North Carolina Department of Natural and Cultural Resources

State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary Susi H. Hamilton

Office of Archives and History
Deputy Secretary Kevin Cherry

October 27, 2020

Ellen Turco
Richard Grubb & Associates
525 Wait Avenue
Wake Forest, NC 27587

eturco@rgaincorporated.com

Re: Develop multi-family apartment complex, 7705 East W.T. Harris Boulevard, Charlotte, Mecklenburg County, ER 20-0829

Dear Ms. Turco:

Thank you for your letter of September 22, 2020, transmitting the requested Historic Structure Survey Report (HSSR), "Grove Airport, City of Charlotte, Crab Orchard Township, Mecklenburg County, North Carolina" prepared by Richard Grub & Associates. We have reviewed the HSSR and offer the following comments. We apologize for the delay in our response and any inconvenience it may have caused.

We concur that Grove Airport (MK3414) is not eligible for listing in the National Register of Historic Places for the reasons listed in the report. Therefore, there will be no historic properties affected by the proposed project.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above-referenced tracking number.

Sincerely,

Renee Gledhill-Earley

for Ramona Bartos, Deputy
State Historic Preservation Officer

Received 09/22/2020
Historic Preservation Office
ER 20-0829

Due 10/14/2020
H

HISTORIC STRUCTURES SURVEY REPORT

No cover page submitted- LET 09/22/20; CP recv'd 09/22/20 - KBH

GROVE AIRPORT, CITY OF CHARLOTTE

Crab Orchard Township, Mecklenburg County, North Carolina

SUBMITTED TO:

Pedcor Investments, A Limited Liability Company
770 Third Avenue, S.W.
Carmel, Indiana 46032

Technical Report # 2020-160NC

RICHARD GRUBB & ASSOCIATES

HISTORIC STRUCTURES SURVEY REPORT

GROVE AIRPORT, CITY OF CHARLOTTE

Crab Orchard Township, Mecklenburg County, North Carolina

Principal Investigator:

Ellen Turco, Principal Senior Historian

Authors:

Ellen Turco, Principal Senior Historian
Olivia Heckendorf, Architectural Historian

Prepared by:

Richard Grubb & Associates, Inc.
525 Wait Avenue
Wake Forest, North Carolina 27587

Submitted to:

Pedcor Investments, A Limited Liability Company
770 Third Avenue, S.W.
Carmel, Indiana 46032

Date:

July 15, 2020

Technical Report # 2020-160NC

TABLE OF CONTENTS

LIST OF FIGURES, PLATES, AND TABLES

FIGURES:

PHOTO PLATES:

TABLES:

1.0 MANAGEMENT SUMMARY

On behalf of Pedcor Investments, A Limited Liability Company, Richard Grubb & Associates, Inc. (RGA) has completed a Historic Structures Survey Report (HSSR) of the proposed HUB on Harris multi-family apartment complex development project at the 28-acre former Grove Airport (MK3414) which lies roughly seven miles east of downtown Charlotte in Crab Orchard Township, Mecklenburg County, North Carolina. The proposed undertaking will be partially funded by the United States Department of Housing and Urban Development (HUD). The purpose of this HSSR was to identify and evaluate historic resources present within the Area of Potential Effects (APE) in order to comply with Section 106 of the National Historic Preservation Act (NHPA), as amended.

The project area is located along the east side of East W.T. Harris Boulevard, approximately seven miles east of downtown Charlotte and one-half-mile north of the intersection of Albemarle Road and East W.T. Harris Boulevard. The APE for the undertaking was defined and limited to the subject parcel currently owned by Village Capital Company and Pedcor Investments, A Limited Liability Company (Parcel ID 10915106).

In June 2020, RGA architectural historians recorded all above-ground resources at the Grove Airport approximately 50 years of age or more within the APE (Appendix A). The resource and its various components were evaluated using the National Register of Historic Places (NRHP) Criteria for Eligibility (Table 1.1; Appendix B). As a result of this evaluation, for the purposes of compliance with the NHPA, as amended, RGA recommends the Grove Airport not eligible for listing in the NRHP.

Table 1.1: Resources studied and summary of their NRHP eligibility.

Survey Site No.	Resource Name	NRHP Recommendation
MK3414	Grove Airport	Not Eligible

2.0 PROJECT APPROACH AND METHODOLOGY

In June 2020, under contract to Pedcor Investments, A Limited Liability Company, RGA completed a Historic Structure Survey Report (HSSR) and National Register of Historic Places (NRHP) Evaluation for the 28-acre former Grove Airport, the proposed site of the HUB on Harris multi-family apartment complex development project. The purpose of the survey and this report was to identify and evaluate historic resources present within the Area of Potential Effects (APE) in order to comply with Section 106 of the National Historic Preservation Act (NHPA), as amended. This report meets the requirements of Section 106 and the manual *Report Standards for Historic Structure Survey Reports/Section 106/110 Compliance Reports in North Carolina* (North Carolina State Historic Preservation Office 2019).

2.1 Project Location and Setting

The proposed HUB on Harris multi-family apartment complex development (project) will be sited east of the City of Charlotte in Crab Orchard Township, Mecklenburg County (Figure 2.1, Figure 2.2). The project area vicinity is characterized by suburban development patterns and is roughly bounded by townhomes to the north, single-family residences to the east, additional single-family residences and vacant land to the south, and East W.T. Harris Boulevard to the west.

2.2 Project Description

Final plans for the HUB on Harris development are still under development. A preliminary general schematic drawing has been provided by the developer (Figure 2.3). The project includes the construction of 12 apartment buildings composed of 24 units each. Each apartment building will stand three stories tall. The proposed project also includes a system of roads, parking lots, and recreational space.

2.3 Area of Potential Effects

Section 106 of the NHPA, as amended, defines the APE as "the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects cause by the undertaking" (Figure 2.4). The recommended APE for this project is defined as the parcel proposed for development (Parcel ID 10915106).

2.4 Background Research and Previous Surveys

In a letter to Arkose Environmental, Inc. dated May 18, 2020, the North Carolina State Historic Preservation Office (HPO) identified the Grove Airport (MK3414) in the project area and requested it be evaluated for the NRHP and an HSSR be prepared (Appendix C).

Research was conducted to locate previously identified historic properties in the APE and to develop an appropriate historic context. Due to COVID-19 visitation restrictions, research at the HPO in Raleigh was conducted on RGA's behalf by HPO Technical Assistant, Chandrea Burch. Research was primarily conducted online at Ancestry.com, Newspapers.com, and the University of North Carolina's map collection. Newspapers.com served as an invaluable resource as newspaper articles about the Grove Airport and its development over the years were written frequently. The Abandoned and Little-Known Airfields website provided a brief overview of the Grove Airport and assisted in identifying other potential airfields in the Charlotte area that have since disappeared. The Federal Aviation

Administration's (FAA) history page on its website provided background for the understanding of the development of aviation in the build up to and throughout the duration of World War II and its aftermath. Additional knowledge about airports in North Carolina and their history was provided by Casey Bumgarner Moore, Collections Specialist at the Carolinas Aviation Museum.

2.5 Field Methods

On June 9, 2020, RGA's Public Historian Jason L. Harpe and Architectural Historian Olivia Heckendorf visited the former Grove Airport. Each of the buildings that make up the Grove Airport complex were visually inspected and the exterior and settings were documented with notes and digital photographs. When possible, the interiors were documented through notes and digital photographs. The historical development, architecture, cultural significance, and physical integrity of the property as a whole was assessed and evaluated within its historic context and according to the established NRHP Criteria for Eligibility.

2.6 Reporting

The results of this HSSR are presented in the following chapters. Section 3.0 provides a background history and historical context for the Charlotte area that focuses on the development of aviation. Section 4.0 describes and evaluates the Grove Airport, which includes a physical description of the property and associated buildings and includes an evaluation of the property for individual listing in the NRHP by applying the NRHP Criteria for Evaluation. Section 5.0 is the summary of findings and 6.0 provides the references.

This report meets the HPO's *Standards for Historic Structure Survey Reports/Determinations of Eligibility/ Section 106/110 Compliance Reports in North Carolina*. Ellen Turco served as the Principal Investigator and served as co-author. Jason L. Harpe, Public Historian, conducted fieldwork. Olivia Heckendorf, Architectural Historian, conducted fieldwork and background research and co-authored the report. Ms. Turco, Mr. Harpe, and Ms. Heckendorf meet the professional qualifications standards of 36 CFR 61 set forth by the National Park Service (see Appendix A). Ms. Heckendorf produced the report graphics. Catherine Smyrski served as technical editor and formatted the report.

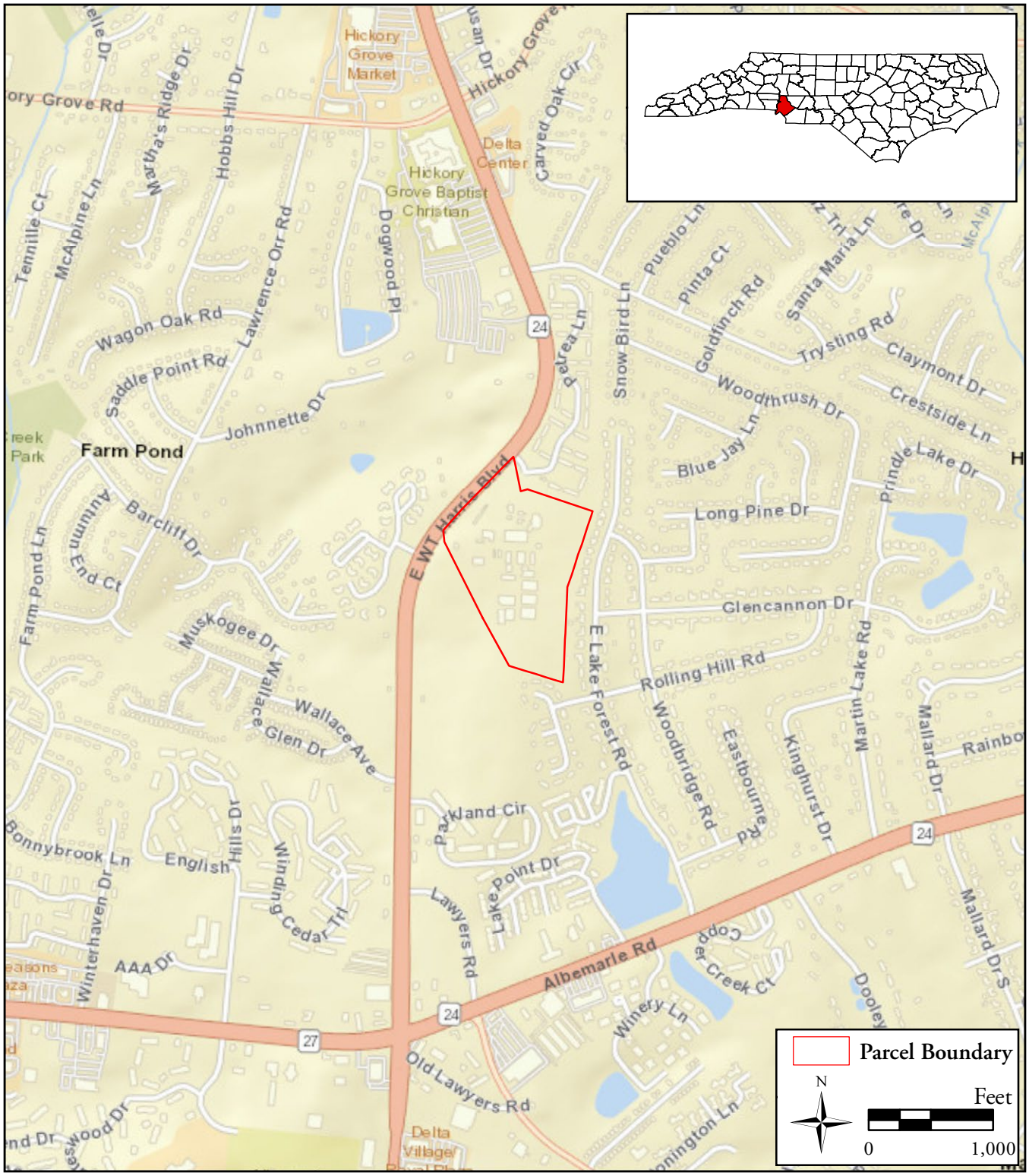


Figure 2.1: Street map showing the location of Grove Airport (World Street Map, ESRI 2020).

