Final Environmental Assessment for Phase II Air Cargo Facility Development

Volume 2: Appendices

Lakeland Linder International Airport Polk County, Florida

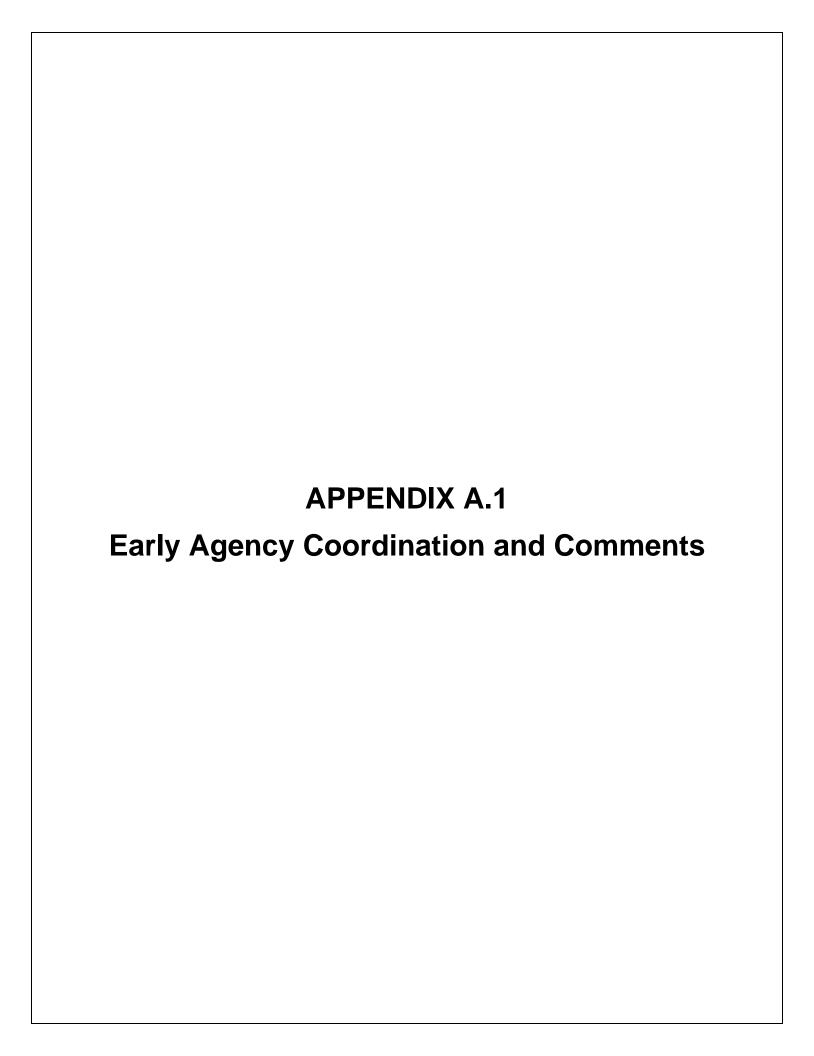
October 2021



APPENDIX A Agency Coordination Appendix A.1 Early Agency Coordination and Comments Appendix A.2 USFWS Consultation Appendix A.3 SHPO Consultation

Appendix A.4 Tribal Consultation









AECOM 7650 West Courtney Campbell Causeway Tampa, FL 33607 www.aecom.com 813.675.6843 tel

May 4, 2020

Mr. Chris Stahl Clearinghouse Coordinator Florida State Clearinghouse Department of Environmental Protection 3900 Commonwealth Boulevard, M.S. 47 Tallahassee, FL 32399-3000

Re: State Clearinghouse Review for Phase II Air Cargo Development at Lakeland Linder International Airport (LAL), Polk County, Florida

Dear Mr. Stahl:

The City of Lakeland, Florida (City), through its Airports department, is proposing to implement Phase II of development of an air cargo facility at the Lakeland Linder International Airport (LAL), hereinafter referred to as the Proposed Project. The City, in coordination with the Federal Aviation Administration (FAA), is requesting review of the Proposed Project's early consistency with the Florida Coastal Management Program.

Additionally, the City and FAA are requesting early agency input on any environmental concerns and issues that should be considered in the environmental planning and permitting process for the Proposed Project. To accomplish this we would like to receive your comments relative to the proposed improvements as they relate to your specific area of expertise or regulatory jurisdiction, including permitting or mitigation requirements.

The enclosed **Figure 1** shows the extent of the Proposed Project, which is comprised of the following actions:

- Construct a 464,600 square foot (SF) expansion of the Phase I sort and office building;
- Construct approximately 69,000 square yards (SY) of paved truck court to accommodate 370 additional truck bays;
- Construct approximately 42,500 SY of paved vehicle parking lot to accommodate 1,120 additional parking spaces;
- Construct approximately 29,200 SY of concrete aircraft parking apron to accommodate three additional Boeing 767-300 aircraft parking positions.

- Construct approximately 19,350 SY of pavement for aircraft ground support equipment staging and periodic aircraft parking;
- Construct new airport access road to provide access to the Phase II facilities via Drane Field Road:
- Site clearing, grading, and landscaping;
- Modifications to the airport's stormwater management system, including construction of swales and retention ponds.
- Installation of security fencing, gates and security checkpoints;
- Installation of airfield lighting and signage

In order to sufficiently address any preliminary key project issues and maintain the project schedule, the City and FAA are requesting an expedited 30-day review of the Proposed Project. Please respond to me at the address provided below and feel free to contact me if you have any questions or concerns.

Sincerely,

Paul K. Sanford

AECOM Project Manager

7650 West Courtney Campbell Causeway

Tampa, FL 33607

813.675.6843

paul.sanford@aecom.com

Enclosure (1)

Copy: Gene Conrad, City of Lakeland

Peter Green, FAA

File

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9:27

LAKELAND LINDER INTERNATIONAL AIRPORT

PARKING

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

EA PROPOSED PROJECT

FIGURE 1

Local Agency Distribution List (Example Letter Attached)

Ms. Patricia M. Steed Executive Director Central Florida Regional Planning Council 555 E. Church Street Bartow, FL 33830

Mr. Sean Malott President and CEO Central Florida Development Council 5908 Hillside Heights Drive Lakeland, FL 33812

Mr. Tony Delgado City Manager City of Lakeland 228 S. Massachusetts Avenue Lakeland, FL 33801

Mr. Heath Frederick
Public Works Director
City of Lakeland
228 S. Massachusetts Avenue
Lakeland, FL 33801

Water Utilities Engineering City of Lakeland 501 E. Lemon Street Lakeland, FL 33801 Mr. Joel Ivy General Manager Lakeland Electric 501 E. Lemon Street Lakeland, FL 33801

Mr. Bill Beasley
Manager
Polk County
330 W. Church St.
Drawer BC01
P.O. Box 9005
Bartow, Florida 33831-9005

Mr. Steve Scruggs President Lakeland Economic Development Council 502 E. Main Street Lakeland, FL 33801

Commissioner Charles Lake Chairperson Polk Transportation Planning Organization 330 W. Church Street Drawer TS05 Bartow, FL 33830



AECOM 7650 West Courtney Campbell Causeway Tampa, FL 33607 www.aecom.com 813.675.6843 tel

July 10, 2020

Mr. Sean Malott President and CEO Central Florida Development Council 5908 Hillside Heights Drive Lakeland, FL 33812

Re: Environmental Assessment for Phase II Air Cargo Development at Lakeland Linder International Airport (LAL), Polk County, Florida

Dear Mr. Malott:

The City of Lakeland, Florida (City), through its Airports department, is proposing to implement Phase II of development of an air cargo facility at the Lakeland Linder International Airport (LAL), hereinafter referred to as the Proposed Project. The Proposed Project is an expansion of an air cargo facility already under construction that will be operated by the existing tenant.

The Phase II expansion is being contemplated to accommodate future flexibility for expanded operations, and therefore the timeline and internal decision for this expansion has not been finalized. However, given that network and customer demand could increase in the near foreseeable future, it has been decided to perform the preliminary environmental planning and permitting actions to support eventual construction, such that all parties could ensure due diligence in complying with all applicable federal, state and local environmental regulations and requirements. Therefore, in accordance with the National Environmental Policy Act of 1969 (NEPA) and Federal Aviation Administration (FAA) implementing regulations, the City is preparing an Environmental Assessment (EA) to consider and document the potential air quality, noise, traffic-related, social, economic, and environmental impacts associated with the Proposed Project.

On behalf of the City and FAA, we would like to receive early input relative to the proposed improvements as they relate to your specific area of expertise or regulatory jurisdiction, including any permitting or mitigation requirements.

The enclosed **Figure 1** shows the extent of the Proposed Project, which is comprised of the following actions:

- · Construct up to 464,600 square foot (SF) expansion of the Phase I sort and office building;
- · Construct up to approximately 69,000 square yards (SY) of paved truck court to accommodate up to 370 additional truck bays;
- Construct up to approximately 42,500 SY of paved vehicle parking lot to accommodate up to 1,120 additional parking spaces;
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- · Installation of security fencing, gates and security checkpoints;
- · Installation of airfield lighting and signage

In order to sufficiently address any preliminary key project issues and maintain the project schedule, your written comments are requested within 30 days of receipt of this letter. Please respond to me at the address provided below and feel free to contact me if you have any questions or concerns.

Sincerely,

Paul K. Sanford

AECOM Project Manager

7650 West Courtney Campbell Causeway

Tampa, FL 33607

813.675.6843

paul.sanford@aecom.com

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Copy: Gene Conrad, City of Lakeland

Peter Green, FAA

File

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LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

EA PROPOSED PROJECT

FIGURE

From: Stahl, Chris <Chris.Stahl@dep.state.fl.us>
Sent: Wednesday, June 17, 2020 2:51 PM
To: Sanford, Paul <paul.sanford@aecom.com>

Cc: State_Clearinghouse <State.Clearinghouse@dep.state.fl.us>

Subject: [EXTERNAL] State Clearance Letter for FL202005068934C- Phase II Air Cargo Development

At Lakeland Linder International Airport, Polk County, Florida.

June 17, 2020

Paul Sanford AECOM 7650 W. Courtney Campbell Causeway Tampa, Florida 33607-1462

RE: Federal Aviation Administration - Scoping Notice - Environmental Assessment - Phase II Air Cargo Development at Lakeland Linder International Airport, Polk County, Florida. SAI # FL202005068934C

Dear Paul:

Florida State Clearinghouse staff has reviewed the proposal under the following authorities: Presidential Executive Order 12372; § 403.061(42), Florida Statutes; the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended; and the National Environmental Policy Act, 42 U.S.C. §§ 4321-4347, as amended.

The Southwest Florida Water Management District has communicated that a preapplication meeting with District Environmental Resource Permit (ERP) staff is encouraged prior to any site work. For assistance or additional information concerning the District's ERP program, please contact Robbin McGill, Senior Professional Engineer, at (813) 985-7481, ext. 2072, or robbinmcgill@watermatters.org.

The Florida Fish and Wildlife Conservation Commission has reviewed the proposed action and independently submitted comments. These have been attached to this letter and are incorporated hereto.

Based on the information submitted and minimal project impacts, the state has no objections to allocation of federal funds for the subject project and, therefore, the funding award is consistent with the Florida Coastal Management Program (FCMP). The state's final concurrence of the project's consistency with the FCMP will be determined during any environmental permitting processes, in accordance with Section 373.428, Florida Statutes, if applicable.

Chris Stahl

Chris Stahl, Coordinator
Florida State Clearinghouse
Florida Department of Environmental Protection
3800 Commonwealth Blvd., M.S. 47
Tallahassee, FL 32399-2400
ph. (850) 717-9076
State.Clearinghouse@floridadep.gov



Florida Fish and Wildlife Conservation Commission

Commissioners

Robert A. Spottswood Chairman Key West

Michael W. Sole Vice Chairman Teauesta

Rodney Barreto Coral Gables

Steven HudsonFort Lauderdale

Gary Lester Oxford

Gary Nicklaus Jupiter

Sonya Rood St. Augustine

Office of the
Executive Director
Eric Sutton
Executive Director

Thomas H. Eason, Ph.D. Assistant Executive Director

Jennifer Fitzwater Chief of Staff

850-487-3796 850-921-5786 FAX

Managing fish and wildlife resources for their long-term well-being and the benefit of people.

620 South Meridian Street Tallahassee, Florida 32399-1600 Voice: 850-488-4676

Hearing/speech-impaired: 800-955-8771 (T) 800 955-8770 (V)

MyFWC.com

May 26, 2020

Paul K. Sanford AECOM Project Manager 7650 West Courtney Campbell Causeway Tampa, FL 33607 paul.sanford@aecom.com

Re: Phase II Air Cargo Development at Lakeland Linder International Airport (SAI # FL202005068934C), Polk County

Dear Mr. Sanford:

Florida Fish and Wildlife Conservation Commission (FWC) staff reviewed the proposed Phase II Air Cargo Development at Lakeland Linder International Airport and provides the following comments and recommendations for your consideration in accordance with Chapter 379, Florida Statutes (F.S.), and pursuant to the federal National Environmental Policy Act (NEPA), and the Coastal Zone Management Act/Florida's Coastal Management Program.

Project Description

The City of Lakeland, in coordination with the Federal Aviation Administration, requests early agency input to implement Phase II in the development of an air cargo facility at the Lakeland Linder International Airport (LAL) located south of Drane Field Road in Polk County. The proposed project would consist of a 464,000 square foot (SF) expansion of a sorting and office building and 160,000 square yards of paving for a paved truck court, vehicle parking lot, aircraft parking apron, staging area, and a new access road from Drane Field Road. There would be other modifications to the airport's stormwater management system, installation of security features, airfield lighting, and signage. The construction and improvements would take place in existing disturbed and maintained lands, existing airport operations lands, and herbaceous/forested uplands and wetlands adjacent to operations.

Potentially Affected Resources

The request did not include a listed species assessment or other environmental information; however, FWC staff conducted a geographic information system (GIS) analysis of the project area and found that the project area is located near, within, or adjacent to:

- One or more wood stork (*Mycteria americana*, Federally Threatened [FT]) nesting core foraging areas (CFA). The CFA consists of an 18.6-mile radius around the nesting colony.
- U.S. Fish and Wildlife Service (USFWS) Consultation Areas for:
 - o Florida grasshopper sparrow (*Ammodramus savannarum floridanus*, Federally Endangered [FE])
 - o Florida scrub jay (Aphelocoma coerulescens, Federally Threatened [FT])
 - o Audubon's crested caracara (*Polyborus plancus audubonii*, FT)
 - o Everglade snail kite (Rostrhamus sociabilis plumbeus, FE)
- Potential habitat for federally and state-listed species:
 - o Gopher tortoise (Gopherus polyphemus, State Threatened [ST])
 - o Least tern (Sternula antillarum, ST)
 - o Florida sandhill crane (Antigone canadensis pratensis, ST)

- o Southeastern American kestrel (Falco sparverius paulus, ST)
- o Eastern indigo snake (Drymarchon corais couperi, FT)

Comments and Recommendations

Gopher Tortoise

The cleared and maintained herbaceous lands may provide potential habitat for the gopher tortoise. The applicant should refer to the FWC's Gopher Tortoise Permitting Guidelines (Revised January 2017) at http://www.myfwc.com/license/wildlife/gopher-tortoise-permits/ for survey methodology and permitting guidance prior to any development activity. Specifically, the permitting guidelines include methods for avoiding impacts as well as options and state requirements for minimizing, mitigating, and permitting potential impacts of the proposed activities. If you have any questions regarding gopher tortoise permitting, please contact Kyle Brown by phone at (863) 648-3200 or at Kyle.Brown@MyFWC.com.

Least Tern

Clearing that creates large areas of open sandy conditions may create conditions conducive for beach-nesting bird nesting, and there are historically active rooftop nesting sites less than 10-miles from the project site. Cleared sites such as areas that have undergone surface scraping may attract ground-nesting species such as least terns during nesting season. Least tern nests have been documented on a variety of disturbed sites, including construction sites. Least terns deposit their eggs in shallow depressions or scrapes in the substrate, possibly lined with pebbles, grasses, or coquina shells. Egg-laying usually begins in late April or early May, and colonies may range in size from a few breeding pairs to many hundreds. FWC staff recommends the following measures to reduce nesting potential during construction:

- Conduct construction activities outside of the breeding season (generally April through August) if feasible, or,
- If the site is cleared during the breeding season, clear the site only when ready to build, and
- Avoid leaving cleared areas with little to no activity for an extended amount of time.

If nesting is observed, the applicant can contact FWC staff to discuss necessary nest buffers and potential permitting alternatives. For additional information, please refer to FWC's Breeding Bird Protocol for Florida's Seabirds and Shorebirds located at http://www.myflorida.com/apps/vbs/adoc/F15907 1241AttachmentDBreedingBirdProtocolForFl

http://www.myflorida.com/apps/vbs/adoc/F15907_1241AttachmentDBreedingBirdProtocolForForidasSeabirdsAndShorebirds.pdf.

Southeastern American Kestrel

Suitable habitat for southeastern American kestrel may be found within the proposed project area, particularly in the southern portion of the site where there are trees and a freshwater marsh. FWC staff recommends that the applicant conduct kestrel surveys from April to August within suitable habitat areas. Surveys from May to July are ideal to avoid confusion with the migratory subspecies of American kestrel (*Falco sparverius*). Survey guidelines, reporting criteria, and habitat needs for the southeastern American kestrel can be found at https://myfwc.com/media/18576/american_kestrel_technical_report_1993.pdf. If surveys encounter active nest cavities, we recommend avoiding project activities within 150 meters (492 feet) of the nest tree during the breeding season (mid-March to June). If nesting is discovered after construction has begun or if maintaining the recommended buffer is not possible, we recommend that the applicant contact FWC staff identified below to discuss potential permitting needs. In areas of suitable kestrel habitat, we recommend retaining snags whenever possible.

Florida Sandhill Crane

The cleared and maintained lands may provide foraging habitat for the Florida sandhill crane, and the freshwater emergent marshes on the western portion of the site may provide potential nesting habitat for this species. FWC staff recommends that surveys for nesting Florida sandhill cranes be conducted prior to construction activities and during the December through August breeding season. If construction occurs over several years, it may be necessary to conduct surveys each year as Florida sandhill cranes do not nest in the same location every year. If active nests are identified onsite, the Florida Sandhill Crane Species Conservation Measures and Permitting Guidelines recommend that the nest site be buffered by 400 feet to avoid disturbance by human activities. If nesting is discovered after construction has begun or if maintaining the recommended buffer is not possible, the applicant can contact FWC staff identified below to discuss potential permitting needs. Additional information and guidance for conducting Florida sandhill crane surveys can be found in the Florida Sandhill Crane Species Conservation Measures and Permitting Guidelines at https://myfwc.com/media/11565/final-florida-sandhill-cranespecies-guidelines-2016.pdf. FWC staff would also like to note that Florida sandhill cranes do not nest in the same location every year, so if construction occurs over several years, it may be necessary to determine if nesting is occurring each year.

Federal Species

This site may also contain habitat suitable for the federally listed species identified above. FWC staff recommends coordination with USFWS South Florida Ecological Services Office (ESO) as necessary for information regarding potential impacts on these species. The USFWS South Florida ESO can be contacted at (772) 562-3909.

FWC staff appreciates the opportunity to provide input on this project and looks forward to working with the applicant throughout the permitting process. If you have specific technical questions regarding the content of this letter, please contact Jim Keltner at (239) 332-6972 x9209 or by email at james.Keltner@MyFWC.com. All other inquiries may be sent to conservationPlanningServices@MyFWC.com.

Sincerely,

Jason Hight

Hart

Land Use Planning Program Administrator Office of Conservation Planning Services

jh/jdk

Lakeland Linder International Airport Cargo Development Phase II_41734_05262020

CC: Chris Stahl, Florida State Clearinghouse, <u>State.Clearinghouse@floridadep.gov</u>

From: Barmby, Charles

Sent: Wednesday, July 15, 2020 7:37 AM

To: Willey, Jason < <u>Jason.Willey@lakelandgov.net</u>>; Conrad, Gene < <u>Gene.Conrad@lakelandgov.net</u>>;

Travis, Nicole < <u>Nicole.Travis@lakelandgov.net</u>>

Cc: Maio, Teresa < Teresa.Maio@lakelandgov.net>; Stovall, Jennifer (City Hall)

<Jennifer.Stovall@lakelandgov.net>

Subject: RE: Written Comments Requested ~Letter from AECOM re EA Phase II Air Cargo Dev @ LLIA

Thanks for the clarification, Jason. In addition to addressing Teresa's comments, are any turn lane modifications expected on Drane Field Road that should be considered in the EA? A frontage sidewalk will be required along Drane Field Road and an enhanced landscaped buffer (including potential berming) to somewhat hide the proposed truck parking area should also be anticipated in the layout. What is the proposed with of the access road (and what impact does that have on impervious area calculations)? We'll want to ensure that trucks don't stage on Drane Field Road.

Thank you for the opportunity to comment.

Chuck

Charles Barmby, AICP CTP
Business Development & Transportation Manager
Community & Economic Development
City of Lakeland
p. 863.834.6028
f. 863.834.8432



From: Willey, Jason

Sent: Tuesday, July 14, 2020 2:25 PM

To: Barmby, Charles < Charles.Barmby@lakelandgov.net; Conrad, Gene

<<u>Gene.Conrad@lakelandgov.net</u>>; Travis, Nicole <<u>Nicole.Travis@lakelandgov.net</u>>

Cc: Maio, Teresa < Teresa.Maio@lakelandgov.net>; Stovall, Jennifer (City Hall)

<Jennifer.Stovall@lakelandgov.net>

Subject: RE: Written Comments Requested ~Letter from AECOM re EA Phase II Air Cargo Dev @ LLIA

Thanks Chuck, at this time I think we can hold off on DRT in the short-term. The attachment is related to the Environmental Assessment (EA) that AECOM is completing for the Airport. Based on the previous project and the current EA, construction on phase II could still be 1 to 2 years away. In short, the tenant would like to keep phase II confidential until a plan to move forward has been developed based on their needs and the EA.

Thanks Jason From: Barmby, Charles

Sent: Tuesday, July 14, 2020 2:02 PM

To: Conrad, Gene <<u>Gene.Conrad@lakelandgov.net</u>>; Travis, Nicole <<u>Nicole.Travis@lakelandgov.net</u>>
Cc: Maio, Teresa <<u>Teresa.Maio@lakelandgov.net</u>>; Willey, Jason <<u>Jason.Willey@lakelandgov.net</u>>
Subject: RE: Written Comments Requested ~Letter from AECOM re EA Phase II Air Cargo Dev @ LLIA

Thanks, Gene:

We should run this concept through the DRT—we have a meeting next Wednesday and can add it to the agenda to meet the timeline stated in the letter.

Chuck

From: Conrad, Gene

Sent: Tuesday, July 14, 2020 1:59 PM

To: Travis, Nicole < <u>Nicole.Travis@lakelandgov.net</u>>

Cc: Barmby, Charles < <u>Charles.Barmby@lakelandgov.net</u>>; Maio, Teresa

<<u>Teresa.Maio@lakelandgov.net</u>>; Willey, Jason <<u>Jason.Willey@lakelandgov.net</u>>

Subject: FW: Written Comments Requested ~Letter from AECOM re EA Phase II Air Cargo Dev @

LLIA

Nicole,

AECOM, on behalf of the airport, is circulating the attached. Just wanted to make sure you and your team were aware of the proposed expansion and if you had any comments, etc.

Feel free to send comments to me and I will make sure they are incorporated.

Thank you!

Gene

Eugene B. Conrad III, C.M.

Airport Director

Lakeland Linder International Airport

From: Stovall, Jennifer (City Hall) **Sent:** Tuesday, July 14, 2020 1:50 PM

To: Conrad, Gene < Gene.Conrad@lakelandgov.net >; Delgado, Tony

<a href="mailto: Anthony.Delgado@lakelandgov.net >

Cc: Sherrouse, Shawn < <u>Shawn.Sherrouse@lakelandgov.net</u>>; Willey, Jason

<Jason.Willey@lakelandgov.net>

Subject: Written Comments Requested ~Letter from AECOM re EA Phase II Air Cargo Dev @ LLIA

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Tony received the attached letter today. Are you preparing a response?

Thanks!

PUBLIC RECORDS NOTICE:

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From: Maio, Teresa

Sent: Tuesday, July 14, 2020 3:08 PM

To: Willey, Jason < <u>Jason.Willey@lakelandgov.net</u>>; Barmby, Charles

<<u>Charles.Barmby@lakelandgov.net</u>>; Conrad, Gene <<u>Gene.Conrad@lakelandgov.net</u>>; Travis, Nicole <<u>Nicole.Travis@lakelandgov.net</u>>

Cc: Stovall, Jennifer (City Hall) < <u>Jennifer.Stovall@lakelandgov.net</u>>

Subject: RE: Written Comments Requested ~Letter from AECOM re EA Phase II Air Cargo Dev @ LLIA

Is there a concept B that rotates the new sort building 90 degrees to form an L-shaped footprint with the Phase I building to allow the additional parking and truck court to shift south and west, away from Drane Field and to allow cross docks oriented east to west on the north end of the new sort building?

Teresa Maio

Planning and Housing Manager Community and Economic Development City of Lakeland

From: Willey, Jason

Sent: Tuesday, July 14, 2020 2:25 PM

To: Barmby, Charles < <u>Charles.Barmby@lakelandgov.net</u>>; Conrad, Gene

<<u>Gene.Conrad@lakelandgov.net</u>>; Travis, Nicole <<u>Nicole.Travis@lakelandgov.net</u>>

Cc: Maio, Teresa < Teresa. Maio@lakelandgov.net >; Stovall, Jennifer (City Hall)

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<<u>Teresa.Maio@lakelandgov.net</u>>; Willey, Jason <<u>Jason.Willey@lakelandgov.net</u>>

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Eugene B. Conrad III, C.M.

Airport Director

Lakeland Linder International Airport

From: Stovall, Jennifer (City Hall)

Sent: Tuesday, July 14, 2020 1:50 PM

To: Conrad, Gene < Gene.Conrad@lakelandgov.net >; Delgado, Tony

Anthony.Delgado@lakelandgov.net

Cc: Sherrouse, Shawn <<u>Shawn.Sherrouse@lakelandgov.net</u>>; Willey, Jason

<Jason.Willey@lakelandgov.net>

Subject: Written Comments Requested ~Letter from AECOM re EA Phase II Air Cargo Dev @ LLIA

Hi Gene,

Tony received the attached letter today. Are you preparing a response?

Thanks!

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Florida's Crossroads of Opportunity

330 West Church Street PO Box 9005 • Drawer GM01 Bartow, Florida 33831-9005



Board of County Commissioners

PHONE: 863-534-6467 FAX: 863-534-6543 www.polk-county.net

OFFICE OF PLANNING AND DEVELOPMENT

August 11, 2020

Paul K. Sanford AECOM 7650 W. Courtney Campbell Causeway Tampa, FL 33607

Sent Via Email: paul.sanford@aecom.com

Re: Environmental Assessment for Phase II Air Cargo Development at Lakeland Linder International

Airport (LAL), Polk County, Florida

Dear Mr. Sanford,

Thank you for the opportunity to provide comment on the proposed Phase II Air Cargo Development at Lakeland Linder Airport. Since this property is within the City of Lakeland's jurisdiction, the County's primary area of regulatory authority is the review and approval of connection(s) or improvements to any county road facilities.

In this case, the proposed use will gain primary access to Drane Field Road by way of Kidron and Kelvin Howard Roads, both of which are city-maintain roads. Any connections or improvements associated with this development should be submitted to the County, accompanied by a major traffic study. Without fully understanding the proposed impacts to Drane Field Road and other nearby county roads, it is difficult for our staff to comment on any traffic-related impacts.

Drane Field Road is a county-maintained urban collector from County Line Road to SR 572 (Airport Road). The remainder of Drane Field Road is state-maintained. Over 60 percent of road frontage along the county-maintained portion of Drane Field Road is located in the city's jurisdiction. Due to the increased traffic from this project and others being approved by the City along this roadway, the County would like to discuss a more equitable ownership arrangement for the westerly segment of Drane Field Road.

August 11, 2020 Sanford, Paul K. Page 2 of 2

Thank you for the opportunity to provide preliminary comments and we look forward to future opportunities to comment as the proposed project is further along. Please contact me at 863-534-6454 or chandrafrederick@polk-county.net with any questions.

Sincerely,

Chandra C. Frederick

Assistant County Manager

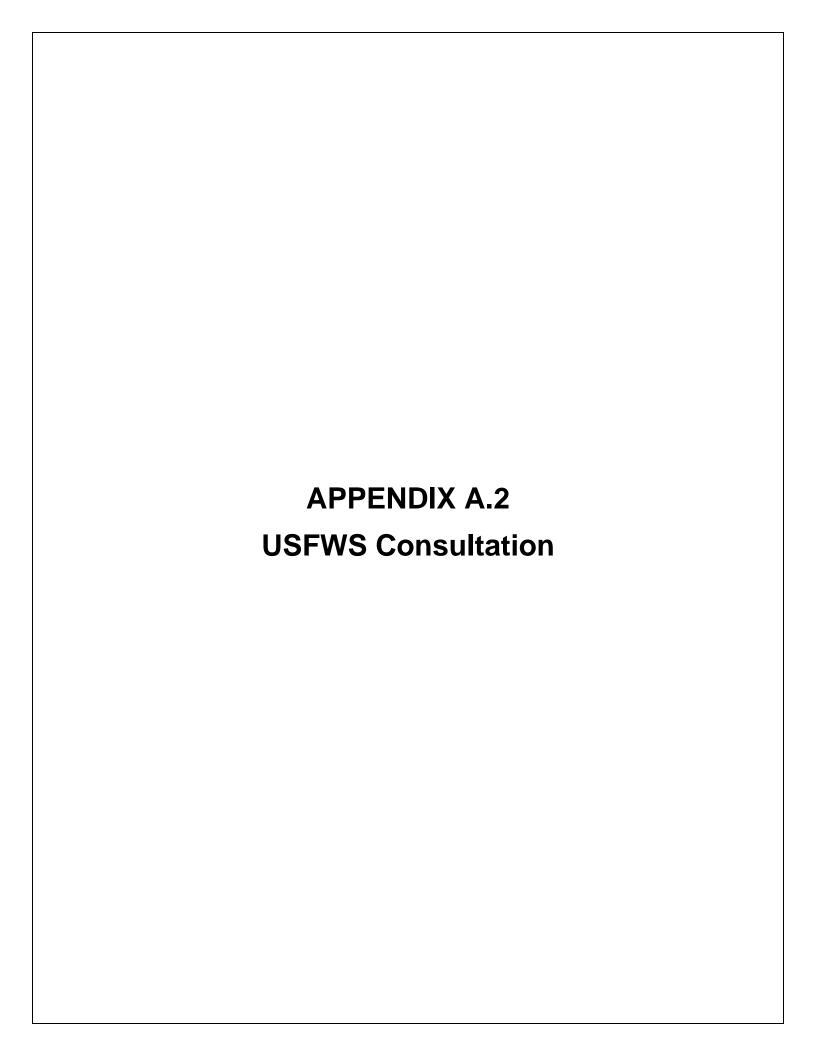
Copy: William D. Beasley, County Manager

Tony Delgado, City Manager

Jay Jarvis, Polk County Roads and Drainage Division Director Heath Frederick, City of Lakeland Public Works Director

Chuck Barmby, Business Development & Transportation Manager, City of Lakeland









United States Department of the Interior

FISH AND WILDLIFE SERVICE

South Florida Ecological Services Field Office 1339 20th Street Vero Beach, FL 32960-3559 Phone: (772) 562-3909 Fax: (772) 562-4288

http://fws.gov/verobeach



May 08, 2020

In Reply Refer To:

Consultation Code: 04EF2000-2020-SLI-0368

Event Code: 04EF2000-2020-E-02220

Project Name: Phase II Air Cargo Facility Development EA at LAL

Subject: Updated list of threatened and endangered species that may occur in your proposed

project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

South Florida Ecological Services Field Office 1339 20th Street Vero Beach, FL 32960-3559 (772) 562-3909

Project Summary

Consultation Code: 04EF2000-2020-SLI-0368

Event Code: 04EF2000-2020-E-02220

Project Name: Phase II Air Cargo Facility Development EA at LAL

Project Type: TRANSPORTATION

Project Description: Phase II Air Cargo Facility Development EA at LAL

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/27.993463489938144N82.03855443416727W



Counties: Polk, FL

Endangered Species Act Species

There is a total of 33 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Florida Panther <i>Puma</i> (=Felis) concolor coryi	Endangered
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/1763	
Habitat assessment guidelines:	
https://ecos.fws.gov/ipac/guideline/assessment/population/8/office/41420.pdf	
Puma (=mountain Lion) <i>Puma (=Felis) concolor (all subsp. except coryi)</i> Population: FL	Similarity of Appearance
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6049	(Threatened)

Event Code: 04EF2000-2020-E-02220

Birds

NAME STATUS

Audubon's Crested Caracara Polyborus plancus audubonii

Population: FL pop.

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8250

Everglade Snail Kite Rostrhamus sociabilis plumbeus

There is **final** critical habitat for this species. Your location is outside the critical habitat.

Species profile: https://ecos.fws.gov/ecp/species/7713

Species survey guidelines:

https://ecos.fws.gov/ipac/guideline/survey/population/1221/office/41420.pdf

Florida Grasshopper Sparrow *Ammodramus savannarum floridanus*

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/32

Florida Scrub-jay Aphelocoma coerulescens

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6174

Ivory-billed Woodpecker Campephilus principalis

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8230

Whooping Crane Grus americana

Population: U.S.A. (CO, ID, FL, NM, UT, and the western half of Wyoming)

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/758

Wood Stork Mycteria americana

Population: AL, FL, GA, MS, NC, SC

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8477

Habitat assessment guidelines:

https://ecos.fws.gov/ipac/guideline/assessment/population/124/office/41420.pdf

Endangered

Threatened

Endangered

Threatened

Endangered

Experimental Population, Non-Essential

Threatened

Reptiles

NAME STATUS

American Alligator *Alligator mississippiensis*No critical habitat has been designated for this species.

Species profile: https://ecos.fws.gov/ecp/species/776

Appearance (Threatened)

Similarity of

Bluetail Mole Skink Eumeces egregius lividus

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2203

Species survey guidelines:

https://ecos.fws.gov/ipac/guideline/survey/population/178/office/41420.pdf

Eastern Indigo Snake Drymarchon corais couperi

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/646

Sand Skink *Neoseps reynoldsi*

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4094

Species survey guidelines:

https://ecos.fws.gov/ipac/guideline/survey/population/179/office/41420.pdf

Threatened

Threatened

Threatened

Flowering Plants

NAME **STATUS** Avon Park Harebells Crotalaria avonensis Endangered No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7093 Britton's Beargrass *Nolina brittoniana* Endangered No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4460 Carter's Mustard Warea carteri Endangered No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5583 Threatened Florida Bonamia Bonamia grandiflora No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2230 Florida Ziziphus *Ziziphus celata* Endangered No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2950 Endangered Highlands Scrub Hypericum Hypericum cumulicola No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2940 Lewton's Polygala Polygala lewtonii Endangered No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6688 Papery Whitlow-wort *Paronychia chartacea* Threatened No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1465 Pigeon Wings Clitoria fragrans Threatened No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/991 Endangered Pygmy Fringe-tree *Chionanthus pygmaeus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1084 Sandlace *Polygonella myriophylla* Endangered No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5745 Scrub Blazingstar *Liatris ohlingerae* Endangered No critical habitat has been designated for this species.

Endangered

NAME **STATUS** Species profile: https://ecos.fws.gov/ecp/species/864 Scrub Buckwheat *Eriogonum longifolium var. gnaphalifolium* Threatened No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5940 Scrub Lupine *Lupinus aridorum* Endangered No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/736 Endangered Scrub Mint *Dicerandra frutescens* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/799 Scrub Plum *Prunus geniculata* Endangered No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2238 Short-leaved Rosemary Conradina brevifolia Endangered No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2929 Endangered Wide-leaf Warea Warea amplexifolia No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/412 Wireweed Polygonella basiramia Endangered No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1718 Lichens

NAME STATUS

Florida Perforate Cladonia Cladonia perforata

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7516

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

From: Sanford, Paul

Sent: Friday, June 12, 2020 9:52 AM

To: Norman, Tia

Subject: FW: Proposed Air Cargo Facility Expansion, Lakeland Linder International Airport - Request for Consultation
Attachments: 200513_LAL Air Cargo EA_Biological Assessment.pdf; LAL Amazon PH2 Expansion - USFWS Letter 6-10-20.pdf

From: Green, Peter M (FAA) peter.m.green@faa.gov>

Sent: Wednesday, June 10, 2020 1:55 PM

To: verobeach@fws.gov

Cc: 'Conrad, Gene' < Gene. Conrad@lakelandgov.net'>; Sanford, Paul < paul.sanford@aecom.com'>

Subject: [EXTERNAL] Proposed Air Cargo Facility Expansion, Lakeland Linder International Airport - Request for Consultation

Dear Mr. Wrublik,

The City of Lakeland has requested approval from the Federal Aviation Administration to expand an air cargo facility at the Lakeland-Linder International Airport. The attached letter serves as FAA's request to initiate Section 7 consultation with the US Fish and Wildlife Service. I am also forwarding a copy of the Biological Assessment that was prepared for the project.

Let me know if you have any questions about the proposed project, the Biological Assessment, or FAA's determinations.

Regards,

Peter Green

Peter M. Green, AICP
Environmental Protection Specialist
Orlando Airports District Office
Federal Aviation Administration
8427 SouthPark Circle
Orlando, Florida 32819
407-487-7296
peter.m.green@faa.gov



Orlando Airports District Office 8427 SouthPark Circle, Suite 524 Orlando, FL 32819 Phone: (407) 487-7720 Fax: (407) 487-7135

June 10, 2020

[via email: verobeach@fws.gov.]

Mr. John M. Wrublik South Florida Ecological Services Office U.S. Fish and Wildlife Service 1339 20th Street Vero Beach, Florida 32960-3559

RE: Section 7 Consultation

Phase II Air Cargo Development

Lakeland-Linder International Airport (Polk County, Florida)

Dear Mr. Wrublik,

The City of Lakeland, through its Airports Department, has requested approval from the Federal Aviation Administration (FAA) to expand an air cargo facility at the Lakeland-Linder International Airport (LAL). The existing facility and the proposed Phase II expansion will be operated by Amazon Air as an air cargo sorting and distribution facility. The proposed project, which is described below, requires FAA actions and approvals. These federal actions are subject to provisions found in the *Endangered Species Act* (ESA). The actions are also subject to the *National Environmental Policy Act* (NEPA) and an Environmental Assessment is currently being prepared to meet FAA's obligations under NEPA.

The purpose of this letter is to initiate informal consultation with the U.S. Fish and Wildlife Service pursuant to Section 7 of the ESA and its implementing regulations at 50 CFR Part 402. The enclosed Biological Assessment provides additional project information and evaluates the project's effect on special status fish, wildlife, and plant species.

Project Information

All project components would be constructed on airport property. Major project elements include:

- Construct a 464,600 square foot (SF) expansion of the Phase I sort and office building;
- Construct approximately 69,000 square yards (SY) of paved truck court to accommodate 370 additional truck bays; Construct approximately 42,500 SY of paved vehicle parking lot to accommodate 1,120 additional parking spaces;
- Construct approximately 29,200 SY of concrete aircraft parking apron to accommodate three additional Boeing 767-300 aircraft parking positions.
- Construct approximately 19,350 SY of pavement for aircraft ground support equipment (GSE) staging and periodic aircraft parking;

- Construct new airport access road to provide access to the Phase II facilities via Drane Field Road;
- Site clearing, grading, and landscaping;
- Modifications to the airport's stormwater management system, including construction of swales and retention ponds.
- Installation of security fencing, gates and security checkpoints;
- Installation of airfield lighting and signage

The air cargo facility expansion will be designed to accommodate Boeing 767 and 737 cargo aircraft. The Phase II Cargo Development project is expected to generate 16 additional aircraft operations¹ per day at LAL during the facility's first year of operation (2022) and 24 additional daily operations in 2027. Similarly, the project is expected to generate approximately 664 additional car and truck trips per day in 2022 (peak daily) and 1,242 additional car and truck trips per day in 2027.

Species Evaluation

The proposed action has been reviewed for its effects on federally-listed threatened and endangered species, and designated critical habitat. Based on the analysis contained in the attached Biological Assessment (BA), FAA has determined that the Eastern indigo snake (Drymarchon corais couperi), Florida scrub jay (Aphelocoma coerulescens), Wood stork (Mycteria americana), Audubon's crested caracara (Polyborus plancus audubonii), Everglade snail kite (Rostrhamus sociabilis plumbeus) occur or has the potential to occur in the vicinity of the airport and project site.

The Action Area for the project is 70.3 acres in size. As described in the BA, approximately 42 acres of upland habitat is located within the action area. Most of this upland is cleared and maintained as grassed field. In addition, 28 acres of wetland habitat and 0.3-acre of Other Surface Waters are located in the action area. The Action Area contains no Critical Habitat. The BA identifies species-specific avoidance, minimization, and compensation measures. The proposed wetland habitat impacts would be mitigated through the purchase of mitigation credits from the Alafia River Mitigation Bank. Prior to construction, the City will re-survey the project site for crested caracara nests and bald eagle nests. The City will also implement Standard Protection Measures for the Eastern indigo snake.

After reviewing the status of the affected species, the effects of the Proposed Action, and the proposed conservation measures to avoid, minimize, and compensate for effects to listed species, the FAA has determined that the project would not affect the Florida scrub jay. Audubon's crested caracara, and the Everglade snail kite. The FAA has also determined the project may affect, but is not likely to adversely affect, the Eastern indigo snake and wood stork.

An aircraft operation is defined as one aircraft takeoff or one landing. An aircraft that visits an airport generates two operations.

Request for Concurrence

FAA appreciates USFWS's review of the proposed action and the Biological Assessment. Please let us know if the USFWS concurs with our effect determinations listed above.

If you have any questions or would like to discuss the project, you can reach me at peter.m.green@faa.gov or (407) 487-7296.

Sincerely,

Peter M. Green, AICP

Environmental Protection Specialist

Enclosure

cc. Mr. Gene Conrad, City of Lakeland

Green, Peter M (FAA)

From: Green, Peter M (FAA)

Sent: Thursday, September 17, 2020 10:12 AM

To: Wrublik, John

Subject: RE: Lakeland-Linder International Airport Cargo Development

Attachments: 200901_LAL EA_Response to FWS RAI_rev0.pdf

Good morning John,

Attached is a copy of the consultant's report on the functional assessment of wood stork foraging habitat and proposed mitigation at the Alafia River Mitigation Bank.

Let me know if you have any questions or need additional information.

Regards,

Peter

From: Wrublik, John <john_wrublik@fws.gov> Sent: Thursday, June 18, 2020 10:09 AM

To: Green, Peter M (FAA) <peter.m.green@faa.gov>

Subject: Lakeland-Linder International Airport Cargo Development

Peter,

Thank you for your consultation request for the project referenced above dated June 10, 2020. I currently don't have enough information to initiate informal consultation for the project. Please have the applicant's consultant provide me with the following:

A report providing the results of a functional assessment of the wood stork foraging habitat (i.e., wetlands) to be lost due to the project and the wood stork foraging habitat (wetlands) to be provided as compensation for the project. The assessment should follow the Service's wood stork foraging assessment methodology found at: https://www.fws.gov/verobeach/BirdsPDFs/20120712_WOST%20Forage%20Assessment%20Methodology_Appendix.pdf

Wood Stork Foraging Habitat Assessment Methodology July 12, 2012

Wood Stork Foraging Habitat Assessment Methodology (July 12, 2012) Page 3 Parameter 2 – Wetland Hydroperiod: The hydroperiod of a wetland can affect the density of wood stork prey species. For example, studies of Everglades fish populations using a variety of quantitative sampling

www.fws.gov

In addition, I noticed that the Federal Aviation Administration (FAA) determined that the project may affect, but is not likely to adversely affect the Eastern indigo snake. The Service notes that we do not have records of Eastern indigo snakes occurring on or near the project site, and sightings of this species on the project site have not been reported. As such, the Service finds that this species is not reasonably certain to occur on the project

site. I recommend that the FAA change its determination for the Eastern indigo snake from may affect, not likely to adversely affect to no effect. If this acceptable to the FAA, you can let me know by return email. If you have any questions, please let me know.

regards John

John M. Wrublik U.S. Fish and Wildlife Service 1339 20th Street Vero Beach, Florida 32960 Office: (772) 469-4282

Fax: (772) 562-4288

email: John_Wrublik@fws.gov

NOTE: This email correspondence and any attachments to and from this sender is subject to the Freedom of Information Act (FOIA) and may be disclosed to third parties.



AECOM 813-286-1711 tel 7650 West Courtney Campbell

Causeway
Tampa, Florida 33607
www.aecom.com

Memorandum

То	Peter Green, FAA Orlando Airports District Office Page 1				
CC	Paul Sanford, AECOM				
Subject	Response to Request for Additional Information for the Phase II Air Cargo Facility Development at Lakeland Linder International Airport Biological Assessment Consultation\ Consultation Code: 04EF2000-2020-SLI-0368				
From	Tia Norman, AECOM				
Date	September 1, 2020				

Introduction

On June 10, 2020, the Federal Aviation Administration (FAA) submitted a Biological Assessment (BA) for the Phase II Air Cargo Facility Development at Lakeland Linder International Airport (LAL) Environmental Assessment (EA) to the U.S. Fish and Wildlife Service (USFWS), South Florida Field Office for review and requested USFWS' concurrence with the effects determinations.

On June 18, 2020, the USFWS responded to the BA with a Request for Additional Information via email that stated the following:

A report providing the results of a functional assessment of the wood stork foraging habitat (i.e., wetlands) to be lost due to the project and the wood stork foraging habitat (wetlands) to be provided as compensation for the project. The assessment should follow the Service's wood stork foraging assessment methodology found at:

https://www.fws.gov/verobeach/BirdsPDFs/20120712_WOST%20Forage%20Assessment%20Methodology_Appendix.pdf.

As mentioned in the BA and based on USFWS data, the Biological Study Area (BSA) established for the EA is located within the 18.6-mile radius core foraging area (CFA) of three active wood stork nesting colonies, (see Figure 5-1 of the BA). Based on the 2013 Wildlife Hazard Assessment conducted at LAL, wood storks have been observed foraging within herbaceous wetlands and other surface waters on Airport property. In order to make a determination of the Proposed Project's potential effect on the wood stork, the construction impacts were assessed using USFWS' *Wood Stork Effect Determination Key* (May 2010). Using this key, the following steps were followed to determine the effect of the Proposed Project on the wood stork:

- A. A review of FNAI and USFWS information indicates that the Proposed Project is located more than 2,500 feet from an active wood stork colony site. The nearest active wood stork colony is located approximately four miles northeast of the BSA.
- B. The Proposed Project will impact more than 0.5 acre of suitable foraging habitat (SFH).
- C. The Proposed Projet is located within the CFA of three active wood stork nesting colonies. The nearest active wood stork colony is located approximately four miles northeast of the BSA.
- D. Impacts to SFH have been avoided and minimized to the extent practicable; compensation (FWS-approved mitigation bank or as provided in accordance with Mitigation Rule 33 CFR Part 332) for unavoidable impacts is proposed in accordance with the CWA section 404(b)(1)



guidelines; and habitat compensation replaces the foraging value matching the hydroperiod of the wetlands affected and provides foraging value similar to, or higher than, that of impacted wetlands.

Based on this assessment, it was determined that the Proposed Project "may affect, but is not likely to adversely affect" the wood stork.

In an effort to gather the information needed for USFWS to initiate Section 7 Consultation, a Wood Stork Foraging Analysis has been prepared per the USFWS-approved "Wood Stork Foraging Habitat Assessment Methodology" dated July 12, 2012 (herein referred to as the "Methodology". The following sections outline the methodology and calculation of prey-base analysis, the assessment of loss of suitable foraging biomass, and potential mitigation alternatives. The goal of the exercise was to determine the amount of compensation required to offset the loss of suitable wood stork foraging habitat associated with the Proposed Project.

Foraging Assessment Methodology

Wood stork foraging biomass calculations were conducted for all wetlands impacted by the Proposed Project that can be considered potential wood stork foraging habitat. The Proposed Project will result in a total of 23.7 acres of impact to potential wood stork foraging habitat. **Table 1** below lists the acreage of proposed impact, by wetland number and classification, to suitable wood stork foraging habitat within the BSA. The locations of individual wetlands are depicted on Figure 3-1 in the BA.

Table 1: Proposed	l Impacts to	Suitable Wood	Stork Fo	oraging Habitat
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ID	FLUCFCS Code ¹	USFWS Classification ²	Acres of Impacts
Wetlands			
WL 1	630	PFO1/3C	1.2
WL 2	631	PFO1/2C	9.9
WL 2	621	PFO2C	1.4
WL 6	631	PFO1/2C	11.2
		Total	23.7

¹ Florida Department of Transportation (FDOT), Florida Land Use, Cover and Forms Classification System (FLUCFCS) Handbook, 3rd Edition (FDOT, 1999).

Notes: PFO2C = palustrine, forested, needle-leaved deciduous, seasonally flooded; PFO1/3C = palustrine, forested, broad-leaved deciduous/needle-leaved evergreen, seasonally flooded; PFO1/2C = palustrine, forested, needle-leaved/broad-leaved deciduous, seasonally flooded

Wetlands were evaluated based on four parameters in accordance with the Methodology: the density of the vegetation within suitable wood stork foraging habitat, the hydroperiod of each impacted wetland, the size of available prey, and potential competition from other wading bird species.

To calculate the wood stork foraging biomass potentially lost as a result of the Proposed Project, each impacted wetland was assigned an appropriate hydroperiod class based on data collected during field reviews. Hydroperiod classes range from Class 1, which includes inundation for 0-60 days, to Class 7, which includes inundation for 330-365 days per year. The FWS defines wetlands that are inundated for 0 to 180 days per year as having a "short hydroperiod" and includes Classes 1 through 3. Wetlands inundated for 180 days to 360 days per year are considered as having a "long

² FWS, Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, et al., 1979).



hydroperiod" and include Classes 4 through 7 (as provided in Parameter 2- Wetland Hydroperiod of the Methodology). All wetlands included in the foraging analysis for the Proposed Project have short hydroperiods (between Class 1 and Class 3). The hydroperiod class table is found in Table WSM 4 of the Methodology. **Table 2** below lists the hydroperiod class and length, the total acres of proposed impact, and the percent cover of nuisance/exotic vegetation (i.e. melaleuca or Brazilian pepper) for each wetland, by number and Florida Land Use, Cover and Forms Classification System (FLUCFCS) (FDOT 1999) category, included in the foraging analysis.

FLU	and ID & Total Direct UCFCS Impact Area sifications (acres)		Hydroperiod Class ¹ Percent Cover Nuisance/Exot Vegetation		I Anoth of	
WL 1	630	1.2	1	0-25	Short	
WL 2	621/631	11.3	1	0-25	Short	
WL 6	WL 6 631 11.2		1	0-25	Short	
	Total	22.7				

Table 2: Summary of Hydroperiod Class and Percent Cover by Exotic Species

Prior to conducting biomass calculations, the acreage of impact to each wetland was converted to square meters (m²). The conversion of 23.7 acres of total direct impact to wetlands equates to 95,910.5 m². This information is summarized below in **Table 3**.

The total biomass per hydroperiod class was established using Table WSM 11 in the Methodology. Each wetland was assigned a total biomass number based on class according to Table WSM 11. Using Table WSM 3 from the Methodology, each wetland was assigned a Wood Stork Foraging Suitability Index ranging from 1.00 for exotic coverage between 0-25 percent cover and 0.64 for exotic coverage between 26-50 percent. The forage biomass loss for each class is provided in **Table 4** below.

Table 3: Summary by Hydroperiod Class

Hydroperiod Class ¹	Total Direct Impact Area (acres)	Total Direct Impact Area (m²)²	Average Percent Nuisance/Exotic Vegetation
Class 1	23.7	95,910.5	0.0

¹As defined by the FWS Wood Stork Foraging Habitat Assessment Methodology dated July 12, 2012 (Table WSM 4). ²Acres converted to m² as stated in the Summary of the factors affecting vulnerability of wetland habitats to wood stork foraging in the action area, FWS Wood Stork Foraging Habitat Assessment Methodology dated July 12, 2012.

Table 4: Forage Biomass Lost by Class and Hydroperiod

Hydroperiod Class ¹	Area (m²)	ea (m ²) Foraging Suitability Index Total Biomass		Forage Biomass Lost (Kilograms) ²
Class 1	95,910.5	1.00	0.1008 gram/m²	9.67
	al Biomass Lost	9.67		

¹ As defined by the FWS Wood Stork Foraging Habitat Methodology dated July 12, 2012.

¹ As defined by the FWS Wood Stork Foraging Habitat Assessment Methodology dated July 12, 2012 (Table WSM 4). ² As defined by the FWS in the Wood stork Foraging Habitat Assessment Methodology, *Parameter 2- Wetland Hydroperiod*, Page 3.

² Calculations based on total direct impact area (m²) multiplied by the total biomass hydroperiod and the exotic suitability foraging index. The total was divided by 1000 to convert to kilograms. As defined by the FWS Wood Stork Foraging Habitat Assessment Methodology dated July 12, 2012.



According to Kahl's estimate (1964), 201 kg of forage is required for a successful wood stork nest. Because this project shows a total biomass loss of 9.67 kilograms, the calculation represents the loss of 0.05 nest. **Table 5** summarizes the anticipated wood stork forage biomass lost as a result of the Proposed Project.

Conclusion

The June 2020 BA concluded that the Proposed Project "may affect, but is not likely to adversely affect" the wood stork; to compensate for the loss of wood stork foraging habitat, the City is committed to purchasing USFWS-approved wood stork credits from a mitigation bank that, at a minimum, offset 9.67 kilograms of short hydroperiod forage biomass losses. The Alafia River Mitigation Bank (ARMB) services the Alafia River watershed and provides forested wetland mitigation credits. ARMB is a 468-acre site located north of Lithia Springs in Hillsborough County. Forested wetland mitigation credits at ARMB were approved by SWFWMD in May 2017 and by USACE in April 2018. Mitigation bank credits at ARMB can be used to offset impacts to wood stork foraging habitat. At ARMB, the conversion factor for the short hydroperiod is 10.2 kilograms per credit. Therefore, to compensate for the loss of 9.67 kilograms of short hydroperiod forage biomass, approximately 0.95 wetland credits would be required. For the preparation of the EA for the Project Project, wetland impacts were assessed using the Uniform Mitigation Assessment Methodology (UMAM), Chapter 62-345, Florida Administrative Code. Based on the UMAM analyses performed, construction of the Proposed Project will result in the functional loss of approximately 10.9 credits (includes permanent and secondary wetland impacts). The City has already reserved and/or purchased approximately 10.1 federal/state wetland credits from the ARMB for wetland impacts resulting from the Proposed Project and is coordinating with ARMB to acquire an additional 1.5 wetland credits. Therefore, it is anticipated that prior to construction of the Proposed Project, the City will have purchased approximately 11.6 federal/state wetland credits from the ARMB to offset the loss of 23.7 acres (10.9 units) of wetland function with approximately 0.7 wetland credit in excess for potential future impacts to wetland functions at LAL.

Pursuant to the 2010 *USFWS Wood Stork Effect Determination Key* the Proposed Project is not located within 2,500 feet (0.47 mile) of an active nesting wood stork colony, and suitable foraging habitat will be compensated in accordance with Section 404(b) of the Clean Water Act and the USFWS *Habitat Management Guidelines for the Wood Stork in the Southeast Region* through purchase of federal credits at a Service-approved mitigation bank. Additionally, the wetland habitats associated the proposed habitat compensation plan will provide equal foraging value to that of the impacted wetlands. Based on this information, it has been determined that the previous finding of "may affect, but is not likely to adversely affect" regarding the wood stork remains valid for the Proposed Project.



Table 5: Summary of Wood Stork Forage Biomass Lost

Wetl ID & FLU Classific	JCFCS	Total Direct Impact Area (acres)	Hydroperiod Class ¹	Total Direct Impact Area (m²)²	Percent Cover by Exotic Species	Total Biomass per Hydroperiod (grams/m²)³	Exotic Foraging Suitability Index ⁴	Forage Biomass Lost (Kilograms) ⁵	Length of Hydroperiod ⁶
WL 1	630	1.2	1	4,856.2	0	0.1008	1.00	0.49	Short
WL 2	621/631	11.3	1	45,729.5	0	0.1008	1.00	4.61	Short
WL 6	631	11.2	1	45,324.8	0	0.1008	1.00	4.57	Short
Proje	ect Total	23.7		95,910.5			_	9.67	

¹ As defined by the FWS Wood Stork Foraging Habitat Assessment Methodology dated July 12, 2012. (Table WSM 4).

² Acres converted to m² as stated in the summary of the factors affecting vulnerability of wetland habitats to wood stork foraging in the action area, FWS Wood Stork Foraging Habitat Assessment Methodology dated July 12, 2012.

³ Total Fish and Crayfish Biomass per period as per Table WSM 11, FWS Wood Stork Foraging Habitat Assessment Methodology dated July 12, 2012.

⁴ Exotic Foraging Suitability Index per Table WSM 3, FWS Wood Stork Foraging Habitat Assessment Methodology dated July 12, 2012.

⁵ Calculations based on total direct impact area (m²) multiplied by the total biomass hydroperiod and the exotic suitability foraging index. The total was divided by 1000 to convert to kilograms, as defined by the FWS Wood Stork Foraging Habitat Assessment Methodology dated July 12, 2012.

⁶ As defined by the FWS in the Wood stork Foraging Habitat Assessment Methodology, *Parameter 2- Wetland Hydroperiod*, Page 3.



Federal Aviation Administration

June 10, 2020

Mr. John M. Wrublik South Florida Ecological Services Office U.S. Fish and Wildlife Service 1339 20th Street Vero Beach, Florida 32960-3559

RE: Section 7 Consultation

Phase II Air Cargo Development Lakeland-Linder International Airport (Pa Orlando Airports District Office 8427 SouthPark Circle, Suite 524 Orlando, FL 32819 Phone: (407) 487-7720 Fax: (407) 487-7135



U.S. Fish and Wildlife Service 1339 20th Street Vero Beach, Florida 32960 772-562-3909 Fax 772-562-4288

FWS Log No. 04EF2000-2020-I-0853

The U.S. Fish and Wildlife Service has reviewed the information provided and finds that the proposed action is not likely to adversely affect any federally listed species or designated critical habitat protected by the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 et. seq.). A record of this consultation is on file at the South Florida Ecological Service Office.

This fulfills the requirements of section 7 of the Act and further action is not required. If modifications are made to the project, if additional information involving potential effects to listed species becomes available, or if a new species is listed, reinitiation of consultation may be necessary.



9/23/2020

Roxanna Hinzman, Field Supervisor

Date

Dear Mr. Wrublik,

The City of Lakeland, through its Airports Department, has requested approval from the Federal Aviation Administration (FAA) to expand an air cargo facility at the Lakeland-Linder International Airport (LAL). The existing facility and the proposed Phase II expansion will be operated by Amazon Air as an air cargo sorting and distribution facility. The proposed project, which is described below, requires FAA actions and approvals. These federal actions are subject to provisions found in the *Endangered Species Act* (ESA). The actions are also subject to the *National Environmental Policy Act* (NEPA) and an Environmental Assessment is currently being prepared to meet FAA's obligations under NEPA.

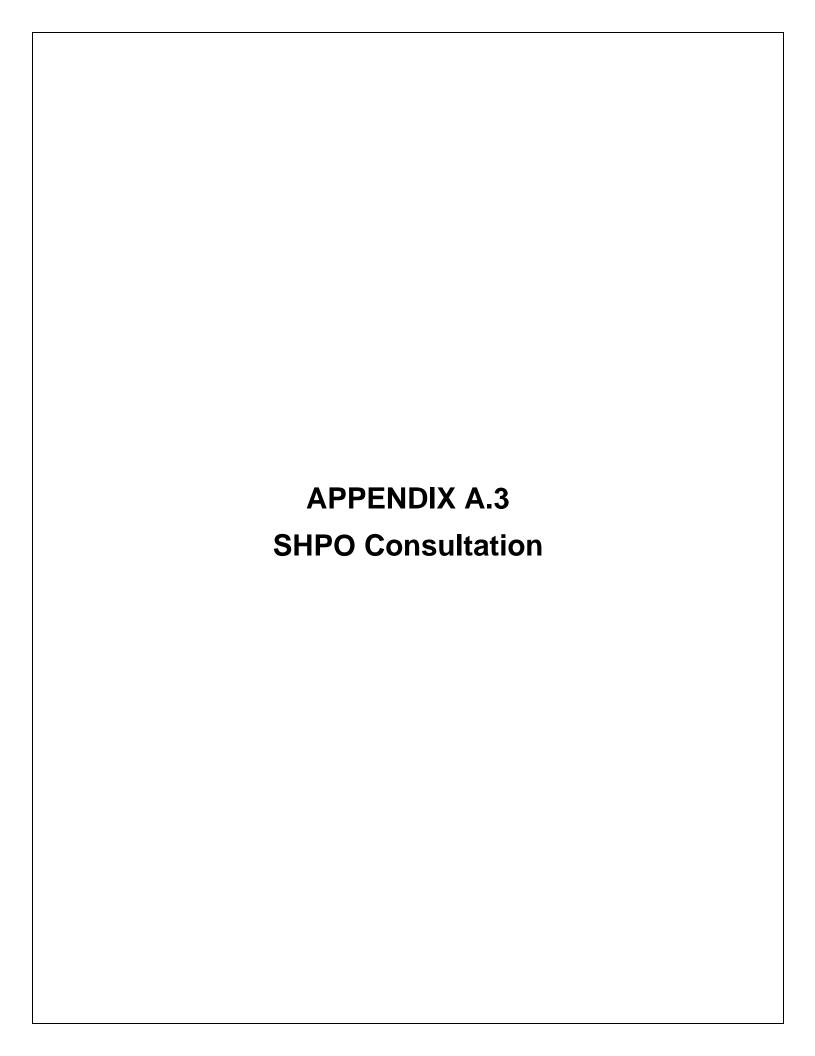
The purpose of this letter is to initiate informal consultation with the U.S. Fish and Wildlife Service pursuant to Section 7 of the ESA and its implementing regulations at 50 CFR Part 402. The enclosed Biological Assessment provides additional project information and evaluates the project's effect on special status fish, wildlife, and plant species.

Project Information

All project components would be constructed on airport property. Major project elements include:

- Construct a 464,600 square foot (SF) expansion of the Phase I sort and office building;
- Construct approximately 69,000 square yards (SY) of paved truck court to accommodate 370 additional truck bays; Construct approximately 42,500 SY of paved vehicle parking lot to accommodate 1,120 additional parking spaces;
- Construct approximately 29,200 SY of concrete aircraft parking apron to accommodate three additional Boeing 767-300 aircraft parking positions.
- Construct approximately 19,350 SY of pavement for aircraft ground support equipment (GSE) staging and periodic aircraft parking;









Orlando Airports District Office 8427 South Park Circle, Suite 524 Orlando, FL 32819 Phone: (407) 487-7220 Fax: (407) 487-7135

May 6, 2020

[Via email - CompliancePermits@DOS.MyFlorida.com]

Timothy A. Parsons, Ph.D. Director, Division of Historical Resources and State Historic Preservation Officer R.A. Gray Building 500 South Bronough Street Tallahassee, Florida 32399

> RE: Section 106 Consultation and Area of Potential Effect Phase II Air Cargo Development Lakeland-Linder International Airport (Polk County, Florida)

Dear Dr. Parsons,

The City of Lakeland, through its Airports Department, has requested approval from the Federal Aviation Administration (FAA) to expand an air cargo facility at the Lakeland-Linder International Airport (LAL). The existing facility and the proposed Phase II expansion will be operated by Amazon Air as an air cargo sorting and distribution facility. The proposed project, which is described below, requires FAA actions and approvals.

The proposed project constitute an "undertaking" subject to the *National Historic Preservation Act* (Section 106) and its implementing regulations at 36 CFR Part 800. This letter is intended to initiate consultation and seek concurrence on the undertaking's proposed Area of Potential Effect (APE). The project also requires the preparation of an Environmental Assessment (EA) in accordance with the *National Environmental Policy Act*. The EA is being prepared separately from, but concurrent with, this consultation process.

Proposed Undertaking

The proposed project is described below and depicted on the enclosed **Figure 1**. The project site is approximately 60 acres in size. All project components would be constructed on airport property. Major project elements include:

- Construct a 464,600 square foot (SF) expansion of the Phase I sort and office building;
- Construct approximately 69,000 square yards (SY) of paved truck court to accommodate 370 additional truck bays;

- Construct approximately 42,500 SY of paved vehicle parking lot to accommodate 1,120 additional parking spaces;
- Construct approximately 29,200 SY of concrete aircraft parking apron to accommodate three additional Boeing 767-300 aircraft parking positions.
- Construct approximately 19,350 SY of pavement for aircraft ground support equipment (GSE) staging and periodic aircraft parking;
- Construct new airport access road to provide access to the Phase II facilities via Drane Field Road;
- Site clearing, grading, and landscaping;
- Modifications to the airport's stormwater management system, including construction of swales and retention ponds.
- Installation of security fencing, gates and security checkpoints;
- Installation of airfield lighting and signage

The facility will be designed to accommodate Boeing 767 and 737 cargo aircraft. If approved, the Phase II Cargo Development project is expected to generate 16 additional aircraft operations¹ per day at LAL during the facility's first year of operation (2022) and 24 additional daily operations in 2027. Similarly, the project is expected to generate approximately 664 additional car and truck trips per day in 2022 (peak daily) and 1,242 additional car and truck trips per day in 2027.

Proposed Area of Potential Effect

The construction and operations of the proposed facility was reviewed to identify an appropriate APE for the evaluation of potential impacts on historic, archaeological, and cultural resources. Based on a review of the proposed project, the Direct Effects portion of the APE includes the areas where ground disturbance is expected to occur. The Direct Effects APE is depicted on **Figure 1**.

The Indirect Effects APE was delineated to include the area likely to be exposed, and newly exposed, to aircraft noise levels of Day-Night Average Sound Level (DNL) 65 and higher.² The extent of the APE is also considered appropriate for the evaluation of other effects, such as those associated with air emissions and visual effects. The Indirect Effects APE is depicted on **Figure 2**.

¹ An aircraft operation is defined as one aircraft takeoff or one landing. An aircraft that visits an airport generates two operations.

² The Day-Night Average Sound Level (DNL) represents aircraft sound levels averaged over a 24-hour period, with penalties to account for the increased sensitivity to noise events that occur at night.

Pursuant to Title 36 CFR Section 800.4, Identification of Historic Properties, the FAA is seeking comments on the proposed APE for this undertaking. If possible, please let us know within 15 days of receipt of this letter indicating if you concur with the APE as defined. Please direct correspondence and questions to me at (407) 487-7296 or via email at peter.m.green@faa.gov.

Sincerely, Peter M. Green, AICP Environmental Protection Specialist	
Enclosures (2)	
Copy: Mr. Gene Conrad, Lakeland-Linder Int Mr. Paul Sanford, AECOM	ernational Airport
The Florida State Historic Preservation Officer ☐ in this letter for SHPO/FDHR Project File Number	concurs/□ does not concur with the APE proposed
Comments:	
Timothy A. Parsons, Ph.D., Director, and State Historic Preservation Officer	Date:

Florida Division of Historical Resources



Orlando Airports District Office 8427 South Park Circle, Suite 524 Orlando, FL 32819 Phone: (407) 487-7220 Fax: (407) 487-7135

October 20, 2020

[Via email - CompliancePermits@DOS.MyFlorida.com]

Timothy A. Parsons, Ph.D. Director, Division of Historical Resources and State Historic Preservation Officer R.A. Gray Building 500 South Bronough Street Tallahassee, Florida 32399

RE: Determination of Effect
Phase II Air Cargo Development
Lakeland-Linder International Airport (Polk County, Florida)

Dear Dr. Parsons,

As part of the Federal Aviation Administration's (FAA's) Section 106 review, and pursuant to 36 CFR §800.4, the FAA has undertaken identification efforts for the Phase 2 Air Cargo Development project at the Lakeland-Linder International Airport (LAL). Based on the results of these efforts the FAA has determined a finding of no effect is appropriate for this undertaking.

Proposed Undertaking and Area of Potential Effect

As described in our letter dated May 6, 2020, the City of Lakeland requested approval from the FAA to expand an air cargo facility at LAL. The existing facility and the proposed Phase II expansion will be operated as an air cargo sorting and distribution facility. The facility expansion project includes the construction of additional warehouse space, office space, aircraft parking apron, truck courts, vehicle parking spaces, and support buildings. The Area of Potential Effects (APE) described in the letter as having two components: 1) areas where ground disturbance and construction activities would occur and 2) a broader area likely to be exposed, and newly exposed, to aircraft noise levels of Day-Night Average Sound Level (DNL) 65 and higher.

Tribal Consultation

The FAA initiated Section 106 consultation with the following Native American tribes: Miccosukee Tribe of Indians of Florida, Muscogee (Creek) Nation, Poarch Band of Creek Indians, Seminole Nation of Oklahoma, and the Seminole Tribe of Florida. Of those tribes the

Seminole Tribe of Florida and the Muscogee (Creek) Nation expressed interest in participating in consultation. The other tribes did not respond to the FAA's correspondence. All project documentation and this determination of effect letter will be provided to those tribes participating in the consultation.

Identification Efforts

A review of available literature, maps, and information was conducted to identify recorded resources and understand the history and environment of land within the APE. This research was followed by a pedestrian surface inspection and a subsurface survey (shovel testing) to identify potentially significant archaeological, cultural, and historical resources within direct effects portion of the APE. The effort also identified any structures over 50 years in age within the indirect effects portion of the APE. For your review, the results of the research and surveys are contained in the Phase IB Cultural Resource Assessment Survey¹ report enclosed with this letter.

Historic Properties in the APE

A majority of the Direct Effects portion of the APE is comprised of previously disturbed land associated with the airfield and land routinely used for construction staging. The Direct Effects APE also includes several large wetlands. Shovel tests showed no observable natural soil stratigraphy as past development and activities have greatly impacted the area. No historic cultural materials were recovered from the shovel tests.

No resources within the APE are listed in the National Register of Historic Places. Resources within the APE which were, or may have been, built 50 or more years ago were located, researched, and assessed. Eleven resource groups located on- and off-airport were identified for evaluation. The structures were evaluated against National Register eligibility criteria. The evaluation indicated that the Aaron E. and Maude Morgan House and the English Family House are each potentially eligible for listing for listing in the National Register under Criterion C. Neither of these properties would be affected by project construction. Additionally, the properties are well outside of existing and future DNL 65 airport noise contours and are distant from the airport viewshed.

Based on the results of surveys, no further archaeological work was recommended. No historic properties would be affected by the Proposed Project.

Finding of Effect

Based on the results of the studies and an assessment of effects on historic properties, the FAA has determined that this undertaking will have no effect on historic properties. Please review this finding and the enclosed documentation and provide either your concurrence or non-concurrence within 30 days.

¹ Phase IB Cultural Resources Assessment Survey for Phase II Air Cargo Facility Development at Lakeland Linder International Airport (LAL). AECOM. September 2020.

The documentation provided herein meets the regulatory standard for documenting this effect determination. If you have questions or concerns regarding this finding or the sufficiency of documentation, please contact me at (407) 487-7296 or via email at peter.m.green@faa.gov.

Sincerely,

Peter M. Green, AICP

Environmental Protection Specialist

Enclosure

Copy: Mr. Gene Conrad, Lakeland-Linder International Airport

Mr. Paul Sanford, AECOM



RON DESANTIS
Governor
Secretary of State

Peter M. Green Environmental Protection Specialist Orlando Airports District Office Federal Aviation Administration 8427 SouthPark Circle Orlando, Florida 32819

RE: DHR Project File No.: 2020-2420

Determination of Effect, Phase II Air Cargo Development, Lakeland-Linder International Airport

(Polk County, Florida), Phase IB Cultural Resources Assessment Survey

Dear Mr. Green:

Our office received and reviewed the above referenced project for possible effects on historic properties listed, or eligible for listing, on the *National Register of Historic Places* (NRHP). The review was conducted in accordance with Section 106 of the *National Historic Preservation Act of 1966*, as amended, and its implementing regulations in 36 CFR Part 800: Protection of Historic Properties.

In September 2020, AECOM conducted the above referenced cultural resources assessment survey (CRAS) on behalf of the Federal Aviation Administration (FAA) in compliance with requirements for Section 106. AECOM identified no archaeological resources and fifteen historic structure. AECOM recommended two structures as eligible for listing in the NRHP, the Aaron E. and Maude Morgan House (PO8453) and the English Family House (PO8454). AECOM recommended no further work in the APE and stated that the project house have no effect to historic properties.

Based on the results of the survey as well as previous surveys in the vicinity, the FAA determined that the undertaking will have no effect to historic properties. Our office concurs with the FAA's determination of no effect and we find the submitted report to be complete and sufficient in accordance with Chapter 1A-46, *Florida Administrative Code*.

If you have any questions, please contact me by email at *Jason.Aldridge@dos.myflorida.com* or by telephone at 850-245-6344.

Sincerely

Jason Aldridge

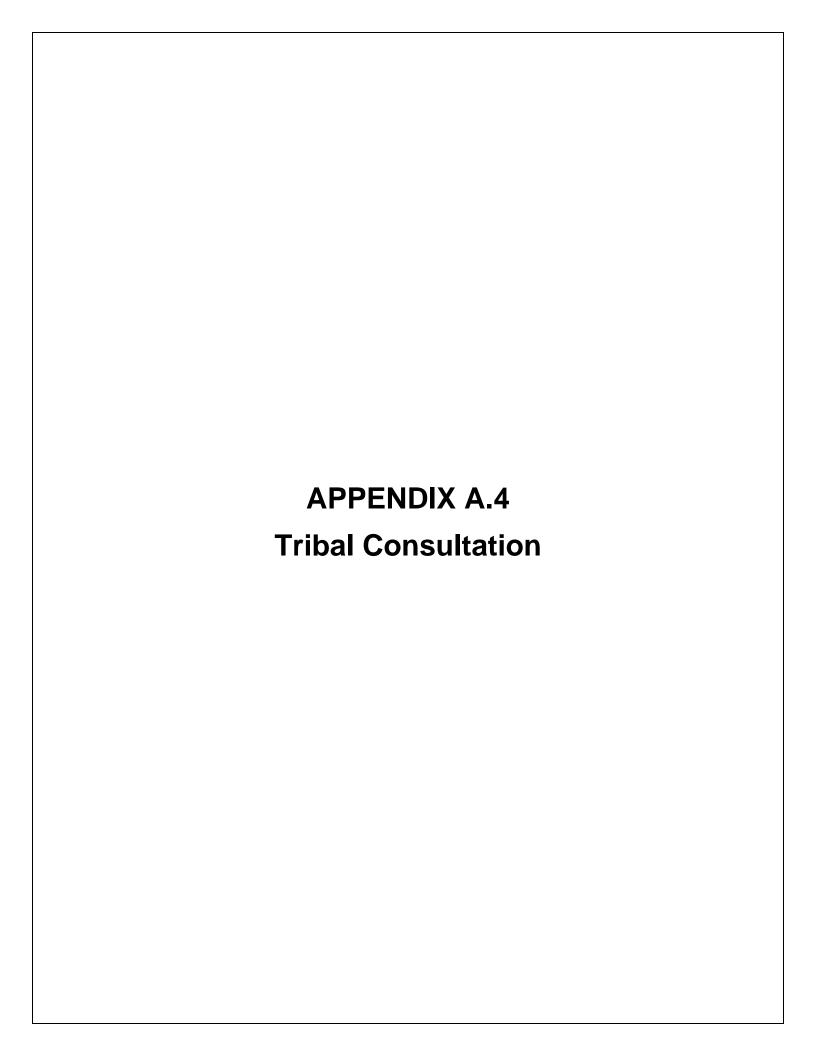
Deputy State Historic Preservation Officer

for Compliance and Review



February 19, 2021









Orlando Airports District Office 8427 South Park Circle, Suite 524 Orlando, FL 32819 Phone: (407) 487-7220 Fax: (407) 487-7135

May 6, 2020

[Via email - THPOCompliance@semtribe.com]

Mr. Bradley Mueller Compliance Review Supervisor Tribal Historic Preservation Office Seminole Tribe of Florida 30290 Josie Billie Highway, PMB 1004 Clewiston, Florida 33440

RE: Section 106 Consultation and Area of Potential Effect
Phase II Air Cargo Development
Lakeland –Linder International Airport (Polk County, Florida)

Dear Mr. Mueller,

The City of Lakeland, through its Airports Department, has requested approval from the Federal Aviation Administration (FAA) to expand an air cargo facility at the Lakeland-Linder International Airport (LAL). The existing facility and the proposed Phase II expansion will be operated by Amazon Air as an air cargo sorting and distribution facility. The proposed project, which is described below, requires FAA actions and approvals.

The proposed project constitute an "undertaking" subject to the *National Historic Preservation Act* (Section 106) and its implementing regulations at 36 CFR Part 800. This letter is intended to initiate consultation and seek concurrence on the undertaking's proposed Area of Potential Effect (APE). The project also requires the preparation of an Environmental Assessment (EA) in accordance with the *National Environmental Policy Act*. The EA is being prepared separately from, but concurrent with, this consultation process.

Proposed Undertaking

The Proposed Undertaking is described below and depicted on the enclosed Figure 1. The project site is approximately 60 acres in size. All project components would be constructed on airport property. Major project elements include:

- Construct a 464,600 square foot (SF) expansion of the Phase I sort and office building;
- Construct approximately 69,000 square yards (SY) of paved truck court to accommodate 370 additional truck bays;

- Construct approximately 42,500 SY of paved vehicle parking lot to accommodate 1,120 additional parking spaces;
- Construct approximately 29,200 SY of concrete aircraft parking apron to accommodate three additional Boeing 767-300 aircraft parking positions.
- Construct approximately 19,350 SY of pavement for aircraft ground support equipment (GSE) staging and periodic aircraft parking;
- Construct new airport access road to provide access to the Phase II facilities via Drane Field Road;
- Site clearing, grading, and landscaping;
- Modifications to the airport's stormwater management system, including construction of swales and retention ponds.
- Installation of security fencing, gates and security checkpoints;
- Installation of airfield lighting and signage

The facility will be designed to accommodate Boeing 767 and 737 cargo aircraft. If approved, the Phase II Cargo Development project is expected to generate 16 additional aircraft operations¹ per day at LAL during the facility's first year of operation (2022) and 24 additional daily operations in 2027. Similarly, the project is expected to generate approximately 664 additional car and truck trips per day in 2022 (peak daily) and 1,242 additional car and truck trips per day in 2027.

Proposed Area of Potential Effect

The construction and operations of the proposed facility was reviewed to identify an appropriate APE for the evaluation of potential impacts on historic, archaeological, and cultural resources. Based on a review of the proposed project, the Direct Effects portion of the APE includes the areas where ground disturbance is anticipated to take place. The Direct Effects APE is depicted on Figure 1.

The Indirect Effects APE was delineated to include the area likely to be exposed to aircraft noise levels of Day-Night Average Sound Level (DNL) 65 and higher.² The extent of the APE is also considered appropriate for the evaluation of other effects, such as those associated with air emissions. The Indirect Effects APE is depicted on Figure 2.

The FAA has identified your tribe as potentially having an interest in the project area. Pursuant to 36 CFR § 800.2(c)(2)(B)(ii), the FAA is seeking input on properties of cultural or religious significance that may be affected by the undertaking, and inviting you to participate in government-to-government consultation in the Section 106 consultation process.

¹ An aircraft operation is defined as one aircraft takeoff or one landing. An aircraft that visits an airport generates two operations.

² The Day-Night Average Sound Level (DNL) represents aircraft sound levels averaged over a 24-hour period, with penalties to account for the increased sensitivity to noise events that occur at night.

Please contact me within 30 days of the receipt of this letter to confirm your intent to participate in this Section 106 consultation. I can be reached at (407) 487-7296 or via email at peter.m.green@faa.gov.

Sincerely,

Peter M. Green, AICP

Environmental Protection Specialist FAA Orlando Airports District Office

Enclosures (2)



Orlando Airports District Office 8427 South Park Circle, Suite 524 Orlando, FL 32819 Phone: (407) 487-7220 Fax: (407) 487-7135

May 6, 2020

[Via email - kevind@miccosukeetribe.com]

Mr. Kevin Donaldson Environmental Specialist Historic and Cultural Preservation Department Miccosukee Tribe of Indians of Florida Tamiami Station PO Box 440021 Miami, Florida 33144

RE: Section 106 Consultation and Area of Potential Effect
Phase II Air Cargo Development
Lakeland –Linder International Airport (Polk County, Florida)

Dear Mr. Donaldson,

The City of Lakeland, through its Airports Department, has requested approval from the Federal Aviation Administration (FAA) to expand an air cargo facility at the Lakeland-Linder International Airport (LAL). The existing facility and the proposed Phase II expansion will be operated by Amazon Air as an air cargo sorting and distribution facility. The proposed project, which is described below, requires FAA actions and approvals.

The proposed project constitute an "undertaking" subject to the *National Historic Preservation Act* (Section 106) and its implementing regulations at 36 CFR Part 800. This letter is intended to initiate consultation and seek concurrence on the undertaking's proposed Area of Potential Effect (APE). The project also requires the preparation of an Environmental Assessment (EA) in accordance with the *National Environmental Policy Act*. The EA is being prepared separately from, but concurrent with, this consultation process.

Proposed Undertaking

The Proposed Undertaking is described below and depicted on the enclosed Figure 1. The project site is approximately 60 acres in size. All project components would be constructed on airport property. Major project elements include:

• Construct a 464,600 square foot (SF) expansion of the Phase I sort and office building;

- Construct approximately 69,000 square yards (SY) of paved truck court to accommodate 370 additional truck bays;
- Construct approximately 42,500 SY of paved vehicle parking lot to accommodate 1,120 additional parking spaces;
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- Construct new airport access road to provide access to the Phase II facilities via Drane Field Road;
- Site clearing, grading, and landscaping;
- Modifications to the airport's stormwater management system, including construction of swales and retention ponds.
- Installation of security fencing, gates and security checkpoints;
- Installation of airfield lighting and signage

The facility will be designed to accommodate Boeing 767 and 737 cargo aircraft. If approved, the Phase II Cargo Development project is expected to generate 16 additional aircraft operations¹ per day at LAL during the facility's first year of operation (2022) and 24 additional daily operations in 2027. Similarly, the project is expected to generate approximately 664 additional car and truck trips per day in 2022 (peak daily) and 1,242 additional car and truck trips per day in 2027.

Proposed Area of Potential Effect

The construction and operations of the proposed facility was reviewed to identify an appropriate APE for the evaluation of potential impacts on historic, archaeological, and cultural resources. Based on a review of the proposed project, the Direct Effects portion of the APE includes the areas where ground disturbance is anticipated to take place. The Direct Effects APE is depicted on Figure 1.

The Indirect Effects APE was delineated to include the area likely to be exposed to aircraft noise levels of Day-Night Average Sound Level (DNL) 65 and higher.² The extent of the APE is also considered appropriate for the evaluation of other effects, such as those associated with air emissions. The Indirect Effects APE is depicted on Figure 2.

The FAA has identified your tribe as potentially having an interest in the project area. Pursuant to 36 CFR § 800.2(c)(2)(B)(ii), the FAA is seeking input on properties of cultural or religious

¹ An aircraft operation is defined as one aircraft takeoff or one landing. An aircraft that visits an airport generates two operations.

² The Day-Night Average Sound Level (DNL) represents aircraft sound levels averaged over a 24-hour period, with penalties to account for the increased sensitivity to noise events that occur at night.

significance that may be affected by the undertaking, and inviting you to participate in government-to-government consultation in the Section 106 consultation process.

Please contact me within 30 days of the receipt of this letter to confirm your intent to participate in this Section 106 consultation. I can be reached at (407) 487-7296 or via email at peter.m.green@faa.gov.

Sincerely,

Peter M. Green, AICP

Environmental Protection Specialist FAA Orlando Airports District Office

Enclosures (2)



Orlando Airports District Office 8427 South Park Circle, Suite 524 Orlando, FL 32819 Phone: (407) 487-7220 Fax: (407) 487-7135

May 6, 2020

[Via email - section106@mcn-nsn.gov]

Ms. Corrain Loe-Zepeda
Tribal Historic Preservation Officer
Historic and Cultural Preservation Department
Muscogee (Creek) Nation Cultural Preservation
Post Office Box 580
Okmulgee, Oklahoma 74447

RE: Section 106 Consultation and Area of Potential Effect Phase II Air Cargo Development Lakeland –Linder International Airport (Polk County, Florida)

Dear Ms. Loe-Zepeda,

The City of Lakeland, through its Airports Department, has requested approval from the Federal Aviation Administration (FAA) to expand an air cargo facility at the Lakeland-Linder International Airport (LAL). The existing facility and the proposed Phase II expansion will be operated by Amazon Air as an air cargo sorting and distribution facility. The proposed project, which is described below, requires FAA actions and approvals.

The proposed project constitute an "undertaking" subject to the *National Historic Preservation Act* (Section 106) and its implementing regulations at 36 CFR Part 800. This letter is intended to initiate consultation and seek concurrence on the undertaking's proposed Area of Potential Effect (APE). The project also requires the preparation of an Environmental Assessment (EA) in accordance with the *National Environmental Policy Act*. The EA is being prepared separately from, but concurrent with, this consultation process.

Proposed Undertaking

The Proposed Undertaking is described below and depicted on the enclosed Figure 1. The project site is approximately 60 acres in size. All project components would be constructed on airport property. Major project elements include:

- Construct a 464,600 square foot (SF) expansion of the Phase I sort and office building;
- Construct approximately 69,000 square yards (SY) of paved truck court to accommodate 370 additional truck bays;

- Construct approximately 42,500 SY of paved vehicle parking lot to accommodate 1,120 additional parking spaces;
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- Modifications to the airport's stormwater management system, including construction of swales and retention ponds.
- Installation of security fencing, gates and security checkpoints;
- Installation of airfield lighting and signage

The facility will be designed to accommodate Boeing 767 and 737 cargo aircraft. If approved, the Phase II Cargo Development project is expected to generate 16 additional aircraft operations¹ per day at LAL during the facility's first year of operation (2022) and 24 additional daily operations in 2027. Similarly, the project is expected to generate approximately 664 additional car and truck trips per day in 2022 (peak daily) and 1,242 additional car and truck trips per day in 2027.

Proposed Area of Potential Effect

The construction and operations of the proposed facility was reviewed to identify an appropriate APE for the evaluation of potential impacts on historic, archaeological, and cultural resources. Based on a review of the proposed project, the Direct Effects portion of the APE includes the areas where ground disturbance is anticipated to take place. The Direct Effects APE is depicted on Figure 1.

The Indirect Effects APE was delineated to include the area likely to be exposed to aircraft noise levels of Day-Night Average Sound Level (DNL) 65 and higher.² The extent of the APE is also considered appropriate for the evaluation of other effects, such as those associated with air emissions. The Indirect Effects APE is depicted on Figure 2.

The FAA has identified your tribe as potentially having an interest in the project area. Pursuant to 36 CFR § 800.2(c)(2)(B)(ii), the FAA is seeking input on properties of cultural or religious significance that may be affected by the undertaking, and inviting you to participate in government-to-government consultation in the Section 106 consultation process.

¹ An aircraft operation is defined as one aircraft takeoff or one landing. An aircraft that visits an airport generates two operations.

² The Day-Night Average Sound Level (DNL) represents aircraft sound levels averaged over a 24-hour period, with penalties to account for the increased sensitivity to noise events that occur at night.

Please contact me within 30 days of the receipt of this letter to confirm your intent to participate in this Section 106 consultation. I can be reached at (407) 487-7296 or via email at peter.m.green@faa.gov.

Sincerely,

Peter M. Green, AICP

Environmental Protection Specialist FAA Orlando Airports District Office

Enclosures (2)



Orlando Airports District Office 8427 South Park Circle, Suite 524 Orlando, FL 32819 Phone: (407) 487-7220 Fax: (407) 487-7135

May 6, 2020

[Via email - lhaikey@pci-nsn.gov]

Mr. Larry D. Haikey Tribal Historic Preservation Officer Poarch Band of Creek Indians 5811 Jack Springs Road Atmore, Alabama 36502

> RE: Section 106 Consultation and Area of Potential Effect Phase II Air Cargo Development Lakeland –Linder International Airport (Polk County, Florida)

Dear Mr. Haikey,

The City of Lakeland, through its Airports Department, has requested approval from the Federal Aviation Administration (FAA) to expand an air cargo facility at the Lakeland-Linder International Airport (LAL). The existing facility and the proposed Phase II expansion will be operated by Amazon Air as an air cargo sorting and distribution facility. The proposed project, which is described below, requires FAA actions and approvals.

The proposed project constitute an "undertaking" subject to the *National Historic Preservation Act* (Section 106) and its implementing regulations at 36 CFR Part 800. This letter is intended to initiate consultation and seek concurrence on the undertaking's proposed Area of Potential Effect (APE). The project also requires the preparation of an Environmental Assessment (EA) in accordance with the *National Environmental Policy Act*. The EA is being prepared separately from, but concurrent with, this consultation process.

Proposed Undertaking

The Proposed Undertaking is described below and depicted on the enclosed Figure 1. The project site is approximately 60 acres in size. All project components would be constructed on airport property. Major project elements include:

- Construct a 464,600 square foot (SF) expansion of the Phase I sort and office building;
- Construct approximately 69,000 square yards (SY) of paved truck court to accommodate 370 additional truck bays;
- Construct approximately 42,500 SY of paved vehicle parking lot to accommodate 1,120 additional parking spaces;

- Construct approximately 29,200 SY of concrete aircraft parking apron to accommodate three additional Boeing 767-300 aircraft parking positions.
- Construct approximately 19,350 SY of pavement for aircraft ground support equipment (GSE) staging and periodic aircraft parking;
- Construct new airport access road to provide access to the Phase II facilities via Drane Field Road;
- Site clearing, grading, and landscaping;
- Modifications to the airport's stormwater management system, including construction of swales and retention ponds.
- Installation of security fencing, gates and security checkpoints;
- Installation of airfield lighting and signage

The facility will be designed to accommodate Boeing 767 and 737 cargo aircraft. If approved, the Phase II Cargo Development project is expected to generate 16 additional aircraft operations¹ per day at LAL during the facility's first year of operation (2022) and 24 additional daily operations in 2027. Similarly, the project is expected to generate approximately 664 additional car and truck trips per day in 2022 (peak daily) and 1,242 additional car and truck trips per day in 2027.

Proposed Area of Potential Effect

The construction and operations of the proposed facility was reviewed to identify an appropriate APE for the evaluation of potential impacts on historic, archaeological, and cultural resources. Based on a review of the proposed project, the Direct Effects portion of the APE includes the areas where ground disturbance is anticipated to take place. The Direct Effects APE is depicted on Figure 1.

The Indirect Effects APE was delineated to include the area likely to be exposed to aircraft noise levels of Day-Night Average Sound Level (DNL) 65 and higher.² The extent of the APE is also considered appropriate for the evaluation of other effects, such as those associated with air emissions. The Indirect Effects APE is depicted on Figure 2.

The FAA has identified your tribe as potentially having an interest in the project area. Pursuant to 36 CFR § 800.2(c)(2)(B)(ii), the FAA is seeking input on properties of cultural or religious significance that may be affected by the undertaking, and inviting you to participate in government-to-government consultation in the Section 106 consultation process.

¹ An aircraft operation is defined as one aircraft takeoff or one landing. An aircraft that visits an airport generates two operations.

² The Day-Night Average Sound Level (DNL) represents aircraft sound levels averaged over a 24-hour period, with penalties to account for the increased sensitivity to noise events that occur at night.

Please contact me within 30 days of the receipt of this letter to confirm your intent to participate in this Section 106 consultation. I can be reached at (407) 487-7296 or via email at peter.m.green@faa.gov.

Sincerely,

Peter M. Green, AICP

Environmental Protection Specialist FAA Orlando Airports District Office

Enclosures (2)



Orlando Airports District Office 8427 South Park Circle, Suite 524 Orlando, FL 32819 Phone: (407) 487-7220 Fax: (407) 487-7135

May 6, 2020

[Via email - leader.bs@sno-nsn.gov]

Brigita Leader, MS Interim Director/TCNS Coordinator Historic Preservation Office Seminole Nation of Oklahoma Post Office Box 1498 Wewoka, Oklahoma 74884

> RE: Section 106 Consultation and Area of Potential Effect Phase II Air Cargo Development Lakeland –Linder International Airport (Polk County, Florida)

Dear Ms. Leader,

The City of Lakeland, through its Airports Department, has requested approval from the Federal Aviation Administration (FAA) to expand an air cargo facility at the Lakeland-Linder International Airport (LAL). The existing facility and the proposed Phase II expansion will be operated by Amazon Air as an air cargo sorting and distribution facility. The proposed project, which is described below, requires FAA actions and approvals.

The proposed project constitute an "undertaking" subject to the *National Historic Preservation Act* (Section 106) and its implementing regulations at 36 CFR Part 800. This letter is intended to initiate consultation and seek concurrence on the undertaking's proposed Area of Potential Effect (APE). The project also requires the preparation of an Environmental Assessment (EA) in accordance with the *National Environmental Policy Act*. The EA is being prepared separately from, but concurrent with, this consultation process.

Proposed Undertaking

The Proposed Undertaking is described below and depicted on the enclosed Figure 1. The project site is approximately 60 acres in size. All project components would be constructed on airport property. Major project elements include:

- Construct a 464,600 square foot (SF) expansion of the Phase I sort and office building;
- Construct approximately 69,000 square yards (SY) of paved truck court to accommodate 370 additional truck bays;

- Construct approximately 42,500 SY of paved vehicle parking lot to accommodate 1,120 additional parking spaces;
- Construct approximately 29,200 SY of concrete aircraft parking apron to accommodate three additional Boeing 767-300 aircraft parking positions.
- Construct approximately 19,350 SY of pavement for aircraft ground support equipment (GSE) staging and periodic aircraft parking;
- Construct new airport access road to provide access to the Phase II facilities via Drane Field Road;
- Site clearing, grading, and landscaping;
- Modifications to the airport's stormwater management system, including construction of swales and retention ponds.
- Installation of security fencing, gates and security checkpoints;
- Installation of airfield lighting and signage

The facility will be designed to accommodate Boeing 767 and 737 cargo aircraft. If approved, the Phase II Cargo Development project is expected to generate 16 additional aircraft operations¹ per day at LAL during the facility's first year of operation (2022) and 24 additional daily operations in 2027. Similarly, the project is expected to generate approximately 664 additional car and truck trips per day in 2022 (peak daily) and 1,242 additional car and truck trips per day in 2027.

Proposed Area of Potential Effect

The construction and operations of the proposed facility was reviewed to identify an appropriate APE for the evaluation of potential impacts on historic, archaeological, and cultural resources. Based on a review of the proposed project, the Direct Effects portion of the APE includes the areas where ground disturbance is anticipated to take place. The Direct Effects APE is depicted on Figure 1.

The Indirect Effects APE was delineated to include the area likely to be exposed to aircraft noise levels of Day-Night Average Sound Level (DNL) 65 and higher.² The extent of the APE is also considered appropriate for the evaluation of other effects, such as those associated with air emissions. The Indirect Effects APE is depicted on Figure 2.

The FAA has identified your tribe as potentially having an interest in the project area. Pursuant to 36 CFR § 800.2(c)(2)(B)(ii), the FAA is seeking input on properties of cultural or religious significance that may be affected by the undertaking, and inviting you to participate in government-to-government consultation in the Section 106 consultation process.

¹ An aircraft operation is defined as one aircraft takeoff or one landing. An aircraft that visits an airport generates two operations.

² The Day-Night Average Sound Level (DNL) represents aircraft sound levels averaged over a 24-hour period, with penalties to account for the increased sensitivity to noise events that occur at night.

Please contact me within 30 days of the receipt of this letter to confirm your intent to participate in this Section 106 consultation. I can be reached at (407) 487-7296 or via email at peter.m.green@faa.gov.

Sincerely,

Peter M. Green, AICP

Environmental Protection Specialist FAA Orlando Airports District Office

Enclosures (2)

LAKELAND LINDER INTERNATIONAL AIRPORT

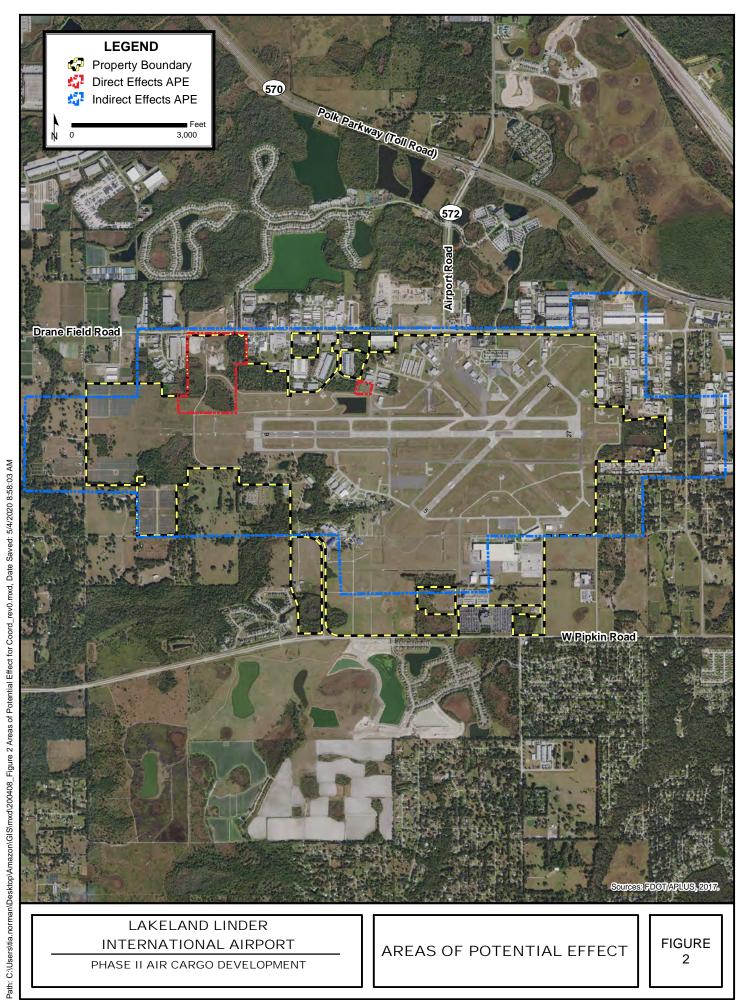
PHASE II AIR CARGO DEVELOPMENT

PROPOSED PROJECT
AREA OF POTENTIAL EFFECT
DIRECT EFFECTS

FIGURE 1

C:\Civil 3D Projects\Amazon\SHPO-C00RD-FIG 1.dwg

04/28/2020



LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT

AREAS OF POTENTIAL EFFECT

FIGURE 2

From: Green, Peter M (FAA) < peter.m.green@faa.gov>

Sent: Monday, June 08, 2020 7:34 AM

To: 'Conrad, Gene' <Gene.Conrad@lakelandgov.net>; Sanford, Paul <paul.sanford@aecom.com>

Subject: [EXTERNAL] FW: FAA- Phase II Air Cargo Development Project, Lakeland-Linder International Airport, Polk County, Florida

Importance: High

Gene / Paul,

The Seminole Tribe of Florida agrees with the Area of Potential Effect for historic resources, provided that the APE contains the areas for construction staging, storage, and borrow material. Please confirm whether or not the APE includes these construction-related items.

Regards,

Peter

From: Bradley Mueller < bradleymueller@semtribe.com >

Sent: Friday, June 05, 2020 1:44 PM

To: Green, Peter M (FAA) peter.m.green@faa.gov>

Subject: FAA- Phase II Air Cargo Development Project, Lakeland-Linder International Airport, Polk County, Florida

SEMINOLE TRIBE OF FLORIDA TRIBAL HISTORIC PRESERVATION OFFICE



June 5, 2020

Peter M. Green, AICP Environmental Protection Specialist FAA Orlando District Airport Districts Office 8427 South Park Circle, Suite 524 Orlando, FL 32891

Phone: 407-487-7296 Email: peter.m.green@faa.gov

Subject: FAA- Phase II Air Cargo Development Project, Lakeland-Linder International Airport, Polk County, Florida

THPO Compliance Tracking Number: 0032438

Dear Mr. Green,

Thank you for contacting the Seminole Tribe of Florida – Tribal Historic Preservation Office (STOF-THPO) Compliance Section regarding the Phase II Air Cargo Development Project, Lakeland-Linder International Airport, Polk County, Florida. The proposed undertaking does fall within the STOF Area of Interest. We have reviewed the documents you provided and agree with your APE determinations provided that the APE for direct effects also incorporates all temporary staging or equipment storage areas, and any borrow locations if fill material will be needed. We would like to continue to consult with the FAA on this as the project proceeds. Please keep us updated and feel free to contact us with any questions or concerns.

Respectfully,

Bradley M. Mueller, MA, Compliance Specialist STOF-THPO, Compliance Review Section 30290 Josie Billie Hwy, PMB 1004

Bradley M. Mueller

Clewiston, FL 33440

Office: 863-983-6549 ext 12245

Fax: 863-902-1117

Email: <u>bradleymueller@semtribe.com</u>

Web: www.stofthpo.com

Green, Peter M (FAA)

From: Green, Peter M (FAA)

Sent: Tuesday, June 23, 2020 7:57 AM

To: Section 106

Subject: RE: Section 106 Consultation - Air Cargo Facility Expansion Lakeland-Linder Intl Airport

Hello Robin,

Thank you for your response. We will provide copies of the Cultural Resource Assessment and the Environmental Assessment for the Muscogee (Creek) Nation's review and comment. We anticipate sending you the Cultural Resource Assessment in July and the Draft EA in September 2020.

Best regards,

Peter

From: Section106 <Section106@mcn-nsn.gov>

Sent: Monday, June 22, 2020 4:13 PM

To: Green, Peter M (FAA) <peter.m.green@faa.gov>

Subject: Re: Section 106 Consultation - Air Cargo Facility Expansion Lakeland-Linder Intl Airport

Good afternoon Mr. Green,

Thank you for sending the correspondence regarding the proposed air cargo facility expansion at Lakeland-Linder International Airport located in Polk County, Florida. Polk County is located within the Muscogee (Creek) Nation's historic area of interest and is of importance to us. Before the Muscogee Nation can comment of the possibility of this undertaking affecting any Cultural Resources, the Muscogee Nation requests the finalized EA mentioned within the correspondence. I will provide a response/comment upon receipt of the EA. Please feel free to contact me if there are any questions or concerns.

Thank you,

Robin Soweka Jr.

Historic and Cultural Preservation Department | Cultural Resource Specialist Muscogee (Creek) Nation
P.O. Box 580 | Okmulgee, OK 74447
T 918.732.7726
F 918.758.0649

http://www.muscogeenation-nsn.gov/

From: Green, Peter M (FAA) < peter.m.green@faa.gov >

Sent: Wednesday, May 6, 2020 6:37 PM **To:** Section106 < Section106@mcn-nsn.gov>

Subject: Section 106 Consultation - Air Cargo Facility Expansion Lakeland-Linder Intl Airport

Dear Ms. Loe-Zepeda,

An air cargo services provider has proposed the expansion of an existing air cargo facility at the Lakeland-Linder international Airport. Federal Aviation Administration actions associated with the proposed project require consultation under Section 106 of the National Historic Preservation Act. FAA appreciates your review of the project and letting us know if the Muscogee (Creek) Nation has an interest in the project area and would like to participate in the Section 106 consultation process.

Regards,

Peter Green

Peter M. Green, AICP
Environmental Protection Specialist
Orlando Airports District Office
Federal Aviation Administration
8427 SouthPark Circle
Orlando, Florida 32819
407-487-7296
peter.m.green@faa.gov



Orlando Airports District Office 8427 South Park Circle, Suite 524 Orlando, FL 32819 Phone: (407) 487-7220 Fax: (407) 487-7135

October 20, 2020

[Via email: THPOCompliance@semtribe.com]

Mr. Bradley Mueller, MA Compliance Specialist Tribal Historic Preservation Office Seminole Tribe of Florida 30290 Josie Billie Highway, PMB 1004 Clewiston, Florida 33440

RE: Determination of Effect
Phase II Air Cargo Development
Lakeland-Linder International Airport (Polk County, Florida)

Dear Mr. Mueller,

As part of the Federal Aviation Administration's (FAA's) Section 106 review, and pursuant to 36 CFR §800.4, the FAA has undertaken identification efforts for the Phase 2 Air Cargo Development project at the Lakeland-Linder International Airport (LAL). Based on the results of these efforts the FAA has determined a finding of no effect is appropriate for this undertaking.

Proposed Undertaking and Area of Potential Effect

As described in our letter dated May 6, 2020, the City of Lakeland requested approval from the FAA to expand an air cargo facility at LAL. The existing facility and the proposed Phase II expansion will be operated as an air cargo sorting and distribution facility. The facility expansion project includes the construction of additional warehouse space, office space, aircraft parking apron, truck courts, vehicle parking spaces, and support buildings. The Area of Potential Effects (APE) described in the letter as having two components: 1) areas where ground disturbance and construction activities would occur and 2) a broader area likely to be exposed, and newly exposed, to aircraft noise levels of Day-Night Average Sound Level (DNL) 65 and higher. The APE includes all construction staging and storage areas.

Identification Efforts

A review of available literature, maps, and information was conducted to identify recorded resources and understand the history and environment of land within the APE. This research was followed by a pedestrian surface inspection and a subsurface survey (shovel testing) to

identify potentially significant archaeological, cultural, and historical resources within direct effects portion of the APE. The effort also identified any structures over 50 years in age within the indirect effects portion of the APE. For your review, the results of the research and surveys are contained in the Phase IB Cultural Resource Assessment Survey¹ report enclosed with this letter.

Historic Properties in the APE

A majority of the Direct Effects portion of the APE is comprised of previously disturbed land associated with the airfield and land routinely used for construction staging. The Direct Effects APE also includes several large wetlands. Shovel tests showed no observable natural soil stratigraphy as past development and activities have greatly impacted the area. No historic cultural materials were recovered from the shovel tests.

No resources within the APE are listed in the National Register of Historic Places. Resources within the APE which were, or may have been, built 50 or more years ago were located, researched, and assessed. Eleven resource groups located on- and off-airport were identified for evaluation. The structures were evaluated against National Register eligibility criteria. The evaluation indicated that the Aaron E. and Maude Morgan House and the English Family House are each potentially eligible for listing for listing in the National Register under Criterion C. Neither of these properties would be affected by project construction. Additionally, the properties are well outside of existing and future DNL 65 airport noise contours and are distant from the airport viewshed. Based on the results of surveys, no further archaeological work was recommended. No historic properties would be affected by the Proposed Project.

Finding of Effect

Based on the results of the studies and an assessment of effects on historic properties, the FAA has determined that this undertaking will have no effect on historic properties. Please review this finding and the enclosed documentation and provide either your concurrence or non-concurrence within 30 days.

If you have questions or concerns regarding this finding or the sufficiency of documentation, please contact me at (407) 487-7296 or via email at peter.m.green@faa.gov.

Respectfully,

Peter M. Green, AICP

Environmental Protection Specialist

Enclosure

¹ Phase IB Cultural Resources Assessment Survey for Phase II Air Cargo Facility Development at Lakeland Linder International Airport (LAL). AECOM. September 2020.

From: Green, Peter M (FAA)

To: Section 106

Subject: RE: Section 106 Consultation - Air Cargo Facility Expansion Lakeland-Linder Intl Airport (1 of 2)

Date: Tuesday, April 27, 2021 9:10:00 AM

Attachments: Lakeland Airport Air Cargo Phase 2 CRAS 9-29-2020 (1 of2).pdf

Good morning Mr. Soweka,

The Draft Environmental Assessment for the proposed expansion of an air cargo facility at the Lakeland Linder International Airport is available for review. Below are links to download the Draft Environmental Assessment and its appendix. If you have any difficulty downloading the document, please let me know.

FTP Link to Download Draft EA: https://www.flvlakeland.com/airport-projects
Link to Download Draft EA from Airport's Website: https://www.flvlakeland.com/airport-projects

I am also providing a copy of the Cultural Resource Assessment report because the location of previously recorded archeological sites is not shown in the CRAS contained in the Draft EA's appendix. Due to the size of the PDF file, the front section of the CRAS is attached to this email and the report's appendix will be provided in a separate email.

Let us know if you have any questions or would like to discuss the project during your review. We ask that you provide any comments within 30 days of the date of this email.

Respectfully,

Peter Green

From: Section106 < Section106@mcn-nsn.gov>

Sent: Monday, June 22, 2020 4:13 PM

To: Green, Peter M (FAA) <peter.m.green@faa.gov>

Subject: Re: Section 106 Consultation - Air Cargo Facility Expansion Lakeland-Linder Intl Airport

Good afternoon Mr. Green,

Thank you for sending the correspondence regarding the proposed air cargo facility expansion at Lakeland-Linder International Airport located in Polk County, Florida. Polk County is located within the Muscogee (Creek) Nation's historic area of interest and is of importance to us. Before the Muscogee Nation can comment of the possibility of this undertaking affecting any Cultural Resources, the Muscogee Nation requests the finalized EA mentioned within the correspondence. I will provide a response/comment upon receipt of the EA. Please feel free to contact me if there are any questions or concerns.

Thank you,

Robin Soweka Jr.

Historic and Cultural Preservation Department | Cultural Resource Specialist Muscogee (Creek) Nation
P.O. Box 580 | Okmulgee, OK 74447
T 918.732.7726
F 918.758.0649
http://www.muscogeenation-nsn.gov/

From: Green, Peter M (FAA) < peter.m.green@faa.gov>

Sent: Wednesday, May 6, 2020 6:37 PM **To:** Section106 < Section106@mcn-nsn.gov >

Subject: Section 106 Consultation - Air Cargo Facility Expansion Lakeland-Linder Intl Airport

Dear Ms. Loe-Zepeda,

An air cargo services provider has proposed the expansion of an existing air cargo facility at the Lakeland-Linder international Airport. Federal Aviation Administration actions associated with the proposed project require consultation under Section 106 of the National Historic Preservation Act. FAA appreciates your review of the project and letting us know if the Muscogee (Creek) Nation has an interest in the project area and would like to participate in the Section 106 consultation process.

Regards,

Peter Green

Peter M. Green, AICP

Environmental Protection Specialist Orlando Airports District Office Federal Aviation Administration 8427 SouthPark Circle Orlando, Florida 32819 407-487-7296 peter.m.green@faa.gov From: Green, Peter M (FAA)

To: THPOCompliance@semtribe.com; Bradley Mueller

Subject: FAA - Phase II Air Cargo Development - Lakeland Linder Intl Airport, Polk County

Date: Tuesday, April 27, 2021 9:29:00 AM

Mr. Mueller,

[THPO Compliance Tracking Number 0032438]

The Draft Environmental Assessment for the proposed expansion of an air cargo facility at the Lakeland Linder International Airport is available for review. Below are links to download the Draft Environmental Assessment and its appendix. If you have any difficulty downloading the document, please let me know.

FTP Link to Download Draft EA: https://we.tl/t-oSx8INBHai
Link to Download Draft EA from Airport's Website: https://www.flylakeland.com/airport-projects

Please note that the location of previously recorded archeological sites is not shown in the Cultural Resource Assessment Survey report contained in the Draft EA's appendix. The copy of the CRAS provided to your office via email on October 10, 2020 contains a complete copy of the report.

Let us know if you have any questions or would like to discuss the project during your review. We ask that you provide any comments within 30 days of the date of this email.

Respectfully,

Peter Green

Peter M. Green, AICP
Environmental Protection Specialist
Orlando Airports District Office
Federal Aviation Administration
8427 SouthPark Circle
Orlando, Florida 32819
407-487-7296
peter.m.green@faa.gov

Green, Peter M (FAA)

From: Danielle Simon <daniellesimon@semtribe.com>

Sent: Tuesday, May 18, 2021 9:02 AM

To: Green, Peter M (FAA)
Cc: THPO Compliance

Subject: RE: FAA - Phase II Air Cargo Development - Lakeland Linder Intl Airport, Polk County

SEMINOLE TRIBE OF FLORIDA TRIBAL HISTORIC PRESERVATION OFFICE

TRIBAL HISTORIC

SEMINOLE TRIBE OF FLORIDA

30290 JOSIE BILLIE HIGHWAY PMB 1004 CLEWISTON, FL 33440

THPO PHONE: (863) 983-6549 FAX: (863) 902-1117

THPO WEBSITE: WWW.STOFTHPO.COM



TRIBAL OFFICERS

MARCELLUS W. OSCEOLA JR.
CHAIRMAN

MITCHELL CYPRESS VICE CHAIRMAN

> LAVONNE ROSE SECRETARY

> PETER A. HAHN TREASURER

May 18, 2021

Peter M. Green, AICP Environmental Protection Specialist Orlando Airports District Office Federal Aviation Administration 8427 SouthPark Circle Orlando, Florida 32819

Subject: Phase II Air Cargo Development, Lakeland-Linder International Airport, Polk County

THPO Compliance Tracking Number: 0032438

In order to expedite the THPO review process:

- 1. Please correspond via email and provide documents as attachments,
- 2. Please send all emails to THPOCompliance@semtribe.com.
- 3. Please reference the THPO Compliance Tracking Number if one has been assigned.

Dear Mr. Green,

Thank you for contacting the Seminole Tribe of Florida – Tribal Historic Preservation Office (STOF-THPO) Compliance Section regarding the *Phase II Air Cargo Development, Lakeland-Linder International Airport, Polk County.*

The proposed undertaking does fall within the STOF Area of Interest. We have reviewed the documents that you provided and completed our assessment pursuant to Section 106 of the National Historic Preservation Act (16 USC 470) as amended and its implementing regulations (36 CFR 800). We have no objections or other comments at this time, provided our office is notified if any archaeological,

historical, or burial resources are inadvertently discovered during project implementation. Please feel free to contact us with any questions or concerns.

Respectfully,
Danielle A. Simon, MA, RPA
Compliance Review Specialist
STOF-THPO, Compliance Review Section
30290 Josie Billie Hwy, PMB 1004
Clewiston, FL 33440

Email: daniellesimon@semtribe.com

From: Green, Peter M (FAA) <peter.m.green@faa.gov>

Sent: Tuesday, April 27, 2021 9:30 AM

To: THPO Compliance <THPOCompliance@semtribe.com>; Bradley Mueller

 Semtribe.com>

Subject: FAA - Phase II Air Cargo Development - Lakeland Linder Intl Airport, Polk County

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Mr. Mueller,

[THPO Compliance Tracking Number 0032438]

The Draft Environmental Assessment for the proposed expansion of an air cargo facility at the Lakeland Linder International Airport is available for review. Below are links to download the Draft Environmental Assessment and its appendix. If you have any difficulty downloading the document, please let me know.

FTP Link to Download Draft EA: https://we.tl/t-oSx8INBHai
Link to Download Draft EA from Airport's Website: https://www.flylakeland.com/airport-projects

Please note that the location of previously recorded archeological sites is not shown in the Cultural Resource Assessment Survey report contained in the Draft EA's appendix. The copy of the CRAS provided to your office via email on October 10, 2020 contains a complete copy of the report.

Let us know if you have any questions or would like to discuss the project during your review. We ask that you provide any comments within 30 days of the date of this email.

Respectfully,

Peter Green

Peter M. Green, AICP
Environmental Protection Specialist
Orlando Airports District Office
Federal Aviation Administration
8427 SouthPark Circle
Orlando, Florida 32819
407-487-7296
peter.m.green@faa.gov

Green, Peter M (FAA)

From: Section106 < Section106@muscogeenation.com>

Sent: Tuesday, June 08, 2021 4:42 PM

To: Green, Peter M (FAA)

Subject: Re: Section 106 Consultation - Air Cargo Facility Expansion Lakeland-Linder Intl Airport

(1 of 2)

Good afternoon Mr. Green,

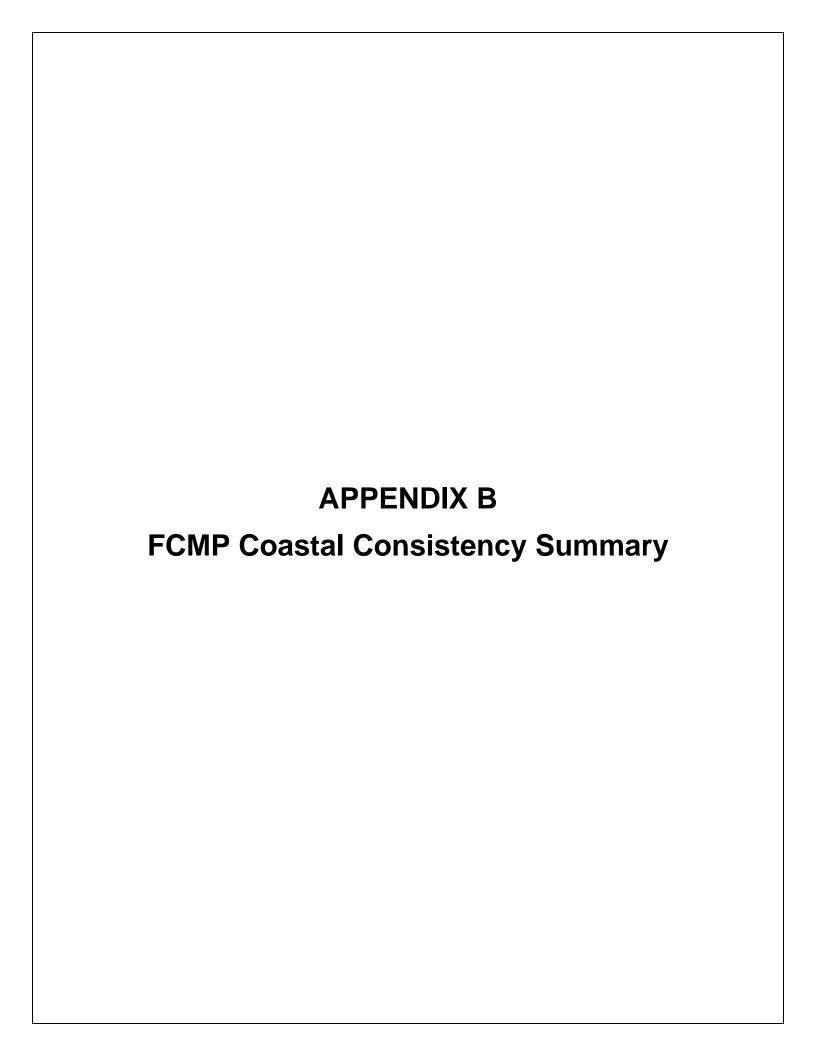
Thank you for providing the additional materials for the proposed Air Cargo Facility Expansion project located at the Lakeland-Linder International Airport in Polk County, Florida. Polk County is located within the Muscogee Nation's historic area of interest and is of importance to us. After review of the additional materials, the Muscogee Nation concurs that there should be **no effects to any known historic properties**. However, due to the historic presence of Muscogee people in the project area, inadvertent discoveries of cultural resources, human remains and related NAGPRA items may occur, even in areas of existing or prior development. Should this occur, the Muscogee (Creek) Nation requests that all work cease and our office as well as other appropriate agencies be notified immediately. Please feel free to contact me if there are any questions or concerns.

Thank you,

Robin Soweka, Jr.

Cultural Resource Specialist, Historic and Cultural Preservation Department The Muscogee Nation
P.O. Box 580 | Okmulgee, OK 74447
T 918.732.7726 | F 918.758.0649
rosoweka@MuscogeeNation.com
MuscogeeNation.com







Florida Coastal Management Program Consistency Review Summary

Statute	Scope	Consistency				
Chapter 161: Beach and Shore Preservation	Provides for beach and shoreline protection through regulation of coastal construction	Construction of the Proposed Project would not take place in an area seaward of a Coastal Construction Control Line or Mean High Water Line. No secondary or cumulative impacts are anticipated as potential water quality impacts are expected to be minimized through use of best management practices (BMPs) during construction. No significant operational impacts are expected when compared against the No-Action Alternative.				
Chapter 163, Part II: Growth Policy – County and Municipal Planning; Land Development Regulation	Requires local governments to develop comprehensive plans that encourage appropriate use of land and resources in a manner consistent with public interest	Both Polk County and the City of Lakeland have published and continue to update Comprehensive Plans for regional land use planning and growth. A County Airport Impact District (AID) overlay is established to ensure that the operation of public use airports is compatible with surrounding land uses with minimal conflicts between the two. Polk County has established development criteria for providing aviation-compatible land uses and activities in the AID.				
Chapter 186: State and Regional Planning	Requires the preparation of state and regional plans that promote governmental coordination and guide state and regional programs and functions.	As part of the NEPA process, the Proposed Project has been coordinated with Federal, state and local governments and agencies, including the Florida Department of Environmental Protection State Clearinghouse, for compatibility with state and regional planning. See Appendix A of this Environmental Assessment (EA) for a complete list of coordinating agencies.				
Chapter 252: Emergency Management and Disaster Preparedness, Response and Mitigation	Provides for planning and implementation of the state's response to, efforts to recover from, and the control of natural, technological and manmade disasters	The Proposed Project would not have an effect on the ability of the state to respond to or recover from natural or manmade disasters				
Chapter 253: State Lands	Addresses state administration (i.e., acquisition, leasing, disposal, management) of public lands	The Proposed Project would be constructed entirely on Airport property and would not involve use of state lands or submerged lands.				
Chapter 258: State Parks and Preserves	Administration and management of state parks and preserves	The Proposed Project would not directly impact state parks, recreational areas or preserves. Secondary or indirect impacts to				

Statute	Scope	Consistency
Chapter 259: Land Acquisition for Conservation or Recreation	Acquisition of land for environmental and recreation purposes	environmental or social resources related to these facilities are not anticipated. Opportunity for recreation on state lands would not be affected.
Chapter 260: Recreational Trails System	Acquisition of land and development of recreational trails system	
Chapter 375: Multipurpose, Outdoor Recreation, Land Acquisition, Management and Conservation	Planning for multipurpose outdoor recreation and conservation	
Chapter 267: Historical Resources	Addresses management and preservation of state's historical and archaeological resources	The Proposed Project is not expected to affect historic or archaeological resources. No significant indirect impacts (i.e., noise, air quality) to applicable resources are expected. During the Section 106 consultations, the Seminole Tribe of Florida concurred with the designated Areas of Potential Effect and stated they will continue to consult with the FAA throughout the EA process as the Proposed Project falls within the tribe's area of interest. The Muscogee (Creek) Nation also stated that the Proposed Project falls within the tribe's area of interest and requested that they receive a copy of the Draft EA once finalized for review and comment. On February 19, 2021, the State Historic Preservation Officer submitted a letter in response to the Cultural Resources Assessment Survey concurring with the FAA's determination of no effect to historic properties.
Chapter 288: Commercial Development and Capital Improvements	Promotes development of general business, trade and tourism components of the state economy	The Proposed Project improves air cargo handling and processing capacity, allowing for the increased movement of goods into, out of, and through the region. Polk County Comprehensive Plan Objectives 2.402-A and 2.402-B direct the County to maintain programs designed to expand and enhance the County's traditional economic base and to promote retention and expansion of existing businesses within the County. The Proposed Project supports these objectives.
Chapter 334: Transportation Administration	Establishes state policy for planning and development of transportation systems	No adverse impact to the administration or planning of transportation systems is expected. The Proposed Project will be
Chapter 339: Transportation Finance and Planning	Addresses the finance and planning needs of the state's transportation system	included on the Lakeland Linder International Airport (LAL) Airport Layout Plan (ALP) prior to the Federal Aviation Administration finding participation or approval. City and County Comprehensive Plans incorporate Airport ALP and Master Plan updates into Comprehensive Plan updates to ensure continued coordination of regional planning elements including transportation.

Statute	Scope	Consistency					
Chapter 373: Water Resources	Addresses water resources and their quality	Implementation of project-specific erosion control and pollution prevention measures would minimize the potential for exceeding applicable water quality standards during construction. The Proposed Project would not introduce activities having significant potential to generate new or higher levels of pollutants to surface waters.					
		The Proposed Project could have negligible to minor impacts on surface water and groundwater. Temporary, indirect, negligible adverse impacts from soil disturbance could create non-point source water pollution; however, BMPs would be utilized to reduce the chance of impacts on surface water resources.					
		The Proposed Project could impact up to 28.4 acres of floodplains. All floodplain impacts would occur on LAL property. The Proposed Project would generate no measurable change in flood elevations. Floodplain impacts during construction would be minimized by applying construction period erosion and sedimentation controls. Design measures would be implemented to avoid/minimize impacts to floodplains, in accordance with local floodplain management policies and regulations. Adverse indirect impacts to beneficial floodplain values, cultural features, or wildlife habitat is not expected.					
		The Proposed Project could directly impact up to 23.9 acres of wetlands and up to 0.3 acre of other surface waters. Potential secondary impacts to the habitat functions of wetlands within 25 feet of the direct impacts include up to 1.0 additional acre of wetlands. Design measures would be implemented to avoid/minimize impacts to wetlands and other surface waters. Proposed mitigation includes the purchase of state and federally-approved wetland credits from the Alafia River Mitigation Bank.					
		Overall, there would be no significant impacts to water resources as a result of the Proposed Project.					

Statute	Scope	Consistency			
Chapter 376: Pollutant Discharge Prevention and Removal		During construction, the contractor would be required to prepare project-specific Spill Prevention Control and Countermeasures Plan documenting measures to prevent accidental release to the environment and, should they occur, the corrective action to minimize environmental impacts. Project-specific BMPs would be implemented for the operation of the Proposed Project in accordance with existing or modified			
	transportation of pollutant discharges in state waters or affecting coastlines, recreation, or marine-related livelihood The Proposed Project would not alter the types of he other regulated materials used at LAL (e.g., cleaning lubricants). No involvement and impact associated water in the stormwater discharge permit conditions.				
		materials or wastes is anticipated. The Proposed Project would not involve the transfer of pollutants between vessels; between onshore facilities and vessels; between offshore facilities and vessels; or between terminal facilities within jurisdiction of the state and state waters.			
Chapter 377: Energy Resources	Addresses regulation, planning, and development of energy resources of the state	Implementation of the Proposed Project would not cause unsupportable demands on available natural resources or energy supplies, and construction and operation of the Proposed Project would not require consumable natural resources that would be considered in short supply in Polk County.			
Chapter 379: Fish and Wildlife Conservation	Addresses management and protection of fish and wildlife in the state	The Proposed Project would result in permanent impacts to approximately 53 acres of existing terrestrial and wetland habitats. Much of the proposed areas of direct impact have been previously affected by anthropogenic activities at LAL, including land clearing and roadway construction. The Proposed Project would have minimal impact on natural habitats, wildlife, and listed plant and animal species.			
		The area's inventory of habitat and vegetative cover types is expected to provide suitable temporary or permanent habitat for			

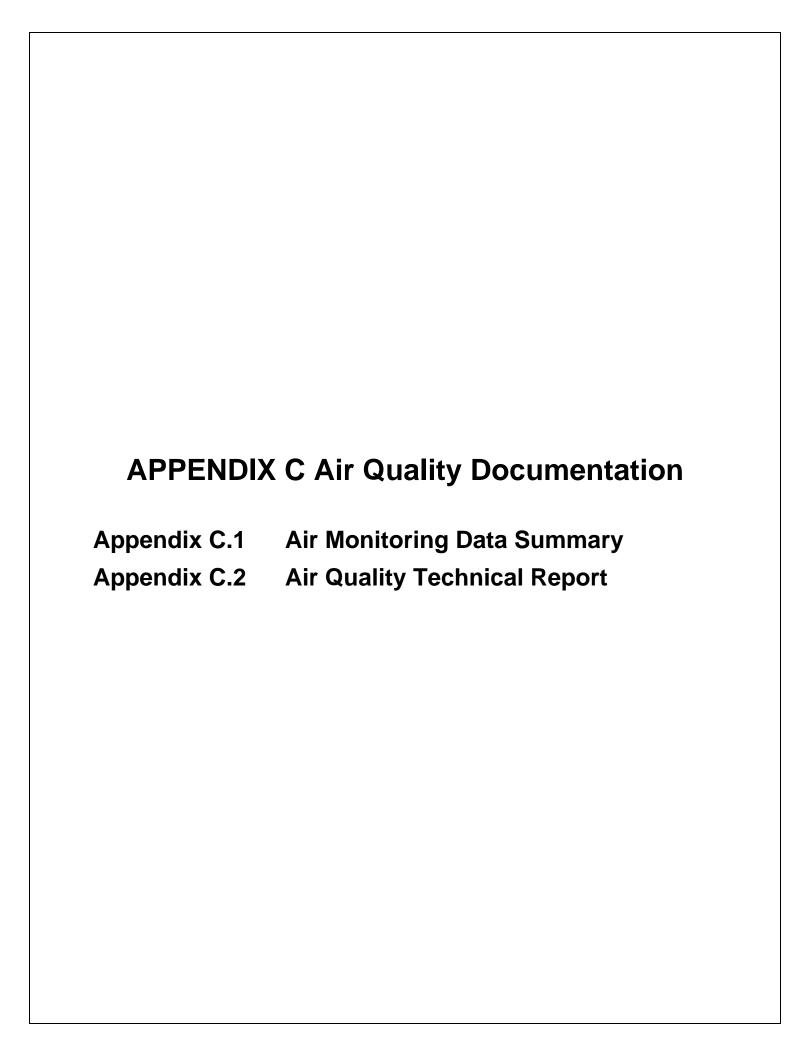
Statute	Scope	Consistency
		common species of displaced wildlife. In order to avoid or minimize
		potential impacts to listed species that have the potential to occur
		within the Proposed Project area, measures to be implemented by
		LAL in coordination with the U.S. Fish and Wildlife Service
		(USFWS) and Florida Fish and Wildlife Conservation Commission
		(FWC) as necessary include pre-construction species surveys,
		implementation of USFWS- and FWC-approved protection
		measures for federal- and state-listed species, and compensatory
		wetland mitigation.
		Based on the findings and commitments of the Biological
		Assessment (BA) and this EA, a determination has been made that
		the Proposed Project is not likely to adversely affect any state or
		federally listed plant or animal species. On 24 September 2020, the
		USFWS concurred with findings and commitments of the BA. The
		Proposed Project will not impact critical habitat designated by
		Congress in 50 CFR 424.
		The Proposed Project would be developed consistent with local
	Establishes land and water management	land and water management plans. The Proposed Project is
Chapter 380: Land and	policies to guide and coordinate local	subject to local permit, stormwater, and environmental
Water Management	decisions relating to growth and	requirements and review. The Proposed Project will require
	development	coordination with and authorization from the U.S. Army Corps of
		Engineers and the Southwest Florida Water Management District.
		The Proposed Project does not involve the construction of an
		onsite sewage treatment and disposal system. Construction
		activities associated with the Proposed Project are governed by
Chapter 381: Public Health,	Establishes public policy affecting public	regulations established by the Occupational Safety and Health
General Provisions	health of the state	Administration. The types and quantities of hazardous materials
General Flovisions	Tiediti Of the State	stored and hazardous wastes generated on site would not change
		as a result of the Proposed Project. The Proposed Project would
		not impact public policy or management in regard to sanitation,
		communicable diseases, or public health.

Statute	Scope	Consistency
Chapter 388: Mosquito Control	Provides funding authority and development of criteria for arthropod control effort in the state	The Proposed Project would not affect local arthropod (mosquito) control efforts or contribute to increased propagation of mosquitos.
Chapter 403: Environmental Control	Establishes state regulatory policy for certain environmental resources (i.e., water quality, air quality, waste disposal)	The construction and operation of the Proposed Project would include project-specific BMPs and pollution prevention measures. The Proposed Project is not expected to exceed applicable state water quality standards or have substantial and longer-term water quality impacts. The Proposed Project would marginally increase aircraft and surface vehicle operations at LAL. Although airport operations and associated emissions would increase with the Proposed Project, the increases are not significant according to established criteria. LAL is located within an attainment area for all criteria air pollutants. Construction wastes would be collected, transported, recycled, and
		disposed of in compliance with applicable state and local regulations. No potential issues regarding solid or hazardous wastes have been identified.
Chapter 553: Building Construction Standards	Provides a mechanism for the uniform adoption, updating, amendment, interpretation, and enforcement of a single, unified state building code, to be called the Florida Building Code	The Proposed Project would not affect the Building Construction Standards of the State of Florida. The project proponent would obtain and comply with all applicable permits as required by law.
Chapter 582: Soil and Water Conservation	Provides for the control and prevention of soil erosion	A Stormwater Pollution Prevention Plan would be developed and followed, and BMPs addressing erosion and sediment controls would be implemented to minimize impact to soils and water quality. The Proposed Project would be consistent with current and future land use plans and zoning ordinances established for the LAL area, and with the current characteristic features of the area and landscape, and would not result in any significant impacts to land use. The Proposed Project would not affect soils or farmland

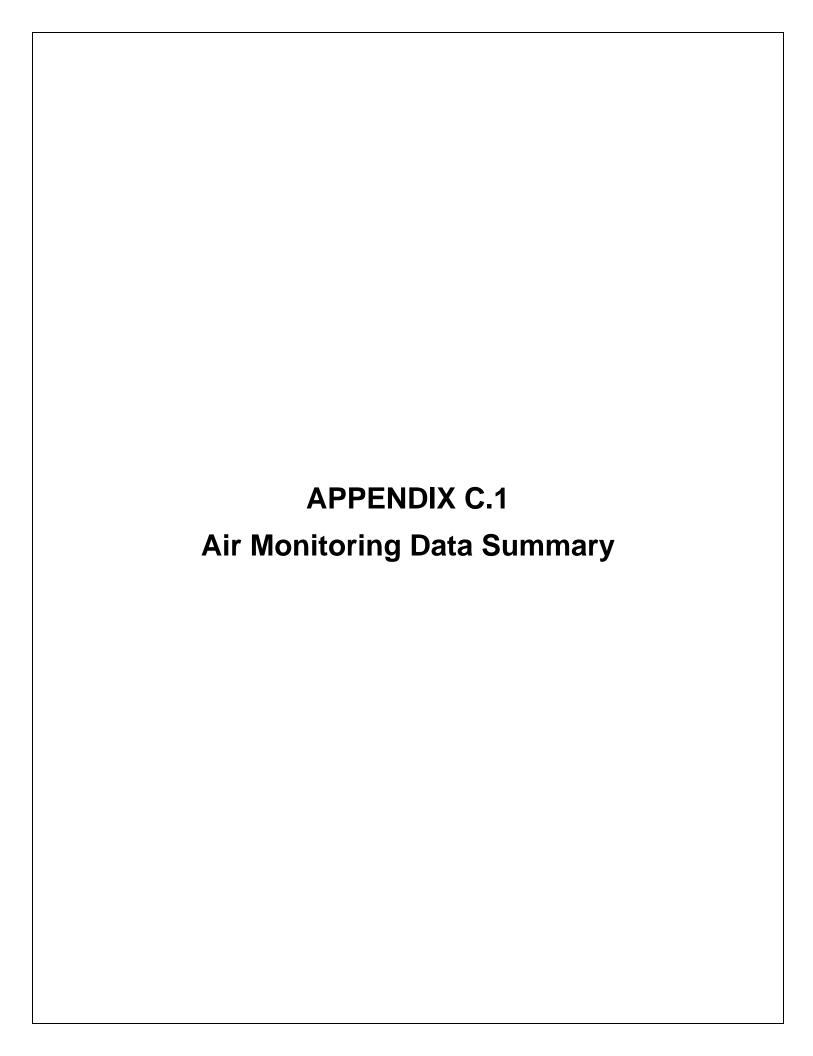
Statute	Scope	Consistency		
		within a Soil and Water Conservation District and would not convert prime farmland.		
Chapter 597: Aquaculture	Establishes public policy concerning the cultivation of aquatic organisms	The Proposed Project has no activities related to or affecting the cultivation of marine species. The Proposed Project activities would not affect aquaculture.		

Source: Florida Statutes, as identified in table.









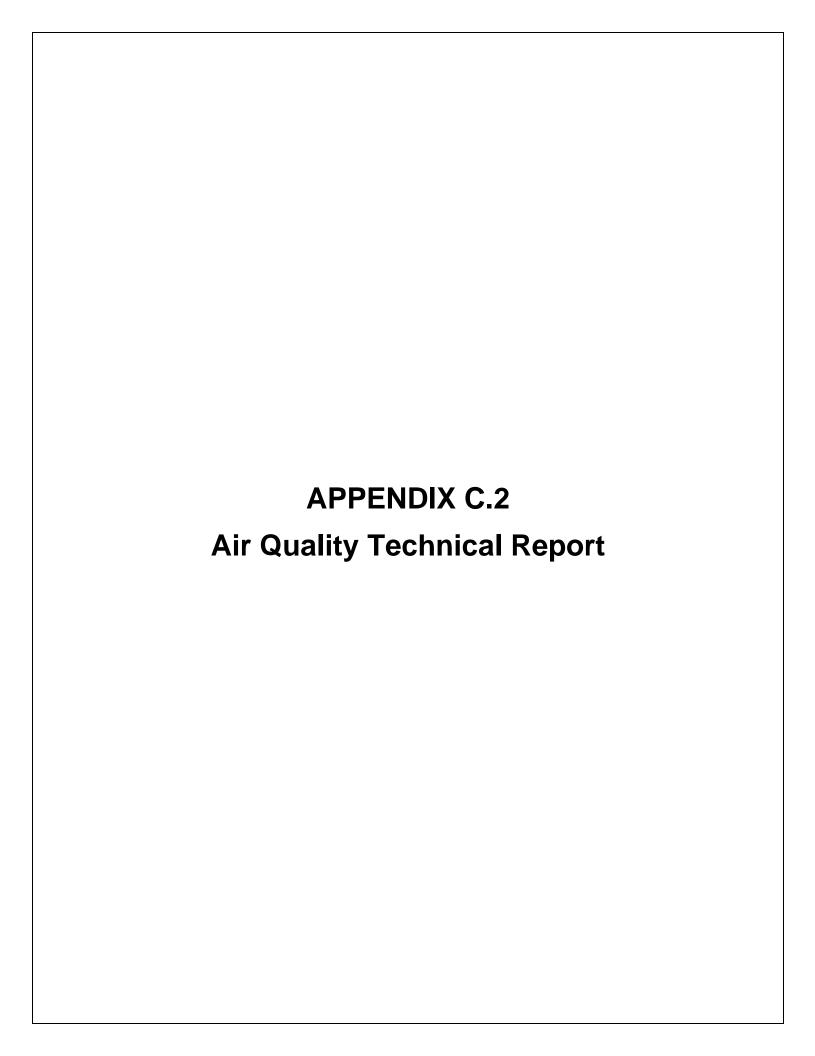


Air Monitoring Data Summary (2017-2019)

		Level	Form	Concentration					
Pollutant	Averaging Time			(Monitor ID, Distance from LAL)					
Tonutant				12-105-6006 3.2 Miles	12-105-6005 3.3 Miles	12-057-3002 12 Miles	12-057-1073 21 Miles	12-057-0113 26 Miles	
Carbon	8-hour	9 ppm	Not to be exceeded					Not Exceeded	
monoxide [76 FR 54294, Aug 31, 2011]	1-hour	32 (1)(1)(1)	more than once per year					Not Exceeded	
Lead [81 FR 71906, October 18, 2016]	Rolling 3 month average	0.15 μg/m³	Not to be exceeded				Not Exceeded		
Nitrogen dioxide [75 FR 6474, Feb 9, 2010]	1-hour	100 ppb	98th percentile of 1- hour daily maximum concentrations, averaged over 3 years					37.000	
[77 FR 20218, April 3, 2012]	Annual	53 ppb	Annual mean					9.013	
Ozone [80 FR 65292, Oct 26, 2015]	8-hour	0.070 ppm	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years	0.068	0.0677	0.066			
Particle Pollution [78 FR 3085, Jan 15, 2013]	PM _{2.5} Annual (primary)		Annual mean, averaged over 3 years	7.665		8.291		8.359	
	PM _{2.5} Annual (secondary)		Annual mean, averaged over 3 years						
	PM _{2.5} 24-hour	35 μg/m³	98th percentile, averaged over 3 years	15.067		18.867		21.100	
	PM ₁₀ 24-hour	150 μg/m³	Not to be exceeded more than once per year on average over 3 years			Not Exceeded			
Sulfur dioxide	1-hour	/ h nnn	99th percentile of 1- hour daily maximum		22.267	9.000			

	Averaging	Lovel	Form	Concentration (Monitor ID, Distance from LAL)				
Pollutant								
Pollulani	Time	Level	Form	12-105-6006	12-105-6005	12-057-3002	12-057-1073	12-057-0113
				3.2 Miles	3.3 Miles	12 Miles	21 Miles	26 Miles
[77 FR 20218,			concentrations,					
April 3, 2012]			averaged over 3 years					
[75 FR 35520,			Not to be exceeded					
Jun 22, 2010]	3-hour	0.5 ppm	more than once per		Not Exceeded	Not Exceeded		
			year					

^{-- =} not monitored; FR = Federal Register; ppb = parts per billion; ppm = parts per million; μg/m³ = micrograms per cubic meter of air Sources: FR, as above; and EPA AirData (https://www.epa.gov/outdoor-air-quality-data), accessed January 28, 2020





Phase II Air Cargo Facility Development at Lakeland Linder International Airport (LAL) Environmental Assessment

Air Quality Technical Report

Prepared for:

City of Lakeland, Florida and Federal Aviation Administration

Prepared by:

AECOM

September 2021



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ACRONYMS AND ABBREVIATIONS

ACEIT Airport Construction Emissions Inventory Tool

AEDT Aviation Environmental Design Tool

APU Auxiliary Power Unit

AVMT Annual Vehicle Miles of Travel

BMP Best Management Practice

CO Carbon Monoxide

CO₂e Carbon Dioxide Equivalent

EA Environmental Assessment

EF Emissions Rate

EPA U.S. Environmental Protection Agency

GHG Greenhouse Gas

GSE Ground Support Equipment

HP Horsepower

I-4 Interstate 4

LAL Lakeland Linder International Airport

MOVES Motor Vehicle Emissions Simulator

mph miles-per-hour

NO_x Nitrogen Oxides

PM Particulate Matter

 $PM_{2.5}$ Particulate Matter equal to or less than 2.5 micrometers in diameter PM_{10} Particulate Matter equal to or less than 10 micrometers in diameter

SO₂ Sulfur Dioxide

SSA Socioeconomic Study Area

TGO Touch and Go TPY Tons Per Year

TSP Total Suspended Particulate

VOC Volatile Organic Compounds



CHAPTER 1 INTRODUCTION

This Air Quality Technical Report details the assessment scope, calculation methodology, input data and other technical information used in the analysis of air quality impacts associated with Environmental Assessment (EA) for the proposed Phase II Air Cargo Facility Development at the Lakeland Linder International Airport (i.e., LAL, or the Airport), hereinafter referred to as the Proposed Project.

1.1. ANALYSIS METHODOLOGY

1.1.1. CONSTRUCTION EMISSIONS

Construction period emission inventories of the following criteria pollutants and their precursors were prepared for the Proposed Project: carbon monoxide (CO), nitrogen oxides (NO $_x$), sulfur dioxide (SO $_2$), particulate matter (PM), and volatile organic compounds (VOC). Greenhouse gas (GHG) emissions, expressed in metric tons of carbon dioxide equivalent (CO $_2$ e) emissions, were also computed. The inventories include annual emissions from the following construction emissions sources: off-road equipment, on-road vehicles, and fugitive sources including asphalt paving and dust generation from site-wide construction activities. Off-road equipment and on-road vehicle emissions were computed using **Equations 1** and **2**, respectively.

Annual hours of off-road equipment operation and on-road annual vehicle miles of travel (AVMT) were derived using an engineering estimate of probable materials quantities and construction cost developed for the proposed expanded air cargo sort building, air cargo aircraft ramp, ground support equipment (GSE) ramp, taxilane, employee parking, truck yard, and stormwater retention pond. This information was input to the Airport Cooperative Research Program Airport Construction Emissions Inventory Tool (ACEIT), which then estimates the number and types of equipment to be used on the project and the deployment schedule (monthly and annually). Annual construction equipment and vehicle activity is summarized on **Table 1.1-1.**

Equation 1:

Emissions_(tpy) =
$$\sum_{v=i}^{n} EF_v \times HP_v \times \frac{hours}{day} \times \frac{days}{year} \div 2,000 \div 453.59$$

Where:

Emissions_(tpy)= annual emissions (tons per year) $EF_v = \text{ emissions rate for equipment } v(i)...v(n) \text{ (grams per horsepower-hour of operation)}$ $HP_v = \text{ rated horsepower for equipment } v(i)...v(n)$ 2.000 = pounds per ton

2,000 = pounds per ton 453.59 = grams per pound

Equation 2:

Emissions_(tpy) =
$$\sum_{v=i}^{n} EF_v \times \frac{\text{miles}}{\text{day}} \times \frac{\text{days}}{\text{year}} \div 2,000 \div 453.59$$

Where:

Emissions_(tpy)= annual emissions (tons per year) EF_v = emissions rate for vehicle v(i)...v(n) (grams per mile) 2,000 = pounds per ton 453.59 = grams per pound

Table 1.1-1 Estimated Annual Construction Activity

Off-road Equipment	Fuel	Annual Operating Hours
40 Ton Rough Terrain	Diesel	321.6
40 Ton Rough Terrain Crane	Diesel	240.0
90 Ton Crane	Diesel	960.0
90 Ton Crane Supplemental Hoisting	Diesel	240.0
Air Compressor	Gasoline	229.1
Asphalt Paver	Diesel	259.9
Backhoe	Diesel	4,120.2
Caisson Drilling Rig	Gasoline	400.0
Chain Saw	Gasoline	281.2
Chipper/Stump Grinder	Diesel	281.2
Concrete Boom Pump	Gasoline	720.0
Concrete Pump	Gasoline	324.0
Concrete Ready Mix Trucks	Gasoline	1,800.0
Concrete Saws	Gasoline	194.8
Concrete Truck	Diesel	2,095.8
Concrete Truck Pump	Gasoline	1,140.0
Crane	Diesel	30.0
Curb/Gutter Paver	Diesel	32.9
Distributing Tanker	Diesel	129.4
Dozer	Diesel	3,500.8
Dump Truck	Diesel	1,196.9
Dump Truck (12 cy)	Diesel	5,720.5
Excavator	Diesel	1,791.7
Flatbed Truck	Diesel	1,673.2
Fork Truck	Diesel	7,502.5
Forklift	Diesel	2,372.4
Front Loader	Diesel	556.8
Front Loader for Subgrade Materials	Diesel	158.4
Generator	Gasoline	240.0
Grader	Diesel	86.8
Grout Mixer	Gasoline	1,600.0
Grout Wheel Truck	Diesel	240.0
High Lift	Diesel	3,361.6
Hydroseeder	Gasoline	460.3
Loader	Diesel	318.2
Man Lift	Diesel	6,400.0

Off-road Equipment	Fuel	Annual Operating Hours
Man Lift (Fascia Construction)	Diesel	40.0
Material Deliveries	Diesel	120.0
Off-Road Truck	Diesel	81.8
Other General Equipment	Gasoline	3,102.5
Pickup Truck	Diesel	5,972.2
Pile Driver	Gasoline	160.0
Pumps	Gasoline	93.7
Roller	Diesel	2,908.8
Rubber Tired Loader	Diesel	194.8
Scraper	Diesel	1,451.8
Skid Steer Loader	Diesel	392.5
Slip Form Paver	Diesel	194.8
Surfacing Equipment (Grooving)	Gasoline	324.7
Survey Crew Trucks	Diesel	39.2
Ten Wheelers- Material Delivery	Diesel	120.0
Tool Truck	Diesel	7,843.2
Tower Crane	Diesel	1,960.0
Tractor Trailer- Material Delivery	Diesel	8,600.4
Tractor Trailer- Steel Deliveries	Diesel	480.0
Tractor Trailer- Stone Delivery	Diesel	398.4
Tractor Trailer with Boom Hoist- Curbs Del & Place	Diesel	81.6
Tractor Trailers- Rebar Deliveries	Diesel	760.0
Tractor Trailers Temp Fac.	Diesel	17.6
Tractors/Loader/Backhoe	Diesel	511.6
Trencher	Diesel	240.0
Trencher for U/G Piping	Diesel	398.4
Trenchers	Diesel	34.3
Trowel Machine	Gasoline	760.0
Trowel Machines (4) machines	Gasoline	480.0
Truck for Topsoil & Seed Del&Spread	Diesel	81.6
Vibratory Compactor	Gasoline	633.5
Water Truck	Diesel	1,800.0

Source: ACEIT, 2020

Because construction equipment and vehicle emissions rates contained in ACEIT are not sufficiently representative of local conditions, equipment and vehicle emissions rates were instead generated using the current version of the U.S. Environmental Protection Agency Motor Vehicle Emissions Simulator (EPA MOVES2014b). MOVES2014b was invoked at the project-level using input databases specific to Polk County, Florida. Input databases were adapted from EPA's most recent National Emissions Inventory, which incorporates Polk County-specific information to the extent it was submitted to the EPA by state and local air quality and transportation agencies.

Vehicle age distributions, inspection and maintenance programs (to the extent applied), fuel supply and other data were held constant for future years; that is, projections or adjustments were not applied unless available from locally-developed data. A summer design hour representative of a July weekday in Polk County from 1600 to 1700 was selected for emissions rate modeling based on the worst-case temperature/humidity hourly condition, according to the MOVES

'ZoneMonthHour' input database. Emissions rates for on-road vehicles were generated for five mile-per-hour (mph) increments ranging from 5 to 65 mph. For the purposes of emissions calculations, it was assumed that all on-road vehicles would travel at an average speed of 35 miles per hour. **Tables 1.1-2a** and **1.1-2b** specify the annual off-road equipment and on-road vehicle emissions rates applied in the analysis.

Equation 3 was used to estimate dust emissions from site-wide construction activities, adapted from EPA's AP-42 methodology.¹ EPA studies have concluded that ten percent of the dust emissions in the PM₁₀ or less size fractions are PM_{2.5}.² Therefore, uncontrolled PM₁₀ dust emissions were factored by 0.10 to derive the PM_{2.5} component. Further, dust suppression and erosion control Best Management Practices (BMPs) during construction, such as site watering and track-out prevention measures, will ensure that PM impacts from construction activities are minimized. According to EPA, adherence to these BMPs can result in a dust control efficiency of 75 percent, which was applied to the calculation to represent controlled PM emissions.³

Estimation of annual evaporative VOC emissions from asphalt curing is based upon the EPA methods outlined in AP-42⁴ as well as the Emissions Inventory Improvement Program.⁵ **Equation** 4 outlines this method. Because the asphalt characterization is not known, assuming that 35 percent of liquefied asphalt is diluent that can evaporate as VOC, 95 percent of this diluent would evaporate during asphalt curing, and that the density of the diluent is 1.98 pounds per liter of diluent applied.

1

¹ U.S. Environmental Protection Agency. *Compilation of Air Pollutant Emissions Factors (AP-42). Fifth Edition, Volume I Chapter 13: Miscellaneous Sources.* 1995.

² Pace, Thompson G. *Examination of the Multiplier Used to Estimate PM2.5 Fugitive Dust Emissions From PM10.* Presented at the Environmental Protection Agency 14th International Emission Inventory Conference. Las Vegas, NV, 2005

³ U.S. Environmental Protection Agency. *Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures*. OAQPS, EPA-450/2-92-004. 1992.

⁴ U.S. Environmental Protection Agency. Compilation of Air Pollutant Emission Factors (AP-42). Fifth Edition Volume I Chapter 4.5: Asphalt Paving Operations. 1995.

⁵ U.S. Environmental Protection Agency. *Emissions Inventory Improvement Program (EIIP), Volume III: Chapter 17, "Asphalt Paving"*. 2001.

Table 1.1-2a Off-Road Equipment Emissions Rates

Environant	Fuel	Lood	Haraanawar	Emissi	on Rate	(grams pe	r horsepo	wer-hour	at operat	ing load)
Equipment	Type	Load	Horsepower	СО	NOx	PM ₁₀	PM _{2.5}	SO ₂	VOC	CO ₂ e
Cranes	Diesel	0.43	237.70	0.181	0.788	0.034	0.033	0.004	0.050	530.991
Air Compressors	Gasoline	0.56	5.19	208.961	2.116	0.378	0.348	0.007	9.954	1,247.391
Pavers	Diesel	0.59	134.60	0.274	1.028	0.068	0.066	0.004	0.044	536.789
Tractors/Loaders/Backhoes	Diesel	0.21	87.17	3.079	3.233	0.518	0.502	0.005	0.593	694.627
Bore/Drill Rigs	Gasoline	0.79	2.21	205.168	1.984	0.318	0.293	0.007	9.606	1,247.879
Chain Saws < 6 HP (com)	Gasoline	0.7	3.92	266.029	1.528	9.748	8.968	0.004	73.339	710.950
Chippers/Stump Grinders (com)	Diesel	0.43	84.47	1.756	3.637	0.319	0.310	0.005	0.350	589.629
Pumps	Gasoline	0.69	4.63	207.004	2.048	0.347	0.320	0.007	10.529	1,247.644
Cement & Mortar Mixers	Gasoline	0.59	8.37	275.340	1.688	0.109	0.100	0.006	9.774	1,061.043
Concrete/Industrial Saws	Gasoline	0.78	4.53	266.029	1.528	9.748	8.968	0.004	63.532	710.949
Off-highway Trucks	Diesel	0.59	419.90	0.142	0.376	0.027	0.026	0.004	0.024	536.802
Crawler Tractor/Dozers	Diesel	0.59	136.10	0.211	0.801	0.053	0.052	0.004	0.032	536.802
Excavators	Diesel	0.59	137.60	0.175	0.589	0.045	0.043	0.004	0.026	536.805
Forklifts	Diesel	0.59	85.48	0.158	0.948	0.029	0.029	0.004	0.014	596.142
Generator Sets	Gasoline	0.68	8.82	275.368	1.634	0.113	0.104	0.006	8.503	1,060.742
Graders	Diesel	0.59	231.20	0.162	0.493	0.032	0.031	0.004	0.030	536.802
Aerial Lifts	Diesel	0.21	60.46	3.613	4.546	0.488	0.473	0.005	0.761	694.387
Commercial Turf Equipment (com)	Gasoline	0.6	5.22	205.057	1.981	0.316	0.291	0.007	7.604	1,247.892
Other General Industrial Eqp	Gasoline	0.54	4.29	211.553	2.207	0.420	0.386	0.007	10.070	1,247.056
Rollers	Diesel	0.59	84.76	0.806	1.697	0.134	0.130	0.004	0.067	596.082
Rubber Tire Loaders	Diesel	0.59	136.30	0.304	1.118	0.075	0.073	0.004	0.051	536.778
Scrapers	Diesel	0.59	422.50	0.335	0.918	0.051	0.049	0.004	0.048	536.780
Skid Steer Loaders	Diesel	0.21	57.67	4.328	4.811	0.720	0.698	0.006	0.946	693.699
Surfacing Equipment	Gasoline	0.49	8.92	278.743	1.694	0.124	0.114	0.006	6.560	1,060.494
Trenchers	Diesel	0.59	61.02	0.922	2.979	0.120	0.116	0.004	0.146	596.005
Plate Compactors	Gasoline	0.55	4.41	205.471	1.995	0.323	0.297	0.007	8.704	1,247.840

Table 1.1-2b On-Road Vehicle Emissions Rates

Vohiolo Typo	Fuel	Emission Rate (grams per vehicle mile traveled)								
Vehicle Type	Type	CO	NOx	PM ₁₀	PM _{2.5}	SO ₂	VOC	CO ₂ e		
Light commercial truck	Diesel	3.055	1.032	0.088	0.044	0.005	0.171	620.833		
Single unit short-haul truck	Diesel	1.679	3.477	0.404	0.250	0.010	0.512	1,174.359		
Passenger car	Gasoline	3.698	0.183	0.044	0.009	0.006	0.165	327.538		
Passenger truck	Gasoline	6.649	0.461	0.049	0.011	0.009	0.269	447.292		

Equation 3:**

$$PM_{10(tpy)} = EF_{TSP} \times \frac{days}{year} \times \frac{acres}{day} \times 0.45 \div 2,000$$

Where:

 $PM_{10(tpv)}$ = annual PM_{10} dust emissions (tons per year)

EF_{TSP}= total suspended particulate (TSP) emissions rate (80 pounds per acre-day)

0.45 = estimated ratio of PM₁₀ to TSP

2,000 = pounds per ton

**Represents uncontrolled emissions of PM₁₀. Controlled emissions are derived by applying a 75% control factor.

 $PM_{2.5} = PM_{10} \times 0.10$

Equation 4:

$$VOC_{(tov)} = A \times AR \times VD \times EF \times D \div 2,000$$

Where:

VOC_(tpv)= annual VOC paving emissions (tons per year)

A = area of pavement in square meters(m^2)

AR = asphalt application rate (0.679 liter/m²)

VD = volume fraction of diluent (0.35)

AF = mass fraction of diluent which evaporates as VOC (0.95)

D = solvent density (1.98 pounds/liter)

2,000 = pounds per ton

1.1.2. OPERATIONAL EMISSIONS

Operations of aircraft (Boeing 767-300 and 737-800), aircraft Auxiliary Power Unit (APU), and Ground Support Equipment (GSE), would change as a result of the expanded air cargo facilities described by the EA Proposed Project. Additionally, an increase in truck traffic and employee commute trips would result from increased cargo handling activities. Operations of stationary combustion sources and on-airport motor vehicles would not be expected to increase substantially as a result of the Proposed Project. Therefore, operational emissions estimates for the future year conditions in the EA with the Proposed Project Alternatives, include emissions from aircraft, APUs, GSE, cargo truck traffic, and air cargo facility employee vehicles. Emissions from aircraft, APUs, and GSE were estimated using Federal Aviation Administration's Aviation Environmental Design Tool (AEDT). Air emission analyses for airports are required to use AEDT for these sources. Emissions from cargo trucks and employee commutes were estimated using **Equation** 2, using emission rates obtained from MOVES.

Noise modeling performed for the EA using AEDT was used as a basis for the air quality analysis. The noise modeling accounted for air cargo aircraft operations derived from the expected rates of use at the cargo facility under the No-Action and Proposed Project Alternatives. APU and GSE operations were derived using default values for the Boeing 767 and Boeing 737 in AEDT.

Criteria pollutant emission rates for air cargo aircraft, APUs, and associated GSE are built into AEDT, using Boeing 767 aircraft with the GE 2GE054 engine and Boeing 737 with the CFM International 4CM039 engine (representative of proponent in-use aircraft fleet), and using default rates for APU and GSE. The aircraft fleet mix, associated engines, and number of operations used to develop the operations emissions inventory are provided in **Tables 1.1-3a** through **1.1-3c**.

Default GHG emission rates for air cargo aircraft are built into AEDT and were used for this analysis. GHG emissions from APUs and GSE are not built into AEDT. GHG emissions from these sources were calculated using AEDT default operating times and fuel flow rates for specific equipment, pounds per gallon for each assigned fuel type, and the GHG emission rate per gallon of each fuel. Fuel based emission rates applied to the AEDT-derived fuel consumption for GSE and APU correspond to 21.095 pounds/gallon for CO₂, 0.000595248 pounds/gallon for CH₄ and 0.000683433 pounds/gallon for N₂O for Jet A; 22.5091702 pounds/gallon for CO₂, 0.001256633 pounds/gallon for CH₄ and 0.000573201 pounds/gallon for N₂O for diesel; and 19.3565636 pounds/gallon for CO₂, 0.00110231 pounds/gallon for CH₄ and 0.000485016 pounds/gallon for N₂O for gasoline. Global warming potentials used to convert individual GHG emissions of CO₂, CH₄ and N₂O to carbon dioxide equivalent (CO₂e) emissions are 1, 21 and 310, respectively.

Additional cargo truck and cargo facility employee vehicle commute operations were derived for travel within the EA Socioeconomic Study Area (SSA), using roadway segment distances and total vehicle trip data derived from the traffic study completed for the EA. A traffic analysis was performed to assess the number of cargo truck and passenger vehicles trips that would result from operation of the Proposed Project, as detailed in **Appendix F** of the EA. AVMT were derived for travel between the air cargo facility and the SSA boundary, assuming that 35 percent of vehicles would use Drane Field Road and County Line Road north to Interstate 4 (I-4); 15 percent of vehicles would use Drane Field Road and County Line Road to locations south of the SSA; 25 percent of vehicles would use Drane Field Road, Airport Road north to Polk Parkway, and Polk Parkway to I-4; and 25 percent would use Drane Field Road east to Polk Parkway and Polk Parkway to areas outside the SSA (see **Figure 1.1-1**). A weighted average speed of 60 mph for motor vehicles was derived from road segment speed limits, segment distances, and the percentage of traffic expected to use each road segment within the SSA. **Table 1.1.-4** details the total number of motor vehicle trips and AVMT used in the emissions analysis.

Table 1.1-3a 2019 Aircraft Fleet Mix and Activity

Aircraft Model	Fraine		2019 Existin	g Condition	
	Engine	Arrival	Departure	TGO*	Total
Aerospatiale SA-350D Astar (AS-350) TPE3	TPE331-3	106	106	-	212
Agusta A-109 250B17	250B17B	40	40	-	80
Airbus A320-200 Series 2CM018	CFM56-5B4/2 DAC	2	2	-	4
BEC58P	TIO-540-J2B2	5,012	5,012	1,089	11,113
Bell 206L-4T Long Ranger 250B17	250B17B	13	13	-	26
Boeing 727-200 Series 1PW004	JT8D-7 series Smoke Fix	1	1	-	2
Boeing 737-800 Series 4CM039	CFM56-7B20/2	5	5	-	10
Boeing 757-200 Series 4PW073	PW2040	2	2	-	4
Boeing CH-46 Sea Knight T588F	T58-GE-8F	17	17	-	34
Boeing DC-10-10 Series 3GE076	CF6-50E1 Low emissions	1	1		2
Boeing DC-10-10 Series 3GE076	fuel nozzle	l	I	-	2
Boeing F/A-18 Hornet F4044	F404-GE-400	24	24	-	48
Bombardier Challenger 600 5GE084	CF34-3B	443	443	-	886
Bombardier Global 5000 Business 4BR009	BR700-710A2-20	69	69	-	138
Bombardier Learjet 35 1AS002	TFE731-3	1,476	1,476	-	2,952
CASA CN-235-100 CT79B	CT7-9B	60	60	83	203
Cessna 150 Series O200	O-200	6,993	6,993	11,045	25,031
Cessna 172 Skyhawk IO360	IO-360-B	493	493	-	986
Cessna 182 IO360	IO-360-B	695	695	-	1,390
Cessna 206 TIO540 IO-540-AC	TIO-540-J2B2	490	490	-	980
Cessna 208 Caravan PT6A14	PT6A-114	808	808	-	1,616
Cessna 441 Conquest II TPE10A	TPE331-10A	648	648	-	1,296
Cessna 500 Citation I 1PW038	JT15D-5C	563	563	-	1,126
Cessna 550 Citation II 1PW036	JT15D-4series	498	498	-	996
Cessna 650 Citation III 1AS001	TFE731-2-2B	44	44	-	88
Cessna 680 Citation Sovereign 7PW078	PW306B Annular	194	194	-	388
Cessna 750 Citation X 6AL024	AE3007C1 Type 2	78	78	-	156
COMSEP	TIO-540-J2B2	2,040	2,040	692	4,772
DeHavilland DHC-6-100 Twin Otter PT6A20	PT6A-20	3,984	3,984	-	7,968
Eclipse 500 / PW610F	PW610F Annular	50	50	-	100
Embraer ERJ145 6AL008	AE3007A1/1 Type 1	1	1	-	2
Gulfstream G400 6RR042	TAY 611-8C Transply IIJ	262	262	-	524
Gulfstream G500 4BR003	BR700-715B1-30	69	69	-	138
Hughes 500D 250B17	250B17B	66	66	-	132

Aircraft Model	Engino		2019 Existin	g Condition	
	Engine	Arrival	Departure	TGO*	Total
Israel IAI-1125 Astra 1AS002	TFE731-3	76	76	-	152
Lockheed C-130 Hercules T56A14	T56-A-14	347	347	960	1,654
Lockheed P-3 Orion ANP:P3A T56A14 T56- A-14	T56-A-14	360	360	-	720
McDonnell Douglas A-4 Skyhawk J52P4	J52-P-408	30	30	-	60
Mitsubishi MU-300 Diamond 1PW037	JT15D-5, -5A, -5B	123	123	-	246
Piper PA-24 Comanche TIO540	TIO-540-J2B2	11,723	11,723	20,615	44,061
Piper PA-30 Twin Comanche IO320	IO-320-D1AD	636	636	-	1,272
Piper PA-42 Cheyenne Series PT6A41	PT6A-41	164	164	-	328
Robinson R44 Raven / Lycoming O-540-F1B5 TIO540	TIO-540-J2B2	159	159	-	318
Rockwell T-2 Buckeye J852	J85-GE-2	34	34	-	68
7Saab 340-A CT7-5	CT7-5	272	272	-	544
Sikorsky SH-60 Sea Hawk T70041	T700-GE-401 -401C	246	246	-	492
T-38 Talon J855HA	J85-GE-5H (w/AB)	40	40	-	80
	Total	39,457	39,457	34,484	113,398

Sources: AECOM, 2020; AEDT.

Notes: *TGO = Touch and go operation;

Values may reflect rounding.

Table 1.1-3b 2022 Aircraft Fleet Mix and Activity

Aircraft	F.,:		2022 No	Action			2022 Proposed Project				
Model	Engine	Arrival	Departure	TGO*	Total	Arrival	Departure	TGO*	Total		
1985 1-ENG COMP	TIO-540- J2B2	2,714	2,714	697	6,125	2,714	2,714	697	6,125		
Aerospatiale SA-350D Astar (AS- 350)	TPE331-3	385	385	•	770	385	385	-	770		
Agusta A-109	250B17B	144	144	ı	288	144	144	-	288		
Airbus A319- 100 Series	CFM56- 5B9/2P DAC	210	210	-	420	210	210	-	420		
Airbus A320- 200 Series	CFM56- 5B4/2 DAC	90	90	-	180	90	90	-	180		
Bell 206L-4T Long Ranger	250B17B	48	48	-	96	48	48	-	96		
Boeing 737- 800 Series	CFM56- 7B20/2	373	373	-	746	373	373	-	746		
Boeing 737- 800 Series (Cargo)	CFM56- 7B20/2	2,190	2,190	-	4,380	4,928	4,928	-	9,856		
Boeing 757- 200 Series	PW2040	184	184	-	368	184	184	-	368		
Boeing 767- 300 ER Freighter	CF6- 80C2B7F	1,460	1,460	-	2,920	1,643	1,643	-	3,286		
Boeing F/A-18 Hornet	F404-GE- 400	26	26	1	52	26	26	-	52		
Bombardier Challenger 600	CF34-3B	625	625	-	1,250	625	625	-	1,250		
Bombardier Global 5000 Business	BR700- 710A2-20	97	97	-	194	97	97	-	194		
Bombardier Learjet 35	TFE731-3	2,084	2,084	-	4,168	2,084	2,084	-	4,168		

Aircraft	Engino		2022 No	Action			2022 Propo	sed Project			
Model	Engine	Arrival	Departure	TGO*	Total	Arrival	Departure	TGO*	Total		
CASA CN- 235-100	CT7-9B	67	67	48	182	67	67	48	182		
Cessna 150 Series	O-200	9,290	9,290	11,133	29,713	9,290	9,290	11,133	29,713		
Cessna 172 Skyhawk	IO-360-B	656	656	-	1,312	656	656	-	1,312		
Cessna 182	IO-360-B	925	925	1	1,850	925	925	-	1,850		
Cessna 206	TIO-540- J2B2	651	651	-	1,302	651	651	-	1,302		
Cessna 208 Caravan	PT6A-114	471	471	-	942	471	471	-	942		
Cessna 441 Conquest II	TPE331- 10A	377	377	1,148	1,902	377	377	1,148	1,902		
Cessna 500 Citation I	JT15D-5C	796	796	-	1,592	796	796	-	1,592		
Cessna 550 Citation II	JT15D- 4series	704	704	-	1,408	704	704	-	1,408		
Cessna 650 Citation III	TFE731-2- 2B	62	62	-	124	62	62	-	124		
Cessna 680 Citation Sovereign	PW306B Annular	274	274	-	548	274	274	-	548		
Cessna 750 Citation X	AE3007C1 Type 2	110	110	-	220	110	110	-	220		
DeHavilland DHC-6-100 Twin Otter	PT6A-20	2,320	2,320	-	4,640	2,320	2,320	-	4,640		
Eclipse 500 / PW610F	PW610F Annular	70	70	-	140	70	70	-	140		
Gulfstream G400	TAY 611- 8C Transply IIJ	369	369	-	738	369	369	-	738		
Gulfstream G500	BR700- 715B1-30	97	97	-	194	97	97	-	194		
Hughes 500D	250B17B	241	241	-	482	241	241	-	482		
Israel IAI-1125 Astra	TFE731-3	107	107	-	214	107	107	-	214		

Aircraft	Engine		2022 No	Action			2022 Proposed Project			
Model	Engine	Arrival	Departure	TGO*	Total	Arrival	Departure	TGO*	Total	
Lockheed C- 130 Hercules	T56-A-14	381	381	556	1,318	381	381	556	1,318	
Lockheed P-3 Orion ANP:P3A	T56-A-14	396	396	-	792	396	396	-	792	
Mitsubishi MU-300 Diamond	JT15D-5, - 5A, -5B	174	174	-	348	174	174	-	348	
Piper PA-24 Comanche	TIO-540- J2B2	15,583	15,583	20,780	51,946	15,583	15,583	20,780	51,946	
Piper PA-30 Twin Comanche	IO-320- D1AD	370	370	-	740	370	370	-	740	
Piper PA-42 Cheyenne Series	PT6A-41	95	95	-	190	95	95	-	190	
Raytheon Beech Baron 58	TIO-540- J2B2	2,912	2,912	6,503	12,327	2,912	2,912	6,503	12,327	
Robinson R44 Raven / Lycoming O- 540-F1B5	TIO-540- J2B2	1,649	1,649	-	3,298	1,649	1,649	-	3,298	
Saab 340-A	CT7-5	158	158		316	158	158	-	316	
Sikorsky SH- 60 Sea Hawk	T700-GE- 401 -401C	692	692	-	1,384	692	692	-	1,384	
15001	Total	50,629	50,629	40,865	142,123	53,549	53,549	40,865	147,963	

Sources: AECOM, 2020; AEDT.

