAME	NONE	SAME	NONE	SAME	1,004.33'	SAME	NONE	SAME	NONE	SAME
DISPLACED THRESHOLD ELEVATION (NAVD 88)		NONE	SAME	NONE	SAME	NONE	SAME	962.80'	SAME	NONE	SAME	NONE	SAME
RUNWAY SAFETY AREA (RSA) DIMENSIONS (LENGTH X WIDTH)		4,226' X 120'	SAME	4,226' X 120'	SAME	6,001' X 500'	SAME	6,001' X 500'	SAME	4,447' X 120'	SAME	4,447' X 120'	SAME
RUNWAY OBJECT FREE AREA (ROFA) DIMENSIONS (LENGTH X WIDTH)		4,226' X 250'	SAME	4,226' X 250'	SAME	6,001' X 800'	SAME	6,001' X 800'	SAME	4,447' X 250'	SAME	4,447' X 250'	SAME
OBSTACLE FREE ZONE (OFZ) DIMENSIONS (LENGTH X WIDTH)		4,146' X 250'	SAME	4,146' X 250'	SAME	6,401' X 400'	SAME	6,401' X 400'	SAME	4,367' X 250'	SAME	4,367' X 250'	SAME
PRECISION OBSTACLE FREE ZONE (POFZ) (FROM THRSHOLD) 200' LONG BY 800' WIDE		N/A	SAME	N/A	SAME	N/A	SAME	N/A	SAME	N/A	SAME	N/A	SAME
RUNWAY SHOULDER WIDTH		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
RUNWAY END COORDINATES (NAD83)	LATITUDE:	33° 52' 06.19" N	SAME	33° 52' 42.90" N	SAME	33° 52' 06.60" N	SAME	33° 53' 02.53" N	SAME	33° 52' 57.53" N	SAME	33° 52' 21.42" N	SAME
	LONGITUDE:	84° 19' 20.14" W	SAME	84° 19' 04.57" W	SAME	84° 18' 14.37" W	SAME	84° 17' 49.44" W	SAME	84° 18' 19.77" W	SAME	84° 18' 01.88" W	SAME
RUNWAY END ELEVATIONS		990.27'	SAME	978.70'	SAME	995.54'	SAME	962.27'	SAME	988.09'	SAME	991.21'	SAME
RUNWAY LIGHTING		MIRL	SAME	MIRL	SAME	HIRL	SAME	HIRL	SAME	MIRL	SAME	MIRL	SAME
RUNWAY PROTECTION ZONE (RPZ) DIMENSIONS	LENGTH	1,000'	SAME	1,000'	SAME	1,700'	SAME	1,700'	SAME	1,000'	SAME	1,000'	SAME
	INNER WIDTH	250'	SAME	250'	SAME	500'	SAME	500'	SAME	250'	SAME	250'	SAME
	OUTER WIDTH	450'	SAME	450'	SAME	1,010'	SAME	1,010'	SAME	450'	SAME	450'	SAME
RUNWAY MARKINGS		VISUAL	SAME	VISUAL	SAME	PRECISION	SAME	PRECISION	SAME	VISUAL	SAME	VISUAL	SAME
FAR PART 77 APPROACH SURFACE SLOPE		20:1	SAME	20:1	SAME	34:1	34:1	34:1	34:1	20:1	SAME	20:1	SAME
APPROACH TYPE		VISUAL	SAME	VISUAL	SAME	NONPRECISION	SAME	PRECISION	SAME	VISUAL	SAME	VISUAL	SAME
VISIBILITY MINIMUMS		1 MILE	SAME	1 MILE	SAME	1 MILE	SAME	7/8 MILE	SAME	1 MILE	SAME	1 MILE	SAME
TYPE OF AERONAUTICAL SURVEY		NVGS	SAME	NVGS	SAME	NVGS	NVGS	NVGS	NVGS	NVGS	NVGS	NVGS	NVGS
RUNWAY DEPARTURE SURFACE		YSS	YSS	YSS	YSS	YSS	YSS	YSS	YSS	YSS	YSS	YSS	YSS
THRSHOLD SITING SURFACE (TSS)													
TSS PENETRATION	CONTROLLING OBJECT	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
	PENETRATION	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	DISPOSITION	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
VISUAL AND INSTRUMENTAL NAVAID		GPS/RAPI	GPS/RAPI RSLS	GPS/RAPI	GPS/RAPI RSLS	GPS/RAPI RSLS	GPS/RAPI RSLS	GPS/RAPI ILS, MALSF	GPS/RAPI ILS, MALSF	GPS/RAPI	GPS/RAPI RSLS	GPS/RAPI RSLS	GPS/RAPI RSLS
TOUCHDOWN ZONE ELEVATION (NAVD 88)		990.27'	SAME	967.36'	SAME	995.54'	SAME	956.59'	SAME	988.09'	SAME	986.91'	SAME
TAXIWAY DESIGN GROUP (TDG)		TDG-2	TDG-2	TDG-2	TDG-2	TDG-2	TDG-2	TDG-2	TDG-2	TDG-2	TDG-2	TDG-2	TDG-2
TAXIWAY WIDTH		42' - 53'	SAME	42' - 53'	SAME	42' - 53'	SAME	42' - 53'	SAME	42' - 53'	SAME	42' - 53'	SAME
TAXIWAY SAFETY AREA DIMENSIONS		TF	TF	TF	TF	TF	TF	TF	TF	TF	TF	TF	TF
TAXIWAY LIGHTING		MITL	MITL	MITL	MITL	MITL	MITL	MITL	MITL	MITL	MITL	MITL	MITL
TAXIWAY EDGE SAFETY MARGIN		7.5'	7.5'	7.5'	7.5'	7.5'	7.5'	7.5'	7.5'	7.5'	7.5'	7.5'	7.5'
TAXIWAY SHOULDER WIDTH		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TAXIWAY TO TAXILANE SEPARATION		VARIES	VARIES	VARIES	VARIES	VARIES	VARIES	VARIES	VARIES	VARIES	VARIES	VARIES	VARIES

AIRPORT DATA

CITY: ATLANTA COUNTY: DEKALB STATE: GEORGIA

DESCRIPTION	EXISTING	ULTIMATE
AIRPORT REFERENCE CODE	D-II	SAME
MEAN MAXIMUM TEMPERATURE (JULY)	89.4° F	89.4° F
AIRPORT ELEVATION	996.4'	996.4'
AIRPORT & TERMINAL NAVAIDS	BEACON, PAPI, RSLS, ILS, MALSF, DME, VOR, GPS	BEACON, PAPI, RSLS, ILS, MALSF, DME, GPS
AIRPORT REFERENCE POINT (NAD 83) LAT.	N 33° 52' 33.20"	N 33° 52' 33.20"
AIRPORT REFERENCE POINT (NAD 83) LONG.	W 84° 18' 07.10"	W 84° 18' 07.10"
MISCELLANEOUS FACILITIES	WIND CONES AND ASOS	WIND CONES AND ASOS
CRITICAL AIRCRAFT	GULFSTREAM 550	GULFSTREAM 550
AIRPORT MAGNETIC VARIATION (2020) (NOAA)	5° 18' W	5° 4' W / year
NPIAS SERVICE LEVEL	RELIEVER	RELIEVER
STATE EQUIVALENT SERVICE ROLE	LEVEL III	LEVEL III

AIRPORT SURVEY MONUMENTS

POINT ID	DESCRIPTION	LATITUDE	LONGITUDE	ELEVATION
AA3001	PACS - FAA PDK C	N 33° 53' 02.03"	W 84° 17' 47.19"	960.60
AA3002	SACS - FAA PDK D	N 33° 52' 08.56"	W 84° 18' 15.46"	960.30
AA 3003	SACS - FAA PDK STA. A AP	N 33° 53' 01.08"	W 84° 18' 19.59"	1,002.53

MODIFICATIONS TO STANDARDS

DESCRIPTION
NO MODIFICATIONS TO STANDARDS

DECLARED DISTANCES TABLE

	3L		21R		3R		21L		18		34	
	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE
TAKE OFF RUN AVAILABLE (TORA)	3,746'	3,746'	3,746'	3,746'	5,411'	5,411'	6,001'	6,001'	3,967'	3,967'	3,967'	3,967'
TAKE OFF DISTANCE AVAILABLE (TODA)	3,746'	3,746'	3,746'	3,746'	6,001'	6,001'	6,001'	6,001'	3,967'	3,967'	3,967'	3,967'
ACCELERATE STOP DISTANCE AVAILABLE (ASDA)	3,746'	3,746'	3,746'	3,746'	5,411'	5,411'	6,001'	6,001'	3,967'	3,967'	3,967'	3,967'
LANDING DISTANCE AVAILABLE (LDA)	3,746'	3,746'	3,746'	3,746'	5,411'	5,411'	5,001'	5,001'	3,967'	3,967'	3,967'	3,967'

ALL WEATHER

RUNWAY END COVERAGE

RUNWAY	10.5 KTS 12 MPH	13 KTS 15 MPH	16 KTS 18 MPH
3°	84.13%	85.51%	89.03%
21°	89.24%	91.08%	93.02%
18°	82.10%	82.98%	83.80%
34°	90.05%	91.45%	92.46%
3-21	93.57%	95.35%	96.12%
18-34	96.71%	96.47%	99.70%
BOTH	96.09%	99.33%	99.86%

* BASED ON A 5 KT TAILWIND
SOURCE: NATIONAL CLIMATIC DATA CENTER
LOCATION: 722196 DEKALB-PEACHTREE AIRPORT
PERIOD: 2008 - 2017 OBSERVATIONS: 99,294

VFR

RUNWAY END COVERAGE

RUNWAY	10.5 KTS 12 MPH	13 KTS 15 MPH	16 KTS 18 MPH
3°	83.31%	85.46%	88.78%
21°	88.80%	90.80%	92.80%
18°	80.51%	81.43%	82.28%
34°	90.22%	91.71%	92.75%
3-21	92.96%	95.02%	96.08%
18-34	96.59%	96.46%	99.74%
BOTH	97.99%	99.33%	99.88%

* BASED ON A 5 KT TAILWIND
SOURCE: NATIONAL CLIMATIC DATA CENTER
LOCATION: 722196 DEKALB-PEACHTREE AIRPORT
PERIOD: 2008 - 2017 OBSERVATIONS: 82,809
HIGH VISIBILITY: CEILING GREATER THAN OR EQUAL TO 1,000 FT AGL AND VISIBILITY OF GREATER THAN OR EQUAL TO THREE MILES

IFR

RUNWAY END COVERAGE

RUNWAY	10.5 KTS 12 MPH	13 KTS 15 MPH	16 KTS 18 MPH
3°	87.81%	88.82%	89.94%
21°	91.56%	92.82%	93.66%
18°	90.01%	90.66%	91.31%
34°	89.06%	89.99%	90.79%
3-21	96.59%	97.87%	99.34%
18-34	97.40%	96.57%	99.53%
BOTH	96.63%	99.40%	99.79%

* BASED ON A 5 KT TAILWIND
SOURCE: NATIONAL CLIMATIC DATA CENTER
LOCATION: 722196 DEKALB-PEACHTREE AIRPORT
PERIOD: 2008 - 2017 OBSERVATIONS: 17,291
LOW VISIBILITY: CEILING LESS THAN 1000' BUT GREATER THAN OR EQUAL TO 200' AND/OR VISIBILITY LESS THAN 3 MILES BUT GREATER THAN OR EQUAL TO 0.5 MILE

DEKALB PEACHTREE AIRPORT
ATLANTA, GEORGIA

Michael Baker INTERNATIONAL

DESIGNED: Robert D. Farrar | DRAWN BY: Jim Dugsley
TECHNICIAN: Folashade Shelton | PROJECT NUMBER: 187389

NOTES

1. COORDINATES SHOWN ARE IN NADS3.
2. ELEVATIONS SHOWN ARE IN NAVD 88 AND ARE ABOVE MEAN SEA LEVEL (AMSL).

REVISIONS

NO.	DESCRIPTION	DATE	BY

DRAFT

PROJECT NAME: AIRPORT LAYOUT PLAN
DRAWING NAME: AIRPORT DATA SHEET
FAA AIP #3-13-STATE-SHEET #: NONE
DESIGN: PLANNING
DATE: JUNE 2021
DRAWING NUMBER: 2