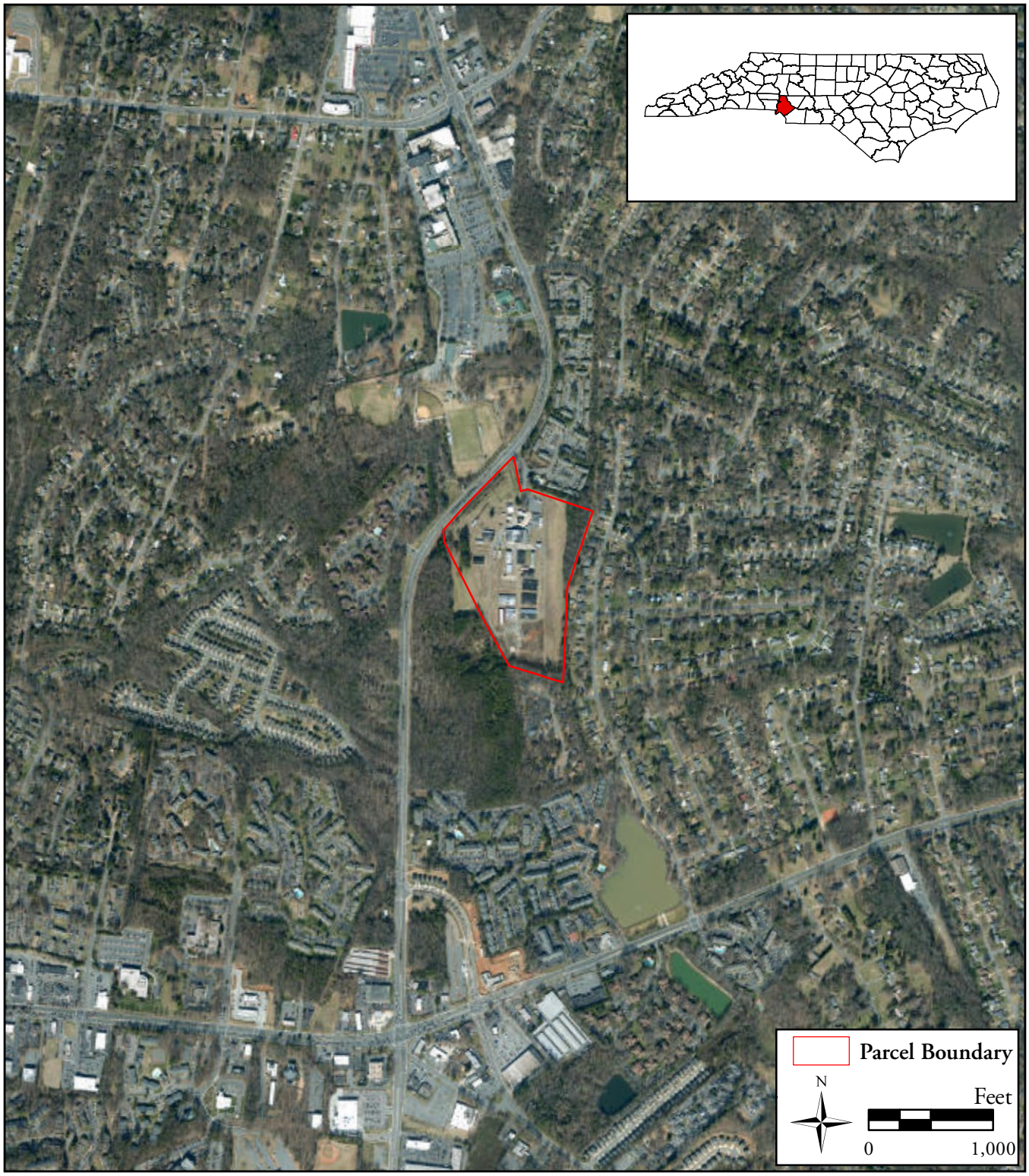
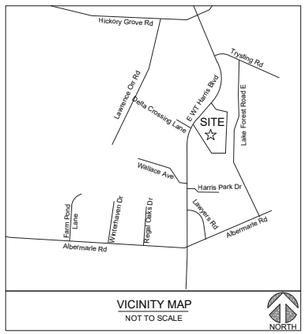


Figure 2.2: Aerial map showing the location of Grove Airport (World Imagery, ESRI 2020).



VICINITY MAP
NOT TO SCALE

NORTH

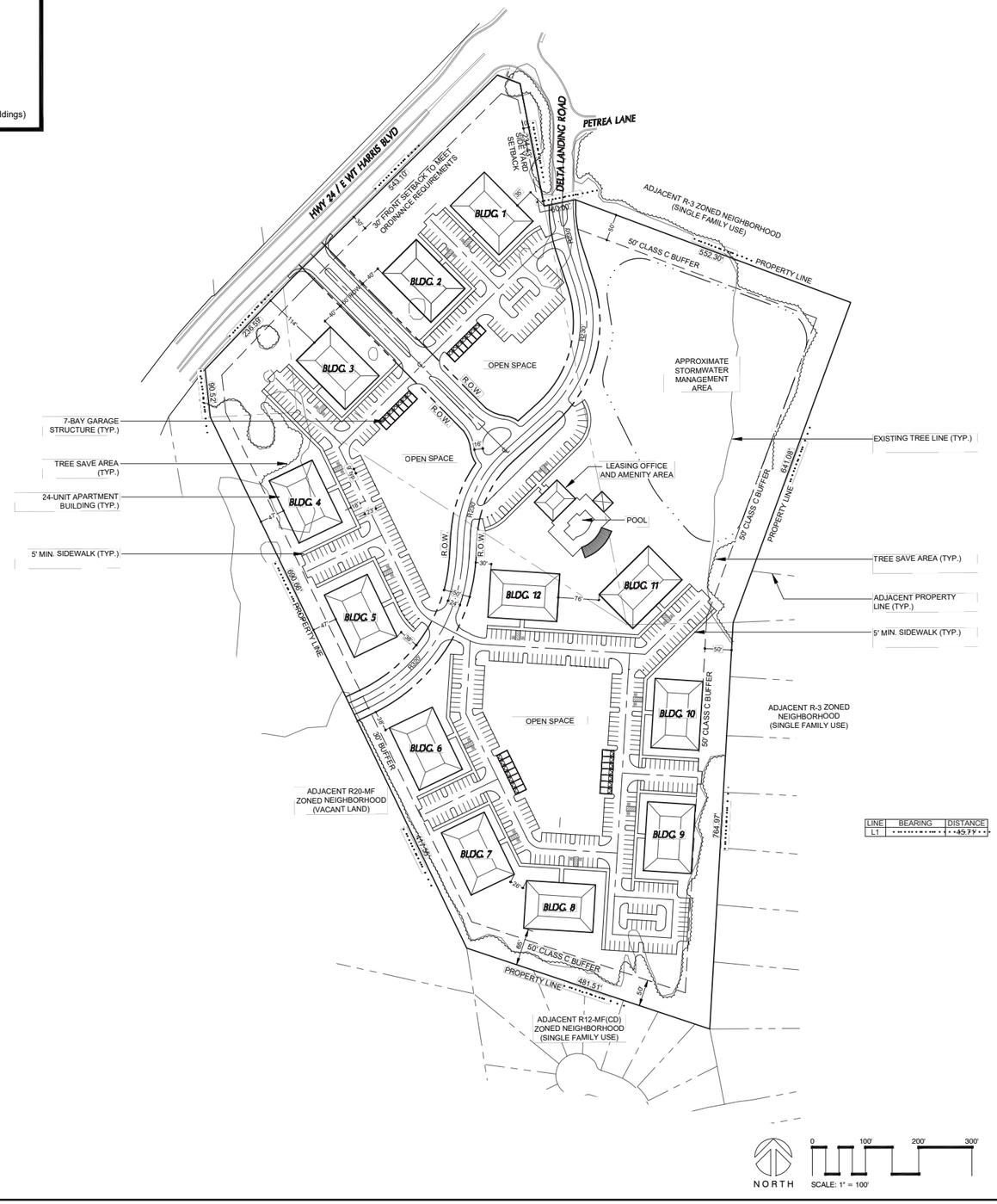
DEVELOPMENT DATA TABLE

a. Site Acreage	▪▪▪▪▪▪▪▪▪▪▪▪
b. Tax Parcels included in Rezoning	10915106 10915107 10915110
c. Existing Zoning:	R20-MF / R-3
d. Proposed Zoning:	R12-MF(CD)
e. Number of Residential Units	288
f. Residential Density	10.48 Units/Acre
g. Maximum Building Height	40', 3 stories max.
h. Maximum Number of Buildings	14 (including principal & accessory buildings)

SITE DATA

Project Roads	▪▪▪▪▪▪▪▪▪▪
Parking Driveways	▪▪▪▪▪▪▪▪▪▪
Apartments	
Total Units (12 Buildings x 24 Units)	288
Required Parking	
1.5 spaces per Apartment Unit	432 Spaces
3000 SF Clubhouse (1 Space per 250 SF)	12 Spaces
1400 SF Pool (1 Space per 100 SF)	14 Spaces
Total Required Parking	458 Spaces
Provided Parking	
1.85 spaces per Apartment Unit	540 Spaces
3000 SF Clubhouse (1 Space per 250 SF)	12 Spaces
1400 SF Pool (1 Space per 100 SF)	14 Spaces
Total Provided Parking	566 Spaces

BOUNDARY
1. Survey is complete & Title Search for Existing Easements is underway. Final Plat will reflect any easement. Survey completed on May 7, 2018.



PRELIMINARY DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:
KSADE VENTURES
4242 SIX FORKS ROAD, SUITE 1500
RALEIGH, NC 27609

PARAMOUNTE ENGINEERING
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6767 (O) (910) 791-6760 (F)
NC License #: C-2946

SKETCH PLAN
HUB ON HARRIS
CHARLOTTE
NORTH CAROLINA

PROJECT STATUS
CONCEPTUAL LAYOUT
PRELIMINARY LAYOUT
FINAL DESIGN
RELEASED FOR CONST.

DRAWING INFORMATION
DATE: 5/30/18
SCALE: 1" = 100'
DESIGNED: JRC
DRAWN: JRC
CHECKED:

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER 14449 05/30/18 JAMES R. CIRELLO

SP-1

PEI JOB#: 17346.PE

Figure 2.3: Preliminary design of the HUB on Harris
(Courtesy of Arkose Environmental, Inc.).

Figure 2.4: Aerial map showing the Area of Potential Effects (World Imagery, ESRI 2020).

3.0 HISTORIC CONTEXT

Establishment of Charlotte through the Nineteenth Century

Originally home of the Catawba tribe, the present-day Charlotte area experienced westward expansion of colonists in the mid-eighteenth century when a group of Ulster Scots Presbyterians and a smaller group of Germans came to the southern Piedmont and Mecklenburg County. Roughly two decades later, the city of Charlotte was established. Charlotte rose as the county's trading hub and political seat. Throughout the duration of the eighteenth century and into the nineteenth century, Mecklenburg County gradually developed as a cotton producing area populated by plantation owners and middling farmers who occupied fertile bottomlands near the Catawba River (Mattson, Alexander & Associates 2008:1). Early settlement patterns shaped rural development and a series of thriving agricultural communities emerged around the Presbyterian churches that were established during the initial phase of settlement (Mattson, Alexander & Associates 2008:1).

Growth was slow in the area until the arrival of the railroad. In the 1850s, the Charlotte & South Carolina Railroad was established, which connected Charlotte with Columbia, South Carolina. The introduction of this rail line increased Charlotte's role in the area's manufacturing industries and allowed for the widespread distribution of local farm products (Czaikowski 2010). In 1852, the NC Railroad reached Charlotte from Goldsboro. This event marked the connection of Charlotte with the eastern North Carolina cotton market. In turn, the NC Railroad boosted Charlotte as a cotton market and further encouraged commercial agriculture. This was a foreshadowing of the dominance Charlotte would show in the years following the Civil War.

Because Charlotte was far from the action during the Civil War, the city and its people were able to recover quickly and rail lines were expanded. As a result, by 1875, six railroads were routed through the city, giving Charlotte more rail connections than any other location between Washington, D.C. and Atlanta (Mattson, Alexander & Associates 2008:1). In the twentieth century, Charlotte also gained connections to New Orleans and Baltimore. The growing number of railroad lines reflected Charlotte's booming population, which had increased from roughly 7,000 in 1880 to over 18,000 in 1900.

Charlotte in the Early Twentieth Century

The twentieth century brought about continued expansion and modernization in Charlotte. The railroad played a major role in supporting Charlotte's rapidly expanding textile industry. By the 1920s, the area between Greenville and Spartanburg, South Carolina up to Winston-Salem and Durham, North Carolina surpassed New England to become the United States top cotton manufacturing center (Hanchett 2015). This increase in textile production spurred the population to new heights and by 1930 the population was over 82,000.

A portion of Charlotte's growing population, along with the many all over the United States, took up an interest in aviation. Throughout the 1930s, general aviation became increasingly accessible as a result of achievements in design and production during World War I. This is reflected in the establishment of Douglas Municipal Airport in 1936, among other private airfields.

To further spur the growth of the Charlotte area in the twentieth century, Charlotte Mayor Ben E. Douglas advocated for a municipal airport in the mid-1930s (Sumner 2002:5). At this time, there was one small airfield that serviced the Charlotte area. Charlotte Airport, also known as Cannon Airport, was founded by Johnny Crowell in the years immediately following World War I (Freeman 2020).[1] In the summer of 1935, Mayor Douglas and the Chamber of Commerce appealed to the City Council to provide Charlotteans with adequate passenger and airmail service to and from the city, knowing that a new airport would draw in larger airlines (Sumner 2002:5). In September 1935, Mayor Douglas and the Charlotte City Council authorized the City Manager to file an application with the Works Progress Administration (W.P.A.) for funding to construct an airport. The funds were granted, and by 1937, an administration/terminal building, hangar, beacon tower, and three runways were complete (Sumner 2002:7). The airport was named Charlotte Municipal Airport and later dedicated as "Douglas Municipal" in 1940 to honor Mayor Douglas.