Notes: *TGO = Touch and go operation;

Values may reflect rounding.

Table 1.1-3c 2027 Aircraft Fleet Mix and Activity

Aircraft	Engino		2027 No	Action			2027 Proposed Project				
Model	Engine	Arrival	Departure	TGO*	Total	Arrival	Departure	TGO*	Total		
1985 1-ENG COMP	TIO-540- J2B2	3,071	3,071	893	7,035	3,071	3,071	893	7,035		
Aerospatiale SA-350D Astar (AS- 350)	TPE331-3	788	788	-	1,576	788	788	-	1,576		
Agusta A-109	250B17B	295	295	-	590	295	295	-	590		
Airbus A319- 100 Series	CFM56- 5B9/2P DAC	244	244	-	488	244	244	-	488		
Airbus A320- 200 Series	CFM56- 5B4/2 DAC	104	104	-	208	104	104	-	208		
Bell 206L-4T Long Ranger	250B17B	98	98	-	196	98	98	-	196		
Boeing 737- 800 Series	CFM56- 7B20/2	431	431	-	862	431	431	-	862		
Boeing 737- 800 Series (Cargo)	CFM56- 7B20/2	2,190	2,190	-	4,380	6,023	6,023	-	12,046		
Boeing 757- 200 Series	PW2040	212	212	1	424	212	212	ı	424		
Boeing 767- 300 ER Freighter	CF6- 80C2B7F	1,460	1,460	-	2,920	2,008	2,008	-	4,015		
Boeing F/A-18 Hornet	F404-GE- 400	26	26	1	52	26	26	ı	52		
Bombardier Challenger 600	CF34-3B	953	953	-	1,906	953	953	-	1,906		
Bombardier Global 5000 Business	BR700- 710A2-20	148	148	-	296	148	148	-	296		
Bombardier Learjet 35	TFE731-3	3,176	3,176	-	6,352	3,176	3,176	-	6,352		

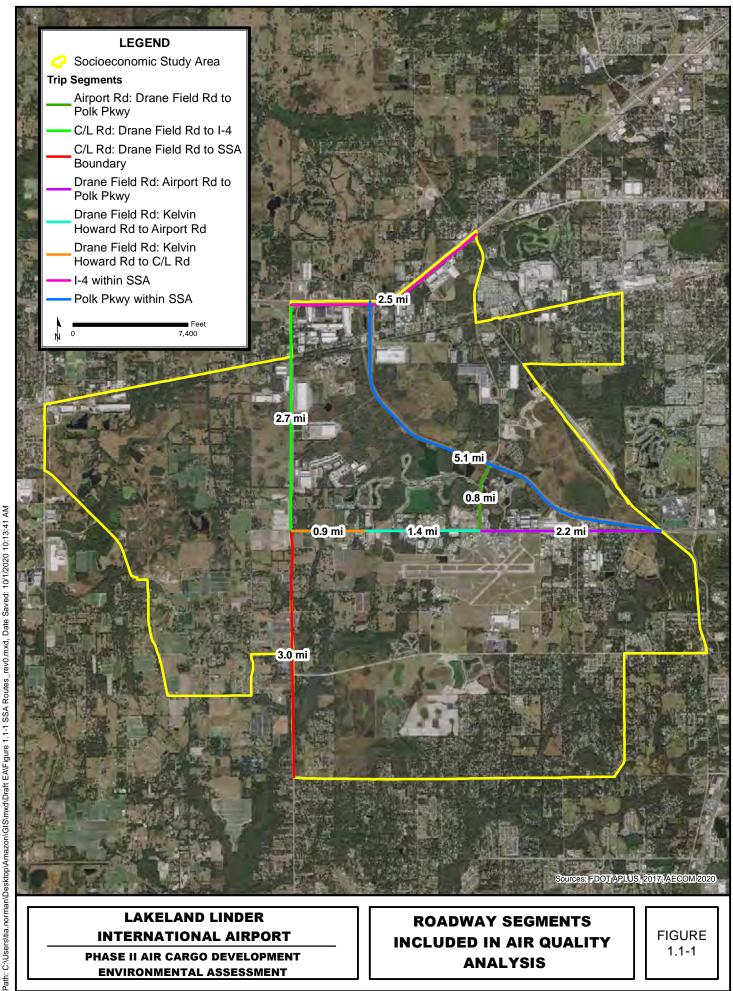
Aircraft	Engino		2027 No	Action			2027 Propo	sed Project			
Model	Engine	Arrival	Departure	TGO*	Total	Arrival	Departure	TGO*	Total		
CASA CN- 235-100	CT7-9B	68	68	106	242	68	68	106	242		
Cessna 150 Series	O-200	10,526	10,526	14,271	35,323	10,526	10,526	14,271	35,323		
Cessna 172 Skyhawk	IO-360-B	742	742	-	1,484	742	742	-	1,484		
Cessna 182	IO-360-B	1,047	1,047	1	2,094	1,047	1,047	-	2,094		
Cessna 206	TIO-540- J2B2	737	737	1	1,474	737	737	-	1,474		
Cessna 208 Caravan	PT6A-114	538	538	-	1,076	538	538	-	1,076		
Cessna 441 Conquest II	TPE331- 10A	431	431	1,200	2,062	431	431	1,200	2,062		
Cessna 500 Citation I	JT15D-5C	1,212	1,212	-	2,424	1,212	1,212	-	2,424		
Cessna 550 Citation II	JT15D- 4series	1,072	1,072	-	2,144	1,072	1,072	-	2,144		
Cessna 650 Citation III	TFE731-2- 2B	94	94	-	188	94	94	-	188		
Cessna 680 Citation Sovereign	PW306B Annular	418	418	-	836	418	418	-	836		
Cessna 750 Citation X	AE3007C1 Type 2	168	168	-	336	168	168	-	336		
DeHavilland DHC-6-100 Twin Otter	PT6A-20	2,652	2,652	-	5,304	2,652	2,652	-	5,304		
Eclipse 500 / PW610F	PW610F Annular	107	107	-	214	107	107	-	214		
Gulfstream G400	TAY 611- 8C Transply IIJ	563	563	-	1,126	563	563	-	1,126		
Gulfstream G500	BR700- 715B1-30	148	148	-	296	148	148	-	296		
Hughes 500D	250B17B	492	492	-	984	492	492	-	984		
Israel IAI-1125 Astra	TFE731-3	163	163	-	326	163	163	-	326		

Aircraft	Engine		2027 No	Action		2027 Proposed Project				
Model		Arrival	Departure	TGO*	Total	Arrival	Departure	TGO*	Total	
Lockheed C- 130 Hercules	T56-A-14	388	388	1,228	2,004	388	388	1,228	2,004	
Lockheed P-3 Orion ANP:P3A	T56-A-14	403	403	-	806	403	403	-	806	
Mitsubishi MU-300 Diamond	JT15D-5, - 5A, -5B	265	265	-	530	265	265	-	530	
Piper PA-24 Comanche	TIO-540- J2B2	17,644	17,644	26,636	61,924	17,644	17,644	26,636	61,924	
Piper PA-30 Twin Comanche	IO-320- D1AD	423	423	-	846	423	423	-	846	
Piper PA-42 Cheyenne Series	PT6A-41	109	109	-	218	109	109	-	218	
Raytheon Beech Baron 58	TIO-540- J2B2	3,595	3,595	7,040	14,230	3,595	3,595	7,040	14,230	
Robinson R44 Raven / Lycoming O- 540-F1B5	TIO-540- J2B2	2,456	2,456	-	4,912	2,456	2,456	-	4,912	
Saab 340-A	CT7-5	181	181	-	362	181	181	-	362	
Sikorsky SH- 60 Sea Hawk	T700-GE- 401 -401C	803	803	-	1,606	803	803	-	1,606	
Total		60,643	60,643	51,374	172,660	65,023	65,023	51,374	181,420	

Sources: AECOM, 2020; AEDT.

Notes: *TGO = Touch and go operation;

Values may reflect rounding.



LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

ROADWAY SEGMENTS INCLUDED IN AIR QUALITY ANALYSIS

FIGURE 1.1-1

Table 1.1-4 Estimated Annual Motor Vehicle Operations Activity

Description	2019			
Description	Existing Conditions			
Passenger Vehicle VMT	283,0	004,537		
Heavy Truck VMT	14,8	14,894,976		
Total	297,899,513			
	2	.022		
Description	No-Action	Proposed Project		
Passenger Vehicle VMT	285,161,025	296,537,163		
Heavy Truck VMT	66,071,561	71,864,569		
Total	351,232,586	368,401,732		
	2	.027		
Description	No-Action	Proposed Project		
Passenger Vehicle VMT	306,797,060	324,925,101		
Heavy Truck VMT	75,866,582	89,252,580		
Total	382,663,642	414,177,681		

Sources: AECOM, 2020

Note: 2022 and 2027 No-Action includes traffic increases resulting from Phase I Cargo Facility Development

Emission rates, (including vehicle age distributions, inspection and maintenance programs, to the extent applied, fuel supply and other data) for cargo trucks and employee vehicles were derived using MOVES, as described in **Section 1.1.1** above. Cargo trucks were assumed to be single utility short-haul diesel trucks. Private passenger vehicles, including employee vehicles, were assumed to be gasoline passenger cars. Emission rates used for the analysis of motor vehicle emissions are shown in **Table 1.1-5**.

Table 1.1-5 On-road Vehicle Emission Rates

Vehicle		Average	2019 Emission Rates (Grams per VMT)							
Туре	Fuel Type	Speed (mph)	СО	NOx	PM ₁₀	PM _{2.5}	SO ₂	voc	CO ₂ e	
Cargo Trucks	Diesel	60	1.460	2.827	0.210	0.270	0.007	0.431	782.731	
Passenger Vehicles	Gasoline	60	3.458	0.247	0.005	0.016	0.006	0.177	303.303	
Vehicle		Average 2022 Emission Rates (Gram						s per VMT)		
Туре	Fuel Type	Speed (mph)	СО	NOx	PM ₁₀	PM _{2.5}	SO ₂	voc	CO ₂ e	
Cargo Trucks	Diesel	60	1.124	2.053	0.148	0.203	0.007	0.312	775.843	
Passenger Vehicles	Gasoline	60	2.971	0.175	0.005	0.016	0.006	0.142	281.268	
Vehicle		Average	2027 Emission Rates (Grams per VMT)							
Туре	Fuel Type	Speed (mph)	СО	NOx	PM ₁₀	PM _{2.5}	SO ₂	voc	CO₂e	
Cargo Trucks	Diesel	60	0.672	1.307	0.082	0.131	0.006	0.167	759.664	
Passenger Vehicles	Gasoline	60	2.311	0.102	0.005	0.015	0.005	0.108	239.603	

Operations emissions for cargo truck and passenger vehicle traffic were further refined to account for increased idling emissions resulting from potential intersection delays associated with the Proposed Project. As discussed in the EA, a traffic analysis was conducted for the Proposed Project, in which estimated significant delays could result at the intersection of Kidron Road and Drane Field Road. Two traffic mitigation options are presented in the EA for this intersection: 1) add dedicated turning lanes at the intersection and retain the existing stop sign, and 2) add dedicated turn lanes and replace the existing stop sign with a traffic signal. Idle times were calculated for the Proposed Project without intersection delay mitigation, and with each of the proposed mitigation strategies, as described in **Appendix F** of the EA. Idle emissions were calculated for each study year using average idle times for the No-Action Alternative and for the Proposed Project with no traffic mitigation, with mitigation option 1, and with mitigation option 2, using **Equation 5**. Idle emission rates derived from MOVES2014b are presented in **Table 1.1-6**. Total passenger vehicle and cargo truck emissions presented in the EA include in-transit emissions and idle emissions at this intersection, for each scenario described above.

Equation 5:

Emissions_(tpy) =
$$\sum_{v=i}^{n} EF_v \times \frac{hours}{trip} \times \frac{trips}{year} \div 2,000 \div 453.59$$

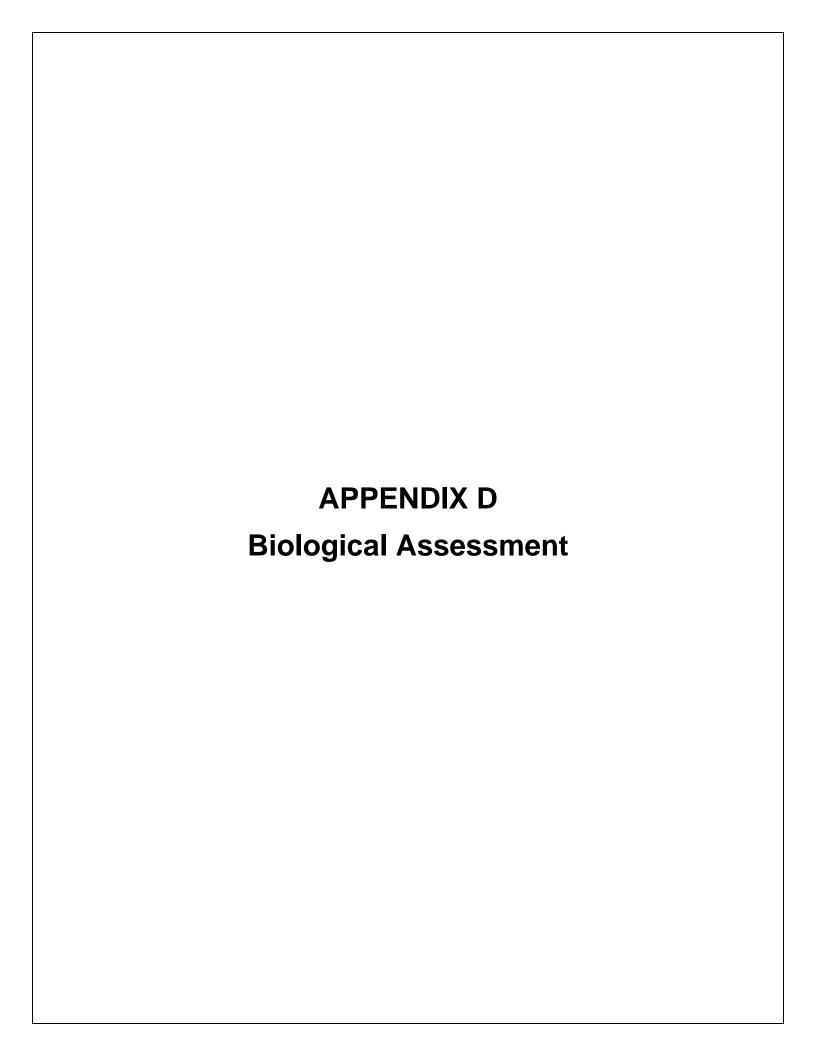
Where:

Emissions_(tpy)= annual emissions (tons per year) $EF_v = \text{emissions rate for vehicle type v(i)...v(n) (grams per hour of idling)}$ 2,000 = pounds per ton 453.59 = grams per pound

Table 1.1-6 On-road Vehicle Idling Emission Rates

Vehicle	Fuel	2019 Emission Rates (Grams per Idle Hour)								
Type	Type	СО	NOx	PM ₁₀	PM _{2.5}	SO ₂	VOC	CO ₂ e		
Cargo Trucks	Diesel	12.421	29.406	2.801	3.044	0.057	6.345	6,673.072		
Passenger Vehicles	Gasoline	7.362	1.970	0.045	0.051	0.070	1.406	3,551.162		
Vehicle Fuel		2022 Emission Rates (Grams per Idle Hour)								
Type	Type	СО	NO _x	PM ₁₀	PM _{2.5}	SO ₂	VOC	CO₂e		
Cargo Trucks	Diesel	9.929	19.971	2.097	2.279	0.056	4.537	6,595.336		
Passenger Vehicles	Gasoline	4.534	1.151	0.042	0.047	0.064	1.068	3,268.623		
Vehicle	Fuel		2027 Emission Rates (Grams per Idle Hour)							
Type	Type	СО	NOx	PM ₁₀	PM _{2.5}	SO ₂	VOC	CO ₂ e		
Cargo Trucks	Diesel	6.047	12.232	1.127	1.225	0.054	2.423	6,457.424		
Passenger Vehicles	Gasoline	1.709	0.478	0.037	0.042	0.055	0.797	2,774.403		







Environmental Assessment for Phase II Air Cargo Facility Development at Lakeland Linder International Airport (LAL)

Biological Assessment

Prepared for:

City of Lakeland Federal Aviation Administration

Prepared by:

AECOM

May 2020



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1.0 INTRODUCTION

The City of Lakeland (City), through their Airports Department, is undertaking an Environmental Assessment (EA) in accordance with the National Environmental Policy Act of 1969 (NEPA). The EA is being completed to support Phase II of ongoing air cargo facility development at Lakeland Linder International Airport (LAL or Airport), hereinafter referred to as the Proposed Project. The Proposed Project is an extension of development already underway to support air cargo service operations of Amazon Air at LAL. The purpose of the EA is to identify and consider the potential environmental impacts associated with the Proposed Project and any reasonable alternatives.

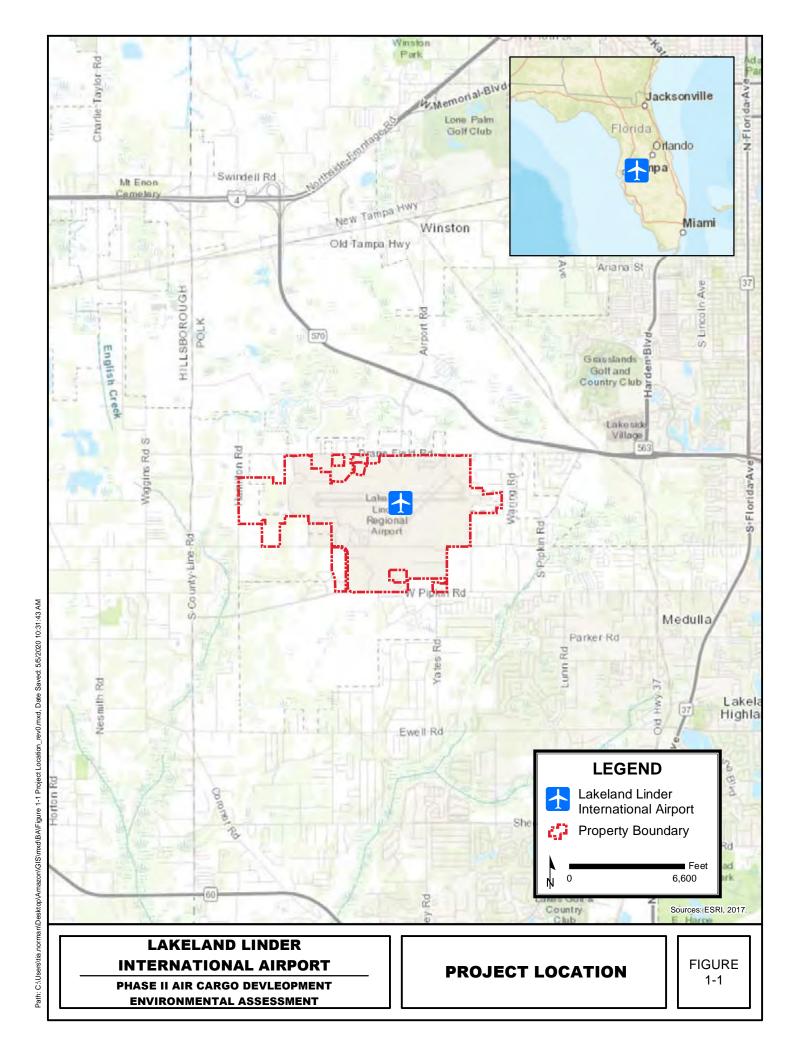
The Federal Aviation Administration (FAA) is the lead federal agency and is seeking to initiation informal consultation with the U.S. Fish and Wildlife Service (USFWS) per 50 Code of Federal Regulations (CFR) 402.13, as amended. To support the completion of consultation between the FAA and the USFWS under Section 7 of the Endangered Species Act of 1973, as amended (ESA), this Biological Assessment (BA) has been prepared to identify potential impacts to listed species within the study area of the Proposed Project. This BA is intended to: (1) describe the Proposed Project at LAL; (2) discuss the biology and distribution of plant and animal species that have the potential to be present in the project vicinity and have protection under the ESA; and (3) determine the potential effect of the Proposed Project on such ESA protected species. Preparation of this BA included field inspections by qualified biologists of habitats within and adjacent to the Action Area, as well as literature and database reviews. Details on the study methodologies and results are provided below.

1.1. AIRPORT DESCRIPTION

LAL is publicly owned and operated by the City of Lakeland. The Airport is located on approximately 1,710 acres in central Florida's Polk County, less than one mile east of the Hillsborough County Line, and approximately 3.5 miles south of Interstate Highway 4, five miles southwest of the City of Lakeland, and 27 miles east of Tampa International Airport (TPA). **Figure 1-1** depicts the location of the Airport as it relates to the City of Lakeland and surrounding areas.

The City holds an operating certificate issued under Title 14 CFR Part 139, Certification and Operations: Land Airports Serving Certain Air Carriers¹, which allows the airport to allow scheduled air carrier service. At this time there is no scheduled air carrier service at LAL. The airport serves public, private, and corporate users that operate a mixed fleet of helicopters, single and twin-engine propeller aircraft, corporate jets, commercial aircraft (maintenance, repair), and military aircraft.

¹ CFR Part 139 requires FAA to issue Airport Operating Certificates to airports that serve scheduled and unscheduled air carrier aircraft with more than 30 seats. LAL meets this requirement. To maintain this certificate, LAL must meet certain operational and safety standards.



The FAA's National Plan of Integrated Airport Systems (NPIAS) report identifies five-year funding needs for airports eligible to receive Airport Improvement Program grants. Each airport is classified based on annual enplanements (departing passengers). The 2019-2023 NPIAS (published on October 3, 2018)² classifies LAL as a national reliever airport. A reliever airport defined in the FAA's authorizing statute at 49 United States Code (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." U.S. enplanements in 2017 were approximately 840 million, of which LAL recorded 223 (0.000027 percent).

1.2. DESCRIPTION OF THE PROPOSED PROJECT

The Proposed Project is an expansion of an air cargo facility already under construction (Phase I) that will be operated by Amazon Air. Construction of Phase I is nearing completion. The Phase II expansion is being contemplated to accommodate expanded operations. A notional layout for the Proposed Project is shown on **Figure 1-2a** based on facility sizing needs. The Proposed Project would be developed on an approximate 60-acre site in the northwest quadrant of LAL, immediately west and adjacent to the Phase I development already in progress. All project components would be constructed on airport. Specific construction and operational activities included in the Proposed Project are listed below:

- Construct a 464,600 square foot (SF) expansion of the Phase I sort and office building;
- Construct approximately 69,000 square yards (SY) of paved truck court to accommodate 370 additional truck bays;
- Construct approximately 42,500 SY of paved vehicle parking lot to accommodate 1,120 additional parking spaces;
- ➤ Construct approximately 29,200 SY of concrete aircraft parking apron to accommodate three additional Boeing 767-300 aircraft parking positions.
- ➤ Construct approximately 19,350 SY of pavement for aircraft ground support equipment (GSE) staging and periodic aircraft parking;
- Construct new airport access road to provide access to the Phase II facilities via Drane Field Road:
- Site clearing, grading, and landscaping;
- Modifications to the airport's stormwater management system, including construction of swales and retention ponds.
- Installation of security fencing, gates and security checkpoints;
- Installation of airfield lighting and signage

The facility will be designed to approve Boeing 767 and 737 cargo aircraft. If approved, the Phase II Cargo Development project is expected to generate 16 additional aircraft operations per day at LAL during the facility's first year of operation (2022) and 24 additional daily operations in 2027. Similarly, the project is expected to generate approximately 664 additional car and truck trips per day in 2022 (peak daily) and 1,242 additional car and truck trips per day in 2027.

_

² DOT, FAA. Report to Congress: National Plan of Integrated Airport Systems 2019-2023, 2018.

Additionally, to accommodate the potential need for additional aviation fueling capacity at LAL, a fuel farm is being proposed in an area separate from the Proposed Project footprint, at the intersection of Air Park Drive and Taxiway H (**Figure 1-2b**). Current projections indicate need for between six to eight aboveground tanks providing a total of 850,000 gallons of Jet A fuel capacity. There is potential for a small portion of this capacity to be dedicated to off-road equipment fuel (e.g., gasoline, diesel or hydrogen) if usage needs dictate once the facility is operational.

Due to the location and design of the Proposed Project shown in **Figures 1-2a** and **1-2b**, the Proposed Project will result in modification to potential habitat and permanent fill of wetlands. Impacts to potential upland and wetland habitats are discussed in detail in **Section 6.0**.

LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

EA PROPOSED PROJECT

FIGURE 1-2a

C:\Civil 3D Projects\FIG 1-2a.dwg 05/05/2020

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LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

EA PROPOSED PROJECT FUEL FARM

FIGURE 1-2b

C:\Civil 3D Projects\Amazon\FIG 1-2b.dwg

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05/05/2020

2.0 METHODOLOGY

The purpose of this BA is to describe the existing environmental conditions of the study area and the potential impacts to wetlands, other surface waters, and federal and state listed species that could occur as a result of the Proposed Project. The Action Area for the BA encompasses the construction footprint of the Proposed Project and comprises a total of 70.3 acres (**Figure 2-1**).

The potential presence of state and federally listed species within the Action Area was assessed by review of the following:

- Listed species accounts;
- ➤ 2013 Wildlife Hazard Assessment (WHA) completed at LAL (Environmental Science Associates, 2013);
- ➤ 2020 Wildlife Hazard Management Plan (WHMP) for LAL (LAL, 2020);
- U.S. Fish and Wildlife Service (USFWS) and Florida Fish and Wildlife Conservation Commission (FWC) listings of species known to occur or potentially occurring in Charlotte County;
- Online database sources from the USFWS, FWC, and Florida Natural Areas Inventory (FNAI); and
- Field observations of habitats and wildlife species.

2.1. AGENCY COORDINATION

As part of the NEPA process, an Advance Notification of the Proposed Project was sent to the Florida Department of Environmental Protection (FDEP) State Clearinghouse requesting comments on the Proposed Project. Through this process, the Clearinghouse will request comments from the FWC on potential effects of the Proposed Project on listed species and potential permit requirements (see **Appendix A**). In addition, an official species list was requested from the USFWS Information for Planning and Consultation (IPaC) database (consultation code 04EF2000-2020-SLI-0368) and is provided in **Appendix A**.

2.2. DATA COLLECTION AND FIELD REVIEW

Documented occurrences of rare species likely to occur within Polk County were obtained from FNAI's Searchable Tracking List website (FNAI, 2020).

The following information was reviewed prior to the field review to characterize habitat features and land use patterns within the Action Area:



LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT **ENVIRONMENTAL ASSESSMENT**

ACTION AREA

FIGURE 2-1

- ➤ U.S. Geological Survey 7.5 minute Topographical Quadrangle Map, Nichols, FL, 2018;
- Aerial photographs (Florida Department of Transportation [FDOT] Aerial Photo Look-up System [APLUS], 2017);
- U.S. Department of Agriculture, Natural Resource Conservation Service (NRCS), Web Soil Survey of Polk County, Florida. (http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx) (NRCS, 2019);
- Florida Association of Professional Soil Scientists, *Hydric Soils of Florida Handbook*, Fourth Edition (Hurt, 2007);
- FDOT, Florida Land Use, Cover and Forms Classification System Handbook (FLUCFCS), Third edition (FDOT, 1999);
- Southwest Florida Water Management District (SWFWMD), FLUCFCS GIS Database (SWFWMD, 2017);
- ➤ USFWS, Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, et al., 1979); and
- FDEP, Map Direct Gateway (http://ca.dep.state.fl.us/mapdirect/gateway.jsp), (FDEP, 2020).

AECOM environmental scientists familiar with Florida's natural communities conducted a field review within the Action Area on April 29, 2020. During the field review, each vegetative community and land use type within the Action Area was visually inspected to assess approximate boundaries and document dominant vegetation. Exotic plant infestations and other disturbances such as erosion and existing structures (i.e. riprap) were noted. Field activities also included identifying wildlife and signs of wildlife usage within the Action Area and within adjacent habitats.

3.0 EXISTING LAND USES AND VEGETATIVE COVER

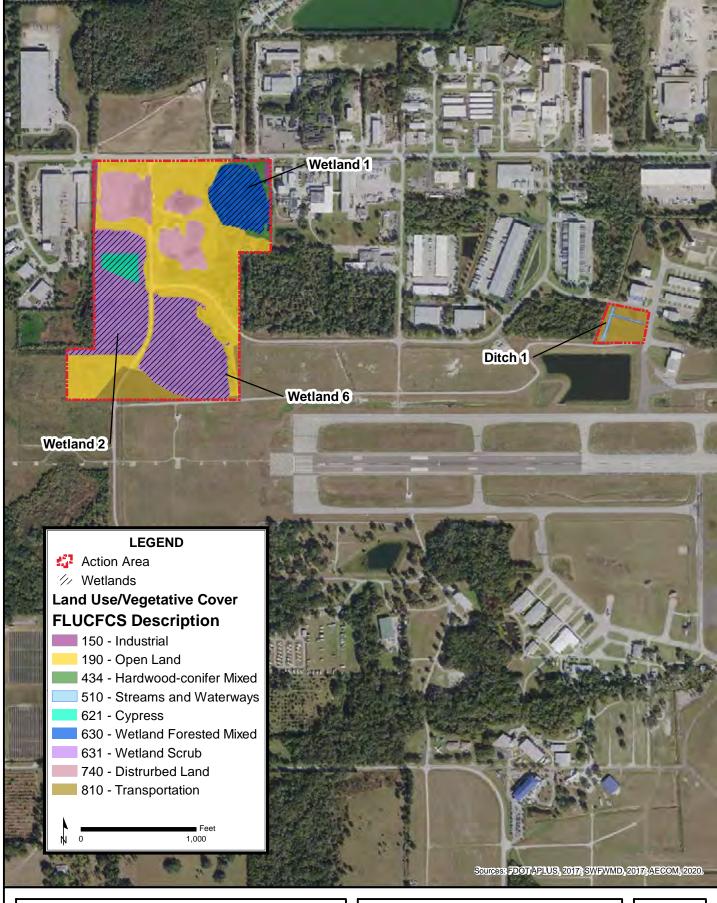
Based on in-house and field reviews, five upland community types, three wetland community types, and one surface water community type are present within the Action Area (**Figure 3-1**). All vegetative habitats and land uses within the Action Area were classified using FLUCFCS (FDOT 1999). Wetland habitats were also classified using the *USFWS Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin, et. al., 1979). A summary description of each land use/vegetative cover type is provided below. **Table 3-1** summarizes the acreage of each land use/vegetative cover type within the Action Area.

3.1. UPLAND LAND USE/VEGETATIVE COVER

Industrial

FLUCFCS: 150

The Industrial category encompasses those land uses where manufacturing, assembly or processing of materials and products are accomplished. Within the Action Area, industrial land use is located at the northwest and northeast margins of the Action Area adjacent to off-airport developed land, and comprises approximately 0.6 acre of the Action Area.



LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

EXISTING LAND USE/ VEGETATIVE COVER FIGURE 3-1

Path: C:\Users\tian.norman\Desktop\Amazon\GIS\mxd\BA\Figure 3-1 LUVC_rev0.mxd, Date Saved: 5/14/2020 7:48:09 AM

Open Land FLUCFCS: 190

Open land includes undeveloped land within urban areas that does not typically exhibit any structures or any indication of intended use. Open land comprises approximately 26.3 acres of the Action Area and is includes mostly mowed/maintained Bahia grass (*Paspalum notatum*). It is a dominant cover type throughout the Action Area.

Hardwood-Conifer Mixed

FLUCFCS: 434

This vegetative cover type is reserved for those forested areas in which neither upland conifers nor hardwoods achieve a 66 percent crown canopy dominance. Within the Action Area, these areas predominantly consist of live oak (*Quercus virginiana*), slash pine (*Pinus elliottii*), wax myrtle (*Morella cerifera*), cogon grass (*Imperata cylindrica*), and muscadine grape (*Vitis rotundifolia*). Hardwood-conifer mixed is located in the northeast portion of the Action Area south of Drane Field Road adjacent to Wetland 1, and comprises approximately 0.9 acre of the Action Area.

Disturbed

FLUCFCS: 740

Disturbed lands are those areas which have been changed due primarily to human activities other than mining. Disturbed lands are located in the northwest portion of the Action Area west of Kelvin Howard Road and in the north-central portion east of Kelvin Howard Road and north of Air Park Drive. These areas are currently used as staging areas for the construction of Phase I Air Cargo Facility east of the Proposed Project area. This land use type comprises approximately 8.3 acres of the Action Area.

Transportation FLUCFCS: 810

Transportation facilities are used for the movement of people and goods. Within the Action Area, this land use type includes unpaved areas adjacent to the airfield that are dominated by ruderal grasses that are regularly mowed as part of airport maintenance and operations. This land use type also includes portions of roadway on Airport property. The transportation land use

comprises approximately 5.8 acres of the Action Area.

FLUCFCS1 **USFWS Vegetative Community/** Acres in **Land Use** Code Classification² **Action Area Uplands** 150 N/A Industrial 0.6 Open Land 190 N/A 26.3 Hardwood-Conifer Mixed 434 N/A 0.9 Disturbed 740 N/A 8.3 Transportation 810 N/A 5.8 Subtotal Uplands 41.9 Wetlands PFO2C 621 1.4 Cypress Wetland Forested Mixed PFO1/3C 5.6 630 Wetland Scrub 631 PFO1/2C 21.1 Subtotal Wetlands 28.1 Other Surface Waters **PUBx** Streams and Waterways 510 0.3 Subtotal Other Surface Waters 0.3 70.3 TOTAL

Table 3-1: Existing Land Use and Vegetative Communities within the Action Area

Notes: NA = Not applicable; PFO2C = palustrine, forested, needle-leaved deciduous, seasonally flooded; PFO1/3C = palustrine, forested, broad-leaved deciduous/needle-leaved evergreen, seasonally flooded; PFO1/2C = palustrine, forested, needle-leaved/broad-leaved deciduous, seasonally flooded; PUBx = palustrine, unconsolidated bottom, excavated

3.2. WETLAND AND OTHER SURFACE WATER LAND USE/VEGETATIVE COVER

Streams and Waterways

FLUCFCS: 510

USFWS: PUBx – Palustrine, Unconsolidated Bottom, Excavated

Streams and waterways include linear water bodies such as rivers, creeks, canals, and ditches. Within the Action Area, this classification type includes an upland-cut drainage ditch (Ditch 1) that is seasonally inundated by surface water during the wet season and intermittently flooded after rainfall events in the dry season. This ditch is located in the proposed fuel area and consists of steep slopes and a sandy bottom. Vegetation within the ditch consists of primrose willow (*Ludwigia peruviana*), camphorweed (*Pluchea rosea*), elderberry (*Sambucus canadensis*), pennywort (*Hydrocotyle* spp.), and dogfennel (*Eupatorium capillifolium*). Ditch 1 is part of a stormwater management system that directs water into the stormwater pond directly south of the ditch. It is under the jurisdiction of the SWFWMD through Environmental Resource Permit Number 49002237.068 issued in October 2010. This ditch comprises approximately 0.3 acre of the Action Area. During the April 29, 2020 field review, the ditch was inundated with approximately 12 inches of water and various fish species were observed.

¹ FDOT. 1999.

² Cowardin, Lewis M., et.al. 1979.

Cypress

FLUCFCS: 621

USFWS: PFO2C – Palustrine, Forested, Needle-leaved Deciduous, Seasonally Flooded

Within the Action Area, this community type is composed of bald cypress (*Taxodium distichum*) which is either pure or predominant. Within the Action Area, approximately 1.4 acres of cypress wetland occur west of Kelvin Howard Road and comprise the central portion of Wetland 2.

Wetland Forested Mixed

FLUCFCS: 630

USFWS: PFO1/3C - Palustrine, Forested, Broad-leaved Deciduous/Needle-leaved

Evergreen, Seasonally Flooded

This category includes mixed wetlands forest communities in which neither hardwoods or conifers achieve a 66 percent dominance of the crown canopy composition. This area consists of Wetland 1 and predominantly consists of water oak (*Quercus nigra*), laurel oak (*Quercus laurifolia*), slash pine, red maple (*Acer rubrum*), Carolina willow (*Salix caroliniana*), Virginia chain fern (*Woodwardia virginica*), and primrose willow. Wetland forested mixed comprises approximately 5.6 acres and is located east of Kelvin Howard Road south of Drane Field Road in the northeast section of the Action Area.

Wetland Scrub

FLUCFCS: 631

USFWS: PFO1/2C - Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous,

Seasonally Flooded

Wetland scrub is associated with topographic depressions and poorly drained soils consisting of low scrub species. Within the Action Area, this consists of Wetland 6 and the north and south portions of Wetland 2. During the April 29, 2020 field review, these areas appeared to be transitioning into forested wetland community types. Dominant vegetative species include cypress, Carolina willow, red maple, sweet bay (*Magnolia virginiana*), saltbush (*Baccharis halimifolia*), elderberry, Virginia chain fern, primrose willow, and poison ivy (*Toxicodendron radicans*). The outer fringe of these areas consist of Brazilian pepper (*Schinus terebinthifolia*), peppervine (*Nekemias arborea*), cogon grass, and wax myrtle. Wetland scrub comprises approximately 21.1 acres of the Action Area.

4.0 WILDLIFE

The open areas within the Action Area provide potential habitat for various lizards, snakes, field birds, gallinaceous birds, shrews, rats, rabbits, skunks, coyotes, and bobcats. However, these areas are regularly mowed which limits the amount of sufficient cover provided to these species. The forested and scrub wetlands in the Action Area provide potential habitat for various songbirds, snakes, wading birds, and small mammals. The drainage ditch (Ditch 1) provides potential habitat for freshwater turtles, wading birds, fish, and frogs. The utilization of these

habitats on the Airport property by large-bodied mammals (i.e., deer, feral pigs, coyotes, etc.) is limited due to existing security fencing around the Airport property, the ongoing activities of the Phase 1 construction, and roadways. During the April 29, 2020 field review, red-winged blackbirds (*Agelaius phoeniceus*) were observed within the forested wetlands and various fish were observed within Ditch 1.

An FAA-approved WHMP is implemented at LAL and was last revised on January 26, 2020. As part of the WHMP, the City, as the Airport Sponsor, is responsible for implementing measures that will minimize and/or eliminate hazardous wildlife on Airport property. Based on a WHA conducted in June 2013, wildlife groups were identified as having the most significant threat to air operations at LAL. These groups were identified as:

- Large wading birds such as Florida sandhill cranes, wood storks, and great egrets.
- Medium-sized wading birds that forage or fly in groups such as cattle egrets and white ibis;
- Large raptors such as bald eagles, hawks, osprey, and vultures;
- > Small birds that fly in flocks or groups such as red-winged blackbirds and swallows;
- Large/medium-sized mammals such as coyotes, feral hogs, bobcats, and raccoons.

In July 2013, a Depredation permit and a Migratory Depredation Wildlife Permit was obtained from the USFWS that is renewed annually and authorizes the City to legally take, using methods specified by USFWS, listed species and migratory bird species that pose a threat to human safety.

5.0 LISTED SPECIES

The Action Area was evaluated for potential occurrences of federally and state listed plant and animal species. For a listed species to be considered potentially occurring within the Action Area, appropriate habitat for reproduction, nesting, foraging, feeding, or resting must be present in the Action Area and the Action Area must be located within the species' geographical range. Federally listed species are those plant and animal species protected by the federal government pursuant to the ESA. Federally listed species are classified as endangered or threatened. State listed species are those plant and animal species managed by the state of Florida pursuant to Chapter 5B-40 Florida Administrative Code (F.A.C.) and Chapter 68A-27 F.A.C, respectively. State listed species are classified as endangered, threatened, species of special concern (animals), or commercially exploited (plants). During the April 29, 2020 field review, the Action Area was assessed for the presence of, or potential use by, federally and state listed plant and animal species. The following literature and online data sources were used to collect information concerning the potential presence of federally and/or state listed species within the Action Area:

- ➤ USFWS, Endangered and Threatened Wildlife and Plants, 50 CFR 17.11 and 17.12, updated April 8, 2019 (USFWS, 2019);
- USFWS, IPaC (https://ecos.fws.gov/ipac) (USFWS, 2020);

- FWC, Florida's Endangered Species, Threatened Species, and Species of Special Concern, Chapter 68A-27 F.A.C, updated December 2018 (FWC, 2018);
- FWC, Eagle Nest Locator website (http://myfwc.com/eagle/eaglenests/nestlocator.aspx) (FWC, 2020);
- FNAI, Polk County Tracking List, (http://fnai.org/bioticssearch.cfm), updated April 2019 (FNAI, 2019);
- ➤ Florida Department of Agriculture & Consumer Services, Division of Plant Industry (FDACS), 2010 Notes on Florida's Endangered and Threatened Plants: Botany Contribution No. 38, 5th edition; and
- ➤ Nature Serve Explorer maps and database (http://www.natureserve.org/explorer/), (NatureServe, 2020).

The listed species with potential to occur within the Action Area are described below. **Table 5-1** provides a summary of the listed and protected species with potential to occur within the Action Area.

Table 5-1: Listed Species¹ Potentially Occurring within Action Area

Scientific Name	Common Name	Federal Status ²	State Status ³	Habitat Preference	
Plants					
Agrimonia incisa	Incised groove-bur	NL	Т	Longleaf pine-deciduous scrub oak, sandy or sandy loam; open pine woods or mixed pine-oak woods, bluffs, small clearings and old roads.	
Ophioglossum palmatum	Hand fern	NL	Е	Forested wetlands typically at the base of cabbage palms.	
Pecluma ptilota var. bourgeauana	Comb (swamp) polypody	NL	E	Rockland hammocks, strand swamps, and wet woods; often on tree bases and fallen logs.	
Platanthera integra	Yellow fringeless orchid	NL	Е	Marshes, swamps, acid bogs, low pine barrens.	
Salix floridana	Florida willow	NL	E	Wet, mucky soils in bottomland forests, floodplains, hydric hammocks, swamps, edges of spring-runs, and streams	
Thelypteris serrata	Toothed maiden fern	NL	E	Cypress swamps, sloughs, floodplains.	
Reptiles					
Drymarchon corais couperi	Eastern indigo snake	Т	Т	Various habitats with the exception of open water.	
Gopherus polyphemus	Gopher tortoise	С	Т	Dry upland habitats, including disturbed habitats such as pastures, old fields, and road shoulders.	
Birds					
Antigone canadensis pratensis	Florida sandhill crane			Prairies, freshwater marshes, and pastures.	
Aphelocoma	Florida scrub jay	Т	Т	Fire-dominated xeric oak	

Scientific Name	Common Name	Federal Status ²	State Status ³	Habitat Preference	
coerulescens				communities on well drained sandy soils. *LAL is located within USFWS Consultation Area for the Florida scrub jay.	
Athene cunicularia floridana	Florida burrowing owl	NL	Т	High, sparsely vegetated, sandy ground. Natural habitats include dry prairie and sandhill. Makes extensive use of ruderal areas such as pastures, airports, road right-of-ways, and vacant spaces in residential areas.	
Egretta caerulea	Little blue heron	NL	Т	Permanently and seasonally flooded wetlands, streams, lakes, and swamps, and in manmade impoundments and ditches.	
Egretta tricolor	Tricolored heron	NL	Т	Permanently and seasonally flooded wetlands, streams, lakes, and swamps, and in manmade impoundments and ditches.	
Falco sparverius Paulus	Southeastern American kestrel	NL	Т	Open pine habitats, woodland edges, prairies and pastures.	
Mycteria americana	Wood stork	Т	Т	Nests in inundated forested wetlands. Forages in freshwater marshes, swamps, flooded pastures.	
Polyborus plancus audubonii	Audubon's crested caracara	Т	Т	Open country with scattered cabbage palms, cabbage palm/live oak hammocks, and shallow ponds/sloughs. *LAL is located within USFWS Consultation Area for the crested caracara.	
Rostrhamus sociabilis plumbeus	Everglade snail kite	E	E	Large, open freshwater marshes and lakes; open water areas without emergent vegetation required for foraging; nests 1-5 m above water in low shrub/tree, sawgrass, maidencane habitat. *LAL is located within USFWS Consultation Area for the snail kite.	
Other Species of Concern					
Haliaeetus leucocephalus	Bald eagle	NL ⁴	NL ⁴	Nests in tall trees. Forages near bodies of water.	
Ursus americanus floridanus Note:	Ursus americanus floridanus Florida black bear		NL ⁵	A wide variety of forested communities including forested wetlands.	

- T = Threatened; E = Endangered; NL = Not Listed; C = Candidate
- ¹ As reported by the "FNAI Tracking List, Polk County" http://www.fnai.org. (FNAI, 2020) and the USFWS IPaC "Official Species List" (USFWS, 2020).
- ² As listed by the USFWS in 50 CFR 17 (http://www.fws.gov/endangered/), updated April 2019 (USFWS, 2019).
- ³ Plant species listed by the FDACS pursuant to Chapter 5B-40, F.A.C, updated 2010 (FDACS, 2010). Animal species listed by the FWC pursuant to Rules 68A-27.003 through 68A-27.005, F.A.C. (http://myfwc.com/wildlifehabitats/imperiled/), updated December 2018 (FWC, 2018).
- ⁴ The bald eagle is neither state nor federally listed; however, this species is federally protected by the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. The bald eagle is also managed in Florida by the FWC's bald eagle rule (Chapter 68A-16.002, F.A.C).
- ⁵ The Florida black bear is no longer state-listed; however, this species is managed in Florida by the FWC's Florida Black Bear Conservation rule (68A-4.009, F.A.C.).

5.1. FLORA

A review of state and federally listed plants that occur within Polk County and their preferred habitats was performed prior to field reviews. No listed plant species have been documented within the Action Area based on information from FNAI and USFWS. The field review did not detect the occurrence of any protected plant species within the Action Area.

5.1.1. FEDERALLY LISTED SPECIES

Based on the existing habitat types occurring within the Action Area, no federally listed plant species documented within Polk County have the potential to occur within the Action Area.

5.1.2. STATE LISTED SPECIES

Incised groove-bur (Agrimonia incisa)

The incised groove-bur is listed as threatened by the FDACS and is a member of the Rosaceae (rose) family. This species is most commonly found in the fire-maintained longleaf pine-oak communities. However, it occasionally has been found on old roads and disturbed mixed pine-oak woods. Marginally suitable habitat for this species occurs within the Action Area within the small areas of hardwood-conifer mixed habitat.

Hand fern (Ophioglossum palmatum)

Hand fern is listed as endangered by the FDACS and is a member of the Ophioglossaceae (adder's-tongue) family. This species is found within hydric hammocks typically at the base of cabbage palms. Marginally suitable habitat for hand fern occurs within the Action Area within the forested wetlands; however, cabbage palms have not been observed to be a dominant vegetative species within the wetlands.

Comb (swamp) polypody (Pecluma ptilota var. bourgeauana)

Comb (swamp) polypody is listed as endangered by the FDACS and is a member of the Polypodiaceae (fern) family. This species is found in rockland hammocks, strand swamps, and wet woods, often at the base of trees and fallen logs. Suitable habitat for this species is available within the Action Area within the forested wetlands.

Yellow fringeless orchid (Platanthera integra)

The yellow fringeless orchid is listed as endangered by the FDACS and is a member of the Orchidaceae (orchid) family. This species is typically found in both forested and herbaceous wetlands including wet pine flatwoods, wet prairies, marshes, bogs, and swamps. It is thought to be fire dependent throughout its range where it doesn't get overwhelmed by other plant species or shaded out by pines and hardwoods. Marginally suitable habitat for this species occurs within the Action Area within the forested wetlands.

Florida willow (Salix floridana)

Florida willow is listed as endangered by the FDACS and is a member of the Salicaceae (willow) family. This species occurs in very wet, calcareous soils, typically in forested floodplains, hydric hammocks, edges of spring runs, and roadside ditches. Suitable habitat for this species occurs within the Action Area within the forested wetlands and Ditch 1.

Toothed maiden fern (*Thelypteris serrata*)

The toothed maiden fern is listed as endangered by the FDACS and is a member of the Thelypteridaceae (marsh fern) family. This species generally is found in freshwater swamps, cypress domes, and bogs. Suitable habitat for the toothed maiden fern occurs within the Action Area within the forested wetlands.

5.2. FAUNA

5.2.1. FEDERALLY LISTED SPECIES

Eastern indigo snake (Drymarchon corais couperi)

The eastern indigo snake is listed as threatened by the USFWS. The snake can be found in a variety of habitats including mesic flatwoods, swamps, wet prairies, xeric pinelands, and scrub areas. It may use gopher tortoise burrows for shelter to escape hot or cold ambient temperatures within its range. While suitable habitat is present for this species in the Action Area, no eastern indigo snakes or gopher tortoise burrows were observed during the April 2020 field review.

Florida scrub jay (Aphelocoma coerulescens)

The Florida scrub jay is listed as threatened by the USFWS and is typically found in early successional stages of fire-dominated xeric oak communities located on well-drained, sandy soils. Preferred habitat consists of scrub oaks between three and ten feet tall with open sand and scattered clumps of herbaceous vegetation. The Action Area is located within the USFWS Consultation Area for the scrub jay. However, no xeric oak scrub communities are located inside the Action Area and no scrub jays were observed within the Action Area during the April 2020 field review.

Wood stork (Mycteria americana)

The wood stork is listed as threatened by the USFWS. This wading bird species is opportunistic and uses various habitat types, including forested wetlands, freshwater marshes, swamps, lagoons, ponds, tidal creeks, flooded pastures, and ditches for feeding. A specialized feeding

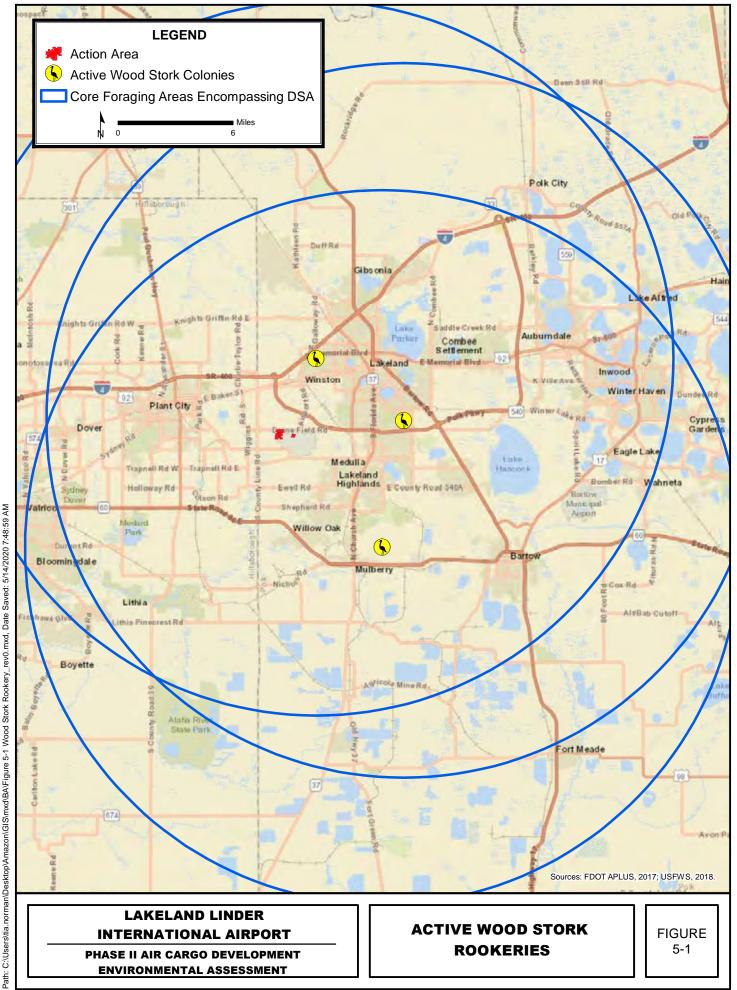
technique commonly referred to as "groping" limits the wood stork to feeding in shallow water. This species can be expected to use the ditches and marshes within the Action Area for seasonal foraging; however, existing wildlife hazard management activities actively discourage foraging on Airport property. The USFWS has defined the core foraging area (CFA) for the wood stork in Polk County as an 18.6-mile radius from breeding colonies. Based on information provided by the USFWS, the Action Area is located within the 18.6-mile radius CFA of three active wood stork nesting colonies. As shown on **Figure 5-1**, the closest colony is approximately four miles northeast of the Action Area. Based on the 2013 WHA, wood storks have been observed foraging within wetlands and other surface waters on Airport property. Suitable foraging and nesting habitat is available within the Action Area. During the April 2020 field review, no wood storks were observed within or adjacent to the Action Area.

Audubon's crested caracara (Polyborus plancus audubonii)

The Audubon's crested caracara is listed as threatened by the USFWS and inhabits open country, such as dry prairie and pasturelands with scattered cabbage palms, cabbage palm/live oak hammocks, and shallow ponds and sloughs. This species requires cabbage palms or live oaks with low-growing surrounding vegetation for nesting. Although the Action Area is located within the USFWS Consultation Area for this species, no suitable foraging or nesting habitat is available within the Action Area and no individuals or nests were observed within the Action Area during the April 2020 field review.

Everglade snail kite (Rostrhamus sociabilis plumbeus)

The Everglade snail kite is federally listed as endangered by the USFWS due to habitat degradation and loss. This species prefers large open freshwater marshes and lakes with shallow water and feeds exclusively on apple snails (*Pomacea paludosa*). The Action Area is located within the USFWS Consultation Area for the snail kite. However, suitable foraging habitat does not exist for this species in the Action Area and no snail kites or apple snails were observed during the April 2020 field review.



5-1

ROOKERIES

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

5.2.2. STATE LISTED SPECIES

Gopher tortoise (Gopherus polyphemus)

The gopher tortoise is listed as threatened by the FWC and is considered a candidate species by USFWS due to habitat loss, degradation, and a declining number of individuals. The gopher tortoise requires well-drained, loose, sandy soils for burrowing, and low-growing herbs and grasses for food. Marginally suitable habitat for this species is present within the Action Area and based on the 2013 WHA, gopher tortoise burrows have been observed at LAL; however, no gopher tortoise burrows were observed within the Action Area during the April 2020 field review.

Florida burrowing owl (Athene cunicularia floridana)

The Florida burrowing owl is listed as threatened by the FWC. This species inhabits high, sparsely vegetated, sandy ground including dry prairie, pastures, airports, and road rights-of-way for nesting. Within the Action Area, marginally suitable habitat for this species is available. However, during the April 2020 field review, no burrowing owls or burrows were observed within the Action Area.

Little blue heron (Egretta caerulea) and tricolored heron (Egretta tricolor)

The little blue heron and tricolored heron are both listed as threatened by the FWC. These wading birds nest and forage among both fresh and saltwater habitats such as freshwater marshes, coastal beaches, mangrove swamps, cypress swamps, hardwood swamps, wet prairies and bay swamps. Suitable nesting habitat for these wading birds is available within the Action Area within the forested wetlands and suitable foraging habitat is available within the drainage ditch. Based on the WHA, these wading birds have been observed foraging throughout the wetlands on Airport property. During the 2020 field review, no wading birds were observed within or adjacent to the Action Area.

Southeastern American kestrel (Falco sparverius paulus)

The southeastern American kestrel is listed as threatened by FWC and is non-migratory. The species utilizes open habitats for foraging and nests in tree cavities. Habitats such as pine scrub, dry prairies, mixed pine and hardwood forests, and pine flatwoods are preferable for the southeastern American kestrel. Based on the 2013 WHA, kestrels have been observed within the AOA at LAL. However, suitable habitat for the southeastern American kestrel is not available within the Action Area and none were observed during the April 2020 field review.

Florida sandhill crane (*Antigone canadensis pratensis*)

The Florida sandhill crane is listed as threatened by the FWC. The sandhill crane is associated with shallow freshwater areas, pasture, and open woods habitats. Habitats such as wet and dry prairies, marshes, and marshy lake margins are preferred. Marginally suitable habitat for this species is available in the Action Area. Based on the 2013 WHA, sandhill cranes have been observed foraging at LAL. During the April 2020 field review, no sandhill cranes or nests were observed within the Action Area.

5.2.3. OTHER SPECIES OF CONCERN

Bald eagle (Haliaeetus leucocephalus)

Though the bald eagle has been removed from federal and state listings, it is still protected by the Bald and Golden Eagle Protection Act in accordance with 16 U.S.C. Section 668 and the Migratory Bird Treaty Act in accordance with 16 USC Sections 703-712. The bald eagle typically uses riparian habitat associated with coastal areas, lake shorelines, and river banks. The nests are generally located near water bodies that provide a dependable food source. The FWC online bald eagle nest locator website indicates that the nearest document nest is located approximately one mile northwest of the Action Area. Based on the 2013 WHA, bald eagles have been observed at LAL, though sitings are rare. During the April 2020 field review, no bald eagles or nests were observed within the Action Area.

Florida Black Bear (Ursus americanus floridanus)

Although the Florida black bear has been removed from the state listing, it is still protected and managed by the FWC pursuant to the Florida Black Bear Conservation Rule 68A-4.009, F.A.C. The Florida black bear can be found statewide in a number of habitats including mixed hardwood pine communities, cabbage palm hammock and forested wetland systems. This species tends to den alone within tree cavities, river banks, logs or caves. They will also seek shelter on the ground in palmetto thickets, gallberry, fetterbush, and sweet pepperbush. Marginally suitable habitat for the black bear is available within the proposed project areas in the forested upland and wetland areas. Established by the FWC, a Bear Management Unit (BMU) is a geographic location bounded by county and/or state borders with one of the seven Florida black bear subpopulations within it. The goal of a BMU is to provide a defined area within which FWC can have a community-focused effort to effectively manage and conserve Florida black bears (FWC, 2019). According to FWC, LAL is located within the South Central BMU where their occurrence is classified as "occasional". No black bears have been observed at LAL and only marginally suitable habitat for the black bear is present within the Action Area.

6.0 EFFECTS OF PROPOSED PROJECT

Implementation of the Proposed Project will result in the conversion of approximately 54.6 acres of land use/vegetative cover to Transportation use (FLUCFCS 810). It is anticipated that 5.8 acres of land use/vegetative cover will convert into Reservoir (FLUCFCS 534) as a result of the proposed retention pond (see **Figures 1-2a** and **1-2b** for Proposed Project layout). **Table 6-1** lists the vegetative communities and land uses that will be converted to Transportation use or Reservoir use by the Proposed Project.

Table 6-1: Vegetative Community/Land Use Conversions Resulting from the Proposed Project

Vegetative Community/Land Use	FLUCFCS Code ¹	USFWS Classification ²	Acres Converted to Transportation (FLUCFCS 810)	Acres Converted to Reservoir (FLUCFCS 534)	Total
Uplands					
Industrial	150	N/A	0.4		0.4
Open Land	190	N/A	22.8	3.5	26.3
Hardwood-Conifer Mixed	434	N/A	0.3		0.3
Disturbed	740	N/A	8.3		8.3
Transportation	810	N/A		1.1	1.1
	S	ubtotal Uplands	31.8	4.6	36.4
Wetlands					
Cypress	621	PFO2C	1.4		1.4
Wetland Forested Mixed	630	PFO1/3C	1.2		1.2
Wetland Scrub	631	PFO1/2C	19.9	1.2	21.1
	Su	btotal Wetlands	22.5	1.2	23.7
Other Surface Wat	ters				•
Streams and Waterways	510	PUBx	0.3		0.3
Su	Subtotal Other Surface Waters			0.0	0.3
		Total	54.6	5.8	60.4

Notes:

To offset the loss of wetland functions and values, all wetland impacts will be mitigated to satisfy all mitigation requirements of 33 USC 1344 and Part IV, Chapter 373, Florida Statutes. The City proposes to purchase wetland credits from the Alafia River Mitigation Bank to offset the loss of wetland functions and values. Measures will be implemented to minimize impacts to listed pecies as summarized in **Section 7.0.**

Table 6-2 summarizes the proposed land use and vegetative cover types resulting from the implementation of the Proposed Project.

¹ FDOT, 1999

² Cowardin, Lewis M., et.al. 1979.

Existing Proposed FLUCFCS1 **USFWS** Vegetative Acres in Acres in Community/Land Use Code Classification² **Action Area Action Area Uplands** Industrial 150 N/A 0.6 0.2 Open Land 190 N/A 26.3 0.0 Hardwood-Conifer 434 N/A 0.9 0.6 Mixed 740 N/A 8.3 0.0 Disturbed Transportation 810 N/A 5.8 59.3 Subtotal Uplands 41.8 60.1 Wetlands Cypress 621 PFO2C 1.4 0.0 Wetland Forested Mixed 630 PFO1/3C 5.6 4.4 Wetland Scrub PFO1/2C 0.0 631 21.1 Subtotal Wetlands 28.1 4.4 Other Surface Waters Streams and 510 **PUBx** 0.3 0.0 Waterways POWx Reservoir 534 0.0 5.8 Subtotal Other Surface Waters 0.3 5.8 Total 70.3 70.3

Table 6-2: Existing and Proposed Land Use and Vegetative Communities
Within the Action Area

6.1. EFFECTS ON LISTED SPECIES

The Proposed Project would result in permanent modification of habitats potentially utilized by listed and protected species. The potential effect of the habitat impacts on state and federally listed species with potential to occur within the Action Area are discussed below.

6.1.1. FLORA

6.1.1.1. FEDERALLY LISTED SPECIES

Based on the existing habitat types occurring within the Action Area, no federally listed plant species documented within Polk County have the potential to occur within the Action Area.

6.1.1.2. STATE LISTED SPECIES

Incised groove-bur

The incised groove-bur is most commonly found in the fire-maintained longleaf pine-oak communities, occasionally is found on old roads and disturbed mixed pine-oak woods. Though marginally suitable habitat for this species occurs within the Action Area within the small areas of hardwood-conifer mixed habitat, none of these species were detected within or adjacent to the Action Area during the April 2020 field review and none have been documented at LAL.

¹ FDOT, 1999.

² Cowardin, Lewis M., et.al. 1979.

POWx = Palustrine, open water, excavated

Based on this information, the Proposed Project is not anticipated to affect the incised groovebur.

Hand fern

Hand fern is found within hydric hammocks typically at the base of cabbage palms. Only marginally suitable habitat for hand fern occurs within the Action Area within the forested wetlands; however, cabbage palms have not been observed to be a dominant vegetative species within these wetlands, no hand ferns were detected within or adjacent to the Action Area, and none have been documented at LAL. Based on this information, the Proposed Project is not anticipated to affect the hand fern.

Comb (swamp) polypody

Comb (swamp) polypody is found in rockland hammocks, strand swamps, and wet woods, often at the base of trees and fallen logs. Suitable habitat for this species is available within the Action Area within the forested wetlands. No polypody was detected within or adjacent to the Action Area and none have been documented at LAL. Based on this information, the Proposed Project is not anticipated to affect the comb (swamp) polypody.

Yellow fringeless orchid

The yellow fringeless orchid is typically found in both forested and herbaceous wetlands including wet pine flatwoods, wet prairies, marshes, bogs, and swamps. It is thought to be fire dependent throughout its range where it doesn't get overwhelmed by other plant species or shaded out by pines and hardwoods. Marginally suitable habitat for this species occurs within the Action Area within the forested wetlands. However, these areas are not fire-dominated, no yellow fringeless orchid was detected within or adjacent to the Action Area, and none have been documented at LAL. Based on this information, the Proposed Project is not anticipated to affect the yellow fringeless orchid.

Florida willow

Florida willow is found in very wet, calcareous soils, typically in forested floodplains, hydric hammocks, edges of spring runs, and roadside ditches. Suitable habitat for this species occurs within the Action Area within the forested wetlands and Ditch 1. No Florida willow was detected within or adjacent to the Action Area and none have been documented at LAL. Based on this information, the Proposed Project is not anticipated to affect the Florida willow.

Toothed maiden fern

The toothed maiden fern generally is found in freshwater swamps, cypress domes, and bogs. Suitable habitat for the toothed maiden fern occurs within the Action Area within the forested wetlands. No Florida willow was detected within or adjacent to the Action Area and none have been documented at LAL. Based on this information, the Proposed Project is not anticipated to affect the Florida willow.

6.1.2. FAUNA

6.1.2.1. FEDERALLY LISTED SPECIES

Eastern indigo snake

While no eastern indigo snakes were observed during the field reviews, suitable habitat for this species is present within the Action Area. To minimize potential impacts to the eastern indigo snake, LAL will commit to use the USFWS-approved *Standard Protection Measures for the Eastern Indigo Snake* (updated August 2013) (see **Appendix B**) as part of the Proposed Project. In addition, the Proposed Project will impact less than 25 acres of marginally suitable indigo snake habitat and there are no known gopher tortoise burrows within the Action Area. The most recent (August 1, 2017) USFWS Eastern Indigo Snake Programmatic Effect Determination Key was used to evaluate potential effects on this species. The result of this evaluation indicates that the Proposed Project "may affect, but is not likely to adversely affect" the eastern indigo snake.

Florida scrub jay

Though the Action Area is located within the USFWS Consultation Area for the Florida scrub jay, no xeric oak scrub communities are located inside the Action Area and no scrub jays were observed within the Action Area during field reviews. Based on this information, a determination that the Proposed Project will have "no effect" on the Florida scrub jay is recommended.

Wood stork

Suitable foraging habitat for the wood stork is available within the Action Area within the wetlands. Based on USFWS data, the Action Area is located within the CFA of three active wood stork nesting colonies (**Figure 5-1**) and individuals have been observed foraging within the Action Area. Compensation for suitable foraging habitat will be provided within the service area of an USFWS-approved wetland mitigation bank or wood stork conservation bank (preferably located within the CFA of wood stork foraging habitat lost). Based on these commitments and the 2010 FWS Programmatic Concurrence Letter for the Wood Stork, a determination that the Proposed Project "may affect, but is not likely to adversely affect" the wood stork is recommended.

Audubon's crested caracara

The Action Area is located within the USFWS Consultation Area for the Audubon's crested caracara; however, suitable foraging or nesting habitat is not available within the Action Area and no individuals or nests were observed within the Action Area during the field review. Based on this information, a determination that the Proposed Project will have "no effect" on the crested caracara is recommended.

Everglade snail kite

Though the Action Area is located within the USFWS Consultation Area for the Everglade snail kite, no suitable foraging or nesting habitat is available within the Action Area and no snail kites or apple snails were observed during the field review. Wetland values and functions lost as a result of project construction will be mitigated. Based on this information, a determination that the Proposed Project will have "no effect" on the snail kite is recommended.

6.1.2.2. STATE LISTED SPECIES

Gopher tortoise

Marginally suitable habitat for the gopher tortoise is available within the Action Area and burrows have been observed at LAL based on the 2013 WHA. However, no gopher tortoise burrows were observed within the Action Area during the April 2020 field review. Prior to construction of the Proposed Project, surveys of the appropriate habitats will be conducted for the presence of gopher tortoise burrows. If gopher tortoises or their burrows are found in or within 25 feet of the construction limits of the Proposed Project, coordination with the FWC will be implemented to secure permits needed to relocate the gopher tortoises prior to construction. Based on these commitments, the Proposed Project is not anticipated to affect the gopher tortoise.

Florida burrowing owls

Marginally suitable habitat for the Florida burrowing owls is available within the Action Area; however, none were observed within the Action Area during the field review and none had been documented in the 2013 WHA. To avoid any potential impacts to this species, LAL will resurvey appropriate upland habitats within the Proposed Project area for burrowing owls or their burrows prior to construction. If any burrows are located in the project area, LAL will coordinate with FWC to develop and implement the appropriate protection criteria prior to construction. With this commitment, the Proposed Project is not anticipated to affect the Florida burrowing owl.

Little blue heron and tricolored heron

Suitable foraging and roosting habitat for the little blue heron and tricolored heron is available within the Action Area and individuals have been observed at LAL. As part of the Proposed Project, adverse wetland impacts will be mitigated as necessary to prevent a net loss of wetland habitat functions and values. Based on this information, the Proposed Project is not anticipated to affect the little blue heron and tricolored heron.

Southeastern American kestrel

Based on the 2013 WHA, several southeastern American kestrels were observed foraging in the AOA and perched on existing signs and fences within the Airport property. However, no nests have been observed or documented within the Action Area. Prior to construction of the Proposed Project, informal surveys will be conducted for the presence of the southeastern American kestrel. If any individuals or nests are observed, coordination with FWC will be implemented. With this commitment, the Proposed Project is not anticipated to affect the southeastern American kestrel.

Florida sandhill crane

Marginally suitable foraging habitat is available within the Action Area for the Florida sandhill crane and several individuals have been observed foraging on Airport property. As part of the construction of the Proposed Project, all wetland impacts will be mitigated to prevent a net loss of wetland functions and values. In addition, LAL will resurvey the project area for sandhill crane nests prior to construction. If Florida sandhill crane nests are found within the Proposed Project area, LAL will coordinate with the FWC prior to construction to minimize adverse

impacts to this species to the greatest extent possible. With this commitment, the Proposed Project is not anticipated to affect the Florida sandhill crane.

6.1.2.3. OTHER SPECIES OF CONCERN

Federal

Based on the FWC online database, one **bald eagle** nest is documented within one mile of the Action Area. No bald eagle nests were observed within the Action Area during the field review. For these reasons, it has been determined that the Proposed Project will not affect the bald eagle. Pursuant to the USFWS bald eagle guidelines, any disturbance within 1,000 feet of a bald eagle nest requires additional coordination and potential permitting with the USFWS. To avoid any potential impacts to this species, LAL will resurvey appropriate upland habitats within 1,000 feet of the Proposed Project area for bald eagle nests prior to construction. If a bald eagle nest is found within 1,000 feet of the Proposed Project area, LAL will coordinate with USFWS to secure any and all approvals regarding this species.

State

The project area is located within the South Central BMU where the occurrence of the **Florida black bear** is "occasional". No Florida black bears were observed within the Action Area during the field review and only marginally suitable habitat occurs within the Action Area. LAL is bounded by a perimeter fence which typically keeps large mammals, such as the black bear, away from airport activities. Additional measures to be taken to minimize conflict with bears during construction activities include:

- Following best management practices during construction;
- Requiring clean construction sites with wildlife-resistant containers for workers to use for food-related and other wildlife-attractant refuse; and
- > Requiring frequent trash removal and the use of proper food storage and removal on work sites.

6.2. CRITICAL HABITAT

The Action Area was also evaluated for the occurrence of listed species critical habitat designated by Congress in 50 CFR 424. No designated critical habitat for any federally listed species occurs within the Action Area. Based on this information, it has been determined that the Proposed Project will have "no effect" on any critical habitat.

7.0 CONSERVATION MEASURES

If environmentally approved, the FAA will require the City to implement the following conservation measures to minimize potential impacts to listed species discussed in this BA as part of this Proposed Project:

7.1. FEDERALLY LISTED SPECIES

- 1. Prior to and during construction, the City will be required to implement the USFWS-approved Standard Protection Measures for the Eastern Indigo Snake (updated August 2013) (see **Appendix B**);
- 2. During the permitting phase of the Proposed Projects, the City will purchase wetland mitigation credits from the Alafia River Mitigation Bank to offset wetland functions and values potentially used by the wood stork and Everglade snail kite;
- Prior to construction, the City will be required to resurvey appropriate habitats within the
 project area to confirm the presence or absence of crested caracara nests. If any of
 these species or their nests are present, the City will coordinate with the USFWS to
 minimize the Proposed Project impacts and obtain the necessary permits; and
- 4. Prior to construction, the City will be required to resurvey appropriate habitats within 1,000 feet of the Proposed Project area for bald eagle nests. If a bald eagle nest is found within 1,000 feet of the Proposed Project, the City will coordinate with the USFWS to secure any and all approvals regarding this species.

7.2. STATE LISTED SPECIES

- During the permitting phase of the Proposed Projects, the City will purchase wetland mitigation credits from the Alafia River Mitigation Bank to offset wetland functions and values potentially used by the little blue heron, tricolored heron, and Florida sandhill crane;
- 2. Prior to construction, the City will be required to resurvey appropriate habitats within the project area to confirm the presence or absence of gopher tortoises, Florida burrowing owls, southeastern American kestrel nests, and Florida sandhill crane nests. If any of these species or their nests are present, the City will coordinate with the FWC to minimize the Proposed Project impacts and obtain the necessary permits; and
- To prevent black bear encounters during construction activities, contractors will follow best management practices; keep construction sites clean with wildlife-resistant containers for workers to use for food-related and other wildlife-attractant refuse; and frequently remove trash and use proper food storage on work sites.

8.0 SUMMARY

The Proposed Project would result in permanent impacts to approximately 50.6 acres of existing terrestrial and wetland habitats. The Proposed Action Area has been previously affected by anthropogenic activities at the Airport, including regular mowing and maintenance of the open grassy areas. No federally listed species or designated critical habitat are expected to be adversely affected by the Proposed Project. **Table 8-1** provides the project impact determination for federally and state listed species. Based on the findings and commitments of this BA, a determination has been made that the Proposed Project is not likely to adversely affect any state or federally listed plant or animal species.

Table 8-1: Project Impact Determination on Listed Species

Project Impact Determination	Federally Listed Species		
"May affect, not likely to adversely	Eastern indigo snake (<i>Drymarchon corais couperi</i>)		
affect"	Wood stork (<i>Mycteria americana</i>)		
"No effect"	Florida scrub jay (Aphelocoma coerulescens) Audubon's crested caracara (Polyborus plancus audubonii) Everglade snail kite (Rostrhamus sociabilis plumbeus)		
Project Impact Determination	State Listed Species		
	Gopher tortoise (Gopherus polyphemus)		
	Little blue heron (Egretta caerulea)		
	Tricolored heron (Egretta tricolor)		
Will not affect	Southeastern American kestrel (Falco sparverius paulus)		
	Florida sandhill crane (Antigone canadensis pratensis)		
	State listed plant species		
	Florida burrowing owl (Athene cunicularia floridana)		

9.0 REFERENCES

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APPENDIX A: AGENCY COORDINATION





AECOM 7650 West Courtney Campbell Causeway Tampa, FL 33607 www.aecom.com 813.675.6843 tel

May 4, 2020

Mr. Chris Stahl Clearinghouse Coordinator Florida State Clearinghouse Department of Environmental Protection 3900 Commonwealth Boulevard, M.S. 47 Tallahassee, FL 32399-3000

Re: State Clearinghouse Review for Phase II Air Cargo Development at Lakeland Linder International Airport (LAL), Polk County, Florida

Dear Mr. Stahl:

The City of Lakeland, Florida (City), through its Airports department, is proposing to implement Phase II of development of an air cargo facility at the Lakeland Linder International Airport (LAL), hereinafter referred to as the Proposed Project. The City, in coordination with the Federal Aviation Administration (FAA), is requesting review of the Proposed Project's early consistency with the Florida Coastal Management Program.

Additionally, the City and FAA are requesting early agency input on any environmental concerns and issues that should be considered in the environmental planning and permitting process for the Proposed Project. To accomplish this we would like to receive your comments relative to the proposed improvements as they relate to your specific area of expertise or regulatory jurisdiction, including permitting or mitigation requirements.

The enclosed **Figure 1** shows the extent of the Proposed Project, which is comprised of the following actions:

- Construct a 464,600 square foot (SF) expansion of the Phase I sort and office building;
- Construct approximately 69,000 square yards (SY) of paved truck court to accommodate 370 additional truck bays;
- Construct approximately 42,500 SY of paved vehicle parking lot to accommodate 1,120 additional parking spaces;
- Construct approximately 29,200 SY of concrete aircraft parking apron to accommodate three additional Boeing 767-300 aircraft parking positions.

- Construct approximately 19,350 SY of pavement for aircraft ground support equipment staging and periodic aircraft parking;
- Construct new airport access road to provide access to the Phase II facilities via Drane Field Road:
- Site clearing, grading, and landscaping;
- Modifications to the airport's stormwater management system, including construction of swales and retention ponds.
- Installation of security fencing, gates and security checkpoints;
- Installation of airfield lighting and signage

In order to sufficiently address any preliminary key project issues and maintain the project schedule, the City and FAA are requesting an expedited 30-day review of the Proposed Project. Please respond to me at the address provided below and feel free to contact me if you have any questions or concerns.

Sincerely,

Paul K. Sanford

AECOM Project Manager

7650 West Courtney Campbell Causeway

Tampa, FL 33607 813.675.6843

paul.sanford@aecom.com

Enclosure (1)

Copy: Gene Conrad, City of Lakeland

Peter Green, FAA

File

Projects\Amazon\FIG 1.dwg

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9:27

05/04/2020

LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

EA PROPOSED PROJECT

FIGURE



United States Department of the Interior

FISH AND WILDLIFE SERVICE

South Florida Ecological Services Field Office 1339 20th Street Vero Beach, FL 32960-3559 Phone: (772) 562-3909 Fax: (772) 562-4288

http://fws.gov/verobeach



May 08, 2020

In Reply Refer To:

Consultation Code: 04EF2000-2020-SLI-0368

Event Code: 04EF2000-2020-E-02220

Project Name: Phase II Air Cargo Facility Development EA at LAL

Subject: Updated list of threatened and endangered species that may occur in your proposed

project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

South Florida Ecological Services Field Office 1339 20th Street Vero Beach, FL 32960-3559 (772) 562-3909

Project Summary

Consultation Code: 04EF2000-2020-SLI-0368

Event Code: 04EF2000-2020-E-02220

Project Name: Phase II Air Cargo Facility Development EA at LAL

Project Type: TRANSPORTATION

Project Description: Phase II Air Cargo Facility Development EA at LAL

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/27.993463489938144N82.03855443416727W



Counties: Polk, FL

Endangered Species Act Species

There is a total of 33 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Florida Panther <i>Puma (=Felis) concolor coryi</i>	Endangered
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/1763	
Habitat assessment guidelines:	
https://ecos.fws.gov/ipac/guideline/assessment/population/8/office/41420.pdf	
Puma (=mountain Lion) Puma (=Felis) concolor (all subsp. except coryi)	Similarity of
Population: FL	Appearance
No critical habitat has been designated for this species.	(Threatened)
Species profile: https://ecos.fws.gov/ecp/species/6049	(======================================

Event Code: 04EF2000-2020-E-02220

Birds

NAME STATUS

Audubon's Crested Caracara Polyborus plancus audubonii

Population: FL pop.

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8250

Everglade Snail Kite Rostrhamus sociabilis plumbeus

There is **final** critical habitat for this species. Your location is outside the critical habitat.

Species profile: https://ecos.fws.gov/ecp/species/7713

Species survey guidelines:

https://ecos.fws.gov/ipac/guideline/survey/population/1221/office/41420.pdf

Florida Grasshopper Sparrow *Ammodramus savannarum floridanus*

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/32

Florida Scrub-jay Aphelocoma coerulescens

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6174

Ivory-billed Woodpecker Campephilus principalis

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8230

Whooping Crane Grus americana

Population: U.S.A. (CO, ID, FL, NM, UT, and the western half of Wyoming)

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/758

Wood Stork Mycteria americana

Population: AL, FL, GA, MS, NC, SC

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8477

Habitat assessment guidelines:

https://ecos.fws.gov/ipac/guideline/assessment/population/124/office/41420.pdf

Endangered

Threatened

Endangered

Threatened

Endangered

Experimental Population,

Non-Essential

Threatened

Reptiles

NAME STATUS

American Alligator *Alligator mississippiensis*No critical habitat has been designated for this species.

Species profile: https://ecos.fws.gov/ecp/species/776

Appearance (Threatened)

Threatened

Similarity of

Bluetail Mole Skink Eumeces egregius lividus

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2203

Species survey guidelines:

https://ecos.fws.gov/ipac/guideline/survey/population/178/office/41420.pdf

Eastern Indigo Snake *Drymarchon corais couperi*

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/646

Threatened

Sand Skink Neoseps reynoldsi

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4094

Species survey guidelines:

https://ecos.fws.gov/ipac/guideline/survey/population/179/office/41420.pdf

Threatened

Flowering Plants

NAME **STATUS** Avon Park Harebells Crotalaria avonensis Endangered No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7093 Britton's Beargrass *Nolina brittoniana* Endangered No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4460 Carter's Mustard Warea carteri Endangered No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5583 Threatened Florida Bonamia Bonamia grandiflora No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2230 Florida Ziziphus *Ziziphus celata* Endangered No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2950 Endangered Highlands Scrub Hypericum Hypericum cumulicola No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2940 Lewton's Polygala Polygala lewtonii Endangered No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6688 Papery Whitlow-wort *Paronychia chartacea* Threatened No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1465 Pigeon Wings Clitoria fragrans Threatened No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/991 Endangered Pygmy Fringe-tree *Chionanthus pygmaeus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1084 Sandlace *Polygonella myriophylla* Endangered No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5745 Scrub Blazingstar *Liatris ohlingerae* Endangered No critical habitat has been designated for this species.

Endangered

NAME **STATUS** Species profile: https://ecos.fws.gov/ecp/species/864 Scrub Buckwheat *Eriogonum longifolium var. gnaphalifolium* Threatened No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5940 Scrub Lupine *Lupinus aridorum* Endangered No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/736 Endangered Scrub Mint *Dicerandra frutescens* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/799 Scrub Plum *Prunus geniculata* Endangered No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2238 Short-leaved Rosemary Conradina brevifolia Endangered No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2929 Endangered Wide-leaf Warea Warea amplexifolia No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/412 Wireweed Polygonella basiramia Endangered No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1718

Lichens

NAME STATUS

Florida Perforate Cladonia Cladonia perforata

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7516

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

APPENDIX B: USFWS STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO SNAKE



STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO SNAKE U.S. Fish and Wildlife Service August 12, 2013

The eastern indigo snake protection/education plan (Plan) below has been developed by the U.S. Fish and Wildlife Service (USFWS) in Florida for use by applicants and their construction personnel. At least **30 days prior** to any clearing/land alteration activities, the applicant shall notify the appropriate USFWS Field Office via e-mail that the Plan will be implemented as described below (North Florida Field Office: jaxregs@fws.gov; South Florida Field Office: jaxregs@fws.gov; South Florida Field Office: jaxregs@fws.gov; South Florida Field Office: jaxregs@fws.gov). As long as the signatory of the e-mail certifies compliance with the below Plan (including use of the attached poster and brochure), no further written confirmation or "approval" from the USFWS is needed and the applicant may move forward with the project.

If the applicant decides to use an eastern indigo snake protection/education plan other than the approved Plan below, written confirmation or "approval" from the USFWS that the plan is adequate must be obtained. At least 30 days prior to any clearing/land alteration activities, the applicant shall submit their unique plan for review and approval. The USFWS will respond via email, typically within 30 days of receiving the plan, either concurring that the plan is adequate or requesting additional information. A concurrence e-mail from the appropriate USFWS Field Office will fulfill approval requirements.

The Plan materials should consist of: 1) a combination of posters and pamphlets (see **Poster Information** section below); and 2) verbal educational instructions to construction personnel by supervisory or management personnel before any clearing/land alteration activities are initiated (see **Pre-Construction Activities** and **During Construction Activities** sections below).

POSTER INFORMATION

Posters with the following information shall be placed at strategic locations on the construction site and along any proposed access roads (a final poster for Plan compliance, to be printed on 11" x 17" or larger paper and laminated, is attached):

DESCRIPTION: The eastern indigo snake is one of the largest non-venomous snakes in North America, with individuals often reaching up to 8 feet in length. They derive their name from the glossy, blue-black color of their scales above and uniformly slate blue below. Frequently, they have orange to coral reddish coloration in the throat area, yet some specimens have been reported to only have cream coloration on the throat. These snakes are not typically aggressive and will attempt to crawl away when disturbed. Though indigo snakes rarely bite, they should NOT be handled.

SIMILAR SNAKES: The black racer is the only other solid black snake resembling the eastern indigo snake. However, black racers have a white or cream chin, thinner bodies, and WILL BITE if handled.

LIFE HISTORY: The eastern indigo snake occurs in a wide variety of terrestrial habitat types throughout Florida. Although they have a preference for uplands, they also utilize some wetlands

and agricultural areas. Eastern indigo snakes will often seek shelter inside gopher tortoise burrows and other below- and above-ground refugia, such as other animal burrows, stumps, roots, and debris piles. Females may lay from 4 - 12 white eggs as early as April through June, with young hatching in late July through October.

PROTECTION UNDER FEDERAL AND STATE LAW: The eastern indigo snake is classified as a Threatened species by both the USFWS and the Florida Fish and Wildlife Conservation Commission. "Taking" of eastern indigo snakes is prohibited by the Endangered Species Act without a permit. "Take" is defined by the USFWS as an attempt to kill, harm, harass, pursue, hunt, shoot, wound, trap, capture, collect, or engage in any such conduct. Penalties include a maximum fine of \$25,000 for civil violations and up to \$50,000 and/or imprisonment for criminal offenses, if convicted.

Only individuals currently authorized through an issued Incidental Take Statement in association with a USFWS Biological Opinion, or by a Section 10(a)(1)(A) permit issued by the USFWS, to handle an eastern indigo snake are allowed to do so.

IF YOU SEE A LIVE EASTERN INDIGO SNAKE ON THE SITE:

- Cease clearing activities and allow the live eastern indigo snake sufficient time to move away from the site without interference;
- Personnel must NOT attempt to touch or handle snake due to protected status.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Immediately notify supervisor or the applicant's designated agent, **and** the appropriate USFWS office, with the location information and condition of the snake.
- If the snake is located in a vicinity where continuation of the clearing or construction activities will cause harm to the snake, the activities must halt until such time that a representative of the USFWS returns the call (within one day) with further guidance as to when activities may resume.

IF YOU SEE A DEAD EASTERN INDIGO SNAKE ON THE SITE:

- Cease clearing activities and immediately notify supervisor or the applicant's designated agent, **and** the appropriate USFWS office, with the location information and condition of the snake.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Thoroughly soak the dead snake in water and then freeze the specimen. The appropriate wildlife agency will retrieve the dead snake.

Telephone numbers of USFWS Florida Field Offices to be contacted if a live or dead eastern indigo snake is encountered:

North Florida Field Office – (904) 731-3336 Panama City Field Office – (850) 769-0552 South Florida Field Office – (772) 562-3909

PRE-CONSTRUCTION ACTIVITIES

- 1. The applicant or designated agent will post educational posters in the construction office and throughout the construction site, including any access roads. The posters must be clearly visible to all construction staff. A sample poster is attached.
- 2. Prior to the onset of construction activities, the applicant/designated agent will conduct a meeting with all construction staff (annually for multi-year projects) to discuss identification of the snake, its protected status, what to do if a snake is observed within the project area, and applicable penalties that may be imposed if state and/or federal regulations are violated. An educational brochure including color photographs of the snake will be given to each staff member in attendance and additional copies will be provided to the construction superintendent to make available in the onsite construction office (a final brochure for Plan compliance, to be printed double-sided on 8.5" x 11" paper and then properly folded, is attached). Photos of eastern indigo snakes may be accessed on USFWS and/or FWC websites.
- 3. Construction staff will be informed that in the event that an eastern indigo snake (live or dead) is observed on the project site during construction activities, all such activities are to cease until the established procedures are implemented according to the Plan, which includes notification of the appropriate USFWS Field Office. The contact information for the USFWS is provided on the referenced posters and brochures.

DURING CONSTRUCTION ACTIVITIES

- 1. During initial site clearing activities, an onsite observer may be utilized to determine whether habitat conditions suggest a reasonable probability of an eastern indigo snake sighting (example: discovery of snake sheds, tracks, lots of refugia and cavities present in the area of clearing activities, and presence of gopher tortoises and burrows).
- 2. If an eastern indigo snake is discovered during gopher tortoise relocation activities (i.e. burrow excavation), the USFWS shall be contacted within one business day to obtain further guidance which may result in further project consultation.
- 3. Periodically during construction activities, the applicant's designated agent should visit the project area to observe the condition of the posters and Plan materials, and replace them as needed. Construction personnel should be reminded of the instructions (above) as to what is expected if any eastern indigo snakes are seen.

POST CONSTRUCTION ACTIVITIES

Whether or not eastern indigo snakes are observed during construction activities, a monitoring report should be submitted to the appropriate USFWS Field Office within 60 days of project completion. The report can be sent electronically to the appropriate USFWS e-mail address listed on page one of this Plan.





ATTENTION:

THREATENED EASTERN INDIGO SNAKES MAY BE PRESENT ON THIS SITE!!!

IF YOU SEE A LIVE EASTERN INDIGO SNAKE ON THE SITE:

- Cease clearing activities and allow the eastern indigo snake sufficient time to move away from the site without interference.
- Personnel must NOT attempt to touch or handle snake due to protected status.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Immediately notify supervisor or the applicant's designated agent, and the appropriate U.S. Fish and Wildlife Service (USFWS) office, with the location information and condition of the snake.
- If the snake is located in a vicinity where continuation of the clearing or construction activities will cause harm to the snake, the activities must halt until such time that a representative of the USFWS returns the call (within one day) with further guidance as to when activities may resume.

IF YOU SEE A DEAD EASTERN INDIGO SNAKE ON THE SITE:

- Cease clearing activities and immediately notify supervisor or the applicant's designated agent, **and** the appropriate USFWS office, with the location information and condition of the snake.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Thoroughly soak the dead snake in water and then freeze the specimen. The appropriate wildlife agency will retrieve the dead snake.

USFWS Florida Field Offices to be contacted if a live or dead eastern indigo snake is encountered:

North Florida Field Office – (904) 731-3336 Panama City Field Office – (850) 769-0552 South Florida Field Office – (772) 562-3909

Killing, harming, or harassing indigo snakes is strictly prohibited and punishable under State and Federal Law.

DESCRIPTION:

The eastern indigo snake is one of the largest non-venomous snakes in North America, with individuals often reaching up to 8 feet in length. They derive their name from the glossy, blue-black color of their scales above and uniformly slate blue below. Frequently, they have orange to coral reddish coloration in the throat area, yet some specimens have been reported to only have cream coloration on the throat. These snakes are not typically aggressive and will attempt to crawl away when disturbed. Though indigo snakes rarely bite, they should NOT be handled.

SIMILAR SNAKES:

The black racer is the only other solid black snake resembling the eastern indigo snake. However, black racers have a white or cream chin, thinner bodies, and WILL BITE if handled.

LIFE HISTORY:

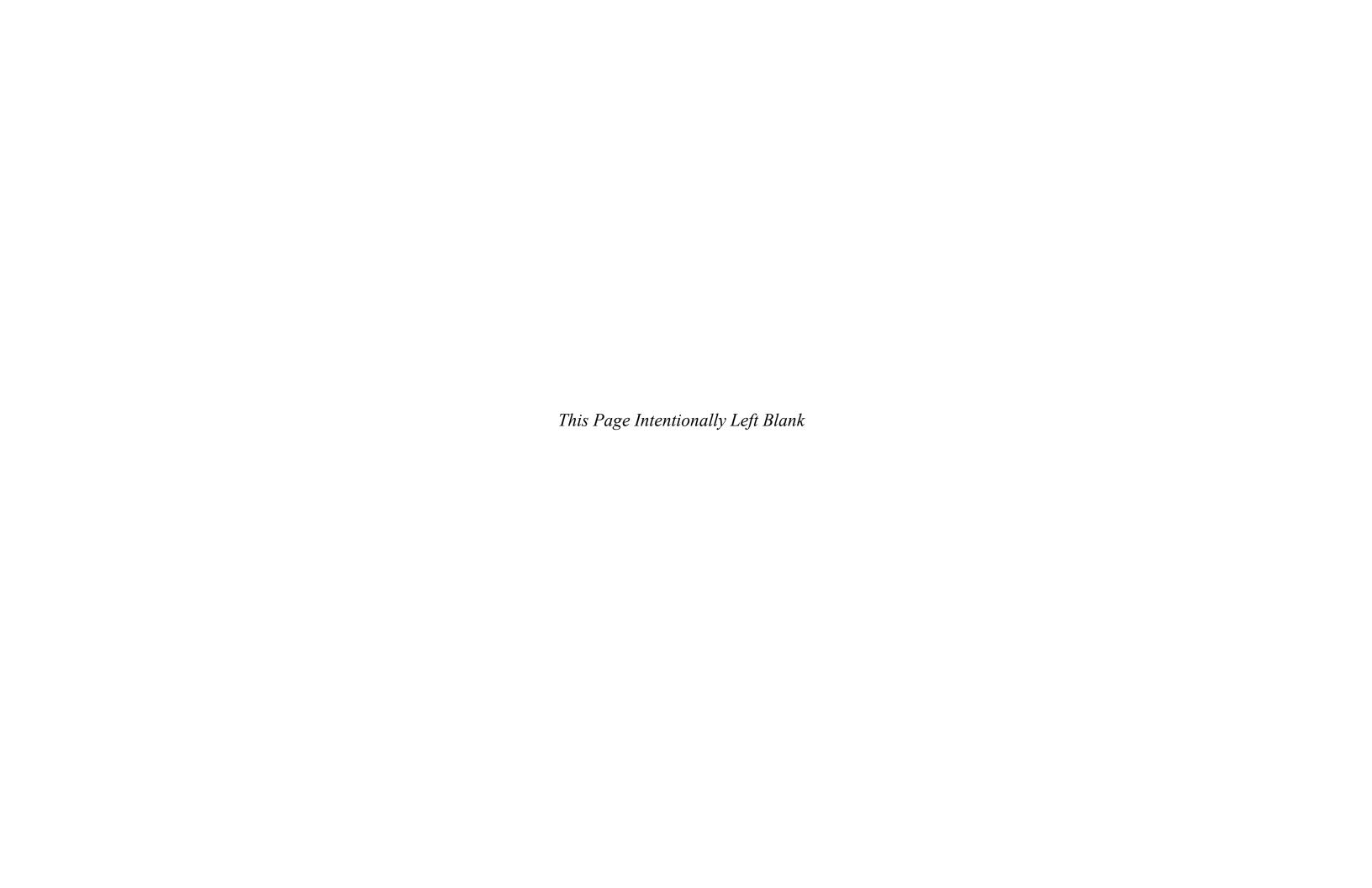
The eastern indigo snake occurs in a wide variety of terrestrial habitat types throughout Florida. Although they have a preference for uplands, they also utilize some wetlands and agricultural areas. Eastern indigo snakes will often seek shelter inside gopher tortoise burrows and other below- and aboveground refugia, such as other animal burrows, stumps, roots, and debris piles. Females may lay from 4 - 12 white eggs as early as April through June, with young hatching in late July through October.

PROTECTION:

The eastern indigo snake is classified as a Threatened species by both the USFWS and the Florida Fish and Wildlife Conservation Commission. "Taking" of eastern indigo snakes is prohibited by the Endangered Species Act without a permit. "Take" is defined by the USFWS as an attempt to kill, harm, harass, pursue, hunt, shoot, wound, trap, capture, collect, or engage in any such conduct. Penalties include a maximum fine of \$25,000 for civil violations and up to \$50,000 and/or imprisonment for criminal offenses, if convicted.

Only individuals currently authorized through an issued Incidental Take Statement in association with a USFWS Biological Opinion, or by a Section 10(a)(1)(A) permit issued by the USFWS, to handle an eastern indigo snake are allowed to do so.

August 12, 2013



IF YOU SEE A <u>LIVE</u> EASTERN INDIGO SNAKE ON THE SITE:

- Cease clearing activities and allow the eastern indigo snake sufficient time to move away from the site without interference.
- Personnel must NOT attempt to touch or handle snake due to protected status.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Immediately notify supervisor or the applicant's designated agent, and the appropriate U.S. Fish and Wildlife Service (USFWS) office, with the location information and condition of the snake.
- If the snake is located in a vicinity where continuation of the clearing or construction activities will cause harm to the snake, the activities must halt until such time that a representative of the USFWS returns the call (within one day) with further guidance as to when activities may resume.

IF YOU SEE A <u>DEAD</u> EASTERN INDIGO SNAKE ON THE SITE:

- Cease clearing activities and immediately notify supervisor or the applicant's designated agent, and the appropriate USFWS office, with the location information and condition of the snake.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Thoroughly soak the dead snake in water and then freeze the specimen.
 The appropriate wildlife agency will retrieve the dead snake.

USFWS Florida Field Offices to be contacted if a live or dead eastern indigo snake is encountered:

North Florida ES Office – (904) 731-3336 Panama City ES Office – (850) 769-0552 South Florida ES Office – (772) 562-3909 DESCRIPTION: The eastern indigo snake is one of the largest non-venomous snakes in North America, with individuals often reaching up to 8 feet in length. They derive their name from the glossy, blue-black color of their scales above and uniformly slate blue below. Frequently, they have orange to coral reddish coloration in the throat area, yet some specimens have been reported to only have cream coloration on the throat. These snakes are not typically aggressive and will attempt to crawl away when disturbed. Though indigo snakes rarely bite, they should NOT be handled.

SIMILAR SNAKES: The black racer is the only other solid black snake resembling the eastern indigo snake. However, black racers have a white or cream chin, thinner bodies, and WILL BITE if handled.

LIFE HISTORY: The eastern indigo snake occurs in a wide variety of terrestrial habitat types throughout Florida. Although they have a preference for uplands, they also utilize some wetlands and agricultural areas. Eastern indigo snakes will often seek shelter inside gopher tortoise burrows and other below- and aboveground refugia, such as other animal burrows, stumps, roots, and debris piles. Females may lay from 4 - 12 white eggs as early as April through June, with young hatching in late July through October.

Killing, harming, or harassing indigo snakes is strictly prohibited and punishable under State and Federal Law.

Only individuals currently authorized through an issued Incidental Take Statement in association with a USFWS Biological Opinion, or by a Section 10(a)(1)(A) permit issued by the USFWS, to handle an eastern indigo snake are allowed to do so.

LEGAL STATUS: The eastern indigo snake is classified as a Threatened species by both the USFWS and the Florida Fish and Wildlife Conservation Commission. "Taking" of eastern indigo snakes is prohibited by the Endangered Species Act without a permit. "Take" is defined by the USFWS as an attempt to kill, harm, harass, pursue, hunt, shoot, wound, trap, capture, collect, or engage in any such conduct. Penalties include a maximum fine of \$25,000 for civil violations and up to \$50,000 and/or imprisonment for criminal offenses, if convicted.



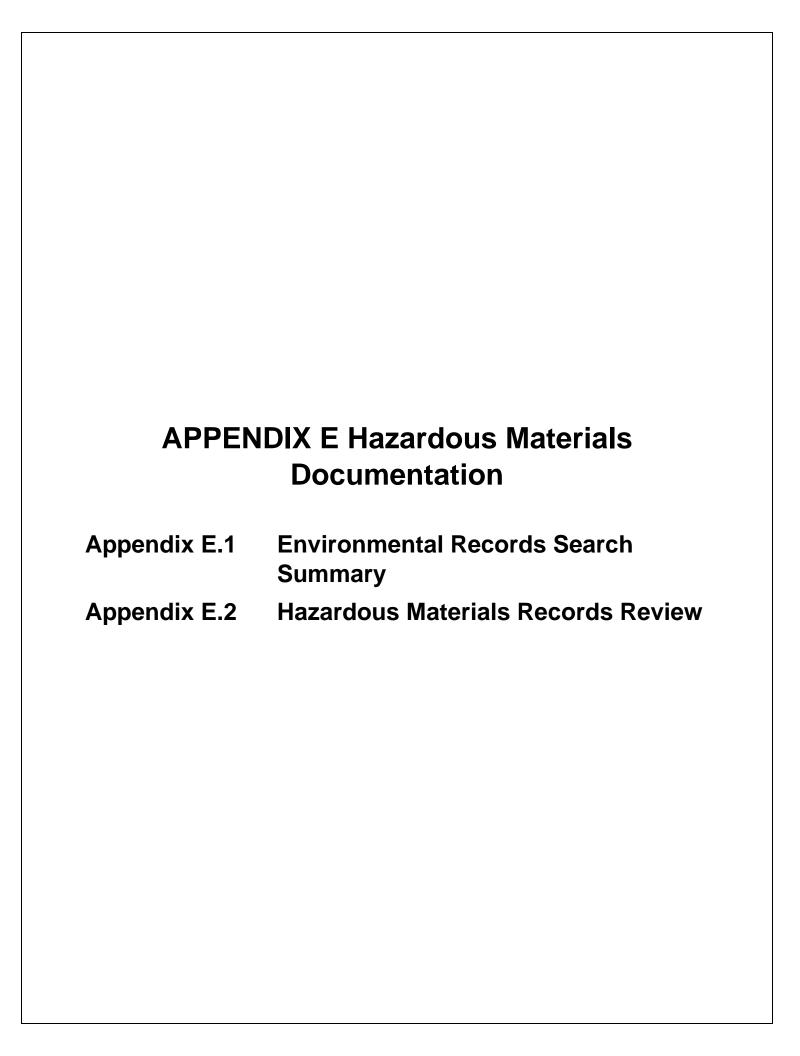
August 12, 2013

ATTENTION:

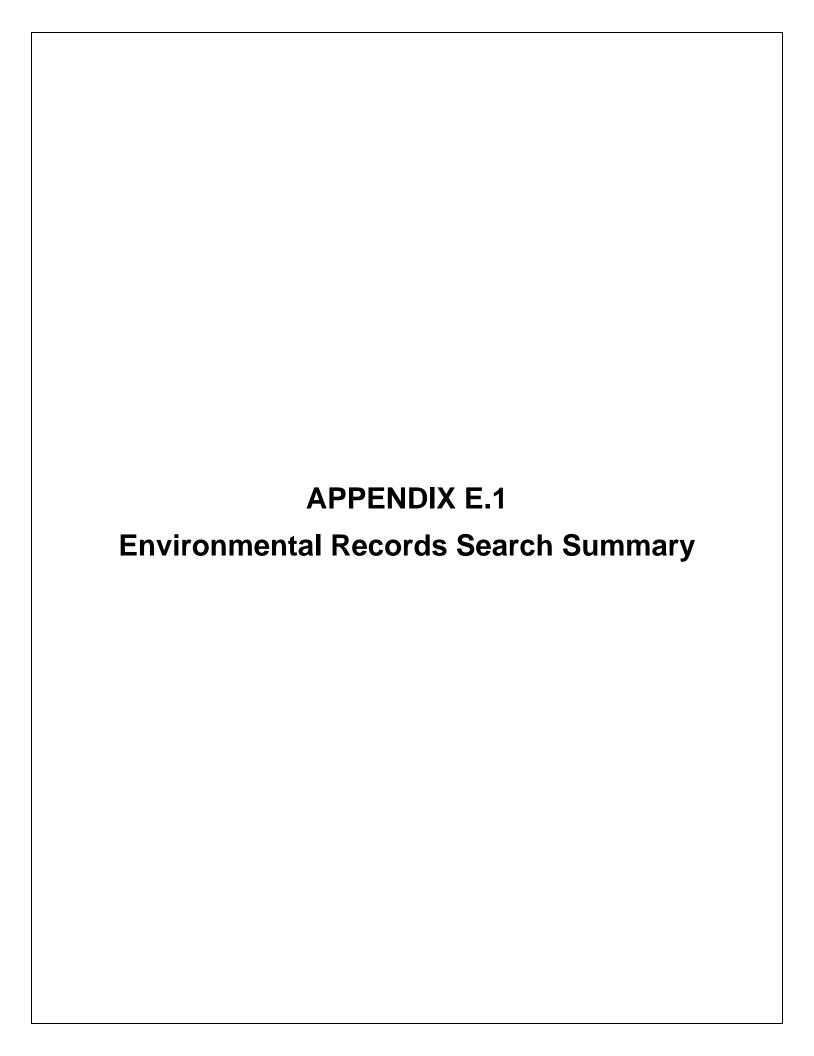
THREATENED EASTERN INDIGO SNAKES MAY BE PRESENT ON THIS SITE!!!



Please read the following information provided by the U.S. Fish and Wildlife Service to become familiar with standard protection measures for the eastern indigo snake.











LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

ENVIRONMENTAL RECORDS

Environmental Records Search Summary

Мар					
ID	Site Name	Database(s)	Description		
1	Green Tread Recycling, Inc WTPF (3810 Drane Field Road, Suite 21)	FL SWF/LF	Former waste tire processing facility. The site is inactive and has been closed since 2012-2013, with no groundwater monitoring occurring. Documentation that the warehouse (including processing equipment) was empty and all waste tires removed was received by the FDEP June 13, 2013.		
	HD Builder Solutions Group Inc #FL0075 (3810 Drane Field Road)	RCRA NonGen / NLR	Registered as a non-generator of hazardous waste under the Resource Conservation and Recovery Act (RCRA) beginning in March 2001. No violations reported.		
2	Brandis Aircraft Tom Miller Interior (3925 Aero Place)	RCRA NonGen / NLR, FINDS, ECHO	Registered as a non-generator of hazardous waste under the RCRA beginning December 23, 1999. Violations received at this facility have all been resolved.		
3	FWCC Drainage Improvements (3900 Drane Field Road)	FINDS, ECHO	Facility issued a minor Generic Permit (GP) under National Pollutant Discharge Elimination System (NPDES) for stormwater construction that expires January 31, 2024. No violations have been reported.		
4	International Paint LLC Lakeland Distribution Cent (3919 Air Park Drive Ste 1- 3)	FL TIER 2	This facility participated in Tier 2 reporting from 2017 through 2018. The latest modification was submitted February 28, 2019.		
5	Ferrera Tooling (3960 Air Park Drive)	FL NPDES	Construction Stormwater GP for an existing permitted facility/site for which effluent, reclaimed water or wastewater residual discharge into the environment and/or monitoring is taking place. Permit issued June 30, 2017 and expires June 29, 2022. No violations reported.		
6	Industrial Brush Corp (4000 Drane Field Road)	FL LUST, FL TANKS, FINDS, ECHO, FL NPDES	Facility was subject to petroleum cleanup and rehabilitation for unleaded gasoline discharge on May 17, 2007. Site cleanup and a Site Rehabilitation Completion Report were completed and closed out with FDEP on May 28, 2008. The FDEP site manager ended oversite of the effort on June 10, 2008. The cleanup work status is considered complete and the site closed. Multi-Sector Stormwater GP issued to facility for stormwater construction that expires in July 2, 2022.		
	Industrial Brush Corp (4000 Drane Field Road)	RCRA-VSQG ²	Registered as a Conditionally-Exempt Very Small Quantity Generator (VSQG) under the RCRA beginning June 5, 2007. Specific wastes generated include ignitable waste (D001). Violations reported have been resolved.		
7	Florida DMA National Guard Armory (4140 Drane Field Road)	RCRA-VSQG, FINDS, ECHO	Registered as a Conditionally-Exempt VSQG under the RCRA beginning October 18, 1996. Specific wastes generated include ignitable		

Map ID	Site Name	Database(s)	Description
			waste (D001) and corrosive waste (D002). No violations reported.
	National Guard – Lakeland Armory (4140 Drane Field Road)	FL TIER 2	This facility participated in Tier 2 reporting during the period of 2013 through 2017. The latest modification was submitted February 28, 2018.
8	Protel Inc (4150 Kidron Road)	RCRA-VSQG, FINDS, ECHO	Registered as a Conditionally-Exempt VSQG under the RCRA beginning October 18, 1996 and ending November 3, 2011. Specific wastes generated include spent halogenated solvents used in degreasing (F001). No violations reported.
9	International Beverage (3919 Kidron Road)	RCRA-VSQG	Registered as a Conditionally-Exempt VSQG under the RCRA beginning May 25, 1999. Specific wastes generated not identified. No violations reported.
10	FL Refreshment Centers (Kidron Road)	FL UST, FL AST	This site was formerly occupied by a non-retail fuel user with three tanks that were removed at unknown dates. Tank 1 was a 2000-gallon UST containing leaded gasoline. Tank 2 was a 1000-gallon UST containing vehicular diesel. Tank 3 was a 1000-gallon AST containing vehicular diesel. No violations were reported. The facility closed at an unknown date.
11	Lakeland AAF (Medulla, FL)	FUDS	Site of former Lakeland AAF, consisting of 2,640.66 acres. This property is known or suspected to contain military munitions and explosives of concern (e.g., unexploded ordnance [UXO]) and, therefore, may present an explosive hazard. Between 1942 and 1944, the U.S. acquired 2,640.66 acres for an AAF. The Lakeland AAF was developed as a sub-base of MacDill Field and utilized for flight training. The facility was developed and named the Lakeland AAF. Improvements included approximately 320 structures, runways, taxiways, roads, underground fuel storage tanks, and utility systems. The Lakeland AAF remained active until 1945 when its functions were no longer required. The site was declared surplus in November 1945, and in January 1965 and September 1966, 608.60 acres and 701.4 acres were returned to the then current owners. Currently, these two parcels are owned by the one company, various business corporations, and private individuals. The utilization on this acreage consists of a major development for private residences, commercial establishments, and light industries. The remainder of the site was conveyed to the City for reactivation of the Lakeland Municipal Airport.

Map ID	Site Name	Database(s)	Description
			The USACE, Jacksonville District, prepared an Inventory Project Report to establish this site as a FUDS under the Defense Environmental Restoration Program. An Archives Search Report for this site was prepared by the USACE, St. Louis District, in September 1993 with a recommendation of no further action.
	CWM Areas (Medulla, FL)	UXO, FUDS	Former Lakeland AAF training and maneuver area. The USACE, Jacksonville District, prepared an Inventory Project Report to establish this site as a FUDS under the Defense Environmental Restoration Program. An Archives Search Report for this site was prepared by the USACE, St. Louis District, in September 1993 with a recommendation of no further action.
	Skeet Range and Firing In- Butt (Medulla, FL)	UXO, FUDS	Former Lakeland AAF small arms range. The USACE, Jacksonville District, prepared an Inventory Project Report to establish this site as a FUDS under the Defense Environmental Restoration Program. An Archives Search Report for this site was prepared by the USACE, St. Louis District, in September 1993 with a recommendation of no further action.
	Firmenich, Inc. (4330 Drane Field Road)	RCRA-LQG³, US AIRS	Registered as an LQG under the RCRA beginning July 1, 2007. Specific wastes generated include ignitable waste (D001), corrosive waste (D002), spent halogenated solvents (F002), and spent nonhalogenated solvents (F003 and F005). The facility received several violations but all have been resolved and the facility is in compliance as of June 19, 2019. No air quality permits are associated with this facility. However, under the State Implementation Plan for national primary and secondary ambient air quality standards, compliance monitoring had been conducted on February 4, 2010, June 22,
12	Trugreen Inc (3939 Progress Drive)	RCRA-VSQG, FINDS, ECHO	2010, and June 2, 2014. Registered as a Conditionally-Exempt VSQG under the RCRA. Facility activity dates and associated wastes are unknown. No violations reported.
13	GMF Industries, Inc (4600 Drane Field Road)	RCRA-VSQG, FINDS, ECHO	Registered as a Conditionally-Exempt VSQG under the RCRA beginning March 27, 1998. The site was historically registered as a small quantity generator (SQG) beginning January 6, 1992. Specific wastes generated include ignitable waste (D001) and spent nonhalogenated solvents (F003 and F005). Violations reported have since been resolved and the facility is considered in compliance since March 20, 1998.

Мар			
ID	Site Name	Database(s)	Description
	GMF Industries, Inc (4600 Drane Field Road)	FL RESP PARTY, FL TIER 2, FL NPDES	This site is a closed Correct Action Plan (CAP)/Remedial Action Plan (RAP) site. The CAP/RAP was initiated September 15, 1997 and closed December 11, 2012. The facility participated in TIER 2 reporting at this address in 2010, 2015, and 2017. Specific chemicals reported were argon (liquified gas), nitrogen (liquified gas), carbon dioxide (liquified gas), and compressed oxygen (liquefied gas). The facility holds a multi-sector stormwater GP for an existing, permitted facility/site for which effluent, reclaimed water or wastewater residual discharge into the environment and/or monitoring is taking place. The permit was issued June 23,
14	Interstate Chemical Inc (DC Drums) (3903 Progress Road)	RCRA-SQG⁴	Currently registered as a SQG under the RCRA beginning March 2, 2018. Facility RCRA generator registration began on November 1, 1999. The facility has historically been registered as a SQG (January 5, 2006), LQG (March 4, 2011), conditionally exempt SQG (March 28, 2012), and LQG (December 7, 2017). Specific wastes generated include ignitable waste (D001), corrosive waste (D002), and spent nonhalogenated solvents (F003 and F005). Several violations have been reported at this facility related to non-compliance. However, all violations have since been resolved.
	Interstate Chemical Inc (DC Drums) (3903 Progress Road)	FL AST, FL SPILLS, FL DRYCLEANERS, FL Financial Assurance, TIER 2	Facility has three tanks in service. Tanks 1 and 2 are 20,000-gallon ASTs containing an unspecified "hazardous substance" and installed August 1, 2006. Tank 3 is a 21,000-gallon AST containing an unspecified "miscellaneous petrolbased product" and was installed August 1, 2012. A 250-gallon sodium metasilicate (corrosive pollutant) spill was reported April 9, 2007. The incident is considered closed. The facility is registered as a wholesale supplier of dry cleaning chemicals. For financial assurance purposes the facility is registered for bulk chemical storage. The facility participated in Tier 2 reporting at this address between 2015 and 2018. Specific chemicals are not reported. The facility holds a Stormwater No Exposure Certification for a permitted facility/site for which effluent, reclaimed water or wastewater residual discharge into the environment and/or monitoring

Map ID	Site Name	Database(s)	Description
			is taking place. No treatment is currently required. The permit was issued February 10, 2017 and expires February 9, 2022.
15	Nations Rent #97 (4710 Drane Field Road)	FL AST	Facility was registered as a non-retail fuel user beginning on June1, 1999 and was closed on March 1, 2001. The site features a 3000-gallon vehicular diesel AST that is closed in place.
16	Connected Power Phosphate Services (4783 Drane Field Road Ste 105)	RCRA NonGen / NLR	Current operator is registered as a non-generator under the RCRA beginning November 20, 2014. The previous operator was registered as a non-generator beginning January 1, 2005, with no registered closing date. No violations reported.

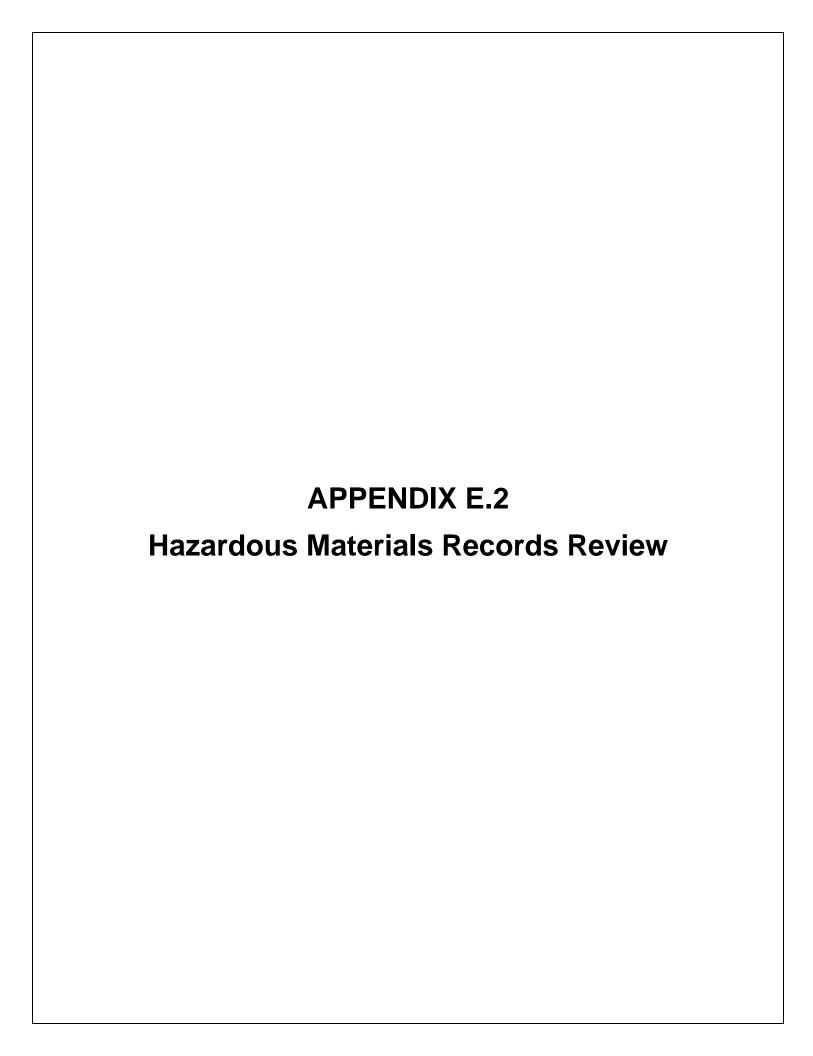
Source: EDR, 2020;

Notes: individual databases as noted. Records in red occur directly in the DSA or within 150 feet of the DSA.

AST = aboveground storage tank; ECHO = Enforcement and Compliance History Online; FINDS = Facility Index Data System; FUDS = Formerly Used Defense Sites; LQG = large quantity generator; LUST = Leaking Underground Storage Tanks; NLR = No Longer Regulated; RESP = Responsible Party; SWF/LF = Solid Waste and Landfilling Facilities; US AIRS = Aerometric Information Retrieval System; UST = Underground Storage Tanks.

¹ A non-generator status signifies that hazardous waste not currently generated by the facility.

- ² A VSQG generates 100 kilogram (kg) or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any and or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste.
- ³ A LQG generates more than 1,000 kg of hazardous waste, more than 1 kg of acute hazardous waste, or more than 100 kg of acute spill residue or soil during any calendar month or accumulates more than 6,000 kg of hazardous waste.
- ⁴ A SQG generates more than 100 and less than 1,000 kg of hazardous waste during any calendar month and accumulates less than 6,000 kg of hazardous waste at any time, or generates 100 kg or less of hazardous waste during any calendar month and accumulates more than 1,000 kg of hazardous waste at any time.





Lakeland Linder Intl Airport 3900 Don Emerson Dr

Lakeland, FL 33811

Inquiry Number: 5953258.2s

January 29, 2020

The EDR Radius Map™ Report with GeoCheck®



6 Armstrong Road, 4th floor Shelton, CT 06484 Toll Free: 800.352.0050 www.edrnet.com



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Thank you for your business.Please contact EDR at 1-800-352-0050 with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

3900 DON EMERSON DR LAKELAND, FL 33811

COORDINATES

Latitude (North): 27.9945170 - 27° 59' 40.26" Longitude (West): 82.0143140 - 82° 0' 51.53"

Universal Tranverse Mercator: Zone 17 UTM X (Meters): 400260.2 UTM Y (Meters): 3096837.8

Elevation: 136 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: 5676054 NICHOLS, FL

Version Date: 2012

Northeast Map: 5652798 LAKELAND, FL

Version Date: 2012

Southeast Map: 5653572 MULBERRY, FL

Version Date: 2012

Northwest Map: 5653826 PLANT CITY EAST, FL

Version Date: 2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from: 20150816 Source: USDA

MAPPED SITES SUMMARY

Target Property Address: 3900 DON EMERSON DR LAKELAND, FL 33811

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS		RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	LAL N APRON REHABILI	3900 DON EMERSON DR	FINDS, ECHO	LLLVATION	TP
A2	LAKELAND LINDER REGI	3900 DON EMERSON DR	FINDS, ECHO		TP
A3	REHABILITATE TAXIWAY	3900 DON EMERSON DR	FINDS, ECHO		TP
A4	PIEDMONT HAWTHORNE A	3900 DON EMERSON DR	FL AST		TP
A5	LAKELAND LINDER REG	3900 DON EMERSON DR	FL NPDES		TP
A6	LAKELAND LINDER REGI	3900 DON EMERSON DR	RCRA-SQG, FINDS, ECHO		TP
A7	RUNWAY 27 & TAXIWAY	3900 DON EMERSON DR	FINDS, ECHO		TP
A8	NEW FUEL FARM @ LAKE	3900 DON EMERSON DR	FINDS, ECHO		TP
A9	ENGLISH OAKS FORCE M	3900 DON EMERSON DR	FINDS, ECHO		TP
A10	LAKELAND LINDER REG	3900 DON EMERSON DR	FINDS		TP
A11	SW APRON RECONSTRUCT	3900 DON EMERSON DR	FINDS, ECHO		TP
A12	TAXIWAY B EXTENSION	3900 DON EMERSON DR	FINDS, ECHO		TP
A13		LAKELAND LENDER AIRP	FL SPILLS		TP
A14	LANDMARK AVIATION -	3900 DON EMERSON DRI	FL TIER 2		TP
A15		3900 DON EMERSON DRI	FL SPILLS		TP
A16	LAKELAND LINDER REGI	3900 DON EMERSON DR	FINDS, ECHO		TP
A17	KTTW HANGAR AT LAKEL	3900 DON EMERSON DR	FINDS, ECHO		TP
A18	LAKELAND LINDER REGI	3900 DON EMERSON DR	FL NPDES		TP
A19	LAKELAND LINDER INTE	3900 DON EMERSON DR	FL UST, FL AST, FL Financial Assurance, FL NPDES		TP
A20	SHELTAIR -LAKELAND J	3900 DON EMERSON DR	FL AST		TP
A21	LAKELAND LINDER INTE	3900 DON EMERSON DR,	FL AIRS		TP
A22	TSA AT LAKELAND LIND	3900 DON EMERSON DR	RCRA NonGen / NLR		TP
A23	LAKELAND LINDER REG	3900 DON EMERSON DR	FINDS, ECHO		TP
A24	FWCC DRAINAGE IMPROV	3900 DRANE FIELD RD	FL SPILLS, FL NPDES	Higher	70, 0.013, SW
25	COLUMBIA AIR -3320 A	3320 AIRFIELD DR E	FINDS, ECHO	Higher	316, 0.060, East
B26	STAYBRIDGE SUITES -	3855 DON EMERSON DR	FINDS, ECHO	Higher	569, 0.108, North
B27	STAYBRIDGE SUITES -	3855 DON EMERSON DR	FL NPDES	Higher	569, 0.108, North
C28	LAKELAND LINDER REGI	3450 DRANE FIELD RD	FL LUST, FL TANKS	Higher	885, 0.168, NNW
C29	LAKELAND ARMY AIRFIE	3450 DRANE FIELD RD	FL TANKS	Higher	885, 0.168, NNW
C30	LAKELAND ARMY AIRFIE	3450 DRANE FIELD RD	FL RGA LUST	Higher	885, 0.168, NNW
C31	LAKELAND ARMY AIRFIE	3450 DRANE FIELD RD	FL RGA LUST	Higher	885, 0.168, NNW
C32	LAKELAND ARMY AIRFIE	3450 DRANE FIELD RD	FL TANKS	Higher	885, 0.168, NNW
C33	LAKELAND LINDER REGI	3450 DRANE FIELD RD	FL RGA LUST	Higher	885, 0.168, NNW
C34	LAKELAND CITY-LINDER	3450 DRANE FIELD RD	FL LUST, FL UST, FL CLEANUP SITES, FL DWM CONTA	M Higher	885, 0.168, NNW
35	NO TORO AIRCRAFT INC	3240 AIRFIELD DR E #	RCRA NonGen / NLR, RAATS, FINDS, ECHO	Higher	979, 0.185, ENE
C36	LAKELAND CITY-HANGAR	3470 DRANE FIELD RD	FL LUST, FL UST	Lower	999, 0.189, NW
C37	LAKELAND MUNICIPAL A	3470 DRANE FIELD RD	FL LUST, FL UST, FL AST, FL CLEANUP SITES, FL DWM	I Lower	999, 0.189, NW
C38	LAKELAND CITY-HANGAR	3470 DRANE FIELD RD	FL RGA LUST	Lower	999, 0.189, NW
C39	LAKELAND MUNICIPAL A	3470 DRANE FIELD RD	FL RGA LUST	Lower	999, 0.189, NW

Target Property Address: 3900 DON EMERSON DR LAKELAND, FL 33811

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
C40	PUBLIX CORPORATE OFF	DRANE FIELD RD	FL LUST, FL TANKS	Higher	1089, 0.206, NNW
D41	FEDEX NATIONAL - AVI	3840 AIRFIELD COURT	FL TIER 2	Higher	1161, 0.220, East
D42	WATKINS MOTOR LINES	3840 AIRFIELD COURT	FINDS, ECHO	Higher	1161, 0.220, East
E43	RENNA ENTERPRISES	3231 DRANE FIELD RD	FL LUST, FL UST	Higher	1172, 0.222, NE
E44	RENNA ENTERPRISES	3231 DRANE FIELD RD	FL RGA LUST	Higher	1172, 0.222, NE
45	GLOBE AERO LIMITED I	3240 DRANE FIELD RD	FL CLEANUP SITES, FL RESP PARTY	Higher	1301, 0.246, NE
E46	KROON ENTERPRIES	3711 CENTURY BLVD	FINDS, ECHO	Higher	1377, 0.261, NE
F47	LAKELAND LINDER AIRP	3830 AIRFIELD CT W	FINDS, ECHO	Lower	1404, 0.266, WNW
G48	CIRCLE K #2707553	3730 AIRPORT RD	FL LUST, FL UST, FL Financial Assurance	Lower	1414, 0.268, NW
G49	CIRCLE K #2707553	3730 AIRPORT RD	FL RGA LUST	Lower	1414, 0.268, NW
G50	CIRCLE K STORES INC	3730 AIRPORT RD	EDR Hist Auto	Lower	1414, 0.268, NW
G51	A-1 DIESEL REPAIR IN	3718 DMG DR	FL AST	Lower	1441, 0.273, NW
F52	PUBLIX SUPER MARKETS	3795 AIRFIELD DRIVE	FL TIER 2	Lower	1449, 0.274, WNW
F53	PUBLIX CORPORATE AIR	3795 AIRFIELD DR W	FL AST	Lower	1449, 0.274, WNW
F54	PUBLIX CORPORATE AIR	3795 AIRFIELD DR W	FL Financial Assurance	Lower	1449, 0.274, WNW
F55	NATIONAL FLIGHT SERV	3480 AIRFIELD DR W	RCRA-VSQG, FINDS, ECHO	Lower	1475, 0.279, WNW
F56	9805363	3440 AIRFIELD DRIVE	FL TIER 2	Lower	1488, 0.282, WNW
F57	FLIGHT LEVEL AVIATIO	3440 AIRFIELD DR W	FL CLEANUP SITES, FL DWM CONTAM, FL TIER 2	Lower	1488, 0.282, WNW
F58	FLIGHT LEVEL AVIATIO	3440 AIRFIELD DR W	FL LUST, FL UST	Lower	1488, 0.282, WNW
F59	9046828	3440 AIRFIELD DRIVE	FL TIER 2	Lower	1488, 0.282, WNW
F60	FLIGHTLEVEL AVIATION	3440 AIRFIELD DRIVE	ECHO	Lower	1488, 0.282, WNW
F61	FLIGHTLEVEL AVIATION	3440 AIRFIELD DRIVE	FINDS	Lower	1488, 0.282, WNW
F62	LAKELAND LINDER REG	3400 AIRFIELD DRIVE	FINDS, ECHO	Lower	1500, 0.284, WNW
G63	SHELTAIR-LAKELAND JE	3600 DRANE FIELD RD	FL AST, FL Financial Assurance	Lower	1510, 0.286, WNW
G64	FLORIDA DMA FLARNG A	3600 DRANE FIELD RD	RCRA NonGen / NLR, FINDS, ECHO	Lower	1510, 0.286, WNW
G65	LAKELAND AIR SRVC IN	3600 DRANEFIELD RD	FL TANKS	Lower	1510, 0.286, WNW
H66	B & M CONSTRUCTION C	3706 DMG DR	RCRA-VSQG	Lower	1568, 0.297, NNW
H67	B & M CONSTRUCTION C	3706 DMG DR	FINDS, ECHO	Lower	1568, 0.297, NNW
168		3633 CENTURY BLVD.	FL SPILLS	Higher	1576, 0.298, NE
J69	US ARMY-AIRFIELD	3610 DRANE FIELD RD	FL LUST, FL CLEANUP SITES, FL DWM CONTAM	Lower	1580, 0.299, WNW
J70	CHAD GUNTER	3610 DRANE FIELD RD	FINDS	Lower	1580, 0.299, WNW
J71	US ARMY-AIRFIELD	3610 DRANE FIELD RD	FL UST	Lower	1580, 0.299, WNW
J72	DENNIS TOWNSEL, JR	3610 DRANE FIELD RD	FINDS	Lower	1580, 0.299, WNW
J73	US ARMY-AIRFIELD	3610 DRANE FIELD RD	FL RGA LUST	Lower	1580, 0.299, WNW
J74	US ARMY-AIRFIELD	3610 DRANE FIELD RD	FL SPILLS 90	Lower	1580, 0.299, WNW
J75	IMPROVEMENTS TO SR 5	DRANE FIELD AND AIRP	FINDS, ECHO	Lower	1588, 0.301, WNW
K76	CITY OF LAKELAND- FI	3150 DRANE FIELD RD	FINDS, ECHO	Higher	1660, 0.314, ENE
177	WILKERSON INSTRUMENT	3615 CENTURY BLVD	RCRA NonGen / NLR, FINDS, ECHO	Higher	1688, 0.320, NNE
K78	NEW CINGULAR WIRELES	3135 DRANE FIELD RD	FL TIER 2	Higher	1768, 0.335, ENE

Target Property Address: 3900 DON EMERSON DR LAKELAND, FL 33811

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
K79	NATURAL ADVANTAGE LL	3135 DRANE FIELD RD	RCRA-LQG, FINDS, ECHO	Higher	1768, 0.335, ENE
K80	TASTE ADVANTAGE - LA	3135 DRANE FIELD ROA	FL TIER 2	Higher	1768, 0.335, ENE
K81	NATURAL ADVANTAGE -	3135 DRANE FIELD ROA	FL TIER 2	Higher	1768, 0.335, ENE
K82	LAKELAND WAREHOUSE -	3135 DRANE FIELD RD	FL SPILLS, FL TIER 2, FL NPDES	Higher	1768, 0.335, ENE
K83		3135 DRANEFIELD ROAD	ERNS	Higher	1768, 0.335, ENE
K84	OMNIA INCORPORTATED	3125 DRANE FIELD ROA	FINDS	Higher	1801, 0.341, ENE
K85		3115 DRANE FIELD RD	ERNS	Higher	1841, 0.349, ENE
K86		3115 DRANE FIELD ROA	FL SPILLS	Higher	1841, 0.349, ENE
L87	FL AIRCRAFT TIRE	3604 E CENTURY BLVD	FL SWF/LF	Higher	1919, 0.363, NNE
L88	GOLD EAGLE ENTERPRIS	3604 CENTURY BLVD ST	RCRA NonGen / NLR	Higher	1919, 0.363, NNE
L89	GOLD EAGLE ENTERPRIS	3604 CENTURY BLVD ST	FINDS, ECHO	Higher	1919, 0.363, NNE
L90	CUSTOM CONTROLS & PU	3604 CENTURY BLVD. (FINDS	Higher	1919, 0.363, NNE
M91	JC MACHINE INC	3620 AIRPORT RD	RCRA-SQG	Lower	1938, 0.367, NW
M92	QUALITY AEROSPACE CO	3620 AIRPORT ROAD	FINDS, ECHO	Lower	1938, 0.367, NW
N93	GMF IND INC	3517 CENTURY BLVD	RCRA-VSQG, FINDS, ECHO	Higher	1985, 0.376, NNE
N94	GMF IND INC	3517 CENTURY BLVD	RCRA NonGen / NLR	Higher	1985, 0.376, NNE
O95	CYPRESS AVIATION INC	3636 DRANE FIELD ROA	RCRA NonGen / NLR, RAATS, ICIS, FINDS, ECHO	Lower	2018, 0.382, WNW
O96	CYPRESS AVIATION INC	3636 DRANE FIELD ROA	FL RESP PARTY	Lower	2018, 0.382, WNW
M97	QUALITY AEROSPACE CO	3610 AIRPORT RD	RCRA-SQG	Lower	2020, 0.383, NW
M98	QUALITY AEROSPACE CO	3610 AIRPORT RD	FINDS, ECHO	Lower	2020, 0.383, NW
P99	QUALITY AEROSPACE CO	3536 DMG DRIVE	RCRA NonGen / NLR	Lower	2097, 0.397, NNW
P100		3536 DMG DRIVE	FL SPILLS	Lower	2097, 0.397, NNW
P101	QUALITY AEROSPACE CO	3536 DMG DRIVE	FINDS, ECHO	Lower	2097, 0.397, NNW
102	AIRPORT HANGER	DRANEFIELD ROAD WITH	FINDS, ECHO	Lower	2111, 0.400, West
N103	BELL CHEMICAL	3511 CENTURY BOULEVA	SEMS-ARCHIVE	Higher	2156, 0.408, NNE
N104	BELL CHEMICAL CO	3511 CENTURY BLVD	FINDS, ECHO	Higher	2156, 0.408, NNE
Q105	KINGS & QUEENS CABIN	3512 CENTURY BLVD	RCRA-VSQG, FINDS, ECHO	Higher	2251, 0.426, NNE
Q106	COMMON GROUND ENVIRO	3504 CENTURY BLVD #4	FL SWF/LF	Higher	2256, 0.427, NNE
107	CONE CONSTRUCTORS IN	3425 AIRPORT RD	FL AST	Lower	2312, 0.438, NW
R108	MAURICES AUTO BODY I	3025A DRANE FIELD RD	RCRA-VSQG, ICIS, FINDS, ECHO	Higher	2762, 0.523, ENE
R109	MAURICES AUTO BODY I	3025A DRANE FIELD RD	RCRA-VSQG	Higher	2762, 0.523, ENE
110	AIRPORT COMMERCE PAR	JONES INDUSTRIAL DR	FINDS, ECHO	Lower	2766, 0.524, WNW
S111	PHOSPHATE ENGINEERIN	2940 DRANE FIELD RD	FL RESP PARTY	Higher	2780, 0.527, ENE
S112	CONSERVE CHEMICALS	2940 DRANE FIELD RD	FINDS, ECHO	Higher	2780, 0.527, ENE
S113	PHOSPHATE ENGINEERIN	2940 DRANE FIELD RD	RCRA-SQG	Higher	2780, 0.527, ENE
S114	PHOSPHATE ENGINEERIN	2940 DRANE FIELD RD	RCRA-VSQG, FINDS, ECHO	Higher	2780, 0.527, ENE
S115	DIXIE SIGNS INC	2930 DRANE FIELD RD	RCRA-VSQG, FINDS, ECHO	Higher	2782, 0.527, East
T116	FABWELL	2934 PARKWAY ST	RCRA NonGen / NLR	Higher	2911, 0.551, East
T117	FABWELL	2934 PARKWAY ST	FINDS, ECHO	Higher	2911, 0.551, East

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MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
T118	REESE CITRUS INSULAT	2940 PKWY CT	SSTS	Higher	2914, 0.552, East
T119	REESE CITRUS INSULAT	5888 LAKE VICTORIA P	SSTS	Higher	2914, 0.552, East
T120	NEW MANUFACTURING FA	2940 PARKWAY ST	FINDS, ECHO	Higher	2914, 0.552, East
T121	REESE CITRUS INSULAT	2940 PKY ST	SSTS	Higher	2914, 0.552, East
T122	REESE CITRUS INSULAT	2940 PARKWAY STREET	FINDS	Higher	2914, 0.552, East
T123	REESE CITRUS INSULAT	2940 PARKWAY ST	SSTS	Higher	2914, 0.552, East
T124	FLORIDA PROCESSING M	2920 PARKWAY ST	FINDS, ECHO	Higher	2969, 0.562, East
T125	FLORIDA PROCESSING M	2920 PARKWAY ST	RCRA NonGen / NLR	Higher	2969, 0.562, East
U126	POPS PAINTING INC	3805 DRANE FIELD RD	RCRA-LQG	Lower	2997, 0.568, WNW
U127	POP'S PAINTING, INC.	3805 DRANE FIELD RD	FINDS, ECHO	Lower	2997, 0.568, WNW
U128	POP'S PAINTING, INC.	3805 DRANE FIELD ROA	FL AIRS, FL Financial Assurance, FL TIER 2, FL	Lower	2997, 0.568, WNW
U129	POP'S PAINTING, INC.	3805 DRANE FIELD ROA	FL TIER 2	Lower	2997, 0.568, WNW
U130	POPS PAINTING	3805 DRANE FIELD ROA	FL TIER 2	Lower	2997, 0.568, WNW
U131	POPS PAINTING INC	3805 DRANE FIELD RD	FL AST	Lower	2997, 0.568, WNW
132	PIPER AIRCRAFT CORPO	3000 MEDULLA RD	CORRACTS, RCRA NonGen / NLR, FINDS, ECHO	Lower	3003, 0.569, WSW
U133	TAMPA TANK & WELDING	5205 ADAMO DR	RCRA-SQG, ICIS, US AIRS	Lower	3019, 0.572, WNW
134	ROBERTS FLYING SERVI	LAKELAND MUNICIPAL A	FL UST	Lower	3026, 0.573, SW
V135	HD BUILDER SOLUTIONS	3810 DRANE FIELD RD	FINDS, ECHO	Lower	3143, 0.595, West
V136	GREEN TREAD RECYCLIN	3810 DRANE FIELD ROA	FL SWF/LF	Lower	3143, 0.595, West
V137	3810 DRANEFIELD ROAD	3810 DRANEFIELD ROAD	FINDS, ECHO	Lower	3143, 0.595, West
V138	HD BUILDER SOLUTIONS	3810 DRANE FIELD RD	RCRA NonGen / NLR	Lower	3143, 0.595, West
W139	TRI W RENTAL	2910 DRANE FIELD RD	FL AST	Higher	3214, 0.609, ENE
W140	RENTAL SERVICE CORPO	2910 DRANE FIELD RD	RCRA NonGen / NLR, FINDS, ECHO	Higher	3214, 0.609, ENE
X141	MGL ENGINEERING INC	2830 PKWY ST #2	RCRA-VSQG, FINDS, ECHO	Higher	3219, 0.610, East
X142	OES ENVIRONMENTAL	2830 PKWY ST SUITE 1	RCRA NonGen / NLR, FINDS, ECHO	Higher	3219, 0.610, East
Y143	ECLIPSE CONSTRUCTION	2930 PARKWAY ST	FINDS, ECHO	Higher	3249, 0.615, ESE
Y144	PARKWAY CENTER	2930 PARKWAY ST	FINDS, ECHO	Higher	3249, 0.615, ESE
Y145	ECLIPSE CONSTRUCTION	2930 PARKWAY ST	RCRA-VSQG	Higher	3249, 0.615, ESE
X146	SCHWAN'S HOME SERVIC	2905 PARKWAY STREET	FL TIER 2	Higher	3322, 0.629, East
X147	SCHWANS SALES ENTERP	2905 PARKWAY STREET	FL TIER 2	Higher	3322, 0.629, East
148	POPS' PAINTING, INC.	UNKNOWN	FINDS, ECHO	Lower	3395, 0.643, WNW
149	BRANDIS AIRCRAFT TOM	3925 AERO PL	RCRA NonGen / NLR, FINDS, ECHO	Lower	3427, 0.649, West
150	FWCC DRAINAGE IMPROV	3900 DRANE FIELD RD	FINDS, ECHO	Lower	3456, 0.655, WNW
Z151	PUBLIX SUPER MARKETS	3300 PUBLIX CORPORAT	RCRA NonGen / NLR	Higher	3512, 0.665, North
Z152	PUBLIX SUPER MARKETS	3300 PUBLIX CORPORAT	FINDS, ECHO	Higher	3512, 0.665, North
153	WALGREENS #13824	UNKNOWN	FINDS, ECHO	Higher	3562, 0.675, NE
AA154	MGL ENGINEERING INC	2818 PARKWAY ST	FINDS, ECHO	Higher	3613, 0.684, East
AB155	RUTHVEN PARKWAY CENT	2825 DRANE FIELD RD	FINDS, ECHO	Higher	3632, 0.688, ENE
AB156	RUTHVEN PARKWAY CENT	2825 DRANE FIELD RD	FL NPDES	Higher	3632, 0.688, ENE

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MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
157	CARILLON PLACE	CARILLON BLVD	FINDS, ECHO	Lower	3713, 0.703, NNW
AA158	QUALITY AEROSPACE CO	2810 PARKWAY ST	FINDS, ECHO	Higher	3811, 0.722, East
AA159	QUALITY AEROSPACE CO	2810 PARKWAY ST	RCRA NonGen / NLR	Higher	3811, 0.722, East
AA160	QUALITY POT METAL WO	2810 PKWY ST #5	FINDS, ECHO	Higher	3811, 0.722, East
161	RUTHVEN REAL ESTATE	3965 AERO PLACE	FINDS, ECHO	Lower	3841, 0.727, West
162	SOUTHERN CROSS FIBER	2805 BABGER RD	RCRA NonGen / NLR, FINDS, ECHO	Higher	3920, 0.742, ESE
AC163	ROBINSON FANS FLORID	3955 DRANE FIELD ROA	FL TIER 2, FL NPDES	Lower	3921, 0.743, WNW
AC164	ROBINSON FANS, INC.	3955 DRANE FIELD ROA	FINDS	Lower	3921, 0.743, WNW
AC165	ROBINSON FANS INC	3955 DRANE FIELD RD	RCRA-VSQG	Lower	3921, 0.743, WNW
AC166	ROBINSON FANS INC	3955 DRANEFIELD RD	FINDS, ECHO	Lower	3921, 0.743, WNW
AC167	ROBINSON FANS 2008 W	3955 DRANE FIELD RD	FINDS, ECHO	Lower	3921, 0.743, WNW
168	REALIGNMENT OF TAXIW	UNKNOWN	FINDS, ECHO	Higher	4028, 0.763, ESE
AD169	VERIZON - WARING PAR	2721 PARKWAY STREET	FL TIER 2	Higher	4054, 0.768, East
AD170	VERIZON WARING PARK	2721 PARKWAY ST.	FL TIER 2	Higher	4054, 0.768, East
AD171	WARING PARK RSU (FTR	2721 PARKWAY ST.	FL TIER 2	Higher	4054, 0.768, East
AD172	FRONTIER WARING INDU	2721 PARKWAY ST	FL TIER 2	Higher	4054, 0.768, East
AE173	RUTHVEN REAL ESTATE	3910 AIR PARK DR	FINDS, ECHO	Lower	4080, 0.773, West
AD174	B H BUNN CO	2730 DRANE FIELD RD	RCRA-VSQG, FINDS, ECHO	Higher	4080, 0.773, East
AC175	LAKELAND PARK	DRANE FIELD RD. /AIR	FINDS, ECHO	Lower	4139, 0.784, West
AE176	INTERNATIONAL PAINT	3919 AIR PARK DRIVE	FL TIER 2	Lower	4164, 0.789, West
AF177	SPECIALTY MAINTENANC	4015 DRANE FIELD RD	RCRA-SQG	Lower	4219, 0.799, WNW
AF178	SPECIALTY FABRICATIO	4015 DRANE FIELD RD	FL AIRS, FL TIER 2, FL NPDES	Lower	4219, 0.799, WNW
AF179	SPECIALTY MAINT & CO	4015 DRANEFIELD RD	FINDS, ECHO	Lower	4219, 0.799, WNW
AF180	METAL-TEK, INC.	4015 DRANE FIELD RD.	FINDS	Lower	4219, 0.799, WNW
AG181	FERRERA TOOLING	3960 AIR PARK DR	FL NPDES	Lower	4234, 0.802, West
AG182	FERRERA TOOLING	3960 AIR PARK DR	FINDS, ECHO	Lower	4234, 0.802, West
AH183	GLOBE FIBERGLASS LTD	4033 HOLDEN RD	RCRA NonGen / NLR, FINDS, ECHO	Higher	4356, 0.825, East
AH184	GLOBE FIBERGLASS	4033 HOLDEN ROAD	FL TIER 2	Higher	4356, 0.825, East
185		3912 HOLDEN ROAD	FL SPILLS	Higher	4388, 0.831, East
AI186	INDUSTRIAL BRUSH COR	4000 DRANE FIELD RD	FL RGA LUST	Lower	4436, 0.840, West
AI187	INDUSTRIAL BRUSH COR	400 DRANE FIELD RD	FL LUST, FL TANKS, FINDS, ECHO, FL NPDES	Lower	4436, 0.840, West
AI188	INDUSTRIAL BRUSH COR	4000 DRANE FIELD RD	RCRA-VSQG	Lower	4436, 0.840, West
AI189	INDUSTRIAL BRUSH COR	4000 DRANE FIELD RD	FINDS, ECHO	Lower	4436, 0.840, West
190	CHEMSTATION OF FLORI	4410 HOLDEN RD	FL TIER 2	Lower	4486, 0.850, SE
AJ191	FLORIDA MODIFICATION	3430 FLIGHTLINE DR	RCRA-VSQG, FINDS, ECHO	Lower	4551, 0.862, South
AJ192	CYPRESS AVIATION INC	3450 FLIGHTLINE DR	RCRA-VSQG, FINDS, ECHO	Lower	4554, 0.863, South
AK193	MAX TORQUE LLC	3360 FLIGHTLINE DR	RCRA-SQG	Lower	4560, 0.864, South
AK194	MAX TORQUE LLC	3360 FLIGHTLINE DR	FINDS, ECHO	Lower	4560, 0.864, South
AK195	KIDRON INC	3330 FLIGHTLINE DR	RCRA NonGen / NLR	Lower	4618, 0.875, South

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MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
AK196	VT HACKNEY CORP	3330 FLIGHTLINE DRIV	FINDS, ECHO	Lower	4618, 0.875, South
AK197	KIDRON	3330 FLIGHT LINE DRI	FL TIER 2	Lower	4618, 0.875, South
198	PROTEL, INC	4705 AIRPARK DRIVE	FINDS, ECHO	Lower	4633, 0.877, West
AL199	TROPIC STAR SEAFOOD	3620 VENTURA DR E	FINDS	Lower	4658, 0.882, WNW
AL200	TROPIC STAR SEAFOOD,	3620 VENTURA DR E	FL NPDES	Lower	4658, 0.882, WNW
AM201	FLORIDA AERO SERVICE	3005 AIRSIDE CENTER	RCRA-VSQG, FINDS, ECHO	Lower	4687, 0.888, SSE
AK202	MODULAR SOLID SURFAC	3240 FLIGHTLINE DR	RCRA-VSQG	Lower	4688, 0.888, South
AK203	MODULAR SOLID SURFAC	3240 FLIGHTLINE DR.	FINDS, ECHO	Lower	4688, 0.888, South
AK204	MODULAR SOLID SURFAC	3240 FLIGHTLINE DRIV	FL TIER 2	Lower	4688, 0.888, South
AK205	SKY KING, INC./B737-	3200 FLIGHTLINE DRIV	ICIS, FINDS, ECHO	Lower	4715, 0.893, South
206	WARING INDUSTRIAL PA	4120 HOLDEN RD	FINDS, ECHO	Higher	4722, 0.894, ESE
AM207	CITY OF LAKELAND	2949 AIRSIDE CENTER	FINDS, ECHO	Lower	4747, 0.899, SSE
AN208	METALTEK INTERNATION	4121 DRANE FIELD RD	US AIRS, FINDS, ECHO	Lower	4757, 0.901, WNW
AN209	METALTEK	4121 DRAIN FIELD ROA	FINDS	Lower	4757, 0.901, WNW
AN210	SPECIALTY MAINTENANC	4121 DRANE FIELD ROA	FL TIER 2	Lower	4757, 0.901, WNW
211		3607 VENTURA DRIVE E	FL SPILLS	Lower	4804, 0.910, WNW
212	FIREWOLF INDUSTRIES	3249 MEDULLA RD	RCRA NonGen / NLR, FINDS, ECHO	Lower	4922, 0.932, South
AO213	YARBOROUGH LANE		FINDS	Higher	5029, 0.952, ENE
AO214	LAKELAND, CITY OF -	GRIFFIN ROAD FROM US	FINDS	Higher	5029, 0.952, ENE
AO215		4100 SOUTH FRONTAGE	FL SPILLS	Higher	5029, 0.952, ENE
216	RUTHVEN REAL ESTATE	4020, 4030 AND 4040	FINDS	Lower	5061, 0.959, West
AP217	COMMON GROUND ENVIRO	4516 CLEMENTS RD	FINDS, ECHO	Lower	5088, 0.964, SE
AP218	COMMON GROUND ENVIRO	4516 CLEMENTS RD	RCRA NonGen / NLR	Lower	5088, 0.964, SE
AP219	C.D. BROWN CO, INC	4516 CLEMENTS RD.	SSTS	Lower	5088, 0.964, SE
AQ220	FLORIDA DMA NATIONAL	4140 DRANE FIELD RD	RCRA-VSQG, FINDS, ECHO	Lower	5186, 0.982, West
AQ221	NATIONAL GUARD - LAK	4140 DRANE FIELD ROA	FL TIER 2	Lower	5186, 0.982, West
222	RUTHVEN REAL ESTATE	4020, 4030 AND 4040	FINDS, ECHO	Lower	5240, 0.992, West
223	HERITAGE-CRYSTAL CLE	4302 HOLDEN RD	RCRA NonGen / NLR, FINDS	Higher	5339, 1.011, ESE
224	PROTEL INC	4150 KIDRON RD	RCRA-VSQG, FINDS, ECHO	Lower	5357, 1.015, West
225	DAY & NIGHT TIRE, LL	3703 VENTURA DRIVE,	FL SWF/LF	Lower	5379, 1.019, WNW
AR226	GLOBE FIBERGLASS LTD	3470 AIRCRAFT DR.	RCRA-VSQG, FINDS, ECHO	Lower	5499, 1.041, South
AR227	FOSTERS AIRCRAFT REF	3400B AIRCRAFT DR	RCRA-SQG	Lower	5503, 1.042, South
AR228	NATIONAL FLIGHT SERV	3400 AIRCRAFT DR	RCRA NonGen / NLR, FINDS, ECHO	Lower	5503, 1.042, South
AS229	INDUSTRIAL COMPOSITE	4225 DRANE FIELD RD	RCRA-SQG, TRIS, ICIS, US AIRS, FINDS, ECHO	Lower	5608, 1.062, West
AT230	SENIOR CARE PHARMACY	4175 S PIPKIN RD STE	RCRA-VSQG	Higher	5620, 1.064, ESE
AT231	CARTER LYNN P	4175 S PIPKIN RD	FL UST	Higher	5620, 1.064, ESE
AS232	HARDEE EQUIPMENT COM	4220 DRANE FIELD ROA	RCRA NonGen / NLR, FINDS, ECHO	Lower	5633, 1.067, West
AS233	KIDRON BODY CO	4220 DRANE FIELD RD	FL UST	Lower	5633, 1.067, West
234	WEST LAKELAND SOD	2915 AIRPORT RD	FL AST	Lower	5657, 1.071, North

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235	INTERNATIONAL BEVERA	3919 KIDRON RD	RCRA-VSQG	Lower	5691, 1.078, West
236	DARIAS ACOSTA BER 11	POLK PKWY FRONTAGE R	FL LUST, FL TANKS, FL CLEANUP SITES, FL DWM CO	NTAM Higher	5941, 1.125, ENE
237	FL REFRESHMENT CENTE	KIDRON RD	FL UST, FL AST	Lower	5984, 1.133, West
238	CAROLINA LOGISTICS S	4150 S PIPKIN RD #5	RCRA NonGen / NLR	Higher	6016, 1.139, ESE
AU239	LAKELAND AAF		FUDS	Lower	6049, 1.146, West
AU240	CWM AREAS		UXO	Lower	6049, 1.146, West
AU241	SKEET RANGE & FIRING		UXO	Lower	6049, 1.146, West
AU242	FIRMENICH, INC.	4330 DRANE FIELD RD	RCRA-LQG, US AIRS	Lower	6104, 1.156, West
243	MORGAN J L	2646 MEDULLA RD	FL AST	Lower	6116, 1.158, SE
244	SUN 'N FUN FLY IN IN	4175 MEDULLA RD	FL AST	Lower	6157, 1.166, SW
245	PUBLIX SUPER MARKET	3525 AVIATION DR	FL AST, FL Financial Assurance	Lower	6356, 1.204, South
246	LUKES AMOCO INC	2716 MEDULLA RD	EDR Hist Auto	Lower	6383, 1.209, SE
247	SOUTHWEST STAINLESS	4355 DRANE FIELD RD	RCRA-SQG, PA MANIFEST	Lower	6590, 1.248, WNW
248	PIPER AIRCRAFT CORP-	2955 MEDULLA RD	FL LUST, FL UST	Lower	7018, 1.329, SSE
AV249	GOVERNMENT EMPLOYEE	3535 W PIPKIN RD	FL AST	Lower	7132, 1.351, South
AV250	GOVERNMENT EMPLOYEE	3535 W PIPKIN RD	FL LUST, FL Financial Assurance	Lower	7132, 1.351, South
AW251	IMPERIAL AMOCO INC	3230 W PIPKIN RD	EDR Hist Auto	Lower	7281, 1.379, South
AW252	QUALITY#154	3230 W PIPKIN RD	FL LUST, FL UST, FL CLEANUP SITES, FL DWM CONT	AM, Lower	7281, 1.379, South
AW253	KELLERS CLEANERS	5004 YATES RD	EDR Hist Cleaner	Lower	7309, 1.384, South
254	LAKELAND CITY-ENGLIS	2121 DRANE FIELD RD	FL AST	Higher	7489, 1.418, East
255	LAKELAND, CITY OF (F	3249 MEDULLA RD	FL RESP PARTY	Lower	7842, 1.485, SW
AX256	CSX TRANSPORTATION 0	WINSTON RAIL YARD TR	FL LUST, FL TANKS	Higher	8234, 1.559, NE
AX257	CSX TRANSPORTATION 0	WINSTON RAIL YARD	FL LUST, FL TANKS	Higher	8234, 1.559, NE
AX258	CSX TRANSPORTATION 0	WINSTON YARD TRACKS	FL LUST, FL TANKS	Higher	8234, 1.559, NE
259	TRUGREEN INC	3939 PROGRESS DR	RCRA-VSQG, FINDS, ECHO	Lower	8443, 1.599, West
AY260	GMF INDUSTRIES, INC	4600 DRANE FIELD RD	RCRA-VSQG, FINDS, ECHO	Lower	8479, 1.606, West
AY261	GMF INDUSTRIES INC	4600 DRANE FIELD ROA	FL RESP PARTY, FL TIER 2, FL NPDES	Lower	8479, 1.606, West
AZ262	INTERSTATE CHEMICAL	3903 PROGRESS DR	RCRA-SQG	Lower	8671, 1.642, West
AZ263	INTERSTATE CHEMICAL	3903 PROGRESS DR	${\sf FL}\ {\sf AST}, {\sf FL}\ {\sf SPILLS}, {\sf FL}\ {\sf DRYCLEANERS}, {\sf FL}\ {\sf Financial}$	Lower	8671, 1.642, West
BA264	CITGO FOOD MART	1950 DRANE FIELD RD	RCRA-VSQG, FINDS	Higher	8713, 1.650, East
BA265	CITGO FOOD MART	1950 DRANE FIELD RD	FL LUST, FL UST, FL Financial Assurance	Higher	8713, 1.650, East
266	YAGER PROPERTIES	0 PIPKIN CREEK ROAD,	FL RESP PARTY	Lower	8887, 1.683, East
267	NATIONS RENT #97	4710 DRANEFIELD RD	FL AST	Lower	8941, 1.693, West
268	CONNECTED POWER PHOS	4783 DRANE FIELD RD	RCRA NonGen / NLR	Lower	9361, 1.773, West
269	PIPPING BLOCK	LAKE HENRY & LEAMEN	FL UST, FL AST	Lower	9777, 1.852, SE
BB270	FLORIDA RECYCLING SO	3210 WHITTEN ROAD	RCRA NonGen / NLR, FINDS, ECHO	Lower	9841, 1.864, WNW
BB271	AQUA CLEAN ENVIRONME	3210 WHITTEN RD	FL SWF/LF, FL SPILLS, FL Financial Assurance	Lower	9841, 1.864, WNW
BB272	AQUA CLEAN ENVIRONME	3210 WHITTEN RD	FL AST	Lower	9841, 1.864, WNW
BC273	COOK COMPOSITE & POL	4775 GATELAND DR	RCRA-VSQG	Higher	10455, 1.980, WNW

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MAP				RELATIVE	DIST (ft. & mi.)
ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	ELEVATION	DIRECTION
BC274	COMPOSITES ONE LLC	4775 GATELAND DR	RCRA-SQG	Higher	10455, 1.980, WNW
BC275	8381920 - VALSPAR -	4775 GATELAND DRIVE	RCRA NonGen / NLR	Higher	10455, 1.980, WNW
BC276	REICHOLD INC	4775 GATELAND DR	RCRA-VSQG	Higher	10455, 1.980, WNW

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
LAL N APRON REHABILI 3900 DON EMERSON DR LAKELAND, FL 33811	FINDS Registry ID:: 110063607431	N/A
LANCEAND, LE 33011	ECHO Registry ID: 110063607431	
LAKELAND LINDER REGI 3900 DON EMERSON DR LAKELAND, FL 33811	FINDS Registry ID:: 110027962774	N/A
2 11.2 11.5, 1 2 00011	ECHO Registry ID: 110027962774	
REHABILITATE TAXIWAY 3900 DON EMERSON DR LAKELAND, FL 33811	FINDS Registry ID:: 110070111544	N/A
,	ECHO Registry ID: 110070111544	
PIEDMONT HAWTHORNE A 3900 DON EMERSON DR LAKELAND, FL 33811	FL AST Database: AST, Date of Government Version: 10/30/2019 Facility-Site Id: 9805314 Facility Status: CLOSED Facility Status: CLOSED	N/A
LAKELAND LINDER REG 3900 DON EMERSON DR LAKELAND, FL	FL NPDES Status: A Facility ID: FLR10JX50 Facility ID: FLR05A537 Facility ID: FLR10SF52 Facility ID: FLR10NI14	N/A
LAKELAND LINDER REGI 3900 DON EMERSON DR	RCRA-SQG EPA ID:: FLR000130518	FLR000130518
LAKELAND, FL 33811	FINDS Registry ID:: 110069485630 Registry ID:: 110056344273	
	ECHO Registry ID: 110069485630 Registry ID: 110056344273 Registry ID: 110070064129	
RUNWAY 27 & TAXIWAY 3900 DON EMERSON DR LAKELAND, FL 33811	FINDS	N/A

Registry ID:: 110064762332 Registry ID:: 110070263420 Registry ID:: 110044267762 Registry ID: 110070263420 Registry ID: 110064762332 Registry ID: 110044267762 NEW FUEL FARM @ LAKE **FINDS** N/A 3900 DON EMERSON DR Registry ID:: 110062671755 LAKELAND, FL 33811 Registry ID: 110062671755 ENGLISH OAKS FORCE M **FINDS** N/A 3900 DON EMERSON DR Registry ID:: 110037330796 LAKELAND, FL 33811 **ECHO** Registry ID: 110037330796 LAKELAND LINDER REG **FINDS** N/A 3900 DON EMERSON DR Registry ID:: 110070064129 LAKELAND, FL 33811 SW APRON RECONSTRUCT **FINDS** N/A 3900 DON EMERSON DR Registry ID:: 110063607422 LAKELAND, FL 33811 Registry ID: 110063607422 TAXIWAY B EXTENSION **FINDS** N/A 3900 DON EMERSON DR Registry ID:: 110054134593 LAKELAND, FL 33811 Registry ID: 110054134593 LAKELAND LENDER AIRP **FL SPILLS** N/A LAKELAND LENDER AIRP OHMIT Incident Number: 24746 LAKELAND, FL Incident Status: Closed LANDMARK AVIATION -FL TIER 2 N/A 3900 DON EMERSON DRI LAKELAND, FL 33801 3900 DON EMERSON DRI **FL SPILLS** N/A 3900 DON EMERSON DRI OHMIT Incident Number: 44996 LAKELAND, FL Incident Status: Closed LAKELAND LINDER REGI **FINDS** N/A 3900 DON EMERSON DR LAKELAND, FL 33811

Registry ID:: 110020170679

ECHO

Registry ID: 110020170679

KTTW HANGAR AT LAKEL 3900 DON EMERSON DR LAKELAND, FL 33811 FINDS Registry ID:: 110070548451 N/A

ECHO

Registry ID: 110070548451

LAKELAND LINDER REGI 3900 DON EMERSON DR LAKELAND, FL FL NPDES

N/A

Status: A

Facility ID: FLR10QF20

LAKELAND LINDER INTE 3900 DON EMERSON DR LAKELAND, FL 33811 **FL UST**

N/A

Database: UST, Date of Government Version: 10/30/2019

Tank Status: T Tank Status: B

Facility-Site Id: 9046828 Facility Status: OPEN

FL AST

Database: AST, Date of Government Version: 10/30/2019

Facility-Site Id: 9046828 Facility Status: OPEN Facility Status: OPEN

FL Financial Assurance

Database: Financial Assurance 3, Date of Government Version: 10/29/2019

Facility Status: OPEN Facility Status: CLOSED Facility ID: 8943925 Facility ID: 9046828 Facility ID: 9805314

FL NPDES

Status: A

Facility ID: FLR20BP77 Facility ID: FLR10SN60 Facility ID: FLR20AE13 Facility ID: FLR20BC56 Facility ID: FLR20CK67

*Additional key fields are available in the Map Findings section

SHELTAIR -LAKELAND J 3900 DON EMERSON DR LAKELAND, FL 33811 FL AST

N/A

Database: AST, Date of Government Version: 10/30/2019

Facility-Site Id: 8943925 Facility Status: OPEN Facility Status: OPEN

LAKELAND LINDER INTE 3900 DON EMERSON DR, LAKELAND, FL 33811 **FL AIRS**

N/A

Facility Status: A Facility Id: 1050470

TSA AT LAKELAND LIND RCRA NonGen / NLR 3900 DON EMERSON DR

EPA ID:: FLR000175927

LAKELAND, FL 33811

LAKELAND LINDER REG **FINDS** N/A

3900 DON EMERSON DR Registry ID:: 110070388526 LAKELAND, FL 33811

Registry ID: 110070388526

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL..... National Priority List

Proposed NPL Proposed National Priority List Sites NPL LIENS Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL...... National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY..... Federal Facility Site Information listing SEMS...... Superfund Enterprise Management System

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF...... RCRA - Treatment, Storage and Disposal

Federal institutional controls / engineering controls registries

.....Land Use Control Information System US ENG CONTROLS..... Engineering Controls Sites List US INST CONTROL..... Sites with Institutional Controls

State- and tribal - equivalent CERCLIS

FL SHWS..... Florida's State-Funded Action Sites

FLR000175927

State and tri	ibal leaking	storage	tank lists
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FL LAST..... Leaking Aboveground Storage Tank Listing INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

FL FF TANKS..... Federal Facilities Listing

FEMA UST..... Underground Storage Tank Listing

INDIAN UST...... Underground Storage Tanks on Indian Land

State and tribal institutional control / engineering control registries

FL ENG CONTROLS...... Institutional Controls Registry FL INST CONTROL...... Institutional Controls Registry

State and tribal voluntary cleanup sites

FL VCP..... Voluntary Cleanup Sites

INDIAN VCP..... Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

FL BROWNFIELDS..... Brownfields Sites Database

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

FL SWRCY...... Recycling Centers

INDIAN ODI______ Report on the Status of Open Dumps on Indian Lands DEBRIS REGION 9_____ Torres Martinez Reservation Illegal Dump Site Locations

ODI....... Open Dump Inventory IHS OPEN DUMPS...... Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL..... Delisted National Clandestine Laboratory Register

FL PRIORITYCLEANERS.... Priority Ranking List

FL FI Sites List

US CDL...... National Clandestine Laboratory Register

FL PFAS...... PFOS and PFOA stand for perfluorooctane sulfonate and perfluorooctanoic acid

Local Land Records

LIENS 2..... CERCLA Lien Information

Records of Emergency Release Reports

HMIRS..... Hazardous Materials Information Reporting System

FL SPILLS 80...... SPILLS 80 data from FirstSearch

Other Ascertainable Records

DOD...... Department of Defense Sites

SCRD DRYCLEANERS...... State Coalition for Remediation of Drycleaners Listing

US FIN ASSUR..... Financial Assurance Information

EPA WATCH LIST..... EPA WATCH LIST

FTTS______FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide

Act)/TSCA (Toxic Substances Control Act)

COAL ASH EPA..... Coal Combustion Residues Surface Impoundments List

PCB TRANSFORMER...... PCB Transformer Registration Database

RADINFO...... Radiation Information Database

HIST FTTS..... FIFRA/TSCA Tracking System Administrative Case Listing

DOT OPS..... Incident and Accident Data

CONSENT..... Superfund (CERCLA) Consent Decrees

INDIAN RESERV..... Indian Reservations

FUSRAP..... Formerly Utilized Sites Remedial Action Program

DOCKET HWC..... Hazardous Waste Compliance Docket Listing

FUELS PROGRAM..... EPA Fuels Program Registered Listing

FL ASBESTOS..... ASBESTOS

FL DEDB..... Ethylene Dibromide Database Results

FL Cattle Dip. Vats..... Cattle Dipping Vats

FL SITE INV SITES Site Investigation Section Sites Listing

FL UIC...... Underground Injection Wells Database Listing

MINES MRDS..... Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP..... EDR Proprietary Manufactured Gas Plants

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

FL RGA HWS...... Recovered Government Archive State Hazardous Waste Facilities List

FL RGA LF..... Recovered Government Archive Solid Waste Facilities List

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in **bold italics** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that based upon available information, the location is not judged to be potential NPL site.

A review of the SEMS-ARCHIVE list, as provided by EDR, and dated 10/25/2019 has revealed that there is 1 SEMS-ARCHIVE site within approximately 2 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BELL CHEMICAL Site ID: 0404953 EPA Id: FLD984167502	3511 CENTURY BOULEVA	NNE 1/4 - 1/2 (0.408 mi.)	N103	268

Federal RCRA CORRACTS facilities list

CORRACTS: CORRACTS is a list of handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.