Figure 6-3: Existing Condition Drawing

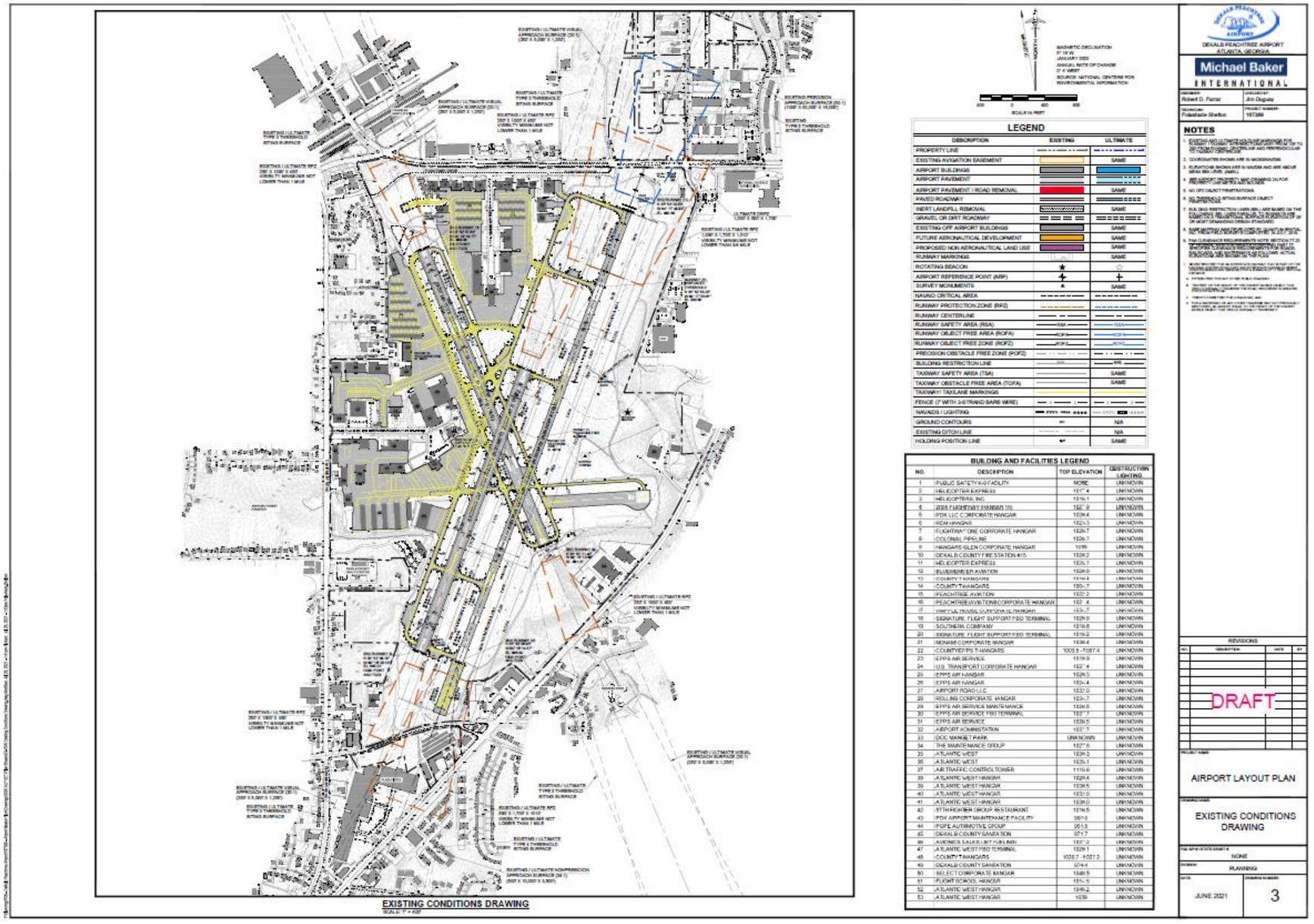


Figure 6-4: Airport Layout Drawing

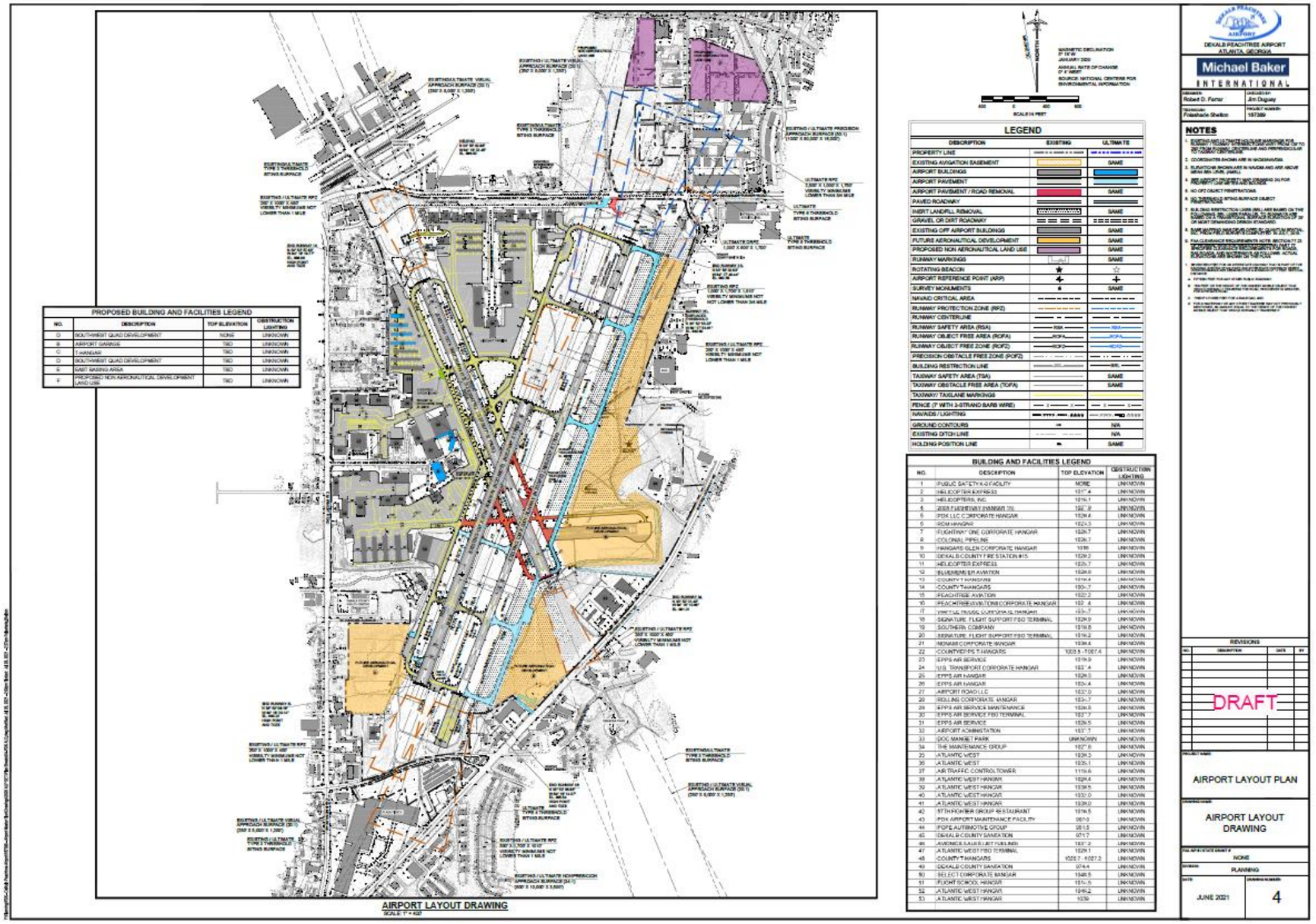


Figure 6-5: Basing Area Plan - North

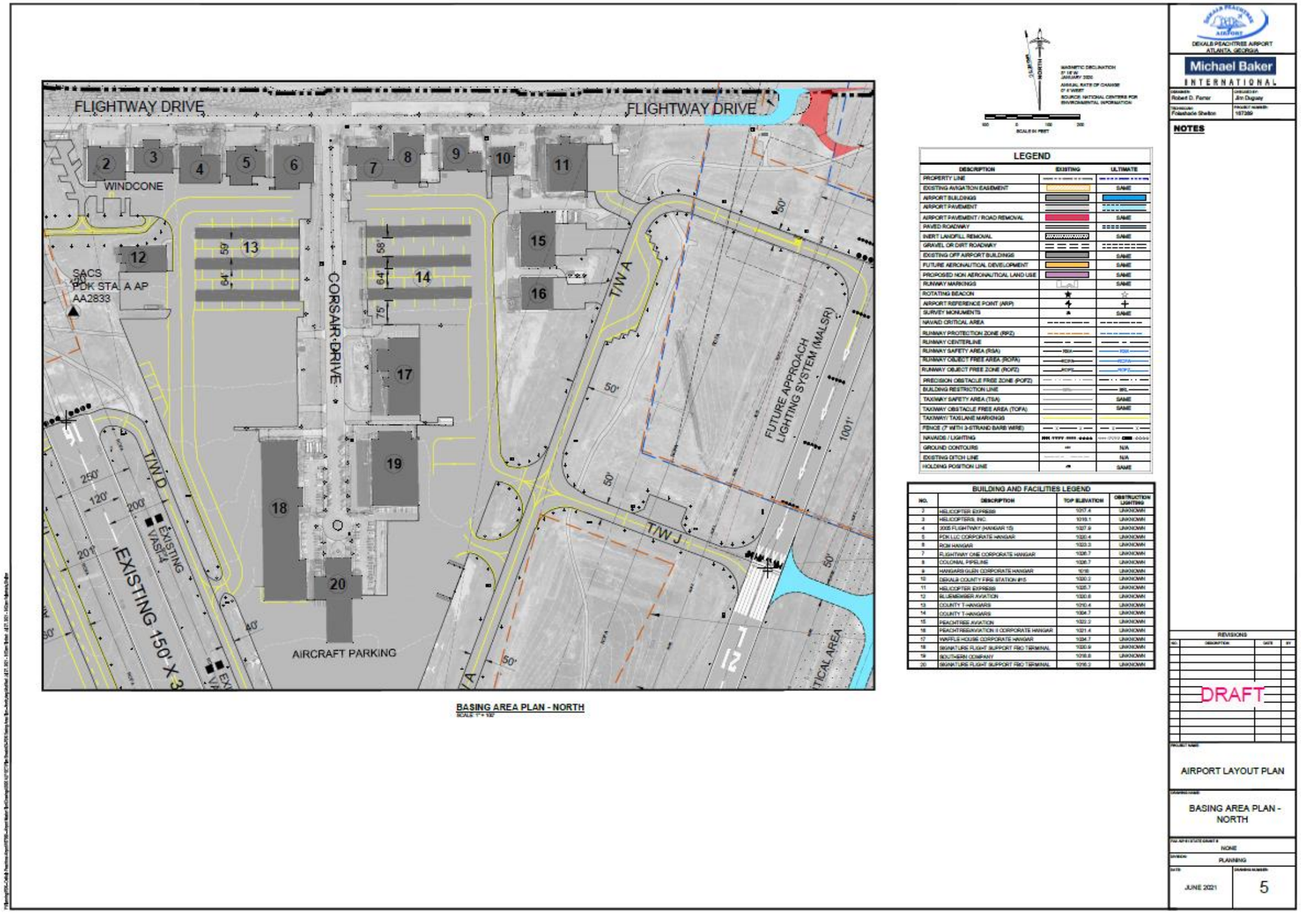


Figure 6-6: Basing Area Plan – Clairmont / North Central

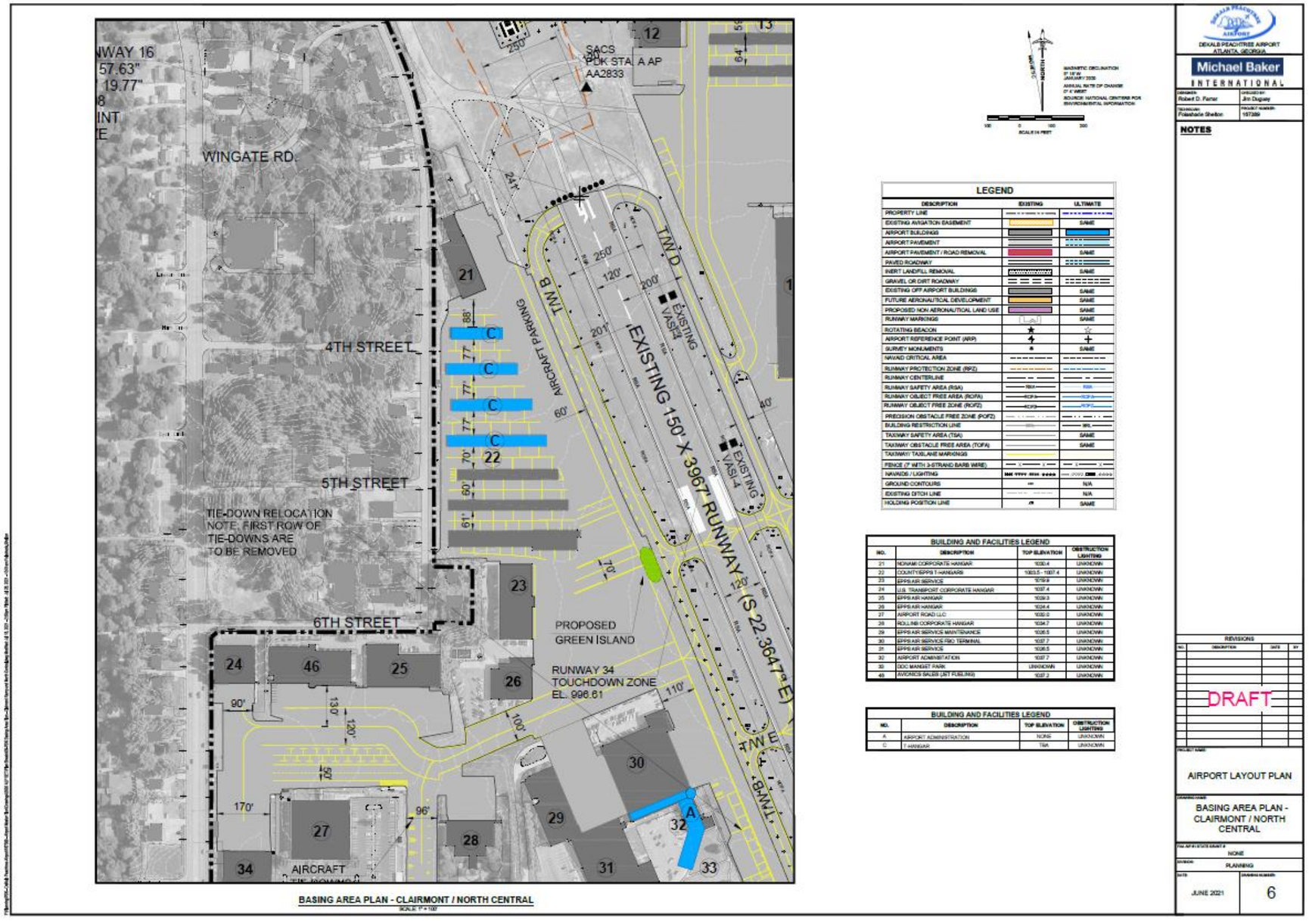