1 Charlotte Airport was considered as a location for the municipal airport, but officials ruled that its location and gravel runways were not suitable (Freeman 2020). The Charlotte Airport later closed in the 1950s and the site has since been developed.

Private airfields were also established to further feed the public's interest in aviation. The Grove Airport and Plaza Airport were established in the Charlotte area between 1937 and 1941. These private airfields consisted primarily of hangars and a couple of grass runways. The build up to and start of World War II would usher in a new era of both military and civilian aviation.

Build Up to War and Aviation in World War II

In 1938, the Civilian Aeronautics Authority (CAA) was established by the United States government as an independent agency under the Civil Aeronautics Act (Milbrooke 1998:11).[2] The CAA's purpose was to regulate all non-military aviation and promote its development and safety. The CAA continued to administer civil aviation throughout World War II but with a heavy military influence (Milbrooke 1998:11). When war broke out in Europe in September 1939, Congress appropriated $40 million for the Development of Landing Areas for National Defense (DLAND). The DLAND triggered direct federal funding of airports, and a total of $363 million was spent by the CAA to construct and repair airfields throughout the United States. In addition, the CAA took control of airport traffic control and airway traffic control (Milbrooke 1998:11). Private airfields, like Grove Airport after 1941, were improved in cooperation with the CAA and were subject to these new regulations.

In the build up to World War II, it became apparent to leaders that the United States was seriously lacking in the necessary number of trained pilots needed for service. In response, the government established the Civilian Pilot Training Program (CPTP) in 1938 (aiREFORM). The CPTP was later changed to the War Training Service (WTS) in 1942. The CPTP/WTS was established as a civilian program with the understanding that it had the potential to support national defense in the mounting tension between the United States and other nations (National Museum of the United States Air Force 2015). The CPTP/WTS screened pilot candidates and lessons were provided by private schools (National Museum of the United States Air Force 2015). After its establishment in 1941, Grove Airport was one of the private airfields in Charlotte that offered CPTP/WTS instruction. Other private airports that offered training included Plaza and Brockenbrough airports. In total, the CPTP/WTS trained 435,165 pilots nationally between 1939 and 1944 (National Museum of the United States Air Force 2015). Two of the largest CPTP/WTS schools were located in North Carolina: Piedmont Aviation out of Winston-Salem and Southern Airways based out of Charlotte (National Museum of the United States Air Force 2015).

In early 1941, Douglas Municipal Airport in Charlotte was handed over to the United States Army Air Corps, which would become the United States Army Air Forces in June 1941 (Sumner 2002:8). The airport was renamed Charlotte Army Air Base, and again changed names to Morris Field after the Japanese attack on Pearl Harbor in December 1941 (Charlotte Mecklenburg Library). Once the Army took over the base in 1941, civilian flights and training programs ceased at the new Charlotte Army Air Base (*The Charlotte Observer* June 15, 1941). As a result, civilian pilots were looking for airfields to store their planes and fly. This demand for hangar space and runways led to the establishment and improvement of small, private airfields such as the Grove, Plaza, and Brockenbrough airports. In addition, several flying schools, including the Charlotte Flying Service and Haskell A. Deaton's training program both approved by the CPTP/WTS, shifted to Grove Airport. Grove Airport was slightly different from the other facilities due to its crucial overhaul station. Overhauling aircraft is a "process that ensures the aeronautical article is in complete conformity with the applicable service tolerances specified in the type certificate holder's, or equipment manufacturer's instructions for continued airworthiness…No person may describe an article as being overhauled unless it has been at least disassembled, cleaned, inspected, repaired as necessary, reassembled and tested in accordance with the above-specified data" (FAA 2020). In other words, overhauling aircraft is a form of maintenance to ensure that all parts are compliant with manufacturer's recommendations, thus ensuring the safety of the aircraft. From November 1942 to March 1944, Grove Airport halted flight training while it focused solely on overhauling airplanes for the military under a government contract.

Post-World War II to the Present

In the post-World War II years, airports utilized by the military were returned to their pre-war owners and civilian aviation resumed, although many of the safety regulations installed by the CAA remained

2 The CAA was the predecessor of today's Federal Aviation Administration (FAA).

in place. As it is known today, the Charlotte Douglas International Airport was returned to the city's control in 1946 after having been expanded by the military during World War II and growth was spurred in the surrounding area. The Grove Airport became permanently known as Delta Air Base, although it was also referred to as United Aero Service and remained in private hands. Delta Air Base focused primarily on the distribution of aircraft components and parts surplus and operated as a dealer in smaller planes. In 1949, Charlotte was touted as having more airports per capita than any other city in the world with a total of five airports, including Charlotte Douglas, Plaza, Delta Air Base (United Aero Service), Carolina Aircraft Sales, and Cannon airports (*The Charlotte Observer* February 8, 1949). The City of Charlotte continued to grow with its booming manufacturing economy supported by the railroad and air service. Charlotte went on to become a mecca for new businesses as well as one of the top financial centers in the United States.

Local Airports and Comparables
Several historic airports were reviewed for architectural context and for comparison with the Grove Airport, including the W.P.A. Douglas Airport Hangar (MK2933/MK3761), Hangars 4 and 5 at Pope Air Force Base (CD0192), and Plaza Airport.

Aviation has had a long and impactful history in North Carolina beginning with the Wright Brothers manned flight in Kitty Hawk in 1903. There are 13 commercial airports, 60 public airports, over 300 privately-owned airports, and eight military airports in the state (Brenneman 2011). The most prominent and character-defining features of an airport are hangars and runways. Hangars are typically the first buildings to be constructed in order to protect and secure the airplanes. A hangar is characterized by its large, open interior space with an arched truss roofline and massive sliding doors in the gable end for access. A representative example of an airplane hangar is the W.P.A. Douglas Airport Hangar (Figures 3.1-3.2). Located in the northeast corner of the Charlotte Douglas International Airport property, the municipal hangar was erected between 1936 and 1937. The one-story building has an arched roof that runs north-south with rounded cornices composed of prefabricated sheet metal with a corrugated pattern (Sumner 2002:11). The primary, south-facing elevation is characterized by 10 bays of sliding doors which are perforated with a window grouping of two sets of nine panes (Sumner 2002:11). The interior of the hangar is open from the floor to the vaulted ceiling and the walls and roof are supported by a steel frame (Sumner 2002:12).

Hangars 4 and 5 at Pope Air Force Base in Cumberland County were constructed in 1934 and listed in the NRHP in 1991. Hangars 4 and 5 have a double-bay metal super-structure that rests on a concrete slab with pylon corner supports, canopy front doors, and sliding panel rear doors which are typical of hangar construction (Carolina Archaeological Services 1987). The roof is supported by metal bowstring trusses. The Grove Airport hangar stands as a miniaturized and altered version of the more fully expressed Hangers 4 and 5 of the Pope Air Force Base and the W.P.A. Hangar at Charlotte Douglas Airport.

Although no longer extant, the Plaza Airport was constructed concurrently with the Grove Airport. The Plaza Airport was located northeast of downtown Charlotte and was founded as a private airfield in 1941 by Frank A. Pounds of Pounds Flying Service, Inc. Its construction was a direct response to the halt of private flights at the Charlotte Airport after it was taken over by the United States Army Air Forces before the United States' entry into World War II (*The Charlotte Observer* April 20, 1941). Its hangars were much smaller in contrast to the hangar at Charlotte Douglas Airport, Pope Air Force Base, and Grove Airport. These simple gabled structures were composed of frame and clad with either vertical or horizontal wood siding (Figure 3.3). The former hangars of the Plaza Airport serve as an example of simple aircraft hangar construction.

Runways, long strips of cleared, flat land, are an undeniably instrumental part of airports and allow aircraft to take off and land at the location. Runways are either paved, like at Charlotte Douglas Airport and Pope Air Force Base, or have grass runways, like at Grove Airport.

While commonly found at airports, utilitarian sheds are not a character-defining component of airport complexes. These storage buildings are commonly prefabricated and are not aviation specific.

Figure 3.1: View of the primary elevation of the original W.P.A. Hangar at Charlotte Douglas Airport (Carolinas Aviation Museum).

Figure 3.2: View of the original W.P.A. Hangar at Charlotte Douglas Airport (Google Maps, Inc. 2019).

Figure 3.3: View of wood hangars at Plaza Airport circa 1941
(Abandoned & Little-Known Airfields 2020).

4.0 NATIONAL REGISTER EVALUATION OF THE GROVE AIRPORT (MK3414)

Table 4.1: Grove Airport Information Table.

Resource Name	Grove Airport
HPO Survey Site No.	MK3414
Location	7705 East W.T. Harris Boulevard
PIN	10915106
Date of Construction	1941-1996
NRHP Recommendation	Not Eligible

This section contains a description of the setting and a physical description of the Grove Airport (MK3414), a summative history of the property, and an evaluation of the property as a historic resource for listing in the NRHP by applying the NRHP Criteria for Evaluation.

4.1 Setting

The Grove Airport, also known as Delta Air Base, is a collection of 28 buildings on a 28-acre parcel on the east side of East W.T. Harris Boulevard, roughly seven miles west of downtown Charlotte in the Hickory Grove area of Crab Orchard Township, Mecklenburg County (Figure 4.1) (Plates 4.1-4.2). The property is bounded by townhouses to the north, single-family homes to the east, additional single-family residences and vacant land to the south, and East W.T. Harris Boulevard to the west. The property is accessible via Delta Landing Road, which leads to a paved parking lot for the property at the northern border. A chain link fence topped by barbed wire encloses the property. Paved drives run throughout the property, connecting the various buildings to one another. A portion of the former runway, which is the only remaining runway, lies to the east of the structures and is bounded by the subject parcel's east edge and woodland at the northeast. The buildings are concentrated along a paved road that runs north-south through the center of the parcel.

4.2 Inventory List and Physical Descriptions

The following physical descriptions of the buildings that make up the Grove Airport are presented in chronological order according to their construction dates based on aerial imagery (Figure 4.2). The building numbers are their formal names and, for clarity, are reflected on Figure 4.1 for ease of discussion.

Runway, 1941
The only remaining runway of the Grove Airport's three original runways is located outside the barbed wire fencing to the east of the buildings within the complex. Today, the north-south runway measures roughly 1,300 feet and is a truncated remnant of the original 2,000-foot runway. The other runways that ran northwest-southeast and east-west were sold off for residential development between 1956 and 1965. The remaining runway was originally seeded with Bermuda grass but is now covered mostly with weeds. Like the rest of the airport property, the grass is cut but not to the original runway specifications.

Building 1, 1941
Building 1, also known as the Administration Building/Overhaul Station, was built in 1941 and lies adjacent to the paved parking lot; a chain link fence separates the parking lot from access to the structures and airport (see Plate 4.1; Figure 4.3; Plates 4.3-4.7). The building has endured alterations over its lifetime. According to a newspaper photograph from 1941, the initial construction phase

Figure 4.1: Overview of Grove Airport with building identification numbers (World Imagery, ESRI 2020).

Plate 4.1: View of the entry into Grove Airport.