A review of the CORRACTS list, as provided by EDR, and dated 12/16/2019 has revealed that there is 1 CORRACTS site within approximately 2 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
PIPER AIRCRAFT CORPO EPA ID:: FLD049551864	3000 MEDULLA RD	WSW 1/2 - 1 (0.569 mi.)	132	388

Federal RCRA generators list

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 12/16/2019 has revealed that there are 3 RCRA-LQG sites within approximately 2 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NATURAL ADVANTAGE LL EPA ID:: FLR000194407	3135 DRANE FIELD RD	ENE 1/4 - 1/2 (0.335 mi.)	K79	183
Lower Elevation	Address	Direction / Distance	Map ID	Page
POPS PAINTING INC EPA ID:: FLD984262535	3805 DRANE FIELD RD	WNW 1/2 - 1 (0.568 mi.)	U126	337
FIRMENICH, INC. EPA ID:: FLR000034512	4330 DRANE FIELD RD	W 1 - 2 (1.156 mi.)	AU242	687

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 12/16/2019 has revealed that there are 11 RCRA-SQG sites within approximately 2 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
PHOSPHATE ENGINEERIN EPA ID:: FLD984262980	2940 DRANE FIELD RD	ENE 1/2 - 1 (0.527 mi.)	S113	280
COMPOSITES ONE LLC EPA ID:: FLR000120105	4775 GATELAND DR	WNW 1 - 2 (1.980 mi.)	BC274	835
Lower Elevation	Address	Direction / Distance	Map ID	Page
JC MACHINE INC EPA ID:: FLR000221549	3620 AIRPORT RD	NW 1/4 - 1/2 (0.367 mi.)	M91	224
QUALITY AEROSPACE CO EPA ID:: FLR000211375	3610 AIRPORT RD	NW 1/4 - 1/2 (0.383 mi.)	M97	256
TAMPA TANK & WELDING EPA ID:: FLD982088007	5205 ADAMO DR	WNW 1/2 - 1 (0.572 mi.)	U133	394
SPECIALTY MAINTENANC EPA ID:: FLD982148603	4015 DRANE FIELD RD	WNW 1/2 - 1 (0.799 mi.)	AF177	493
MAX TORQUE LLC EPA ID:: FLR000211706	3360 FLIGHTLINE DR	S 1/2 - 1 (0.864 mi.)	AK193	517
FOSTERS AIRCRAFT REF	3400B AIRCRAFT DR	S 1 - 2 (1.042 mi.)	AR227	597

EPA ID:: FLR000110403				
INDUSTRIAL COMPOSITE EPA ID:: FLD982107203	4225 DRANE FIELD RD	W 1 - 2 (1.062 mi.)	AS229	633
SOUTHWEST STAINLESS EPA ID:: FLD157571811	4355 DRANE FIELD RD	WNW 1 - 2 (1.248 mi.)	247	705
INTERSTATE CHEMICAL EPA ID:: FLR000124891	3903 PROGRESS DR	W 1 - 2 (1.642 mi.)	AZ262	757

RCRA-VSQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-VSQG list, as provided by EDR, and dated 12/16/2019 has revealed that there are 27 RCRA-VSQG sites within approximately 2 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GMF IND INC EPA ID:: FLTMP9002146	3517 CENTURY BLVD	NNE 1/4 - 1/2 (0.376 mi.)	N93	227
KINGS & QUEENS CABIN EPA ID:: FL0000924894	3512 CENTURY BLVD	NNE 1/4 - 1/2 (0.426 mi.)	Q105	270
MAURICES AUTO BODY I EPA ID:: FLR000056531	3025A DRANE FIELD RD	ENE 1/2 - 1 (0.523 mi.)	R108	274
MAURICES AUTO BODY I EPA ID:: FLR000056523	3025A DRANE FIELD RD	ENE 1/2 - 1 (0.523 mi.)	R109	276
PHOSPHATE ENGINEERIN EPA ID:: FLT950053413	2940 DRANE FIELD RD	ENE 1/2 - 1 (0.527 mi.)	S114	304
DIXIE SIGNS INC EPA ID:: FLR000056507	2930 DRANE FIELD RD	E 1/2 - 1 (0.527 mi.)	S115	306
MGL ENGINEERING INC EPA ID:: FLR000082859	2830 PKWY ST #2	E 1/2 - 1 (0.610 mi.)	X141	416
ECLIPSE CONSTRUCTION EPA ID:: FLR000122853	2930 PARKWAY ST	ESE 1/2 - 1 (0.615 mi.)	Y145	421
B H BUNN CO EPA ID:: FLD982121352	2730 DRANE FIELD RD	E 1/2 - 1 (0.773 mi.)	AD174	483
SENIOR CARE PHARMACY EPA ID:: FLR000221473	4175 S PIPKIN RD STE	ESE 1 - 2 (1.064 mi.)	AT230	665
CITGO FOOD MART EPA ID:: FLD984186304	1950 DRANE FIELD RD	E 1 - 2 (1.650 mi.)	BA264	793
COOK COMPOSITE & POL EPA ID:: FLT050074921	4775 GATELAND DR	WNW 1 - 2 (1.980 mi.)	BC273	834
REICHOLD INC EPA ID:: FLT060077930	4775 GATELAND DR	WNW 1 - 2 (1.980 mi.)	BC276	840
Lower Elevation	Address	Direction / Distance	Map ID	Page
NATIONAL FLIGHT SERV	3480 AIRFIELD DR W	WNW 1/4 - 1/2 (0.279 mi.)	F55	136

EPA ID:: FLR000061069				
B & M CONSTRUCTION C EPA ID:: FLT980059695	3706 DMG DR	NNW 1/4 - 1/2 (0.297 mi.)	H66	164
ROBINSON FANS INC EPA ID:: FLD984228189	3955 DRANE FIELD RD	WNW 1/2 - 1 (0.743 mi.)	AC165	463
INDUSTRIAL BRUSH COR EPA ID:: FLR000139386	4000 DRANE FIELD RD	W 1/2 - 1 (0.840 mi.)	AI188	508
FLORIDA MODIFICATION EPA ID:: FLR000204982	3430 FLIGHTLINE DR	S 1/2 - 1 (0.862 mi.)	AJ191	512
CYPRESS AVIATION INC EPA ID:: FLR000014092	3450 FLIGHTLINE DR	S 1/2 - 1 (0.863 mi.)	AJ192	514
FLORIDA AERO SERVICE EPA ID:: FLR000047381	3005 AIRSIDE CENTER	SSE 1/2 - 1 (0.888 mi.)	AM201	538
MODULAR SOLID SURFAC EPA ID:: FLR000045393	3240 FLIGHTLINE DR	S 1/2 - 1 (0.888 mi.)	AK202	541
FLORIDA DMA NATIONAL EPA ID:: FL0000360420	4140 DRANE FIELD RD	W 1/2 - 1 (0.982 mi.)	AQ220	579
PROTEL INC EPA ID:: FLD984227975	4150 KIDRON RD	W 1 - 2 (1.015 mi.)	224	592
GLOBE FIBERGLASS LTD EPA ID:: FLR000156505	3470 AIRCRAFT DR.	S 1 - 2 (1.041 mi.)	AR226	596
INTERNATIONAL BEVERA EPA ID:: FLT990063141	3919 KIDRON RD	W 1 - 2 (1.078 mi.)	235	674
TRUGREEN INC EPA ID:: FLT160086492	3939 PROGRESS DR	W 1 - 2 (1.599 mi.)	259	746
GMF INDUSTRIES, INC EPA ID:: FLD984178418	4600 DRANE FIELD RD	W 1 - 2 (1.606 mi.)	A Y260	748

Federal ERNS list

ERNS: The Emergency Response Notification System records and stores information on reported releases of oil and hazardous substances. The source of this database is the U.S. EPA.

A review of the ERNS list, as provided by EDR, and dated 09/09/2019 has revealed that there are 2 ERNS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
Not reported Incident Date Time: 2013-10-28 10:30:00 NRC Report #: 1064242	3135 DRANEFIELD ROAD	ENE 1/4 - 1/2 (0.335 mi.)	K83	211
Not reported Incident Date Time: 2015-07-17 10:38:00 NRC Report #: 1123111	3115 DRANE FIELD RD	ENE 1/4 - 1/2 (0.349 mi.)	K85	215

State and tribal landfill and/or solid waste disposal site lists

FL SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Department of Environmental Protection's Facility Directory (Solid Waste Facilities).

A review of the FL SWF/LF list, as provided by EDR, has revealed that there are 5 FL SWF/LF sites within approximately 2 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FL AIRCRAFT TIRE Database: SWF/LF, Date of Governi Facility-Site Id: 95685 Class Status: INACTIVE (I)	3604 E CENTURY BLVD ment Version: 10/15/2019	NNE 1/4 - 1/2 (0.363 mi.)	L87	221
COMMON GROUND ENVIRO Database: SWF/LF, Date of Governi Facility-Site Id: 102143 Class Status: INACTIVE (I)	3504 CENTURY BLVD #4 ment Version: 10/15/2019	NNE 1/4 - 1/2 (0.427 mi.)	Q106	272
Lower Elevation	Address	Direction / Distance	Map ID	Page
GREEN TREAD RECYCLIN Database: SWF/LF, Date of Governing Facility-Site Id: 100389 Class Status: CLOSED, NO GW MCC Class Status: INACTIVE (I)		W 1/2 - 1 (0.595 mi.)	V136	410
DAY & NIGHT TIRE, LL Database: SWF/LF, Date of Governifacility-Site Id: 95954 Class Status: ACTIVE (A) Class Status: REGISTERED (R)	3703 VENTURA DRIVE, ment Version: 10/15/2019	WNW 1 - 2 (1.019 mi.)	225	595
AQUA CLEAN ENVIRONME Database: SWF/LF, Date of Governing Facility-Site Id: 98770 Class Status: PROPOSED (P)	3210 WHITTEN RD ment Version: 10/15/2019	WNW 1 - 2 (1.864 mi.)	BB271	826

State and tribal leaking storage tank lists

FL LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Environmental Protection's PCTO1--Petroleum Contamination Detail Report.

A review of the FL LUST list, as provided by EDR, and dated 10/28/2019 has revealed that there are 18 FL LUST sites within approximately 2 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LAKELAND LINDER REGI	3450 DRANE FIELD RD	NNW 1/8 - 1/4 (0.168 mi.)	C28	63
Discharge Cleanup Status: NFA - NFA (COMPLETE	•		
Facility Status: CLOSED				
Facility-Site Id: 9801687				
LAKELAND CITY-LINDER	3450 DRANE FIELD RD	NNW 1/8 - 1/4 (0.168 mi.)	C34	68

Discharge Cleanup Status: SA - SA ONGOING Discharge Cleanup Status: NFA - NFA COMPLETE Facility Status: CLOSED Facility-Site Id: 9700527 Facility-Site Id: 9701079 **PUBLIX CORPORATE OFF** DRANE FIELD RD NNW 1/8 - 1/4 (0.206 mi.) C40 100 Discharge Cleanup Status: NFA - NFA COMPLETE Facility Status: CLOSED Facility-Site Id: 9806933 RENNA ENTERPRISES 3231 DRANE FIELD RD NE 1/8 - 1/4 (0.222 mi.) E43 106 Discharge Cleanup Status: NFA - NFA COMPLETE Facility Status: CLOSED Facility-Site Id: 8944950 DARIAS ACOSTA BER 11 POLK PKWY FRONTAGE R ENE 1 - 2 (1.125 mi.) 236 675 Discharge Cleanup Status: SA - SA ONGOING Facility Status: CLOSED Facility-Site Id: 9813000 CSX TRANSPORTATION 0 WINSTON RAIL YARD TR NE 1 - 2 (1.559 mi.) AX256 739 Discharge Cleanup Status: NFA - NFA COMPLETE Facility Status: CLOSED Facility-Site Id: 9807740 CSX TRANSPORTATION 0 WINSTON RAIL YARD NE 1 - 2 (1.559 mi.) AX257 742 Discharge Cleanup Status: NFA - NFA COMPLETE Facility Status: CLOSED Facility-Site Id: 9806136 CSX TRANSPORTATION 0 WINSTON YARD TRACKS NE 1 - 2 (1.559 mi.) AX258 744 Discharge Cleanup Status: NFA - NFA COMPLETE Facility Status: CLOSED Facility-Site Id: 9807765 CITGO FOOD MART 1950 DRANE FIELD RD E 1 - 2 (1.650 mi.) BA265 795 Discharge Cleanup Status: NFA - NFA COMPLETE Facility Status: OPEN Facility-Site Id: 8623420 **Lower Elevation Address Direction / Distance** Map ID Page NW 1/8 - 1/4 (0.189 mi.) LAKELAND CITY-HANGAR 3470 DRANE FIELD RD C36 89 Discharge Cleanup Status: NFA - NFA COMPLETE Facility Status: CLOSED Facility-Site Id: 9101671 LAKELAND MUNICIPAL A 3470 DRANE FIELD RD NW 1/8 - 1/4 (0.189 mi.) C37 93 Discharge Cleanup Status: RA - RA ONGOING Facility Status: CLOSED Facility-Site Id: 8628463 CIRCLE K #2707553 3730 AIRPORT RD NW 1/4 - 1/2 (0.268 mi.) G48 113 Discharge Cleanup Status: NFA - NFA COMPLETE Facility Status: OPEN Facility-Site Id: 9802234 WNW 1/4 - 1/2 (0.282 mi.) F58 FLIGHT LEVEL AVIATIO 3440 AIRFIELD DR W 148 Discharge Cleanup Status: RA - RA ONGOING Facility Status: CLOSED

Facility-Site Id: 9814943 US ARMY-AIRFIELD Discharge Cleanup Status: WDRW - WITH Discharge Cleanup Status: SRCR - SRCR Facility Status: CLOSED Facility-Site Id: 9101799		WNW 1/4 - 1/2 (0.299 mi.) GRAM	J69	166
INDUSTRIAL BRUSH COR Discharge Cleanup Status: SRCR - SRCR Facility Status: CLOSED Facility-Site Id: 9809351	400 DRANE FIELD RD COMPLETE	W 1/2 - 1 (0.840 mi.)	AI187	504
PIPER AIRCRAFT CORP- Discharge Cleanup Status: SRCR - SRCR Facility Status: CLOSED Facility-Site Id: 8623681	2955 MEDULLA RD COMPLETE	SSE 1 - 2 (1.329 mi.)	248	709
GOVERNMENT EMPLOYEE Discharge Cleanup Status: NFA - NFA CC Facility Status: OPEN Facility-Site Id: 9807101	3535 W PIPKIN RD MPLETE	S 1 - 2 (1.351 mi.)	AV250	716
QUALITY#154 Discharge Cleanup Status: SA - SA ONGO Facility Status: OPEN	3230 W PIPKIN RD DING	S 1 - 2 (1.379 mi.)	AW252	722

State and tribal registered storage tank lists

Facility-Site Id: 8624337

FL UST: The Underground Storage Tank database contains registered USTs. Shortly after the September 11 event, the DEP was instructed to remove the detail about some of the storage tank facilities in the state from their reports. Federal-owned facilities and bulk storage facilities are included in that set.

A review of the FL UST list, as provided by EDR, has revealed that there are 15 FL UST sites within approximately 2 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LAKELAND CITY-LINDER Database: UST, Date of Governme Tank Status: B Facility-Site Id: 9202619 Facility Status: CLOSED	3450 DRANE FIELD RD nt Version: 10/30/2019	NNW 1/8 - 1/4 (0.168 mi.)	C34	68
RENNA ENTERPRISES Database: UST, Date of Government Tank Status: B Facility-Site Id: 8944950 Facility Status: CLOSED	3231 DRANE FIELD RD nt Version: 10/30/2019	NE 1/8 - 1/4 (0.222 mi.)	E43	106
CARTER LYNN P Database: UST, Date of Governme Tank Status: B Facility-Site Id: 8624261 Facility Status: CLOSED	4175 S PIPKIN RD nt Version: 10/30/2019	ESE 1 - 2 (1.064 mi.)	AT231	668
CITGO FOOD MART Database: UST, Date of Governme	1950 DRANE FIELD RD ont Version: 10/30/2019	E 1 - 2 (1.650 mi.)	BA265	795

Tank Status: B
Tank Status: U
Facility-Site Id: 8

Facility-Site Id: 8623420 Facility Status: OPEN

Lower Elevation	Address	Direction / Distance	Map ID	Page
LAKELAND CITY-HANGAR Database: UST, Date of Government Versit Tank Status: B Facility-Site Id: 9101671 Facility Status: CLOSED	3470 DRANE FIELD RD on: 10/30/2019	NW 1/8 - 1/4 (0.189 mi.)	C36	89
LAKELAND MUNICIPAL A Database: UST, Date of Government Versi Tank Status: B Facility-Site Id: 8628463 Facility Status: CLOSED	3470 DRANE FIELD RD on: 10/30/2019	NW 1/8 - 1/4 (0.189 mi.)	C37	93
CIRCLE K #2707553 Database: UST, Date of Government Versi Tank Status: U Facility-Site Id: 9802234 Facility Status: OPEN	3730 AIRPORT RD on: 10/30/2019	NW 1/4 - 1/2 (0.268 mi.)	G48	113
FLIGHT LEVEL AVIATIO Database: UST, Date of Government Versi Tank Status: B Facility-Site Id: 9814943 Facility Status: CLOSED	3440 AIRFIELD DR W on: 10/30/2019	WNW 1/4 - 1/2 (0.282 mi.)	F58	148
US ARMY-AIRFIELD Database: UST, Date of Government Versi Tank Status: B Facility-Site Id: 9101799 Facility Status: CLOSED	3610 DRANE FIELD RD on: 10/30/2019	WNW 1/4 - 1/2 (0.299 mi.)	J71	171
ROBERTS FLYING SERVI Database: UST, Date of Government Versi Tank Status: B Facility-Site Id: 8624323 Facility Status: CLOSED	LAKELAND MUNICIPAL A on: 10/30/2019	SW 1/2 - 1 (0.573 mi.)	134	408
KIDRON BODY CO Database: UST, Date of Government Versi Tank Status: B Facility-Site Id: 8624340 Facility Status: CLOSED	4220 DRANE FIELD RD ion: 10/30/2019	W 1 - 2 (1.067 mi.)	AS233	673
FL REFRESHMENT CENTE Database: UST, Date of Government Versi Tank Status: B Facility-Site Id: 8623581 Facility Status: CLOSED	KIDRON RD ion: 10/30/2019	W 1 - 2 (1.133 mi.)	237	679
PIPER AIRCRAFT CORP- Database: UST, Date of Government Versi Tank Status: B Facility-Site Id: 8623681 Facility Status: CLOSED	2955 MEDULLA RD on: 10/30/2019	SSE 1 - 2 (1.329 mi.)	248	709
QUALITY#154 Database: UST, Date of Government Versi	3230 W PIPKIN RD on: 10/30/2019	S 1 - 2 (1.379 mi.)	AW252	722

Tank Status: B Tank Status: U

Facility-Site Id: 8624337 Facility Status: OPEN

PIPPING BLOCK LAKE HENRY & LEAMEN SE 1 - 2 (1.852 mi.) 269 808

Database: UST, Date of Government Version: 10/30/2019

Tank Status: B

Facility-Site Id: 8735757 Facility Status: CLOSED

FL AST: Shortly after the Sept 11 event, the DEP was instructed to remove the detail about some of the storage tank facilities in the state from their reports. Federal-owned facilities and bulk storage facilities are included in that set.

A review of the FL AST list, as provided by EDR, has revealed that there are 18 FL AST sites within approximately 2 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TRI W RENTAL Database: AST, Date of Government Facility-Site Id: 8944932 Facility Status: CLOSED Facility Status: CLOSED	2910 DRANE FIELD RD Version: 10/30/2019	ENE 1/2 - 1 (0.609 mi.)	W139	413
LAKELAND CITY-ENGLIS Database: AST, Date of Government Facility-Site Id: 9811363 Facility Status: OPEN Facility Status: OPEN	2121 DRANE FIELD RD Version: 10/30/2019	E 1 - 2 (1.418 mi.)	254	737
Lower Elevation	Address	Direction / Distance	Map ID	Page
LAKELAND MUNICIPAL A Database: AST, Date of Government Facility-Site Id: 9101671 Facility Status: CLOSED Facility Status: CLOSED	3470 DRANE FIELD RD Version: 10/30/2019	NW 1/8 - 1/4 (0.189 mi.)	C37	93
A-1 DIESEL REPAIR IN Database: AST, Date of Government Facility-Site Id: 9815188 Facility Status: CLOSED Facility Status: CLOSED	3718 DMG DR Version: 10/30/2019	NW 1/4 - 1/2 (0.273 mi.)	G51	129
PUBLIX CORPORATE AIR Database: AST, Date of Government Facility-Site Id: 9813646 Facility Status: OPEN Facility Status: OPEN	3795 AIRFIELD DR W Version: 10/30/2019	WNW 1/4 - 1/2 (0.274 mi.)	F53	134
SHELTAIR-LAKELAND JE Database: AST, Date of Government Facility-Site Id: 9805363 Facility Status: OPEN Facility Status: OPEN	3600 DRANE FIELD RD Version: 10/30/2019	WNW 1/4 - 1/2 (0.286 mi.)	G63	156
CONE CONSTRUCTORS IN Database: AST, Date of Government	3425 AIRPORT RD Version: 10/30/2019	NW 1/4 - 1/2 (0.438 mi.)	107	273

Facility-Site Id: 9601664 Facility Status: CLOSED Facility Status: CLOSED				
POPS PAINTING INC Database: AST, Date of Government Versi Facility-Site Id: 9502526 Facility Status: OPEN Facility Status: OPEN	3805 DRANE FIELD RD ion: 10/30/2019	WNW 1/2 - 1 (0.568 mi.)	U131	385
WEST LAKELAND SOD Database: AST, Date of Government Versi Facility-Site Id: 8839375 Facility Status: CLOSED Facility Status: CLOSED	2915 AIRPORT RD on: 10/30/2019	N 1 - 2 (1.071 mi.)	234	674
FL REFRESHMENT CENTE Database: AST, Date of Government Versification Facility-Site Id: 8623581 Facility Status: CLOSED Facility Status: CLOSED	KIDRON RD on: 10/30/2019	W 1 - 2 (1.133 mi.)	237	679
MORGAN J L Database: AST, Date of Government Versi Facility-Site Id: 8838687 Facility Status: CLOSED Facility Status: CLOSED	2646 MEDULLA RD on: 10/30/2019	SE 1 - 2 (1.158 mi.)	243	697
SUN 'N FUN FLY IN IN Database: AST, Date of Government Versi Facility-Site Id: 9806258 Facility Status: OPEN Facility Status: OPEN	4175 MEDULLA RD on: 10/30/2019	SW 1 - 2 (1.166 mi.)	244	698
PUBLIX SUPER MARKET Database: AST, Date of Government Versification Facility-Site Id: 9809621 Facility Status: OPEN Facility Status: OPEN	3525 AVIATION DR on: 10/30/2019	S 1 - 2 (1.204 mi.)	245	699
GOVERNMENT EMPLOYEE Database: AST, Date of Government Versi Facility-Site Id: 9807101 Facility Status: OPEN Facility Status: OPEN	3535 W PIPKIN RD on: 10/30/2019	S 1 - 2 (1.351 mi.)	AV249	713
INTERSTATE CHEMICAL Database: AST, Date of Government Versification Facility-Site Id: 9808352 Facility Status: OPEN Facility Status: OPEN	3903 PROGRESS DR on: 10/30/2019	W 1 - 2 (1.642 mi.)	AZ263	781
NATIONS RENT #97 Database: AST, Date of Government Versi Facility-Site Id: 9803548 Facility Status: CLOSED Facility Status: CLOSED	4710 DRANEFIELD RD on: 10/30/2019	W 1 - 2 (1.693 mi.)	267	806
PIPPING BLOCK Database: AST, Date of Government Versi Facility-Site Id: 8735757	LAKE HENRY & LEAMEN on: 10/30/2019	SE 1 - 2 (1.852 mi.)	269	808

Facility Status: CLOSED Facility Status: CLOSED

AQUA CLEAN ENVIRONME 3210 WHITTEN RD WNW 1 - 2 (1.864 mi.) BB272 831

Database: AST, Date of Government Version: 10/30/2019

Facility-Site Id: 9800103 Facility Status: OPEN Facility Status: OPEN

FL TANKS: This listing includes storage tank facilities that do not have tank information. The tanks have either be closed or removed from the site, but the facilities were still registered at some point in history.

A review of the FL TANKS list, as provided by EDR, and dated 10/30/2019 has revealed that there are 10 FL TANKS sites within approximately 2 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LAKELAND LINDER REGI Facility Status: CLOSED Facility ID: 9801687	3450 DRANE FIELD RD	NNW 1/8 - 1/4 (0.168 mi.)	C28	63
LAKELAND ARMY AIRFIE Facility Status: CLOSED Facility ID: 9700527	3450 DRANE FIELD RD	NNW 1/8 - 1/4 (0.168 mi.)	C29	65
LAKELAND ARMY AIRFIE Facility Status: CLOSED Facility ID: 9701079	3450 DRANE FIELD RD	NNW 1/8 - 1/4 (0.168 mi.)	C32	67
PUBLIX CORPORATE OFF Facility Status: CLOSED Facility ID: 9806933	DRANE FIELD RD	NNW 1/8 - 1/4 (0.206 mi.)	C40	100
DARIAS ACOSTA BER 11 Facility Status: CLOSED Facility ID: 9813000	POLK PKWY FRONTAGE R	ENE 1 - 2 (1.125 mi.)	236	675
CSX TRANSPORTATION 0 Facility Status: CLOSED Facility ID: 9807740	WINSTON RAIL YARD TR	NE 1 - 2 (1.559 mi.)	AX256	739
CSX TRANSPORTATION 0 Facility Status: CLOSED Facility ID: 9806136	WINSTON RAIL YARD	NE 1 - 2 (1.559 mi.)	AX257	742
CSX TRANSPORTATION 0 Facility Status: CLOSED Facility ID: 9807765	WINSTON YARD TRACKS	NE 1 - 2 (1.559 mi.)	AX258	744
Lower Elevation	Address	Direction / Distance	Map ID	Page
LAKELAND AIR SRVC IN Facility Status: CLOSED Facility ID: 9805364	3600 DRANEFIELD RD	WNW 1/4 - 1/2 (0.286 mi.)	G65	163
INDUSTRIAL BRUSH COR Facility Status: CLOSED Facility ID: 9809351	400 DRANE FIELD RD	W 1/2 - 1 (0.840 mi.)	AI187	504

ADDITIONAL ENVIRONMENTAL RECORDS

Records of Emergency Release Reports

FL SPILLS: Fuel Spill Cases from the Department of Environmental resource management

A review of the FL SPILLS list, as provided by EDR, and dated 10/03/2019 has revealed that there are 8 FL SPILLS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FWCC DRAINAGE IMPROV OHMIT Incident Number: 22460 Incident Status: Closed	3900 DRANE FIELD RD	SW 0 - 1/8 (0.013 mi.)	A24	60
Not reported OHMIT Incident Number: 63136 Incident Status: Pending-DM	3633 CENTURY BLVD.	NE 1/4 - 1/2 (0.298 mi.)	168	165
CHARELAND WAREHOUSE - OHMIT Incident Number: 58909 OHMIT Incident Number: 58932 Incident Status: Pending-HQ Incident Status: Closed	3135 DRANE FIELD RD	ENE 1/4 - 1/2 (0.335 mi.)	K82	205
Not reported OHMIT Incident Number: 51287 OHMIT Incident Number: 53297 Incident Status: Closed	3115 DRANE FIELD ROA	ENE 1/4 - 1/2 (0.349 mi.)	K86	220
Not reported OHMIT Incident Number: 56675 Incident Status: Closed	3912 HOLDEN ROAD	E 1/2 - 1 (0.831 mi.)	185	503
Not reported OHMIT Incident Number: 51522 Incident Status: Closed	4100 SOUTH FRONTAGE	ENE 1/2 - 1 (0.952 mi.)	AO215	570
Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported OHMIT Incident Number: 7025 Incident Status: Closed	3536 DMG DRIVE	NNW 1/4 - 1/2 (0.397 mi.)	P100	266
Not reported OHMIT Incident Number: 9176 Incident Status: Closed	3607 VENTURA DRIVE E	WNW 1/2 - 1 (0.910 mi.)	211	565

FL SPILLS 90: Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

A review of the FL SPILLS 90 list, as provided by EDR, and dated 12/10/2012 has revealed that there is 1 FL SPILLS 90 site within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
US ARMY-AIRFIELD	3610 DRANE FIELD RD	WNW 1/4 - 1/2 (0.299 mi.)	J74	174

Status: CLOSED Site Id: 539101799

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 12/16/2019 has revealed that there are 28 RCRA NonGen / NLR sites within approximately 2 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NO TORO AIRCRAFT INC EPA ID:: FLD085090421	3240 AIRFIELD DR E #	ENE 1/8 - 1/4 (0.185 mi.)	35	73
WILKERSON INSTRUMENT EPA ID:: FLD982097131	3615 CENTURY BLVD	NNE 1/4 - 1/2 (0.320 mi.)	<i>177</i>	176
GOLD EAGLE ENTERPRIS EPA ID:: FLR000081711	3604 CENTURY BLVD ST	NNE 1/4 - 1/2 (0.363 mi.)	L88	221
GMF IND INC EPA ID:: FLR000034538	3517 CENTURY BLVD	NNE 1/4 - 1/2 (0.376 mi.)	N94	228
FABWELL EPA ID:: FLD984229286	2934 PARKWAY ST	E 1/2 - 1 (0.551 mi.)	T116	324
FLORIDA PROCESSING M EPA ID:: FLD984246462	2920 PARKWAY ST	E 1/2 - 1 (0.562 mi.)	T125	335
RENTAL SERVICE CORPO EPA ID:: FLR000019570	2910 DRANE FIELD RD	ENE 1/2 - 1 (0.609 mi.)	W140	414
OES ENVIRONMENTAL EPA ID:: FLR000079525	2830 PKWY ST SUITE 1	E 1/2 - 1 (0.610 mi.)	X142	418
PUBLIX SUPER MARKETS EPA ID:: FLR000126102	3300 PUBLIX CORPORAT	N 1/2 - 1 (0.665 mi.)	Z151	443
QUALITY AEROSPACE CO EPA ID:: FLR000199398	2810 PARKWAY ST	E 1/2 - 1 (0.722 mi.)	AA159	449
SOUTHERN CROSS FIBER EPA ID:: FLD982098824	2805 BABGER RD	ESE 1/2 - 1 (0.742 mi.)	162	451
GLOBE FIBERGLASS LTD EPA ID:: FL0000071126	4033 HOLDEN RD	E 1/2 - 1 (0.825 mi.)	AH183	500
HERITAGE-CRYSTAL CLE EPA ID:: FLR000074971	4302 HOLDEN RD	ESE 1 - 2 (1.011 mi.)	223	589
CAROLINA LOGISTICS S EPA ID:: FLR000173781	4150 S PIPKIN RD #5	ESE 1 - 2 (1.139 mi.)	238	680
8381920 - VALSPAR - EPA ID:: FLT110083227	4775 GATELAND DRIVE	WNW 1 - 2 (1.980 mi.)	BC275	838
Lower Elevation	Address	Direction / Distance	Map ID	Page
FLORIDA DMA FLARNG A	3600 DRANE FIELD RD	WNW 1/4 - 1/2 (0.286 mi.)	G64	161

EPA ID:: FLD982088908				
CYPRESS AVIATION INC EPA ID:: FLD094613346	3636 DRANE FIELD ROA	WNW 1/4 - 1/2 (0.382 mi.)	O95	232
QUALITY AEROSPACE CO EPA ID:: FLR000178525	3536 DMG DRIVE	NNW 1/4 - 1/2 (0.397 mi.)	P99	260
PIPER AIRCRAFT CORPO EPA ID:: FLD049551864	3000 MEDULLA RD	WSW 1/2 - 1 (0.569 mi.)	132	388
HD BUILDER SOLUTIONS EPA ID:: FLR000126342	3810 DRANE FIELD RD	W 1/2 - 1 (0.595 mi.)	V138	412
BRANDIS AIRCRAFT TOM EPA ID:: FLD984183681	3925 AERO PL	W 1/2 - 1 (0.649 mi.)	149	441
KIDRON INC EPA ID:: FLR000036715	3330 FLIGHTLINE DR	S 1/2 - 1 (0.875 mi.)	AK195	519
FIREWOLF INDUSTRIES EPA ID:: FLD984259952	3249 MEDULLA RD	S 1/2 - 1 (0.932 mi.)	212	566
COMMON GROUND ENVIRO EPA ID:: FLR000228791	4516 CLEMENTS RD	SE 1/2 - 1 (0.964 mi.)	AP218	571
NATIONAL FLIGHT SERV EPA ID:: FLR000047373	3400 AIRCRAFT DR	S 1 - 2 (1.042 mi.)	AR228	616
HARDEE EQUIPMENT COM EPA ID:: FLD032419442	4220 DRANE FIELD ROA	W 1 - 2 (1.067 mi.)	AS232	669
CONNECTED POWER PHOS EPA ID:: FLR000219626	4783 DRANE FIELD RD	W 1 - 2 (1.773 mi.)	268	807
FLORIDA RECYCLING SO EPA ID:: FLR000034033	3210 WHITTEN ROAD	WNW 1 - 2 (1.864 mi.)	BB270	809

FUDS: The Listing includes locations of Formerly Used Defense Sites Properties where the US Army Corps Of Engineers is actively working or will take necessary cleanup actions.

A review of the FUDS list, as provided by EDR, and dated 11/12/2019 has revealed that there is 1 FUDS site within approximately 2 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
LAKELAND AAF		W 1 - 2 (1.146 mi.)	AU239	684

SSTS: Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

A review of the SSTS list, as provided by EDR, and dated 05/01/2019 has revealed that there are 5 SSTS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
REESE CITRUS INSULAT Registration Number:: 045443FL 001	2940 PKWY CT	E 1/2 - 1 (0.552 mi.)	T118	326
REESE CITRUS INSULAT	5888 LAKE VICTORIA P	E 1/2 - 1 (0.552 mi.)	T119	329

Registration Number:: 045443FL 001 REESE CITRUS INSULAT 2940 PKY ST E 1/2 - 1 (0.552 mi.) T121 331 Registration Number:: 045443FL 001 REESE CITRUS INSULAT 2940 PARKWAY ST E 1/2 - 1 (0.552 mi.) 333 T123 Registration Number:: 045443FL 001 **Lower Elevation Address Direction / Distance** Map ID Page C.D. BROWN CO, INC SE 1/2 - 1 (0.964 mi.) 4516 CLEMENTS RD. AP219 573 Registration Number:: 057611FL 001

RAATS: The RCRA Administration Action Tracking System contains records based on enforcement actions issued under RCRA and pertaining to major violators. It includes administrative and civil actions brought by the United States Environmental Protection Agency. The source of this database is the U.S. EPA.

A review of the RAATS list, as provided by EDR, and dated 04/17/1995 has revealed that there are 2 RAATS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NO TORO AIRCRAFT INC Status: 01 Facility ID: FLD085090421	3240 AIRFIELD DR E #	ENE 1/8 - 1/4 (0.185 mi.)	35	73
Lower Elevation	Address	Direction / Distance	Map ID	Page
CYPRESS AVIATION INC Status: 03 Facility ID: FLD094613346	3636 DRANE FIELD ROA	WNW 1/4 - 1/2 (0.382 mi.)	O95	232

ICIS: The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

A review of the ICIS list, as provided by EDR, and dated 11/18/2016 has revealed that there are 4 ICIS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MAURICES AUTO BODY I FRS ID:: 110005656423	3025A DRANE FIELD RD	ENE 1/2 - 1 (0.523 mi.)	R108	274
Lower Elevation	Address	Direction / Distance	Map ID	Page
CYPRESS AVIATION INC FRS ID:: 110002538228	3636 DRANE FIELD ROA	WNW 1/4 - 1/2 (0.382 mi.)	O95	232
TAMPA TANK & WELDING FRS ID:: 110005626938	5205 ADAMO DR	WNW 1/2 - 1 (0.572 mi.)	U133	394
SKY KING, INC./B737- FRS ID:: 110055109582	3200 FLIGHTLINE DRIV	S 1/2 - 1 (0.893 mi.)	AK205	559

US AIRS: The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

A review of the US AIRS list, as provided by EDR, has revealed that there are 2 US AIRS sites within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
TAMPA TANK & WELDING 5205 ADAMO DR Database: US AIRS (AFS), Date of Government Version: 10/12/2016 EPA plant ID:: 110005626938		WNW 1/2 - 1 (0.572 mi.)	U133	394
METALTEK INTERNATION	4121 DRANE FIELD RD f Government Version: 10/12/2016	WNW 1/2 - 1 (0.901 mi.)	AN208	562

FINDS: The Facility Index System contains both facility information and "pointers" to other sources of information that contain more detail. These include: RCRIS; Permit Compliance System (PCS); Aerometric Information Retrieval System (AIRS); FATES (FIFRA [Federal Insecticide Fungicide Rodenticide Act] and TSCA Enforcement System, FTTS [FIFRA/TSCA Tracking System]; CERCLIS; DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes); Federal Underground Injection Control (FURS); Federal Reporting Data System (FRDS); Surface Impoundments (SIA); TSCA Chemicals in Commerce Information System (CICS); PADS; RCRA-J (medical waste transporters/disposers); TRIS; and TSCA. The source of this database is the U.S. EPA/NTIS.

A review of the FINDS list, as provided by EDR, and dated 08/12/2019 has revealed that there are 91 FINDS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
COLUMBIA AIR -3320 A Registry ID:: 110032774987	3320 AIRFIELD DR E	E 0 - 1/8 (0.060 mi.)	25	61
STAYBRIDGE SUITES - Registry ID:: 110070016351	3855 DON EMERSON DR	N 0 - 1/8 (0.108 mi.)	B26	62
NO TORO AIRCRAFT INC Registry ID:: 110002537256	3240 AIRFIELD DR E #	ENE 1/8 - 1/4 (0.185 mi.)	35	73
WATKINS MOTOR LINES Registry ID:: 110009074606	3840 AIRFIELD COURT	E 1/8 - 1/4 (0.220 mi.)	D42	105
KROON ENTERPRIES Registry ID:: 110037319924	3711 CENTURY BLVD	NE 1/4 - 1/2 (0.261 mi.)	E46	112
CITY OF LAKELAND- FI Registry ID:: 110056127846	3150 DRANE FIELD RD	ENE 1/4 - 1/2 (0.314 mi.)	K76	176
WILKERSON INSTRUMENT Registry ID:: 110002559874	3615 CENTURY BLVD	NNE 1/4 - 1/2 (0.320 mi.)	177	176
NATURAL ADVANTAGE LL Registry ID:: 110054830420	3135 DRANE FIELD RD	ENE 1/4 - 1/2 (0.335 mi.)	K79	183
OMNIA INCORPORTATED Registry ID:: 110070329761	3125 DRANE FIELD ROA	ENE 1/4 - 1/2 (0.341 mi.)	K84	215
GOLD EAGLE ENTERPRIS	3604 CENTURY BLVD ST	NNE 1/4 - 1/2 (0.363 mi.)	L89	223

Registry ID:: 11003556	9211				
CUSTOM CONTROLS & Registry ID:: 11001184	-	3604 CENTURY BLVD. (NNE 1/4 - 1/2 (0.363 mi.)	L90	224
GMF IND INC Registry ID:: 11000564	3759	3517 CENTURY BLVD	NNE 1/4 - 1/2 (0.376 mi.)	N93	227
BELL CHEMICAL CO Registry ID:: 11000210	4366	3511 CENTURY BLVD	NNE 1/4 - 1/2 (0.408 mi.)	N104	269
KINGS & QUEENS CABI Registry ID:: 11000252		3512 CENTURY BLVD	NNE 1/4 - 1/2 (0.426 mi.)	Q105	270
MAURICES AUTO BODY Registry ID:: 11000565 Registry ID:: 11000565	6423	3025A DRANE FIELD RD	ENE 1/2 - 1 (0.523 mi.)	R108	274
CONSERVE CHEMICAL Registry ID:: 11003571	_	2940 DRANE FIELD RD	ENE 1/2 - 1 (0.527 mi.)	S112	279
PHOSPHATE ENGINEER Registry ID:: 11000562		2940 DRANE FIELD RD	ENE 1/2 - 1 (0.527 mi.)	S114	304
DIXIE SIGNS INC Registry ID:: 11000565	6405	2930 DRANE FIELD RD	E 1/2 - 1 (0.527 mi.)	S115	306
FABWELL Registry ID:: 11000745	8456	2934 PARKWAY ST	E 1/2 - 1 (0.551 mi.)	T117	326
NEW MANUFACTURING Registry ID:: 11003276		2940 PARKWAY ST	E 1/2 - 1 (0.552 mi.)	T120	330
REESE CITRUS INSULA Registry ID:: 11001185		2940 PARKWAY STREET	E 1/2 - 1 (0.552 mi.)	T122	332
FLORIDA PROCESSING Registry ID:: 11000746 Registry ID:: 11003961	1512	2920 PARKWAY ST	E 1/2 - 1 (0.562 mi.)	T124	335
RENTAL SERVICE COR Registry ID:: 11000563	-	2910 DRANE FIELD RD	ENE 1/2 - 1 (0.609 mi.)	W140	414
MGL ENGINEERING INC Registry ID:: 11001257		2830 PKWY ST #2	E 1/2 - 1 (0.610 mi.)	X141	416
OES ENVIRONMENTAL Registry ID:: 11001254	9402	2830 PKWY ST SUITE 1	E 1/2 - 1 (0.610 mi.)	X142	418
ECLIPSE CONSTRUCTION Registry ID:: 11002309	_	2930 PARKWAY ST	ESE 1/2 - 1 (0.615 mi.)	Y143	420
PARKWAY CENTER Registry ID:: 11003732	7283	2930 PARKWAY ST	ESE 1/2 - 1 (0.615 mi.)	Y144	420
PUBLIX SUPER MARKE Registry ID:: 11003137		3300 PUBLIX CORPORAT	N 1/2 - 1 (0.665 mi.)	Z152	445
WALGREENS #13824 Registry ID:: 11004193	8981	UNKNOWN	NE 1/2 - 1 (0.675 mi.)	153	446
MGL ENGINEERING INC Registry ID:: 11002457		2818 PARKWAY ST	E 1/2 - 1 (0.684 mi.)	AA154	446
RUTHVEN PARKWAY C Registry ID:: 11006360		2825 DRANE FIELD RD	ENE 1/2 - 1 (0.688 mi.)	AB155	447
QUALITY AEROSPACE Registry ID:: 11005543		2810 PARKWAY ST	E 1/2 - 1 (0.722 mi.)	AA158	448
QUALITY POT METAL W	VO	2810 PKWY ST #5	E 1/2 - 1 (0.722 mi.)	AA160	450

Registry ID:: 110027224983				
SOUTHERN CROSS FIBER Registry ID:: 110002560050	2805 BABGER RD	ESE 1/2 - 1 (0.742 mi.)	162	451
REALIGNMENT OF TAXIW Registry ID:: 110043165909	UNKNOWN	ESE 1/2 - 1 (0.763 mi.)	168	467
B H BUNN CO Registry ID:: 110011356567	2730 DRANE FIELD RD	E 1/2 - 1 (0.773 mi.)	AD174	483
GLOBE FIBERGLASS LTD Registry ID:: 110002516493	4033 HOLDEN RD	E 1/2 - 1 (0.825 mi.)	AH183	500
WARING INDUSTRIAL PA Registry ID:: 110024394323	4120 HOLDEN RD	ESE 1/2 - 1 (0.894 mi.)	206	561
YARBOROUGH LANE Registry ID:: 110035699447		ENE 1/2 - 1 (0.952 mi.)	AO213	569
LAKELAND, CITY OF - Registry ID:: 110035542311	GRIFFIN ROAD FROM US	ENE 1/2 - 1 (0.952 mi.)	AO214	570
Lower Elevation	Address	Direction / Distance	Map ID	Page
LAKELAND LINDER AIRP Registry ID:: 110046322537	3830 AIRFIELD CT W	WNW 1/4 - 1/2 (0.266 mi.)	F47	112
NATIONAL FLIGHT SERV Registry ID:: 110005659402	3480 AIRFIELD DR W	WNW 1/4 - 1/2 (0.279 mi.)	F55	136
FLIGHTLEVEL AVIATION Registry ID:: 110070231699	3440 AIRFIELD DRIVE	WNW 1/4 - 1/2 (0.282 mi.)	F61	155
LAKELAND LINDER REG Registry ID:: 110009070021	3400 AIRFIELD DRIVE	WNW 1/4 - 1/2 (0.284 mi.)	F62	156
FLORIDA DMA FLARNG A Registry ID:: 110007422360	3600 DRANE FIELD RD	WNW 1/4 - 1/2 (0.286 mi.)	G64	161
B & M CONSTRUCTION C Registry ID:: 110035519178	3706 DMG DR	NNW 1/4 - 1/2 (0.297 mi.)	H67	165
CHAD GUNTER Registry ID:: 110068690615	3610 DRANE FIELD RD	WNW 1/4 - 1/2 (0.299 mi.)	J70	171
DENNIS TOWNSEL, JR Registry ID:: 110068940846	3610 DRANE FIELD RD	WNW 1/4 - 1/2 (0.299 mi.)	J72	173
IMPROVEMENTS TO SR 5 Registry ID:: 110008982832	DRANE FIELD AND AIRP	WNW 1/4 - 1/2 (0.301 mi.)	J75	175
QUALITY AEROSPACE CO Registry ID:: 110070339667 Registry ID:: 110059227670	3620 AIRPORT ROAD	NW 1/4 - 1/2 (0.367 mi.)	M92	226
CYPRESS AVIATION INC Registry ID:: 110002538228	3636 DRANE FIELD ROA	WNW 1/4 - 1/2 (0.382 mi.)	O95	232
QUALITY AEROSPACE CO Registry ID:: 110062926534	3610 AIRPORT RD	NW 1/4 - 1/2 (0.383 mi.)	M98	259
QUALITY AEROSPACE CO Registry ID:: 110043986791	3536 DMG DRIVE	NNW 1/4 - 1/2 (0.397 mi.)	P101	267
AIRPORT HANGER Registry ID:: 110020568385	DRANEFIELD ROAD WITH	W 1/4 - 1/2 (0.400 mi.)	102	268
AIRPORT COMMERCE PAR	JONES INDUSTRIAL DR	WNW 1/2 - 1 (0.524 mi.)	110	278

Registry ID:: 110033636849				
POP'S PAINTING, INC. Registry ID:: 110005626938	3805 DRANE FIELD RD	WNW 1/2 - 1 (0.568 mi.)	U127	369
PIPER AIRCRAFT CORPO Registry ID:: 110008325589	3000 MEDULLA RD	WSW 1/2 - 1 (0.569 mi.)	132	388
HD BUILDER SOLUTIONS Registry ID:: 110027966716	3810 DRANE FIELD RD	W 1/2 - 1 (0.595 mi.)	V135	410
3810 DRANEFIELD ROAD Registry ID:: 110020521274	3810 DRANEFIELD ROAD	W 1/2 - 1 (0.595 mi.)	V137	411
POPS' PAINTING, INC. Registry ID:: 110041940567	UNKNOWN	WNW 1/2 - 1 (0.643 mi.)	148	440
BRANDIS AIRCRAFT TOM Registry ID:: 110005597666	3925 AERO PL	W 1/2 - 1 (0.649 mi.)	149	441
FWCC DRAINAGE IMPROV Registry ID:: 110070548799	3900 DRANE FIELD RD	WNW 1/2 - 1 (0.655 mi.)	150	443
CARILLON PLACE Registry ID:: 110024577705	CARILLON BLVD	NNW 1/2 - 1 (0.703 mi.)	157	448
RUTHVEN REAL ESTATE Registry ID:: 110020546756	3965 AERO PLACE	W 1/2 - 1 (0.727 mi.)	161	450
ROBINSON FANS, INC. Registry ID:: 110070330545	3955 DRANE FIELD ROA	WNW 1/2 - 1 (0.743 mi.)	AC164	463
ROBINSON FANS INC Registry ID:: 110005613354	3955 DRANEFIELD RD	WNW 1/2 - 1 (0.743 mi.)	AC166	466
ROBINSON FANS 2008 W Registry ID:: 110037474346	3955 DRANE FIELD RD	WNW 1/2 - 1 (0.743 mi.)	AC167	466
RUTHVEN REAL ESTATE Registry ID:: 110024395910	3910 AIR PARK DR	W 1/2 - 1 (0.773 mi.)	AE173	482
LAKELAND PARK Registry ID:: 110020539568	DRANE FIELD RD. /AIR	W 1/2 - 1 (0.784 mi.)	AC175	491
SPECIALTY MAINT & CO Registry ID:: 110005587347	4015 DRANEFIELD RD	WNW 1/2 - 1 (0.799 mi.)	AF179	498
METAL-TEK, INC. Registry ID:: 110070280595	4015 DRANE FIELD RD.	WNW 1/2 - 1 (0.799 mi.)	AF180	498
FERRERA TOOLING Registry ID:: 110070097913	3960 AIR PARK DR	W 1/2 - 1 (0.802 mi.)	AG182	499
INDUSTRIAL BRUSH COR Registry ID:: 110009074456	400 DRANE FIELD RD	W 1/2 - 1 (0.840 mi.)	AI187	504
INDUSTRIAL BRUSH COR Registry ID:: 110027960543	4000 DRANE FIELD RD	W 1/2 - 1 (0.840 mi.)	AI189	510
FLORIDA MODIFICATION Registry ID:: 110056303147	3430 FLIGHTLINE DR	S 1/2 - 1 (0.862 mi.)	AJ191	512
CYPRESS AVIATION INC Registry ID:: 110005633948 Registry ID:: 110045966558	3450 FLIGHTLINE DR	S 1/2 - 1 (0.863 mi.)	AJ192	514
MAX TORQUE LLC Registry ID:: 110062926829	3360 FLIGHTLINE DR	S 1/2 - 1 (0.864 mi.)	AK194	518
VT HACKNEY CORP	3330 FLIGHTLINE DRIV	S 1/2 - 1 (0.875 mi.)	AK196	523

Registry ID:: 110000496758				
PROTEL, INC Registry ID:: 110020135021	4705 AIRPARK DRIVE	W 1/2 - 1 (0.877 mi.)	198	537
TROPIC STAR SEAFOOD Registry ID:: 110027971906	3620 VENTURA DR E	WNW 1/2 - 1 (0.882 mi.)	AL199	537
FLORIDA AERO SERVICE Registry ID:: 110005651400	3005 AIRSIDE CENTER	SSE 1/2 - 1 (0.888 mi.)	AM201	538
MODULAR SOLID SURFAC Registry ID:: 110015583395	3240 FLIGHTLINE DR.	S 1/2 - 1 (0.888 mi.)	AK203	557
SKY KING, INC./B737- Registry ID:: 110055109582	3200 FLIGHTLINE DRIV	S 1/2 - 1 (0.893 mi.)	AK205	559
CITY OF LAKELAND Registry ID:: 110063607869	2949 AIRSIDE CENTER	SSE 1/2 - 1 (0.899 mi.)	AM207	561
METALTEK INTERNATION Registry ID:: 110069428596	4121 DRANE FIELD RD	WNW 1/2 - 1 (0.901 mi.)	AN208	562
METALTEK Registry ID:: 110070290138	4121 DRAIN FIELD ROA	WNW 1/2 - 1 (0.901 mi.)	AN209	562
FIREWOLF INDUSTRIES Registry ID:: 110005625528	3249 MEDULLA RD	S 1/2 - 1 (0.932 mi.)	212	566
RUTHVEN REAL ESTATE Registry ID:: 110035486541	4020, 4030 AND 4040	W 1/2 - 1 (0.959 mi.)	216	571
COMMON GROUND ENVIRO Registry ID:: 110070431482	4516 CLEMENTS RD	SE 1/2 - 1 (0.964 mi.)	AP217	571
FLORIDA DMA NATIONAL Registry ID:: 110008314920	4140 DRANE FIELD RD	W 1/2 - 1 (0.982 mi.)	AQ220	579
RUTHVEN REAL ESTATE Registry ID:: 110020521265	4020, 4030 AND 4040	W 1/2 - 1 (0.992 mi.)	222	589

ECHO: ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

A review of the ECHO list, as provided by EDR, and dated 10/06/2019 has revealed that there are 79 ECHO sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
COLUMBIA AIR -3320 A Registry ID: 110032774987	3320 AIRFIELD DR E	E 0 - 1/8 (0.060 mi.)	25	61
STAYBRIDGE SUITES - Registry ID: 110070016351	3855 DON EMERSON DR	N 0 - 1/8 (0.108 mi.)	B26	62
NO TORO AIRCRAFT INC Registry ID: 110002537256	3240 AIRFIELD DR E #	ENE 1/8 - 1/4 (0.185 mi.)	35	73
WATKINS MOTOR LINES Registry ID: 110009074606	3840 AIRFIELD COURT	E 1/8 - 1/4 (0.220 mi.)	D42	105
KROON ENTERPRIES Registry ID: 110037319924	3711 CENTURY BLVD	NE 1/4 - 1/2 (0.261 mi.)	E46	112
CITY OF LAKELAND- FI	3150 DRANE FIELD RD	ENE 1/4 - 1/2 (0.314 mi.)	K76	176

Registry ID: 110056127846				
WILKERSON INSTRUMENT Registry ID: 110002559874	3615 CENTURY BLVD	NNE 1/4 - 1/2 (0.320 mi.)	177	176
NATURAL ADVANTAGE LL Registry ID: 110054830420	3135 DRANE FIELD RD	ENE 1/4 - 1/2 (0.335 mi.)	K79	183
GOLD EAGLE ENTERPRIS Registry ID: 110035569211	3604 CENTURY BLVD ST	NNE 1/4 - 1/2 (0.363 mi.)	L89	223
GMF IND INC Registry ID: 110005643759	3517 CENTURY BLVD	NNE 1/4 - 1/2 (0.376 mi.)	N93	227
BELL CHEMICAL CO Registry ID: 110002104366	3511 CENTURY BLVD	NNE 1/4 - 1/2 (0.408 mi.)	N104	269
KINGS & QUEENS CABIN Registry ID: 110002522182	3512 CENTURY BLVD	NNE 1/4 - 1/2 (0.426 mi.)	Q105	270
MAURICES AUTO BODY I Registry ID: 110005656423 Registry ID: 110005656432	3025A DRANE FIELD RD	ENE 1/2 - 1 (0.523 mi.)	R108	274
CONSERVE CHEMICALS Registry ID: 110035719951	2940 DRANE FIELD RD	ENE 1/2 - 1 (0.527 mi.)	S112	279
PHOSPHATE ENGINEERIN Registry ID: 110005627161	2940 DRANE FIELD RD	ENE 1/2 - 1 (0.527 mi.)	S114	304
DIXIE SIGNS INC Registry ID: 110005656405	2930 DRANE FIELD RD	E 1/2 - 1 (0.527 mi.)	S115	306
FABWELL Registry ID: 110007458456	2934 PARKWAY ST	E 1/2 - 1 (0.551 mi.)	T117	326
NEW MANUFACTURING FA Registry ID: 110032765620	2940 PARKWAY ST	E 1/2 - 1 (0.552 mi.)	T120	330
FLORIDA PROCESSING M Registry ID: 110007461512 Registry ID: 110039613371	2920 PARKWAY ST	E 1/2 - 1 (0.562 mi.)	T124	335
RENTAL SERVICE CORPO Registry ID: 110005636204	2910 DRANE FIELD RD	ENE 1/2 - 1 (0.609 mi.)	W140	414
MGL ENGINEERING INC Registry ID: 110012579290	2830 PKWY ST #2	E 1/2 - 1 (0.610 mi.)	X141	416
OES ENVIRONMENTAL Registry ID: 110012549402	2830 PKWY ST SUITE 1	E 1/2 - 1 (0.610 mi.)	X142	418
ECLIPSE CONSTRUCTION Registry ID: 110023095247	2930 PARKWAY ST	ESE 1/2 - 1 (0.615 mi.)	Y143	420
PARKWAY CENTER Registry ID: 110037327283	2930 PARKWAY ST	ESE 1/2 - 1 (0.615 mi.)	Y144	420
PUBLIX SUPER MARKETS Registry ID: 110031377560	3300 PUBLIX CORPORAT	N 1/2 - 1 (0.665 mi.)	Z152	445
WALGREENS #13824 Registry ID: 110041938981	UNKNOWN	NE 1/2 - 1 (0.675 mi.)	153	446
MGL ENGINEERING INC Registry ID: 110024577439	2818 PARKWAY ST	E 1/2 - 1 (0.684 mi.)	AA154	446
RUTHVEN PARKWAY CENT Registry ID: 110063607486	2825 DRANE FIELD RD	ENE 1/2 - 1 (0.688 mi.)	AB155	447
QUALITY AEROSPACE CO	2810 PARKWAY ST	E 1/2 - 1 (0.722 mi.)	AA158	448

Pogistry ID: 110055433106				
Registry ID: 110055433106 QUALITY POT METAL WO	2810 PKWY ST #5	E 1/2 - 1 (0.722 mi.)	AA160	450
Registry ID: 110027224983	2010111111111111	L 1/2 1 (0.722 mi.)	77.700	400
SOUTHERN CROSS FIBER Registry ID: 110002560050	2805 BABGER RD	ESE 1/2 - 1 (0.742 mi.)	162	451
REALIGNMENT OF TAXIW Registry ID: 110043165909	UNKNOWN	ESE 1/2 - 1 (0.763 mi.)	168	467
B H BUNN CO Registry ID: 110011356567	2730 DRANE FIELD RD	E 1/2 - 1 (0.773 mi.)	AD174	483
GLOBE FIBERGLASS LTD Registry ID: 110002516493	4033 HOLDEN RD	E 1/2 - 1 (0.825 mi.)	AH183	500
WARING INDUSTRIAL PA Registry ID: 110024394323	4120 HOLDEN RD	ESE 1/2 - 1 (0.894 mi.)	206	561
Lower Elevation	Address	Direction / Distance	Map ID	Page
LAKELAND LINDER AIRP Registry ID: 110046322537	3830 AIRFIELD CT W	WNW 1/4 - 1/2 (0.266 mi.)	F47	112
NATIONAL FLIGHT SERV Registry ID: 110005659402	3480 AIRFIELD DR W	WNW 1/4 - 1/2 (0.279 mi.)	F55	136
FLIGHTLEVEL AVIATION Registry ID: 110070231699	3440 AIRFIELD DRIVE	WNW 1/4 - 1/2 (0.282 mi.)	F60	155
LAKELAND LINDER REG Registry ID: 110009070021	3400 AIRFIELD DRIVE	WNW 1/4 - 1/2 (0.284 mi.)	F62	156
FLORIDA DMA FLARNG A Registry ID: 110007422360	3600 DRANE FIELD RD	WNW 1/4 - 1/2 (0.286 mi.)	G64	161
B & M CONSTRUCTION C Registry ID: 110035519178	3706 DMG DR	NNW 1/4 - 1/2 (0.297 mi.)	H67	165
IMPROVEMENTS TO SR 5 Registry ID: 110008982832	DRANE FIELD AND AIRP	WNW 1/4 - 1/2 (0.301 mi.)	J75	175
QUALITY AEROSPACE CO Registry ID: 110059227670	3620 AIRPORT ROAD	NW 1/4 - 1/2 (0.367 mi.)	M92	226
CYPRESS AVIATION INC Registry ID: 110002538228	3636 DRANE FIELD ROA	WNW 1/4 - 1/2 (0.382 mi.)	O95	232
QUALITY AEROSPACE CO Registry ID: 110062926534	3610 AIRPORT RD	NW 1/4 - 1/2 (0.383 mi.)	M98	259
QUALITY AEROSPACE CO Registry ID: 110043986791	3536 DMG DRIVE	NNW 1/4 - 1/2 (0.397 mi.)	P101	267
AIRPORT HANGER Registry ID: 110020568385	DRANEFIELD ROAD WITH	W 1/4 - 1/2 (0.400 mi.)	102	268
AIRPORT COMMERCE PAR Registry ID: 110033636849	JONES INDUSTRIAL DR	WNW 1/2 - 1 (0.524 mi.)	110	278
POP'S PAINTING, INC. Registry ID: 110005626938	3805 DRANE FIELD RD	WNW 1/2 - 1 (0.568 mi.)	U127	369
PIPER AIRCRAFT CORPO Registry ID: 110008325589	3000 MEDULLA RD	WSW 1/2 - 1 (0.569 mi.)	132	388
HD BUILDER SOLUTIONS	3810 DRANE FIELD RD	W 1/2 - 1 (0.595 mi.)	V135	410

Registry ID: 110027966716				
3810 DRANEFIELD ROAD Registry ID: 110020521274	3810 DRANEFIELD ROAD	W 1/2 - 1 (0.595 mi.)	V137	411
POPS' PAINTING, INC. Registry ID: 110041940567	UNKNOWN	WNW 1/2 - 1 (0.643 mi.)	148	440
BRANDIS AIRCRAFT TOM Registry ID: 110005597666	3925 AERO PL	W 1/2 - 1 (0.649 mi.)	149	441
FWCC DRAINAGE IMPROV Registry ID: 110070548799	3900 DRANE FIELD RD	WNW 1/2 - 1 (0.655 mi.)	150	443
CARILLON PLACE Registry ID: 110024577705	CARILLON BLVD	NNW 1/2 - 1 (0.703 mi.)	157	448
RUTHVEN REAL ESTATE Registry ID: 110020546756	3965 AERO PLACE	W 1/2 - 1 (0.727 mi.)	161	450
ROBINSON FANS INC Registry ID: 110005613354	3955 DRANEFIELD RD	WNW 1/2 - 1 (0.743 mi.)	AC166	466
ROBINSON FANS 2008 W Registry ID: 110037474346	3955 DRANE FIELD RD	WNW 1/2 - 1 (0.743 mi.)	AC167	466
RUTHVEN REAL ESTATE Registry ID: 110024395910	3910 AIR PARK DR	W 1/2 - 1 (0.773 mi.)	AE173	482
LAKELAND PARK Registry ID: 110020539568	DRANE FIELD RD. /AIR	W 1/2 - 1 (0.784 mi.)	AC175	491
SPECIALTY MAINT & CO Registry ID: 110005587347	4015 DRANEFIELD RD	WNW 1/2 - 1 (0.799 mi.)	AF179	498
FERRERA TOOLING Registry ID: 110070097913	3960 AIR PARK DR	W 1/2 - 1 (0.802 mi.)	AG182	499
INDUSTRIAL BRUSH COR Registry ID: 110009074456	400 DRANE FIELD RD	W 1/2 - 1 (0.840 mi.)	AI187	504
INDUSTRIAL BRUSH COR Registry ID: 110027960543	4000 DRANE FIELD RD	W 1/2 - 1 (0.840 mi.)	AI189	510
FLORIDA MODIFICATION Registry ID: 110056303147	3430 FLIGHTLINE DR	S 1/2 - 1 (0.862 mi.)	AJ191	512
CYPRESS AVIATION INC Registry ID: 110045966558	3450 FLIGHTLINE DR	S 1/2 - 1 (0.863 mi.)	AJ192	514
MAX TORQUE LLC Registry ID: 110062926829	3360 FLIGHTLINE DR	S 1/2 - 1 (0.864 mi.)	AK194	518
VT HACKNEY CORP Registry ID: 110000496758	3330 FLIGHTLINE DRIV	S 1/2 - 1 (0.875 mi.)	AK196	523
PROTEL, INC Registry ID: 110020135021	4705 AIRPARK DRIVE	W 1/2 - 1 (0.877 mi.)	198	537
FLORIDA AERO SERVICE Registry ID: 110005651400	3005 AIRSIDE CENTER	SSE 1/2 - 1 (0.888 mi.)	AM201	538
MODULAR SOLID SURFAC Registry ID: 110015583395	3240 FLIGHTLINE DR.	S 1/2 - 1 (0.888 mi.)	AK203	557
SKY KING, INC./B737- Registry ID: 110055109582	3200 FLIGHTLINE DRIV	S 1/2 - 1 (0.893 mi.)	AK205	559
CITY OF LAKELAND	2949 AIRSIDE CENTER	SSE 1/2 - 1 (0.899 mi.)	AM207	561

Registry ID: 110063607869				
METALTEK INTERNATION Registry ID: 110069428596	4121 DRANE FIELD RD	WNW 1/2 - 1 (0.901 mi.)	AN208	562
FIREWOLF INDUSTRIES Registry ID: 110005625528	3249 MEDULLA RD	S 1/2 - 1 (0.932 mi.)	212	566
COMMON GROUND ENVIRO Registry ID: 110070431482	4516 CLEMENTS RD	SE 1/2 - 1 (0.964 mi.)	AP217	571
FLORIDA DMA NATIONAL Registry ID: 110008314920	4140 DRANE FIELD RD	W 1/2 - 1 (0.982 mi.)	AQ220	579
RUTHVEN REAL ESTATE Registry ID: 110020521265	4020, 4030 AND 4040	W 1/2 - 1 (0.992 mi.)	222	589

UXO: A listing of unexploded ordnance site locations

A review of the UXO list, as provided by EDR, and dated 12/31/2017 has revealed that there are 2 UXO sites within approximately 2 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
CWM AREAS		W 1 - 2 (1.146 mi.)	AU240	686
SKEET RANGE & FIRING		W 1 - 2 (1.146 mi.)	AU241	686

FL AIRS: A listing of Air Resources Management permits.

A review of the FL AIRS list, as provided by EDR, and dated 05/14/2019 has revealed that there are 2 FL AIRS sites within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
POP'S PAINTING, INC. Facility Status: A Facility Id: 1050226	3805 DRANE FIELD ROA	WNW 1/2 - 1 (0.568 mi.)	U128	370
SPECIALTY FABRICATIO Facility Status: A Facility Id: 1050466	4015 DRANE FIELD RD	WNW 1/2 - 1 (0.799 mi.)	AF178	494

FL CLEANUP SITES: This listing includes the locations of waste cleanup sites from various programs. The source of the cleanup site data includes Hazardous Waste programs, Site Investigation Section, Compliance and Enforcement Tracking, Drycleaning State Funded Cleanup Program (possibly other state funded cleanup), Storage Tank Contamination Monitoring.

A review of the FL CLEANUP SITES list, as provided by EDR, and dated 11/21/2019 has revealed that there are 5 FL CLEANUP SITES sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LAKELAND CITY-LINDER DEP Cleanup Site Key: 60788728	3450 DRANE FIELD RD	NNW 1/8 - 1/4 (0.168 mi.)	C34	68
GLOBE AERO LIMITED I	3240 DRANE FIELD RD	NE 1/8 - 1/4 (0.246 mi.)	45	109

DEP Cleanup Site Key: 60778751

Lower Elevation	Address	Direction / Distance	Map ID	Page
LAKELAND MUNICIPAL A DEP Cleanup Site Key: 60784828	3470 DRANE FIELD RD	NW 1/8 - 1/4 (0.189 mi.)	C37	93
FLIGHT LEVEL AVIATIO DEP Cleanup Site Key: 60786462	3440 AIRFIELD DR W	WNW 1/4 - 1/2 (0.282 mi.)	F57	143
US ARMY-AIRFIELD DEP Cleanup Site Key: 60788346	3610 DRANE FIELD RD	WNW 1/4 - 1/2 (0.299 mi.)	J69	166

Florida Drycleaners list comes from the Department of Environmental Protection.

A review of the FL DRYCLEANERS list, as provided by EDR, and dated 10/21/2019 has revealed that there is 1 FL DRYCLEANERS site within approximately 2 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
INTERSTATE CHEMICAL Facility Status: OPEN	3903 PROGRESS DR	W 1 - 2 (1.642 mi.)	AZ263	781
Facility-Site Id: 9812819				

FL DWM CONTAM: A listing of active or known sites. The listing includes sites that need cleanup but are not actively being working on because the agency currently does not have funding (primarily petroleum and drycleaning).

A review of the FL DWM CONTAM list, as provided by EDR, and dated 01/28/2019 has revealed that there are 6 FL DWM CONTAM sites within approximately 2 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LAKELAND CITY-LINDER Program Site Id: 9700527	3450 DRANE FIELD RD	NNW 1/8 - 1/4 (0.168 mi.)	C34	68
DARIAS ACOSTA BER 11 Program Site Id: 9813000	POLK PKWY FRONTAGE R	ENE 1 - 2 (1.125 mi.)	236	675
Lower Elevation	Address	Direction / Distance	Map ID	Page
LAKELAND MUNICIPAL A Program Site Id: 8628463	3470 DRANE FIELD RD	NW 1/8 - 1/4 (0.189 mi.)	C37	93
FLIGHT LEVEL AVIATIO Program Site Id: 9814943	3440 AIRFIELD DR W	WNW 1/4 - 1/2 (0.282 mi.)	F57	143
US ARMY-AIRFIELD Program Site Id: 9101799	3610 DRANE FIELD RD	WNW 1/4 - 1/2 (0.299 mi.)	J69	166
QUALITY#154 Program Site Id: 8624337	3230 W PIPKIN RD	S 1 - 2 (1.379 mi.)	AW252	722

A list of hazardous waste facilities required to provide financial assurance under RCRA.

A review of the FL Financial Assurance list, as provided by EDR, has revealed that there are 4 FL Financial Assurance sites within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
CIRCLE K #2707553 Database: Financial Assurance 3, Da Facility Status: OPEN Facility ID: 9802234	3730 AIRPORT RD te of Government Version: 10/29/2019	NW 1/4 - 1/2 (0.268 mi.)	G48	113
PUBLIX CORPORATE AIR Database: Financial Assurance 3, Da Facility Status: OPEN Facility ID: 9813646	3795 AIRFIELD DR W te of Government Version: 10/29/2019	WNW 1/4 - 1/2 (0.274 mi.)	F54	135
SHELTAIR-LAKELAND JE Database: Financial Assurance 3, Da Facility Status: OPEN Facility ID: 9805363	3600 DRANE FIELD RD te of Government Version: 10/29/2019	WNW 1/4 - 1/2 (0.286 mi.)	G63	156
POP'S PAINTING, INC. Database: Financial Assurance 3, Da Facility Status: OPEN Facility ID: 9502526	3805 DRANE FIELD ROA te of Government Version: 10/29/2019	WNW 1/2 - 1 (0.568 mi.)	U128	370

FL RESP PARTY: Open, inactive and closed responsible party sites

A review of the FL RESP PARTY list, as provided by EDR, and dated 09/29/2019 has revealed that there are 6 FL RESP PARTY sites within approximately 2 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GLOBE AERO LIMITED I Site Status: OPEN Site Status: CLOSED	3240 DRANE FIELD RD	NE 1/8 - 1/4 (0.246 mi.)	45	109
PHOSPHATE ENGINEERIN Site Status: CLOSED	2940 DRANE FIELD RD	ENE 1/2 - 1 (0.527 mi.)	S111	279
Lower Elevation	Address	Direction / Distance	Map ID	Page
CYPRESS AVIATION INC Site Status: CLOSED	3636 DRANE FIELD ROA	WNW 1/4 - 1/2 (0.382 mi.)	O96	255
LAKELAND, CITY OF (F Site Status: CLOSED	3249 MEDULLA RD	SW 1 - 2 (1.485 mi.)	255	739
GMF INDUSTRIES INC Site Status: CLOSED	4600 DRANE FIELD ROA	W 1 - 2 (1.606 mi.)	AY261	751
YAGER PROPERTIES Site Status: CLOSED	0 PIPKIN CREEK ROAD,	E 1 - 2 (1.683 mi.)	266	805

FL TIER 2: A listing of facilities which store or manufacture hazardous materials that submit a chemical inventory report.

A review of the FL TIER 2 list, as provided by EDR, and dated 12/31/2018 has revealed that there are 27 FL TIER 2 sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FEDEX NATIONAL - AVI NEW CINGULAR WIRELES Facility Id: 4030504 Facility Id: 4496266	3840 AIRFIELD COURT 3135 DRANE FIELD RD	E 1/8 - 1/4 (0.220 mi.) ENE 1/4 - 1/2 (0.335 mi.)	D41 K78	102 177
TASTE ADVANTAGE - LA Facility Id: 4550900 Facility Id: 4096081 Facility Id: 3989072 Facility Id: 5403634 Facility Id: 3988930 *Additional key fields are available in the	3135 DRANE FIELD ROA Map Findings section	ENE 1/4 - 1/2 (0.335 mi.)	K80	189
NATURAL ADVANTAGE - Facility Id: 6396686 Facility Id: 5846674 Facility Id: 6142588	3135 DRANE FIELD ROA	ENE 1/4 - 1/2 (0.335 mi.)	K81	199
LAKELAND WAREHOUSE - Facility Id: 6073258 Facility Id: 6365027 Facility Id: 4983080 Facility Id: 5814063 Facility Id: 5377012	3135 DRANE FIELD RD	ENE 1/4 - 1/2 (0.335 mi.)	K82	205
SCHWAN'S HOME SERVIC Facility Id: 5372898 Facility Id: 6363030 Facility Id: 4032367 Facility Id: 6095735 Facility Id: 4514971 *Additional key fields are available in the	2905 PARKWAY STREET Map Findings section	E 1/2 - 1 (0.629 mi.)	X146	425
SCHWANS SALES ENTERP Facility Id: 3988372	2905 PARKWAY STREET	E 1/2 - 1 (0.629 mi.)	X147	431
VERIZON - WARING PAR Facility Id: 3988203	2721 PARKWAY STREET	E 1/2 - 1 (0.768 mi.)	AD169	467
VERIZON WARING PARK Facility Id: 5383378 Facility Id: 4513047 Facility Id: 4039097 Facility Id: 4981353	2721 PARKWAY ST.	E 1/2 - 1 (0.768 mi.)	AD170	476
WARING PARK RSU (FTR Facility Id: 5835447	2721 PARKWAY ST.	E 1/2 - 1 (0.768 mi.)	AD171	480
FRONTIER WARING INDU Facility Id: 6382108 Facility Id: 6088743	2721 PARKWAY ST	E 1/2 - 1 (0.768 mi.)	AD172	481
GLOBE FIBERGLASS	4033 HOLDEN ROAD	E 1/2 - 1 (0.825 mi.)	AH184	502
Lower Elevation	Address	Direction / Distance	Map ID	Page
PUBLIX SUPER MARKETS	3795 AIRFIELD DRIVE	WNW 1/4 - 1/2 (0.274 mi.)	F52	130

Facility Id: 6404117 Facility Id: 4990433 Facility Id: 5380969 Facility Id: 6090708 Facility Id: 5814304				
9805363 Facility Id: 5023201 Facility Id: 6410085 Facility Id: 5855203 Facility Id: 6112248 Facility Id: 5403718	3440 AIRFIELD DRIVE	WNW 1/4 - 1/2 (0.282 mi.)	F56	139
FLIGHT LEVEL AVIATIO Facility Id: 5022629 Facility Id: 6410084 Facility Id: 5855202 Facility Id: 6112247 Facility Id: 5403717	3440 AIRFIELD DR W	WNW 1/4 - 1/2 (0.282 mi.)	F57	143
9046828 Facility Id: 5023229 Facility Id: 6410086 Facility Id: 5855204 Facility Id: 6112249 Facility Id: 5403719	3440 AIRFIELD DRIVE	WNW 1/4 - 1/2 (0.282 mi.)	F59	151
POP'S PAINTING, INC. Facility Id: 4643685 Facility Id: 5140044	3805 DRANE FIELD ROA	WNW 1/2 - 1 (0.568 mi.)	U128	370
POP'S PAINTING, INC. Facility Id: 6405425 Facility Id: 5392683 Facility Id: 6112620 Facility Id: 5871908	3805 DRANE FIELD ROA	WNW 1/2 - 1 (0.568 mi.)	U129	381
POPS PAINTING ROBINSON FANS FLORID Facility Id: 5000620 Facility Id: 6413545 Facility Id: 3994959 Facility Id: 4068153 Facility Id: 5863753 *Additional key fields are available in the	3805 DRANE FIELD ROA 3955 DRANE FIELD ROA Map Findings section	WNW 1/2 - 1 (0.568 mi.) WNW 1/2 - 1 (0.743 mi.)	U130 AC163	384 452
INTERNATIONAL PAINT Facility Id: 6409471 Facility Id: 6111883	3919 AIR PARK DRIVE	W 1/2 - 1 (0.789 mi.)	AE176	491
SPECIALTY FABRICATIO Facility Id: 4030027 Facility Id: 4553431	4015 DRANE FIELD RD	WNW 1/2 - 1 (0.799 mi.)	AF178	494
CHEMSTATION OF FLORI Facility Id: 6412568 Facility Id: 6142616	4410 HOLDEN RD	SE 1/2 - 1 (0.850 mi.)	190	510
KIDRON MODULAR SOLID SURFAC SPECIALTY MAINTENANC	3330 FLIGHT LINE DRI 3240 FLIGHTLINE DRIV 4121 DRANE FIELD ROA	S 1/2 - 1 (0.875 mi.) S 1/2 - 1 (0.888 mi.) WNW 1/2 - 1 (0.901 mi.)	AK197 AK204 AN210	524 558 563

FL NPDES: Domestic and Industrial Wastewater Facilities

A review of the FL NPDES list, as provided by EDR, and dated 11/01/2019 has revealed that there are 10 FL NPDES sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FWCC DRAINAGE IMPROV Status: A Facility ID: FLR10SM14	3900 DRANE FIELD RD	SW 0 - 1/8 (0.013 mi.)	A24	60
STAYBRIDGE SUITES - Status: A Facility ID: FLR20AS02	3855 DON EMERSON DR	N 0 - 1/8 (0.108 mi.)	B27	62
LAKELAND WAREHOUSE - Status: A Facility ID: FLRNEF374	3135 DRANE FIELD RD	ENE 1/4 - 1/2 (0.335 mi.)	K82	205
RUTHVEN PARKWAY CENT Status: A Facility ID: FLR10OS80	2825 DRANE FIELD RD	ENE 1/2 - 1 (0.688 mi.)	AB156	447
Lower Elevation	Address	Direction / Distance	Map ID	Page
POP'S PAINTING, INC. Status: A Facility ID: FLR10NX65 Facility ID: FLR05H012	3805 DRANE FIELD ROA	WNW 1/2 - 1 (0.568 mi.)	U128	370
ROBINSON FANS FLORID Status: A Facility ID: FLR05C386	3955 DRANE FIELD ROA	WNW 1/2 - 1 (0.743 mi.)	AC163	452
SPECIALTY FABRICATIO Status: A Facility ID: FLR05H437	4015 DRANE FIELD RD	WNW 1/2 - 1 (0.799 mi.)	AF178	494
FERRERA TOOLING Status: A Facility ID: FLR10RC92	3960 AIR PARK DR	W 1/2 - 1 (0.802 mi.)	AG181	499
INDUSTRIAL BRUSH COR Status: A Facility ID: FLR05B748	400 DRANE FIELD RD	W 1/2 - 1 (0.840 mi.)	AI187	504
TROPIC STAR SEAFOOD,	3620 VENTURA DR E	WNW 1/2 - 1 (0.882 mi.)	AL200	538

Status: A

Facility ID: FLA016917

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR Hist Auto: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Auto list, as provided by EDR, has revealed that there are 3 EDR Hist Auto sites within approximately 2 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
CIRCLE K STORES INC	3730 AIRPORT RD	NW 1/4 - 1/2 (0.268 mi.)	G50	129
LUKES AMOCO INC	2716 MEDULLA RD	SE 1 - 2 (1.209 mi.)	246	705
IMPERIAL AMOCO INC	3230 W PIPKIN RD	S 1 - 2 (1.379 mi.)	AW251	722

EDR Hist Cleaner: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Cleaner list, as provided by EDR, has revealed that there is 1 EDR Hist Cleaner site within approximately 2 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
KELLERS CLEANERS	5004 YATES RD	S 1 - 2 (1.384 mi.)	AW253	736

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

FL RGA LUST: The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a

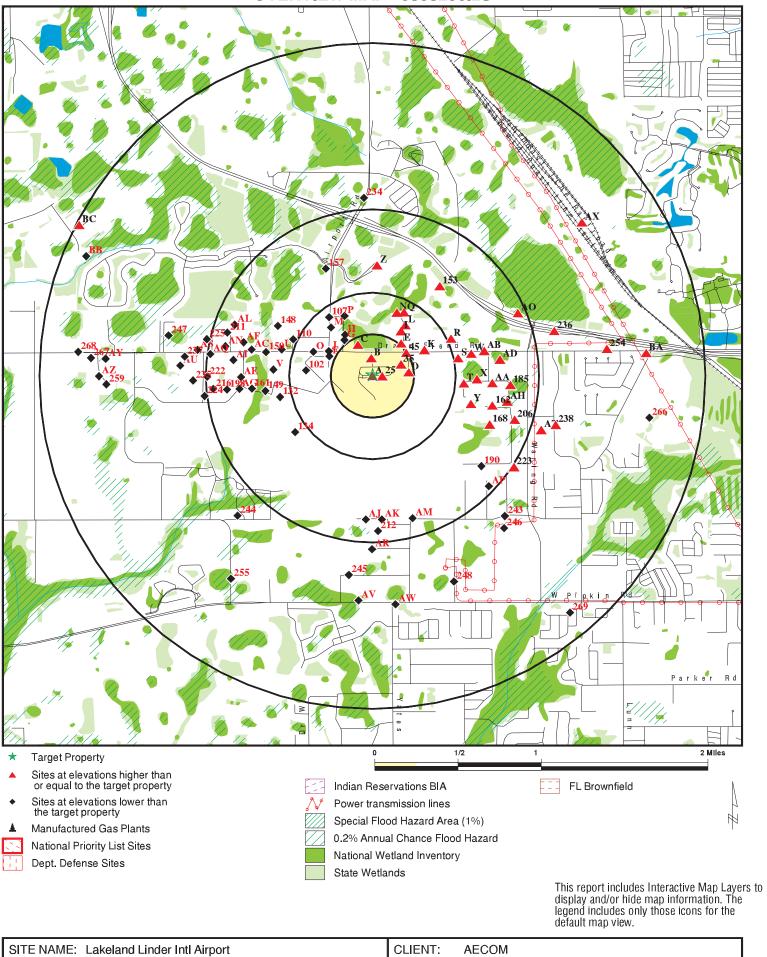
list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Protection in Floridia.

A review of the FL RGA LUST list, as provided by EDR, has revealed that there are 9 FL RGA LUST sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LAKELAND ARMY AIRFIE Facility ID: 9700527	3450 DRANE FIELD RD	NNW 1/8 - 1/4 (0.168 mi.)	C30	66
LAKELAND ARMY AIRFIE Facility ID: 9701079	3450 DRANE FIELD RD	NNW 1/8 - 1/4 (0.168 mi.)	C31	66
LAKELAND LINDER REGI Facility ID: 9801687	3450 DRANE FIELD RD	NNW 1/8 - 1/4 (0.168 mi.)	C33	67
RENNA ENTERPRISES Facility ID: 8944950	3231 DRANE FIELD RD	NE 1/8 - 1/4 (0.222 mi.)	E44	109
Lower Elevation	Address	Direction / Distance	Map ID	Page
LAKELAND CITY-HANGAR Facility ID: 9101671	3470 DRANE FIELD RD	NW 1/8 - 1/4 (0.189 mi.)	C38	99
LAKELAND MUNICIPAL A Facility ID: 8628463	3470 DRANE FIELD RD	NW 1/8 - 1/4 (0.189 mi.)	C39	99
CIRCLE K #2707553 Facility ID: 9802234	3730 AIRPORT RD	NW 1/4 - 1/2 (0.268 mi.)	G49	128
US ARMY-AIRFIELD Facility ID: 9101799	3610 DRANE FIELD RD	WNW 1/4 - 1/2 (0.299 mi.)	J73	174
INDUSTRIAL BRUSH COR Facility ID: 9809351	4000 DRANE FIELD RD	W 1/2 - 1 (0.840 mi.)	AI186	504

There were no unmapped sites in this report.

OVERVIEW MAP - 5953258.2S

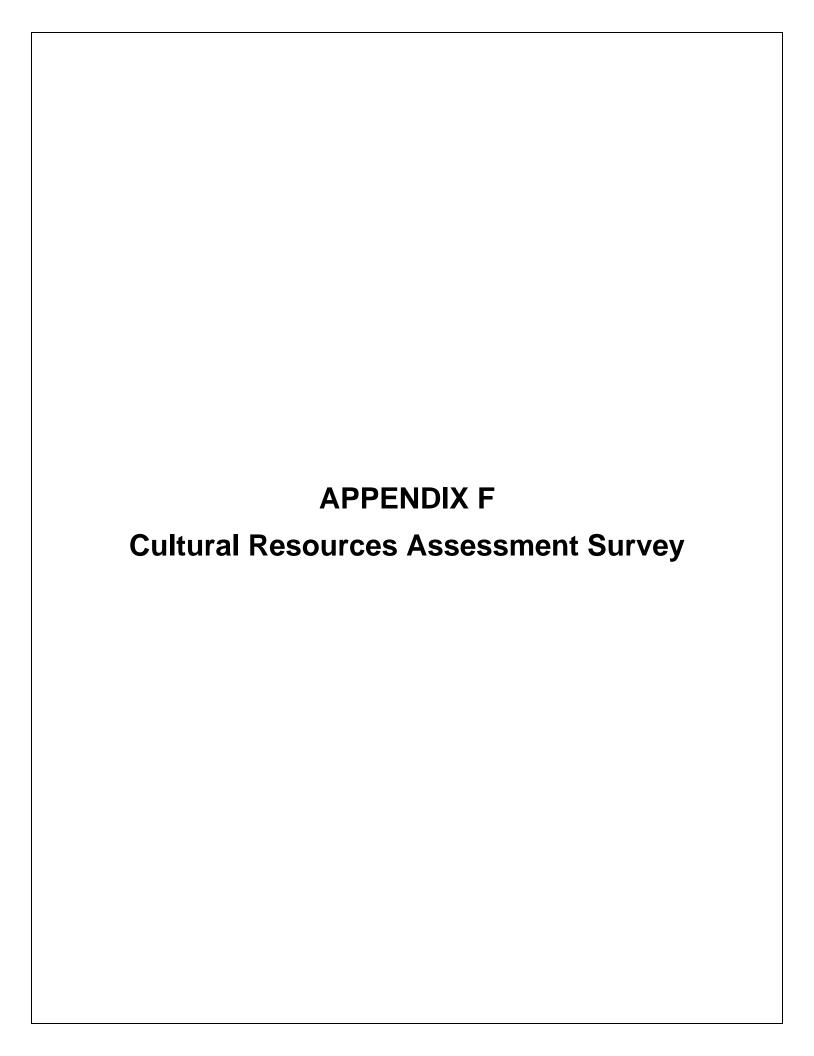


ADDRESS: 3900 Don Emerson Dr

Lakeland FL 33811 LAT/LONG: 27.994517 / 82.014314 CLIENT: AECOM CONTACT: Paul Sanford INQUIRY#: 5953258.2s

DATE: January 29, 2020 7:12 pm

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Phase II Air Cargo Facility Development at Lakeland Linder International Airport (LAL)

Phase IB Cultural Resources Assessment Survey

Prepared for:

Federal Aviation Administration

Prepared by:

City of Lakeland, Florida and AECOM

September 2020



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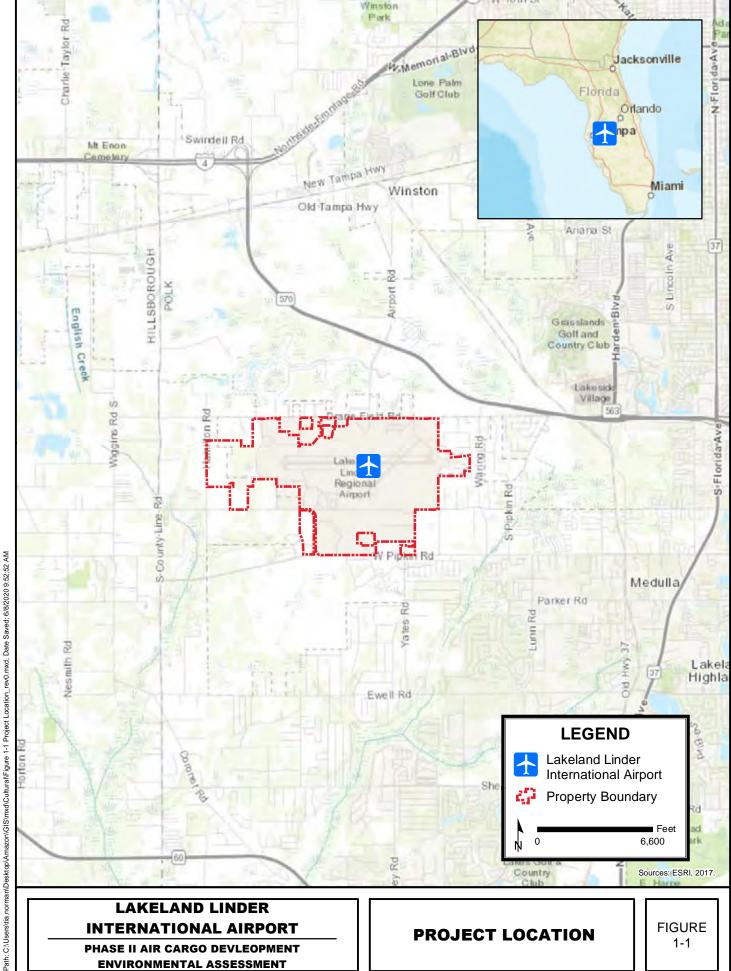
1. INTRODUCTION

AECOM Technical Services, Inc. (AECOM) has performed cultural assessment services to support Phase II of an air cargo facility at Lakeland Linder International Airport (LAL, or the Airport), hereinafter referred to as the Proposed Project. The Airport is located on approximately 1,710 acres in central Florida's Polk County, less than one mile east of the Hillsborough County Line, and approximately 3.5 miles south of Interstate Highway 4, five miles southwest of the City of Lakeland (City), and 27 miles east of Tampa International Airport (**Figure 1-1**).

The Proposed Project is an expansion of an air cargo facility already constructed (i.e., Phase I development). The Phase II expansion is being proposed to accommodate future flexibility for expanded operations, given the potential for network and customer demand to increase in the near future. A notional layout for the Proposed Project is shown on **Figure 1-2a** based on facility sizing needs. The Proposed Project would be developed on an approximate 68-acre site in the northwest quadrant of LAL, immediately west and adjacent to the completed Phase I development. Additionally, to accommodate the potential need for additional aviation fueling capacity at LAL, a fuel farm is being proposed in an area separate from the Proposed Project footprint, at the intersection of Aero Place and Taxiway H (**Figure 1-2b**). Current projections indicate need for additional aboveground storage tanks providing a total of 850,000 gallons of Jet-A fuel capacity. There is potential for a small portion of this capacity to be dedicated to off-road equipment fuel (e.g., gasoline, diesel or hydrogen) if usage needs dictate once the facility is operational.

AECOM conducted a Phase IB Cultural Resources Assessment Survey (CRAS) of the areas of potential effect (APE) for the Proposed Project. To identify potentially significant archaeological and/or historical resources within a project area, a Phase IB CRAS includes background research on the history and environment of the property followed by a subsurface survey and surface inspection of the project impact area which involves pedestrian inspections and shovel testing. Phase IB surveys also include recording any structures over 50 years in age within the vicinity of the project area. A Phase IB CRAS does not include formal excavations of identified cultural resources (Phase II), or data recovery/mitigation planning (Phase III). A Direct Effects Area of Potential Effect (APE) was delineated within which direct physical impacts of the Proposed Project (i.e., construction footprint) will be characterized and disclosed. and was used for the purposes of Section 106 coordination pursuant to the National Historic Preservation Act (NHPA).

An Indirect Effects APE was also delineated that corresponds to the area within the composite 65 decibel day-night average sound level (DNL 65 dB) and higher aircraft noise contour of the Proposed Project. The Indirect Effects APE was used to identify, disclose and evaluate potential impacts on eligible historic architectural resources protected by the NHPA. Refer to **Figure 1-3** for a graphical depiction of the Direct and Indirect Effects APEs delineated for the EA and this CRAS.



LAKELAND LINDER
INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

EA PROPOSED PROJECT

FIGURE 1-2a

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09/23/2020

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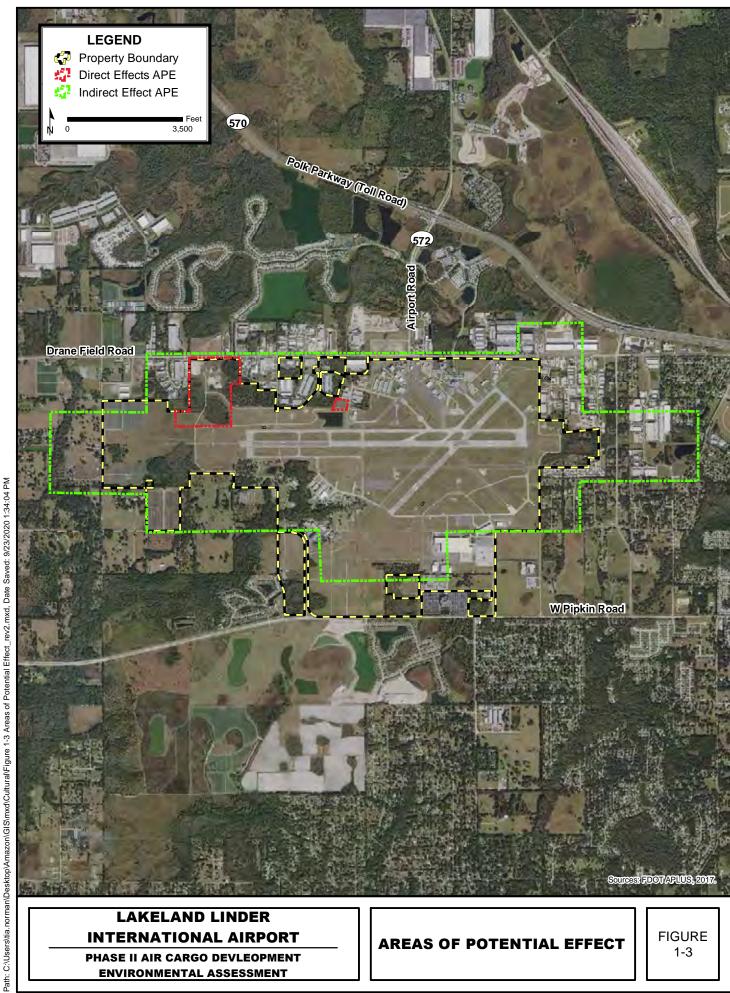
07/02/2020

LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

EA PROPOSED PROJECT FUEL FARM

FIGURE 1-2b



LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVLEOPMENT ENVIRONMENTAL ASSESSMENT

AREAS OF POTENTIAL EFFECT

FIGURE 1-3

The Proposed Project requires Federal action and the Federal Aviation Administration (FAA) is the lead federal agency. This CRAS was prepared to facilitate consultation per Section 106 of the NHPA and 36 Code of Federal Regulation (CFR) 800. This work was conducted pursuant to Section 106 and conforms to the professional guidelines set forth in the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 CFR 44716, as amended and annotated). The work was also conducted pursuant to the following:

- Chapter 1A-46 of the Florida Administrative Code,
- Cultural Resource Management Standards and Operational Manual of the Florida Division of Historic Resources (FDHR, 2003), and
- Chapter 267, Florida Statutes (F.S.).

A background research conducted within one-mile of the Indirect Effects APE revealed that there are 17 historic structures, six archaeological sites, 26 cultural resource studies, and one resource group present within one mile of the Indirect Effects APE (**Appendix B**).

The current study, documented herein, constitutes a Phase IB CRAS and included a Florida Master Site File (FMSF) check, background research, and linear pedestrian and subsurface shovel testing survey within the APE. Mark Martinkovic served as Principal Investigator for the archaeological cultural resources survey on this project and authored this report, which adheres to the FDHR CRAS format. Archaeological fieldwork was conducted by Mark Martinkovic, Jeffrey Jones, Brooke Bayer, and Elizabeth Wilkins on July 6 and 7, 2020 and included the excavation of 12 shovel test pits (STPs) and photographic documentation. Based on the results of current survey, no further archaeological work is recommended for the APE. No Historic Properties will be affected by the Proposed Project.

2. ENVIRONMENTAL OVERVIEW

2.1 PHYSIOGRAPHY AND GEOLOGY

Regionally, the APEs are located in the Flatwoods province of Florida, approximately 25 miles (40 kilometers) east of Tampa Bay. This physiographic region is characterized by relatively low flat land encompassing large portions of south-central Florida. The altitude in this region ranges from sea level to 150 feet. This region is characterized by flatwoods and inland lakes between the Gulf of Mexico to the west and the Atlantic Coastal Ridge to the east. The topography of the region includes a series of poorly drained soil types and ranges in elevation from 140-144 feet (43 meters) above mean sea level.

2.2 HYDROLOGY

The western portion of Polk County consists of fairly level pine flatwoods containing numerous lakes and occasional swamps and marshes. The general area adjacent to LAL is drained by the Gaskin Branch which empties into the Peace Creek to the south which empties into the larger Peace River approximately three miles to the southwest. There are two hydrological characterizations within or adjacent to LAL: freshwater streams and stagnant flatland waters.

Much of the surrounding area is generally poorly drained with occasional drainage channels. The hydrology of the area surrounding LAL is consistent with hydric flatwoods and consists of poorly drained soils.

2.3 PALEOENVIRONMENT

During the late Pleistocene, sea levels were more than 70 meters lower than they are today, and the coastline of Florida extended many miles beyond its current location. From approximately 11,000 before present (B.P.) to 9000 B.P., sea levels rose dramatically as the continental ice sheets retreated and melted, bringing sea levels to within a few meters of current levels (Figure 2-1). Around 14,000 B.P., the vegetational community in the area of western Florida mostly consisted of oak, hickory, and southern pine forests, with mixed hardwood forests along major drainages from the Appalachian highlands toward the Gulf of Mexico. The oak, hickory, and southern pine forests persisted in the area until circa (ca.) 10,000 B.P., while communities from the Appalachians north from 33 degrees latitude and the Florida peninsula experienced a variety of changes as the climate warmed and sea levels rose. The Hypsithermal interval around 8000 to 4000 B.P. led to the emergence of southern pine communities in interriverine uplands and large riverine swamps in the lowlands (Anderson et al. 1996:3-7; Delcourt and Delcourt 1981, 1983, 1985, 1987).

2.4 SOILS

The U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (WSS) maps six distinct soil types in the Direct Effects APE (**Figure 2-2**). The soils within the APE are all poorly drained. The air cargo facility portion of the APE consists of Smyrna and Myakka fine sand; Pomona fine sand; Immokalee sand; Ona-Ona wet fine sand 0-2 percent slopes; and Basinger Mucky fine sand. The proposed fuel farm portion of the APE contains Pomona fine sand and Felda fine sand, frequently ponded 0-1 percent slopes (NRCS, 2019).

2.5 FLORA AND FAUNA

The traditional mesic flatwoods flora of the project area consists of longleaf pine (*Pinus palustris*), slash pine (*Pinus elliottii*) (USDA, 1983), saw palmetto (*Serenoa repens*), gallberry (*Ilex glabra*), fetterbush (*Lyonia lucida*), dwarf live oak (*Quercus minima*), runner oak (*Quercus elliottii*), and wiregrass (*Astrida stricta*) (FNAI, 2010).

Tree-dwelling and larger mammals present on and around the project area include white tail deer (*Odocoileos virginianus*), river otter (*Lontra canadensis*), raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), and squirrels (*Sciurus* ssp.). Avian species located in the area include local species, migratory species, and waterfowl. Reptiles are also present and include several species of snakes, turtles, lizards, and alligators. A wide variety of freshwater, fish are present in fresh water sources such a rivers, creeks, lakes, and ponds (FNAI 2010).



INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVLEOPMENT ENVIRONMENTAL ASSESSMENT

FLORIDA SHORELINES: PLEISTOCENE TO PRESENT

FIGURE 2-1



LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVLEOPMENT ENVIRONMENTAL ASSESSMENT

SOILS

FIGURE 2-2

2.6 CURRENT CONDITIONS AND LAND USE

The Direct Effects APE is historically and is currently an actively maintained site where grounddisturbing operations are often conducted. Many of the ground disturbing activities include building construction and grading, and creation of retention ponds and drainage systems.

Areas of filled and disturbed soil were consistently encountered within the APE during current survey efforts.

The APEs are located in the northeastern portion of the U.S. Geological Survey (USGS) 7.5-minute Nichols, Florida topographic quadrangle map in an area labeled "Lakeland Linder Regional Airport" (**Figure 2-3**). The area immediately west of the Direct Effects APE is outside of the Airport property and consists of a series of light industrial and commercial businesses. North of the APE is Drane Field Road which is a heavily developed east/west road skirting the north boundary of the Airport property. South of the APE are a taxiway and the main runway for LAL.

3. CULTURAL CONTEXT

The FDHR has developed cultural contexts that provide a necessary framework for the description and analysis of known and anticipated cultural resources. The contexts are organized by geographic region, time/developmental period, and theme, and are the basis for evaluating the significance of resources within the APE. The sections that follow summarize the relevant information for each time period in the region. The FDHR divides the prehistory of the State of Florida into four general periods (Payne and Milanich, 1992):

- Paleoindian (12,000-7,900 Before Christ [B.C.]),
- > Archaic (7,900-500 B.C.),
- ➤ Woodland (500 B.C.-Anno Domini [A.D.] 1500), and
- ➤ Mississippian (A.D. 1000-1500).

3.1 PALEOINDIAN PERIOD (12,000-7,900 B.C.)

The earliest human occupation in Florida dates to the Paleoindian period. These people were the descendants of populations that had previously crossed the Bering Strait from Asia into the New World during the Late Pleistocene. Although the timing of this migration is subject to considerable debate, by ca. 12,000 B.C. these early colonists had spread across most of North and South America (Adovasio and Pedler 2005; Milanich 1994).

The earliest human occupants in Florida occupied a landscape different from that which is present today. During the Ice Age at the end of the Pleistocene epoch (ca. 12,000 years ago), sea levels were approximately 60 to 100 m lower than today. As a result, large portions of the continental shelf to the east, west, and south of Florida would have been exposed and the Florida Peninsula was twice as large as it is today (Faught 2004; Milanich 1994).



The subsequent inundation of these areas skews the available data on Paleoindian occupations in Florida, as sites that would have been located on the Coastal Plain are now under water (Borremans 1992; Faught 2004; Milanich 1994).

Paleoecological data suggest Florida was cooler and drier during the Paleoindian period compared to modern conditions (Borremans 1992). The now submerged Coastal Plain appears to have been crisscrossed by numerous river drainage systems, while the interior prairies were dotted by lakes and sinkholes created by upland springs.

These wetter environments would have provided more hospitable conditions for flora, fauna, and the earliest human occupants of interior Florida (Borremans 1992; Milanich 1994).

The majority of information related to the material culture of the Paleoindians of Florida comes from lithic assemblages. Paleoindian assemblages contain a mixture of formal and expedient stone tools (Borremans 1992). Formal tools include large, lanceolate projectile point/knives (PPKs), unifacial scrapers, gravers, and bifacial knives. Expedient tool types include flake knives, retouched flakes, and hammerstones used in tool manufacture. The majority of both formal and expedient Paleoindian tools were manufactured from high quality cherts (Borremans 1992; Milanich 1994). Ground stone tools were also manufactured, including adzes and egg-shaped weights interpreted as parts of bolas used in bird hunting (Milanich 1994).

Diagnostic stone tools dated to the first half of the Paleoindian period (i.e., Early and Middle Paleoindian periods [12,000-8,500 B.C.]) include the Suwannee, Simpson, and Clovis PPKs (Borremans 1992; Milanich 1994). Diagnostic stone tools dated to the latter part of the Paleoindian period (Late Paleoindian [8,500-8,000 B.C.]) include Dalton PPKs that represent a transitional form between the earlier Paleoindian and Early Archaic forms (Borremans 1992; Milanich 1994).

Although the Paleoindian occupants of Florida likely used a host of organic materials such as wood, bone, shell, and plant fibers to manufacture tools, shelters, ornaments, and clothing, the acidic soil conditions found across most of the state have resulted in the decomposition of most these organic artifacts (Borremans 1992). A small sample of non-lithic tools have been recovered across the state, including ivory spear foreshafts, bone and antler PPKs, bone needles, and worked fossil shark teeth (Dunbar and Webb 1996; Milanich 1994).

Paleoindians in Florida exploited a wide variety of animals and plants for food. Evidence for megafauna exploitation in Florida include a mammoth vertebra with visible butchering marks on its surface recovered from the Santa Fe River in north central Florida and the partial skeleton of an extinct species of bison (*Bison antiquus*) with a stone PPK still lodged in the skull found in the Wacissa River in northwest Florida (Milanich 1994). Faunal remains from the Little Salt Spring and sites on the Aucilla River demonstrate the wide breadth of species consumed by Paleoindian groups, including sloth, tapir, horse, camelids, mammoth, deer, fish, turtles, shellfish, opossum, rabbit, and muskrat. Evidence suggests that Paleoindian groups consumed plant foods as well. At the Little Salt Springs site, located just north of Charlotte Bay on the Gulf

Coast, archaeologists recovered botanical remains including berries, roots, seeds, and nuts (Borremans 1992; Milanich 1994).

Throughout the period, Paleoindian sites are interpreted as the remains of small, mobile bands of hunter-gatherer groups. The small size of most Paleoindian sites suggests these bands consisted of nuclear families or extended families, although larger group aggregations may have occurred at quarry sites (Milanich 1994). Sites located near fresh water sources are interpreted as seasonally reoccupied base camps; small lithic scatters are interpreted as short-term camps that represent brief stays for resource procurement (Milanich 1994). The location of high-quality chert for stone tool production also played a significant role in Paleoindian settlement systems. Quarry sites were likely visited on a regular basis to obtain raw materials for tool production and numerous sites have been found in association with chert outcrops. Cores, flakes, and other evidence of initial tool reduction are typically found at these sites (Borremans 1992).

Archaeological research conducted on the now submerged Coastal Plain suggests Paleoindian settlement was focused on riverine environments. Geological studies of inundated riverine, lagoon, and marsh deposits along the Florida coast suggest estuarine resources in these areas were utilized by Paleoindian groups (Borremans 1992). A survey conducted along the drowned channel of the Aucilla River in northwest Florida identified nine submerged Paleoindian sites. Diagnostic Paleoindian PPKs were recovered from these sites, including Suwannee PPKs as well as later Early and Middle Archaic PPKs (Faught 2004). These sites varied in size and artifact diversity suggesting the presence of base camps and short-term, resource procurement camps similar to those found in the interior.

3.2 ARCHAIC PERIOD (8,000-500 B.C.)

The Archaic period is typically divided into three subperiods based predominantly on the changes in PPK morphology through time: Early Archaic (8,000–5,000 B.C.); Middle Archaic (5,000–3,000 B.C.); and Late Archaic (3,000–500 B.C.). The general trend was toward increasing sedentism throughout the period, culminating in the appearance of the first fully sedentary villages during the Late Archaic period. Ceramic technology appeared during the Late Archaic. The end of the Archaic period is marked by the appearance of regional cultures in different parts of the peninsula. These regional cultures are primarily defined based on technological and stylistic differences in ceramic assemblages.

Sea-level rise and increasingly wetter climatic conditions constitute the largest changes to the environment along the Florida Peninsula during the Archaic period. Although the general climactic trend was towards increasingly wetter conditions, there were marked fluctuations in climate (Milanich 1994). The period from 8,000 to 6,000 B.C. was markedly wetter than the preceding Paleoindian period, while the period from 6,000 to 3,000 B.C. was drier than the previous 2,000 years. By 3,000 B.C., the climate of Florida was similar to that of today (Milanich 1994).

The wetter climate brought about changes in both the hydrology and flora on the Florida Peninsula. Pollen data suggest that during this period, mixed forests gradually replaced the xerophytic oak-pine forest that had dominated the landscape during the Paleoindian period (Pelletier *et al.* 2004). The moister climate also resulted in an increase in surface water across the state, expanding the number of pond, lake, marsh, and swamp environments across the peninsula.

Sea-level rise, which began during the Paleoindian period as the glaciers associated with the last glacial maximum began to melt, continued during the Archaic period. As a result of rising sea levels, a large number of Archaic period sites have been inundated. The inundation of these sites has created a bias in our understanding of Archaic period lifeways as the majority of the available data are from interior sites in upland settings.

3.2.1 EARLY ARCHAIC PERIOD (8,000-6,000 B.C.)

Diagnostic PPKs from the Early Archaic consist of a variety of side-notched and stemmed varieties including the Bolen, Dalton, Hamilton, Kirk Serrated, Nuckolls, Santa Fe, Suwannee, and Wacissa types (Milanich 1994; Russo 1992). PPKs with side notches and bifurcated bases, such as the Hamilton and Arredondo types, also date to this period (Milanich 1994; Russo 1992).

Early Archaic settlement and subsistence patterns appear to be similar to the preceding Paleoindian period. Early Archaic components are commonly found at sites with earlier Paleoindian occupations. This is most common at base camp sites (Milanich 1994). Types of Early Archaic sites include base camps, short-term camps, and quarry sites similar to those dated to the Paleoindian period (Russo 1992). The continuity in both site location and site types suggests Paleoindian lifeways generally continued into the Early Archaic period. Although the similarities in settlement pattern between the Early Archaic and Paleoindian periods are numerous, significant changes did occur. Early Archaic occupations are found in a more diverse set of locations and environments compared to early Paleoindian sites. The wetter conditions of the Early Archaic period resulted in an increase in available surface water, and Early Archaic populations appear to have expanded their occupation across the landscape as a result (Milanich 1994).

The second major development associated with Early Archaic populations was the appearance of a new type of site, the cemetery, which is not known for the preceding Paleoindian period. These sites are typically encountered in wet, marshy environments and shallow ponds, although later examples include internments in shell middens (Russo 1992). The practice of burying the dead in cemeteries located in low, wet, marshy environments persisted into the Middle Archaic period at sites such as Little Salt Spring in Sarasota County as well as sites in southern Florida (Milanich 1994; Russo 1992).

3.2.2 MIDDLE ARCHAIC PERIOD (6,000-3,000 B.C.)

Middle Archaic PPKs are typified by the stemmed PPK with a Christmas tree shaped blade such as the Levy, Marion, Newman, and Putnam types (Russo 1992). A hallmark of the Middle Archaic was the appearance and development of a blade industry (Milanich 1994). In addition to the PPKs, the Middle Archaic toolkit included a variety of specialized tools such as burins, microliths, and expedient forms.

While terrestrial animal and plant food resources continued to be exploited, the proliferation of shell middens in both riverine and coastal settings during the Middle through Late Archaic period demonstrate the importance of both freshwater and saltwater species of shellfish to these populations. At sites along the Gulf and Atlantic coasts, marine shellfish such as quahogs, whelks, conchs, oysters, and scallops were common food items. At riverine sites, mystery and apple snails, as well as freshwater mussels were harvested (Milanich 1994; Russo 1992). The focus on riverine and coastal resources helped to establish a more sedentary settlement pattern, with increasing population sizes at base camps (Milanich 1994; Russo 1992).

3.2.3 LATE ARCHAIC PERIOD (3,000-500 B.C.)

Late Archaic PPKs are typically smaller, stemmed and corner-notched forms that include the Clay, Culbreath, Destin, Lafayette, Marion, Putnam, and Savannah types (Campbell *et al.* 2012; Morehead *et al.* 2013). The Late Archaic tool kit also included a variety of temporally nondiagnostic formal and expedient stone tools such as scrapers, gravers, adzes, knives, drills, choppers, gouges, and hammerstones (Milanich 1994; Russo 1992).

One of the most significant technological developments of the Late Archaic period was the appearance of ceramic technology. The earliest ceramic ware found in Florida is fiber-tempered Orange ware ceramics, which appeared along the northeast coast of Florida ca. 2200 B.C. Shortly after the appearance of ceramic technology in northeast Florida, fiber-tempered ceramics appeared at sites in the southern portion of the state, as well as along the Gulf Coast and Florida Panhandle. Along the Gulf Coast, the earliest, fiber-tempered ceramics are defined as the Norwood series (Saunders and Hays 2004). Norwood series ceramics are similar in morphology and exterior surface decoration but have a greater amount of sand content in their paste compared to Orange wares (Russo 1992; Saunders and Hays 2004).

The increased exploitation of shellfish and coastal resources during the Late Archaic led to large shell midden sites covering several acres (Milanich 1994; Russo 1992). These shell midden sites consist of large, extensive sheet midden deposits or deep, ring-shaped mounds of shell arranged around open, circular areas. These interior spaces within shell-ring sites may have functioned as central plazas or living areas (Russo 1992; Sassaman 2005).

The variety of faunal and botanical remains at Late Archaic sites demonstrates continued reliance on a hunting and gathering subsistence strategy (Milanich 1994). Plant and animal resources available during different seasons have been recovered from sites, suggesting occupation year round. The larger size, increased depth, and evidence of year-round

occupation based on faunal and botanical remains recovered from these sites indicates they represent occupations by semi-sedentary, and possibly even fully sedentary, hunter-gatherer groups (Russo 1992).

The larger sites appear to have been surrounded by a network of small, short-term resource procurement sites similar to those encountered during earlier periods. Russo (1992) has interpreted the relationship between large shell midden sites and these smaller, short-term camps as reflecting an integrated settlement system of large, centralized villages articulated with outlying habitation areas and resource processing stations.

3.3 WOODLAND PERIOD (500 B.C.-A.D. 1000)

The Woodland period in Florida is generally divided into three periods: the Early Woodland, represented by the Deptford culture (500 B.C.–A.D. 100); the Middle Woodland, represented by the Santa Rosa and Swift Creek cultures (A.D. 100–300); and the Late Woodland, represented by the Weeden Island culture (A.D. 300–900/1000). However, the Woodland Culture is poorly defined in the Central Florida Gulf Coast. Changes in pottery and technology beginning in the Late Archaic period are generally described as the Formative period. This culture gave rise to the later Weeden Island cultures.

Climactic conditions during the Woodland period were similar to those of today across the Southeast. Sea levels continued to rise, but at a slower rate than in earlier periods, with sea levels rising approximately 2 m over the last 2,000 years (Avery 1992).

3.3.1 WEEDEN ISLAND CULTURE (MANASOTA CULTURE) (500 B.C.-A.D. 1000)

Weeden Island cultures are generally distributed from Mobile Bay to the Atlantic Ocean and south through north and central Florida. Common Weeden Island cultural traits include distinctive decorated pottery, mound building and burial ceremonialism, and village sites. Gulf Coast sites are found as far south as Sarasota. There are several regional variations of the culture, based on regional adaptations to Florida's varied environments. The southern manifestation of the Weeden Island culture is known as the Manasota Culture. Despite the distances between them, all Weeden Island cultures are thought to have shared a common belief system. The Manasota culture focused on fishing, hunting, and shell fish gathering. Burial practices include primary flexed mound burials. Dense shell middens (oysters, quahog, and scallops) are often found along the coast in elevated hammocks. Early Manasota pottery was sand-tempered and undecorated but later pottery was decorated with check and complicated stamping. This decorated pottery is often discovered in a funerary context within burial mounds (Milanich 1994).

3.4 MISSISSIPPIAN PERIOD (A.D. 1000-1500)

The Mississippian culture in southwest Florida is known as Safety Harbor and grew out of the earlier Manasota cultures. According to Willey (1949) and White (1982), the key aspects of the culture include large sites with a temple mound (or mounds); plazas along streams, coastal

areas, inland lakes, and ponds; and typical Mississippian architecture (Lewis and Stout 1998; Payne 2002). Structural remains include daub, postholes/molds, wall trenches, hearths, and storage and refuse pits. There is little evidence of defensive constructions, such as palisades or embankments, around mound or other sites (Gardner 1971; Tesar 2006). Other features of these sites include cemeteries; an apparently reduced number of ceremonial sites as compared to the preceding periods; and a subsistence regime including evidence of maize agriculture, horticulture, and wild collected plants, as well as a wide range of fauna such as deer, small mammals, turtle, fish, and shellfish. Safety Harbor sites relied less on traditional Mississippian agriculture and focused on shellfish gathering (Milanich 1994).

3.5 HISTORIC CONTEXT

3.5.1 CONTACT PERIOD (A.D. 1500-1565)

Spain made several attempts to colonize Florida in the early sixteenth century. The North American continent was first sighted by Spanish explorer Juan Ponce de Leon in March of 1513. He claimed the land for the Spanish crown and named it *La Florida*, meaning "Land of Flowers." Spain launched multiple expeditions to settle their new discovery between 1513 and 1563, but Native Americans and the inhospitable wilderness prevented permanent settlement (Gannon 1996).

At the time that the first Spanish explorers, Juan Ponce de Leon, Panfilo de Narvaez, and Hernan de Soto, were making the first recorded European forays into Florida in the early 1500s, the northwestern portion of the State was occupied by the Apalachee chiefdoms, agricultural descendants of the Fort Walton Culture (Hann and Mcewan 1998). The Apalachee settlements included small farming hamlets, as well as larger villages and ceremonial mound centers. Alvar Nunez Cabeza de Vaca, a member of Narvaez's party, recorded fields of planted maize around the villages (Gannon 1996). Narvaez ventured into the Apalachee region in 1528 in an attempt to find treasure (Gannon 1996). After one month in the area, more than 60 of Narvaez's men were dead, and the party retreated to the Gulf Coast. There, they constructed small craft and set sail for Mexico, but a storm capsized the small boats off the coast of Texas, and all but eight of the men drowned. Of these survivors, only four reached Mexico (Gannon 1996).

A deadly hurricane prevented Tristan de Luna's efforts to establish a colony on Pensacola Bay in 1559 (Burns 2008). Florida became increasingly important to Spain because it was located along the return route followed by Spanish treasure fleets. The crown wanted to prevent foreign countries from establishing a base in Florida that would threaten Spain's communications with the Caribbean and Mexico (Johnson 1982).

The early contact with Spanish explorers, while brief, resulted in significant deleterious effects to the Native Americans. The influx of European trade goods, usually acquired via down-the-line exchange from other indigenous traders, brought about great changes in lifestyle as Native Americans incorporated new technologies and reoriented their economies to participate in the European goods trade networks (Holland Braund 1993). However, European diseases introduced by the explorers and traders decimated the local populations (Ramenofsky 1987).

By the time the Spanish Franciscans established missions in northwestern Florida during the mid-seventeenth century, the Apalachee were much reduced in population and social cohesion.

Florida became increasingly important to the European powers because of its location along the return route followed by Spanish treasure fleets. The first attempt to establish a permanent colony was in 1559, when Don Tristan de Luna y Arellano and 900 colonists from Mexico established a settlement in the Pensacola Bay area (Lyon 1996), but the colony was destroyed by a hurricane on September 19, 1559 (Lyon 1996). Later attempts at colonization by the French and Spanish were focused on the St. John's River area, near modern day St. Augustine, on the Atlantic coast (Johnson 1982). Conflicts between the French and Spanish in Florida resulted in the destruction of the French colonies in the 1560s and the establishment of a fixed Spanish foothold centered in the St. John's River area (Burns 2008). While Spain emerged victorious over the French in Florida, conflict with the English continued intermittently for the next 200 years.

3.5.2 FIRST SPANISH PERIOD (A.D. 1559-1763)

The First Spanish period is defined by an era in which Spain first claimed ownership of Florida over the English and the French (Handly *et al.* 2012). The French presence in Florida threatened Spain's supply of gold and silver, which was carried in galleons along the coastline en route to Spain. King Phillip II named Pedro Menéndez de Avilés, a nobleman with extensive naval experience in Spain and the New World, as governor of Florida and instructed him to explore and further colonize the territory. St. Augustine was established as a permanent Spanish settlement in 1565 by Avilés.

Spanish settlement in northwestern Florida during this period appears to have been sparse. Fort Santa Maria de Galve was established by the Spanish in 1698 in Pensacola Bay in an attempt to thwart France's presence in the area. San Jose was a military outpost established in 1702 at St. Joseph's Bay (Handly *et al.* 2008). The French established Fort Crevecoeur at St. Joseph's Bay in 1717, which was abandoned by 1718. The Spanish erected their own fort in the same location, but it was also eventually abandoned. In 1754, there appears to have been a Spanish settlement located somewhere on St. Andrews Bay, although evidence is anecdotal (Handly *et al.* 2008).

Spanish colonial rule in Florida had a significant impact on the local Native American populations. The principal instrument of Spanish influence and control was the establishment of the mission system along the Atlantic coast from the St. Augustine north through coastal Georgia (Saunders 1992). Franciscan missions in Florida were established in pre-existing Native American village areas. While Spanish governors held supreme authority, local native officials were allowed to retain a degree of cultural and political influence (Hann 1996). The missions' primary goal was not of economic enterprise, as was the case in missions established in the Western U.S. While native peoples living at missions did work for the Spanish overlords, they often settled in the missions of their own accord for economic reasons (Hann 1996) and

possibly to find refuge after their own homelands were devastated by disease and raiding (Ramenofsky 1987).

Missions among the Apalachee were established in the Tallahassee region in the 1630s and 1640s (Hann 1996). The mission on the Apalachicola River was the farthest west of the Franciscan churches in Florida prior to establishment of the Recollect Order's missions in the 1670s (Hann 1996). Groups like the Tama from central Georgia and the Chine and Chacato from northeastern Florida migrated to the Apalachee missions throughout the mid-1600s.

Estimates during the middle of the seventeenth century list 15,000 to 20,000 people living in the Apalachee area (Hann 1996). The local population of mixed Apalachee, Chacato, Chine, Amacano, Pacha, Tama-Yamasee, and others lived in 40 settlements, 11 of which were incorporated into the missions (Hann 1996). By the end of the seventeenth century, disease epidemics reduced local populations, and raids from native groups allied to the British in the Carolinas destroyed the mission settlements. Following the raids, the Spanish abandoned Apalachee in 1704. The remnant native population dispersed to Mobile, Pensacola, and St. Augustine (Hann 1996).

3.5.3 British Period (A.D. 1763-1781)

The Seven Years' War (1756–1763) broke out between England and France in North America and later spread to Europe. Spain remained neutral until 1762 (Johnson 1982). Spain was allied with France and feared that a British victory in North America would destroy the balance of power. The British captured Havana in 1762, and Spain ceded Florida to England in the Treaty of Paris in 1763 (Johnson 1982).

After England gained control of Florida, the territory was divided into West Florida and East Florida. East Florida included the Florida Peninsula and ended at the Apalachicola River. West Florida included the Florida Panhandle and portions of southern Alabama, Mississippi, and Louisiana. Apart from the capitals at St. Augustine and Pensacola, the province was almost devoid of European settlement (Burns 2008).

To attract European settlers, the governors of West Florida offered small tracts of land in exchange for service in the Seven Years War (Fabel 1996). However, poor soils, lack of the trade that was expected with Mexico, and frequent disease epidemics kept the province poor and largely undeveloped. In 1770, West Florida was home to 3,700 white and 12,000 black settlers, along with approximately 30,000 people belonging to the Chickasaw, Choctaw, and Creek nations (Fabel 1996:136). Most of the new settlers were concentrated in the Natchez Tract in Mississippi and around the towns of Mobile and Pensacola (Coker 1996; Fabel 1996). Small farmsteads were established in the rural areas of the Florida Panhandle, and the forests were harvested for lumber, but the area was mostly occupied by remnant Apalachee and Creek groups (Hudson 1976; Ramsey 1988).

Florida had become Britain's informal fourteenth colony, but the protectorate did not send a delegate to Philadelphia when the Declaration of Independence was signed (Boatner 1992;

Burns 2008). Florida was still a garrison colony and was dependent on English arms for protection (Johnson 1982). The majority of the European population consisted of soldiers and officers, officials, and dependents (Wright 1975). The region was also a haven for Loyalist refugees.

When France entered the American Revolutionary War, allied Spain also declared war on Britain. The Spanish Governor of Louisiana, Bernardo de Galvez, defeated the British garrisons at Baton Rouge, Natchez, and Mobile. Then, in 1781, he besieged and eventually occupied Pensacola (Fabel 1996). Florida was returned to Spain at the Second Treaty of Paris in 1783 in thanks for assisting America during the war for independence (Morris *et al.* 2002). The transfer of flags took place in St. Augustine in July of 1784.

3.5.4 SECOND SPANISH PERIOD (A.D. 1781-1821)

Spain retained the division of Florida's eastern and western provinces after formally taking over the territory in 1784 (Coker and Parker 1996). Most British residents departed for other parts of the British Empire or settled in the U.S. following the return of Florida to the Spanish. Those that remained were required to take an oath of allegiance to Spain. The population during the Second Spanish period included British, Minorcans, Italians, Greeks, refugee slaves from the former English colonies, and Spanish residents from the First Spanish period (Johnson 1982).

The poor Spanish colony was not economically vital to Spain, and pieces of the territory were gradually ceded to the U.S. In addition to lumber products, the Panhandle region saw increased trapping of deer for the skin-trade, particularly with British, and later American trading companies (Coker and Parker 1996; Pavao-Zuckerman 2007). The Creek Nation was the ethnic majority group in the northern Panhandle during this period (Coker and Parker 1996). Formerly enslaved Africans who had escaped from Alabama, Georgia, and eastern Florida cohabitated with the Creeks in the Panhandle region (Coker and Parker 1996:156).

Spanish Florida continually felt pressure from its neighbors to the north. The Spanish territory was considered by President James Madison to be "at all times a source of irritation and ill blood with the U.S." (Cusick 2003, quoted in Burns 2008:10). It was Madison's hope that it be occupied and absorbed into the U.S. The Spanish government in St. Augustine offered freedom to runaway slaves from nearby states and territories to reinforce their presence in Florida (Burns 2008; Griffin 1983).

Good trade relations did not quench the U.S.' desire to control Florida. The U.S. Army attempted to invade and occupy northeastern Florida between 1812 and 1813 in an effort to dominate the region. The Patriot War, as it is now known, resulted in no new land acquisitions for the U.S., but it did leave numerous plantations in ruin and intensified tensions between the U.S. and Spain (Burns 2008). During the War of 1812, the British, who were then allied with Spain, launched attacks on Mobile and New Orleans from Spanish-occupied Pensacola. After successfully defending both cities, American General Andrew Jackson attacked the British fortifications in Pensacola (Coker and Parker 1996:156).

The First Seminole War, which began when American troops attacked a Creek village in Georgia, was fought partly in northwestern Florida, specifically in areas of what is now Calhoun County. On December 13, 1817, a large force of Seminole and Creek attacked the Creek village, Blountstown, due to the political affiliation of its leader, Chief John Blount (Calhoun County Chamber of Commerce 2014). Later in December 1817, the same group attacked American supply boats on the Apalachicola near Ocheese Bluff, also in what is now northeastern Calhoun County (Missall and Missall 2004).

In 1818, Creek and African raiders from Negro Fort near the mouth of the Apalachicola River were attacking farmsteads in the region and up into southern Georgia and Alabama. General Jackson attacked the fort and then proceeded to attack Spanish troops in Pensacola on the pretext that they were collaborators with the Creek Nation (Coker and Parker 1996).

President James Monroe supported the acquisition of Florida during his 1821 inauguration speech by stating "it would provide neighboring states access to the ocean, its Gulf coast harbor could berth warships" (Waterbury 1983:151). Spain lost Florida when thousands of Americans settled there and made the country ungovernable. The U.S. Government seized the opportunity afforded by Spain's lack of control and negotiated the purchase of the territory. Spain officially ceded all of Florida to the U.S. with the signing of the Adams-Onis Treaty in February of 1821 (Franklin and Morris 1996:51; Morris *et al.* 2002).

3.5.5 TERRITORIAL PERIOD (1821-1845)

Tallahassee was chosen as the state capital in 1821 because of its central location, granting representatives from each part of the state equal access to a common meeting place (Schafer 1996). Florida's economy grew and diversified under American rule. Growth was spurred by the production of citrus fruit and sugar, which led to land speculation and the improvement of transportation facilities. Merchant vessel traffic increased as trade between the U.S. and the Caribbean region flourished. Goods from New York, New Orleans, and Charleston were imported to St. Augustine, while oak, cedar, timber, pine, cotton, bricks, oranges, and other items were exported (Burns 2008). American merchant ships, predominantly coastal schooners, were the key to the commercial expansion and economic viability of the new territory (Morris et al. 2002).

3.5.6 AMERICAN STATEHOOD AND CIVIL WAR PERIOD (A.D. 1845-1865)

Florida became the 27th State admitted to the Union in 1845. The northwestern portion of the State held 15 percent of the population, most of it rural. Pensacola was the largest city in the region, with 2,900 inhabitants (Brown 1996). The largely frontier-like conditions of northwestern (and eastern) Florida were the opposite of middle Florida's wealthy cotton and citrus plantations, which contained two-thirds of the State's enslaved population (Brown 1996). The disparate economies led to internal conflict on the subject of secession. As municipalities voted on slavery and secession, bands of armed regulators representing both sides of the issue rode about intimidating voters (Cox 2008). Despite abolitionist sympathizers in northwestern and parts of eastern Florida, the wealthy and politically connected land-owning class of middle

Florida pushed for secession, and Florida became the third State to secede from the Union in 1861 (Brown 1996).

The Civil War began in Florida two days after the shelling of Fort Sumter. Union troop buildup began at Fort Pickens on Santa Rosa Island in Pensacola Bay in early 1861. On April 13, 1861, Confederate troops began shelling the Union position but were quickly defeated by the Union navy (Brown 1996). The Confederate forces under General Braxton Bragg attempted several more times to dislodge the fortified Federal forces, but abandoned Pensacola by March of 1862 (Brown 1996). Port cities like Apalachicola and other southern coastal cities found themselves at the mercy of Union blockades by the spring of 1862 (Burns 2009). Skirmishing continued throughout the state, but no major battles took place. Nevertheless, the Union blockade and forced conscription of a large percentage of able-bodied men left Florida impoverished by 1864 (Brown 1996).

3.5.7 RECONSTRUCTION AND INDUSTRIALIZATION (A.D. 1865-1940)

Much of Florida struggled after the conclusion of the Civil War and the abolition of slavery. Freed slaves established homesteads or share-cropped much of the former plantation lands, leading to conflicts with former planters (Shofner 1996:250). On the other hand, migration of the wealthy planter class and northerners to peninsular Florida created a thriving citrus-growing and tourist economy (Burns 2008).

Things remained largely unchanged in the general region during the late 19th century. White yeoman and black farmers continued to grow cotton, corn, vegetables, sugar-cane, and tobacco as sharecroppers and tenant farmers (Proctor 1996). The timber industry also continued to operate.

Naval stores, also referred to as the turpentine industry, were a part of the timber industry in the southeastern U.S. Naval stores were produced through the industrial rendering of the sap or gum (oleoresin) gathered from pine trees, most notably the longleaf pine and slash pine. The naval stores industry, and its associated settlement patterns, were extractive systems closely linked with lumber and timber (Butler 1998). The naval stores industry supplied needed turpentine and rosin to the world market and provided employment for residents of Florida during the late 19th through middle 20th century. Turpentine and rosin were both used in many American household products including paints, medicines, hair spray, and cosmetics (Butler 1998).

Many of the families involved in the naval stores industry migrated to Florida in the decades following the Civil War from the Carolinas, as war and a long history of timbering negatively affected the industry in those states (Blount 1993). The influx of people from North and South Carolina helped exploit the vast timber resources of Florida. This business opportunity can be seen in contemporary advertisements proclaiming that ready fortunes were available in Florida for a hardy few. For example, in 1889 the New York Times described the timber and turpentine business in Florida as "A business that promises well for hardy men, money to be made in the

cypress swamps and pine woods with honest, hard work" (New York Times 1889). The development of improved transportation systems during this period, such as improved roads, railroads, and narrow gauge tram railroads, allowed the naval stores industry to spread and utilize the resources farther from settled areas (Butler 1998). In 1850, Florida accounted for only 1.05 percent of naval stores production in the U.S. By 1900, Florida claimed 31.8 percent of the U.S. production, and became the national leader. Florida held the lead until 1924, when Georgia became the national leader and remained so until the demise of the industry after WWII (Martinkovic 2006).

3.5.8 1941-PRESENT DAY

A 1952 promotional publication summarized the immediate post-WWII history of Lakeland, founded in 1884 (Lakeland Chamber of Commerce 1952:5, 11). It noted that with a population of approximately 40,000, Lakeland was Polk County's principal city. The County grew a third of Florida's citrus crop, raised more cattle than any other Florida county, and produced 68 percent of the phosphate mined in the Country. Pebble phosphate was generally found in the County from 10 to 30 feet below the surface, requiring stripping of the land by giant shovels (**Photos 3-1** through **Photo 3-4**). This last item is most relevant to the history of LAL and its surroundings. Local resident Claude M. Harden, Jr. recalled that around 1940 or 1941, just prior to the Airport's construction, current Drane Field Road was dirt and the area was marked by "high and rugged" piles of spoil from phosphate mining (Cobb, Oldham and Harden n.d.) (**Photo 3-5**). Another contemporary account described the Airport site prior to construction differently (Lakeland Ledger 1945a):

Extensive installations, equipment, and buildings now on the [air] field present an interesting contrast to the barren expanse and swamps which confronted the original GI settlers here, who experienced hardships and privations sometimes not experienced by soldiers overseas. Mess was prepared and eaten out of doors, sanitary facilities were man-dug, and tents served as living quarters. All water was transported from Lakeland (quoted in Cobb, Oldham and Harden n.d.).

A few pre-WWII residences likely built as farmhouses that stand west of the Airport, though, suggest that the area was not solely barren, swampy, or devoted to mining. It also supported agriculture. This would not be surprising, given the agricultural nature of Polk County and neighboring Hillsborough County to the west throughout much of the 20th century (Kerlin 2005).



Photo 3-1 (left): Polk County agricultural field, 1921¹; **Photo 3-2** (right): view west over Davison Chemical Corporation phosphate mine with Drane Field Road and Edgewood Drive heading north, off the top of the aerial, toward the airport site, c1930-46.²

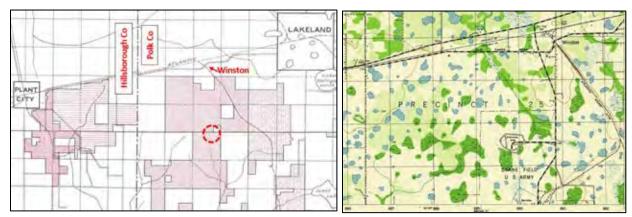


Photo 3-3 (left): 1940 US Geological Survey map with approximate airfield location circled, within property of International Minerals & Chemical Corporation;

Photo 3-4 (right): 1944 US Geological Survey Map with airfield at lower right.



Photo 3-5: Lakeland Army Air Base, late 1942 or early 1943 (source: McDill Field 1943:36).

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¹ Photo 3-1 accessed from https://ufdc.ufl.edu/UF00033854/00001/1x?search=polk+county).

² Photo 3-2 accessed from https://lakelandpubliclibrary.contentdm.oclc.org/digital/collection/p15809coll7/id/497/rec/25

In July 1941, the *Tampa Tribune* reported that Lakeland was in the midst of constructing a new airport five miles southwest of the city. The airport was initially called Lakeland Airport No. 2 to distinguish it from the city's Airport No. 1. (No. 1 was called Lodwick during WWII; its site is now occupied by Tiger Town, the Detroit Tigers spring training facility.) Lakeland Airport No. 2 was renamed Drane Field, for Rep. Herbert J. Drane, in May 1941 (*Tampa Times* 1941). Originally planned to cost about \$380,000, the project was boosted in July to more than one million dollars. Lakeland was sponsoring the Federal Civil Aeronautics Act and Works Progress Administration (CAA-WPA) project. For the one-mile-square site and engineering services, the CAA-WPA provided two-thirds of the funding. The newspaper further noted that "Approximately a third of the cost of the project will be supplied by army engineers and the Federal bureau of public roads, giving rise to further speculation that the army plans to take over the development as a training field or as an air corps base."

In May 1942, with the Airport "being rushed to completion," Lakeland leased Drane Field to the War Department as a training center for U.S. Army fliers (*Tampa Tribune* 1942b; Air Force History Index at http://airforcehistoryindex.org/display.php?irisnum=174017&p=y). The Army renamed the facility Lakeland Army Air Field (*Tampa Tribune* 1947) (**Photo 3-6**).



Photo 3-6: Lakeland Army Air Field, 1943.3

When the field was built, current Drane Field Road was dirt (interview of Claude M. Harden, Jr. at Cobb, Oldham and Harden n.d.) and the area around it, as noted, was likely marked by a mix of piles of pebble-phosphate spoil, woods, swampy land, and citrus or other agricultural fields. An article in the May 1943 *Lakeland Ledger* described the many improvements to the field and its facilities:

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³ Photo 3-6 accessed from https://web.archive.org/web/20120608222530/http://www.airfieldsdatabase.com/WW2/WW2% 20R27b% 20CO-HA.htm

Drane Field is one year old—and the post this morning, with its numerous buildings and extensive equipment, is a big contrast to the bare site which the first troops found when they arrived to begin clearing the woods and scratching redbugs. Long rows of identical army barracks have replaced the tents in which the first troops to come here were quartered. The paved streets, named for Army officers, are posted with neat signs identifying them as MacArthur Boulevard, Roosevelt Road, Voss Avenue, and similar designations. Speed limit signs are placed at regular intervals to control the heavy traffic and vigilant MPs check on violations.

A drive through the base shows further evidence of its growth—base headquarters, squadron areas, dayrooms, mess halls, hospital, officers' quarters, post exchange, theater, service club, chapel, and many other buildings. The base hospital is now fully equipped to care for the men at the field. It even has a maternity ward for wives of men stationed here and several births have been reported in the past few months. When the hospital was first set up its grounds were as barren as the rest of the field. Landscaping is underway, and grass, flowers, and shrubs have been planted to beautify the area. The base headquarters area is also being improved and landscaping is planned for other parts of the base later (quoted in Cobb, Oldham and Harden n.d.).

On November 2, 1945—two months after WWII ended—the War Department deactivated the training base (*Miami News* 1945). The *Lakeland Ledger* (1945a) summarized the field's activities during the war:

Of the 3,880 acres of land which comprise the reservation area, only 475 acres were purchased outright by the government. The remaining acres are leased from private individuals and firms. The cantonment area was constructed to accommodate 3,196 enlisted men and 958 officers, but housing and messing facilities were exhausted on several occasions by a sudden increase of personnel.

Air traffic at Lakeland Army Air Field has been fairly heavy, the average daily cycle of operations having been in excess of 100. Combat aircraft which have trained here have included B-17s, B-24s, B-26s, P-51s, P-40s, and A-20s, varying in weight from 8,500 pounds to 50,000 pounds. More than 15 groups ranging in type from heavy bombardment to specialized commando units and service groups of the old and new type have trained at Lakeland in the past 34 months.

Following the closure, Lakeland began to shift operations from its other city airfield—Lodwick Field on Lake Parker—to Drane. With its 5,000-foot long runways, Drane was more desirable than Lodwick, which had runways only 3,500 feet in length (*Lakeland Ledger* 1945b). In 1946, the City began flying locally grown strawberries from Drane to Detroit. In 1947, National Air Lines shifted its limited operations from Lodwick to Drane (*Tampa Tribune* 1946 and 1947).

In April 1947, the City recovered the title to Drane Field. It received from the War Assets Administration (WAA) not only the original 640-acre landing area, but an additional 320 acres of

the training field, which included 13 buildings and many pieces of maintenance equipment (*Tampa Bay Times* 1947). The WAA retained approximately 235 buildings, which it put up for sale in May. The sale notice stated that the buildings and fixtures were "for removal and off-site use only." Among the buildings were barracks, warehouses, mess halls, hospital wards, and officers and nurses quarters. Most of the barracks, at least, were wooden (interview of Claude M. Harden, Jr. at Cobb, Oldham and Harden n.d.). In spite of fresh strawberry transportation and some National flights, from the end of the war until the mid-1950s, Drane Field was only partially in use. A 1953 aerial photograph depicts it with no evident planes and its WWII configuration intact (**Photos 3-7** and **3-8**).

In 1959-60 Drane Field added a new, one-story, Modernist terminal building and two new hangars (*Tampa Tribune* 1959a) (**Photos 3-9** through **3-11**). The cost of the new facilities, plus planned improved lighting and repair and extension of the runways, was to be covered by sale of the former Lodwick Airport property. Airport zoning regulations were also approved in 1959, "but not before residents in that section waged a successful fight to get the regulations relaxed to a minimum" (*Tampa Tribune* 1959b).





Photo 3-7 (left): Portions of WAA sales notice for Drane Field (Tampa Bay Times 1947); Photo 3-8 (right): Aerial photo of field, 1953.⁴



Photo 3-9: Drane Field with municipal terminal and two hangars, c1960. 5





Photo 3-10 (left): Lakeland Municipal Airport terminal under construction, December 1959 (source: Tampa Tribune 1959a); **Photo 3-11** (right): Terminal in 1967.⁶

⁴ Photo 3-8 accessed from

https://web.archive.org/web/20120608222530/http:/www.airfieldsdatabase.com/WW2/WW2%20R27b%20CO-HA.htm

 $^{^5\} Photo\ 3-9\ accessed\ from\ \textit{https://cdm15809.contentdm.oclc.org/digital/collection/p15809coll7/id/43/rec/48}$

⁶ Photo 3-11 accessed from https://cdm15809.contentdm.oclc.org/digital/collection/p15809coll7/id/66/rec/1.

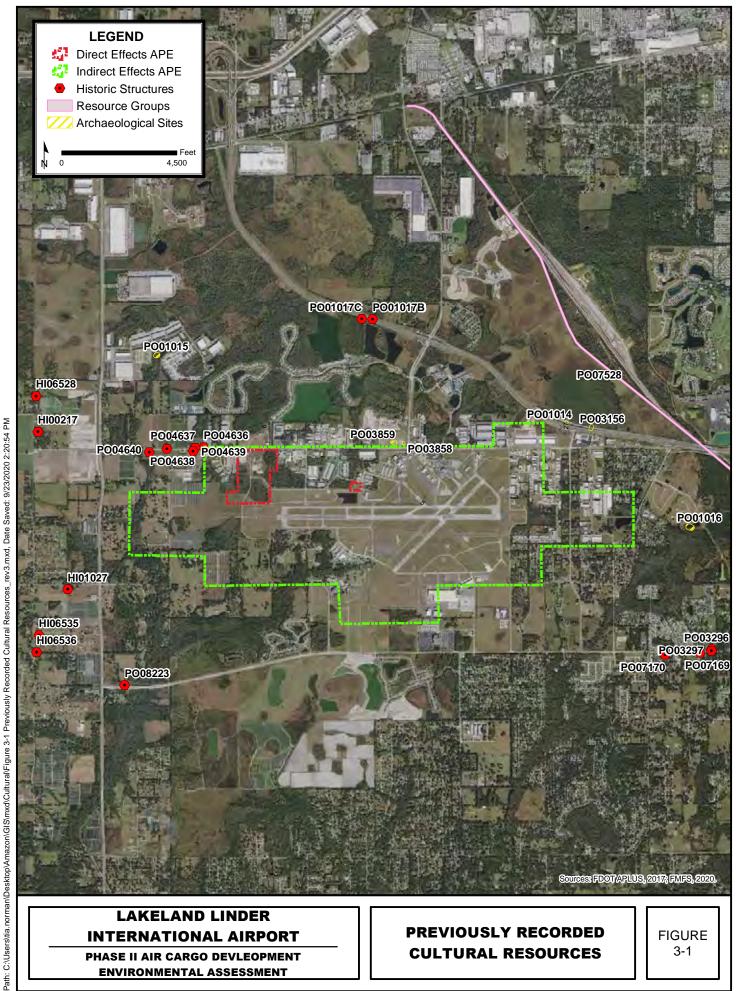
The Airport extended its east-west runway from 5,000 to 6,000 feet in 1967-68. By 1997 this runway had been extended further to 8,500 feet (*Tampa Tribune* 1967a, 1968 and 1997). In 2002 the Airport replaced the first terminal with a much larger two-story building at a cost of 6.7 million dollars (*Tampa Tribune* 2000b and 2002). This remains its current terminal.

The Airport's name changed with its buildings and runways. It reverted to Drane Field after the U.S. Army relinquished the field in the late 1940s. By January 1961, it was renamed the Lakeland Municipal Airport (*Tampa Tribune* 1961). By the early 1980s, it was the Lakeland Regional Airport, which in 1991 the City renamed the Lakeland Linder Regional Airport (*Tampa Tribune* 1961 and 1991). In 2017, the Airport took on its current name, Lakeland Linder International Airport (*Lakeland Ledger* 2017b).

3.6 LITERATURE SEARCH AND FLORIDA MASTER SITE FILE REVIEW

An archaeological and historical literature and background information search pertinent to the APEs was conducted to determine the types, chronology, and locations of previously recorded cultural resources and studies within the APEs. This included a search of the FMSF, NHRP nomination forms, and cultural resource management reports on file at the FDHR in Tallahassee.

Examination of the FMSF indicated that no National Register-listed sites are present within the Direct or Indirect Effects APEs or within a one-mile (0.8 kilometers [km]) radius of the APEs. The FMSF indicated that there are 17 historic structures, six archaeological sites, 26 cultural resource studies, and one resource group present within one mile of the Indirect Effects APE. These resources and studies are depicted in **Figure 3-1** and **Appendix B**.



LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVLEOPMENT ENVIRONMENTAL ASSESSMENT

PREVIOUSLY RECORDED CULTURAL RESOURCES

FIGURE 3-1

4. RESEARCH DESIGN AND METHODS

The objective of the Phase IB archaeological survey of the current Direct Effects APE was to identify cultural resources, if present, and assess them, if possible, for National Register of Historic Places (NRHP) significance.

4.1 RESEARCH

Prior to the start of the fieldwork, background research was conducted at a variety of institutions to characterize the general history of occupation and land use of the survey areas to identify previously documented archaeological sites and historic structures, and the potential locations of historic structures and occupations. Resources accessed included:

- > FMSF,
- General Land Office Records of the Bureau of Land Management (http://www.glorecords.blm.gov/default.aspx),
- Land Boundary Information System of the Florida Department of Environmental Protection (http://www.labins.org/),
- Aerial Photography: Florida of the University of Florida Digital Collections at the George A. Smathers Libraries (http://ufdc.ufl.edu/aerials),
- Map and Imagery Collections of the University of Florida Digital Collections at the George A. Smathers Libraries (http://ufdcweb1.uflib.ufl.edu/maps), and
- ➤ USGS Historical Topographic Map Explorer (http://historicalmaps.arcgis.com/usgs/).

4.2 ARCHAEOLOGICAL FIELD METHODS

The property was investigated using a combination of visual surface inspection, photo documentation of existing field conditions, and subsurface shovel testing. The majority of the APE contained large portions of heavily disturbed soils and was subjected to visual surface inspection. Shovel testing was completed in areas where potential for intact deposits existed, and followed the proposed archaeological probability model. The archaeological probability model was adjusted based on field conditions.

4.3 ARCHAEOLOGICAL PROBABILITY MODEL

Prior to the field survey, a probability model was developed to aid in determining the shovel testing intensity to be applied within a particular portion of the Airport property, either at 25-meter, 50-meter, or 100-meter intervals. The standard testing model in Florida includes three probability levels (High, Medium, Low) that were primarily based on soils, proximity to water, and soil integrity. The Phase IB archaeological survey effort was comprised of linear transect survey involving systematic shovel testing along survey transects spaced a specified distance apart (as defined for each specific probability level). For the purposes of this project, there were no high probability levels based on the desktop review. Four moderate probability levels were

identified (see **Figure 4-1**) and were assessed through the excavation of STPs at 50-meter intervals. Low probability levels were assessed through shovel testing transects spaced at 100-meter intervals (**Figure 4-1**). All mapped soils on the property were considered poorly-drained. The primary water source adjacent or within the Direct Effects APE consisted of hardwood forest wetland systems.

As areas of severe surface disturbances and construction along with standing water were encountered in the Direct Effects APE, the shovel testing intervals were increased to over 100 meters.

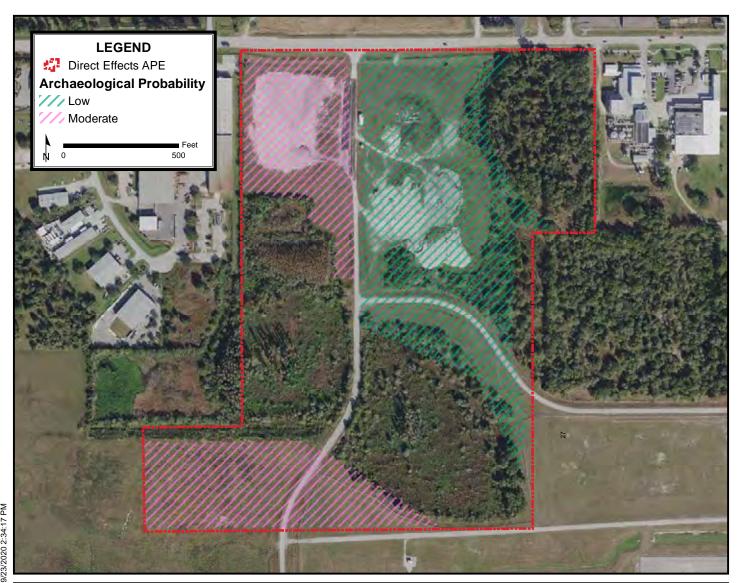
4.4 SHOVEL TESTING

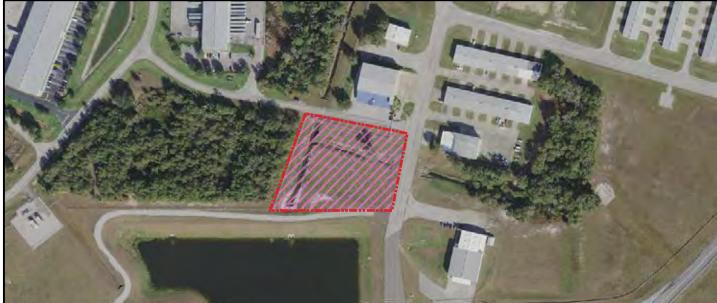
STPs were 50 centimeters (cm) in diameter and excavated to subsoil or 100 cm below ground surface (bgs). STPs were excavated at 25-meter intervals for high probability areas, 50-meter intervals for moderate probability areas, and 100-meter intervals for low probability areas. STPs were excavated in 10-cm arbitrary levels, and soils were screened through a 0.635-millimeter (0.25-inch) mesh. When artifacts were encountered, the base of the STP excavation was extended to at least 20 cm beneath the last occurrence of cultural material. On thin upland and/or erosional landforms where compressed stratigraphy was encountered, excavation progressed at shallower intervals and/or followed the natural stratigraphic layers.

STP data were recorded on standardized forms, including information on depth of each individual STP, the number of artifacts, provenience, and soil conditions. Munsell soil charts were used to describe soil color. Standard soils nomenclature was used to describe soil textures. All of the STPs were backfilled. Flagging tape was used for marking STPs.

5. SURVEY AREA RESULTS

The following section presents the results within the Direct and Indirect APEs. There are two distinct parcels of land under study, western (i.e., air cargo facility) and eastern (i.e., fuel farm). **Section 5.1** describes the archaeology results and **Section 5.2** describes the historical architecture results.





LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVLEOPMENT ENVIRONMENTAL ASSESSMENT

ARCHAEOLOGICAL PROBABILITY MODEL

FIGURE 4-1

Path: C:Users\tia.norman\Desktop\Amazon\G\S\mxd\Cultura\Figure 4-1 Archeo Prob Model_rev1.mxd, Date Saved: 9/23/2020 2:34:17 PM

5.1 ARCHAEOLOGICAL RESULTS

Large portions of the Direct Effects APE were subjected to a visual reconnaissance survey where significant disturbances were observed (**Photo 5-1**). There were large piles of construction rubble and material from grading present across the site. Subsurface testing was conducted in most areas to confirm the observable damage to the ground surface with the exception of inaccessible or newly paved areas. A total of 12 STPs were excavated in the Direct Effects APE (**Figure 5-1**). The only areas with relatively undisturbed soils are the wetlands (although construction materials were present in the A horizon in the wetland areas as well), and the majority of the shovel testing was attempted along the wetland edges. The following is a discussion of the western and eastern parcels.



Photo 5-1: Construction activities south of Drane Field Road, facing east.

5.1.1 WESTERN PARCEL

The western parcel measures approximately 67.2 acres (27.2 hectares) and was mostly an active construction site by the time of this study. The western parcel is partially bisected east-to-west by Air Park Drive and bisected north-to-south by Kelvin Howard Road. Both of these roads bisect in the center of the property. There are wetlands in the central and southern portion of the APE as well as the northeastern quadrant. There is recently completed air cargo facility immediately to the southeast of the APE, while the northern edge is bounded by Drane Field Road and the western edge is bounded by private property and wetlands. To the south is an unpaved access road.

Shovel tests were planned but not excavated south of the wetland on the southern portion of the property on either side of Kelvin Howard Road. This area was paved to the east of Kelvin Howard Road and there was standing water on the western side of the road (**Photo 5-2**).



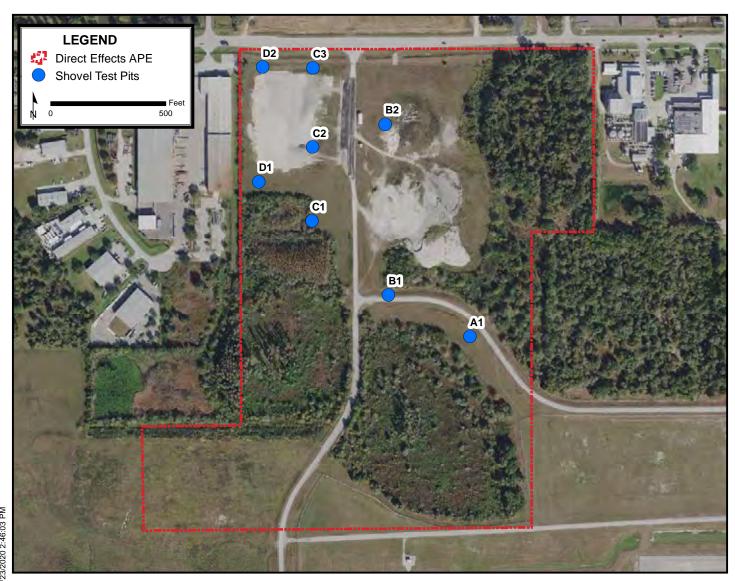
Photo 5-2: Paved area east of Kelvin Howard Road, facing west.

The northern portion of the APE closest to Drane Field Road was recently used as a staging area for the Phase I construction of the air cargo facility. Grading and mixing of gravel and clay had occurred over much of the prepared surfaces and there were large debris piles present (**Photo 5-3**).



Photo 5-3: Construction activities in the western parcel, Air Cargo warehouse visible in background, facing southeast.

Total of eight shovel tests were excavated in the western parcel. There was no observable natural soil stratigraphy observed in the western parcel as the construction activities have greatly impacted the area. A typical soil profile is exemplified in STP B1. This shovel test encountered disturbed soils. Stratum I was recorded from 0-42 cm bgs and consisted of very dark, grayish-brown, coarse sand containing concrete and asphalt. A concrete impasse was reached at 42 cm bgs. No historic cultural materials were recovered from this shovel test.





LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVLEOPMENT ENVIRONMENTAL ASSESSMENT

FIELD TESTING MAP

FIGURE 5-1

Path: C:\Users\tau: norman\Desktop\Amazon\GIS\mxd\Cultura\\Figure 5-1 Field Testing Map_rev.3.mxd, Date Saved: 9/23/2020 2:46:03 PM

5.1.2 EASTERN PARCEL

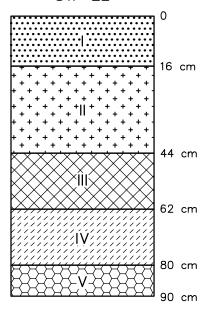
The eastern parcel measures approximately 2.8 acres (1.1 hectares). The parcel is paralleled on the north side by Aero Place, the eastern and southern sides by unnamed airport access roads, and on the western side by dense hardwood wetlands. This parcel is bisected by two drainage ditches, one north-to-south and one east-to-west. The western edge of the property (west of the ditch) was comprised of rip-rap and was not testable. The primary vegetation in this area was manicured lawn (**Photo 5-4**).



Photo 5-4: Eastern Parcel setting, facing northwest

A total of four shovel tests were excavated in this location. All tests encountered disturbed soils, likely from the construction of the adjacent ditches, access roads, and the large man-made pond to the south (**Photo 5-5**). STP E2 is representative of the disturbed stratigraphy in this area (**Figure 5-2, Photo 5-6**). Stratum I consists of dark, reddish-brown (2.5YR 3/1) sand fill with limestone and metal from 0-16 cm bgs. Stratum II is characterized by reddish-black (2.5YR 2/1) sand fill with limestone from 16-44 cm bgs. Stratum III displayed reddish-brown (2.5YR 4/3) sand fill with limestone from 44-62 cm bgs. Stratum IV consists of light reddish brown (2.5YR 6/3) sand fill from 62-80 cm bgs. Stratum V contained white (2.5YR 8/1) sand from 80-90 cm bgs.

STP E2



- I DARK REDDISH BROWN (2.5 YR 3/1) SAND FILL WITH LIMESTONE CHUNKS & METAL
- II REDDISH BLACK
 (2.5 YR 2/1) SAND FILL
 WITH LIMESTONE PIECES
- III REDDISH BROWN
 (2.5 YR 4/3) SAND FILL
 WITH LIMESTONE PIECES
- IV LIGHT REDDISH BROWN (2.5 YR 6/3) SAND FILL
- V (2.5 YR 8/1) SAND

20 CM

LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

REPRESENTATIVE SHOVEL TEST SOIL PROFILE

FIGURE 5-2

13:25



Photo 5-5: Retention pond south of Eastern Parcel, facing southwest



Photo 5-6: STP E2 Profile, facing north.

5.2 ARCHITECTURAL HISTORY RESULTS

The architectural historic survey was performed on August 4 and 12, 2020. AECOM senior architectural historian Marvin Brown located, researched, and assessed the resources inventoried below, all of which were, or may have been, built 50 or more years ago. AECOM environmental planner Tia Norman took the photographs. Due to COVID-19 pandemic and access concerns and difficulties, and the insistence of several property owners and/or occupants prohibiting photographs to be taken of their property, the photographs accompanying the inventory have been supplemented with Google and Bing Maps, aerials, and online images from various sources. Ten houses located within the Indirect Effects APE, or upon parcels partially located within the APE, were inventoried and assessed for National Register (NR)

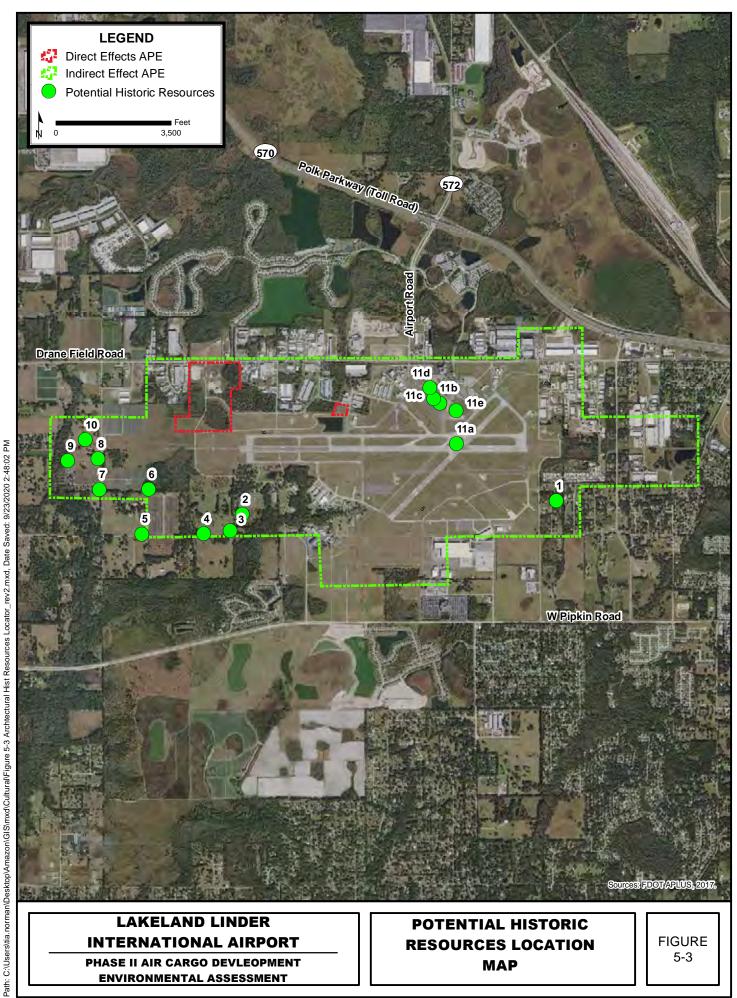
eligibility. These are numbered by Map ID #1 through #10. An eleventh resource – LAL (former Lakeland Army Air Base/Drane Field/Lakeland Municipal Airport) – has been numbered #11a through #11e. The LAL airfield is identified as #11a. Four buildings on the airfield property that date from between about 1959 and 1971 are identified as #11b through #11e (**Figure 5-3**). Completed FMSF Historical Structure Forms for the resources described below are provided in **Appendix D**.

Robberson House – 4514 Windee Avenue (Map ID #1)

Tax records assign the house at 4514 Windee Avenue with a 1930 construction date. Google Maps photographs of it from 2011, which predate major alterations, suggest that it may well have been built in the 1930s. Currently, though, the house is almost unrecognizable as a dwelling from that time, as only its basic form remains intact. The house's owner, Kenneth L. Robberson, acquired it via a quitclaim deed from the estate of his brother, Jerry W. Robberson, in 2004 (Polk County Deed Book 5471/Page 0378). Jerry Robberson (1944-2003) was not its original owner, as the house predates his birth and he did not come to Lakeland until 1956 (*Lakeland Ledger* 2003).

In 2011, according to Google Maps photos taken that year, the house had a frame, one-story, gable-front, central block (**Photos 5-7** through **5-12**). This was crossed at the front (west) by a partially enclosed gable-roofed porch and at the rear (east) by a perpendicular, gable-end, frame block. The house had double-hung sash windows, a seam-metal roof, and aluminum siding. Since 2011, the porch has been removed and replaced by an open porch; bays have been covered or shifted and windows and doors have been replaced; new artificial siding has been added; and a gable-front rather than gable-end roof has been placed atop the rear ell. The house continues to stand on concrete blocks. The house's many significant alterations suggest that after the 2011 photographs were taken, it was essentially stripped down to its studs and rebuilt, resulting in its current appearance. Bing Maps photographs from 2014 depict the house as it is at present, dating its alterations to between 2011 and 2014.

The Robberson House is not known to have any association with significant historic events or persons. It is therefore recommended as not eligible for NR listing under NR Criteria A or B. The house does not appear to embody the distinctive characteristics of a type, period, or method of construction and accordingly is recommended as not NR-eligible under Criterion C. The house is further recommended as not NR-eligible under Criterion D, for it is unlikely to yield important historical information not available from other sources. Additionally, due to its substantial alterations, the house is believed to have lost its integrity of design, materials, workmanship, feeling, and association. Its setting remains largely intact and it presumably stands at its original location.



LAKELAND LINDER INTERNATIONAL AIRPORT

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POTENTIAL HISTORIC RESOURCES LOCATION MAP

FIGURE 5-3



Photo 5-7 (left): Robberson House in 2011, north side and west front elevations (source: https://www.google.com/maps); **Photo 5-8** (right): Robberson House in 2011, west front and south side elevations (source: https://www.google.com/maps).



Photo 5-9 (left): Robberson House in 2020, north side and west front elevations; **Photo 5-10** (right): Robberson House in 2020, west front and south side elevations.



Photo 5-11 (left): Robberson House in 2020, west front and south side elevations (source: https://www.bing.com/maps/); **Photo 5-12** (right): same elevations in 2014 (source: https://www.bing.com/maps/).

Aaron E. and Maude Morgan House – 4510 Aaron Morgan Road (Map ID #2)

Aaron Edward Morgan (1893-1974) and Maude Miranda Morgan (1897-1971) are likely the original owners of this house, which tax records assign a construction date of 1924. By 1917, (U.S. Selective Service System), when Aaron registered for the draft, they were already married and had a young child. Aaron was the son of Aaron Joseph Morgan, a citrus grower, cattleman,

and state representative (*Tampa Times* 1917). In 1920, according to census records, the Morgans were living in the Medulla area – where the house is located – as was Aaron's father. They lived in the same area in 1930 and 1940. All three censuses, as well as Aaron's draft registration, identify him as a farmer (U.S. Bureau of the Census 1920, 1930, and 1940). His obituary noted that he was a lifelong Polk County resident who also drove a school bus (*Tampa Tribune* 1974).

In 1976, with both Morgans deceased, the Aaron E. Morgan Estate transferred this property to Ruth Morgan Bell (Polk County Deed Book 1678/Page 1221). Ruth was the Morgans' youngest child. She and her husband, Charles W. Bell, continue to own it (Polk County Deed Book 9864/Page 2248 (2016)).

The marital status and ages of the Morgans and the farmhouse's form and Craftsman-style features suggest that it was erected around 1924, the date tax records assign it (**Photos 5-13** through **5-17**). The frame house is one-story tall. Its west-facing front block has an asphalt-shingled gable-end roof and rests on brick piers. A door is centered at the front elevation, flanked by paired, double-hung, sash windows. The Craftsman-style four-vertical-light-over-one-light sash suggests the windows are original. The Craftsman-style glass-paned front door also appears to be original. Plain surrounds frame the door and windows. A hipped-roof porch supported by plain wooden posts and underpinned by exposed rafter tails – yet another Craftsman feature – extends across the facade's full length. Exposed rafter tails also mark the wide overhanging eaves of the block's roof and those of its small ventilated dormer, which is centered over the entry. A brick exterior-end chimney extends through the wide overhang on the block's south side elevation. The block is clad in original German siding that terminates at plain corner boards.

A gable-roofed ell extending from the northern portion of the block's rear elevation gives the house an L-shaped footprint. Within the legs of the ell, a formerly open porch has been enclosed. A small later addition extends to the rear of the ell and porch.

To the house's rear (east), thick round poles support the gabled sheet-metal roof of an open pole barn that is less than 50 years old (**Photos 5-18** through **5-22**). Shaded by the roof is an earlier building that appears to be largely built of slender, round, saddle-notched, unchinked logs. (Note: due to COVID-19 concerns and no-trespassing signs, access to the property and its resources was limited.) Log buildings were erected in Polk and other northern and central Florida counties into the late nineteenth century (Florida Association of the American Institute of Architecture 2017: 4, 23, 108). The extant English Family Log Cabin, now located in Homeland Heritage Park, was moved to Homeland from elsewhere in Polk County. Constructed of round saddle-notched logs, it dates from about 1890 (Hacking, Forbes, and Jones 2006). Whether this building was erected in the late nineteenth century could not be determined.)

The house and barn stand in the northwest corner of an approximately 16-acre rectangular parcel that fronts on Aaron Morgan Road. To their east and south is an inactive citrus grove that encompasses about half of the parcel. The eastern half of the parcel is wooded. The land to the

parcel's east, south, and west remains largely rural, marked by open fields, woodland, and scattered houses. Only to the immediate north, where a trailer park was established in the early 2000s, has modern development encroached on the setting.

The Aaron E. and Maude Morgan House is recommended as eligible for NR listing under Criterion C for its architecture. It is a good, intact representative of an early-twentieth-century Polk County farmhouse. It retains its original form, German siding, plain surrounds, front porch, and corner boards, as well as its original Craftsman-style sash, doors, and overhanging eaves with exposed rafter tails. The only notable alterations appear to be the enclosure of a rear porch, which is clad in matching German siding, and the addition of a small room to the rear of the ell. Further, the house appears to stand on its original site. The Morgan House is therefore believed to retain its integrity of location, design, setting, materials, workmanship and, by extension, feeling and association. The house is not known to have any association with significant historic events or persons and is unlikely to yield important historical information not available from other sources. It is therefore recommended as not eligible for NR listing under NR Criteria A, B, or D.

The Morgan House's NR boundaries are recommended as the boundaries of its approximately 16-acre parcel (Polk County parcel 232905000000042030) on its north, east, and south (**Figure 5-4**). On its west, where the parcel reaches toward Aaron Morgan Road, its boundary is recommended as ending on the east side of the county-maintained shallow ditch and road right-of-way. (It is not clear from tax maps whether the parcel already terminates there.) Contained within this boundary are the house and barn, both of which are contributing buildings, the former citrus grove, and woodland, all of which were historically associated with the property.



Photo 5-13 (left): Aaron E. and Maude Morgan House in 2020, west front; Photo 5-14 (right): Aaron E. and Maude Morgan House in 2020, south side elevations.



Photo 5-15: Aaron E. and Maude Morgan House, west front and south side elevations showing German siding and Craftsman-style windows, door, and exposed rafter tails, 2020.





Photo 5-16 (left): Aaron E. and Maude Morgan House, south side elevation at rear (north end) of house with front (west) elevation of barn at far right, 2020; **Photo 5-17** (right): Aaron E. and Maude Morgan House aerial depicting west front and south side elevations and roof lines, no date (source: https://www.google.com/maps).





Photo 5-18 (left): Aaron E. and Maude Morgan House, aerial depicting east rear and north side elevations, no date (source: https://www.google.com/maps); **Photo 5-19** (right): Aaron E. and Maude Morgan House, west front and south side elevations of barn to rear of house, 2020.



Photo 5-20: Aaron E. and Maude Morgan House, west front and south side elevations of pole barn and log building within it, 2020.





Photo 5-21 (left) and Photo 5-22 (right): English Family Log Cabin, Homeland Heritage Park in Polk County, built c1890 (source: Polk County Government 2019).

Figure 5-4 Aaron E. and Maude Morgan House: Recommended NRHP Boundaries (Polk County parcel 23290500000042030)



Morgan Family House 1 – 4405 Medulla Road (Map ID #3)

This house stands at the intersection of Medulla and Aaron Morgan roads, in the southeastern corner of a 40-acre tract (Polk County parcel 23290500000044010) once owned by the estate of Aaron Joseph Morgan (1863-1941) and his wife, Dollie A. Morgan (1864-1957). In 1943, in association with the construction of Lakeland Army Air Base, A. Joseph Morgan's estate was awarded more than \$15,000 as compensation for the taking of "homestead property of 160 acres." An additional 200 acres of the estate was valued at \$8,500 (Tampa Tribune 1943). This parcel, not taken for the base, subsequently came into the hands of one of the Morgans' sons, Harley G. Morgan (1898-1977), and his wife, Thelma Futch Morgan (1910-2000). In 1976 they conveyed the land, which includes more than one house, to their daughter, Betty L. Howard, who still owns it (Polk County Deed Book 2883/Page 1542; Tampa Tribune 2000a). It is unlikely that the older Morgans lived in this small house, which carries a tax date of 1920. A. Joseph Morgan's obituary described him as a prominent two-term state legislator (1919 and 1921) who was a "successful citrus grower and cattleman" (Tampa Tribune 1941a). Harley G. Morgan, also a cattleman (Tampa Bay Times 1966), and his wife may have lived on the property; if so, it is not known which of the two houses they occupied. This house's modest size and form suggest it was a tenant house.

Photographs taken in 2011, before the house underwent a major renovation, depict a dwelling that may indeed have been built around 1920, the assigned tax date (**Photos 5-23** through **5-29**). In 2011 the small, gable-front, frame house – about 16 feet across and 24 feet deep according to tax records – was sided in heavily weathered vertical boards without battens and topped by a metal roof. Its two-bay-wide south-facing front facade was shaded by a plainly finished porch covered by a metal shed porch. To its rear (north) extended an ell faced with T111-type siding that had a double-pitched shed roof. Tax records identify much of the ell as a formerly open porch. Between 2011 and 2019, the old front porch was replaced by one with square posts and a balustrade. The front door was also replaced. A new metal roof was set atop the house and it received new artificial siding. Its two-over-two, double-hung, sash windows were cleaned or replaced in kind; the plain window surrounds were cleaned and painted. The rear ell was also re-sided.

Due to its many post-2011 alterations, the house is believed to have lost its integrity of design, materials, workmanship and, accordingly, feeling and association. Its setting appears to be largely intact and it likely continues to stand on the location upon which it was built, but overall it has lost its integrity. Additionally, the house is not known to have any association with significant historic events or persons. It is therefore recommended as not eligible for NR listing under NR Criteria A or B. The house does not appear to embody the distinctive characteristics of a type, period, or method of construction and accordingly is recommended as not NR-eligible under Criterion C. Due to its loss of integrity and lack of significance, the house is recommended as not eligible for NR listing.





Photo 5-23 (left): Morgan Family House 1 south front elevation, c2014 (source: https://www.bing.com/maps/); Photo 5-24 (right): Morgan Family House 1 west side and south front elevations in 2019 (source: https://www.google.com/maps).





Photo 5-25 (left): Morgan Family House 1 south front and east side elevations in 2011 https://www.google.com/maps); Photo 5-26 (right): https://www.google.com/maps).

Morgan Family House 1 in 2019 (source:





Photo 5-27 (left): Morgan Family House 1 east side elevation in 2011 (source: https://www.google.com/maps); Photo 5-28 (right): Morgan Family House 1 east side elevation in 2020 (source: https://www.google.com/maps).



Photo 5-29: Morgan Family House 1: east side and north rear elevations, 2011 (source: https://www.google.com/maps).