Figure 6-7: Basing Area Plan - Central

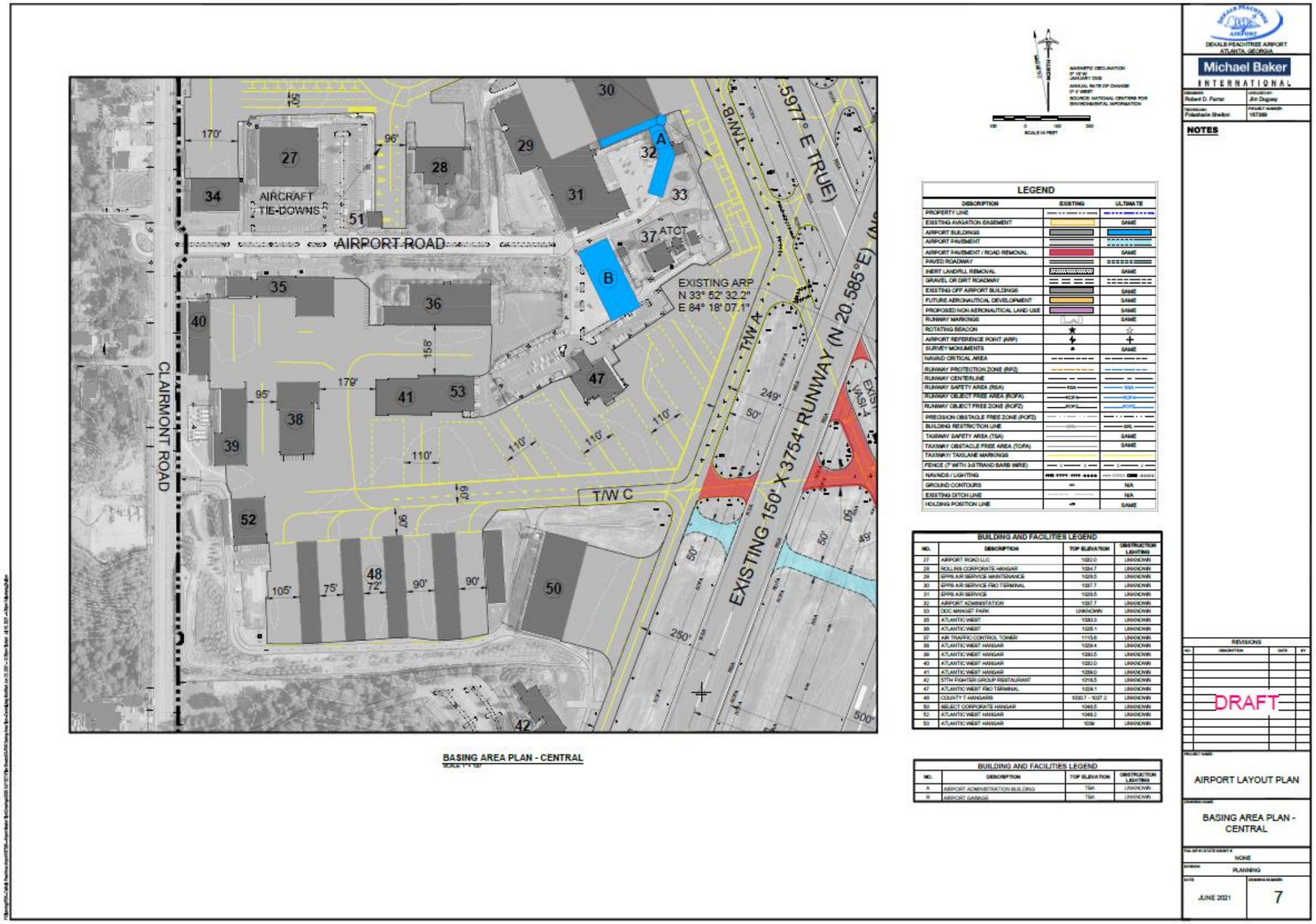


Figure 6-8: Basing Area Plan - Southwest

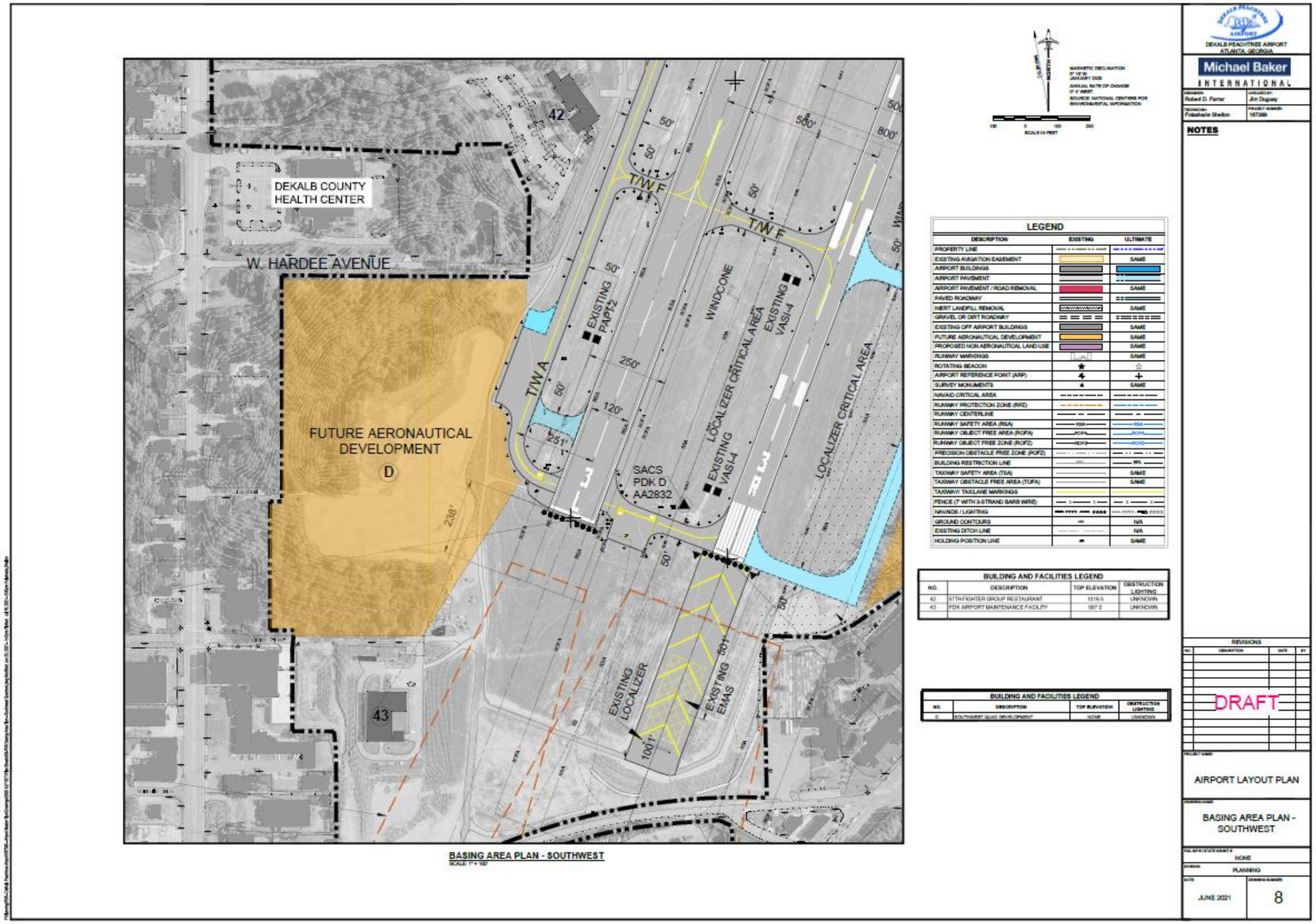


Figure 6-9: Basing Area Plan - East

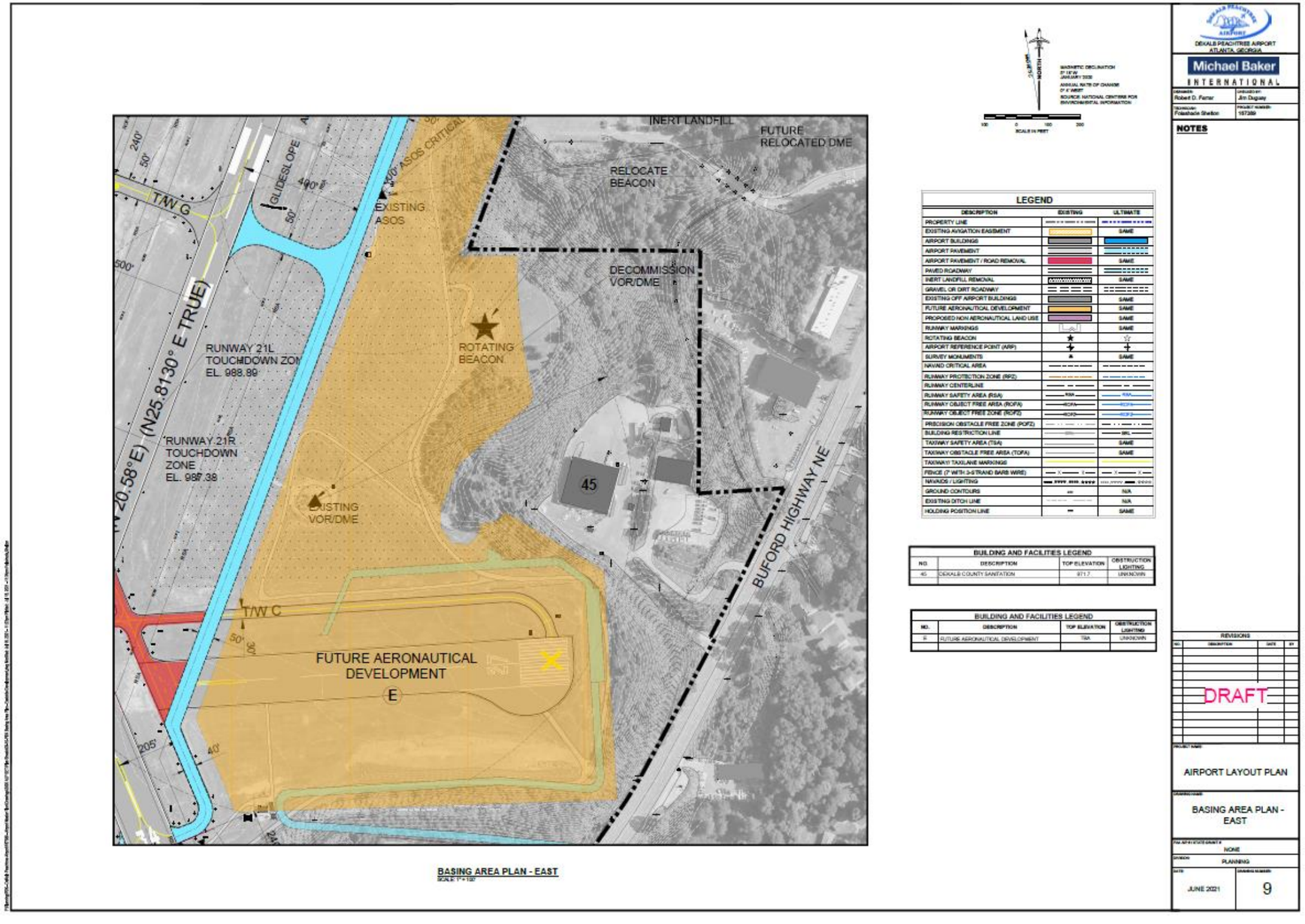


Figure 6-10: Basing Area Plan - East

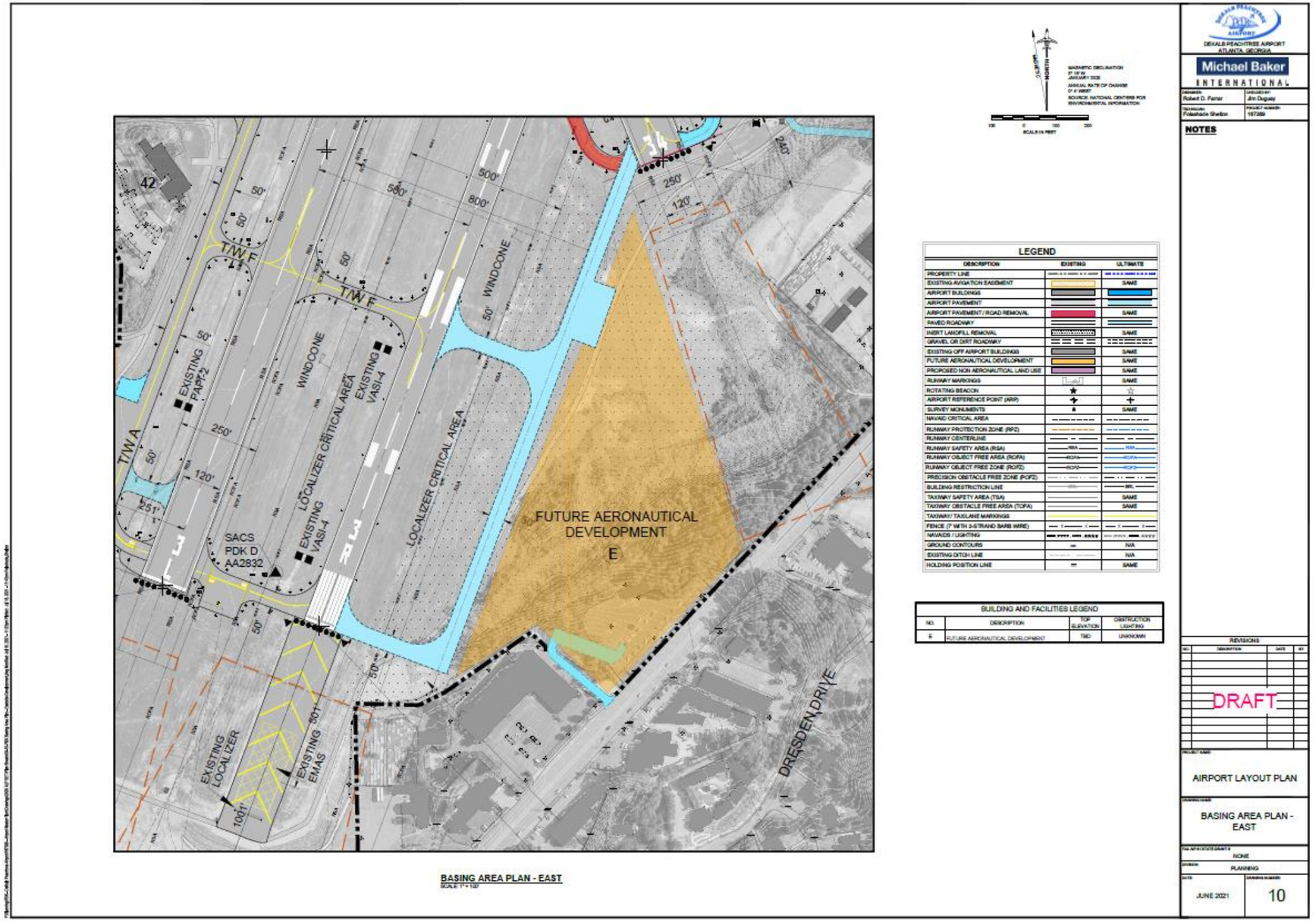


Figure 6-11: Airport Airspace Drawing (1 of 3)