Photo view: Southwest

Photographer: Jason L. Harpe

Date: June 9, 2020

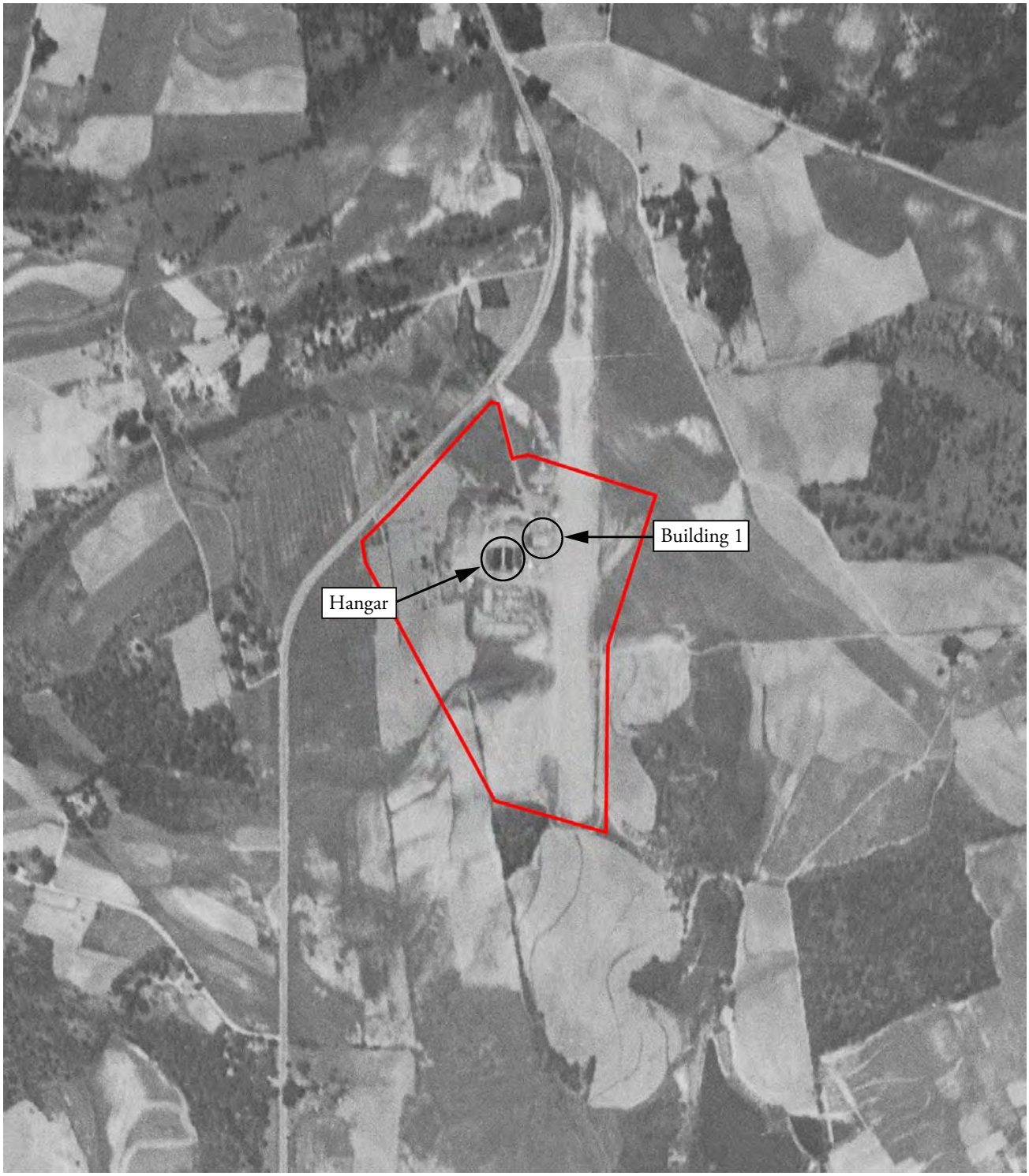
Plate 4.2: View of the former airstrip.

Photo view: Southeast

Photographer: Jason L. Harpe

Date: June 9, 2020

Figure 4.2: Overview of Grove Airport with color coded markers to illustrate construction dates (World Imagery, ESRI 2020).



AERIAL PHOTOGRAPH	Scale: 1" = 500' Date: 1943 Figure No. 5	N↑
Arkose Environmental, Inc.	Site Name: HUB on Harris 7705 East W.T. Harris Blvd Charlotte, North Carolina Project Number: 20-126	

Figure 4.3: 1943 aerial photograph
(Courtesy of Arkose Environmental, Inc.).

Plate 4.3: View of the primary elevation of Building 1.

Photo view: East

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.4: View of the rear elevation of Building 1.

Photo view: Northwest

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.5: View of the interior of the office of Building 1.

Photo view: Southeast

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.6: View of the interior of the Overhaul Station area of Building 1.

Photo view: South

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.7: View of the interior of the south wing of Building 1.

Photo view: South

Photographer: Jason L. Harpe

Date: June 9, 2020

included the rectangular main block with an arched roof, curved corners, and flat roof wings on the north and south elevations. The structure's curved corners hinted at the Streamline Moderne style of architecture that was a common design element in aviation buildings in the 1930s and 1940s. Between 1948 and 1951, aerial photography suggests that the metal-clad curved addition at the southeast corner of the south wing was added, and its design follows that of the Streamline Moderne motif. The most recent addition was made to the east elevation of the main block between 1976 and 1983 and is composed of a single-story hipped roof section clad with vinyl siding on the north elevation and plywood on the east elevation.

The main block and wings of the building rest on a concrete slab and are constructed of concrete block walls with a steel truss roof system that supports the arched roof which is covered with composite shingles. Once oriented with its primary elevation facing east, Building 1 is now oriented with the west side serving as the primary elevation. The west elevation features the large, original multi-light steel sash windows, and a vinyl-wrapped gabled shed with vinyl siding covers up a portion of the windows. Between the arched main block and north wing, a single-bay metal roll-up garage door with a vinyl pent has been added.

The north wing of Building 1 is clad with vinyl siding and has an altered window configuration with single-sash vinyl windows. A modern single-leaf entry door is located at the northwest corner of the wing. The south wing exposes the building's original materials of painted concrete block and two original multi-light steel sash windows.

On the interior, the office space in the north wing has a drop ceiling with wood paneling and carpet. The north wing connects with the main block that has a concrete floor and a drop ceiling. The steel roof truss system is visible in the south wing.

Hangar, 1941

The Hangar was built concurrently with Building 1 (Plates 4.8-4.12). The barrel-vaulted main block is oriented north-south, with its primary elevation facing north. Two original wings flank the east and west elevations, and a shed roof addition was installed on the west wing between 1951 and 1956. The main block rests on a concrete slab foundation and the east and west walls are frame. The roof is supported by a steel truss system and the exterior is covered in corrugated metal. Portions of the north and south elevations no longer retain their corrugated metal siding, which exposes the wood lattice infill that was added at an undetermined date. The north elevation has been altered and the original sliding hangar doors and large opening are no longer intact. Now the north elevation has a single bay opening without a door in the east bay and a paneled, fiberglass replacement personnel door in the west bay. The south elevation has a centered single bay opening, which is also missing a door. The interior of the hangar is open, and the steel truss roof system is exposed. The floors are concrete.

The front gable east wing with a circa 1976 to 1983 shed roof addition on the east side rests on a concrete slab foundation and its frame construction is clad with board-and-batten siding. The primary elevation of the east wing is oriented to face the north and is three bays wide. A shed roof porch extends across the façade and is supported by turned balusters. The east bay has a metal, single-leaf personnel door. The windows throughout are one-over-one vinyl sashes.

The frame west wing has a shed roof and is of frame construction. A double-leaf door is centered on the north elevation. The frame shed roof west wing addition has a hipped-roof metal porch that extends along the west elevation. Another centered garage door opening without a door is present on the north elevation. Both the west wing and west wing addition are clad with corrugated metal siding. The interior of the west wing is divided into a north and south room by a wall clad with thin wood strips. This wall is perforated by two six-over-six wood sash windows. The east wall of the interior, which also serves as the wall for the main hangar, is lined with corrugated metal. The floors throughout this section are concrete.

Plate 4.8: View of the primary (north) elevation of the Hangar.

Photo view: Southeast

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.9: View of the rear elevation of the Hangar.

Photo view: Northeast

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.10: View of the interior of the Hangar.

Photo view: Southeast

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.11: View of the interior of the west wing of the Hangar.

Photo view: South

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.12: View of the interior of the westernmost wing of the Hangar.

Photo view: South

Photographer: Jason L. Harpe

Date: June 9, 2020

Building 3, 1941-1943
Building 3 is composed of two single-story sections, which include a gabled section at the east and a shed roof section at the west. It was constructed between 1941 and 1943 (Plates 4.13-4.14). The gabled section rests on a brick foundation and its exterior walls are clad with vinyl siding. A replacement, single-leaf door covered by a hipped pent is located on the north elevation. The windows throughout this section are fixed, single-sash vinyl replacement windows. The west section is constructed of concrete block. The windows and doors on the east and north elevations have either been infilled with concrete block or covered by plywood. The west elevation is covered with metal siding and features a large, single sliding door. All roof sections of Building 3 are covered with metal.

Building 6, 1941-1943
The arched roof building known as Building 6 lies south of the Hangar (Plates 4.15-4.16). The building is built on a concrete slab, is covered in corrugated metal siding, and has steel supports. The east elevation has a large, centered bay opening flanked by a modern personnel door. Both the north and south elevations have centered bay openings. Two circular metal flues pierce the metal roof and the bay opening on the east elevation is crowned by a steel truss roof system. The interior of Building 6 is open with no finish materials other than the exterior corrugated metal and the concrete flooring.

Building 4, 1943-1948
Another early building constructed at Grove Airport is Building 4 (Plates 4.17-4.18). Built between 1943 and 1948, the single-story building has a main gabled section with shed wings on the north and south sides. Building 4 is clad with metal siding and is capped by a metal roof. The primary elevation faces east and has a single, metal roll-up garage door in addition to a personnel door. Both doors are replacements. An additional metal roll-up garage door is on the west elevation. The windows throughout are replacement one-over-one double-hung wood sashes. One original six-over-six wood sash window remains on the west elevation. The west elevation has an attached, gabled shed with vinyl siding and a rolled composite shingle roof.

Building 31/Coop, 1943-1948
It is likely that this shed roof chicken coop was constructed around 1943 when military personnel were stationed at the base to oversee the overhaul work (Figure 4.4). The coop is composed of an enclosed section to the east and a fenced area to the west. A single-leaf personnel door perforates the south elevation. The east section of the building is clad with corrugated metal. Both sections of the building are capped by a metal roof.

Building 2, 1948-1951
Building 2 is a one-story, side-gabled building that is semi-attached to the southwest corner of Building 1 (Plates 4.19-4.20). According to aerial photographs, Building 2 was completed between 1948 and 1951. It is constructed of concrete block that has been covered with stucco. Engaged stuccoed brick pilasters adorn the west elevation of the building. The building is capped by a rolled composite shingle roof. The primary (west) elevation has a single-leaf personnel door in the north bay that is surmounted by a small transom and entry pent. Original, one-over-one wood sash windows perforate the east and west elevations. The south elevation features a large, metal sliding door.

Building 8, 1951-1956
Building 8 was constructed between 1951 and 1956 and is located south of the Hangar and east of Building 6 (Plates 4.21-4.22). This front gabled frame building rests on a foundation of concrete block and concrete slab. The exterior walls are covered in metal. Although the original windows are no longer in place, their fenestration pattern still perforates the west elevation and corrugated plastic has been installed. The north elevation features two doorless, single-bay openings and a personnel door. The south elevation has a single bay opening in the east bay that is also missing doors.

House, 1951-1956
A side-gabled, single-story House lies west of the airport buildings (Plates 4.23-4.27). This House, constructed between 1951 and 1956, sits on a concrete block foundation and has vinyl siding. It is capped by a composite shingle roof. An interior brick chimney pierces the east face of the roof.

Plate 4.13: View of the primary elevation of Building 3.

Photo view: West

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.14: View of the rear elevation of Building 3.

Photo view: East

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.15: View of the primary and north elevations of Building 6.

Photo view: Southwest

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.16: View of the interior of Building 6.

Photo view: Northwest

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.17: View of the primary elevation of Building 4.

Photo view: West

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.18: View of the north and west elevations of Building 4.

Photo view: Southeast

Photographer: Jason L. Harpe

Date: June 9, 2020

Figure 4.4: Buildings 31/Chicken Coop
(Courtesy of Arkose Environmental, Inc.).

Plate 4.19: View of the primary elevation of Building 2.

Photo view: Southeast

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.20: View of the rear elevation of Building 2 at the left of the photograph.

Photo view: Northwest

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.21: View of the north and west elevation of Building 8.

Photo view: Southeast

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.22: View of the interior of Building 8.

Photo view: Southwest

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.23: View of the primary and north elevations of the House.

Photo view: Southeast

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.24: View of the primary and south elevations of the House.

Photo view: Northeast

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.25: View of the rear elevation of the House.

Photo view: West

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.26: View of the primary and north elevations of the hipped roof residential building.

Photo view: Southeast

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.27: View of the rear elevation of the hipped roof residential building.

Photo view: West

Photographer: Jason L. Harpe

Date: June 9, 2020

The primary elevation faces west, and the front door is protected by a small gabled stoop supported by two, square vinyl covered posts. The north elevation of the House has a gabled addition that is composed of the same materials as the main block of the House. All the windows and doors in the House have been replaced. The windows throughout are one-over-one vinyl sashes. The House was likely constructed by the founder of the Charlotte Aircraft Corporation, H.J. (Jenks) Caldwell, and his wife Mildred Caldwell.

Roughly 30 feet southeast of the House is a single-story, hipped roof residential building constructed of concrete block. Composite shingles cover the roof. The primary (west) elevation is two bays wide with a single-leaf entry door surmounted by a shed roof pent. The windows throughout are one-over-one vinyl replacement sashes. According to the available research, it is unclear who resided in this building.

Buildings 9, 10, 11, 12, 13, 14, 15, 16, 23, 67, 71, 243, Sheds, and Weigh Station, 1956-1965
The majority of buildings that make up the Grove Airport were constructed between 1956 and 1965, according to aerial photographs (Plates 4.28-4.45). Of the 12 buildings constructed during this period, 10 were constructed of frame and clad with corrugated metal (Buildings 11, 12, 13, 14, 15, 16, 23, 67, 71, and 243). The remaining two buildings were constructed of concrete block (Buildings 9 and 10) and Building 9 was covered with stucco. With the exception of Building 71 with a gambrel roof created by sheds that extends from the roof to the ground, all of the buildings are front-gabled and have points of ingress on their primary elevations. Eight of these buildings have either open or enclosed shed additions (Buildings 11, 12, 13, 14, 15, 16, 67, and 243). All of the buildings constructed between 1956 and 1965 are capped by metal roofs. Storage sheds were also constructed out near the northwest parcel boundary line.