Morgan Family House 2 – 4415 Medulla Road (Map ID #4)

Morgan Family House 2 stands on the same 40-acre tract (Polk County parcel 232905000000044010) as Morgan Family House 1 does. It is located, however, near the southwest corner of the parcel facing Medulla Road. The known history of the two houses is nearly identical. The 40-acre parcel was once owned by the estate of Aaron Joseph Morgan (1863-1941) and his wife, Dollie A. Morgan (1864-1957). In 1943, in association with the construction of Lakeland Army Air Base, A. Joseph Morgan's estate was awarded more than \$15,000 as compensation for the taking of "homestead property of 160 acres." An additional 200 acres of the estate was valued at \$8,500 (*Tampa Tribune* 1943). This parcel, not taken for the base, subsequently came into the hands of one of the Morgans' sons, Harley G. Morgan (1898-1977), and his wife, Thelma Futch Morgan (1910-2000). It is unlikely that the older Morgans lived in this house, which carries a tax date of 1935. A. Joseph Morgan's obituary described him as a prominent two-term state legislator (1919 and 1921) who was a "successful citrus grower and cattleman" (*Tampa Tribune* 1941a). The house was more likely first occupied by Harley Morgan, who was also a cattleman (*Tampa Bay Times* 1966), and his wife.

In 1920 (U.S. Bureau of the Census), Harley Morgan was unmarried and still living with his parents. In that census he listed his occupation as a laborer on the "home farm." By 1930, he was married to Thelma and farming his own land. He was 32, she was 20, and their one child, Darwin, was two. In the order that the census was taken, four Morgan families lived one after the other: the elder Morgans were visited first, then Harley and Thelma, then brother and sister-in-law Aaron E. and Maude Morgan, and then another brother and his wife, G. Bascom and Eva Morgan.

In 1976, Harley and Thelma Morgan conveyed the 40 acres to their daughter, Betty L. Howard (Polk County Deed Book 2883/Page 1542; *Tampa Tribune* 2000a). She continues to own the property and occupies this house. On a field visit – due to COVID-19 and privacy concerns – it was forcefully requested that no photos of the house or outbuildings be taken from the property or the public right-of-way. One image was taken while driving away, but the other images below were taken by Google Earth and Maps in November 2019. Compared to views of the property driving by, the house appears unchanged since they were taken.

Tax records place the house's construction in 1935 (**Photos 5-30** through **5-41**). Its dimensions and L-plan footprint are nearly identical (according to tax records) to those of the Aaron Morgan House to the east, which has a tax date of 1924. Both houses are one-story tall, of frame construction, German sided, and edged with cornerboards. This house lacks Craftsman-style details, though. It does not have exposed rafter tails at the roof of its main block or porch and its windows appear to be one-over-one. This suggests the house may well have been built in the 1930s. A seam-metal hipped roof tops the main block and the full-facade porch to its front (south). The porch has plain square posts and a heavy infill of modern decorative metal grillwork. The windows on the east and west side elevations are covered by the same grillwork. An narrow, exterior-end, brick chimney stack rises along the west side elevation of the main block, which is extended to the rear by a one-story gable-end ell. The L-shaped porch that extended along the rear of main block and ell has been largely enclosed.

The house has seven associated outbuildings. To its east are two modern, taupe-colored, shedroofed sheds that do not appear on Bing Maps aerials taken in December 2014. Between these sheds and the house's east side elevation stands a gable-front frame garage with sliding wooden doors that may be more than 50 years old. Three outbuildings are arrayed to the house's rear: a white shed-roofed shed and two taupe-colored gable-roofed sheds. The white shed may be more than 50 years old; the taupe sheds appear to have been built more recently. A long gable-roofed pole barn stands to the house's northwest. The varied pitches and conditions of its roof suggest it was built in three sections. Its first section rose at its south end, closest to the road. This may be the resource identified in tax records a "pole shed dirt [floor] erected in 1935. A second section added to its rear (north) may be the resource tax records identify as a "pole shed concrete [floor]," erected in 1960. A more substantial and longer third section of the barn was subsequently appended to the barn's north end.

Morgan Family House 2 is not believed to retain the integrity necessary for NR eligibility. Its rural setting retains intact and it appears to stand upon the site where it was erected. However, the heavy intrusive grills that hide its porch and windows have negatively affected its integrity of design, materials, and workmanship, and thereby of feeling and association. Further, the house is not known to have any association with significant historic events or persons and is therefore recommended as not eligible for NR listing under NR Criteria A or B. It also does not appear to embody the distinctive characteristics of a type, period, or method of construction and accordingly is recommended as not NR-eligible under Criterion C. The house is further recommended as not NR-eligible under Criterion D, for it is unlikely to yield important historical information not available from other sources.



Photo 5-30 (left): Morgan Family House 2, south front and east side elevations; **Photo 5-31** (right): south front elevation, 2019 (source of both: https://www.google.com/maps).



Photo 5-32 (left): Morgan Family House 2, west side and south front elevations in 2019 (source: https://www.google.com/maps); **Photo 5-33** (right): same elevations in 2020.



Photo 5-34 (left): Morgan Family House 2, west side and south front elevations, 2019 (source: https://www.google.com/maps); **Photo 5-35** (right): Morgan Family House 2, aerial view of north rear elevation and roofs, 2018 (source: https://www.google.com/maps).





Photo 5-36 (left): Morgan Family House 2, looking north (with house at left) and two shed-roofed sheds at right (east), garage at center left, and two gable-roofed sheds at left distance, 2019 (source: https://www.google.com/maps); **Photo 5-37** (right): Morgan Family House 2, view of eastern shed-roofed sheds, 2019 (source: https://www.google.com/maps).





Photo 5-38 (left): Morgan Family House 2, looking northeast (house at left) at garage at left and eastern sheds at right, 2019 (source: https://www.google.com/maps); **Photo 5-39** (right): Morgan Famility House 2, looking northwest (house at left) at white shed-roofed shed and gabled sheds at left and garage at right, 2019 (source: https://www.google.com/maps).





Photo 5-40 (left): Morgan Family House 2, south front elevation of barn, 2019 (source: https://www.google.com/maps); **Photo 5-41** (right): Morgan Family House 2, aerial view of barn with south elevation at bottom, 2018 (source: https://www.google.com/maps).

English Family House – 4815 Medulla Road (Map ID #5)

This house was likely built for either James Jackson English (1872-1937) and Lula English (1869-1951) or their son and daughter-in-law, Clarence J. English, Sr. (1897-1970) and Lucy Peacock English (1897-1992). James or Jackson (he went by both names) lived in a house in the Medulla area in 1910 on property that was part of this tract. (Aaron Joseph Morgan of the Morgan Family houses lived a few doors down.) James and Lula may have lived on this property in 1900, although the surrounding names in the census of the year make this less clear (US Bureau of the Census 1900 and 1910). It is possible that they built the house around 1910, the assigned tax date. It is also possible that Clarence and Lucy erected it by 1920 on property he received from, or least farmed for, his parents. The form and finish of the house suggest it may indeed have been erected in the 1910s. The 1920 census places Clarence and Lucy living immediately next to his parents, again a few farms distant from A.J. Morgan. The census identifies him as living on a farm but working as a house carpenter, so if it was Clarence's house, he may well have built it himself.

In 1935 James and Lula continued to live in Polk County, but James died in 1937 in Plant City, west across the county line in Hillsborough County (Florida State Census 1935). His obituary noted that by 1937 Clarence and Lucy had also moved from the area, to Davenport in Polk County about 30 miles to the northeast (*Tampa Tribune* 1937). The property remained in English family hands, although likely not occupied by them for many years. Clarence J. English, Jr. and his wife, Irma, had moved back to the Springhead community (adjacent to Medulla) from Davenport about 1963 (*Tampa Tribune* 1967b). Whether to this house or another is not known. In 1974, though, when they acquired the property from Clarence's brother, John Henry English, a resident of Davenport, they were living in Lakeland (Polk County Deed Book 1605/Page1823). Clarence died in Lakeland in 2003 (*Lakeland Ledger*) and his and Irma's revocable trust sold the property out of the family to Eduardo and Shannon Morrell in 2005 (Polk County Deed Book 6559/Page 3). According to Shannon Morrell (personal communication), the house was built by the English family, possibly around 1908 or so.

The English Family House is one-story tall and of frame construction (**Photos 5-42** through **5-55**). Its main block has a T-shaped plan that is extended to the rear elevation by a one-story frame ell. The gable-front central part of the T-shaped block faces south toward Medulla Road. The legs of its T at its rear terminate in gables as well. The block retains original narrow corner boards, German siding, and plain surrounds with slightly crossetted lintels. The section facing the road is two bays wide; both of these bays hold original two-over-two, double-hung, sash windows. The rest of the house's window bays are finished in similar fashion. Entrances to the house are along either side of the projecting section. They are shaded and reached by a U-shaped porch that wraps around the front section. The porch retains turned posts and solid, floriated, jig-sawn brackets that appear to be original. The rear ell is original or early. An L-shaped porch that once crossed the rear of the main block and west side of the ell has been enclosed. Exterior-end brick chimney stacks rise along the rear gable of the ell and the east side gable of the main block.

After the English family sold the parcel to the Morrells, they quickly converted the property into its current use as the English Oaks Equestrian Center (**Photos 5-56** through **5-60**). (Its patrons include the Florida Southern University equestrian team, which Shannon Morrell coaches (*Lakeland Ledger* 2017b).) In 2007 they removed the citrus grove that extended to the north and west of the house and filled the southeastern third of the parcel. They also removed early outbuildings near the house, built a frame and a metal pole barn to the house's north, and added a large stable near the northern end of the property in 2013 accessed by a long new road. In 2017 the owners of the parcel abutting the east side of the English Family House parcel replaced a citrus grove with a solar farm, further altering the house's historic setting.

The English Family House 2 is recommended as eligible for NR listing under Criterion C for its architecture. It remains a good intact representative of an early-twentieth-century Polk County farmhouse. It retains its original T-shaped form, German siding, crossetted surrounds, two-overtwo sash windows, corner boards, and front porch with turned posts and decorative brackets. Its only notable alteration appear to be the enclosure of the rear porch. The house appears to stand on its original site and is therefore believed to retain its integrity of location, design, materials, workmanship and, by extension, feeling and association. The removal of outbuildings and construction of modern ones, along with the removal of its citrus grove and the one that abutted its parcel to the east, have negatively affected its setting. The proposed NR boundaries for the house are not recommended to encompass all of its approximately 20-acre historic parcel (Polk County parcel 232906000000024010), which is now a horse farm with modern outbuildings. Rather, they are recommended as the approximately ½-acre portion at the parcel's southeastern corner that includes the house and its associated trees and intact setting (Photo 5-61). The proposed boundaries extend south to a fence near the right-of-way of Medulla Road and east and west to fence lines. On the north they terminate 25 feet north of the ell, before the modern metal and frame pole barns are reached. Lacking any known association with historic events or persons, and unlikely to yield important historical information not available from other sources, the house is not recommended as NR eligible under Criteria A, B, or D.





Photo 5-42 (left): English Family House, 2018 aerial with south at bottom of image (source: https://www.google.com/maps); **Photo 5-43** (right): English Family House, 2018 aerial with north at bottom of right image; T-shaped roofs of main block and linearly extended ell are topped by rusted roofs; porches and west gable end of main block are apparent from shiny appearance of reclad roofs (source: https://www.google.com/maps).



Photo 5-44 (left): English Family House, east side elevation in 2019 (source: https://www.google.com/maps); **Photo 5-45** (right): English Family House, east side elevation in 2020.



Photo 5-46 (left): English Family House, east side elevation in 2019 (source: https://www.google.com/maps); **Photo 5-47** (right): English Family House, east side elevation in 2020.



Photo 5-48 (left): English Family House, south front and west side elevation in 2019 (source: https://www.google.com/maps); **Photo 5-49** (right): English Family House, south front and west side elevation in 2020.



Photo 5-50 (left): English Family House, south front elevation in 2019 (source: https://www.google.com/maps); **Photo 5-51** (right): English Family House, south front elevation in 2020.



Photo 5-52 (left): English Family House, west side elevation in 2020; Photo 5-53 (right): English Family House, west side elevation in 2020.





Photo 5-54 (left): English Family House, looking northeast at west side of house at right, metal pole barn at center, and wooden pole barn at far left, 2020; **Photo 5-55** (right): English Family House, metal pole barn in 2020.





Photo 5-56 (left): English Family House, west side and south rear elevation of modern stable in 2020; Photo 5-57 (right): English Family House, interior of stable in 2019 (source: https://www.youtube.com/watch?v=CyRZU8S4zkU).





Photo 5-58 (left): English Family House parcel in December 2006 with house and outbuildings at lower right corner (source: https://www.google.com/maps); **Photo 5-59** (right): English Family House parcel in November 2007 with citrus grove and early outbuildings removed and modern outbuildings and access road added (source: https://www.google.com/maps).



Photo 5-60: February 2017 aerial of English parcel at left (west) and solar farm on site of former citrus grove at right (source: https://www.google.com/maps).



Photo 5-61: English Family House, proposed NR boundaries outlined in yellow.

House – 4404 Hamilton Road (Map ID #6)

Deed and newspaper searches of this property did not unearth its history. It has changed hand numerous times over the past 25 years. Tax records put its date of construction at 1934. A 1941 aerial photograph shows it standing at the southwest corner of a citrus grove. The house and grove are visible in a 1964 aerial, along with the long entrance lane that extends east to it from

Hamilton Road. In a 1968 aerial, the house, one outbuilding to its (north) rear, and the grove are clearly visible (**Figures 5-5** through **5-8**). The former grove is now wooded and the house's diminished one-acre tract is abutted on its west and south by large expanses of solar panels. The property is gated off and the house could barely be viewed through the heavy growth of trees that largely surround it. It appeared to have its windows boarded up, but no further inspection could be made.

Tax records and aerial photographs indicate that the house has a one-story main block with a south-facing, metal, gable-front roof (**Photos 5-62** through **5-65**). It is built of frame with frame cladding. An unfinished open porch crosses most its front elevation. To its east is an additional section of unfinished porch that wraps partly around the east side elevation. A small gable peak in the roof above the side of this porch suggests that the porch shields a side entrance. To the west of the front porch another extended porch partly wraps the west elevation. It is enclosed but unfinished. The body of the house behind the porches is one-story tall. Rectangular, it encompasses just under 1,150 square feet. The outbuilding depicted on the aerials behind the house is now gone or hidden by overgrowth. From the edge of the parcel, the house and its grounds appear to be long abandoned and unmaintained. Bird-eye aerials from 2018 depict heavy overgrowth at the house's south front and east side elevation, further suggesting heavy deterioration.

The house at 4404 Hamilton Road is not known to have any association with significant historic events or persons. It is therefore recommended as not eligible for NR listing under NR Criteria A or B. From the available evidence, it does not appear to embody the distinctive characteristics of a type, period, or method of construction and accordingly is recommended as not NR-eligible under Criterion C. The house is further recommended as not NR-eligible under Criterion D, for it is unlikely to yield important historical information not available from other sources. Additionally, the house's former citrus grove is now wooded and former groves to its west and south hold modern solar farms. It is therefore believed to have lost its integrity of setting. Its basic form and ca.1934 construction date, coupled with available information and apparent abandonment and deterioration, suggest it has also lost its integrity of design, materials, workmanship and, thereby, feeling and association. Due to its loss of integrity and lack of significance, the house is recommended as not eligible for NR listing.



Figure 5-5 House at 4404 Hamilton Road, March 10, 1941 Aerial

House partially obscured by date number (source: http://gisapps.polk-county.net/gisviewer).



Figure 5-6 House at 4404 Hamilton Road, 1964 Aerial

House at 4404 Hamilton Road with parcel boundaries mislocated to the left (west) (source: http://gisapps.polk-county.net/gisviewer).

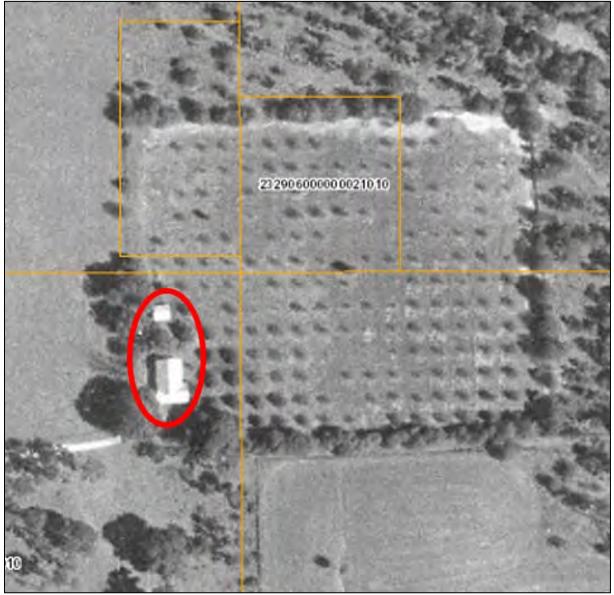


Figure 5-7 House at 4404 Hamilton Road, 1964 Aerial

Parcel mislocated to the northeast of house (source: http://gisapps.polk-county.net/gisviewer).



Figure 5-8 House at 4404 Hamilton Road, 2010 Aerial

Former grove largely filled with trees and edged by solar farms (source of both: http://gisapps.polk-county.net/gisviewer).





Photo 5-62 (left): House at 4404 Hamilton Road, 2018 bird's-eye aerial view with south front of house at bottom (source: https://www.google.com/maps); **Photo 5-63** (right): House at 4404 Hamilton Road, 2018 bird's-eye aerial view with south front of house at left (source: https://www.google.com/maps).





Photo 5-64 (left): House at 4404 Hamilton Road, 2018 bird's-eye aerial view with south front of house at top (source: https://www.google.com/maps); **Photo 5-65** (right) House at 4404 Hamilton Road, 2018 bird's-eye aerial view showing south front and east side of houses heavily encroached upon by tall green growth (source: https://www.google.com/maps).

House – 4333 Hamilton Road (Map ID #7)

This house stands on an approximately 0.6-acre parcel on the west side of Hamilton Road, 0.25 mile north of Medulla Road. The mostly modern houses to its north, south, and west occupy numerous small parcels of varying shapes that were likely cut off over time from a single larger agricultural property. This house has changed hands numerous times over the past 25 years and its early owners could not be determined. Tax records carry two dates for the house, a build date of 1920 and an estimated or apparent build date of 1991.

The house is built of frame with an overlay of brick veneer (**Photos 5-66** through **5-68**). It is one-story tall and has a gable-front roof pierced by a central brick chimney stack. Three bays cross its front (east) elevation, a central door flanked by paired windows with clip-in muntins. Windows with clip-in muntins mark the side elevations as well. A full-facade porch crosses its front elevation. A carport extends to the porch's north. An artificial-sided gable-front shed stands to the carport's north. The house's veneer, porch, and windows suggest a construction date within the past 30 or 40 years. If it was built in 1920, it is so heavily altered that this is not discernable.

This house is not known to have any association with significant historic events or persons and therefore is recommended as not eligible for NR listing under NR Criteria A or B. It does not appear to embody the distinctive characteristics of a type, period, or method of construction and accordingly is recommended as not NR-eligible under Criterion C. The house is further recommended as not NR-eligible under Criterion D, for it is unlikely to yield important historical information not available from other sources. If it is more than 50 years old, it has lost the integrity of design, materials, and workmanship – as well as setting, feeling, and association – that would express and represent that earlier period of construction. It is recommended as not eligible for NR listing under any of the Register's Criteria and Criteria Considerations.



Photo 5-66: House at 4333 Hamilton Road, east front elevation of house at left, carport at center, and modern shed at right in 2019 (source: https://www.google.com/maps).



Photo 5-67 (left): House at 4333 Hamilton Road, south side in 2020; **Photo 5-68** (right): House at 4333 Hamilton Road, east front elevations in 2020.





Photo 5-69 (left): House at 4333 Hamilton Road, north side and east front elevations in 2020; **Photo 5-70** (right): House at 4333 Hamilton Road, modern shed in 2020.

Futch-Dawson House – 4257 Hamilton Road (Map ID #8)

For much of the past 40 years at least, this house has been owned by either Mildred Ann Futch Dawson or her parents, Rev. Clyde A. and Florence Mary Futch (Polk County Deed Book 1941/Page 1835 (1980); Deed Book 3175/1925 (1992). Reverend Futch lived most of his life in eastern Hillsborough County (*Tampa Tribune* 1984), although he was living with his family and farming in the Medulla area of Polk County in 1940 (U.S. Bureau of the Census). The house carries a tax date of 1935, but its appearance strongly suggests that it is less than 50 years old.

The house has two blocks that are nearly equal in size (**Photos 5-71** through **5-75**). The gable-end block on the south is the principal one. Its east-facing front elevation is four bays wide. A door and a window are shaded by a hip-roofed screened front porch; a window is also placed to either side of the porch. These as the house's other windows are double-hung with two-horizontal-light-over-two-horizontal-light sash. The later-added north block holds a two-bay garage. Like the main block, it is topped by a gable-end roof and sided with asbestos shingles. It is flush with the main block at the front but extends a few feet farther back at the house's west-facing rear elevation. The window sash, their placement immediately under the eaves, the proportions of the main block, the asbestos shingles – all suggest a construction date within the past 50 years.

This house is not known to have any association with significant historic events or persons and therefore is recommended as not eligible for NR listing under NR Criteria A or B. It does not appear to embody the distinctive characteristics of a type, period, or method of construction and accordingly is recommended as not NR-eligible under Criterion C. The house is further recommended as not NR-eligible under Criterion D, for it is unlikely to yield important historical information not available from other sources. If it is more than 50 years old, it has lost the integrity of design, materials, and workmanship—as well as setting, feeling, and association—that would express and represent that earlier period of construction. It is recommended as not eligible for NR listing under any of the Register's Criteria and Criteria Considerations.





Photo 5-71 (left): Futch-Dawson House, east front and north side elevations; **Photo 5-72** (right): Futch-Dawson House, east front elevation.





Photo 5-73 (left): Futch-Dawson House, south side and east front elevations; **Photo 5-74** (right) Futch-Dawson House, north side and west rear elevations.



Photo 5-75: Futch-Dawson House, east front and north side elevations.

Dawson House - 4239 Hamilton Road (Map ID #9)

Like the house a short distance to its west at 4257 Hamilton Road, this house was long connected with Mildred Ann Futch Dawson, who owned it from at least the mid-1970s until her estate transferred it to another owner in 2017 (Polk County Deed Book 1679/Page 880 (1976); Probate Document 11052/Page 617 (2017). When Mildred Dawson and her husband, Willie Ray Dawson were divorced in 1980, she gave up the house at 4257 Hamilton Road, but retained

and likely lived in this one. The house is assigned a tax date of 1940, but it appears to be less than 50 years old.

The house occupies a zig-zag-shaped parcel on the west side of Hamilton Road and is located down a lane about 300 yards from the road (**Photos 5-76** through **5-81**). Its distance from the road and the shape of its parcel indicate that its 5.54-acre parcel was cut out of a larger agricultural tract. The house is almost square with a notch out of the back of the northwestern corner of its rear (west) elevation. One-story tall, it encompasses approximately 1,600 square feet. The house is of stuccoed masonry construction. Its gable-end roof is asphalt-shingled. At its front (east) elevation it has a tripled one-over-one window grouping at the left, an entry shaded by a screened hip-roofed porch at the center, and paired one-over-windows at the right. The house's other windows are also one-over-one. A gabled roof extends to the house's rear. It is abutted by a fenced patio shaded by a modern metal-pole-supported roof. A modern outbuilding stands to the house's south. The window sash, the house's proportions and relatively large footprint, and its masonry construction suggest a construction date within the past 50 years.

This house is not known to have any association with significant historic events or persons and therefore is recommended as not eligible for NR listing under NR Criteria A or B. It does not appear to embody the distinctive characteristics of a type, period, or method of construction and accordingly is recommended as not NR-eligible under Criterion C. The house is further recommended as not NR-eligible under Criterion D, for it is unlikely to yield important historical information not available from other sources. If it is more than 50 years old, it has lost the integrity of design, materials, and workmanship—as well as setting, feeling, and association—that would express and represent that earlier period of construction. It is recommended as not eligible for NR listing under any of the Register's Criteria and Criteria Considerations.





Photo 5-76 (left): Dawson House, east front elevation in 2014 (source: https://www.bing.com/maps/); **Photo 5-77** (right): Dawson House, east front elevation in 2018 (source: https://www.google.com/maps).





Photo 5-78 (left): Futch-Dawson House, east front and north side elevations; **Photo 5-79** (right): Futch-Dawson House, north side and west rear elevations.





Photo 5-80 (left): Futch-Dawson House, west rear elevation; Photo 5-81 (right): Futch-Dawson House, modern shed to house's south.

Opal and Oliver Phillips House – 4141 Hamilton Road (Map ID #10)

Tax records assign this house a date of 1935, but it may have been built a few years later. In 1937 George Hamilton, Jr. (1870-1942) and his wife, Florence B. Hamilton (1875-1965), transferred 24 acres to their daughter, Opal Phillips (1903-1983) (Polk County Deed Book 177/Page 145). She and her husband, Oliver W. Phillips (1892-1969), had married in 1927 (*Tampa Times*). They are believed to have built the house.

George Hamilton was a "stock breeder and orange grower" (*Tampa Tribune* 1906). The 1914 *Lakeland Ledger* described him as one of Polk County's "most substantial growers." He came from a local slaveholding family. In 1934 (*Tampa Tribune*) he gathered friends at his Medulla Road residence "to welcome Aunt Ella Robinson, 87, one-time slave, back to the old plantation." George's holdings of family property were apparently substantial in the early 20th century. The 1910 (US Bureau of the Census) census, taken when Opal was seven, identified his livelihood as "general farming." The farm inventoried immediately before his was that of James Jackson English of the English Family House at 4815 Medulla Road, located well southeast of this property.

Opal and Oliver Phillips likely erected this house in the late 1930s. Opal died in 1983. Two years later her estate kept the property in the family by transferring it to Billy J. Phillips. He continued to own but did not live in the house until it was foreclosed upon in 2019 (Polk County Deed Book 2324/Page 1045 (1985); Polk County Foreclosures).

The house's main block is one-story tall and two rooms deep (**Photos 5-82** through **5-89**). It is built of frame and topped by an asphalt-shingled gable-roof. A one-bay gable-front porch supported by square posts extends over its central front (south-facing) entry. The windows to either side of the facade are shaded by later-added metal hoods. An exterior-end brick chimney rises from the block's east gable. A hipped-roof wing wraps around much of the east side elevation of the house and part of the north rear elevation. The house has been vacant for a number of years and its windows are boarded over. It appears to be maintained, though, and its artificial siding is in good condition. When the house was artificially sided in recent years its original exposed rafter tails were boxed in. A frame two-car garage standing to the house's north rear appears to have been its contemporary, likely dating from the 1930s. A largely collapsed frame barn is overgrown by trees farther to the north. Its construction date is not known.

The Opal and Oliver Phillips House is not known to have any association with significant historic events or persons. It is therefore recommended as not eligible for NR listing under NR Criteria A or B. The house does not appear to embody the distinctive characteristics of a type, period, or method of construction and accordingly is recommended as not NR-eligible under Criterion C. The house is further recommended as not NR-eligible under Criterion D, for it is unlikely to yield important historical information not available from other sources. Additionally, due to its alterations—including boarded-over windows, artificial siding, and boxed-in eaves—the house is believed to have lost its integrity of design, materials, workmanship and, therefore, feeling and association. The loss of its the large citrus grove amidst which it stood has also negatively affected its integrity of setting.





Photo 5-82 (left): Opal and Oliver Phillips House, 2012 aerial with north at top showing ghost marks of a former grove (source: https://www.google.com/maps); **Photo 5-83** (right): Opal and Oliver Phillips House, 2012 aerial zoomed in

showing south front elevation of house with porch at bottom and garage at top (north) (source: https://www.google.com/maps).



Photo 5-84 (left): Opal and Oliver Phillips House, south front elevation with porch post visible at left center, 2020; **Photo 5-85** (right): Opal and Oliver Phillips House, detail of south elevation, 2020.





Photo 5-86 (left): Opal and Oliver Phillips House, south front and east elevations with porch at left in 2014 (source: https://www.bing.com/maps/); **Photo 5-87** (right): Opal and Oliver Phillips House, south front and east elevations with porch at left in 2020.





Photo 5-88 (left): Opal and Oliver Phillips House, south front and east side elevations with garage at far right, 2019 (source: https://www.google.com/maps); **Photo 5-89** (right): Opal and Oliver Phillips House, north rear of house with garage at left center and now collapsed barn at far left, no date (source: Connected Investors website).

Lakeland Linder International Airport (former Lakeland Army Air Base/Drane Field/Lakeland Municipal Airport) – 3900 Don Emerson Drive (Map ID #s11a through 11e)

Only the ghost of the original runway pattern of the former Lakeland Army Air Base is visible at the current Lakeland Linder International Airport (Map #11a) (**Photos 5-90** and **5-91**). Since the late 1980s, it has been transformed by the construction of extensions and new runways and the sodding over of old runways and pads (*Tampa Tribune* 1967b, 1968, 1997, 2000, and 2002). The runway and the airport grounds, therefore, are believed to have lost their integrity of design, setting, materials, workmanship and, thereby, feeling, and association. The airfield is accordingly not recommended as eligible for NR listing due to a loss of integrity. (The airfield does remain at its original location.)

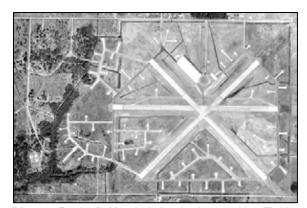




Photo 5-90 (left): Lakeland Army Air Field with Drane Field Road at north top, 1953 (source: https://web.archive.org/web/20120608222530/http://www.airfieldsdatabase.com/WW2/WW2%20R27b%20CO-HA.htm; **Photo 5-91** (right): modern Google Maps aerial.

As noted at the historic context of this report, none of the Airport's scores of WWII-era buildings survived. Tax records and historic aerials, however, indicate that four of the its standing resources were erected between about 1959 and 1971. Three of these are hangars standing on the southwest side of Airfield Drive West about 400 feet southeast of the modern airport terminal. Matching steel hangars erected c.1960 (Tampa Tribune 1959a) now house the aircraft maintenance facilities of Sheltair Aviation (Map ID #11b) (Photos 5-92 through 5-95) and Aeromech Aviation (Map ID #11c) (Photos 5-96 through 5-99). These were joined by a nearly identical hangar (Photos 5-100 through 5-103) to their northwest - now home to the maintenance facilities of Double M Aviation (Map ID #11d) - between the taking of aerial photographs of the Airport in 1964 and 1968. (The 1964 aerial appears to show ground preparation for the hangar.) A second building was added to this hangar by 1971. (A series of historic aerials of the Airport and Polk County are available at the Polk County GIS Map Viewer site.) The three earliest hangars are essentially square, about 120 feet on each side. They are conventional hangar types with steel primary load-bearing trusses and framing and steel walls and roofs. Their doors are the standard horizontal telescoping type that slide, overlap, and open up access to the entire hangar space when fully pushed to either side. The hangar attached to the northeast side of the Double M Aviation hangar is of similar design and construction, but it only about half as wide. The two hangars are largely open to each other inside, forming a single work space.

The maintenance hangars are believed to retain their integrity of location, design, setting, materials, workmanship and, thereby, feeling, and association. However, they are not believed to be significant for any association with significant events or individuals or to embody the distinctive characteristics of a type, period, or method of construction. They are conventional steel hangar types with standard telescoping doors (Luke and Howson 2002; lungerich 2018; Weitze 1999). The hangars have no known associations with the Cold War or other military activities. They are therefore not believed to be significant under NR Criteria A, B, or C and are recommended as not eligible for NR listing. The hangars are further recommended as not NR-eligible under Criterion D, for they are unlikely to yield important historical information not available from other sources.





Photo 5-92 (left): Sheltair Aviation maintenance hangar (Map ID #11b), airside elevation; **Photo 5-93** (right): Sheltair Aviation maintenance hangar (Map ID #11b), southwest airside and southeast elevations.





Photo 5-94 (left): Sheltair Aviation maintenance hangar (Map ID #11b), interior views. Photo 5-95 (right): Sheltair Aviation maintenance hangar (Map ID #11b), interior views.





Photo 5-96 (left): Aeromech Aviation maintenance hangar (Map ID #11c), southwest airside elevation; **Photo 5-97** (right): Aeromech Aviation maintenance hangar (Map ID #11c), northwest side elevation.





Photo 5-98 (left): Aeromech Aviation maintenance hangar (Map ID #11c) interior view; **Photo 5-99** (right): Aeromech Aviation maintenance hangar (Map ID #11c) interior view.





Photo 5-100 (left): Double M Aviation maintenance hangars (Map ID #11d), southwest side and southeast airside elevations with first-built hangar at left; **Photo 5-101** (right): Double M Aviation maintenance hangars (Map ID #11d), southeast airside and northeast side elevations with second-built hangar at right.





Photo 5-102 (left): Double M Aviation maintenance hangars (Map ID #11d), southwest side elevation of first-built hangar; **Photo 5-103** (right): Double M Aviation maintenance hangar (Map ID #11d), interior view looking from first-built hangar into darker second-built hangar space.

A portion of one additional building that is more than 50 years old survives at the Airport (**Photos 5-104** through **5-107**). In December 1959, the Airport was completing construction of its first purpose-built terminal. A basic Modernist building, the Lakeland Municipal Airport terminal was a one-story-tall rectangle of masonry construction topped by a flat roof. Exposed posts separated it into seven bays across its front. Three had three-part glass windows and paired doors that extended most of the way toward the roof; four were windowless. A flat-roofed portico supported by steel posts crossed the glassed bays. In the late 1980s or early 1990s, a control tower was built off the terminal's southeastern corner. Between 2002 and 2005, the western three-quarters of the building were lopped off, leaving only its eastern quarter. In the mid-2010s the control tower was removed as well.

The remaining quarter of the former terminal now houses the airport's U.S. Customs and Border Protection (CPB) facility (**Photos 5-108** through **5-110**). The one-story building retains some of the walls of the terminal and perhaps one of the original three-part windows. A shorter one-story addition has been wrapped around its south and east elevations. This addition includes three-part windows similar to the original ones.

Due its dramatic alterations—not least the removal of one-quarter of its original structure—the former Lakeland Municipal Airport terminal, now home to the airport's CPB facility, is believed to have lost its integrity of design, materials, workmanship and, accordingly, feeling and association. It remains in an airport setting on its original location, but it appears to have clearly lost its overall integrity. Additionally, the building is not known to have any association with significant historic events or persons and does not appear to embody the distinctive characteristics of a type, period, or method of construction. It is accordingly recommended as not NR-eligible under Criteria A, B, or C. The former terminal is further recommended as not NR-eligible under Criterion D, for it is unlikely to yield important historical information not available from other sources.





Photo 5-104 (left): Aerial view of former Lakeland Municipal Airport terminal (Map ID #11e) in 2002 (source: Polk County GIS Map Viewer site); **Photo 5-105** (right): Aerial view of former Lakeland Municipal Airport terminal (Map ID #11e) in 2005 (source: Polk County GIS Map Viewer site).





Photo 5-106 (left): Lakeland Municipal Airport terminal building (Map ID #11e), 1967 (source: https://cdm15809.contentdm.oclc.org/digital/collection/p15809coll7/id/66/rec/1); **Photo 5-107** (right): Current U.S. Customs and Border Protection building (same number), south front and east side elevation.





Photo 5-108 (left): Current U.S. Customs and Border Protection building (Map ID #11e), south front elevation; **Photo 5-109** (right): Current US Customs and Border Protection building (Map ID #11e), west side and south front elevations.



Photo 5-110: Current U.S. Customs and Border Protection building (Map ID #11e), north rear elevation.

6. EFFECTS RECOMMENDATIONS

6.1 ARCHAEOLOGICAL RESOURCES

Surface inspection, photo documentation of existing field conditions, and subsurface shovel testing performed within the Direct Effects APE (i.e., construction disturbance areas) revealed no existing or potential archaeological sites in the APE. There were no positive recoveries of potentially significant archaeological materials in the 12 STPs excavated for this study. Therefore, the recommendation of this study is that the Proposed Project will have *no effect* on archaeological resources in the APE.

6.2 HISTORIC ARCHITECTURAL RESOURCES

Examination of the FMSF indicated that no National Register-listed sites are present within the Direct or Indirect Effects APEs. The FMSF indicated that there are 17 historic structures, six archaeological sites, 26 cultural resource studies, and one resource group present within one mile of the Indirect Effects APE, although none of these are physically located in the APE.

As elaborated in **Section 5.2**, the Indirect Effects APE was further evaluated to determine the presence of buildings or structures 50 years of age or older that could be eligible for listing to the National Register. Fifteen structures at eleven locations on- and off-airport were identified for evaluation. All structures were appraised against NRHP Criteria A through D to recommend whether or not each location was potentially eligible for listing to the National Register. These results are summarized on **Table 6-1** and indicate that the Aaron E. and Maude Morgan House (Map ID #2) and the English Family House (Map ID #5) are each potentially eligible for listing to the National Register under Criterion C.

The Proposed Project would cause no direct physical effects to any of the fifteen locations within the APE described above, including the two that are potentially NRHP-eligible. To determine the potential for indirect effects, the noise and visual environment in the Indirect Effects APE was evaluated.

Table 6-1 Historic Evaluation Summary

Мар	Name	Eligi Reco	-	Crite		Pred	dicted Sound l	Levels (DNL o	Effects Recommendation	
ID		A	В	С	D	2022 No- Action	2022 Proposed Project	2027 No- Action	2027 Proposed Project	Lifects Recommendation
1	Robberson House	Ν	N	N	N	61.13	62.32	61.68	62.75	Direct: No effect. Indirect: No adverse effects. Predicted sound levels remain noise-compatible for this agricultural/residential land use per FAA criteria. Property is 1.5 miles from project area with tree stands obstructing line of site, no viewshed changes expected.
2	Aaron E. and Maude Morgan House	Ζ	N	Y	N	60.15	61.32	60.66	61.72	Direct: No effect. Indirect: No adverse effects. Predicted sound levels remain noise-compatible for this agricultural/residential land use per FAA criteria. Property is 0.6 mile from project area with multiple tree stands and a campground between property and project area, no viewshed changes expected.
3	Morgan Family House 1	Z	N	N	N	57.8	58.89	58.34	59.32	Direct: No effect. Indirect: No adverse effects. Predicted sound levels remain noise-compatible for this agricultural/residential land use per FAA criteria. Property is 0.6 mile from project area with dense tree stands protecting viewshed, no viewshed changes expected.

Мар	Name	Eligi	NRI bility omme	Crit		Pred	dicted Sound I	_evels (DNL o	Effects Recommendation	
ID		Α	В	С	D	2022 No- Action	2022 Proposed Project	2027 No- Action	2027 Proposed Project	
4	Morgan Family House 2	Ν	N	N	N	56.93	57.91	57.54	58.4	Direct: No effect. Indirect: No adverse effects. Predicted sound levels remain noise-compatible for this agricultural/residential land use per FAA criteria. Property is 0.6 mile from project area with dense tree stands protecting viewshed, no viewshed changes expected.
5	English Family House	N	N	Υ	N	55.08	55.99	55.82	56.59	Direct: No effect. Indirect: No adverse effects. Predicted sound levels remain noise-compatible for this agricultural/residential land use per FAA criteria. Property is 0.75 mile from project area with dense tree stands protecting viewshed, no viewshed changes expected.
6	House – 4404 Hamilton Road	N	N	N	N	57.99	58.88	58.77	59.53	Direct: No effect. Indirect: No adverse effects. Predicted sound levels remain noise-compatible for this residential land use per FAA criteria. Property is 0.6 mile from project area and set within a dense tree stand, no viewshed changes expected.

Мар	Name	Eligi Reco	_	Crit		Pre	dicted Sound I	_evels (DNL (Effects Recommendation	
ID		Α	В	С	D	2022 No- Action	2022 Proposed Project	2027 No- Action	2027 Proposed Project	
7	House – 4333 Hamilton Road	N	N	N	N	56.14	57.03	56.9	57.66	Direct: No effect. Indirect: No adverse effects. Predicted sound levels remain noise-compatible for this residential land use per FAA criteria. Property is 0.8 mile from project area with a dense tree stand partially obstructing line of site and a large solar farm between property and project area, no viewshed changes expected.
8	Futch-Dawson House	N	N	N	N	61.63	62.53	62.21	63.00	Direct: No effect. Indirect: No adverse effects. Predicted sound levels remain noise-compatible for this residential land use per FAA criteria. Property is 0.8 mile from project area with tree stands projecting viewshed, no viewshed changes expected.
9	Dawson House	N	N	N	N	60.00	60.89	60.56	61.35	Direct: No effect. Indirect: No adverse effects. Predicted sound levels remain noise-compatible for this residential land use per FAA criteria. Property is 1 mile from project area with small tree stands partially obstructing line of site, no viewshed changes expected.

Мар	Name	Eligi Reco	_	Crit		Pre	dicted Sound	Levels (DNL o	Effects Recommendation	
ID		Α	В	С	D	2022 No- Action	2022 Proposed Project	2027 No- Action	2027 Proposed Project	Effects Recommendation
10	Opal and Oliver Phillips House	N	N	N	N	61.79	62.72	62.31	63.15	Direct: No effect. Indirect: No adverse effects. Predicted sound levels remain noise-compatible for this agricultural/residential land use per FAA criteria. Property is 0.9 mile from project area with small tree stands and a large solar farm between property and project area, minimal viewshed changes expected.
11a	Aeromech Maintenance Hangar	N	N	N	N	78.70	79.10	79.40	79.75	Direct: No effect. Indirect: No adverse effects. Predicted sound levels remain noise-compatible for this governmental land use per FAA criteria. Property is 0.9 mile from project area and located on-airport with existing buildings and airport infrastructure between property and project area, no viewshed changes expected.
11b	Lakeland Linder International Airport	N	N	N	N	65.91	66.53	66.51	67.06	Direct: No effect. Indirect: No adverse effects. Predicted sound levels remain noise-compatible for this governmental land use per FAA criteria. Property is 1 mile from project area and located on-airport with existing buildings and airport infrastructure between property and project area, no viewshed changes expected.

Мар	Name	Eligi Reco	_	Crite		Pre	dicted Sound	Levels (DNL o	Effects Recommendation	
ID		Α	В	С	D	2022 No- Action	2022 Proposed Project	2027 No- Action	2027 Proposed Project	Effects Recommendation
11c	Sheltair Maintenance Hangar	N	N	N	Z	64.69	65.37	65.35	65.94	Direct: No effect. Indirect: No adverse effects. Predicted sound levels remain noise-compatible for this governmental land use per FAA criteria. Property is 0.9 mile from project area and located on-airport with existing buildings and airport infrastructure between property and project area, no viewshed changes expected.
11d	Double M Maintenance Hangar	N	N	N	N	62.93	63.64	63.62	64.23	Direct: No effect. Indirect: No adverse effects. Predicted sound levels remain noise-compatible for this governmental land use per FAA criteria. Property is 0.9 mile from project area and located on-airport with existing buildings and airport infrastructure between property and project area, no viewshed changes expected.
11e	Former Lakeland Municipal Airport Terminal	N	N	N	N	73.31	73.48	73.5	73.66	Direct: No effect. Indirect: No adverse effects. Predicted sound levels remain noise-compatible for this governmental land use per FAA criteria. Property is 0.9 mile from project area and located on-airport with existing buildings and airport infrastructure between property and project area, no viewshed changes expected.

¹ Y = Recommended eligible under given criterion; N = Recommended ineligible under given criterion Source: AEDT, 2020; AECOM, 2020.

For the evaluation of visual impacts, landscape character and visual/aesthetic attributes in the vicinity of these locations were qualitatively assessed in terms of the anticipated changes associated with the Proposed Project (see **Table 6-1**). Anticipated lighting sources are expected to be similar to existing structures at LAL and the adjacent land areas. The distance between the Proposed Project and the nearest property included in this study (Map ID #2) is approximately 0.6 mile, and the line of sight between the two is obscured by vegetation and other existing structures. Generally speaking, while the visual landscape would change as a result of the Proposed Project, it would be compatible with the Airport environs and not result in intrusive visual impacts.

For the evaluation of aircraft noise impacts, the FAA Aviation Environmental Design Tool (AEDT) was used to predict sound levels both with and without the Proposed Project. FAA considers a noise impact significant when the Proposed Project causes a predicted increase of a 1.5 decibels (dB) or more for a noise sensitive area that is exposed to noise at or above the Day-Night Average (DNL) 65 dB noise exposure level. This also applies when a noise-sensitive location is exposed at or above the DNL 65 dB level due to a DNL 1.5 dB or greater increase, when compared to the No-Action Alternative for the same timeframe. For example, an increase from DNL 65.5 dB to 67 dB is considered a significant impact, as is an increase from DNL 63.5 dB to 65 dB.

The results of the noise analysis are documented on **Table 6-1** and show that none of the evaluated properties experience a 1.5 dB or greater increase due to the Proposed Project compared to the No-Action Alternative. Those already contained in the DNL 65 dB or higher contours (i.e., LAL airport buildings) remain noise-compatible per FAA regulation.

Based on the foregoing discussion, and the results listed on **Table 6-1**, the recommendation of this study is that the Proposed Project will have no adverse effects on potential historic resources in the APE.

7. SUMMARY

AECOM conducted a Phase IB CRAS of planned improvements at LAL in Polk County, Florida. These efforts included background research and field survey to study the archaeological and historic stand structures resources on the property. Background research identified no listed cultural resources within the Direct or Indirect Effects APEs.

The archaeological survey was performed from July 6-7, 2020. The archaeological investigations included ground surface reconnaissance and subsurface testing in all areas of proposed ground disturbance and resulted in the excavation of 12 STPs. During this time, no archaeological resources were encountered. Examination of the FMSF indicated that no National Register-listed sites are present within the Direct or Indirect Effects APEs. The FMSF indicated that there are 17 historic structures, six archaeological sites, 26 cultural resource studies, and one resource group present within one mile of the Indirect Effects APE. However, none of these resources will be affected by the Proposed Project.

The architectural historic survey was conducted on August 4 and 12, 2020. It identified 11 resources or groups of resources. Nine are recommended as not eligible for NRHP listing. Two are recommended as NRHP-eligible, the Aaron E. and Maude Morgan House (Map ID #2) and the English Family House (Map ID #5). Neither of these properties would be affected by project construction. Additionally, the properties are well outside of existing and future airport noise contours and are distant from the airport viewshed. Therefore, it is not anticipated that these properties would be adversely indirectly affected by facility operations once the facility is constructed.

Based on the results of current survey, no further archaeological work is recommended for the APE. No Historic Properties will be affected by the Proposed Project.

7.1 UNANTICIPATED FINDS

Should future construction activities uncover any archaeological remains, it is recommended that activity in the immediate area of the remains be stopped while a professional archaeologist evaluates the remains. In the event that human remains are found during construction or maintenance activities, the provisions of Chapter 872.05, F.S. will apply. Chapter 872.05, F.S. states that when human remains are encountered all activity that might disturb the remains shall cease and may not resume until authorized by the District Medical Examiner or the State Archaeologist. The District Medical Examiner has jurisdiction if the remains are less than 75 years old or if the remains are involved in a criminal investigation. The State Archaeologist has jurisdiction if the remains are over 75 years of age or more.

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Appendix A: Qualifications of Investigators

Mark Martinkovic, M.A. is a Registered Professional Archaeologist with over 15 years of experience in the Cultural Resource Management (CRM) industry and exceeds the Secretary of the Interior's Professional Qualification Standards for Archaeology (36 CFR Part 61). Mr. Martinkovic is a Senior Archaeologist based in the Tallahassee, FL office. He has experience in the design, management, and technical execution of historic and archaeological investigations throughout the eastern US, primarily on the Gulf Coast. Since June 2006 he has been employed by AECOM and worked on Department of Transportation and private sector energy projects and also as a Historic Preservation Specialist (archaeologist) for FEMA in various roles on the Gulf Coast. Most recently he has successfully completed the Phase I investigation of 30 miles of proposed pipeline in South Carolina according to state and FERC guidelines. Mr. Martinkovic has also participated in surveys and studies of proposed energy corridors in Florida, primarily assessments of transmission line corridors and power station sites. He also has extensive experience in monitoring and overseeing the excavation of large-scale utility projects, including the installation of a sewer system on the Beauvoir Plantation in Biloxi, MS (2010) and the installation of a combined sewer and natural gas system in historic downtown Pensacola (2000).

Marvin Brown, M.A., has over 35 years of experience in historic and architectural studies, environmental compliance procedures, and project management. This experience includes performing historic architectural surveys in support of state and federal projects in compliance with Section 106 and other statutes and regulations; determination of effects and development of mitigation measures, including Memoranda of Agreement, Programmatic Agreements, Historic Preservation Plans, HABS/HAER-level recordation, and Section 4(f) documentation; environmental documentation including Environmental Impact Statements, Environmental Assessments, and Categorical Exclusions for airport, highway, and other projects; recordation of historic bridges; emergency and long-term response for FEMA projects; and drafting Multiple Property Documentation forms and National Register nominations for individual properties and historic districts. He has completed numerous projects in Florida associated with airports and other resources.







Category	FMSF Site ID	Name	Description	Temporal Affiliation	NRHP Status
	PO01014	Early	Campsite	Prehistoric lacking pottery	Ineligible for NRHP
	PO01015	Hamilton Branch	Lithic scatter/quarry	Prehistoric lacking pottery	Not Evaluated by SHPO
Archaeological	PO01016	Poley Creek	Lithic scatter/quarry	Prehistoric lacking pottery	Not Evaluated by SHPO
Sites	PO03156	Bay Ridge	Campsite	Prehistoric lacking pottery	Ineligible for NRHP
	PO03858	Airport Road Foundation	Building remains	Twentieth century American, 1900- present	Ineligible for NRHP
	PO03859	Drane Field Road Foundation	Building remains	Twentieth century American, 1900- present	Not Evaluated by SHPO
	HI00217	Chumney House	Private residence (destroyed)	circa 1910	Ineligible for NRHP
	HI01027	Phagen-Getty- West House	Private residence (destroyed)	circa 1913	Ineligible for NRHP
	HI06528	1312 Lindsey Road	Frame vernacular	circa 1946	Ineligible for NRHP
	HI06535	3010 Wiggins Road	Bungalow	circa 1924	Ineligible for NRHP
	HI06536	3120 Wiggins Road	Frame vernacular	circa 1920	Ineligible for NRHP
	PO01017B	Drane Field Building 2	Military warehouse	1942	Ineligible for NRHP
	PO01017C	Drane Field Building 3	Military warehouse (destroyed)	1942	Ineligible for NRHP
	PO03296	1343 West Pipkin Road	Frame vernacular	1926	Ineligible for NRHP
Historic Structures	PO03297	1343 West Pipkin Road	Frame vernacular	1928	Ineligible for NRHP
	PO04636	4755 Drane Field Road	Frame vernacular	circa 1940	Ineligible for NRHP
	PO04637	4815 Drane Field Road	Frame vernacular	circa 1930	Ineligible for NRHP
	PO04638	5005 Drane Field Road	Frame vernacular	1955	Ineligible for NRHP
	PO04639	4830 Drane Field Road	Frame vernacular	circa 1940	Ineligible for NRHP
	PO04640	5110 Drane Field Road	Frame vernacular	circa 1940	Ineligible for NRHP
	PO07169	1360 West Pipkin Road	Frame vernacular	1954	Ineligible for NRHP
	PO07170	1610 West Pipkin Road	Frame vernacular	1955	Ineligible for NRHP
	PO08223	5140 County Line Road	Frame vernacular	circa 1968	Ineligible for NRHP
Resource Groups	PO07528	Winston & Bone Valley RR	Linear resource	American 1892- present	Eligible for NRHP

	FMSF			
	Survey ID	Report Title	Author	Year
	1407	Cultural resource assessment survey of the proposed West Lakeland development site, Polk County, Florida	AUSTIN, ROBERT J.	1987
	1710	An Archaeological Survey of Segment 3, County Line Road, Polk/Hillsborough counties, Florida	WILLIAMS, J. RAYMOND	1988
	2132	Cultural resource assessment for the Oakbridge DRI, Drummond Properties, Lakeland, Polk Co., Florida	DICKINSON, MARTIN F.	1985
	3516	Archaeological / Historical Resource Evaluation for Polk Parkway (West Leg), Hillsborough and Polk Counties, Florida	HDR ENGINEERING, INC.	1993
	3776	A Cultural Resource Assessment Survey of the Drane Field Road/State Road 572 (Airport Road) Interchange Improvements Project, Polk County, Florida	BELLOMO, RANDY V.	1994
Cultural Resource Management	4571	Drane Field Road Cultural Resources Survey and Assessment, Polk County, Florida	SOUTHARC, INC.	1995
Studies	tudies 5409	Hillsborough County Historic Resources Survey Report	MAIO, TERESA	1998
	5828	Archaeological Site Location Predictive Model for the City of Lakeland	DEMING, JOAN	1999
	6733	Cultural Resource Assessment Survey of The Realignment of Medulla Road Between County Line Road and Existing Medulla Road Polk County, Florida	ALMY, MARION	2000
	7998	An Archaeological and Historical Survey of the Plant City/ Griffis Tower Site in Hillsborough County, Florida	AMBROSINO, JAMES N.	2001
	7458	An Archaeological and Historical Survey of the Proposed Medulla and Drainfield Tower Location in Hillsborough County, Florida	AMBROSINO, MEGHAN L.	2001
	8564	An Archaeological and Historical Survey of the Proposed Medulla & Drainfield Tower (Revised) Location in Hillsborough County, Florida	Sims, Cynthia L.	2001
	9136	AT&T Cellular Tower, French River Site, Polk County, Florida	WAYNE, LUCY B.	2003

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9804	Identification and Evaluation of Historic Properties Within the One Mile Area of Potential Effects of the Proposed Lakeland Electric Wireless Telecommunications Tower (Verizon Wireless 088096-6), Polk County, Florida (DEA Project Number 20401014)	Parker, Brian T.	2004
10059	Assessment of Potential Effects Upon Historic Properties: Proposed 150- foot Old Medulla Road Wireless Telecommunications Tower (Verizon Wireless 088096-5), Polk County Florida	Florida Archaeological Consulting, Inc.	2004
11647	An Inventory and Evaluation of the Lakeland National Guard Armory (Lakeland Armory), Polk County, Florida	Stokes, Anne V.	2005
11918	An Archaeological and Historical Survey of the English Creek Project Area in Polk County, Florida	Driscoll, Kelly A	2005
13061	A Phase 1 Cultural Resource Survey of the Lakeland Central Park DRI, Polk County, Florida	Stokes, Anne V.	2006
14659	FCC Form 620: CSX Parkway Frontage Road Telecommunications Tower Site (Verizon Wireless Personal Communications LP 088307-1) Polk County, Florida	Parker, Brian T.	2007
15860	An Archaeological and Historical Survey of the 10080881 - Scott Lake Tower in Polk County, Florida FCC Form 620	Bland and Associates, Inc.	2008
16075	A Phase I Cultural Resources Assessment Survey Report West Pipkin Road Widening Project from Medulla Road to Old Highway 37	Cremer, David	2008
17574	Administrative Action Environmental Assessment: State Road 563 (North/South Route) from State Road 37 (South Florida Avenue) to Drane Field Road, Polk County, Florida	Federal Highway Administration	1993
18459	Cultural Resource Assessment Survey Wabash Avenue Extension PD&E Study Polk County, Florida	Brouwer, Kaitlyn T.	2011
22724	Cultural Resource Assessment Survey of the Rice Road Commerce Center Property, Hillsborough County, Florida	ACI	2016
24982	Cultural Resource Assessment Survey of the Lakeland-Linder Regional Airport Properties, Polk County, Florida	ACI	2018

26804	A Cultural Resources Assessment Survey of the Publix Supermarket Development Project Parcel, 5140 County Line Road, Lakeland, Polk County, Florida	Mankowski, Joseph F.	2019
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STP#	Strat	Depth (cm)	Munsell #	Munsell Color	Texture	Artifacts	Comments
A1	I	0-50	10YR 3/2	Very Dark Grayish Brown	FILL Sand	NCM	Limestone chunks; impasse
B1	I	0-42	10YR 3/2	Very Dark Grayish Brown	FILL Sand	NCM	Concrete & asphalt
C1	I	0-20	2.5Y 2.5/1	Black	Fine Sand	NCM	Larger area, heavily disturbed;
							Spoil piles and concrete rubble;
	П	20-35	2.5Y/2.5/1 & 4/1	Black & Dark Gray	Fine Sand	NCM	Water @ 20 cmbs
							Filled and graded -active
C2	I	0-15	2.5Y 2.5/1 & 4/1	Black	Fine Sand	NCM	construction site
	П	15-30	2.5Y 6/3	Light Yellowish Brown	Fine Sand	NCM	Water @ 30cmbs
							Filled and graded -active
C3	I	0-16	2.5Y 2.5/1	Black	Fine Sand	NCM	construction site
	II	16-40	2.5Y 6/3	Light Yellowish Brown	Fine Sand	NCM	Water @ 35cmbs
							Filled and graded -active
D1	I	0-18	2.5Y 2.5/1	Black	Fine Sand	NCM	construction site
	II	18-40	2.5Y 2.5/1 & 4/1	Black & Dark Gray	Fine Sand	NCM	Water @ 35cmbs
							Filled and graded -active
D2	I	0-20	2.5Y 2.5/1	Black	Fine Sand	NCM	construction site
	П	20-40	2.5Y 6/3	Light Yellowish Brown	Fine Sand	NCM	Water @30
E1	I	0-100	2.5Y 4/1	Dark Gray/Light Gray	FILL Sand	NCM	Smaller area; graded
E2	I	0-16	2.5Y 3/1	Very Dark Gray	Fine Sand	NCM	Fill sand with gravel
	II	16-44	2.5Y 2.5/1	Black	Fine Sand	NCM	
	Ш	44-62	2.5Y 4/3	Olive Brown	Fine Sand	NCM	
	IV	62-90	2.5Y 6/3	Light Yellowish Brown	Fine Sand	NCM	
	V	90-100	2.5Y 8/1	White	Fine Sand	NCM	
F1	I	0-68	2.5Y 3/2, 4/3	Dark Gray/Light Gray, Brown	FILL Sand	NCM	Limestone chunks
	II	68-100	2.5Y 3/2	Very Dark Grayish Brown	Fine Sand	NCM	
F2	I	0-23	2.5Y3/1	Very Dark Gray	Fine Sand	NCM	
	II	23-50	2.5Y/2.5/1	Black	Fine Sand	NCM	
	Ш	50-60	2.5Y 4/3	Olive Brown	Fine Sand	NCM	
	IV	60-87	2.5Y 6/3	Light Yellowish Brown	Fine Sand	NCM	
	٧	87-95	2.5Y 8/1	White	Fine Sand	NCM	Water @ 90 cmbs



Appendix D: FMSF Forms



Page 1

☑ Original
☐ Update



HISTORICAL STRUCTURE FORM

FLORIDA MASTER SITE FILE

Version 5.0 3/19

 Site#8
 PO08452

 Field Date
 8-12-2020

 Form Date
 8-25-2020

 Recorder #
 Marvin
 Brown

Shaded Fields represent the minimum acceptable level of documentation. Consult the *Guide to Historical Structure Forms* for detailed instructions.

te Name(s) (address if none) Robberson House urvey Project Name EA for PhII Air Cargo Facility at LAL Ph IA CRAS ational Register Category (please check one) Subuilding structure district site object whereship: private-profit private-nonprofit private-individual private-nonspecific city county state federal Native American foreign unknown	
LOCATION & MAPPING Street Number Direction Street Name Street Type Suffix Direction Avenue Toss Streets (nearest / between) between Holden and Old Medulla roads SGS 7.5 Map Name NICHOLS USGS Date 1987 Plat or Other Map ty / Town (within 3 miles) Lakeland In City Limits? Syes Ino Inclunknown County wwnship 298 Range 23E Section 3 1/4 section: NW ISW Ise Inregular-name: ax Parcel # 23903000000044040 Landgrant ubdivision Name Block Lot TM Coordinates: Zone 16 17 Easting Northing Included System & Datum ther Coordinates: X: Y: Coordinate System & Datum ame of Public Tract (e.g., park)	<u> </u>
HISTORY	
onstruction Year: 1930	
the Resource Affected by a Local Preservation Ordinance?	
DESCRIPTION	
yle Craftsman Aterior Fabric(s) 1. Aluminum 2. 3. pof Type(s) 1. Gable 2. 3. pof Material(s) 1. Asphalt shingles 2. 3. Roof secondary strucs. (dormers etc.) 1. 2. indows (types, materials, etc.) see attachment	
stinguishing Architectural Features (exterior or interior ornaments) ee attachment	
	- 1
ncillary Features / Outbuildings (record outbuildings, major landscape features; use continuation sheet if needed.)	

HISTORICAL STRUCTURE FORM

Site #8 PO08452

DESCRIPTION (continued)
Chimney: No. 0 Chimney Material(s): 1. 2. Structural System(s): 1. Balloon wood frame 2. 3. Foundation Type(s): 1. Piers 2. 2. Foundation Material(s): 1. Concrete Block 2. 2. Main Entrance (stylistic details) 2.
Porch Descriptions (types, locations, roof types, etc.)
modern
Condition (overall resource condition): ☐ excellent ☑ good ☐ fair ☐ deteriorated ☐ ruinous Narrative Description of Resource
see attachment
Archaeological Remains Check if Archaeological Form Completed
RESEARCH METHODS (select all that apply)
□FMSF record search (sites/surveys) □Iibrary research ⊠ building permits □Sanborn maps □FL State Archives/photo collection □city directory □occupant/owner interview □plat maps □property appraiser / tax records ☑newspaper files □neighbor interview □Public Lands Survey (DEP) ☑cultural resource survey (CRAS) □historic photos □interior inspection □HABS/HAER record search □other methods (describe) □ Bibliographic References (give FMSF manuscript # if relevant, use continuation sheet if needed)
see attachment
OPINION OF RESOURCE SIGNIFICANCE
Appears to meet the criteria for National Register listing individually? Appears to meet the criteria for National Register listing as part of a district? Sometimes because the criteria for National Register listing as part of a district? Explanation of Evaluation (required, whether significant or not; use separate sheet if needed)
see attachment
Area(s) of Historical Significance (see <i>National Register Bulletin 15</i> , p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.) 1
DOCUMENTATION
Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents 1) Document type Maintaining organization File or accession #'s
2) Document type Maintaining organization
DECORDED INFORM ATTION
RECORDER INFORMATION
Recorder Name Marvin Brown Affiliation AECOM Recorder Contact Information (address / phone / fax / e-mail) Affiliation AECOM Affiliation AECOM 2707/919-854-6203/marvin.brown@aecom.com

Required Attachments

- **1** USGS 7.5' MAP WITH STRUCTURE LOCATION CLEARLY INDICATED
- 2 LARGE SCALE STREET, PLAT OR PARCEL MAP (available from most property appraiser web sites)
- **3** PHOTO OF MAIN FACADE, DIGITAL IMAGE FILE

When submitting an image, it must be included in digital <u>AND</u> hard copy format (plain paper grayscale acceptable). Digital image must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.

Robberson House – 4514 Windee Avenue (PO08452) (AECOM Resource #1)

Tax records assign the house at 4514 Windee Avenue a 1930 construction date. Google Maps photographs of it from 2011, which predate major alterations, suggest that it may well have been built in the 1930s. Currently, though, the house is almost unrecognizable as a dwelling from that time, as only its basic form remains intact. The house's owner, Kenneth L. Robberson, acquired it via a quitclaim deed from the estate of his brother, Jerry W. Robberson, in 2004 (Polk County Deed Book 5471/Page 0378). Jerry Robberson (1944-2003) was not its original owner, as the house predates his birth and he did not come to Lakeland until 1956 (*Lakeland Ledger* 2003).

In 2011, according to Google Maps photos taken that year, the house had a frame, one-story, gable-front, central block (Figure 2 through Figure 4). This was crossed at the front (west) by a partially enclosed gable-roofed porch and at the rear (east) by a perpendicular, gable-end, frame block. The house had double-hung sash windows, a seam-metal roof, and aluminum siding. Since 2011 the porch has been removed and replaced by an open porch; bays have been covered or shifted and windows and doors have been replaced; new artificial siding has been added; and a gable-front rather than gable-end roof has been placed atop the rear ell. The house continues to stand on concrete blocks. The house's many significant alterations suggest that after the 2011 photographs were taken, it was essentially stripped down to its studs and rebuilt, resulting in its current appearance. Bing Maps photographs from 2014 depict the house as it is at present, dating its alterations to between 2011 and 2014.

The Robberson House is not known to have any association with significant historic events or persons. It is therefore recommended as not eligible for NR listing under NR Criteria A or B. The house does not appear to embody the distinctive characteristics of a type, period, or method of construction and accordingly is recommended as not NR-eligible under Criterion C. Additionally, due to its substantial alterations, the house is believed to have lost its integrity of design, materials, workmanship, feeling, and association. Its setting remains largely intact and it presumably stands at its original location.



Figure 1. Robberson House in 2011: left, north side and west front elevations; right, west front and south side elevations (source: https://www.google.com/maps).



Figure 2. Robberson House in 2020: left, north side and west front elevations; right, west front and south side elevations.



Figure 3. Robberson House: left, west front and south side elevations in 2020; right, same elevations in 2014 (source: https://www.bing.com/maps/).

REFERENCES

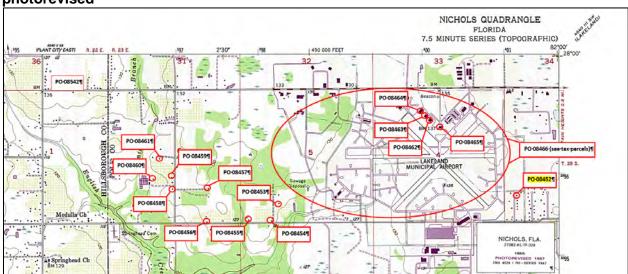
Lakeland Ledger

2003 C.J. "Jack" English obituary. November 25, 2003.

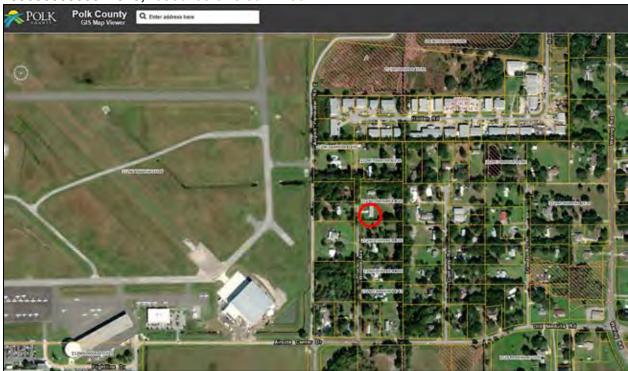
Polk County GIS Map Viewer site. Accessed July and August 2020 at http://gisapps.polk-county.net/gisviewer.

Polk County Register of Deeds Office. Accessed August 2020 at https://apps.polkcountyclerk.net/browserviewor/.

FMSF # highlighted in yellow and resource circled in red on Nichols Quad sheet, 1987 photorevised



Polk County GIS Map Viewer (http://gisapps.polk-county.net/gisviewer) Parcel 2390300000044040, resource circled in red



Photographs included in above history attachment and submitted separately as pdfs

Page 1

☑ Original☑ Update



HISTORICAL STRUCTURE FORM

FLORIDA MASTER SITE FILE

Version 5.0 3/19

 Site#8
 PO08453

 Field Date
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 Marvin
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Shaded Fields represent the minimum acceptable level of documentation. Consult the *Guide to Historical Structure Forms* for detailed instructions.

Site Name(s) (address if none) Aaron E. and Maude Morgan House Survey Project Name EA for PhII Air Cargo Facility at LAL Ph IA CRAS National Register Category (please check one) Subuilding structure district site object Ownership: private-profit private-nonprofit private-individual private-individual private-nonspecific city county state federal Native American foreign unknown
LOCATION & MAPPING Street Number Direction Street Name Street Type Suffix Direction
HISTORY
Construction Year:1924
DESCRIPTION
Style Frame Vernacular Exterior Plan Rectangular Number of Stories 1 Exterior Fabric(s) 1. Siding-novelty 2. 3. Roof Type(s) 1. Gable 2. 3. Roof Material(s) 1. Asphalt shingles 2. 3. Roof secondary strucs. (dormers etc.) 1. 2. Windows (types, materials, etc.) see attachment
Distinguishing Architectural Features (exterior or interior ornaments) see attachment
Ancillary Features / Outbuildings (record outbuildings, major landscape features; use continuation sheet if needed.) barn
DHR USE ONLY OFFICIAL EVALUATION DHR USE ONLY
NR List Date SHPO – Appears to meet criteria for NR listing:

HISTORICAL STRUCTURE FORM

Site #8 **PO08453**

DESCRIPTION (continued)				
Chimney: No. 1 Chimney Material(s): 1. Brick 2. 3. Foundation Type(s): 1. Piers 2. 5. Structural System(s): 1. Brick 2. 5. See attachment 5. See attachme				
Porch Descriptions (types, locations, roof types, etc.) see attachment				
Condition (overall resource condition): excellent good fair deteriorated ruinous Narrative Description of Resource see attachment				
Archaeological Remains Deck if Archaeological Form Completed				
RESEARCH METHODS (select all that apply)				
□FMSF record search (sites/surveys) □library research □state Archives/photo collection □city directory □occupant/owner interview □plat maps □property appraiser / tax records □newspaper files □neighbor interview □Public Lands Survey (DEP) □state archives/photos □interior inspection □HABS/HAER record search □other methods (describe) □ Bibliographic References (give FMSF manuscript # if relevant, use continuation sheet if needed) □ see attachment				
OPINION OF RESOURCE SIGNIFICANCE				
Appears to meet the criteria for National Register listing individually? Appears to meet the criteria for National Register listing as part of a district? Explanation of Evaluation (required, whether significant or not; use separate sheet if needed) See attachment				
Area(s) of Historical Significance (see National Register Bulletin 15, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.) 1. Architecture 3. 5. 2. 6.				
DOCUMENTATION				
Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents 1) Document type				
RECORDER INFORMATION				
Recorder Name Marvin Brown Affiliation AECOM Recorder Contact Information (address / phone / fax / e-mail) Affiliation AECOM Affiliation AECOM 2707/919-854-6203/marvin.brown@aecom.com				

Required Attachments

- **1** USGS 7.5' MAP WITH STRUCTURE LOCATION CLEARLY INDICATED
- 2 LARGE SCALE STREET, PLAT OR PARCEL MAP (available from most property appraiser web sites)
- **3** PHOTO OF MAIN FACADE, DIGITAL IMAGE FILE

When submitting an image, it must be included in digital AND hard copy format (plain paper grayscale acceptable). Digital image must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.

Aaron E. and Maude Morgan House – 4510 Aaron Morgan Road (PO08453) (AECOM Resource #2)

Aaron Edward Morgan (1893-1974) and Maude Miranda Morgan (1897-1971) are likely the original owners of this house, which tax records assign a construction date of 1924. By 1917 (US Selective Service System), when Aaron registered for the draft, they were already married and had a young child. Aaron was the son of Aaron Joseph Morgan, a citrus grower, cattleman, and state representative (*Tampa Times* 1917). In 1920, according to census records, the Morgans were living in the Medulla area—where the house is located—as was Aaron's father. They lived in the same area in 1930 and 1940. All three censuses, as well as Aaron's draft registration, identify him as a farmer (US Bureau of the Census 1920, 1930, and 1940). His obituary noted that he was a lifelong Polk County resident who also drove a school bus (*Tampa Tribune* 1974).

In 1976, with both Morgans deceased, the Aaron E. Morgan Estate transferred this property to Ruth Morgan Bell (Polk County Deed Book 1678/Page 1221). Ruth was the Morgans' youngest child. She and her husband, Charles W. Bell, continue to own it (Polk County Deed Book 9864/Page 2248 (2016)).

The marital status and ages of the Morgans and the farmhouse's form and Craftsman-style features suggest that it was erected around 1924, the date tax records assign it (Figure 1 through Figure 4). The frame house is one-story tall. Its west-facing front block has an asphalt-shingled gable-end roof and rests on brick piers. A door is centered at the front elevation, flanked by paired, double-hung, sash windows. The Craftsman-style four-vertical-light-over-one-light sash suggests the windows are original. The Craftsman-style glass-paned front door also appears to be original. Plain surrounds frame the door and windows. A hipped-roof porch supported by plain wooden posts and underpinned by exposed rafter tails—yet another Craftsman feature—extends across the facade's full length. Exposed rafter tails also mark the wide overhanging eaves of the block's roof and those of its small ventilated dormer, which is centered over the entry. A brick exterior-end chimney extends through the wide overhang on the block's south side elevation The block is clad in original German siding that terminates at plain cornerboards.

A gable-roofed ell extending from the northern portion of the block's rear elevation gives the house an L-shaped footprint. Within the legs of the ell, a formerly open porch has been enclosed. A small later addition extends to the rear of the ell and porch.

To the house's rear (east), thick round poles support the gabled sheet-metal roof of an open pole barn that is less than 50 years old (Figure 4 through Figure 6). Shaded by the roof is an earlier building that appears to be largely built of slender, round, saddle-notched, unchinked logs. (Due to Covid concerns and no-trespassing signs, access to the property and its resources was limited.) Log buildings were erected in Polk and other northern and central Florida counties into the late nineteenth century (Florida Association of the American Institute of Architecture 2017: 4, 23, 108). The extant English Family Log Cabin, now located in Homeland Heritage Park, was moved to Homeland from elsewhere in Polk County. Constructed of round saddle-notched logs, it dates from about 1890 (Hacking, Forbes, and Jones 2006). Whether this building was erected in the late nineteenth century could not be determined.)

The house and barn stand in the northwest corner of an approximately 16-acre rectangular parcel that fronts on Aaron Morgan Road. To their east and south is a no-longer-active citrus

grove that encompasses about half of the parcel. The eastern half of the parcel is wooded. The land to the parcel's east, south, and west remains largely rural, marked by open fields, woodland, and scattered houses. Only to the immediate north, where a trailer park was established in the early 2000s, has modern development encroached on the setting.

The Aaron E. and Maude Morgan House is recommended as eligible for NR listing under Criterion C for its architecture. It is a good intact representative of an early-twentieth-century Polk County farmhouse. It retains its original form, German siding, plain surrounds, front porch, and cornerboards, as well as its original Craftsman-style sash, doors, and overhanging eaves with exposed rafter tails. The only notable alterations appear to be the enclosure of a rear porch, which is clad in matching German siding, and the addition of a small room to the rear of the ell. Further, the house appears to stand on its original site. The Morgan House is therefore believed to retain its integrity of location, design, setting, materials, workmanship and, by extension, feeling and association.

The Morgan House's NR boundaries are recommended as the boundaries of its approximately 16-acre parcel (Polk County parcel 232905000000042030) on its north, east, and south (Figure 7). On it west, where the parcel reaches toward Aaron Morgan Road, its boundary is recommended as ending on the east side of the county-maintained shallow ditch and road right-of-way. (It is not clear from tax maps whether the parcel already terminates there.) Contained within this boundary are the house and barn, both of which are contributing buildings, the former citrus grove, and woodland, all of which were historically associated with the property.



Figure 1. Aaron E. and Maude Morgan House: west front and south side elevations, 2020



Figure 2. Aaron E. and Maude Morgan House: west front and south side elevations showing German siding and Craftsman-style windows, door, and exposed rafter tails, 2020.



Figure 3. Aaron E. and Maude Morgan House: left, south side elevation at rear (north end) of house with front (west) elevation of barn at far right, 2020; right, aerial depicting west front and south side elevations and roof lines, no date (source: https://www.google.com/maps).



Figure 4. Aaron E. and Maude Morgan House: left, aerial depicting east rear and north side elevations, no date (source: https://www.google.com/maps); right, west front and south side elevations of barn to rear of house, 2020.



Figure 5. Aaron E. and Maude Morgan House: west front and south side elevations of pole barn and log building within it, 2020.



Figure 6. English Family Log Cabin, Homeland Heritage Park in Polk County, built c1890 (source: Polk County Government 2019).



Figure 7. Aaron E. and Maude Morgan House: recommended NR boundaries (Polk County parcel 23290500000042030).

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1917 "Salary System for County Officers." March 2, 1917.

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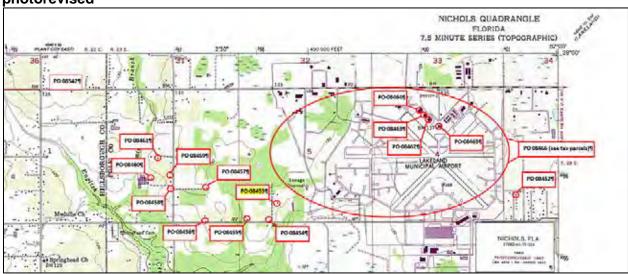
US Bureau of the Census

- 1920 Fourteenth Census of the United States. Accessed August 2020 at https://search.ancestry.com/.
- 1930 Fifteenth Census of the United States. Accessed August 2020 at https://search.ancestry.com/.
- 1940 Six*teenth Census of the United States. Accessed* August 2020 at https://search.ancestry.com/.

US Selective Service System

1917 World War I Selective Service System Draft Registration Cards, 1917-1918. Aaron Edward Morgan card accessed August 2020 at https://search.ancestry.com/.

FMSF # highlighted in yellow and resource circled in red on Nichols Quad sheet, 1987 photorevised



Polk County GIS Map Viewer (http://gisapps.polk-county.net/gisviewer) Parcel 23290500000042030, resource circled in red



Photographs included in above history attachment and submitted separately as pdfs

Page 1

☑ Original☑ Update



HISTORICAL STRUCTURE FORM

FLORIDA MASTER SITE FILE

Version 5.0 3/19

 Site#8
 PO08454

 Field Date
 8-12-2020

 Form Date
 8-25-2020

 Recorder #
 Marvin
 Brown

Shaded Fields represent the minimum acceptable level of documentation. Consult the *Guide to Historical Structure Forms* for detailed instructions.

Site Name(s) (address if none) Morgan Family House 1 Survey Project Name EA for PhII Air Cargo Facility at LAL Ph IA CRAS National Register Category (please check one) Subuilding structure district site object Ownership: private-profit private-nonprofit private-individual private-nonspecific city county state of the county of the cou	
Cross Streets (nearest / between) NW corner of jct of Aaron Morgan & Medulla roads USGS 7.5 Map Name_NICHOLS USGS Date 1987 Plat or Othe City / Town (within 3 miles) Lakeland In City Limits? \(\text{ Syes} \) \(\text{ In City Limits} \)? \(\text{ Syes} \) \(\text{ In City Limits} \)? \(\text{ Syes} \) \(\text{ In City Limits} \)? \(\text{ Syes} \) \(\text{ In City Limits} \)? \(\text{ Syes} \) \(\text{ In City Limits} \)? \(\text{ Syes} \) \(\text{ In City Limits} \)? \(\text{ Syes} \) \(\text{ In City Limits} \)? \(\text{ Syes} \) \(\text{ In City Limits} \)? \(\text{ Syes} \) \(\text{ In City Limits} \)? \(\text{ Syes} \) \(\text{ In City Limits} \)? \(In	er Mapeuntyegular-name:
HISTORY	
Construction Year:1920approximatelyyear listed or earlier	o (year):
DESCRIPTION	
Style Frame Vernacular Exterior Plan Rectangular Exterior Fabric(s) 1. Aluminum 2. 3 Roof Type(s) 1. Gable 2. 3 Roof Material(s) 1. Sheet metal:3V crimp 2. 3 Roof secondary strucs. (dormers etc.) 1. 2. 2. Windows (types, materials, etc.) see attachment 3	3 3
Distinguishing Architectural Features (exterior or interior ornaments) see attachment	
Ancillary Features / Outbuildings (record outbuildings, major landscape features; use continuation sheet if needed.) none	
DHR USE ONLY OFFICIAL EVALUATION	DHR USE ONLY
NR List Date SHPO – Appears to meet criteria for NR listing: ☐yes ☐no ☐insufficient info KEEPER – Determined eligible: ☐yes ☐no ☐Owner Objection NR Criteria for Evaluation: ☐a ☐b ☐c ☐d (see National Register Bulletin 1.	Date Init Date 5, p. 2)

HISTORICAL STRUCTURE FORM

Site #8 PO08454

DESCRIPTION (continued)
Chimney: No. O Chimney Material(s): 1. 2. 3. Structural System(s): 1. Balloon wood frame 2. 3. Foundation Type(s): 1. Piers 2. 5. Foundation Material(s): 1. Concrete Block 2. 5. Main Entrance (stylistic details)
Book Book Warner and the second secon
Porch Descriptions (types, locations, roof types, etc.) see attachment
Condition (overall resource condition): ☐ excellent ☑ good ☐ fair ☐ deteriorated ☐ ruinous Narrative Description of Resource
see attachment
Archaeological Remains Check if Archaeological Form Completed
RESEARCH METHODS (select all that apply)
□FMSF record search (sites/surveys) □Iibrary research □Suilding permits □Sanborn maps □FL State Archives/photo collection □city directory □occupant/owner interview □plat maps □property appraiser / tax records □newspaper files □neighbor interview □Public Lands Survey (DEP) □Cultural resource survey (CRAS) □historic photos □interior inspection □HABS/HAER record search □other methods (describe) □Bibliographic References (give FMSF manuscript # if relevant, use continuation sheet if needed)
OPINION OF RESOURCE SIGNIFICANCE
Appears to meet the criteria for National Register listing individually?
Area(s) of Historical Significance (see National Register Bulletin 15, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.) 1.
DOCUMENTATION
Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents 1) Document type Maintaining organization File or accession #'s
2) Document type Maintaining organization
Document description File or accession #'s
RECORDER INFORMATION
Recorder Name Marvin Brown Affiliation AECOM Recorder Contact Information (address / phone / fax / e-mail) Affiliation AECOM AFFILIATION AECOM 2707/919-854-6203/marvin.brown@aecom.com

Required Attachments

- **1** USGS 7.5' MAP WITH STRUCTURE LOCATION CLEARLY INDICATED
- 2 LARGE SCALE STREET, PLAT OR PARCEL MAP (available from most property appraiser web sites)
- **3** PHOTO OF MAIN FACADE, DIGITAL IMAGE FILE

When submitting an image, it must be included in digital AND hard copy format (plain paper grayscale acceptable). Digital image must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.

Morgan Family House 1-4405 Medulla Road (PO08454) (AECOM Resource #3)

This house stands at the intersection of Medulla and Aaron Morgan roads, in the southeastern corner of a 40-acre tract (Polk County parcel 23290500000044010) once owned by the estate of Aaron Joseph Morgan (1863-1941) and his wife, Dollie A. Morgan (1864-1957). In 1943, in association with the construction of Lakeland Army Air Base, A. Joseph Morgan's estate was awarded more than \$15,000 as compensation for the taking of "homestead property of 160 acres." An additional 200 acres of the estate was valued at \$8,500 (Tampa Tribune 1943). This parcel, not taken for the base, subsequently came into the hands of one of the Morgans' sons, Harley G. Morgan (1898-1977), and his wife, Thelma Futch Morgan (1910-2000). In 1976 they conveyed the land, which includes more than one house, to their daughter, Betty L. Howard, who still owns it (Polk County Deed Book 2883/Page 1542; Tampa Tribune 2000a). It is unlikely that the olders Morgans lived in this small house, which carries a tax date of 1920. A. Joseph Morgan's obituary described him as a prominent two-term state legislator (1919 and 1921) who was a "successful citrus grower and cattleman" (Tampa Tribune 1941a). Harley G. Morgan, also a cattleman (Tampa Bay Times 1966), and his wife may have lived on the property; if so, it is not known which of the two houses they occupied. This house's modest size and form suggest it was a tenant house.

Photographs taken in 2011, before the house underwent a major renovation, depict a dwelling that may indeed have been built around 1920, the assigned tax date (Figure 1 through Figure 4). In 2011 the small, gable-front, frame house—about 16' across and 24' deep according to tax records—was sided in heavily weathered vertical boards without battens and topped by a metal roof. Its two-bay-wide south-facing front facade was shaded by a plainly finished porch covered by a metal shed porch. To its rear (north) extended an ell faced with T111-type siding that had a double-pitched shed roof. Tax records identify much of the ell as a formerly open porch. Between 2011 and 2019, the old front porch was replaced by one with square posts and a balustrade. The front door was also replaced. A new metal roof was set atop the house and it received new artificial siding. Its two-over-two, double-hung, sash windows were cleaned or replaced in kind; the plain window surrounds were cleaned and painted. The rear ell was also re-sided.

Due to its many post-2011 alterations, the house is believed to have lost its integrity of design, materials, workmanship and, accordingly, feeling and association. Its setting appears to be largely intact and it likely continues to stand on the location upon which it was built, but overall it has lost its integrity. Additionally, the house is not known to have any association with significant historic events or persons. It is therefore recommended as not eligible for NR listing under NR Criteria A or B. The house does not appear to embody the distinctive characteristics of a type, period, or method of construction and accordingly is recommended as not NR-eligible under Criterion C. Due to its loss of integrity and lack of significance, the house is recommended as not eligible for NR listing.





Figure 1. Morgan Family House 1: left, south front elevation, c2014 (source: https://www.bing.com/maps/); right, west side and south front elevations in 2019 (source: https://www.google.com/maps).





Figure 2. Morgan Family House 1: left, south front and east side elevations in 2011 and, at right, in 2019 (source of both: https://www.google.com/maps).





Figure 3. Morgan Family House 1: left, east side elevation in 2011 (source: https://www.google.com/maps) and, at right, in 2020.



Figure 4. Morgan Family House 1: east side and north rear elevations, 2011 (source: https://www.google.com/maps).

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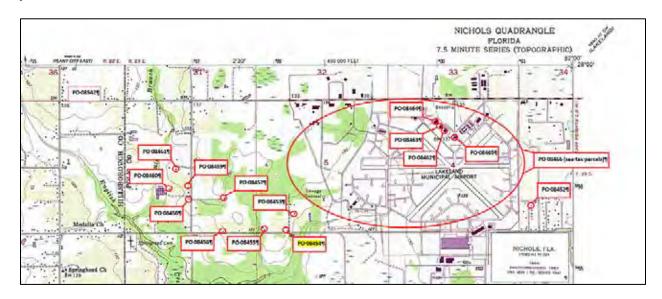
Tampa Tribune

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FMSF # highlighted in yellow and resource circled in red on Nichols Quad sheet, 1987 photorevised



Polk County GIS Map Viewer (http://gisapps.polk-county.net/gisviewer) Parcel 23290500000044010, resource circled in red



Photographs included in above history attachment and submitted separately as pdfs

Page 1

☑ Original
☐ Update



HISTORICAL STRUCTURE FORM

FLORIDA MASTER SITE FILE

Version 5.0 3/19

 Site#8
 PO08455

 Field Date
 8-12-2020

 Form Date
 8-25-2020

 Recorder #
 Marvin
 Brown

Shaded Fields represent the minimum acceptable level of documentation. Consult the *Guide to Historical Structure Forms* for detailed instructions.

	acility at LAL Ph IA CRAS Survey # (DHR only)
National Register Category (please check one) ⊠building Ownership: □private-profit □private-nonprofit ☑private-individual	□ structure □ district □ site □ object □ □ private-nonspecific □ city □ county □ state □ federal □ Native American □ foreign □ unknown
Address: 4415 Direction Street Name Address: 4415 Medulla Cross Streets (nearest / between) between Aaron Morg USGS 7.5 Map Name NICHOLS City / Town (within 3 miles) Lakeland Township 29S Range 23E Section 5	USGS Date 1987 Plat or Other Map
UTM Coordinates: Zone ☐16 ☐17 Easting ☐ ☐ ☐	Coordinate dystem & Datum
	HISTORY
Other Use Moves:	From (year):
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Style Frame Vernacular	
Exterior Fabric(s) 1. Novelty siding Roof Type(s) 1. Hip	2. 3. 3. 2. 3. 2. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3.
Distinguishing Architectural Features (exterior or interior ornam see attachment	nents)
Ancillary Features / Outbuildings (record outbuildings, major land see attachment	
DHR USE ONLY	OFFICIAL EVALUATION DHR USE ONLY

DESCRIPTION (continued)
Chimney: No. 1 Chimney Material(s): 1. Brick 2. Structural System(s): 1. Balloon wood frame 2. 3. Foundation Type(s): 1. Piers 2. Foundation Material(s): 1. Concrete Block 2. Main Entrance (stylistic details)
Porch Descriptions (types, locations, roof types, etc.) see attachment
Condition (overall resource condition): ☐ excellent ☑ good ☐ fair ☐ deteriorated ☐ ruinous Narrative Description of Resource
see attachment
Archaeological Remains Check if Archaeological Form Completed
RESEARCH METHODS (select all that apply)
□FMSF record search (sites/surveys) □ library research □ building permits □ Sanborn maps □ FL State Archives/photo collection □ city directory □ occupant/owner interview □ plat maps □ property appraiser / tax records □ neighbor interview □ public Lands Survey (DEP) □ cultural resource survey (CRAS) □ historic photos □ interior inspection □ HABS/HAER record search □ other methods (describe) □ Bibliographic References (give FMSF manuscript # if relevant, use continuation sheet if needed)
OPINION OF RESOURCE SIGNIFICANCE
Appears to meet the criteria for National Register listing individually? yes yes
Area(s) of Historical Significance (see National Register Bulletin 15, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.) 1
DOCUMENTATION
Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents 1) Document type Maintaining organization Document type Maintaining organization 2) Document type Maintaining organization Document description File or accession #'s
RECORDER INFORMATION
Recorder Name Marvin Brown Affiliation AECOM Recorder Contact Information 701 Community Contact Information 701 Community Information Recorder Contact Information 701 Community Informatio
Recorder Contact Information 701 Corporate Center Dr, Raleigh NC 2707/919-854-6203/marvin.brown@aecom.com

Required Attachments

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- 2 LARGE SCALE STREET, PLAT OR PARCEL MAP (available from most property appraiser web sites)
- **3** PHOTO OF MAIN FACADE, DIGITAL IMAGE FILE

When submitting an image, it must be included in digital AND hard copy format (plain paper grayscale acceptable). Digital image must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.

Morgan Family House 2–4415 Medulla Road (PO08455) (AECOM Resource #4)

Morgan Family House 2 stands on the same 40-acre tract (Polk County parcel 23290500000044010) as Morgan Family House 1 does. It is located, however, near the southwest corner of the parcel facing Medulla Road. The known history of the two houses is nearly identical. The 40-acre parcel was once owned by the estate of Aaron Joseph Morgan (1863-1941) and his wife, Dollie A. Morgan (1864-1957). In 1943, in association with the construction of Lakeland Army Air Base, A. Joseph Morgan's estate was awarded more than \$15,000 as compensation for the taking of "homestead property of 160 acres." An additional 200 acres of the estate was valued at \$8,500 (*Tampa Tribune* 1943). This parcel, not taken for the base, subsequently came into the hands of one of the Morgans' sons, Harley G. Morgan (1898-1977), and his wife, Thelma Futch Morgan (1910-2000). It is unlikely that the olders Morgans lived in this house, which carries a tax date of 1935. A. Joseph Morgan's obituary described him as a prominent two-term state legislator (1919 and 1921) who was a "successful citrus grower and cattleman" (*Tampa Tribune* 1941a). The house was more likely first occupied by Harley Morgan, who was also a cattleman (*Tampa Bay Times* 1966), and his wife.

In 1920 (US Bureau of the Census) Harley Morgan was unmarried and still living with his parents. In that census he listed his occupation as a laborer on the "home farm." By 1930 he was married to Thelma and farming his own land. He was 32, she was 20, and their one child, Darwin, was two. In the order that the census was taken, four Morgan families lived one after the other: the elder Morgans were visited first, then Harley and Thelma, then brother and sisterin-law Aaron E. and Maude Morgan, and then another brother and his wife, G. Bascom and Eva Morgan.

In 1976 Harley and Thelma Morgan conveyed the 40 acres to their daughter, Betty L. Howard (Polk County Deed Book 2883/Page 1542; *Tampa Tribune* 2000a). She continues to own the property and occupies this house. On a field visit—due to Covid and privacy concerns—it was forcefully requested that no photos of the house or outbuildings be taken from the property or the public right-of-way. One image was taken while driving away, but the other images below were taken by Google Earth and Maps in November 2019. Compared to views of the property driving by, the house appears unchanged since they were taken.

Tax records place the house's construction in 1935 (Figure 1 through Figure 6). Its dimensions and L-plan footprint are nearly identical (according to tax records) to those of the Aaron Morgan House to the east, which has a tax date of 1924. Both houses are one-story tall, of frame construction, German sided, and edged with cornerboards. This house lacks Craftsman-style details, though. It does not have exposed rafter tails at the roof of its main block or porch and its windows appear to be one-over-one. This suggests the house may well have been built in the 1930s. A seam-metal hipped roof tops the main block and the full-facade porch to its front (south). The porch has plain square posts and a heavy infill of modern decorative metal grillwork. The windows on the east and west side elevations are covered by the same grillwork. An narrow, exterior-end, brick chimney stack rises along the west side elevation of the main block, which is extended to the rear by a one-story gable-end ell. The L-shaped porch that extended along the rear of main block and ell has been largely enclosed.

The house has seven associated outbuildings. To its east are two modern, taupe-colored, shedroofed sheds that do not appear on Bing Maps aerials taken in December 2014. Between these sheds and the house's east side elevation stands a gable-front frame garage with sliding wooden doors that may be more than 50 years old. Three outbuildings are arrayed to the

house's rear: a white shed-roofed shed and two taupe-colored gable-roofed sheds. The white shed may be more than 50 years old; the taupe sheds appear to have been built more recently. A long gable-roofed pole barn stands to the house's northwest. The varied pitches and conditions of its roof suggest it was built in three sections. Its first section rose at its south end, closest to the road. This may be the resource identified in tax records a "pole shed dirt [floor] erected in 1935. A second section added to its rear (north) may be the resource tax records identify as a "pole shed concrete [floor]," erected in 1960. A more substantial and longer third section of the barn was subsequently appended to barn's north end.

Morgan Family House 2 is not believed to retain the integrity necessary for NR eligibility. Its rural setting retains intact and it appears to stand upon the site where it was erected. However, the heavy intrusive grills that hide its porch and windows have negatively affected its integrity of integrity design, materials, and workmanship, and thereby of feeling and association. Further, the house is not known to have any association with significant historic events or persons and is therefore recommended as not eligible for NR listing under NR Criteria A or B. It also does not appear to embody the distinctive characteristics of a type, period, or method of construction and accordingly is recommended as not NR-eligible under Criterion C.



Figure 1. Morgan Family House 2: left, south front and east side elevations and, right, south front elevation, 2019 (source of both: https://www.google.com/maps).



Figure 2. Morgan Family House 2: left, west side and south front elevations in 2019 (source: https://www.google.com/maps) and, right, same elevations in 2020.



Figure 3. Morgan Family House 2: left, west side and south front elevations, 2019; right, aerial view of north rear elevation and roofs, 2018 (source of both: https://www.google.com/maps).





Figure 4. Morgan Family House 2: left, looking north (with house at left) at two shed-roofed sheds at right (east), garage at center left, and two gable-roofed sheds at left distance; right, view of eastern shed-roofed sheds, both 2019 (source of both: https://www.google.com/maps).





Figure 5. Morgan Family House 2: left, looking northeast (house at left) at garage at left and eastern sheds at right; right, looking northwest (house at left) at white shed-roofed shed and gabled sheds at left and garage at right, 2019 (source of both: https://www.google.com/maps).





Figure 6. Morgan Family House 2: left, south front elevation of barn, 2019; right, aerial view of barn with south elevation at bottom, 2018 (source of both: https://www.google.com/maps).

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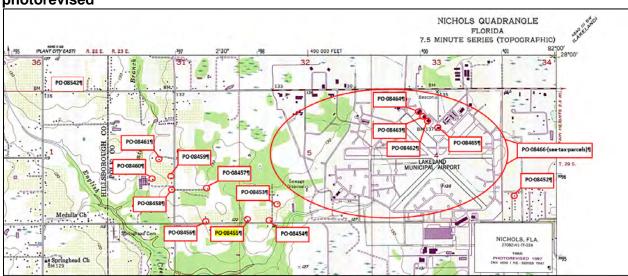
Tampa Tribune

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1943 "U.S. Jury Fixes Price of Army Air Base Site." July 16, 1943.

2000a Thelma Futch Morgan obituary. January 21, 2000.

FMSF # highlighted in yellow and resource circled in red on Nichols Quad sheet, 1987 photorevised



Polk County GIS Map Viewer (http://gisapps.polk-county.net/gisviewer) Parcel 23290500000044010, resource circled in red



Photographs included in above history attachment and submitted separately as pdfs

Page 1

☑ Original
☐ Update



HISTORICAL STRUCTURE FORM

FLORIDA MASTER SITE FILE

Version 5.0 3/19

 Site#8
 PO08456

 Field Date
 8-12-2020

 Form Date
 8-25-2020

 Recorder #
 Marvin
 Brown

Shaded Fields represent the minimum acceptable level of documentation. Consult the *Guide to Historical Structure Forms* for detailed instructions.

Site Name(s) (address if none) English Family House Survey Project Name EA for PhII Air Cargo Facility at LAL Ph IA CRAS Survey # (DHR only) Survey # (DHR only) Survey # (DHR only) Descriptional Register Category (please check one) Survey # (DHR only) Descriptional Register Category (please check one) Survey # (DHR only)	
Street Number Direction Street Name Street Type Suffix Direction	_
HISTORY	
Construction Year: 1910	
s the Resource Affected by a Local Preservation Ordinance?	_
DESCRIPTION	
Style Frame Vernacular Exterior Plan Square Number of Stories 1 Exterior Fabric(s) 1. Novelty siding 2. 3. Roof Type(s) 1. Gable 2. 3.	
Roof Material(s) 1. Sheet metal:3V crimp 2. 3	
Roof Material(s) 1. Sheet metal:3V crimp 2. 3	
Roof Material(s) 1. Sheet metal:3V crimp 2. 3	
Roof Material(s) 1. Sheet metal:3V crimp 2. 3	
Roof Secondary strucs. (dormers etc.) 1	

DESCRIPTION (continued)
Chimney: No1_ Chimney Material(s): 1. Brick 2. Structural System(s): 1. Balloon wood frame 2. 3. Foundation Type(s): 1. Piers 2. Foundation Material(s): 1. Concrete Block 2. Main Entrance (stylistic details) see attachment
Porch Descriptions (types, locations, roof types, etc.) see attachment
Condition (overall resource condition):
Archaeological Remains Check if Archaeological Form Completed
RESEARCH METHODS (select all that apply)
□FMSF record search (sites/surveys) □library research ⊠ building permits □Sanborn maps □FL State Archives/photo collection □city directory ☑occupant/owner interview □plat maps □property appraiser / tax records ☑newspaper files □neighbor interview □Public Lands Survey (DEP) ☑cultural resource survey (CRAS) □historic photos □interior inspection □HABS/HAER record search □other methods (describe) □ Bibliographic References (give FMSF manuscript # if relevant, use continuation sheet if needed)
see attachment
OPINION OF RESOURCE SIGNIFICANCE
Appears to meet the criteria for National Register listing individually? Appears to meet the criteria for National Register listing as part of a district? Explanation of Evaluation (required, whether significant or not; use separate sheet if needed) See attachment
Area(s) of Historical Significance (see National Register Bulletin 15, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.) 1. Architecture 3. 5. 6.
DOCUMENTATION
Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents 1) Document type Maintaining organization Document type Maintaining organization 2) Document type Maintaining organization
Document description File or accession #'s
RECORDER INFORMATION
Recorder Name Marvin Brown Affiliation AECOM
Recorder Contact Information 701 Corporate Center Dr, Raleigh NC 2707/919-854-6203/marvin.brown@aecom.com

Required Attachments

- **1** USGS 7.5' MAP WITH STRUCTURE LOCATION CLEARLY INDICATED
- 2 LARGE SCALE STREET, PLAT OR PARCEL MAP (available from most property appraiser web sites)
- **3** PHOTO OF MAIN FACADE, DIGITAL IMAGE FILE

When submitting an image, it must be included in digital AND hard copy format (plain paper grayscale acceptable). Digital image must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.

English Family House – 4815 Medulla Road (PO08455) (AECOM Resource #5)

This house was likely built for either James Jackson English (1872-1937) and Lula English (1869-1951) or their son and daughter-in-law, Clarence J. English, Sr. (1897-1970) and Lucy Peacock English (1897-1992). James or Jackson (he went by both names) lived in a house in the Medulla area in 1910 on property that was part of this tract. (Aaron Joseph Morgan of the Morgan Family houses lived a few doors down.) James and Lula may have lived on this property in 1900, although the surrounding names in the census of the year make this less clear (US Bureau of the Census 1900 and 1910). It is possible that they built the house around 1910, the assigned tax date. It is also possible that Clarence and Lucy erected it by 1920 on property he received from, or least farmed for, his parents. The form and finish of the house suggest it may indeed have been erected in the 1910s. The 1920 census places Clarence and Lucy living immediately next to his parents, again a few farms distant from A.J. Morgan. The census identifies him as living on a farm but working as a house carpenter, so if it was Clarence's house, he may well have built it himself.

In 1935 James and Lula continued to live in Polk County, but James died in 1937 in Plant City, west across the county line in Hillsborough County (Florida State Census 1935). His obituary noted that by 1937 Clarence and Lucy had also moved from the area, to Davenport in Polk County about 30 miles to the northeast (*Tampa Tribune* 1937). The property remained in English family hands, although likely not occupied by them for many years. Clarence J. English, Jr. and his wife, Irma, had moved back to the Springhead community (adjacent to Medulla) from Davenport about 1963 (*Tampa Tribune* 1967). Whether to this house or another is not known. In 1974, though, when they acquired the property from Clarence's brother, John Henry English, a resident of Davenport, they were living in Lakeland (Polk County Deed Book 1605/Page1823). Clarence died in Lakeland in 2003 (*Lakeland Ledger*) and his and Irma's revocable trust sold the property out of the family to Eduardo and Shannon Morrell in 2005 (Polk County Deed Book 6559/Page 3). According to Shannon Morrell (personal communication), the house was built by the English family, possibly around 1908 or so.

The English Family House is one-story tall and of frame construction (Figure 1 through Figure 6). Its main block has a T-shaped plan that is extended to the rear elevation by a one-story frame ell. The gable-front central part of the T-shaped block faces south toward Medulla Road. The legs of its T at its rear terminate in gables as well. The block retains original narrow cornerboards, German siding, and plain surrounds with slightly crossetted lintels. The section facing the road is two bays wide; both of these bays hold original two-over-two, double-hung, sash windows. The rest of the house's window bays are finished in similar fashion. Entrances to the house are along either side of the projecting section. They are shaded and reached by a U-shaped porch that wraps around the front section. The porch retains turned posts and solid, floriated, jig-sawn brackets that appear to be original. The rear ell is original or early. An L-shaped porch that once crossed the rear of the main block and west side of the ell has been enclosed. Exterior-end brick chimney stacks rise along the rear gable of the ell and the east side gable of the main block.

After the English family sold the parcel to the Morrells, they quickly converted the property into its current use as the English Oaks Equestrian Center (Figure 6 through Figure 9). (Its patrons include the Florida Southern University equestrian team, which Shannon Morrell coaches (*Lakeland Ledger* 2017).) In 2007 they removed the citrus grove that extended to the north and west of the house and filled the southeastern third of the parcel. They also removed early outbuildings near the house, built a frame and a metal pole barn to the house's north, and

added a large stable near the northern end of the property in 2013 accessed by a long new road. In 2017 the owners of the parcel abutting the east side of the English Family House parcel replaced a citrus grove with a solar farm, further altering the house's historic setting.

The English Family House 2 is recommended as eligible for NR listing under Criterion C for its architecture. It remains a good intact representative of an early-twentieth-century Polk County farmhouse. It retains its original T-shaped form, German siding, crossetted surrounds, two-overtwo sash windows, cornerboards, and front porch with turned posts and decorative brackets. Its only notable alteration appear to be the enclosure of the rear porch. The house appears to stand on its original site and is therefore believed to retain its integrity of location, design, materials, workmanship and, by extension, feeling and association. The removal of outbuildings and construction of modern ones, along with the removal of its citrus grove and the one that abutted its parcel to the east, have negatively affected its setting. The proposed NR boundaries for the house are not recommended to encompass all of its approximately 20-acre historic parcel (Polk County parcel 232906000000024010), which is now a horse farm with modern outbuildings. Rather, they are recommended as the approximately ½-acre portion at the parcel's southeastern corner that includes the house and its associated trees and intact setting (Figure 10). The proposed boundaries extend south to a fence near the right-of-way of Medulla Road and east and west to fence lines. On the north they terminate 25 feet north of the ell, before the modern metal and frame pole barns are reached. Lacking any known association with historic events or persons, the house is not recommended as NR eligible under Criteria A or B.





Figure 1. English Family House: 2018 aerials with south at bottom of left image and north at bottom of right image; T-shaped roofs of main block and linearly extended ell are topped by rusted roofs; porches and west gable end of main block are apparent from shiny appearance of reclad roofs.



Figure 2. English Family House: left, east side elevation in 2019 (source: https://www.google.com/maps); same elevation in 2020



Figure 3. English Family House: left, south front and west side elevation in 2019 (source: https://www.google.com/maps); same elevations in 2020.



Figure 4. English Family House: left, south front elevation in 2019 (source: https://www.google.com/maps); right, same elevation in 2020.



Figure 5. English Family House: west side elevation in 2020.



Figure 6. English Family House: left, looking northeast at west side of house at right, metal pole barn at center, and wooden pole barn at far left; right, metal pole barn, both in 2020.



Figure 7. English Family House: left, west side and south rear elevation of modern stable in 2020; interior of stable in 2019 (source: https://www.youtube.com/watch?v=CyRZU8S4zkU).



Figure 8. Left, parcel in December 2006 with house and outbuildings at lower right corner; right, parcel in November 2007 with citrus grove and early outbuildings removed and modern outbuildings and access road added (source of both: https://www.google.com/maps).



Figure 9. February 2017 aerial of English parcel at left (west) and solar farm on site of former citrus grove at right (source: https://www.google.com/maps).



Figure 10. English Family House: proposed NR boundaries outlined in yellow.

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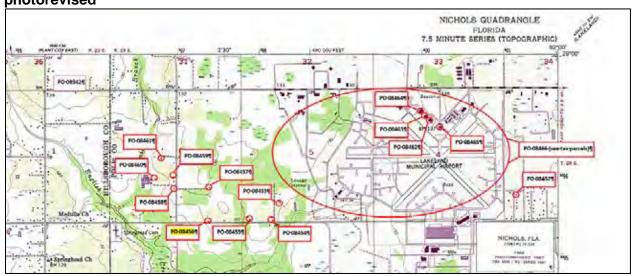
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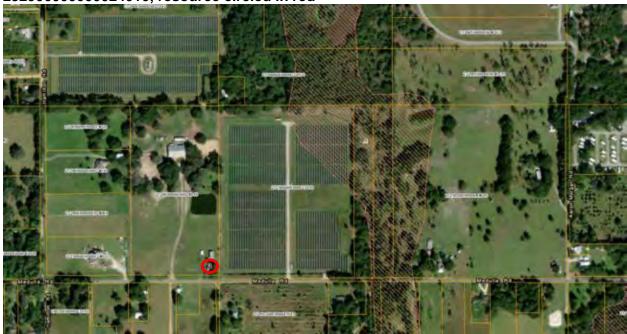
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FMSF # highlighted in yellow and resource circled in red on Nichols Quad sheet, 1987 photorevised



Polk County GIS Map Viewer (http://gisapps.polk-county.net/gisviewer) Parcel 23290600000024010, resource circled in red



Photographs included in above history attachment and submitted separately as pdfs

Page 1

☑ Original
☐ Update



HISTORICAL STRUCTURE FORM

FLORIDA MASTER SITE FILE Version 5.0 3/19
 Site#8
 PO08457

 Field Date
 8-12-2020

 Form Date
 8-25-2020

 Recorder #
 Marvin Brown

Shaded Fields represent the minimum acceptable level of documentation. Consult the *Guide to Historical Structure Forms* for detailed instructions.

	Multiple Listing (DHR only)
	Survey # (DHR only)
	□ structure □ district □ site □ object □ private-nonspecific □ city □ county □ state □ federal □ Native American □ foreign □ unknown
1.0	CATION & MAPPING
01 111 1 5 1 01 111	0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
Address: 4404 Hamilton	Street Type Suffix Direction Road
Cross Streets (nearest/between) E side of Hamilton	
USGS 7.5 Map Name NICHOLS	USGS Date 1987 Plat or Other Map n City Limits? ⊠yes □no □unknown County
Tox Porcel # 23290600000021010	4 section: NW SW SE NE Irregular-name:
Subdivision Name	Landgrant Lot
UTM Coordinates: Zone 16 17 Easting	Northing
Other Coordinates: X: Y:	Coordinate System & Datum
Name of Public Tract (e.g., park)	
	HIGDODY
	HISTORY
Construction Year: 1934	vear listed or earlier
Original Use Residence, private	From (year): To (year):
	From (year): To (year):
Other Use	From (year): To (year):
Moves: Jyes No Junknown Date:	
Alterations: Syes Ino Inno Innomerate:	
Architect (last name first):	Builder (last name first):
Ownership History (especially original owner, dates, profession, etc	.)
see attachment	
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Is the Resource Affected by a Local Preservation Ordinan Style Frame Vernacular	DESCRIPTION Exterior Plan Rectangular Number of Stories 1
Is the Resource Affected by a Local Preservation Ordinan Style Frame Vernacular Exterior Fabric(s) 1. Unknown	DESCRIPTION Exterior Plan Rectangular Number of Stories 1 2. 3.
Is the Resource Affected by a Local Preservation Ordinan Style Frame Vernacular Exterior Fabric(s) 1. Unknown Roof Type(s) 1. Gable	DESCRIPTION Exterior Plan Rectangular Number of Stories 1 2. 3. 3. 3. 3.
Is the Resource Affected by a Local Preservation Ordinan Style Frame Vernacular Exterior Fabric(s) 1. Unknown Roof Type(s) 1. Gable Roof Material(s) 1. Sheet, metal: 3V, crimp	DESCRIPTION Exterior Plan Rectangular Number of Stories 1 2. 3.
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HISTORICAL STRUCTURE FORM

Site #8 **PO08457**

DESCRIPTION (continued)
Chimney: No. 1 Chimney Material(s): 1. Brick 2. 3. Foundation Type(s): 1. Unknown 2. Foundation Material(s): 1. Obscured 2. Main Entrance (stylistic details)
Porch Descriptions (types, locations, roof types, etc.) see attachment
Condition (overall resource condition):
Archaeological Remains Check if Archaeological Form Completed
RESEARCH METHODS (select all that apply)
□FMSF record search (sites/surveys) □Iibrary research □Sbuilding permits □Sanborn maps □FL State Archives/photo collection □city directory □occupant/owner interview □plat maps □property appraiser / tax records □newspaper files □neighbor interview □Public Lands Survey (DEP) □Cultural resource survey (CRAS) □historic photos □interior inspection □HABS/HAER record search □other methods (describe) □Bibliographic References (give FMSF manuscript # if relevant, use continuation sheet if needed)
OPINION OF RESOURCE SIGNIFICANCE
Appears to meet the criteria for National Register listing individually?
Area(s) of Historical Significance (see National Register Bulletin 15, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.) 1
DOCUMENTATION
Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents 1) Document type Maintaining organization File or accession #'s
2) Document type Maintaining organization File or accession #'s
RECORDER INFORMATION
Recorder Name Marvin Brown Affiliation AECOM Recorder Contact Information (address/phone/fax/e-mail) Affiliation AECOM 2707/919-854-6203/marvin.brown@aecom.com

Required Attachments

- **1** USGS 7.5' MAP WITH STRUCTURE LOCATION CLEARLY INDICATED
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 - **3** PHOTO OF MAIN FACADE, DIGITAL IMAGE FILE

When submitting an image, it must be included in digital <u>AND</u> hard copy format (plain paper grayscale acceptable). Digital image must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.

House – 4404 Hamilton Road (FMSF PO08457) (AECOM Resource #6)

Deed and newspaper searches of this property did not unearth its history. It has changed hand numerous times over the past 25 years. Tax records put its date of construction at 1934. A 1941 aerial photograph shows it standing at the southwest corner of a citrus grove. The house and grove are visible in a 1964 aerial, along with the long entrance lane that extends east to it from Hamilton Road. In a 1968 aerial, the house, one outbuilding to its (north) rear, and the grove are clearly visible (Figure 1 and Figure 2). The former grove is now wooded and the house's diminished one-acre tract is abutted on its west and south by large expanses of solar panels. The property is gated off and the house could barely be viewed through the heavy growth of trees that largely surround it. It appeared to have its windows boarded up, but no further inspection could be made.

Tax records and aerial photographs indicate that the house has a one-story main block with a south-facing, metal, gable-front roof (Figure 3 and Figure 4). It is built of frame with frame cladding. An unfinished open porch crosses most its front elevation. To its east is an additional section of unfinished porch that wraps partly around the east side elevation. A small gable peak in the roof above the side of this porch suggests that the porch shields a side entrance. To the west of the front porch another extended porch partly wraps the west elevation. It is enclosed but unfinished. The body of the house behind the porches is one-story tall. Rectangular, it encompasses just under 1,150 square feet. The outbuilding depicted on the aerials behind the house is now gone or hidden by overgrowth. From the edge of the parcel, the house and its grounds appear to be long abandoned and unmaintained. Bird-eye aerials from 2018 depict heavy overgrowth at the house's south front and east side elevation, further suggesting heavy deterioration.

The house at 4404 Hamilton Road is not known to have any association with significant historic events or persons. It is therefore recommended as not eligible for NR listing under NR Criteria A or B. From the available evidence, it does not appear to embody the distinctive characteristics of a type, period, or method of construction and accordingly is recommended as not NR-eligible under Criterion C. Additionally, its former citrus grove is now wooded and groves to its west and south hold modern solar farms. It is therefore believed to have lost its integrity of setting. Its basic form and c1934 construction date, coupled with available information and apparent abandonment and deterioration, suggest it has also lost its integrity of design, materials, workmanship and, thereby, feeling and association. Due to its loss of integrity and lack of significance, the house is recommended as not eligible for NR listing.



Figure 1. House at 4404 Hamilton Road: left, March 10, 1941 aerial with house partially obscured by date number; right, 1964 aerial with parcel boundaries mislocated to the left (west) (source of both: http://gisapps.polk-county.net/gisviewer).



Figure 2 . House at 4404 Hamilton Road: left, 1964 aerial with parcel mislocated to the northeast of house and, right, parcel in 2018 with former grove largely filled with trees and edged by solar farms (source of both: http://gisapps.polk-county.net/gisviewer).



Figure 3. House at 4404 Hamilton Road: left, 2018 bird's-eye aerial view with south front of house at bottom and, right with south front of house at left (source of both: https://www.google.com/maps).



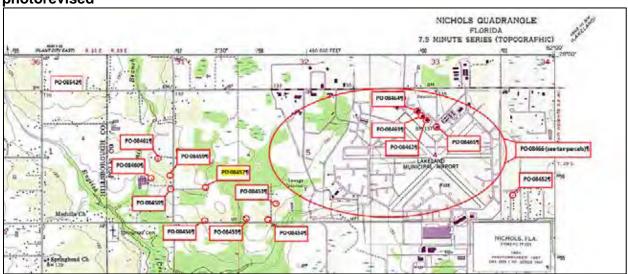
Figure 4. House at 4404 Hamilton Road: left, 2018 bird's-eye aerial view with south front of house at top and, right 2018 view showing south front and east side of houses heavily encroached upon by tall green growth (source of both: https://www.google.com/maps).

REFERENCES

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Polk County Register of Deeds Office. Accessed August 2020 at https://apps.polkcountyclerk.net/browserviewor/.

FMSF # highlighted in yellow and resource circled in red on Nichols Quad sheet, 1987 photorevised



Polk County GIS Map Viewer (http://gisapps.polk-county.net/gisviewer) Parcel 23290600000021010, resource circled in red



Photographs included in above history attachment and submitted separately as pdfs

Page 1

☑ Original
☐ Update



HISTORICAL STRUCTURE FORM

FLORIDA MASTER SITE FILE Version 5.0 3/19
 Site#8
 PO08458

 Field Date
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National Register Category (please check one) ☑ building	Multiple Listing (DHR only) cility at LAL Ph IA CRAS Survey # (DHR only) structure district site object private-nonspecific city county state federal Native American foreign unknown
Street Number Direction Street Name Address: 4333	USGS Date 1987 Plat or Other Map
	HISTORY
Original Use Residence, private Current Use Other Use Moves: yes no unknown Date: Alterations: yes no unknown Date: Additions: yes no unknown Date:	From (year): To (year): From (year): To (year): Original address Nature
Is the Resource Affected by a Local Preservation Ordinance	e? □yes □no ⊠unknown Describe
	DESCRIPTION
	2
Distinguishing Architectural Features (exterior or interior omame see attachment	nts)
Ancillary Features / Outbuildings (record outbuildings, major lands see attachment	scape features; use continuation sheet if needed.)
DHR USE ONLY O	FFICIAL EVALUATION DHR USE ONLY
NR List Date SHPO – Appears to meet criteria for NF KEEPER – Determined eligible: NR Criteria for Evaluation: Da Db	R listing: yes

HISTORICAL STRUCTURE FORM

Site #8 P008458

DESCRIPTION (continued)
Chimney: No1_ Chimney Material(s): 1. Brick 2. Structural System(s): 1. Balloon wood frame 2. 3. Foundation Type(s): 1. Continuous 2. Foundation Material(s): 1. Brick 2. Main Entrance (stylistic details) see attachment
Porch Descriptions (types, locations, roof types, etc.) see attachment
Condition (overall resource condition):
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RESEARCH METHODS (select all that apply)
□FMSF record search (sites/surveys) □Iibrary research □Sbuilding permits □Sanborn maps □FL State Archives/photo collection □city directory □occupant/owner interview □plat maps □property appraiser / tax records □newspaper files □neighbor interview □Public Lands Survey (DEP) □Cultural resource survey (CRAS) □historic photos □interior inspection □HABS/HAER record search □other methods (describe) □ Bibliographic References (give FMSF manuscript # if relevant, use continuation sheet if needed)
see attachment
OPINION OF RESOURCE SIGNIFICANCE
Appears to meet the criteria for National Register listing individually? Appears to meet the criteria for National Register listing as part of a district? Explanation of Evaluation (required, whether significant or not; use separate sheet if needed) See attachment
Area(s) of Historical Significance (see National Register Bulletin 15, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.) 1
DOCUMENTATION
Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents 1) Document type Maintaining organization File or accession #'s
2) Document type Maintaining organization File or accession #'s
RECORDER INFORMATION
Recorder Name Marvin Brown Affiliation AECOM Recorder Contact Information (address/phone/fax/e-mail) Affiliation AECOM 2707/919-854-6203/marvin.brown@aecom.com

Required Attachments

- **1** USGS 7.5' MAP WITH STRUCTURE LOCATION CLEARLY INDICATED
- 2 LARGE SCALE STREET, PLAT OR PARCEL MAP (available from most property appraiser web sites)
- **3** PHOTO OF MAIN FACADE, DIGITAL IMAGE FILE

When submitting an image, it must be included in digital <u>AND</u> hard copy format (plain paper grayscale acceptable). Digital image must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.

House – 4333 Hamilton Road (FMSF PO08458) (AECOM Resource #7)

This house stands on an approximately 0.6-acre parcel on the west side of Hamilton Road, 0.25 miles north of Medulla Road. The mostly modern houses to its north, south, and west occupy numerous small parcels of varying shapes that were likely cut off over time from a single larger agricultural property. This house has changed hands numerous times over the past 25 years and its early owners could not be determined. Tax records carry two dates for the house, a build date of 1920 and an estimated or apparent build date of 1991.

The house is built of frame with an overlay of brick veneer (Figure 1 through Figure 3). It is one-story tall and has a gable-front roof pierced by a central brick chimney stack. Three bays cross its front (east) elevation, a central door flanked by paired windows with clip-in muntins. Windows with clip-in muntins mark the side elevations as well. A full-facade porch crosses its front elevation. A carport extends to the porch's north. An artificial-sided gable-front shed stands to the carport's north. The house's veneer, porch, and windows suggest a construction date within the past 30 or 40 years. If it was built in 1920, it is so heavily altered that this is not discernable.

This house is not known to have any association with significant historic events or persons and therefore is recommended as not eligible for NR listing under NR Criteria A or B. It does not appear to embody the distinctive characteristics of a type, period, or method of construction and accordingly is recommended as not NR-eligible under Criterion C. If it is more than 50 years old, it has lost the integrity of design, materials, and workmanship—as well as setting, feeling, and association—that would express and represent that earlier period of construction. It is recommended as not eligible for NR listing under any of the Register's Criteria and Criteria Considerations.



Figure 1. House at 4333 Hamilton Road: east front elevation of house at left, carport at center, and modern shed at right in 2019 (source: https://www.google.com/maps).



Figure 2. House at 4333 Hamilton Road: south side and east front elevations, both 2020.



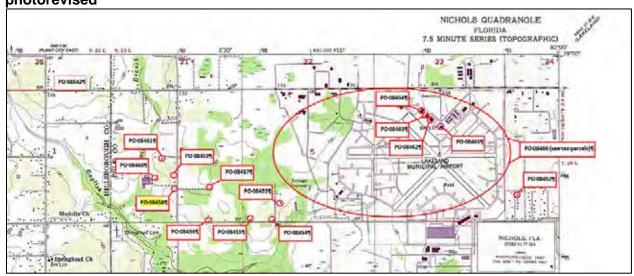
Figure 3. House at 4333 Hamilton Road: left, north side and east front elevations; right, modern shed, both 2020.

REFERENCES

Polk County GIS Map Viewer site. Accessed July and August 2020 at http://gisapps.polk-county.net/gisviewer.

Polk County Register of Deeds Office. Accessed August 2020 at https://apps.polkcountyclerk.net/browserviewor/.

FMSF # highlighted in yellow and resource circled in red on Nichols Quad sheet, 1987 photorevised



Polk County GIS Map Viewer (http://gisapps.polk-county.net/gisviewer) Parcel 23290600000041090, resource circled in red



Photographs included in above history attachment and submitted separately as pdfs

Page 1

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☐ Update



HISTORICAL STRUCTURE FORM

FLORIDA MASTER SITE FILE

Version 5.0 3/19

 Site#8
 PO08459

 Field Date
 8-12-2020

 Form Date
 8-25-2020

 Recorder #
 Marvin Brown

Shaded Fields represent the minimum acceptable level of documentation. Consult the *Guide to Historical Structure Forms* for detailed instructions.

Site Name(s) (address if none) _Futch-Dawson House Survey Project Name _EA for PhII Air Cargo Facility at LAL Ph IA CRAS National Register Category (please check one) _Subuilding _ structure _ district _ site _ object Ownership: _private-profit _ private-nonprofit _ private-individual _ private-nonspecific _ city _ county _ state _ fet	• • •
Cross Streets (nearest / between) W side of Hamilton Rd N of Medulla Rd USGS 7.5 Map Name NICHOLS USGS Date 1987 Plat or Othe City / Town (within 3 miles) Lakeland In City Limits? Syes Ino Inchesion Inches	egular-name: Lot
HISTORY	
Construction Year:1935approximatelyyear listed or earlier	(year):
DESCRIPTION	
Style Other Exterior Plan Rectangular Exterior Fabric(s) 1. Asbestos 2. 3 Roof Type(s) 1. Gable 2. 3 Roof Material(s) 1. Sheet metal:3V crimp 2. 3 Roof secondary strucs. (dommers etc.) 1. 2. 3 Windows (types, materials, etc.) 2. 2. 3 see attachment 3<	3 3
Distinguishing Architectural Features (exterior or interior ornaments) see attachment	
Ancillary Features / Outbuildings (record outbuildings, major landscape features; use continuation sheet if needed.) see attachment	
	DHR USE ONLY

HISTORICAL STRUCTURE FORM

Site #8 PO08459

DESCRIPTION (continued)
Chimney: No0_ Chimney Material(s): 1
Porch Descriptions (types, locations, roof types, etc.)
see attachment
Condition (overall resource condition): ☐excellent ☐good ☑fair ☐deteriorated ☐ruinous Narrative Description of Resource
see attachment
Archaeological Remains Check if Archaeological Form Completed
RESEARCH METHODS (select all that apply)
□FMSF record search (sites/surveys) □library research □building permits □Sanborn maps □FL State Archives/photo collection □city directory □occupant/owner interview □plat maps □property appraiser / tax records □newspaper files □neighbor interview □Public Lands Survey (DEP) □Cultural resource survey (CRAS) □historic photos □interior inspection □HABS/HAER record search □other methods (describe) □ ■Bibliographic References (give FMSF manuscript # if relevant, use continuation sheet if needed)
see attachment
OPINION OF RESOURCE SIGNIFICANCE
Appears to meet the criteria for National Register listing individually? Appears to meet the criteria for National Register listing as part of a district? Explanation of Evaluation (required, whether significant or not; use separate sheet if needed) See attachment
Area(s) of Historical Significance (see National Register Bulletin 15, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.) 1.
DOCUMENTATION
Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents 1) Document type
RECORDER INFORMATION
Recorder Name Marvin Brown Affiliation AECOM Recorder Contact Information (address / phone / fax / e-mail) Affiliation AECOM AFFILIATION AECOM AFFILIATION AECOM 2707/919-854-6203/marvin.brown@aecom.com

Required Attachments

- **1** USGS 7.5' MAP WITH STRUCTURE LOCATION CLEARLY INDICATED
- 2 LARGE SCALE STREET, PLAT OR PARCEL MAP (available from most property appraiser web sites)
- **3** PHOTO OF MAIN FACADE, DIGITAL IMAGE FILE

When submitting an image, it must be included in digital AND hard copy format (plain paper grayscale acceptable). Digital image must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.

Futch-Dawson House – 4257 Hamilton Road (FMSF PO08459) (AECOM Resource #8)

For much of the past 40 years at least, this house has been owned by either Mildred Ann Futch Dawson or her parents, Rev. Clyde A. and Florence Mary Futch (Polk County Deed Book 1941/Page 1835 (1980); Deed Book 3175/1925 (1992). Reverend Futch lived most of his life in eastern Hillsborough County (*Tampa Tribune* 1994), although he was living with his family and farming in the Medulla area of Polk County in 1940 (US Bureau of the Census). The house carries a tax date of 1935, but its appearance strongly suggests that it is less than 50 years old.

The house has two blocks that are nearly equal in size (Figure 1 through Figure 3). The gable-end block on the south is the principal one. Its east-facing front elevation is four bays wide. A door and a window are shaded by a hip-roofed screened front porch; a window is also placed to either side of the porch. These as the house's other windows are double-hung with two-horizontal-light-over-two-horizontal-light sash. The later-added north block holds a two-bay garage. Like the main block, it is topped by a gable-end roof and sided with asbestos shingles. It is flush with the main block at the front but extends a few feet farther back at the house's west-facing rear elevation. The window sash, their placement immediately under the eaves, the proportions of the main block, the asbestos shingles—all suggest a construction date within the past 50 years.

This house is not known to have any association with significant historic events or persons and therefore is recommended as not eligible for NR listing under NR Criteria A or B. It does not appear to embody the distinctive characteristics of a type, period, or method of construction and accordingly is recommended as not NR-eligible under Criterion C. If it is more than 50 years old, it has lost the integrity of design, materials, and workmanship—as well as setting, feeling, and association—that would express and represent that earlier period of construction. It is recommended as not eligible for NR listing under any of the Register's Criteria and Criteria Considerations.



Figure 1. Futch-Dawson House: left, east front and north side elevations; right, east front elevation.



Figure 2. Futch-Dawson House: left, south side and east front elevations; right, north side and west rear elevations.



Figure 3. Futch-Dawson House: east front and north side elevations.

REFERENCES

Polk County GIS Map Viewer site. Accessed July and August 2020 at http://gisapps.polk-county.net/gisviewer.

Polk County Register of Deeds Office. Accessed August 2020 at https://apps.polkcountyclerk.net/browserviewor/.

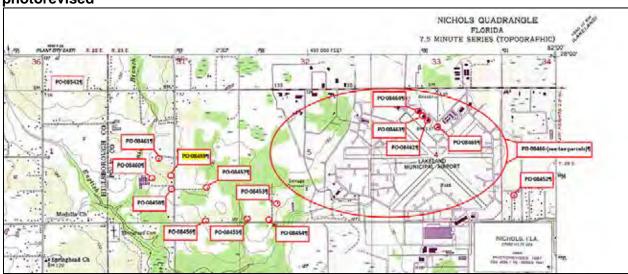
Tampa Tribune

1994 Reverend Clyde A. Futch. October 16, 1994.

US Bureau of the Census

1940 Sixteenth Census of the United States. Accessed August 2020 at https://search.ancestry.com/.

FMSF # highlighted in yellow and resource circled in red on Nichols Quad sheet, 1987 photorevised



Polk County GIS Map Viewer (http://gisapps.polk-county.net/gisviewer) Parcel 23290600000041050, resource circled in red



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Page 1

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HISTORICAL STRUCTURE FORM

FLORIDA MASTER SITE FILE Version 5.0 3/19
 Site#8
 PO08460

 Field Date
 8-12-2020

 Form Date
 8-25-2020

 Recorder #
 Marvin Brown

Shaded Fields represent the minimum acceptable level of documentation. Consult the *Guide to Historical Structure Forms* for detailed instructions.

Site Name(s) (address if none) Dawson House Survey Project Name EA for PhII Air Cargo Facility at LAL Ph IA CRAS National Register Category (please check one) National Private individual Image: Structure individual Image: Structure individual individual Image: Structure individual i	• • •
Cross Streets (nearest / between) W side of Hamilton Rd N of Medulla Rd USGS 7.5 Map Name_NICHOLS USGS Date 1987 Plat or Othe City / Town (within 3 miles) Lakeland In City Limits? Syes Ino Include	egular-name: Lot
HISTORY	
Construction Year:1940	(year):
DESCRIPTION	
Style Other Exterior Flan Rectangular Exterior Fabric(s) 1. Stucco 2. 3 Roof Type(s) 1. Gable 2. 3 Roof Material(s) 1. Composition shingles 2. 3 Roof secondary strucs. (dormers etc.) 1. 2. 3 Windows (types, materials, etc.) see attachment	3 3
Distinguishing Architectural Features (exterior or interior ornaments) see attachment	
Ancillary Features / Outbuildings (record outbuildings, major landscape features; use continuation sheet if needed.) see attachment	
	DHR USE ONLY

HISTORICAL STRUCTURE FORM

Site #8 P008460

DESCRIPTION (continued)
Chimney: No. O Chimney Material(s): 1. 2. 3. Structural System(s): 1. Masonry - General 2. 3. Foundation Type(s): 1. Continuous 2. Foundation Material(s): 1. Obscured 2. Main Entrance (stylistic details) see attachment
Porch Descriptions (types, locations, roof types, etc.) see attachment
Condition (overall resource condition):
Archaeological Remains Check if Archaeological Form Completed
RESEARCH METHODS (select all that apply)
□FMSF record search (sites/surveys) □Iibrary research □Suilding permits □Sanborn maps □FL State Archives/photo collection □city directory □occupant/owner interview □plat maps □property appraiser / tax records □newspaper files □neighbor interview □Public Lands Survey (DEP) □Sultural resource survey (CRAS) □historic photos □interior inspection □HABS/HAER record search □other methods (describe) □Bibliographic References (give FMSF manuscript # if relevant, use continuation sheet if needed)
OPINION OF RESOURCE SIGNIFICANCE
Appears to meet the criteria for National Register listing individually?
Area(s) of Historical Significance (see National Register Bulletin 15, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.) 1
DOCUMENTATION
Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents 1) Document type Maintaining organization Document description File or accession #'s
2) Document type Maintaining organization File or accession #'s
RECORDER INFORMATION
Recorder Name Marvin Brown Affiliation AECOM Recorder Contact Information 701 Corporate Center Dr, Raleigh NC 2707/919-854-6203/marvin.brown@aecom.com (address/phone/fax/e-mail)

Required Attachments

- **1** USGS 7.5' MAP WITH STRUCTURE LOCATION CLEARLY INDICATED
- 2 LARGE SCALE STREET, PLAT OR PARCEL MAP (available from most property appraiser web sites)
 - **3** PHOTO OF MAIN FACADE, DIGITAL IMAGE FILE

When submitting an image, it must be included in digital AND hard copy format (plain paper grayscale acceptable). Digital image must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.

Dawson House – 4239 Hamilton Road (FMSF PO08460) (AECOM Resource #9)

Like the house a short distance to its west at 4257 Hamilton Road, this house was long connected with Mildred Ann Futch Dawson, who owned it from at least the mid-1970s until her estate transferred it to another owner in 2017 (Polk County Deed Book 1679/Page 880 (1976); Probate Document 11052/Page 617 (2017). When Mildred Dawson and her husband, Willie Ray Dawson were divorced in 1980, she gave up the house at 4257 Hamilton Road, but retained and likely lived in this one. The house is assigned a tax date of 1940, but it appears to be less than 50 years old.

The house occupies a zig-zag-shaped parcel on the west side of Hamilton Road and is located down a lane about 300 yards from the road (Figure 1 through Figure 3). Its distance from the road and the shape of its parcel indicate that its 5.54-acre parcel was cut out of a larger agricultural tract. The house is almost square with a notch out of the back of the northwestern corner of its rear (west) elevation. One-story tall, it encompasses approximately 1,600 square feet. The house is of stuccoed masonry construction. Its gable-end roof is asphalt-shingled. At its front (east) elevation it has a tripled one-over-one window grouping at the left, an entry shaded by a screened hip-roofed porch at the center, and paired one-over-windows at the right. The house's other windows are also one-over-one. A gabled roof extends to the house's rear. It is abutted by a fenced patio shaded by a modern metal-pole-supported roof. A modern outbuilding stands to the house's south. The window sash, the house's proportions and relatively large footprint, and its masonry construction suggest a construction date within the past 50 years.

This house is not known to have any association with significant historic events or persons and therefore is recommended as not eligible for NR listing under NR Criteria A or B. It does not appear to embody the distinctive characteristics of a type, period, or method of construction and accordingly is recommended as not NR-eligible under Criterion C. If it is more than 50 years old, it has lost the integrity of design, materials, and workmanship—as well as setting, feeling, and association—that would express and represent that earlier period of construction. It is recommended as not eligible for NR listing under any of the Register's Criteria and Criteria Considerations.





Figure 1. Dawson House: Left, east front elevation in 2014 (source: https://www.bing.com/maps/) and, right, same elevation in 2018 (source: https://www.google.com/maps).



Figure 2. Dawson House: left, east front and north side elevations; right, north side and west rear elevations.

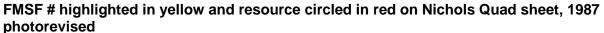


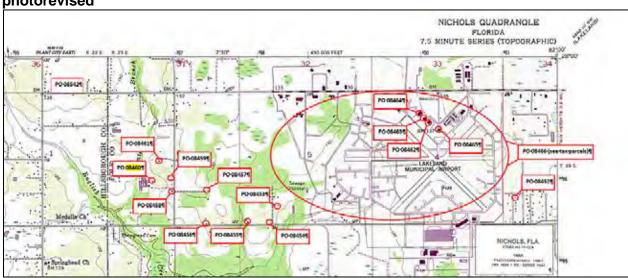
Figure 3. Dawson House: left, west rear elevation; right, modern shed to house's south.

REFERENCES

Polk County GIS Map Viewer site. Accessed July and August 2020 at http://gisapps.polk-county.net/gisviewer.

Polk County Register of Deeds Office. Accessed August 2020 at https://apps.polkcountyclerk.net/browserviewor/.





Polk County GIS Map Viewer (http://gisapps.polk-county.net/gisviewer) Parcel 23290600000041130, resource circled in red



Photographs included in above history attachment and submitted separately as pdfs

Page 1

○ Original
 □ Update



HISTORICAL STRUCTURE FORM

FLORIDA MASTER SITE FILE Version 5.0 3/19
 Site#8
 PO08461

 Field Date
 8-12-2020

 Form Date
 8-25-2020

 Recorder #
 Marvin
 Brown

Shaded Fields represent the minimum acceptable level of documentation. Consult the *Guide to Historical Structure Forms* for detailed instructions.

Site Name(s) (address if none) Opal and Oliver Phillips House Survey Project Name EA for PhII Air Cargo Facility at LAL Ph IA CRAS National Register Category (please check one) Survey Phillips House Survey # (DHR only) Survey # (DHR only) Ownership: private-profit private-nonprofit private-individual private-nonspecific city county state federal Native American foreign unknown
LOCATION & MAPPING Street Number Direction Street Name Street Type Suffix Direction
HISTORY
Construction Year:1935
Style Frame Vernacular Exterior Plan Rectangular Number of Stories 1 Exterior Fabric(s) 1. Vinyl 2. 3. Roof Type(s) 1. Gable 2. 3. Roof Material(s) 1. Composition shingles 2. 3. Roof secondary strucs. (dormers etc.) 1. 2. Windows (types, materials, etc.) see attachment
Distinguishing Architectural Features (exterior or interior ornaments) see attachment
Ancillary Features / Outbuildings (record outbuildings, major landscape features; use continuation sheet if needed.) see attachment
DHR USE ONLY OFFICIAL EVALUATION DHR USE ONLY
NR List Date SHPO – Appears to meet criteria for NR listing:

DESCRIPTION (continued)				
Chimney: No. 1 Chimney Material(s): 1. Brick 2. 3. Foundation Type(s): 1. Piers 2. 5. Concrete Block 2. Main Entrance (stylistic details)				
Porch Descriptions (types, locations, roof types, etc.)				
see attachment				
Condition (overall resource condition): ☐ excellent ☐ good ☑ fair ☐ deteriorated ☐ ruinous Narrative Description of Resource				
see attachment				
Archaeological Remains Check if Archaeological Form Completed				
RESEARCH METHODS (select all that apply)				
□FMSF record search (sites/surveys) □Iibrary research □Sbuilding permits □Sanborn maps □FL State Archives/photo collection □city directory □occupant/owner interview □plat maps □property appraiser / tax records □newspaper files □neighbor interview □Public Lands Survey (DEP) □Cultural resource survey (CRAS) □historic photos □interior inspection □HABS/HAER record search □other methods (describe) □ ■Bibliographic References (give FMSF manuscript # if relevant, use continuation sheet if needed)				
OPINION OF RESOURCE SIGNIFICANCE				
Appears to meet the criteria for National Register listing individually? Appears to meet the criteria for National Register listing as part of a district? Explanation of Evaluation (required, whether significant or not; use separate sheet if needed) See attachment				
Area(s) of Historical Significance (see <i>National Register Bulletin 15</i> , p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.) 1				
DOCUMENTATION				
Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents 1) Document type Maintaining organization File or accession #'s				
2) Document type Maintaining organization				
Decomposition File or accession #'s				
RECORDER INFORMATION				
Recorder Name Marvin Brown Affiliation AECOM Recorder Contact Information 701 Corporate Center Dr, Raleigh NC 2707/919-854-6203/marvin.brown@aecom.com (address/phone/fax/e-mail)				

Required Attachments

- **1** USGS 7.5' MAP WITH STRUCTURE LOCATION CLEARLY INDICATED
- 2 LARGE SCALE STREET, PLAT OR PARCEL MAP (available from most property appraiser web sites)
- **3** PHOTO OF MAIN FACADE, DIGITAL IMAGE FILE

When submitting an image, it must be included in digital <u>AND</u> hard copy format (plain paper grayscale acceptable). Digital image must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.

Opal and Oliver Phillips House – 4141 Hamilton Road (FMSF PO08461) (AECOM Resource #10)

Tax records assign this house a date of 1935, but it may have been built a few years later. In 1937 George Hamilton, Jr. (1870-1942) and his wife, Florence B. Hamilton (1875-1965), transferred 24 acres to their daughter, Opal Phillips (1903-1983) (Polk County Deed Book 177/Page 145). She and her husband, Oliver W. Phillips (1892-1969), had married in 1927 (*Tampa Times*). They are believed to have built the house.

George Hamilton was a "stock breeder and orange grower" (*Tampa Tribune* 1906). The 1914 *Lakeland Ledger* described him as one of Polk County's "most substantial growers." He came from a local slaveholding family. In 1934 (*Tampa Tribune*) he gathered friends at his Medulla Road residence "to welcome Aunt Ella Robinson, 87, one-time slave, back to the old plantation." George's holdings of family property were apparently substantial in the early 20th century. The 1910 (US Bureau of the Census) census, taken when Opal was seven, identified his livelihood as "general farming." The farm inventoried immediately before his was that of James Jackson English of the English Family House at 4815 Medulla Road, located well southeast of this property.

Opal and Oliver Phillips likely erected this house in the late 1930s. Opal died in 1983. Two years later her estate kept the property in the family by transferring it to Billy J. Phillips. He continued to own but did not live in the house until it was foreclosed upon in 2019 (Polk County Deed Book 2324/Page 1045 (1985); Polk County Foreclosures).

The house's main block is one-story tall and two rooms deep (Figure 1 through Figure 4). It is built of frame and topped by an asphalt-shingled gable-roof. A one-bay gable-front porch supported by square posts extends over its central front (south-facing) entry. The windows to either side of the facade are shaded by later-added metal hoods. An exterior-end brick chimney rises from the block's east gable. A hipped-roof wing wraps around much of the east side elevation of the house and part of the north rear elevation. The house has been vacant for a number of years and its windows are boarded over. It appears to be maintained, though, and its artificial siding is in good condition. When the house was artificially sided in recent years its original exposed rafter tails were boxed in. A frame two-car garage standing to the house's north rear appears to have been its contemporary, likely dating from the 1930s. A largely collapsed frame barn is overgrown by trees farther to the north. Its construction date is not known.

The Opal and Oliver Phillips House is not known to have any association with significant historic events or persons. It is therefore recommended as not eligible for NR listing under NR Criteria A or B. The house does not appear to embody the distinctive characteristics of a type, period, or method of construction and accordingly is recommended as not NR-eligible under Criterion C. Additionally, due to its alterations—including boarded-over windows, artificial siding, and boxed-in eaves—the house is believed to have lost its integrity of design, materials, workmanship and, therefore, feeling and association. The loss of its the large citrus grove amidst which it stood has also negatively affected its integrity of setting.



Figure 1. Opal and Oliver Phillips House: left, 2012 aerial with north at top showing ghost marks of a former grove; right, same aerial zoomed in showing south front elevation of house with porch at bottom and garage at top (north) (source of both: https://www.google.com/maps).



Figure 2. Opal and Oliver Phillips House: left, south front elevation with porch post visible at left center; right, detail of south elevation, both 2020



Figure 3. Opal and Oliver Phillips House: left, south front and east elevations with porch at left in 2014 (source: https://www.bing.com/maps/); right, same view in 2020.





Figure 4. Opal and Oliver Phillips House: left, south front and east side elevations with garage at far right, 2019 (source: https://www.google.com/maps); right, north rear of house with garage at left center and now collapsed barn at far left, no date (source: Connected Investors website).

REFERENCES

Connected Investors website. Accessed August 2020 at https://connectedinvestors.com/investment-property/4141-hamilton-rd/4869456.

Polk County Foreclosures website. Accessed August 2020 at https://www.polkcountyforeclosures.com/property-info/1845187/4141-hamilton-rd.

Polk County GIS Map Viewer site. Accessed July and August 2020 at http://gisapps.polk-county.net/gisviewer.

Polk County Register of Deeds Office. Accessed August 2020 at https://apps.polkcountyclerk.net/browserviewor/.

Tampa Times

1927 "Marriage Licenses." June 6, 1927.

Tampa Tribune

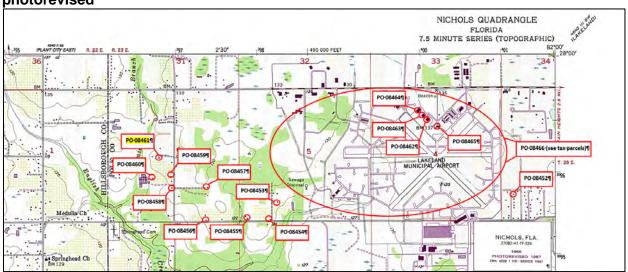
1906 "Personal Paragraphs." March 27, 1906.

1934 "Aunt Ella to Entertain." May 17, 1934.

US Bureau of the Census

1910 Fourteenth Census of the United States. Accessed August 2020 at https://search.ancestry.com/.

FMSF # highlighted in yellow and resource circled in red on Nichols Quad sheet, 1987 photorevised



Polk County GIS Map Viewer (http://gisapps.polk-county.net/gisviewer) Parcel 23290600000032010, resource circled in red



Photographs included in above history attachment and submitted separately as pdfs

Opal and Oliver Phillips House – 4141 Hamilton Road (FMSF PO08461) attachment



Page 1

☑ Original☑ Update



HISTORICAL STRUCTURE FORM

FLORIDA MASTER SITE FILE Version 5.0 3/19
 Site#8
 PO08462

 Field Date
 8-12-2020

 Form Date
 8-25-2020

 Recorder #
 Marvin Brown

Shaded Fields represent the minimum acceptable level of documentation. Consult the *Guide to Historical Structure Forms* for detailed instructions.

Survey Project Name _E National Register Categor	CA for PhII Air Cargo Factory (please check one)	cility at LAL F ☐ structure ☐ district	Ph IA CRAS ☐ site ☐ object	_ Multiple Listing (DHR only) Survey # (DHR only) rederal □Native American □foreign □unknown
Cross Streets (nearest / be USGS 7.5 Map Name_N City / Town (within 3 miles) Township 29S Rar Tax Parcel # 232904 Subdivision Name_ UTM Coordinates: Zone Other Coordinates: X:_	Direction Street Name Don Emerso NICHOLS Lakeland In nge 23E Section 4 1/4 000000011010	Nest and Drane USGS Dat City Limits? ⊠yes [section: □NW □S L Northing □ Coordinat	Street Type Drive Field Rd e 1987 Plat or Othe Ino Dunknown Co SW DSE NE Irr Landgrant Block USystem & Datum Datum	Suffix Direction er Map unty egular-name: Lot
		HISTORY		
Original Use Hangar Current Use Hangar Other Use Moves: yes Ino Alterations: yes Ino Additions: yes Ino Architect (last name first):	unknown Date: unknown Date: unknown Date:	From (yea From (yea From (yea From (yea Original address Nature See A Nature Builder	r): To r): To attachment	o (year): o (year): o (year):
Is the Resource Affected	by a Local Preservation Ordinance	·		
Roof Type(s) 1. Ga Roof Material(s) 1. Sh	etal able neet metal:3V crimp uCS. (dormers etc.) 1.	2 2 2	applicable	Number of Stories 1 333
Distinguishing Architectural Features (exterior or interior ornaments) see attachment				
Ancillary Features / Outbuildings (record outbuildings, major landscape features; use continuation sheet if needed.) see attachment				
DHR US	E ONLY O	FFICIAL EVALUA	TION	DHR USE ONLY
k	SHPO – Appears to meet criteria for NF KEEPER – Determined eligible: NR Criteria for Evaluation: ☐a ☐b	□yes □no	□insufficient info	Date Init Date (5. p. 2)

HISTORICAL STRUCTURE FORM

Site #8 **PO08462**

DESCRIPTION (continued)				
Chimney: No0_ Chimney Material(s): 1				
Porch Descriptions (types, locations, roof types, etc.) see attachment				
Condition (overall resource condition): ☐ excellent ☑ good ☐ fair ☐ deteriorated ☐ ruinous Narrative Description of Resource				
see attachment				
Archaeological Remains □Check if Archaeological Form Completed				
RESEARCH METHODS (select all that apply)				
□FMSF record search (sites/surveys) □library research □ building permits □ Sanborn maps □FL State Archives/photo collection □ city directory □ occupant/owner interview □ plat maps □property appraiser / tax records □ newspaper files □ neighbor interview □ Public Lands Survey (DEP) □ cultural resource survey (CRAS) □ historic photos □ interior inspection □ HABS/HAER record search □ other methods (describe) □ ■ Bibliographic References (give FMSF manuscript # if relevant, use continuation sheet if needed) see attachment □ state state				
OPINION OF RESOURCE SIGNIFICANCE				
Appears to meet the criteria for National Register listing individually? Appears to meet the criteria for National Register listing as part of a district? Explanation of Evaluation (required, whether significant or not; use separate sheet if needed)				
see attachment				
Area(s) of Historical Significance (see National Register Bulletin 15, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.) 1				
DOCUMENTATION				
Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents 1) Document type Maintaining organization Document type Maintaining organization 2) Document type Maintaining organization Document description File or accession #'s				
RECORDER INFORMATION				
Recorder Name Marvin Brown Affiliation AECOM				
Recorder Contact Information 701 Corporate Center Dr, Raleigh NC 2707/919-854-6203/marvin.brown@aecom.com (address/phone/fax/e-mail)				

Required Attachments

- **1** USGS 7.5' MAP WITH STRUCTURE LOCATION CLEARLY INDICATED
- 2 LARGE SCALE STREET, PLAT OR PARCEL MAP (available from most property appraiser web sites)
- **3** PHOTO OF MAIN FACADE, DIGITAL IMAGE FILE

When submitting an image, it must be included in digital <u>AND</u> hard copy format (plain paper grayscale acceptable). Digital image must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.

Shelterair Maintenance Hangar – 3900 Don Emerson Drive (FMSF PO08462) (AECOM Resource #11b)

Only the ghost of the original runway pattern of the former Lakeland Army Air Base is visible at the current Lakeland Linder Airport (FMSF PO08466) (AECOM Resource 11a) (Figure 1). Since the late 1980s, it has been transformed by the construction of extensions and new runways and the sodding over of old runways and pads (*Tampa Tribune* 1967, 1968, 1997, 2000, and 2002). The runway and the airport grounds, therefore, are believed to have lost their integrity of design, setting, materials, workmanship and, thereby, feeling, and association. The airfield is accordingly not recommended as eligible for NR listing due to a loss of integrity. (The airfield does remain at its original location.)

As noted at the historic context of the accompanying report, none of the airport's scores of WWII-era buildings survive. Tax records and historic aerials, however, indicate that four of the its standing resources were erected between about 1959 and 1971. Three of these are hangars standing on the southwest side of Airfield Drive West about 400' southeast of the modern airport terminal. Matching steel hangars erected c1960 (Tampa Tribune 1959a) now house the aircraft maintenance facilities of Shelterair Aviation (FMSF PO08462) (AECOM Resource 11b) (Figure 2 and Figure 3) and Aeromech Aviation (FMSF PO08463) (AECOM Resource 11c). These were joined by a nearly identical hangar to their northwest—now home to the maintenance facilities of Double M Aviation (FMSF PO08464) (AECOM Resource 11d)—between the taking of aerial photographs of the airport in 1964 and 1968. (The 1964 aerial appears to show ground preparation for the hangar.) A second building was added to this hangar by 1971. (A series of historic aerials of the airport and Polk County are available at the Polk County GIS Map Viewer site.) The three earliest hangars are essentially square, about 120' on each side. They are conventional hangar types with steel primary load-bearing trusses and framing and steel walls and roofs. Their doors are the standard horizontal telescoping type that slide, overlap, and open up access to the entire hangar space when fully pushed to either side. The hangar attached to the northeast side of the Double M Aviation hangar is of similar design and construction, but it only about half as wide. The two hangars are largely open to each other inside, forming a single work space.

The maintenance hangars are believed to retain their integrity of location, design, setting, materials, workmanship and, thereby, feeling, and association. However, they are not believed to be significant for any association with significant events or individuals or to embody the distinctive characteristics of a type, period, or method of construction. They are conventional steel hangar types with standard telescoping doors (Luke and Howson 2002; lungerich 2018; Weitze 1999). The hangars have no known associations with the Cold War or other military activities. They are therefore not believed to be significant under NR Criteria A, B, or C and are recommended as not eligible for NR listing.

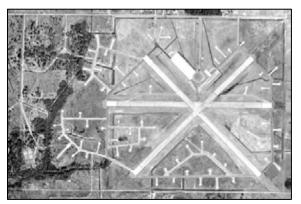




Figure 1. Left, Lakeland Army Air Field (FMSF PO08466) (AECOM Resource #11a) with Drane Field Road at north top, 1953: (source: https://web.archive.org/web/20120608222530/http://www.airfieldsdatabase.com/WW2/WW2%20R27b%20CO-HA.htm; right, modern Google Maps aerial.





Figure 2. Shelterair Aviation maintenance hangar (FMSF PO08462) (AECOM Resource #11b): left, southwest airside elevation; right, southwest airside and southeast elevations.





Figure 3. Shelterair Aviation maintenance hangar (FMSF PO08462) (AECOM Resource #11b): interior views.

REFERENCES

lungerich, Justin M.

2018 "Comprehensive Comparison of Steel Frame Fabric and Conventionally Constructed Aircraft Hangars." Thesis, Air Force Institute of Technology. Accessed August 2020 at https://apps.dtic.mil/dtic/tr/fulltext/u2/1056499.pdf

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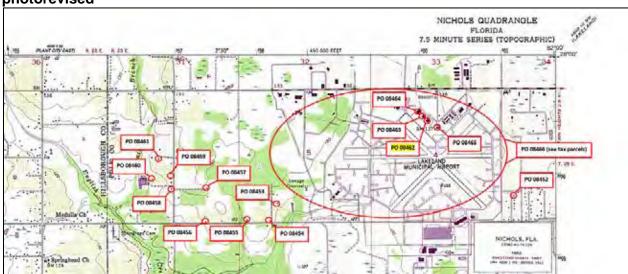
- 1967 "Airport Work Bids Below Airport Cost Estimates." August 3, 1967.
- 1968 "Thousands Thrill to Navy Fliers' Exhibition at Lakewood." March 11, 1968.
- 1997 "Airline Might Fly Out of Lakeland." June 22, 1997.
- 2000 "Lakeland Airport to Get New Terminal." December 2, 2000.
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"Cold War Infrastructure for Air Defense: The Fighter and Command Missions."

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FMSF # highlighted in yellow and resource circled in red on Nichols Quad sheet, 1987 photorevised



Polk County GIS Map Viewer (http://gisapps.polk-county.net/gisviewer) within Parcel 23290400000011010, resource circled in red



Photographs included in above history attachment and submitted separately as pdfs

Page 1

☑ Original
☐ Update



HISTORICAL STRUCTURE FORM

FLORIDA MASTER SITE FILE

Version 5.0 3/19

 Site#8
 PO08463

 Field Date
 8-12-2020

 Form Date
 8-25-2020

 Recorder #
 Marvin
 Brown

Shaded Fields represent the minimum acceptable level of documentation. Consult the *Guide to Historical Structure Forms* for detailed instructions.

Site Name(s) (address if none) Aeromech Maintenance Hangar Survey Project Name EA for PhII Air Cargo Facility at LAL Ph IA C National Register Category (please check one) Subuilding structure district site Ownership: private-profit private-nonprofit private-non	CRAS Survey # (DHR only)
Address: 3900 Don Emerson Cross Streets (nearest/between) SE of Airfield Dr West and Drane Field USGS 7.5 Map Name NICHOLS City / Town (within 3 miles) Lakeland Township 29S Range 23E Section 4 1/4 section: NW SW S Tax Parcel # 232904000000011010 Landgrar Subdivision Name Block UTM Coordinates: Zone 16 17 Easting Northing Subdivision Name Coordinates: X: Y: Coordinate System	Suffix Direction ive Rd Plat or Other Map unknown County E NE Irregular-name: Lot M & Datum
HISTORY	
	To (year): To (year): To (year): To (year):
DESCRIPTION	
Style Industrial Vernacular Exterior Plan Not applied Exterior Fabric(s) 1. Metal 2. Roof Type(s) 1. Gable 2. Roof Material(s) 1. Sheet metal:3V crimp 2. Roof secondary strucs. (dormers etc.) 1. Windows (types, materials, etc.) see attachment	3. 3.
Distinguishing Architectural Features (exterior or interior ornaments) see attachment	
Ancillary Features / Outbuildings (record outbuildings, major landscape features; use continuation sheel see attachment	t if needed.)
DHR USE ONLY OFFICIAL EVALUATION	DHR USE ONLY
NR List Date SHPO – Appears to meet criteria for NR listing:	Date

HISTORICAL STRUCTURE FORM

Site #8 P008463

DESCRIPTION (continued)				
Chimney: NoO_ Chimney Material(s): 1				
Porch Descriptions (types, locations, roof types, etc.) see attachment				
Condition (overall resource condition):				
Archaeological Remains Check if Archaeological Form Completed				
RESEARCH METHODS (select all that apply)				
□FMSF record search (sites/surveys) □Iibrary research □ building permits □ Sanborn maps □ FL State Archives/photo collection □ city directory □ occupant/owner interview □ plat maps □ property appraiser / tax records □ newspaper files □ neighbor interview □ Public Lands Survey (DEP) □ cultural resource survey (CRAS) □ historic photos □ interior inspection □ HABS/HAER record search □ other methods (describe) □ Bibliographic References (give FMSF manuscript # if relevant, use continuation sheet if needed)				
see attachment				
OPINION OF RESOURCE SIGNIFICANCE				
Appears to meet the criteria for National Register listing individually?				
Area(s) of Historical Significance (see National Register Bulletin 15, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.) 1				
DOCUMENTATION				
Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents 1) Document type Maintaining organization File or accession #'s				
2) Document type Maintaining organization File or accession #'s				
RECORDER INFORMATION				
Recorder Name Marvin Brown Affiliation AECOM Recorder Contact Information (address / phone / fax / e-mail) Affiliation AECOM 2707/919-854-6203/marvin.brown@aecom.com				

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When submitting an image, it must be included in digital <u>AND</u> hard copy format (plain paper grayscale acceptable). Digital image must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.

Aeromech Maintenance Hangar – 3900 Don Emerson Drive (FMSF PO08463) (AECOM Resource #11c)

Only the ghost of the original runway pattern of the former Lakeland Army Air Base is visible at the current Lakeland Linder Airport (FMSF PO08466) (AECOM Resource 11a) (Figure 1). Since the late 1980s, it has been transformed by the construction of extensions and new runways and the sodding over of old runways and pads (*Tampa Tribune* 1967, 1968, 1997, 2000, and 2002). The runway and the airport grounds, therefore, are believed to have lost their integrity of design, setting, materials, workmanship and, thereby, feeling, and association. The airfield is accordingly not recommended as eligible for NR listing due to a loss of integrity. (The airfield does remain at its original location.)

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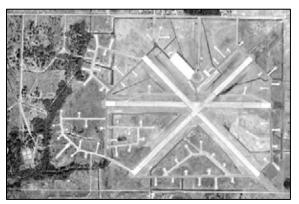




Figure 1. Left, Lakeland Army Air Field (FMSF PO08466) (AECOM Resource #11a) with Drane Field Road at north top, 1953: (source: https://web.archive.org/web/20120608222530/http://www.airfieldsdatabase.com/WW2/WW2%20R27b%20CO-HA.htm; right, modern Google Maps aerial.





Figure 2. Aeromech Aviation maintenance hangar (AECOM Resource #11c): left, southwest airside elevation; right, northwest side elevation.





Figure 3. Aeromech Aviation maintenance hangar (AECOM Resource #11c): interior views.

REFERENCES

lungerich, Justin M.

2018 "Comprehensive Comparison of Steel Frame Fabric and Conventionally Constructed Aircraft Hangars." Thesis, Air Force Institute of Technology. Accessed August 2020 at https://apps.dtic.mil/dtic/tr/fulltext/u2/1056499.pdf

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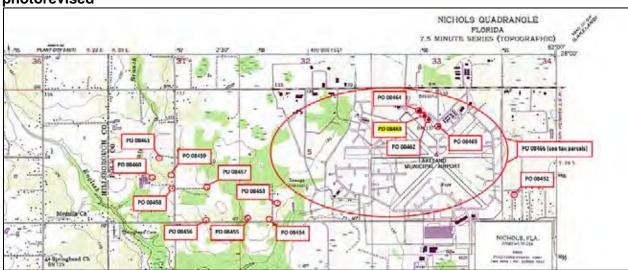
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Page 1

☑ Original
☐ Update



HISTORICAL STRUCTURE FORM

FLORIDA MASTER SITE FILE Version 5.0 3/19
 Site#8
 PO08464

 Field Date
 8-12-2020

 Form Date
 8-25-2020

 Recorder # Marvin Brown

Shaded Fields represent the minimum acceptable level of documentation. Consult the *Guide to Historical Structure Forms* for detailed instructions.

Site Name(s) (address if none) Double M Maintenance Hangar Survey Project Name EA for PhII Air Cargo Facility at LAL Ph IA CRAS National Register Category (please check one) Subuilding structure district site object Ownership: private-profit private-nonprofit private-individual private-nonspecific city county state of the county of th	Survey # (DHR only)
Cross Streets (nearest / between) SE of Airfield Dr West and Drane Field Rd USGS 7.5 Map Name_NICHOLS USGS Date 1987 Plat or Othe City / Town (within 3 miles) Lakeland In City Limits? Eyes Ino Inchown Courtownship 298 Range 23E Section 4 1/4 section: INW ISW ISE INE Irretax Parcel # 232904000000011010 Landgrant Subdivision Name Block UTM Coordinates: Zone 16 17 Easting Northing III Other Coordinates: X: Y: Coordinate System & Datum Name of Public Tract (e.g., park)	egular-name: Lot
HISTORY	
Construction Year:1965_	(year):
Style Industrial Vernacular Exterior Plan Not applicable Exterior Fabric(s) 1. Metal 2. 3 Roof Type(s) 1. Gable 2. 3 Roof Material(s) 1. Sheet metal: 3V crimp 2. 3 Roof secondary strucs. (dormers etc.) 1. 2. 2. Windows (types, materials, etc.) see attachment	3 3
Distinguishing Architectural Features (exterior or interior ornaments) see attachment	
Ancillary Features / Outbuildings (record outbuildings, major landscape features; use continuation sheet if needed.) see attachment	
DHR USE ONLY OFFICIAL EVALUATION	DHR USE ONLY
NR List Date SHPO – Appears to meet criteria for NR listing: □yes □no □insufficient info KEEPER – Determined eligible: □yes □no □Owner Objection NR Criteria for Evaluation: □a □b □c □d (see National Register Bulletin 15	Date Init Date 5, p. 2)

HISTORICAL STRUCTURE FORM

Site #8 PO08464

DESCRIPTION (continued)				
Chimney: No0_ Chimney Material(s): 1				
Porch Descriptions (types, locations, roof types, etc.) see attachment				
Condition (overall resource condition): ☐ excellent ☑ good ☐ fair ☐ deteriorated ☐ ruinous Narrative Description of Resource				
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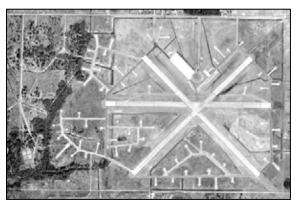




Figure 1. Left, Lakeland Army Air Field (FMSF PO08466) (AECOM Resource #11a) with Drane Field Road at north top, 1953: (source: https://web.archive.org/web/20120608222530/http://www.airfieldsdatabase.com/WW2/WW2%20R27b%20CO-HA.htm; right, modern Google Maps aerial.





Figure 2. Double M Aviation maintenance hangars (AECOM Resource #11d): left, southwest side and southeast airside elevations with first-built hangar at left; right, southeast airside and northeast side elevations with second-built hangar at right.





Figure 3. Double M Aviation maintenance hangars (AECOM Resource #11d): left, southwest side elevation of first-built hangar; right, interior view looking from first-built hangar into darker second-built hangar space.

REFERENCES

lungerich, Justin M.

2018 "Comprehensive Comparison of Steel Frame Fabric and Conventionally Constructed Aircraft Hangars." Thesis, Air Force Institute of Technology. Accessed August 2020 at https://apps.dtic.mil/dtic/tr/fulltext/u2/1056499.pdf

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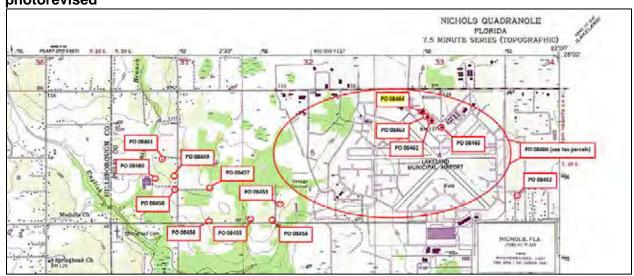
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☐ Update



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Version 5.0 3/19

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Site Name(s) (address if none) Frmr Lakeland Municipal Airport Terminal Gurvey Project Name EA for PhII Air Cargo Facility at LAL Ph IA CRAS Survey # (DHR only) Actional Register Category (please check one) Survey # (DHR only) Ownership: private-profit private-nonprofit private-individual private-nonspecific city county state federal Native American foreign unknown
Street Number Direction Street Name Street Type Suffix Direction
HISTORY
Construction Year:1965
s the Resource Affected by a Local Preservation Ordinance?
DESCRIPTION
Style Modernistic Exterior Plan Not applicable Number of Stories 1 Exterior Fabric(s) 1. Brick 2. Concrete block 3. Roof Type(s) 1. Flat 2. 3. Roof Material(s) 1. 2. 3. Roof secondary strucs. (dormers etc.) 1. 2. Vindows (types, materials, etc.) See attachment
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Site #8 PO08465

DESCRIPTION (continued)				
Chimney: No. O Chimney Material(s): 1. 2. 3. Structural System(s): 1. Masonry - General 2. 3. Foundation Type(s): 1. Slab 2. Foundation Material(s): 1. Concrete, Generic 2. Main Entrance (stylistic details)				
Porch Descriptions (types, locations, roof types, etc.)				
see attachment				
Condition (overall resource condition): ☐ excellent ☑ good ☐ fair ☐ deteriorated ☐ ruinous Narrative Description of Resource				
see attachment				
Archaeological Remains Check if Archaeological Form Completed				
RESEARCH METHODS (select all that apply)				
□FMSF record search (sites/surveys) □library research □building permits □Sanborn maps □FL State Archives/photo collection □city directory □occupant/owner interview □plat maps □property appraiser / tax records □newspaper files □neighbor interview □Public Lands Survey (DEP) □Cultural resource survey (CRAS) □historic photos □interior inspection □HABS/HAER record search □other methods (describe) □ Bibliographic References (give FMSF manuscript # if relevant, use continuation sheet if needed)				
see attachment				
OPINION OF RESOURCE SIGNIFICANCE				
Appears to meet the criteria for National Register listing individually?				
Area(s) of Historical Significance (see National Register Bulletin 15, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.) 1.				
DOCUMENTATION				
Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents 1) Document type Maintaining organization Document type Maintaining organization 2) Document type Maintaining organization Document description File or accession #'s				
RECORDER INFORMATION				
Recorder Name Marvin Brown Affiliation AECOM Recorder Contact Information (address / phone / fax / e-mail) Affiliation AECOM 2707/919-854-6203/marvin.brown@aecom.com				

Required Attachments

- **1** USGS 7.5' MAP WITH STRUCTURE LOCATION CLEARLY INDICATED
- 2 LARGE SCALE STREET, PLAT OR PARCEL MAP (available from most property appraiser web sites)
- **3** PHOTO OF MAIN FACADE, DIGITAL IMAGE FILE

When submitting an image, it must be included in digital \underline{AND} hard copy format (plain paper grayscale acceptable). Digital image must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.

Only the ghost of the original runway pattern of the former Lakeland Army Air Base is visible at the current Lakeland Linder Airport (AECOM Resource 11a) (Figure 1). Since the late 1980s, it has been transformed by the construction of extensions and new runways and the sodding over of old runways and pads (*Tampa Tribune* 1967, 1968, 1997, 2000, and 2002). The runway and the airport grounds, therefore, are believed to have lost their integrity of design, setting, materials, workmanship and, thereby, feeling, and association. The airfield is accordingly not recommended as eligible for NR listing due to a loss of integrity. (The airfield does remain at its original location.)

As noted at the historic context of this report, none of the airport's scores of WWII-era buildings survive. Tax records and historic aerials, however, indicate that four of the its standing resources were erected between about 1959 and 1971. Three of these are hangars standing on the southwest side of Airfield Drive West about 400' southeast of the modern airport terminal. Matching steel hangars erected c1960 (Tampa Tribune 1959a) now house the aircraft maintenance facilities of Shelterair Aviation (AECOM Resource 11b) and Aeromech Aviation (AECOM resource 11c). These were joined by a nearly identical hangar to their northwest—now home to the maintenance facilities of Double M Aviation (AECOM Resource 11d)—between the taking of aerial photographs of the airport in 1964 and 1968. (The 1964 aerial appears to show ground preparation for the hangar.) A second building was added to this hangar by 1971. (A series of historic aerials of the airport and Polk County are available at the Polk County GIS Map Viewer site.) The three earliest hangars are essentially square, about 120 feet on each side. They are conventional hangar types with steel primary load-bearing trusses and framing and steel walls and roofs. Their doors are the standard horizontal telescoping type that slide, overlap, and open up access to the entire hangar space when fully pushed to either side. The hangar attached to the northeast side of the Double M Aviation hangar is of similar design and construction, but it only about half as wide. The two hangars are largely open to each other inside, forming a single work space.

A portion of one additional building that is more than 50 years old survives at the airport (Figure 2 through Figure 5). In December 1959 the airport was completing construction of its first purpose-built terminal. A basic Modernist building, the Lakeland Municipal Airport terminal was a one-story-tall rectangle of masonry construction topped by a flat roof. Exposed posts separated it into seven bays across its front. Three had three-part glass windows and paired doors that extended most of the way toward the roof; four were windowless. A flat-roofed portico supported by steel posts crossed the glassed bays. In the late 1980s or early 1990s, a control tower was built off the terminal's southeastern corner. Between 2002 and 2005, the western three-quarters of the building were lopped off, leaving only its eastern quarter. In the mid-2010s the control tower was removed as well.

The remaining quarter of the former terminal now houses the airport's US Customs and Border Protection (CPB) facility. The one-story building retains some of the walls of the terminal and perhaps one of the original three-part windows. A shorter one-story addition has been wrapped around its south and east elevations. This addition includes three-part windows similar to the original ones.