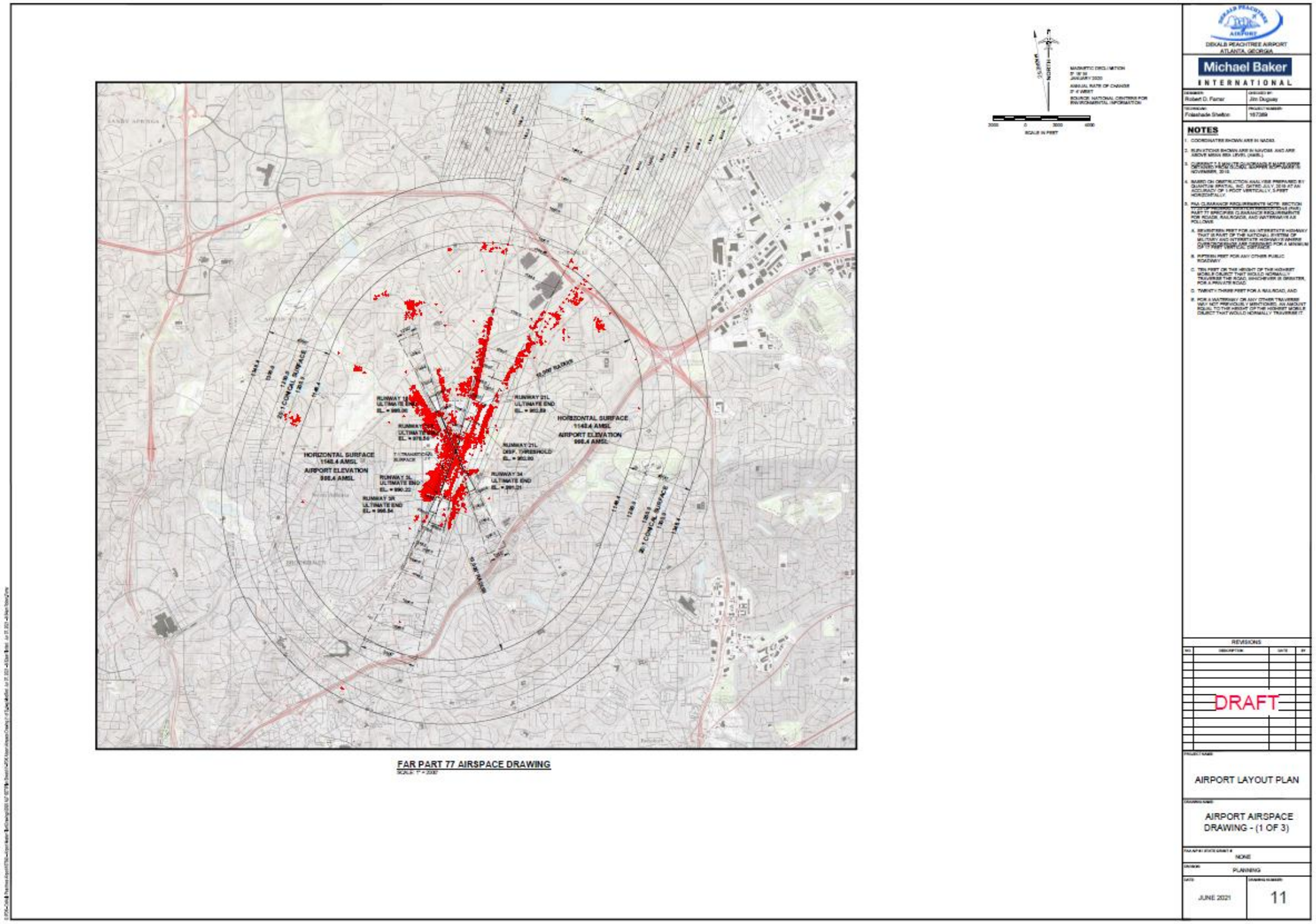


Figure 6-12: Airport Airspace Drawing (2 of 3)

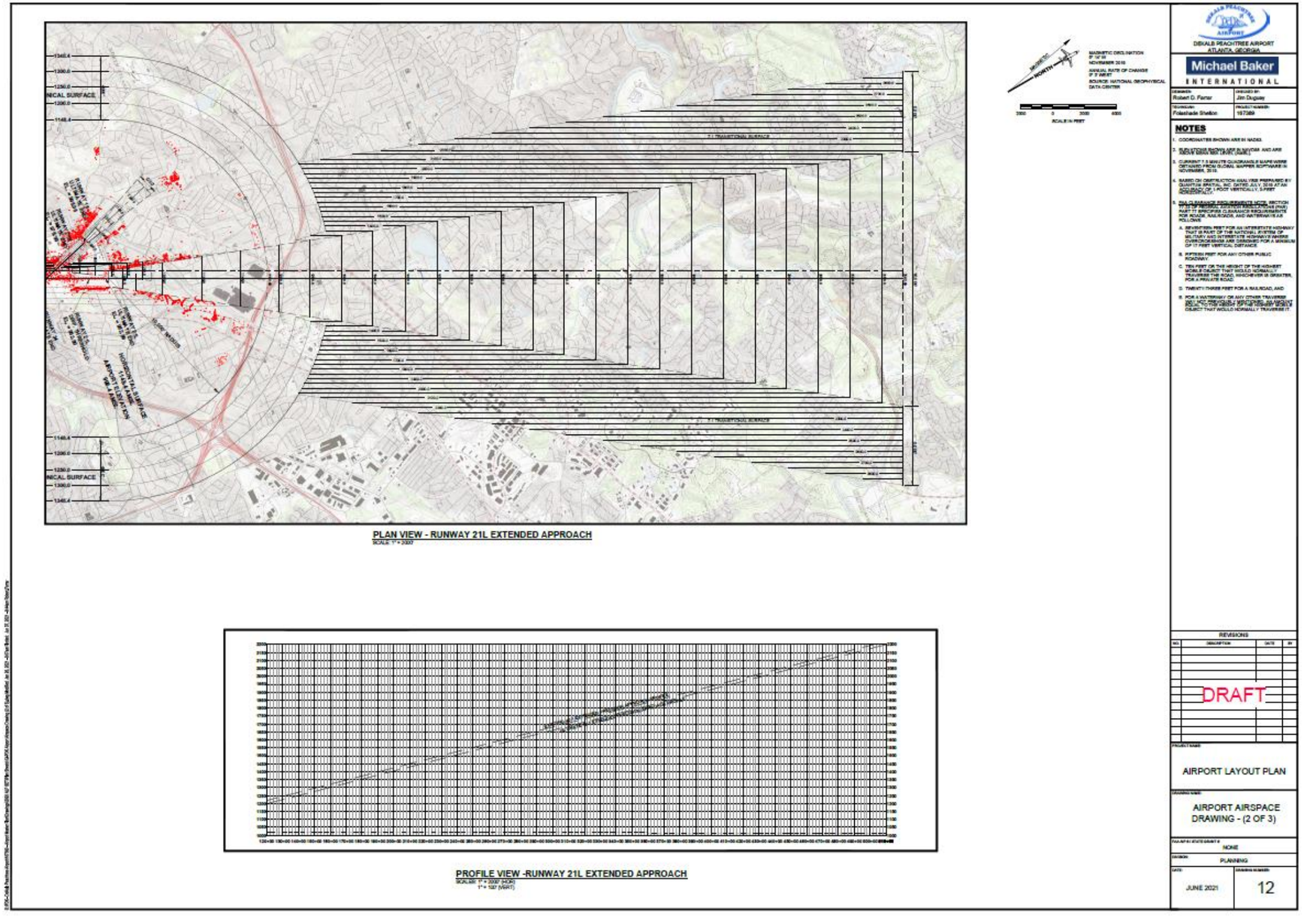


Figure 6-13: Airport Airspace Drawing (3 of 3)