In addition to the buildings constructed during this period, a weigh station was likely installed to the south of Building 90, which had not yet been built. The weigh station is composed of a metal platform inset in the ground and covered by wood planks. The large Winslow scale is protected by a metal shed roof supported by posts.

Building 47, 1965-1969
Building 47 was constructed sometime between 1965 and 1969 (Plates 4.46-4.47). Much like the buildings erected between 1956 and 1965, this building is front gabled with a central point of ingress on the primary (east) elevation. The door is centered on the east elevation and consists of two leaves of corrugated metal. The building rests on wood beams and the exterior is clad with both metal siding and vertical wood paneling. It is capped by a metal roof. The interior has wood strip flooring and was likely used as a storage facility with its shelving units created from military munitions crates.

Buildings 59, 90, Shed behind Building 90, and 74, 1976-2006
A total of four buildings were constructed between 1969 and 2006, according to aerial photographs (Plates 4.48-4.55). All of these buildings are gabled and clad with metal exterior siding. They are all capped by metal roofs.

4.3 History

Prior to the establishment of Grove Airport, the land on which the subject parcel lies was owned by a farmer, Vernon (also spelled Verner, according to census data) Jordan (Figure 4.5). An aerial photograph from 1938 shows agricultural fields on the subject parcel and trees planted to the west.

The Grove Airport was founded in 1941 by Robert H. Miller and Vernon Hickman under the auspices of Aero Center, Inc. (*The Charlotte Observer* February 27, 1941). Initial plans for the airport included three 1,000-foot Bermuda grass runways, an overhaul station, and a hangar all for the cost of $25,000 (*The Charlotte Observer* February 27, 1941) (see Figure 4.3). The overhaul station and hangar were designed

Plate 4.28: View of the primary elevation of Building 9.

Photo view: West

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.29: View of Buildings 10 and 11.

Photo view: South

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.30: View of the interior of Building 10.

Photo view: South

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.31: View of the interior of Building 11.

Photo view: East

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.32: View of Buildings 14, 12, and 13.

Photo view: South

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.33: Interior view of Building 13, which is representative also of Buildings 12, 14, 15, 67, and 243.

Photo view: East

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.34: View of the east elevation of Building 15.

Photo view: West

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.35: View of the north elevation of Building 16.

Photo view: South

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.36: View of the east elevation of Building 23.

Photo view: West

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.37: View of the rear and south elevations of Building 23.

Photo view: Northeast

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.38: View of the interior of Building 23.

Photo view: Southwest

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.39: View of the east elevation of Building 67.

Photo view: West

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.40: View of the west elevation of Building 71.

Photo view: East

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.41: View of the interior of Building 71.

Photo view: East

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.42: View of the east elevation of Building 243.

Photo view: West

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.43: View of the storage sheds along the northwest edge of the parcel boundary.

Photo view: North

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.44: View of the weigh station.

Photo view: West

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.45: View of the weigh station.

Photo view: South

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.46: View of the east elevation of Building 47.

Photo view: West

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.47: View of the interior of Building 47.

Photo view: West

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.48: View of the north elevation of Building 59.

Photo view: Southwest

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.49: View of the building to the west of Building 59.

Photo view: Southwest

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.50: View of the south elevations of Building 59 and the associated building to the west.

Photo view: Northeast

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.51: View of the primary and south elevations of Building 90.

Photo view: Northwest

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.52: View of the office inside Building 90.

Photo view: West

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.53: View of the shed behind Building 90.

Photo view: Southeast

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.54: View of east elevation of Building 74.

Photo view: Northwest

Photographer: Jason L. Harpe

Date: June 9, 2020

Plate 4.55: View of the interior of Building 74.

Photo view: Southwest

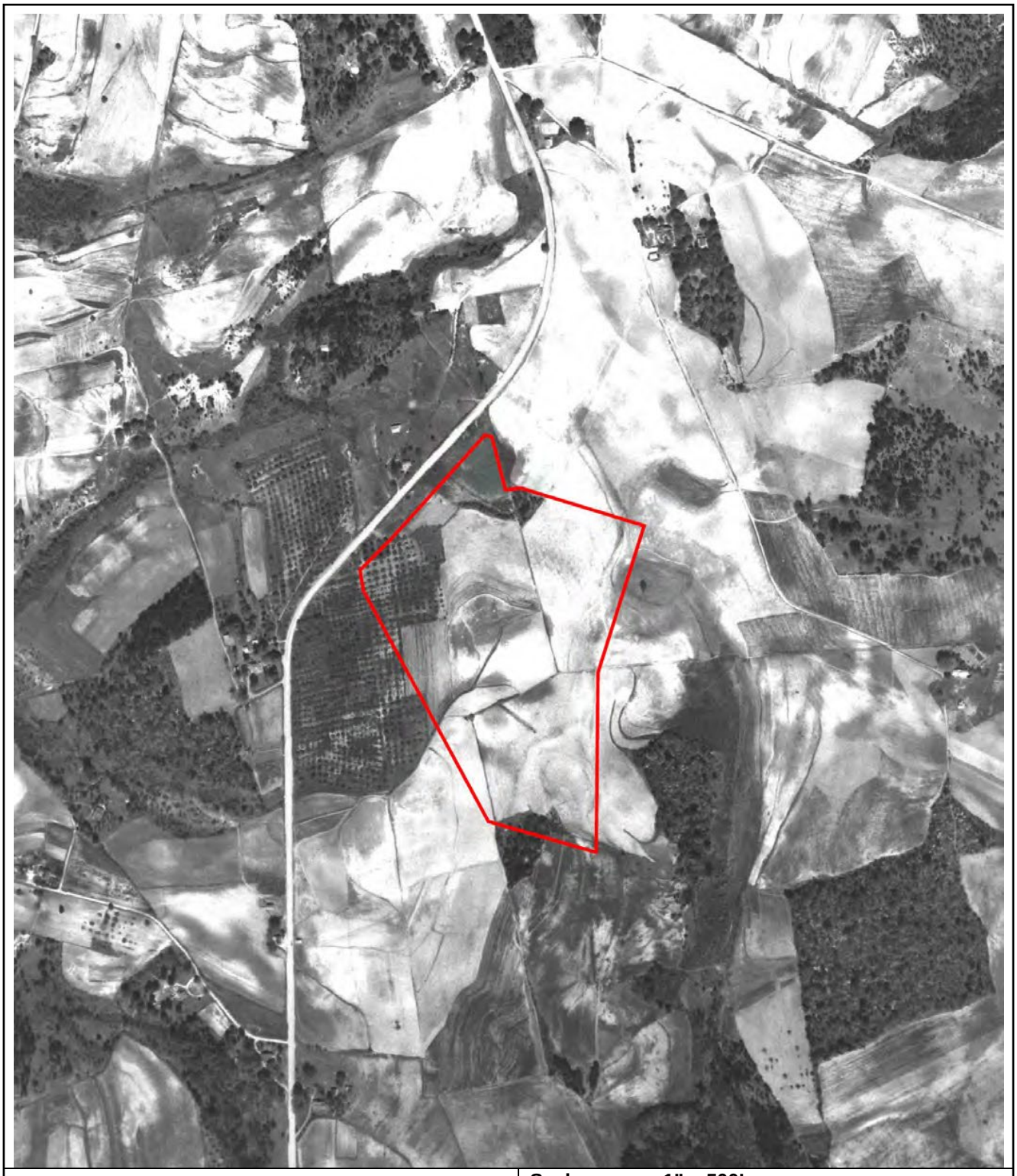
Photographer: Jason L. Harpe

Date: June 9, 2020

and constructed by A.L. Jarrell & Son, a contractor from Salisbury, North Carolina (*The Charlotte News* September 27, 1941). The airport was large enough to accommodate commercial aircraft and the Civilian Aeronautics Authority (CAA), predecessor to the Federal Aviation Administration (FAA), ran pilot training programs from the site. In early 1941, civilian flying was halted at Charlotte Municipal Airport due to training exercises by the United States Army Air Forces that were stationed there. Aero Center, Inc. was awarded a contract to serve as a dealer of Stinson aircraft out of Grove Airport (*The Charlotte Observer* February 27, 1941). Aero Center, Inc. showcased the new Stinson Voyager, which was a new model with a 90-horsepower Franklin motor and was fully equipped with a sending and receiving radio (*The Charlotte News* March 7, 1941).

By June 15, 1941, the Grove Airport had three runways, each measuring 2,000 feet long and 300 feet wide and another runway was being planned for the future (*The Charlotte Observer* June 15, 1941). An aerial photograph included with a newspaper article regarding privately-owned airfields in Charlotte shows the Grove Airport with its three grass runways, overhaul station (Building 1), Hangar, and three planes sitting outside (Figure 4.6) (*The Charlotte Observer* June 15, 1941). Because Charlotte Municipal Airport was closed to civilian flyers, there was an uptick in demand for private hangar space. In addition to Grove Airport, there were two other privately-owned fields within an eight-mile radius of Charlotte: the Cannon and Plaza airports (*The Charlotte Observer* June 15, 1941). In September 1941, Grove Airport was officially open for business with planes to rent, hangar space for rent, flight instructors for hire, and aircraft for sale (Figures 4.7-4.9). Aero Center, Inc. officials included Vernon Hickman, president; Bob Miller, secretary-treasurer; Haskell Deaton, chief flying instructor; and flight instructors Bill Lefevers and Jimmy Summers (The Charlotte News September 6, 1941). An advertisement for Grove Airport included a description of its amenities that were housed in Building 1, which included offices, locker rooms, rest rooms, showers, engine room, assembly room, paint room, and lunch room (*The Charlotte Observer* September 28, 1941). The company officials at Grove Airport touted their overhaul station's (Building 1) capabilities which included the ability to repair wings, fuselages, and engines and it could handle all jobs from a "simple tune-up" to a "major overhaul" (*The Charlotte Observer* September 28, 1941).

Beginning in 1942, the CAA authorized that more thorough inspections be carried out at private airports to monitor the flight activity of private pilots during World War II (*The Charlotte Observer* February 13, 1942). New regulations included security guards during the day and at night and the installation of burglar alarms in hangars. In addition, if pilots were to travel farther than a 25-mile



AERIAL PHOTOGRAPH	Scale: 1" = 500' Date: 1938 Figure No. 4	N↑
Arkose Environmental, Inc.	Site Name: HUB on Harris 7705 East W.T. Harris Blvd Charlotte, North Carolina Project Number: 20-126	

Figure 4.5: 1938 aerial photograph
(Courtesy of Arkose Environmental, Inc.).

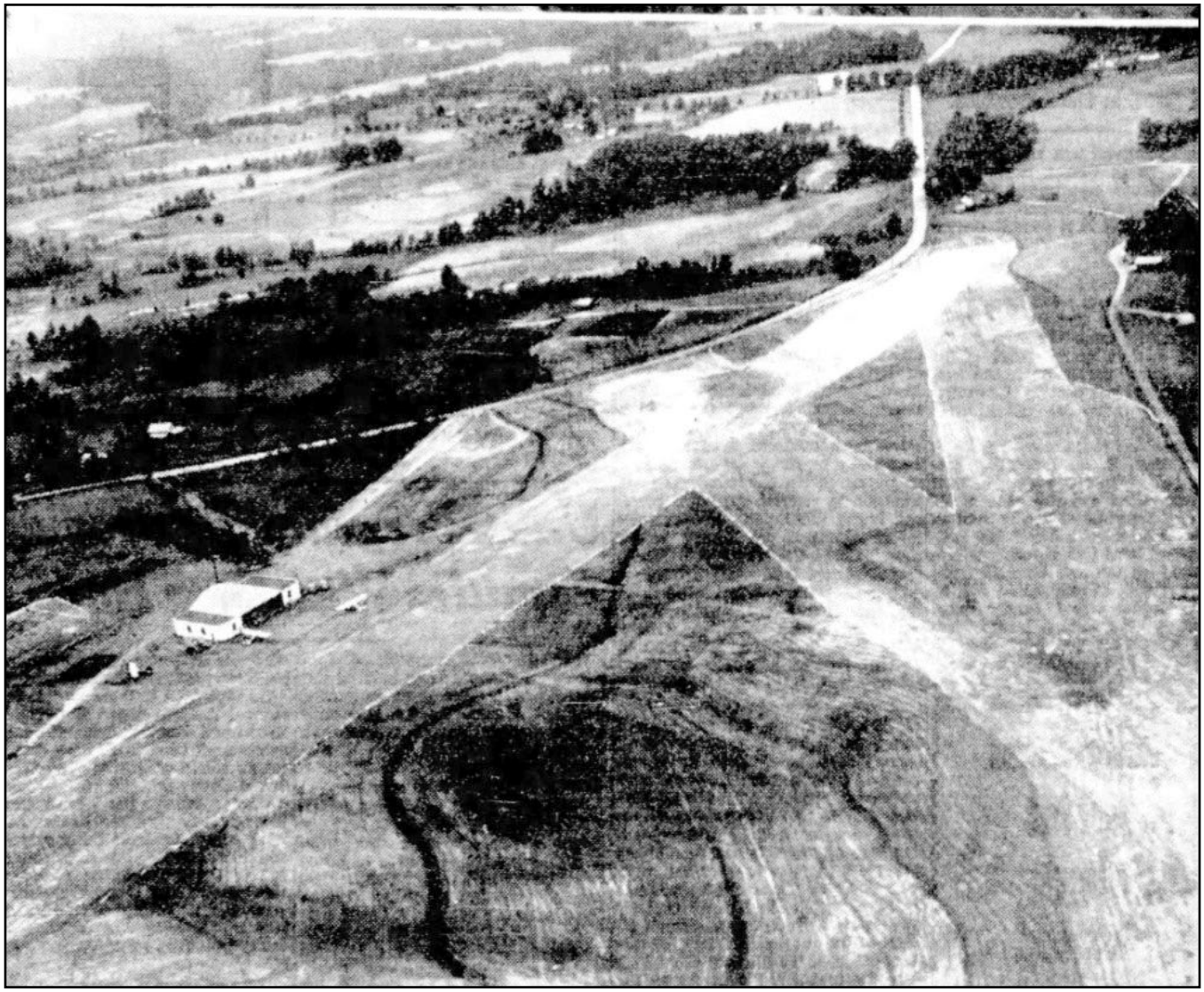


Figure 4.6: Aerial view of Grove Airport in 1941
(*The Charlotte Observer* June 15, 1941).