Due its dramatic alterations—not least the removal of one-quarter of its original structure—the former Lakeland Municipal Airport terminal, now home to the airport's CPB facility, is believed to have lost its integrity of design, materials, workmanship and, accordingly, feeling and association. It remains in an airport setting on its original location, but it appears to have clearly lost its overall integrity. Additionally, the building is not known to have any association with significant historic events or persons and does not appear to embody the distinctive characteristics of a type, period, or method of construction. It is accordingly recommended as not NR-eligible under Criteria A, B, or C.

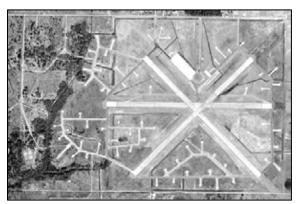




Figure 1. Left, Lakeland Army Air Field with Drane Field Road at north top, 1953 (source: https://web.archive.org/web/20120608222530/http://www.airfieldsdatabase.com/WW2/WW2%20R27b%20CO-HA.htm; right, modern Google Maps aerial.





Figure 2. Left, aerial views of former Lakeland Municipal Airport terminal (FMSF PO08465) (AECOM Resource #11e) in 2002 and, right, in 2005 (source of both: Polk County GIS Map Viewer site)





Figure 3. Left, Lakeland Municipal Airport terminal building (FMSF PO08465) (AECOM #11e), 1967 (source: https://cdm15809.contentdm.oclc.org/digital/collection/p15809coll7/id/66/rec/1); right, current US Customs and Border Protection building (same number), south front and east side elevation.





Figure 4. Left, current US Customs and Border Protection building (FMSF PO08465) (AECOM #11e), south front elevation and, right, west side and south front elevations.



Figure 5. Left, current US Customs and Border Protection building (FMSF PO08465) (AECOM #11e), north rear elevation.

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Polk County GIS Map Viewer site. Accessed July and August 2020 at http://gisapps.polk-county.net/gisviewer.

Tampa Bay Times

1947 "Lakeland Gets Drane Field Landing Area." April 10, 1947.

Tampa Tribune

1959a "New Airport Facility." December 10, 1959.

1967 "Airport Work Bids Below Airport Cost Estimates." August 3, 1967.

1968 "Thousands Thrill to Navy Fliers' Exhibition at Lakewood." March 11, 1968.

1997 "Airline Might Fly Out of Lakeland." June 22, 1997.

2000 "Lakeland Airport to Get New Terminal." December 2, 2000.

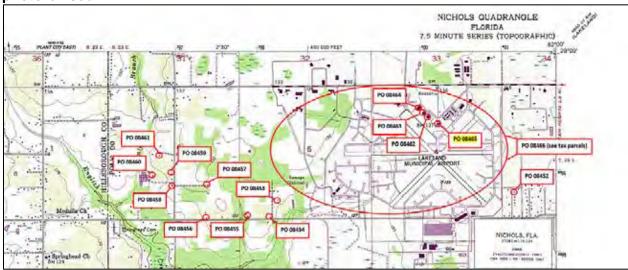
2002 "Lakeland Airport Launches Terminal." April 9, 2002.

Weitze, Karen J.

"Cold War Infrastructure for Air Defense: The Fighter and Command Missions."

Prepared by KEA Environmental, Inc. for Headquarters Air Combat Command, Langley
Air Force Base. Accessed August 2020 at http://www.mobileradar.org/Documents/1999-11-02132.pdf.

FMSF # highlighted in yellow and resource circled in red on Nichols Quad sheet, 1987 photorevised



Polk County GIS Map Viewer (http://gisapps.polk-county.net/gisviewer) within Parcel 23290400000011010, resource circled in red



Photographs included in above history attachment and submitted separately as pdfs

Page 1



RESOURCE GROUP FORM FLORIDA MASTER SITE FILE

Version 5.0 3/19

Site #8 PO08466
Field Date 8-12-2020
Form Date 8-24-2020
Recorder# Marvin Brown

Consult the Guide to the Resource Group Form for additional instructions

NOTE: Use this form to document districts, landscapes, building complexes and linear resources as described in the box below. Cultural resources contributing to the Resource Group should also be documented individually at the Site File. Do not use this form for National Register multiple property submissions (MPSs). National Register MPSs are treated as Site File manuscripts and are associated with the individual resources included under the MPS cover using the Site File manuscript number.

	Check ONE box that best describes the Resource Group:		
 ☐ Historic district (NR category "district"): buildings and NR structures only: NO archaeological sites ☐ Archaeological district (NR category "district"): archaeological sites only: NO buildings or NR structures ☐ Mixed district (NR category "district"): includes more than one type of cultural resource (example: archaeological sites and buildings) ☐ Building complex (NR category usually "building(s)"): multiple buildings in close spatial and functional association ☐ Designed historic landscape (NR category usually "district" or "site"): can include multiple resources (see National Register Bulletin #18, page 2 for more detailed definition and examples: e.g. parks, golf courses, campuses, resorts, etc.) ☐ Rural historic landscape (NR category usually "district" or "site"): can include multiple resources and resources not formally designed (see National Register Bulletin #30, Guidelines for Evaluating and Documenting Rural Historic Landscapes for more detailed definition and examples: e.g. farmsteads, fish camps, lumber camps, traditional ceremonial sites, etc.) ☐ Linear resource (NR category usually "structure"): Linear resources are a special type of structure or historic landscape and can include canals, railways, roads, etc. 			
Project Name <u>EA 1</u> National Register Cat Linear Resource Type	me_Lakeland Linder Airport		
	LOCATION & MAPPING		
County or Counties (c Name of Public Tract 1) Township 29S 2) Township 29S 3) Township 29S 4) Township USGS 7.5' Map(s) 1) Plat, Aerial, or Other Landgrant Verbal Description of	Don Emerson Drive es) _Lakeland In Current City Limits? ⊠yes □no □unknown do not abbreviate) _Polk		
Dr, Flightline Dr, James C Ray Dr and Medulla Rd on the south; and Aaron Morgan Rd and Kelvin Howard Rd on the west			
DHR U	USE ONLY OFFICIAL EVALUATION DHR USE ONLY		
NR List Date	SHPO – Appears to meet criteria for NR listing: SHPO – Appears to meet criteria for NR listing: SHPO		

Owner Objection

NR Criteria for Evaluation:

a

b

c

d

(see National Register Bulletin 15, p. 2)

RESOURCE GROUP FORM

HISTORY & DESCRIPTION				
Construction Year: approxim Architect/Designer: Total number of individual resources included	ately	rrlier	# of non contributing	4
Time period(s) of significance (choose a period fr 1. <u>WW II & Aftermath 1941-1950</u>	om the list or type in date range(s),	, e.g. <i>1895-1925</i>)		
2. Modern (Post 1950)		·		
Narrative Description (National Register Bulletin 16	д pp. 35-34, апасл supplementary	sneets ii needed)		
RES	EARCH METHOD	S (check all that apply)		
☑FMSF record search (sites/surveys) ☑FL State Archives/photo collection ☐property appraiser / tax records ☑cultural resource survey ☑other methods (specify) <u>online research</u>	arch	☐ building permits ☐ occupant/owner interview ☐ neighbor interview ☐ interior inspection	□Sanborn maps □plat maps □Public Lands Surv □HABS/HAER reco	
Bibliographic References (give FMSF Manuscript				
Phase Ib CRAS for EA for Phase 2020	II Air Cargo Facil	lity at Lakeland Linder	r Airport, Polk Co	unty,
OP.	NION OF RESOLU	RCE SIGNIFICANCE		
Potentially eligible individually for National Register of Historic Places? yes x no insufficient information				
Area(s) of Historical Significance (see National Register Bulletin 15, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.) 1. Transportation 2				
2	4	6		
	DOCUME	NTATION		
Accessible Documentation Not Filed with the 1) Document type Document description	Ma	aintaining organization		
		File or accession #'s		
2) Document type		aintaining organization File or accession #'s		
RECORDER INFORMATION				
Recorder Name Marvin Brown, Sr Archit'al Historian Affiliation AECOM Recorder Contact Information 701 Corporate Center Dr/Raleigh NC 27607 919-274-5374/marvin.brown@aecom.com (address/phone/fax/e-mail)				

Required Attachments

- **1** PHOTOCOPY OF USGS 7.5' MAP WITH DISTRICT BOUNDARY CLEARLY MARKED
- 2 LARGE SCALE STREET, PLAT OR PARCEL MAP WITH RESOURCES MAPPED & LABELED
- **3 TABULATION OF ALL INCLUDED RESOURCES -** Include name, FMSF #, contributing? Y/N, resource category, street address or other location information if no address.
- **4** PHOTOS OF GENERAL STREETSCAPE OR VIEWS (Optional: aerial photos, views of typical resources) When submitting images, they must be included in digital AND hard copy format (plain paper grayscale acceptable). Digital images must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.

Lakeland Linder Airport history

A 1952 promotional publication summarized the immediate post-WWII history of Lakeland, founded in 1884 (Lakeland Chamber of Commerce 1952:5, 11). It noted that with a population of approximately 40,000, Lakeland was Polk County's principal city. The county grew a third of Florida's citrus crop, raised more cattle than any other Florida county, and produced 68% of the phosphate mined in the country. Pebble phosphate was generally found in the county from 10 to 30 feet below the surface, requiring stripping of the land by giant shovels (Figure 1 and Figure 2). This last item is most relevant to the history of Lakeland Linder Airport and its surroundings. Local resident Claude M. Harden, Jr. recalled that around 1940 or 1941, just prior to the airport's construction, current Drane Field Road was dirt and the area was marked by "high and rugged" piles of spoil from phosphate mining (Cobb, Oldham and Harden n.d.) (Figure 3). Another contemporary account described the airport site prior to construction differently (*Lakeland Ledger* 1945a):

Extensive installations, equipment, and buildings now on the [air] field present an interesting contrast to the barren expanse and swamps which confronted the original GI settlers here, who experienced hardships and privations sometimes not experienced by soldiers overseas. Mess was prepared and eaten out of doors, sanitary facilities were man-dug, and tents served as living quarters. All water was transported from Lakeland (quoted in Cobb, Oldham and Harden n.d.).

A few pre-WWII residences likely built as farmhouses that stand west of the airport, though, suggest that the area was not solely barren, swampy, or devoted to mining. It also supported agriculture. This would not be surprising, given the agricultural nature of Polk and neighboring Hillsborough County to the west throughout much of the twentieth century (Kerlin 2005).





Figure 1. Left, Polk County agricultural field, 1921 (source: https://ufdc.ufl.edu/UF00033854/00001/1x?search=polk+county); right, view west over Davison Chemical Corporation phosphate mine with Drane Field Road and Edgewood Drive heading north, off the top of the aerial, toward the airport site, c1930-46 (source: https://lakelandpubliclibrary.contentdm.oclc.org/digital/collection/p15809coll7/id/497/rec/25).



Figure 2. Left, 1940 US Geological Survey map with approximate airfield location circled, within property of International Minerals & Chemical Corporation; right, 1944 US Geological Survey Map with airfield at lower right.



Figure 3. Lakeland Army Air Base, late 1942 or early 1943 (source: McDill Field 1943:36).

In July 1941 the *Tampa Tribune* reported that Lakeland was in the midst of constructing a new airport five miles southwest of the city. The airport was initially called Lakeland Airport No. 2 to distinguish it from the city's Airport No. 1. (No. 1 was called Lodwick during WWII; its site is now occupied by Tiger Town, the Detroit Tigers spring training facility.) Lakeland Airport No. 2 was renamed Drane Field, for Rep. Herbert J. Drane, in May 1941 (*Tampa Times* 1941). Originally planned to cost about \$380,000, the project was boosted in July to more than one million dollars. Lakeland was sponsoring the federal Civil Aeronautics Act and Works Progress Administration (CAA-WPA) project. It provided the one-mile-square site and engineering services, the CAA-WPA provided two-thirds of the funding. The newspaper further noted that "Approximately a third of the cost of the project will be supplied by army engineers and the federal bureau of public roads, giving rise to further speculation that the army plans to take over the development as a training field or as an air corps base."

In May 1942, with the airport "being rushed to completion," Lakeland leased Drane Field to War the Department as a training center for US Army fliers (*Tampa Tribune* 1942b; Air Force History Index at http://airforcehistoryindex.org/display.php?irisnum=174017&p=y). The Army renamed the facility Lakeland Army Air Field (*Tampa Tribune* 1947) (Figure 4).

When the field was built, current Drane Field Road was dirt (interview of Claude M. Harden, Jr. at Cobb, Oldham and Harden n.d.) and the area around it, as noted, was likely marked by a mix of piles of pebble-phosphate spoil, woods, swampy land, and citrus or other agricultural fields. An article in the May 1943 *Lakeland Ledger* described the many improvements to the field and its facilities:

Drane Field is one year old—and the post this morning, with its numerous buildings and extensive equipment, is a big contrast to the bare site which the first troops found when they arrived to begin clearing the woods and scratching redbugs. Long rows of identical army barracks have replaced the tents in which the first troops to come here were quartered. The paved streets, named for Army officers, are posted with neat signs identifying them as MacArthur Boulevard, Roosevelt Road, Voss Avenue, and similar designations. Speed limit signs are placed at regular intervals to control the heavy traffic and vigilant MPs check on violations.

A drive through the base shows further evidence of its growth—base headquarters, squadron areas, dayrooms, mess halls, hospital, officers' quarters, post exchange, theater, service club, chapel, and many other buildings. The base hospital is now fully equipped to care for the men at the field. It even has a maternity ward for wives of men stationed here and several births have been reported in the past few months. When the hospital was first set up its grounds were as barren as the rest of the field. Landscaping is underway, and grass, flowers, and shrubs have been planted to beautify the area. The base headquarters area is also being improved and landscaping is planned for other parts of the base later (quoted in Cobb, Oldham and Harden n.d.).



Figure 4. Lakeland Army Air Field, 1943 (source: https://web.archive.org/web/20120608222530/http://www.airfieldsdatabase.com/WW2/WW2%20R27b %20CO-HA.htm)

On November 2, 1945—two months after WWII ended—the War Department deactivated the training base (*Miami News* 1945). The *Lakeland Ledger* (1945a) summarized the field's activities during the war:

Of the 3,880 acres of land which comprise the reservation area, only 475 acres were purchased outright by the government. The remaining acres are leased from private individuals and firms. The cantonment area was constructed to accommodate 3,196 enlisted men and 958 officers, but housing and messing facilities were exhausted on several occasions by a sudden increase of personnel.

Air traffic at Lakeland Army Air Field has been fairly heavy, the average daily cycle of operations having been in excess of 100. Combat aircraft which have trained here have

included B-17s, B-24s, B-26s, P-51s, P-40s, and A-20s, varying in weight from 8,500 pounds to 50,000 pounds. More than 15 groups ranging in type from heavy bombardment to specialized commando units and service groups of the old and new type have trained at Lakeland in the past 34 months.

Following the closure, Lakeland began to shift operations from its other city airfield—Lodwick Field on Lake Parker—to Drane. With its 5,000'-long runways, Drane was more desirable than Lodwick, which had runways only 3,500' in length (*Lakeland Ledger* 1945b). In 1946 the city began flying locally grown strawberries from Drane to Detroit. In 1947 National Air Lines shifted its limited operations from Lodwick to Drane (*Tampa Tribune* 1946 and 1947).

In April 1947, the city recovered title to Drane Field. It received from the War Assets Administration (WAA) not only the original 640-acre landing area, but an additional 320 acres of the training field, which included 13 buildings and many pieces of maintenance equipment (*Tampa Bay Times* 1947). The WAA retained approximately 235 buildings, which it put up for sale in May. The sale notice stated that the buildings and fixtures were "for removal and off-site use only." Among the buildings were barracks, warehouses, mess halls, hospital wards, and officers and nurses quarters. Most of the barracks, at least, were wooden (interview of Claude M. Harden, Jr. at Cobb, Oldham and Harden n.d.). In spite of fresh strawberry transportation and some National flights, from the end of the war until the mid-1950s Drane Field was only partially in use. A 1953 aerial photograph depicts it with no evident planes and its WWII configuration intact (Figure 5).





Figure 5. Left, portions of WAA sales notice for Drane Field (Tampa Bay Times 1947); right, aerial photo of field, 1953 (source:

https://web.archive.org/web/20120608222530/http://www.airfieldsdatabase.com/WW2/WW2%20R27b%20C0-HA.htm).

In 1959-60 Drane Field added a new, one-story, Modernist terminal building and two new hangars (*Tampa Tribune* 1959a) (Figure 6 and Figure 7). The cost of the new facilities, plus planned improved lighting and repair and extension of the runways, was to be covered by sale of the former Lodwick Airport property. Airport zoning regulations were also approved in 1959, "but not before residents in that section waged a successful fight to get the regulations relaxed to a minimum" (*Tampa Tribune* 1959b).



Figure 6. Left, Drane Field with municipal terminal and two hangars, c1960 (source: https://cdm15809.contentdm.oclc.org/digital/collection/p15809coll7/id/43/rec/48).





Figure 7. Left, Lakeland Municipal Airport terminal under construction, December 1959 (source: Tampa Tribune 1959a); right, terminal in 1967 (source: https://cdm15809.contentdm.oclc.org/digital/collection/p15809coll7/id/66/rec/1).

The airport extended its east-west runway from 5,000 to 6,000 feet in 1967-68. By 1997 this runway had been extended further to 8,500 feet (*Tampa Tribune* 1967, 1968 and 1997). In 2002 the airport replaced the first terminal with a much larger two-story building at a cost of 6.7 million dollars (*Tampa Tribune* 2000 and 2002). This remains its current terminal.

The airport's name changed with its buildings and runways. It reverted to Drain Field after the US Army relinquished the field in the late 1940s. By January 1961 it was renamed the Lakeland Municipal Airport (*Tampa Tribune* 1961). By the early 1980s it was the Lakeland Regional Airport, which in 1991 the city renamed the Lakeland Linder Regional Airport (*Tampa Tribune* 1961 and 1991). In 2017 the airport took on its current name, Lakeland Linder International Airport (*Lakeland Ledger* 2017).

Lakeland Linder Airport (former Lakeland Army Air Base/Drane Field/Lakeland Municipal Airport) – 3900 Don Emerson Drive (FMSF PO08466) (AECOM #11a)

Only the ghost of the original runway pattern of the former Lakeland Army Air Base is visible at the current Lakeland Linder Airport (FMSF PO08466) (AECOM resource 11a) (Figure 8). Since the late 1980s, it has been transformed by the construction of extensions and new runways and the sodding over of old runways and pads (*Tampa Tribune* 1967, 1968, 1997, 2000, and 2002). The runway and the airport grounds, therefore, are believed to have lost their integrity of design, setting, materials, workmanship and, thereby, feeling, and association. The airfield is accordingly not recommended as eligible for NR listing due to a loss of integrity. (The airfield does remain at its original location.)

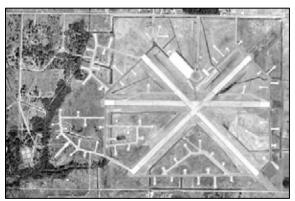




Figure 8. Left, Lakeland Army Air Field with Drane Field Road at north top, 1953 (source: https://web.archive.org/web/20120608222530/http://www.airfieldsdatabase.com/WW2/WW2%20R27b%20CO-HA.htm; right, modern Google Maps aerial.

As noted at the historic context of this report, none of the airport's scores of WWII-era buildings survive. Tax records and historic aerials, however, indicate that four of the its standing resources were erected between about 1959 and 1971. Three of these are hangars standing on the southwest side of Airfield Drive West about 400' southeast of the modern airport terminal. Matching steel hangars erected c1960 (Tampa Tribune 1959a) now house the aircraft maintenance facilities of Shelterair Aviation (FMSF PO08462) (AECOM resource 11b) (Figure 9 and Figure 10) and Aeromech Aviation (FMSF PO08463) (AECOM resource 11c) (Figure 11 Figure 12). These were joined by a nearly identical hangar (Figure 13 and Figure 14) to their northwest—now home to the maintenance facilities of Double M Aviation (FMSF PO08464) (AECOM resource 11d)—between the taking of aerial photographs of the airport in 1964 and 1968. (The 1964 aerial appears to show ground preparation for the hangar.) A second building was added to this hangar by 1971. (A series of historic aerials of the airport and Polk County are available at the Polk County GIS Map Viewer site.) The three earliest hangars are essentially square, about 120' on each side. They are conventional hangar types with steel primary load-bearing trusses and framing and steel walls and roofs. Their doors are the standard horizontal telescoping type that slide, overlap, and open up access to the entire hangar space when fully pushed to either side. The hangar attached to the northeast side of the Double M Aviation hangar is of similar design and construction, but it only about half as wide. The two hangars are largely open to each other inside, forming a single work space.

The maintenance hangars are believed to retain their integrity of location, design, setting, materials, workmanship and, thereby, feeling, and association. However, they are not believed to be significant for any association with significant events or individuals or to embody the distinctive characteristics of a type, period, or method of construction. They are conventional steel hangar types with standard telescoping doors (Luke and Howson 2002; lungerich 2018; Weitze 1999). The hangars have no known associations with the Cold War or other military activities. They are therefore not believed to be significant under NR Criteria A, B, or C and are recommended as not eligible for NR listing.





Figure 9. Shelterair Aviation maintenance hangar (FMSF PO08462) (AECOM Resource #11b): left, southwest airside elevation; right, southwest airside and southeast elevations.





Figure 10. Shelterair Aviation maintenance hangar (FMSF P008462) (AECOM Resource #11b): interior views.





Figure 11. Aeromech Aviation maintenance hangar (FMSF PO08463) (AECOM Resource #11c): left, southwest airside elevation; right, northwest side elevation.





Figure 12. Aeromech Aviation maintenance hangar (FMSF PO08463) (AECOM Resource #11c): interior views.





Figure 13. Double M Aviation maintenance hangars (FMSF PO08464) (AECOM Resource #11d): left, southwest side and southeast airside elevations with first-built hangar at left; right, southeast airside and northeast side elevations with second-built hangar at right.





Figure 14. Double M Aviation maintenance hangars (FMSF PO08464) (AECOM Resource #11d): left, southwest side elevation of first-built hangar; right, interior view looking from first-built hangar into darker second-built hangar space.

A portion of one additional building that is more than 50 years old survives at the airport (Figure 15 and Figure 16). In December 1959 the airport was completing construction of its first purpose-built terminal (FMSF PO08465) (AECOM Resource #11e). A basic Modernist building, the Lakeland Municipal Airport terminal was a one-story-tall rectangle of masonry construction topped by a flat roof. Exposed posts separated it into seven bays across its front. Three had three-part glass windows and paired doors that extended most of the way toward the roof; four were windowless. A flat-roofed portico supported by

steel posts crossed the glassed bays. In the late 1980s or early 1990s, a control tower was built off the terminal's southeastern corner. Between 2002 and 2005, the western three-quarters of the building were lopped off, leaving only its eastern quarter. In the mid-2010s the control tower was removed as well.

The remaining quarter of the former terminal now houses the airport's US Customs and Border Protection (CPB) facility (Figure 17 and Figure 18). The one-story building retains some of the walls of the terminal and perhaps one of the original three-part windows. A shorter one-story addition has been wrapped around its south and east elevations. This addition includes three-part windows similar to the original ones.

Due its dramatic alterations—not least the removal of one-quarter of its original structure—the former Lakeland Municipal Airport terminal, now home to the airport's CPB facility, is believed to have lost its integrity of design, materials, workmanship and, accordingly, feeling and association. It remains in an airport setting on its original location, but it appears to have clearly lost its overall integrity. Additionally, the building is not known to have any association with significant historic events or persons and does not appear to embody the distinctive characteristics of a type, period, or method of construction. It is accordingly recommended as not NR-eligible under Criteria A, B, or C.



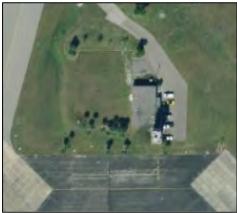


Figure 15. Left, aerial views of former Lakeland Municipal Airport terminal (FMSF P008465) (AECOM #11e) in 2002 and, right, in 2005 (source of both: Polk County GIS Map Viewer site)





Figure 16. Left, Lakeland Municipal Airport terminal building (FMSF P008465) (AECOM #11e), 1967 (source: https://cdm15809.contentdm.oclc.org/digital/collection/p15809coll7/id/66/rec/1); right, current US Customs and Border Protection building (same number), south front and east side elevation.

Lakeland Linder Airport (FMSF PO08466) attachment



Figure 17. Left, current US Customs and Border Protection building (FMSF P008465) (AECOM #11e), south front elevation and, right, west side and south front elevations.



Figure 18. Left, current US Customs and Border Protection building (FMSF P008465) (AECOM #11e), north rear elevation.

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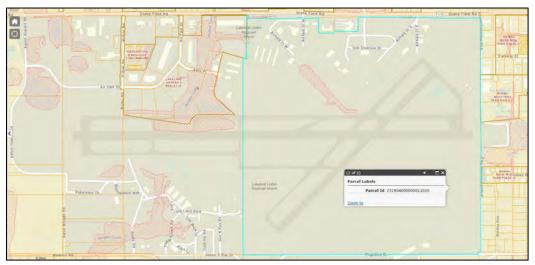
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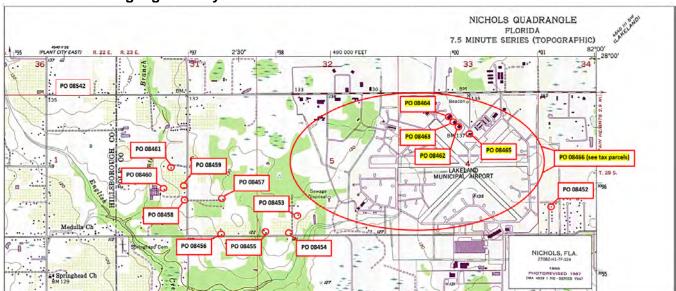


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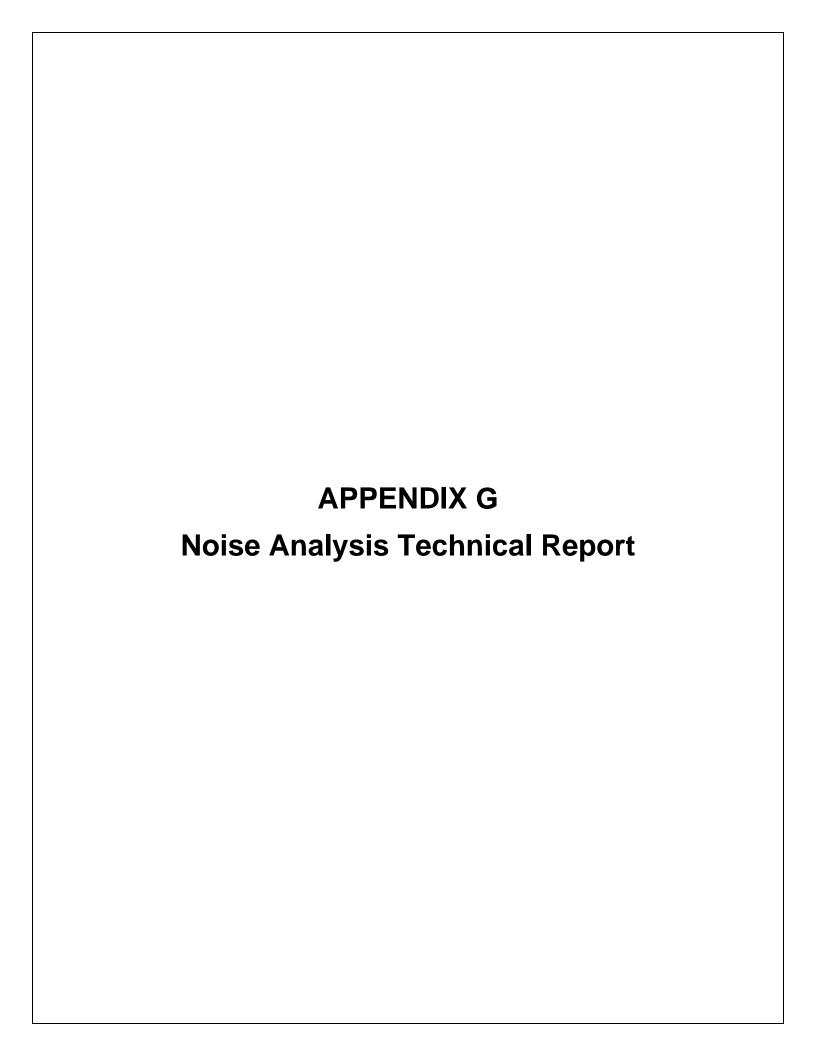
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FMSF numbers highlighted in yellow and resources circled in red



Photographs included in above history attachment and submitted separately as pdfs







Environmental Assessment for Phase II Air Cargo Facility Development at Lakeland Linder International Airport (LAL)

Noise Technical Report

Prepared for:

City of Lakeland, Florida and Federal Aviation Administration

Prepared by:

AECOM

October 2020



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ACRONYMS AND ABBREVIATIONS

AEDT Aviation Environmental Design Tool

CFR Code of Federal Regulation
CIP Capital Improvement Program

dB Decibel

dBA A-Weighted Decibel

DNL Day-Night Average Sound Level

FAA Federal Aviation Administration

FICON Federal Interagency Committee on Noise

FICUN Federal Interagency Committee on Urban Noise

GA General Aviation

HUD Department of Housing and Urban Development

Hz Hertz

INM Integrated Noise Model

L_{eq} Equivalent Sound Level L_{max} Maximum Sound Level

LAL Lakeland Linder International Airport

NLR Noise Level Reduction

SEL Sound Exposure Level SPL Sound Pressure Level

CHAPTER 1 INTRODUCTION

This *Noise Technical Report* details the assessment scope, calculation methodology, input data and other technical information used in the analysis of noise impacts associated with the proposed Phase II Air Cargo Facility Development at the Lakeland Linder International Airport (i.e., LAL, or the Airport), hereinafter referred to as the Proposed Project.

1.1. AIRCRAFT NOISE DESCRIPTORS

A variety of noise metrics are used to assess airport noise impacts in different ways. Noise metrics are used to describe individual noise events (such as a single operation of an aircraft taking off overhead) or groups of events (such as the cumulative effect of numerous aircraft operations, the collection of which creates a general noise environment or overall exposure level). Both types of descriptors are helpful in explaining how people tend to respond to a given noise condition. Descriptions of these metrics are provided below.

<u>Decibel, dB</u> – Sound is a complex physical phenomenon consisting of complex minute vibrations traveling through a medium, such as air. These vibrations are sensed by the human ear as sound pressure. Because of the vast range of sound pressure or intensity detectable by the human ear, sound pressure level (SPL) is represented on a logarithmic scale known as decibels (dB). A sound level of 0 dB is approximately the threshold of human hearing and is barely audible under extremely quiet (laboratory-type) listening conditions. A SPL of 120 dB begins to be felt inside the ear as discomfort and pain at approximately 140 dB. Most environmental sounds have SPLs ranging from 30 to 100 dB.

Because dB are logarithmic, they cannot be added or subtracted directly like other (linear) numbers. For example, if two sound sources each produce 100 dB, when they are operated together, they will produce 103 dB, not 200 dB. Four 100 dB sources operating together again double the sound energy, resulting in a total SPL of 106 dB, and so on. In addition, if one source is much louder than another, the two sources operating together will produce the same SPL as if the louder source were operating alone. For example, a 100 dB source plus an 80 dB source produce 100 dB when operating together. The louder source masks the quieter one.

Two useful rules to remember when comparing SPLs are: (1) most people perceive a six to 10 dB increase in SPL between two noise events to be about a doubling of loudness, and (2) changes in SPL of less than about three dB between two events are not easily detected outside of a laboratory.

<u>A-Weighted Decibel, dBA</u> – Frequency, or pitch, is a basic physical characteristic of sound and is expressed in units of cycles per second or hertz (Hz). The normal frequency range of hearing for most people extends from about 20 to 15,000 Hz. Because the human ear is more sensitive to middle and high frequencies (i.e., 1000 to 4000 Hz), a frequency weighting called "A" weighting is applied to the measurement of sound. The internationally standardized "A" filter approximates

the sensitivity of the human ear and helps in assessing the perceived loudness of various sounds. In this document all sound levels are A-weighted sound levels and the adjective "A-weighted" has been omitted.

Figure 1.1-1 charts common indoor and outdoor sound levels. A quiet rural area at nighttime may be 30 A-weighted decibels (dBA) or lower while the operator of a typical gas lawn mower may experience a level of 90 dBA. Similarly, the level in a library may be 30 dBA or lower while the listener at a rock band concert may experience levels near 110 dBA.

<u>Maximum A-Weighted Noise Level, L_{max}</u> – Sound levels vary with time. For example, the sound increases as an aircraft approaches, then falls and blends into the ambient or background as the aircraft recedes into the distance. Because of this variation, it is often convenient to describe a particular noise "event" by its highest or maximum sound level (L_{max}). Note L_{max} describes only one dimension of an event; it provides no information on the cumulative noise exposure generated by a sound source. In fact, two events with identical L_{max} may produce very different total exposures. One may be of very short duration, while the other may be much longer.

<u>Sound Exposure Level, SEL</u> – The most common measure of noise exposure for a single aircraft flyover is the sound exposure level (SEL). SEL is a summation of the A-weighted sound energy at a particular location over the true duration of a noise event normalized to a fictional duration of one second. The true duration is defined as the amount of time the noise event exceeds background levels. For events lasting more than one second, SEL does not directly represent the sound level heard at any given time, but rather provides a measure of the net impact of the entire acoustic event.

The normalization to the fictional duration of one second enables the comparison of noise events with differing true duration and/or maximum level. Because the SEL is normalized to one second, it will almost always be larger in magnitude than the L_{max} for the event. In fact, for most aircraft events, the SEL is about seven to 12 dB higher than the L_{max} . Additionally, since it is a cumulative measure, a higher SEL can result from either a louder or longer event, or some combination.

As SEL combines an event's overall sound level along with its duration, SEL provides a comprehensive way to describe noise events for use in modeling and comparing noise environments. Computer noise models, such as the one employed for this document, base their computations on these SELs.

Figure 1.1-2 shows an event's "time history," the variation of sound level with time. For typical sound events experienced by a fixed listener, like a person experiencing an aircraft flying by, the sound level rises as the source (or aircraft) approaches the listener, peaks and then diminishes as the aircraft flies away from the listener. The area under the time history curve represents the overall sound energy of the noise event. The L_{max} for the event shown in the figure was 93.5 dBA. Compressing the event's total sound energy into one second to compute its SEL yields 102.7 dBA.

Indoor Sound Levels Outdoor Sound Levels 140 Threshold of Pain Threshold of Pain Military Jet Takeoff with Afterburner at 50 feet 130 120 Rock Band Concer 110 Ambulance Siren at 10 feet Pile Driver at 50 feet Night Club with Live Music 100 Gas Lawnmower at 3 feet Sports Boat at 100 feet 90 Diesel Truck at 50 feet Concrete Mixer at 50 feet Food Blender at 3 feet 80 Leaf Blower at 50 feet Noisy Restaurant Garbage Disposal at 3 feet 70 Vaccuum Cleaner at 10 feet Normal Conversation at 3 feet Commercial / Urban Area, Daytime Urban Expressway at 300 feet Active Office Environment 60 Suburban Area, Daytime Quiet Office Environment Dishwasher, Next Room Quiet Urban Area, Nighttime Quiet Suburban Area, Nighttime Library Quiet Bedroom, Nightime Quiet Rural Area, Nighttime 30 Concert Hall, Background Quiet Wilderness Area, No Wind Recording Studio Threshold of Human Hearing Threshold of Human Hearing Decibels Source: URS Corporation, 2008

Figure 1.1-1 Common Outdoor and Indoor Sound Levels

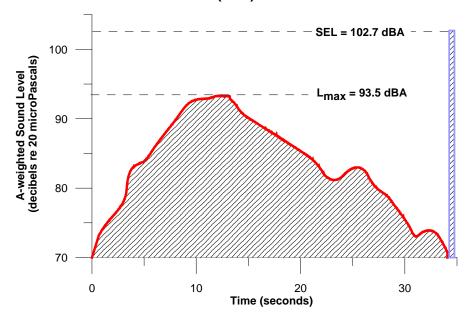


Figure 1.1-2 Comparison of Maximum Sound Level (L_{MAX}) and Sound Exposure Level (SEL)

Source: URS Corporation, 2007.

Equivalent Sound Level, L_{eq} – Equivalent sound level (L_{eq}) is a measure of the exposure resulting from the accumulation of A-weighted sound levels over a particular period of interest (e.g., an hour, an 8-hour school day, nighttime, or a full 24-hour day). However, because the length of the period can be different depending on the time frame of interest, the applicable period should always be identified or clearly understood when discussing the metric. Such durations are often identified through a subscript, for example $L_{eq(8)}$ or $L_{eq(24)}$.

Conceptually, L_{eq} may be thought of as a constant sound level over the period of interest that contains as much sound energy as the actual time-varying sound level with its normal "peaks" and "dips." In the context of noise from typical aircraft flight events and as noted earlier for SEL, L_{eq} does not represent the sound level heard at any particular time, but rather represents the total sound exposure for the period of interest. Also, it should be noted that the "average" sound level suggested by L_{eq} is not an arithmetic value, but a logarithmic, or "energy-averaged," sound level. Thus, loud events tend to dominate the noise environment described by the L_{eq} metric.

<u>Day-Night Average Sound Level, DNL</u> - Time-averaged sound levels are measurements of sound levels averaged over a specified length of time. These levels provide a measure of the average sound energy during the measurement period. For the evaluation of community noise effects, and particularly aircraft noise effects, the Day-Night Average Sound Level (DNL). This metrics are similar to the Leq except that it compensates for the widely assumed increase in people's sensitivity to noise during nighttime hours. Each aircraft operation occurring between 10:00 p.m. and 7:00 a.m. is treated as if it were 10 operations. Logarithmically, this multiplier is the equivalent of adding 10 dB to the noise level of each nighttime operation. These noise level penalties are intended to correspond to the drop in background noise level which studies have

found takes place from daytime to nighttime in a typical community. The nighttime decrease in ambient sound levels—from both outdoor and indoor sources—is commonly considered to be the principal explanation for people's heightened sensitivity to noises during these periods.

DNL is the primary noise descriptor of this study. DNL is a 24-hour time-weighted-average noise metric expressed in dBA which accounts for the noise levels (in terms of SEL) of all individual aircraft events, the number of times those events occur, and the time of day at which they occur. Values of DNL can be measured with standard monitoring equipment or predicted with computer models. This document utilizes estimates of DNL with a Federal Aviation Administration (FAA)-approved computer-based noise model.

Typical DNL values for a variety of noise environments are shown in **Figure 1.1-3**. DNL values can be approximately 85 dBA outdoors under a flight path within a mile of a major airport and 40 dBA or less outdoors in a rural residential area.

Due to the DNL descriptor's close correlation with the degree of community annoyance from aircraft noise, DNL have been formally adopted by most Federal agencies for measuring and evaluating aircraft noise for land use planning and noise impact assessment. Federal committees such as the Federal Interagency Committee on Urban Noise (FICUN) and the Federal Interagency Committee on Noise (FICON) which include the Environmental Protection Agency (EPA), FAA, Department of Defense, Department of Housing and Urban Development (HUD), and Veterans Administration, found DNL to be the best metric for land use planning. They also found no new cumulative sound descriptors or metrics of sufficient scientific standing to substitute for DNL. Other cumulative metrics could be used only to supplement, not replace DNL. Furthermore, FAA Order 1050.1F for environmental impact studies, requires DNL be used in describing cumulative noise exposure and in identifying aircraft noise/land use compatibility issues (EPA, 1974; FICUN, 1980; FICON, 1992; 14 CFR part 150, 2007; FAA, 2006).

1.2. EFFECTS OF AIRCRAFT NOISE ON PEOPLE

This section addresses three ways humans can be affected by aircraft noise: annoyance, speech interference and sleep disturbance.

<u>Annoyance</u> – The primary potential effect of aircraft noise on exposed communities is one of annoyance. Noise annoyance is defined by the Environmental Protection Agency as any negative subjective reaction on the part of an individual or group (EPA, 1974). Scientific studies and a large number of social/attitudinal surveys have been conducted to appraise people's annoyance to all types of environmental noise, especially aircraft events. These studies and surveys have found the DNL to be the best measure of this annoyance (EPA, 1974; FICUN, 1980; FICON, 1992; ANSI, 2007; ANSI, 2003; Schultz, 1978; Fidell, et. al., 1991).

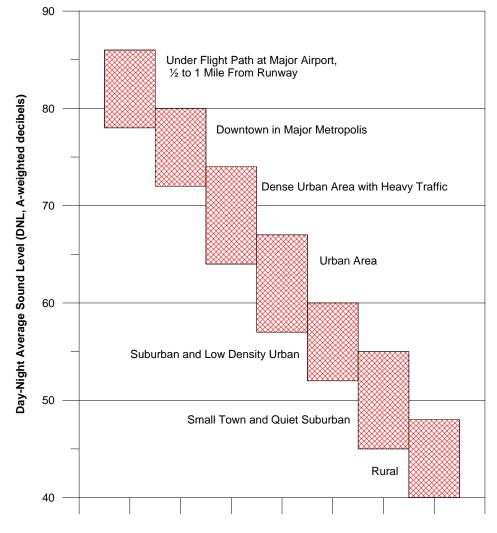


Figure 1.1-3 Typical Range of Outdoor Community Day-Night Average Sound Levels

Source: FICON, 1992.

The relationship between annoyance and DNL determined by the scientific community and endorsed by many Federal agencies, including the FAA, is shown in **Figure 1.2-1**. For a DNL of 65 dBA, approximately 13 percent of the exposed population would be highly-annoyed. The figure also shows at very low values of DNL, such as 45 dB or less, one percent or less of the exposed population would be highly annoyed. At very high values of DNL, such as 90 dBA, more than 80 percent of the exposed population would be highly annoyed.

It is often suggested a lower DNL, such as 60 or 55 dB, be adopted as the threshold of community noise annoyance for FAA environmental analysis documents. While there is no technical reason why a lower level cannot be measured or calculated for comparison purposes, a DNL of 65 dB:

- Provides a valid basis for comparing and assessing community noise effects.
- > Represents a noise exposure level normally dominated by aircraft noise and not other

community or nearby highway noise sources.

- Reflects the FAA's threshold for grant-in-aid funding of airport noise mitigation projects.
- > HUD also established a DNL standard of 65 dBA for eligibility for federally-guaranteed home loans.

100 80 Percent Highly Annoyed 60 % Highly Annoyed = $100 / [1 + e^{(11.13 - 0.141 \times DNL)}]$ 40 20 0 40 50 80 90 60 70 Day-Night Average Sound Level (DNL, A-weighted decibels)

Figure 1.2-1 Relationship between Annoyance and Day-Night Average Sound Level

Source: FICON, 1992.

<u>Speech Interference</u> – A primary effect of aircraft noise is its tendency to drown out or "mask" speech, making it difficult to carry on a normal conversation. As an aircraft approaches and its sound level increases, speech becomes harder to hear. As the ambient level increases, the talker must raise his/her voice, or the individuals must get closer together to continue talking.

For typical communication distances of three or four feet (one to 1.5 meters), acceptable outdoor conversations can be carried on in a normal voice as long as the ambient noise outdoors is less than about 65 dBA (FICON, 1992). If the noise exceeds this level, intelligibility would be lost unless vocal effort was increased or communication distance was decreased.

Indoor speech interference can be expressed as a percentage of sentence intelligibility between two average adults with normal hearing speaking fluently in relaxed conversation approximately one meter apart in a typical living room or bedroom (EPA, 1974). As shown in **Figure 1.2-2**, the percentage of sentence intelligibility is a non-linear function of the (steady) indoor ambient or background sound level (24-hour energy-average $L_{eq(24)}$). Steady ambient indoor sound levels of up to 45 dBA $L_{eq(24)}$ are expected to allow 100 percent intelligibility of sentences. The curve shows 99 percent sentence intelligibility for $L_{eq(24)}$ at or below 54 dBA and less than 10 percent

intelligibility for $L_{eq(24)}$ greater than 73 dBA. In the same document from which **Figure 1.2-2** was taken, the EPA established an indoor criterion of 45 dBA DNL as requisite to protect against speech interference indoors (EPA, 1974).

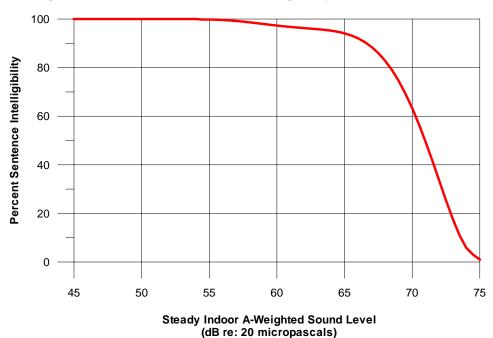


Figure 1.2-2 Percent Sentence Intelligibility for Indoor Speech

Source: EPA, 1974

1.3. NOISE ANALYSIS

1.3.1. EXISTING CONDITION NOISE MODELING ASSUMPTIONS

<u>Airport Environmental Design Tool (AEDT)</u>

The FAA has required the use of the Aviation Environmental Design Tool (AEDT) since May 29, 2015 for determining the predicted noise impact in the vicinity of airports. Statutory requirements for AEDT use are defined in FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*; Order 5050.4B, *NEPA Implementing Instructions for Airport Actions*; and Title 14 CFR part 150, *Airport Noise Compatibility Planning*.

The AEDT incorporates the number of annual average daily daytime and nighttime flight and runup operations, flight paths, and flight profiles of the aircraft along with its extensive internal database of aircraft noise and performance information, to calculate the DNL at many points on the ground around an airport. From a grid of points, the AEDT contouring program draws contours of equal DNL to be superimposed onto land use maps. For this document, DNL contours of 65, 70, and 75 dBA were developed. DNL contours are a graphical representation of how the noise from the airport's average annual daily aircraft operations is distributed over the surrounding area. The AEDT can calculate sound levels at any specified point so that noise exposure at representative locations around an airport can be obtained.

The results of the AEDT analysis provide a relative measure of noise levels around airfield facilities. When the calculations are made in a consistent manner, the AEDT is most accurate for comparing before and after noise effects resulting from forecast changes or alternative noise control actions. It allows noise levels to be predicted for such Proposed Projects without the actual implementation and noise monitoring of those actions.

Title 14 CFR part 150, Appendix A, provides Federal compatible land use guidelines for several land uses as a function of DNL values. Compatible or non-compatible land use is determined by comparing the predicted or measured DNL values at a site to the established thresholds.

Examples of detailed local acoustical variables include:

- Temperature profiles;
- Wind gradients;
- Humidity effects;
- Ground absorption;
- > Individual aircraft directivity patterns; and
- Sound diffraction caused by terrain, buildings, barriers, etc.

The results of the AEDT analysis provide a relative measure of noise levels around airfield facilities. When the calculations are made in a consistent manner, the AEDT is most accurate for comparing before and after noise effects resulting from forecast changes or alternative noise control actions. It allows noise levels to be predicted for such proposed projects without the actual implementation and noise monitoring of those actions.

Modeled Aircraft Operations

This section describes in detail the sources and derivation of the AEDT input data for the existing conditions including airport layout, weather, flight operations, runway use, flight tracks, track use, and flight profiles.

Airport Layout

LAL has three runways, designated as Runway 9-27, 5-23 and 8-26. Runway 9-27 is 8,499 feet long by 150 feet wide. Runway 5-23 is 5,005 feet long by 150 feet wide. Runway 8-26 is a turf surface runway and is 2,205 feet long by 60 feet wide. The field elevation at LAL is approximately 142 feet. Apron and hangar facilities are available for both based and transient aircraft.

Flight Operations

Tables 1.3-1 shows the AEDT-modeled average annual daily operations for the Existing Conditions by aircraft at LAL.

Runway Use

A summary of the modeled annual average daily utilization of LAL's runways is presented in **Table 1.3-2**. The percentages provided in **Table 1.3-2** are applicable to both day time and nighttime operations.

Flight Tracks

Flight tracks are the aircraft's actual path through the air projected vertically onto the ground. Modeled flight tracks reflect a reasonable representation of the actual flight track recognizing that pilot technique and weather conditions will affect the actual track of individual flights. **Figures 1.3-1a** through **1.3-1c** depict modeled arrival, departure, and touch and go tracks, respectively.

Track Use

Utilization percentages of the flight tracks are tabulated in **Table 1.3-3** for arrivals, departures, and touch-and-gos (TGOs).

Flight Profiles

Flight profiles model the vertical paths of aircraft during departure and arrival to determine the altitude, speed, and engine thrust or power of an aircraft at any point along a flight track. AEDT uses this information to calculate noise exposure on the ground. Profiles are unique to each aircraft type and vary with temperature, barometric pressure, headwind, and aircraft weight. Standard AEDT default profiles were used for all aircraft operations.

FAA Part 150 Compatible Land Use Criteria

Title 14 CFR part 150, Appendix A, Table 1, provides Federal compatible land use guidelines for several land uses as a function of DNL values. Compatible or non-compatible land use is determined by comparing the predicted or measured DNL or Community Noise Equivalent Level (CNEL) values at a site to the values listed in Table 1. This table is provided as **Table 1.3-4**.

Table 1.3-1 Existing Condition Average Annual Daily Operations at LAL

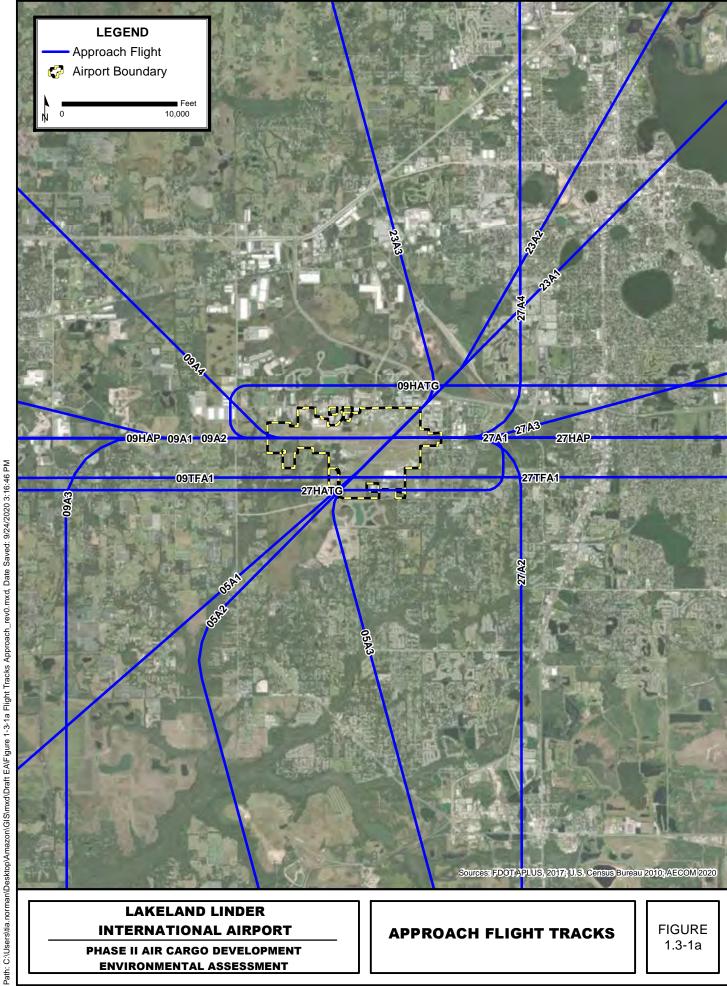
	2019 Existing Condition								
Aircraft	Arrivals		Departures		TGO				
	Day	Night	Day	Night	Day	Night	Total		
Aerospatiale SA-350D Astar (AS-350) TPE3	0.290	-	0.290	-	-	-	0.580		
Agusta A-109 250B17	0.108	-	0.108	-	-	-	0.217		
Airbus A320-200 Series 2CM018	0.004	0.001	0.004	0.001	-	-	0.010		
BEC58P	12.908	0.824	12.908	0.824	2.686	0.298	30.447		
Bell 206L-4T Long Ranger 250B17	0.037	-	0.037	-	-	-	0.073		
Boeing 727-200 Series 1PW004	0.001	0.000	0.001	0.000	-	-	0.003		
Boeing 737-800 Series 4CM039	0.011	0.004	0.013	0.002	-	-	0.029		
Boeing 757-200 Series 4PW073	0.004	0.001	0.004	0.001	-	-	0.010		
Boeing CH-46 Sea Knight T588F	0.046	-	0.046	-	ı	1	0.092		
Boeing DC-10-10 Series 3GE076	0.001	0.000	0.001	0.000	ı	1	0.003		
Boeing F/A-18 Hornet F4044	0.065	-	0.065	-	ı	1	0.131		
Bombardier Challenger 600 5GE084	1.140	0.073	1.140	0.073	-	-	2.425		
Bombardier Global 5000 Business 4BR009	0.177	0.011	0.177	0.011	-	-	0.376		
Bombardier Learjet 35 1AS002	3.800	0.243	3.800	0.243	-	-	8.086		
CASA CN-235-100 CT79B	0.166	-	0.166	-	0.226	-	0.557		
Cessna 150 Series O200	18.144	1.016	18.144	1.016	27.234	3.026	68.580		
Cessna 172 Skyhawk IO360	1.270	0.081	1.270	0.081	-	-	2.702		
Cessna 182 IO360	1.791	0.114	1.791	0.114	-	-	3.811		
Cessna 206 TIO540 IO-540-AC	1.261	0.080	1.261	0.080	-	-	2.683		
Cessna 208 Caravan PT6A14	2.081	0.133	2.081	0.133	-	-	4.428		
Cessna 441 Conquest II TPE10A	1.669	0.107	1.669	0.107	-	-	3.551		
Cessna 500 Citation I 1PW038	1.451	0.093	1.451	0.093	-	-	3.087		
Cessna 550 Citation II 1PW036	1.283	0.082	1.283	0.082	-	-	2.730		
Cessna 650 Citation III 1AS001	0.113	0.007	0.113	0.007	-	-	0.240		
Cessna 680 Citation Sovereign 7PW078	0.500	0.032	0.500	0.032	-	-	1.063		
Cessna 750 Citation X 6AL024	0.201	0.013	0.201	0.013	-	-	0.427		
COMSEP	5.254	0.335	5.254	0.335	1.705	0.189	13.074		
DeHavilland DHC-6-100 Twin Otter PT6A20	10.259	0.655	10.259	0.655	-	-	21.827		
Eclipse 500 / PW610F PW610F	0.128	0.008	0.128	0.008	-	-	0.272		
Embraer ERJ145 6AL008	0.002	0.001	0.003	0.000	-	-	0.006		
Gulfstream G400 6RR042	0.674	0.043	0.674	0.043	-	-	1.433		

	2019 Existing Condition						
Aircraft	Arrivals		Departures		TGO		
	Day	Night	Day	Night	Day	Night	Total
Gulfstream G500 4BR003	0.177	0.011	0.177	0.011	-	-	0.376
Hughes 500D 250B17	0.182	-	0.182	-	-	-	0.363
Israel IAI-1125 Astra 1AS002	0.195	0.012	0.195	0.012	-	•	0.415
Lockheed C-130 Hercules T56A14	0.951	-	0.951		2.629		4.530
Lockheed P-3 Orion ANP:P3A T56A14 T56-A-14	0.986	-	0.986	-	-	-	1.971
McDonnell Douglas A-4 Skyhawk J52P4	0.083	-	0.083	-	-	-	0.166
Mitsubishi MU-300 Diamond 1PW037	0.317	0.020	0.317	0.020	-	-	0.674
Piper PA-24 Comanche TIO540	30.248	1.870	30.248	1.870	50.831	5.648	120.715
Piper PA-30 Twin Comanche IO320	1.638	0.105	1.638	0.105	-	-	3.486
Piper PA-42 Cheyenne Series PT6A41	0.422	0.027	0.422	0.027	-	-	0.898
Robinson R44 Raven / Lycoming O-540-F1B5 TIO540	0.435	-	0.435	-	-	-	0.869
Rockwell T-2 Buckeye J852	0.092	-	0.092	-	-	-	0.185
Saab 340-A CT7-5	0.700	0.045	0.700	0.045			1.490
Sikorsky SH-60 Sea Hawk T70041	0.674	-	0.674	-	-	-	1.347
T-38 Talon J855HA	0.110	-	0.110	-	-	-	0.220
Grand Total	102.045	6.047	102.049	6.043	85.312	9.162	310.658

TGO = Touch and Go

Day = 7:00 a.m. to 9:59 p.m.; Night = 10:00 p.m. to 6:59 a.m.

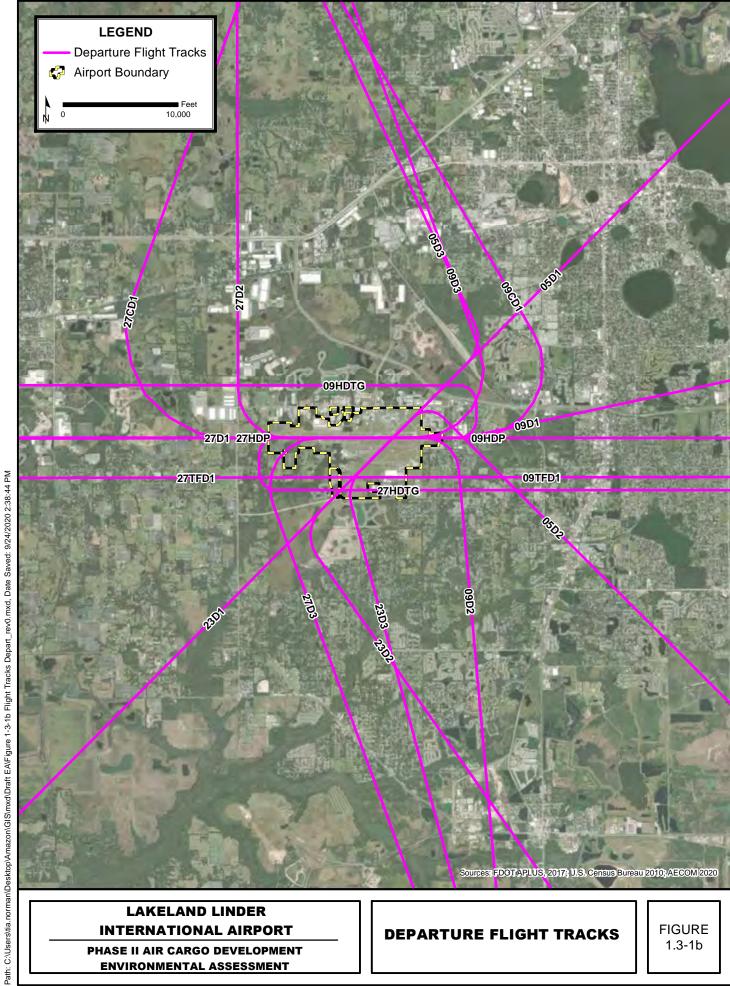
Values reflect rounding. Source: AECOM, 2020.



INTERNATIONAL AIRPORT PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

APPROACH FLIGHT TRACKS

FIGURE 1.3-1a



LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

DEPARTURE FLIGHT TRACKS

FIGURE 1.3-1b



LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

TOUCH AND GO FLIGHT TRACKS

FIGURE 1.3-1c

Table 1.3-2 2019 Runway Utilization

A:	Operation	Runway							
Aircraft	Туре	5	9	23	27	09H	09TF	27H	27TF
Aerospatiale SA-350D Astar (AS-350)	Arrivals	-	-	-	-	60.00%	-	40.00%	•
TPE3	Departures	-	-	-	-	60.00%	-	40.00%	-
Aguata A 100 250D17	Arrivals	-	-	-	-	60.00%	-	40.00%	-
Agusta A-109 250B17	Departures	-	-	-	-	60.00%	-	40.00%	-
Airbus A320-200 Series 2CM018	Arrivals	-	55.00%	-	45.00%	-	-	-	-
Alibus A320-200 Series 2CM016	Departures	-	55.00%	-	45.00%	-	-	-	-
	Arrivals	20.00%	36.00%	14.00%	30.00%	-	-	-	-
BEC58P	Departures	20.00%	36.00%	14.00%	30.00%	-	-	-	-
	TGO	20.00%	36.00%	14.00%	30.00%	-	-	-	-
Dall 2001 AT Lang Danger 250D47	Arrivals	-	-	-	-	60.00%	-	40.00%	-
Bell 206L-4T Long Ranger 250B17	Departures	-	-	-	-	60.00%	-	40.00%	-
Decine 727 200 Corice 4 DW/004	Arrivals	-	55.00%	-	45.00%	-	-	-	-
Boeing 727-200 Series 1PW004	Departures	-	55.00%	-	45.00%	-	-	-	-
Daning 727 000 Caring 40M020	Arrivals	-	55.00%	-	45.00%	-	-	-	-
Boeing 737-800 Series 4CM039	Departures	-	55.00%	-	45.00%	-	-	-	-
Decine 757 200 Corios 4DM072	Arrivals	-	55.00%	-	45.00%	-	-	-	-
Boeing 757-200 Series 4PW073	Departures	-	55.00%	-	45.00%	-	-	-	-
Paging CH 46 Cap Knight TERR	Arrivals	-	-	-	-	60.00%	-	40.00%	-
Boeing CH-46 Sea Knight T588F	Departures	-	-	-	-	60.00%	-	40.00%	-
Paging DC 40 40 Coving 200070	Arrivals	-	55.00%	-	45.00%	-	-	-	-
Boeing DC-10-10 Series 3GE076	Departures	-	55.00%	-	45.00%	-	-	-	-
Docing 5/A 40 Hornet 54044	Arrivals	-	55.00%	-	45.00%	-	-	-	-
Boeing F/A-18 Hornet F4044	Departures	-	55.00%	-	45.00%	-	-	40.00% 40.00% 40.00% 40.00%	-
Demberdier Chellenger COO FCF004	Arrivals	20.00%	36.00%	14.00%	30.00%	-	-	40.00% 40.00% 40.00%	-
Bombardier Challenger 600 5GE084	Departures	20.00%	36.00%	14.00%	30.00%	-	-	-	-
Bombardier Global 5000 Business	Arrivals	20.00%	36.00%	14.00%	30.00%	-	-	-	-
4BR009	Departures	20.00%	36.00%	14.00%	30.00%	-	-	-	-
Developed and a print OF 4A COOO	Arrivals	20.00%	36.00%	14.00%	30.00%	-	-	-	-
Bombardier Learjet 35 1AS002	Departures	20.00%	36.00%	14.00%	30.00%	-	-	-	-
	Arrivals	-	55.00%	-	45.00%	-	-	-	-
CASA CN-235-100 CT79B	Departures	-	55.00%	-	45.00%	-	-	-	-
	TGO	-	60.00%	-	40.00%	-	-	-	-
Casana 150 Carias O200	Arrivals	17.67%	31.81%	12.37%	26.51%	-	6.40%	-	5.24%
Cessna 150 Series O200	Departures	17.67%	31.81%	12.37%	26.51%	-	6.40%	-	5.24%

A :	Aircraft Operation Runway								
Aircraft	Type	5	9	23	27	09H	09TF	27H	27TF
	TGO	20.00%	36.00%	14.00%	30.00%	-	-	-	-
0 470 Olystands 10000	Arrivals	20.00%	36.00%	14.00%	30.00%	-	-	-	-
Cessna 172 Skyhawk IO360	Departures	20.00%	36.00%	14.00%	30.00%	-	-	-	-
0 400 10000	Arrivals	20.00%	36.00%	14.00%	30.00%	-	-	-	-
Cessna 182 IO360	Departures	20.00%	36.00%	14.00%	30.00%	-	-	-	-
O 000 TIOF 40 IO 540 AC	Arrivals	20.00%	36.00%	14.00%	30.00%	-	-	-	-
Cessna 206 TIO540 IO-540-AC	Departures	20.00%	36.00%	14.00%	30.00%	-	-	-	-
Cessna 208 Caravan PT6A14	Arrivals	20.00%	36.00%	14.00%	30.00%	-	-	-	-
Cessna 208 Caravan PT6A14	Departures	20.00%	36.00%	14.00%	30.00%	-	-	-	-
Casara 444 Casarrast II TDE404	Arrivals	20.00%	36.00%	14.00%	30.00%	-	-	-	-
Cessna 441 Conquest II TPE10A	Departures	20.00%	36.00%	14.00%	30.00%	-	-	-	-
Coord FOO Citation LADWOOD	Arrivals	20.00%	36.00%	14.00%	30.00%	-	-	-	-
Cessna 500 Citation I 1PW038	Departures	20.00%	36.00%	14.00%	30.00%	-	-	-	-
Conses 550 Citation II ADMOSC	Arrivals	20.00%	36.00%	14.00%	30.00%	-	-	-	-
Cessna 550 Citation II 1PW036	Departures	20.00%	36.00%	14.00%	30.00%	-	-	-	-
O 050 O'(at'a III 4 4 0004	Arrivals	20.00%	36.00%	14.00%	30.00%	-	-	-	-
Cessna 650 Citation III 1AS001	Departures	20.00%	36.00%	14.00%	30.00%	-	-	-	-
0 000 011 11 0 1	Arrivals	20.00%	36.00%	14.00%	30.00%	-	-	-	-
Cessna 680 Citation Sovereign 7PW078	Departures	20.00%	36.00%	14.00%	30.00%	-	-	-	-
Coord 750 Citation V CAL 004	Arrivals	20.00%	36.00%	14.00%	30.00%	-	-	-	-
Cessna 750 Citation X 6AL024	Departures	20.00%	36.00%	14.00%	30.00%	-	-	-	-
	Arrivals	20.00%	36.00%	14.00%	30.00%	-	-	-	-
COMSEP	Departures	20.00%	36.00%	14.00%	30.00%	-	-	-	-
	TGO	20.00%	36.00%	14.00%	30.00%	-	-	-	-
DeHavilland DHC-6-100 Twin Otter PT6A20	Arrivals	20.00%	36.00%	14.00%	30.00%	-	-	-	-
	Departures	20.00%	36.00%	14.00%	30.00%	-	-	-	-
Folings FOO / DIMEAGE DIMEAGE	Arrivals	20.00%	36.00%	14.00%	30.00%	-	-	-	-
Eclipse 500 / PW610F PW610F	Departures	20.00%	36.00%	14.00%	30.00%	-	-	-	-
France FD 1445 CAL 000	Arrivals	-	55.00%	-	45.00%	-	-	-	-
Embraer ERJ145 6AL008	Departures	-	55.00%	-	45.00%	-	-	-	-
Culfatra and C400 CDD040	Arrivals	20.00%	36.00%	14.00%	30.00%	-	-	-	-
Gulfstream G400 6RR042	Departures	20.00%	36.00%	14.00%	30.00%	-	-	-	-
Cultatra am CEOC ADDOOS	Arrivals	20.00%	36.00%	14.00%	30.00%	-	-	-	-
Gulfstream G500 4BR003	Departures	20.00%	36.00%	14.00%	30.00%	-	-	-	-
Llughaa 500D 050D47	Arrivals	-	-	-	-	60.00%	-	40.00%	-
Hughes 500D 250B17	Departures	-	-	-	-	60.00%	-	40.00%	-

A:waya64	Operation	Runway								
Aircraft	Туре	5	9	23	27	09H	09TF	27H	27TF	
Jarool IAI 1125 Actro 1ACO02	Arrivals	20.00%	36.00%	14.00%	30.00%	-	-	-	-	
Israel IAI-1125 Astra 1AS002	Departures	20.00%	36.00%	14.00%	30.00%	-	-	-	-	
	Arrivals	-	55.00%	-	45.00%	-	-	-	-	
Lockheed C-130 Hercules T56A14	Departures	-	55.00%	-	45.00%	-	-	-	-	
	TGO	-	60.00%	-	40.00%	-	-	-	-	
Lockheed P-3 Orion ANP:P3A T56A14 T56-A-	Arrivals	-	55.00%	-	45.00%	-	-	-	-	
14	Departures	-	55.00%	-	45.00%	-	-	-	-	
McDonnell Douglas A-4 Skyhawk J52P4	Arrivals	-	55.00%	-	45.00%	-	-	-	-	
WicDonnell Douglas A-4 Skyrlawk 352F4	Departures	-	55.00%	-	45.00%	-	-	-	-	
Mitsubishi MU-300 Diamond 1PW037	Arrivals	20.00%	36.00%	14.00%	30.00%	-	-	-	-	
WillSubistif MO-300 Diamond TP W037	Departures	20.00%	36.00%	14.00%	30.00%	-	-	1	-	
	Arrivals	19.41%	34.93%	13.58%	29.11%	-	1.64%	-	1.34%	
Piper PA-24 Comanche TIO540	Departures	19.41%	34.93%	13.58%	29.11%	-	1.64%	-	1.34%	
	TGO	20.00%	36.00%	14.00%	30.00%	-	-	-	-	
Dinor DA 20 Twin Compands 10220	Arrivals	20.00%	36.00%	14.00%	30.00%	-	-	-	-	
Piper PA-30 Twin Comanche IO320	Departures	20.00%	36.00%	14.00%	30.00%	-	-	-	-	
Dinor DA 42 Chayanna Carina DTGA44	Arrivals	20.00%	36.00%	14.00%	30.00%	-	-	-	-	
Piper PA-42 Cheyenne Series PT6A41	Departures	20.00%	36.00%	14.00%	30.00%	-	-		-	
Robinson R44 Raven / Lycoming O-540-	Arrivals	-	-	-	-	60.00%	-	40.00%	-	
F1B5 TIO540	Departures	-	-	-	-	60.00%	-	40.00%	-	
Rockwell T-2 Buckeye J852	Arrivals	-	55.00%	-	45.00%	-	-	-	-	
Nockwell 1-2 Buckeye 3832	Departures	-	55.00%	-	45.00%	-	-	-	-	
Saab 340-A CT7-5	Arrivals	20.00%	36.00%	14.00%	30.00%	-	-	1	-	
Saab 340-A C17-3	Departures	20.00%	36.00%	14.00%	30.00%	-	-	-	-	
Sikoroky SH 60 Soo Howk T70044	Arrivals		-	-	-	60.00%	-	40.00%	-	
Sikorsky SH-60 Sea Hawk T70041	Departures	-	-	-	-	60.00%	-	40.00%	-	
T-38 Talon J855HA	Arrivals	-	55.00%	-	45.00%	-	-	-	-	
1-30 TAIOH 3033HA	Departures	-	55.00%	-	45.00%	-	-	-	-	

Table 1.3-3 2019 Existing Condition Flight Track Utilization

Arrival Track	Utilization	Departure Track	Utllization	TGO Track	Utilization
05A1	1.81%	05D1	2.79%	05TG	5.90%
05A2	0.91%	05D2	0.91%	09TG	0.55%
05A3	3.76%	05D3	2.79%	09TGSEP	10.62%
09A1	3.00%	09CD1	3.50%	23TG	4.13%
09A2	3.27%	09D1	2.30%	27TG	0.37%
09A3	1.40%	09D2	2.45%	27TGSEP	8.85%
09A4	4.43%	09D3	3.85%		
09HAP	0.27%	09HDP	0.27%		
09HATG	0.08%	09HDTG	0.08%		
09TFA1	0.56%	09TFD1	0.56%		
23A1	2.27%	23D1	0.91%		
23A2	1.36%	23D2	2.27%		
23A3	0.91%	23D3	1.36%		
27A1	3.27%	27CD1	1.68%		
27A2	1.46%	27D1	2.20%		
27A3	3.89%	27D2	3.75%		
27A4	1.46%	27D3	2.45%		
27HAP	0.18%	27HDP	0.18%		
27HATG	0.05%	27HDTG	0.05%		
27TFA1	0.46%	27TFD1	0.46%		
Subtotal	34.79%	Subtotal	34.79%	Subtotal	30.41%

Table 1.3-4 Land Use Compatibility with Yearly Day-Night Average Sound Levels

		Yearly Day	-Night Avera	age Sound I	Level (DNL)	
	Below 65	65-70	70-75	75-80	80-85	Over 85
	Decibels	Decibels	Decibels	Decibels	Decibels	Decibels
<u>Residential</u>						
Residential (Other than mobile	Υ	N^1	N^1	N	N	N
homes & transient lodges)	ī	IN	IN	IN	IN	IN
Mobile Home Parks	Υ	N	N	N	N	N
Transient Lodging	Υ	N^1	N^1	N^1	N	N
Public Use						
Schools	Υ	N^1	N ¹	N	N	N
Hospitals, Nursing Homes	Υ	25	30	N	N	N
Churches, Auditoriums, Concert	Υ	25	20	N	N	NI.
Halls	Ť	25	30	IN	IN	N
Governmental Services	Υ	Υ	25	30	N	N
Transportation	Υ	Υ	Y^2	Y^3	Y^4	Y^4
Parking	Υ	Υ	Y^2	Y^3	Y^4	N
Commercial Use						
Offices, Business & Professional	Υ	Υ	25	30	N	N
Wholesale & Retail Building						
Materials, Hardware & Farm	Υ	Υ	Y^2	Y^3	Y^4	N
Equipment						
Retail Trade - General	Υ	Υ	25	30	N	N
Utilities	Υ	Υ	Y^2	Y^3	Y^4	N
Communications	Υ	Υ	25	30	N	N
Manufacturing & Production						
Manufacturing, General	Υ	Υ	Y^2	Y^3	Y^4	N
Photographic and Optical	Υ	Υ	25	30	N	N

		Yearly Day	-Night Avera	age Sound I	_evel (DNL)	
	Below 65 Decibels	65-70 Decibels	70-75 Decibels	75-80 Decibels	80-85 Decibels	Over 85 Decibels
Agriculture (Except Livestock) & Forestry	Υ	Y^6	Y^7	Y ⁸	Y ⁸	Y ⁸
Livestock Farming & Breeding	Υ	Y^6	Y^7	N	N	N
Mining & Fishing, Resource Production & Extraction	Υ	Υ	Υ	Υ	Υ	Υ
Recreational Outdoor Sports Arenas, Spectator Sports	Υ	Y ⁵	Y ⁵	N	N	N
Outdoor Music Shells, Amphitheaters	Υ	N	N	N	N	N
Nature Exhibits & Zoos	Υ	Υ	N	N	N	N
Amusement, Parks, Resorts, Camps	Υ	Υ	Υ	N	N	N
Golf Courses, Riding Stables, Water Recreation	Υ	Υ	25	30	N	N

NOTE:

The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties remains with the local authorities. FAA determinations under Part 150 are not intended to substitute federally determined land use for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise-compatible land uses.

Y (Yes) Land Use and related structures are compatible without restrictions.

N (No) Land Use and related structures are not compatible and should be prohibited.

NLR Noise Level Reduction (outdoor to indoor) are to be achieved through incorporation of noise

attenuation into the design and construction of structure.

25, 30, or 35 Land use and related structures are generally compatible; measures to achieve NLR of 25, 30, or 35

dB must be incorporated in design and construction of structure.

Noncompatible land use

Source: Title 14 CFR part 150, 2007.

¹ Where the community determines that residential or school uses must be allowed, measures to achieve 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. However, the use of NLR criteria will not eliminate outdoor noise problems.

² Measures to achieve NLR of 25 dB must be incorporated into the design and construction of portions of the 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 the 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 the buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.

⁵ Land use compatibility provided special sound reinforcement systems are installed.

⁶ Residential buildings require an NLR of 25 dB.

⁷Residential buildings require an NLR of 30 dB.

⁸ Residential buildings not permitted.

1.3.2. FUTURE CONDITIONS NOISE MODELING ASSUMPTIONS

Flight Operations

Table 1.3-5 shows the AEDT-modeled average annual daily operations for the 2022 No-Action Alternative and Proposed Project conditions by aircraft at LAL. **Table 1.3-6** shows the AEDT-modeled average annual daily operations for the 2027 No-Action Alternative and Proposed Project conditions.

Runway Use

Runway utilization for the 2022 and 2027 scenarios are provided in **Tables 1.3-7** and **1.3-8**. There is no change from the No-Action Alternative and the Proposed Project conditions.

Flight Tracks

Flight tracks remain unchanged from the Existing Condition.

Track Use

Utilization percentages of the flight tracks are summarized in **Table 1.3-9** for arrivals, departures, and TGO tracks for the 2022 No-Action Alternative, 2022 Proposed Project, 2027 No-Action Alternative, and 2027 Proposed Project scenarios.



Noise Technical Report Lakeland Linder International Airport

Table 1.3-5 2022 Average Annual Daily Operations at LAL

	2022 No-Action Alternative 2022 Proposed Project													
Aircraft	Δrri	vals	Depar		TG	0		Arri	vals	Depar		TG	0	
Allorant	Day	Night	Day	Night	Day	Night	Total	Day	Night	Day	Night	Day	Night	Total
Aerospatiale SA-350D Astar (AS-350) TPE3	1.055	-	1.055	-	-	- Trigit	2.110	1.055	-	1.055	-	-	-	2.110
Agusta A-109 250B17	0.396	_	0.396	_	-	_	0.791	0.396	_	0.396	_	_	_	0.791
Airbus A319-100 Series 7CM050	0.432	0.144	0.507	0.069	-	_	1.153	0.432	0.144	0.507	0.069	_	_	1.153
Airbus A320-200 Series 2CM018	0.185	0.062	0.217	0.030	-	_	0.494	0.185	0.062	0.217	0.030	_	_	0.494
BEC58P	7.499	0.479	7.499	0.479	16.034	1.782	33.771	7.499	0.479	7.499	0.479	16.034	1.782	33.771
Bell 206L-4T Long Ranger 250B17	0.132	-	0.132	-	-	-	0.264	0.132	-	0.132	-	-	-	0.264
Boeing 737-800 Series 4CM039	0.766	0.255	0.899	0.123	-	_	2.043	0.766	0.255	0.899	0.123	_	_	2.043
Boeing 737-800 Series 4CM039 (CARGO)	4.000	2.000	4.000	2.000			12.000	7.000	7.000	7.000	6.000	_	_	27.000
Boeing 757-200 Series 4PW073	0.377	0.126	0.443	0.060	-	_	1.006	0.377	0.126	0.443	0.060	_	_	1.006
Boeing 767-200 cented 41 World Boeing 767-300 ER Freighter 2GE054	2.000	2.000	3.000	1.000			8.000	2.000	2.000	3.000	2.000	_	_	9.000
Boeing F/A-18 Hornet F4044	0.071	-	0.071	1.000	_	_	0.142	0.071	2.000	0.071	-	_	_	0.142
Bombardier Challenger 600 5GE084	1.610	0.103	1.610	0.103	-	_	3.425	1.610	0.103	1.610	0.103	_	_	3.425
Bombardier Global 5000 Business 4BR009	0.250	0.103	0.250	0.103			0.531	0.250	0.103	0.250	0.103	_		0.531
Bombardier Learjet 35 1AS002	5.367	0.343	5.367	0.343		_	11.420	5.367	0.343	5.367	0.343	_	_	11.420
CASA CN-235-100 CT79B	0.182	-	0.182	-	0.131		0.496	0.182	0.545	0.182	0.545	0.131	_	0.496
Cessna 150 Series O200	24.063	1.390	24.063	1.390	27.452	3.050	81.409	24.063	1.390	24.063	1.390	27.452	3.050	81.409
Cessna 172 Skyhawk IO360	1.690	0.108	1.690	0.108	21.432	-	3.595	1.690	0.108	1.690	0.108		5.050	3.595
Cessna 182 IO360	2.383	0.100	2.383	0.152		<u> </u>	5.070	2.383	0.152	2.383	0.152	_	_	5.070
Cessna 206 TIO540 IO-540-AC	1.678	0.132	1.678	0.132		<u> </u>	3.569	1.678	0.132	1.678	0.132	_	_	3.569
Cessna 208 Caravan PT6A14	1.212	0.107	1.212	0.107		<u> </u>	2.579	1.212	0.107	1.212	0.107	_	_	2.579
Cessna 441 Conquest II TPE10A	0.972	0.062	0.972	0.062	2.830	0.314	5.212	0.972	0.062	0.972	0.062	2.830	0.314	5.212
Cessna 500 Citation I 1PW038	2.049	0.002	2.049	0.002	2.030	0.314	4.359	2.049	0.002	2.049	0.002	2.030	0.314	4.359
Cessna 550 Citation II 1PW036	1.812	0.131	1.812	0.131	-	-	3.856	1.812	0.131	1.812	0.131	-	-	3.856
Cessna 550 Citation III 1AS001	0.159	0.110	0.159	0.010	-	-	0.339	0.159	0.110	0.159	0.010	-	-	0.339
Cessna 680 Citation In 1A3001 Cessna 680 Citation Sovereign 7PW078	0.706	0.010	0.706	0.010	-	-	1.502	0.706	0.010	0.706	0.010	-	-	1.502
Cessna 750 Citation X 6AL024	0.700	0.043	0.700	0.043	-	-	0.604	0.700	0.043	0.700	0.043	-	-	0.604
COMSEP	6.990	0.018	6.990	0.446	1.718	0.191	16.782	6.990	0.018	6.990	0.016	1.718	0.191	16.782
DeHavilland DHC-6-100 Twin Otter PT6A20	5.975	0.381	5.975	0.381	1.7 10	-	12.713	5.975	0.381	5.975	0.381	1.7 10	0.191	12.713
Eclipse 500 / PW610F PW610F	0.181	0.012	0.181	0.012	-	-	0.385	0.181	0.012	0.181	0.012	-	-	0.385
Gulfstream G400 6RR042	0.161	0.012	0.161	0.012	-	-	2.024	0.161	0.012	0.161	0.012	-	-	2.024
Gulfstream G500 4BR003	0.951	0.001	0.951		-	-	0.531	0.951		0.951	0.001	-	-	0.531
Hughes 500D 250B17	0.250	+	0.250	0.016	-	-	1.319	0.250	0.016	0.250	0.016	-	-	1.319
Israel IAI-1125 Astra 1AS002	0.860	0.018	0.860	- 0.010	-	-	0.586	0.000	0.018	0.860	0.018	-	-	0.586
	1.044	0.016	1.044	0.018	1.523	-	3.611	1.044	0.016	1.044	0.016	1.523	-	3.611
Lockheed C-130 Hercules T56A14		-		-	1.523	-			-		-	1.523	-	
Lockheed P-3 Orion ANP:P3A T56A14 T56-A-14	1.085	- 0.000	1.085	- 0.000	-	-	2.169	1.085	- 0.000	1.085	- 0.000	-	-	2.169
Mitsubishi MU-300 Diamond 1PW037	0.448	0.029	0.448	0.029	-		0.952	0.448	0.029	0.448	0.029	-	-	0.952
Piper PA-24 Comanche TIO540	40.190	2.503	40.190	2.503	51.238	5.693	142.317	40.190	2.503	40.190	2.503	51.238	5.693	142.317
Piper PA-30 Twin Comanche IO320	0.954	0.061	0.954	0.061	-	-	2.029	0.954	0.061	0.954	0.061	-	-	2.029
Piper PA-42 Cheyenne Series PT6A41	0.246	0.016	0.246	0.016	-	-	0.523	0.246	0.016	0.246	0.016	-	-	0.523
Robinson R44 Raven / Lycoming O-540-F1B5 TIO540	4.519	-	4.519	- 0.000	-	-	9.037	4.519	- 0.000	4.519	- 0.000	-	-	9.037
Saab 340-A CT7-5	0.408	0.026	0.408	0.026	-	-	0.868	0.408	0.026	0.408	0.026	-	-	0.868
Sikorsky SH-60 Sea Hawk T70041	1.897	-	1.897	-	-	-	3.793	1.897	-	1.897	-	-	-	3.793
Grand Tot	al 127.401	11.310	128.706	10.005	100.926	11.030	389.378	130.401	16.310	131.706	15.005	100.926	11.030	405.378

TGO = Touch and Go
Day = 7:00 a.m. to 9:59 p.m.; Night = 10:00 p.m. to 6:59 a.m.
Values reflect rounding
Source: AECOM, 2020

Table 1.3-6 2027 Average Annual Daily Operations at LAL

Aircraft Aircraft Aircraft Day Night Day Day
Aerospatiale SA-350D Astar (AS-350) TPE3 2.158 2.158 4.316 2.158 2.158 4.316 Agusta A-109 250B17 0.809 0.809 1.619 0.809 0.809 1.619 Airbus A319-100 Series 7CM050 0.500 0.167 0.587 0.080 1.335 0.500 0.167 0.587 Airbus A320-200 Series 2CM018 0.214 0.071 0.252 0.034 0.572 0.214 0.071 0.252 0.034 BEC58P 9.259 0.591 9.259 0.591 17.358 1.929 38.987 9.259 0.591 17.358 1.929 38.987 9.259 0.591 17.358 1.929 38.987 9.259 0.591 17.358 1.929 38.987 9.259 0.591 17.358 1.929 38.987 9.259 0.591 17.358 1.929 38.987 9.259 0.591 17.358 1.929 38.987 9.259 0.591 17.358 1.929 38.987 9.259 0.591 17.358 1.929
Agusta A-109 250B17 0.809 0.809 0.809 1.619 0.809 0.809 1.619 Airbus A319-100 Series 7CM050 0.500 0.167 0.587 0.080 1.335 0.500 0.167 0.587 0.080 1.335 Airbus A320-200 Series 2CM018 0.214 0.071 0.252 0.034 0.572 0.214 0.071 0.252 0.034 0.572 0.214 0.071 0.252 0.034 0.572 0.214 0.071 0.252 0.034 0.572 0.214 0.071 0.252 0.034 0.572 0.214 0.071 0.252 0.034 0.572 0.214 0.071 0.252 0.034 0.572 0.214 0.071 0.252 0.034 0.572 0.214 0.071 0.252 0.034 0.572 0.214 0.071 0.252 0.034 0.572 0.540 0.270 0.540 0.270 0.270 0.270 0.540 0.270 0.270 0.540 0.270 0.270 0.540 0.270
Airbus A319-100 Series 7CM050 0.500 0.167 0.587 0.080 1.335 0.500 0.167 0.587 0.080 1.335 Airbus A320-200 Series 2CM018 0.214 0.071 0.252 0.034 0.572 0.214 0.071 0.252 0.034 0.572 BEC58P 9.259 0.591 9.259 0.591 17.358 1.929 38.987 9.259 0.591 17.358 1.929 38.987 9.259 0.591 17.358 1.929 38.987 9.259 0.591 17.358 1.929 38.987 9.259 0.591 17.358 1.929 38.987 9.259 0.591 17.358 1.929 38.987 9.259 0.591 17.358 1.929 38.987 9.259 0.591 17.358 1.929 38.987 9.259 0.591 17.358 1.929 38.987 9.259 0.591 17.358 1.929 38.987 9.259 0.591 17.358 1.929 38.987 9.259 0.591 0.591 0.540
Airbus A320-200 Series 2CM018 0.214 0.071 0.252 0.034 0.572 0.214 0.071 0.252 0.034 0.572 BEC58P 9.259 0.591 9.259 0.591 17.358 1.929 38.987 9.259 0.591 17.358 1.929 38.987 Bell 206L-4T Long Ranger 250B17 0.270 0.270 0.540 0.270 0.270 0.540 Boeing 737-800 Series 4CM039 0.887 0.296 1.040 0.142 2.364 0.887 0.296 1.040 2.000 2.000 12.000 8.000 8.000 9.000 8.000 33.000 Boeing 757-200 Series 4PW073 0.437 0.146 0.512 0.070 1.164 0.437 0.146 0.512 0.070 1.164 0.437 0.146 0.512 0.070 1.164 0.437 0.146 0.512 0.070 1.164 0.437 0.146 0.512 0.070 1.164 0.437 0.146 0.512 0.070 1.164 0.437 0.14
BEC58P 9.259 0.591 9.259 0.591 17.358 1.929 38.987 9.259 0.591 9.259 0.591 17.358 1.929 38.987 Bell 206L-4T Long Ranger 250B17 0.270 0.270 0.540 0.270 0.270 0.540 Boeing 737-800 Series 4CM039 0.887 0.296 1.040 0.142 2.364 0.887 0.296 1.040 0.142 2.364 Boeing 737-800 Series 4CM039 (CARGO) 4.000 2.000 4.000 2.000 12.000 8.000 8.000 9.000 8.000 33.000 Boeing 757-200 Series 4PW073 0.437 0.146 0.512 0.070 1.164 0.437 0.146 0.512 0.070 1.164 Boeing 767-300 ER Freighter 2GE054 2.000 2.000 3.000 1.000 8.000 3.000 3.000 3.000 12.000 Boeing F/A-18 Hornet F4044 0.072 0.072 0.072 0.144 0.072 0.072 0.144 Bombardier Challenger 600 5GE084
Bell 206L-4T Long Ranger 250B17 0.270 0.270 0.540 Boeing 737-800 Series 4CM039 0.887 0.296 1.040 0.142 2.364 0.887 0.296 1.040 0.142 2.364 Boeing 737-800 Series 4CM039 (CARGO) 4.000 2.000 4.000 2.000 12.000 8.000 8.000 9.000 8.000 33.000 Boeing 757-200 Series 4PW073 0.437 0.146 0.512 0.070 1.164 0.437 0.146 0.512 0.070 1.164 0.437 0.146 0.512 0.070 1.164 0.437 0.146 0.512 0.070 1.164 0.437 0.146 0.512 0.070 1.164 0.437 0.146 0.512 0.070 1.164 0.437 0.146 0.512 0.070 1.164 0.437 0.146 0.512 0.070 1.164 0.072 0.072 0.072 0.072 0.072 0.072 0.072 0.072 0.072 0.072 0.072 0.072 0.072 0.072 <t< td=""></t<>
Boeing 737-800 Series 4CM039 0.887 0.296 1.040 0.142 2.364 0.887 0.296 1.040 0.142 2.364 Boeing 737-800 Series 4CM039 (CARGO) 4.000 2.000 4.000 2.000 4.000 2.000 12.000 8.000 8.000 9.000 8.000 33.000 Boeing 757-200 Series 4PW073 0.437 0.146 0.512 0.070 1.164 0.437 0.146 0.512 0.070 1.164 Boeing 767-300 ER Freighter 2GE054 2.000 2.000 3.000 1.000 8.000 3.000 3.000 3.000 12.000 Boeing F/A-18 Hornet F4044 0.072 0.072 0.144 0.072 0.072 0.144 Bombardier Challenger 600 5GE084 2.453 0.157 2.453 0.157 5.220 2.453 0.157 2.453 0.157 5.220
Boeing 737-800 Series 4CM039 (CARGO) 4.000 2.000 4.000 2.000 12.000 8.000 9.000 8.000 33.000 Boeing 757-200 Series 4PW073 0.437 0.146 0.512 0.070 1.164 0.437 0.146 0.512 0.070 1.164 Boeing 767-300 ER Freighter 2GE054 2.000 2.000 3.000 1.000 8.000 3.000 3.000 3.000 12.000 Boeing F/A-18 Hornet F4044 0.072 0.072 0.144 0.072 0.072 0.144 Bombardier Challenger 600 5GE084 2.453 0.157 2.453 0.157 5.220 2.453 0.157 2.453
Boeing 757-200 Series 4PW073 0.437 0.146 0.512 0.070 1.164 0.437 0.146 0.512 0.070 1.164 Boeing 767-300 ER Freighter 2GE054 2.000 2.000 3.000 1.000 3.000 3.000 3.000 3.000 3.000 3.000 3.000 12.000 Boeing F/A-18 Hornet F4044 0.072 0.072 0.144 0.072 0.072 0.144 Bombardier Challenger 600 5GE084 2.453 0.157 2.453 0.157 5.220 2.453 0.157 2.453 0.157 5.220
Boeing 767-300 ER Freighter 2GE054 2.000 2.000 3.000 1.000 8.000 3.000
Boeing F/A-18 Hornet F4044 0.072 0.072 0.144 0.072 0.072 0.144 Bombardier Challenger 600 5GE084 2.453 0.157 2.453 0.157 5.220 2.453 0.157 2.200
Boeing F/A-18 Hornet F4044 0.072 0.072 0.144 0.072 0.072 0.144 Bombardier Challenger 600 5GE084 2.453 0.157 2.453 0.157 5.220 2.453 0.157 2.200
Bombardier Challenger 600 5GE084 2.453 0.157 2.453 0.157 5.220 2.453 0.157 2.20
Bombardier Learjet 35 1AS002 8.180 0.522 8.180 0.522 17.404 8.180 0.522 8.180 17.404
CASA CN-235-100 CT79B 0.186 0.186 0.289 0.660 0.186 0.186 0.289 0.660
Cessna 150 Series O200 27.251 1.587 27.251 1.587 35.188 3.910 96.774 27.251 1.587 27.251 1.587 35.188 3.910 96.774
Cessna 172 Skyhawk IO360 1.912 0.122 1.912 0.122 4.067 1.912 0.122 1.912 0.122 4.067
Cessna 182 IO360 2.696 0.172 2.696 0.172 5.735 2.696 0.172 2.696 0.172 5.735
Cessna 206 TIO540 IO-540-AC 1.898 0.121 1.898 0.121 4.038 1.898 0.121 1.898 0.121 4.038
Cessna 208 Caravan PT6A14 1.385 0.088 1.385 0.088 2.948 1.385 0.088 1.385 0.088 2.948
Cessna 441 Conquest II TPE10A 1.111 0.071 1.111 0.071 2.959 0.329 5.651 1.111 0.071 1.111 0.071 2.959 0.329 5.651
Cessna 500 Citation I 1PW038 3.122 0.199 <th< td=""></th<>
Cessna 550 Citation II 1PW036 2.762 0.176 2.762 0.176 5.876 2.762 0.176 5.876
Cessna 650 Citation III 1AS001 0.243 0.015 0.243 0.015 0.516 0.243 0.015 0.516
Cessna 680 Citation Sovereign 7PW078 1.076 0.069
Cessna 750 Citation X 6AL024 0.433 0.028 0.433 0.028 0.921 0.433 0.028 0.433 0.028 0.921
COMSEP 7.908 0.505 7.908 0.505 2.202 0.245 19.273 7.908 0.505 7.908 0.505 2.202 0.245 19.273
DeHavilland DHC-6-100 Twin Otter PT6A20 6.830 0.436 6.830 0.436 14.531 6.830 0.436 6.830 0.436 14.531
Eclipse 500 / PW610F PW610F
Gulfstream G400 6RR042 1.450 0.093 1.450 0.093 3.084 1.450 0.093 1.450 0.093 3.084
Gulfstream G500 4BR003 0.380 0.024 0.380 0.024 0.810 0.810 0.380 0.024 0.380 0.024 0.810
Hughes 500D 250B17 1.349 1.349 2.698 1.349 1.349 2.698
Israel IAI-1125 Astra 1AS002 0.420 0.027 0.420 0.027 0.893 0.420 0.027 0.420 0.027 0.893
Lockheed C-130 Hercules T56A14 1.062 1.062 3.364 5.489 1.062 1.062 3.364 5.489
Lockheed P-3 Orion ANP:P3A T56A14 T56-A-14 1.104 1.104 2.207 1.104 1.104 2.207
Mitsubishi MU-300 Diamond 1PW037 0.682 0.044 0.682 0.044 1.452 0.682 0.044 0.682 0.044 1.452
Piper PA-24 Comanche TIO540 45.502 2.839 45.502 2.839 65.677 7.297 169.657 45.502 2.839 45.502 2.839 65.677 7.297 169.657
Piper PA-30 Twin Comanche IO320 1.091 0.070 1.091 0.070 2.320 1.091 0.070 2.320
Piper PA-42 Cheyenne Series PT6A41 0.281 0.018 0.281 0.018 0.281 0.018 0.298
Robinson R44 Raven / Lycoming O-540-F1B5 TIO540 6.729 6.729 13.458
Saab 340-A CT7-5 0.466 0.030 0.466 0.030 0.992 0.466 0.030 0.992
Sikorsky SH-60 Sea Hawk T70041 2.200 4.400 2.200 2.200 4.400
Grand Total 153.423 12.723 154.777 11.370 127.038 13.709 473.041 158.423 19.723 159.777 18.370 127.038 13.709 497.041

TGO = Touch and Go
Day = 7:00 a.m. to 9:59 p.m.; Night = 10:00 p.m. to 6:59 a.m.
Values reflect rounding
Source: AECOM, 2020

Table 1.3-7 2022 Runway Utilization

Aircraft	Operation Type	2022 (No-Action Alternative and Proposed Project) Runway										
7 67 34.1	opolation Type	5	9	23	27	09H	09TF	27H	27TF			
	Arrival	-	-	-	-	60.00%	-	40.00%	-			
Aerospatiale SA-350D Astar (AS-350) TPE3	Departure	_	_	_	_	60.00%	-	40.00%	-			
	Arrival	_	_	_	-	60.00%	-	40.00%	-			
Agusta A-109 250B17	Departure	_	_	_	_	60.00%	_	40.00%	-			
	Arrival	_	55.00%	-	45.00%	-	_	-	-			
Airbus A319-100 Series 7CM050	Departure	_	55.00%	-	45.00%	_	_	_	-			
	Arrival	-	55.00%	-	45.00%	_	_	_	_			
Airbus A320-200 Series 2CM018	Departure	_	55.00%	-	45.00%	_	_	_	-			
	Arrival	20.00%	36.00%	14.00%	30.00%	-	-	-	-			
BEC58P	Departure	20.00%		14.00%	30.00%	_	_	_	-			
22000.	TGO	20.00%		14.00%	30.00%	_	_	_	-			
	Arrival	-	-	-	-	60.00%	_	40.00%	_			
Bell 206L-4T Long Ranger 250B17	Departure	_	_	_	-	60.00%	_	40.00%	_			
	Arrival	-	55.00%	-	45.00%	-	_	-	_			
Boeing 737-800 Series 4CM039	Departure	_	55.00%	_	45.00%	_	_	-	_			
	Arrival	-	55.00%	-	45.00%	_	_	_	_			
Boeing 737-800 Series 4CM039 (CARGO)	Departure	_	55.00%	-	45.00%	_	_	_	_			
	Arrival	_	55.00%	_	45.00%	_	_	_	_			
Boeing 757-200 Series 4PW073	Departure	_	55.00%	_	45.00%	_	_	_	_			
	Arrival	_	55.00%	_	45.00%	_	_	_	_			
Boeing 767-300 ER Freighter 2GE054	Departure	_	55.00%	-	45.00%	_	_	_	_			
Boeing F/A-18 Hornet F4044 Bombardier Challenger 600 5GE084	Arrival	_	55.00%	-	45.00%	_	_	_	_			
	Departure	_	55.00%	-	45.00%	_	_	_	_			
	Arrival	20.00%	36.00%	14.00%	30.00%	_	_	_				
	Departure	20.00%	36.00%	14.00%	30.00%	_	_	_	_			
	Arrival	20.00%	36.00%	14.00%	30.00%	_	_	_				
Bombardier Global 5000 Business 4BR009	Departure	20.00%		14.00%	30.00%	_	_	_	_			
	Arrival	20.00%	36.00%	14.00%	30.00%	_	_	_	_			
Bombardier Learjet 35 1AS002	Departure	20.00%	36.00%	14.00%	30.00%	_	_	_	_			
	Arrival	-	55.00%	-	45.00%	_	_	_	_			
CASA CN-235-100 CT79B	Departure	-	55.00%	-	45.00%	_	_	_	_			
6/16/1 611 200 100 617 6B	TGO	-	60.00%	-	40.00%	_	_	_	_			
	Arrival	18.20%	32.77%	12.74%	27.30%	_	4.94%	_	4.04%			
Cessna 150 Series O200	Departure	18.20%			27.30%	_	4.94%	_	4.04%			
2000114 100 201100 2200	TGO	20.00%		14.00%	30.00%	_	-	_	-			
	Arrival	20.00%		14.00%	30.00%	_	_	_	_			
Cessna 172 Skyhawk IO360	Departure	20.00%		14.00%	30.00%	_	_	_	-			
	Arrival	20.00%		14.00%	30.00%	_	_	_	-			
Cessna 182 IO360	Departure	20.00%		14.00%	30.00%	_	_	_	-			
	Arrival	20.00%		14.00%	30.00%	_	_	_	_			
Cessna 206 TIO540 IO-540-AC	Departure	20.00%		14.00%	30.00%	-	_	_	_			
	Arrival	20.00%		14.00%	30.00%	_	_	_	_			
Cessna 208 Caravan PT6A14	Departure	20.00%		14.00%	30.00%	-	_	_	_			
	Arrival	20.00%		14.00%	30.00%	_	_	_	_			
Cessna 441 Conquest II TPE10A	Departure	20.00%		14.00%	30.00%	-	_	_	_			
Cooma III Conquestii II E 10/1	TGO	-	55.00%	-	45.00%	-	_	_	_			
	Arrival	20.00%	36.00%	14.00%	30.00%	-	_	_				
Cessna 500 Citation I 1PW038									_			

		2022 (No-Action Alternative and Proposed Project)									
Aircraft	Operation Type				Runv						
		5	9	23	27	09H	09TF	27H	27TF		
Cessna 550 Citation II 1PW036	Arrival	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
Cessila 330 Citation in Tr W030	Departure	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
Cessna 650 Citation III 1AS001	Arrival	20.00%	36.00%	14.00%	30.00%	-	-	- !	-		
Cessila 000 Citation III TAGOUT	Departure	20.00%	36.00%	14.00%	30.00%	1	-	-	-		
Cessna 680 Citation Sovereign 7PW078	Arrival	20.00%	36.00%	14.00%	30.00%	1	-	-	-		
Cessila 000 Citation Sovereign 7 P W076	Departure	20.00%	36.00%	14.00%	30.00%	1	-	-	-		
Cessna 750 Citation X 6AL024	Arrival	20.00%	36.00%	14.00%	30.00%	-	-	- !	-		
Cessila 730 Citation A 0AL024	Departure	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
	Arrival	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
COMSEP	Departure	20.00%	36.00%	14.00%	30.00%	-	-	- !	-		
	TGO	20.00%	36.00%	14.00%	30.00%	-	-	- !	-		
DeHavilland DHC-6-100 Twin Otter PT6A20	Arrival	20.00%	36.00%	14.00%	30.00%	-	-	- !	-		
Deliavillatid Di IC-0-100 Twill Offer P 10A20	Departure	20.00%	36.00%	14.00%	30.00%	1	-	-	-		
Eclipse 500 / PW610F PW610F	Arrival	20.00%	36.00%	14.00%	30.00%	1	-	-	-		
Edipse 500 / PWOTOF PWOTOF	Departure	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
Gulfstream G400 6RR042	Arrival	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
Guilstream G400 6KK042	Departure	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
Gulfstream G500 4BR003	Arrival	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
Guilstream G500 4BR005	Departure	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
Hughes 500D 250B17	Arrival	-	-	-	-	60.00%	-	40.00%	-		
	Departure	-	-	-	-	60.00%	-	40.00%	-		
Israel IAI-1125 Astra 1AS002	Arrival	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
ISTACTIAL-1125 ASITA TASUUZ	Departure	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
	Arrival	-	55.00%	-	45.00%	-	-	-	-		
Lockheed C-130 Hercules T56A14	Departure	-	55.00%	-	45.00%	-	-	-	-		
	TGO	-	60.00%	-	40.00%	-	-	-	-		
Lookhood D.2 Orion AND D2A TEGA14 TEG A 14	Arrival	-	55.00%	-	45.00%	-	-	-	-		
Lockheed P-3 Orion ANP:P3A T56A14 T56-A-14	Departure	-	55.00%	-	45.00%	-	-	-	-		
Mitsubishi MU-300 Diamond 1PW037	Arrival	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
Willsubistii WiO-300 Diamond 1PW037	Departure	20.00%	36.00%	14.00%	30.00%	•	-	-	-		
	Arrival	19.54%	35.17%	13.68%	29.31%	•	1.26%	-	1.03%		
Piper PA-24 Comanche TIO540	Departure	19.54%	35.17%	13.68%	29.31%	-	1.26%	-	1.03%		
	TGO	20.00%	36.00%	14.00%	30.00%	•	-	-	-		
Dinor DA 20 Twin Comprehe IO220	Arrival	20.00%	36.00%	14.00%	30.00%	•	-	-	-		
Piper PA-30 Twin Comanche IO320	Departure	20.00%	36.00%	14.00%	30.00%	•	-	-	-		
Dipor DA 42 Chayanna Sariaa DT6A41	Arrival	20.00%	36.00%	14.00%	30.00%	•	-	-	-		
Piper PA-42 Cheyenne Series PT6A41	Departure	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
Robinson R44 Raven / Lycoming O-540-F1B5 TIO540	Arrival	-	-	-	-	60.00%	-	40.00%	-		
Nobilison K44 Kaven / Lyconning O-540-F165 110540	Departure	-	-	-	-	60.00%	-	40.00%	-		
Cook 240 A CT7 5	Arrival	20.00%	36.00%	14.00%	30.00%	-	-		-		
Saab 340-A CT7-5	Departure	20.00%	36.00%	14.00%	30.00%	-	-		-		
	Arrival	-	_	-	-	60.00%	-	40.00%	-		
Sikorsky SH-60 Sea Hawk T70041	,										

Table 1.3-8 2027 Runway Utilization

Aircraft	Operation Type	2027 (No-Action Alternative and Proposed Project) Runway									
7.111.01.011	operanen Type	5	9	23	27	09H	09TF	27H	27TF		
	Arrival	-	-	-	-	60.00%	-	40.00%	-		
Aerospatiale SA-350D Astar (AS-350) TPE3	Departure	_	_	_	_	60.00%	-	40.00%	-		
	Arrival	-	_	_	-	60.00%	-	40.00%	-		
Agusta A-109 250B17	Departure	_	_	_	_	60.00%	_	40.00%	_		
	Arrival	-	55.00%	-	45.00%	-	_	-	_		
Airbus A319-100 Series 7CM050	Departure	-	55.00%	-	45.00%	_	_	_	_		
	Arrival	-	55.00%	-	45.00%	_	_	_	_		
Airbus A320-200 Series 2CM018	Departure	_	55.00%	_	45.00%	_	_	_	_		
	Arrival	20.00%	36.00%	14.00%	30.00%	_	_	_	_		
BEC58P	Departure	20.00%		14.00%	30.00%	_	_	_	_		
BE0001	TGO	20.00%		14.00%	30.00%	_	_	_	_		
	Arrival	-	-	-	-	60.00%	_	40.00%	_		
Bell 206L-4T Long Ranger 250B17	Departure	_	_	_	_	60.00%	_	40.00%	_		
	Arrival	_	55.00%	_	45.00%	-	_	-0.0070			
Boeing 737-800 Series 4CM039	Departure	_	55.00%	_	45.00%	_	_		_		
	Arrival		55.00%		45.00%	-	_	_	-		
Boeing 737-800 Series 4CM039 (CARGO)		-	55.00%	-	45.00%			-	-		
	Departure Arrival	-		-		-	-		-		
Boeing 757-200 Series 4PW073		-	55.00% 55.00%	-	45.00%	-	-	-	-		
	Departure	-		-	45.00%	-	-	-	-		
Boeing 767-300 ER Freighter 2GE054	Arrival	-	55.00%	-	45.00%	-	-	-	-		
	Departure	-	55.00%	-	45.00%	-	-	-	-		
Boeing F/A-18 Hornet F4044	Arrival	-	55.00%	-	45.00%	-	-	-	-		
-	Departure	-	55.00%	- 44.000/	45.00%	-	-	-	-		
Bombardier Challenger 600 5GE084	Arrival	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
~	Departure	20.00%		14.00%	30.00%	-	-	-	-		
Bombardier Global 5000 Business 4BR009	Arrival	20.00%		14.00%	30.00%	-	-	-	-		
	Departure	20.00%		14.00%	30.00%	-	-	-	-		
Bombardier Learjet 35 1AS002	Arrival	20.00%		14.00%	30.00%	-	-	-	-		
,	Departure	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
0404 ON 005 400 OT70D	Arrival	-	55.00%	-	45.00%	-	-	-	-		
CASA CN-235-100 CT79B	Departure	-	55.00%	-	45.00%	-	-	-	-		
	TGO	-	60.00%	-	40.00%	-	-	-	-		
0 450 0 1 0000	Arrival	18.20%		12.74%	27.30%	-	4.94%	-	4.04%		
Cessna 150 Series O200	Departure	18.20%			27.30%	-	4.94%	-	4.04%		
	TGO	20.00%		14.00%	30.00%	-	-	-	-		
Cessna 172 Skyhawk IO360	Arrival	20.00%		14.00%	30.00%	-	-	-	-		
	Departure	20.00%		14.00%	30.00%	-	-	-	-		
Cessna 182 IO360	Arrival	20.00%		14.00%	30.00%	-	-	-	-		
	Departure	20.00%		14.00%	30.00%	-	-	-	-		
Cessna 206 TIO540 IO-540-AC	Arrival	20.00%		14.00%	30.00%	-	-	-	-		
200114 200 1100 10 10 110 110	Departure	20.00%		14.00%	30.00%	-	-	-	-		
Cessna 208 Caravan PT6A14	Arrival	20.00%		14.00%	30.00%	-	-	-	-		
Cooma 200 Galavan i 10/117	Departure	20.00%		14.00%	30.00%	-	-	-	-		
_	Arrival	20.00%		14.00%	30.00%	-	-	-			
Cessna 441 Conquest II TPE10A	Departure	20.00%		14.00%	30.00%	-	-	-	-		
	TGO	-	55.00%	-	45.00%	-	-	-	-		
Cessna 500 Citation I 1PW038	Arrival	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
Ocasiia ooo Oilalloii i ii vyooo	Departure	20.00%	36.00%	14.00%	30.00%	-		-	-		

		2027 (No-Action Alternative and Proposed Project)									
Aircraft	Operation Type				Runv	vay					
		5	9	23	27	09H	09TF	27H	27TF		
Cessna 550 Citation II 1PW036	Arrival	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
Cessila 330 Citation II 17 W030	Departure	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
Cessna 650 Citation III 1AS001	Arrival	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
Cessila 050 Citation III 1A5001	Departure	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
Cessna 680 Citation Sovereign 7PW078	Arrival	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
Cessila 000 Citation Sovereign 7F W076	Departure	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
Cessna 750 Citation X 6AL024	Arrival	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
Cessila 750 Citation A 6AL024	Departure	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
	Arrival	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
COMSEP	Departure	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
	TGO	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
Dellavilland DHC 6 100 Twin Ottor DT6A20	Arrival	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
DeHavilland DHC-6-100 Twin Otter PT6A20	Departure	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
Foliage 500 / DMC405 DMC405	Arrival	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
Eclipse 500 / PW610F PW610F	Departure	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
Oulfatra and O400 CDR040	Arrival	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
Gulfstream G400 6RR042	Departure	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
O 1/ 1 O 500 4 B B 000	Arrival	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
Gulfstream G500 4BR003	Departure	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
	Arrival	-	-	-	-	60.00%	-	40.00%	-		
Hughes 500D 250B17	Departure	-	-	-	-	60.00%	-	40.00%	-		
	Arrival	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
Israel IAI-1125 Astra 1AS002	Departure	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
	Arrival	-	55.00%	-	45.00%	-	-	-	-		
Lockheed C-130 Hercules T56A14	Departure	-	55.00%	_	45.00%	_	-	_	-		
	TGO	-	60.00%	_	40.00%	_	_	_	_		
	Arrival	-	55.00%	_	45.00%	_	_	_	_		
Lockheed P-3 Orion ANP:P3A T56A14 T56-A-14	Departure	-	55.00%	_	45.00%	_	-	_	-		
	Arrival	20.00%	36.00%	14.00%	30.00%	_	_	_	_		
Mitsubishi MU-300 Diamond 1PW037	Departure	20.00%	36.00%	14.00%	30.00%	_	_	_	-		
	Arrival	19.58%	35.24%	13.70%	29.36%	0.00%	1.17%	0.00%	0.96%		
Piper PA-24 Comanche TIO540	Departure	19.58%	35.24%	13.70%	29.36%	0.00%	1.17%	0.00%	0.96%		
i ipor i / E i comanone i recito	TGO	20.00%	36.00%	14.00%	30.00%	-	-	-	-		
	Arrival	20.00%	36.00%	14.00%	30.00%	_	_	_	_		
Piper PA-30 Twin Comanche IO320	Departure	20.00%	36.00%	14.00%	30.00%	_	_	_	_		
	Arrival	20.00%	36.00%	14.00%	30.00%	_	_	_	-		
Piper PA-42 Cheyenne Series PT6A41	Departure	20.00%	36.00%	14.00%	30.00%	_	_	_	_		
	Arrival	-	-	- 1.5070	-	60.00%	_	40.00%	_		
Robinson R44 Raven / Lycoming O-540-F1B5 TIO540	Departure	_	_	_	_	60.00%	_	40.00%	_		
	Arrival	20.00%	36.00%	14.00%	30.00%	-	_	-0.0070	_		
Saab 340-A CT7-5	Departure	20.00%	36.00%	14.00%	30.00%	_	_	_	_		
	Arrival	-	-	-	-	60.00%	_	40.00%	_		
Sikorsky SH-60 Sea Hawk T70041	Departure	_	_	_	_	60.00%	_	40.00%	-		
	Departure		<u> </u>	<u>-</u>		00.0070		70.00/0	-		

Table 1.3-9 2022 and 2027 Flight Track Utilization Summary

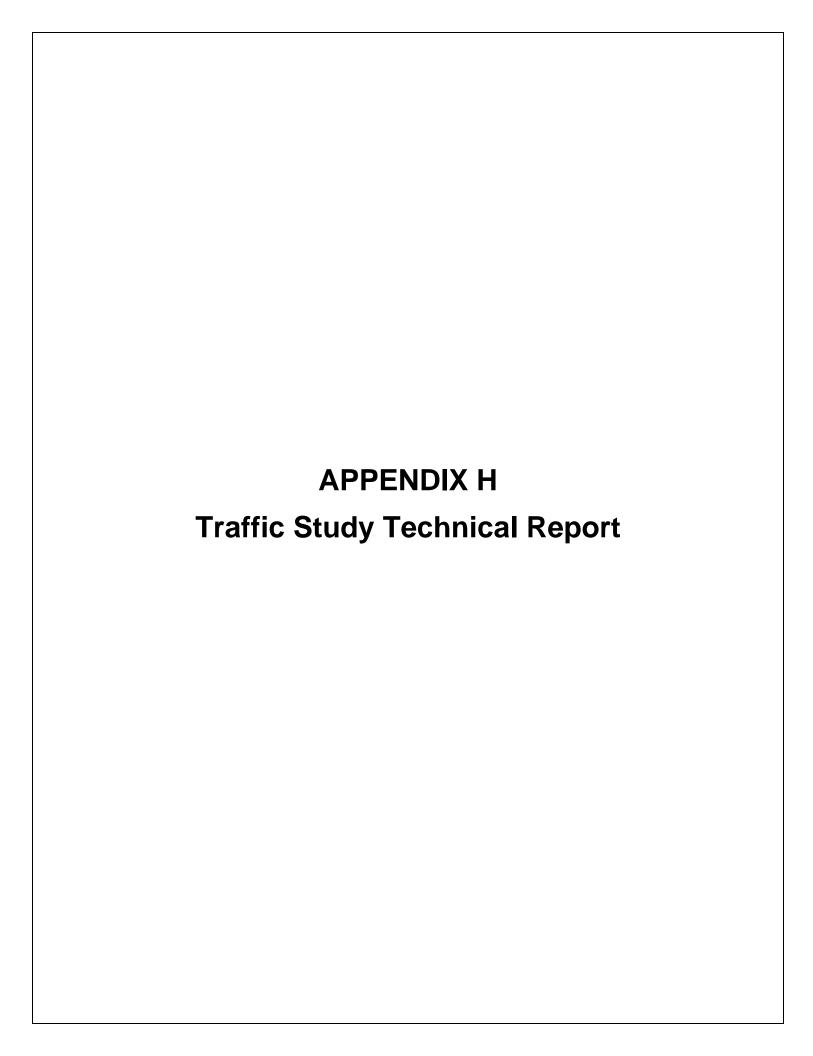
	20)22	2027		
Flight Tracks	No-Action	Proposed Project	No-Action	Proposed Project	
Arrival		110,000		110,000	
05A1	1.61%	1.55%	1.59%	1.51%	
05A2	0.81%	0.77%	0.79%	0.76%	
05A3	3.34%	3.21%	3.29%	3.13%	
09A1	3.00%	3.12%	2.85%	3.01%	
09A2	3.39%	3.56%	3.27%	3.48%	
09A3	1.45%	1.53%	1.40%	1.49%	
09A4	4.60%	4.83%	4.44%	4.73%	
09HAP	0.64%	0.61%	1.03%	0.98%	
09HATG	0.70%	0.67%	0.68%	0.65%	
09TFA1	0.46%	0.44%	0.40%	0.38%	
23A1	2.01%	1.93%	1.98%	1.89%	
23A2	1.21%	1.16%	1.19%	1.13%	
23A3	0.81%	0.77%	0.79%	0.76%	
27A1	3.29%	3.43%	3.14%	3.32%	
27A2	1.51%	1.58%	1.46%	1.55%	
27A3	4.02%	4.22%	3.88%	4.13%	
27A4	1.51%	1.58%	1.46%	1.55%	
27HAP	0.42%	0.41%	0.69%	0.66%	
27HATG	0.42 %	0.41%	0.45%	0.43%	
27TFA1	0.46%	0.45%	0.43%	0.43%	
Subtotal Arrival	35.62%	36.19%	35.12%	35.84%	
Departure	30.02 //	30.1970	30.12/0	33.0476	
05D1	2.47%	2.38%	2.44%	2.32%	
05D1	0.81%	0.77%	0.79%	0.76%	
05D2 05D3	2.47%	2.38%	2.44%	2.32%	
09CD1		3.81%	3.50%		
	3.63%			3.73%	
09D1	2.27%	2.36%	2.15%	2.26%	
09D2	2.54%	2.67% 4.19%	2.45%	2.61%	
09D3 09HDP	3.99% 0.64%		3.85%	4.11%	
09HDTG		0.61%	1.03%	0.98%	
	0.70% 0.46%	0.67% 0.44%	0.68% 0.40%	0.65%	
09TFD1	0.46%	0.44%	0.40%	0.38% 0.76%	
23D1					
23D2	2.01%	1.93% 1.16%	1.98%	1.89%	
23D3	1.21%		1.19%	1.13%	
27CD1	1.79%	1.90%	1.73%	1.87%	
27D1	2.03%	2.04%	1.90%	1.92%	
27D2	3.95%	4.18%	3.82%	4.11%	
27D3	2.57%	2.71%	2.48%	2.66%	
27HDP	0.42%	0.41%	0.69%	0.66%	
27HDTG	0.46%	0.45%	0.45%	0.43%	
27TFD1	0.38%	0.36%	0.33%	0.31%	
Subtotal Departure	35.62%	36.19%	35.12%	35.84%	
TGO	F 500'	E 000′	E 000/	F 000'	
05TG	5.50%	5.29%	5.66%	5.38%	
09TG	0.70%	0.67%	0.85%	0.80%	
09TGSEP	9.91%	9.52%	10.18%	9.69%	
23TG	3.85%	3.70%	3.96%	3.77%	

	20)22	2027				
Flight Tracks	No-Action	Proposed Project	No-Action	Proposed Project			
27TG	0.53%	0.51%	0.62%	0.59%			
27TGSEP	8.26%	7.93%	8.49%	8.08%			
Subtotal TGO	28.75%	27.62%	29.75%	28.32%			
Total	100.00%	100.00%	100.00%	100.00%			

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Environmental Assessment for Phase II Air Cargo Facility Development at Lakeland Linder International Airport (LAL)

Traffic Study Technical Report

Prepared for:

City of Lakeland Federal Aviation Administration

Prepared by:

AECOM

August 2020



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LIST OF ATTACHMENTS

Attachment A Synchro Outputs

ACRONYMS AND ABBREVIATIONS

AADT Average Annual Daily Traffic AST Aboveground Storage Tank

LAL Lakeland Linder International Airport

D Directional Factor

D1RPM District 1 Regional Planning Model
DDHV Daily Directional Hourly Volume
EA Environmental Assessment

EB Eastbound

FDOT Florida Department of Transportation

FTI Florida Traffic Information
GSE Ground Service Equipment
HCM Highway Capacity Manual

K Scale Factor LOS Level of Service

LT Left Turn NB Northbound

NCRHP National Cooperative Highway Research Program

NEPA National Environmental Policy Act

RT Right Turn
SB Southbound
SF Square Foot
SY Square Yard
T Truck Factor
TH Through

TMC Turning Movement Counts

WB Westbound



1.0 INTRODUCTION

The City of Lakeland (City), through their Airports Department, is undertaking an Environmental Assessment (EA) in accordance with the National Environmental Policy Act of 1969 (NEPA). The EA is being completed to support Phase II of air cargo facility development at Lakeland Linder International Airport (LAL or Airport), hereinafter referred to as the Proposed Project. The Proposed Project is an extension of development already completed to support air cargo service operations at LAL. The purpose of the EA is to identify and consider the potential environmental impacts associated with the Proposed Project and any reasonable alternatives.

This *Traffic Study Technical Report* details the assessment scope, input data and other technical information used in the analysis of traffic impacts associated with the Proposed Project.

In May 2019, the City completed a Major Traffic Study¹ for Phase I of the air cargo facility to determine the impacts a new air cargo facility will have on the adjacent transportation system and to recommend mitigation measures if necessary. The 2019 study determined how the intersections within the study area operate under existing AM and PM peak hour conditions. This additional traffic study was conducted to update the 2019 study and determine potential traffic impacts that would result from the Proposed Project. Conclusions from both the 2019 traffic study and the current study are summarized in the following sections.

1.1. PROPOSED PROJECT

The Proposed Project is a Phase II expansion of an air cargo facility already constructed. The Phase II expansion is being contemplated to accommodate future flexibility for expanded operations, given the potential for network and customer demand to increase in the near future. A notional layout for the Proposed Project is shown on **Figure 1.1-1a** based on facility sizing needs. The Proposed Project would be developed on an approximate 68-acre site in the northwest quadrant of LAL, immediately west and adjacent to the Phase I development already completed. All project components would be constructed on airport. Specific construction and operational activities included in the Proposed Project are listed below:

- Construct up to 464,600-square foot (SF) expansion of the Phase I sort and office building;
- Construct up to approximately 69,100 square yards (SY) of paved truck court to accommodate up to 370 additional truck bays;
- Construct up to approximately 42,500 SY of paved vehicle parking lot to accommodate up to 1,120 additional parking spaces;
- Construct up to approximately 29,200 SY of concrete aircraft parking apron accommodate three additional Boeing 767-300 aircraft parking positions;
- Construct up to approximately 19,400 SY of pavement for aircraft ground support equipment (GSE) staging and periodic aircraft parking;

¹ RK&K Engineers. Lakeland Linder Airport – NW Quadrant Traffic Study – Major Traffic Study. May 2019.

- Construct new airport access road to provide access to the Phase II facilities via Drane Field Road:
- Site clearing, grading, and landscaping;
- Modifications to the Airport's stormwater management system, including construction of swales and retention ponds;
- Installation of security fencing, gates and security checkpoints;
- Installation of airfield lighting and signage

The facility will be designed to approve Boeing 767 and 737 cargo aircraft. If approved, the Phase II Cargo Development project is expected to generate 8 additional bi-directional aircraft flights per day at LAL during the facility's first year of operation (2022) and 12 additional daily bi-directional flights in 2027. According to the forecast of project trips provided by the operator of Phase II Cargo Development, the project is expected to generate approximately 664 additional car and truck trips per day in 2022 (peak daily) and 1,242 additional car and truck trips per day in 2027.

Additionally, to accommodate the potential need for additional aviation fueling capacity at LAL, a fuel farm is being proposed in an area separate from the Proposed Project footprint, at the intersection of Aero Place and Taxiway H (**Figure 1.1-1b**). Current projections indicate need for additional aboveground storage tanks (ASTs) providing a total of 850,000 gallons of Jet-A fuel capacity. There is potential for a small portion of this capacity to be dedicated to off-road equipment fuel (e.g., gasoline, diesel or hydrogen) if usage needs dictate once the facility is operational.

2.0 EXISTING CONDITIONS

2.1. AREA TRANSPORTATION NETWORK CHARACTERISTICS

Table 2.1-1 presents the exiting conditions for the roadways adjacent to the Proposed Project including number of lanes, speed limit, and functional classification. The existing intersection controls are presented in **Table 2.1-2**. The existing roadway configurations are shown in **Figure 2.1-1**.

Roadway	Functional Classification	Facility Type	Speed Limit (mph)	Directionality	No. of Lanes
Drane Field Road	Major collector	Undivided	50	Two-way	2
County Line Road	Minor arterial	Divided	55	Two-way	4
Kidron Road	N/A	Undivided	25	Two-way	2
Airport Road	Major collector	Undivided	50	Two-way	2

Table 2.1-1 Existing Roadway Characteristics

Source: Lakeland Linder Airport - NW Quadrant Traffic Study: Major Traffic Study. May 2019.

LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

EA PROPOSED PROJECT

FIGURE 1.1-1a

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LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

EA PROPOSED PROJECT FUEL FARM

FIGURE 1.1-1b



LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

EXISTING ROADWAY CONFIGURATIONS

FIGURE 2.1-1

Table 2.1-2 Intersection and Control Type

Intersection	Control/Signal Type
County Line Road at Drane Field Road	Signal Controlled
Kelvin Howard Road at Drane Field Road	Stop sign controlled/Unsignalized
Kidron Road at Drane Field Road	Stop sign controlled/Unsignalized
Airport Road at Drane Field Road	Signal controlled

Source: Lakeland Linder Airport - NW Quadrant Traffic Study: Major Traffic Study. May 2019.

2.2. TRAFFIC COUNTS

As part of the 2019 study, turning movement traffic counts (TMC) were taken at the intersection of Drane Field Road and Kidron Road. The Florida Department of Transportation's (FDOT) Florida Traffic Information (FTI) seasonal factor (0.96) and axle factor (0.96) were applied to the counts to account for the time of year and the type of roadway where the counts were taken. A prior study collected volumes for the intersections of Airport Road at Drane Field Road on August 31, 2017 and May 12, 2017 and County Line Road at Drane Field Road on March 12, 2019.²

Additional traffic information was collected from the FTI database and from IdealSpot's 2019 Quarter One Average Annual Daily Traffic (AADT) report for the study year. The 2019 data from IdealSpot was used as the recommended AADT. The AADT developed from TMCs for Kidron Road was used where IdealSpot data was not available. The AADT collected from the 2019 study is summarized in **Table 2.2-1.**

2.3. TRAFFIC FACTORS AND EXISTING VOLUMES

The 2019 study used a directional factor (D) of 54.5 percent, which was identified from the 2018 FTI along Drane Field Road. The standard scale factor (K) of 9 percent and a truck factor (T) of 10.7 percent with an hourly truck factor of 5 percent was used. The seasonal and axle adjusted counts, calculated D factor and standard K factor were used to develop existing AADT volumes and Daily Directional Hourly Volumes (DDHV) on Drane Field Road and Kidron Road. Existing (2019) AADT volumes and DDHVs are shown in **Table 2.2-1.**

Phase II Air Cargo Facility Development Environmental Assessment

² RK&K Engineers. Lakeland Linder Airport – NW Quadrant Traffic Study – Major Traffic Study. May 2019.

Table 2.2-1 Existing AADT Volumes and Calculated DDHVs

				A	ADT			
Roadway	From	То	Polk TPO	FTI	IdealSpot	ТМС	DDHV	
			2017	2018	2019	Various	Peak	Off Peak
Drane Field Road	County Line Road	Airport Road	7,600	7,100	7,900	9,300	387	324
Drane Field Road	Airport Road	Waring Road	10,700	15,400	13,400	10,000	657	549
County Line Road	Medulla Road	Drane Field Road	25,700	21,000	19,400	15,700	952	794
County Line Road	Drane Field Road	East Baker Street	25,700	20,500	19,600	18,700	961	803
Airport Road	Drane Field Road	Polk Parkway	10,400	10,600	10,600	8,700	520	434
Kidron Road	Airpark Drive	Drane Field Road				800	39	33

Notes: D-Factor = 54.5%; Standard K-Factor = 9%; T-Factor = 10.7%; DHT = 5% from FTI on Drane Field Road Source: RK&K Engineers. *Lakeland Linder Airport – NW Quadrant Traffic Study – Major Traffic Study*. May 2019.

2.4. EXISTING LEVEL OF SERVICE CAPACITY ANALYSES

The 2019 study included an intersection capacity analysis for the existing intersections pursuant to methodologies prescribed by the *Highway Capacity Manual (HCM)*.³ A level of service (LOS) letter grade was assigned to each intersection for the peak hour of traffic based on the number of lanes, traffic volumes, and traffic existing controls. According to the HCM, LOS is a qualitative measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Letters designate each level, from A to F, with LOS A representing the best operating conditions and LOS F the worst.

The annual traffic volumes, average delay (seconds per vehicle), and LOS results for the existing peak hours are shown in **Table 2.4-1** for the existing roadway configurations (see **Figure 2.1-1**). These values are based on the existing lane configurations and lane usages. Existing turning movement volumes collected in the May 2019 traffic study were used to determine the existing LOS. Existing signal timings were not available for the intersection of Airfield Court West/Airport Road at Drane Field Road; therefore, they were developed based on Synchro optimizations for this intersection. The LOS calculations were performed by AECOM per the HCM using Synchro software. Traffic analysis results in HCM format were reported for intersections except for the intersection of Airfield Court/West Airport Road at Drane Field Road. Due to limitations of Synchro software, results in Synchro format were reported for the intersection instead. Based on the information provided in **Table 2.4-1**, all study intersections currently operate acceptably at LOS B or better during both AM and PM peak hours.

Table 2.4-2 provides a detailed summary of the existing conditions traffic operations including queue length, delays (seconds/vehicle), and LOS for each individual movement at each intersection shown on **Figure 2.1-1**.

-

³ Transportation Research Board. *Highway Capacity Manual, 6th Edition: A Guide for Multimodal Mobility Analysis (HCM).* 2016

Table 2.4-1 Existing Conditions (2019) Traffic Volumes and Level of Service

					AM	PM	
Intersections	Control/Signal Type	Signal Type	Annual Volumes	LOS	Delay (Seconds/ Vehicle)	LOS	Delay (Seconds/ Vehicle)
County Line Road at Drane Field Road	Signal controlled	Signal	9,033,800	В	16.3	В	17.2
Airfield Court/West Airport Road at Drane Field Road	Signal controlled	Signal	6,233,400	В	24.5	В	17.1
Kelvin Howard Road at Drane Field Road	Stop sign controlled/unsignalized	Unsignalized	2,883,500	А	0	А	0
Kidron Road at Drane Field Road	Stop sign controlled/unsignalized	Unsignalized	3,029,500	В	13	В	12.7

Sources: AECOM, 2020; Transportation Research Board. Highway Capacity Manual, 6th Edition

Table 2.4-2 Existing Conditions (2019) Traffic Operations

				AM		PM			
Intersections	Control/Signal Type	Movement	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)	
		EB LT	С	28.9	40	C	29.5	40	
	Cional acatalla d	EB TH	Α	0.0	71	Α	0.0	71	
		EB RT	D	37.0	71	D	37.7	71	
		WB LT	С	25.7	145	С	26.8	155	
		WB TH	С	25.6	54	С	26.1	72	
County Line Road at Drane Field		WB RT	С	26.6	0	С	27.5	34	
Road	Signal controlled	NB LT	В	11.4	8	В	10.5	9	
		NB TH	В	15.9	218	В	16.3	263	
		NB RT	В	13.8	9	В	12.4	17	
		SB LT	В	11.0	89	В	11.7	59	
		SB TH	В	12.0	210	В	11.9	181	
		SB RT	Α	8.7	0	Α	9.1	0	
	Signal controlled	EB LT	F	94.6	#164	D	46.5	112	

				АМ			PM	
Intersections	Control/Signal Type	Movement	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)
		EB TH & RT	С	31.3	199	С	32.4	181
		WB LT	С	22.2	23	В	19.0	6
Airfield Court/West Airport Road		WB TH	С	34.4	226	С	28.4	151
at Drane Field Road		WB RT	Α	5.8	49	Α	6.3	48
at Diane Field Road		NB LT, TH & RT	Α	0.0	0.0	Α	5.0	13
		SB TH & LT	В	14.7	262	Α	8.6	109
		SB RT	Α	2.1	22	Α	1.8	28
		EB TH	Α	0	0	Α	0	0
		EB RT	Α	0	0	Α	0	0
Kelvin Howard Road at Drane	Stop sign	WB LT	Α	0	0	Α	0	0
Field Road	controlled/unsignalized	WB TH	Α	0	0	Α	0	0
		NB LT	Α	0	0	Α	0	0
		NB RT	Α	0	0	Α	0	0
		EB TH & RT	Α	0	0	Α	0	0
Kidron Road at Drane Field	Stop sign	WB LT	Α	8.4	3	Α	8.3	0
Road	controlled/unsignalized	WB TH	Α	0	0	Α	0	0
Notos:		NB LT & RT	В	12	8	В	12.7	8

Notes:

#:95th percentile volume exceeds capacity and queue may be longer. Queue shown is maximum after two cycles. SB = southbound; EB = eastbound; WB = westbound; NB = northbound; TH = through; LT = left turn; RT = right turn

3.0 FUTURE CONDITIONS

3.1 FORECAST TRAFFIC VOLUMES AND LEVEL OF SERVICE

3.1.1 No-ACTION ALTERNATIVE

As part of the 2019 traffic study, future year (2023) traffic volumes on Drane Field Road were estimated using the District 1 Regional Planning Model (D1RPM) outputs. Model volumes for 2010 and 2040 from each leg of the study intersections were used to forecast 2019 volumes. The National Cooperative Highway Research Program (NCHRP) 765 adjustment procedure was utilized to develop 2040 AADT. The 2019 AADT and 2040 AADT were then used to linearly interpolate a "no-build" 2023 AADT (i.e., forecast traffic volumes that do not include traffic resulting from Phase I cargo development).

Traffic volumes for no-build conditions for years 2022 and 2027 were calculated via interpolation between years 2019 and 2040. Estimates of additional cargo truck and passenger vehicle traffic that would be generated by the Phase I air cargo development were added to the no-build traffic volumes for years 2022 and 2027 to represent the No-Action Alternative for EA. LOS for each study intersection was calculated for the 2022 and 2027 No-Action Alternative using methodologies previously described. **Tables 3.1-1** and **3.1-2** depict the forecasted No-Action Alternative annual traffic volumes and LOS for the 2022 and 2027 study years, respectively.

Tables 3.1-3 and **3.1-4** provide a detailed summary of the No-Action traffic operations including queue length, delays (seconds/vehicle), and LOS for each individual movement at each intersection for the 2022 and 2027 study years, respectively.

Table 3.1-1 2022 No-Action Alternative Traffic Volumes and Level of Service

				AM		PM
Intersections	Control/Signal Type	Annual Volumes	LOS	Delay (Seconds/ Vehicle)	LOS	Delay (Seconds/ Vehicle)
County Line Road at Drane Field Road	Signal Controlled	10,128,800	В	17.8	В	18.8
Airfield Court/West Airport Road at Drane Field Road	Signal controlled	6,872,100	O	24	В	17.7
Kelvin Howard Road at Drane Field Road	Stop sign controlled/Unsignalized	3,605,400	O	18.9	С	18.3
Kidron Road at Drane Field Road	Stop sign controlled/Unsignalized	4,365,800	С	24.2	С	22.5

Sources: AECOM, 2020; Transportation Research Board. Highway Capacity Manual, 6th Edition

Table 3.1-2 2027 No-Action Alternative Traffic Volumes and Level of Service

				AM		PM
Intersections	Control/Signal Type	Annual Volumes	LOS	Delay (Seconds/ Vehicle)	LOS	Delay (Seconds/ Vehicle)
County Line Road at Drane Field Road	Signal Controlled	11,112,200	В	19.7	В	21.4
Airfield Court/West Airport Road at Drane Field Road ¹	Signal controlled	7,486,600	O	24.2	В	17.8
Kelvin Howard Road at Drane Field Road	Stop sign controlled/Unsignalized	3,917,700	С	20.8	O	20
Kidron Road at Drane Field Road	Stop sign controlled/Unsignalized	4,690,300	D	29.7	D	26.7

Sources: AECOM, 2020; Transportation Research Board. Highway Capacity Manual, 6th Edition

Table 3.1-3 2022 No-Action Traffic Operations

				AM			PM	
Intersections	Control/Signal Type	Movement	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)
		EB LT	С	29.6	41	С	29.7	40
		EB TH	Α	0.0	69	Α	0.0	69
		EB RT	D	37.8	69	D	37.9	69
		WB LT	С	34.7	#200	С	34.6	#213
		WB TH	С	27.2	64	С	27.0	84
County Line Road at Drane Field	Signal controlled	WB RT	С	28.7	1	С	29.1	23
Road	Signal controlled	NB LT	В	11.7	8	В	10.7	10
		NB TH	В	17.1	239	В	17.8	293
		NB RT	В	15.3	39	В	13.5	18
		SB LT	В	12.9	117	В	13.7	83
		SB TH	В	11.7	216	В	11.9	191
		SB RT	Α	8.3	0	Α	8.8	0
	O'mad as stadled	EB LT	F	95.6	#207	D	49.6	127
		EB TH & RT	С	26.1	234	С	29.0	197
		WB LT	В	17.2	20	В	16.0	6
Airfield Court/West Airport Road		WB TH	С	27.1	246	С	24.8	160
at Drane Field Road	Signal controlled	WB RT	Α	4.3	42	Α	5.2	43
		NB LT, TH & RT	Α	0.0	0	Α	6.3	15
		SB TH & LT	В	19.3	258	В	10.1	105
		SB RT	Α	2.1	22	Α	1.8	28
		EB TH	Α	0.0	0	Α	0.0	0
		EB RT	Α	0.0	0	Α	0.0	0
Kelvin Howard Road at Drane	Stop sign	WB LT	В	10.6	0	В	10.0	0
Field Road	controlled/unsignalized	WB TH	Α	0.0	0	Α	0.0	0
		NB LT	С	24.0	5	С	23.9	5
		NB RT	В	13.8	2.5	В	12.7	3
Vidron Dood at Drong Field Dood	Stop sign	EB TH & RT	Α	0.0	0	Α	0.0	0
Kidron Road at Drane Field Road	controlled/unsignalized	WB LT	Α	9.2	13	Α	8.7	5
		WB TH	Α	0.0	0	Α	0.0	0

Intersections	Control/Signal Type		АМ				PM		
		Movement	1.00	Delay	Queue	1.00	Delay (Seconda)	Queue	
			LOS	(Seconds/ Vehicle)	Length (feet)	LOS	(Seconds/ Vehicle)	Length (feet)	
		NB LT & RT	С	24.2	65	С	22.5	70	

Notes:

#: 95th percentile volume exceeds capacity and queue may be longer. Queue shown is maximum after two cycles. SB = southbound; EB = eastbound; WB = westbound; NB = northbound; TH = through; LT = left turn; RT = right turn

Table 3.1-4 2027 No-Action Traffic Operations

	Control/Signal Type			AM			PM			
Intersections		Movement	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)		
		EB LT	С	29.5	44	С	30.3	44		
		EB TH	Α	0.0	75	Α	0.0	75		
		EB RT	D	38.0	75	D	39.0	75		
		WB LT	D	41.4	#233	Е	56.7	#197		
		WB TH	С	27.4	68	С	29.1	91		
County Line Road at Drane Field	Signal controlled	WB RT	С	29.1	7	С	32.2	42		
Road	Signal controlled	NB LT	В	12.3	9	В	10.4	10		
		NB TH	В	18.9	275	В	18.1	320		
		NB RT	В	16.5	41	В	13.2	33		
		SB LT	В	16.2	161	В	16.5	132 ²		
		SB TH	В	12.6	248	В	11.7	212		
		SB RT	Α	8.6	0	Α	8.4	0		
		EB LT	F	95.2	#229	D	54.3	139		
		EB TH & RT	С	24.5	249	С	27.9	208		
		WB LT	В	16.3	20	В	15.0	6		
Airfield Court/West Airport Road	Signal controlled	WB TH	С	25.5	267	С	24.0	169		
at Drane Field Road	Signal controlled	WB RT	Α	4.0	43	Α	4.9	43		
		NB LT, TH & RT	Α	0.1	0	Α	7.1	18		
		SB TH & LT	С	24.6	303	В	11.7	126		
		SB RT	Α	2.8	35	Α	2.5	35		
Kelvin Howard Road at Drane	Stop sign	EB TH	Α	0.0	0	Α	0.0	0		
Field Road	controlled/unsignalized	EB RT	Α	0.0	0	Α	0.0	0		

				AM			PM			
Intersections	Control/Signal Type	Movement	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)		
		WB LT	В	10.9	0	В	10.3	0		
		WB TH	Α	0.0	0	Α	0.0	0		
		NB LT	D	27.0	5	D	26.9	5		
		NB RT	В	14.5	2.5	В	13.2	3		
		EB TH & RT	Α	0.0	0	Α	0.0	0		
Kidron Road at Drane Field	Stop sign	WB LT	Α	9.5	13	Α	8.8	8		
Road	controlled/unsignalized	WB TH	Α	0.0	0	Α	0.0	0		
	55 55 51.101g/14.11 2 00	NB LT & RT	D	29.7	83	D	26.7	85		

#:95th percentile volume exceeds capacity and queue may be longer. Queue shown is maximum after two cycles. SB = southbound; EB = eastbound; WB = westbound; NB = northbound; TH = through; LT = left turn; RT = right turn

3.1.2 PROPOSED PROJECT

For the purpose of this study, additional estimates of increased daily cargo truck and passenger vehicle traffic that would result from the operations of the Proposed Project were added to the forecasted No-Action Alternative traffic volumes for each study year to develop total traffic volumes and calculate intersection LOS that would result from the Proposed Project. **Tables 3.1-5** and **3.1-6** depict the forecasted Proposed Project annual traffic volumes and LOS for the 2022 and 2027 study years, respectively. **Tables 3.1-7** and **3.1-8** summarize changes to annual traffic volumes, LOS, and average delay that would result from the Proposed Project in 2022 and 2027, respectively. **Tables 3.1-9** and **3.1-10** provide a detailed summary of the Proposed Project traffic operations including queue length, delays (seconds/vehicle), and LOS for each individual movement at each intersection for the 2022 and 2027 study years, respectively.

Traffic impacts that would result from operation of the Proposed Project incur no unacceptable decrease in LOS at three of the four studied intersections. While impacts would be evident in the 2022 study year, the increased average intersection delay and the resulting impacts to LOS would generally be greatest in the 2027 study year. The County Line Road and Drane Field Road intersection would experience average delay increases of less than three seconds per vehicle, resulting in LOS change from B to C in 2027. The intersection of Airfield Court West/Airport Road and Drane Field Road would experience the least impact, with less than one second increase in average delay per vehicle, and no resulting change to LOS in 2027. At Kelvin Howard Road and Drane Field Road, the 2027 increase in average intersection delay would be 6.3 seconds during the AM peak hour and 5.8 seconds during the PM Peak hour. Both peak hours would experience a reduced LOS from C to D, as compared to the No-Action Alternative.

The intersection of Kidron Road and Drane Field Road would experience an unacceptable decrease to LOS as a result of the Proposed Project. This intersection currently is controlled only by stop signs on Kidron Road, and there are no dedicated turn lanes at the intersection, either on Kidron Road or Drane Field Road. Under the No-Action Alternative, this intersection would have a LOS of C in 2022 and LOS of D in 2027. With operation of the Proposed project, the LOS would decrease to LOS E in 2022 and LOS F in 2027. Without mitigation, this would constitute a significant impact to surface transportation. Mitigation alternatives considered are presented in **Section 4.0**.

Table 3.1-5 2022 Proposed Project Traffic Volumes and Level of Service

				AM		PM
Intersections	Control/Signal Type	Annual Volumes	LOS	Delay (Seconds/ Vehicle)	LOS	Delay (Seconds/ Vehicle)
County Line Road at Drane Field Road	Signal Controlled	10,333,600	В	18.6	В	19.4
Airfield Court/West Airport Road at Drane Field Road ¹	Signal controlled	7,170,200	O	24.1	В	17.8
Kelvin Howard Road at Drane Field Road	Stop sign controlled/Unsignalized	3,879,100	O	22.1	O	21.2
Kidron Road at Drane Field Road	Stop sign controlled/Unsignalized	4,809,900	E	38.7	Е	36.6

Sources: AECOM, 2020; Transportation Research Board. Highway Capacity Manual, 6th Edition

Table 3.1-6 2027 Proposed Project Traffic Volumes and Level of Service

				AM		PM
Intersections	Control/Signal Type	Annual Volumes	LOS	Delay (Seconds/ Vehicle)	LOS	Delay (Seconds/ Vehicle)
County Line Road at Drane Field Road	Signal Controlled	11,481,300	С	22	С	23.8
Airfield Court/West Airport Road at Drane Field Road ¹	Signal controlled	8,046,200	С	25	С	17.8
Kelvin Howard Road at Drane Field Road	Stop sign controlled/Unsignalized	4,382,000	D	27.1	D	25.8
Kidron Road at Drane Field Road	Stop sign controlled/Unsignalized	5,537,900	F	126	F	114.5

Sources: AECOM, 2020; Transportation Research Board. Highway Capacity Manual, 6th Edition

Table 3.1-7 2022 Traffic Volume, Level of Service, and Delay Changes Resulting from Proposed Project

Intersections	Control/Signal Type Annual Volume Difference		LOS Dif	ference	Average Delay Difference (Seconds/Vehicle)		
		Difference	AM	PM	AM	PM	
County Line Road at Drane Field Road	Signal Controlled	204,800	None	None	0.8	0.6	
Airfield Court/West Airport Road at Drane Field Road ¹	Signal controlled	298,100	None	None	0.1	0.1	
Kelvin Howard Road at Drane Field Road	Stop sign controlled/Unsignalized	273,700	None	None	3.2	2.9	
Kidron Road at Drane Field Road	Stop sign controlled/Unsignalized	444,100	C to E	C to E	14.5	14.1	

Notes: Difference = Difference between No-Action Alternative and Proposed Project

Sources: AECOM, 2020; Transportation Research Board. Highway Capacity Manual, 6th Edition: A Guide for Multimodal Mobility Analysis (HCM). 2016; except as noted with "*"

Table 3.1-8 2027 Traffic Volume, Level of Service, and Delay Changes Resulting from Proposed Project

Intersections	Control/Signal Type	Annual Volume Difference	LOS Di	fference	Average Delay Difference (Seconds/Vehicle)		
		Difference	AM	PM	AM	PM	
County Line Road at Drane Field Road	Signal Controlled	369,100	B to C	B to C	2.3	2.4	
Airfield Court/West Airport Road at Drane Field Road ¹	Signal controlled	559,600	None	None	0.8	0	

¹ Calculations performed with Synchro software

Kelvin Howard Road at Drane Field Road	Stop sign controlled/Unsignalized	464,300	C to D	C to D	6.3	5.8
Kidron Road at Drane Field Road	Stop sign controlled/Unsignalized	847,600	D to F	D to F	96.3	87.8

Notes: Difference = Difference between No-Action Alternative and Proposed Project

Sources: AECOM, 2020; Transportation Research Board. *Highway Capacity Manual*, 6th Edition: A Guide for Multimodal Mobility Analysis (HCM). 2016; except as noted with "*"

Table 3.1-9 2022 Proposed Project Traffic Operations

				AM			PM	
Intersections	Control/Signal Type	Movement	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)
		EB LT	С	29.6	41	С	29.7	41
		EB TH	Α	0.0	69	Α	0.0	69
		EB RT	D	37.8	69	D	37.9	69
		WB LT	С	34.4	#208	D	39.0	#239
		WB TH	С	26.7	66	С	27.3	87
County Line Road at Drane Field	Signal controlled	WB RT	С	28.2	3	С	29.6	26
Road	Signal controlled	NB LT	В	12.5	8	В	10.8	10
		NB TH	В	18.3	247	В	18.0	299
		NB RT	В	16.8	42	В	14.0	25
		SB LT	В	14.4	142	В	14.3	97
		SB TH	В	12.1	220	В	11.7	190
		SB RT	Α	8.6	0	Α	8.7	0
		EB LT	F	88.4	#239	D	50.2	138
		EB TH & RT	С	27.3	274	С	28.1	212
		WB LT	В	19.0	22	В	14.7	6
Airfield Court/West Airport Road	Cianal controlled	WB TH	С	27.5	280	С	23.2	164
at Drane Field Road	Signal controlled	WB RT	Α	4.2	46	Α	4.7	41
		NB LT, TH & RT	Α	0.1	0	Α	7.0	17
		SB TH & LT	С	20.2	236	В	11.3	112
		SB RT	Α	3.0	37	Α	2.5	35

¹ Calculations performed with Synchro software

				AM			PM	
Intersections	Control/Signal Type	Movement	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)
		EB TH	Α	0.0	0	Α	0.0	0
	Stop sign controlled/unsignalized	EB RT	Α	0.0	0	Α	0.0	0
Kelvin Howard Road at Drane		WB LT	В	10.9	3	В	10.3	3
Field Road		WB TH	Α	0.0	0	Α	0.0	0
		NB LT	D	29.1	10	D	28.8	10
		NB RT	C	15.0	5	В	13.5	3
		EB TH & RT	Α	0.0	0	Α	0.0	0
Kidron Road at Drane Field	Stop sign	WB LT	Α	9.6	15	Α	8.9	8
Road	controlled/unsignalized	WB TH	Α	0.0	0	Α	0.0	0
		NB LT & RT	Е	38.7	13	Е	36.6	140

#:95th percentile volume exceeds capacity and queue may be longer. Queue shown is maximum after two cycles. SB = southbound; EB = eastbound; WB = westbound; NB = northbound; TH = through; LT = left turn; RT = right turn

Table 3.1-10 2027 Proposed Project Traffic Operations

				AM		PM			
Intersections	Control/Signal Type	Movement	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)	
		EB LT	С	29.5	44	С	30.2	44	
		EB TH	Α	0.0	75	Α	0	75	
		EB RT	D	38.0	75	D	38.8	75	
	Signal controlled	WB LT	Е	60.7	#211	Е	71.3	#227	
		WB TH	С	28.3	74	C	29.2	96	
County Line Road at Drane Field		WB RT	С	30.5	12	C	32.6	37	
Road		NB LT	В	12.3	9	В	10.8	10	
		NB TH	В	19.1	273	В	19.1	329	
		NB RT	В	17.4	43	В	14.3	36	
		SB LT	В	19.1	#215	В	19.2	#167	
		SB TH	В	12.0	243	В	11.7	212	
		SB RT	Α	8.2	0	Α	8.4	0	
	Signal controlled	EB LT	F	91.3	#269	D	53.6	158	

				AM			PM	
Intersections	Control/Signal Type	Movement	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)
		EB TH & RT	O	24.3	296	С	25.8	232
		WB LT	В	16.5	21	В	12.7	5
Airfield Court/West Airport Road		WB TH	С	24.4	297	С	20.8	172
at Drane Field Road		WB RT	Α	3.7	43	Α	4.1	38
at Drane Field Noad		NB LT, TH & RT	Α	0.1	0	Α	8.9	20
		SB TH & LT	С	28.6	299	В	14.6	147
		SB RT	Α	4.8	57	Α	3.0	41
		EB TH	Α	0.0	0	Α	0.0	0
		EB RT	Α	0.0	0	Α	0.0	0
Kelvin Howard Road at Drane	Stop sign	WB LT	В	11.5	3	В	10.7	3
Field Road	controlled/unsignalized	WB TH	Α	0.0	0	Α	0.0	0
		NB LT	Е	37.7	15	Е	36.9	15
		NB RT	С	16.5	5	В	14.6	5
		EB TH & RT	Α	0.0	0	Α	0.0	0
Kidron Road at Drane Field	Stop sign	WB LT	В	10.2	20	Α	9.3	13
Road	controlled/unsignalized	WB TH	Α	0.0	0	Α	0.0	0
Notes		NB LT & RT	F	126.0	298	F	114.5	325

#95th percentile volume exceeds capacity and queue may be longer. Queue shown is maximum after two cycles. SB = southbound; EB = eastbound; WB = westbound; NB = northbound; TH = through; LT = left turn; RT = right turn

4.0 SUMMARY AND RECOMMENDATIONS

4.1 SUMMARY OF FINDINGS

The Proposed Project has the potential to impact vehicle delays and LOS at four intersections. Compared to the No-Action Alternative, the Proposed Project would incur additional delays in the 2022 and 2027 study years at all four intersections, either during AM peak hour, PM peak hour, or both. The greatest impacts would generally occur in the 2027 study year. Three of the four impacted intersections would not experience significant or unacceptable increased average delay or LOS in either study year.

However, the intersection of Kidron Road at Drane Field Road would experience substantial average vehicle delays and decreases in LOS by 2022. With operation of the Proposed Project, in the 2022 study year, the intersection would experience an average vehicle delay of as much as 14.5 seconds more than the No-Action Alternative, resulting in a LOS decrease from C to E. In the 2027 study year, the intersection would experience an average vehicle delay of as much as 96.3 seconds more than the No-Action Alternative, resulting in a LOS decrease from D to F.

4.2 TRAFFIC IMPACTS MITIGATION

Two alternative methods were developed to mitigate the impacts to LOS by reducing the increased average vehicle delay that would be incurred by the Proposed Project at the intersection of Kidron Road at Drane Field Road. Mitigation Alternative 1 includes adding dedicated turning lanes at the intersection. Mitigation Alternative 2 includes the addition of turn lanes and replacing the existing stop sign with a traffic signal. The resulting average delay and LOS for 2022 and 2027 are depicted in **Tables 4.2-1** and **4.2-2**, respectively.

Table 4.2-1 2022 Kidron Road at Drane Field Road Traffic Mitigation Scenarios

			AM	PM	
Scenario	Control Type	LOS	Delay (Seconds/ Vehicle)	LOS	Delay (Seconds/ Vehicle)
No-Action	Stop Sign	С	24.2	C	22.5
Proposed Project, No Mitigation	Stop Sign	Е	38.7	Е	36.6
Proposed Project, Mitigation Alternative 1	Stop Sign with Dedicated Turn Lanes	С	21.2	O	19.5
Proposed Project, Mitigation Alternative 2	Signal with Dedicated Turn Lanes	В	11.0	В	10.2

Sources: AECOM, 2020; Transportation Research Board. Highway Capacity Manual, 6th Edition

Table 4.2-2 2027 Kidron Road and Drane Field Road Traffic Mitigation Scenarios

			AM	PM		
Scenario	Control Type	LOS	Delay (Seconds/	LOS	Delay (Seconds/	

			Vehicle)		Vehicle)
No-Action	Stop Sign	D	29.7	D	26.7
Proposed Project, No Mitigation	Stop Sign	F	126.0	F	114.5
Proposed Project, Mitigation Alternative 1	Stop Sign with Dedicated Turn Lanes	D	32.0	D	28.4
Proposed Project, Mitigation Alternative 2	Signal with Dedicated Turn Lanes	В	13.0	В	12.0

Sources: AECOM, 2020; Transportation Research Board. Highway Capacity Manual, 6th Edition

Tables 4.2-3 and **4.2-4** summarize the average delay and LOS impacts of the Proposed Project with no mitigation, with Mitigation Alternative 1, and with Mitigation Alternative 2, as compared to the No-Action Alternative.

Table 4.2-3 2022 Kidron Road and Drane Field Road Traffic Mitigation Comparisons

		AM	PM			
Scenario	LOS Difference	Average Delay Difference (Seconds/Vehicle)	LOS Difference	Average Delay Difference (Seconds/Vehicle)		
No-Action Vs Proposed Project, No Mitigation	C to E	14.5	C to E	14.1		
No-Action Vs Proposed Project, Alternative 1	No Change	-3.0	No Change	-3.0		
No-Action Vs Proposed Project, Alternative 2	C to B	-13.2	C to B	-13.2		

Notes: Difference = Difference between No-Action Alternative and Proposed Project

Sources: AECOM, 2020; Transportation Research Board. Highway Capacity Manual, 6th Edition

Table 4.2-4 2027 Kidron Road and Drane Field Road Traffic Mitigation Comparisons

		AM	PM			
Scenario	LOS Difference	Average Delay Difference (Seconds/Vehicle)	LOS Difference	Average Delay Difference (Seconds/Vehicle)		
No-Action Vs Proposed Project, No Mitigation	D to F	96.3	D to F	87.8		
No-Action Vs Proposed Project, Alternative 1	No Change	2.3	No Change	1.7		
No-Action Vs Proposed Project, Alternative 2	D to B	-16.7	D to B	-14.7		

Notes: Difference = Difference between No-Action Alternative and Proposed Project

Sources: AECOM, 2020; Transportation Research Board. Highway Capacity Manual, 6th Edition

As previously stated, constructing the Proposed Project with no mitigation at the Kidron Road and Drane Field Road intersection would result in significant impacts to surface road traffic. Therefore, implementing mitigation would be required to avoid significant impacts.

By implementing Mitigation Alternative 1 (construct designated turn lanes), the majority of traffic impacts potentially incurred by the Proposed Project at this intersection would be mitigated, and LOS would be preserved at the No-Action Alternative of LOS C, with a slight average delay time decrease in 2022 and a slight increase average delay time increase in 2027. In both study years,

the intersection would remain at an acceptable LOS with this mitigation scenario. The Proposed Project would therefore result in no significant impact to surface road traffic.

If Mitigation Alternative 2 (construct designated turn lanes and a traffic signal) is implemented, all potential traffic impacts incurred by the Proposed Project at this intersection would be mitigated, and average delay and LOS would improve relative to the No-Action Alternative. With the No-Action Alternative, traffic volumes at this intersection would continue to increase over time, and the average delay would be expected to increase, with a resulting LOS decrease from C in 2022 to D 2027. However, with the implementation of Mitigation Alternative 2, the intersection would experience a marked decrease in average delay, resulting in an improvement of LOS compared to the No-Action Alternative LOS. The LOS resulting from Mitigation Alternative 2 would improve to LOS B, compared to the No-Action Alternative LOS C and D in 2022 and 2027, respectively. Therefore, the intersection would remain at an acceptable LOS with this mitigation scenario and there would be no significant impact to surface road traffic.

Further details summarizing the traffic operations, including queue length, delays (seconds/vehicle), and LOS for each individual movement, for the 2022 and 2027 Proposed Project conditions with each mitigation alternative are provided in **Tables 4.2-5** through **4.2-6** below. Attached to this Report are the detailed Synchro outputs utilized in the analysis contained herein.

Table 4.2-5 2022 Proposed Project Mitigation Alternative 1 Traffic Operations

				AM			PM	
Intersections	Control/Signal Type	Movement	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)
		EB LT	С	29.6	41	С	29.7	41
		EB TH	Α	0.0	69	Α	0.0	69
		EB RT	D	37.8	69	D	37.9	69
		WB LT	С	34.4	#208	D	39.0	#239
		WB TH	С	26.7	66	С	27.3	87
County Line Road at Drane Field	Signal controlled	WB RT	С	28.2	3	С	29.6	26
Road	Signal controlled	NB LT	В	12.5	8	В	10.8	10
		NB TH	В	18.3	247	В	18.0	299
		NB RT	В	16.8	42	В	14.0	25
		SB LT	В	14.4	142	В	14.3	97
		SB TH	В	12.1	220	В	11.7	190
		SB RT	Α	8.6	0	Α	8.7	0
		EB LT	F	88.4	#239	D	50.2	138
	Signal controlled	EB TH & RT	С	27.3	274	С	28.1	212
		WB LT	В	19.0	22	В	14.7	6
Airfield Court/West Airport Road		WB TH	С	27.5	280	С	23.2	164
at Drane Field Road		WB RT	Α	4.2	46	Α	4.7	41
		NB LT, TH & RT	Α	0.1	0	Α	7.0	17
		SB TH & LT	С	20.2	236	В	11.3	112
		SB RT	Α	3.0	37	Α	2.5	35
		EB TH	Α	0.0	0	Α	0.0	0
		EB RT	Α	0.0	0	Α	0.0	0
Kelvin Howard Road at Drane	Stop sign	WB LT	В	10.9	3	В	10.3	3
Field Road	controlled/unsignalized	WB TH	Α	0.0	0	Α	0.0	0
	_	NB LT	D	29.1	10	D	28.8	10
		NB RT	С	15.0	5	В	13.5	3
		EBTH&RT	Α	0	0	Α	0	0
Kidron Bood of Drong Field	Stop size	WBLT	Α	9.6	15	Α	8.9	8
Kidron Road at Drane Field	Stop sign	WBTH	Α	0	0	Α	0	0
Road	controlled/unsignalized	NBLT	Е	39.7	38	D	34.8	40
		NBRT	С	15.3	35	В	14.2	38

#95th percentile volume exceeds capacity and queue may be longer. Queue shown is maximum after two cycles. SB = southbound; EB = eastbound; WB = westbound; NB = northbound; TH = through; LT = left turn; RT = right turn

Table 4.2-6 2027 Proposed Project Mitigation Alternative 1 Traffic Operations

				AM			PM	
Intersections	Control/Signal Type	Movement	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)
		EB LT	С	29.5	44	С	30.2	44
		EB TH	Α	0.0	75	Α	0.0	75
		EB RT	D	38.0	75	D	38.8	75
		WB LT	Е	60.7	#211	Е	71.3	#227
		WB TH	С	28.3	74	С	29.2	96
County Line Road at Drane Field	Signal controlled	WB RT	С	30.5	12	С	32.6	37
Road	Signal controlled	NB LT	В	12.3	9	В	10.8	10
		NB TH	В	19.1	273	В	19.1	329
		NB RT	В	17.4	43	В	14.3	36
		SB LT	В	19.1	#215	В	19.2	#167
		SB TH	В	12.0	243	В	11.7	212
		SB RT	Α	8.2	0	Α	8.4	0
		EB LT	F	91.3	#269	D	53.6	158
		EB TH & RT	С	24.3	296	С	25.8	232
		WB LT	В	16.5	21	В	12.7	5
Airfield Court/West Airport Road	Cianal controlled	WB TH	С	24.4	297	С	20.8	172
at Drane Field Road	Signal controlled	WB RT	Α	3.7	43	Α	4.1	38
		NB LT, TH & RT	Α	0.1	0	Α	8.9	20
		SB TH & LT	С	28.6	299	В	14.6	147
		SB RT	Α	4.8	57	Α	3.0	41
		EB TH	Α	0.0	0	Α	0.0	0
		EB RT	Α	0.0	0	Α	0.0	0
Kelvin Howard Road at Drane	Stop sign	WB LT	В	11.5	3	В	10.7	3
Field Road	controlled/unsignalized	WB TH	Α	0.0	0	Α	0.0	0
r ieiu itoau		NB LT	Е	37.7	15	Е	36.9	15
		NB RT	С	16.5	5	В	14.6	5
		EBTH&RT	Α	0	0	Α	0	0

				AM			PM			
Intersections	Intersections Control/Signal Type	Movement	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)		
	Stop sign controlled/unsignalized	WBLT	В	10.2	20	Α	9.3	13		
Kidron Road at Drane Field		WBTH	Α	0	0	Α	0	0		
Road		NBLT	F	74.5	73	F	60.9	78		
		NBRT	С	18.4	58	С	16.9	58		

#:95th percentile volume exceeds capacity and queue may be longer. Queue shown is maximum after two cycles. SB = southbound; EB = eastbound; WB = westbound; NB = northbound; TH = through; LT = left turn; RT = right turn

Table 4.2-7 2022 Proposed Project Mitigation Alternative 2 Traffic Operations

				AM		PM			
Intersections	Control/Signal Type	Movement	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)	
		EB LT	С	29.6	41	С	29.7	41	
		EB TH	Α	0.0	69	Α	0.0	69	
		EB RT	D	37.8	69	D	37.9	69	
		WB LT	С	34.4	#208	D	39.0	#239	
		WB TH	С	26.7	66	С	27.3	87	
County Line Road at Drane Field	Signal controlled	WB RT	С	28.2	3	С	29.6	26	
Road	Signal controlled	NB LT	В	12.5	8	В	10.8	10	
		NB TH	В	18.3	247	В	18.0	299	
		NB RT	В	16.8	42	В	14.0	25	
		SB LT	В	14.4	142	В	14.3	97	
		SB TH	В	12.1	220	В	11.7	190	
		SB RT	Α	8.6	0	Α	8.7	0	
		EB LT	F	88.4	#239	D	50.2	138	
		EB TH & RT	С	27.3	274	С	28.1	212	
Airfield Count/Most Airport Dood		WB LT	В	19	22	В	14.7	6	
Airfield Court/West Airport Road at Drane Field Road	Signal controlled	WB TH	С	27.5	280	С	23.2	164	
at Dialie Field Road	-	WB RT	Α	4.2	46	Α	4.7	41	
		NB LT, TH & RT	Α	0.1	0	Α	7.0	17	
		SB TH & LT	С	20.2	236	В	11.3	112	

		SB RT	Α	3.0	37	Α	2.5	35
		EB TH	Α	0.0	0	Α	0.0	0
		EB RT	Α	0.0	0	Α	0.0	0
Kelvin Howard Road at Drane	Stop sign	WB LT	В	10.9	3	В	10.3	3
Field Road	controlled/unsignalized	WB TH	Α	0.0	0	Α	0.0	0
		NB LT	D	29.1	10	D	28.8	10
		NB RT	С	15.0	5	В	13.5	3
		EB TH	Α	0	264	Α	0	198
		EBRT	В	12.8	264	В	12.5	198
Kidron Road at Drane Field	Signal controlled	WBLT	Α	8.2	31	Α	7.2	23
Road	Signal controlled	WBTH	Α	3.9	73	Α	5	103
		NBLT	В	16.4	51	В	13.9	51
		NBRT	С	20.8	44	В	17.7	42

#:95th percentile volume exceeds capacity and queue may be longer. Queue shown is maximum after two cycles. SB = southbound; EB = eastbound; WB = westbound; NB = northbound; TH = through; LT = left turn; RT = right turn

Table 4.2-8 2027 Proposed Project Mitigation Alternative 2 Traffic Operations

				AM			PM			
Intersections	Control/Signal Type	Movement	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)		
		EB LT	С	29.5	44	С	30.2	44		
		EB TH	Α	0.0	75	Α	0.0	75		
		EB RT	D	38.0	75	D	38.8	75		
		WB LT	Е	60.7	#211	Е	71.3	#227		
	Signal controlled	WB TH	С	28.3	74	С	29.2	96		
County Line Road at Drane Field		WB RT	С	30.5	12	С	32.6	37		
Road		NB LT	В	12.3	9	В	10.8	10		
		NB TH	В	19.1	273	В	19.1	329		
		NB RT	В	17.4	43	В	14.3	36		
		SB LT	В	19.1	#215	В	19.2	#167		
		SB TH	В	12.0	243	В	11.7	212		
		SB RT	Α	8.2	0	Α	8.4	0		
		EB LT	F	91.3	#269	D	53.6	158		
Airfield Court/West Airport Road at Drane Field Road	Signal controlled	EB TH & RT	С	24.3	296	С	25.8	232		
		WB LT	В	16.5	21	В	12.7	5		

				AM			PM			
Intersections	Control/Signal Type	Movement	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)	LOS	Delay (Seconds/ Vehicle)	Queue Length (feet)		
		WB TH	С	24.4	297	С	20.8	172		
		WB RT	Α	3.7	43	Α	4.1	38		
		NB LT, TH & RT	Α	0.1	0	Α	8.9	20		
		SB TH & LT	С	28.6	299	В	14.6	147		
		SB RT	Α	4.8	57	Α	3	41		
	Stop sign controlled/unsignalized	EB TH	Α	0.0	0	Α	0.0	0		
		EB RT	Α	0.0	0	Α	0.0	0		
Kelvin Howard Road at Drane		WB LT	В	11.5	3	В	10.7	3		
Field Road		WB TH	Α	0.0	0	Α	0.0	0		
		NB LT	Е	37.7	15	E	36.9	15		
		NB RT	С	16.5	5	В	14.6	5		
		EBTH	Α	0	333	Α	0	252		
		EBRT	В	14.6	333	В	14.3	252		
Kidron Road at Drane Field	Signal controlled	WBLT	В	11.1	38	Α	8.9	29		
Road	Signal controlled	WBTH	Α	4.4	84	Α	5.8	127		
		NBLT	В	18.7	66	В	15.6	68		
		NBRT	С	24.6	51	С	20.7	49		

#:95th percentile volume exceeds capacity and queue may be longer. Queue shown is maximum after two cycles.