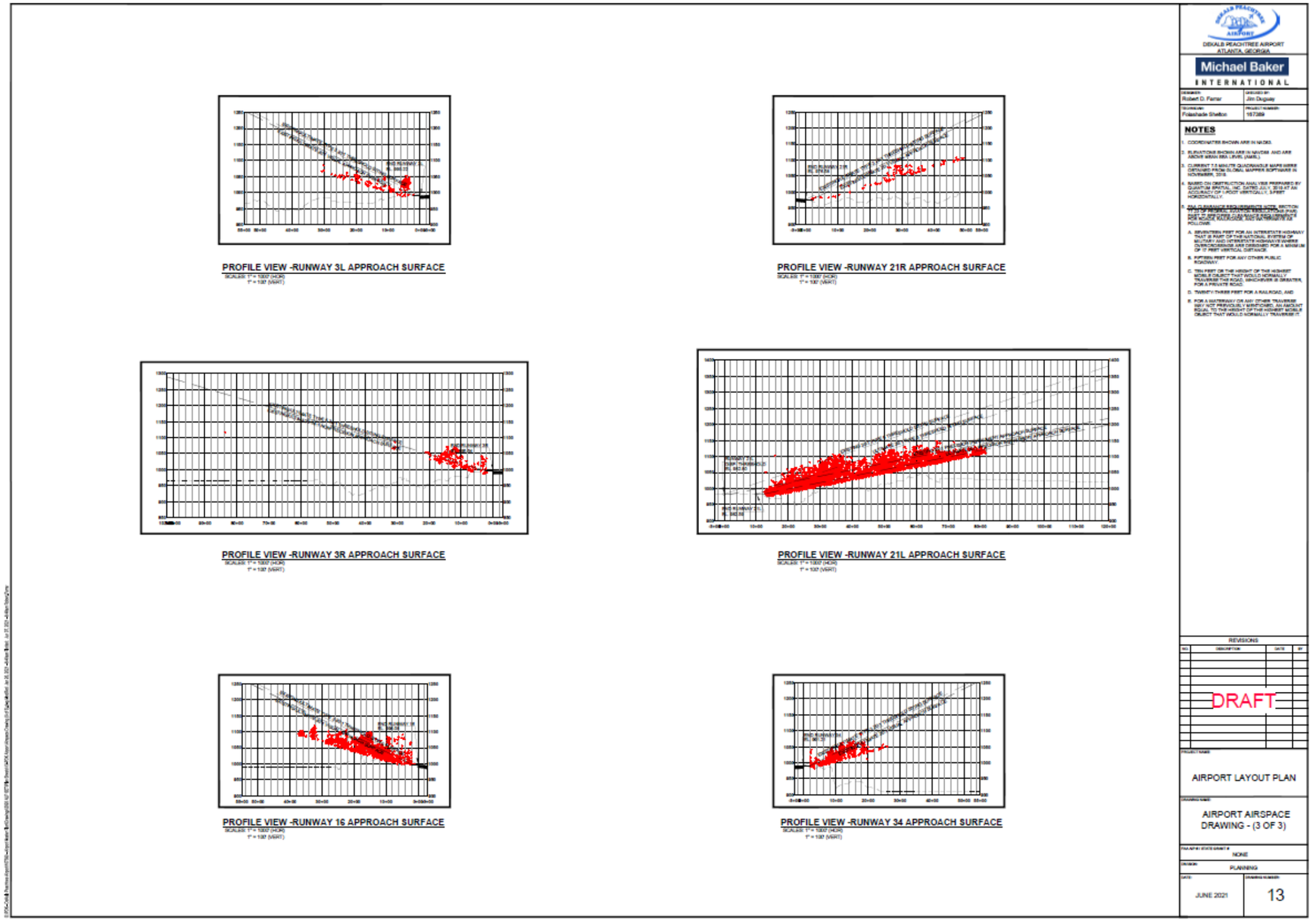


Figure 6-14: Inner Portion of Approach Surface Drawing - Runway 3L

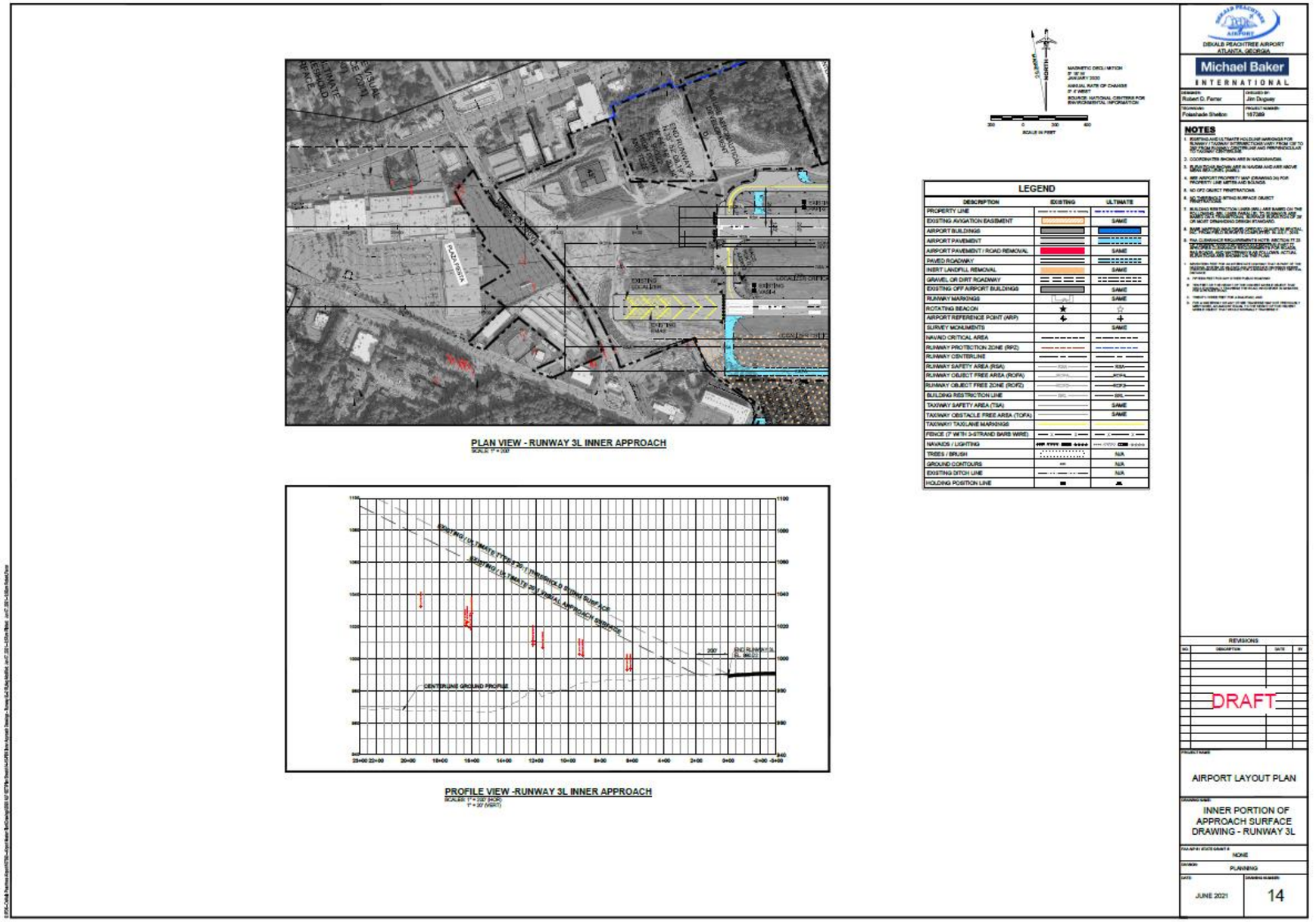


Figure 6-15: Inner Portion of Approach Surface Drawing - Runway 21R

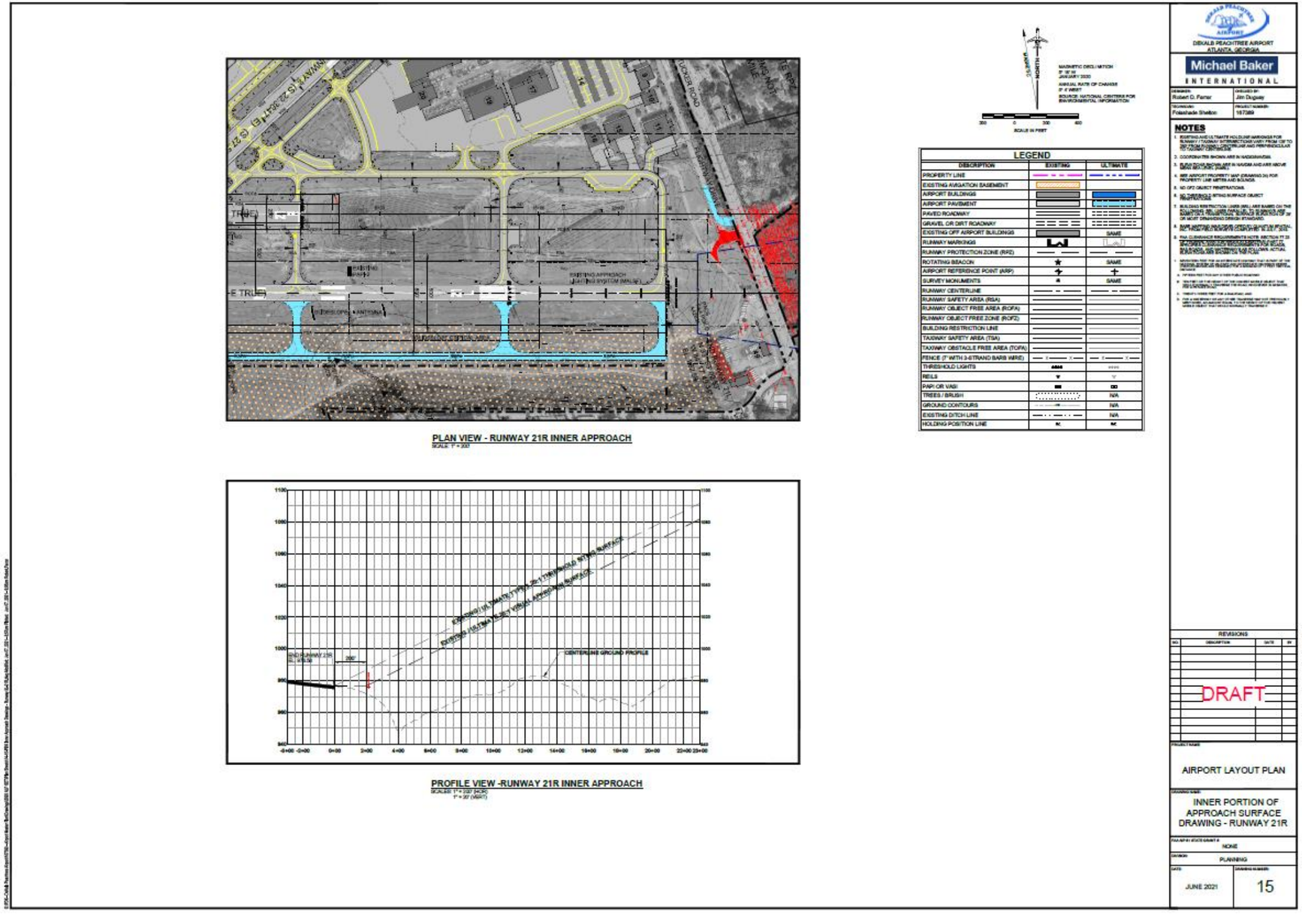


Figure 6-16: Inner Portion of Approach Surface Drawing - Runway 3R

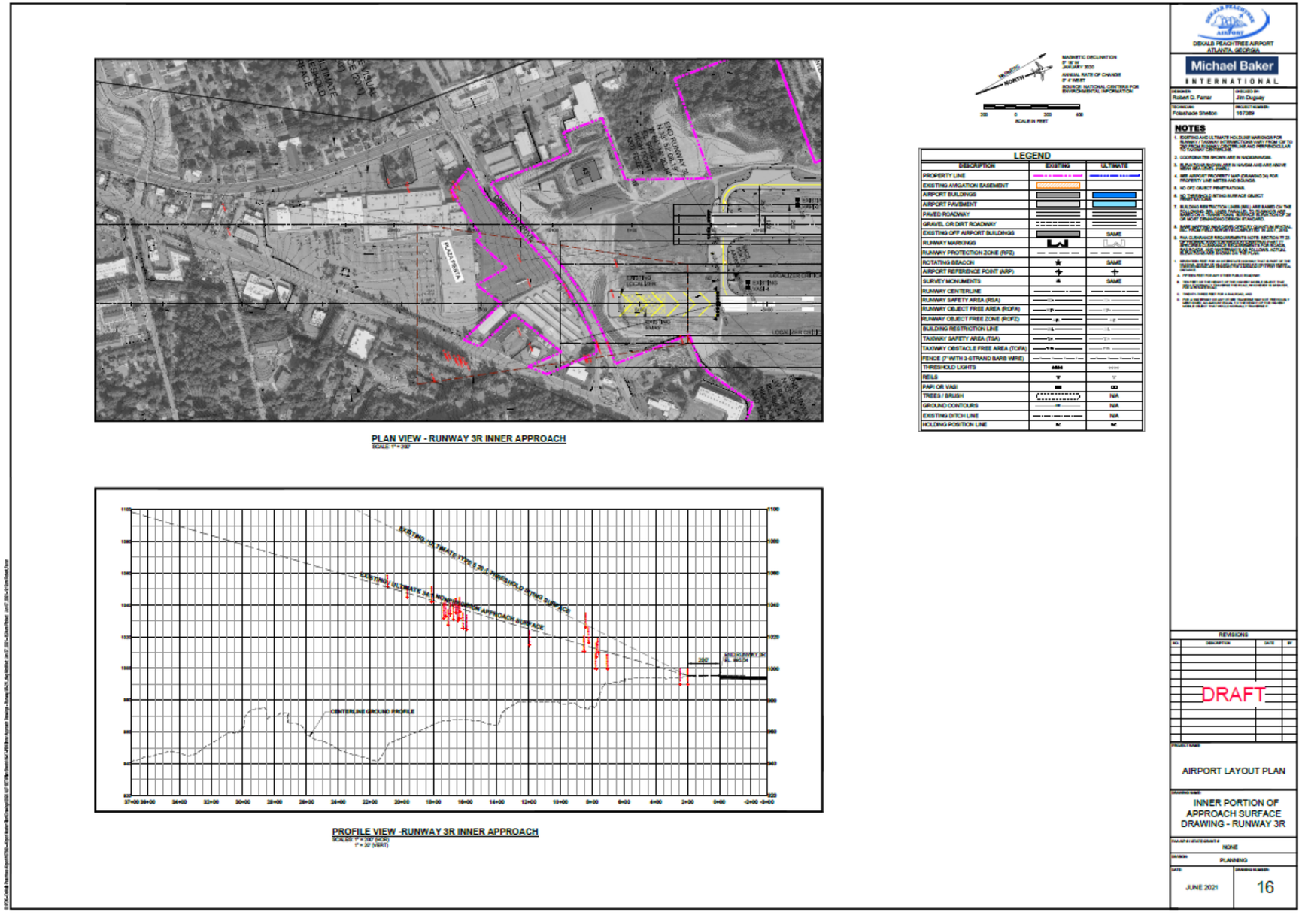


Figure 6-17: Inner Portion of Approach Surface Drawing - Runway 21L

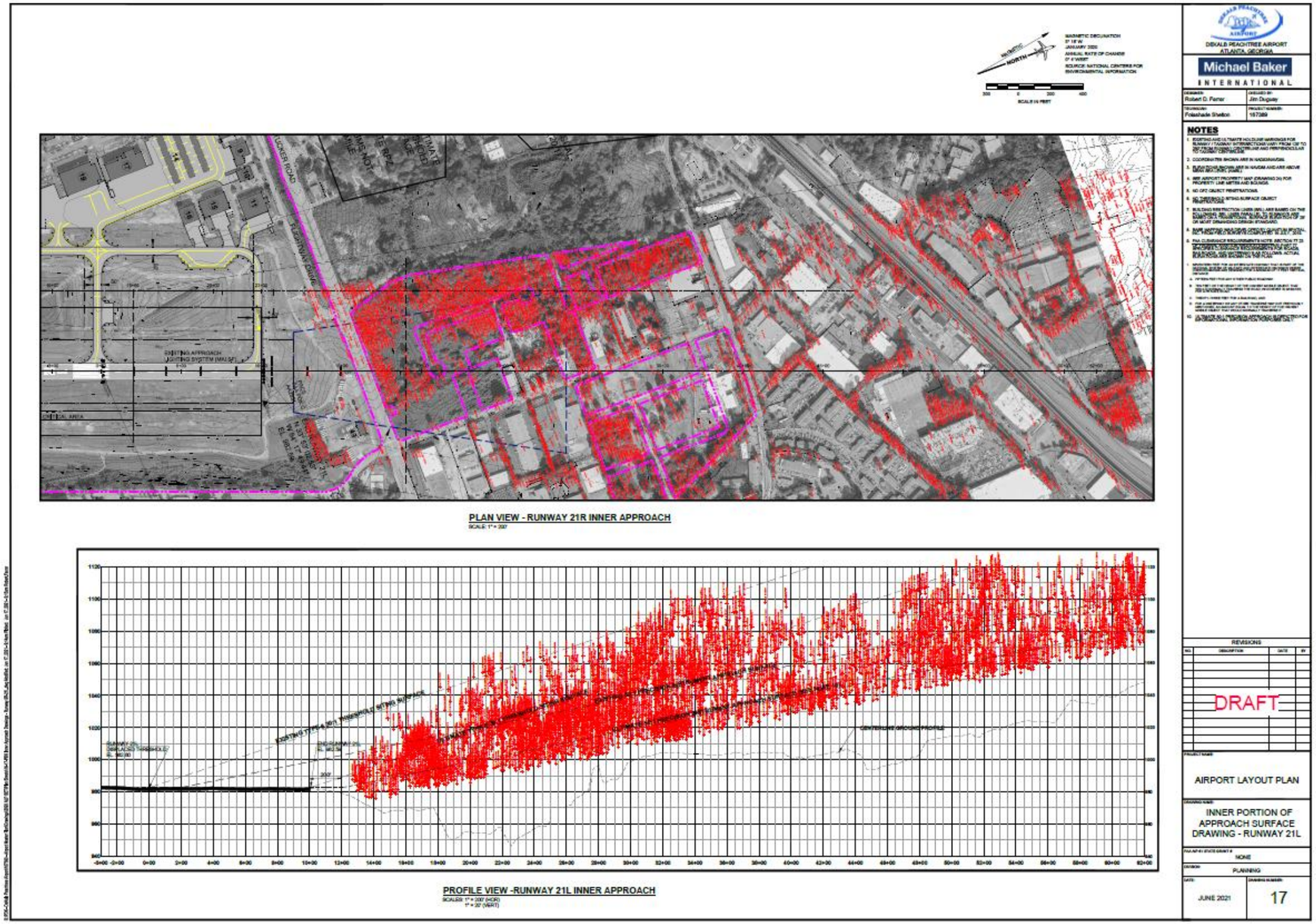


Figure 6-18: Inner Portion of Approach Surface Drawing - Runway 16

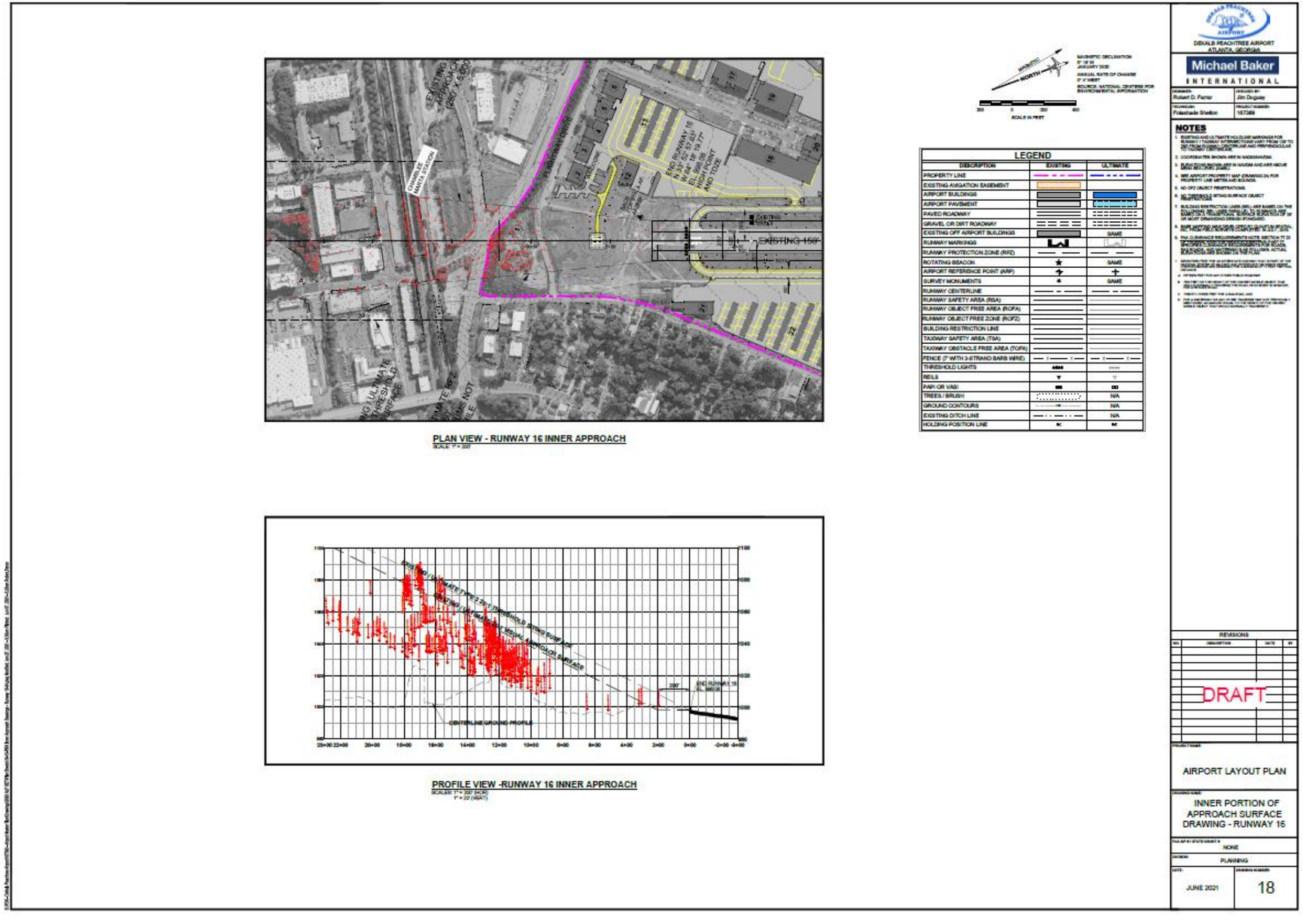


Figure 6-19: Inner Portion of Approach Surface Drawing - Runway 34

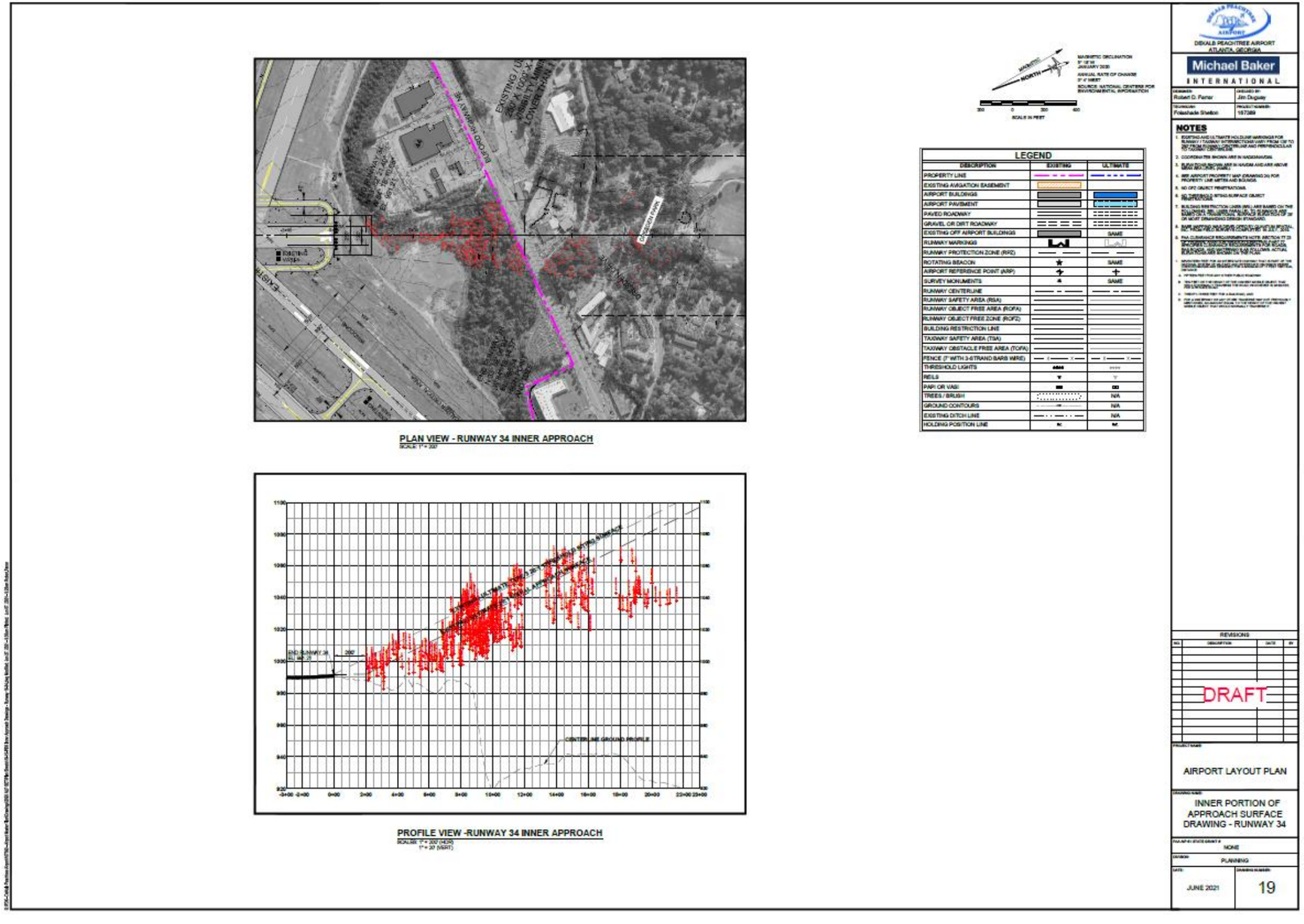


Figure 6-20: Runway Departure Surface Drawing - Runway 3L - 21R

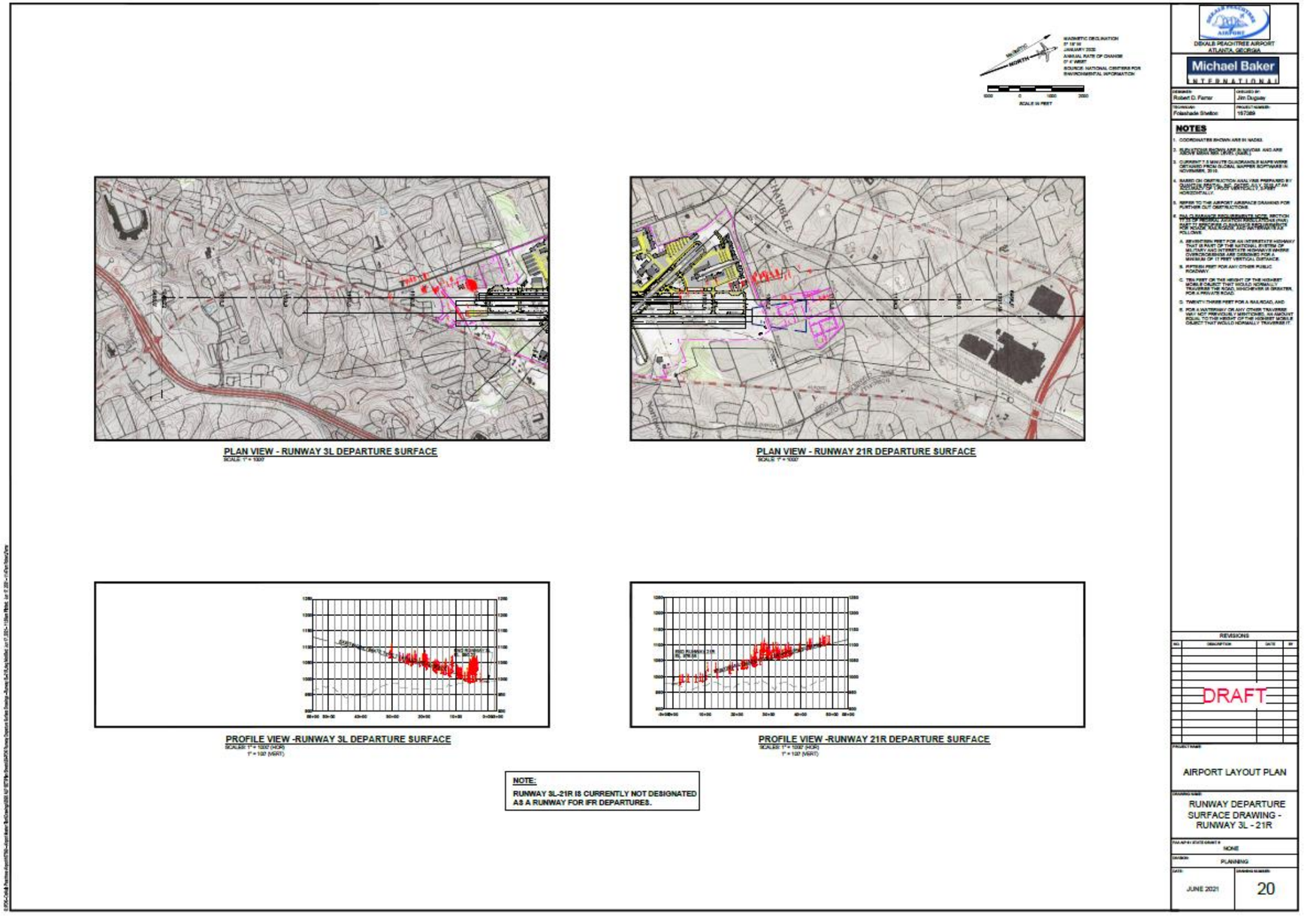


Figure 6-21: Runway Departure Surface Drawing - Runway 3R- 21L

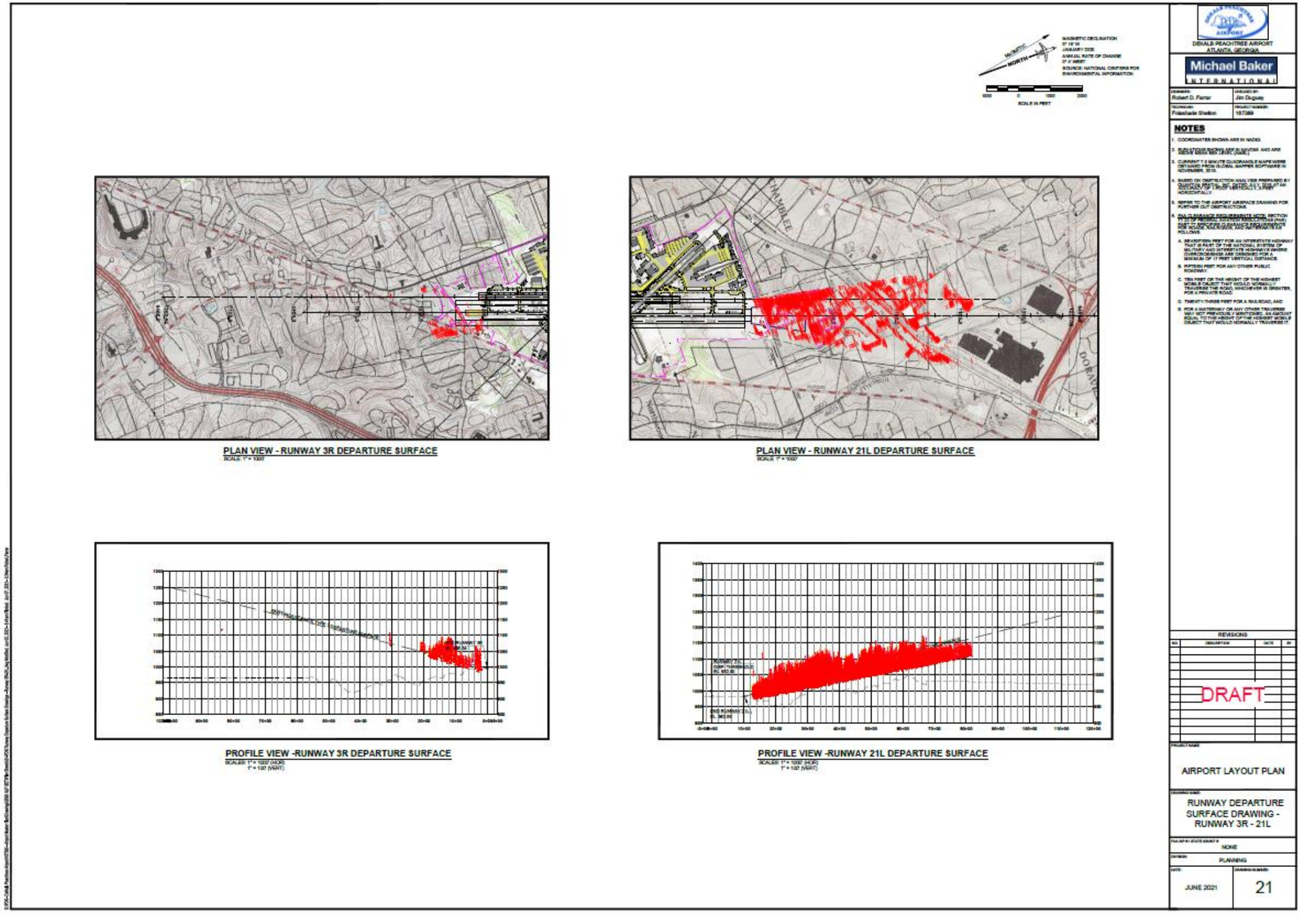


Figure 6-22: Runway Departure Surface Drawing - Runway 16-34

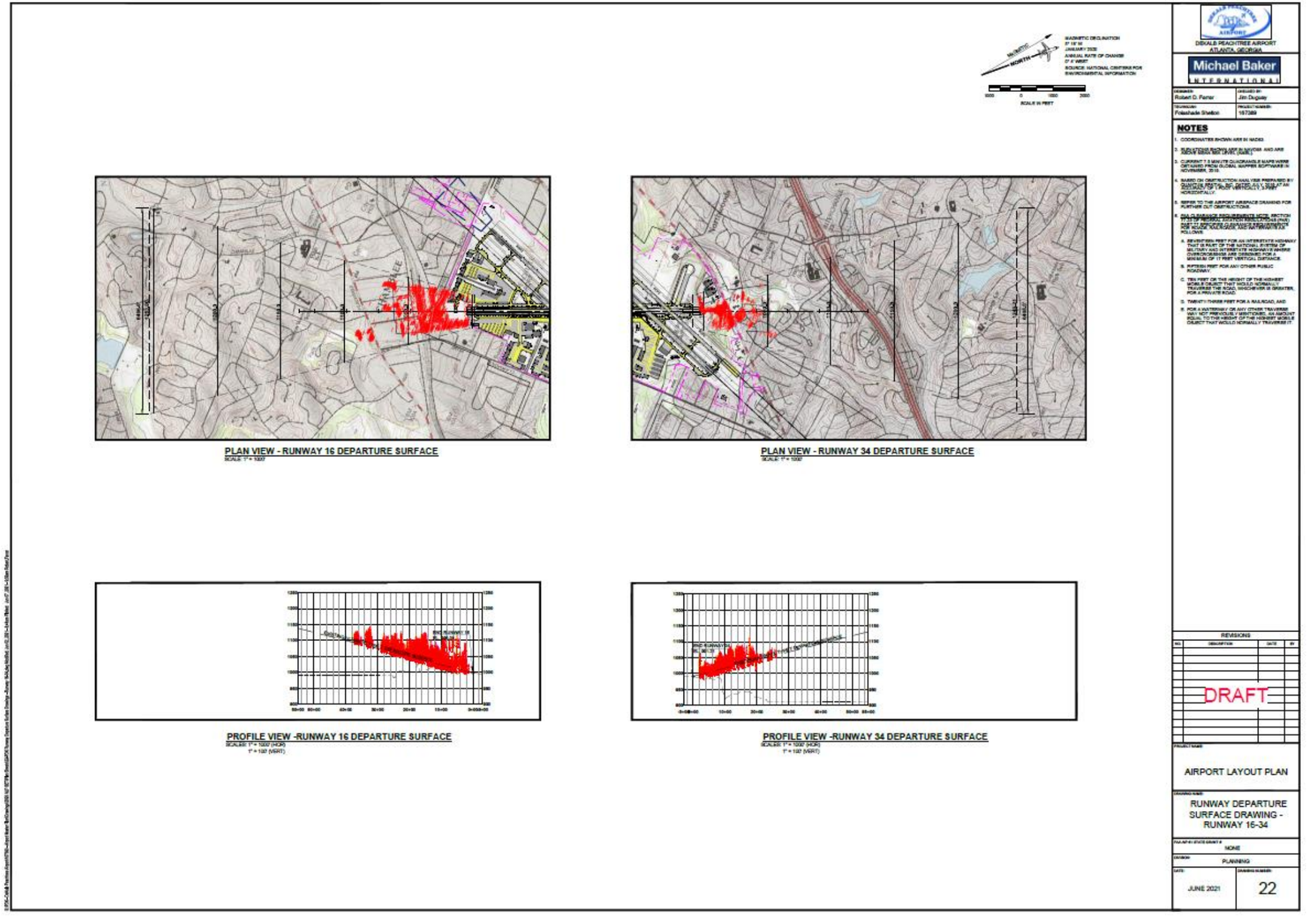


Figure 6-23: Off-Airport Land Use

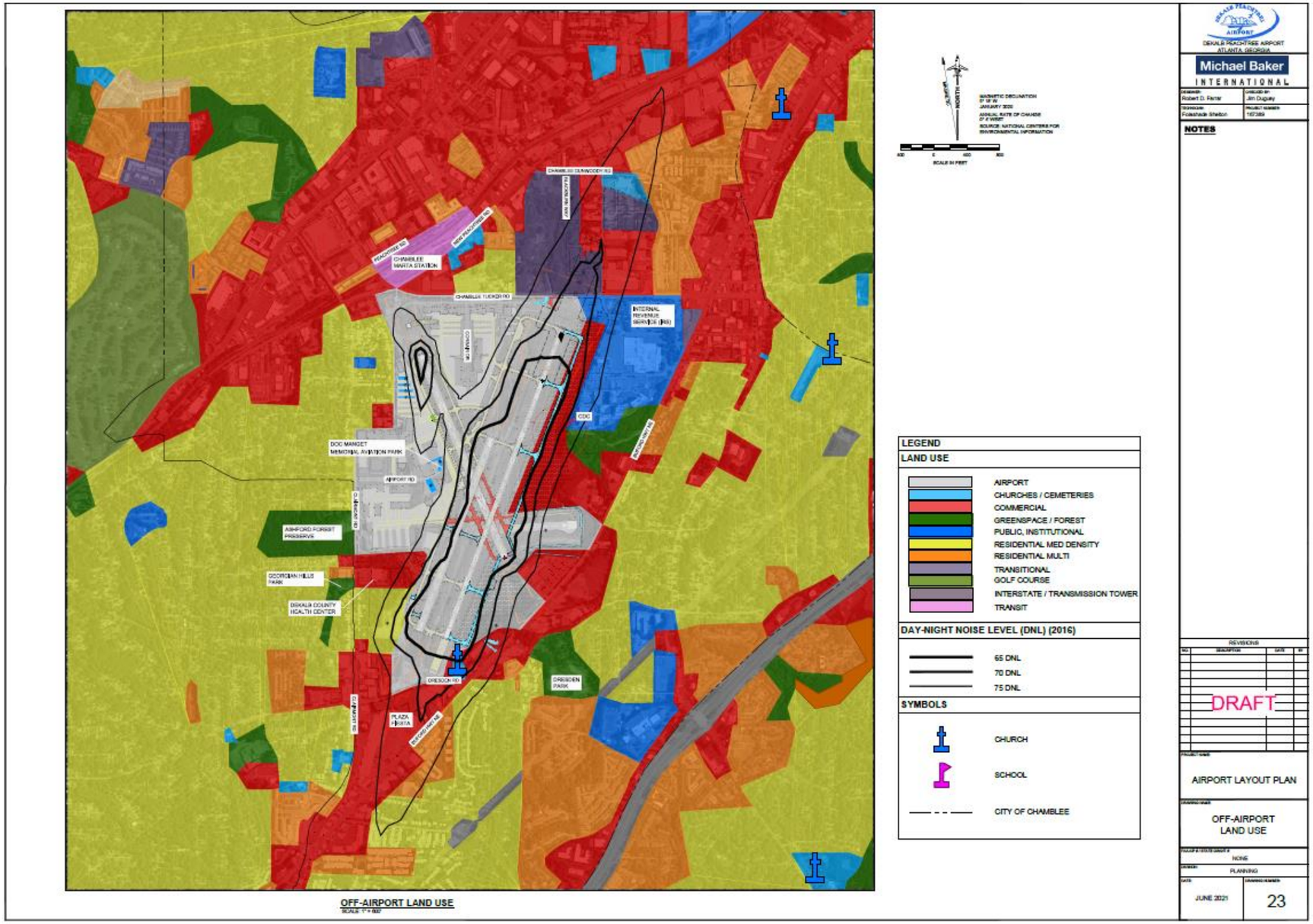
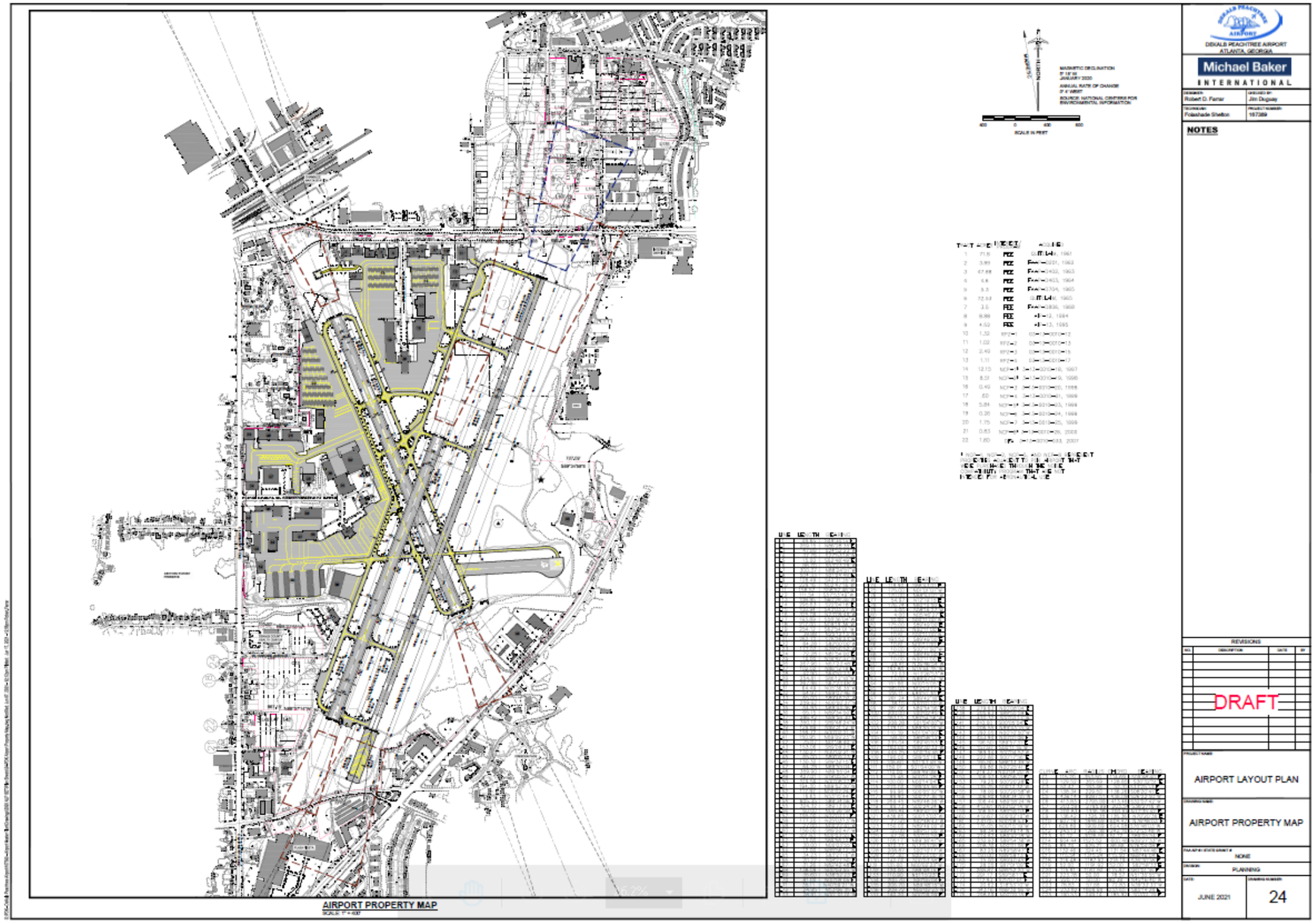


Figure 6-24: Airport Property Map



Chapter 7 – Capital Improvement Plan

7.1 Introduction

This purpose of this chapter is to provide guidance for the funding and implementation of the recommendations contained within Chapter 5, Development Concepts. The airport Capital Improvement Program (CIP) is developed by the airport and submitted to GDOT each year in order to detail and prioritize the most important