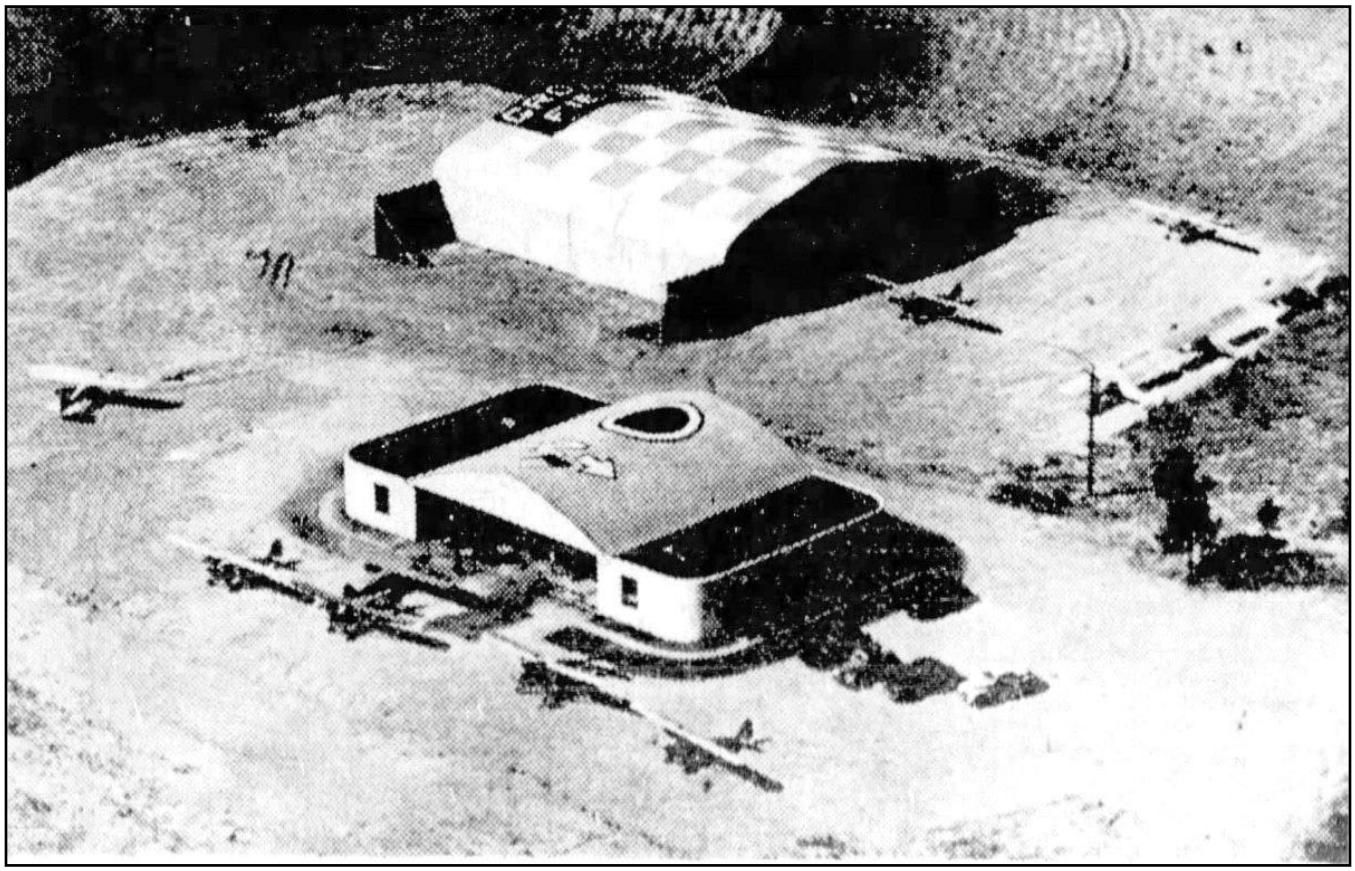


Figure 4.7: Aerial view of Grove Airport buildings in 1941
(*The Charlotte Observer* September 9, 1941).

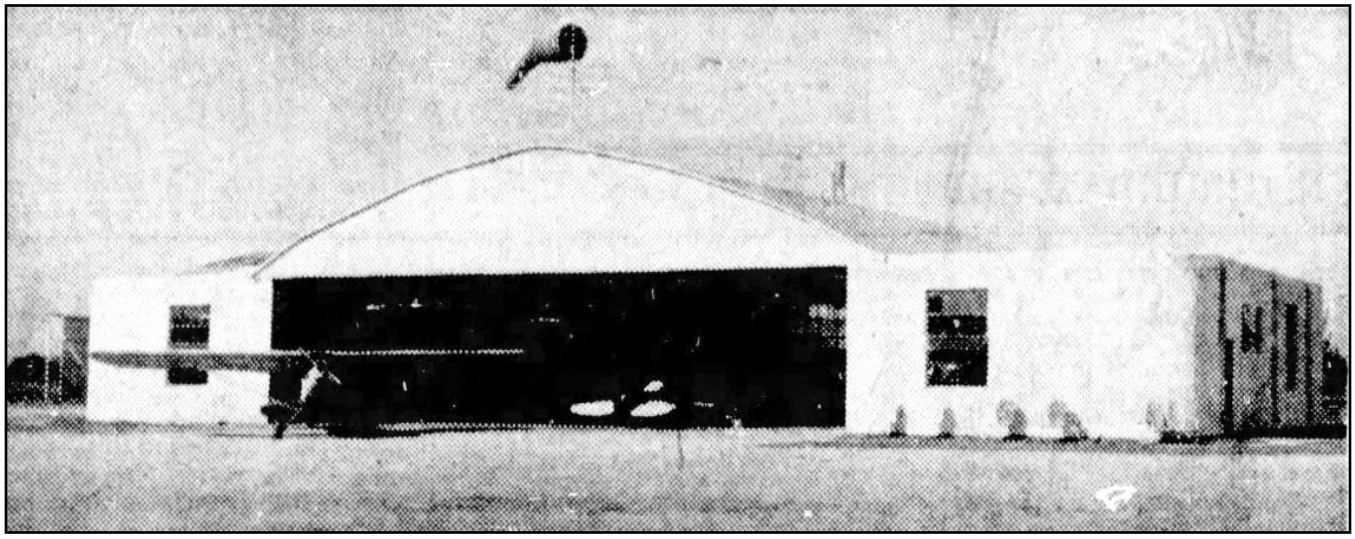


Figure 4.8: Photograph of the Administration Building/Overhaul Station (Building 1) at the Grove Airport in 1941 (*The Charlotte Observer* September 28, 1941).

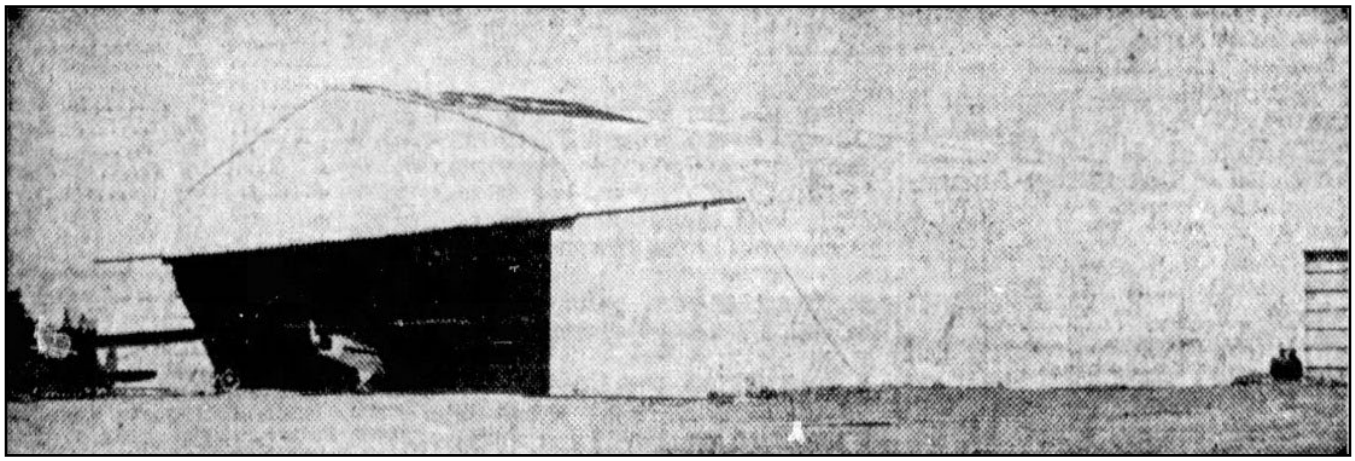


Figure 4.9: Photograph of the Hangar at the Grove Airport in 1941
(*The Charlotte Observer* September 28, 1941).

radius zone around Charlotte, they had to obtain permission from the CAA and carry clearance papers with them (*The Charlotte Observer* February 13, 1942). Grove Airport obtained approval from the CAA on February 14, 1942 to continue private flight out of the airport after having proven compliance with the new CAA regulations. However, by July 6, 1942, Grove Airport no longer adhered to the new policies that were required by the CAA, and it was forced to close its doors (*The Charlotte News* July 6, 1942). For about five months, Grove Airport was utilized by the Civil Air Patrol (CAP) for training maneuvers until it came under the ownership of Charles Foley in November 1942.

Grove Airport was re-opened as Delta Air Base in November 1942 (*The Charlotte News* November 17, 1942). The purpose of Delta Air Base was to serve as a headquarters for aircraft repair, reconditioning, and maintenance in coordination with the United States Army Air Forces, CAP, and the Civilian Pilot Training Program (CPTP). According to a newspaper article from that month, Delta Air Base was a private enterprise owned by Charles Foley, president of the C. Foley Co. of Mineola, New York, which manufactured aviation equipment (*The Charlotte News* November 17, 1942). All activity at Delta Air Base was to be "strictly defense work" which meant no airplane rentals, student flying, or charter planes. Improvements at the airport during this time included the installation of new mechanical equipment in the hanger, runway improvements, and installation of lighting equipment so work could be completed around the clock (*The Charlotte News* November 17, 1942).

Not long after Foley's company opened Delta Air Base, the newly formed United Aero Service, Inc. (United Aero Service) took control of the property in May 1943 (*The Charlotte Observer* May 29, 1943). Delta Air Base continued to serve as a repair and overhaul station under United Aero Service, Inc. which held contracts with the United States Army Air Forces, Civil Aeronautics Administration, Civil Coastal Patrol (CCP), CAP, and War Training Service (WTS). In December 1943, United Aero Service was awarded another contract with the United States Army Air Forces to repair and overhaul airplanes and airplane engines for the entire 1944 calendar year. At this time, the United States Army Air Forces assigned a detachment of men to permanent duty at Delta Air Base so that work could be supervised (*The Charlotte Observer* December 16, 1943). A newspaper article from around this time suggests that the servicemen were living on the Delta Air Base property (*The Charlotte Observer* December 16, 1943). An aerial image from 1943 shows undetermined buildings or objects to the west of the buildings. However, by the time the 1948 aerial photograph was taken, those undetermined buildings/objects had been removed. The current housing units on the Grove Airport property were constructed between 1951 and 1956 for Charlotte Aircraft Corporation's owner H.J. (Jenks) Caldwell and are not associated with the Air Force personnel assigned to Delta Air Base.