SB = southbound; EB = eastbound; WB = westbound; NB = northbound; TH = through; LT = left turn; RT = right turn



Lakeland Linder International Airport	Traffic Study Technical Report
ATTACHMENT A SYNCHRO OUTPUTS	



	۶	→	•	•	—	4	1	†	<i>></i>	/	+	-√
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	₽		ሻ	†	7	ሻ	^	7	ሻ	^	7
Traffic Volume (veh/h)	43	53	22	196	51	76	8	643	143	192	731	38
Future Volume (veh/h)	43	53	22	196	51	76	8	643	143	192	731	38
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone)											
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	50	62	26	228	59	88	9	748	166	223	850	44
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	273	98	41	384	323	274	340	1507	672	433	1800	803
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.04	0.08	0.08	0.14	0.18	0.18	0.01	0.43	0.43	0.10	0.52	0.52
Unsig. Movement Delay												
Ln Grp Delay, s/veh	28.9	0.0	37.0	25.7	25.6	26.6	11.4	15.9	13.8	11.0	12.0	8.7
Ln Grp LOS	С	Α	D	С	С	С	В	В	В	В	В	Α
Approach Vol, veh/h		138			375			923			1117	
Approach Delay, s/veh		34.1			25.9			15.5			11.6	
Approach LOS		С			С			В			В	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		1	2	3	4	5	6	7	8			
Case No		1.1	3.0	1.1	4.0	1.1	3.0	1.1	3.0			
Phs Duration (G+Y+Rc), s		11.4	35.9	14.7	10.3	5.3	42.0	7.7	17.3			
Change Period (Y+Rc), s		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5			
Max Green (Gmax), s		13.5	29.0	11.5	18.0	5.0	37.5	5.1	24.4			
Max Allow Headway (MAH), s		3.7	4.6	3.7	4.9	3.7	4.7	3.7	4.3			
Max Q Clear (g_c+l1), s		6.7	13.2	10.2	5.6	2.2	13.3	3.9	5.6			
Green Ext Time (g_e), s		0.3	4.5	0.1	0.2	0.0	5.5	0.0	0.4			
Prob of Phs Call (p_c)		0.99	1.00	0.99	1.00	0.17	1.00	0.63	1.00			
Prob of Max Out (p_x)		0.09	0.00	1.00	0.00	1.00	0.00	1.00	0.00			
Left-Turn Movement Data												
Assigned Mvmt		1		3		5		7				
Mvmt Sat Flow, veh/h		1739		1739		1739		1739				
Through Movement Data												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			3469		1221		3469		1826			
Right-Turn Movement Data												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			1547		512		1547		1547			
Left Lane Group Data												
Assigned Mvmt		1	0	3	0	5	0	7	0			
Lane Assignment	L ((Pr/Pm)	L((Pr/Pm)	L	(Pr/Pm)	L ((Pr/Pm)				

Lakeland Linder Aiport RK&K

Synchro 10 Report 06/22/2020

1: County Line Rd & Drane	e Field	Ru							AIVI Peak
Lanes in Grp	1	0	1	0	1	0	1	0	
Grp Vol (v), veh/h	223	0	228	0	9	0	50	0	
Grp Sat Flow (s), veh/h/ln	1739	0	1739	0	1739	0	1739	0	
Q Serve Time (g_s), s	4.7	0.0	8.2	0.0	0.2	0.0	1.9	0.0	
Cycle Q Clear Time (g_c), s	4.7	0.0	8.2	0.0	0.2	0.0	1.9	0.0	
Perm LT Sat Flow (s_l), veh/h/ln	596	0	1278	0	608	0	1211	0	
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0	
Perm LT Eff Green (g_p), s	33.4	0.0	7.8	0.0	31.4	0.0	5.8	0.0	
Perm LT Serve Time (g_u), s	20.1	0.0	2.2	0.0	26.2	0.0	5.8	0.0	
Perm LT Q Serve Time (g_ps), s	7.9	0.0	1.2	0.0	0.1	0.0	0.0	0.0	
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	
Lane Grp Cap (c), veh/h	433	0	384	0	340	0	273	0	
V/C Ratio (X)	0.52	0.00	0.59	0.00	0.03	0.00	0.18	0.00	
Avail Cap (c_a), veh/h	591	0	415	0	440	0	319	0	
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	
Uniform Delay (d1), s/veh	10.0	0.0	23.8	0.0	11.3	0.0	28.6	0.0	
Incr Delay (d2), s/veh	1.0	0.0	2.0	0.0	0.0	0.0	0.3	0.0	
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh	11.0	0.0	25.7	0.0	11.4	0.0	28.9	0.0	
1st-Term Q (Q1), veh/ln	1.2	0.0	3.0	0.0	0.1	0.0	0.7	0.0	
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	
%ile Back of Q (50%), veh/ln	1.4	0.0	3.2	0.0	0.1	0.0	0.7	0.0	
%ile Storage Ratio (RQ%)	0.10	0.00	0.41	0.00	0.01	0.00	0.10	0.00	
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0	
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Middle Lane Group Data									
Assigned Mvmt	0	2	0	4	0	6	0	8	
Lane Assignment		Т				Т		Т	
Lanes in Grp	0	2	0	0	0	2	0	1	
Grp Vol (v), veh/h	0	748	0	0	0	850	0	59	
Grp Sat Flow (s), veh/h/ln	0	1735	0	0	0	1735	0	1826	
Q Serve Time (g_s), s	0.0	11.2	0.0	0.0	0.0	11.3	0.0	2.0	
Cycle Q Clear Time (g_c), s	0.0	11.2	0.0	0.0	0.0	11.3	0.0	2.0	
Lane Grp Cap (c), veh/h	0	1507	0	0	0	1800	0	323	
V/C Ratio (X)	0.00	0.50	0.00	0.00	0.00	0.47	0.00	0.18	
Avail Cap (c_a), veh/h	0	1507	0	0	0	1800	0	616	
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00	
Uniform Delay (d1), s/veh	0.0	14.7	0.0	0.0	0.0	11.1	0.0	25.3	
Incr Delay (d2), s/veh	0.0	1.2	0.0	0.0	0.0	0.9	0.0	0.3	
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh	0.0	15.9	0.0	0.0	0.0	12.0	0.0	25.6	
1st-Term Q (Q1), veh/ln	0.0	3.5	0.0	0.0	0.0	3.2	0.0	0.8	
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0	
· \ · // - ·		-				-			

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	
%ile Back of Q (50%), veh/ln	0.0	3.7	0.0	0.0	0.0	3.4	0.0	0.8	
%ile Storage Ratio (RQ%)	0.00	0.07	0.00	0.00	0.00	0.05	0.00	0.00	
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0	
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Right Lane Group Data									
Assigned Mvmt	0	12	0	14	0	16	0	18	
Lane Assignment		R		T+R		R		R	
Lanes in Grp	0	1	0	1	0	1	0	1	
Grp Vol (v), veh/h	0	166	0	88	0	44	0	88	
Grp Sat Flow (s), veh/h/ln	0	1547	0	1734	0	1547	0	1547	
Q Serve Time (g_s), s	0.0	4.9	0.0	3.6	0.0	1.0	0.0	3.6	
Cycle Q Clear Time (g_c), s	0.0	4.9	0.0	3.6	0.0	1.0	0.0	3.6	
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.30	0.00	1.00	0.00	1.00	
Lane Grp Cap (c), veh/h	0	672	0	138	0	803	0	274	
V/C Ratio (X)	0.00	0.25	0.00	0.64	0.00	0.05	0.00	0.32	
Avail Cap (c_a), veh/h	0	672	0	432	0	803	0	522	
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	
Uniform Delay (d1), s/veh	0.0	13.0	0.0	32.2	0.0	8.6	0.0	26.0	
Incr Delay (d2), s/veh	0.0	0.9	0.0	4.8	0.0	0.1	0.0	0.7	
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh	0.0	13.8	0.0	37.0	0.0	8.7	0.0	26.6	
1st-Term Q (Q1), veh/ln	0.0	1.4	0.0	1.4	0.0	0.3	0.0	1.2	
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.1	
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	
%ile Back of Q (50%), veh/ln	0.0	1.6	0.0	1.5	0.0	0.3	0.0	1.2	
%ile Storage Ratio (RQ%)	0.00	0.16	0.00	0.02	0.00	0.03	0.00	0.16	
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0	
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Intersection Summary									
HCM 6th Ctrl Delay		16.3							
HCM 6th LOS		В							

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	7	ሻ	<u> </u>	ሻ	7
Traffic Vol, veh/h	387	0	0	324	0	0
Future Vol, veh/h	387	0	0	324	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-		- -	None
Storage Length	_	275	200	-	0	50
Veh in Median Storage		213	200	0	0	-
Grade, %	, # 0	<u>-</u>	_	0	0	_
Peak Hour Factor	86	86	86	86	86	86
	5	5	5		5	5
Heavy Vehicles, %				5		
Mvmt Flow	450	0	0	377	0	0
Major/Minor N	/lajor1	N	Major2	ı	Minor1	
Conflicting Flow All	0	0	450	0	827	450
Stage 1	_		-	-	450	-
Stage 2	_	<u>-</u>	_	_	377	_
Critical Hdwy	_	_	4.15	_	6.45	6.25
Critical Hdwy Stg 1	<u>-</u>	_	-	_	5.45	-
Critical Hdwy Stg 2	_	_	_	_	5.45	_
Follow-up Hdwy	<u>-</u>	_	2.245	_	3.545	
Pot Cap-1 Maneuver	_	_	1095	-	337	603
Stage 1	_	_	1033	_	636	-
Stage 2	-	<u>-</u>	-		687	
	-	-	-	-	007	-
Platoon blocked, %	-	-	4005	-	227	000
Mov Cap-1 Maneuver	-	-	1095	-	337	603
Mov Cap-2 Maneuver	-	-	-	-	337	-
Stage 1	-	-	-	-	636	-
Stage 2	-	-	-	-	687	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		0	
	U		U			
HCM LOS					Α	
Minor Lane/Major Mvm	t _	NBLn11	VBLn2	EBT	EBR	WBL
Capacity (veh/h)		-	_	_	-	1095
HCM Lane V/C Ratio		_	_	-	-	-
HCM Control Delay (s)		0	0	-	_	0
HCM Lane LOS		A	A	-	-	A
HCM 95th %tile Q(veh)		-	-	_	_	0

Intersection						
Int Delay, s/veh	1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	ĵ.			सी	¥	
Traffic Vol, veh/h	386	1	36	287	8	25
Future Vol. veh/h	386	1	36	287	8	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-		-	None	-	None
Storage Length	_	-	_	-	0	-
Veh in Median Storage	e.# 0	_	_	0	0	_
Grade, %	0	_	_	0	0	_
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	5	5	5	5	5	5
Mymt Flow	449	1	42	334	9	29
IVIVIIIL I IOW	443	Į.	42	JJ4	3	23
	Major1		Major2		Minor1	
Conflicting Flow All	0	0	450	0	868	450
Stage 1	-	-	-	-	450	-
Stage 2	-	-	-	-	418	-
Critical Hdwy	-	-	4.15	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	_	2.245	_	3.545	3.345
Pot Cap-1 Maneuver	-	-	1095	-	319	603
Stage 1	_	_	_	_	636	_
Stage 2	-	-	-	-	658	-
Platoon blocked, %	<u>-</u>	_		_		
Mov Cap-1 Maneuver	_	_	1095	_	304	603
Mov Cap-2 Maneuver	-	_	-	_	304	-
Stage 1	_	_	_	_	636	_
Stage 2	_	_	_	_	627	_
Stage 2	_	_	_	_	021	_
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.9		13	
HCM LOS					В	
Minor Long/Major Mars	at N	MDI 51	EDT	EDD	WDI	WDT
Minor Lane/Major Mvn	iit f	VBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		487	-	-	1095	-
HCM Lane V/C Ratio		0.079	-	-	0.038	-
HCM Control Delay (s)		13	-	-	8.4	0
	/	_				
HCM Lane LOS HCM 95th %tile Q(veh		B 0.3	-	-	0.1	Α

1: County Line Rd & Drane Field Rd

	•	-	•	•	•	4	†	~	>	ļ	4	
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	50	88	228	59	88	9	748	166	223	850	44	
v/c Ratio	0.21	0.41	0.63	0.15	0.19	0.03	0.55	0.22	0.52	0.43	0.05	
Control Delay	22.0	32.1	29.9	26.8	0.9	9.1	21.3	1.6	13.1	12.0	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	22.0	32.1	29.9	26.8	0.9	9.1	21.3	1.6	13.1	12.0	0.1	
Queue Length 50th (ft)	17	30	86	24	0	2	147	0	49	113	0	
Queue Length 95th (ft)	40	71	145	54	0	8	218	9	89	210	0	
Internal Link Dist (ft)		1862		5754			1432			1594		
Turn Bay Length (ft)	200		200		200	275		250	350		250	
Base Capacity (vph)	242	438	381	600	631	354	1354	749	491	1955	953	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.21	0.20	0.60	0.10	0.14	0.03	0.55	0.22	0.45	0.43	0.05	
Intersection Summary												

	•	-	•	←	•	†	ļ	4	
Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR	
Lane Group Flow (vph)	148	306	20	344	399	29	463	142	
v/c Ratio	0.96	0.63	0.11	0.70	0.56	0.03	0.58	0.14	
Control Delay	94.6	31.3	22.2	34.4	5.8	0.0	14.7	2.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	94.6	31.3	22.2	34.4	5.8	0.0	14.7	2.1	
Queue Length 50th (ft)	73	134	8	155	0	0	124	0	
Queue Length 95th (ft)	#164	199	23	226	49	0	262	22	
Internal Link Dist (ft)		3893		1270		729	1301		
Turn Bay Length (ft)	400		150		300			350	
Base Capacity (vph)	223	710	266	711	846	1097	795	1003	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.66	0.43	0.08	0.48	0.47	0.03	0.58	0.14	
Intersection Summary									

⁹⁵th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	1>		ሻ	†	7	ሻ	^	7	ሻ	^	7
Traffic Volume (veh/h)	43	53	22	211	73	103	10	818	123	124	647	32
Future Volume (veh/h)	43	53	22	211	73	103	10	818	123	124	647	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone	Э											
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	50	62	26	245	85	120	12	951	143	144	752	37
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	265	97	41	395	337	286	377	1601	714	342	1779	793
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.04	0.08	0.08	0.15	0.18	0.18	0.01	0.46	0.46	0.07	0.51	0.51
Unsig. Movement Delay												
Ln Grp Delay, s/veh	29.5	0.0	37.7	26.8	26.1	27.5	10.5	16.3	12.4	11.7	11.9	9.1
Ln Grp LOS	С	Α	D	С	С	С	В	В	В	В	В	Α
Approach Vol, veh/h		138			450			1106			933	
Approach Delay, s/veh		34.8			26.8			15.8			11.8	
Approach LOS		С			С			В			В	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		1	2	3	4	5	6	7	8			
Case No		1.1	3.0	1.1	4.0	1.1	3.0	1.1	3.0			
Phs Duration (G+Y+Rc), s		9.4	38.5	15.5	10.4	5.6	42.3	7.7	18.1			
Change Period (Y+Rc), s		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5			
Max Green (Gmax), s		8.5	34.0	11.5	18.0	5.0	37.5	5.1	24.4			
Max Allow Headway (MAH), s		3.7	4.6	3.7	4.9	3.7	4.7	3.7	4.3			
Max Q Clear (g_c+l1), s		5.0	17.0	11.0	5.6	2.3	11.9	3.9	7.0			
Green Ext Time (g_e), s		0.1	5.9	0.0	0.2	0.0	4.8	0.0	0.6			
Prob of Phs Call (p_c)		0.95	1.00	0.99	1.00	0.22	1.00	0.64	1.00			
Prob of Max Out (p_x)		1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00			
Left-Turn Movement Data												
Assigned Mvmt		1		3		5		7				
Mvmt Sat Flow, veh/h		1739		1739		1739		1739				
Through Movement Data												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			3469		1221		3469		1826			
Right-Turn Movement Data												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			1547		512		1547		1547			
Left Lane Group Data												
Assigned Mvmt		1	0	3	0	5	0	7	0			
Lane Assignment	L ((Pr/Pm)	L ((Pr/Pm)	L	(Pr/Pm)	L ((Pr/Pm)				

Lakeland Linder Aiport RK&K

Synchro 10 Report 06/22/2020

1. County Line Nu & Drain	e i ieiu	itu							1 Wil eak
Lanes in Grp	1	0	1	0	1	0	1	0	
Grp Vol (v), veh/h	144	0	245	0	12	0	50	0	
Grp Sat Flow (s), veh/h/ln	1739	0	1739	0	1739	0	1739	0	
Q Serve Time (g_s), s	3.0	0.0	9.0	0.0	0.3	0.0	1.9	0.0	
Cycle Q Clear Time (g_c), s	3.0	0.0	9.0	0.0	0.3	0.0	1.9	0.0	
Perm LT Sat Flow (s_l), veh/h/ln	503	0.0	1278	0.0	670	0.0	1149	0.0	
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0/0	0	0	0	
Perm LT Eff Green (g_p), s	35.3	0.0	7.9	0.0	34.0	0.0	5.9	0.0	
Perm LT Serve Time (g_u), s	19.0	0.0	2.2	0.0	27.8	0.0	5.9	0.0	
Perm LT Q Serve Time (g_u), s	6.5	0.0	1.3	0.0	0.1	0.0	0.0	0.0	
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time to First Blk (g_f), s		0.0		0.0	0.0	0.0	0.0	0.0	
Serve Time pre Blk (g_fs), s	0.0		0.0						
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	
Lane Grp Cap (c), veh/h	342	0	395	0	377	0	265	0	
V/C Ratio (X)	0.42	0.00	0.62	0.00	0.03	0.00	0.19	0.00	
Avail Cap (c_a), veh/h	428	0	408	0	469	0	309	0	
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	
Uniform Delay (d1), s/veh	10.8	0.0	24.0	0.0	10.4	0.0	29.2	0.0	
Incr Delay (d2), s/veh	8.0	0.0	2.7	0.0	0.0	0.0	0.3	0.0	
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh	11.7	0.0	26.8	0.0	10.5	0.0	29.5	0.0	
1st-Term Q (Q1), veh/ln	0.8	0.0	3.3	0.0	0.1	0.0	0.7	0.0	
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	
%ile Back of Q (50%), veh/ln	0.9	0.0	3.6	0.0	0.1	0.0	0.8	0.0	
%ile Storage Ratio (RQ%)	0.07	0.00	0.46	0.00	0.01	0.00	0.10	0.00	
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0	
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Middle Lane Group Data									
Assigned Mvmt	0	2	0	4	0	6	0	8	
Lane Assignment	U U	T	U		U	T	- U	T	
Lanes in Grp	0	2	0	0	0	2	0	1	
Grp Vol (v), veh/h	0	951	0	0	0	752	0	85	
Grp Sat Flow (s), veh/h/ln	0	1735	0	0	0	1735	0	1826	
Q Serve Time (g_s), s	0.0	15.0	0.0	0.0	0.0	9.9	0.0	2.9	
Cycle Q Clear Time (g_c), s	0.0	15.0	0.0	0.0	0.0	9.9	0.0	2.9	
	0.0								
Lane Grp Cap (c), veh/h		1601	0	0	0	1779	0	337	
V/C Ratio (X)	0.00	0.59	0.00	0.00	0.00	0.42	0.00	0.25	
Avail Cap (c_a), veh/h	0 00	1601	0	0	0	1779	0	605	
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00	
Uniform Delay (d1), s/veh	0.0	14.7	0.0	0.0	0.0	11.2	0.0	25.7	
Incr Delay (d2), s/veh	0.0	1.6	0.0	0.0	0.0	0.7	0.0	0.4	
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh	0.0	16.3	0.0	0.0	0.0	11.9	0.0	26.1	
1st-Term Q (Q1), veh/ln	0.0	4.6	0.0	0.0	0.0	2.9	0.0	1.1	
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.0	0.0	0.2	0.0	0.0	

1: County Emic Na a Brai	10 1 1014								
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	
%ile Back of Q (50%), veh/ln	0.0	4.9	0.0	0.0	0.0	3.0	0.0	1.2	
%ile Storage Ratio (RQ%)	0.00	0.09	0.00	0.00	0.00	0.05	0.00	0.01	
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0	
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Right Lane Group Data									
Assigned Mvmt	0	12	0	14	0	16	0	18	
Lane Assignment		R		T+R		R		R	
Lanes in Grp	0	1	0	1	0	1	0	1	
Grp Vol (v), veh/h	0	143	0	88	0	37	0	120	
Grp Sat Flow (s), veh/h/ln	0	1547	0	1734	0	1547	0	1547	
Q Serve Time (g_s), s	0.0	4.0	0.0	3.6	0.0	0.9	0.0	5.0	
Cycle Q Clear Time (g_c), s	0.0	4.0	0.0	3.6	0.0	0.9	0.0	5.0	
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.30	0.00	1.00	0.00	1.00	
Lane Grp Cap (c), veh/h	0	714	0	138	0	793	0	286	
V/C Ratio (X)	0.00	0.20	0.00	0.64	0.00	0.05	0.00	0.42	
Avail Cap (c_a), veh/h	0	714	0	424	0	793	0	512	
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	
Uniform Delay (d1), s/veh	0.0	11.8	0.0	32.9	0.0	9.0	0.0	26.5	
Incr Delay (d2), s/veh	0.0	0.6	0.0	4.8	0.0	0.1	0.0	1.0	
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh	0.0	12.4	0.0	37.7	0.0	9.1	0.0	27.5	
1st-Term Q (Q1), veh/ln	0.0	1.1	0.0	1.4	0.0	0.2	0.0	1.7	
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.1	
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	
%ile Back of Q (50%), veh/ln	0.0	1.3	0.0	1.6	0.0	0.3	0.0	1.8	
%ile Storage Ratio (RQ%)	0.00	0.13	0.00	0.02	0.00	0.03	0.00	0.23	
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0	
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Intersection Summary									
HCM 6th Ctrl Delay		17.2							
HCM 6th LOS		В							

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	<u> </u>	T T	VVDL آ	<u>₩</u>	NDL Š	TO IX
Traffic Vol, veh/h	324	0	0	387	0	0
Future Vol, veh/h	324	0	0	387	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	- -	None
Storage Length	_	275	200	-	0	50
Veh in Median Storage,		213	200	0	0	-
	0			0	0	
Grade, %		-	-			-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	377	0	0	450	0	0
Major/Minor N	/lajor1	N	Major2	N	Minor1	
Conflicting Flow All	0	0	377	0	827	377
Stage 1	-	_	-	-	377	-
Stage 2	_	_	_	<u>-</u>	450	<u>-</u>
Critical Hdwy	_	_	4.15	_	6.45	6.25
Critical Hdwy Stg 1	_	_		_	5.45	-
Critical Hdwy Stg 2	_		_		5.45	_
Follow-up Hdwy	_	_	2.245	_	3.545	
Pot Cap-1 Maneuver		_	1165	-	337	663
	-	-	1100	_		
Stage 1	-	-	-	-	687	-
Stage 2	-	-	-	-	636	-
Platoon blocked, %	-	-	1405	-	007	000
Mov Cap-1 Maneuver	-	-	1165	-	337	663
Mov Cap-2 Maneuver	-	-	-	-	337	-
Stage 1	-	-	-	-	687	-
Stage 2	-	-	-	-	636	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		0	
	U		U			
HCM LOS					Α	
Minor Lane/Major Mvmt	t 1	NBLn11	VBLn2	EBT	EBR	WBL
Capacity (veh/h)		-	-	-	-	1165
HCM Lane V/C Ratio		_	_	_	_	-
HCM Control Delay (s)		0	0	_	_	0
HCM Lane LOS		A	A	_	_	A
HCM 95th %tile Q(veh)		-	- '.	-	_	0

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	\$	LDI	WDL	₩ <u>₩</u>	₩.	וטוו
Traffic Vol, veh/h	379	9	8	316	9	30
Future Vol, veh/h	379	9	8	316	9	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	riee -	None				None
			-		-	
Storage Length	_ 	-	-	-	0	-
Veh in Median Storage,		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	441	10	9	367	10	35
Major/Minor M	1ajor1	N	Major2	ı	Minor1	
Conflicting Flow All	0	0	451	0	831	446
Stage 1	-	-	701	-	446	-
Stage 2	_	_	_	_	385	_
Critical Hdwy	_		4.15	_	6.45	6.25
Critical Hdwy Stg 1	_	_	4.13	_	5.45	0.23
Critical Hdwy Stg 2	-	_	_	_	5.45	
	_	_	2.245	-	3.545	
Follow-up Hdwy	-	-		-		
Pot Cap-1 Maneuver	-	-	1094	-	336	606
Stage 1	-	-	-	-	639	-
Stage 2	-	-	-	-	681	-
Platoon blocked, %	-	-	1001	-	000	000
Mov Cap-1 Maneuver	-	-	1094	-	333	606
Mov Cap-2 Maneuver	-	-	-	-	333	-
Stage 1	-	-	-	-	639	-
Stage 2	-	-	-	-	674	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.2		12.7	
	U		0.2		_	
HCM LOS					В	
Minor Lane/Major Mvmt	: 1	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		510	_	-	1094	-
HCM Lane V/C Ratio		0.089	_		0.009	-
HCM Control Delay (s)		12.7	_	_		0
HCM Lane LOS		В	_	_	A	A
HCM 95th %tile Q(veh)		0.3	_	_	0	-
, , v (voii)						

1: County Line Rd & Drane Field Rd

	•	-	•	•	•	4	†	~	>	ļ	4	
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	50	88	245	85	120	12	951	143	144	752	37	
v/c Ratio	0.22	0.42	0.69	0.22	0.28	0.03	0.62	0.18	0.43	0.38	0.04	
Control Delay	22.8	33.1	33.6	28.4	7.0	8.5	20.2	1.9	12.3	11.2	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	22.8	33.1	33.6	28.4	7.0	8.5	20.2	1.9	12.3	11.2	0.1	
Queue Length 50th (ft)	18	32	99	37	0	2	194	0	30	96	0	
Queue Length 95th (ft)	40	71	155	72	34	9	263	17	59	181	0	
Internal Link Dist (ft)		1862		5754			1432			1594		
Turn Bay Length (ft)	200		200		200	275		250	350		250	
Base Capacity (vph)	232	422	369	575	575	405	1524	783	348	1993	968	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.22	0.21	0.66	0.15	0.21	0.03	0.62	0.18	0.41	0.38	0.04	
Intersection Summary												

4: Airfield Ct W/Airport Rd & Drane Field Rd

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Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR	
Lane Group Flow (vph)	148	303	3	253	381	29	267	337	
v/c Ratio	0.74	0.69	0.02	0.58	0.58	0.03	0.33	0.31	
Control Delay	46.5	32.4	19.0	28.4	6.3	5.0	8.6	1.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	46.5	32.4	19.0	28.4	6.3	5.0	8.6	1.8	
Queue Length 50th (ft)	58	118	1	95	0	2	46	0	
Queue Length 95th (ft)	112	181	6	151	48	13	109	28	
Internal Link Dist (ft)		3893		1270		729	1301		
Turn Bay Length (ft)	400		150		300			350	
Base Capacity (vph)	446	978	356	978	1006	1019	801	1090	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.33	0.31	0.01	0.26	0.38	0.03	0.33	0.31	
Intersection Summary									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	₽		7	•	7	ሻ	44	7	*	^	7
Traffic Volume (veh/h)	42	52	22	232	61	90	9	696	191	251	782	40
Future Volume (veh/h)	42	52	22	232	61	90	9	696	191	251	782	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	4.00	1.00	1.00	4.00	1.00	1.00	4.00	1.00	1.00	4.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	4000	No	4000	4000	No	4000	4000	No	4000	4000	No	4000
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	49	60	26	270	71	105	10	809	222	292	909	47
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	265	95	41	360	300	254	332	1490	665	441	1860	829
Arrive On Green	0.04 1739	0.08 1208	0.08	0.13 1739	0.16 1826	0.16 1547	0.01	0.43	0.43	0.12	0.54 3469	0.54
Sat Flow, veh/h			524				1739	3469	1547	1739		1547
Grp Volume(v), veh/h	49	0	4720	270	71	105	10	809	222	292	909	47
Grp Sat Flow(s), veh/h/ln	1739	0	1732	1739	1826 2.5	1547	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	1.9 1.9	0.0	3.5 3.5	9.5 9.5	2.5	4.5 4.5	0.2	12.8 12.8	7.0 7.0	6.3 6.3	12.1 12.1	1.1 1.1
Cycle Q Clear(g_c), s Prop In Lane	1.00	0.0	0.30	1.00	2.5	1.00	1.00	12.0	1.00	1.00	12.1	1.00
Lane Grp Cap(c), veh/h	265	0	136	360	300	254	332	1490	665	441	1860	829
V/C Ratio(X)	0.19	0.00	0.63	0.75	0.24	0.41	0.03	0.54	0.33	0.66	0.49	0.06
Avail Cap(c_a), veh/h	310	0.00	423	360	555	470	429	1490	665	603	1860	829
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.3	0.0	32.9	26.3	26.8	27.6	11.7	15.6	14.0	11.2	10.7	8.2
Incr Delay (d2), s/veh	0.3	0.0	4.8	8.4	0.4	1.1	0.0	1.4	1.4	1.7	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	1.5	4.6	1.0	1.6	0.1	4.4	2.3	1.8	3.6	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.6	0.0	37.8	34.7	27.2	28.7	11.7	17.1	15.3	12.9	11.7	8.3
LnGrp LOS	С	Α	D	С	С	С	В	В	В	В	В	Α
Approach Vol, veh/h		135			446			1041			1248	
Approach Delay, s/veh		34.8			32.1			16.6			11.8	
Approach LOS		С			С			В			В	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.3	36.2	14.0	10.3	5.4	44.0	7.7	16.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	15.6	28.9	9.5	18.0	5.0	39.5	5.1	22.4				
Max Q Clear Time (g_c+l1), s	8.3	14.8	11.5	5.5	2.2	14.1	3.9	6.5				
Green Ext Time (p_c), s	0.5	4.8	0.0	0.2	0.0	6.1	0.0	0.5				
Intersection Summary												
HCM 6th Ctrl Delay			17.8									
HCM 6th LOS			В									

Intersection							
Int Delay, s/veh	0.5						
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations		7	ች		ሻ	7	•
Traffic Vol, veh/h	488	6	6	373	9	9	
Future Vol, veh/h	488	6	6	373	9	9	
Conflicting Peds, #/hr	. 0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	None	
Storage Length	_	275	200	_	0	50	
Veh in Median Storag	je,# 0	-	_	0	0	_	
Grade, %	0	_	-	0	0	_	
Peak Hour Factor	86	86	86	86	86	86	
Heavy Vehicles, %	5	100	100	5	67	67	
Mvmt Flow	567	7	7	434	10	10	
WIVIII(I IOW	001	•		707	10	10	
		-					
Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	0	0	574	0	1015	567	
Stage 1	-	-	-	-	567	-	
Stage 2	-	-	-	-	448	-	
Critical Hdwy	-	-	5.1	-	7.07	6.87	
Critical Hdwy Stg 1	-	-	-	-	6.07	-	
Critical Hdwy Stg 2	-	-	-	-	6.07	-	
Follow-up Hdwy	-	-	3.1	-	4.103	3.903	
Pot Cap-1 Maneuver	-	-	653	-	202	418	
Stage 1	-	-	-	-	458	-	
Stage 2	-	-	-	-	526	-	
Platoon blocked, %	-	-		-			
Mov Cap-1 Maneuver	r -	-	653	-	200	418	
Mov Cap-2 Maneuver		-	-	-	200	-	
Stage 1	-	-	_	-	458	-	
Stage 2	_	_	_	_	520	_	
o tago _					0=0		
Approach	EB		WB		NB		
HCM Control Delay, s	0		0.2		18.9		
HCM LOS					С		
Minor Lane/Major Mvi	mt 1	NBLn11	VBLn2	EBT	EBR	WBL	
Capacity (veh/h)		200	418	-		653	
HCM Lane V/C Ratio		0.052		<u>-</u>	_	0.011	
HCM Control Delay (s		24	13.8	<u>-</u>	-	10.6	
HCM Lane LOS	9)	24 C	13.6 B	<u>-</u>	-	10.0 B	
HCM 95th %tile Q(vel	h)	0.2	0.1	<u>-</u>		0	
	11)	0.2	0.1	_	_	U	

Intersection						
Int Delay, s/veh	4.4					
		EDD	WDI	WOT	NDI	NDD
	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	}	7.5	440	4	¥	440
Traffic Vol, veh/h	422	75	112	313	37	118
Future Vol, veh/h	422	75	112	313	37	118
Conflicting Peds, #/hr	_ 0	_ 0	0	0	0	0
3	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, a	# 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	491	87	130	364	43	137
Major/Minor	-:4		Mais =0		Mineral	
	ajor1		Major2		Minor1	505
Conflicting Flow All	0	0	578	0	1159	535
Stage 1	-	-	-	-	535	-
Stage 2	-	-	-	-	624	-
Critical Hdwy	-	-	4.15	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	_	2.245	-	3.545	3.345
Pot Cap-1 Maneuver	-	-	981	-	213	540
Stage 1	-	-	-	-	581	-
Stage 2	-	-	-	-	528	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	_	_	981	-	178	540
Mov Cap-2 Maneuver	_	_	_	_	178	-
Stage 1	_	_	_	_	581	_
Stage 2	_	_	_	_	440	_
Olago 2					110	
Approach	EB		WB		NB	
HCM Control Delay, s	0		2.4		24.2	
HCM LOS					С	
Minor Long/Major M.		JDI1	CDT	EDD	WDI	WDT
Minor Lane/Major Mvmt	ľ	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		364	-	-		-
HCM Lane V/C Ratio		0.495	-		0.133	-
HCM Control Delay (s)		24.2	-	-	9.2	0
HCM Lane LOS		С	-	-	Α	Α
		2.6	-	-	0.5	A -

AM Peak

1: County Line Rd & Drane Field Rd

	۶	→	•	←	•	4	†	~	-	↓	4	
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	49	86	270	71	105	10	809	222	292	909	47	
v/c Ratio	0.21	0.41	0.82	0.20	0.24	0.03	0.61	0.30	0.65	0.45	0.05	
Control Delay	23.5	31.9	45.8	29.4	1.7	8.6	22.5	4.2	15.9	11.0	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	23.5	31.9	45.8	29.4	1.7	8.6	22.5	4.2	15.9	11.0	0.1	
Queue Length 50th (ft)	17	29	110	30	0	2	165	0	62	114	0	
Queue Length 95th (ft)	41	69	#200	64	1	8	239	39	117	216	0	
Internal Link Dist (ft)		1862		5754			1432			1594		
Turn Bay Length (ft)	200		200		200	275		250	350		250	
Base Capacity (vph)	237	435	331	545	590	336	1337	733	513	2028	959	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.21	0.20	0.82	0.13	0.18	0.03	0.61	0.30	0.57	0.45	0.05	

Intersection Summary

Queue shown is maximum after two cycles.

Lakeland Linder Aiport

Synchro 10 Report

07/10/2020

^{# 95}th percentile volume exceeds capacity, queue may be longer.

	•	→	•	←	•	†	ļ	1	
Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR	
Lane Group Flow (vph)	194	402	20	420	409	29	405	250	
v/c Ratio	1.01	0.64	0.10	0.67	0.51	0.03	0.58	0.27	
Control Delay	95.6	26.1	17.2	27.1	4.3	0.0	19.3	2.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	95.6	26.1	17.2	27.1	4.3	0.0	19.3	2.7	
Queue Length 50th (ft)	94	163	7	173	0	0	135	0	
Queue Length 95th (ft)	#207	234	20	246	42	0	258	33	
Internal Link Dist (ft)		3893		1270		729	1301		
Turn Bay Length (ft)	400		150		300			350	
Base Capacity (vph)	270	881	289	883	959	991	695	943	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.72	0.46	0.07	0.48	0.43	0.03	0.58	0.27	

Intersection Summary 95th percentile volume exceeds capacity, queue may be longer.

Synchro 10 Report 07/10/2020 Lakeland Linder Aiport

Queue shown is maximum after two cycles.

	۶	→	•	•	←	4	1	†	~	/	†	1
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	£		7	↑	7	7	^	7	ሻ	^	7
Traffic Volume (veh/h)	42	52	22	251	86	123	11	884	165	166	692	33
Future Volume (veh/h)	42	52	22	251	86	123	11	884	165	166	692	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	49	60	26	292	100	143	13	1028	192	193	805	38
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	259	95	41	383	324	274	364	1575	703	341	1806	805
Arrive On Green	0.04	0.08	0.08	0.14	0.18	0.18	0.02	0.45	0.45	0.08	0.52	0.52
Sat Flow, veh/h	1739	1208	524	1739	1826	1547	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	49	0	86	292	100	143	13	1028	192	193	805	38
Grp Sat Flow(s),veh/h/ln	1739	0	1732	1739	1826	1547	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	1.9	0.0	3.6	10.5	3.5	6.2	0.3	17.0	5.7	4.0	10.7	0.9
Cycle Q Clear(g_c), s	1.9	0.0	3.6	10.5	3.5	6.2	0.3	17.0	5.7	4.0	10.7	0.9
Prop In Lane	1.00		0.30	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	259	0	136	383	324	274	364	1575	703	341	1806	805
V/C Ratio(X)	0.19	0.00	0.63	0.76	0.31	0.52	0.04	0.65	0.27	0.57	0.45	0.05
Avail Cap(c_a), veh/h	304	0	421	383	578	490	454	1575	703	433	1806	805
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.4	0.0	33.1	25.8	26.5	27.6	10.7	15.7	12.6	12.2	11.1	8.7
Incr Delay (d2), s/veh	0.4	0.0	4.8	8.8	0.5	1.5	0.0	2.1	1.0	1.5	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	1.6	5.0	1.4	2.2	0.1	5.7	1.8	1.2	3.3	0.3
Unsig. Movement Delay, s/veh	l											
LnGrp Delay(d),s/veh	29.7	0.0	37.9	34.6	27.0	29.1	10.7	17.8	13.5	13.7	11.9	8.8
LnGrp LOS	С	Α	D	С	С	С	В	В	В	В	В	<u>A</u>
Approach Vol, veh/h		135			535			1233			1036	
Approach Delay, s/veh		34.9			31.7			17.0			12.1	
Approach LOS		С			С			В			В	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.6	38.1	15.0	10.3	5.7	43.0	7.7	17.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.0	33.5	10.5	18.0	5.0	38.5	5.1	23.4				
Max Q Clear Time (g_c+l1), s	6.0	19.0	12.5	5.6	2.3	12.7	3.9	8.2				
Green Ext Time (p_c), s	0.2	6.0	0.0	0.2	0.0	5.2	0.0	0.8				
Intersection Summary												
HCM 6th Ctrl Delay			18.8									
HCM 6th LOS			В									

PM Peak

Intersection						
Intersection Int Delay, s/veh	0.4					
•						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations		7				- 7
Traffic Vol, veh/h	405	6	6	452	9	9
Future Vol, veh/h	405	6	6	452	9	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	275	200	-	0	50
Veh in Median Storage,	# 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	5	100	100	5	67	67
Mymt Flow	471	7	7	526	10	10
WWW.CT IOW		•	•	020	10	10
Major/Minor M	1ajor1	I	Major2		Minor1	
Conflicting Flow All	0	0	478	0	1011	471
Stage 1	-	-	-	-	471	-
Stage 2	-	-	-	-	540	-
Critical Hdwy	-	-	5.1	-	7.07	6.87
Critical Hdwy Stg 1	-	-	-	-	6.07	-
Critical Hdwy Stg 2	_	-	-	-	6.07	-
Follow-up Hdwy	-	-	3.1	_	4.103	3.903
Pot Cap-1 Maneuver	_	_	720	_	203	479
Stage 1	_	_	-	_	512	-
Stage 2	_	_	_	_	473	-
Platoon blocked, %	_	_		_	.10	
Mov Cap-1 Maneuver			720	_	201	479
Mov Cap-1 Maneuver		_	720	_	201	419
	-	-	_		512	
Stage 1	_	-		-	468	-
Stage 2	-	-	-	-	400	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		18.3	
HCM LOS	•		J. 1		C	
					<u> </u>	
Minor Lane/Major Mvmt	: 1	NBLn11	VBLn2	EBT	EBR	WBL
Capacity (veh/h)		201	479	-	-	720
HCM Lane V/C Ratio		0.052	0.022	-	-	0.01
HCM Control Delay (s)		23.9	12.7	-	-	10
HCM Lane LOS		С	В	-	-	В
HCM 95th %tile Q(veh)		0.2	0.1	-	-	0
						_

Synchro 10 Report 06/29/2020 Lakeland Linder Aiport

Intersection						
Int Delay, s/veh	4.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations		LDK	WDL	₩ <u>₩</u>	NDL W	אסוז
Traffic Vol, veh/h	Љ 353	61	69	414	4 6	133
Future Vol, veh/h	353	61	69	414	46	133
	0	0	09	0	0	0
Conflicting Peds, #/hr						
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-		-	None
Storage Length	- -	-	-	-	0	-
Veh in Median Storage,		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	410	71	80	481	53	155
Major/Minor M	lajor1	N	Major2	ı	Minor1	
Conflicting Flow All	0	0	481	0	1087	446
Stage 1	-	U	401	U	446	-
Stage 2	-	-	_	_	641	_
•		_	4.15		6.45	6.25
Critical Hdwy	-	-		-	5.45	
Critical Hdwy Stg 1	-	-	-	-		-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.245	-	3.545	
Pot Cap-1 Maneuver	-	-	1066	-	236	606
Stage 1	-	-	-	-	639	-
Stage 2	-	-	-	-	519	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1066	-	212	606
Mov Cap-2 Maneuver	-	-	-	-	212	-
Stage 1	-	-	-	-	639	-
Stage 2	-	-	-	-	466	-
Annroach	EB		WB		NB	
Approach						
HCM Control Delay, s	0		1.2		22.5	
HCM LOS					С	
Minor Lane/Major Mvmt		NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		410			1066	_
HCM Lane V/C Ratio		0.508	_		0.075	_
HCM Control Delay (s)		22.5	_	_		0
HCM Lane LOS		ZZ.3	_	_	Α	A
HCM 95th %tile Q(veh)		2.8	_	_	0.2	-
HOW JOHN JOHN W(VEII)		2.0			0.2	

	۶	→	•	←	•	4	†	/	>	ļ	4	
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	49	86	292	100	143	13	1028	192	193	805	38	
v/c Ratio	0.21	0.42	0.85	0.27	0.31	0.03	0.69	0.24	0.58	0.40	0.04	
Control Delay	23.4	32.6	48.5	29.9	4.3	8.2	21.9	2.0	16.3	10.9	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	23.4	32.6	48.5	29.9	4.3	8.2	21.9	2.0	16.3	10.9	0.1	
Queue Length 50th (ft)	18	30	125	45	0	2	219	0	40	101	0	
Queue Length 95th (ft)	40	69	#213	84	23	10	293	18	83	191	0	
Internal Link Dist (ft)		1862		5754			1432			1594		
Turn Bay Length (ft)	200		200		200	275		250	350		250	
Base Capacity (vph)	228	420	344	550	594	386	1496	802	352	2022	979	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.21	0.20	0.85	0.18	0.24	0.03	0.69	0.24	0.55	0.40	0.04	

Intersection Summary

Queue shown is maximum after two cycles.

Synchro 10 Report 07/10/2020 Lakeland Linder Aiport

⁹⁵th percentile volume exceeds capacity, queue may be longer.

4: Airfield Ct W/Airport Rd & Drane Field Rd

	•	→	•	•	•	†	ļ	4	
Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR	
Lane Group Flow (vph)	177	364	3	300	391	29	224	324	
v/c Ratio	0.81	0.71	0.02	0.58	0.54	0.03	0.30	0.32	
Control Delay	49.6	29.0	16.0	24.8	5.2	6.3	10.1	2.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	49.6	29.0	16.0	24.8	5.2	6.3	10.1	2.2	
Queue Length 50th (ft)	66	131	1	104	0	3	40	0	
Queue Length 95th (ft)	127	197	6	160	43	15	105	32	
Internal Link Dist (ft)		3893		1270		729	1301		
Turn Bay Length (ft)	400		150		300			350	
Base Capacity (vph)	490	1157	378	1157	1124	945	743	1027	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.36	0.31	0.01	0.26	0.35	0.03	0.30	0.32	
Intersection Summary									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		₽		7	+	7	ሻ	44	7	*	^	7
Traffic Volume (veh/h)	46	57	24	253	66	99	10	767	207	272	862	44
Future Volume (veh/h)	46	57	24	253	66	99	10	767	207	272	862	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	4.00	1.00	1.00	4.00	1.00	1.00	4.00	1.00	1.00	4.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach Adj Sat Flow, veh/h/ln	1826	No 1826	1006	1826	No 1826	1826	1826	No 1826	1006	1006	No 1826	1006
Adj Flow Rate, veh/h	53	66	1826 28	294	77	115	1020	892	1826 241	1826 316	1002	1826 51
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	271	101	43	358	303	257	302	1451	647	426	1846	823
Arrive On Green	0.04	0.08	0.08	0.13	0.17	0.17	0.01	0.42	0.42	0.13	0.53	0.53
Sat Flow, veh/h	1739	1217	516	1739	1826	1547	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	53	0	94	294	77	115	12	892	241	316	1002	51
Grp Sat Flow(s), veh/h/ln	1739	0	1733	1739	1826	1547	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	2.0	0.0	3.9	9.5	2.7	5.0	0.3	15.0	8.0	7.0	14.1	1.2
Cycle Q Clear(g_c), s	2.0	0.0	3.9	9.5	2.7	5.0	0.3	15.0	8.0	7.0	14.1	1.2
Prop In Lane	1.00		0.30	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	271	0	144	358	303	257	302	1451	647	426	1846	823
V/C Ratio(X)	0.20	0.00	0.65	0.82	0.25	0.45	0.04	0.61	0.37	0.74	0.54	0.06
Avail Cap(c_a), veh/h	313	0	420	358	551	467	393	1451	647	584	1846	823
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	0.0	33.0	27.2	27.0	27.9	12.2	16.9	14.9	12.9	11.4	8.4
Incr Delay (d2), s/veh	0.3	0.0	5.0	14.2	0.4	1.2	0.1	2.0	1.6	3.3	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	1.7	5.6	1.1	1.7	0.1	5.2	2.6	2.2	4.3	0.3
Unsig. Movement Delay, s/veh		0.0	00.0	44.4	07.4	00.4	40.0	40.0	10.5	40.0	10.0	0.0
LnGrp Delay(d),s/veh	29.5	0.0	38.0	41.4	27.4	29.1	12.3	18.9	16.5	16.2	12.6	8.6
LnGrp LOS	С	A	D	D	C	С	В	B	В	В	B	A
Approach Vol, veh/h		147			486			1145			1369	
Approach LOS		34.9			36.3			18.3			13.3	
Approach LOS		С			D			В			В	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	35.5	14.0	10.7	5.6	44.0	7.8	16.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	16.3	28.2	9.5	18.0	5.0	39.5	5.1	22.4				
Max Q Clear Time (g_c+l1), s	9.0	17.0	11.5	5.9	2.3	16.1	4.0	7.0				
Green Ext Time (p_c), s	0.5	4.7	0.0	0.3	0.0	6.7	0.0	0.6				
Intersection Summary												
HCM 6th Ctrl Delay			19.7									
HCM 6th LOS			В									

Lakeland Linder Aiport

Intersection							Į
Int Delay, s/veh	0.5						
Movement	EBT	EBR	WBL	WBT	NBL	NBR	J
Lane Configurations	†	7	ች		*	7	
Traffic Vol, veh/h	530	6	6	408	9	9	
Future Vol, veh/h	530	6	6	408	9	9	
Conflicting Peds, #/hr		0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	275	200	-	0	50	
Veh in Median Storag	e,# 0	-	-	0	0	-	
Grade, %	0	_	-	0	0	_	
Peak Hour Factor	86	86	86	86	86	86	
Heavy Vehicles, %	5	100	100	5	67	67	
Mymt Flow	616	7	7	474	10	10	
WWITH	010	!	'	7/7	10	10	
		-					
	Major1		Major2		Minor1		
Conflicting Flow All	0	0	623	0	1104	616	
Stage 1	-	-	-	-	616	-	
Stage 2	-	-	-	-	488	-	
Critical Hdwy	-	-	5.1	-	7.07	6.87	
Critical Hdwy Stg 1	-	-	-	-	6.07	-	
Critical Hdwy Stg 2	-	-	-	-	6.07	-	
Follow-up Hdwy	-	-	3.1	-	4.103	3.903	
Pot Cap-1 Maneuver	-	-	621	-	176	390	
Stage 1	-	-	-	-	432	-	
Stage 2	-	-	-	-	502	-	
Platoon blocked, %	_	_		_			
Mov Cap-1 Maneuver	_	_	621	_	174	390	
Mov Cap-2 Maneuver		_	-	_	174	-	
Stage 1	_	_	_	_	432	_	
Stage 2	_	_	_	_	496	_	
Olago Z					100		
Approach	EB		WB		NB		
HCM Control Delay, s	0		0.2		20.8		
HCM LOS					С		
Minor Lane/Major Mvr	nt N	NBLn11	VIRI n2	EBT	EBR	WBL	
	nt I				LDK		
Capacity (veh/h)		174	390	-	-	621	
HCM Lane V/C Ratio			0.027	-		0.011	
HCM Control Delay (s HCM Lane LOS	5)	27	14.5	-	-	10.9	
HUM I AND I (I)S		D	В	-	-	В	
HCM 95th %tile Q(veh	. \	0.2	0.1			0	

Intersection						
Int Delay, s/veh	5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1 >			4	¥	
Traffic Vol, veh/h	464	75	116	344	38	121
Future Vol, veh/h	464	75	116	344	38	121
Conflicting Peds, #/hr		0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-		-		-	None
Storage Length	_	-	_	_	0	_
Veh in Median Storag	e,# 0	-	_	0	0	_
Grade, %	0	-	_	0	0	_
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	540	87	135	400	44	141
		•				
N.A (N.A.)					A' 4	
Major/Minor	Major1		Major2		Minor1	-0.4
Conflicting Flow All	0	0	627	0	1254	584
Stage 1	-	-	-	-	584	-
Stage 2	-	-	-	-	670	-
Critical Hdwy	-	-	4.15	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.245	-		
Pot Cap-1 Maneuver	-	-	940	-	187	506
Stage 1	-	-	-	-	552	-
Stage 2	-	-	-	-	503	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	• -	-	940	-	152	506
Mov Cap-2 Maneuver	· <u>-</u>	-	-	-	152	-
Stage 1	-	-	-	-	552	-
Stage 2	-	-	-	-	410	-
Annroach	ED		WD		ND	
Approach	EB		WB		NB	
HCM Control Delay, s	0		2.4		29.7	
HCM LOS					D	
Minor Lane/Major Mvr	mt_ l	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		325	-	-	940	-
HCM Lane V/C Ratio		0.569	-	_	0.143	-
HCM Control Delay (s	s)	29.7	-	-	9.5	0
HCM Lane LOS		D	-	-	Α	Α
HCM 95th %tile Q(vel	h)	3.3	-	-	0.5	-

1: County Line Rd & Drane Field Rd

	۶	-	•	←	•	4	†	~	>	ļ	4	
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	53	94	294	77	115	12	892	241	316	1002	51	
v/c Ratio	0.22	0.44	0.89	0.22	0.26	0.04	0.69	0.33	0.72	0.49	0.05	
Control Delay	23.8	33.5	56.0	29.7	2.5	9.0	25.5	4.4	22.2	11.7	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	23.8	33.5	56.0	29.7	2.5	9.0	25.5	4.4	22.2	11.7	0.1	
Queue Length 50th (ft)	20	35	128	34	0	2	204	0	73	133	0	
Queue Length 95th (ft)	44	75	#233	68	7	9	275	41	161	248	0	
Internal Link Dist (ft)		1862		5754			1432			1594		
Turn Bay Length (ft)	200		200		200	275		250	350		250	
Base Capacity (vph)	238	428	330	538	584	307	1286	726	491	2033	961	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.22	0.22	0.89	0.14	0.20	0.04	0.69	0.33	0.64	0.49	0.05	

Intersection Summary

Queue shown is maximum after two cycles.

^{# 95}th percentile volume exceeds capacity, queue may be longer.

	۶	-	•	•	•	†	ļ	✓	
Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR	
Lane Group Flow (vph)	210	433	21	457	451	31	445	271	
v/c Ratio	1.02	0.63	0.09	0.66	0.52	0.03	0.68	0.30	
Control Delay	95.2	24.5	16.3	25.5	4.0	0.1	24.6	2.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	95.2	24.5	16.3	25.5	4.0	0.1	24.6	2.8	
Queue Length 50th (ft)	106	175	7	189	0	0	192	0	
Queue Length 95th (ft)	#229	249	20	267	43	0	303	35	
Internal Link Dist (ft)		3893		1270		729	1301		
Turn Bay Length (ft)	400		150		300			350	
Base Capacity (vph)	259	871	282	873	975	940	652	913	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.81	0.50	0.07	0.52	0.46	0.03	0.68	0.30	
Intersection Summary									

⁹⁵th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Synchro 10 Report 07/10/2020 Lakeland Linder Aiport

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	₽		ሻ	•	7	ሻ	^	7	ሻ	^	7
Traffic Volume (veh/h)	46	57	24	274	94	134	12	974	179	180	762	37
Future Volume (veh/h)	46	57	24	274	94	134	12	974	179	180	762	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	53	66	28	319	109	156	14	1133	208	209	886	43
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	261	100	42	349	297	252	348	1640	732	327	1873	835
Arrive On Green	0.04	0.08	0.08	0.12	0.16	0.16	0.02	0.47	0.47	0.08	0.54	0.54
Sat Flow, veh/h	1739	1217	516	1739	1826	1547	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	53	0	94	319	109	156	14	1133	208	209	886	43
Grp Sat Flow(s),veh/h/ln	1739	0	1733	1739	1826	1547	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	2.1	0.0	4.0	9.5	4.0	7.1	0.3	19.5	6.2	4.3	12.0	1.0
Cycle Q Clear(g_c), s	2.1	0.0	4.0	9.5	4.0	7.1	0.3	19.5	6.2	4.3	12.0	1.0
Prop In Lane	1.00		0.30	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	261	0	142	349	297	252	348	1640	732	327	1873	835
V/C Ratio(X)	0.20	0.00	0.66	0.91	0.37	0.62	0.04	0.69	0.28	0.64	0.47	0.05
Avail Cap(c_a), veh/h	300	0	410	349	537	455	433	1640	732	375	1873	835
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	0.0	33.9	29.1	28.4	29.7	10.3	15.7	12.2	13.6	10.8	8.3
Incr Delay (d2), s/veh	0.4	0.0	5.1	27.6	0.8	2.5	0.0	2.4	1.0	2.9	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	0.0	1.8	3.6	1.7	2.6	0.1	6.6	2.0	1.4	3.6	0.3
Unsig. Movement Delay, s/veh		0.0	20.0	FG 7	20.4	20.0	10.4	10.1	42.0	10 E	117	0.4
LnGrp Delay(d),s/veh	30.3 C	0.0	39.0 D	56.7 E	29.1 C	32.2 C	10.4 B	18.1	13.2 B	16.5 B	11.7 B	8.4
LnGrp LOS	U	A 47	U			U	Б	B	D	D		A
Approach Vol, veh/h		147			584			1355			1138	
Approach LOC		35.9			45.0			17.3			12.5	
Approach LOS		D			D			В			В	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.9	40.5	14.0	10.8	5.8	45.6	7.9	16.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	8.5	36.0	9.5	18.0	5.0	39.5	5.1	22.4				
Max Q Clear Time (g_c+l1), s	6.3	21.5	11.5	6.0	2.3	14.0	4.1	9.1				
Green Ext Time (p_c), s	0.1	6.7	0.0	0.3	0.0	5.9	0.0	0.8				
Intersection Summary												
HCM 6th Ctrl Delay			21.4									
HCM 6th LOS			С									

Intersection							
Int Delay, s/veh	0.4						۰
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	110		ሻ	101	<u>ች</u>		
Traffic Vol, veh/h	440	6	6	494	9	9	
Future Vol, veh/h	440	6	6	494	9	9	
Conflicting Peds, #/hr		0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	275	200	-	0	50	
Veh in Median Storage	e,# 0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	86	86	86	86	86	86	
Heavy Vehicles, %	5	100	100	5	67	67	
Mvmt Flow	512	7	7	574	10	10	
	•						
N.A (N.A.)					\ d' \ \ d \		
	Major1		Major2		Minor1		
Conflicting Flow All	0	0	519	0	1100	512	
Stage 1	-	-	-	-	512	-	
Stage 2		-	-	-	588	-	
Critical Hdwy	-	-	5.1	-	7.07	6.87	
Critical Hdwy Stg 1	-	-	-	-	6.07	-	
Critical Hdwy Stg 2	-	-	-	-	6.07	-	
Follow-up Hdwy	-	-	3.1	-	4.103	3.903	
Pot Cap-1 Maneuver	_	-	690	-	177	452	
Stage 1	_	_	_	_	488	_	
Stage 2	_	_	_	_	447	_	
Platoon blocked, %	_	_		_			
Mov Cap-1 Maneuver		_	690	_	175	452	
Mov Cap-1 Maneuver		_	030	_	175	-	
			_		488		
Stage 1	-	-	-	-		-	
Stage 2	-	_	_		443	-	
Approach	EB		WB		NB		
HCM Control Delay, s			0.1		20		
HCM LOS			J. 1		C		
1.5111 200							
Minor Lane/Major Mvr	nt N	NBLn11	NBLn2	EBT	EBR	WBL	
Capacity (veh/h)		175	452	-	-	690	
HCM Lane V/C Ratio		0.06	0.023	-	-	0.01	
HCM Control Delay (s	;)	26.9		-	-	10.3	
HCM Lane LOS		D	В	-	_	В	
HCM 95th %tile Q(veh	n)	0.2	0.1	_	_	0	

Int Delay, s/veh Movement Lane Configurations Traffic Vol, veh/h Future Vol, veh/h Conflicting Peds, #/hr Sign Control RT Channelized Storage Length Veh in Median Storage Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow Major/Minor	4.8 EBT 388 388 0 Free - - - 2, # 0 0 86 5 451	61 61 0 Free None - - - 86 5	WBL 69 69 0 Free 86 5 80	WBT 455 455 0 Free None - 0 86 5 529	NBL 47 47 0 Stop - 0 0 0 0 86 5	NBR 135 135 0 Stop None 86
Lane Configurations Traffic Vol, veh/h Future Vol, veh/h Conflicting Peds, #/hr Sign Control RT Channelized Storage Length Veh in Median Storage Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow	388 388 0 Free - - - e, # 0 0 86 5 451	61 61 0 Free None - - - 86 5	69 69 0 Free - - - 86 5	455 455 0 Free None 0 0 86 5	47 47 0 Stop - 0 0 0	135 135 0 Stop None -
Lane Configurations Traffic Vol, veh/h Future Vol, veh/h Conflicting Peds, #/hr Sign Control RT Channelized Storage Length Veh in Median Storage Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow	388 388 0 Free - - - e, # 0 0 86 5 451	61 61 0 Free None - - - 86 5	69 69 0 Free - - - 86 5	455 455 0 Free None 0 0 86 5	47 47 0 Stop - 0 0 0	135 135 0 Stop None -
Traffic Vol, veh/h Future Vol, veh/h Conflicting Peds, #/hr Sign Control RT Channelized Storage Length Veh in Median Storage Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow	388 388 0 Free - - e, # 0 0 86 5 451	61 0 Free None - - - 86 5	69 0 Free - - - - 86 5	455 455 0 Free None - 0 0 86 5	47 47 0 Stop - 0 0 0	135 0 Stop None - -
Future Vol, veh/h Conflicting Peds, #/hr Sign Control RT Channelized Storage Length Veh in Median Storage Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow	388 0 Free - - e, # 0 0 86 5 451	61 0 Free None - - - 86 5	69 0 Free - - - - 86 5	455 0 Free None - 0 0 86 5	47 0 Stop - 0 0 0 86	135 0 Stop None - -
Conflicting Peds, #/hr Sign Control RT Channelized Storage Length Veh in Median Storage Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow	0 Free - - - - - - 0 86 5 451	0 Free None - - - 86 5	0 Free - - - - 86 5	0 Free None - 0 0 86 5	0 Stop - 0 0 0	0 Stop None - -
Sign Control RT Channelized Storage Length Veh in Median Storage Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow	Free 0 0 86 5 451	Free None - - - 86 5	Free 86 5	Free None - 0 0 86 5	Stop 0 0 0 0	Stop None - -
RT Channelized Storage Length Veh in Median Storage Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow	- e, # 0 0 86 5 451	None - - - 86 5	- - - - 86 5	None - 0 0 86 5	0 0 0 0	None - -
Storage Length Veh in Median Storage Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow	e, # 0 0 86 5 451	- - - 86 5	- - 86 5	0 0 86 5	0 0 0 86	- - -
Veh in Median Storage Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow	0 86 5 451	86 5	86 5	0 86 5	0 0 86	-
Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow	0 86 5 451	86 5	86 5	0 86 5	0 86	
Peak Hour Factor Heavy Vehicles, % Mvmt Flow	86 5 451	86 5	86 5	86 5	86	
Heavy Vehicles, % Mvmt Flow	5 451	5	5	5		00
Mvmt Flow	451					5
		71	00	323	55	157
Major/Minor I	Maior1				55	157
Major/Minor	Major1					
	iviajoi i	N	Major2	ı	Minor1	
Conflicting Flow All	0	0	522	0	1176	487
Stage 1	-	-	-	-	487	-
Stage 2	-	-	-	-	689	-
Critical Hdwy	-	-	4.15	-	6.45	6.25
Critical Hdwy Stg 1	_	_	-	-	5.45	-
Critical Hdwy Stg 2	_	_	_	_	5.45	_
Follow-up Hdwy	_	_	2.245	_	3.545	3.345
Pot Cap-1 Maneuver	_	_	1029	_	208	574
Stage 1	_	_	-	_	612	-
Stage 2	_	_	_	_	493	_
Platoon blocked, %	_	_	_	_	733	_
Mov Cap-1 Maneuver	-		1029	_	185	574
Mov Cap-1 Maneuver		_	1029	-	185	- 574
	-	_			612	
Stage 1	-	-	-	-		-
Stage 2	-	-	-	-	439	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.2		26.7	
HCM LOS					D	
Minor Lane/Major Mvm	nt I	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		372	-	-		-
HCM Lane V/C Ratio		0.569	-	-	0.078	-
HCM Control Delay (s)		26.7	-	-	8.8	0
HCM Lane LOS		D	-	-	Α	Α
HCM 95th %tile Q(veh)	3.4	-	-	0.3	-

1: County Line Rd & Drane Field Rd

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Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	53	94	319	109	156	14	1133	208	209	886	43	
v/c Ratio	0.23	0.45	0.99	0.32	0.37	0.04	0.72	0.25	0.69	0.43	0.04	
Control Delay	24.2	33.9	78.2	31.4	8.1	7.8	21.5	3.2	24.6	10.9	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	24.2	33.9	78.2	31.4	8.1	7.8	21.5	3.2	24.6	10.9	0.1	
Queue Length 50th (ft)	20	35	142	50	0	3	240	0	43	112	0	
Queue Length 95th (ft)	44	75	#197	91	42	10	320	33	#132	212	0	
Internal Link Dist (ft)		1862		5754			1432			1594		
Turn Bay Length (ft)	200		200		200	275		250	350		250	
Base Capacity (vph)	230	413	321	517	551	371	1579	818	304	2070	976	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.23	0.23	0.99	0.21	0.28	0.04	0.72	0.25	0.69	0.43	0.04	

Intersection Summary

Queue shown is maximum after two cycles.

Lakeland Linder Aiport

Synchro 10 Report

07/11/2020

PM Peak

^{# 95}th percentile volume exceeds capacity, queue may be longer.

4: Airfield Ct W/Airport Rd & Drane Field Rd

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Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR	
Lane Group Flow (vph)	190	392	3	326	430	32	247	353	
v/c Ratio	0.85	0.71	0.02	0.59	0.56	0.03	0.35	0.35	
Control Delay	54.3	27.9	15.0	24.0	4.9	7.1	11.7	2.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	54.3	27.9	15.0	24.0	4.9	7.1	11.7	2.5	
Queue Length 50th (ft)	72	141	1	112	0	3	49	0	
Queue Length 95th (ft)	139	208	6	169	43	18	126	35	
Internal Link Dist (ft)		3893		1270		729	1301		
Turn Bay Length (ft)	400		150		300			350	
Base Capacity (vph)	474	1175	365	1175	1149	915	713	1016	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.40	0.33	0.01	0.28	0.37	0.03	0.35	0.35	
Intersection Summary									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	₽		ሻ	↑	7	7	^	7	ሻ	^	7
Traffic Volume (veh/h)	42	52	22	243	64	94	9	696	206	270	782	40
Future Volume (veh/h)	42	52	22	243	64	94	9	696	206	270	782	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	49	60	26	283	74	109	10	809	240	314	909	47
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	264	95	41	375	315	267	326	1425	636	445	1831	817
Arrive On Green	0.04	0.08	0.08	0.14	0.17	0.17	0.01	0.41	0.41	0.13	0.53	0.53
Sat Flow, veh/h	1739	1208	524	1739	1826	1547	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	49	0	86	283	74	109	10	809	240	314	909	47
Grp Sat Flow(s),veh/h/ln	1739	0	1732	1739	1826	1547	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	1.9	0.0	3.5	10.1	2.6	4.6	0.2	13.2	8.0	7.0	12.4	1.1
Cycle Q Clear(g_c), s	1.9	0.0	3.5	10.1	2.6	4.6	0.2	13.2	8.0	7.0	12.4	1.1
Prop In Lane	1.00		0.30	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	264	0	136	375	315	267	326	1425	636	445	1831	817
V/C Ratio(X)	0.19	0.00	0.63	0.76	0.24	0.41	0.03	0.57	0.38	0.71	0.50	0.06
Avail Cap(c_a), veh/h	310	0	423	375	570	483	422	1425	636	613	1831	817
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.3	0.0	32.9	25.9	26.3	27.2	12.4	16.7	15.1	12.2	11.1	8.5
Incr Delay (d2), s/veh	0.3	0.0	4.8	8.5	0.4	1.0	0.0	1.6	1.7	2.2	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	1.5	4.8	1.0	1.6	0.1	4.6	2.6	2.1	3.7	0.3
Unsig. Movement Delay, s/veh		0.0	27.0	24.4	06.7	20.2	10 E	10.2	16.0	111	10.1	0.6
LnGrp Delay(d),s/veh	29.6 C	0.0	37.8 D	34.4 C	26.7 C	28.2 C	12.5 B	18.3 B	16.8 B	14.4 B	12.1 B	8.6
LnGrp LOS	U	A 425	U	U		U	Б		D	D		A
Approach Vol, veh/h		135			466			1059			1270	
Approach Delay, s/veh		34.8			31.7			17.9			12.5	
Approach LOS		С			С			В			В	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.1	34.8	14.6	10.3	5.4	43.4	7.7	17.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	16.7	27.2	10.1	18.0	5.0	38.9	5.1	23.0				
Max Q Clear Time (g_c+l1), s	9.0	15.2	12.1	5.5	2.2	14.4	3.9	6.6				
Green Ext Time (p_c), s	0.5	4.5	0.0	0.2	0.0	6.0	0.0	0.5				
Intersection Summary												
HCM 6th Ctrl Delay			18.6									
HCM 6th LOS			В									

Intersection						
Int Delay, s/veh	0.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations		7	ሻ	↑	ሻ	7
Traffic Vol, veh/h	514	14	14	384	17	17
Future Vol, veh/h	514	14	14	384	17	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	_	275	200	-	0	50
Veh in Median Storage	e, # 0			0	0	-
Grade, %	0	_	_	0	0	_
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	5	100	100	5	82	82
Mymt Flow	598	16	16	447	20	20
IVIVIIIL I IOW	330	10	10	447	20	20
Major/Minor	Major1	1	Major2	- 1	Minor1	
Conflicting Flow All	0	0	614	0	1077	598
Stage 1	-	-	-	-	598	-
Stage 2	-	-	-	-	479	-
Critical Hdwy	-	-	5.1	-	7.22	7.02
Critical Hdwy Stg 1	-	-	-	-	6.22	-
Critical Hdwy Stg 2	-	-	-	-	6.22	-
Follow-up Hdwy	_	_	3.1	_	4.238	4.038
Pot Cap-1 Maneuver	-	_	627	_	173	381
Stage 1	_	_	-	-	421	-
Stage 2	_	_	_	_	486	_
Platoon blocked, %	<u>-</u>	_		_	.00	
Mov Cap-1 Maneuver	_	_	627	-	169	381
Mov Cap 1 Maneuver	_	_	-	_	169	-
Stage 1	_	_	_	_	421	_
Stage 2	_	_	_	_	473	-
Staye 2	-	_	_	_	4/3	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.4		22.1	
HCM LOS					С	
N.4' I (N.4 ' N.4		IDL 4	UDI O	EDT	EDD	MDI
Minor Lane/Major Mvn	nt r	VBLn11		EBT	EBR	WBL
Capacity (veh/h)		169	381	-	-	627
HCM Lane V/C Ratio		0.117		-	-	0.026
HCM Control Delay (s)		29.1	15	-	-	10.9
HCM Lane LOS		D	С	-	-	В
HCM 95th %tile Q(veh)	0.4	0.2	-	-	0.1

Intersection						
Int Delay, s/veh	7.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	<u></u>			4	¥	
Traffic Vol, veh/h	430	101	136	321	48	149
Future Vol, veh/h	430	101	136	321	48	149
Conflicting Peds, #/hr		0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-		-		-	None
Storage Length	_	-	-	-	0	-
Veh in Median Storag	e,# 0	_	_	0	0	_
Grade, %	0	_	-	0	0	_
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	500	117	158	373	56	173
minici ion	000		100	0.0		110
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	617	0	1248	559
Stage 1	-	-	-	-	559	-
Stage 2	-	-	-	-	689	-
Critical Hdwy	-	-	4.15	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.245	-	3.545	3.345
Pot Cap-1 Maneuver	-	-	949	-	189	523
Stage 1	-	-	-	-	567	-
Stage 2	-	-	-	-	493	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	· -	_	949	-	149	523
Mov Cap-2 Maneuver		-	-	-	149	-
Stage 1	-	-	-	-	567	-
Stage 2	_	-	-	-	389	-
3 13 9						
A I			\A/D		NE	
Approach	EB		WB		NB	
HCM Control Delay, s	0		2.8		38.7	
HCM LOS					Е	
Minor Lane/Major Mvi	mt 1	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		325	-	-	949	-
HCM Lane V/C Ratio		0.705	_		0.167	-
HCM Control Delay (s	s)	38.7	-	-	9.6	0
HCM Lane LOS	,	E	_	-	A	A
HCM 95th %tile Q(vel	ո)	5	-	-	0.6	-
	,					

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Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	49	86	283	74	109	10	809	240	314	909	47	
v/c Ratio	0.21	0.41	0.82	0.20	0.24	0.03	0.64	0.34	0.68	0.45	0.05	
Control Delay	23.2	31.9	45.4	29.0	2.0	9.1	24.5	4.5	18.3	11.4	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	23.2	31.9	45.4	29.0	2.0	9.1	24.5	4.5	18.3	11.4	0.1	
Queue Length 50th (ft)	17	30	117	32	0	2	176	0	69	117	0	
Queue Length 95th (ft)	41	69	#208	66	3	8	247	42	142	220	0	
Internal Link Dist (ft)		1862		5754			1432			1594		
Turn Bay Length (ft)	200		200		200	275		250	350		250	
Base Capacity (vph)	236	435	345	559	601	323	1257	714	522	2004	972	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.21	0.20	0.82	0.13	0.18	0.03	0.64	0.34	0.60	0.45	0.05	

Intersection Summary

Queue shown is maximum after two cycles.

Synchro 10 Report 07/11/2020 Lakeland Linder Aiport

⁹⁵th percentile volume exceeds capacity, queue may be longer.

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Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR	
Lane Group Flow (vph)	209	432	20	438	409	29	405	269	
v/c Ratio	0.98	0.63	0.09	0.64	0.49	0.03	0.61	0.29	
Control Delay	88.4	27.3	19.0	27.5	4.2	0.1	20.2	3.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	88.4	27.3	19.0	27.5	4.2	0.1	20.2	3.0	
Queue Length 50th (ft)	114	193	7	197	0	0	155	5	
Queue Length 95th (ft)	#239	274	22	280	46	0	236	37	
Internal Link Dist (ft)		3893		1270		729	1301		
Turn Bay Length (ft)	400		150		300			350	
Base Capacity (vph)	220	709	224	710	852	939	669	918	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.95	0.61	0.09	0.62	0.48	0.03	0.61	0.29	
Intersection Summary									

⁹⁵th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Synchro 10 Report 07/11/2020 Lakeland Linder Aiport

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	₽		ሻ	↑	7	7	^	7	ሻ	^	7
Traffic Volume (veh/h)	42	52	22	263	90	128	11	884	179	180	692	33
Future Volume (veh/h)	42	52	22	263	90	128	11	884	179	180	692	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	49	60	26	306	105	149	13	1028	208	209	805	38
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	258	95	41	378	319	270	367	1565	698	347	1815	810
Arrive On Green	0.04	0.08	0.08	0.14	0.17	0.17	0.02	0.45	0.45	0.09	0.52	0.52
Sat Flow, veh/h	1739	1208	524	1739	1826	1547	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	49	0	86	306	105	149	13	1028	208	209	805	38
Grp Sat Flow(s),veh/h/ln	1739	0	1732	1739	1826	1547	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	1.9	0.0	3.6	10.3	3.7	6.5	0.3	17.1	6.3	4.4	10.7	0.9
Cycle Q Clear(g_c), s	1.9	0.0	3.6	10.3	3.7	6.5	0.3	17.1	6.3	4.4	10.7	0.9
Prop In Lane	1.00		0.30	1.00	212	1.00	1.00	4-0-	1.00	1.00	101=	1.00
Lane Grp Cap(c), veh/h	258	0	136	378	319	270	367	1565	698	347	1815	810
V/C Ratio(X)	0.19	0.00	0.63	0.81	0.33	0.55	0.04	0.66	0.30	0.60	0.44	0.05
Avail Cap(c_a), veh/h	303	0	421	378	573	485	457	1565	698	455	1815	810
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.4	0.0	33.1	26.6	26.7	27.9	10.8	15.8	12.9	12.6	10.9	8.6
Incr Delay (d2), s/veh	0.4	0.0	4.8	12.4	0.6	1.8	0.0	2.2	1.1	1.7 0.0	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0 1.6	0.0	0.0 1.5	0.0	0.0	0.0	0.0	1.3	0.0 3.2	0.0
%ile BackOfQ(50%),veh/ln		0.0	1.0	5.7	1.5	2.3	0.1	5.8	2.0	1.3	3.2	0.3
Unsig. Movement Delay, s/veh	29.7	0.0	37.9	39.0	27.3	29.6	10.8	18.0	14.0	14.3	11.7	8.7
LnGrp Delay(d),s/veh LnGrp LOS	29.7 C	0.0 A	37.9 D	39.0 D	21.3 C	29.6 C	10.6 B	10.0 B	14.0 B	14.3 B	11.7 B	6. <i>1</i>
		135	U	U			D		D	D		A
Approach Vol, veh/h		34.9			560 34.3			1249			1052 12.1	
Approach LOS								17.3			_	
Approach LOS		С			С			В			В	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	37.9	14.8	10.3	5.7	43.2	7.7	17.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.1	32.6	10.3	18.0	5.0	38.7	5.1	23.2				
Max Q Clear Time (g_c+l1), s	6.4	19.1	12.3	5.6	2.3	12.7	3.9	8.5				
Green Ext Time (p_c), s	0.2	5.9	0.0	0.2	0.0	5.2	0.0	8.0				
Intersection Summary												
HCM 6th Ctrl Delay			19.4									
HCM 6th LOS			В									

Lakeland Linder Aiport

Intersection						
Int Delay, s/veh	0.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	†	7	*	↑	*	7
Traffic Vol, veh/h	425	14	14	466	17	17
Future Vol, veh/h	425	14	14	466	17	17
Conflicting Peds, #/hr		0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	275	200	_	0	50
Veh in Median Storag	e,# 0	-	-	0	0	-
Grade, %	0	-	_	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	5	100	100	5	82	82
Mvmt Flow	494	16	16	542	20	20
minici ion	101			012		
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	510	0	1068	494
Stage 1	-	-	-	-	494	-
Stage 2	-	-	-	-	574	-
Critical Hdwy	-	-	5.1	-	7.22	7.02
Critical Hdwy Stg 1	-	-	-	-	6.22	-
Critical Hdwy Stg 2	-	-	-	-	6.22	-
Follow-up Hdwy	-	-	3.1	-	4.238	4.038
Pot Cap-1 Maneuver	-	-	697	-	175	443
Stage 1	-	-	-	-	477	-
Stage 2	-	-	-	-	433	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	· -	-	697	-	171	443
Mov Cap-2 Maneuver		-	-	-	171	-
Stage 1	-	-	-	-	477	-
Stage 2	_	_	_	_	423	_
3 13 9						
			14/5			
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.3		21.2	
HCM LOS					С	
Minor Lane/Major Mvi	mt 1	NBLn11	NBLn2	EBT	EBR	WBL
Capacity (veh/h)		171	443		-	697
HCM Lane V/C Ratio		0.116		<u>-</u>		0.023
HCM Control Delay (s	:)	28.8	13.5	_	_	10.3
HCM Lane LOS	7	D	В	_	_	В
HCM 95th %tile Q(vel	n)	0.4	0.1	_	_	0.1
	7	V .,	7 11			J. 1

Intersection						
Int Delay, s/veh	7.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	<u> </u>			4	¥	
Traffic Vol, veh/h	361	81	91	422	60	172
Future Vol, veh/h	361	81	91	422	60	172
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-		-	None
Storage Length	_	-	-	-	0	-
Veh in Median Storage,	# 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	420	94	106	491	70	200
N 4 - 1 /N 41 N	1 - ' 4				M	
	/lajor1		Major2		Minor1	407
Conflicting Flow All	0	0	514	0	1170	467
Stage 1	-	-	-	-	467	-
Stage 2	-	-	-	-	703	-
Critical Hdwy	-	-	4.15	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.245	-		3.345
Pot Cap-1 Maneuver	-	-	1036	-	210	590
Stage 1	-	-	-	-	625	-
Stage 2	-	-	-	-	485	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1036	-	180	590
Mov Cap-2 Maneuver	-	-	-	-	180	-
Stage 1	-	-	-	-	625	-
Stage 2	-	-	-	-	417	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.6		36.6	
HCM LOS	U		1.0		30.0 E	
I IOIVI LOG						
Minor Lane/Major Mvmt	t	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		371	-	-	1036	-
HCM Lane V/C Ratio		0.727	-	-	0.102	-
HCM Control Delay (s)		36.6	-	-	8.9	0
HCM Lane LOS		Е	-	-	Α	Α
HCM 95th %tile Q(veh)		5.6	-	-	0.3	-
, ,						

PM I	Peak
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Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	49	86	306	105	149	13	1028	208	209	805	38	
v/c Ratio	0.21	0.42	0.89	0.29	0.33	0.03	0.70	0.26	0.61	0.40	0.04	
Control Delay	23.5	32.4	55.5	30.3	5.0	8.3	22.7	2.7	17.6	10.8	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	23.5	32.4	55.5	30.3	5.0	8.3	22.7	2.7	17.6	10.8	0.1	
Queue Length 50th (ft)	18	30	132	47	0	2	222	0	43	101	0	
Queue Length 95th (ft)	41	69	#239	87	26	10	299	25	97	190	0	
Internal Link Dist (ft)		1862		5754			1432			1594		
Turn Bay Length (ft)	200		200		200	275		250	350		250	
Base Capacity (vph)	228	423	342	549	593	380	1465	790	371	2024	980	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.21	0.20	0.89	0.19	0.25	0.03	0.70	0.26	0.56	0.40	0.04	

Intersection Summary

Queue shown is maximum after two cycles.

Synchro 10 Report 07/11/2020 Lakeland Linder Aiport

⁹⁵th percentile volume exceeds capacity, queue may be longer.

4: Airfield Ct W/Airport Rd & Drane Field Rd

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Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR	
Lane Group Flow (vph)	194	400	3	317	391	29	224	342	
v/c Ratio	0.83	0.72	0.02	0.57	0.53	0.03	0.31	0.34	
Control Delay	50.2	28.1	14.7	23.2	4.7	7.0	11.3	2.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	50.2	28.1	14.7	23.2	4.7	7.0	11.3	2.5	
Queue Length 50th (ft)	73	143	1	107	0	3	44	0	
Queue Length 95th (ft)	138	212	6	164	41	17	112	35	
Internal Link Dist (ft)		3893		1270		729	1301		
Turn Bay Length (ft)	400		150		300			350	
Base Capacity (vph)	499	1192	361	1192	1146	909	712	1007	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.39	0.34	0.01	0.27	0.34	0.03	0.31	0.34	
Intersection Summary									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	¥	f)		¥	†	7	, J	^	7	¥	^	7
Traffic Volume (veh/h)	46	57	24	272	71	106	10	767	234	306	862	44
Future Volume (veh/h)	46	57	24	272	71	106	10	767	234	306	862	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	53	66	28	316	83	123	12	892	272	356	1002	51
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	270	101	43	339	284	240	309	1443	643	444	1883	840
Arrive On Green	0.04	0.08	0.08	0.12	0.16	0.16	0.01	0.42	0.42	0.14	0.54	0.54
Sat Flow, veh/h	1739	1217	516	1739	1826	1547	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	53	0	94	316	83	123	12	892	272	356	1002	51
Grp Sat Flow(s),veh/h/ln	1739	0	1733	1739	1826	1547	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	2.0	0.0	3.9	8.7	3.0	5.4	0.3	15.0	9.3	7.9	13.8	1.2
Cycle Q Clear(g_c), s	2.0	0.0	3.9	8.7	3.0	5.4	0.3	15.0	9.3	7.9	13.8	1.2
Prop In Lane	1.00		0.30	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	270	0	144	339	284	240	309	1443	643	444	1883	840
V/C Ratio(X)	0.20	0.00	0.65	0.93	0.29	0.51	0.04	0.62	0.42	0.80	0.53	0.06
Avail Cap(c_a), veh/h	312	0	420	339	531	450	401	1443	643	584	1883	840
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	0.0	33.0	28.9	27.8	28.8	12.3	17.1	15.4	13.1	10.9	8.0
Incr Delay (d2), s/veh	0.4	0.0	5.0	31.7	0.6	1.7	0.1	2.0	2.0	6.0	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	0.0	1.7	4.1	1.2	1.9	0.1	5.2	3.1	2.8	4.1	0.3
Unsig. Movement Delay, s/veh	l											
LnGrp Delay(d),s/veh	29.5	0.0	38.0	60.7	28.3	30.5	12.3	19.1	17.4	19.1	12.0	8.2
LnGrp LOS	С	Α	D	Е	С	С	В	В	В	В	В	A
Approach Vol, veh/h		147			522			1176			1409	
Approach Delay, s/veh		34.9			48.4			18.6			13.6	
Approach LOS		С			D			В			В	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	35.4	13.2	10.7	5.6	44.8	7.8	16.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	16.5	28.8	8.7	18.0	5.0	40.3	5.1	21.6				
Max Q Clear Time (g_c+l1), s	9.9	17.0	10.7	5.9	2.3	15.8	4.0	7.4				
Green Ext Time (p_c), s	0.6	4.9	0.0	0.3	0.0	6.8	0.0	0.6				
Intersection Summary												
HCM 6th Ctrl Delay			22.0									
HCM 6th LOS			С									

Intersection						
Int Delay, s/veh	1.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	<u> </u>	7	ነ	<u> </u>	ሻ	7
Traffic Vol, veh/h	581	17	17	429	20	20
Future Vol, veh/h	581	17	17	429	20	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	- -	None
Storage Length	_	275	200	-	0	50
Veh in Median Storage,		-	-	0	0	-
Grade, %	0	_	_	0	0	_
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	5	100	100	5	85	85
Mymt Flow	676	20	20	499	23	23
IVIVIIIL FIOW	070	20	20	499	23	23
Major/Minor M	ajor1	N	Major2	ľ	Minor1	
Conflicting Flow All	0	0	696	0	1215	676
Stage 1	-	-	-	-	676	-
Stage 2	-	-	-	-	539	-
Critical Hdwy	-	-	5.1	-	7.25	7.05
Critical Hdwy Stg 1	-	-	-	-	6.25	-
Critical Hdwy Stg 2	_	-	-	-	6.25	-
Follow-up Hdwy	_	_	3.1	_		4.065
Pot Cap-1 Maneuver	_	-	576	-	138	337
Stage 1	_	_	_	_	379	_
Stage 2	_	_	_	_	448	_
Platoon blocked, %	_	_		_	110	
Mov Cap-1 Maneuver	_	_	576	_	133	337
Mov Cap-2 Maneuver	_	_	-	_	133	-
Stage 1	_	_	_	_	379	_
Stage 2	_	_	_	_	432	_
Slage 2	-	_	_	_	432	_
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.4		27.1	
HCM LOS					D	
		IDI (IDI C			14/51
Minor Lane/Major Mvmt		NBLn1 N		EBT	EBR	WBL
Capacity (veh/h)		133	337	-	-	576
HCM Lane V/C Ratio		0.175		-		0.034
HCM Control Delay (s)		37.7	16.5	-	-	11.5
HCM Lane LOS		Е	С	-	-	В
HCM 95th %tile Q(veh)		0.6	0.2	-	-	0.1

Intersection						
Int Delay, s/veh	23.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1			4	¥	
Traffic Vol, veh/h	475	126	165	355	59	184
Future Vol, veh/h	475	126	165	355	59	184
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-		-	None
Storage Length	_	-	_	-	0	-
Veh in Median Storage	, # 0	_	_	0	0	_
Grade, %	0	_	_	0	0	_
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	5	5	5	5	5	5
Mymt Flow	552	147	192	413	69	214
IVIVIIIL FIOW	332	147	132	413	03	214
Major/Minor N	/lajor1	N	Major2	1	Minor1	
Conflicting Flow All	0	0	699	0	1423	626
Stage 1	-	-	-	-	626	-
Stage 2	-	-	-	-	797	-
Critical Hdwy	-	-	4.15	-	6.45	6.25
Critical Hdwy Stg 1	_	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	_	-	5.45	-
Follow-up Hdwy	_	_	2.245	_		3.345
Pot Cap-1 Maneuver	_	_	884	_	147	479
Stage 1	_	_	-	_	527	-
Stage 2	-	_	_	_	439	-
Platoon blocked, %	_	<u>-</u>		_	100	
Mov Cap-1 Maneuver	_		884	_	106	479
Mov Cap-1 Maneuver	_	<u>-</u>	- 004	-	106	419
Stage 1		-	_		527	
-		-			315	
Stage 2	-	-	-	-	313	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		3.2		126	
HCM LOS					F	
		IDI (14/5	14/5-
Minor Lane/Major Mvm	t l	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		258	-	-	884	-
HCM Lane V/C Ratio		1.095	-	-	0.217	-
HCM Control Delay (s)		126	-	-		0
HCM Lane LOS		F	-	-	В	Α
HCM 95th %tile Q(veh)		11.9	-	-	8.0	-

Peak

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Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	53	94	316	83	123	12	892	272	356	1002	51	
v/c Ratio	0.23	0.44	1.04	0.25	0.29	0.04	0.69	0.36	0.76	0.48	0.05	
Control Delay	24.6	33.9	93.4	31.1	3.3	8.7	25.4	4.3	25.3	11.1	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	24.6	33.9	93.4	31.1	3.3	8.7	25.4	4.3	25.3	11.1	0.1	
Queue Length 50th (ft)	20	35	~146	38	0	2	202	0	94	129	0	
Queue Length 95th (ft)	44	75	#211	74	12	9	273	43	#215	243	0	
Internal Link Dist (ft)		1862		5754			1432			1594		
Turn Bay Length (ft)	200		200		200	275		250	350		250	
Base Capacity (vph)	235	421	303	509	563	306	1289	746	494	2089	984	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.23	0.22	1.04	0.16	0.22	0.04	0.69	0.36	0.72	0.48	0.05	

Intersection Summary

Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR	
Lane Group Flow (vph)	238	491	21	492	451	31	445	306	
v/c Ratio	1.01	0.63	0.09	0.63	0.49	0.04	0.74	0.36	
Control Delay	91.3	24.3	16.5	24.4	3.7	0.1	28.6	4.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	91.3	24.3	16.5	24.4	3.7	0.1	28.6	4.8	
Queue Length 50th (ft)	~135	211	7	212	0	0	198	18	
Queue Length 95th (ft)	#269	296	21	297	43	0	299	57	
Internal Link Dist (ft)		3893		1270		729	1301		
Turn Bay Length (ft)	400		150		300			350	
Base Capacity (vph)	235	781	235	782	920	865	602	850	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	1.01	0.63	0.09	0.63	0.49	0.04	0.74	0.36	

Intersection Summary

Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ň	£		7	†	7	Ţ	^	7	7	^	7
Traffic Volume (veh/h)	46	57	24	295	101	144	12	974	205	206	762	37
Future Volume (veh/h)	46	57	24	295	101	144	12	974	205	206	762	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	53	66	28	343	117	167	14	1133	238	240	886	43
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	260	100	43	351	298	253	347	1594	711	337	1865	832
Arrive On Green	0.04	0.08	0.08	0.13	0.16	0.16	0.02	0.46	0.46	0.10	0.54	0.54
Sat Flow, veh/h	1739	1217	516	1739	1826	1547	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	53	0	94	343	117	167	14	1133	238	240	886	43
Grp Sat Flow(s),veh/h/ln	1739	0	1733	1739	1826	1547	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	2.1	0.0	4.0	9.5	4.3	7.7	0.3	19.9	7.4	5.1	12.0	1.0
Cycle Q Clear(g_c), s	2.1	0.0	4.0	9.5	4.3	7.7	0.3	19.9	7.4	5.1	12.0	1.0
Prop In Lane	1.00		0.30	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	260	0	143	351	298	253	347	1594	711	337	1865	832
V/C Ratio(X)	0.20	0.00	0.66	0.98	0.39	0.66	0.04	0.71	0.33	0.71	0.47	0.05
Avail Cap(c_a), veh/h	300	0	412	351	540	458	433	1594	711	394	1865	832
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	0.0	33.7	29.5	28.3	29.7	10.7	16.4	13.1	14.3	10.9	8.3
Incr Delay (d2), s/veh	0.4	0.0	5.1	41.8	0.8	2.9	0.0	2.7	1.3	4.9	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	1.7	5.4	1.8	2.8	0.1	6.8	2.4	1.8	3.6	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.2	0.0	38.8	71.3	29.2	32.6	10.8	19.1	14.3	19.2	11.7	8.4
LnGrp LOS	С	Α	D	E	С	С	В	В	В	В	В	<u>A</u>
Approach Vol, veh/h		147			627			1385			1169	
Approach Delay, s/veh		35.7			53.1			18.2			13.2	
Approach LOS		D			D			В			В	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.7	39.3	14.0	10.7	5.8	45.2	7.9	16.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	9.7	34.8	9.5	18.0	5.0	39.5	5.1	22.4				
Max Q Clear Time (g_c+l1), s	7.1	21.9	11.5	6.0	2.3	14.0	4.1	9.7				
Green Ext Time (p_c), s	0.2	6.4	0.0	0.3	0.0	5.9	0.0	0.8				
Intersection Summary												
HCM 6th Ctrl Delay			23.8									
HCM 6th LOS			С									

Intersection							
Int Delay, s/veh	1.1						
Movement	EBT	EBR	WBL	WBT	NBL	NBR	Ī
Lane Configurations	†	7	ሻ	↑	*	7	
Traffic Vol, veh/h	481	17	17	522	20	20	
Future Vol, veh/h	481	17	17	522	20	20	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	None	
Storage Length	_	275	200	-	0	50	
Veh in Median Storage		-	-	0	0	-	
Grade, %	0	<u>-</u>	<u>-</u>	0	0	_	
Peak Hour Factor	86	86	86	86	86	86	
Heavy Vehicles, %	5	100	100	5	85	85	
Mymt Flow	559	20	20	607	23	23	
IVIVIIIL FIOW	559	20	20	007	23	23	
Major/Minor N	Major1	1	Major2	ľ	Minor1		
Conflicting Flow All	0	0	579	0	1206	559	
Stage 1	-	-	-	-	559	-	
Stage 2	-	-	-	-	647	-	
Critical Hdwy	-	-	5.1	-	7.25	7.05	
Critical Hdwy Stg 1	-	-	-	-	6.25	-	
Critical Hdwy Stg 2	-	-	-	-	6.25	-	
Follow-up Hdwy	-	-	3.1	-	4.265	4.065	
Pot Cap-1 Maneuver	-	-	649	-	140	400	
Stage 1	-	-	-	-	437	-	
Stage 2	-	-	-	-	393	-	
Platoon blocked, %	_	_		_			
Mov Cap-1 Maneuver	-	-	649	-	136	400	
Mov Cap-2 Maneuver	<u>-</u>	_	-	_	136	-	
Stage 1	_	_	_	_	437	_	
Stage 2	_	_	_	_	381	_	
Olago Z					001		
Approach	EB		WB		NB		
HCM Control Delay, s	0		0.3		25.8		
HCM LOS					D		
Minor Lane/Major Mvm	ıt N	NBLn11	VBI n2	EBT	EBR	WBL	
Capacity (veh/h)	1	136	400	-	-	649	
HCM Lane V/C Ratio			0.058	<u>-</u>	_	0.03	
HCM Control Delay (s)		36.9	14.6	-	-	10.7	
HCM Lane LOS		30.9 E	14.0 B	<u>-</u>	_	10.7 B	
HCM 95th %tile Q(veh)		0.6	0.2	-	-	0.1	
HOW JOHN JOHN (VEH)		0.0	0.2		_	0.1	

Intersection						
Int Delay, s/veh	24.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
		EDK	VVDL			NDIX
Lane Configurations	}	400	440	400	¥	040
Traffic Vol, veh/h	399	102	113	466	75 75	212
Future Vol, veh/h	399	102	113	466	75	212
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage,		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	464	119	131	542	87	247
Majay/Minay	1-:1		Anin nO		M:1	
	1ajor1		Major2		Minor1	50.4
Conflicting Flow All	0	0	583	0	1328	524
Stage 1	-	-	-	-	524	-
Stage 2	-	-	-	-	804	-
Critical Hdwy	-	-	4.15	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.245	-	3.545	3.345
Pot Cap-1 Maneuver	-	-	977	-	169	547
Stage 1	-	-	-	-	588	-
Stage 2	-	-	-	-	435	-
Platoon blocked, %	-	_		_		
Mov Cap-1 Maneuver	_	_	977	_	137	547
Mov Cap-2 Maneuver	_	_	-	_	137	-
Stage 1				_	588	_
Stage 2					351	_
Staye Z	_	-	-	<u>-</u>	JUI	<u>-</u>
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.8		114.5	
HCM LOS					F	
NA:		IDL 4	CDT		\A/D!	MOT
Minor Lane/Major Mvmt	<u> </u>	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		307	-	-	• • •	-
HCM Lane V/C Ratio		1.087	-	-	0.134	-
HCM Control Delay (s)		114.5	-	-		0
HCM Lane LOS		F	-	-	Α	Α
HCM 95th %tile Q(veh)		13	-	-	0.5	-

	ၨ	-	•	←	•	4	†	~	-	ļ	4	
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	53	94	343	117	167	14	1133	238	240	886	43	
v/c Ratio	0.23	0.45	1.07	0.34	0.38	0.04	0.74	0.29	0.75	0.43	0.04	
Control Delay	24.2	33.9	98.4	31.7	6.8	7.9	23.0	3.4	30.0	10.9	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	24.2	33.9	98.4	31.7	6.8	7.9	23.0	3.4	30.0	10.9	0.1	
Queue Length 50th (ft)	20	35	~160	54	0	3	247	0	57	112	0	
Queue Length 95th (ft)	44	75	#227	96	37	10	329	36	#167	212	0	
Internal Link Dist (ft)		1862		5754			1432			1594		
Turn Bay Length (ft)	200		200		200	275		250	350		250	
Base Capacity (vph)	229	413	321	517	569	367	1526	815	321	2070	976	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.23	0.23	1.07	0.23	0.29	0.04	0.74	0.29	0.75	0.43	0.04	

Intersection Summary

Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

4: Airfield Ct W/Airport Rd & Drane Field Rd

	ၨ	→	•	←	•	†	↓	1	
Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR	
Lane Group Flow (vph)	222	460	3	358	430	32	247	385	
v/c Ratio	0.88	0.73	0.02	0.57	0.53	0.04	0.38	0.39	
Control Delay	53.6	25.8	12.7	20.8	4.1	8.9	14.6	3.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	53.6	25.8	12.7	20.8	4.1	8.9	14.6	3.0	
Queue Length 50th (ft)	84	161	1	116	0	3	54	0	
Queue Length 95th (ft)	158	232	5	172	38	20	147	41	
Internal Link Dist (ft)		3893		1270		729	1301		
Turn Bay Length (ft)	400		150		300			350	
Base Capacity (vph)	501	1257	346	1257	1199	842	656	978	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.44	0.37	0.01	0.28	0.36	0.04	0.38	0.39	
Intersection Summary									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	₽		ሻ	↑	7	7	^	7	ሻ	^	7
Traffic Volume (veh/h)	42	52	22	243	64	94	9	696	206	270	782	40
Future Volume (veh/h)	42	52	22	243	64	94	9	696	206	270	782	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	49	60	26	283	74	109	10	809	240	314	909	47
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	264	95	41	375	315	267	326	1425	636	445	1831	817
Arrive On Green	0.04	0.08	0.08	0.14	0.17	0.17	0.01	0.41	0.41	0.13	0.53	0.53
Sat Flow, veh/h	1739	1208	524	1739	1826	1547	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	49	0	86	283	74	109	10	809	240	314	909	47
Grp Sat Flow(s),veh/h/ln	1739	0	1732	1739	1826	1547	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	1.9	0.0	3.5	10.1	2.6	4.6	0.2	13.2	8.0	7.0	12.4	1.1
Cycle Q Clear(g_c), s	1.9	0.0	3.5	10.1	2.6	4.6	0.2	13.2	8.0	7.0	12.4	1.1
Prop In Lane	1.00		0.30	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	264	0	136	375	315	267	326	1425	636	445	1831	817
V/C Ratio(X)	0.19	0.00	0.63	0.76	0.24	0.41	0.03	0.57	0.38	0.71	0.50	0.06
Avail Cap(c_a), veh/h	310	0	423	375	570	483	422	1425	636	613	1831	817
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.3	0.0	32.9	25.9	26.3	27.2	12.4	16.7	15.1	12.2	11.1	8.5
Incr Delay (d2), s/veh	0.3	0.0	4.8	8.5	0.4	1.0	0.0	1.6	1.7	2.2	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	1.5	4.8	1.0	1.6	0.1	4.6	2.6	2.1	3.7	0.3
Unsig. Movement Delay, s/veh		0.0	27.0	24.4	06.7	20.2	10 E	10.2	16.0	111	10.1	0.6
LnGrp Delay(d),s/veh	29.6 C	0.0	37.8 D	34.4 C	26.7 C	28.2 C	12.5 B	18.3 B	16.8 B	14.4 B	12.1 B	8.6
LnGrp LOS	U	A 425	U	U		U	Б		D	D		A
Approach Vol, veh/h		135			466			1059			1270	
Approach Delay, s/veh		34.8			31.7			17.9			12.5	
Approach LOS		С			С			В			В	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.1	34.8	14.6	10.3	5.4	43.4	7.7	17.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	16.7	27.2	10.1	18.0	5.0	38.9	5.1	23.0				
Max Q Clear Time (g_c+l1), s	9.0	15.2	12.1	5.5	2.2	14.4	3.9	6.6				
Green Ext Time (p_c), s	0.5	4.5	0.0	0.2	0.0	6.0	0.0	0.5				
Intersection Summary												
HCM 6th Ctrl Delay			18.6									
HCM 6th LOS			В									

Intersection							
Int Delay, s/veh	0.9						
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations		7	ች		ች	7	
Traffic Vol, veh/h	514	14	14	384	17	17	
Future Vol, veh/h	514	14	14	384	17	17	
Conflicting Peds, #/hr		0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	275	200	-	0	50	
Veh in Median Storag	je,# 0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	86	86	86	86	86	86	
Heavy Vehicles, %	5	100	100	5	82	82	
Mvmt Flow	598	16	16	447	20	20	
	000	.0	10				
Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	0	0	614	0	1077	598	
Stage 1	-	-	-	-	598	-	
Stage 2	-	-	-	-	479	-	
Critical Hdwy	-	-	5.1	-	7.22	7.02	
Critical Hdwy Stg 1	-	-	-	-	6.22	-	
Critical Hdwy Stg 2	-	-	-	-	6.22	-	
Follow-up Hdwy	-	-	3.1	-	4.238	4.038	
Pot Cap-1 Maneuver	-	-	627	-	173	381	
Stage 1	-	-	-	-	421	-	
Stage 2	-	-	-	-	486	-	
Platoon blocked, %	_	-		-			
Mov Cap-1 Maneuver		_	627	-	169	381	
Mov Cap-2 Maneuver		_	-	_	169	-	
Stage 1	_	_	_	_	421	_	
Stage 2	_	_	_	_	473	_	
Olago Z					770		
Approach	EB		WB		NB		
HCM Control Delay, s	0		0.4		22.1		
HCM LOS					С		
Minor Lane/Major Mvi	mt I	NBLn11	JRI 52	EBT	EBR	WBL	
	int I				EDK		
Capacity (veh/h)		169	381	-	-	627	
HCM Lane V/C Ratio	,	0.117		-	-	0.026	
HCM Control Delay (s	5)	29.1	15	-	-	10.9	
	•	_				11	
HCM Lane LOS HCM 95th %tile Q(vel	,	D 0.4	0.2	-	-	0.1	

Intersection						
Int Delay, s/veh	4.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	f)		ች	↑	*	7
Traffic Vol, veh/h	430	101	136	321	48	149
Future Vol, veh/h	430	101	136	321	48	149
Conflicting Peds, #/hr		0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-		-	None	-	None
Storage Length	-	-	350	-	350	0
Veh in Median Storag	ge, # 0	-	-	0	0	-
Grade, %	0	_	-	0	0	_
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	500	117	158	373	56	173
		• • •		0.0		
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	617	0	1248	559
Stage 1	-	-	-	-	559	-
Stage 2	-	-	-	-	689	-
Critical Hdwy	-	-	4.15	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.245	-	3.545	3.345
Pot Cap-1 Maneuver	-	-	949	-	189	523
Stage 1	-	-	-	-	567	-
Stage 2	-	-	-	-	493	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	r -	-	949	-	158	523
Mov Cap-2 Maneuver		-	-	-	158	-
Stage 1	-	-	-	-	567	-
Stage 2	-	_	-	-	411	-
3 11 0						
A 1			\A/D		NE	
Approach	EB		WB		NB	
HCM Control Delay, s	s 0		2.8		21.2	
HCM LOS					С	
Minor Lane/Major Mv	mt I	NBLn11	NBLn2	EBT	EBR	WBL
Capacity (veh/h)		158	523	-	-	949
HCM Lane V/C Ratio		0.353		_		0.167
HCM Control Delay (s		39.7	15.3	_	_	9.6
HCM Lane LOS	,	E	С	-	_	A
HCM 95th %tile Q(ve	h)	1.5	1.4	_	_	0.6
	,					

	۶	→	•	•	←	4	1	†	~	/	 	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	₽		ሻ	↑	7	7	^	7	ሻ	^	7
Traffic Volume (veh/h)	42	52	22	263	90	128	11	884	179	180	692	33
Future Volume (veh/h)	42	52	22	263	90	128	11	884	179	180	692	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	49	60	26	306	105	149	13	1028	208	209	805	38
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	258	95	41	378	319	270	367	1565	698	347	1815	810
Arrive On Green	0.04	0.08	0.08	0.14	0.17	0.17	0.02	0.45	0.45	0.09	0.52	0.52
Sat Flow, veh/h	1739	1208	524	1739	1826	1547	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	49	0	86	306	105	149	13	1028	208	209	805	38
Grp Sat Flow(s),veh/h/ln	1739	0	1732	1739	1826	1547	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	1.9	0.0	3.6	10.3	3.7	6.5	0.3	17.1	6.3	4.4	10.7	0.9
Cycle Q Clear(g_c), s	1.9	0.0	3.6	10.3	3.7	6.5	0.3	17.1	6.3	4.4	10.7	0.9
Prop In Lane	1.00	_	0.30	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	0	136	378	319	270	367	1565	698	347	1815	810
V/C Ratio(X)	0.19	0.00	0.63	0.81	0.33	0.55	0.04	0.66	0.30	0.60	0.44	0.05
Avail Cap(c_a), veh/h	303	0	421	378	573	485	457	1565	698	455	1815	810
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.4	0.0	33.1	26.6	26.7	27.9	10.8	15.8	12.9	12.6	10.9	8.6
Incr Delay (d2), s/veh	0.4	0.0	4.8	12.4	0.6	1.8	0.0	2.2	1.1	1.7	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	1.6	5.7	1.5	2.3	0.1	5.8	2.0	1.3	3.2	0.3
Unsig. Movement Delay, s/veh		0.0	07.0	20.0	07.0	00.0	40.0	40.0	440	440	44.7	0.7
LnGrp Delay(d),s/veh	29.7	0.0	37.9	39.0	27.3	29.6	10.8	18.0	14.0	14.3	11.7	8.7
LnGrp LOS	С	A	D	D	C	С	В	B	В	В	B	A
Approach Vol, veh/h		135			560			1249			1052	
Approach Delay, s/veh		34.9			34.3			17.3			12.1	
Approach LOS		С			С			В			В	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	37.9	14.8	10.3	5.7	43.2	7.7	17.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.1	32.6	10.3	18.0	5.0	38.7	5.1	23.2				
Max Q Clear Time (g_c+l1), s	6.4	19.1	12.3	5.6	2.3	12.7	3.9	8.5				
Green Ext Time (p_c), s	0.2	5.9	0.0	0.2	0.0	5.2	0.0	0.8				
Intersection Summary												
HCM 6th Ctrl Delay			19.4									
HCM 6th LOS			В									

Intersection						
Int Delay, s/veh	0.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	<u> </u>	7	ሻ	<u>₩</u>	ሻ	T T
Traffic Vol, veh/h	425	14	14	466	17	17
Future Vol, veh/h	425	14	14	466	17	17
		0	0			
Conflicting Peds, #/hr				0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	275	200	-	0	50
Veh in Median Storag	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	5	100	100	5	82	82
Mvmt Flow	494	16	16	542	20	20
Major/Minor	Major1		Major?		Minor1	
Major/Minor	Major1		Major2		Minor1	404
Conflicting Flow All	0	0	510	0	1068	494
Stage 1	-	-	-	-	494	-
Stage 2	-	-		-	574	-
Critical Hdwy	-	-	5.1	-	7.22	7.02
Critical Hdwy Stg 1	-	-	-	-	6.22	-
Critical Hdwy Stg 2	-	-	-	-	6.22	-
Follow-up Hdwy		-	3.1	-	4.238	4.038
Pot Cap-1 Maneuver	-	-	697	-	175	443
Stage 1	-	-	-	-	477	-
Stage 2	-	-	-	-	433	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	_	-	697	-	171	443
Mov Cap-2 Maneuver		_	_	-	171	-
Stage 1	_	_	_	_	477	_
Stage 2	_	_	_	_	423	<u>-</u>
Olaye Z	_		_	_	723	_
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.3		21.2	
HCM LOS					С	
			LIDI C			14/5
Minor Lane/Major Mvr	nt I	NBLn1 I		EBT	EBR	WBL
Capacity (veh/h)		171	443	-	-	•••
HCM Lane V/C Ratio		0.116		-	-	0.023
HCM Control Delay (s	s)	28.8	13.5	-	-	10.3
HCM Lane LOS		D	В	-	-	В
HCM 95th %tile Q(vel	1)	0.4	0.1	-	-	0.1

Intersection						
Int Delay, s/veh	4.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	ĵ.		*	↑	*	7
Traffic Vol, veh/h	361	81	91	422	60	172
Future Vol, veh/h	361	81	91	422	60	172
Conflicting Peds, #/hr		0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-		-	None	-	None
Storage Length	-	-	350	-	350	0
Veh in Median Storag	e,# 0	-	-	0	0	-
Grade, %	0	-	_	0	0	_
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	420	94	106	491	70	200
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	514	0	1170	467
Stage 1	-	-	-	-	467	-
Stage 2	-	-	-	-	703	-
Critical Hdwy	-	-	4.15	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.245	-		3.345
Pot Cap-1 Maneuver	-	-	1036	-	210	590
Stage 1	-	-	-	-	625	-
Stage 2	-	-	-	-	485	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	· -	-	1036	-	189	590
Mov Cap-2 Maneuver	٠ -	-	-	-	189	-
Stage 1	-	-	-	_	625	_
Stage 2	-	-	-	-	436	-
A I.			MD		ND	
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.6		19.5	
HCM LOS					С	
Minor Lane/Major Mv	mt 1	NBLn11	NBLn2	EBT	EBR	WBL
Capacity (veh/h)		189	590	-	-	1036
HCM Lane V/C Ratio		0.369		-	-	0.102
HCM Control Delay (s	s)	34.8	14.2	-	_	8.9
HCM Lane LOS		D	В	-	-	Α
HCM 95th %tile Q(vel	ո)	1.6	1.5	-	-	0.3

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	₽		ሻ	↑	7	7	^	7	ሻ	^	7
Traffic Volume (veh/h)	46	57	24	272	71	106	10	767	234	306	862	44
Future Volume (veh/h)	46	57	24	272	71	106	10	767	234	306	862	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	53	66	28	316	83	123	12	892	272	356	1002	51
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	270	101	43	339	284	240	309	1443	643	444	1883	840
Arrive On Green	0.04	0.08	0.08	0.12	0.16	0.16	0.01	0.42	0.42	0.14	0.54	0.54
Sat Flow, veh/h	1739	1217	516	1739	1826	1547	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	53	0	94	316	83	123	12	892	272	356	1002	51
Grp Sat Flow(s),veh/h/ln	1739	0	1733	1739	1826	1547	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	2.0	0.0	3.9	8.7	3.0	5.4	0.3	15.0	9.3	7.9	13.8	1.2
Cycle Q Clear(g_c), s	2.0	0.0	3.9	8.7	3.0	5.4	0.3	15.0	9.3	7.9	13.8	1.2
Prop In Lane	1.00	_	0.30	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	270	0	144	339	284	240	309	1443	643	444	1883	840
V/C Ratio(X)	0.20	0.00	0.65	0.93	0.29	0.51	0.04	0.62	0.42	0.80	0.53	0.06
Avail Cap(c_a), veh/h	312	0	420	339	531	450	401	1443	643	584	1883	840
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	0.0	33.0	28.9	27.8	28.8	12.3	17.1	15.4	13.1	10.9	8.0
Incr Delay (d2), s/veh	0.4	0.0	5.0	31.7	0.6	1.7	0.1	2.0	2.0	6.0	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	0.0	1.7	4.1	1.2	1.9	0.1	5.2	3.1	2.8	4.1	0.3
Unsig. Movement Delay, s/veh		0.0	20.0	CO 7	00.0	20.5	40.0	40.4	47.4	40.4	40.0	0.0
LnGrp Delay(d),s/veh	29.5	0.0	38.0	60.7	28.3	30.5	12.3	19.1	17.4	19.1	12.0	8.2
LnGrp LOS	С	A 4.7	D	E	C	С	В	B	В	В	B	A
Approach Vol, veh/h		147			522			1176			1409	
Approach Delay, s/veh		34.9			48.4			18.6			13.6	
Approach LOS		С			D			В			В	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	35.4	13.2	10.7	5.6	44.8	7.8	16.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	16.5	28.8	8.7	18.0	5.0	40.3	5.1	21.6				
Max Q Clear Time (g_c+l1), s	9.9	17.0	10.7	5.9	2.3	15.8	4.0	7.4				
Green Ext Time (p_c), s	0.6	4.9	0.0	0.3	0.0	6.8	0.0	0.6				
Intersection Summary												
HCM 6th Ctrl Delay			22.0									
HCM 6th LOS			С									

Intersection						
Int Delay, s/veh	1.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	<u></u>	7	ሻ	<u> </u>	ሻ	7
Traffic Vol, veh/h	581	17	17	429	20	20
Future Vol, veh/h	581	17	17	429	20	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized						
	-	None	200	None	-	None
Storage Length	- 4 0	275	200	-	0	50
Veh in Median Storag	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	5	100	100	5	85	85
Mvmt Flow	676	20	20	499	23	23
Major/Minor	Major1		Major2	ı	Minor1	
		0	696	0	1215	676
Conflicting Flow All	0		090			
Stage 1	-	-	-	-	676	-
Stage 2	-	-	-	-	539	7.05
Critical Hdwy	-	-	5.1	-	7.25	7.05
Critical Hdwy Stg 1	-	-	-	-	6.25	-
Critical Hdwy Stg 2	-	-	-	-	6.25	-
Follow-up Hdwy	-	-	3.1	-	4.265	4.065
Pot Cap-1 Maneuver	-	-	576	-	138	337
Stage 1	-	-	-	-	379	-
Stage 2	-	-	-	-	448	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	_	-	576	-	133	337
Mov Cap-2 Maneuver	_	-	-	-	133	-
Stage 1	-	-	-	-	379	-
Stage 2	-	-	-	-	432	-
3 11 9						
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.4		27.1	
HCM LOS					D	
Minor Long/Major Mar	nt I	IDI 51	NIDI 20	EDT	EDD	WDI
Minor Lane/Major Mvr	nt I	VBLn11		EBT	EBR	WBL
Capacity (veh/h)		133	337	-	-	• • •
HCM Lane V/C Ratio			0.069	-	-	0.034
HCM Control Delay (s	5)	37.7	16.5	-	-	11.5
HCM Lane LOS		Е	С	-	-	В
HCM 95th %tile Q(veh	1)	0.6	0.2	-	-	0.1

Intersection						
Int Delay, s/veh	6.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1	LUIX	YVDL T	<u>₩</u>	NDL	TION.
Traffic Vol, veh/h	475	126	165	355	59	184
Future Vol, veh/h	475	126	165	355	59	184
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	350	-	350	0
Veh in Median Storage,	# 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	552	147	192	413	69	214
Major/Minor N	/lajor1	ı	Major2		Minor1	
Conflicting Flow All	0	0	699	0	1423	626
Stage 1	-	-	099	-	626	020
Stage 2	_	_		_	797	_
Critical Hdwy	_	_	4.15	_	6.45	6.25
Critical Hdwy Stg 1	_	_	7.10	<u>-</u>	5.45	- 0.20
Critical Hdwy Stg 2	_	_	_	_	5.45	_
Follow-up Hdwy	_	_	2.245	_	3.545	3.345
Pot Cap-1 Maneuver	_	_	884	_	147	479
Stage 1	_	_	-	_	527	-
Stage 2	-	_	_	_	439	_
Platoon blocked, %	_	_		_		
Mov Cap-1 Maneuver	-	_	884	_	115	479
Mov Cap-2 Maneuver	-	-	-	-	115	-
Stage 1	-	-	-	-	527	-
Stage 2	-	-	-	-	344	-
, and the second						
Annroach	EB		WB		NB	
Approach						
HCM Control Delay, s HCM LOS	0		3.2		32 D	
HOW LOS					U	
Minor Lane/Major Mvmt	t N	NBLn11	NBLn2	EBT	EBR	WBL
Capacity (veh/h)		115	479	-	-	884
HCM Lane V/C Ratio		0.597	0.447	-	-	0.217
HCM Control Delay (s)		74.5	18.4	-	-	10.2
HCM Lane LOS		F	С	-	-	В
HCM 95th %tile Q(veh)		2.9	2.3	-	-	8.0

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	₽		ሻ	↑	7	ሻ	^	7	ሻ	^	7
Traffic Volume (veh/h)	46	57	24	295	101	144	12	974	205	206	762	37
Future Volume (veh/h)	46	57	24	295	101	144	12	974	205	206	762	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	53	66	28	343	117	167	14	1133	238	240	886	43
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	260	100	43	351	298	253	347	1594	711	337	1865	832
Arrive On Green	0.04	0.08	0.08	0.13	0.16	0.16	0.02	0.46	0.46	0.10	0.54	0.54
Sat Flow, veh/h	1739	1217	516	1739	1826	1547	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	53	0	94	343	117	167	14	1133	238	240	886	43
Grp Sat Flow(s),veh/h/ln	1739	0	1733	1739	1826	1547	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	2.1	0.0	4.0	9.5	4.3	7.7	0.3	19.9	7.4	5.1	12.0	1.0
Cycle Q Clear(g_c), s	2.1	0.0	4.0	9.5	4.3	7.7	0.3	19.9	7.4	5.1	12.0	1.0
Prop In Lane	1.00	_	0.30	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	260	0	143	351	298	253	347	1594	711	337	1865	832
V/C Ratio(X)	0.20	0.00	0.66	0.98	0.39	0.66	0.04	0.71	0.33	0.71	0.47	0.05
Avail Cap(c_a), veh/h	300	0	412	351	540	458	433	1594	711	394	1865	832
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	0.0	33.7	29.5	28.3	29.7	10.7	16.4	13.1	14.3	10.9	8.3
Incr Delay (d2), s/veh	0.4	0.0	5.1	41.8	0.8	2.9	0.0	2.7	1.3	4.9	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	0.0	1.7	5.4	1.8	2.8	0.1	6.8	2.4	1.8	3.6	0.3
Unsig. Movement Delay, s/veh		0.0	20.0	74.0	00.0	20.0	40.0	40.4	440	40.0	44.7	0.4
LnGrp Delay(d),s/veh	30.2	0.0	38.8	71.3	29.2	32.6	10.8	19.1	14.3	19.2	11.7	8.4
LnGrp LOS	С	A	D	E	С	С	В	В	В	В	В	A
Approach Vol, veh/h		147			627			1385			1169	
Approach Delay, s/veh		35.7			53.1			18.2			13.2	
Approach LOS		D			D			В			В	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.7	39.3	14.0	10.7	5.8	45.2	7.9	16.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	9.7	34.8	9.5	18.0	5.0	39.5	5.1	22.4				
Max Q Clear Time (g_c+l1), s	7.1	21.9	11.5	6.0	2.3	14.0	4.1	9.7				
Green Ext Time (p_c), s	0.2	6.4	0.0	0.3	0.0	5.9	0.0	0.8				
Intersection Summary												
HCM 6th Ctrl Delay			23.8									
HCM 6th LOS			С									

Intersection						
Int Delay, s/veh	1.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations		7	ች		ች	7
Traffic Vol, veh/h	481	17	17	522	20	20
Future Vol, veh/h	481	17	17	522	20	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	275	200	-	0	50
Veh in Median Storage	, # 0	-	-	0	0	-
Grade, %	0	_	_	0	0	_
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	5	100	100	5	85	85
Mymt Flow	559	20	20	607	23	23
IVIVIII(I IOW	555	20	20	001	20	20
Major/Minor I	Major1		Major2	- 1	Minor1	
Conflicting Flow All	0	0	579	0	1206	559
Stage 1	-	-	-	-	559	-
Stage 2	-	-	-	-	647	-
Critical Hdwy	-	-	5.1	-	7.25	7.05
Critical Hdwy Stg 1	-	-	-	-	6.25	-
Critical Hdwy Stg 2	_	-	-	-	6.25	-
Follow-up Hdwy	-	-	3.1	-	4.265	4.065
Pot Cap-1 Maneuver	-	-	649	-	140	400
Stage 1	-	-	-	-	437	-
Stage 2	-	_	-	_	393	-
Platoon blocked, %	_	_		_		
Mov Cap-1 Maneuver	_	_	649	_	136	400
Mov Cap-2 Maneuver	_	_	-	_	136	-
Stage 1	_	_	_	_	437	_
Stage 2	_	_	_	_	381	_
Olage 2					301	
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.3		25.8	
HCM LOS					D	
Minor Long/Major Mare	.+ N	NDI 511	VIDI 50	EDT	EDD	WDI
Minor Lane/Major Mvm	it r	VBLn11		EBT	EBR	WBL
Capacity (veh/h)		136	400	-	-	649
HCM Lane V/C Ratio		0.171		-	-	0.03
HCM Control Delay (s)		36.9	14.6	-	-	10.7
HCM Lane LOS		Е	В	-	-	В
HCM 95th %tile Q(veh)		0.6	0.2	-	-	0.1

Intersection						
Int Delay, s/veh	6.7					
	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	<u>□□1</u>	LDK	VVDL	VVD1	NDL Š	INDIK
Traffic Vol, veh/h	399	102	113	T 466	75	212
Future Vol, veh/h	399	102	113	466	75	212
·	399	0	0			
Conflicting Peds, #/hr				0	0	0
Sign Control RT Channelized	Free	Free	Free	Free	Stop	Stop
	-	None	-	None	-	None
Storage Length	- 4 0	-	350	-	350	0
Veh in Median Storage, #		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	464	119	131	542	87	247
Major/Minor Ma	ajor1	ı	Major2		Minor1	
Conflicting Flow All	0	0	583	0	1328	524
Stage 1	-	-	- 303	-	524	524
•		_		-	804	-
Stage 2	-	-	4 4 5			C 0F
Critical Hdwy	-	-	4.15	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-		2.245	-	3.545	
Pot Cap-1 Maneuver	-	-	977	-	169	547
Stage 1	-	-	-	-	588	-
Stage 2	-	-	-	-	435	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	977	-	146	547
Mov Cap-2 Maneuver	-	-	-	-	146	-
Stage 1	-	-	-	-	588	-
Stage 2	-	-	-	-	377	-
Approach	EB		WB		NB	
			1.8		28.4	
HCM Control Delay, s	0		1.0			
HCM LOS					D	
Minor Lane/Major Mvmt	1	NBLn11	VBLn2	EBT	EBR	WBL
Capacity (veh/h)		146	547	_	-	977
HCM Lane V/C Ratio		0.597		-	_	0.134
HCM Control Delay (s)		60.9	16.9	_	_	9.3
HCM Lane LOS		F	C	_	_	A
HCM 95th %tile Q(veh)		3.1	2.3	_	_	0.5
HOW JOHN JUNE Q(VOII)		J. I	2.0	-	-	0.0

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	₽		ሻ	•	7	ሻ	^	7	ሻ	^	7
Traffic Volume (veh/h)	42	52	22	243	64	94	9	696	206	270	782	40
Future Volume (veh/h)	42	52	22	243	64	94	9	696	206	270	782	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	49	60	26	283	74	109	10	809	240	314	909	47
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	264	95	41	375	315	267	326	1425	636	445	1831	817
Arrive On Green	0.04	0.08	0.08	0.14	0.17	0.17	0.01	0.41	0.41	0.13	0.53	0.53
Sat Flow, veh/h	1739	1208	524	1739	1826	1547	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	49	0	86	283	74	109	10	809	240	314	909	47
Grp Sat Flow(s),veh/h/ln	1739	0	1732	1739	1826	1547	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	1.9	0.0	3.5	10.1	2.6	4.6	0.2	13.2	8.0	7.0	12.4	1.1
Cycle Q Clear(g_c), s	1.9	0.0	3.5	10.1	2.6	4.6	0.2	13.2	8.0	7.0	12.4	1.1
Prop In Lane	1.00		0.30	1.00	2.1-	1.00	1.00		1.00	1.00	1001	1.00
Lane Grp Cap(c), veh/h	264	0	136	375	315	267	326	1425	636	445	1831	817
V/C Ratio(X)	0.19	0.00	0.63	0.76	0.24	0.41	0.03	0.57	0.38	0.71	0.50	0.06
Avail Cap(c_a), veh/h	310	0	423	375	570	483	422	1425	636	613	1831	817
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.3	0.0	32.9	25.9	26.3	27.2	12.4	16.7	15.1	12.2	11.1	8.5
Incr Delay (d2), s/veh	0.3	0.0	4.8	8.5	0.4	1.0	0.0	1.6	1.7	2.2 0.0	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0 1.5	0.0 4.8	1.0	0.0 1.6	0.0 0.1	0.0 4.6	0.0 2.6	2.1	0.0 3.7	0.0
%ile BackOfQ(50%),veh/ln		0.0	1.5	4.0	1.0	1.0	0.1	4.0	2.0	۷.۱	3.1	0.3
Unsig. Movement Delay, s/veh	29.6	0.0	37.8	34.4	26.7	28.2	12.5	18.3	16.8	14.4	12.1	8.6
LnGrp Delay(d),s/veh LnGrp LOS	29.0 C	0.0 A	37.0 D	34.4 C	20.7 C	20.2 C	12.5 B	10.3 B	10.0 B	14.4 B	12.1 B	6.0 A
		135	U	<u> </u>	466		В		В	В	1270	
Approach Vol, veh/h Approach Delay, s/veh		34.8			31.7			1059 17.9			12.5	
· · · · · · · · · · · · · · · · · · ·								_			_	
Approach LOS		С			С			В			В	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.1	34.8	14.6	10.3	5.4	43.4	7.7	17.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	16.7	27.2	10.1	18.0	5.0	38.9	5.1	23.0				
Max Q Clear Time (g_c+l1), s	9.0	15.2	12.1	5.5	2.2	14.4	3.9	6.6				
Green Ext Time (p_c), s	0.5	4.5	0.0	0.2	0.0	6.0	0.0	0.5				
Intersection Summary												
HCM 6th Ctrl Delay			18.6									
HCM 6th LOS			В									

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Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	<u></u>		ሻ	<u></u>	ሻ	7	
Traffic Volume (veh/h)	430	101	136	321	48	149	
Future Volume (veh/h)	430	101	136	321	48	149	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No			No	No		
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	
Adj Flow Rate, veh/h	500	117	158	373	56	173	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	
Percent Heavy Veh, %	5	5	5	5	5	5	
Cap, veh/h	625	146	435	1158	285	253	
Arrive On Green	0.44	0.44	0.10	0.63	0.16	0.16	
Sat Flow, veh/h	1431	335	1739	1826	1739	1547	
Grp Volume(v), veh/h	0	617	158	373	56	173	
Grp Sat Flow(s),veh/h/ln	0	1766	1739	1826	1739	1547	
Q Serve(g_s), s	0.0	13.5	1.9	4.2	1.2	4.7	
Cycle Q Clear(g_c), s	0.0	13.5	1.9	4.2	1.2	4.7	
Prop In Lane		0.19	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	0	771	435	1158	285	253	
V/C Ratio(X)	0.00	0.80	0.36	0.32	0.20	0.68	
Avail Cap(c_a), veh/h	0	1805	677	2481	801	713	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	0.0	10.9	7.7	3.7	16.1	17.5	
Incr Delay (d2), s/veh	0.0	2.0	0.5	0.2	0.3	3.2	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.0	3.4	0.3	0.4	0.5	1.5	
Unsig. Movement Delay, s/veh	1						
LnGrp Delay(d),s/veh	0.0	12.8	8.2	3.9	16.4	20.8	
LnGrp LOS	Α	В	Α	Α	В	С	
Approach Vol, veh/h	617			531	229		
Approach Delay, s/veh	12.8			5.2	19.7		
Approach LOS	В			Α	В		
Timer - Assigned Phs		2	3	4			
Phs Duration (G+Y+Rc), s		11.8	8.8	23.9			
Change Period (Y+Rc), s		4.5	4.5	4.5			
Max Green Setting (Gmax), s		20.5	10.5	45.5			
Max Q Clear Time (g_c+l1), s		6.7	3.9	15.5			
Green Ext Time (p_c), s		0.6	0.2	4.0			
Intersection Summary							
•			11.0				
HCM 6th Ctrl Delay							
HCM 6th LOS			В				

Lane Configurations	Intersection							
Lane Configurations	Int Delay, s/veh	0.9						
Lane Configurations	Movement	ERT	FBR	WBI	WRT	NRI	NBR	
Traffic Vol, veh/h 514 14 14 384 17 17 Future Vol, veh/h 514 14 14 384 17 17 Future Vol, veh/h 514 14 14 384 17 17 Conflicting Peds, #/hr 0 0 0 0 0 0 0 0 0 0 Sign Control Free Free Free Free Stop Stop Stop RT Channelized - None - None - None Storage Length - 275 200 - 0 50 Veh in Median Storage, # 0 - 0 0 0 - Grade, % 0 - 0 0 0 - Peak Hour Factor 86 86 86 86 86 86 86 Heavy Vehicles, % 5 100 100 5 82 82 Mwmt Flow 598 16 16 447 20 20 Major/Minor Major1 Major2 Minor1 Conflicting Flow All 0 0 614 0 1077 598 Stage 1 - 5 598 - 598 Stage 2 - 5 479 - Critical Hdwy - 55.1 - 7.22 7.02 Critical Hdwy Stg 1 - 6.22 - Critical Hdwy Stg 2 - 6.22 - Critical Hdwy Stg 2 - 6.22 - Follow-up Hdwy - 3.1 - 4.238 4.038 Pot Cap-1 Maneuver - 627 - 173 381 Stage 1 4.238 4.038 Pot Cap-1 Maneuver - 627 - 169 381 Mov Cap-2 Maneuver - 627 - 473 - Approach EB WB NB								
Future Vol, veh/h Conflicting Peds, #/hr Conflicting Language Conflicting Language Conflicting Language Conflicting Flow All Conflicting Flow All Conflicting Flow All Conflicting Howy Conflicting								
Conflicting Peds, #/hr Free Free Free Free Free Free Free Stop Stop Free Stop Stop Stop Stop RT Channelized - None Storage Length - 275 200 - 0 50 - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None								
Sign Control Free Rough Free Free Rough Rone Rough None Rough	<u> </u>							
RT Channelized								
Storage Length								
Veh in Median Storage, # 0 - - 0 0 - Grade, % 0 - - 0 0 - Peak Hour Factor 86 86 86 86 86 86 Heavy Vehicles, % 5 100 100 5 82 82 Mymt Flow 598 16 16 447 20 20 Major/Minor Major/Minor Major/Minor Minor1 Minor1 Conflicting Flow All 0 0 614 0 1077 598 Stage 1 - - - 598 - 598 - Stage 2 - - - 479 - C Critical Hdwy Stg 1 - - - 6.22 - - Critical Hdwy Stg 2 - - - 6.22 - - Follow-up Hdwy - - 3.1 - 4.238 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>								
Grade, % 0 - - 0 0 - Peak Hour Factor 86					0			
Peak Hour Factor 86 80 Magior/Minor Mall 0 0 614 0 1077 598 20 20 20 20 20 20 20 20 20 20 20 20 20 20 <td>•</td> <td></td> <td>_</td> <td>_</td> <td></td> <td></td> <td>_</td> <td></td>	•		_	_			_	
Heavy Vehicles, % 5 100 100 5 82 82 Mvmt Flow 598 16 16 447 20 20 20 Mimort Flow 598 16 16 447 20 20 20 Mimort Flow 598 16 16 447 20 20 20 Mimort Flow 598 16 16 447 20 20 20 Mimort Flow 598 16 16 447 20 20 20 Mimort Flow 598 16 16 447 20 20 20 Mimort Flow 60 60 60 60 60 60 60 6								
Mymt Flow 598 16 16 447 20 20 Major/Minor Major1 Major2 Minor1 Conflicting Flow All 0 0 614 0 1077 598 Stage 1 - - - 598 - Stage 2 - - - 479 - Critical Hdwy - - 5.1 - 7.22 7.02 Critical Hdwy Stg 1 - - - 6.22 - - C122 - Follow-up Hdwy - - 3.1 - 4.238 4.038 Pol Cap-1 Maneuver - 627 - 173 381 Stage 1 - - - 421 - Stage 2 - - - 421 - Stage 1 - - - 421 - Stage 2 - - - 421 -								
Major/Minor Major1 Major2 Minor1 Conflicting Flow All 0 0 614 0 1077 598 Stage 1 - - - 598 - Stage 2 - - - 598 - Stage 2 - - - 598 - - - 598 - - - 598 - - - 598 - - - 598 - - - 598 - - - 598 - - - 598 - - - - 479 -								
Conflicting Flow All 0 0 614 0 1077 598 Stage 1 - - - 598 - Stage 2 - - - 479 - Critical Hdwy Stg 1 - - - 6.22 - Critical Hdwy Stg 1 - - - 6.22 - - Follow-up Hdwy - - 3.1 - 4.238 4.038 Pot Cap-1 Maneuver - 627 - 173 381 Stage 1 - - - 421 - Stage 2 - - - 486 - Platoon blocked, % - - - - - Mov Cap-1 Maneuver - 627 - 169 381 Mov Cap-2 Maneuver - - - - 421 - Stage 1 - - - 473 -	WITHIU I IOW	000	10	10	771	20	20	
Conflicting Flow All 0 0 614 0 1077 598 Stage 1 - - - 598 - Stage 2 - - - 479 - Critical Hdwy Stg 1 - - - 6.22 - Critical Hdwy Stg 1 - - - 6.22 - - Critical Hdwy Stg 2 - - - 6.22 - - Follow-up Hdwy - - 3.1 - 4.238 4.038 Pot Cap-1 Maneuver - 627 - 173 381 - Stage 1 - - - - 421 - - - 486 -<								
Stage 1 - - - 598 - Stage 2 - - - 479 - Critical Hdwy - - - 6.22 - Critical Hdwy Stg 1 - - - 6.22 - Critical Hdwy Stg 2 - - - 6.22 - Follow-up Hdwy - - 3.1 - 4.238 4.038 Pol Cap-1 Maneuver - - 627 - 173 381 Stage 1 - - - - 421 - Stage 2 - - - - - - Mov Cap-1 Maneuver - - 627 - 169 381 Mov Cap-2 Maneuver - - - - 421 - Stage 1 - - - - 473 - Approach EB WB NB HCM Control Delay, s 0 0.4 22.1 HCM Lane V/C Ratio 0.117 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>								
Stage 2 - - - 479 - Critical Hdwy Stg 1 - - - 6.22 - Critical Hdwy Stg 2 - - - 6.22 - Follow-up Hdwy - - - 6.22 - Follow-up Hdwy - - 3.1 - 4.238 4.038 Pol Cap-1 Maneuver - - 627 - 173 381 Stage 1 - - - 421 - Stage 2 - - - 169 381 Mov Cap-2 Maneuver - - - 169 - Stage 1 - - - 421 - Stage 2 - - - 473 - Approach EB WB NB HCM Control Delay, s 0 0.4 22.1 HCM Control Delay (s) 0.117 0.052 - -		0	0	614	0		598	
Critical Hdwy - - 5.1 - 7.22 7.02 Critical Hdwy Stg 1 - - - 6.22 - Critical Hdwy Stg 2 - - - 6.22 - Follow-up Hdwy - - 3.1 - 4.238 4.038 Pot Cap-1 Maneuver - - 627 - 173 381 Stage 1 - - - - 421 - Stage 2 - - - - - - Mov Cap-1 Maneuver - - - - - - Mov Cap-2 Maneuver - - - 169 381 -		-	-	-	-		-	
Critical Hdwy Stg 1 - - - 6.22 - Follow-up Hdwy - - 3.1 - 4.238 4.038 Pot Cap-1 Maneuver - - 627 - 173 381 Stage 1 - - - 421 - Stage 2 - - - 486 - Platoon blocked, % - - - - - Mov Cap-1 Maneuver - 627 - 169 381 Mov Cap-2 Maneuver - - - 169 - Stage 1 - - - 421 - Stage 2 - - - 421 - Stage 2 - - - 473 - Approach B WB HCM Control Delay, s Output B WB WBT Capacity (veh/h) In 169 Stage 1 Stage 2 Stage 2 Stage 3 Stage 1 Stage 3 Stage 4 Stage 3 Stage 4 Sta		-	-		-			
Critical Hdwy Stg 2 - - - 6.22 - Follow-up Hdwy - 3.1 - 4.238 4.038 Pot Cap-1 Maneuver - 627 - 173 381 Stage 1 - - - 421 - Stage 2 - - - 486 - Platoon blocked, % - - - - Mov Cap-1 Maneuver - - 627 - 169 381 Mov Cap-2 Maneuver - - - 169 - - - 421 - - - 473 - - - 473 - - - 473 - - - 473 - - - - - 473 - - - - - 473 -		-	-	5.1	-		7.02	
Follow-up Hdwy - 3.1 - 4.238 4.038 Pot Cap-1 Maneuver - 627 - 173 381 Stage 1 421 - 426 - 513 Stage 2 486 - 513 Platoon blocked, % 5169 381 Mov Cap-1 Maneuver - 627 - 169 381 Mov Cap-2 Maneuver 627 - 169 - 5169 - 5169 Stage 1 421 - 5169 Stage 2 473 - 5169 Approach EB WB NB HCM Control Delay, s 0 0.4 22.1 HCM LOS C Minor Lane/Major Mvmt NBLn1 NBLn2 EBT EBR WBL WBT Capacity (veh/h) 169 381 - 627 - 5169 HCM Lane V/C Ratio 0.117 0.052 - 0.026 - 5169 HCM Control Delay (s) 29.1 15 - 10.9 - 5169 HCM Lane LOS D C - B - 527		-	-	-	-		-	
Pot Cap-1 Maneuver		-	-		-			
Stage 1 - - - 421 - Stage 2 - - - 486 - Platoon blocked, % - - - - Mov Cap-1 Maneuver - - 627 - 169 381 Mov Cap-2 Maneuver - - - 169 - Stage 1 - - - 421 - Stage 2 - - - 473 - Approach EB WB NB HCM Control Delay, s 0 0.4 22.1 HCM Lane/Major Mvmt NBLn1 NBLn2 EBT EBR WBL WBT Capacity (veh/h) 169 381 - 627 - HCM Lane V/C Ratio 0.117 0.052 - 0.026 - HCM Control Delay (s) 29.1 15 - 10.9 - HCM Lane LOS D C - B - HCM Lane LOS D C B -		-	-		-			
Stage 2 - - - 486 - Platoon blocked, % - - - - Mov Cap-1 Maneuver - - 627 - 169 381 Mov Cap-2 Maneuver - - - 169 - Stage 1 - - - 421 - Stage 2 - - - 473 - Approach EB WB NB HCM Control Delay, s 0 0.4 22.1 HCM LOS C Minor Lane/Major Mvmt NBLn1 NBLn2 EBT EBR WBL WBT Capacity (veh/h) 169 381 - - 627 - HCM Lane V/C Ratio 0.117 0.052 - - 0.026 - HCM Lane LOS D C - - B -	•	-	-	627	-		381	
Platoon blocked, %		-	-	-	-		-	
Mov Cap-1 Maneuver - - 627 - 169 381 Mov Cap-2 Maneuver - - - - 169 - Stage 1 - - - - 421 - Stage 2 - - - - 473 - Approach EB WB NB HCM Control Delay, s 0.4 22.1 HCM LOS C Minor Lane/Major Mvmt NBLn1 NBLn2 EBT EBR WBL WBT Capacity (veh/h) 169 381 - - 627 - - HCM Lane V/C Ratio 0.117 0.052 - - - 0.026 - - HCM Control Delay (s) 29.1 15 - - 10.9 - - HCM Lane LOS D C - B -	_	-	-	-	-	486	-	
Mov Cap-2 Maneuver - - - 169 - Stage 1 - - - 421 - Stage 2 - - - 473 - Approach EB WB NB HCM Control Delay, s 0 0.4 22.1 HCM LOS C C Minor Lane/Major Mvmt NBLn1 NBLn2 EBT EBR WBL WBT Capacity (veh/h) 169 381 627 HCM Lane V/C Ratio 0.117 0.052 0.026 HCM Control Delay (s) D C B -		-	-		-			
Stage 1 - - - 421 - Stage 2 - - - 473 - Approach EB WB NB HCM Control Delay, s 0 0.4 22.1 HCM LOS C Minor Lane/Major Mvmt NBLn1 NBLn2 EBT EBR WBL WBT Capacity (veh/h) 169 381 - - 627 - HCM Lane V/C Ratio 0.117 0.052 - - 0.026 - HCM Control Delay (s) 29.1 15 - - 10.9 - HCM Lane LOS D C - - B -	•	-	-	627	-		381	
Stage 2 - - - 473 - Approach EB WB NB NB HCM Control Delay, s 0 0.4 22.1 HCM LOS C C Minor Lane/Major Mvmt NBLn1 NBLn2 EBT EBR WBL WBT Capacity (veh/h) 169 381 - 627 - HCM Lane V/C Ratio 0.117 0.052 - 0.026 - HCM Control Delay (s) 29.1 15 - 10.9 - HCM Lane LOS D C - B -		-	-	-	-		-	
Approach EB WB NB HCM Control Delay, s 0 0.4 22.1 HCM LOS C Minor Lane/Major Mvmt NBLn1 NBLn2 EBT EBR WBL WBT Capacity (veh/h) 169 381 - 627 - HCM Lane V/C Ratio 0.117 0.052 - 0.026 - HCM Control Delay (s) 29.1 15 - 10.9 - HCM Lane LOS D C - B -	_	-	-	-	-		-	
HCM Control Delay, s 0 0.4 22.1	Stage 2	-	-	-	-	473	-	
HCM Control Delay, s 0 0.4 22.1								
HCM Control Delay, s 0 0.4 22.1 HCM LOS	Annroach	FR		\M/R		NIP		
Minor Lane/Major Mvmt NBLn1 NBLn2 EBT EBR WBL WBT Capacity (veh/h) 169 381 - - 627 - HCM Lane V/C Ratio 0.117 0.052 - - 0.026 - HCM Control Delay (s) 29.1 15 - - 10.9 - HCM Lane LOS D C - B -								
Minor Lane/Major Mvmt NBLn1 NBLn2 EBT EBR WBL WBT Capacity (veh/h) 169 381 - - 627 - HCM Lane V/C Ratio 0.117 0.052 - - 0.026 - HCM Control Delay (s) 29.1 15 - - 10.9 - HCM Lane LOS D C - B -		U		0.4				
Capacity (veh/h) 169 381 - - 627 - HCM Lane V/C Ratio 0.117 0.052 - - 0.026 - HCM Control Delay (s) 29.1 15 - - 10.9 - HCM Lane LOS D C - B -	I ICIVI LOS					U		
Capacity (veh/h) 169 381 - - 627 - HCM Lane V/C Ratio 0.117 0.052 - - 0.026 - HCM Control Delay (s) 29.1 15 - - 10.9 - HCM Lane LOS D C - B -								
HCM Lane V/C Ratio 0.117 0.052 - - 0.026 - HCM Control Delay (s) 29.1 15 - - 10.9 - HCM Lane LOS D C - B -	Minor Lane/Major Mvm	nt 1	NBLn1	VBLn2	EBT	EBR	WBL	WBT
HCM Lane V/C Ratio 0.117 0.052 - - 0.026 - HCM Control Delay (s) 29.1 15 - - 10.9 - HCM Lane LOS D C - B -	Capacity (veh/h)		169	381	-	-	627	-
HCM Control Delay (s) 29.1 15 - - 10.9 - HCM Lane LOS D C - B -			0.117		-	-		-
HCM Lane LOS D C B -			29.1	15	-			-
HCM 95th %tile Q(veh) 0.4 0.2 0.1 -					-	-	В	-
	HCM 95th %tile Q(veh))	0.4	0.2	-	-	0.1	-

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Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	49	86	283	74	109	10	809	240	314	909	47	
v/c Ratio	0.21	0.41	0.82	0.20	0.24	0.03	0.64	0.34	0.68	0.45	0.05	
Control Delay	23.2	31.9	45.4	29.0	2.0	9.1	24.5	4.5	18.3	11.4	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	23.2	31.9	45.4	29.0	2.0	9.1	24.5	4.5	18.3	11.4	0.1	
Queue Length 50th (ft)	17	30	117	32	0	2	176	0	69	117	0	
Queue Length 95th (ft)	41	69	#208	66	3	8	247	42	142	220	0	
Internal Link Dist (ft)		1862		5754			1432			1594		
Turn Bay Length (ft)	200		200		200	275		250	350		250	
Base Capacity (vph)	236	435	345	559	601	323	1257	714	522	2004	972	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.21	0.20	0.82	0.13	0.18	0.03	0.64	0.34	0.60	0.45	0.05	

Intersection Summary

Queue shown is maximum after two cycles.

Synchro 10 Report 07/11/2020 Lakeland Linder Aiport

⁹⁵th percentile volume exceeds capacity, queue may be longer.

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Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	617	158	373	56	173
v/c Ratio	0.74	0.35	0.32	0.21	0.45
Control Delay	17.5	5.2	4.4	25.1	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.5	5.2	4.4	25.1	9.2
Queue Length 50th (ft)	139	12	34	15	0
Queue Length 95th (ft)	264	31	73	51	44
Internal Link Dist (ft)	2130		3893	1523	
Turn Bay Length (ft)		350		350	
Base Capacity (vph)	1526	556	1750	771	785
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.40	0.28	0.21	0.07	0.22
Intersection Summary					

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Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR	
Lane Group Flow (vph)	209	432	20	438	409	29	405	269	
v/c Ratio	0.98	0.63	0.09	0.64	0.49	0.03	0.61	0.29	
Control Delay	88.4	27.3	19.0	27.5	4.2	0.1	20.2	3.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	88.4	27.3	19.0	27.5	4.2	0.1	20.2	3.0	
Queue Length 50th (ft)	114	193	7	197	0	0	155	5	
Queue Length 95th (ft)	#239	274	22	280	46	0	236	37	
Internal Link Dist (ft)		3893		1270		729	1301		
Turn Bay Length (ft)	400		150		300			350	
Base Capacity (vph)	220	709	224	710	852	939	669	918	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.95	0.61	0.09	0.62	0.48	0.03	0.61	0.29	
Intersection Summary									

^{# 95}th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	₽		7	•	7	ሻ	44	7	*	ተተ	7
Traffic Volume (veh/h)	42	52	22	263	90	128	11	884	179	180	692	33
Future Volume (veh/h)	42	52	22	263	90	128	11	884	179	180	692	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	4.00	1.00	1.00	4.00	1.00	1.00	4.00	1.00	1.00	4.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	4000	No	4000	4000	No	4000	4000	No	4000	4000	No	4000
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	49	60	26	306	105	149	13	1028	208	209	805	38
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	5	5 95	5 41	5 270	5 319	5 270	5 367	5 1565	5	5 347	5 1015	5
Cap, veh/h Arrive On Green	258	0.08	0.08	378 0.14	0.17	0.17	0.02	1565 0.45	698 0.45	0.09	1815 0.52	810 0.52
Sat Flow, veh/h	0.04 1739	1208	524	1739	1826	1547	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	49	0	4720	306	105	149	13	1028	208	209	805	38
Grp Sat Flow(s), veh/h/ln	1739	0	1732	1739	1826	1547	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	1.9 1.9	0.0	3.6	10.3 10.3	3.7 3.7	6.5	0.3	17.1	6.3 6.3	4.4 4.4	10.7	0.9
Cycle Q Clear(g_c), s Prop In Lane	1.00	0.0	3.6 0.30	1.00	3.1	6.5 1.00	1.00	17.1	1.00	1.00	10.7	0.9 1.00
Lane Grp Cap(c), veh/h	258	0	136	378	319	270	367	1565	698	347	1815	810
V/C Ratio(X)	0.19	0.00	0.63	0.81	0.33	0.55	0.04	0.66	0.30	0.60	0.44	0.05
Avail Cap(c_a), veh/h	303	0.00	421	378	573	485	457	1565	698	455	1815	810
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.4	0.00	33.1	26.6	26.7	27.9	10.8	15.8	12.9	12.6	10.9	8.6
Incr Delay (d2), s/veh	0.4	0.0	4.8	12.4	0.6	1.8	0.0	2.2	1.1	1.7	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	1.6	5.7	1.5	2.3	0.1	5.8	2.0	1.3	3.2	0.3
Unsig. Movement Delay, s/veh		0.0	1.0	0.1	1.0	2.0	0.1	0.0	2.0	1.0	0.2	0.0
LnGrp Delay(d),s/veh	29.7	0.0	37.9	39.0	27.3	29.6	10.8	18.0	14.0	14.3	11.7	8.7
LnGrp LOS	C	A	D	D	C	C	В	В	В	В	В	A
Approach Vol, veh/h		135			560			1249			1052	, ,
Approach Delay, s/veh		34.9			34.3			17.3			12.1	
Approach LOS		C			C			В			В	
	4		•			•	-					
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	37.9	14.8	10.3	5.7	43.2	7.7	17.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.1	32.6	10.3	18.0	5.0	38.7	5.1	23.2				
Max Q Clear Time (g_c+I1), s	6.4	19.1	12.3	5.6	2.3	12.7	3.9	8.5				
Green Ext Time (p_c), s	0.2	5.9	0.0	0.2	0.0	5.2	0.0	0.8				
Intersection Summary												
HCM 6th Ctrl Delay			19.4									
HCM 6th LOS			В									

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Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	1 >		ሻ	†	*	7	
Traffic Volume (veh/h)	361	81	91	422	60	172	
Future Volume (veh/h)	361	81	91	422	60	172	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No			No	No		
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	
Adj Flow Rate, veh/h	420	94	106	491	70	200	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	
Percent Heavy Veh, %	5	5	5	5	5	5	
Cap, veh/h	553	124	445	1064	331	295	
Arrive On Green	0.38	0.38	0.09	0.58	0.19	0.19	
Sat Flow, veh/h	1444	323	1739	1826	1739	1547	
Grp Volume(v), veh/h	0	514	106	491	70	200	
Grp Sat Flow(s), veh/h/ln	0	1768	1739	1826	1739	1547	
Q Serve(g_s), s	0.0	10.0	1.2	6.1	1.3	4.8	
Cycle Q Clear(g_c), s	0.0	10.0	1.2	6.1	1.3	4.8	
Prop In Lane		0.18	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	0	677	445	1064	331	295	
V/C Ratio(X)	0.00	0.76	0.24	0.46	0.21	0.68	
Avail Cap(c_a), veh/h	0	2026	622	2644	1029	916	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	0.0	10.7	7.0	4.7	13.6	14.9	
Incr Delay (d2), s/veh	0.0	1.8	0.3	0.3	0.3	2.7	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.0	2.5	0.2	0.6	0.5	1.4	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	0.0	12.5	7.2	5.0	13.9	17.7	
LnGrp LOS	Α	В	Α	Α	В	В	
Approach Vol, veh/h	514			597	270		
Approach Delay, s/veh	12.5			5.4	16.7		
Approach LOS	В			A	В		
Timer - Assigned Phs		2	3	4			8
Phs Duration (G+Y+Rc), s		12.1	7.9	19.7			27.6
Change Period (Y+Rc), s		4.5	4.5	4.5			4.5
Max Green Setting (Gmax), s		23.5	7.5	4.5			57.5
Max Q Clear Time (g_c+l1), s		6.8	3.2	12.0			8.1
Green Ext Time (p_c), s		0.8	0.1	3.1			3.0
* ,		0.0	0.1	J. I			3.0
Intersection Summary			40.0				
HCM 6th Ctrl Delay			10.2				
HCM 6th LOS			В				

Intersection						
Int Delay, s/veh	0.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	†	7	ች		*	7
Traffic Vol, veh/h	425	14	14	466	17	17
Future Vol, veh/h	425	14	14	466	17	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	_	275	200	-	0	50
Veh in Median Storage	e, # 0			0	0	-
Grade, %	0	_	_	0	0	_
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	5	100	100	5	82	82
Mymt Flow	494	16	16	542	20	20
IVIVIIIL I IOW	434	10	10	J42	20	20
Major/Minor	Major1	- 1	Major2	1	Minor1	
Conflicting Flow All	0	0	510	0	1068	494
Stage 1	-	-	-	-	494	-
Stage 2	-	-	-	-	574	-
Critical Hdwy	-	-	5.1	-	7.22	7.02
Critical Hdwy Stg 1	_	_	_	_	6.22	_
Critical Hdwy Stg 2	_	-	-	-	6.22	_
Follow-up Hdwy	_	_	3.1	_	4.238	4.038
Pot Cap-1 Maneuver	_	_	697	_	175	443
Stage 1	_	_	-	_	477	-
Stage 2	_	_	_	_	433	_
Platoon blocked, %	_	_		_	100	
Mov Cap-1 Maneuver	_	_	697	_	171	443
Mov Cap-1 Maneuver	_	_	-	_	171	-
		_	_	_	477	
Stage 1		-				
Stage 2	-	-	-	-	423	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.3		21.2	
HCM LOS	-				С	
J 200						
N 42 1 42 4 1 2 4		IDI 4	UDI C			14/51
Minor Lane/Major Mvn	nt r	NBLn11		EBT	EBR	WBL
Capacity (veh/h)		171	443	-	-	697
HCM Lane V/C Ratio		0.116		-	-	0.023
HCM Control Delay (s)		28.8	13.5	-	-	10.3
HCM Lane LOS		D	В	-	-	В
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0.1

	۶	→	•	←	•	4	†	~	-	ļ	4	
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	49	86	306	105	149	13	1028	208	209	805	38	
v/c Ratio	0.21	0.42	0.89	0.29	0.33	0.03	0.70	0.26	0.61	0.40	0.04	
Control Delay	23.5	32.4	55.5	30.3	5.0	8.3	22.7	2.7	17.6	10.8	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	23.5	32.4	55.5	30.3	5.0	8.3	22.7	2.7	17.6	10.8	0.1	
Queue Length 50th (ft)	18	30	132	47	0	2	222	0	43	101	0	
Queue Length 95th (ft)	41	69	#239	87	26	10	299	25	97	190	0	
Internal Link Dist (ft)		1862		5754			1432			1594		
Turn Bay Length (ft)	200		200		200	275		250	350		250	
Base Capacity (vph)	228	423	342	549	593	380	1465	790	371	2024	980	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.21	0.20	0.89	0.19	0.25	0.03	0.70	0.26	0.56	0.40	0.04	

Intersection Summary

Queue shown is maximum after two cycles.

^{# 95}th percentile volume exceeds capacity, queue may be longer.

	→	•	←	1	/
Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	514	106	491	70	200
v/c Ratio	0.70	0.22	0.46	0.23	0.45
Control Delay	17.0	4.5	6.0	21.3	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.0	4.5	6.0	21.3	7.8
Queue Length 50th (ft)	103	8	49	16	0
Queue Length 95th (ft)	198	23	103	51	42
Internal Link Dist (ft)	2130		3893	1523	
Turn Bay Length (ft)		350		350	
Base Capacity (vph)	1635	509	1789	1007	984
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.31	0.21	0.27	0.07	0.20
Intersection Summary					

Queues

4: Airfield Ct W/Airport Rd & Drane Field Rd

	•	-	•	←	•	†	ļ	4	
Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR	
Lane Group Flow (vph)	194	400	3	317	391	29	224	342	
v/c Ratio	0.83	0.72	0.02	0.57	0.53	0.03	0.31	0.34	
Control Delay	50.2	28.1	14.7	23.2	4.7	7.0	11.3	2.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	50.2	28.1	14.7	23.2	4.7	7.0	11.3	2.5	
Queue Length 50th (ft)	73	143	1	107	0	3	44	0	
Queue Length 95th (ft)	138	212	6	164	41	17	112	35	
Internal Link Dist (ft)		3893		1270		729	1301		
Turn Bay Length (ft)	400		150		300			350	
Base Capacity (vph)	499	1192	361	1192	1146	909	712	1007	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.39	0.34	0.01	0.27	0.34	0.03	0.31	0.34	
Intersection Summary									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	₽		ሻ	↑	7	7	^	7	ሻ	^	7
Traffic Volume (veh/h)	46	57	24	272	71	106	10	767	234	306	862	44
Future Volume (veh/h)	46	57	24	272	71	106	10	767	234	306	862	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	53	66	28	316	83	123	12	892	272	356	1002	51
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	270	101	43	339	284	240	309	1443	643	444	1883	840
Arrive On Green	0.04	0.08	0.08	0.12	0.16	0.16	0.01	0.42	0.42	0.14	0.54	0.54
Sat Flow, veh/h	1739	1217	516	1739	1826	1547	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	53	0	94	316	83	123	12	892	272	356	1002	51
Grp Sat Flow(s),veh/h/ln	1739	0	1733	1739	1826	1547	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	2.0	0.0	3.9	8.7	3.0	5.4	0.3	15.0	9.3	7.9	13.8	1.2
Cycle Q Clear(g_c), s	2.0	0.0	3.9	8.7	3.0	5.4	0.3	15.0	9.3	7.9	13.8	1.2
Prop In Lane	1.00	_	0.30	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	270	0	144	339	284	240	309	1443	643	444	1883	840
V/C Ratio(X)	0.20	0.00	0.65	0.93	0.29	0.51	0.04	0.62	0.42	0.80	0.53	0.06
Avail Cap(c_a), veh/h	312	0	420	339	531	450	401	1443	643	584	1883	840
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	0.0	33.0	28.9	27.8	28.8	12.3	17.1	15.4	13.1	10.9	8.0
Incr Delay (d2), s/veh	0.4	0.0	5.0	31.7	0.6	1.7	0.1	2.0	2.0	6.0	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	0.0	1.7	4.1	1.2	1.9	0.1	5.2	3.1	2.8	4.1	0.3
Unsig. Movement Delay, s/veh		0.0	20.0	CO 7	00.0	20.5	40.0	40.4	47.4	40.4	40.0	0.0
LnGrp Delay(d),s/veh	29.5	0.0	38.0	60.7	28.3	30.5	12.3	19.1	17.4	19.1	12.0	8.2
LnGrp LOS	С	A 4.7	D	E	C	С	В	B	В	В	B	A
Approach Vol, veh/h		147			522			1176			1409	
Approach Delay, s/veh		34.9			48.4			18.6			13.6	
Approach LOS		С			D			В			В	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	35.4	13.2	10.7	5.6	44.8	7.8	16.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	16.5	28.8	8.7	18.0	5.0	40.3	5.1	21.6				
Max Q Clear Time (g_c+l1), s	9.9	17.0	10.7	5.9	2.3	15.8	4.0	7.4				
Green Ext Time (p_c), s	0.6	4.9	0.0	0.3	0.0	6.8	0.0	0.6				
Intersection Summary												
HCM 6th Ctrl Delay			22.0									
HCM 6th LOS			С									

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Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	1>		ች		ች	7	
Traffic Volume (veh/h)	475	126	165	355	59	184	
Future Volume (veh/h)	475	126	165	355	59	184	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No			No	No		
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	
Adj Flow Rate, veh/h	552	147	192	413	69	214	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	
Percent Heavy Veh, %	5	5	5	5	5	5	
Cap, veh/h	657	175	382	1181	318	283	
Arrive On Green	0.47	0.47	0.09	0.65	0.18	0.18	
Sat Flow, veh/h	1389	370	1739	1826	1739	1547	
Grp Volume(v), veh/h	0	699	192	413	69	214	
Grp Sat Flow(s),veh/h/ln	0	1759	1739	1826	1739	1547	
Q Serve(g_s), s	0.0	18.4	2.6	5.4	1.8	6.9	
Cycle Q Clear(g_c), s	0.0	18.4	2.6	5.4	1.8	6.9	
Prop In Lane		0.21	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	0	831	382	1181	318	283	
V/C Ratio(X)	0.00	0.84	0.50	0.35	0.22	0.76	
Avail Cap(c_a), veh/h	0	1516	573	2092	675	601	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	0.0	12.2	10.1	4.3	18.4	20.5	
Incr Delay (d2), s/veh	0.0	2.4	1.0	0.2	0.3	4.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.0	5.2	0.6	0.8	0.7	2.4	
Unsig. Movement Delay, s/veh		J.L	3.0	3.0	J.1	,	
LnGrp Delay(d),s/veh	0.0	14.6	11.1	4.4	18.7	24.6	
LnGrp LOS	A	В	В	A	В	C	
Approach Vol, veh/h	699			605	283		
Approach Delay, s/veh	14.6			6.5	23.2		
Approach LOS	В			Α	23.2 C		
					- 0		
Timer - Assigned Phs		2	3	4			
Phs Duration (G+Y+Rc), s		14.1	9.2	29.4			
Change Period (Y+Rc), s		4.5	4.5	4.5			
Max Green Setting (Gmax), s		20.5	10.5	45.5			
Max Q Clear Time (g_c+I1), s		8.9	4.6	20.4			
Green Ext Time (p_c), s		0.7	0.2	4.6			
Intersection Summary							
HCM 6th Ctrl Delay			13.0				
HCM 6th LOS			В				
TIOW OUT LOO			D				

1.2						
EBT	EBR	WBL	WBT	NBL	NBR	
0/0	20	20	499	23	23	
/lajor1	1	Major2		Minor1		
0	0	696	0	1215	676	•
-	-	-	-	676	_	
-	-	-	-	539	-	
-	-	5.1	-	7.25	7.05	
_	-	-	-		-	
_	-	-	-		-	
-	_	3.1	-		4.065	
-	-		-			
_	_	-	_		-	
_	_	_	_		_	
_	_			770		
	_	576		133	337	
	_					
_	_	_				
_	_	_	_			
-		_	-	432	_	
EB		WB		NB		
0		0.4		27.1		
				D		
	UDL 4 I	UDL = 0	EDT	EDD	WDI	
ı r						
			-	-		
			-			
	37.7	16.5	-	-	11.5	
					_	
	E 0.6	C 0.2	-	-	0.1	
	581 581 0 Free - # 0 0 86 5 676 Major1 0	EBT EBR 581 17 581 17 0 0 Free Free - None - 275 # 0 - 0 - 86 86 5 100 676 20 Major1 0 0	EBT EBR WBL 17	EBT EBR WBL WBT 17	EBT EBR WBL WBT NBL 581 17 17 429 20 581 17 17 429 20 0 0 0 0 0 Free Free Free Free Stop - None - None - 0 0 - None - None - O 0 0 - None - None - O 0 0 0 - None - None - O 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EBT EBR WBL WBT NBL NBR 581 17 17 429 20 20 581 17 17 429 20 20 0 0 0 0 0 0 Free Free Free Stop Stop - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - None - So - So

AM Peak

1: County Line Rd & Drane Field Rd

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Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	53	94	316	83	123	12	892	272	356	1002	51	
v/c Ratio	0.23	0.44	1.04	0.25	0.29	0.04	0.69	0.36	0.76	0.48	0.05	
Control Delay	24.6	33.9	93.4	31.1	3.3	8.7	25.4	4.3	25.3	11.1	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	24.6	33.9	93.4	31.1	3.3	8.7	25.4	4.3	25.3	11.1	0.1	
Queue Length 50th (ft)	20	35	~146	38	0	2	202	0	94	129	0	
Queue Length 95th (ft)	44	75	#211	74	12	9	273	43	#215	243	0	
Internal Link Dist (ft)		1862		5754			1432			1594		
Turn Bay Length (ft)	200		200		200	275		250	350		250	
Base Capacity (vph)	235	421	303	509	563	306	1289	746	494	2089	984	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.23	0.22	1.04	0.16	0.22	0.04	0.69	0.36	0.72	0.48	0.05	

Intersection Summary

Lakeland Linder Aiport Synchro 10 Report

07/11/2020

Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

	-	•	←	•	~
Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	699	192	413	69	214
v/c Ratio	0.82	0.47	0.33	0.28	0.53
Control Delay	21.4	7.1	4.3	29.6	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	21.4	7.1	4.3	29.6	10.4
Queue Length 50th (ft)	179	17	41	21	0
Queue Length 95th (ft)	333	38	84	66	51
Internal Link Dist (ft)	2130		3893	1523	
Turn Bay Length (ft)		350		350	
Base Capacity (vph)	1402	480	1685	632	701
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.50	0.40	0.25	0.11	0.31
Intersection Summary					

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Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR	
Lane Group Flow (vph)	238	491	21	492	451	31	445	306	
v/c Ratio	1.01	0.63	0.09	0.63	0.49	0.04	0.74	0.36	
Control Delay	91.3	24.3	16.5	24.4	3.7	0.1	28.6	4.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	91.3	24.3	16.5	24.4	3.7	0.1	28.6	4.8	
Queue Length 50th (ft)	~135	211	7	212	0	0	198	18	
Queue Length 95th (ft)	#269	296	21	297	43	0	299	57	
Internal Link Dist (ft)		3893		1270		729	1301		
Turn Bay Length (ft)	400		150		300			350	
Base Capacity (vph)	235	781	235	782	920	865	602	850	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	1.01	0.63	0.09	0.63	0.49	0.04	0.74	0.36	

Intersection Summary

Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

	۶	→	•	•	←	4	1	†	~	/	†	✓
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	1>		ሻ	↑	7	ሻ	^	7	7	^↑	7
Traffic Volume (veh/h)	46	57	24	295	101	144	12	974	205	206	762	37
Future Volume (veh/h)	46	57	24	295	101	144	12	974	205	206	762	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	53	66	28	343	117	167	14	1133	238	240	886	43
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	260	100	43	351	298	253	347	1594	711	337	1865	832
Arrive On Green	0.04	0.08	0.08	0.13	0.16	0.16	0.02	0.46	0.46	0.10	0.54	0.54
Sat Flow, veh/h	1739	1217	516	1739	1826	1547	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	53	0	94	343	117	167	14	1133	238	240	886	43
Grp Sat Flow(s),veh/h/ln	1739	0	1733	1739	1826	1547	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	2.1	0.0	4.0	9.5	4.3	7.7	0.3	19.9	7.4	5.1	12.0	1.0
Cycle Q Clear(g_c), s	2.1	0.0	4.0	9.5	4.3	7.7	0.3	19.9	7.4	5.1	12.0	1.0
Prop In Lane	1.00		0.30	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	260	0	143	351	298	253	347	1594	711	337	1865	832
V/C Ratio(X)	0.20	0.00	0.66	0.98	0.39	0.66	0.04	0.71	0.33	0.71	0.47	0.05
Avail Cap(c_a), veh/h	300	0	412	351	540	458	433	1594	711	394	1865	832
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	0.0	33.7	29.5	28.3	29.7	10.7	16.4	13.1	14.3	10.9	8.3
Incr Delay (d2), s/veh	0.4	0.0	5.1	41.8	0.8	2.9	0.0	2.7	1.3	4.9	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	1.7	5.4	1.8	2.8	0.1	6.8	2.4	1.8	3.6	0.3
Unsig. Movement Delay, s/veh		0.0	00.0	74.0	00.0	00.0	40.0	40.4	440	40.0	44.7	0.4
LnGrp Delay(d),s/veh	30.2	0.0	38.8	71.3	29.2	32.6	10.8	19.1	14.3	19.2	11.7	8.4
LnGrp LOS	С	Α	D	E	C	С	В	В	В	В	В	A
Approach Vol, veh/h		147			627			1385			1169	
Approach Delay, s/veh		35.7			53.1			18.2			13.2	
Approach LOS		D			D			В			В	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.7	39.3	14.0	10.7	5.8	45.2	7.9	16.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	9.7	34.8	9.5	18.0	5.0	39.5	5.1	22.4				
Max Q Clear Time (g_c+l1), s	7.1	21.9	11.5	6.0	2.3	14.0	4.1	9.7				
Green Ext Time (p_c), s	0.2	6.4	0.0	0.3	0.0	5.9	0.0	8.0				
Intersection Summary												
HCM 6th Ctrl Delay			23.8									
HCM 6th LOS			С									

Movement EBT EBR WBL WBT NBL NBR Lane Configurations Image: Configuration of the co
Lane Configurations Image: Configuration of the properties of
Traffic Volume (veh/h) 399 102 113 466 75 212 Future Volume (veh/h) 399 102 113 466 75 212 Initial Q (Qb), veh 0 0 0 0 0 0 Ped-Bike Adj(A_pbT) 1.00 1.00 1.00 1.00 1.00 Parking Bus, Adj 1.00 1.00 1.00 1.00 1.00 1.00 Work Zone On Approach No No No No No No Adj Sat Flow, veh/h/In 1826 1826 1826 1826 1826 1826 Adj Flow Rate, veh/h 464 119 131 542 87 247 Peak Hour Factor 0.86 0.86 0.86 0.86 0.86 0.86 Percent Heavy Veh, % 5 5 5 5 5 5
Future Volume (veh/h) 399 102 113 466 75 212 Initial Q (Qb), veh 0 0 0 0 0 0 0 Ped-Bike Adj(A_pbT) 1.00 1.00 1.00 1.00 1.00 1.00 Parking Bus, Adj 1.00 1.00 1.00 1.00 1.00 1.00 Work Zone On Approach No No No No Adj Sat Flow, veh/h/In 1826 1826 1826 1826 1826 Adj Flow Rate, veh/h 464 119 131 542 87 247 Peak Hour Factor 0.86 0.86 0.86 0.86 0.86 0.86 Percent Heavy Veh, % 5 5 5 5 5 5
Ped-Bike Adj(A_pbT) 1.00 </td
Parking Bus, Adj 1.00 1.0
Work Zone On Approach No No No Adj Sat Flow, veh/h/ln 1826
Adj Sat Flow, veh/h/ln 1826 247 247 247 247 247 248 247 248 248 247 248 248 248 248 248 247 248 <
Adj Flow Rate, veh/h 464 119 131 542 87 247 Peak Hour Factor 0.86 0.86 0.86 0.86 0.86 0.86 Percent Heavy Veh, % 5 5 5 5 5 5
Peak Hour Factor 0.86 0.86 0.86 0.86 0.86 0.86 Percent Heavy Veh, % 5 5 5 5 5 5
Percent Heavy Veh, % 5 5 5 5 5
Cap, veh/h 577 148 404 1087 370 329
Arrive On Green 0.41 0.41 0.09 0.60 0.21 0.21
Sat Flow, veh/h 1402 359 1739 1826 1739 1547
Grp Volume(v), veh/h 0 583 131 542 87 247
Grp Sat Flow(s),veh/h/ln 0 1761 1739 1826 1739 1547
Q Serve(g_s), s 0.0 13.6 1.7 8.0 1.9 7.0
Cycle Q Clear(g_c), s 0.0 13.6 1.7 8.0 1.9 7.0
Prop In Lane 0.20 1.00 1.00 1.00
Lane Grp Cap(c), veh/h 0 725 404 1087 370 329
V/C Ratio(X) 0.00 0.80 0.32 0.50 0.24 0.75
Avail Cap(c_a), veh/h 0 1672 567 2240 872 776
HCM Platoon Ratio 1.00 1.00 1.00 1.00 1.00 1.00
Upstream Filter(I) 0.00 1.00 1.00 1.00 1.00
Uniform Delay (d), s/veh 0.0 12.1 8.4 5.5 15.3 17.3
ncr Delay (d2), s/veh 0.0 2.1 0.5 0.4 0.3 3.4
Initial Q Delay(d3),s/veh 0.0 0.0 0.0 0.0 0.0 0.0
%ile BackOfQ(50%),veh/ln 0.0 3.8 0.4 1.2 0.7 2.2
Unsig. Movement Delay, s/veh
LnGrp Delay(d),s/veh 0.0 14.3 8.9 5.8 15.6 20.7
LnGrp LOS A B A A B C
Approach Vol, veh/h 583 673 334
Approach Delay, s/veh 14.3 6.4 19.4
Approach LOS B A B
Timer - Assigned Phs 2 3 4
Phs Duration (G+Y+Rc), s 14.5 8.6 23.8
\ O
Green Ext Time (p_c), s 1.0 0.1 3.7
Intersection Summary
HCM 6th Ctrl Delay 12.0
HCM 6th LOS B

Intersection						
Int Delay, s/veh	1.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	<u> </u>	7	<u> </u>	<u>₩</u>	ኘ	T T
Traffic Vol, veh/h	4 81	17	17	522	20	20
Future Vol, veh/h	481	17	17	522	20	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	275	200	-	0	50
Veh in Median Storage		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	5	100	100	5	85	85
Mvmt Flow	559	20	20	607	23	23
Major/Minor N	Major1		Major?		Minor1	
	Major1		Major2		Minor1	FF0
Conflicting Flow All	0	0	579	0	1206	559
Stage 1	-	-	-	-	559	-
Stage 2	-	-	-	-	647	-
Critical Hdwy	-	-	5.1	-	7.25	7.05
Critical Hdwy Stg 1	-	-	-	-	6.25	-
Critical Hdwy Stg 2	-	-	-	-	6.25	-
Follow-up Hdwy	-	-	3.1			4.065
Pot Cap-1 Maneuver	-	-	649	-	140	400
Stage 1	-	-	-	-	437	-
Stage 2	-	-	-	-	393	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	_	649	_	136	400
Mov Cap-2 Maneuver	_	_		_	136	-
Stage 1	_	_	_	_	437	_
Stage 2	_				381	_
Olaye Z	<u>-</u>	_	-	-	JU 1	<u>-</u>
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.3		25.8	
HCM LOS					D	
Minor Lane/Major Mvm	t 1	NBLn11	VBLn2	EBT	EBR	WBL
Capacity (veh/h)		136	400	-	-	649
HCM Lane V/C Ratio		0.171	0.058	-	-	0.03
HCM Control Delay (s)		36.9	14.6	-	-	10.7
HCM Lane LOS		E	В	-	-	В
HCM 95th %tile Q(veh)		0.6	0.2	_	_	0.1

	ၨ	-	•	←	•	•	†	~	\	ļ	1	
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	53	94	343	117	167	14	1133	238	240	886	43	
v/c Ratio	0.23	0.45	1.07	0.34	0.38	0.04	0.74	0.29	0.75	0.43	0.04	
Control Delay	24.2	33.9	98.4	31.7	6.8	7.9	23.0	3.4	30.0	10.9	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	24.2	33.9	98.4	31.7	6.8	7.9	23.0	3.4	30.0	10.9	0.1	
Queue Length 50th (ft)	20	35	~160	54	0	3	247	0	57	112	0	
Queue Length 95th (ft)	44	75	#227	96	37	10	329	36	#167	212	0	
Internal Link Dist (ft)		1862		5754			1432			1594		
Turn Bay Length (ft)	200		200		200	275		250	350		250	
Base Capacity (vph)	229	413	321	517	569	367	1526	815	321	2070	976	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.23	0.23	1.07	0.23	0.29	0.04	0.74	0.29	0.75	0.43	0.04	

Intersection Summary

Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

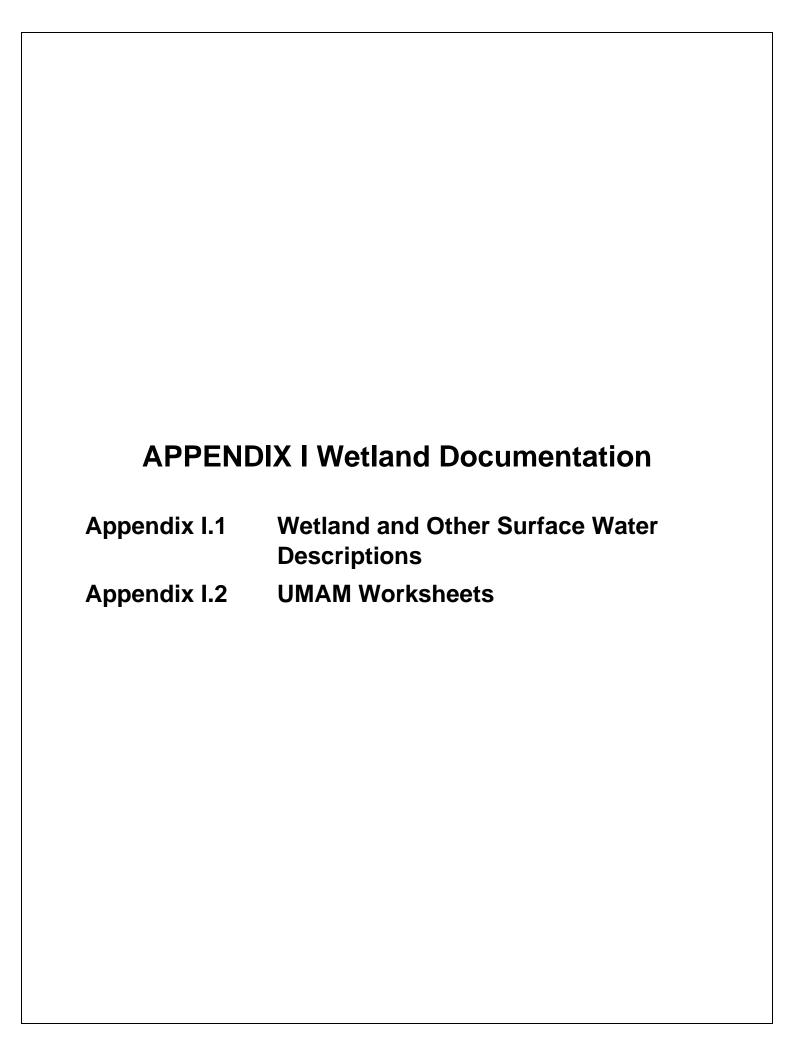
3: Kidron Rd & Drane Field Rd

	-	•	←	•	~
Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	583	131	542	87	247
v/c Ratio	0.72	0.29	0.48	0.29	0.52
Control Delay	17.6	5.1	6.2	24.7	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.6	5.1	6.2	24.7	8.5
Queue Length 50th (ft)	131	11	60	23	0
Queue Length 95th (ft)	252	29	127	68	49
Internal Link Dist (ft)	2130		3893	1523	
Turn Bay Length (ft)		350		350	
Base Capacity (vph)	1509	503	1739	890	916
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.39	0.26	0.31	0.10	0.27
Intersection Summary					

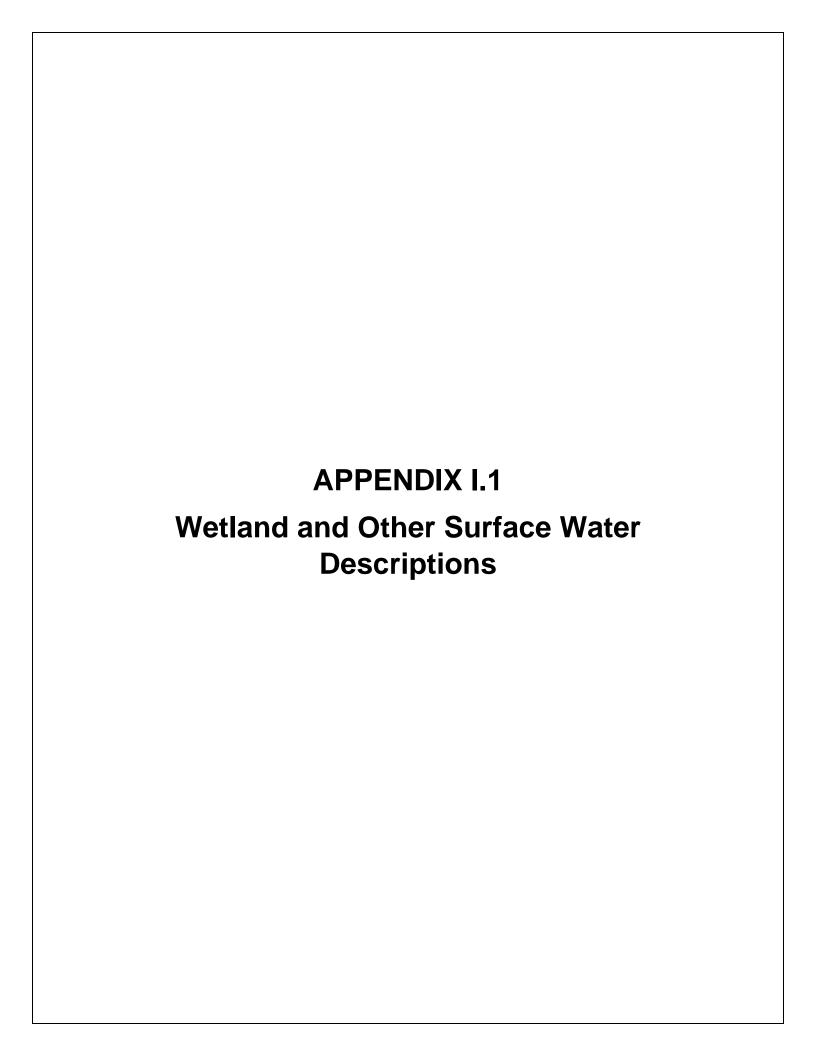
Queues

4: Airfield Ct W/Airport Rd & Drane Field Rd

	۶	→	•	←	•	†	ļ	4	
Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR	
Lane Group Flow (vph)	222	460	3	358	430	32	247	385	
v/c Ratio	0.88	0.73	0.02	0.57	0.53	0.04	0.38	0.39	
Control Delay	53.6	25.8	12.7	20.8	4.1	8.9	14.6	3.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	53.6	25.8	12.7	20.8	4.1	8.9	14.6	3.0	
Queue Length 50th (ft)	84	161	1	116	0	3	54	0	
Queue Length 95th (ft)	158	232	5	172	38	20	147	41	
Internal Link Dist (ft)		3893		1270		729	1301		
Turn Bay Length (ft)	400		150		300			350	
Base Capacity (vph)	501	1257	346	1257	1199	842	656	978	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.44	0.37	0.01	0.28	0.36	0.04	0.38	0.39	
Intersection Summary									









			Acres
ID	FLUCFCS Code and Description ¹	USFWS Classification ²	in BSA
Wetland	ds .		
WL 1	630 - Wetland Forested Mixed	PFO1/3C	5.6
WL 2	621 - Cypress / 631 - Wetland Scrub	PFO2C / PFO1/2C	11.5
WL 6	631 - Wetland Scrub	PFO1/2C	11.2
		TOTAL WETLANDS:	28.3
Other S	urface Waters		
Ditch 1	510 – Streams and waterways	PUBx	0.3
	TOTAL O	THER SURFACE WATERS:	0.3

Wetlands and Other Surface Waters within the BSA

Wetland 1 (WL 1)

FLUCFCS: 630 – Wetland Forested Mixed

USFWS: PFO1/3C - Palustrine, Forested, Broad-leaved Deciduous/Needle-leaved Evergreen, Seasonally Flooded

WL 1 is comprised of a forested wetland that predominantly consists of water oak (*Quercus nigra*), laurel oak (*Q. laurifolia*), red maple (*Acer rubrum*), Caroline willow (*Salix caroliniana*), slash pine (*Pinus elliottii*), Virginia chain fern (*Woodwardia virginica*), and primrose willow (*Ludwigia peruviana*). WL 1 is located directly south of Drane Field Road on the east side of Kelvin Howard Road. An upland-cut drainage ditch within WL 1 flows north to south underneath Drane Field Road. To facilitate drainage of this poorly drained site with high groundwater levels, the USACE constructed a series of relatively deep drainage ditches between 1941 and 1945, including the one that runs through the eastern portion of WL 1. The ditches served to lower groundwater levels at the site, and to provide more efficient conveyance for flows from off-site areas north of Drane Field Road. WL 1 comprises approximately 5.6 acres of the BSA.