projects to be constructed in the near-term. Most importantly, it includes preliminary cost estimates, a determination of potential funding sources and timeframes for completion. The CIP should provide PDK management, GDOT, and FAA with the information needed to integrate the Master Plan Update's development concepts into the financial planning of the airport. It should be noted that costs shown within the CIP are preliminary estimates to be used for planning purposes only. Furthermore, the CIP provides a suggested schedule for implementation, but the actual construction of these projects will ultimately be defined by demand for facilities, rather than scheduled years.

7.2 Funding Sources

7.2.1 Federal

The FAA's Airport Improvement Program (AIP) is the primary source of funding for airport capital projects for NPIAS airports. As discussed in Chapter 1, Inventory, PDK is included in the NPIAS as a general aviation airport and is eligible for AIP funding. AIP grants currently cover up to 90% of an eligible project's cost. Eligible projects include airport planning, airfield improvement, and some terminal area development. The two major categories of funding for general aviation airports include entitlement grant and discretionary grant programs.

PDK is eligible to receive nonprimary entitlement funding at $150,000 per fiscal year. Further, each annual nonprimary entitlement grant can be held for up to three years and enable to the airport to use up to $450,000 in nonprimary entitlement grants for one project. Nonprimary entitlements are based upon the level of funding allocated by Congress each year, but for the purpose of this report, it is assumed this entitlement of $150,000 will continue throughout the planning period.

Discretionary grants above the annual nonprimary entitlement grant of $150,000 are available to PDK for specific projects for which enhance safety, security, and capacity. The FAA has established the national priority system for the award process of AIP discretionary grants, and each project must show proper justification in accordance with the system. The FAA AIP discretionary grants typically fund 90% of the total project cost.

7.2.2 State

GDOT operates the Georgia Airport Aid Program (GAAP) for the purpose of providing funding for planning, capital improvements, maintenance, and approach aids to 103 publicly-owned airports in Georgia. As federally funded projects are typically funded at 90% by the FAA, GDOT funding assistance is usually 5% with a 5% local match. Further, some airport projects not eligible for or not included in FAA AIP funding may be funded by GDOT at 75% or 100%. With respect to funding priority, all projects funded by the FAA which are eligible for state funding assistance are given the highest priority for GAAP funds. However, for federally funded projects, general aviation airport projects are given priority for state funding assistance

over the commercial service airport projects because general aviation airports typically generate less local revenue and are thus more dependent upon state funding assistance.