In addition to serving the needs of the United States Army Air Forces, United Aero Service expanded its operations to include a private flying school at Delta Air Base (*The Charlotte News* March 2, 1944). Lieutenant Edward A. Rollerson, operations and training officer of the Charlotte Squadron of the CAP, was brought in to serve as the instructor for the new flying school. The CAA's training courses included primary flight, ground work, and cross-county and instrument flying (*The Charlotte News* March 2, 1944). By March 1944, one of the runways had been expanded to 4,000 feet in length and the others remained at 2,000 feet. A newspaper article from the same month indicates that five buildings were constructed since United Aero Service had taken over Delta Air Base (*The Charlotte News* March 2, 1944). Another expansion program was initiated late in 1944 and included the construction of an additional hangar (likely Building 4) for $25,000 (*The Charlotte News* November 30, 1944). United Aero Service continued to occupy Delta Air Base throughout the remainder of the 1940s and into the early 1950s while serving as an overhaul station and private flight training ground.

Aerial photographs demonstrate the development of the subject parcel between 1943 and 1951 before it was purchased by the Charlotte Aircraft Corporation (CAC). The 1943 aerial photograph depicts the location of Buildings 1, 3, 6, and the Hangar (see Figure 4.3). By 1948, the site remained the same with the exception of the addition of Buildings 4 and 31 (Figure 4.10). The 1948 aerial photograph also shows the newly built northwest-southeast runway. The 1951 aerial photograph shows additional

AERIAL PHOTOGRAPH	Scale: 1" = 500'	N↑
	Date: 1948	
	Figure No. 6	
Arkose Environmental, Inc.	Site Name:	HUB on Harris 7705 East W.T. Harris Blvd Charlotte, North Carolina
	Project Number:	20-126

Figure 4.10: 1948 aerial photograph
(Courtesy of Arkose Environmental, Inc.).

growth between 1948 and 1951 with the construction of Building 2 (Figure 4.11). This is the earliest aerial photograph to demonstrate the occupancy of United Aero Service. Roughly seven planes are visible on the subject parcel and plane parts lie to the west of the buildings.

United Aero Service was purchased by the newly established CAC in 1953 (*The News & Observer* October 3, 1953). The CAC was founded by H.J. (Jenks) Caldwell of Charlotte. Delta Air Base continued to serve as an overhaul station where airplanes and their parts were salvaged. A new flight school, the Delta School of Aviation, was established in 1954 by Harlan H. Hespen and Bennett N. Aiken (*The Charlotte Observer* August 4, 1954). The CAC continued to build new storage structures but sold off some of its land between 1956 and 1965 for a single-home residential development to the east of Delta Air Base (Figure 4.12-4.14). This residential development was completed by 1983, destroying two of the three runways. The remaining runway was severely truncated. In December 2018, the CAC vacated and sold the property to K Sade Ventures, LLC (MCDB 3383:826). In September 2019, K Sade Ventures, LLC sold the property to Village Capital Corporation and Pedcor Investments, A Limited Liability Company (MCDB 33834:826).

4.4 NRHP Evaluation

Integrity
In order to be eligible for the NRHP, a property must possess several, and usually most, of the seven aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. In addition, a property must also possess significance under at least one of the four NRHP evaluation criteria (see Appendix B). Occupying its original site, Grove Airport maintains its integrity of location, but the airport complex has lost land and two of its three original runways due to the sale of land for residential development to the north, east, and south. The remaining runway has been severely truncated. The key buildings that make up the Grove Airport complex have lost integrity of design, materials, and workmanship. Building 1, also known as the Administration Building/Overhaul Building, was designed in the Streamline Moderne style, which reflected the stylistic trend of aviation buildings in the 1930s and 1940s. Over time, Building 1 has been altered to include additions and new materials that obscure the building's original form and stylistic design features.

The loss of original windows and doors throughout the complex diminishes the Grove Airport's integrity of materials. The loss of original windows and doors is evident in Building 1, the original Hangar, and the House. Many doors are gone and most of the windows are vinyl replacement sashes. The only example of original window sashes that remains in place is demonstrated in Building 1, but these windows on the south and west elevations have been partially covered up.

Workmanship was not considered a significant aspect of the Grove Airport. Many of the buildings found throughout the property, particularly those buildings constructed between 1956 and 1965, are of a prefabricated standardized construction.

Lastly, Grove Airport has low levels of integrity in relation to feeling and association. Due to the loss of design and materials, the property fails to reflect its appearance when it was first established in 1941 as a private airport. In addition, the loss of two of the three runways, the severe truncation of the remaining runway, and the residential development that has taken place immediately north, east, and south of the property diminishes the integrity of feeling and association. For these reasons, Grove Airport fails to retain a strong association with general aviation and private airports of the twentieth century.

Criterion A
A property can be eligible for the NRHP under Criterion A if it is associated with an A property can be eligible for the National Register under Criterion A if it is associated with an event or events that have made a significant contribution to the broad patterns of our history (see Appendix B). Grove

Airport, also known as Delta Air Base, has served several functions since its establishment in 1941. It was founded as a private airport to cater to civilian pilots who were barred from flying at Charlotte Municipal Airport after the United States Army Air Forces took control of the property. Not only did Grove Airport allow civilians to fly, but it also included an overhaul station where privately-owned, commercial, and military airplanes could undergo maintenance and repair.

From November 1942 through December 1944, Grove Airport served in a military capacity which included overhauling planes on a government contract and training pilots under the CPTP/WTS program. While the CPTP/WTS is important to the history of Grove Airport, there are few buildings from that time period, including Buildings 1, 3, 6, and the Hangar (see Figure 4.2). The buildings have been altered over the years and no longer retain sufficient integrity to reflect the period in which the CPTP/WTS program was administered at Grove Airport.

Under United Aero Service, Grove Airport remained in operation as an overhaul station from May 1943 to September 1953. For the majority of its lifespan, Grove Airport was the home of the Charlotte Aircraft Corporation (CAC) beginning in 1953 through the fall of 2018. The Delta School of Aviation utilized the airport for less than a year as the CAC shifted all of its efforts to the sale and overhauling of planes. While the work carried out by the CAC in overhauling airplanes was performed for over 50 years, the buildings that make up the Grove Airport complex do not retain the necessary integrity nor is there historical significance to a particular event or events that made a contribution to the broad patterns of history. The work carried out by the CAC was typical of the aviation industry, and the Charlotte Douglas Airport has several overhaul/repair facilities that are in active use. According to newspaper sources, the CAC employed roughly 100 people between its location at Grove Airport and Charlotte Douglas Airport (The Charlotte Observer August 25, 1963). While the work of the CAC certainly was a part of the local economy, it was not notable. *Therefore, the Grove Airport is recommended not eligible for listing in the NRHP under Criterion A.*

Criterion B
A property can be eligible for the NRHP under Criterion B if it is associated with a person or persons of significance within the community, state, or national historic contexts (see Appendix B). The Grove Airport has been owned by a number of individuals under the auspices of various organizations. Through research, it was determined that the various individuals associated with Grove Airport are not at this time known to be of transcendent importance to local, state, or national historic contexts. *Therefore, the Grove Airport is recommended not eligible for listing in the NRHP under Criterion B.*

Criterion C
A property can be eligible for the NRHP under Criterion C if it embodies the distinctive characteristics of a type, period, or method of construction; or represents the work of a master; or possesses high artistic value; or represents a significant and distinguishable entity whose components may lack individual distinction (see Appendix B). Airports and their associated supporting structures, such as runways, airplane hangars, and maintenance and storage sheds can be found throughout the State of North Carolina. There are roughly 349 public or private airports in the state, including 10 commercial airports, eight military airports, and 240 privately-owned airports. Nearly every county in North Carolina has at least one airport.

Both Building 1 (Administration/Overhaul Station) and the original Hangar were built in 1941 by contractors L.A. Jarrell & Son of Salisbury, North Carolina. Since their construction in 1941, the buildings have been expanded and some of their original materials replaced. In particular, Building 1 has had additions made to the east elevation, and the north and south wings have been changed by the installation of vinyl siding and the roofline has been altered. These factors diminish the building's original Streamline Moderne style and massing visible in historical aerial photographs.

The buildings at the Grove Airport are not unique to the airport setting, and many historic airport buildings remain intact elsewhere. Also located in Charlotte, the W.P.A. Douglas Airport Hangar (MK2933/MK3761) is a registered local landmark and retains a high level of integrity (see Figures 3.1

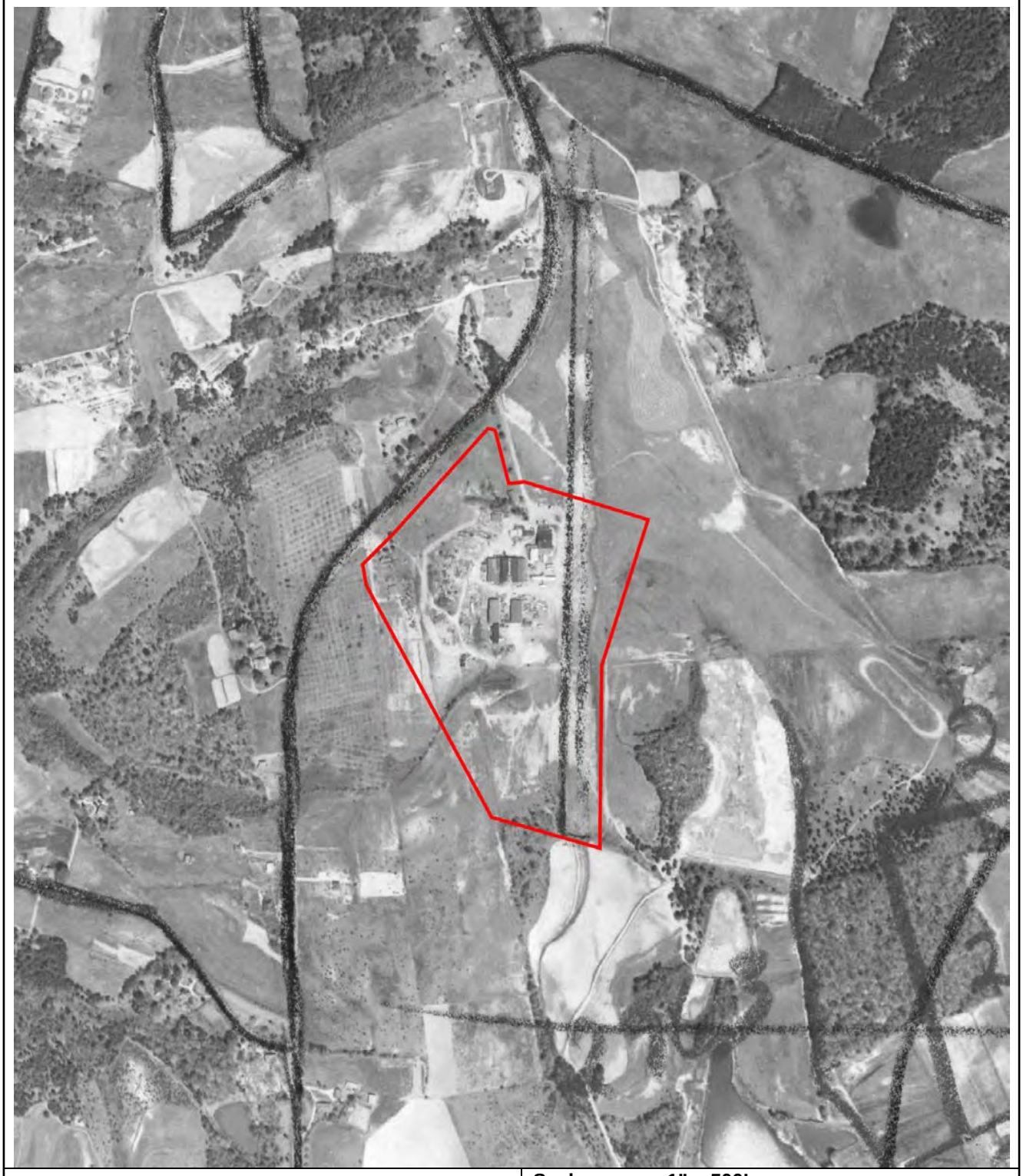
and 3.2). In addition, Hangars 4 and 5 at the Pope Army Airfield are listed in the NRHP under Criteria A and C. Hangars 4 and 5 retain their historical significance and integrity more so than the buildings on the Grove Airport property. The buildings at the Grove Airport lack the necessary integrity to be eligible for the NRHP and fail to express an architectural style from the period in which it was constructed. In addition, many of the buildings are prefabricated utilitarian sheds that are not aviation specific. *Therefore, the Grove Airport is recommended not eligible for listing in the NRHP under Criterion C.*

Criterion D

A property can be eligible for the NRHP under Criterion D if it has yielded, or may be likely to yield, information important to prehistory or history (see Appendix B). According to Archaeological Consultants of the Carolinas (ACC), the Grove Airport is unlikely to have "any intact deposits that would be considered significant" (Arkose Environmental, Inc. 2020). Therefore, *the Grove Airport is recommended not eligible for listing in the NRHP under Criterion D.*