WL 2

FLUCFCS: 621 - Cypress / 631 - Wetland Scrub

USFWS: PFO2C / PFO1/2C - Palustrine, Forested, Needle-leaved Deciduous, Seasonally Flooded / Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous, Seasonally Flooded

Historically a forested wetland, WL 2 has been cleared of canopy species in the past and is currently identified as a scrub wetland. However, during the April 2020 field review, WL 2 appeared to be succeeding back into a forested wetland with a cypress dome near the center. WL 2 is an isolated system located on the west side of Kelvin Howard Road and is adjacent to a stormwater management facility to the west outside of the BSA. Dominant vegetation within WL 2 includes bald cypress (*Taxodium distichum*), red maple, sweet bay (*Magnolia virginiana*), saltbush (*Baccharis halimifolia*), elderberry (*Sambucus canadensis*), and Virginia chain fern. The fringe of WL 2 consists predominantly of Brazilian pepper (*Schinus terebinthifolia*), peppervine (*Nekemias arborea*), cogon grass (*Imperata cylindrica*), and wax myrtle (*Morella cerifera*). During the wet season, water flows through a shallow drainage ditch in the southern portion of the wetland that flows from east to west and consists of primrose willow, alligatorweed (*Alternanthera philoxeroides*), Carolina willow, and soft rush (*Juncus effusus*). WL 2 comprises approximately 11.5 acres of the BSA.

¹ FDOT, Florida Land Use, Cover and Forms Classification System (FLUCFCS) Handbook, 1999.

² Cowardin, Lewis M., et.al. U.S. Fish and Wildlife Service Classification of Wetlands and Deepwater Habitats of the United States. 1979.

<u>WL 6</u>

FLUCFCS: 631 - Wetland Scrub

USFWS: PFO1/2C - Palustrine, Forested, Broad-leaved/Needle-leaved Deciduous,

Seasonally Flooded

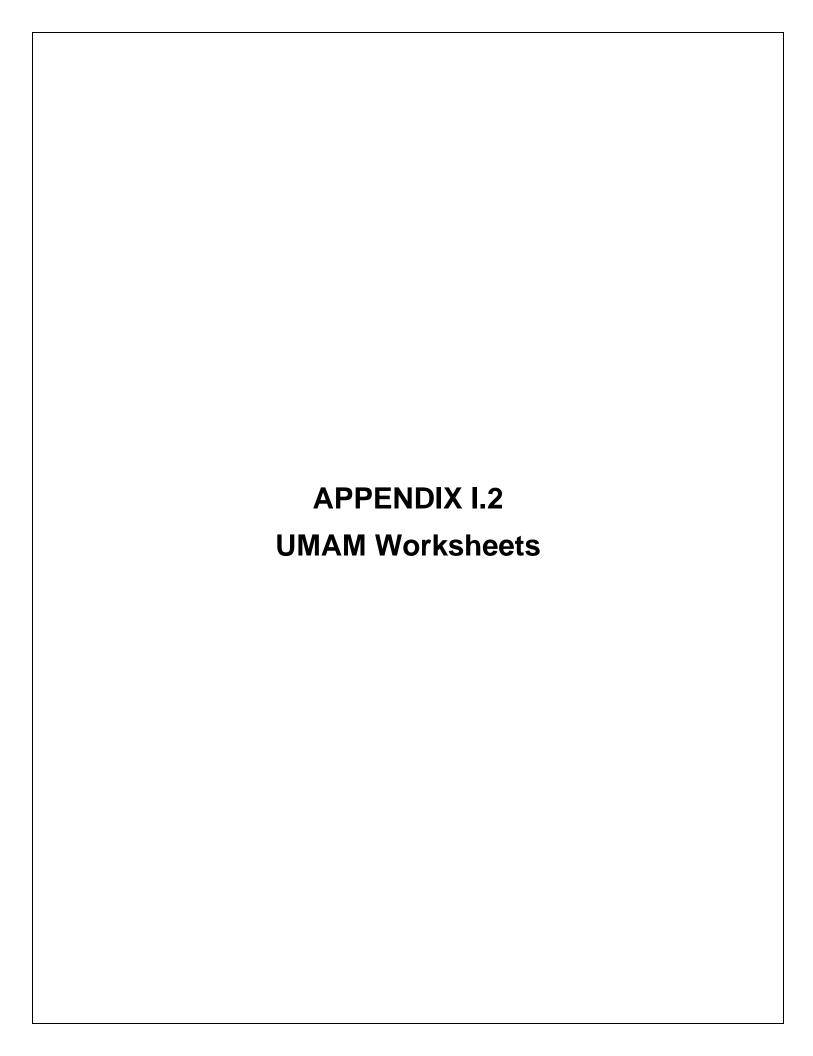
Similar to WL 2, WL 6 historically was a forested wetland but is now a scrub wetland due to historic clearing of canopy species. However, during the April 2020 field review, WL 6 appeared to be succeeding back into a forested wetland. WL 6 is an isolated system located on the east side of Kelvin Howard Road south of Air Park Drive. Dominant vegetation within WL 6 includes bald cypress, red maple, sweet bay, saltbush, elderberry, primrose willow, and Virginia chain fern. WL 6 comprises approximately 11.2 acres of the BSA.

Ditch 1

FLUCFCS: 510 – Streams and Waterways

USFWS: PUBx - Palustrine, Unconsolidated Bottom, Excavated

Ditch 1 is an upland-cut drainage ditch that is seasonally inundated by surface water during the wet season and intermittently flooded after rainfall events in the dry season. This ditch is located in the proposed fuel area and consists of steep slopes and a sandy bottom. Vegetation within the ditch consists of primrose willow, camphorweed (*Pluchea rosea*), elderberry, pennywort (*Hydrocotyle* spp.), and dogfennel (*Eupatorium capillifolium*). Ditch 1 is part of a stormwater management system that directs water into the stormwater pond directly south of the ditch. It is under the jurisdiction of the SWFWMD through Environmental Resource Permit (ERP) Number 49002237.068 issued in October 2010. This ditch comprises approximately 0.3 acre of the BSA. During the April 29, 2020 field review, the ditch was inundated with approximately 12 inches of water and various fish species were observed.





Site/Project Name		Application Numl	ber Assessment Area Name or Number			ne or Number
Phase II Air Cargo Facility De	v elopment at LAL				WI	L 1
FLUCCs code	Further classifica	ation (optional)		Impa	ct or Mitigation Site?	Assessment Area Size
630: Wetland Forested Mixed		alustrine, Forested dle-leaved Evergr Flooded	•		Direct Impact	1.2 acres
Basin/Watershed Name/Number	Affected Waterbody (,	Special Classific	ation	(i.e.OFW, AP, other local/state	e/federal designation of import
Alafia River	Class II	II			N/A	
Geographic relationship to and hy	drologic connection with	n wetlands, other	surface water, up	lands		
	VL 1 is bounded b	y Drane Field Rd	l to the		and Kelvin Howard Rd	
Assessment area description						
WL 1 is comprised of a forested	•	antly consists of chain fern, and pri		oak, re	ed maple, Caroline willo	ow, slash pine, Virginia
Significant nearby features			Uniqueness (co		ring the relative rarity i	n relation to the
Lakeland Linde	The assessment area is not considered unique, as surrounding areas consists of depressional wetlands.					
Functions			Mitigation for pre	ev ious	permit/other historic us	se
Functions include water quality plant habitat, and	improvement, groundw wildlife foraging habitat	_			None known	
Anticipated Wildlife Utilization Bas species that are representative of expected to be found)		•	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Snakes, small man	nmals, song birds, frog	ıs.	Eastern indigo snake (T, foraging, breeding, resting); various listed wading birds			
Observed Evidence of Wildlife Ut	ilization (List species di	irectly observed,	or other signs sur	ch as	tracks, droppings, casi	ings, nests, etc.):
Evidence of wildlife was not observed during the April 2020 field review.						
Additional relevant factors:						
Hy drology has been impacted by large ditch and industrial build up to eas			t and south.			
Assessment conducted by:			Assessment date	e(s):		
Tia Norman, AECOM			29-Apr-20			

Site/Project Name Application Phase II Air Cargo Facility Development at LAL		Assess	ment Area Name	or Number	
		7.00000	WL 1		
	ent conducted by:	Assess	Assessment date:		
Direct Impact	Tia Norman		29-Apr-20		
	oderate(7)	Minimal (4		t Present (0)	
indicator is based on what would be suitable for the type of wetland condition is optimal and fully supports wetland/surface water functions wetland		Minimal level of so wetland/surface functions	water wetlar	ion is insufficient to provide nd/surface water functions	
.500(6)(a) Location and Landscape Support WL 1 is located on Airport propert How ard Rd. WL 1 is bounded by I Rd to the west, Phase I developm facility to the east. Surrounding de operations at LAL limit wildlife move	Drane Field Rd to ent of the air car evelopment, airpo	o the north, distu go facility to the ort perimeter fen	rbed land and K south, and a m ncing, and active	Kelvin Howard anufacturing	
The hydrology and water environment within WL 1 supports the functions and provides to wildlife at a marginal capacity. However, a large upland-cut ditch bisects the wetland appears to have had an adverse effect on the hydrology as a whole in the feature. The standing water present in the ditch feature; however, none was observed within the foarea of the wetland. The soils observed within this feature were hydric with dark surfactions and provides to wildlife at a marginal capacity. However, a large upland-cut ditch bisects the wetland appears to have had an adverse effect on the hydrology as a whole in the feature. The standing water present in the ditch feature; however, none was observed within the feature area of the wetland. The soils observed within this feature were hydric with dark surfactions and provides to wildlife at a marginal capacity. However, a large upland-cut ditch bisects the wetland appears to have had an adverse effect on the hydrology as a whole in the feature. The standing water present in the ditch feature; however, none was observed within the feature area of the wetland. The soils observed within this feature were hydric with dark surfactions and provides to wildlife at a marginal capacity. However, a large upland-cut ditch bisects the wetland appears to have had an adverse effect on the hydrology as a whole in the feature.					
.500(6)(c)Community structure Beneficial w etland vegetation present including w ater oak, laure nuisance and exotic vegetation w How ever, this species w as primary wo pres or current with 5 0	cessional canop , and Carolina w d w hich consiste	oy and shrub sp rillow . There wa ed of Peruvian p	oecies were as minor orimrose willow.		
Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres Score = sum of above If preservation as mitigation, Preservation adjustment factor = Adjusted mitigation delta =			act assessment ar acres (1.2) = 0.48		
0.400					
0.400 0.000 If mitigation Delta = [with-current] Time lag (t-factor) =		For mitiga	ation assessment	areas	

Site/Project Name Application Nu			ber Assessment Area Name or Number			ne or Number	
Phase II Air Cargo Facility De	v elopment at LAL				WI	L 1	
FLUCCs code	Further classifica	ation (optional)		Impa	ct or Mitigation Site?	Assessment Area Size	
630: Wetland Forested Mixed		alustrine, Forested dle-leaved Evergr Flooded			Secondary Impact	0.3 acre	
Basin/Watershed Name/Number	Affected Waterbody (,	Special Classific	ation	(i.e.OFW, AP, other local/state	e/federal designation of import	
Alafia River	Class II	II			N/A		
Geographic relationship to and hyo	drologic connection with	n wetlands, other	surface water, up	lands			
	VL 1 is bounded b	y Drane Field Rd	l to the		and Kelvin Howard Rd		
Assessment area description							
WL 1 is comprised of a forested	•	antly consists of chain fern, and pri		oak, re	ed maple, Caroline willo	ow, slash pine, Virginia	
Significant nearby features			Uniqueness (co		ring the relative rarity i	n relation to the	
Lakeland Linde	The assessment area is not considered unique, as surrounding areas consists of depressional wetlands.						
Functions			Mitigation for pre	ev ious	permit/other historic us	se	
Functions include water quality plant habitat, and	improvement, groundw wildlife foraging habitat	_			None known		
Anticipated Wildlife Utilization Bas species that are representative of expected to be found)		•	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)				
Snakes, small man	nmals, song birds, frog	ıs.	Eastern indigo snake (T, foraging, breeding, resting); various listed wading birds				
Observed Evidence of Wildlife Ut	ilization (List species di	irectly observed,	or other signs sur	ch as	tracks, droppings, casi	ings, nests, etc.):	
	Evidence of wildlife was not observed during the April 2020 field review.						
Additional relevant factors:							
Hydrology has been impacted by large ditch and industrial build up to eas			t and south.				
Assessment conducted by:			Assessment date	e(s):			
Tia Norman, AECOM			29-Apr-20				

Site/Project Name				Application Number	Assessment A	rea Name or Number	
Phase II Air Cargo Facility Development at LAL			/ Development at LAI	Application (Vallise)	/ docodinent /	WL 1	
Impact or Mitigati				Assessment conducted by:	Assessment d		
impact of willigati		condary	Impact	Tia Norman	Assessment	29-Apr-20	
		condary	Пірасі	na Nomian	na Norman 23-Apr-20		
Scoring Guida	nce	7	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)	
The scoring of			Condition is optimal and	Condition is less than	Minimal lavel of augment of	Condition is insufficient	
what would be s	r is based on fully supports			optimal, but sufficient to maintain most	Minimal level of support of wetland/surface water	to provide	
for the type of w			wetland/surface water functions	wetland/surface water	functions	wetland/surface water functions	
or surface wa	ater			functions			
.500(6)(a) Lo Landscape			How ard Rd. WL 1 is bou Rd to the w est, Phase I facility to the east. Surro	ort property directly south unded by Drane Field Rd to development of the air ca ounding development, air widlife movement to and f	o the north, disturbed la orgo facility to the south port perimeter fencing, a	ind and Kelvin How ard , and a manufacturing and active airfield	
w/o pres or							
current	Г	with	1				
3		2					
.500(6)(b)Water (n/a f or up w/o pres or current 4			appears to have had an standing water present area of the wetland. The sandy redox and strippe	capacity. How ever, a larg adverse effect on the hy in the ditch feature; how e soils observed w ithin the ed matrix. Water level indi anditions of the w etland fe	drology as a whole in t ever, none was observ is feature were hydric cators are not distinct o	he feature. There is ed w ithin the forested w ith dark surface,	
.500(6)(c)Commi 1. Vegeta 2. Benthic Co	ation a	nd/or	Beneficial w etland vege because of the hydrolog present including w ater nuisance and exotic veg	etation present include rec gy issues a number of su oak, laurel oak, slash pin getation w ithin this w etlar w as primarily limited to the	ccessional canopy and e, and Carolina w illow . nd w hich consisted of F	shrub species w ere There w as minor eruvian primrose w illow .	
current		with					
5	Γ	4	1				
			<u> </u>				
Score = sum	of abo	ov e	1				
scores/30 (if up	plands,		If preservation as mit	igation,	For impact asso	essment areas	
by 2 current	U)		Preservation adjustme	ent factor =	El - dolto y cores (f	1 2) - 0 02	
or w/o pres	г	with	Adjusted mitigation de	elta =	FL = delta x acres (0.0j = 0.0z	
0.400		0.333]				
			If mitigation				
Delta = [with	n-curre	ntl	Time lag (t-factor) =		For mitigation as	sessment areas	
		-	Risk factor =		RFG = delta/(t-facto	r x risk) =	
-0.067 Risk factor =							

Site/Project Name		Application Number			Assessment Area Name o	or Number	
Phase II Air Cargo Facility De	velonment at LAI				WL 2		
That if the early be	voropinioni di Eriz				***		
FLUCCs code	Further classificat	tion (optional)		Impac	t or Mitigation Site?	Assessment Area Size	
621: Cypress		ustrine, Forested, N			Direct Impact	1.4 acres	
	ious, Seasonally F	·looded		•			
Basin/Watershed Name/Number	Affected Waterbody (Class	ss)	Special Classification	on (i.e.C	PFW, AP, other local/state/federal d	lesignation of importance)	
Alafia River Class III					N/A		
Geographic relationship to and hyd	rologic connection with	wetlands, other su	ırface water, uplan	ds			
WL 2 is an isolated system located the west outside of the project are the east,		disturbed land and	d Drane Field Rd t	o the r	north, disturbed land and		
Assessment area description							
The assessment area	a comprises the central p	portion of WL 2 an	d consists of a cyp	ress do	ome dominated by bald	cypress.	
Significant nearby features			Uniqueness (cor landscape.)	sideri	ng the relative rarity in r	elation to the regional	
Lakeland Linde	The assessment area is not considered unique, as surrounding areas consists of depressional wetlands.						
Functions			Mitigation for pre	vious	permit/other historic use		
Functions include water quality im habitat, and wil	provement, groundwate dlife foraging habitat.	r recharge, plant	None known				
Anticipated Wildlife Utilization Bas			•		by Listed Species (List sp		
that are representative of the assess be found)	ment area and reasonal	bly expected to	classification (E, T, SSC), type of use, and intensity of use of the assessment area)				
be lound)			assessment area)				
Snakes, small mai	mmals, song birds, frogs		Eastern indigo snake (T, foraging, breeding, resting); various listed wading birds				
Observed Evidence of Wildlife Utili	zation (List species direc	atty observed or of	ther signs such as t	racks	dronnings casings nest	s etc):	
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Evidence of wildlife was not observed during the April 2020 field review.							
Additional relevant factors:							
The assessment area has been affe	and surrounding o	development activ	ities.				
Assessment conducted by:			Assessment date(s):			
Tia Norman, AECOM			29-Apr-20				

	Site/Project Name Phase II Air Cargo Facility Development at LAL			Application Number		Assessment Area Name or Number		
		racility	Development at LAL				WL 2	
Impact or Mitiga				Assessment conducted by:		Assessment date:		
	D	irect Im	npact	Tia Norman			29-Apr-20	
Scoring Guid	dance		Optimal (10)	Moderate(7)	Mir	nimal (4)	nal (4) Not Present (0)	
The scoring of			Condition is optimal and	Condition is less than	NAS-S		Condition is ins	ufficient
indicator is ba what would be			fully supports	optimal, but sufficient to maintain most		el of support of surface water	to provid	
for the type of			wetland/surface water functions	wetland/surface water	fu	ınctions	wetland/surfac	
or surface	water			functions			, another	
.500(6)(a) Location and Landscape Support WL 2 is an isolated system located on Airport property on the west side of Kelvin How a and adjacent to a stormw ater management facility to the west outside of the project are is bounded by disturbed land and Drane Field Rd to the north, disturbed land and Kelvin Rd to the east, manufacturing facilities and an artificial pond to the west, and LAL airfies south. Surrounding development, airport perimeter fencing, and active airfield operation limit wildlife movement to and from the assessment area. .500(6)(b)Water Environment (n/a for uplands) The hydrology and water environment within WL 2 supports the functions and provides to wildlife at a marginal capacity. Water level indicators are not distinct or consistent will expected hydrologic conditions of the wetland feature.						he project area and and Kelvin H and LAL airfield field operations and provides be	. WL 2 ow ard to the at LAL	
.500(6)(c)Com 1. Veg 2. Benthic w/o pres or current 7	etation and	d/or	The assessment area is present.	dominated by bald cypre	ss with litt	ile to no exotic/i	invasive specie	98
Score = su scores/30 (if	um of abovuplands, o		If preservation as mit	igation,	F	or impact assess	sment areas	
by	20)		Preservation adjustme	ent factor =				
current br w/o pres with		Adjusted mitigation de	alta —	FL =	delta x acres (1.4	4) = 0.86		
0.600	(0.000	Adjusted Illingation de	ли –				
			If mitigation				1	I
D-#- 1			If mitigation		Fo	or mitigation asse	ssment areas	
Delta = [w	vith-current	ıj	Time lag (t-factor) =		DEO	dolto//t-footore	v riok)	
-0.600 Risk factor =				RFG	G = delta/(t-factor x risk) =			

Site/Project Name Applicati			per Assessment Area Name or Number			or Number
Phase II Air Cargo Facility De	velopment at LAL				W	L 2
FLUCCs code	Further classificat	,		Impac	et or Mitigation Site?	Assessment Area Size
631: Wetland Scrub		 Palustrine, Fores le-leaved Deciduor Flooded 			Direct Impact	10.1 acres
Basin/Watershed Name/Number	Affected Waterbody (Class	ss)	Special Classification	on (i.e.C	DFW, AP, other local/state/federal of	designation of importance)
Alafia River	Class II	II			N/A	
Geographic relationship to and hyd WL 2 is an isolated system located the west outside of the project are	the west side of Ke	elvin Howard Rd an d Drane Field Rd to	nd is actor	north, disturbed land an		
Assessment area description WL 2 has been cleared of canopy shack into a forested wetland. Done fringe consists of Brazilian pep wetland flows f	ninant vegetation includ	is currently identificates bald cypress, regrass, and wax my	ed as a scrub wetla ed maple, sweet ba rrtle. A shallow dra willow, alligatorwee	and. As ay, salt ainage ed, Ca	s of April 2020, WL 2 ap tbush, elderberry, and V e ditch present in the sou	irginia chain fern. The uthern portion of the ush.
Significant nearby features			landscape.)	Bucin	ng the lefative family in i	elation to the regional
Lakeland Linder International Airport			The assessment area is not considered unique, as surrounding areas consists of depressional wetlands.			
Functions			Mitigation for pre	vious	permit/other historic use	
Functions include water quality im habitat, and wil	nprovement, groundwate Idlife foraging habitat.	er recharge, plant			None known	
Anticipated Wildlife Utilization Bas that are representative of the asses be found)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)			
Snakes, small ma	mmals, song birds, frogs.	ì .	Eastern indigo snake (T, foraging, breeding, resting); various listed wading birds			
Observed Evidence of Wildlife Utili	zation (List species direc	ctly observed, or o	ther signs such as t	tracks,	droppings, casings, nest	ts, etc.):
Evidence of wildlife was not observed during the April 2020 field review.						
Additional relevant factors:						
Hydrology has been impacted by large ditch in southern portion of wetland			nat flows into artific	cal por	nd west of the wetland.	
Assessment conducted by:			Assessment date(s):		
Tia Norman, AECOM			29-Apr-20			

Site/Project Name			Application Number	Assessment Are	Assessment Area Name or Number		
•	o Facility	/ Development at LAL			WL 2		
Impact or Mitigation		•	Assessment conducted by:	Assessment da	e:		
	Impa	ct	Tia Norman		29-Apr-20		
Scoring Guidance The scoring of each	4	Optimal (10)	Moderate(7) Condition is less than	Minimal (4)	Not Present (0)		
indicator is based on		Condition is optimal and	optimal, but sufficient to	Minimal level of support of	Condition is insufficient to provide		
what would be suitable		fully supports wetland/surface water	maintain most wetland/surface water to wetland/surface water				
for the type of wetland or surface water		functions	wetland/surface water functions	functions	functions		
.500(6)(a) Location Landscape Suppo		w estw ard outside of the the north, disturbed land	ort property on the w est so e project area. WL 2 is bo I and Kelvin How ard Rd to st, and LAL airfield to the	ounded by disturbed land the east, manufacturing	d and Drane Field Rd to g facilities and an		
		· ·	active airfield operations a	_	•		
w/o pres or		assessment area.	s a operatione				
current	with						
3 0							
.500(6)(b)Water Enviro (n/a for uplands) w/o pres or current		w etland and it appears t feature. There is standir w ithin the forested area	capacity. How ever, a large to have had an adverse eng water present in the did not the wetland. The soils el indicators are not distind feature.	effect on the hydrology a tch feature; how ever, no observed w ithin this fea	s a whole in the one was observed ature were hydric with		
1. Vegetation a 2. Benthic Community v/o pres or current 5	nd/or	elderberry, and Virginia successional canopy ar within this wetland on th	tation present include rec chain fern. However, bed nd shrub species are pred ne fringes which consisted ed of nuisance and exotion	cause of the hydrology is sent. There was nuisanced of Brazilian pepper, pe	sues a number of e and exotic vegetation ppervine, and cogon		
Score = sum of ab		If preservation as miti	igation,	For impact asses	sment areas		
scores/30 (if uplands by 20)	, divide			. 2pas. asooc			
current or w/o pres	with	Preservation adjustme		FL = delta x acres (10	0.1) = 4.8		
0.433	0.000	Adjusted mitigation de	lta =				
		I					
		If mitigation		For mitigation asse	essment areas		
Delta = [with-curre	nt]	Time lag (t-factor) =		DE0 1 11 1/1 1			
-0.433 Risk factor =				RFG = delta/(t-factor	X risk) =		

Site/Project Name Application			er Assessment Area Name or Number			or Number	
Phase II Air Cargo Facility De	velopment at LAL				W	L 2	
FLUCCs code	Further classificat	,		Impac	et or Mitigation Site?	Assessment Area Size	
631: Wetland Scrub		 Palustrine, Fores le-leaved Deciduor Flooded 			Secondary Impact	0.7 acre	
Basin/Watershed Name/Number	Affected Waterbody (Class	ss)	Special Classification	on (i.e.C	DFW, AP, other local/state/federal of	lesignation of importance)	
Alafia River Class III					N/A		
Geographic relationship to and hyd	drologic connection with	wetlands, other s	urface water, uplan	nds			
	disturbed land and	d Drane Field Rd to	o the i	•			
Assessment area description WL 2 has been cleared of canopy s back into a forested wetland. Dom fringe consists of Brazilian pep wetland flows f	ninant vegetation includ	des bald cypress, re grass, and wax my	ed maple, sweet ba vrtle. A shallow dra	ay, salt ainage	tbush, elderberry, and Veditch present in the sou	irginia chain fern. The athern portion of the	
Significant nearby features			Uniqueness (con landscape.)	nsideri	ng the relative rarity in r	elation to the regional	
Lakeland Linder International Airport			The assessment area is not considered unique, as surrounding areas consists of depressional wetlands.				
Functions			Mitigation for pre	vious	permit/other historic use		
Functions include water quality im habitat, and wil	nprovement, groundwate Idlife foraging habitat.	r recharge, plant			None known		
Anticipated Wildlife Utilization Bas that are representative of the assess be found)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)				
Snakes, small ma	mmals, song birds, frogs.	ì .	Eastern indigo snake (T, foraging, breeding, resting); various listed wading birds				
Observed Evidence of Wildlife Utili	zation (List species direc	ctly observed, or o	ther signs such as t	racks,	droppings, casings, nest	s, etc.):	
	Evidence of wildlife was not observed during the April 2020 field review.						
Additional relevant factors:							
Hydrology has been impacted by large ditch in southern portion of wetland			nat flows into artific	cal poi	nd west of the wetland.		
Assessment conducted by:			Assessment date(s):			
Tia Norman, AECOM			29-Apr-20				

Site/Project Name			Application Number	Assessment Arr	ea Name or Number	
_	rao Facility	y Development at LAL	Application Number	Assessment Air	WL 2	
Impact or Mitigation	go i aciiit	y Development at LAL	Assessment conducted by:	Assessment da		
	Secondary	Impact	Tia Norman	Assessment da	29-Apr-20	
	secondary	Шраст	na Nonnan		29-Api-20	
Scoring Guidance		Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)	
The scoring of each		Condition is optimal and	Condition is less than		Condition is insufficient	
indicator is based or what would be suitab		fully supports	optimal, but sufficient to maintain most	Minimal level of support of wetland/surface water	to provide	
for the type of wetlar		wetland/surface water functions	wetland/surface water	functions	wetland/surface water functions	
or surface water		Turictions	functions		Tunctions	
.500(6)(a) Locatio Landscape Supp w/o pres or current		w estw ard outside of the the north, disturbed land artificial pond to the w es	ort property on the east si e project area. WL 2 is bo I and Kelvin How ard Rd to st, and LAL airfield to the active airfield operations a	ounded by disturbed land o the east, manufacturing south. Surrounding deve	d and Drane Field Rd to g facilities and an elopment, airport	
4	3					
.500(6)(b)Water Env (n/a for upland w/o pres or current		w etland and it appears to have had an adverse effect on the hydrology as a whole in the feature. There is standing water present in the ditch feature; however, none was observed within the forested area of the wetland. The soils observed within this feature were hydric with dark surface. Water level indicators are not distinct or consistent with the expected hydrologic conditions of the wetland feature.				
.500(6)(c)Community 1. Vegetation 2. Benthic Comm //o pres or current 6	and/or	Beneficial w etland vege elderberry, and Virginia successional canopy ar w ithin this w etland on th	tation present include rec chain fern. How ever, bed nd shrub species are pres ne fringes w hich consiste ed of nuisance and exotic d.	cause of the hydrology is sent. There was nuisand d of Brazilian pepper, pe	ssues a number of e and exotic vegetation eppervine, and cogon	
•		•				
Score = sum of a		If preservation as miti	igation,	For impact asses	ssment areas	
scores/30 (if upland by 20)	is, divide	l 	-			
current	with	Preservation adjustme	antiactor =	FL = delta x acres (0.	7) = 0.05	
or w/o pres		Adjusted mitigation de	lta =			
0.500	0.433					
		If mitigation		For mitigation acco	ocement areas	
Delta = [with-cur	rent]	Time lag (t-factor) =		For mitigation asse	essinent areas	
-0.067 Risk factor =				RFG = delta/(t-factor	x risk) =	

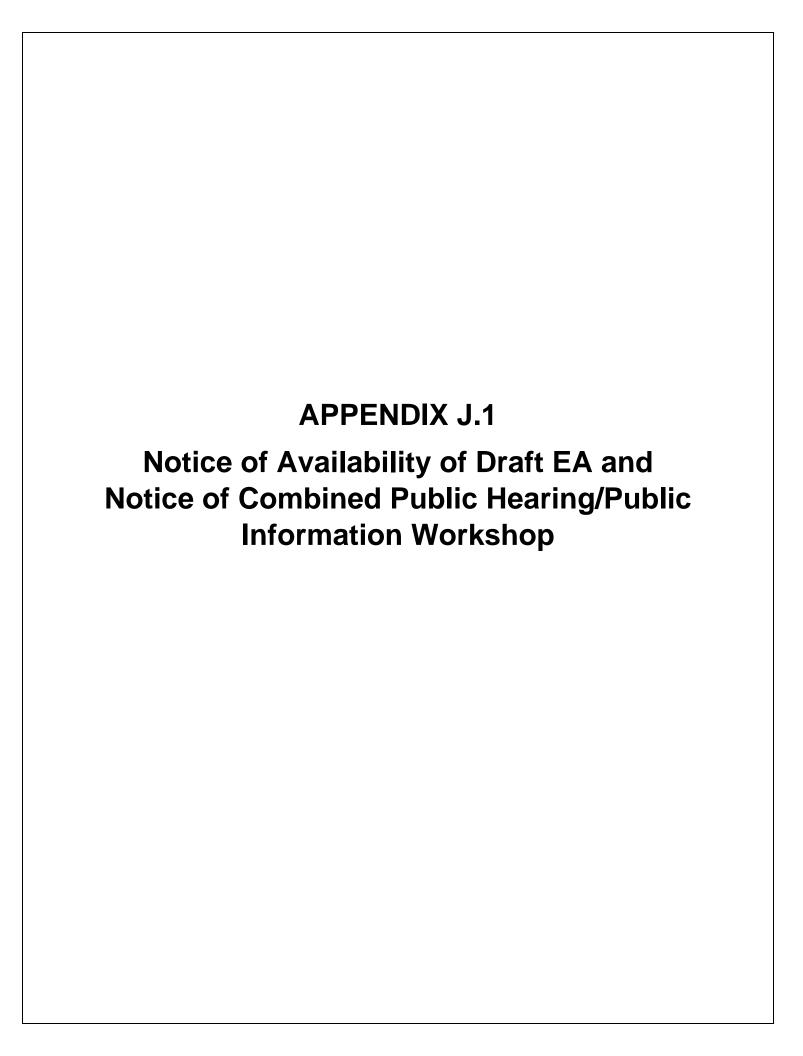
Site/Project Name	Application Num	Jumber Assessment Area Name or			ne or Number		
Phase II Air Cargo Facility De	velopment at LAL			WL 6			
FLUCCs code	Further classification	ation (optional)		Impa	ct or Mitigation Site?	Assessment Area Size	
631: Wetland Scrub		- Palustrine, Fores e-leaved Deciduou Flooded			Direct Impact	11.2 acres	
Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classific	cation	(i.e.OFW, AP, other local/stat-	e/federal designation of import	
Alafia River Class III					N/A		
Geographic relationship to and hyd	rologic connection with	n wetlands, other	surface water, up	olands			
WL 6 is an isolated system locate development of the air cargo facili			ark Dr to the north			-	
Assessment area description							
WL 6 has been cleared of canop succeeding back into a forested	wetland. Dominant veg	=	bald cypress, red		<u>-</u>	* *	
Significant nearby features			Uniqueness (co regional landscap		ring the relative rarity i	n relation to the	
Lakeland Linder		The assessment area is not considered unique, as surrounding areas consists of depressional wetlands.					
Functions			Mitigation for pre	ev ious	permit/other historic us	se	
Functions include water quality in plant habitat, and water	improvement, groundw wildlife foraging habitat	_	None known				
Anticipated Wildlife Utilization Base species that are representative of expected to be found)			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)				
Snakes, small mam	nmals, song birds, frog	JS.	Eastern indigo snake (T, foraging, breeding, resting); various listed wading birds				
Observed Evidence of Wildlife Uti	lization (List species di	irectly observed,	or other signs su	ch as	tracks, droppings, case	ings, nests, etc.):	
Evidence of wildlife was not observed during the April 2020 field review.							
Additional relevant factors:							
Hydrology has been impacted by :	surrounding developms	ent.					
Assessment conducted by:			Assessment date(s):				
Tia Norman, AECOM			29-Apr-20				

Site/Project Name			Application Number Assessment Area Name or Number		ea Name or Number	
Phase II Air Cargo Facility Development at LAL			Application Number Assessm		WL 6	
Impact or Mitigation			Assessment conducted by:	Assessment da	Assessment date:	
Direct Impact			Tia Norman	Assessment da	Assessment date: 29-Apr-20	
	Direct ii	праст	na ryoman		20 Apr 20	
Scoring Guidance		Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)	
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water		Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions	
.500(6)(a) Location and Landscape Support w/o pres or current with		WL 6 is located on Airport property on the east side of Kelvin Howard Rd south of Air Park Dr and is bounded by Phase I development of the air cargo facility to the east, disturbed land and Air Park Dr to the north, Kelvin Howard Rd to the west, and LAL airfield to the south. Surrounding development, airport perimeter fencing, and active airfield operations at LAL limit wildlife movement to and from the assessment area.				
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 5		The hydrology and water environment within WL 6 supports the functions and provides benefits to wildlife at a marginal capacity. However, surrounding development and adjacent disturbance appears to have had an adverse effect on the hydrology as a whole in the feature. The soils observed within this feature were hydric with organic bodies and redox concentrations. Water level indicators are not distinct or consistent with the expected hydrologic conditions of the wetland feature.				
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 6 0		Beneficial w etland vegetation present include red maple, bald cypress, sw eet bay, saltbush, elderberry, and Virginia chain fern. However, because of the hydrology issues a number of successional canopy and shrub species are present. There w as nuisance and exotic vegetation w ithin this w etland w hich consisted of Peruvian primrose w illow.				
Score = sum of scores/30 (if uplan		If preservation as mit	igation,	For impact asses	ssment areas	
by 20) current or w/o pres	with	Preservation adjustme Adjusted mitigation de		FL = delta x acres (1	1.2) = 5.25	
0.467	0.000] ———				
		If mitigation		Farcetination		
Delta = [with-current]		Time lag (t-factor) =		For mitigation ass	езэттент агеаз	
-0.467		Risk factor =		RFG = delta/(t-factor	x risk) =	

APPENDIX J Draft EA Public Involvement

Appendix J.1	Notice of Availability of Draft EA and Notice of Combined Public Hearing/Public Information Workshop
Appendix J.2	Draft EA Agency Transmittal Letters and Distribution List
Appendix J.3	Public Hearing/Workshop Materials
Appendix J.4	Public Comments Received
Appendix J.5	Public Comment Response Database







AFFIDAVIT OF PUBLICATION THE LEDGER

Lakeland, Polk County, Florida

STATE OF FLORIDA) **COUNTY OF POLK)**

Before the undersigned authority personally appeared Olga L. Rodriguez Martin, who on oath says that she is an Account Executive for Advertising at The Ledger and the News Chief, daily newspapers published at Lakeland in Polk County, Florida; that the attached copy of advertisement, being a

PUBLIC NOTICE

In the matter of **DRAFT ENVIRONMENTAL ASSESSMENT**

Concerning WETLANDS AND FLOODPLAINS

as published in said newspaper and online in the issues of

4-23; 2021

Affiant further says that said The Ledger is a newspaper published at Lakeland, in said Polk County, Florida, and that the said newspaper has heretofore been continuously published in said Polk County Florida, daily, and has been entered as second class matter at the post office in Lakeland, in said Polk County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

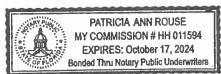
Signed Olga L Rodríguez Martín

Olga L. Rodriguez Martin Advertising Account Executive Who is personally known to me.

Sworn to and subscribed before me this 23rd day of April, 2021 A.D.

Notary Public

(Seal)



NOTICE OF AVAILABILITY OF DRAFT ENVIRONMENTAL ASSESSMENT AND NOTICE OF COMBINED PUBLIC HEARING/INFORMATION WORKSHOP

Notice of Impacts to Wetlands and Floodplains in Accordance with Section 2(a)(f) of Executive Order (EO) 11988, Floodplain Management; Section 2(b) of EO 11990, Protection of Wetlands; and Section 7 DOT Order 5650.2, Floodplain Management and Protection

The City of Lakeland (City) announces the availability of a Draft Environmental Assessment (EA) for Phase II of Air Cargo Facility Development at Lakeland Linder International Airport (LAL) in Polk County, Florida. Pursuant to Section 102(2)(c) of the National Environmental Policy Act (NEPA) of 1989, the Draft EA is being city-lated for review and comment from the public and federal, state and local agencies. Comments from federal, state and local agencies, and the public, will be considered as part of the Finat EA. The Final EA will be submitted to the Federal Aviation Administration (FAA) for the agency's environmental determination.

Proposed Development Project: The proposed cargo facility development, referred to in the Draft EA as the Proposed Development Project, expands the Phase I air cargo facility that became operational at LAL in 2020. The proposed facility expansion includes additional sonation and office building, truck court, and vehicle parking. The Proposed Development Project also expands the aircraft parking apron to accommodate three additional aircraft parking positions and equipment staging for additional flight activities. A new airport access road would be required to provide access to the Phase II facilities via Drane Field Road. A new fuel farm is also proposed to accommodate the need for additional aviation fueling capacity.

The EA discusses the Proposed Development Project, alternatives, and environmental effects in areas including air quality, biological resources, hazardous materials, cultural resources, noise, socioeconomics, and water resources. The Proposed Development Project will affect approximately 25 acres of wetlands and approximately 28 acres of 100-year floodplains. The Proposed Project includes mitigation measures for unavoidable impacts to these resources.

Draft EA Availability: An electronic copy of the Draft EA is available for public review at https://www.flylakeland.com/airport-projects. Both hard copies and electronic copies will also be displayed for inspection and review at the following locations:

Larry R. Jackson Branch Library 1700 N Florida Avenue

eLibrary South Lakeland 4740 S Florida Avenue 4740 S Florida Avenu Lakeland, FL 33813

Lakeland Linder International Airport, Airport Terminal 3900 Don Emerson Drive, Suite 210 Lakeland, FL 33811

Combined Public Hearing and Information Workshop: The public is invited to attend a combined in-person Public Hearing and Information Workshop on May 27, 2021. The purpose of the combined Public Hearing and Information Workshop is to receive and consider public comments on the social, economic and environmental effects of the Proposed Development Project. The Public Information Workshop portion of the proceedings will begin at 8:00 PM, where representatives of the City will be available to answer questions in an open house format and receive verbal/written comments. The Public Hearing will convene at 7:00 PM, where attendess will hear a short presentation and be given opportunity to make an official public statement for the hearing record, to be transcribed by a court reporter. Meeting information is as follows:

DATE / TIME: Thursday, May 27, 2021 Public Information Workshop 6:00 PM - 7:00 PM Public Hearing begins at 7:00 PM

LOCATION: RP Funding Center Sikes Hall Room K 701 W Lime St Lakeland, FL 33815

Due to ongoing public health protections and limitations on gatherings to limit the spread of COVID-19, adherence to face covering and social distancing practices are required for meeting attendees.

How to Comment: Written comments on the Draft EA will be accepted by mail, email, and/or in person at the Public Workshop/Public Hearing. Mailed comments should be postmarked no later than May 31, 2021 and addressed to:

Lakeland Linder International Airport Attention: Gene Conrad, Airport Director 3900 Don Emerson Drive, Suite 210 Lakeland, FL 33811

Comments may also be submitted via email to Gene.Conrad@lakelandgov.net. Requests for reasonable accommodation with obtaining the document for review, and/or for registering comments, can also be made to this address. All comments will be carefully reviewed and considered in a Final EA prior to FAA rendering an environmental determination on the Proposed Development Project.

Please note that comments can only be accepted with the full name and address of the all entities commenting. Before including your address, phone number, e-mall address, or other personal identifying information in your comment, be advised that your entire comment it including your personal identifying information it may be made publicly available at any time. While you can ask in your comment to withhold from public review your personal identifying information, it cannot be guaranteed that it will be withheld.

AFFIDAVIT OF PUBLICATION THE LEDGER

Lakeland, Polk County, Florida

STATE OF FLORIDA) **COUNTY OF POLK)**

Before the undersigned authority personally appeared Olga L. Rodriguez Martin, who on oath says that she is an Account Executive for Advertising at The Ledger and the News Chief, daily newspapers published at Lakeland in Polk County, Florida; that the attached copy of advertisement, being a

PUBLIC NOTICE OF DRAFT ASSESSMENT

In the matter of **HEARING AND INFORMATION WORKSHOP**

Concerning WETLANDS AND FLOODPLAINS

as published in said newspaper and online in the issues of

4-26; 2021

Affiant further says that said The Ledger is a newspaper published at Lakeland, in said Polk County, Florida, and that the said newspaper has heretofore been continuously published in said Polk County Florida, daily, and has been entered as second class matter at the post office in Lakeland, in said Polk County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Signed Olga L Rodríguez Martín

Olga L. Rodriguez Martin Advertising Account Executive Who is personally known to me.

Sworn to and subscribed before me this 26th day of April, 2021 A.D.

Notary Public

(Seal)

PATRICIA ANN ROUSE MY COMMISSION # HH 011594 EXPIRES: October 17, 2024 Bonded Thru Notary Public Underwriters NOTICE OF AVAILABILITY OF DRAFT ENVIRONMENTAL ASSESSMENT AND NOTICE OF COMBINED PUBLIC HEARING/INFORMATION WORKSHOP

Notice of Impacts to Wetlands and Floodplains in Accordance with Section 2(a)(f) of Executive Order (EO) 11988, Floodplain Management; Section 2(b) of EO 11990, Protection of Wetlands; and Section 7 DOT Order 5650.2, Floodplain Management and Protection

The City of Lakeland (City) announces the availability of a Draft Environmental Assessment (EA) for Phase II of Air Cargo Facility Development at Lakeland Linder International Airport (LAL) in Polk County, Florida. Pursuant to Section 102(2)(c) of the National Environmental Policy Act (NEPA) of 1989, the Draft EA is being circulated for review and comment from the public and federal, state and local agencies. Comments from federal, state and local agencies, and the public, will be considered as part of the Final EA. The Final EA will be submitted to the Federal Aviation Administration (FAA) for the agency's environmental determination.

Proposed Development Project: The proposed cargo facility development, referred to in the Draft EA as the Proposed Development Project, expands the Phase I air cargo facility that became operational at LAL in 2020. The proposed facility expansion includes additional sortation and office building, truck court, and vehicle parking. The Proposed Development Project also expands the aircraft parking apron to accommodate three additional aircraft parking positions and equipment staging for additional flight activities. A new airport access road would be required to provide access to the Phase II facilities via Orane Field Road. A new fuel farm is also proposed to accommodate the need for additional aviation fuelling capacity.

The EA discusses the Proposed Development Project, alternatives, and environmental effects in areas including air quality, biological resources, hazardous materials, cultural resources, noise, socioeconomics, and water resources. The Proposed Development Project will affect approximately 25 acres of wetlands and approximately 28 acres of 100-year floodplains. The Proposed Project includes mitigation measures for unavoidable impacts to these resources.

Draft EA Availability: An electronic copy of the Draft EA is available for public review at https://www.flytakeland.com/airport-projects. Both hard copies and electronic copies will also be displayed for inspection and review at the following locations:

Larry R. Jackson Branch Library 1700 N Florida Avenue Lakeland, Fl. 33805

eLibrary South Lakeland 4740 S Florida Avenue Lakeland, FL 33813

Lakeland Linder International Airport, Airport Terminal 3900 Don Emerson Drive, Suite 210 Lakeland, FL 33811

Combined Public Hearing and Information Workshop: The public is invited to attend a combined in-person Public Hearing and Information Workshop on May 27, 2021. The purpose of the combined Public Hearing and Information Workshop is to receive and consider public comments on the social, economic and environmental effects of the Proposed Development Project. The Public Information Workshop portion of the proceedings will begin at 8:00 PM, where representatives of the City will be available to answer questions in an open house format and receive verbal/written comments. The Public Hearing will convene at 7:00 PM, where attendees will hear a short presentation and be given opportunity to make an official public statement for the hearing record, to be transcribed by a court reporter. Meeting information is as follows:

DATE / TIME: Thursday, May 27, 2021
Public Information Workshop 6:00 PM - 7:00 PM
Public Hearing begins at 7:00 PM

LOCATION: RP Funding Center Sikes Hall Room K 701 W Lime St Lakeland, FL 33815

Due to ongoing public health protections and limitations on gatherings to limit the spread of COVID-19, adherence to face covering and social distancing practices are required for meeting attendees.

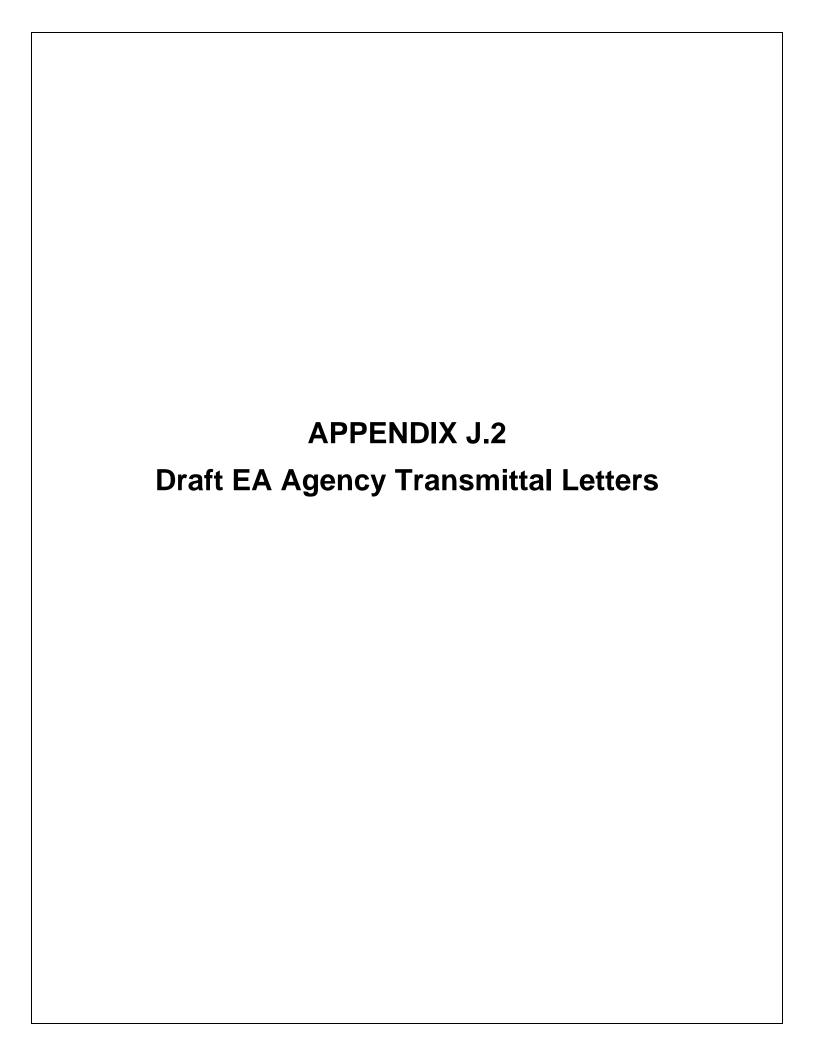
How to Comment: Written comments on the Draft EA will be accepted by mail, email, and/or in person at the Public Workshop/Public Hearing. Mailed comments should be postmarked no later than May 31, 2021 and addressed to:

Lakeland Linder International Airport Attention: Gene Conrad, Airport Directo 3900 Don Emerson Drive, Suite 210 Lakeland, FL 33811

Comments may also be submitted via email to Gene.Conrad@lakelandgov.net. Requests for reasonable accommodation with obtaining the document for review, and/or for registering comments, can also be made to this address. All comments will be carefully reviewed and considered in a Final EA prior to FAA rendering an environmental determination on the Proposed Development Project.

Please note that comments can only be accepted with the full name and address of the all entities commenting. Before including your address, phone number, e-mail address, or other personal identifying information in your comment, be advised that your entire comment it including your personal identifying information in may be made publicly available at any time. While you can ask in your comment to withhold from public review your personal identifying information, it cannot be guaranteed that it will be withheld.

4-26: 2021 JJET





tel

fax



AECOM 7650 West Courtney Campbell Causeway Tampa, FL 33607 www.aecom.com

April 21, 2021

[via email: state.clearinghouse@dep.state.fl.us]

Mr. Chris Stahl Coordinator Florida State Clearinghouse Florida Department of Environmental Protection 3900 Commonwealth Blvd, MS 47 Tallahassee, Florida 32399-3000

DRAFT ENVIRONMENTAL ASSESSMENT FOR PHASE II AIR CARGO FACILITY RE: DEVELOPMENT AT LAKELAND LINDER INTERNATIONAL AIRPORT, LAKELAND, FLORIDA

Dear Mr. Stahl:

Pursuant to the National Environmental Policy Act of 1969 (NEPA), the City of Lakeland, Florida (City) has prepared a Draft Environmental Assessment (EA) to address the proposed expansion of air cargo facilities and the construction of a fuel farm at Lakeland Linder International Airport (LAL), hereinafter referred to as the Proposed Development Project. The EA evaluates reasonable alternatives to the Proposed Development Project, including a No-Action Alternative, and evaluates the potential social, economic and environmental consequences of these alternatives in accordance with applicable federal, state and local regulations. The official public and agency comment period for the Draft EA expires on May 31, 2021.

Throughout the EA process, scoping comments were solicited and received through the Clearinghouse under SAI #FL202005068934C. Accordingly, on behalf of the City and the Federal Aviation Administration (FAA), I'm enclosing a copy of the Draft EA for your retention in electronic format. The City and the FAA invite you to review the Draft EA and provide written comments on the analysis presented, including any issues or concerns to consider when producing the Final EA. The FAA will consider any substantive comments received on the Draft EA when producing the Final EA.

The EA materials can be accessed electronically and downloaded at https://we.tl/t-oSx8INBHai and also from the airport's website at https://www.flylakeland.com/airport-projects. Should you wish to comment, please provide comments by the close of the official comment period on May 31, 2021. Comments by mail should be postmarked by May 31, 2021 and directed to:

> Lakeland Linder International Airport Attention: Gene Conrad, Airport Director 3900 Emerson Drive, Suite 210 Lakeland, FL 33811

Federal, state, local governmental agencies and interested individuals are also invited to be present or represented at a combined Public Hearing and Public Information Workshop to be held on May 27, 2021 from 6:00 p.m. to 8:00 p.m. at the RP Funding Center, Sikes Hall Room K located at 701 West Lime Street, Lakeland, Florida 33815.



Please feel free to contact me directly with any questions or concerns regarding this transmittal.

Sincerely,

Paul Sanford
AECOM Project Manager
7650 West Courtney Campbell Causeway
Tampa, FL 33607
813.675.6843
paul.sanford@aecom.com

Copy: Peter Green, FAA Gene Conrad, City of Lakeland



Causeway Tampa, FL 33607 www.aecom.com

April 21, 2021

Ms. Chandra C. Frederick Assistant County Manager Polk County Office of Planning and Development 330 West Church Street Drawer BC01 P.O. Box 9005 Bartow, FL 33831-9005

RE: DRAFT ENVIRONMENTAL ASSESSMENT FOR PHASE II AIR CARGO FACILITY DEVELOPMENT AT LAKELAND LINDER INTERNATIONAL AIRPORT, LAKELAND, **FLORIDA**

Dear Ms. Frederick:

Pursuant to the National Environmental Policy Act of 1969 (NEPA), the City of Lakeland, Florida (City) has prepared the enclosed Draft Environmental Assessment (EA) to address the proposed expansion of air cargo facilities and the construction of a fuel farm at Lakeland Linder International Airport (LAL), hereinafter referred to as the Proposed Development Project. The EA evaluates reasonable alternatives to the Proposed Development Project, including a No-Action Alternative, and evaluates the potential social, economic and environmental consequences of these alternatives in accordance with applicable federal, state and local regulations. The official public and agency comment period for the Draft EA expires on May 31, 2021.

Throughout the EA process, scoping comments were solicited and received on August 11, 2020 from the Office of Planning and Development. Accordingly, on behalf of the City and the Federal Aviation Administration (FAA), I'm enclosing a copy of the Draft EA for your retention in both hard copy and electronic format. The City and the FAA invite you to review the Draft EA and provide written comments on the analysis presented, including any issues or concerns to consider when producing the Final EA. The FAA will consider any substantive comments received on the Draft EA when producing the Final EA.

Hard copies of the documents are enclosed for your retention. The EA materials can also be accessed and https://we.tl/t-oSx8INBHai downloaded and also from the airport's https://www.flylakeland.com/airport-projects. Should you wish to comment, please provide comments by the close of the official comment period on May 31, 2021. Comments by mail should be postmarked by May 31, 2021 and directed to:

> Lakeland Linder International Airport Attention: Gene Conrad, Airport Director 3900 Emerson Drive, Suite 210 Lakeland, FL 33811

Federal, state, local governmental agencies and interested individuals are also invited to be present or represented at a combined Public Hearing and Public Information Workshop to be held on May 27, 2021



from 6:00 p.m. to 8:00 p.m. at the RP Funding Center, Sikes Hall Room K located at 701 West Lime Street, Lakeland, Florida 33815.

Please feel free to contact me directly with any questions or concerns regarding this transmittal.

Sincerely,

Paul Sanford

AECOM Project Manager

7650 West Courtney Campbell Causeway Tampa, FL 33607

813.675.6843

paul.sanford@aecom.com

Enclosures (1)

Copy: Peter Green, FAA Gene Conrad, City of Lakeland From: Green, Peter M (FAA)

To: Section 106

Subject: RE: Section 106 Consultation - Air Cargo Facility Expansion Lakeland-Linder Intl Airport (1 of 2)

Date: Tuesday, April 27, 2021 9:10:00 AM

Attachments: Lakeland Airport Air Cargo Phase 2 CRAS 9-29-2020 (1 of2).pdf

Good morning Mr. Soweka,

The Draft Environmental Assessment for the proposed expansion of an air cargo facility at the Lakeland Linder International Airport is available for review. Below are links to download the Draft Environmental Assessment and its appendix. If you have any difficulty downloading the document, please let me know.

FTP Link to Download Draft EA: https://www.flvlakeland.com/airport-projects
Link to Download Draft EA from Airport's Website: https://www.flvlakeland.com/airport-projects

I am also providing a copy of the Cultural Resource Assessment report because the location of previously recorded archeological sites is not shown in the CRAS contained in the Draft EA's appendix. Due to the size of the PDF file, the front section of the CRAS is attached to this email and the report's appendix will be provided in a separate email.

Let us know if you have any questions or would like to discuss the project during your review. We ask that you provide any comments within 30 days of the date of this email.

Respectfully,

Peter Green

From: Section106 < Section106@mcn-nsn.gov>

Sent: Monday, June 22, 2020 4:13 PM

To: Green, Peter M (FAA) <peter.m.green@faa.gov>

Subject: Re: Section 106 Consultation - Air Cargo Facility Expansion Lakeland-Linder Intl Airport

Good afternoon Mr. Green,

Thank you for sending the correspondence regarding the proposed air cargo facility expansion at Lakeland-Linder International Airport located in Polk County, Florida. Polk County is located within the Muscogee (Creek) Nation's historic area of interest and is of importance to us. Before the Muscogee Nation can comment of the possibility of this undertaking affecting any Cultural Resources, the Muscogee Nation requests the finalized EA mentioned within the correspondence. I will provide a response/comment upon receipt of the EA. Please feel free to contact me if there are any questions or concerns.

Thank you,

Robin Soweka Jr.

Historic and Cultural Preservation Department | Cultural Resource Specialist Muscogee (Creek) Nation
P.O. Box 580 | Okmulgee, OK 74447
T 918.732.7726
F 918.758.0649
http://www.muscogeenation-nsn.gov/

From: Green, Peter M (FAA) < peter.m.green@faa.gov>

Sent: Wednesday, May 6, 2020 6:37 PM **To:** Section106 < Section106@mcn-nsn.gov >

Subject: Section 106 Consultation - Air Cargo Facility Expansion Lakeland-Linder Intl Airport

Dear Ms. Loe-Zepeda,

An air cargo services provider has proposed the expansion of an existing air cargo facility at the Lakeland-Linder international Airport. Federal Aviation Administration actions associated with the proposed project require consultation under Section 106 of the National Historic Preservation Act. FAA appreciates your review of the project and letting us know if the Muscogee (Creek) Nation has an interest in the project area and would like to participate in the Section 106 consultation process.

Regards,

Peter Green

Peter M. Green, AICP

Environmental Protection Specialist Orlando Airports District Office Federal Aviation Administration 8427 SouthPark Circle Orlando, Florida 32819 407-487-7296 peter.m.green@faa.gov From: Green, Peter M (FAA)

To: THPOCompliance@semtribe.com; Bradley Mueller

Subject: FAA - Phase II Air Cargo Development - Lakeland Linder Intl Airport, Polk County

Date: Tuesday, April 27, 2021 9:29:00 AM

Mr. Mueller,

[THPO Compliance Tracking Number 0032438]

The Draft Environmental Assessment for the proposed expansion of an air cargo facility at the Lakeland Linder International Airport is available for review. Below are links to download the Draft Environmental Assessment and its appendix. If you have any difficulty downloading the document, please let me know.

FTP Link to Download Draft EA: https://we.tl/t-oSx8INBHai
Link to Download Draft EA from Airport's Website: https://www.flylakeland.com/airport-projects

Please note that the location of previously recorded archeological sites is not shown in the Cultural Resource Assessment Survey report contained in the Draft EA's appendix. The copy of the CRAS provided to your office via email on October 10, 2020 contains a complete copy of the report.

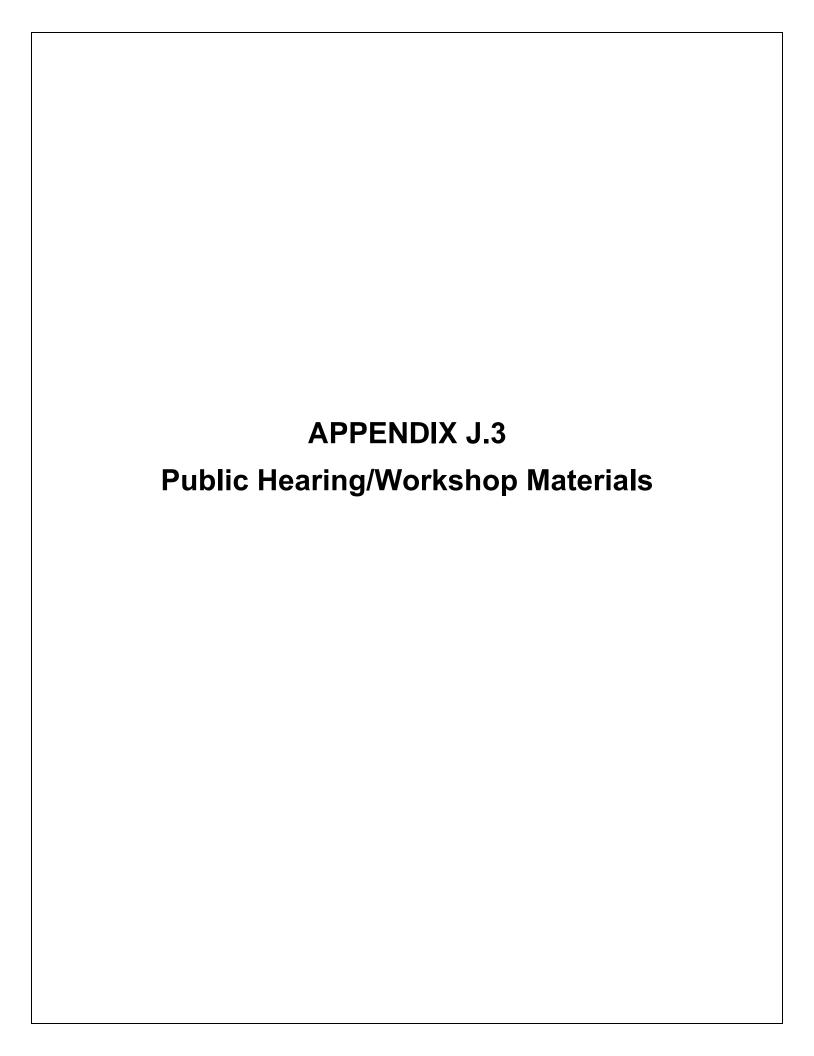
Let us know if you have any questions or would like to discuss the project during your review. We ask that you provide any comments within 30 days of the date of this email.

Respectfully,

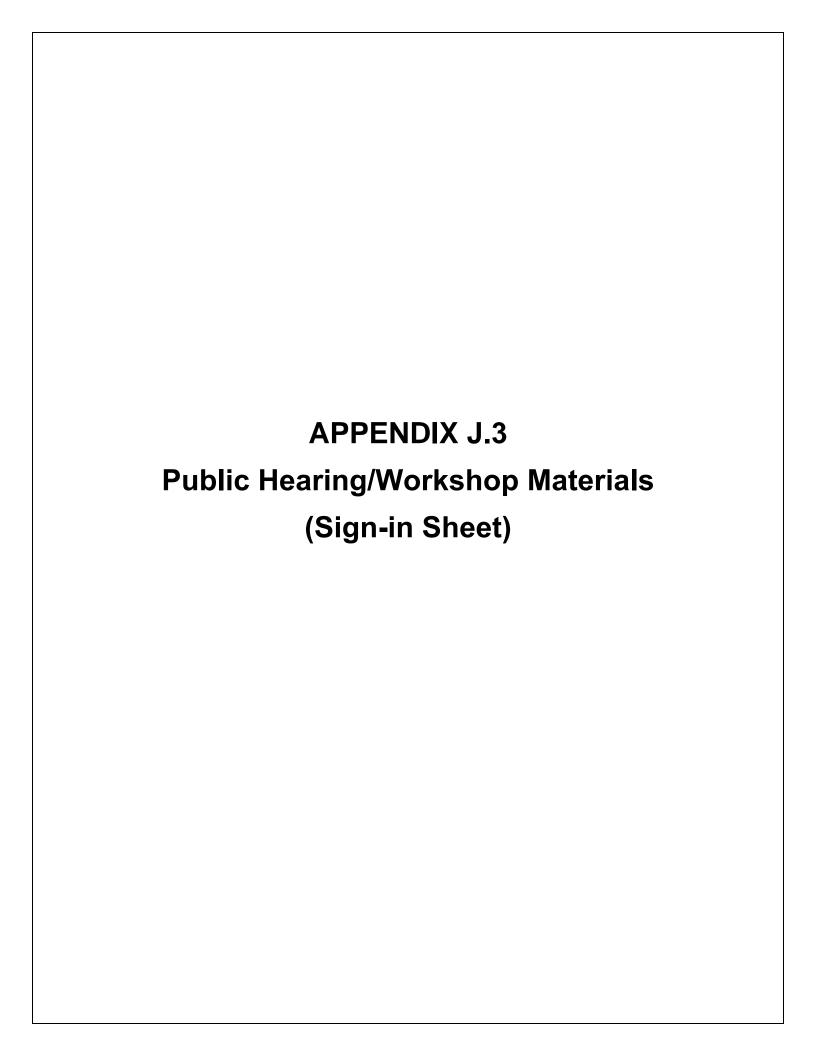
Peter Green

Peter M. Green, AICP
Environmental Protection Specialist
Orlando Airports District Office
Federal Aviation Administration
8427 SouthPark Circle
Orlando, Florida 32819
407-487-7296
peter.m.green@faa.gov













Lakeland Linder International Airport

Draft Environmental Assessment for the Phase II Air Cargo Facility Development COMBINED PUBLIC HEARING/INFORMATION WORKSHOP

Please Sign

- ione origin	E TOTAL AND A STATE OF THE STAT	Way 21, 2021		
NAME	AFFILIATION (if applicable)	ADDRESS	CITY, STATE ZIP	
1 MICHAEL SWILL	RESIDENT	4423 SOUTHRIDE TRAIL	CARGUAND FL 33813	
2 Pan Slyphon	Resident	3096 Bellflower Way	Kakeland, FL3384	
3 Kath Husch	Resident	3096 Bellflowe Way	Labeland, FC 3384	
4 Varie E Wough	Regident	6076 Craekwater Dr	Lakeland 33811	
5 Deniel Lune He	Resident	304 Erclove Or	Lekeland 33803	
6 Jabin Bonnet	Resider		Winks Heven, Fl 33	
7 David Radry	Resident	5216 Old Barton / Eagle Lake Rd 1560 Hollow Tree Ct-Lakeland	Ladoland 33811	
8 Roland Bean		4228 Breemer Ave L	Laland 73813	
9 22 CETrangolo	(- x - 1)	3032 Show Creek Vill		
TO Tom Coraham		2936 SANCTIVERRY Circle	33803	



Lakeland Linder International Airport

Draft Environmental Assessment for the Phase II Air Cargo Facility Development COMBINED PUBLIC HEARING/INFORMATION WORKSHOP

			Way 21, 2021
NAME	AFFILIATION (if applicable)	ADDRESS	CITY, STATE ZIP
Fred Tillman	resident	4413 Hallam H.11 Ln Lak 33813	Lat Fl,
2 Barbara Sween		3356 Fiddle Leaf Way	Lakeland 3361,
3 Mary Lon Waugh	1	6026 Creekwater Dr hateland FL 33811	7
4 Thomna Lunetta	resident	364 Enclove DC. Lakeland F1 33803	
	the spent	2417 COVENTEY Due,	LAKE / AND
6 N. WAYE SETCIFF 6 NOW HORN	RESIDENT	3435 Newberry DR. 2111 33803	
7 Mite & Bernadette	Resident	341 Tanager Ct.	Latebord, 3380
8 Aven Mesmer	Fox 13 News		Tauga, FL
9 Bourasa Marko			Lopeland
9 Bowara Warks 10 Dougsbrer	resident	1623 Wecliff DR Oclardo, FL 32803	Oslando



Lakeland Linder International Airport

Draft Environmental Assessment for the Phase II Air Cargo Facility Development COMBINED PUBLIC HEARING/INFORMATION WORKSHOP

NAME	AFFILIATION (if applicable)	ADDRESS	CITY, STATE ZIP
1 Jack Masur		3795 A: F: [[] Lot 5511	Latel and 3381
2 Robin & Lynn Thor 3 Ana Hubert	npson	3925 Sandhill Crane Dr 604 Laurel Ln	Likeland 33817 Lakeland 33813
4 amshua Hummel		C346 Fierra Vista Cir	LaGeland 33813
5 Karly Bear		549 Prado Pl	Lkld 33803
6 FRANK BEAN		549 PRA 00 PL.	4440 33833
7 Jehonh Schaffer	***	2441 Clared Step Drive	863-255-4757
8 Les O. Blenn		111 Arlen St 1310 Pelling Word Can	867-660-5283
9 CMS SIMER		1310 Pelling Word Can	967-647-3065
10 Teres Swax		c. (_ \	



Lakeland Linder International Airport

Draft Environmental Assessment for the Phase II Air Cargo Facility Development COMBINED PUBLIC HEARING/INFORMATION WORKSHOP

Please Sign

i lease Sigii			Way 27, 2021
NAME	AFFILIATION (if applicable)	ADDRESS	CITY, STATE ZIP
1 JAMES L. MCOMBHAN	Lesident	2920 SANCTUARY Circle	Jakolnu 3380
2 VRICHARD HUBER	PESIDENT	GOY LAUREL KN	L+LD 338/3
3 DARREL RUSNELL	RESIDENT	1414 CYPRESS VIEW LN	44 33811
4 Paula Told	RESIDENT	3093 Shal Creek Village De	LKID 33823
5 ML MR BAUETT	RESIDENT		400 33803
6 Christine Jacob		4515 Ginny Dr.	LKLD 33811
7 Michael Hars		4515 GINDY DK	CKD 33811
8 Wass Mahalla Graha		2946 Shoal Greek Villam Dr.	Lk 33803
Bruce Jan Velze	Rag	2924 Grass ads Dr	Jk 33803 Jk 33803
10 Trey Hurden	Healthy Progress	3730 Cleveland Nits. Blud. Suite	LK 33803



Lakeland Linder International Airport

Draft Environmental Assessment for the Phase II Air Cargo Facility Development

COMBINED PUBLIC HEARING/INFORMATION WORKSHOP

Please Sign

Please Sign			May 27, 2021
NAME	AFFILIATION (if applicable)	ADDRESS	CITY, STATE ZIP
Marlin Nichols		2210 Mission Hills Drive Gallet	Lakeland F1.
2 Wes MAFFETT		GIIS IRBY LN E	LAKELAND FL SSOM
3 Palela graham		2936 Sanctione CH	CE 35803
4 Tom Prancue		11	CC 11
5 Jim Franklin		2904 Sondway CD	(1 (1
6 Rene Amos		423 Lake Boney Dr. E. 33801	Caleland C
7 Mechael Williams			()
8 Somanthalmos		La	()
9 Stay Denger		5707 Myrtle Hill DrW	Lakeland
10 Donna Willett		3380 Fiddle Leaf Way	Lakeland, FL



Lakeland Linder International Airport

Draft Environmental Assessment for the Phase II Air Cargo Facility Development COMBINED PUBLIC HEARING/INFORMATION WORKSHOP

Please Sign

Please Sign			May 27, 2021
NAME	AFFILIATION (if applicable)	ADDRESS	CITY, STATE ZIP
1 Jenni Fer Conner	lesident		
2 Bertie Volpe	resident		
3 Flore Gughtan 4 Jason Cimini	resident	3924 Kasslands Dr. C	Jacks Land, FL 33803
4 Jason Cimini	resident	5810 Herdricks Rd	Lakeland, FL 33811
5 Mila Skidmore	POLK COCENTS	Waterfulled	Colord, F.
6 SARY CARR	((0613 Tuelse 7+D	LEWA 3351,
7 DON SOUTHERN	RESIDENT	3442 LAUREL SLEN DR	33803
* Veronika Guttenber	ger Resident	707 Butternut Place	338 13
Veronka Guttenber David Wagun	residual s	707 Butternet Place zures Lavel Glenn Pr	3389
10 Joan Miller	resident of Carilla-Lakes	4332 Whistlewood Circle	33811



Lakeland Linder International Airport

Draft Environmental Assessment for the Phase II Air Cargo Facility Development COMBINED PUBLIC HEARING/INFORMATION WORKSHOP

NAME	AFFILIATION (if applicable)	ADDRESS	CITY, STATE ZIP
1 Krisken Forme	& Anthony Velley	2600 Parkland Dr	33811
2 Nanay Kickbush	4	359 Arbor Way - 33809	
3 Douglas Rickbush	4	359 Arbor Way 33809	
SANN ON		Caxillon LALES	33811
5 Josef & Steve Miller		4332 whistewood, Circle, Lottk-Lord	3381/
6 TIM THORNHILL		3218 FORESTBROOK DR M	33811
7 William Juda		3.745 Serenade Ln	33811
* Jaime Guerra	-	1109 Afron Street 33803	#- 33803
· Mike & Jynni		1109 A Fron Street Pakeland, Fl. 33803 5023 Kirkland Rd Lale land, 71 33811	338//
10 CONNIE HAYNES		702 W. HANCOCK ST LAKELAND FL	33803



Lakeland Linder International Airport

Draft Environmental Assessment for the Phase II Air Cargo Facility Development COMBINED PUBLIC HEARING/INFORMATION WORKSHOP

Please Sign

Flease Sign	100		May 27, 2021
NAME	AFFILIATION (if applicable)	ADDRESS	CITY, STATE ZIP
1 Sharon Bulbe	EK	2631 New Jexsey Rd	LKL10 71-33803
2 DIANNA Thomas		2470 LOURERGIEN DL Lakeland FL 33803	→
3 Therega Garcia		6205 Thousand Oaks Dr LK 33813	
4 PAMMOOR		2829 Shoal Creek Grasslands, Lakeland	33823
5 Candy Wyper 6 Brewell Wyper		2448 Laurel Gler Drin Lakeland FL 33803	
6 Brewer		3450 Flightline Dr. Laurland, Florida 33811	33811
7 Celia Thopnhill		3218 FORATBOOK DI.N Lakeland FL. 33811	
8 Mily Well		823 WOOD MONT LN LKUND 156 33813	33813
STEPHANTE ECKSTEN	Home 2/ Homeson	1 1/2/	338/
10 RAY PAGE	/	3801WESGEWOODA.	33566



Lakeland Linder International Airport

Draft Environmental Assessment for the Phase II Air Cargo Facility Development COMBINED PUBLIC HEARING/INFORMATION WORKSHOP

Please Sign

Please Sign			May 27, 2021
NAME	AFFILIATION (if applicable)	ADDRESS	CITY, STATE ZIP
Vache Schwartz		823 WOODMONT LANCE	Lakehol 338/3
2Kethleen Wright		1109 After St	LK ld 33803
3 Tim Stuli	De		
4 Arlene Quinlan		2641 Bellerive Drive	Lakeland FL3380
5 Jim HALL		2807 WEDGEWOOD DR	PLANT STOY FLEE
6 Roger Grafton		1054 Canary Cir S Lakoland	Lakeland Fl
7 Eugenia fanits		4138 S. POLKave Lo	Icela (
8 Liz Rovaldi		4456 Micarope Crescent Or	La Keland FL 33811
9 Rick GARRITY			La/alm 233813
10 Sara Walsh	The Ledger	The Ledger cime St	Lateland
	0		



Lakeland Linder International Airport

Draft Environmental Assessment for the Phase II Air Cargo Facility Development COMBINED PUBLIC HEARING/INFORMATION WORKSHOP

Please Sign

r lease Sigil			Way 27, 2021
NAME	AFFILIATION (if applicable)	ADDRESS	CITY, STATE ZIP
1 MARGARITA JUDD		3945 SERENADE LN	LAKEL.AND 39811 FL
2 Brian Tobin		4125 Shearwater Et	Cakeland 33811 FL
3 Eiren Oh		911 Dove Ridge Dr.	Lobeland FC
4 Daven Oh		Same as above	saune as alaha
5 JULIE SULIU	AN ESA	SYOU S. KIRKMAN CO. SUITE 475	GRIANDO 32819
6 ROBERTO BISMARK		702 W HANCOCK ST	33803
7 Richele Floyd	ACE/SAF	4175 medulla Rd	Lknd 33811
8 Souce Dias		1716 Camptor DR.	LHOD 33803
9 Marshall Odom		2225 Nottingham Rd	LKLD 33803
19 du tre Cozo		No Bix (2 Cleated & 272	77



Lakeland Linder International Airport

Draft Environmental Assessment for the Phase II Air Cargo Facility Development COMBINED PUBLIC HEARING/INFORMATION WORKSHOP

NAME	AFFILIATION (if applicable)	ADDRESS	CITY, STATE ZIP	
1 Ken Dias	(1716 Camphor Dr.	Lakeland FL 338	103
2 JOHN JOHNSO		4958 FORWOOD WHE DIR	11 338	315
3 Most Muller			33803	
4 Spencer White		3086 Shopl Creek V. Mye Dr. 4307 Storling Commorce Dr. Plant City 33566		
5 Parker Anthony		2506 Panana Rd, Lakeland FE 33810	Rakeland FL 33810	
6 Paul Carter		5236 Sligh RJ. Lukelay =		
7 Tom Conner		1320 Rolling Woods Lekeland, &		
8 BOB+ SUGAD 1614124		2919 DEFERENCE LA	LAL	
9 Shawn Grahan		5222 Creekon R Lac	LaC	
10 KEN LOAR		2934 Plissian LAFES DR	LKL	



Lakeland Linder International Airport

Draft Environmental Assessment for the Phase II Air Cargo Facility Development COMBINED PUBLIC HEARING/INFORMATION WORKSHOP

Please Sign

A DESCRIPTION OF THE PARTY OF T			Way 27, 2021
NAME	AFFILIATION (if applicable)	ADDRESS	CITY, STATE ZIP
1 William Clark	-	2302 W Sugar Creek Dr.	Cakeland FC 338
2 Dawn Clark		2302 W. Sugar Creek Dr	Lakeland, FL338(1)
3 Sottas Tutton		727 SEFFERSON AUE	LKCD 3380/
4 Valerie Tuttor	7	727 Jefferson Ave	LKLD 3380
5 Cligon		6027 Creekwater Dr	11 1- 33811
6 anna M Di Cisax		2834 Shoal Creek Village	33803
RYCHAIZO PEIFER	Resident	3373 Turnberry Ln	LKLY 33803
8 DICHARD PEIFER	>1	1668 POPPY CIECLE	LKLD 33803
9 ROY PRIMEAU		6326 OAK SQ	LK(D 33813
10 Rita Wanters	Resident	2425 Harden Blod 230	LKLD 33803



Lakeland Linder International Airport

Draft Environmental Assessment for the Phase II Air Cargo Facility Development COMBINED PUBLIC HEARING/INFORMATION WORKSHOP

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NAME	AFFILIATION (if applicable)	ADDRESS	CITY, STATE ZIP
1 WALT [450N		241 Pivellas St. Cakeland 33803	33803
2 Dan Makon		4414 mor view De Lakeland 3	338/3
3 Silanaking ht		612 FLAMINGO DR. LKLD.	33803
4 Pointina Dugan		2425 Nardon Blud.	33803
5 M. Ka Duyan		2425 Handin Blud	33803
6 Donovan Bath	th	:810012 Palk City Rd	33809
7 DONARA C. BALTICH		5504 OAKWAY Dr.	33805
8 JAMES PATO		4333 Harden Blud.	33813
9 Nancy Witt		940 Lexington St.	33801
10 Willie J. Appling		4030 Solamor ST	33810



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NAME	AFFILIATION (if applicable)	ADDRESS	CITY, STATE ZIP
1 DUANE WAYTERS		2425 HARDEN Blup LOT 230	LAKE 1274 (
2 JOHN MILONE	1	SIS CENTURY OAK CT	2 KLD 33813
3 Antoinette Appl	ing	4030 Solamor St	UCC 338H
4 Davidstille	\sim	POBOX 2565	LKID. 33806
5 coge Mais	i de la companya de l	3966 Mission Lakes Dr	LK LD33803
6 Terford Winder		914 Sum mosfield Do	33803
Reike Woodbald		914 Sum merfield Dr.	33803
8 Bob + Ruth Sharpe		1756 Birchwood Loop	3381/
I Annette M Lee		1307 EMYPHE ST- Laseland	33801
10 AROYN J. King	V-1	820 N. Sesti BAKESANE	33815



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Please Sign

r lease Sign			Iviay 21, 2021
NAME	AFFILIATION (if applicable)	ADDRESS	CITY, STATE ZIP
1 Mystle Hudray		445 Brasslernde	Lateland 32803
2 Frank Mier		2906 MISSIONLAKES DR.	LAHELAND 33803
3 Sharon Morgan		1344 Cherry Ln	hakeland 338W
4 SEFF MANN		1346 CHERRY LANE	LAKELAND 33811
5 Sheliah Stills		827 N. Scott Ave.	Lattelad. 33815
6 GREGORY BURTO		1340 HALL DRIVE	LAXELALA F3 803
7 Sue Burton		1340 Hawk Drive	Lakeland 35808
8 DAVE CARAKKU		1630 PARKER AD.	338/(
9 JOHN PALIGH		4710 VALLEY HILL CT	LAKELANS 33813
10 Mary Archer		608 Kensington St.	latiland, 33803



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NAME	AFFILIATION (if applicable)	ADDRESS	CITY, STATE ZIP
1 Ellen Word		altavista Circle	Sale
2 Tyler Were		5580 Virtage View Hrd	LaKelow
3 David Harrison		Kensington St	Lateland
*Sally Chunat	4 20 20 20 20 20 20 20 20 20 20 20 20 20	1510 Ariana ST	LAKELAND
5 Wagnelhunat		1510 Doiana St	Lokeland.
6 NORRI BOII		1417 Itchepachesassa Da	Lakeland
7 Th mas Bergan		4504 S PIREIR RD	L466
8 Nalbass		5339 Glenmare ALL	Lakelong
9 Tim Johnson		5016 Reilston Road	Lakeland
10 Amy Johnson		, (Lakeland



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		Way 27, 2021
AFFILIATION (if applicable)	ADDRESS	CITY, STATE ZIP
534	SysAN DR	(AKE CAM) 328
,		Lakehnd, FL, 33A
	·	LAKELAND
'		Lakeland
Kathl	een	Lahelarf
4659	lacht	11 33805
6004	Strey Croek PL 33811	LEO Th.
	Ü	FL. 33813
318 CN	ierdkee TV	338 (B
272	W. Quincy	CAKELUL
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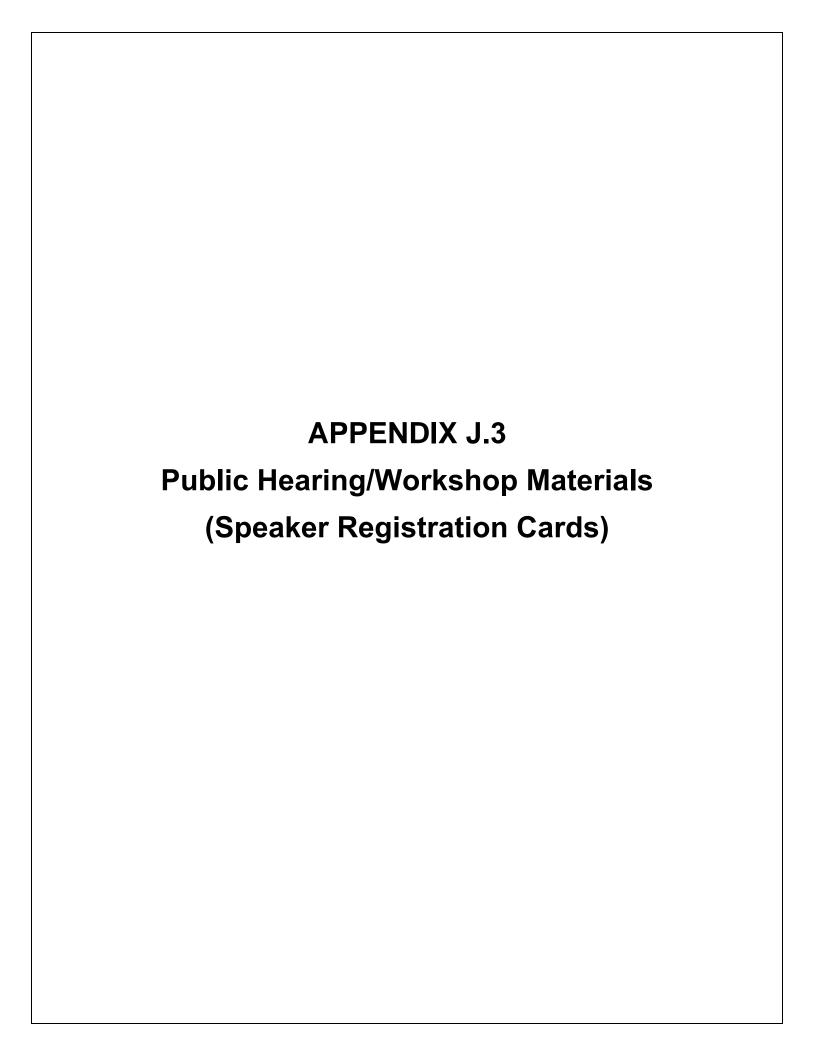


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COMBINED PUBLIC HEARING/INFORMATION WORKSHOP

NAME	AFFILIATION (if applicable)	ADDRESS	CITY, STATE ZIP
1 Valencia Sanders	LK wine:	216 Quincy St.	Lakelene, FL 3354
2 Jan Smith		506 Empress Way	(1 3380)
3 DAN Di GiAcomo		e('c('c('	<i>((</i>
4 Dawn Brower			lakeland 33812
5 MEARUTT DIMBA	+	3335 S. FLORIDA AG	LAKELAND P. 33803
6 The SKIPPERS		721 Wedge wood lane	Likeland 33813
7. Fran Williams		718 Wege wood Lune	u 33813
8			
9			
10			







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SPEAKER REGISTRATION CARD

Name:	Edward M CETTANGOLD
Address:	3032 Shool Creek Uillage DT
City/State/Zip:	Lokalové FL 33803
Affiliation:	GASS(ANdS
Phone:	863-450-8823
E-mail:	edcetra a AoL. com



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May 27, 2021

SPEAKER REGISTRATION CARD

Name:	Jay Bonnett.
Address:	5216 Old Bartow Eagle Lake Rd
City/State/Zip:	Winter Haven, FL 33880
Affiliation:	Persona
Phone:	813-345-7150
E-mail:	icubonnetta email.com



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May 27, 2021

SPEAKER REGISTRATION CARD

Name:	David Pengry
Address:	1560 Hollow Tree (+
City/State/Zip:	Lakeland 33811
Affiliation:	Home owich
Phone:	863-602-4736
E-mail:	DAR 1954@ AOL, COM



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May 27, 2021

SPEAKER REGISTRATION CARD

Name:	MICHAEL SIVILLI	
Address:	4423 SOUTHERDS TRAIL	
City/State/Zip:	(AKSCAN) FL 338(3	•••
Affiliation:	RESIDENT'	•••
Phone:	823 (40 449 6	••
E-mail:	MICHOGLOSIVILLI SS @ GMIL COM	•••



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May 27, 2021

SPEAKER REGISTRATION CARD

Name:	ROBERTO LEIDER
Address:	632 W HANCOCK ST
City/State/Zip:	LAKELAND, FL 33803
Affiliation:	RESIDENT
Phone:	863-808-3913
E-mail:	ROBERTOLEIDERQGMAIL.COM



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May 27, 2021

SPEAKER REGISTRATION CARD

Name:	KEN COAN
Address:	2934 Missim Cabo DA
City/State/Zip:	186
Affiliation:	CTUZZU
Phone:	863 670, 757 b
E-mail:	Key low va one, 1, Com



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May 27, 2021

SPEAKER REGISTRATION CARD

Straun Graham	
5222 Creekmon Pr	
Larged EL 33812	
863-670-6520	
Dive Flago gol, con	••••
	5222 Creekmon D- Lawlad EL 33812 863-670-6520





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May 27, 2021

SPEAKER REGISTRATION CARD

Name:	Bruce Van Verzel
Address:	2924 Grasslands Dr
City/State/Zip:	Lakelal FL 33863
Affiliation:	RESIDENT HOME OWNER
Phone:	419 704-4473
E-mail:	Vanyelze @ bex. net



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May 27, 2021

SPEAKER REGISTRATION CARD

Name:	Dawn Bruer
Address:	4810 Hancock Lake Rd
City/State/Zip:	Lakeland, FL 33812
Affiliation:	Polkhomeowner
Phone:	836076305
E-mail:	Merlin amusements Quahoo.com
	()



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May 27, 2021

SPEAKER REGISTRATION CARD

Name:	Liz Rougldi
Address:	4456 Micanope Crescent Or
City/State/Zip:	Lakeland, FL 339"
Affiliation:	· · · · · · · · · · · · · · · · · · ·
Phone:	ED LOVIDORD
E-mail:	Wertelle verence



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May 27, 2021

SPEAKER REGISTRATION CARD

Name:	Jan Smith
Address:	506 Empress Way
City/State/Zip:	Lakeland FL 33803
Affiliation:	
Phone:	813-843-5402
E-mail:	janin Horida @ msa.com



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May 27, 2021

SPEAKER REGISTRATION CARD

Name:	Man Archer
Address:	608 Kensington St
City/State/Zip:	lalaland f1 33803
Affiliation:	ONNER
Phone:	863-844-1184
E-mail:	mjcm. archer @ yahoo. com



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May 27, 2021

SPEAKER REGISTRATION CARD

Name:	WALT TYSON
Address:	241 Pivellas St
City/State/Zip:	33803
Affiliation:	HOME DUNEY DEAR POLK PAYKWA
Phone:	717 - 314 - 7903
E-mail:	14500 473 @ YAhoo, COM



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May 27, 2021

SPEAKER REGISTRATION CARD

Name:	HANTOINOAD W Mouling Di
Name.	Marie
Address:	4630 Solanur Street
City/State/Zip:	Cakeland, Fla 33810
Affiliation:	
Phone: (1217 45Y-45Y4 r
E-mail:	drappling lange lon



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May 27, 2021

SPEAKER REGISTRATION CARD

	Must be the blister
Name:	WIYII VV (VW) CO
Address:	665 Grasslan Village
City/State/Zip:	labeland Dr. Circl
Affiliation:	
Phone:	217)454-4025
E-mail:	nestro Lasquail- com



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May 27, 2021

SPEAKER REGISTRATION CARD

Name:	JOHN L. JOHNSON
Address:	4958 FOXWOOD LAKE DR
City/State/Zip:	LAKELAND FL 33810
Affiliation:	RESIDENT / HOME OWNER
Phone:	963-327-9806
E-mail:	JJOHNSON JZ @ AVENET, COM



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May 27, 2021

SPEAKER REGISTRATION CARD

Jay Bonnett
5alb Old Barbow Eagle Lake Rd
Worter Haven
813-345-7150
jaybonneH@gmail.com



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May 27, 2021

SPEAKER REGISTRATION CARD

Name:	Kick Garrita
Address:	4138 S. POIKLAVE
City/State/Zip:	Loleland F1. 33813
Affiliation:	c.t. zen
Phone:	8'63 (460143
E-mail:	RGARRITY of Tampalay RR, com
a a consti	



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May 27, 2021

SPEAKER REGISTRATION CARD

Name:	Tim Studjale
Address:	925 Nedgewood
City/State/Zip:	Lakeland /FC 3380
Affiliation:	Cof L Rot. pol
Phone:	863 - 860 - 5758
E-mail:	ics 1052@ 9 mail con
Before including your address, phone number, e-mail address, or other personally identifying information (PIP) in your testimony, be advised that your entire testimony, including your PIP, may be made publicly available at any time. While you can ask in your comment to withhold from public review your PIP, the Airport cannot guarantee that it will be able to do so.	



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May 27, 2021

SPEAKER REGISTRATION CARD

Name:	Tom Graham
Address:	2936 Sanctuary Circle
City/State/Zip:	LAKELAND FL 33803
Affiliation:	Grass (ands
Phone:	863-670-5774
E-mail:	ton Paulagraham & comil. com



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May 27, 2021

SPEAKER REGISTRATION CARD

Name:	Buybara Sweenes
Address:	3356 Fiddle Coal Wag
City/State/Zip:	Lakeland Fl 33811
Affiliation:	r-sident
Phone:	863-393-5916
E-mail:	Kertiggye ACCION



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May 27, 2021

SPEAKER REGISTRATION CARD

Name:	Joen Cinini
Address:	5810 Hundricks Rd
City/State/Zip:	Lakeland, FL 33811
Affiliation:	.,
Phone:	(863) 608-0726
E-mail:	1250n cimini agmail.com
	\1



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May 27, 2021

SPEAKER REGISTRATION CARD

Name:	Veronika Guttenberger
Address:	707 Butternut Place
City/State/Zip:	Lakeland FL 338/3
Affiliation:	Residnt
Phone:	501-319-3304
E-mail:	cinephile @ verizon. net



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May 27, 2021

SPEAKER REGISTRATION CARD

Name:	Roland Bean
Address:	422 Breenar Ave
City/State/Zip:	Lakeland FL 33813
Affiliation:	resident
Phone:	863-838-5125
E-mail:	refried beauto hotmail, on



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May 27, 2021

SPEAKER REGISTRATION CARD

Name:	Kennieth & Kimberly Brewer
Address:	1910 Michelle La
City/State/Zip:	Lakeland, A. 23813
Affiliation:	Aviation
Phone:	863 944 2182
E-mail:	kimdanielle lunn @ gmail. com
Onfore : !!	on all to distall con

Before including your address, phone number, e-mail address, or other personally identifying information (PIP) in your testimony, be advised that your entire testimony, including your PIP, may be review your PIP, the Airport cannot guarantee that it will be able to do so.

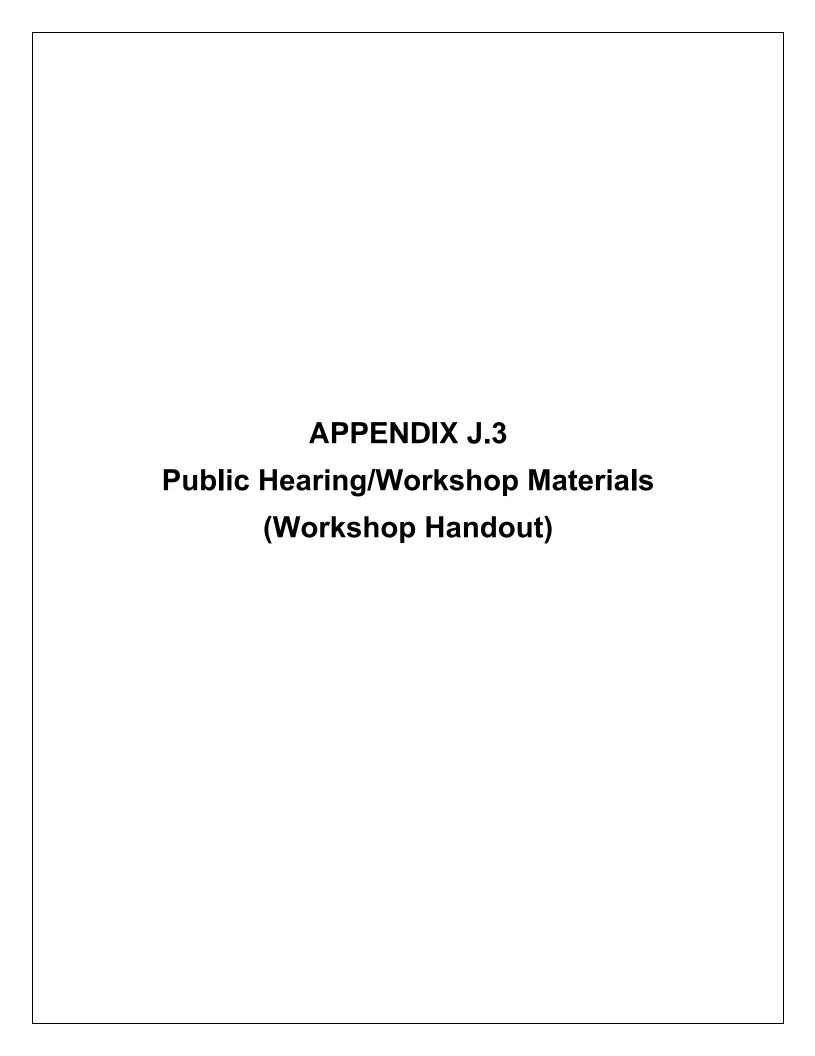


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May 27, 2021

SPEAKER REGISTRATION CARD

Name:	Darrench
Address:	911 Dove Ridge Dr
City/State/Zip:	Lakeland, FL 33863
Affiliation:	Citizen of Lakeland
Phone:	(963) 686 - 8795
E-mail:	darren Och name





How to Comment



During the Workshop

- 1. Fill out a comment form and place in one of the drop boxes, or
- 2. Speak **privately to the court reporter** to have your comment recorded for the EA record.

During the Hearing

- 1. Fill out a **comment form** and place in one of the **drop boxes**, **or**
- 2. Speak **privately to the court reporter** to have your comment recorded for the EA record, **or**
- 3. Fill out a speaker registration card before the hearing and return it to a meeting representative to make an official public statement during the hearing. Please limit your statement to three minutes.

After Tonight's Meeting

- 1. Comment by email to Gene.Conrad@lakelandgov.net, or
- 2. Fill out a comment form and mail to:

Lakeland Linder International Airport
Attention: Gene Conrad, Airport Director
3900 Don Emerson Drive, Suite 210
Lakeland, Florida 33811

Next Steps:

At the end of the public review period, FAA and the Airport will collect and consider all comments received. FAA will then issue the Final EA and its environmental determination document. After this, construction plans could proceed further.

Comments should be emailed/postmarked by **May 31, 2021**

Combined Public Hearing/Information Workshop



Draft Environmental Assessment
Phase II Air Cargo Facility Development
Lakeland Linder International Airport
Polk County, Florida

May 27, 2021

Meeting Overview

The Federal Aviation Administration (FAA) and the Airport have prepared an Environmental Assessment (EA) to comply with the National Environmental Policy Act of 1969 (NEPA).

NEPA establishes a national policy to protect the environment by requiring consideration of the environmental effects of federal actions.

The EA being discussed today evaluates the potential environmental consequences of the Proposed Project, which is an expansion of an existing air cargo facility at LAL. Portions of the proposed air cargo development are subject to FAA environmental approval under NEPA.

This public hearing serves as one of several opportunities for public comment and involvement as part of the EA process (inset).

FAA DETERMINES THE NEED TO PREPARE ENVIRONMENTAL ASSESSMENT (EA)

CONDUCT AGENCY & PUBLIC SCOPING

PREPARE DRAFT EA

PUBLIC REVIEW PERIOD (April 27 2021 – May 31 2021)

RESPOND TO COMMENTS

PREPARE AND ISSUE FINAL EA

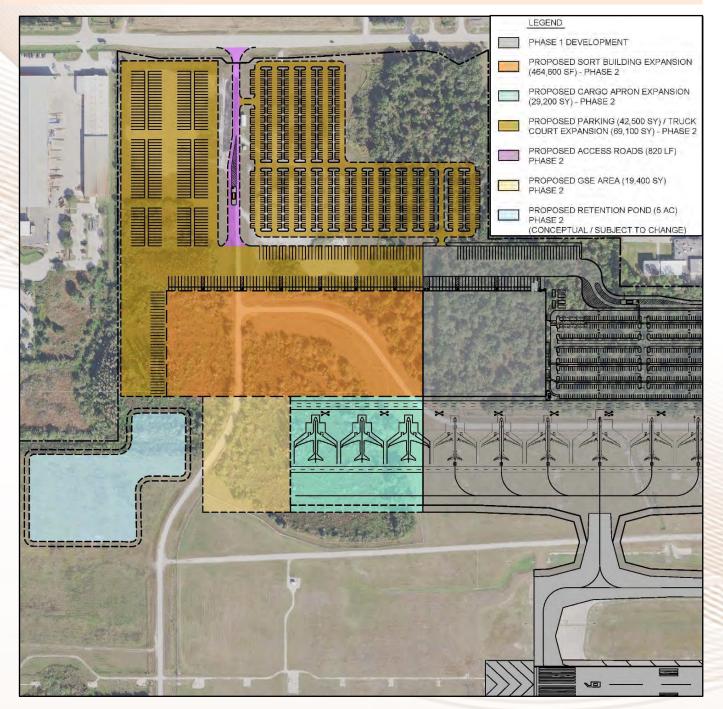
FAA ISSUES ENVIRONMENTAL FINDING

Proposed Project



The Proposed Project is an expansion of the Phase I air cargo facility that became operational at LAL in 2020. The Proposed Project is called Phase II. The Proposed Project would provide air cargo facilities, delivery truck parking and staging areas, equipment parking and operations areas, and aircraft parking.

To supply additional aviation fueling capacity, a fuel farm is also being proposed to the east of the Proposed Project.



Floodplains





The Proposed Project would unavoidably impact 28.4 acres of Zone A floodplain. The impacted floodplain area offers limited value for flood volume storage and infiltration due to its high water table and poorly-drained soils.

The Proposed Project's design would be required to comply with local floodplain management policies and regulations, which promote designs to minimize flood impacts. The proposed stormwater drainage improvements would offset loss of floodplain storage capacity.

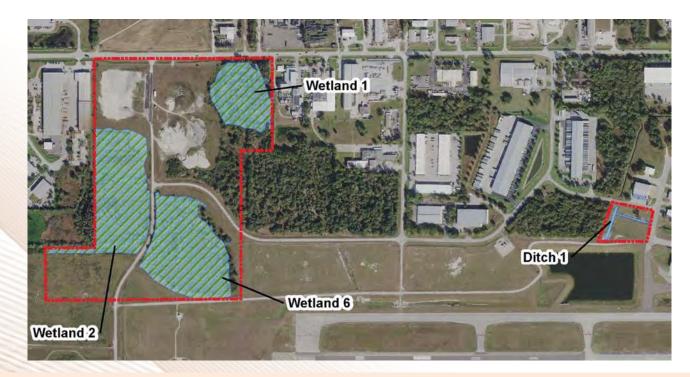
Adverse effects could be further minimized by elevating all facilities above the base flood elevation and applying construction period erosion and sedimentation controls. Offsetting wetland loss and applying species conservation measures discussed in the EA would also further reduce floodplain impact.

Taking these factors into account, the FAA determined that the floodplain impact: would not:

- increase flood potential,
- create encroachment-related costs or damage, or
- adversely impact natural and beneficial floodplain values.

Wetlands





A total of 28.6 acres of wetlands and surface waters are located within the Project Areas. The Proposed Project would impact 25.2 acres as shown below. The Project would avoid impacts to 3.4 acres of wetlands in the project area.

These wetland impacts can be mitigated by creating new wetlands or restoring or improving existing wetlands. The airport will purchase wetland credits from the Alafia River Mitigation Bank for the future construction/restoration of wetlands in the same watershed.

To determine the number of credits needed, the State of Florida's Uniform Mitigation Assessment Method (UMAM) was used, which considers the function and quality of the wetlands impacted at LAL. Shown below, a total of 11.04 credits are needed to offset the Proposed Project wetland impacts.

ID	Description	Impact (Acres)	Estimated Wetland Credits Needed
Wetland 1	Forested Mixed	1.5	0.50
Wetland 2	Scrub	12.2	5.29
Wetland 6	Scrub	11.2	5.25
Ditch 1	Stream/Waterway	0.3	0
	Total	25.2	11.04

Proposed Project Activity



	2022 Aircraft Operations									
	No-Action			Prop	Proposed Project			Additional		
	Dep	Arr	Total	Dep	Arr	Total	Dep	Arr	Total	
Day	7	6	13	10	9	19	3	3	6	
Night	3	4	7	8	9	17	5	5	10	
Total	10	10	20	18	18	36	8	8	16	
	2027 Aircraft Operations									
	No-Action			Proposed Project			Additional			
	Dep	Arr	Total	Dep	Arr	Total	Dep	Arr	Total	
Day	7	6	13	12	11	23	5	5	10	
Night	3	4	7	10	11	21	7	7	14	
Total	10	10	20	22	22	44	12	12	24	

Dep = Departure | Arr = Arrival

	2022	Vehicle Opera	ations	2027 Vehicle Operations			
	No-Action	Proposed Project	Additional	No-Action	Proposed Project	Additional	
Employee/ Visitor	1,500	2,000	500	1,500	2,510	1,010	
Trucks	125	289	164	125	357	232	
Total	1,625	2,289	664	1,625	2,867	1,242	

Expanded air cargo operations are proposed due to the potential for network and customer demand to increase.

Shown above, the Proposed Project will add eight additional daily arrivals and departures (16 total) in year 2022, and 12 additional daily arrivals and departures (24 total) by 2027. The operations would be conducted by Boeing 737 and 767 jets.

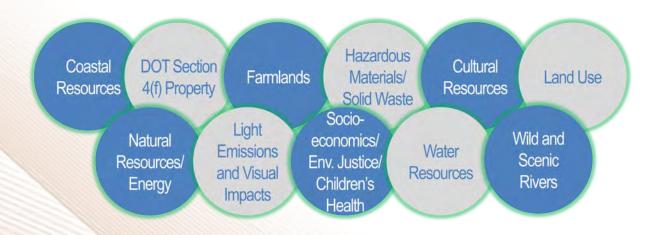
Peak daily motor vehicle operations would also increase with the Proposed Project per the table above.

The environmental effects of these additions were evaluated in the EA.

Environmental Resources Evaluated



The FAA has identified negligible or minor impacts to the following resources:



The FAA has identified short- and long-term impacts to the following resources that do not exceed significance levels:

Air Quality/ Climate Biological Resources Noise

The FAA has identified adverse impacts to the following resources which require mitigation measures:



Surface Transportation Mitigation Options



	2027 Traffic Conditions	Conditions
Mitigation Alternative	SOT	Delay with Project (seconds per vehicl
No Mitigation	Э	8.78+
Stop Sign with Turn Lanes	a	L'1+
Traffic Signal with Turn Lanes	В	-14.7

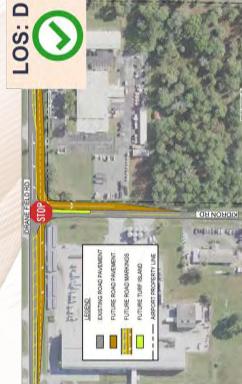
LOS D and reducing delays per vehicle Project. conditions compared to the Noback to the þ the intersection delay caused restore additional would improve Action alternative, improving to LOS plnow the Mitigation Alternative 2 of Mitigation Alternative by about 15 seconds alleviate most

LOS:

Kidron Road

Mitigation

2



Mitigation Alternative 1: Stop Sign with Turn Lanes

Phase II Air Cargo Facility Development | Draft Environmental Assessment



Mitigation Alternative 2: Traffic Signal with Turn Lanes

Phase II Air Cargo Facility Development | Draft Environmental Assessment

Surface Transportation Impacts





effectiveness for a roadway or intersection. LOS A represents free-flow I, significant delays per vehicle. The Drane Field Road/Kidron Road requiring mitigation. intersection would degrade to LOS F with the Proposed Project, Level of Service (LOS) is a measure conditions and LOS F represents Ic

noito control	2027 Changes in Tr	2027 Changes in Traffic Conditions Compared to No-Action	pared to No-Action
	Volume	TOS	Delay (seconds)
County Line/Drane Field	+369,100	B to C	+2.4
Kelvin Howard/Drane Field	+464,300	C to D	+5.8
Kidron/Drane Field	+857,600	D to F	+87.8
Airport Road/Drane Field	+559,600	B to C	+<0.1

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Air Quality

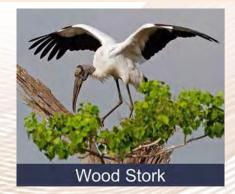


Temporary construction emissions from construction equipment, vehicles and site grading/paving would occur in 2021. Cargo aircraft, cargo equipment and motor vehicle emissions would increase with the Proposed Project compared to the No-Action Alternative in 2022 and 2027. Emissions would not exceed air quality standards or significantly impact climate.

	Annual Emissions Increases (tons) Compared to No-Action						
Pollutant	2021 (Construction)	2022 (with Proposed Project)	2027 (with Proposed Project)				
Carbon Monoxide	+42.1	+49.8	+61.6				
Nitrogen Oxides	+15.5	+22.6	+30.8				
Particulate Matter (2.5 micrometers)	+5.6	+1.2	+1.5				
Particulate Matter (10 micrometers)	+45.2	+1.7	+2.3				
Sulfur Oxides	+0.1	+0.6	+0.8				
Volatile Organic Compounds	+23.9	+5.5	+6.7				

Biological Resources

The Proposed Project may affect, but is not likely to adversely affect, the species below by applying species conservation measures



Provide compensation for loss of wetland and wood stork foraging habitat



Implement U.S. Fish and Wildlife Standard Protection Measures for the Eastern Indigo Snake



Prior to construction, re-survey for gopher tortoise burrows (and other species)

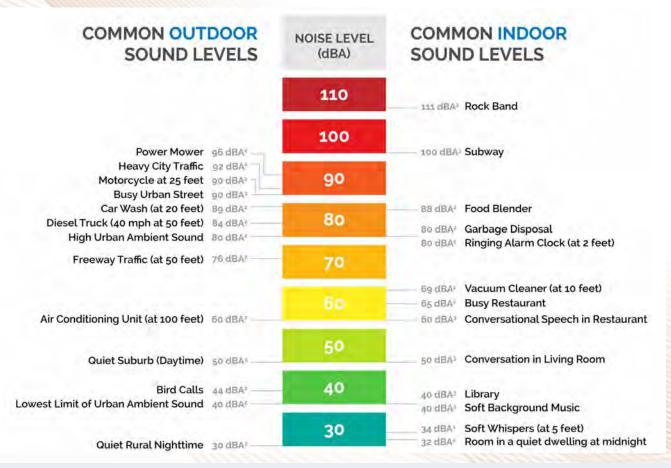
Noise



Noise incompatible land uses include residential, educational, religious, recreational, and cultural areas.

FAA uses the Day-Night Average (DNL) 65 decibel (dB) noise contour to assess land use compatibility impacts related to airport noise. DNL levels are computer simulated and are a 24-hour average. DNL accounts for both the amount of noise from each aircraft operation, as well as the total number of operations flying throughout the day.

Nighttime operations (10 pm to 7 am) are considered ten times as noisy as daytime operations in the DNL calculation.

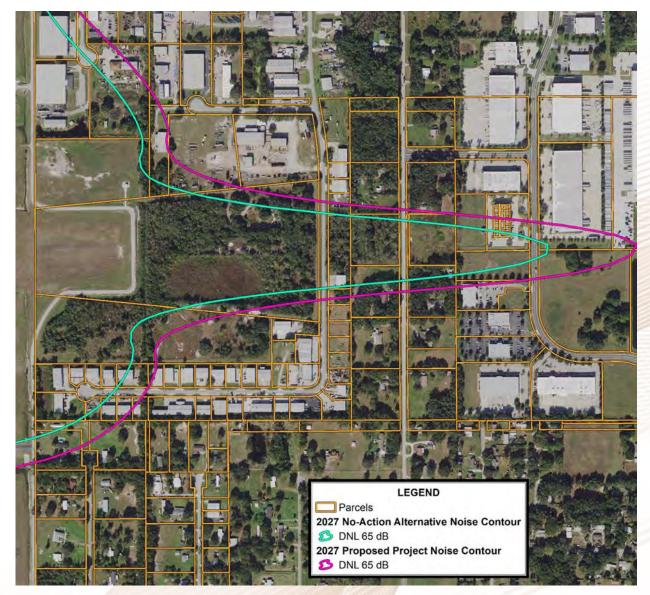


The chart above relates a value of DNL 65 dB, which is the average sound exposure over a 24-hour period, to common outdoor and indoor sound levels.

Noise from individual aircraft overflights could often be louder, albeit much shorter in duration.

2027 Noise Impacts (Off-Airport)





	2027 Noise Exposure within DNL 65						
	No-Action	Proposed Project	Change				
Residential Land Use (acres)	1.8	5.5	+3.7				
Parcels	5	7	+2				
Households on Parcels	5	7	+2				
Households in Contour	2	3	+1				

Overall, residential areas shown above experience a noise increase ranging between 0.8 and 1.2 dB due to the Proposed Project based on the noise simulation. FAA considers mitigation of noise impacts if there is a 1.5 dB or greater increase.

2022 Noise Impacts (Off-airport)





	2022 N	oise Exposure within	DNL 65
	No-Action	Proposed Project	Change
Residential Land Use (acres)	0.5	3.2	+2.7
Parcels	3	6	+3
Households on Parcels	3	6	+3
Households in Contour	0	2	+2

Overall, residential areas shown above experience a noise increase ranging between 0.8 and 1.2 dB due to the Proposed Project based on the noise simulation. FAA considers mitigation of noise impacts if there is a 1.5 dB or greater increase.

Phase II Air Cargo Facility Development | Draft Environmental Assessment

Ongoing Efforts to Manage Aircraft Noise



The EA evaluates noise impacts based on current and planned aircraft operations with and without the Proposed Project. It considers existing flight procedures and flight paths currently in use at LAL. FAA is not requiring mitigation for noise increases shown in the EA.

Separately from the EA process, LAL is actively seeking ways to further manage and reduce aircraft noise to the surrounding community. Because these efforts are still in development, they are not included in the EA noise analysis.

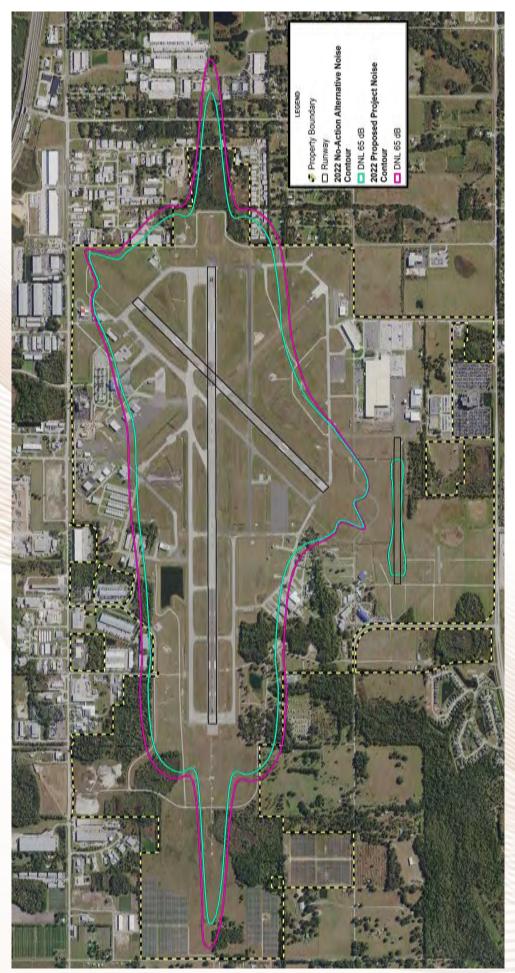
Implementing these procedures now and in the future will reduce noise levels, compared to what is shown in the EA. These measures will reduce noise for communities surrounding the airport and improve conditions for other areas experiencing noise from aircraft overflights.

Voluntary Preferential Runway Use Program: pilots request FAA Air Traffic to assign eastern arrivals and western departures between the hours of 10 pm and 7 am when winds, weather, and other factors allow. These procedures take aircraft away from those densely populated communities closest to the Airport.

Standard Instrument Departure Procedures: develop and get FAA approval for Noise Abatement Departure Profiles (NADP) to abate noise experienced by the community from departing aircraft. NADPs could place aircraft higher over communities or allow reduced engine power levels during overflight, which could reduce noise for communities around LAL.

Visual Approach Procedures: develop and get FAA approval for special visual approaches to be flown by air carrier aircraft when approaching from the east, which could abate noise over those populated areas while also maintaining a safe approach to the Airport.



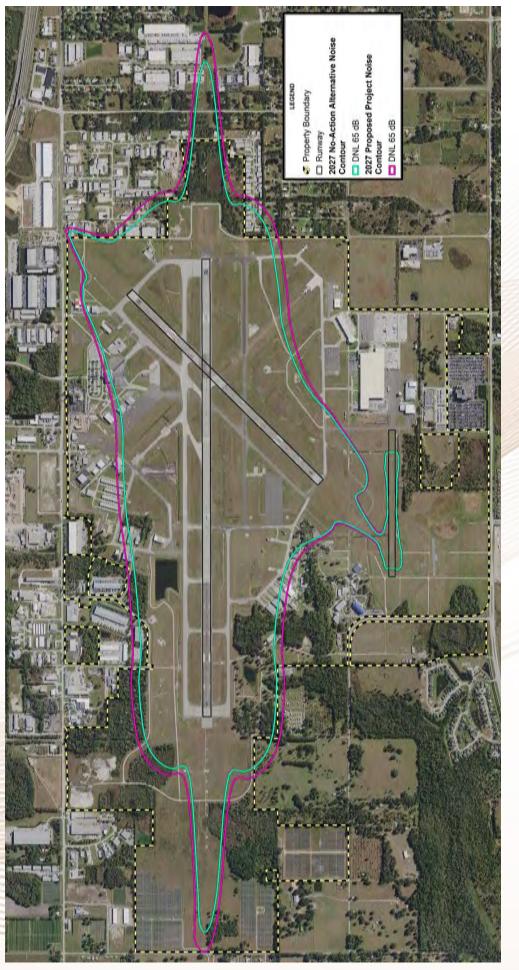


Phase II Air Cargo Facility Development | Draft Environmental Assessment

Noise Contours (2027)



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Phase II Air Cargo Facility Development Environmental Assessment

COMMENT FORM

We encourage you to provide your comments and opinions on this

project so that we may consider them in the study process. Attach additional sheets if needed Name: Address: City, State, Zip:

Please complete this Comment Form and place in one of the drop boxes at the public meeting. You may also mail this Comment Form to the address on the back of this Comment Form by **May 31, 2021**. All comments are part of the public record and are available for viewing by the public and media.

Please note that comments can only be accepted with the full name and address of the individual commenting. Before including your address, phone number, e-mail address, or other personally identifying information (PIP) in your comment, be advised that your entire comment, including your PIP, may be made publicly available at any time. While you can ask in your comment to withhold your PIP from public review, the Airport cannot guarantee that it will be able to do so.

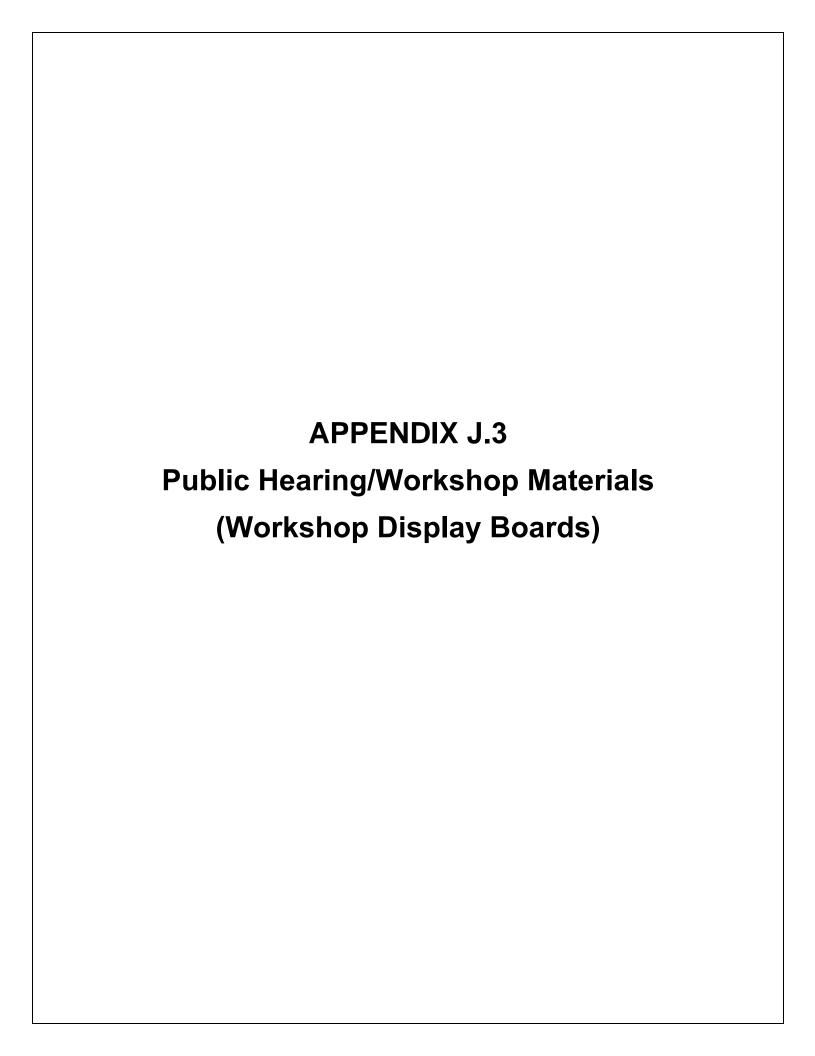
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PLACE STAMP HERE

Lakeland Linder International Airport Attn: Gene Conrad, Airport Director 3900 Don Emerson Drive, Suite 210 Lakeland, FL 33811

_ Please Fold Here







Draft Environmental Assessment for Phase II Air Cargo Facility Development

Lakeland Linder International Airport Polk County, Florida

Combined Public Hearing/Information Workshop



Environmental Assessment Process

- The Federal Aviation Administration (FAA) and the Airport have prepared an Environmental Assessment (EA) to comply with the National Environmental Policy Act of 1969 (NEPA).
- FAA's decisions and approvals necessary to carry out portions of the proposed air cargo development are subject to environmental review under NEPA. FAA's decision authority is further described in the EA.
- Multi-step process.
- Public participation is essential.

An EA includes the following information:

- Purpose of and Need for the Proposed Project
- Description of Proposed Project and reasonable alternatives
- Existing conditions and potential impacts
- Mitigation measures to reduce/avoid significant adverse effects

Next Steps:

At the end of the public review period, FAA and the Airport will collect and consider all comments received. FAA will then issue the Final EA and its environmental determination document. After this, construction plans could proceed further.

FAA DETERMINES THE NEED TO PREPARE ENVIRONMENTAL ASSESSMENT (EA)

CONDUCT AGENCY & PUBLIC SCOPING

PREPARE DRAFT EA

PUBLIC REVIEW PERIOD (April 27 2021 – May 31 2021)

RESPOND TO COMMENTS

PREPARE AND ISSUE FINAL EA

FAA ISSUES ENVIRONMENTAL FINDING



Proposed Project Overview

- The Proposed Project is an expansion of the Phase I air cargo facility that became operational at LAL in 2020. The Proposed Project is called Phase II.
- Expanded air cargo operations are proposed due to the potential for network and customer demand to increase.
- The Proposed Project would provide air cargo facilities, delivery truck parking and staging areas, equipment parking and operations areas, and aircraft parking.
- To supply additional aviation fueling capacity, a fuel farm is also being proposed to the east of the Proposed Project footprint.





Additional Activity from the Proposed Project

Additional Aircraft Operations (Daily)

	2022								
	No-Action			Proposed Project			Additional		
	Departures	Arrivals	Total	Departures	Arrivals	Total	Departures	Arrivals	Total
Day	7	6	13	10	9	19	3	3	6
Night	3	4	7	8	9	17	5	5	10
Total	10	10	20	18	18	36	8	8	16
	2027								
	No	-Action		Proposed Project			Additional		
	Departures	Arrivals	Total	Departures	Arrivals	Total	Departures	Arrivals	Total
Day	7	6	13	12	11	23	5	5	10
Night	3	4	7	10	11	21	7	7	14
Total	10	10	20	22	22	44	12	12	24

Additional Vehicular Traffic Operations (Peak Daily)

		2022			2027			
	No-Action Proposed Project		Additional	No-Action	Proposed Project	Additional		
Employee/Visitor	1,500	2,000	500	1,500	2,510	1,010		
Trucks	125	289	164	125	357	232		
Total	1,625	2,289	664	1,625	2,867	1,242		



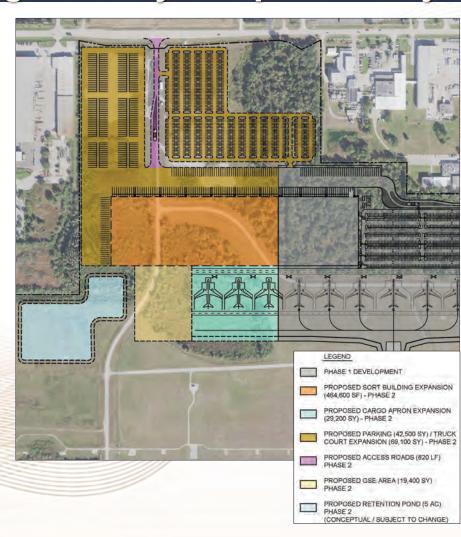
Air Cargo Facility: Proposed Project



Proposed Project

This alternative was retained for consideration in the EA because it provides needed facilities with minimal additional impacts:

- Requires no land acquisition
- Does not impede existing businesses or airport operations
- Does not interfere with existing and planned operations and development





Air Cargo Facility: Alternatives 1 and 2

Alternative 1

This alternative was eliminated from consideration because it:

- Requires land acquisition of ~40 acres
- Impacts residential parcels
- Displaces location of Sun n' Fun
- Overlaps future proposed **Runway 10-28**





Alternative 2

This alternative was eliminated from consideration because it:

- Requires land acquisition of ~41 acres.
- Impacts residential parcels
- Overlaps future proposed Runway 10-18 Runway Protection Zone
- Displaces existing KTTW hangar and apron area







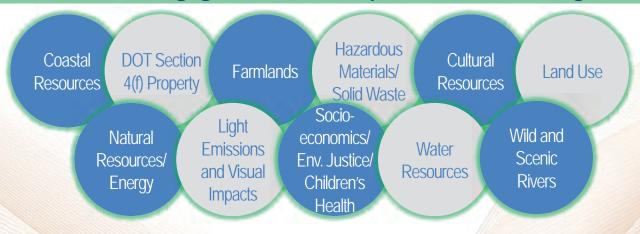
Air Cargo Facility: Alternatives 3 and 4





Environmental Resources Evaluated

The FAA has identified negligible or minor impacts to the following resources:



The FAA has identified short- and long-term impacts to the following resources that do not exceed significance levels:

The FAA has identified adverse impacts to the following resources which require mitigation measures:



Surface Transportation Wetlands Floodplains

Phase II Air Cargo Facility Development | Draft Environmental Assessment



Air Quality

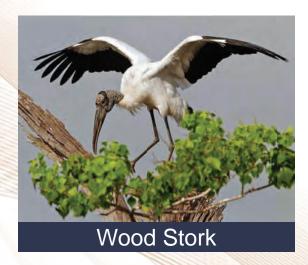
- Temporary construction emissions from construction equipment, vehicles and site grading/paving would occur in 2021.
- Cargo aircraft, cargo equipment and motor vehicle emissions would increase with the Proposed Project compared to the No-Action Alternative in 2022 and 2027.
- Emissions would not exceed air quality standards or significantly impact climate.

	Annual Emissions (tons)								
Pollutant	2021 (Construction)	2022 (No-Action)	2022 (Proposed Project)	2022 Change	2027 (No-Action)	2027 (Proposed Project)	2027 (Change)		
Carbon Monoxide	42.1	1,895.0	1,944.8	+49.8	1,905.5	1,966.9	+61.6		
Nitrogen Oxides	15.5	253.8	276.4	+22.6	199.3	230.1	+30.8		
Particulate Matter (2.5 micrometers)	5.6	13.9	15.1	+1.2	10.3	11.7	+1.5		
Particulate Matter (10 micrometers)	45.2	21.3	23.0	+1.7	18.0	20.3	+2.3		
Sulfur Oxides	0.1	8.6	9.2	+0.6	9.9	10.6	+0.8		
Volatile Organic Compounds	23.9	105.5	111.0	+5.5	98.4	105.2	+6.7		



Biological Resources

Not Likely to Adversely Affect any state or federally listed plant or animal species







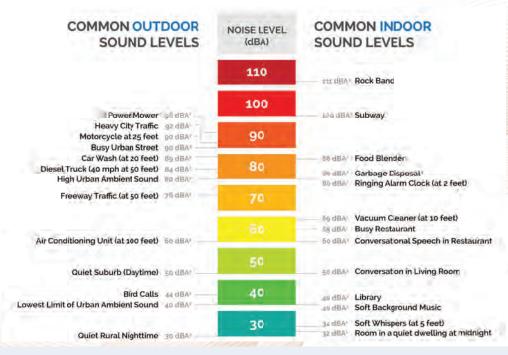
Species Conservation Measures:

- Implement Standard Protection Measures for the Eastern Indigo Snake
- Provide compensation for loss of wetland and wood stork foraging habitat
- Prior to construction, resurvey for gopher tortoise burrows, burrowing owl burrows, and nests of listed/protected bird species



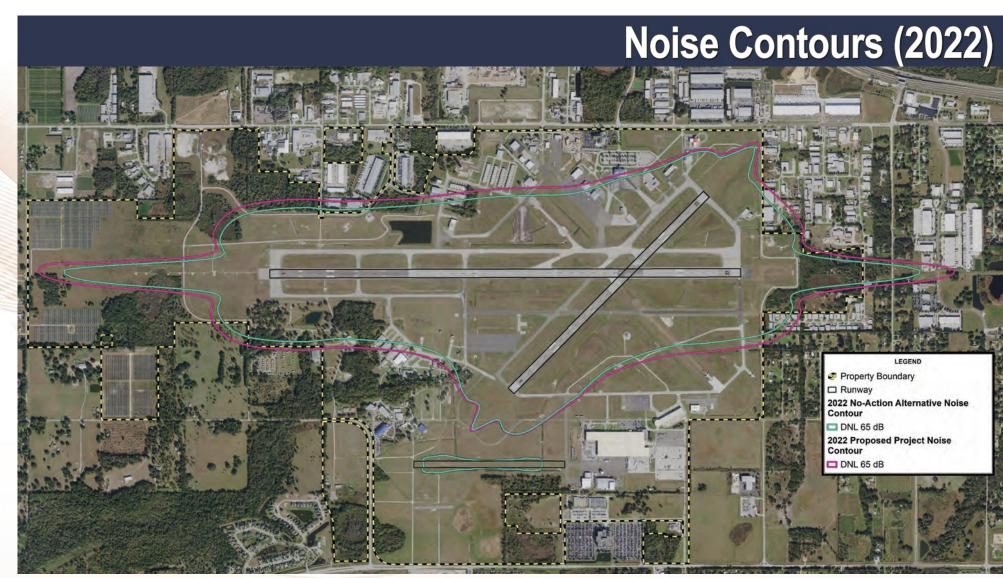
Noise

- Noise incompatible land uses include residential, educational, religious, recreational, and cultural areas.
- FAA uses the Day-Night Average
 (DNL) 65 decibel (dB) noise contour to
 assess land use compatibility impacts
 related to airport noise.
- DNL levels are computer simulated and are a 24-hour average. DNL accounts for both the amount of noise from each aircraft operation, as well as the total number of operations flying throughout the day.
- Nighttime operations (10 pm to 7 am) are considered ten times as noisy as daytime operations in the DNL calculation.

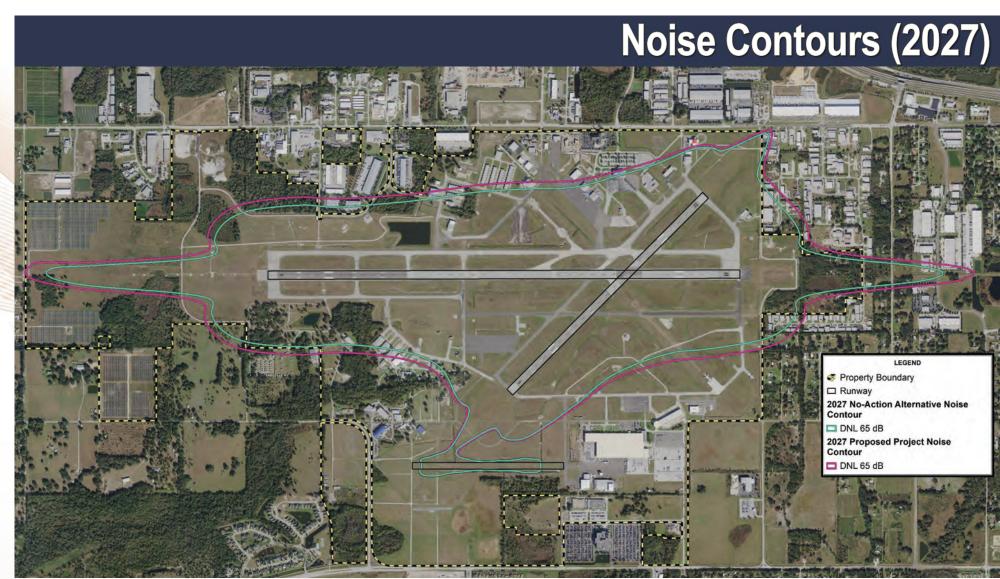


The chart above relates a value of DNL 65 dB, which is the average sound exposure over a 24-hour period, to common outdoor and indoor sound levels. **Noise from individual aircraft overflights could often be louder**, albeit much shorter in duration.









Phase II Air Cargo Facility Development | Draft Environmental Assessment



Noise Impacts (Off-Airport)





- Parcels and residences included in the airport noise contours experience a noise increase ranging between 0.8 and 1.2 dB based on the noise simulation.
- FAA's significance threshold for noise impacts, where mitigation is considered, is a 1.5 dB or greater increase.



Ongoing Efforts to Manage Aircraft Noise

The EA evaluates noise impacts based on current and planned aircraft operations with and without the Proposed Project. It considers existing flight procedures and flight paths currently in use at LAL. FAA is not requiring mitigation for noise increases shown in the EA.

Separately from the EA process, LAL is actively seeking ways to further manage and reduce aircraft noise to the surrounding community.

Implementing these procedures now and in the future will reduce noise levels, compared to what is shown in the EA. These measures will reduce noise for communities surrounding the airport and improve conditions for other areas experiencing noise from aircraft overflights.

Phase II Air Cargo Facility Development | Draft Environmental Assessment

Voluntary Preferential Runway Use Program: pilots request FAA Air Traffic to assign eastern arrivals and western departures between the hours of 10 pm and 7 am when winds, weather, and other factors allow. These procedures take aircraft away from those densely populated communities closest to the Airport.

Standard Instrument Departure Procedures: develop and get FAA approval for Noise Abatement Departure Profiles (NADP) to abate noise experienced by the community from departing aircraft. NADPs could place aircraft higher over communities or allow reduced engine power levels during overflight, which could reduce noise for communities around LAL.

<u>Visual Approach Procedures:</u> develop and get FAA approval for special visual approaches to be flown by air carrier aircraft when approaching from the east, which could abate noise over those populated areas while also maintaining a safe approach to the Airport.



Surface Transportation Impacts

- Level of Service (LOS) is assigned to intersections based on the average vehicle delay
- LOS A has the shortest delays and LOS F has the longest.
- By 2027, the Proposed Project causes LOS conditions to deteriorate to F at the intersection of Kidron and Drane Field Roads, causing delays.





Surface Transportation Mitigation

Level of Service (LOS) is a measurement of intersection performance and traffic delay. Without mitigation, additional cargo facility traffic would increase intersection LOS to unacceptable levels at **Kidron Road/Drane Field Road** intersection by 2027.

Two traffic mitigation strategies were developed and assessed:

- 1. Retain the stop sign and add dedicated turn lanes
- 2. Install a traffic signal and add dedicated turn lanes
 Both strategies would improve LOS.



Mitigation Alternative 1: Stop Sign with Turn Lanes



Mitigation Alternative 2: Traffic Signal with Turn Lanes

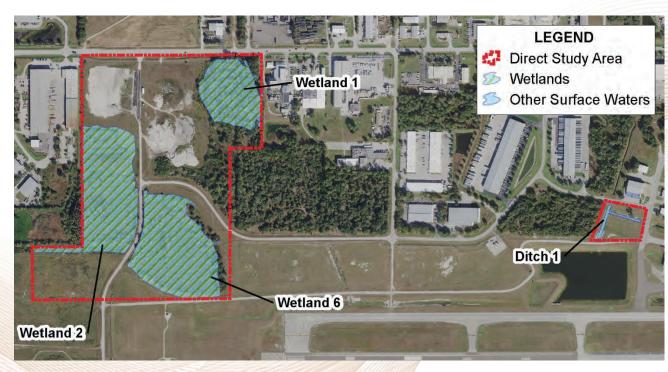


Wetlands

A total of 28.6 acres of wetlands and surface waters are located within the Project Areas.

The Proposed Project would impact 25.2 acres as shown below.

ID	Description	Impacts (Acres)
Wetland 1	Forested Mixed	1.5
Wetland 2	Scrub	12.2
Wetland 6	Scrub	11.2
Ditch 1	Stream/Waterway	0.3
	Total	25.2



The Project would avoid impacts to 3.4 acres of wetlands in the project area.

To compensate for wetland impacts to the remaining acres, wetland credits will be purchased from the Alafia River Mitigation Bank.



Floodplains



The Proposed Project would impact 28.4 acres of Zone A floodplain.

The Proposed Project
stormwater drainage
improvements would offset
loss of floodplain storage
capacity.

With this mitigation, the FAA determined that the floodplain impact would not increase flood potential, create encroachment-related costs or damage, or adversely impact natural and beneficial floodplain values. **Offsetting wetland loss and applying species conservation measures** discussed in the EA would also further reduce floodplain impact.



How to Comment

During the Workshop

- 1. Fill out a comment form and place in one of the drop boxes, or
- 2. Speak privately to the court reporter to have your comment recorded for the EA record.

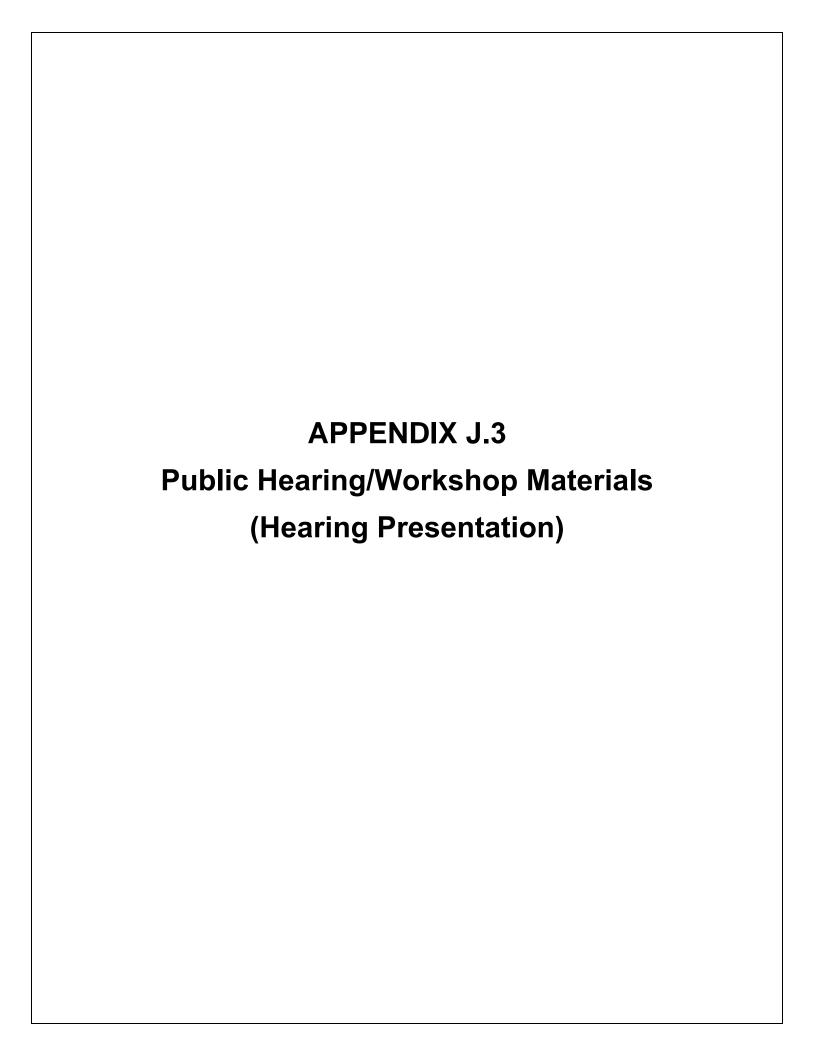
During the Hearing

- 1. Fill out a comment form and place in one of the drop boxes, or
- 2. Speak privately to the court reporter to have your comment recorded for the EA record, or
- 3. Fill out a **speaker registration card before the hearing** and return it to a meeting representative to make an **official public statement during the hearing**. Please limit your statement to **three minutes**.

After Tonight's Meeting

- 1. Comment by email to Gene.Conrad@lakelandgov.net, or
- 2. Fill out a comment form and mail to:

Lakeland Linder International Airport Attention: Gene Conrad, Airport Director 3900 Don Emerson Drive, Suite 210 Lakeland, Florida 33811 Comments should be emailed/postmarked by **May 31, 2021**







Public Hearing

Draft Environmental Assessment for Phase II Air Cargo Facility Development

Lakeland Linder International Airport Polk County, Florida

Thursday May 27, 2021 7 p.m.

RP Funding Center Sikes Hall 701 W Lime St Lakeland, FL 33815





Hearing Presentation Agenda

- 1. Purpose of Public Hearing
- 2. Proposed Project Overview
- 3. Alternatives Considered
- 4. Environmental Impact Summary
- 5. Conclusion and Remarks from the Airport Director





Purpose of Public Hearing





Environmental Assessment Process

The Federal Aviation Administration (FAA) and the Airport have prepared an Environmental Assessment (EA) for proposed air cargo expansion

Describe Proposed Project, EA process and findings, and receive public input

Public participation is essential

Public participation is solicited without regard to race color, national origin, age, sex, religion, disability, or family status

FAA DETERMINES THE NEED TO PREPARE ENVIRONMENTAL ASSESSMENT (EA)

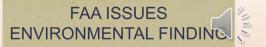
CONDUCT AGENCY & PUBLIC SCOPING

PREPARE DRAFT EA

PUBLIC REVIEW PERIOD (April 27 2021 – May 31 2021)

RESPOND TO COMMENTS

PREPARE AND ISSUE FINAL EA



Phase II Air Cargo Facility Development | Draft Environmental Assessment



Public Notice

- 1. Advertisements in Lakeland Ledger
- On airport's website https://www.flylakeland.com
- 3. Airport Social Media





Agency and Stakeholder Coordination

- Central Florida Development Council
- Central Florida Regional Planning
 Council
- City of Lakeland
- Florida Department of Environmental Protection
- Florida Department of Transportation
- Florida Division of Historic Resources

- Florida Fish and Wildlife Conservation Commission
- Lakeland Electric
- Lakeland Economic Development Council
- Native American Tribes
- Polk County Office of Planning and Development
- Polk Transportation Planning Organization
- U.S. Fish and Wildlife Service



Draft Documents for Public Review

In Hard Copy

Larry R. Jackson Branch Library

1700 N Florida Avenue Lakeland, FL 33805

eLibrary South Lakeland

4740 S Florida Avenue

Lakeland, FL 33813

Lakeland Linder International Airport (Airport Terminal)

3900 Don Emerson Drive, Suite 210
Lakeland, FL 33811

Electronically

Project Website:

https://www.flylakeland.com/airportprojects





How to Comment on the EA

During the Workshop

- 1. Fill out a comment form and place in one of the drop boxes, or
- 2. Speak privately to the court reporter to have your comment recorded for the EA record.

During the Hearing

- 1. Fill out a comment form and place in one of the drop boxes, or
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Lakeland Linder International Airport
Attention: Gene Conrad, Airport Director
3900 Don Emerson Drive, Suite 210
Lakeland, Florida 33811

Comments should be emailed/postmarked by **May 31, 2021**



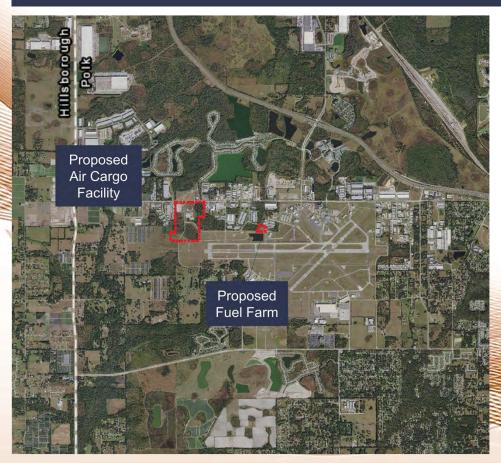


Proposed Project Overview





Proposed Project





Phase II Air Cargo Facility Development | Draft Environmental Assessment



Proposed Project – Air Cargo Facility



Purpose:

- Provide suitable site for air cargo facility expansion
- Expand regional hub capabilities

Need:

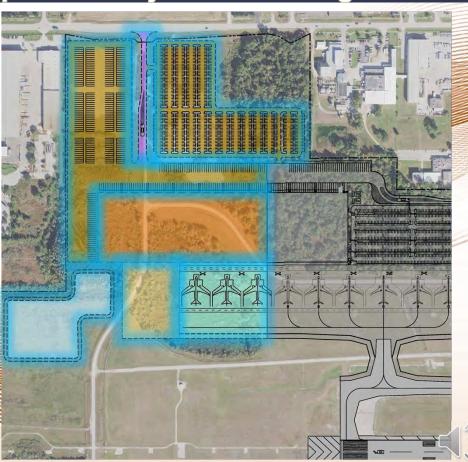
- Process peak cargo volumes based on existing and forecasted demand
- Additional cargo building space and capacity
- Additional staff and truck parking





Proposed Project – Air Cargo Facility





Phase II Air Cargo Facility Development | Draft Environmental Assessment



Proposed Project – Air Cargo Aircraft Activity

	2022 Aircraft Operations								
	No-Action			Proposed Project			Additional		
	Dep	Arr	Total	Dep	Arr	Total	Dep	Arr	Total
Day	7	6	13	10	9	19	+3	+3	+6
Night	3	4	7	8	9	17	+5	+5	+10
Total	10	10	20	18	18	36	+8	+8	+16
	2027 Aircraft Operations								
	No-Action			Proposed Project			Additional		
	Dep	Arr	Total	Dep	Arr	Total	Dep	Arr	Total
Day	7	6	13	12	11	23	+5	+5	+10
Night	3	4	7_	10	11	21	+7	+7	+14
Total	10	10	20	22	22	44	+12	+12	+24



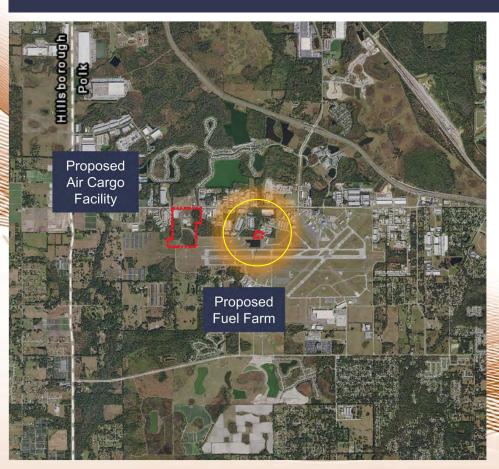
Proposed Project – Air Cargo Vehicle Activity

	2022 V	ehicle Operations		2027 Vehicle Operations			
	No-Action	Proposed Project	Additional	No-Action	Proposed Project	Additional	
Employee/ Visitor	1,500	2,000	+500	1,500	2,510	+1,010	
Trucks	125	289	+164	125	357	+232	
Total	1,625	2,289	+664	1,625	2,867	+1,242	





Proposed Project – Fuel Farm



Purpose:

Supply additional aviation fueling capacity at LAL

Need:

 Additional tanks providing a total of 850,000 gallons of jet fuel capacity





Phase II Air Cargo Facility Development | Draft Environmental Assessment



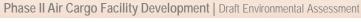
Alternatives Considered





Air Cargo Facility Alternatives







Air Cargo Facility Alternatives





Fuel Farm Alternatives





Environmental Impact Summary





Environmental Issues Evaluated

The FAA has identified negligible or minor impacts to the following resources:



The FAA has identified short- and long-term impacts to the following resources that do not exceed significance levels:

The FAA has identified adverse impacts to the following resources which require mitigation measures:

Air Quality/ Climate Biological Resources Noise Surface Wetlands Floodplains





Environmental Impacts

Air Quality

Biological Resources





Environmental Impacts

Surface Transportation

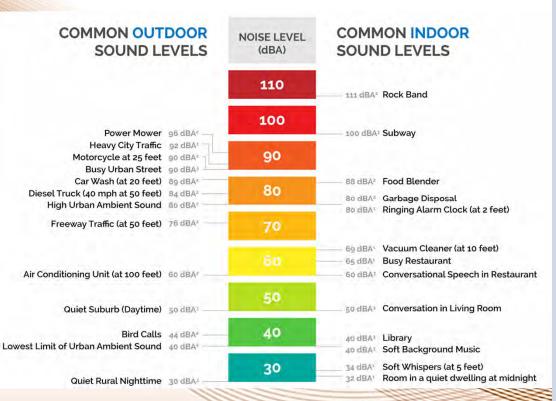
Phase II Air Cargo Facility Development | Draft Environmental Assessment

Wetlands and Floodplains





Noise

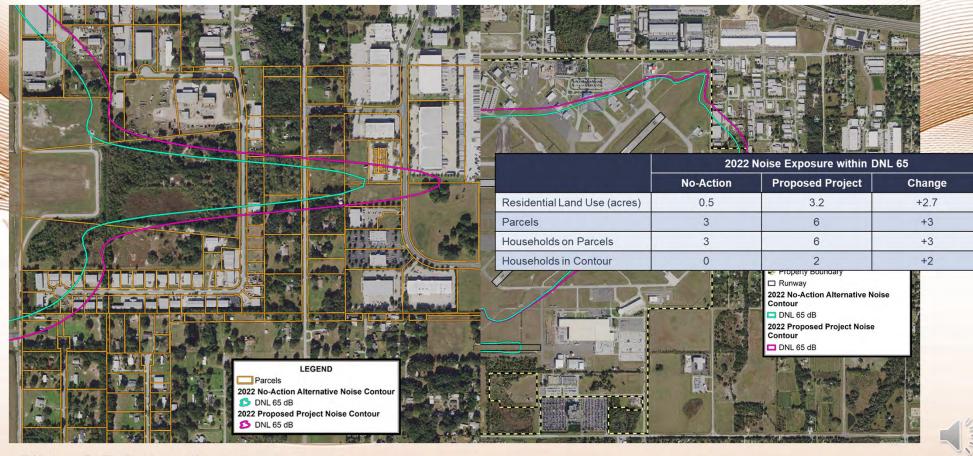


- FAA uses the Day-Night Average (DNL) 65 decibel (dB) noise contour
- DNL levels are computer simulated and are a 24-hour average
- Nighttime operations (10 pm to 7 am) are considered ten times as noisy
- Noise from individual aircraft overflights can often be louder





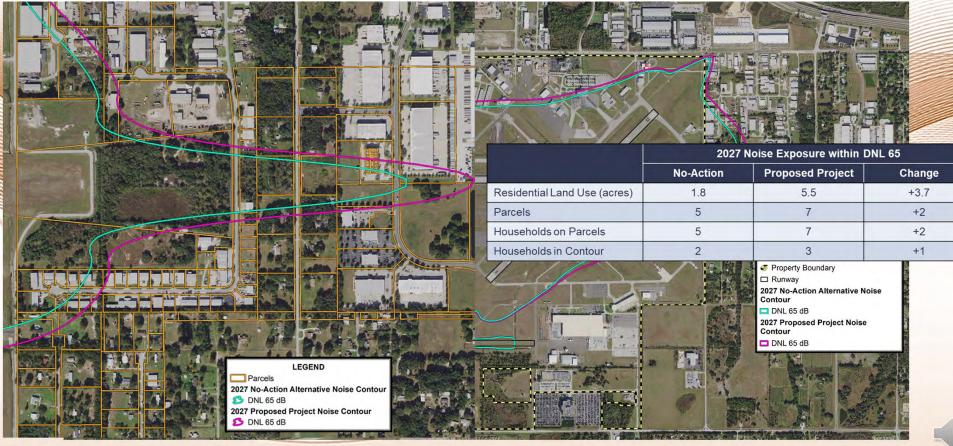
EA Noise Contours (2022)







EA Noise Contours (2027)







Ongoing Efforts to Manage Aircraft Noise

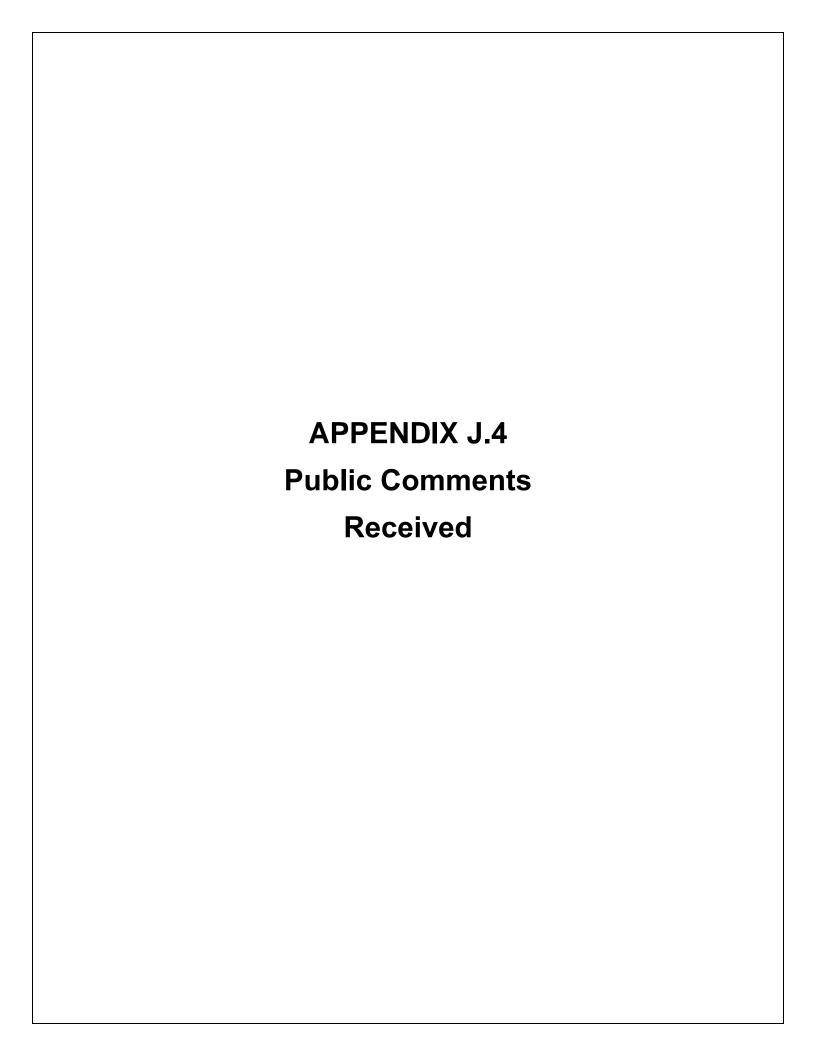
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- Standard Instrument Departure Procedures: develop and get FAA approval for Noise Abatement Departure Profiles (NADP) to abate noise experienced by the community from departing aircraft.
- Visual Approach Procedures: develop and get FAA approval for special visual approaches to be flown by air carrier aircraft when approaching from the east





Conclusion and Remarks from the Airport Director







COMBINED PUBLIC HEARING/INFORMATION WORKSHOP

RE: DRAFT ENVIRONMENTAL ASSESSMENT PHASE II AIR CARGO FACILITY DEVELOPMENT LAKELAND LINDER INTERNATIONAL AIRPORT POLK COUNTY, FLORIDA

DATE:

THURSDAY, MAY 27, 2021

TIME:

6:00 p.m.

LOCATION: RP FUNDING CENTER

SIKES HALL

701 WEST LIME STREET LAKELAND, FLORIDA 33815

PRESENT:

ADAM PURCELL, AECOM

GENE CONRAD, DIRECTOR OF LAKELAND LINDER

INTERNATIONAL AIRPORT

ALSO PRESENT: MEMBERS OF THE PUBLIC

MEMBERS OF THE PRESS

OTHER INTERESTED PARTIES

Proceedings Reported by:

Wendy Wyncoop

Registered Professional Reporter

THEREUPON, the following proceedings were had and taken at 7:00 p.m.:

2.1

2.3

2.4

MR. PURCELL: Good evening. Lakeland Linder International Airport welcomes you to the public hearing of the Draft Environmental Assessment for Phase III Air Cargo Facility Development. I would like to formally start the public hearing today. It is Thursday, 27 May, 2021, and the time is 7:00 p.m.

My name is Adam Purcell with AECOM, and I will be moderating the hearing this evening. I'd like to note for the record that this is public hearing is being recorded and a verbatim transcript will be made of all oral proceedings.

We will now give a formal presentation about the project. The presentation is prerecorded.

After the presentation and some remarks from the airport director we'll open the hearing for public testimony.

(Presentation)

SPEAKER: Good evening. Welcome to the public hearing for the Draft Environmental Assessment for Phase II Air Cargo Development at Lakeland Linder International Airport. The proposed air cargo development project will expand existing air cargo

facilities at the airport that opened in 2020. This public hearing is being held to provide you with the opportunity to comment on the Draft Environmental Assessment or EA.

2.1

2.3

2.4

We will follow the agenda shown on the screen starting first with the purpose of the public hearing including how to comment on the EA. We will then hear an overview of the proposed project studied in the draft EA and any alternatives considered. After an overview of environmental impacts presented in the draft EA and some concluding remarks from the airport, we will open the public comment portion of this hearing.

The purpose of this hearing is to share information with the general public about the proposed project, its conceptual design, all alternatives under study and the potential beneficial and adverse social, economic, cultural, natural and physical impacts on the community.

The public hearing also serves as an official forum to provide an opportunity for members of the public to express their opinions and comments regarding the project. Public participation is encouraged and solicited without regard to race, color, national origin, age, sex, religion,

disability or family status.

2.1

2.3

2.4

During this portion of the presentation we'll overview the EA process, the public and regulatory agency notification process, how to obtain the draft EA for review, and most importantly how to comment at tonight's meeting and for the remainder of the public comment period.

Development activities on public use airports often require review and approval by the Federal Aviation Administration or FAA. Part of FAA's approval process includes complying with the National Environmental Policy Act of 1969 or NEPA. The FAA has determined that portions of the proposed air cargo development project require NEPA review and approval and has identified the need to prepare an EA.

The EA process is shown in the diagram on this screen which includes preparing a draft EA for public review and comment, offering a public review and comment period, and issuing a final EA environmental decision. The draft EA has been prepared in accordance with FAA Order 1050.1F, Environmental Impacts, Policies and Procedures as well as FAA Order 5050.4B, NEPA Implementing Instructions for Airport Actions.

The availability of the draft EA and the intent to hold this public hearing was advertised consistent with FAA regulations and guidelines. A notice of availability of the draft EA and notice of public hearing was advertised in the Lakeland Ledger on April 23, 2021, and again on April 26, 2021.

2.1

2.2

2.3

2.4

The airport has also published notice of the draft document on their website and social media accounts.

The federal, state and local planning and regulatory agencies listed on this screen were offered the opportunity to participate in the draft EA process. Federally recognized Native American Tribes with affiliation or interest in activities in Polk County were also invited by the FAA to participate. Of the stakeholders listed on this screen, those in bold font provided comment or input to the development of the draft EA to date.

Hard copies of the draft EA are available for public review and inspection until May 31, 2021 at the Larry R. Jackson Branch Library, the elibrary South Lakeland, and at the Lakeland Linder International Airport. Electronic copies of the draft EA can be obtained by visiting the airport's website at the URL shown on the screen.

There are many opportunities to comment on the draft EA, both tonight and going forward to the close of the public comment period on May 31, 2021. Attendees of tonight's public hearing can fill out a comment form and place it in one of our drop boxes or speak privately to the court reporter located to the side of the seating areas. After this hearing presentation attendees will also be able to make an official public statement to be recorded into the EA hearing record.

2.1

2.2

2.3

2.4

If you intend to make an official public statement at tonight's hearing, please be sure to fill out a speaker registration card beforehand and turn it in at the sign-in table if you haven't already. Registered speakers will be called to make their comments in the order registrations were received and will be allotted three minutes to do so.