7.2.3 Local

The remainder of the project costs after FAA and GDOT funds are granted for PDK are the responsibility of Dekalb County Board of Commissioners, the owner and operator of the airport. The airport is overseen by DeKalb County Airport Division, an enterprise fund within DeKalb County Government. As an enterprise fund, the Airport Division generates its own revenue for use in operations, maintenance and capital improvements at PDK. Local funds are typically those generated from leases, fuel sales, and other sources of airport income. Additional funds are sometimes obtained from other sources including the use of Special Purpose Local Option Sales Tax (SPLOST) or for large, costly projects, it may be necessary to consider long-term debt, normally in the form of a loan or an airport revenue bond. Historically, the Airport Division has not used SPLOST or long term debt to fund projects.

7.2.4 Private Investment

At PDK, significant private investment may be required for the successful implementation of some of the recommended projects. Typically, a private developer will lease land on a long-term basis in order to construct airport businesses. PDK will still hold authority for approval of private development plans on airport property. Common areas for private investment include projects such aircraft storage hangars, specialized general aviation businesses, as well as fixed-base operations.

7.3 Cost Estimates and Phasing

Each of the project costs shown are estimated planning figures in 2021 dollars. The costs are an estimated total figure which includes items such as design, engineering, planning, grading, supplies, construction and associated utilities. These costs should be used for planning purposes only and detailed cost estimates should be obtained prior to implementation of each project. Recommended improvements for the short term and intermediate term with the associated costs and funding sources are displayed in **Table 7-1**. A graphical depiction of the proposed phasing plan is depicted in **Figure 7-1**. Airfield pavement maintenance and their proposed phasing are depicted on **Figure 7-2**.

Table 7-1: Near Term Capital Improvement Plan Funding Sources

Projects	Term	Primary Funding Source	Total	Federal	State	Local	Private
Southwest Quadrant Development	Near	Federal	$ 12,321,000			$ 12,321,000	
Runway Incursion Mitigation	Near	Federal	$ 1,800,000	$ 1,620,000	$ 90,000	$ 90,000	
Runway 34 RSA	Near	Federal	$ 350,000	$ 315,000	$ 17,500	$ 17,500	
MALSR Upgrade	Near	Federal	$ 1,150,000	$ 1,035,000	$ 57,500	$ 57,500	
Obstruction Removal	Near	Federal	$ 1,000,000	$ 900,000	$ 50,000	$ 50,000	
21L-3R Pavement Maintenance	Near	Federal	$ 458,936	$ 413,042	$ 22,947	$ 22,947	
21R-3L Pavement Maintenance	Near	Federal	$ 69,750	$ 62,775	$ 3,488	$ 3,488	
16-34 Pavement Maintenance	Near	Federal	$ 595,750	$ 536,175	$ 29,788	$ 29,788	
Taxiways Maintenance	Near	Federal	$ 794,927	$ 715,434	$ 39,746	$ 39,746	
Apron Maintenance	Near	Federal	$ 1,797,423	$ 1,617,681	$ 89,871	$ 89,871	
NW T-Hangar Replacement	Near	Local	$ 1,000,000			$ 1,000,000	
Relocate Flightway Drive Entrance	Near	Federal	$ 175,000	$ 157,500		$ 175,000	
Remove County Sanitation	Near	Local	$ 500,000			$ 500,000	
Dresden Drive Streetscape	Near	Local	$ 250,000			$ 250,000	
Short Term Total			**$ 22,262,786**	**$ 7,215,107**	**$ 400,839**	**$ 13,721,839**	**$ -**
	Less Anticipated AIP Entitlements			**$ 750,000**			
	Anticipated Discretionary Budget			**$ 6,465,107**			

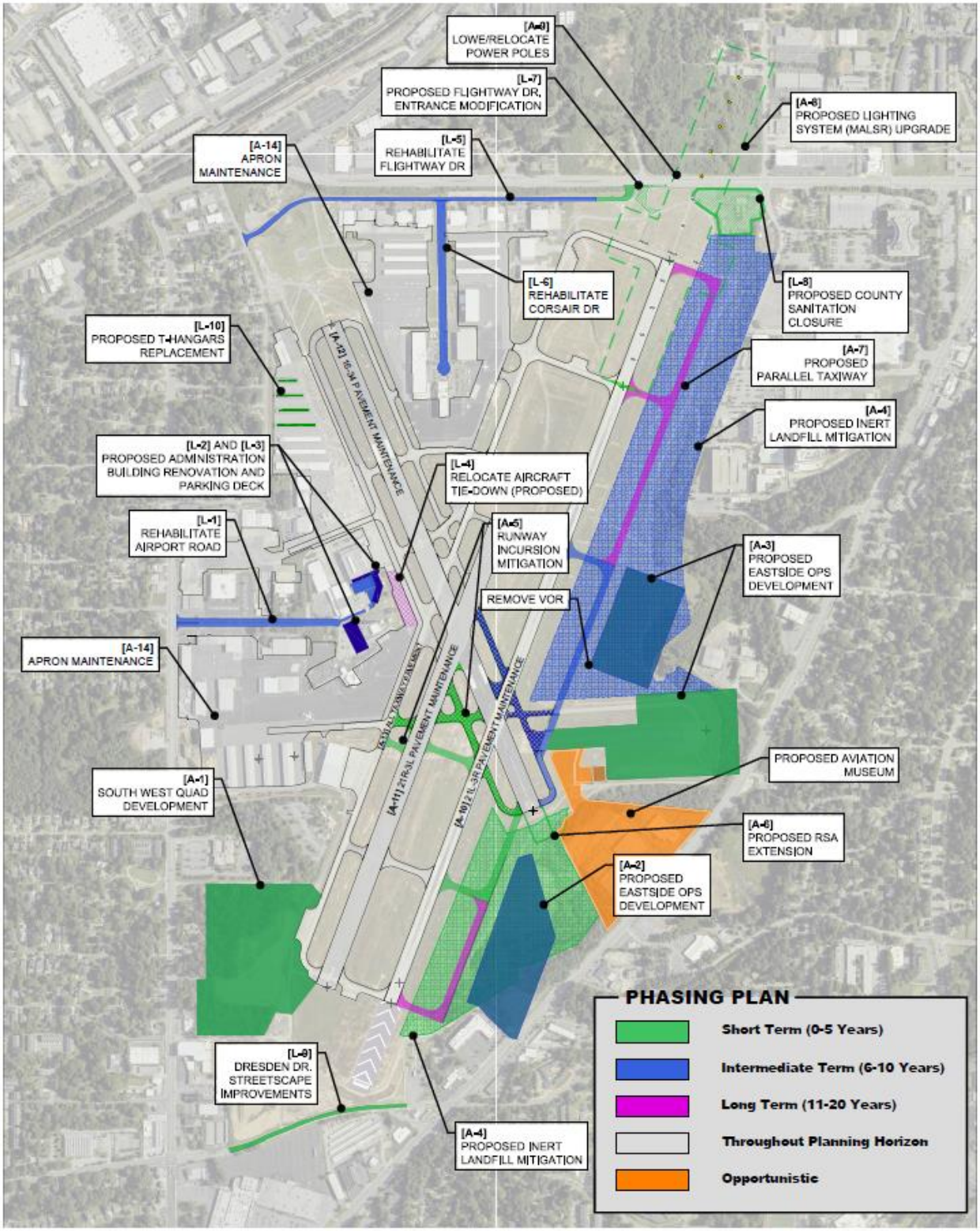
Table 7-2: Intermediate Term Capital Improvement Plan Funding Sources

Projects	Year	Primary Funding Source	Total	Federal	State	Local	Private
Inert Landfill Removal	Intermediate	Local	$ 3,000,000			$ 3,000,000	
21L-3R Pavement Maintenance	Intermediate	Federal	$ 458,936	$ 413,042	$ 22,947	$ 22,947	
21R-3L Pavement Maintenance	Intermediate	Federal	$ 69,750	$ 62,775	$ 3,488	$ 3,488	
16-34 Pavement Maintenance	Intermediate	Federal	$ 595,750	$ 536,175	$ 29,788	$ 29,788	
Taxiways Maintenance	Intermediate	Federal	$ 794,927	$ 715,434	$ 39,746	$ 39,746	
Apron Maintenance	Intermediate	Federal	$ 1,797,423	$ 1,617,681	$ 89,871	$ 89,871	
Rehabilitate Airport Road	Intermediate	Local	$ 500,000				
Admin Building Renovation	Intermediate	Local	$ 11,047,500			$ 11,047,500	
Admin Parking Deck	Intermediate	Local	$ 8,297,500			$ 8,297,500	
Rehabilitate Flightway Drive	Intermediate	Federal	$ 500,000	$ 450,000	$ 25,000	$ 25,000	
Rehabilitate Corsair Drive	Intermediate	Federal	$ 500,000	$ 450,000	$ 25,000	$ 500,000	
Intermediate Term Total			**$ 27,561,786**	**$ 4,245,107**	**$ 235,839**	**$ 23,055,839**	**$ -**
		Less Anticipated AIP Entitlements		**$ 750,000**			
		Anticipated Discretionary Budget		**$ 3,495,107**			

Table 7-3: Long Term Capital Improvement Plan Funding Sources

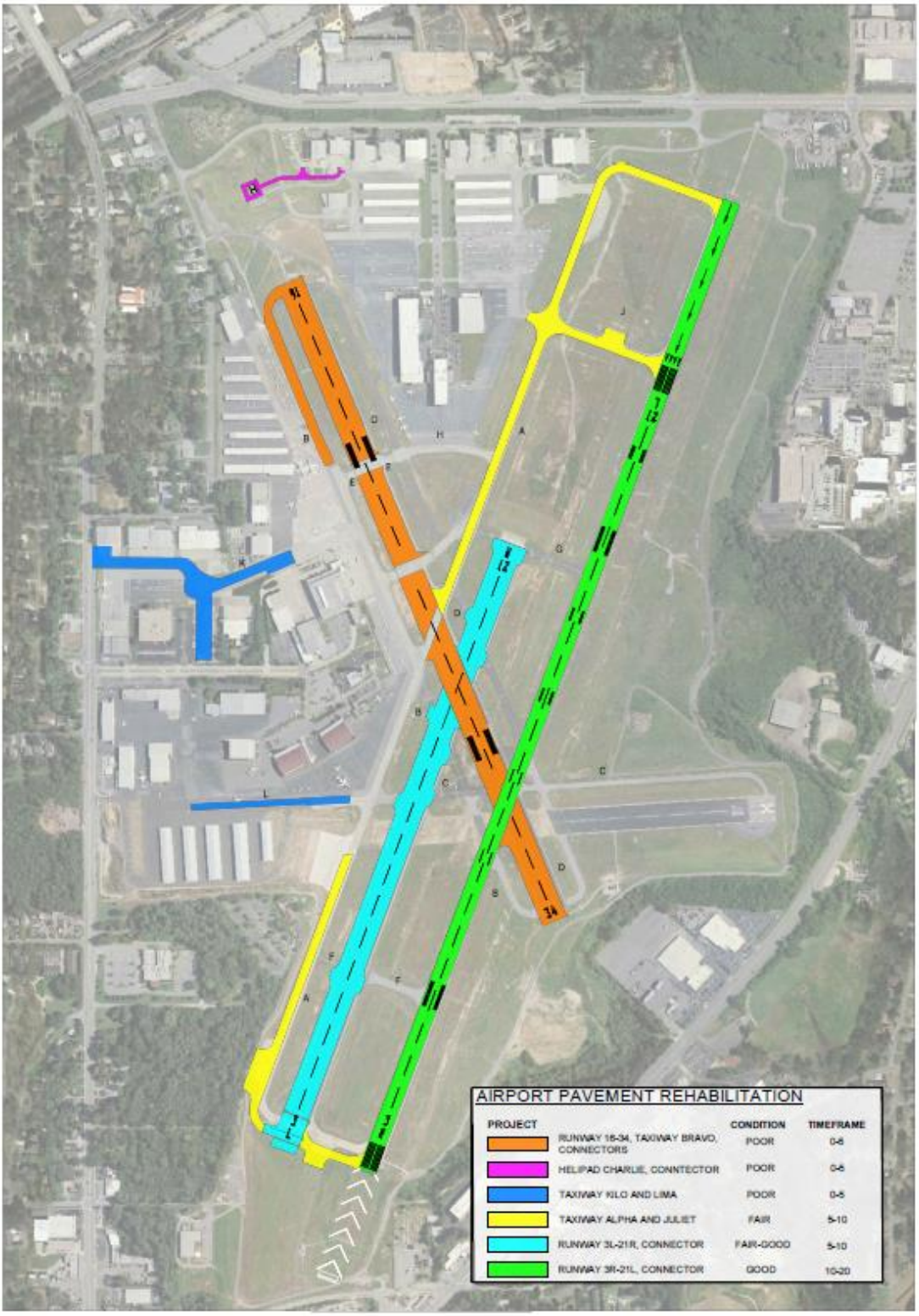
Projects	Year	Primary Funding Source	Total	Federal	State	Local	Private
Eastside Ops - South T-Hangars	Long Term	Federal	$ 6,825,000	$ 6,142,500	$ 341,250	$ 341,250	
Eastside Ops - North VOR Area	Long Term	Federal	$ 10,701,000	$ 9,630,900	$ 535,050	$ 535,050	
Proposed Parallel Taxiway (Eastside)	Long Term	Federal	$ 3,050,000	$ 2,745,000	$ 152,500	$ 152,500	
21L-3R Pavement Maintenance	Long Term	Federal	$ 917,872	$ 826,085	$ 45,894	$ 45,894	
21R-3L Pavement Maintenance	Long Term	Federal	$ 139,500	$ 125,550	$ 6,975	$ 6,975	
16-34 Pavement Maintenance	Long Term	Federal	$ 1,191,500	$ 1,072,350	$ 59,575	$ 59,575	
Taxiways Maintenance	Long Term	Federal	$ 1,589,854	$ 1,430,869	$ 79,493	$ 79,493	
Apron Maintenance	Long Term	Federal	$ 3,594,846	$ 3,235,361	$ 179,742	$ 179,742	
Long Term Total			**$ 28,009,572**	**$ 25,208,615**	**$ 1,400,479**	**$ 1,400,479**	**$ -**
Total All Phases			**$ 77,834,144**	**$ 36,668,830**	**$ 2,037,157**	**$ 39,178,157**	

Figure 7-1: Overall Phasing Plan



Source: Michael Baker International, 2021.

Figure 7-2: Airfield Pavement Rehabilitation Phasing



Source: Michael Baker International, 2021