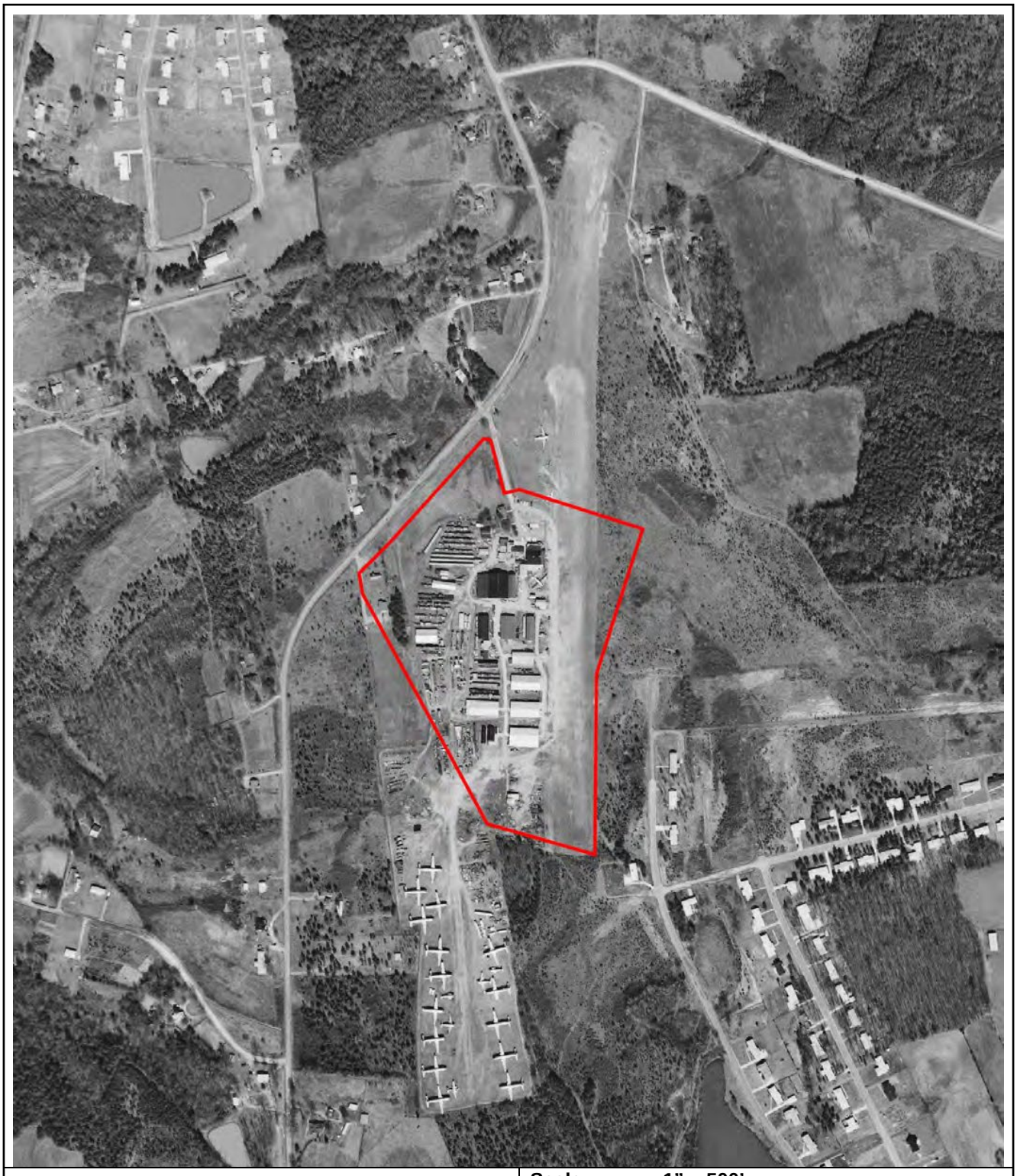
AERIAL PHOTOGRAPH	Scale: 1" = 500'	N↑
	Date: 1951	
	Figure No. 7	
Arkose Environmental, Inc.	Site Name:	HUB on Harris 7705 East W.T. Harris Blvd Charlotte, North Carolina
	Project Number:	20-126

Figure 4.11: 1951 aerial photograph
(Courtesy of Arkose Environmental, Inc.).



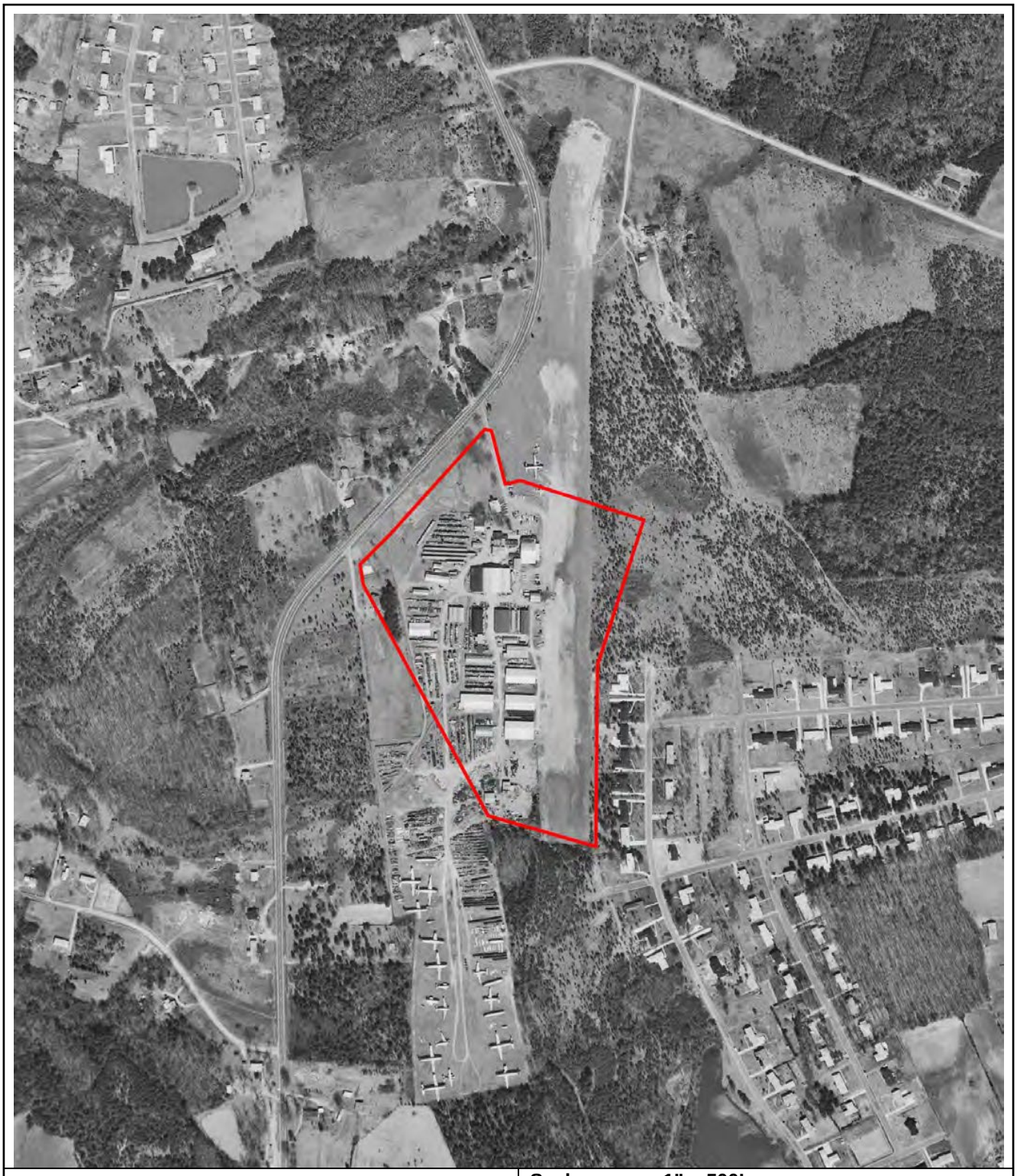
AERIAL PHOTOGRAPH	Scale: 1" = 500'	N↑
	Date: 1956	
	Figure No. 8	
Arkose Environmental, Inc.	Site Name:	HUB on Harris 7705 East W.T. Harris Blvd Charlotte, North Carolina
	Project Number:	20-126

Figure 4.12: 1956 aerial photograph
(Courtesy of Arkose Environmental, Inc.).



AERIAL PHOTOGRAPH	Scale: 1" = 500' Date: 1965 Figure No. 9	N↑
Arkose Environmental, Inc.	Site Name: HUB on Harris 7705 East W.T. Harris Blvd Charlotte, North Carolina Project Number: 20-126	

Figure 4.13: 1965 aerial photograph
(Courtesy of Arkose Environmental, Inc.).



AERIAL PHOTOGRAPH	Scale: 1" = 500' Date: 1969 Figure No. 10	N↑
Arkose Environmental, Inc.	Site Name: HUB on Harris 7705 East W.T. Harris Blvd Charlotte, North Carolina Project Number: 20-126	

Figure 4.14: 1969 aerial photograph
(Courtesy of Arkose Environmental, Inc.).

5.0 SUMMARY OF FINDINGS

Richard Grubb & Associates, Inc. completed a Historic Structures Survey Report (HSSR) and National Register of Historic Places (NRHP) evaluation for the proposed 28-acre HUB on Harris development project located east of the City of Charlotte in Crab Orchard Township, Mecklenburg County, North Carolina. The HSSR identified one historic resource within the Area of Potential Effects: the Grove Airport (MK3414). The Grove Airport is recommended not eligible for listing in the NRHP.

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APPENDIX B: NATIONAL REGISTER OF HISTORIC PLACES CRITERIA FOR EVALUATION

1. State and National Registers of Historic Places Criteria
2. Criteria of Adverse Effect

1. State and National Registers of Historic Places Criteria

Significant historic properties include districts, structures, objects, or sites that are at least 50 years of age and meet at least one National Register criterion. Criteria used in the evaluation process are specified in the Code of Federal Regulations, Title 36, Part 60, National Register of Historic Places (36 CFR 60.4). To be eligible for inclusion in the National Register of Historic Places, a historic property(s) must possess:

> the quality of significance in American History, architecture, archaeology, engineering, and culture [that] is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:

a) that are associated with events that have made a significant contribution to the broad patterns of our history, or

b) that are associated with the lives of persons significant in our past, or

c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components lack individual distinction, or

d) that have yielded, or may be likely to yield, information important in prehistory or history (36 CFR 60.4).

There are several criteria considerations. Ordinarily, cemeteries, birthplaces, or graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years shall not be considered eligible for the National Register of Historic Places. However, such properties will qualify if they are integral parts of districts that do meet the criteria or if they fall within the following categories:

a) a religious property deriving primary significance from architectural or artistic distinction or historical importance, or

b) a building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event, or

c) a birthplace or grave of a historical figure of outstanding importance if there is no other appropriate site or building directly associated with his/her productive life, or

d) a cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events, or

e) a reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived, or

f) a property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own historic significance, or

g) a property achieving significance within the past 50 years if it is of exceptional importance. (36 CFR 60.4)

When conducting National Register evaluations, the physical characteristics and historic significance of the overall property are examined. While a property in its entirety may be considered eligible based on Criteria A, B, C, and/or D, specific data is also required for individual components therein based on date, function, history, and physical characteristics, and other information. Resources that do not relate in a significant way to the overall property may contribute if they independently meet the National Register criteria.

A contributing building, site, structure, or object adds to the historic architectural qualities, historic associations, or archeological values for which a property is significant because a) it was present during the period of significance, and possesses historic integrity reflecting its character at that time or is capable of yielding important information about the period, or b) it independently meets the National Register criteria. A non-contributing building, site, structure, or object does not add to the historic architectural qualities, historic associations, or archeological values for which a property is significant because a) it was not present during the period of significance, b) due to alterations, disturbances, additions, or other changes, it no longer possesses historic integrity reflecting its character at that time or is incapable of yielding important information about the period, or c) it does not independently meet the National Register criteria.

2. Criteria of Adverse Effect

Whenever a historic property may be affected by a proposed undertaking, Federal agency officials must assess whether the project constitutes an adverse effect on the historic property by applying the criteria of adverse effect. According to the Advisory Council on Historic Preservation, the criteria of adverse effect (36 CFR 800.5), is as follows:

> (1) An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that would qualify it for inclusion in the National Register, in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation for the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or cumulative.
>
> (2) Adverse effects on historic properties include, but are not limited to (36 CFR 800.5(a)(2)):
>
> i) Physical destruction of or damage to all or part of the property;
>
> ii) Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR part 68) and applicable guidelines;
>
> iii) Removal of the property from its historic location;
>
> iv) Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;

v) Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features;

vi) Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and

vii) Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

A finding of adverse effect or no adverse effect could occur based on the extent of alteration to a historic property, and the proposed treatment measures to mitigate the effects of a proposed undertaking. According to 36 CFR 800.5(3)(b):

> The agency official, in consultation with the SHPO/THPO, may propose a finding of no adverse effect when the undertaking's effects do not meet the criteria of § 800.5(a)(1) or the undertaking is modified or conditions are imposed, such as the subsequent review of plans for rehabilitation by the SHPO/THPO to ensure consistency with the Secretary's Standards for the Treatment of Historic Properties (36 CFR part 68) and applicable guidelines, to avoid adverse effects.

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