After tonight's hearing, written comments will be accepted through May 31, 2021. You may take a comment form with you and mail it to the airport at the address shown on the screen. Comments by mail must be postmarked by May 31, 2021 in order to be included in the EA record and considered when preparing the final EA.

You may also submit comments by e-mail through May 31, 2021 to Mr. Gene Conrad, airport director, at the e-mail address shown. Every comment method described here carries equal weight.

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We'll now hear an overview of the proposed project studied in the draft EA including its purpose and need and anticipated air cargo activities that would occur if the proposed project were implemented.

The proposed project is an expansion of the air cargo facility that became operational at the airport in 2020. The existing facility is referred to as Phase I. The proposed project is a Phase II expansion and is being considered to accommodate expanded future operations given the potential for network and customer demand to increase in the near future.

The facility will be designed to accommodate Boeing 767 and 737 cargo aircraft. An expanded fuel farm is also being proposed at the location shown to provide additional aviation fueling capacity at the airport.

With the proposed project the airport seeks to provide a suitable site for the proposed expansion of air cargo facilities, services and operations at the airport. Demand for air cargo facilities in central Florida continues to increase with the growth of e-commerce. Although the Phase I air cargo facilities meet existing market demand, they lack the space and cargo volume capacity to handle future expansions of air cargo demand in the market. The proposed project would allow the expansion of regional air cargo hub capabilities at the airport.

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The proposed project would develop additional air cargo processing and sorting facilities, delivery truck parking and staging areas, equipment parking and operation areas, and aircraft parking, processing and maintenance areas.

Specifically the proposed project would:

Construct up to 464,600 square feet of additional sort building and office building space shown in orange;

Construct a concrete aircraft parking apron to accommodate three additional Boeing aircraft parking positions shown in green;

Construct air field pavement for aircraft ground support and equipment staging and periodic aircraft parking shown in tan;

Construct a paved truck court area to accommodate up to 370 additional truck bays shown in

1 gold;

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Construct a paved vehicle parking lot to accommodate up to 1,120 additional parking spaces shown in gold;

Construct a new airport access road to access the Phase II facilities from Drane Field Road at the existing intersection of Drane Field Road and Kelvin Howard Road shown in pink; and modifications to the airport's storm water management system including construction of a storm water retention pond shown in blue.

The location and size of the pond is conceptual and is pending further design of the project.

Shown on the screen is a summary of projected daily aircraft operations that would occur in years 2022 and 2027 for the no-action alternative, which represents the current Phase I operations at the airport and the proposed project alternative which is the total of both Phase I and forecasted Phase II operations at the airport. The columns to the right summarize how many daily aircraft operations would be added due to the proposed project each year.

To summarize in 2022 the Phase I facility would reach its maximum operational capacity of 20 average daily flights under the no-action alternative. If

the proposed project were implemented Phase II would add 16 average daily flights to Phase I totals for an overall total of 36 average daily operations at the airport. For the purposes of this EA nighttime operations occur between the hours of 10:00 p.m. and 7:00 a.m. Operations would be conducted by a combination of Boeing 737 and 767 aircraft.

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By 2027 the Phase I facility would maintain its maximum operational capacity of 20 average daily operations under the no-action alternative. With implementing the proposed project Phase II would add 24 average daily flights to the Phase I totals for an overall total of 44 average daily flights at the airport.

The increase in aircraft flights with the proposed project would also increase the amount of cargo delivery trucks needed to transport the associated freight. Additional employees to process and sort the freight would also be needed, and therefore employee vehicle trips would also increase. Visitor trips, including company staff and vendors, would also increase.

Overall, the proposed project would add 500 peak daily employee and visitor trips in 2022 compared to Phase I operations alone and 164 peak

daily truck trips. By 2027 these values would increase to just over 1,000 peak daily employee and visitor trips and 232 peak daily truck trips.

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As mentioned additional fueling capacity would be needed at the airport with the proposed project. The existing fuel farms can store up to 24,000 gallons of aviation gasoline and 72,000 gallons of Jet-A fuel. Current projections of cargo operations indicate the need for additional above ground tanks providing a total of 850,000 gallons of Jet-A fuel capacity.

NEPA requires the FAA to identify reasonable alternatives to the proposed project and determine whether or not they need detailed consideration in the EA process. Here we will review the alternatives identified in the EA for the Phase II air cargo facility and the fuel farm.

For the air cargo facility two alternatives on the airport's south side were considered. Both of these alternatives would meet the purpose and need of the air cargo facility expansion by providing the sufficient aircraft, building and vehicle operations capacity to meet future demand. However, each of these options would also require off airport land acquisition of over 40 acres including residential

areas. They each would also interfere with current airport activities such as the Sun n' Fun Expo as well as future air field development projects included in the airport's master plan. These locations would also likely increase air cargo vehicle traffic on the roadways to the south of the airport which were not designed to accommodate the traffic. Therefore, these alternatives were not further assessed in the EA.

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Similarly two alternatives on the north side of the airport were considered to meet the purpose and need of the project. Alternative 3 is immediately east of the existing Phase I cargo facility, but it would require over 30 acres of land acquisition and would displace commercial land uses.

Alternative 4 in the northeast would require less land acquisition but would require demolishing the crosswind runway 5-23. Its buildings would also create obstructions to aircraft operations on the main runway 9-27. For these reasons these two alternatives were not further assessed in the EA.

Three alternatives for the fuel farm in various locations across the airport would meet the purpose and need of the project. However, the proposed project shown previously would best promote

efficiency in refueling operations at the airport because it is located in an area that is conveniently accessible to both the airport terminal areas to the east and the air cargo facilities to the west. Therefore, the three alternatives shown were not considered further and only the proposed project was retained in the EA for further environmental analysis.

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Here we will briefly overview the scope of the environmental analysis contained in the EA with an emphasis on environmental resource areas that experience greater impacts due to the project.

The NEPA process requires FAA to examine the potential environmental, social and economic impacts of the proposed project in nearly 20 different categories. The categories shown in green on the screen were determined by FAA to be either not applicable to the proposed project, not impacted at all or impacted to a very minor or temporary degree.

As part of this determination FAA consulted with the Florida Department of Environmental Protection to determine the project's consistency with the Florida Coastal Zone Management Program as it applies to Polk County. They also coordinated a cultural resources assessment survey with the

Florida Division of Historic Resources and interested Native American Tribes in order to support a no-impacts determination to cultural resources.

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The categories in yellow would experience adverse effects that do not exceed FAA's significance criteria. Those in red would experience adverse effects that are significant and would require mitigation per FAA's NEPA rules.

These categories will now be briefly discussed.

For air quality the proposed project would generate emissions from construction equipment and activities. Increased aircraft and vehicle operations with the proposed project would also increase emissions on an annual basis. Because Polk County is currently in compliance with all air quality standards, these emissions levels do not violate any applicable air quality regulations or thresholds and therefore mitigation is not required. However, the draft EA identifies some emissions reduction measures and construction best practices that can reduce emissions levels.

For biological resources qualified biologists reviewed the project area for threatened and endangered species and potential habitat. Based on

this review the FAA coordinated a biological assessment with the U.S. Fish and Wildlife Service. Through this coordination both agencies agreed that the proposed project may affect the Wood Stork, the Eastern Indigo Snake and the Gopher Tortus. By implementing the conservation measures shown on the screen, the Fish and Wildlife Service concluded that these species would not be adversely affected by the project.

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Traffic delay modeling was performed at four intersections along Drane Field Road with and without the proposed project. Added traffic would reduce the level of service or LOS at some of these intersections.

LOS is a measure of how much traffic can move through an intersection and how much delay is present. LOS A is the best performing, and LOS F is the worst.

The analysis shows that LOS would degrade to unacceptable levels with the project at the intersection of Drane Field and Kidron Roads by year 2027. Mitigation would be required for these impacts.

Two mitigation options were considered in the EA. Both would offset the LOS impact and further

the mitigation option of adding turn lanes and a traffic signal at the intersection would actually improve LOS.

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25.2 acres of wetlands and 28.4 acres of floodplains would be impacted by the proposed project construction. Wetland loss can be mitigated by purchasing credits from the Alafia River Mitigation Bank so the bank can reconstruct or improve wetlands elsewhere to offset the loss. The FAA determined that the proposed project storm water improvements along with other best practices such as elevating structures above the base flood elevation would compensate for the loss of flood plain areas.

For EA noise impacts the FAA has determined that the noise exposure from the project activities must be expressed as a day-night average sound level or DNL. DNL is a 24 hour time weighted average and is based on computer simulation. DNL accounts for the noise levels of all individual aircraft flights, the number of times those flights occur, and the time of day which they occur. DNL has two time periods, daytime, 7:00 a.m. to 10:00 p.m. and the nighttime, 10:00 p.m. to 7:00 a.m.

To account for the added intrusiveness of sounds occurring during nighttime hours, nighttime

operations are considered ten times as noisy. It is important to note that the DNL metric is a daily average. Individual aircraft overflights can be much louder, and noise can be experienced further away from the airport.

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FAA defines the 65 DNL noise contour as the threshold of noise compatibility for residential land uses. For EAs a project has significant impact if it would increase noise by 1.5 decibels or more for an area that is already located in the 65 DNL noise contour. A project would also have a significant impact if it causes new areas to be included in the 65 DNL noise contour due to an increase of 1.5 decibels.

The year 2022 DNL noise contour for the no-action alternative, which represents Phase I's maximum of 20 operations per day, is shown in teal on this graphic. The proposed project contour which adds 16 more daily operations is shown in magenta. A majority of the 65 DNL noise footprint remains on airport property in both scenarios although it goes off airport property on the eastern side.

The graphic focuses in on the off airport area.

As shown, the FAA determined that the proposed

project would increase the amount of residential

land use in the noise contour by 2.7 acres. This would involve all or portions of six individual parcels. Of the six residences located on the parcels, two would be located within the 65 DNL contour. The parcels and residences located within or newly within the contour would not experience an increase in aircraft noise of 1.5 decibels or greater. Therefore, mitigation is not required for the purposes of reducing the impact below the threshold indicating a significant impact.

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The year 2016 DNL noise contour for the no-action alternative which represents Phase I's maximum of 20 operations per day is shown in teal on this graphic. The proposed project contour which adds 24 more daily operations is shown in Magenta. Again, a majority of the DNL 65 noise footprint remains on airport property in both scenarios although it goes off airport property on the eastern side.

This graphic focuses in on the off airport area. As shown the FAA determined that the proposed project would increase the amount of residential land use in the noise contour by 3.7 acres. This would involve all or portions of seven individual parcels. Of the seven residences located on the

parcels, one additional residence would be located within the contour for a total of three. The parcels and residences within or newly within the contour would not experience an increase of 1.5 decibels or greater. Therefore, mitigation is not required for the purpose of reducing the impact below the threshold indicating a significant impact.

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The EA evaluates noise impacts based on current and planned aircraft operations with and without the proposed project. It considers existing flight procedures and flight paths currently in use at the airport. FAA is not requiring mitigation for noise increases shown in the EA based on the 65 DNL contours. However, as acknowledged earlier in this presentation, noise from the airport can be louder on a per flight basis and can extend further into off airport communities.

Separately from the EA process the airport is actively seeking ways to further manage and reduce aircraft noise to the surrounding community. These include implementing a preferential runway use program, developing departure procedures with FAA that get aircraft higher quicker and developing approach procedures with FAA that allow pilots to avoid flying over certain areas when approaching the

1 airport.

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The objective of these measures is to reduce noise for communities surrounding the airport and improve conditions for other areas experiencing noise from aircraft overflights.

Before opening tonight's hearing for public testimony the airport would like to brief you on the current status of these initiatives.

This concludes tonight's formal public hearing presentation. We would now like to introduce Mr. Gene Conrad, airport director to elaborate on some of the noise abatement initiatives currently underway and to make come concluding remarks.

Afterward we'll open the hearing for public testimony.

MR. CONRAD: All right. Well, good evening -good evening. My name is Gene Conrad, and I'm the
airport director for Lakeland Linder International
Airport. And I just want to start by saying thank
you to all of you for showing up, and we truly do
appreciate the participation.

Obviously there's a lot of difficult questions, and there's a lot of answers that everybody are looking for, but I just wanted to briefly go over what specifically us as the airport and the city are

doing obviously to address the noise impacts. Right?

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So we just talked about and listened to our presentation reference the Draft Environmental Assessment. And when we look at the noise contours, you know, those are things that FAA looks at are close in impacts basically essentially on top of the airport. But we clearly know obviously with all the great participation tonight that there are impacts that are further away from the airport.

So what I wanted to be able to do tonight is just address those, tell you exactly what we're doing and what we're working on and what our timelines are to help mitigate as much as we can the noise and the impacts for these aircraft that are flying over the top of Lakeland.

First slide. I know probably some of this is hard to see. This is our handout. I just want to briefly talk about the airport and what has happened over the last decade there. Over 440 million dollars has been invested into the airport.

Obviously various pavement projects, Amazon's development, solar farms, new hangar development and NOAA for example the Hurricane Hunters has been a significant investment in our airport over the last

1 decade.

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Also when you look at our operations, our operation is two -- 24/7 356 days a year. We have a crash fire rescue station on the airport, station 7. We have green trucks that go to the airfields, red trucks that go to the public side. We also have 260 based aircraft on the airport.

Our large runway is 8,500 feet long, so it's a very capable facility and obviously we have a lot of operations. We are the 124th busiest airport in the United States. So there's 520 towered airports in the United States. We're about the 124th busiest, so a lot of activity already including obviously what Amazon is doing today.

Next slide. Also we have about over 82 businesses and organizations that are located on the airport with over 3,000 people that are working on the facility in our buildings whether they're private buildings or city owned and airport operated facilities, so it's very busy out there.

We have eight A and P shops. Those are aircraft mechanic shops, five flight schools.

Obviously, again, NOAA the Hurricane Hunters are there, Draken International. So when you see fighter jets flying over the top of Lakeland and

it's not Sun n Fun, that's Draken International.

They have about 300 mechanics that work there. They
do aggressor flying for the Department of Defense.

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Again, NOAA which has been a great partner and they arrived back in 2017 and they have about 110 folks that work there and nine based aircraft that go out and fly into our hurricanes and do other missions around the country.

Now, I know this is a little bit hard to see.

Over here on the boards I'm going to be available afterwards after public comments as well. But we are tracking all of the noise complaints that are coming into the airport. So each one we are documenting, we are recording it, and then we are also -- what this slide represents is a pin so we can help identify where the largest noise impact is or the areas that are being impacted the most away from the airport.

Our biggest two when we look at our heat map and where the most impact is, one is obviously Grasslands where we're making that hard turn to the north, and the other is east, the 27 approach east of South Florida out to Lakeland Highlands when we're flying right over the top. So we're very aware of that, and I want to talk real quick about

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what we're doing to mitigate some of that.

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So this slide right here, again it's a little hard to see, we have the boards over here, but this is essentially the extended center line for the 27 approach. So this is out to the east over the top of South Florida all the way out to Lakeland Highlands. This is the pattern that the aircraft are flying today. They don't fly exactly that line. I'll show you a slide here in a minute, but that's the general extended center line and the pattern that they're flying today for the 27 approach.

Next. Again, this is probably a little hard to see, but the board is over here. This is the 27 departures, so you have departures that go to the north over essentially County Line Road and all the warehouses out on County Line Road, and then there are aircraft that turn to the south out to the west. This is our preferred departure pattern because there's obviously a lot less development out there. There are still homes and there's still impact, but flying out to the west is our preferred pattern.

This represents the runway 9 arrivals, so essentially they're flying over the top of Plant City. Our instrument landing system is on runway 9. And so when the winds are out of the east they are

flying this pattern straight into runway 9.

And then when they depart runway 9, again if you can see it when they make that hard 360 north turn over Grasslands, we're very aware of that. And also the south turn over areas that are close to South Florida and Ewell and Pipkin as well.

So our noise mitigation and goals and our efforts right now, what we're doing specifically, we have hired a consultant, ABCx2, to help us develop several new approaches and departure procedures in and out of the airport. The first bullet there represents our preferential runways use program that we have in place.

And hopefully especially my Grasslands friends have noticed that in the mornings up to a 7 knot tailwind we are departing to the west. I want to say probably in the last two-and-a-half, almost three months we've departed over Grasslands in the morning. That's just because the winds were up and the tailwinds were higher than 7 knots, so they had to depart in that direction. But generally since we put this in place the departures over Grasslands to the east have been reduced drastically.

Regardless of the departure runway -- because I'm sure you've seen this in the Lakeland

Ledger -- you know our aircraft are held down to 2,000 feet. We want to when these aircraft are departing to get up and high and out of here as quickly as possible. We have complex air space being between Tampa and Orlando. They never thought our airport would grow into what it is today, but they are paying attention now especially with our friends at Grasslands who sent a lot of e-mails to the FAA noise portal to get them to pay attention. They are doing that and they are helping us, but this does take time, and there's a process to go through and we are working on that now.

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The second -- the third bullet up there is the runway 27 visual approach what we're calling the parkway approach. So it's the air traffic coming from the east into the airport into 27. Our goal is to get them to fly directly over the Polk Parkway, and when they get to South Florida to side step to the south a little bit to line up with 27 and come into the airport. So we're working on that. We've been on several calls over the last several weeks as well with the chief pilots for the various airlines that fly for Amazon to get this put in place and we are making positive movement to get this done and our goal right now is to have this in place before

1 the end of the year.

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And then the last one is runway 9 departures, and essentially for that we're looking to reverse the Polk Parkway approach and have them fly the reverse pattern that I just described to you for the 27 approach, and with that as well to get these aircraft again up to 3,000 feet as quickly as possible -- 3,000 feet is kind of the sweet spot for these aircraft to be up to. And they don't want to loiter at 2,000 feet, they don't want to make these hard turns over Lake Hollingsworth and various other areas. They want to fly in defined patterns and get in and out of here. They do not like -- the next slide put up real quick.

I know this is a little hard to see again. I have the boards over here. But all these blue lines, the fine blue lines, and that's the RNAV approach into 27, but all the other blue lines are the visual approach they're making right now all over the place. And we want to correct that, get them into what is the red line up there, what we're calling the Parkway approach, and get them into a defined pattern, and get them in and out of the airport.

This is just another representation, so at the

top of the red line they would be starting at 3,000 feet there. Right now there are times they are over the top of Lakeland at 1,600, right, and we don't want that. We want them to be up higher. If they come all the way down to make their turn to the west to get into 27, they're going to be at 3,000 feet and then when they get to essentially South Florida they would be about 1,300 feet which is higher than they are today, probably a mile east of what is happening right now and east of South Florida.

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So I don't know if that's a little hard to understand, but again our goal is to get them to fly directly over the Polk Parkway and then side step when they get to South Florida into runway 27.

And again, this is just another representation.

Again, the blue lines and all these visual approaches that they're flying are different lines and they're all the over the place. We want to get them defined into that red line over the top of Polk Parkway.

And I know there's a lot of information. I know we're going to open up the public comments now, but I will be available if anybody after the public comment period wants to meet me over at the boards I'm happy to explain it further. And again, thank

you all for your time. I appreciate it. We are working diligently to mitigate as much as we can as quickly as we can, so thank you for your time.

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MR. PURCELL: Thank you. I'll now call upon people who registered to speak. People will be called to speak in the order registrations were received. If you've not yet filled out a registration card, please do so now and return it to the sign-in table so we can get you into the cue.

I would like to remind everyone in attendance that this portion of the hearing is for public testimony only. We cannot answer questions or otherwise respond to issues that you raise in your comments this evening.

Please come to the microphone when your name is called and state your name, spell your name and give your address for the court reporter to note in the hearing transcript. If you represent an organization, municipality or other public body, please provide that information as well. Please speak clearly so that we can hear your comments and so the court reporter can easily record your statement.

To help ensure that everyone has a chance to speak every person will be allotted three minutes to

speak. This applies to everyone. You do not have to speak for the full three minutes. On the screen is a timer that will remind you of how much time you have remaining. The timer will turn orange when you have you one minute remaining. It will turn red when you have ten seconds remaining. You will hear a chime when your time is up.

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If you don't get a chance to voice all of your comments, you can and should submit them in writing. If you have a written statement already prepared today, you may hand that in. If you read it aloud within the time limit, you may do that also or you may do both.

Also I ask that you please not repeat what another speaker has said. If you agree with the previous speaker on a topic or particular issue, you may state your agreement. This will allow more time for you and others to provide their remarks and for other speakers to make comments. If there's time available after the last speaker has completed his or her comments, I will allow previous speakers to add remarks they could not provide during their time limit.

With that I'll call the first speaker for public comment.

1 David Pendry.

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MR. PENDRY: Hi, I'm David Pendry. My wife and I live in Lakeside Preserve just east of the airport off of Pipkin Creek Road. My name is spelled P-e-n-d-r-y, and my address is 1560 Hollow Tree Court.

P001

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We had a house built over two years ago and moved in before Amazon started flying to Lakeland. Airport noise was no problem. When Amazon planes come into the airport from the east they come directly over our house at 450 feet which is too low. Even inside the house if you are having a conversation you have to pause the conversation.

Initially flights didn't come in after midnight, but now they come in after midnight and take off around 5:30 a.m. in the morning, and when they come from the east we hear them.

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Now, does airport expansion mean no room for a regional airline to come into Lakeland that Lakeland has been trying to get for years? This seems beneficial to all residents of the Lakeland area.

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Will increased flights expand timeframe of landings and take-offs for 24 hours?

What does quality of life mean with increased noise levels and duration?

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Thank you.

MR. PURCELL: Thank you.

Jay Bonnett.

MR. BONNETT: My name is Jay Bonnett. It's spelled J-a-y, B-o-n-n-e-t-t. My address is 5215 Old Bartow Eagle Lake Road, Winter Haven, Florida.

This comment is being submitted due to a concern I have related to an environmental hazard that does not appear to be accounted for in the proposed environment assessment report, namely the risk of a collision between an airplane and a bird due to the Amazon planes being forced to fly at lower altitudes upon takeoff and with two landfills in close proximity to the airport. As reported by local media Amazon airplanes are not permitted to engage in a traditional takeoff and assent due to their need to receive permission from the Tampa Air Traffic Control to enter air space above 2,000 feet.

When flying at such a low altitude the risk of a collision between an airplane and a bird is always present. The hazards arising from these interactions are so great that federal and state laws have been enacted to address this risk. One such example and one relevant to my concern is the location restriction for landfills in relation to

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airports.

Since landfills are a congregating area for vultures, these vultures pose a flight hazard to low flying airplanes. As such, federal law prohibits a landfill from being within 10,000 feet or approximately two miles from the nearest point of any runway.

The same restriction has been adopted by the State of Florida and its airport zoning laws. The closest landfill to the Lakeland Linder Airport is the North City Landfill in Winter Haven which is approximately 10 miles east of the airport and located next the Polk Parkway.

Though these landfills are located outside the legal boundary restrictions and does not per se have violations of the airport zoning requirement, the logic and spirit behind these laws appear applicable in this case due to the unique takeoff restrictions placed on flights departing Lakeland Linder Airport.

The distance restrictions mandated in these laws are not arbitrary but are based on studies that show the distance at which an airplane needs to travel from an airport under traditional takeoff patterns to reach an altitude where a collision with

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a bird is unlikely.

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Advisory Circular 150-5200-34A prepared by the FAA provides some insight on the rationale behind these distance restrictions. In the background section it states enacting this legislation congress experienced -- or expressed concern that a municipal solid landfill site near an airport poses a potential hazard to aircraft operations because such a waste facility attracts birds.

Statistics support the fact that bird strikes pose a real danger to aircraft. An estimated 87 percent of the collisions between wildlife and civil aircraft occurred on or near airports when aircraft are below 2,000 feet. Collisions with wildlife at these altitudes are especially dangerous as aircraft pilots have minimal time to recover from these emergencies.

I'll finish later. Thank you.

MR. PURCELL: All right. Thank you.

Michael Sivilli.

MR. SIVILLI: Hi, my name is Michael Sivilli.

It's S-i-v-i-l-l-i. I live at 4423 South Ride Trail.

We have been kind of real unhappy about that -- the planes coming in now from Amazon. I live about three quarters -- somewhere between three quarters

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and a mile away from the current flight path and yet we hear them very loudly.

My wife and I were talking actually about it

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last night. In the middle of talking the plane as they came over -- you have to kind of pause and wait If we basically increase to the until they're done. number proposed here with the current flight pattern

you're going to turn a significant part of the south

side of Lakeland into an undesirable place to live.

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And I speak from experience. I spent my childhood in New York, and I had relatives who had homes in the vicinity of JFK Airport as it grew. And in the sixties when I was five years old we would go, and these were nice neighborhoods with big houses. And over the course of ten years as Kennedy Airport expanded and more planes started coming, you started seeing houses get sold constantly on the streets, and it got to where they couldn't sell them.

And then they all started converting them over to rentals, and the property values went through the floor. And you had all these houses carved up into apartment houses. A good thing I guess that comes out of this is you have a lot affordable housing, but the bottom line is it runs people like me out of town.

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I mean my wife and I are discussing whether or not we're going to stay here because if this goes as planned this will not be acceptable to us. We will not be able to live with the noise that's going. I mean you're talking about two planes an hour on average, and I mean that's average. So you know there's going to be times where there's going to be a lot more planes coming and going at certain times of the day and night.

And I don't know if anybody here has ever lived in a place where you have a lot of planes flying over. I mean it's loud and it's constant. And, you know, I'm a deep sleeper. My wife is not. You know, she will not be able to sleep through the night with those planes going over. She wakes up now. So I don't know, I just -- I don't think this is a good direction for us to be going. I realize the need for growth, but the other side is this is an airport owned by the City of Lakeland, and we are the City of Lakeland.

The idea that we are going to put something in place like this that's going to cause a lot of us to be displaced isn't a good idea. And I don't understand why we didn't get better -- I didn't get

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better notice of this. This presentation should have been done closer to the 27th of April so that we had more time to get the word out. I would strongly encourage extending the comment period because I think people need to know the impact this is going to have on us.

MR. PURCELL: Thank you.

Edward M. Cetrangolo.

MR. CETRANGOLO: Thank you all concerned for coming to tonight's meeting. My name is Edward Cetrangolo, spelled C-e-t-r-a-n-g-o-l-o. I live in the Grasslands at 3032 Shoal Creek Village Drive.

I would like to first touch and go on a letter I wrote to The Ledger concerning the noise from the prime aircraft. Dear Ledger, I did my homework.

Where are the flight logistics? Ground logistics are great. Amazon can build one giant building and then build another second giant Amazon building twice the size of the first one, produce all the materials, workers, plans, permits, inspections and environmental assessments, but when it comes to air logistics and moving the arrival and departure flights to something structured and not all over the city, that process has become a long and arduous decision for the FAA to implement.

P004

It's been over almost a year. All flights are dangerously low, some at 1,500 feet off the ground for ten mile stretches before climbing up to a higher altitude. It started at 22 flights per day. It has now jumped to 44 flights. It may jump again and again.

My second letter I want to touch and go on was to Gene Conrad and my fellow Grassland residents.

Investigating the information on a website called Web Track -- Web Track is a public noise abatement and monitoring system that surrounds the areas incorporated in the flight paths to and from the air field used in -- at 26 airports in the US, three airports in Florida and at 58 airports around the world. This website is a model for a state of the art approach to logistics.

It uses sensitive instruments to determine the noise levels in conjunction with standardized flight paths, designated mandatory turning wait points to lessen noise or to fly around a portion of a city before turning. And in conjunction with monitoring aircraft noise too it also monitors elevation off the ground in feet, air speed and miles per hour, type and size of aircraft and its destination all on an easy to read map.

P004

21-3

Page 39

3 - 1

The biggest visual I have noticed in my study was all arriving and departing flights have one thing in common, and that is they fly straight out on takeoff. They do not take radical hairpin turns after takeoff. Amazon needs to stop the radical turns over Grasslands.

These are the facts. Ask yourself why to these three questions:

Why no air logistics on noise above the city?

Two, why the radical departures and arrival

flight paths and not standardized corridors to and

from the airport thus making all flights less

confusing for pilots and the control tower

personnel?

Three, why do the pilots not throttle back their jet engines after lift-off to help lower the jet noise rumbling in people's ears, shaking our homes and the city?

We desperately need a noise abatement system.

Thank you very much.

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MR. PURCELL: All right, thank you. Tom Graham.

MR. GRAHAM: My name is Tom Graham,

G-r-a-h-a-m. My wife and I live at 2936 Sanctuary

Circle, long time residents. We were one of the

13-2

P005

original residents in Grasslands. What I would like to say on the part of my family and many of my friends is that we thank Amazon for putting -- Amazon and the airport for putting on this forum.

We also would like let you all know that we are not anti-growth. We encourage growth. We think Gene has done a great job at the airport. We appreciate what Lakeland has done.

P005 28-1

P006

What our concern is is Amazon has exploded since they've been here in a short period of time, and there's a lot of other support industries that are part of supplying Amazon. There's rumors of commercial aircraft coming in. We just want to be good neighbors and we want to have good neighbors, and that's the whole reason that we're here. The whole reason that people are objecting is because of what could happen in the future, not necessarily what has happened in the past. But it is a problem.

Thank you.

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MR. PURCELL: Thank you.

Barbara Sweeney.

MS. SWEENEY: Barbara Sweeney, 3356 Fiddle Leaf Way. I live in Carillon Lakes, and this is mainly about the noise. In the area you have Publix headquarters, the Lakes at Laurel Highlands,

Steeplechase, Carillon Lakes, 300 new apartments and Grasslands.

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I don't know how people can work from their homes with all of this additional noise that's coming in. Even pre-COVID a lot of people did work from home. And if you're doing Zoom meetings, conference calls and Facetime, I don't know how you're going to do this with all of the noise.

We also have a resident in our community who suffers from PTSD. He was awoken at 6:00 in the morning from hearing the airplanes, and it kicked his PTSD in. I don't know how many veterans we have who suffer with it that live in the area, but these early morning flights are going to cause problems with them.

14-3

Also according to the chart by 2027 there will an additional 2,867 vehicles on our roads. Our roads are not equipped for this.

14 - 4

Now, the air show. I don't remember how many times the air show was stopped so that Amazon could take off. The air show is a big enhancement to the City of Lakeland and has been around for many, many, many years. By 2027 you're going to have 44 flights taking off and landing. So how many times is the air show going to be interrupted?

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So the bottom line is you're not enhancing our You're going to be denigrating it. way of life.

MR. PURCELL: All right. Thank you for your comments.

P007

Jason Semini.

MR. SEMINI:

MR. SEMINI: I'm Jason Semini. I live at 5810 Hendricks Road in Lakeland. S-e-m-i-n-i. I'm just concerned about the noise and the traffic. affected I think it was by runway 9 --

MR. PURCELL: Could you speak into the

It was runway 9 I think,

microphone?

13 - 4

the southeast departure, we actually see when it departs like at an angle and it's really loud. like you have the windows in the house closed and you can still hear it. It's kind of like a very

grinding noise from the engine. It's that loud.

Sorry.

14 - 5

And the other thing is I don't think the impact takes into account the traffic from on Pipkin because I think there's going to be some spillover issues over there because it's already a problem right now. I know the intersection between I think it's Lunn and Pipkin and like it backs up over there -- it used to I think at least before I think COVID and people were at the offices and everything.

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I think that will come back over there.

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And there's like a community over there, they can't even get in because of the traffic, so there's parts of it that are on the east side I think So that's it. they're affected as well.

MR. PURCELL: All right. Thank you.

Veronika Guttenberg.

MS. GUTTENBERGER: I'm Veronika Guttenberger, V-e-r-o-n-i-k-a, G-u-t-t-e-n-b-e-r-g-e-r, and I live at 707 Butternut Place, Lakeland.

A malignant cancerous growth is threatening our quality of life here in Lakeland. Some people want to expand our airport so that more planes can depart and arrive, and this is progress they say. unchecked progress of this cancer is leading to air pollution endangering our lungs, noise pollution interfering with our conversations and constant heavy traffic on our roadways putting our lives in greater danger.

Cancer also makes progress, and progress is not always good. And now just like a cancer cell the airport multiplies and destroys the healthy cells around it. And what is feeding this cancer? Greed. Some people will get a lot of money out of this. Someone has allowed this creeping invasion of

P006

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P008

sinister intentions to entrench itself in our community. If no one stops it, this cancerous

progress will continue. And it's all for the money.

4 Where does that end?

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Let's all think that one through to its logical conclusion. I don't know if there's anyone else here who feels the same way as I do, so I can only speak for myself when I say I don't like Amazon, and I don't like this airport expansion.

MR. PURCELL: All right. Thank you for your comment.

Ronald Bean.

ROLAND BEAN: It's Roland, R-o-l-a-n-d, Bean, B-e-a-n. I live on Braemar Avenue. I don't have a lot of facts like some of the other people had, but just from a resident in the area it feels like this is bit of a kind of punch to the gut to try to move

forward with something like this. I live fairly close to the parkway, so those planes coming east -- coming from the east side moving to the airport arriving are fairly impactful to at least just our living.

What we had before COVID and before a decent number of those planes coming through, we had just purchased a home in the area, and we really enjoyed 28-2

P008

P009

Page 45

it, and it was a costly home, but we definitely liked where we were and the atmosphere and the neighborhood and things like that. And as the planes continue to try to -- started coming through it was definitely impactful whether it was honestly waking up the kids which is something, you know, impactful to me. I have to deal with that on a consistent basis. Or my wife during the day working from home as was mentioned before trying to do a Zoom call and trying to engage in that and being cut off.

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As I think about the number of planes that will be increasing just from this expansion as well as I know there's been a push and hope for maybe a commercial airline coming through. It just seems like it's too much for that area. And I know

they're working on different mitigations and other things that Gene mentioned, but just as a resident mentioned before the quality of life, it feels like it takes a pretty big shot for folks living in the area.

And I'm a little bit down the way -- down the road. I'm not living right on the airport like some folks are, and I hear some of the stories taking place, and I'm concerned about my impact. I can

only imagine what is happening a little bit down the street from where I am.

So just as a Lakeland resident and concerned I really don't like this moving forward, and I would push at least more of the community to continue to look at that and engage and think about the people around us.

We came to Lakeland for a reason. We're in Lakeland for a reason. We're not in Tampa. We're not in Orlando. We're not those other areas. We're in Lakeland. And we want it to be different. We want to it to be a place where people want to be not necessarily where planes are flying all the time.

So thank you for your time.

MR. PURCELL: Thank you.

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Kennieth and Kimberly Brewer.

MR. BREWER: Good evening ladies and gentlemen, fellow citizens of Lakeland. My name is Kennieth Brewer, K-e-n-n-i-e-t-h, B-r-e-w-e-r, and I live at 2224 Parkland Loop South, and that is Lakeland, Florida.

I don't know if anyone has picked up a brochure about the airport, but it has a huge impact on our community, good and bad as we see tonight. Over 82 businesses, over 6 million square feet of company

P010

facilities that's able to provide jobs to our

from my address that I do not live in a gated

Polk County is below the poverty level.

community. May I remind you -- and you can tell

community -- that over half of our community, all of

14-6

P010

these jobs.

With that Draken, a military contractor who trains our young men and women to go into combat flies from this very airport training our service members. And as a fellow member I support that.

We talked about the veterans tonight. May I remind you that only one Flight To Honor has happened in this entire nation this year, and that left from this very airport. We support our community and our veterans within this community.

And I know we are all disturbed by the noise that we hear tonight. But let the noise of our people be heard because that's what instills our Republic. And you being here today shows that. That is important.

With that the NOAA Hurricane Hunters are now here. They are based here, a very important and critical part to our entire nation. With that we also have an airport that stays open during hurricanes. Whenever Irma came through one airport

stayed open to provide FEMA with a runway and the United States Coast Guard with rescue facilities, and that was Lakeland Airport.

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With that we've also seen Amazon come in with 1.5 billion dollars of money going back into our community helping people like me who grew up in a trailer park and is able to stand before you today because the airport has provided jobs for our community.

I know that we are all frustrated with this noise. I live very close to the airport and in the approach path, and I know what you're going through because I see it too. But remember what our community is about, supporting each other and providing jobs to the members who could not provide it for themselves.

The process of a noise abatement procedure is extremely frustrating for an airport and the FAA.

And the fact that the airport is even undergoing the circumstances of which we see tonight to provide noise abatement procedures is absolutely huge.

And it's critical to your voice that you have been heard. Give them time. It will not be easy, I can tell you that. But give them time. And thank you all for being here tonight.

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MR. PURCELL: All right. Thank you.

Darren Oh.

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MR. OH: I am Darren Oh. My name is spelled D-a-r-r-e-n, last name is O-h. I live at 911 Dove Ridge Drive. And I just want to say to the flight of Lakeland staff that are here today thank you for your efforts. I believe you work for us and are trying to get the best deal that you can for Lakeland.

27-1

I'm looking over everything. I'm convinced that for the community as a whole this will be a positive thing and that the risks and the costs can be dealt with if the contract is done well.

My kids have enjoyed seeing more airplanes in the sky going over closer to our house. It hasn't been a problem for us. But I did have the opportunity tonight to speak with somebody who lives closer to the airport than I do, and she's bothered by the existing noise and worried about the planes flying so low. And some of the others who spoke before me are as well as.

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And it's easy for me to say because I'm not bothered that this is an acceptable trade off, but I think we need to stand together, that those on whom the impact falls the hardest should be compensated

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and that should be part of the plan, that if they need -- that they should be able to afford to move somewhere else if they want to and should be -- or

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keep the cash if they decided to stay.

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wetland restoration credits that it doesn't -- it's not just -- shouldn't just be some random place

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Also I think that if we're doing -- buying some wetland -- compensating wetlands restored somewhere else, but it should be in the local community.

And I just want to say that the residents who have purchased property and built up around the airport before Amazon started there, they are also investors in the community and in need of our support. Thank you.

MR. PURCELL: All right. Thank you. Jim Studiale.

My name is Jim Studiale, MR. STUDIALE: S-t-u-d-i-a-l-e. And my comments are addressed to the FAA and the city commission, the major and Gene I was formerly the planning director at the City of Lakeland for many years. This city was well planned. It was laid out with a plan in the nineties that was going to restore the old parks, connect the lakes, create a friendly, walkable community and prime the pump downtown until downtown

P012

worked. It had a remarkable renaissance that worked beautifully. And dozens of people worked on that, not the least of which was me.

P012

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I love Lakeland. I'm passionate about

Lakeland, but unfortunately my house lies under the

Amazon jets. And it's about not economic

development. You don't worship that goal and

mitigate or ignore all the others.

And Gene tells me we're going to mitigate. as soon as we do I'm going to believe it, but as of now we haven't mitigated. And I am amazed at the number and the noise of Amazon jets that go directly over my house. My home is palatial. It is my enjoyment. The pool, the overlooking the patio, the overlooking open space, and I have neighbors like What's the impact? Noise. It's simple. It's one word. It's not about the turtles or snakes or It's noise. And the FAA needs to anything else. help us to mitigate that noise because I'm nowhere near the airport, but there's jets over my house all the time.

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The impact is a reduced quality of life. A drone of jets every time I venture outside in my backyard. And my kids have a house around the corner with a similar view. None of the rest

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matters. The prevalence of Amazon jets flying hurts resale value, but more importantly it hurts the pastoral enjoyment of our homes.

So I beg Gene who I sat across the table from for many years to do what he can to mitigate. And I hear good things, but I don't see them. I don't not hear the Amazon jets over my house.

Economic development is not a God we should worship. We need to look at our priorities and mitigate it, and I'm talking to Phil and all the other city commissioners that will follow this. Pressure will get things done. Get it done.

For a few first time jobs, I heard the economic development stories, we have turned Lakeland around. Lakeland is booming. We don't need to trade off for the sake of economy our quality of life. And that's what we're talking about. There's simply not sufficient benefits to trade -- there's not enough benefit to Lakeland with this expansion unless we mitigate this noise.

Thank you very much.

MR. PURCELL: Thank you.

Rick Garrity.

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MR. GARRITY: Good evening. My name is Rick Garrity, 4138 South Polk Avenue in Lakeland,

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First off I would like to thank Gene Conrad and Mayor Mutz for meeting with our neighborhood and for their stated intent to solve the Amazon cargo and jet intrusions into our calm neighborhood life.

Their plan of a highway approach at a higher altitude from the east may ease problems, but that plan should be implemented before agreeing to an expansion of the Amazon facility.

Although I endorse actions that will enhance the economic well-being of Lakeland, I also know that the decision to expand large jet cargo traffic at Lakeland airport would exacerbate existing collateral damages to our neighborhoods.

Amazon Air has increased their use of the airport in the past year. This increase in air traffic is causing a reduction in quality of life of many residents living even three miles from the airport like we do. We live three-and-a-half miles from the airport. This collateral damage to our quality of life must be eased by seeking alternative flight pathways.

Our major concerns include noise pollution, potential health issues resulting from jet engine emissions and the impact of course on our home

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values. Some of us, like my wife and I, have lived in our homes for more than four decades and lived in harmony with all of the previous uses of the airport, but that all changed last fall with Amazon.

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Despite these existing impacts and before resolving them the City of Lakeland is ready to sign a contract that doubles the impacts. We do not see how the commission could possibly ignore this unfair taking of a pleasant residential lifestyle and in fact doubling that impact.

We would like your assurances that the City of Lakeland will as a matter of public policy implement alternate eastern approaches to the Lakeland runway 27. These alternate approaches should be over less populated pathways that lessen impacts and lessen deterioration in home value for residences even three to four miles from the airport.

Examples of similar approaches are all over the country, and they include things like the LaGuardia Expressway in New York City specifically going over a highway and the Potomac River approach into Washington DC which many of us have experienced.

And likewise we support an approach of -policy of approaching at a higher altitude. That
should be sought. We understand that this

environmental assessment is for an enlargement of the facility. Moving forward with this expansion before existing problems are resolved is not a responsible move. It's unthinkable that your citizens would be burdened with this second new disastrous impact to their lifestyle.

And where do we submit these?

MR. PURCELL: In the boxes in the back, sir.

MR. GARRITY: All right. Thank you.

MR. PURCELL: Thank you.

Bruce Veanvelzer.

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MR. VEANVELZER: I'm Bruce Veanvelzer. I live at 2924 Grasslands Drive. My last name is spelled V-e-a-n-v-e-l-z-e-r. I just want to say real quickly I appreciate the opportunity to be here to talk about it. Almost all my points were covered, so in the interest of time I'll pass. Thank you.

MR. PURCELL: Thank you for your comment. Shawn Graham.

MR. GRAHAM: Good evening. I'm Shawn Graham, address is -- it's S-h-a-w-n, G-r-a-h-a-m. Address is 5222 Creekmore Drive, south Lakeland, basically Highlands City. You know, I hear a lot of people talking and a couple things that really stick to me, number one, I've been following this since 2016, so

P014

P014

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I'm kind of amazed at the number of people that are 1 2 sitting here complaining about we don't know

3 anything about this.

> The airport has had it on their website. The master plan has been around for a long time. City of Lakeland hasn't exactly hidden it. the pandemic I went to an event at the airport, so if you are unaware of this, you're not paying attention. If you have bought a house in the last several years on Pipkin Road in two very large subdivisions, you bought into this. That's all there is to it. You shouldn't be complaining about airplane noise.

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Number three, let's look at jobs real quick.

The average family of four for Polk County is \$50,000. Two people get jobs at Amazon making 15 bucks an hour or better they're clearing \$60,000 a Now, many people have said we don't know year. about the jobs, this, that and the other thing, but you know what, a lot of y'all that I'm hearing speak, and I mean no disrespect, are retired. don't have to look at those jobs. You don't have to worry about that.

What about your kids? What about your grandkids? Do you want them to leave Lakeland? 14 - 9

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P014

raise a lot of kids to move them out of Polk County. Get them through high school, get them out. Draken is bringing people here, keeping them here. NOAA, same thing. A lot of these other jobs, the other gentleman mentioned, same thing. It's a good deal for all of us. Airplane noise is a small price to pay.

MR. PURCELL: Thank you for your comment.

UNKNOWN AUDIENCE MEMBER: How does it affect where you're living?

MR. PURCELL: Ken Leer. Ken Leer. Last call for Ken.

All right. Roberto Leider.

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MR. LEIDER: Hello, I'm Roberto Leider,
L-e-i-d-e-r. I live 632 West Hancock Street,
Lakeland, Florida. And I'm really concerned because

I moved to Lakeland for the quiet and the peace, and now I'll be gardening at 10:00 p.m. or even 11:00 p.m., I'm watering my plants, and I'm seeing the planes right over Dixieland.

Amazon pays no federal income tax most years.

Are they going to pay for the road improvements that are going to be needed for the hundreds of trucks? I don't think so. They do everything they can to not pay taxes.

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Are they going to pay for the airport expansion? We don't know. Either way they are also several call centers with good jobs that we have at Geico and Publix corporate right by the airport. Those thousands of jobs could be threatened with all this noise. Those are more important. My husband works for Geico. Those are good paying jobs with

good benefits. That call center is right next to
the airport, and that's what I'm -- and also on
County Line Road right now the amount of semi trucks
is horrific. What is going to be in a few years
when we're going to have even more hundreds of these
Amazon trucks?

outrage, and I feel that for something this big it should be a referendum where the citizens of Lakeland get to vote, not just a few commissioners because this is going to change the whole town. We moved here for the peace and quiet. We didn't move here for Amazon hundreds of planes flying above for a company that pays no taxes. They're not going to pay for road improvement or airport improvements, and they threaten the good jobs that we have here.

Thank you.

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MR. PURCELL: Thank you.

Page 59

Myrtle Hudson. Myrtle Hudson. Last call, Myrtle.

Antoinette H. Avering. Sorry, the handwriting is difficult to read. Antoinette H. Avering. Last call for Antoinette.

Walt Tyson. Walt Tyson. Last call for Walt. Mary Archer.

Mary Archer, M-a-r-y, A-r-c-h-e-r,

608 Kensington Street, Lakeland. I live on the south side. I'm tired of the noise. I didn't know I was -- where I work I hear noise every day. I

work in Tampa. I come home on the parkway. Traffic is doubled. We've got Amazon trucks all over the place. We need to let the City of Lakeland and the people decide what we want by a vote. We also need to do something about stopping this.

Thank you.

MS. ARCHER:

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MR. PURCELL: Thank you.

Jan Smith.

MS. SMITH: Jan Smith, S-m-i-t-h. I live at 506 Empress Way. That's just north of the parkway near the Walmart, Kelly Rec Center area. I moved here 15 years ago from Brandon because Brandon was just getting a little bit too big. And I hate to say it, but Lakeland is going that same direction at

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I became aware of this Amazon situation last summer when I kept getting woken up at 5:30 in the morning including Saturday morning by planes going right over our house. I talked with several of the neighbors who were also upset, one of whom said because we live in houses in our neighborhood that are about 50 years old, we have older windows. She said that the jets when they come over her house shake her house so much that it shakes her windows unlocked. And so that for her in my opinion is a security issue, and that's the only thing so far

that hasn't been mentioned.

But I would also just like to take my time and say I'm disappointed in that I never heard anything in my 15 years of living here in Brandon about Amazon coming here until they're flying overhead. I think that it would be wonderful as somebody else mentioned that we, the citizens, had the ability to vote on do we want this expansion more than just this. This is great to give us a chance to voice our opinions, but I think that this is a voteable item that the citizens of Lakeland should be deciding. Thank you.

I'm disappointed that the noise abatement plan

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P017 Page 61 was not already put into effect before Amazon 1 13 - 92 started flying overhead. That should have happened. 3 Here are other things that other people have 21 - 54 mentioned that also concern me, the accident 5 probability, birds or otherwise, I don't care, 6 accident probability, obviously the noise, the 13-10 14 - 147 property values that are going to drop in my 8 opinion, the traffic. I drive along Drane Field 9 Road a couple times a week, and it has increased 5 - 110 considerably. The air pollution. 11 I'm looking at future unseen problems that we 12 don't even know about yet that we're not going to 13 get a chance to address. But the biggest thing is I 14 see this as a decrease in quality of life in a town that I absolutely have come to love. 15 16 MR. PURCELL: Thank you. P018 Liz Ronald. 17 MS. REVALDI: Liz Revaldi, 4456 Micanope 18 19 Crescent Drive. I'm at Morgan Creek Preserve, 20 Lakeland sorry. That's in Morgan Creek Preserve. Ι 13-11 2.1 live right next to the airport. It's literally the 22 Geico building, the airport and my subdivision. 2.3 the noise is just horrendous. I mean at times they test engines, and that is like being at a NASCAR 2.4 25 race at Daytona Beach. It's insane how loud that

P018

was when they were doing that. And that was inside the house. That was not outside. So that was absolutely insane when they were doing that.

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And this is a project that should have been something that was done like 20 years ago. If you guys wanted to do this airport expansion you should have done this when there was like no development around this area, Grasslands.

I went to college here in the early nineties. There was nothing in south Lakeland. On the east side of where Scott Lake is, yeah, there was a lot of stuff. In the west, not a bloody thing. There was nothing over there. There was the airport, but there was no homes. The Grasslands didn't exist. Where I live didn't exist. There was nothing. So that's when you should have done this little project.

21-6

I'm concerned about the safety. I mean that huge gas container thing that y'all are thinking about. Hello, we have lightning here. I mean that's like crazy that whole project that you're thinking of.

23 What about the liability to the city? Have you guys considered like all of the liability concerns?

Have you ever even thought about that.

I mean this is just insane. I am so concerned about all these different things, the noise, the liability, the safety, and I mean this is something we should have done 20 years ago. This ship has sailed. This should not go forward at all.

MR. PURCELL: Thank you.

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And Dawn Brewer. Dawn -- oh, sorry.

MS. BROWER: My name is Dawn Brower, D-a-w-n, last name Brower, B-r-o-w-e-r. I live at 4810

Hancock Lake Road which is Highlands City. I'm a resident of this town for 50 years. I grew up on the north side. I moved over by the airport. I'm a self employed person. I've been in this town and done business my whole life.

I moved away from the Geico bottleneck off of Pipkin Road fifteen years ago. I would like to say that this additional level of air traffic is a minor impact on a major metropolitan area like Tampa, Lakeland or Atlanta. But it is a huge, huge impact on a mid size down without an existing international airport. The increase in air traffic has already caused a reduction in quality of life for most Lakeland and greater Lakeland area residents. It's too much noise. There is nobody in this room who loves this idea who isn't getting paid, period.

13-12

P019

P019

We are better than this. We weren't built for this. We don't want it. Did we want people coming into our airport? Does this improve the quality of life for our residents? The answer is no. It is only about money, and you are going to ruin us if you do this. We don't want you to mitigate it. We don't want you to abate it. We want you to stop it, period.

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I was very happy to see Jim Studiale show up today. I used to work with him. I've been part of city government. I worked for the Lakeland Police Department. I was a grant writer. I've seen this process play out at planning meetings, and I understand how it works. And I'm going to tell you all right now, this is a done deal. This is going to happen. There aren't this many people and this much money and this much doing all this work to say no to Amazon money.

I don't think we're going to be listened to. I think they're going to make excuses, and they're going to mitigate, and they're going to do it anyway. And when they do I want everybody in this room to understand you sold out my quality of life in my home town for 50 years. That's what you're doing. That's what this is.

Page 65

It was supposed to be a trial run. I thought, yeah, okay, they'll have some planes coming in and

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out of here. Well, you know what, I've spent an awful lot of time at SanLan the last six months. Do you know what it's like? It's miserable. It's miserable. It's miserable. It's a nature preserve, and that's one of our local spots that we expect tourists to come stay. Guess what? You whored it to Amazon.

The quiet is our identity. We support the NOAA planes. We love the fly in. This ain't that. This is commercial. This was a test run. This has failed. We hate it. Lakeland says no. Say no to Amazon. Please say no to Amazon. Please don't move these jets over onto the parkway and send them into the quiet neighborhoods. Please do not do this to

my home town. It is not worth it.

MR. PURCELL: Thank you for your comments.

Is there anyone else in the audience that would like to provide a comment this evening?

Please come up. We'll have you fill out a comment card once you complete your comment.

MS. HAYNES: My name is Connie Haynes,
H-a-y-n-e-s, and I live at 702 West Hancock Street,
Dixieland.

I have been paying attention to this for quite

13-13

P019

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P020

awhile. I go to the commissioners meetings and was part of the beautification board. And I know the last speaker was correct, that if you don't pay attention and it is a done deal, then it will happen. But if you do let people know what you don't want, it won't happen.

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I have done this before. When they wanted the seven story buildings built in Dixieland, I jumped up and down and screamed about it ruining our quality of life. I came from Tampa, and I lived in Town and Country right near the airport since 1967 until my mom died in 2008. I moved here to Lakeland because it was a quiet, nice town. Now I see the changes that are happening.

And growth is not bad if it's planned smartly. If you don't have the infrastructure to begin with to do this it's stupid. It is stupid. And \$15 an So is that bringing the high people -hour, okay. high rated people we need in order to fill all the apartments that are in downtown that are \$1,500 a month? You know, so we're building the downtown area, doing all of that, taking money away from parks and recs where people are coming to Lakeland because they like the quiet, but this is not the It really isn't. answer.

P020

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Page 67

I lived right next to the airport and saw how they said, oh, we're going to change and mitigate the noise. It happened for a little bit of time.

Now they're expanding. And Amazon was in Tampa, and now they're moving to be here. So this isn't good, it really isn't good.

P020

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14-16

I can see fuel on my car. I mean they do dump fuel. And the environmental impact on this is going to be big because they're not talking about all the trucks that are going to go to Winter Haven. They have an Amazon warehouse in Winter Haven. So those trucks are coming from here to Winter Haven. How are they going? Interstate. Have you guys looked at the Interstate? It's terrible.

14-17

there and trying to do that, mitigate that and also four laning Wabash to help people get through. So they are -- I mean this city is working on infrastructure, but we need to have the people that are impacting it pay for it. Who is paying for this?

Now, they have improved Kathleen Road exit

Thank you.

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MR. PURCELL: Thank you.

Would anyone else like to provide a public comment?

Page 68

All right. Let the record show that the time is now 8:31, and the public comment portion of this hearing is now closed. Thank you for your time and participation this evening to everyone here. This hearing is now adjourned.

THEREUPON, the meeting was concluded at $8:31\ p.m.$

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Wasilewski Court Reporting (888) 686-9890

CERTIFICATE OF REPORTER

2 | STATE OF FLORIDA

COUNTY OF POLK

I, Wendy Wyncoop, Registered Professional Reporter, do hereby certify that I was authorized to and did stenographically report the meeting and that the foregoing transcript is a true record of my stenographic notes.

I FURTHER CERTIFY that I am not a relative, employee, or attorney, or counsel for any of the parties, nor am I a relative or employee of any of the parties' attorney or counsel connected with the action, nor am I financially interested in the outcome of this action.

DATED THIS 1st day of June 2021 at Lakeland, Polk County, Florida.

Wendy (lynas)
WENDY WYNGOOP, RPR

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COMMENT FORM

We encourage you to provide your comments and opinions on this project so that we may consider them in the study process.

13-14	I live in a subdivision (ight next to the airport, Morgan
,,,,,,,,,,,	Crock Preserve. The airport when I hought the home 8 years
**********	ago was an executive airport with an annual oirshow
**********	The plane noise with the executive airport was a concern at
********	first but after hearing the plance fly outlide tinsicle my
*********	house which is very well built Hulbert home. I decided to
**********	proceed be cause the noise level to in my house was about the
*********	sound of a fan - : Fa TV was on 12 could barely be heard
***********	Now that large commercial jets are being flows clarity
**********	at all hours the noise levels are 1000x louder these
	Very low flying icts fly right over our subdivisions
21-8	least 8 K fer lay what happens it as accident
i-2	happens? What about polution? Now we are expanding to
**********	44 Flights !! This is a huge but and Switch, when I we
**********	The college in the Carly good there was nothing in the Sw part
***********	DF Lakeland. IVO Shapping Center. No brasslands. No Morgan Crock Men
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	Disy sound levels and there is nothing you can do about sheets if needed
Nam	e. Liz Rovald.
	ess: 4456 Micanope Crescent Dr
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Phase II Air Cargo Facility Development Environmental Assessment

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Please note that comments can only be accepted with the full name and address of the individual including your address, phone number, e-mail address, or other personally identifying information ment, be advised that your entire comment, including your PIP, may be made publicly available at can ask in your comment to withhold your PIP from public review, the Airport cannot guarantee the	(PIP) in your com- t any time. While you

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Phase II Air Cargo Facility **Development Environmental Assessment**

COMMENT FORM



We encourage you to provide your comments and opinions on this project so that we may consider them in the study process.	s
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1

Phase II Air Cargo Facility Development Environmental Assessment

COMMENT FORM



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	Say No VID This ON LONG.
	The state of the s
	Name: CMJAVIA Attach additional sheets if needed
	Address: 4628 Jones Trail
	City, State, Zip:
	Please complete this Comment Form and place in one of the drop boxes at the public meeting. You may also mail this Comment Form to the address on the back of this Comment Form by May 31, 2021 . All comments are part of the public record and are available for viewing by the public and media.
	Please note that comments can only be accepted with the full name and address of the individual commenting. Before including your address, phone number, e-mail address, or other personally identifying information (PIP) in your comment, be advised that your entire comment, including your PIP, may be made publicly available at any time. While you can ask in your comment to withhold your PIP from public review, the Airport cannot guarantee that it will be able to do so.



COMMENT FORM

	We encourage you to provide your comments and opinions on this
	project so that we may consider them in the study process.
5	- miles from the Alexant and the Blanes are low
	- 1 1 1 11 11 11 11

13-8	I Live 6.5 miles from the Airport and the Blanes are low
	enough to shake my house.
17-1	There Concers on how the Dooding will effect me, It thepsekesses Creek is the morn poute for stoem works pool It luns they my property,
	Name: Manager Boll Attach additional sheets if needed
	Name: [Iprey Bo]] Address: 1617 Itchepackesassa DR
	City, State, Zip: Lake Inncl, FL. 33810
	Please complete this Comment Form and place in one of the drop boxes at the public meeting. You may also mail this Comment Form to the address on the back of this Comment Form by May 31, 2021 . All comments are part of the public record and are available for viewing by the public and media.
	Please note that comments can only be accepted with the full name and address of the individual commenting. Before

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COMMENT FORM

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8 THIS IS AS BOD A DECISION AS WHEN THE TRAIN TRAFFIC THROUGH AT OUR EXDENCE	CITY LET ALL THE
& WE'RE ALDWING BIG BUSINESS ROLL OUER	US"POLKERS LIKE
10 who's marking & OFF DF MY SUFFERENG.	Attach additional sheets if needed
Name: SHA TUTTON Address: 727 SEFFIRE W POB	
City, State, Zip: LKCD FC 33851	
Please complete this Comment Form and place in one of the drop boxes at the public me Comment Form to the address on the back of this Comment Form by May 31, 2021. All or record and are available for viewing by the public and media.	
Please note that comments can only be accepted with the full name and address of the in	ndividual commenting. Before

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Phase II Air Cargo Facility Development Environmental Assessment

COMMENT FORM

We encourage you to provide your comments and opinions on this project so that we may consider them in the study process.

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Name: 501N TUT(ON)
Address: 77 SGSCACO HDE CK City, State, Zip: (KC) FC 2-2X(
Please complete this Comment Form and place in one of the drop boxes at the public meeting. You may also mail this
Comment Form to the address on the back of this Comment Form by May 31, 2021 . All comments are part of the public record and are available for viewing by the public and media.

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Phase II Air Cargo Facility Development Environmental Assessment

COMMENT FORM

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Attach additional sheets if needed
Name: MKNAK SIVILLE
Address: 4923 Southport Port
City, State, Zip: (Accept) 330/3
Please complete this Comment Form and place in one of the drop boxes at the public meeting. You may also mail this
Comment Form to the address on the back of this Comment Form by May 31, 2021. All comments are part of the public
record and are available for viewing by the public and media.
Please note that comments can only be accepted with the full name and address of the individual commenting. Before including your address, phone number, e-mail address, or other personally identifying information (PIP) in your com-
ment, be advised that your entire comment, including your PIP, may be made publicly available at any time. While you

can ask in your comment to withhold your PIP from public review, the Airport cannot guarantee that it will be able to do



COMMENT FORM

We encourage you to provide your comments and opinions on this project so that we may consider them in the study process.

14-23

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-23	
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Name: Joseph John John Com	Attach additional sheets if needed
Address: LCCO FOLIVAN LAKE DR	
City, State, Zip: LAKE LAND, FL 33810	
Please complete this Comment Form and place in one of the drop boxes at the public me Comment Form to the address on the back of this Comment Form by May 31, 2021 . All record and are available for viewing by the public and media.	
Please note that comments can only be accepted with the full name and address of the including your address, phone number, e-mail address, or other personally identifying interest, be advised that your entire comment, including your PIP, may be made publicly averan ask in your comment to withhold your PIP from public review, the Airport cannot guar	formation (PIP) in your com- vailable at any time. While you



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and Publix employee gaing no	- The From Drage F
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	Attach additional sheets if needed
Name: William Juda	sheets if fleeded
Address: 39 3945 Jerenade 4n	
City, State, Zip: Lankeland 33815	
Please complete this Comment Form and place in one of the drop boxes at the	
Comment Form to the address on the back of this Comment Form by May 31,	2021. All comments are part of the publi

record and are available for viewing by the public and media.



COMMENT FORM

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20-7 Community drives the success of l	wrg.
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ander International Chapert duly mor	ie of this.
	Attach additional
Name: Valerie lutton	sheets if needed
Address: 727 Jefferson, Avenue	
City, State, Zip: Lake Jand, Flori da 33801	
	Variable mail 46 is

Please complete this Comment Form and place in one of the drop boxes at the public meeting. You may also mail this Comment Form to the address on the back of this Comment Form by **May 31, 2021**. All comments are part of the public record and are available for viewing by the public and media.



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project so that we may consider them in the study process.
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an be better grove productive members of
the Land Community.
Attack additional
Attach additional sheets if needed
Name: Valery Jutton.
Address: 727 Oefferson ave
City, State, Zip: Lakeland . Floreda 3380/
Please complete this Comment Form and place in one of the drop boyes at the public meeting. You may also mail this

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1

SO.



Phase II Air Cargo Facility Development Environmental Assessment

COMMENT FORM

We encourage you to provide your comments and opinions on this project so that we may consider them in the study process.

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dress: 2924 Hrasland Dr	(Fair-way	actio)
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can ask in your comment to withhold your PIP from public review, the Airport cannot guarantee that it will be able to do



Phase II Air Cargo Facility Development Environmental Assessment

14-25

How many jobs will be asked? What will be tee compensation

COMMENT FORM

We encourage you to provide your comments and opinions on this project so that we may consider them in the study process.

13-21

The noise problem is the big planes, not the
average of small + big. To one knows the loudness #
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the crazy loud noise on take-off? Babies are steeping,
3th shift workers are sleeping, old people sick people
all ared so affected?
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Lakland gets his bucks and the people harm Attach additional sheets if needed
Name: / sheets if needed
Name. Zym Thompson
Address: U 3925 Sandhill Crave Dr
City, State, Zip: Lakeland 338/1
Please complete this Comment Form and place in one of the drop boxes at the public meeting. You may also mail this

Please complete this Comment Form and place in one of the drop boxes at the public meeting. You may also mail this Comment Form to the address on the back of this Comment Form by **May 31, 2021**. All comments are part of the public record and are available for viewing by the public and media.

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Phase II Air Cargo Facility Development Environmental Assessment

COMMENT FORM

We encourage you to provide your comments and opinions on this project so that we may consider them in the study process.

7 – 2	I Feel this would be a assent to the	
	city of Lakeland. More services may be	
	later get a Aleline to come to Lakeland	
	the employment with this would be	
	a plus. People that live by a arppoint	
*******************************	should expect some are teasing	
***************************************	NOISO	
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Address: City, State		
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record and are available for viewing by the public and media.

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May 27, 2021

Dear Mr. Conrad,

Objection to Phase II Air Cargo Facility Development at Lakeland Linder International Airport.

I wish to object to this proposal on the following grounds:

14-26 20-8

I am a homeowner of property located 3 miles from LAL. This development will affect my quality of life and the value of my property. I am already affected by the 22 flights in and out of LAL with respect to noise, traffic and pollution concerns. With this Phase II development doubling the number of flights in and out it doubles my concerns over what has already become an issue in my neighborhood. Noise, traffic, pollution and the decreased value of my home and property.

14-27

The second concern I have with the development of the project concerns my well being because I am employed by a business at the airport that services the general aviation community. This development will have a detrimental effect on the business. With the heavy traffic into and out of the airport our customers will hesitate to fly their planes in this new air traffic. And, the changes being made to the airport property to accommodate the new warehouse space will hinder easy access into and out of our business.

28 - 8

Because of the reasons stated above <u>I OBJECT</u> to the Phase II Air Cargo Facility Development.

Submitter: Christine Jacobson

Date:

May 27, 2021

Name:

Michael Hardin and Christine Jacobson

Signatures:

Address:

4515 Ginny Dr. Lakeland, FL 338 14

P036 Page 1

COMBINED PUBLIC HEARING/INFORMATION WORKSHOP

RE: DRAFT ENVIRONMENTAL ASSESSMENT
PHASE II AIR CARGO FACILITY DEVELOPMENT
LAKELAND LINDER INTERNATIONAL AIRPORT
POLK COUNTY, FLORIDA

(Private comment)

DATE:

THURSDAY, MAY 27, 2021

TIME:

6:00 p.m.

LOCATION:

RP FUNDING CENTER

SIKES HALL

701 WEST LIME STREET LAKELAND, FLORIDA 33815

PRESENT:

ADAM PURCELL, AECOM

GENE CONRAD, DIRECTOR OF LAKELAND LINDER

INTERNATIONAL AIRPORT

ALSO PRESENT: MEMBERS OF THE PUBLIC

MEMBERS OF THE PRESS

OTHER INTERESTED PARTIES

Proceedings Reported by:

Wendy Wyncoop

Registered Professional Reporter

CERTIFICATE OF REPORTER

2 STATE OF FLORIDA

COUNTY OF POLK

I, Wendy Wyncoop, Registered Professional Reporter, do hereby certify that I was authorized to and did stenographically report the comments and that the foregoing transcript is a true record of my stenographic notes.

I FURTHER CERTIFY that I am not a relative, employee, or attorney, or counsel for any of the parties, nor am I a relative or employee of any of the parties' attorney or counsel connected with the action, nor am I financially interested in the outcome of this action.

DATED THIS 1st day of June 2021 at Lakeland, Polk County, Florida.

Wendy (Uproof)
WENDY WYNGOOP, RPR

				raye 4
A	economic 2:4	MEMBERS		701 1:10
action 3:12,14	employee 3:10	1:15,16	taken 2:2	
ADAM 1:12	3:11	N	THURSDAY	
AECOM 1:12	ENVIRONM		1:7	
AIR 1:3	1:3	notes 3:8	TIME 1:8	
airport 1:4,13	excited 2:3	0	transcript 3:7	
2:4,6			true 3:7	
Amazon 2:3	F	outcome 3:13		
ASSESSMENT	FACILITY 1:3	P	U	
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attorney 3:10,12	Florida 1:4,11	p.m 1.8 2.2,8 parties 1:16 3:11	V	
authorized 3:5	3:2,16	parties 1:10 3:11 parties 3:12		
awesome 2:5	following 2:1	PHASE 1:3	W	
	foregoing 3:7	Polk 1:4 3:3,16	Wendy 1:20 3:4	
B	FUNDING 1:9	PRESENT 1:12	3:18	
BALTICH 2:3	FURTHER 3:9	1:15	WEST 1:10	
bringing 2:5		PRESS 1:16	WORKSHOP	
	GENE 1 12	Private 1:5	1:2	
C	GENE 1:12		Wyncoop 1:20	
CARGO 1:3	growth 2:4	proceedings	3:4,18	
CENTER 1:9	H	1:19 2:1,7 Professional	X	
CERTIFICATE	HALL 1:10	1:20 3:4	A	
3:1		PUBLIC 1:2,15	Y	
certify 3:5,9	HEARING/IN 1:2	PURCELL 1:12		
COMBINED	1:2	PURCELL 1:12	$\overline{\mathbf{z}}$	
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concluded 2:7	interested 1:16	record 3:7	1	
connected 3:12	3:13	Registered 1:20	1st 3:15	
CONRAD 1:12	INTERNATI	3:4		
counsel 3:10,12	1:4,13	relative 3:9,11	2	
County 1:4 3:3	1.7,13	report 3:6	2021 1:7 3:15	
3:16	J	Reported 1:19	27 1:7	
	jobs 2:5	Reporter 1:20	3	
<u>D</u>	June 3:15	3:1,5	33815 1:11	
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day 3:15				
DEVELOPM	L	S	5	
1:3	Lakeland 1:4,11	SIKES 1:10		
DIRECTOR	1:12 3:15	staff 2:6	6	
1:12	LIME 1:10	STATE 3:2	6:00 1:8	
DONOVAN 2:3	LINDER 1:4,12	stenographic 3:7		
DRAFT 1:3	LOCATION 1:9	stenographica	7	
		3:6	7:46 2:2	
	M	STREET 1:10	7:47 2:8	

P037 Page 1

COMBINED PUBLIC HEARING/INFORMATION WORKSHOP

RE: DRAFT ENVIRONMENTAL ASSESSMENT
PHASE II AIR CARGO FACILITY DEVELOPMENT
LAKELAND LINDER INTERNATIONAL AIRPORT
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701 WEST LIME STREET LAKELAND, FLORIDA 33815

PRESENT:

ADAM PURCELL, AECOM

GENE CONRAD, DIRECTOR OF LAKELAND LINDER

INTERNATIONAL AIRPORT

ALSO PRESENT: MEMBERS OF THE PUBLIC

MEMBERS OF THE PRESS

OTHER INTERESTED PARTIES

Proceedings Reported by:

Kalliope Maragos

Florida Professional Reporter

P037

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21-11

THEREUPON, the following proceedings were had and taken at 8:34 p.m.:

THERESA GARCIA: Okay. I would like to know what kind of security will be around the fuel tanks so that they don't get blown up by some terrorist or a plane crashing into them and blow out everybody's houses and windows around for miles. I want to know what kind of security they're going to have around those fuel tanks because they're aboveground.

They're not in the ground like they are at big airports, you know, so that was my comment about that.

THEREUPON, the proceedings were concluded at 8:34 p.m.

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CERTIFICATE OF REPORTER

2 STATE OF FLORIDA

COUNTY OF POLK

I, Kalliope Maragos, Florida Professional
Reporter, do hereby certify that I was authorized to and
did stenographically report the examination of the
witness named herein; that a review of the transcript
was requested; and that the foregoing transcript is a
true record of my stenographic notes.

I FURTHER CERTIFY that I am not a relative, employee, attorney, or counsel for any of the parties, nor am I a relative or employee of any of the parties' attorneys or counsel connected with the action, nor am I financially interested in the outcome of this action.

DATED THIS 11th day of June, 2021, at Lakeland, Polk County, Florida.

Kalliope maragos Oflor

LORIDA PROFESSIONAL REPORTER

				1490 1
	DRAFT 1:3	know 2:3,7,11	Reported 1:20	l—
<u>A</u>	DKAFI 1.3	KIIUW 2.3,7,11	Reporter 1:21	2
aboveground	E			2021 1:7 3:15
2:9	employee 3:11	Lakeland 1:4,11	3:1,5,18	27 1:7
action 3:13,14	3:12	1:12 3:15	requested 3:8	3
ADAM 1:12	ENVIRONM	LIME 1:10	review 3:7	
AECOM 1:12	1:3	LINDER 1:4,12	RP 1:9	33815 1:11
AIR 1:3	everybody's 2:6	LOCATION 1:9	<u> </u>	4
AIRPORT 1:4	examination 3:6	LOCATION	security 2:4,8	·
1:13	CXAIIIIIACION 5.0	M	SIKES 1:10	5
airports 2:11	F	Maragos 1:21	STATE 3:2	
ASSESSMENT	FACILITY 1:3	3:4,18	stenographic 3:9	6
1:3	financially 3:14	MEMBERS	stenographica	6:00 1:8
attorney 3:11	Florida 1:4,11	1:16,17	3:6	
attorneys 3:13	1:21 3:2,4,16	miles 2:7	STREET 1:10	7
authorized 3:5	3:18			701 1:10
B	following 2:1	N	T	
	foregoing 3:8	named 3:7	taken 2:2	8
big 2:10	fuel 2:4,9	notes 3:9	tanks 2:4,9	8:34 2:2,14
blow 2:6	FUNDING 1:9		terrorist 2:5	
blown 2:5	FURTHER 3:10	<u> </u>	THERESA 2:3	
<u> </u>		Okay 2:3	THURSDAY	
CARGO 1:3	G	outcome 3:14	1:7	
CENTER 1:9	GARCIA 2:3	P	TIME 1:8	
CERTIFICATE	GENE 1:12	-	transcript 3:7,8	
3:1	going 2:8	p.m 1:8 2:2,14	true 3:9	
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2:11	HEARING/IN	Polk 1:4 3:3,16		
concluded 2:13	1:2	PRESENT 1:12		
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counsel 3:11,13	<u>II</u> 1:3	Private 1:5	windows 2:7 witness 3:7	
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	,	*	1101 5:15	
	-	•	•	•

David J. Logsdon 1779 Laurel Glen Place Lakeland, FL 33803-5419 972-832-0174

dilogsdon49@yahoo.com

May 23, 2021

Lakeland Linder International Airport Attention: Gene Conrad, Airport Director 3900 Don Emerson Drive, Suite 210 Lakeland, FL 33811

Dear Mr. Conrad:

With the impending and inevitable growth of the operations at Lakeland Linder International Airport, including the planned expansion of the Amazon operations and future commercial

flights, it is imperative that the FAA and the Airport consider the noise and visual intrusion created by this increasing number of flights. Specifically, it is problematic that many (if not most) of these flight paths take these aircraft over the Grasslands Golf and Country Club at low altitudes. It is my observation that departures are more of a problem than arrivals, but that could be just my impression.

Many of the residents in Grasslands (this includes my wife and myself) relocated here to escape and avoid this very type of disturbance. While we are supportive of the efforts to improve and expand the airport, we are not supportive of the reduced quality of life in Grasslands that the increasing flight frequency is creating.

We urge the FAA and the Airport to consider and utilize whatever Noise Abatement Protocols are available. There is plenty of open space around Grasslands Gold and Country Club that could and should be utilized for the flight paths these aircraft arrivals and departures. This is something that many other airports around the country have had to address and have done so successfully.

I appreciate your consideration in this matter.

Sincerely,

20 - 9

3 - 3

David J. Logsdon

P039

From: <u>Dan Green</u>
To: <u>Conrad, Gene</u>

Cc: Reed Berlinsky; Michael Myers (mamyers1951@gmail.com); rob@landsouthgroup.com

Subject: Amazon Flt pattern

Date: Monday, May 24, 2021 8:06:25 AM

Attachments: <u>image001.png</u>

Good morning Gene

We own about 15 lots and are building spec homes approaching \$1m in the Sanctuary of Grasslands. We are also developing 88 lots known as Grasslands West between Grasslands and the Lakeside Village. Only reciting this to say that wehave significant single family residential investment

here. While we love the economic progress of having Amazon here in Lakeland and complement you on that coup, the flight pattern over the Grasslands community is very troublesome. Please consider this not only as a noise complaint but a notice of potential diminution of value and we encourage you to continue working with the FAA to modify that flight pattern for Amazon and other large planes to follow.

Thank you

Dan



Daniel B. Green

Principal

Wheelock Street Capital, LLC

3829 Progress Dr. Lakeland, FL 33811

Direct 863-608-9934 Cell 407-908-9858

green@wheelockst.com

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13-23

13 - 24

3 - 4

From: Mike Green
To: Conrad. Gene
Subject: Amazon plane noise

Date: Monday, May 24, 2021 9:24:39 AM

Good afternoon Gene. I am a resident of the Grasslands community here in Lakeland (please see my contact information below). I love my community and

I love Lakeland; However, I have been disturbed lately by the frequency of low flying Amazon jets directly over our home. Several times a day, the jets take off from our airport and bank hard to the north, right over our homes in Grasslands. The noise is quite loud as they pass over at such a low altitude. It seems like a logical solution would be to simply have the planes travel a little further east upon take off, and bank their turn north over the non-residential, commercial area of Florida Avenue.

I would appreciate whatever help you can provide in this matter to help us maintain the great lifestyle we enjoy here in Lakeland. Thank you.

Michael Green
3107 Sanctuary Circle
Lakeland, FL 33803
Email – mike@green-construction.com
Phone – 863-559-8625

Mike Green

E mike@green-construction.com
P 863.665.2767
F 863.619.5211
M 863.559.8625
W Green-Construction.com



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Thank you, Green Construction Services, LLC. V	World Access: www.green-construction.com 800.691.2767

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P041

From: Lester Chernick
To: Conrad, Gene
Subject: Amazon jet takeoffs

Date: Sunday, May 23, 2021 4:50:34 AM

13-25

Sir: While we appreciate the presence of Amazon and what they contribute to our community, the noise their planes create upon takeoff to the east is untenable. If they could travel a mile or two further east prior to turning north our community would avoid the incredible low altitude noise disturbance created by their numerous takeoffs. Flying over the Polk Parkway just a bit further and then turning north or south would make a big difference in our quality of life and protect our home values immensely. We would appreciate your consideration on this matter greatly.

Dr. Lester B. Chernick 3340 Turnberry Dr. Lakeland, FL 33803 wtendo@aol.com

Sent from my iPad

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From: Michael Myers Conrad, Gene To:

Subject: Prime Air - Amazon and other large aircraft Date: Saturday, May 22, 2021 4:31:11 PM

Mr. Conrad,

Living in Grasslands and Golf Community used to be a very pleasant life. With the increase in larger low flying aircraft flying in and out of your facility, not so much. I have heard many stories and I believe that these air planes could be redirected and not be flying so low over our community.

I am all for progress and growth, but this should not be at such an noisy cost to the residents in Grasslands.

Please see if you can get these planes redirected and not over my home.

Regards, Michael MYERS 3000 Sanctuary Circle Lakeland, Florida 33803 Mamyers1951@gmail.com

Sent from my iPad

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 From:
 Nan Simon

 To:
 Conrad, Gene

 Subject:
 Amazon Air

Date: Saturday, May 22, 2021 6:13:35 PM

Hi Gene,

13-26

You've heard from me before, but just wanted to express my disappointment that your airport is allowing these huge Amazon Prime jets to take off right over Grasslands until late in the evening (even 10:45 pm the other night and woke up our entire family on a school night), as well as super early some mornings (5:00 hour one morning).

20 - 18

14 - 29

- I'm so disappointed in the city and our airport for allowing these flight plans that disrupt and take away the use and enjoyment of our homes. Sadly we are thinking about selling our home and moving because of this. Especially seeing that you are going to allow them to have 44 flights per day out of Lakeland. Home values are going to crash in and around the airport. Very sad to all of those affected.
- 3-6

Please, please, please quit approving this flight plan. Make these huge jets follow the path of the Polk Parkway (mostly commercial) when taking off to the East.

1934 Heritage Lakes Blvd Lakeland, FL 33803

Thank you,

Nan Simon

Co Founder

MTM Inc.

863-815-7077



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P044

From: Sherrae Myers
To: Conrad, Gene

Subject: Excessive noise - Low flying aircraft Date: Saturday, May 22, 2021 6:41:35 PM

Dear Mr. Conrad,

13 - 27

I am writing as a concerned citizen to state a complaint against all of the low flying, noisy aircraft that flies over our area on a constant basis. The area I am referring to is our beautiful Grasslands Golf & Country Club community. The frequency of the excessive noise and the low flying is on a regular basis due to Amazon/Prime Air and other commercial aircraft arriving and departing. They are destroying our beautiful and peaceful area and will only increase with more large commercial air traffic as things expand. There must be a way to divert said aircraft from this area. It is sad when you have to pause a conversation because you cannot be heard over air noise or you cannot hear your television. This needs to be addressed before it gets worse. We love our city and as concerned citizens we are imploring a reasonable response in regard to this matter as it relates to the health of our community.

Kindest Regards,
Sherrae Myers
Sent from my iPad

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P045

From: Nancy Bertram
To: Conrad, Gene
Subject: Airport noise

Date: Saturday, May 22, 2021 6:44:01 PM

Hi,

13-28

I just wanted to say that I live in Grasslands, and I don't mind the noise from the Amazon planes, and I would welcome any flights from Southwest or American. I guess some people don't like that, but I don't mind a bit. Just wanted you to know you have a supporter here in Grasslands for more flights.

Nancy and Frank Bertram

2702 Bellerive Dr, Lakeland, FL 33803

863 660-7150

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From: <u>Jack and Bea Kempster</u>

To: Conrad, Gene

Subject: support FOR Lakeland Linder Airport
Date: Sunday, May 23, 2021 4:45:10 AM

Mr. Conrad:

The contribution of the airport to the Lakeland community cannot be understated. It's growth is essential.

It is difficult for us to understand the disparaging comments coming from the Oakbridge HOA 2. We do not concur with them.

Living in Grasslands and having the planes of all sizes fly overhead almost hourly is NOT annoying. To us it's the sound of success.

You, and the leadership of Lakeland, have tried for years to encourage businesses to use the airport. And, now that they're coming the neighborhoods complain?

Please accept our congratulations for the fine job you are doing to try to placate your neighbors. We fear it will never be enough. They don't understand FAA regulations, traffic patterns, scheduling, airport design, Tampa/Orlando airport interaction, etc.

Thank you for all you do, and thank you for a very successful Sun 'n Fun.

Jack and Bea Kempster

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From: T. L. Johnson
To: Conrad, Gene
Subject: Aircraft Noise

Date: Sunday, May 23, 2021 1:01:36 PM

Dear Mr Conrad:

On behalf of our immediate family as well as our greater Grasslands 'families', please accept this, NOT as a 'complaint letter', but rather as a letter of 'suggestions' that are intended not only to assist in mitigating the 'noise' issues associated with Lakeland Linder commercial aircraft traffic but at the same time recognize our sincere appreciation for the economic stimulus derived from the added traffic.

As both a lifelong Lakeland resident AND an old pilot having flown out of Lakeland Linder hundreds of times, I am well aware of the context AND the impact of the aircraft noise issue as regards "quiet enjoyment".

13-30

Noise abatement is an issue affecting every neighborhood either abutting or within sound proximity of an airport. Lakeland Linder is no different, excepting that the airport was at one time rurally located; however, with positive growth comes encroachment into those once "rural" areas...& Lakeland is no different.

Historically, aircraft noise has been addressed from an endless array of "active AND passive" aircraft & environmental perspectives & initiatives, including but not limited to:

- 1. Aircraft design techniques for reduction of noise at the source;
- 2. Pilot operational noise abatement decisions regarding power & approach & departure routes;
- 3. Land use & environmental planning & management;
- 4. Airport operating restrictions.

Rather than belabor any of these topics or imply that I may be able to bring a level of knowledge to the table heretofore not thought of, I would simply suggest that the issue is of paramount importance to the evolving partnership of community & industry in our beautiful bustling metropolis of Lakeland, FL. Consequently, we MUST address it with the highest level of sensitivity & seriousness, exhausting every effort at mitigating this inflamed issue. That's the bottom line: put your smartest heads to work on a resolution demonstrating no stone unturned!

Thanks for your anticipated diligence!

TL & Sherrie Johnson

2354 Heritage Lakes Dr Lakeland, FL 33803

863.701.6523

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From: Pixie Rubin
To: Conrad, Gene

Subject: Noise pollution from Amazon Flights

Date: Monday, May 24, 2021 4:49:30 AM

Importance: High

Hello,

Please redirect the flights from Amazon as well as future flights from Lakeland Linder Airport to prevent the planes from flying directly over Grasslands.

Thank you, Sheryl Rubin 2485 Laurel Glen Drive Lakeland, FL 33803 863-666-4298

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From: Conrad, Gene <Gene.Conrad@lakelandgov.net>

Sent: Tuesday, May 25, 2021 10:13 AM

To: Sanford, Paul <paul.sanford@aecom.com> **Subject:** [EXTERNAL] Fwd: Amazon flights

Sent from my iPhone

Begin forwarded message:

From: Bev Lowman < bev.lowman@gmail.com >

Date: May 25, 2021 at 10:01:42 AM EDT

To: "Conrad, Gene" < Gene.Conrad@lakelandgov.net >

Subject: Amazon flights

Mr. Conrad,

13-31

As Grasslands residents, we have been asked to join a request to the FAA to do whatever possible to abate the flight noise resulting from regulations imposed currently in place regarding Amazon flights.

We understand that this is a complicated issue with no immediate solution.

Your understanding, patience and understanding is greatly appreciated.

Thank you, Beverly and John Lowman 3053 Shoal Creek Vlg Dr Lakeland, FL 33803

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P050

From: Steve Perkins < steve.perkins17@outlook.com>

Date: May 25, 2021 at 2:01:11 PM EDT

To: "Conrad, Gene" < Gene.Conrad@lakelandgov.net >

Subject: Workshop and Public Hearing of May 27, 2021 at the RP Funding Center

Mr. Gene Conrad:

My name is Steve Perkins and I live at 4318 Poley Lane, Lakeland, Florida 33811-1466.

I have lived at this address which is just east of Lakeland Linder International Airport for approximately 32 years. When a person is selecting a property and/or a residence, there are many things to consider. When I selected my home it was after completing a 27 item checklist. And first on that list was location. I drove around and looked at the area where I would be living. I found the head waters to Poley Creek was my rear property line. The utilities were supplied by the City of Lakeland. The roads were well maintained and easy access to main thoroughfares. I found the airport and a slow growing commercial and industrial area surrounding it. All in all, I found nothing that caused me to have concerns about living in the area.

The next item on that list was the future. What could happen in the future? No one can accurately predict the future, but one can identify things that already exist that could give clues to the future. The vacant fields that could develop into residential subdivisions or commercial/industrial growths depending on the zoning. The airport

14-31

could grow into a passenger destination and offer departing flights. Airports the size of Lakeland's are a magnet for growth. With the support of the City of Lakeland and airport management, Lakeland's airport has begun to attract businesses that create jobs and tax revenues that will benefit the area as well as Lakeland itself.

With the addition of the Amazon Distribution Center on County Line Road a few years ago, it set the stage for more growth. With other distribution centers in the area, it made Lakeland's airport a great location for an air terminal. Apparently, that was a good choice since Amazon is now wanting to expand its operations here.

Yes, Amazon's growth may create additional air traffic as well as vehicular traffic, but so will other opportunities such as commercial airlines and other businesses. The bottom line here is, anyone objecting to this proposed expansion, knew or should have known, the airport is here and there will be growth. I would suggest that person consider relocating. Thanks.

Sincerely,

Steve Perkins 4318 Poley Lane Lakeland, Florida 33811-1466

Sent from Mail for Windows 10

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From: Conrad, Gene < Gene. Conrad@lakelandgov.net>

Subject: [EXTERNAL] Fwd: Amazon Noise

Sent from my iPhone

Begin forwarded message:

From: Gregory P Kent <gregoryp_kent@yahoo.com>

Date: May 26, 2021 at 7:47:19 AM EDT

To: "Conrad, Gene" < Gene. Conrad@lakelandgov.net>

Subject: Amazon Noise

Good Morning Mr. Conrad

In reference to the article in the Ledger "Amazon seeks to double its operations at Lakeland

Linder airport"; I am for progress and excited about Amazon's expansion, but I do have to agree the jets going over my house are very noisy. I'm not sure why some leave at a lower altitude than others as they pass over my house.

I live in the Lone Palm community and would like to go on record that the noise at times is excessive.

Address: 407 B Howard Avenue

I plan on being at the meeting Thursday to listen to the proposal.

Thank you for all you do for the city of Lakeland.

Gregory P. Kent

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13-32

From: Conrad, Gene <Gene.Conrad@lakelandgov.net>

Sent: Wednesday, May 26, 2021 10:26:08 AM **To:** Sanford, Paul <paul.sanford@aecom.com> **Subject:** [EXTERNAL] Fwd: airplane noise

Sent from my iPhone

Begin forwarded message:

From: Lynn Hollis <lynn.hollis@silloh.com>
Date: May 26, 2021 at 10:14:09 AM EDT

To: "Conrad, Gene" < Gene. Conrad@lakelandgov.net>

Subject: airplane noise

Mr Conrad,

13 - 33

Grasslands is where my home is and I like the beautiful and pleasant environment. The nice quiet atmosphere has changed recently due to early morning airplane departures by Amazon. I do believe there is another route these airplanes, and any future aircraft, can use in place of the departure route over homes in the surrounding area.

Please consider the choices available. Thank you, Mrs. Lynn D. Hollis 3098 Shoal Creek Village Dr. Lakeland Fl 33803 863 6824929 Lynn.hollis@silloh.com

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P053 From: "Edward M. Cetrangolo" <edcetra@aol.com>

Date: May 26, 2021 at 6:58:41 AM EDT

To: andy.kuppers@theledger.com, ltucker1@gannett.com, mlora@gannett.com,

swalsh@theledger.com

Cc: "Conrad, Gene" < Gene. Conrad@lakelandgov.net>

Subject: FAA - WebTrak Data - USA Airports with noise abatement monitoring decibel location systems.

Dear Ledger,

Here is the information I sent to Gene Conrad, LAL Manager back on April 8, 2021 to forward to the FAA.

I did my homework!!!

Is the (FAA) kidding me about flight logistics?

Amazon can build one giant building. Then build another 2nd Amazon building, twice the size of the first one. Produce the materials, workers, plans, permits, environmental assessment, yet when it come to moving the arrival and departing flights to something structured and not all over the city, that process become a long arduous decision for the FAA.

13-129

Here are some Noise Abatement Programs set into action around the USA and the World. The tracking system is using state of the art instruments to determine the noise, standardized flight paths with designated turning waypoints, in conjunction with monitoring aircraft noise, it monitors altitude, speeds, type of aircraft and its destination.

We needed a system put in place before all the flights arrived! This should have been looked into before the first permits or plans were submitted to begin building super structures buildings with massive cargo jets flying all about the skies, without a pattern or plans of logistics to the airspace.

The numbering flights per week is (308) or 44 per day!

What, are they kidding me!

Sincerely,

Ed

PS GENE CONRAD, Please forward this to the FAA. Thank You

Edward M. Cetrangolo 3032 Shoal Creek Village Drive Lakeland, FL 33803 Cell 863-450-8823

----Original Message----

From: Edward M. Cetrangolo <edcetra@aol.com>

To: Edward Cetrangolo <edcetra@aol.com>

Sent: Thu, Apr 8, 2021 3:33 pm

Subject: Fw: FAA - WebTrak Data - USA Airports with noise abatement

monitoring decibel location systems.

Edward M Cetrangolo 3032 Shoal Creek Village Dr Lakeland FL 33803 Cell 863-450-8823

---- Forwarded Message -----

From: "Edward M. Cetrangolo" <edcetra@aol.com>

To: "gene.conrad@lakelandgov.net" < gene.conrad@lakelandgov.net>

Sent: Thu, Apr 8, 2021 at 11:55 AM

Subject: FAA - WebTrak Data - USA Airports with noise abatement monitoring

decibel location systems. Dear Mr Gene Conrad.

I hope you and your family are doing well.

I was looking forward to the Sun-N-Fun this coming week, but I will be out of town for this years great air show. We have family in AZ that we have not seen for over a year, and since my wife and I have now received our Covid-19 vaccine shots, we are happy to fly again.

After studying the "FAA - WebTrak Data - Airports with noise abatement 3 - 27monitoring decibel location systems - surrounding the Airport's Departure and Arrivals at various airports in the USA and around the world!

> The biggest visual I have noticed in my study, is that all arriving and departing flights have one thing in common! They all "DO NOT" have "RADICAL" turns after takeoff, like we have overhead in the Grasslands. That would be the most reasonable first steps and course of action to take!

Please forward to the FAA our concerns and have the FAA consider and implement our proposal to eliminate the "radical" flight path (day or night)! We are grateful for the recent changes to some of the late night or early morning flights. We can all agree, we sleep much better!

Thank you once again for taking into consideration our concerns, safety and well being for the residents of Grasslands and the City of Lakeland.

Sincerely and Respectfully, Ed

PS I have listed these USA monitoring noise abatements links in this email for my colleagues and the residents of the Grasslands. They also have "waypoints" that are coordinates for turning after reaching those logistical distances and elevations away from the airfield. ie see the example of San Diego's new flight paths and waypoints. They also throttle back after some point after take off to aid in the reduction of noise from thrust.

"See attached PDF and the links below"

Edward M. Cetrangolo 3032 Shoal Creek Village Drive Lakeland, FL 33803 Cell 863-450-8823

WebTrak https://webtrak.emsbk.com/ Noise abatement programs around the World

USA Airports with noise abatement monitoring decibel location systems

Baltimore Washington International Airport https://webtrak.emsbk.com/bwi3

Bob Hope Airport https://webtrak.emsbk.com/bur1

Centennial Airport https://webtrak.emsbk.com/apa

Chicago Department of Aviation https://webtrak.emsbk.com/cda

Fort Lauderdale Executive Airport https://webtrak.emsbk.com/fxe

Honolulu International Airport Must Log In, so I skipped this airport

Long Beach International Airport https://webtrak.emsbk.com/lgb3

Los Angeles International Airport https://webtrak.emsbk.com/lax4

McClellan-Palomar Airport https://webtrak.emsbk.com/crg

Oakland International Airport https://webtrak.emsbk.com/oak3

Ontario International Airport https://webtrak.emsbk.com/ont4

Palm Beach International Airport https://webtrak.emsbk.com/pbi

PANYNJ https://webtrak.emsbk.com/panynj4

Port Columbus International Airport https://webtrak.emsbk.com/cmh2

Portland-Tahoe International Airport https://webtrak.emsbk.com/pdx4

Ronald Reagan Washington National Airport https://webtrak.emsbk.com/dca

Sacramento International Airport https://webtrak.emsbk.com/smf3

San Antonio International Airport https://webtrak.emsbk.com/sat2

San Diego International Airport https://webtrak.emsbk.com/san

San Francisco International Airport https://webtrak.emsbk.com/sfo13

San Jose International Airport https://webtrak.emsbk.com/sjc3

Santa Monica Airport https://webtrak.emsbk.com/smo

Southwest Florida International Airport https://webtrak.emsbk.com/rsw

Van Nuys Airport https://webtrak.emsbk.com/vny4

Washington Dulles International Airport https://webtrak.emsbk.com/iad

Westchester County Airport https://webtrak.emsbk.com/hpn1

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From: Mark Kachelein

1808 Baltusrol Court Lakeland, FL 33803

To: Lakeland Linder International Airport

Attn: Gene Conrad, Airport Director 3900 Don Emerson Drive, Suite 210

Lakeland, FL 33811

Subj: Negative impact Airport Expansion will cause

Mr. Gene Conrad,

After serving our great country within the U.S. Department of Defense for 32 plus years all over the world, my wife and I recently moved to Lakeland, FL to retire. One of the reasons we chose Lakeland from other areas is the small town atmosphere and tranquil environment Lakeland

25 May 2021

offers. We purchased our home in the Grasslands in anticipation of enjoying our retirement years. We were fully aware of the occasional flight that Amazon would make above our home and we were content accepting those occasional flights as the neighborhood and adjoining communities are in such a serene location. However, it has come to our attention the airport is looking to expand in 2022 increasing the number of Amazon Prime flights, possibly up to 44 flights a day (22 arrivals and 22 departures). For this many flights to take place, the planes would have to be arriving and departing during all hours of the day.

Please understand that after serving my country for decades, I do not take writing letters or speaking out lightly. Lakeland is nestled between two large cities of Orlando and Tampa which gives all Lakeland residents the ability to enjoy the big cities but reside and still enjoy family life in the small town atmosphere and tranquil environment. What makes Lakeland a truly enjoyable place to reside would definitely be erased with the increased flights, increased noise and visual distraction that will occur if this airport expansion happens in 2022.

I respectfully request that you strongly consider taking actions to stop the airport expansion and allow Lakeland residents the ability to enjoy the tranquil environment they have always enjoyed in the past. Your support in this matter is very much appreciated.

Mark Kachelein

1808 Baltusrol Court

Lakeland, FL 33803 Home: 863-337-6018 Email: pckach@aol.com

MMC:/SDO.

13-34

From: Mutz, Bill

To: Rick Stevens

Subject: RE: AMAZON/Boeing AIR TRAFFIC INCREASE Date: Wednesday, May 26, 2021 12:43:55 PM

Attachments: <u>image001.png</u>

Rick,

Thanks so much for writing. You will be encouraged to know that we have involved ourselves since last November in gathering the attention of the FAA to our approaches and did an initial study and are now engaged in a formal application process requesting FAA routing decisions that will dramatically affect the traffic. You'd be very proud of our Airport Director, Gene Conrad, all along the way.

We believe the decisions by the FAA will b very positive and should be announced and implemented by November or December of this year. In the process, the corridors discussed in The Ledger today are the desired routes which alleviate most of what you've heard.

As a reference point, I live just ½ mile south and slightly west of you; we share the same low altitude traffic corridor experience when they are directed that way. What is encouraging to note, however, is there is much less of that low altitude traffic since our study began. This is what we want to fully pursue. Now, with all that said, there will sometimes be air exceptions. But, they will be hugely one-off moments. You might recall a 4:30 AM one of those about a month and a half ago which was a mechanical issue for a jet that needed to land outside of the normal schedule. They were brought in long and low by Tampa Air Traffic control due to the tower switch during that time.

For the main (an normal), however, we want these routes fixed, with greater descent angles, and less noise and many of them are now doing today. We believe this will be accomplished by the formalized request. And, we will know that and get that in place, as I said earlier, very likely this year.

I hope this information is helpful as we pursue responsible growth and I can assure you we want to always balance the quality of life needs and desires along the way in the best respects possible.

Grateful for your input,

Bill

Bill Mutz

Mayor

City of Lakeland

o. 863.834.6005

facebook.com/lakelandgov @lakelandgov

signature_1064173257



Administrative Assistant - Traci Terry

traci.terry@lakelandgov.net

(863) 834-6005

From: Rick Stevens < rickbrianstevens@aol.com>

Sent: Wednesday, May 26, 2021 2:32 PM

To: Mutz, Bill <Bill.Mutz@lakelandgov.net>; McLeod, Chad <Chad.McLeod@lakelandgov.net>;

Madden, Stephanie <Stephanie.Madden@lakelandgov.net>; Musick, Michael

<Michael.Musick@lakelandgov.net>; McLeod, Chad <Chad.McLeod@lakelandgov.net>; McLeod,

Chad < Chad. McLeod@lakelandgov.net>

Subject: AMAZON/BOEING AIR TRAFFIC INCREASE

Dear Mr Mayor and Esteemed Commissioners,

The purpose of this email is not to stifle the growth of this beautiful city that I have called home for over 60 years.

My appeal to each of you is be certain that this air traffic growth is carefully measured and controlled before any further expansion of jets flying in and out of Lakeland is approved. Boeing Jets are now flying over long established Lakeland communities at less that 1,000 feet altitude and occasionally over my house in Woodlake as late as 10:30 PM at less that 1,000 feet altitude.

Airport flight expansions must be evaluated and approved after all reasonable alternatives have been documented with all flight control governing bodies in agreement.

These air traffic approvals should not be to "approve it now" and work out the problems later.

While I understand some of the complexities, here is a list of what should be top initiatives:

- 1. Each arrival and departure flight at as high an altitude as possible over low density land away from city and heavily populated areas.
- 2 Agreement of all governing flight agencies what the established approaches should be.
- 3. Method to enforce pre established and approved approach/departure guidelines and discontinue line of sight fly ins and navigational short cut over heavily populated areas.
- 4. If necessary, reconfigure runways to maximize approaches and departures over less populated areas.

While I know there are many facets to air traffic, I pray that our City will be able to both grow while protecting the peace and tranquility of our homes of many years.

Rick & Maryanne Stevens

1708 Bayou Circle, Lakeland Home Phone: 863-644-2197

Sent from the all new AOL app for Android

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From: Susan Pericht
To: Conrad, Gene
Cc: Susan Pericht

Subject: Amazon Air Noise Level

Date: Wednesday, May 26, 2021 3:43:15 PM

> > Mr. Conrad.

13-35

> We are sending you this letter (email) today to voice our deep concern and displeasure over the noise level generated by Amazon Prime Air that occurs several times a day everyday as planes fly directly over our house. This starts as early as 5:45 am and goes into the late evening.

>

> We moved to Lakeland five years ago and bought into the Grasslands community based on the premise that it was peaceful and quiet. That peaceful existence ended when Amazon Prime Air started operating out of Lakeland Linder. We now understand that Amazon Prime Air is looking to increase the number of flights each day which will bring more noise to the area. As an example; when we are relaxing on our outdoor patio the noise level at times is so loud we cannot hear each other speak as planes fly overhead. Not to mention being awaken from our sleep at 5:45 AM. Needless to say, our quality of life has been diminished due to the noise levels created by Amazon Prime Air.

13-36

> We are not against progress, but we would like you and the City of Lakeland to provide some consideration for the Lakeland residents that live near the airport by not only denying Amazon's request for more flights, but to figure out a better flight path that will eliminate rattling windows at 5:45 AM.

> Thank you for your time and attention to this matter.

>

> Sincerely,

>

- > Robert and Susan Pericht
- > 2351 Heritage Lakes Dr.
- > Lakeland FL 33803
- > 863-337-6273
- > susan.pericht@gmail.com

P057

 From:
 Dawn Clark

 To:
 Conrad, Gene

 Subject:
 Amazon Concern

Date: Wednesday, May 26, 2021 5:06:45 PM

Good afternoon, Mr. Conrad.

night, the proposed increase to 44 flights per day. I built my home at 2302 Sugar Creek Drive W. over 30 years ago. I raised my family in this quiet neighborhood in Sugar Creek Estates, spent many years investing in our community as an educator and principal, and plan to retire here. Since Amazon flights began last year at Lakeland Linder Airport our peaceful life is bombarded with noise from Amazon all day long. It is so loud that we have to stop conversations when the jets fly over our home. There is no more sleeping past 6 AM either due to the noise from the early morning flights. We cannot hear the tv when jets fly over. They fly so low it's scary, and when we are outside the sound of the jets hurt our ears. We don't use our backyard for entertainment and relaxing like we did prior to the expansion of the airport and Amazon flights. The quality of our lifestyle has been negatively impacted by the flights. It disrupts our comfort and sleep every day! I worked from home last year, as do two of my neighbors. The jets are so loud that customers hear them over the phone as well as in person meetings, and we have to explain and repeat the portion of the conversation. It is so frustrating! My work productivity suffered from the interruption from the jets. I changed jobs due to this. I am certain if the level of noise from the jets was measured from our yard it would be above the FAA guidelines for residences. The flight pattern is right over my home and needs to be shifted to areas that do not fly so closely over homes, such as toward the west. I urge you to find a solution for all of us to the eat of the airport living along Pipkin Creek Road.

I am writing today to voice my concerns about the impact of the current Amazon flights, and as I found out last

I am concerned that if the flight path is not changed I will have to move, which I am stressed and disappointed about. I am confident I will lose prospective buyers due to the intrusion of these large jets flying so low over my home. Most of our neighbors complain about the jets to each other and some plan to sell their home because of the intrusion of the jets

Something must be done to change the flight pattern for residents.

Dawn Clark

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know the content is safe. If you are unsure about an email, contact 4ISHELP.*****

From: BETH DICKMAN
To: Conrad, Gene

Subject: FAA noise complaint - Grasslands community

Date: Wednesday, May 26, 2021 5:43:36 PM

Hello Mr. Conrad,

13-38

I am writing to complain about the constant low, noisy Amazon flights over the Grasslands community. These planes are so low that that it makes my windows vibrate when they pass over. I would appreciate a new route that would take the planes over a more commercial area.

Thank you.

Beth Dickman 2970 Shoal Creek Village Dr. Lakeland, FL 33803 863-450-7050

bpdickman@msn.com

From: frncshprt
To: Conrad, Gene
Subject: Low flying planes

Date: Wednesday, May 26, 2021 7:10:58 PM

Dear Mr. Conrad,

I have heard you speak on several occasions and have appreciated your improvements and plans for our Lakeland airport.

After living at this address for 50 happy years, we recently have become concerned over the increased low flying planes over our house. They fly so low that the plane casts a shadow on the patio and the loud sound is disturbing!. The plane easily reads "Amazon".

I read the reason why they must fly so low, but it seems nothing has been done. The problem still exists!

I can not attend the meeting Thursday due to physical limitations. I must object to increasing the number of low flying Amazon planes in Lakeland.

Sincerely, Fran Haupert 504 Neslo Lane Lakeland, FL 33813 863-646-1182

Sent from the all new AOL app for iOS

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From: Howard Buss
To: Conrad, Gene

Subject: For the Public Record: Please stop the Amazon expansion at the airport

Date: Thursday, May 27, 2021 3:22:01 AM

Dear Mr. Conrad:

13 - 40

My wife and I would like to express our opposition to the plans to increase the number of Amazon flights per day. Since 1990 we have lived at our current address in Lakeland. This was a nice, peaceful neighborhood before Amazon started operations at the airport. The current Amazon flights are noisy, disruptive, and rain pollution down on us as they go overhead. Our neighborhood now has the feel of an industrial zone. It will suffer much more with increased air traffic.

Some say that this is "progress." Since when is adding more noise, disruptions, and pollution to our neighborhood progress? It may be in the financial interests of a relatively small group of individuals and businesses to sacrifice some residential neighborhoods in the name of profit. Please do not support their schemes. They are operating only in their self-interest and will take whatever they can get away with. Ultimately, it is your decision if neighborhoods and citizens will be negatively impacted by the expansion.

14 - 32

Since we moved into our current neighborhood, the airport lengthened its main runway and made substantial upgrades. We were a comfortable distance from the airport. Over the decades, because of the city's lax zoning supervision, casual approach to impact fees, etc. the airport area has changed dramatically. Now, it is encroaching on once peaceful residential spaces. Ultimately, it will lower the quality of life and property values.

Good city planning would have an airport handling these large jets many miles farther away from the population. Please stop Amazon and keep our city the special, place it is.

Sincerely.

Howard J. Buss 4311 Braemar Avenue Lakeland, FL 33813 Phone (863) 646-0961

 From:
 Bill Clark

 To:
 Conrad, Gene

 Subject:
 Amazon Expansion

Date: Thursday, May 27, 2021 4:10:28 AM

Good morning Mr. Conrad,

My name is William Clark and I live at 2302 West Sugar Creek Drive here in Lakeland Florida.

We have lived in Lakeland since our house was built almost 30 years now

With Amazon moving into our neighborhood we have experienced a high level of increased noise from their planes. It seems our street is right on the planes decent route to the airport as they fly so low over us I can probably throw a stone and hit the bottom of the plane, which I've never done!

The noise is definitely higher then the sound decibels mentioned in this article.

My wife and 2 of our neighbors all work from home and phone conversations are now difficult to handle. My wife and neighbors say they have to place their callers on hold till the planes have passed over us.

This inconvenience will increase dramatically with the proposed additional flights of up to 44 flights per day.

One of our neighbors is actually preparing to sell his house and move if this proposal passes. Our community was a peaceful, quiet neighborhood until Amazon arrived, now we feel like we're living on the tarmac of an Airforce base.

Please find a solution to this situation and a route that does not negatively impact any neighborhood in Lakeland.

Thank You Sincerely,

William Clark

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P062

From: Michael Maguire
To: Conrad, Gene
Subject: For what it's worth ...

Date: Thursday, May 27, 2021 4:28:26 AM

Gene,

27 - 4

I won't be at the public hearing tonight but I want you to know that I support - and appreciate - all you have done and will do to keep our airport and city humming in tune with the times.

Cheers, Michael

From: Patty Fouts
To: Conrad, Gene

Subject: Jet noise over Grasslands

Date: Thursday, May 27, 2021 4:35:02 AM

Dear Mr. Conrad,

Lakeland since 1960 when I moved here as a ten year old, and was a local elementary school teacher for 36 years. What you have done at Lakeland Linder Airport has been amazing and I know has done much for our city. I never thought I would be writing to complain, but it also never occurred to me how flights at the airport might affect my daily living. That was before Amazon and the noise caused by jets flying over Grasslands. Is it tolerable? Yes, annoying, but tolerable. I can't sit on my porch and make a phone call or listen to music or read the paper or visit with friends without knowing I will probably have to stop and wait for a plane to pass-often one plane behind another. My husband and I had just enlarged our porch the November before all of this started so that we would have the space to enjoy having family together. The noise is a disruption and I am very concerned that it will soon be worse. I also fear that the value of our home will decline because of it - a home we bought because of the quiet, tranquil area in which to live our retirement years. I understand you are working to lessen the noise impact, and I thank you for that.

I had the pleasure of hearing you speak a few years ago at my PEO group. I have lived in

Sincerely, Patty Fouts 2410 Laurel Glen Dr. pkfouts@gmail.com 863-683-8916

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From: Tosh Sargeant
To: Conrad, Gene

Subject: Comment Regarding Proposed Increase in Amazon Flights

Date: Thursday, May 27, 2021 8:31:21 AM

Hello,

Thank you for reading my comments regarding the proposed Amazon flight increases at Lakeland Linder Airport. My schedule did not allow me to attend the public forum.

I know that Lakeland city officials will focus greatly on the potential economic impact that may occur by increasing Amazon's presence in our community. And they will focus some energy on reducing the noise pollution from increased flight activity. But I do not think that our city officials will consider the cultural and community impact that increasing Amazon's presence in Lakeland will more than likely have. Here are some questions that our city officials should consider.

- How many full time jobs, with full benefits, will Amazon provide to the citizens of Lakeland? Not to individuals who live in the "surrounding area". How many good paying jobs will go to Lakeland city residents? Will flight crews be stationed in Lakeland? Will upper management that will be needed to operate this proposed increase be hired from Lakeland or will they be brought in from another area?
- How will Amazon become a part of the Lakeland community? Will Amazon donate to our local colleges and universities, as GEICO and Publix have donated to Florida Southern College? Will Amazon partner with the Central Florida Flight Academy to provide our high school students with access to innovative airplane technology and information on future career paths?
- Will Amazon sponsor Lakeland events? An Amazon sponsored Sun N' Fun seems like a good idea to me. Or if Amazon does care about growing Lakeland's economy, then they could help pay for the Lakeland Downtown Farmers Market that is a lifeline to many of Lakeland's small businesses. Or maybe Amazon could contribute to Catapult. Lakeland's very own business incubator.

Will Amazon sponsor a float in the Lakeland Christmas parade like GEICO does almost every year?

Have the individuals at Amazon who would like to increase flights in and out of Lakeland ever visited Lakeland? Do they live nearby?

Is Amazon prepared to not just provide infrastructure to promote more business, but infrastructure to promote healthy lifestyles in Lakeland?

To Amazon, is Lakeland a transit point or a city where people live?

I fear increasing Amazon's presence in Lakeland will create a temporary economy or a transient economy. An economy that is not bound to place or people and therefore

doesn't care about the place or the people. Here's an example of why I think this way. I know my UPS driver. I know his name. He has a daughter that's a few years older than my oldest daughter. My wife and I bought Disney princess dresses from our UPS driver. The dresses were a Christmas present for my daughter. My UPS driver takes extreme care of our packages. He lives nearby. He's invested in his community and mine.

My wife is a professional photographer. Due to her specialized occupation, she often orders supplies online because these supplies are hard to find locally. Unlike our UPS driver, we don't know our Amazon delivery drivers. Why? Because every delivery is a different driver. Also, these drivers don't seem to know the area. They're constantly asking us for help finding houses in our neighborhood. And they're usually not the safest drivers. The city of Lakeland could pay the newly approved raises for the police department through speeding tickets for Amazon delivery drivers. All of this gives me the impression that the Amazon workforce is in constant transition.

Where will Lakeland be in 10 years when Amazon moves on?

How will Amazon contribute to our community and our local culture?

Thank you.

Tosh Sargeant
PhD Student, Music Education
School of Music
College of the Arts
University of South Florida

From: "Mutz, Bill" <Bill.Mutz@lakelandgov.net>

Date: May 27, 2021 at 12:10:22 PM EDT

To: "Conrad, Gene" < Gene. Conrad@lakelandgov.net>

Subject: Fwd: Amazon expansion

FYI

Bill Mutz

Mayor - City of Lakeland

Administrative Assistant: Traci Terry

Office: (863) 834-6005

Traci.Terry@LakelandGov.Net

Begin forwarded message:

From: Brandt Merritt

bwmerritt@gmail.com>
Date: May 27, 2021 at 11:15:53 AM EDT

To: City Commission < CityCommission@lakelandgov.net>

Subject: Amazon expansion

Good morning!

I won't be able to make the meeting tonight or give other public input, but wanted to at least drop a line by email to say that Amazon should be given the green light to expand their physical footprint and the number of flights. We're on the flight path (off Hallam/Live Oak), and while I notice many of the planes when they go overhead I think it's pretty cool and not disruptive. The airport is an appropriately zoned location for this kind of expansion, and it puts Lakeland even more on the map as a critical commercial base of operations. In other words, the benefits far outweigh any drawbacks in my opinion, particularly as some of the flight path issues get ironed out with the FAA over time. Thanks!

BRANDT MERRITT

Marketing/Communications Director Summit Consulting Lakeland, Florida

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From: Conrad, Gene < Gene. Conrad@lakelandgov.net>

Sent: Thursday, May 27, 2021 4:33:31 PM **To:** Sanford, Paul <paul.sanford@aecom.com> **Subject:** [EXTERNAL] FW: Amazon Prime Air

Eugene B. Conrad III, C.M. Airport Director Lakeland Linder International Airport

----Original Message----

From: Mike Loudon [mailto:drmikegbr@gmail.com]

Sent: Thursday, May 27, 2021 4:32 PM

To: Conrad, Gene < Gene. Conrad@lakelandgov.net>

Subject: Amazon Prime Air

Dear Mr. Conrad: My wife and live in southeast Lakeland and enjoy seeing those big blue and white Amazon jets fly over our house and on to Lakeland Linder Field. It's thrilling to see Lakeland become a commercial air center. To me, it speaks of great progress moving forward. Along with

PUBLIX, it helps put Lakeland on the map!

Keep up the great work. Thanks for all you do for this community.

Sincerely,

Dr. John "Mike" Loudon

Sent from my iPhone

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P067

From: Conrad, Gene <Gene.Conrad@lakelandgov.net>

Subject: [EXTERNAL] Fwd: Thank You!

Sent from my iPhone

Begin forwarded message:

From: Shawn Warren <swarren@classiccontrols.com>

Date: May 27, 2021 at 7:32:02 PM EDT

To: "Conrad, Gene" < Gene. Conrad@lakelandgov.net>

Subject: Thank You!

Mr. Conrad:

13-43

Good evening. I wanted to send you a big thank you for all that you and your team are doing to support and grow our aviation business in Lakeland. It is a vital part of our ability to grow while maintaining the quality of our community. There are those who, while enjoying these benefits, are complaining about the "noise". The "noise" is very minimal and short lived. I have lived in the Grasslands community for 20 years now and have absolutely no problem with the flights that travel over our development. Many travel right over my house. I actually very much enjoy these flights, being an aviation fan plus knowing how healthy it is for Lakeland. Feel free to vector as many of them over our house as necessary.

Thank you,

Shawn Warren 3125 Winged Foot Drive Lakeland, FL 33803

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From: Conrad, Gene <Gene.Conrad@lakelandgov.net>

Sent: Thursday, May 27, 2021 8:14:01 PM To: Sanford, Paul <paul.sanford@aecom.com> Subject: [EXTERNAL] Fwd: Public hearing comment

Sent from my iPhone

Begin forwarded message:

From: Donovan Baltich <dcbaltich@gmail.com>

Date: May 27, 2021 at 7:06:17 PM EDT

To: "Conrad, Gene" < Gene. Conrad@lakelandgov.net>

Subject: Public hearing comment

Gene,

You and your team are doing a fantastic job cultivating business relationships for City of Lakeland. I'm very pleased with the progress you've made growing the airport and couldn't be happier about Amazon expanding its footprint in Lakeland.

Thank you for your tireless work!

Best,

Donovan C. Baltich

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From: Conrad, Gene <Gene.Conrad@lakelandgov.net>

Subject: [EXTERNAL] Fwd: Amazon expansion at airport

Sent from my iPhone

Begin forwarded message:

From: Frances Stephens < ocean 42@verizon.net>

Date: May 27, 2021 at 5:27:36 PM EDT

To: "Conrad, Gene" < Gene. Conrad@lakelandgov.net>

Subject: Amazon expansion at airport

Reply-To: Frances Stephens < ocean 42@verizon.net>

13 - 44

Noise and air pollution have become problematic since Amazon began expanding flights. They are ruining our

quiet rural life style that so many of us moved to Lakeland to enjoy. This expansion will tank property values

for many of us near the airport. In return we get a few slave labor jobs. I vote AGAINST expansion.

Frances C. Stephens

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From: Conrad, Gene < Gene. Conrad@lakelandgov.net>

Subject: [EXTERNAL] Fwd: Amazon expansion at airport

Sent from my iPhone

Begin forwarded message:

From: Frances Stephens < ocean 42@verizon.net>

Date: May 27, 2021 at 5:27:36 PM EDT

To: "Conrad, Gene" < Gene. Conrad@lakelandgov.net>

Subject: Amazon expansion at airport

Reply-To: Frances Stephens < ocean42@verizon.net>

Noise and air pollution have become problematic since Amazon began expanding flights. They are ruining our

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for many of us near the airport. In return we get a few slave labor jobs. I vote AGAINST expansion.

Frances C. Stephens

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From: Debbie Schaffer
To: Conrad, Gene

Subject: Lakeland Linder International Airport
Date: Friday, May 28, 2021 2:51:09 AM

Mr. Conrad,

I attended the workshop and hearing last night at RP Funding. I live in Grasslands!

The Amazon proposal is unacceptable increasing the noise and surface transportation. This session should have been done prior to Amazon's arrival. I am presently waiting for the air traffic to start up today as I write this email!

14-35

13 - 45

The arrival of the uncontrolled flight pattern of Amazon prime has compromised our housing development, most likely decreasing our quiet environment and housing prices! If you look back, I also contacted you and Bill Mutz when this started, noting the unacceptable noise level happening with Amazon flights.

Also, when you do a presentation, make sure your visuals are readable and have the neighborhood development labeled. You also know better when you want transparency!

Please feel free to contact me with any questions or concerns!

Thank you,

Deborah Bowers Schaffer 2441 Laurel Glen Drive Lakeland, Florida 33803 Cell: 863.255.4754

Sent from my iPhone

P072

From: Robin Thompson
To: Conrad, Gene

Cc: Home (robinandlynn78@yahoo.com)

Subject: Draft Environmental Assessment Phase II Air Cargo Facility

Date: Friday, May 28, 2021 4:01:52 AM

Public Information Meeting 5/27/21

Request for information on traffic impacts

1-1

I reviewed the draff Assessment document and didn't see any data that an Origin and Destination Study was done and that it appeared all the traffic work was done just for Drane Field Road.

14-36

I did not see any impacts to surrounding roadways, such at Pipkin. While most of the impacts will happen on Drain, there will be some diversion of traffic and/or additional traffic from the O& D study for Waring, Pipkin and County Line, not just at or on Drain Field Road. While the traffic study maybe only required for Drain Road by the FAA, the Airport and City should look at the ancillary impacts of the traffic model. It would not take a lot of additional time to rerun the model for the surrounding area.

I also understand that the Noise levels do not require Noise Mitigation, but why doesn't the Airport enter into a voluntary program to purchase property surrounding the Airport, especially on the east side. These purchases can be done as properties go up for sale? This has been done successfully at other locations around the country and will help with any future expansion.

14 - 36

One of the folks helping at the boards, told me to request a written response on the traffic study, which I a officially requesting.

Thank you.

Robin Thompson 3925 Sandhill Crane Drive Lakeland, FL 33811

P073

From: Robin Thompson
To: Conrad, Gene

Cc: Home (robinandlynn78@yahoo.com)

Subject: Draft Environmental Assessment Phase II Air Cargo Facility

Date: Friday, May 28, 2021 4:01:52 AM

Public Information Meeting 5/27/21

Request for information on traffic impacts

I reviewed the draff Assessment document and didn't see any data that an Origin and Destination Study was done and that it appeared all the traffic work was done just for Drane Field Road. I did not see any impacts to surrounding roadways, such at Pipkin. While most of the impacts will happen on Drain, there will be some diversion of traffic and/or additional traffic from the O& D study for Waring, Pipkin and County Line, not just at or on Drain Field Road. While the traffic study maybe only required for Drain Road by the FAA, the Airport and City should look at the ancillary impacts of the traffic model. It would not take a lot of additional time to rerun the model for the surrounding area.

13 - 46

I also understand that the Noise levels do not require Noise Mitigation, but why doesn't the Airport enter into a voluntary program to purchase property surrounding the Airport, especially on the east side. These purchases can be done as properties go up for sale? This has been done successfully at other locations around the country and will help with any future expansion.

One of the folks helping at the boards, told me to request a written response on the traffic study, which I a officially requesting.

Thank you.

Robin Thompson 3925 Sandhill Crane Drive Lakeland, FL 33811

From: David Houston
To: Conrad, Gene
Subject: FAA COMPLAINT

Date: Friday, May 28, 2021 4:44:50 AM

Dear Mr Conrad,

13-47

I am a resident of Grasslands and am asking you to forward my complaint to the FAA. All communities around the airport need relief from the low flying Amazon flights as soon as possible. Please let the FAA know the path for exiting flights needs to be changed to give us relief from the noise.

Thank you David Houston 2673 Bellerive Dr Lakeland Fl 33803 863 206 2922 dhouston6675@gmail.com

Sent from my iPad

From: Jackie Schwartz
To: Conrad, Gene
Subject: Amazon

Date: Friday, May 28, 2021 5:17:40 AM

My name is Jackie Schwartz we met at the meeting last night and you told me I could email you at this address. I would really like to find the information as to where I can complain about the noise. After attending the meeting last night I realized I think this is a done deal. I think this meeting was just for show I think you guys were going to do this no matter what. I brought my family to Lakeland 35 years ago and raise them here my children still live here my grandchildren live here this was a wonderful town I've always loved Lakeland I still love Lakeland. It was a wonderful place to bring up my children but it's changing and it's not changing for the good. I believe all this is because of money. I don't see how the citizens will benefit. Amazon takes away from our local businesses every single day and we're going to support it and make it get bigger and bigger and bigger.? But talking about the noise I live on the east side by Cleveland Heights two blocks away from the Polk parkway the noise for us right now is atrocious I live in an old house and my windows rattle with the noise.

I really hope in my heart that the city commissioners will not allow this to happen. Jacqueline Schwartz

Sent from the all new AOL app for iOS

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14-37

From: <u>Connie Durrence</u>
To: <u>Conrad, Gene</u>

Subject: Amazon Flights Over Grasslands
Date: Friday, May 28, 2021 5:48:20 AM

Mr. Conrad-

13-49

I wanted to register my complaint about the large number of Amazon flights each day which seem to be flying directly over my house in Shoal Creek Village in Grasslands. The noise is at such a level that if I'm watching TV or simply having a conversation with friends we are unable to hear each other until the plane has left the area.

20 - 10

I am a supporter of businesses that bring jobs to our city and county, but the quality of our life should not be so drastically impaired when there are solutions to mitigate this intrusion. I would appreciate any steps you can take to help us.

Connie Durrence 3062 Shoal Creek Village Drive Lakeland, FL 33803 Cdurrence@tampabay.rr.com (863)640-0303

Sent from my iPhone

From: <u>Elizabeth Willers, Realtor with Avery Properties</u>

To: <u>Conrad, Gene</u>

Subject: Flight Paths and NOISE affecting Grasslands

Date: Friday, May 28, 2021 6:07:52 AM

Dear Mr Conrad,

13 - 50

Please help stop these low flying flights over the Grasslands community. They are LOUD. They are disruptive. Please work with the FAA to stop these unnecessary flight paths.

Sincerely,

Elizabeth and Jock Willers

2476 Laurel Glen Dr, Lakeland, FL 33803

863 521 4164

willershomes@gmail.com

Thank you.

--

How much is your home worth: http://www.willershomes.com/whats-your-home-worthHow Much is Your Home Worth?

My blog: http://willershomesfl.tumblr.com/

From: tfrehnke@gmail.com
To: Conrad_Gene

Subject: Re: Grasslands homeowner

Date: Friday, May 28, 2021 6:12:13 AM

Dear Mr. Conrad,

13-51

We are new homeowners to Grasslands. Moved from Pinellas County to have a quiet sanctuary to

call home. After moving in to our new home in September we starting hearing and seeing the Amazon Prime flights go over our home. It was shocking to us as we never knew this was going to happen. They fly so very low to our home it is scary. We are begging you to please stop this from happening! It can be so loud and literally scary to us when it directly goes over our house at such a low altitude.

We would have never bought in Grasslands if we knew this was going to be a problem. It is a beautiful safe and quiet community that is being destroyed by this terrible situation!

Sincerely,

Robert and Tammy Rehnke

Laurel Glen homeowners (Grasslands)

From: Curtis Cassidy
To: Conrad, Gene

Subject: Flight Paths and NOISE affecting Grasslands

Date: Friday, May 28, 2021 6:18:20 AM

Dear Mr. Conrad:

13-52

You must stop these low flying flights over the Grasslands community. They are LOUD. They are disruptive. Please work with the FAA to stop these unnecessary flight paths.

Sincerely,

Curtis W. Cassidy, M.D.

3105 Legends Circle

Lakeland, FL 33803

(863) 899-6618

cassidymd@msn.com

Curtis W. Cassidy, M.D.
Diplomate in Psychiatry and Forensic Psychiatry
(863) 686-0800 Office
(863) 686-0805 Fax

NOTICE OF CONFIDENTIALITY

The information in this email, including attachments, may be confidential and/or privileged and may contain confidential health information. This email is intended to be reviewed only by the individual or organization named as addressee. If you have received this email in error please notify Dr. Cassidy immediately by return message to the sender. Destroy all copies of this message and any attachments. Confidential health information is protected by state and federal law, including, but not limited to: The Health Insurance Portability and Accountability Act of 1996 and related regulations.

From: Bill McClellan
To: Conrad, Gene

Subject: Flight Paths and NOISE affecting Grasslands

Date: Friday, May 28, 2021 6:27:15 AM

Dear Mr Conrad,

13-53

You must stop these low flying flights over the Grasslands community. They are LOUD. They are disruptive. Please work with the FAA to stop these unnecessary flight paths.

Sincerely,

Bill McClellan 3480 Turnberry Dr Lakeland, FL 33803

863-647-1003

billmccl@att.net

From: <u>Jerry Bridges</u>
To: <u>Conrad, Gene</u>

Subject: Flight Paths and NOISE affecting Grasslands

Date: Friday, May 28, 2021 6:32:24 AM

Dear Mr Conrad,

13-54

You must stop these low flying flights over the Grasslands community. They are LOUD. They are disruptive. Please work with the FAA to stop these unnecessary flight paths.

Sincerely,

Jerry Bridges

1763 Laurel Glen Place

Lakeland, FL 33803

Phone: 863-860-5883

Email Address: Jerry.bridgesrr@gmail.com

From: Alice Gilbertson
To: Conrad, Gene
Subject: Air traffic

Date: Friday, May 28, 2021 6:35:46 AM

Mr. Conrad,

13-55

I am an Amazon shopper and I also appreciate their importance to the growth of Lakeland, however, a correction needs to be addressed concerning their flight path. I am hearing impaired, yet the noise they create as they fly over my patio is too loud for even me. We bought a house in the Grasslands because of its serene atmosphere. Amazon flights have destroyed our peaceful environment.

Sincerely, Alice Gilbertson
Sent from my iPad

From: Stuart Earl Larsen
To: Conrad, Gene

Subject:Disruptive noise over GrasslandsDate:Friday, May 28, 2021 6:44:41 AM

Subject: Flight Paths and NOISE affecting Grasslands

Dear Mr Conrad,

13-56

You must stop these low flying flights over my home in the Grasslands community. They are not only LOUD but are also DISRUPTIVE; especially when our sleep is interrupted at 6:00 and 6:15 AM.

14-38

Grasslands is one of the premier communities in Lakeland, as you know. You and I both know if this persists, our resale values will fall and that directly effects the Lakeland/Polk county tax base and our pocket book.

Dr Bonny and I have lived in several Florida communities since 1972 and we chose Lakeland because it was a quiet peaceful town. These recent decisions you guys are making may be good for business but are surely not good for Grasslands or other communities affected by this noise pollution.

Please work with the FAA to stop these unnecessary flight patterns.

Sincerely,

Dr Bonny and Stuart Larsen

2752 Bellerive Drive - 33803

862-225-5031

DrBonLarsen@aol.com

LarsenStuartE@aol.com

From: Ted Kennedy
To: Conrad, Gene

Subject: Flight Paths and NOISE affecting Grasslands

Date: Friday, May 28, 2021 6:55:53 AM

Dear Mr Conrad,

13-57

You must stop these low flying flights over the Grasslands community. They are LOUD. They are disruptive. Please work with the FAA to stop these unnecessary flight paths.

Sincerely,

Ted Kennedy

2852 Prestwick Drive, Lakeland, FL 33803

919-698-3376

tkiowa@msn.com

From: Kimberly Cassidy
To: Conrad, Gene

Subject: Flight Paths and NOISE affecting Grasslands

Date: Friday, May 28, 2021 7:26:39 AM

Dear Mr. Conrad,

I'm writing you today, as I was unable to attend last nights meeting. My husband and I did watch the live stream of the meeting and have read over the airport project plan.

13 - 58

I'm urging you to please stop these low flying flights, that appear to only be the Amazon Air flights, over our Grasslands community. Not only are these low flying flights loud, they are very disruptive to our family. We have a child with a rare neurological disease and requires sleep to gain strength. These constant flights not only rattle our house, but wake him up and impact his quality of health. I can only imagine if your son's ability to attend school, walk without muscle weakness resulting in sudden falls, and his overall ability to function at full capacity because his sleep was disturbed by a large airplane flying directly over your house, would have you pleading with the FAA and the city to have these flight paths diverted away from your home.

Our children are 10th generation Polk County natives. My husband is a private practicing physician and I'm a former Human Resources Executive now stay at home mom. We came back to Lakeland after college, medical school, and residency to raise our family in this charming quiet town. We love this place and the

20 - 19

people that make it such a wonderful community. However, we did not ever imagine such an unfathomable and obnoxious disruption like Amazon Air negatively impacting our family and friend's quality of life. Walks and bike rides in our Grasslands community, walking the lake, and even hanging around the YMCA/Peterson park, have never been so disruptive and unpleasant as they have this past year. It's absolutely

disheartening.

It's imperative our city of Lakeland Commissioners recognize there are more of the good, loyal, citizens whose health and overall quality of life are being negatively impacted, than those who aren't. Lakeland is a wonderful charming town, please let's keep it this way by urging the FAA to stop these unnecessary flight paths and the city from accepting this large expansion for Amazon.

Sincerely,

Kimberly Cassidy
3105 Legends Circle
Lakeland, Florida
33803
863-370-0054
curtandkimberly@icloud.com

From: <u>Larry Dobbs</u>
To: <u>Conrad, Gene</u>

Subject: Flight Paths and NOISE affecting Grasslands

Date: Friday, May 28, 2021 7:28:21 AM

Dear Mr Conrad,

13-59

You must stop these low flying flights over the Grasslands community. They are LOUD. They are disruptive. Please work with the FAA to stop these unnecessary flight paths.

Sincerely, Larry G Dobbs

Name: Larry G Dobbs

Address: 2729 Bellerive Drive

Phone: 863-660-7824

Email Address: larrygdobbs@yahoo.com

larrygdobbs@yahoo.com Larry G Dobbs 2729 Bellerive Drive Lakeland, Florida 33803-5473 863-660-7824

From: Joseph Belshe
To: Conrad, Gene
Subject: Amazon flights

Date: Friday, May 28, 2021 7:55:36 AM

14-39

13-60

Dear Mr. Conrad.

I live in Grasslands and have enjoyed the security of this community for over 20 years. I was as excited about Amazon coming in as everyone else was. I think they will do a lot for our community by their tax dollars.

Forty- four flights a day scares me. I do feel, however, that all of Lakeland should help to carry the burden of these frequent flights. In other words, all flights should not follow the flight path directly over Grasslands, nor should we be exempt from some going over. Fair is fair. I believe the early report was they used the East/west runway and had to stay below 2000 feet because of the proximity to Tampa and Orlando. This was very noisy! I think there could be some coordination between those two airports and Lakeland Linder to allow for faster climbs. This would

surely alleviate some of the noise. It is not just Grasslands, though we may be the more vocal, but this also affects other communities around us. (Mas Verde, Beacon Terrace, Ariana Village, Presbyterian Homes, etc, etc are all negatively impacted by low flying flights).

I do hope you consider balancing the flight patterns of outgoing and incoming flights. This would end up with less total dissatisfaction. No one wants all and no one should expect no flights at all.

Best to you, Mr. Conrad. Sincerely yours, Mary and Joseph Belshe 2900 Grasslands Drive Lakeland, FL 33803

Email: jcbmd@aol.com

Sent from my iPad

From: pegwendel@gmail.com

To: <u>Conrad, Gene</u>

Cc: pegwendel@gmail.com

Subject: Flight Paths and Noise affecting Grasslands

Date: Friday, May 28, 2021 8:15:20 AM

Importance: High

Dear Mr. Conrad,

13-61

You must stop these low flying flights over the Grasslands community. They are very LOUD. They are very Disruptive.

Please work with the FAA to stop these unnecessary flight paths.

Sincerely,

Mr and Mrs John F Wendel

1748 Laurel Glen Pl Lakeland Fl 33803 pegwendel@gmail.com 863 409 1450

From: <u>LakelandAirport</u>

To: Conrad, Gene: Hallstrand, Chris
Subject: FW: I support airport expansion
Date: Friday, May 28, 2021 8:31:05 AM

Attachments: <u>image001.png</u>

From: John Curls Jr. <curlsj@barneyspumps.com>

Sent: Friday, May 28, 2021 10:50 AM

To: LakelandAirport < lakelandairport@lakelandgov.net>

Subject: I support airport expansion

To whom it may concern:

27-8

I LOVE seeing and hearing airplanes coming in and out of our airport! I am writing to express my full support regarding the ongoing expansions at the airport especially concerning Amazon. As you all have done so far, please continue to move forward in an appropriate and responsible manner. Thank you for the work that you are doing.

I am a City of Lakeland resident. I was born in Lakeland General Hospital and have lived here essentially my whole life. I love the generosity and care that our community shows and how people try to make life better here.

Best regards,

John Curls, Jr., P.E. Chief Executive Officer

O: 863-665-8500

E: curlsj@barneyspumps.com 2965 Barney's Pumps Place Lakeland, FL 33812

www.barneyspumps.com



attachments unless you know	the content is safe	. If you are unsure	about an email	l, contact
4ISHELP.****				

PUBLIC RECORDS NOTICE:

From: Edward M. Cetrangolo
To: Conrad, Gene

Subject: Complaint to the FAA - Gene Conrad please forward to the FAA

Date: Friday, May 28, 2021 8:46:31 AM

Complaint to the FAA - Gene Conrad please forward to the FAA

From my speech last night.

Thank you. to all concerned, for coming to tonight's meeting.

My Name is Edward Cetrangolo, C-E-T-R-A-N-G-O-L-O I live in "The Grasslands" at 3032 Shoal Creek Village Dr, Lakeland

I would like to "Touch and Go" on a letter I wrote to The Ledger concerning the noise from the Prime aircraft.

Dear Ledger,

I did my homework!!!

3-28 Where are the flight logistics?

Ground logistics are great! Amazon can build one giant building. Then build another 2nd Giant Amazon building, twice the size of the first one. Produce all the materials, workers, plans, permits, inspections, and environmental assessments.

BUT, when it come to air logistics and moving the arrival and departing flights to something structured and not all over the city, that process becomes a long and arduous decision for the FAA to implement. It's been almost a year.

All flights are dangerously low, some at 1,500 feet off the ground for 10 mile stretches before climbing up to higher altitudes.

It started at 22 flights per day, it's now jumped to 44 flights. It my jump again and again.

My second letter, I want to "Touch and Go" on, was to Gene Conrad and my

fellow Grasslands residents,

13-62

Investigating THE INFORMATION on the Website called WebTrak

WebTrak - Is a Public Noise Abatement and monitoring system that surrounds the area incorporating the flight paths to and from the airfield, it's used at 26 airports in the US, 3 airports in FL and at 58 airports all around the world.

This website is a model, for a state of the art approach to logistics.

1. It uses sensitive instruments to determine the noise levels, in conjunction with standardized flight paths, designated mandatory turning waypoints to lessen noise or to fly around a portion of a city before turning.

and in conjunction with monitoring aircraft noise!

2. it also monitors elevation off the ground in feet, air speeds in MPH, type and size of aircraft and its destination. All on an easy to read MAP...

3-29

"The biggest visual I have noticed in my study, was, all arriving and departing flights have one thing in common!

They Fly straight out, on take off. They "DO NOT" take "RADICAL" hairpin like turns after takeoff. Amazon needs to STOP the radical turns over "The Grasslands".

These are the facts!

Ask yourself, WHY to these 3 questions?

- 1. WHY, NO air logistics on noise above the city,
- 2. Why, the erratic and radical departing and arrival flight paths and not one standardized corridors to and from the airport, Thus making all flights less confusing for pilots and the control tower personal.

13-130

3. Why, Do the Pilot's NOT throttle back their jets engines after lift off, to help lower the jet's noise rumbling in people ears, shaking our home's and the city.

13-130

We desperately need a noise abatement systems.

The FAA needs to step up their game! "Lets NOT fly by the seat of our pants."

Thank you.

Edward M Cetrangolo 3032 Shoal Creek Village Dr Lakeland FL 33803 Cell 863-450-8823 edcetra@aol.com

From: Peggy Semans
To: Conrad, Gene

Subject: Amazon planes and future flights Date: Friday, May 28, 2021 8:49:41 AM

Dear Mr. Conrad, We are very upset

We are very upset with the low flying, extremely LOUD and disruptive flights flying over our Grasslands community. They start flying around 6 o'clock in the morning which is unacceptable. Please forward our complaint to the FAA to come to a resolution of this problem.

Sincerely,

Rob & Peggy Semans 2834 Grasslands Drive Lakeland, FL 33803 813-610-0826 Rpsemans@aol.com

Sent from my iPad

 From:
 belarson4

 To:
 Conrad, Gene

 Subject:
 Flights

Date: Friday, May 28, 2021 8:49:57 AM

Dear Mr Conrad,

13-64

You must stop these low flying flights over the Grasslands community. They are LOUD. They are disruptive. They are early in the morning, late at night, and they are too many. Please work with the FAA to stop these unnecessary flight paths.

Sincerely,

Buffy Larson

3135 Grasslands Drive

Lakeland, FL 33803

belarson4@gmail.com

From: Nancy Fingar
To: Conrad, Gene

Cc: Edward M. Cetrangolo / Grasslands

Subject: By my wife Nancy Fingar - Complaint to the FAA - Gene Conrad please forward to the FAA

Date: Friday, May 28, 2021 8:54:46 AM

To whom it may concern.

I Nancy Fingar, have read my husbands speech from last night and I want to make a formal complaint to the FAA. I agree with Mr Ed Cetrangolo. "Ditto" on his speech.

Sincerely, Nancy

Nancy L Fingar 3032 Shoal Creek Village Dr Lakeland, FL 33803 Cell 813-458-9924 jnfingar1@me.com

Complaint to the FAA - Gene Conrad please forward to the FAA From my speech last night.

Thank you. to all concerned, for coming to tonight's meeting.

My Name is Edward Cetrangolo, C-E-T-R-A-N-G-O-L-O I live in "The Grasslands" at 3032 Shoal Creek Village Dr, Lakeland

I would like to "Touch and Go" on a letter I wrote to The Ledger concerning the noise from the Prime aircraft.

Dear Ledger,

I did my homework!!!

Where are the flight logistics?

Ground logistics are great! Amazon can build one giant building. Then build another 2nd Giant Amazon building, twice the size of the first one. Produce all the materials, workers, plans, permits, inspections, and environmental assessments.

BUT, when it come to air logistics and moving the arrival and departing flights to something structured and not all over the city, that process becomes a long and arduous decision for the FAA to implement. It's been almost a year.

All flights are dangerously low, some at 1,500 feet off the ground for 10 mile stretches before climbing up to higher altitudes.

It started at 22 flights per day, it's now jumped to 44 flights. It my jump again and again.

My second letter, I want to "Touch and Go" on, was to Gene Conrad and my fellow Grasslands residents,

Investigating THE INFORMATION on the Website called WebTrak

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This website is a model, for a state of the art approach to logistics.

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and in conjunction with monitoring aircraft noise!

2. it also monitors elevation off the ground in feet, air speeds in MPH, type and size of aircraft and its destination. All on an easy to read MAP...

"The biggest visual I have noticed in my study, was, all arriving and departing flights have one thing in common!

They Fly straight out, on take off. They "DO NOT" take "RADICAL" hairpin like turns after takeoff. Amazon needs to STOP the radical turns over "The Grasslands".

These are the facts!

Ask yourself, WHY to these 3 questions?

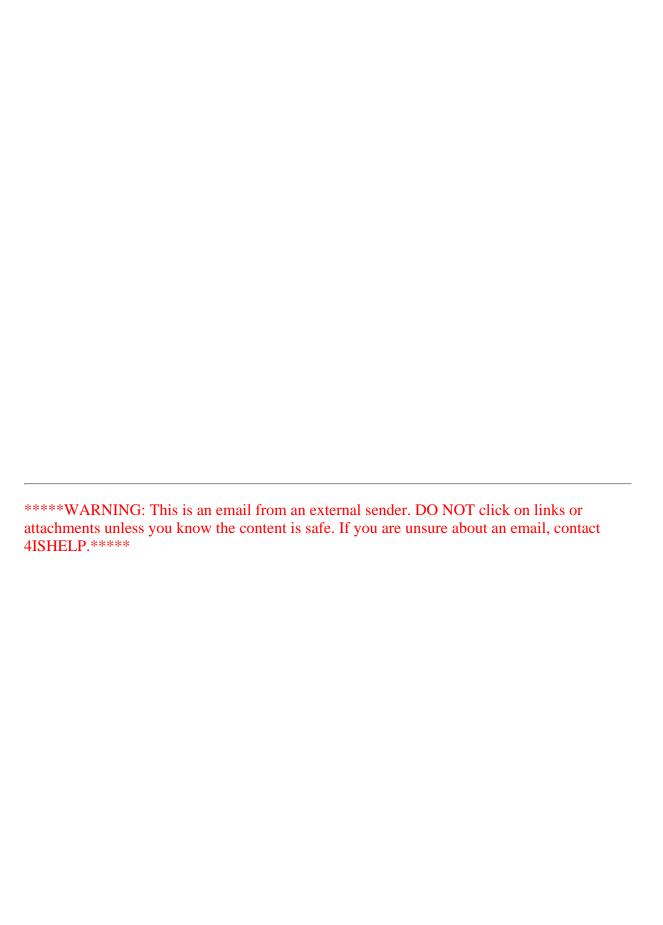
- 1. WHY, NO air logistics on noise above the city,
- 2. Why, the erratic and radical departing and arrival flight paths and not one standardized corridors to and from the airport, Thus making all flights less confusing for pilots and the control tower personal.
- 3. Why, Do the Pilot's NOT throttle back their jets engines after lift off, to help lower the jet's noise rumbling in people ears, shaking our home's and the city.

We desperately need a noise abatement systems.

The FAA needs to step up their game! "Lets NOT fly by the seat of our pants."

Thank you.

Edward M Cetrangolo 3032 Shoal Creek Village Dr Lakeland FL 33803 Cell 863-450-8823 edcetra@aol.com



From:

To: <u>Conrad, Gene</u>

Subject: Flight Paths and NOISE affecting Grasslands

Date: Friday, May 28, 2021 9:03:55 AM

Dear Mr. Conrad,

13-66

You must stop these low flying flights over the Grasslands community. They are LOUD. They are DISRUPTIVE. Please work with the FAA to stop these unnecessary flight paths.

Sincerely,

Lawrence W. Moore 3383 Turnberry Lane Lakeland, Florida 33803 863-944-4186 Lmoore8474@aol.com

From: Pixie Rubin
To: Conrad, Gene

Subject: Flight Paths and NOISE affecting Grasslands

Date: Friday, May 28, 2021 9:10:28 AM

Dear Mr. Conrad,

3-10 I

Please work with the FAA to reroute low-flying flights away from the Grasslands community. We appreciate your attention to this issue.

Sheryl Rubin 2485 Laurel Glen Drive 863-666-4298 pixierubin@icloud.com

From: <u>Jim Studiale</u>

To: <u>City Commission; Bill Mutz; Conrad, Gene</u>
Cc: <u>Cook, Kevin; Sherrouse, Shawn; Travis, Nicole</u>
Subject: Official Comments for Amazon Expansion Hearing

Date: Friday, May 28, 2021 9:11:39 AM

Mayor Mutz, City Commissioners, Gene Conrad, FAA Representatives:

The City of Lakeland was well planned and over the past three decades took action to cause a Lakeland Renisance that has made our city the envy of many other cities nationwide. The 1990 Master Plan documented a multi-decade effort to reclaim Lakeland's Historic Parks, Connect its Lakes, and prime the pump for downtown redevelopment to recreate the City envisioned and enjoyed by its early citizens. Lakeland has boomed and its "Quality of Life" is exceptional and admired by those who visit and call it home. Our neighborhoods are strong and sought after!

I was among those who worked to craft and fulfill that vision and I cherish this City as most residents do. I ask then why in the name of economic development are we ignoring, in fact reversing decades of progress in order to become

an ever growing freight hub for Amazon. Economic gains must be measured against costs. The costs of Amazon's Jets is Noise and degrading the Quality of Life in so many of Lakelands great neighborhoods. Commissioners, you have welcomed a reduced quality of life, a drone of noise any time we venture into our outdoor spaces! None of our public accomplishments and the wonderful qualities of Lakeland matter if we diminish the quality of life here in

"Our City". The prevalence of jets flying over my home has not simply hurt resale value for me and my neighbors but more importantly it robs me of the quiet enjoyment of my once fabulous home, pool, and patio setting—overlooking beautiful open space!

The City's recruitment of Amazon diminishes and in fact has begun to destroy what we so carefully built over decades. Economic development is not the priority, Q of Life is!!! We reduced Drummond's Proposed Mall by 50%, West Lakeland DRI by more then 70% due to traffic impacts and always measured growth against impacts. Why not in this case? These noise impacts are pervasive and overarching and much greater then any economic benefit to Lakeland.

Jim Studiale 925 Wedgewood Lane Lakeland, 33827

PS: Our home is many miles from the airport and I would understand if I was nearby but I am not. Good Cities set priorities for growth and do not embrace it at all costs. Gene, please ensure that these comments are included in the package to FAA, and continue to work on the mitigation steps we have discussed. To date it is all just noise.

Sent from my iPad

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20-11

13-67

From: Zach Backar
To: Conrad, Gene

Subject: Amazon expansion plans.

Date: Friday, May 28, 2021 9:40:06 AM

14 - 41

How would you like this over your head. Now its about to get worse. Apparently, no one is interested in giving any compensation from the windfall revenue to the Lakeland cash register? Why can't you help us with this? By lowering our property taxes? Especially after the financial suffering due to no fault of our own(Pandemic). I moved down here to retire. What are you thoughts?

From: **Emilee Niekro** To: Conrad, Gene Subject: Amazon expansion

Friday, May 28, 2021 10:14:04 AM Date:

Mr. Conrad-

This is a letter about my heartfelt concern of the detrimental effects of the planned Amazon expansion. My husband and I both were born and raised in Lakleland and love it with all our hearts. We have two young children and are very involved in many aspects of the community. We have planted roots in central Lakeland, own our home and love it. We live near the YMCA in a beautiful neighborhood with established homes. The current amount of Amazon arrival traffic is completely tolerable, however with this planned expansion it seem to be extreme. We are so blessed to have this wonderful thriving town, however letting Amazon have this much power here will be detrimental Many home values will plummet, noise pollution will be intolerable. I am all about bringing new business to Lakeland and growth, however, allowing Amazon to impact our community at this magnitude is reckless. I beg of you to please consider the negative impact this expansion will have on our community and it's environment. Lakeland is THRIVING with Amazon here as it is, please consider the community and those that live here. Thank you so much for your time.

Sincerely, Emilee Niekro

Sent from my iPhone

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3-30

13-68

From: Christine Michalik
To: Conrad, Gene

Subject: Flight Paths and NOISE affecting Grasslands

Date: Friday, May 28, 2021 11:06:00 AM

Dear Mr Conrad,

13-69

You must stop these low flying flights over the Grasslands community. They are LOUD. They are disruptive. Please work with the FAA to stop these unnecessary flight paths.

Sincerely,

Name: Christine Michalik

Address: 3146 Grasslands Dr Lakeland FL 33803

Phone: 863-701-6124

Email Address: mompix44@yahoo.com

From: Conrad, Gene <Gene.Conrad@lakelandgov.net>

Sent: Friday, May 28, 2021 2:53 PM

To: Sanford, Paul <paul.sanford@aecom.com>

Subject: [EXTERNAL] FW: Amazon

Eugene B. Conrad III, C.M.

Airport Director

Lakeland Linder International Airport

From: HARRY STOER [mailto:hstoer@aol.com]

Sent: Friday, May 28, 2021 2:49 PM

To: Conrad, Gene <Gene.Conrad@lakelandgov.net>

Subject: Amazon

14-43

Amazon expanding will bring needed jobs to Polk County. A few seconds of jet noise is worth it. Semi's are loud too!

Rick Stoer, CHA

Hospitality Depot Inc.

Phone: 863 529 3401 Mobile

Office: 850 235 8063 Fax: 850 230 3060 Hstoer@aol.com

rick@hospitality-depot.com www.hospitality-depot.com

Like us on Facebook!

https://www.facebook.com/pages/Hospitality-Depot/510806772354901

From: Conrad, Gene < Gene. Conrad@lakelandgov.net>

Sent: Friday, May 28, 2021 3:13 PM

To: Sanford, Paul <paul.sanford@aecom.com> **Subject:** [EXTERNAL] FW: Extreme aircraft noise

Eugene B. Conrad III, C.M.

Airport Director

Lakeland Linder International Airport

From: jmgreenberg3@aol.com [mailto:jmgreenberg3@aol.com]

Sent: Friday, May 28, 2021 3:08 PM

To: Conrad, Gene < Gene.Conrad@lakelandgov.net >

Subject: Extreme aircraft noise

Dear Mr. Conrad,

13 - 70

I am a resident of Grasslands. Our peaceful home is now continually disrupted by the lowing flying Amazon planes. They wake me in the morning and disturb our dinner at night. Our quality of life is effected from this aircraft noise. Please work to re-route these planes to a different path over non residential areas.

I appreciate your prompt attention to this matter.

Carrie Greenberg 3115 Legends Circle Lakeland, FL. 33803

561.706.6510 Carrie

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P102 From: Conrad, Gene < Gene. Conrad@lakelandgov.net>

Sent: Friday, May 28, 2021 3:26:40 PM

To: Sanford, Paul <paul.sanford@aecom.com>

Subject: [EXTERNAL] FW: Amazon

Eugene B. Conrad III, C.M.

Airport Director

Lakeland Linder International Airport

From: Andrew Bildz [mailto:ajbildz@gmail.com]

Sent: Friday, May 28, 2021 3:25 PM

To: Conrad, Gene <Gene.Conrad@lakelandgov.net>

Subject: Amazon

Dear Mr. Conrad,

As the airport director, you are doing the right thing to listen to the community concerns, working with the FAA and Amazon to mitigate the noise, and most importantly, properly managing the expansion at Linder.

27-9

The complainers may not like the noise, but they sure do like their cheap Amazon deliveries to their front door.

They may not like the noise, but they have no need or desire for employment at Amazon or the airport.

They may not like the noise, but they bought their home very near an airport, where (noisy) planes necessarily operate.

This is NIMBY x 1,000. GO AHEAD AND EXPAND!

Andrew J Bildz, Lakeland, FL



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PUBLIC RECORDS NOTICE:

From: Conrad, Gene < Gene. Conrad@lakelandgov.net>

Sent: Friday, May 28, 2021 3:59 PM

To: Sanford, Paul <paul.sanford@aecom.com>

Subject: [EXTERNAL] Fwd: Amazon more than welcomed

Sent from my iPhone

Begin forwarded message:

From: Rick Gonzalez < enrigonz70@gmail.com>

Date: May 28, 2021 at 3:45:38 PM EDT

To: "Conrad, Gene" < Gene.Conrad@lakelandgov.net >

Subject: Amazon more than welcomed

Hello Mr Conrad,

14 - 44

13-71

Bringing in more business like Amazon to Lakeland is a great thing for us, this city and county needs it! More jobs, more businesses equal progress! The airport is doing a great job keeping the noise levels down, I live a mile from the airport, on the south side. The inconveniences are a small price to pay to see our city grow.

Thanks for your time,

Enrique Gonzalez

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PUBLIC RECORDS NOTICE:

From: Conrad, Gene <Gene.Conrad@lakelandgov.net>

Sent: Friday, May 28, 2021 4:01 PM

To: Sanford, Paul <paul.sanford@aecom.com> **Subject:** [EXTERNAL] Fwd: Amazon 5/28/21

Sent from my iPhone

Begin forwarded message:

From: jumpjohn@aol.com

Date: May 28, 2021 at 3:43:01 PM EDT

To: "Conrad, Gene" < Gene.Conrad@lakelandgov.net >

Subject: Amazon 5/28/21
Reply-To: jumpjohn@aol.com

Dear Gene:

14-45

27 - 10

I am in support of the expansion of Amazon at Lakeland Airport. I don't work for Amazon and I don't agree with their politics but I care more about the future of Lakeland and that future is better with more jobs with a good and stable company providing them.

My wife and I in the direct take off line during the day and the planes have never woke us up or bothered us. Actually, when we hear them we still go outside to watch them go by. We love it. I guess our home is better insulated than the complainers homes or they are just complainers. We have lived here most all of our lives coming up on 7 decades and are appreciative of the work the city has done to attract business lately as in the past we lost companies like Rooms to Go. Some of these people are so narrow minded that they don't even like Publix and Lakeland Regional Medical. Anyway, please approve the expansion and if you are able to make the complainers happy by changing routes for them...great. I have a feeling they will still complain. Also, the airport pre-dates 90+% of their homes being built.

Sincerely, Johnny Johnson 1153 Waterfall Lane Lakeland, FL 33803

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PUBLIC RECORDS NOTICE:

From: Conrad, Gene <Gene.Conrad@lakelandgov.net>

Sent: Friday, May 28, 2021 4:03 PM

To: Sanford, Paul <paul.sanford@aecom.com> **Subject:** [EXTERNAL] Fwd: Amazon Expansion

Sent from my iPhone

Begin forwarded message:

From: Donna Willett <dwillett1115@gmail.com>

Date: May 28, 2021 at 3:40:36 PM EDT

To: "Conrad, Gene" < Gene. Conrad@lakelandgov.net>

Subject: Amazon Expansion

Mr. Conrad, I would like to congratulate you and your team for an informative and well executed session at the RP Funding Center on May 27. I was in attendance and was impressed with all the information produced on posters, during the presentation, and during your address to the attendees. I appreciate that the public was allowed to voice their numerous concerns.

13 - 72

14 - 16

13-131

Living at the end of Fiddle Leaf Way, my home is a stone's throw from the current cargo facility. Although I do hear many of the planes as they depart and arrive, I do not find the noise a particular nuisance. I am not certain how the increased flights by Amazon will impact my thinking, to be honest; and I am as concerned about the vehicle traffic as much or more than the flight traffic. As a matter of fact, the continual revving of the jet engines by Draken International, I find much more intrusive than the current Amazon situation.

As I listened to the well thought out speeches, the thing I kept coming back to was why you were the person hired to be the director of the airport. I would think your hiring was so the airport could become an integral part of Lakeland and add to the economic growth of the city. It would seem to me that you have attained what you were hired to do with the exception of adding a commercial airline to Lakeland Linder. I keep hearing that is in the works and surely with the expansion of runways to cope with the businesses, that can not be far off!

Congratulations on a job well done! It seems your efforts for Lakeland have exceeded what residents had hoped for! Your success is also a success for Lakeland.

Sincerely, Donna Willett 3380 Fiddle Leaf Way *****WARNING: This is an email from an external sender. DO NOT click on links or attachments unless you know the content is safe. If you are unsure about an email, contact 4ISHELP.****

PUBLIC RECORDS NOTICE:

From: Conrad, Gene < Gene. Conrad@lakelandgov.net>

Sent: Friday, May 28, 2021 4:04 PM

To: Sanford, Paul <paul.sanford@aecom.com>

Subject: [EXTERNAL] Fwd: Flight Paths and Noise affecting Grasslands.

Sent from my iPhone

Begin forwarded message:

From: Irene Bullara < bullara.ib@gmail.com > Date: May 28, 2021 at 3:57:54 PM EDT

To: "Conrad, Gene" < Gene.Conrad@lakelandgov.net > Subject: Flight Paths and Noise affecting Grasslands.

Dear Mr Conrad,

13 - 73

You must stop these low flying flights from Lakeland Linder airport over the Grasslands community. They are Loud. and They are disruptive.

With more flights planned for future from amazon and other passenger flights worry us. Please work with the FAA to stop these unnecessary flight paths.

Sincerely,

Irene & Joe Bullara 3323 Turnberry Ln Lakeland, Fl 33803

863-686-5130

Email: Jbullara1@tampabay.rr.com

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PUBLIC RECORDS NOTICE:

From: Conrad, Gene < Gene. Conrad@lakelandgov.net>

Sent: Friday, May 28, 2021 4:04 PM

To: Sanford, Paul <paul.sanford@aecom.com>

Subject: [EXTERNAL] Fwd: Pro Amazon Air Expansion

Sent from my iPhone

Begin forwarded message:

From: Matt Wiatt <<u>matt@wiatt.net</u>>
Date: May 28, 2021 at 4:00:34 PM EDT

To: "Conrad, Gene" < Gene.Conrad@lakelandgov.net >

Subject: Pro Amazon Air Expansion

Matthew Wiatt 4519 Hillman Lane Lakeland FL 33813

14 - 47

I have been a homeowner in Lakeland Highlands for nine years. I am in favor of the Amazon Air expansion at Lakeland Linder International Airport. The economic benefits to our growing community have been and will be great for Lakeland by letting Amazon increase its presence.

Best,



MATT WIATT

SENIOR PRODUCER

(863) 272-1899 o (904) 210-3455 c

IndieAtlantic.com

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PUBLIC RECORDS NOTICE:

From: Conrad, Gene < Gene. Conrad@lakelandgov.net>

Sent: Friday, May 28, 2021 4:06 PM

To: Sanford, Paul <paul.sanford@aecom.com>

Subject: [EXTERNAL] Fwd: Lakeland Airport - Amazon

Sent from my iPhone

Begin forwarded message:

From: Highland City Glass < hcglass@verizon.net>

Date: May 28, 2021 at 4:02:46 PM EDT

To: "Conrad, Gene" < Gene.Conrad@lakelandgov.net >

Subject: Lakeland Airport - Amazon

Dear Mr Conrad:

Thank you for helping to improve Lakeland and our airport.

14 - 48

The naysayers griping about the Amazon expansion would chirp differently if they or their kids needed good paying jobs.

27-11

I don't live as close to the airport as 3 of my brothers and an uncle, who all live in Grasslands or Oakbridge do but I am

glad we have good companies providing opportunities and taxes to our community.

Also, none of my brothers are

griping about noise.

or buy near airports, non-golfers

complain about golf course maintenance noise and that they might have to pay for upkeep; those who build near a major

highway complain about the noise......anyway you get my drift.

The overall health of our city is more important than a few people who will complain about most anything.

Thanks,

Jim Johnson

PO Box 5110

Lakeland, FL 33807

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PUBLIC RECORDS NOTICE:

From: Conrad, Gene <Gene.Conrad@lakelandgov.net>

Sent: Friday, May 28, 2021 4:12 PM

To: Sanford, Paul <paul.sanford@aecom.com>

Subject: [EXTERNAL] Fwd: Amazon.

Sent from my iPhone

Begin forwarded message:

From: Paul Skelton < dskel89260@gmail.com >

Date: May 28, 2021 at 4:08:18 PM EDT

To: "Conrad, Gene" < Gene.Conrad@lakelandgov.net >

Subject: Amazon.

Thanks for holding the meeting last nite. I didn't go because I knew what all the cry babies were going to gripe about.

27-12

Lakeland needs this expansion no matter what the people are complaining about. We live in the colonnades and we get the noise from planes but it doesn't last but a few seconds and is no bother. Before living here we lived on Waring road and it was a lot busier but we enjoy planes. This isn't no worse than living by railroad tracks and train coming by all hours of the day. You get used to it.

I'm sure the people complaining have jobs and don't care about other people that need the work. Besides, the airport wasn't just built after the people moved in. If you don't like airports then don't buy a house next to one.

Thank you for letting me get my two cents worth in.

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PUBLIC RECORDS NOTICE:

From: Conrad, Gene <Gene.Conrad@lakelandgov.net>

Sent: Friday, May 28, 2021 5:34:49 PM

To: Sanford, Paul <paul.sanford@aecom.com>

Subject: [EXTERNAL] Fwd: Lakeland Regional sound problems

Sent from my iPhone

Begin forwarded message:

From: Lester Chernick <wtendo@aol.com> Date: May 28, 2021 at 5:22:29 PM EDT

To: "Conrad, Gene" < Gene. Conrad@lakelandgov.net>

Subject: Lakeland Regional sound problems

Sir.

3-11

Just to add my concerns to the already existing ones, what is going to happen as Amazon expands is frightening if a noise abatement plan is not instituted. We want only success for this wonderful company, but the FAA must protect our property values by instituting a reasonable plan for the flight paths of these ever increasing takeoffs and landings. Thank you for your attention to my concerns.

Dr. Lester Chernick 3340 Turnberry Dr. Lakeland,FL 33803 wtendo@aol.com 863-683-4880

Sent from my iPhone

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PUBLIC RECORDS NOTICE:

 From:
 nreh961@gmail.com

 To:
 Conrad, Gene

 Subject:
 Amazon

Subject: Amazon

Date: Saturday, May 29, 2021 11:34:54 AM

13 - 74

I live off Pipkin Road, probably much closer than most of those complaining about the noise. Yes, I hear noise and see the jets coming and going. However I don't find the noise life changing as some would suggest.

14 - 49

We all know people looking for decent paying jobs; Amazon provides that. They also contribute to the financial base in Lakeland, allowing for improvements and employment within the city itself.

Citizens want growth, want their city to have a strong, secure financial base that allows us to make concrete plans for future growth and for a reliable infrastructure. It seems to me Amazon sees a future for themselves here in Lakeland or they would not be interested in expanding. I think we should be pleased to move forward with Amazon.

When I see an incoming Amazon plane I usually think they might have my order I placed yesterday on it.

Nina Rehberg

Sent from my iPhone

From: Doug Curry
To: Conrad, Gene
Subject: Amazon planes

Date: Saturday, May 29, 2021 11:15:14 AM

Hi,

27-13

We live at Sanlan RV Park, in a park model on 98 South and the Prime planes fly over our park on the way to the airport. We actually look forward to watching the planes and it does not disturb our outdoor activities at all. Besides the added jobs for folks in our area is a real plus. Let Amazon expand.

April and Doug Curry
Sent from Yahoo Mail on Android
Sent from Yahoo Mail on Android
Sent from Yahoo Mail on Android

 From:
 Sam Wagner

 To:
 Conrad, Gene

 Subject:
 Amazon

Date: Saturday, May 29, 2021 10:10:49 AM

Good afternoon,

My family and I are not in support of the expansion of Amazon. Amazon is a big box, corporate bully that is not in the best interest of maintaining the peace and small business vitality of Lakeland. As it is, the Amazon planes roaring over our neighborhood have disturbed the peace we previously enjoyed.

Samuel W. Wagner

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From: Matthew Gardner
To: Conrad, Gene
Subject: Amazon Expansion

Date: Saturday, May 29, 2021 10:02:01 AM

Hello Gene,

This is Matt Gardner address is 445 Longfellow Blvd. Lakeland. FL 33801.

My family and I experience heavy air traffic fly overs daily from Amazon Pilots.

It constantly interrupts our family life and quality time.

It constantly has an effect when we leave our home and an Amazon Pilot flys over because our property is on a corner with traffic, we rely on sound and sight to be able to pull onto Longfellow Blvd.

When an Amazon Pilot is flying over head we have to wait additional time to leave because of the safety issue with road traffic.

Amazon pilot's are already flying extremely low altitudes and the noise is extremely loud already.

As a truck driver it's extremely difficult to hear when a jet is flying over and thus makes it extremely difficult to leave home when a jet is flying over.

I'd rather see more road traffic from and to Amazon vs having more air traffic that interrupts anyone's way of life especially safety and sleep.

Sincerely,

Matthew Gardner 445 Longfellow Blvd, Lakeland, FL 33801 Family Tradition Transport LLC

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From: lablack@aol.com
To: Conrad, Gene
Subject: Amazon Expansion

Date: Saturday, May 29, 2021 10:00:32 AM

Good Afternoon Mr. Conrad,

My name is Larry Blackwelder. My wife and I (along with our two horses) live at 4450 Hamilton Road, LL.

I was unable to attend the recent meeting regarding the Amazon expansion of facilities and flights, but would like to provide input. Not having the opportunity to be at the meeting I may have some things confused. If so, please feel free to correct me. From the Ledger article (not always the best information source) it appears that the primary concern was voiced by the residents of Grasslands and Lakeland Highlands (those living on the East side of the airport).

I just want to speak up for the residents on the West side. There are fewer of us and we probably won't make as much "noise" in the system as those to the east. But all the concerns they raise regarding the noise and livability of our residents are just as valid for us on the west. The concern is that the Airport will react in a discriminatory, disproportionate manner to appease the East side residents while neglecting and burdening the West side residents. An example of that was actually presented in the Ledger article stating that "the city has already switched to a voluntary preferred runway that has flights arriving from the west end of the runway overnight between 10 pm to 7 am when winds allow". Why would there be more concern for those on the east side of the airport that they not be disturbed during sleeping hours than those on the west. Is it ok to disturb our sleep more?

The point is that we understand that living in close proximity to an airport will in some ways be disruptive. We understand that increased traffic from Amazon flights is a good thing for Lakeland, Polk County, and commerce and jobs in our community. But everyone who lives around an airport must bear their fair share of that disruption. We on the west side of the airport don't want to bear a disproportionate share of that disruption to quite the "noise" coming from the east side and will be watchful to insure an improper balance doesn't occur.

Have an great Memorial Day weekend. We thank you for all your efforts in promoting and managing the airport. Kind regards.

Larry Blackwelder (863)660-3244

13 - 77

From: <u>crayanderson@gmail.com</u>

To: <u>Conrad, Gene</u>
Subject: Amazon Flights

Date: Saturday, May 29, 2021 9:22:08 AM

Mr. Gene Conrad City of Lakeland Airport Director gene.conrad@lakelandgov.net

re: Amazon Flights

Dear Mr. Conrad,

I've been reading about the protests of a few disgruntled residents, unhappy with the sound of the Amazon jets arriving and departing KLAL. I live in the City of Lakeland at a point about 6 miles directly east of the approach end of Rwy 27. I'm a licensed pilot (grounded for health concerns) and I well

understand air traffic and noise abatement issues

Like others, we experience frequent arrivals and departures of the 737 and 767 aircraft operated for Amazon. I often monitor their movements via FlightAware using an ADS-B receiver. Most of the time when they pass over my house, they are below 2000' and in landing configuration with flaps and leading-edge slats extended and landing gear down. I cannot know their actual power settings, but can sometimes hear power adjustments as they fly the approach.

Frankly, the sound of these jets is lower than some smaller business jets and even some propeller aircraft operated in the vicinity of the airport. The loudest of all are helicopters and, less frequent, the fighters operated by Draken. Taken together, it seems a bit unfair for this entitled class of myopic protestors to pick on Amazon. It suggests a different, un-stated agenda.

Neither we nor our neighbors are at all bothered by the sounds of the heavy jets Amazon has brought to Lakeland's sky. I do not believe that any person who buys a home anywhere near an airport can be seriously surprised or become irrationally angered by the sounds of air operations. These protests are irrational. It is as if they moved to the shore and then objected to the sound of passing boats or even the persistent "noise" of waves lapping at the beach

The enormous economic benefit Amazon's presence has brought to the City of Lakeland is well known. The jobs they bring to our city and the revenue they add to the budget far outweighs the incongruous moaning of a few privileged residents. No one is coercing them to stay here. If they are

not happy here, I suggest they sell their houses and move away. A miniscule fraction of our population will miss them and in this so-called seller's market, they should do quite well. Thanks for all you've done to help put KLAL on the map. I believe our future is ever brighter because of your considerable efforts.

Ray Anderson 2122 Deerfield Drive, Lakeland 33813 crayanderson@gmail.com

14 - 50

From: Ellen Wendel
To: Conrad, Gene
Subject: Amazon noise

Date: Saturday, May 29, 2021 8:55:09 AM

13-78

Lakeland should be financially compensated costs and noise.

Ellen Wendel

From: Jason Gager
To: Conrad, Gene

Subject: Amazon airplane noise

Date: Saturday, May 29, 2021 8:45:04 AM

Hello,

My name is Jason Gager, I just read the article in the ledger about the meeting regarding the noise from the Amazon jets.

I agree with most of my fellow citizens that the noise from the Jets is very disruptive to daily life. I too have to pause conversations when jets are turning around over my house. I however live in plant City just west of county line Road and just south of the flight line to the airport, 2828 clay Turner Rd, to be exact.

I see that plenty of people from grasslands are upset and want the jets to use a different approach route in order to reduce the noise over their high-end gated community. I would sincerely hope that you would take into consideration people who live in the other areas as well. The noise is just as bad over here as it is over there. I take particular offense to the section in the article that said:

"The city has already switched to a voluntary preferred runway that has flights arriving from the west end of the runway overnight between 10 p.m. to 7 a.m when winds allow."

That increases the amount of flight traffic over my house while I'm trying to sleep. I realize this is a sensitive situation and it is up to someone to weigh the cost to benefit ratio. I am politely requesting that traffic is not increased over poor neighborhoods for the sake of people in gated communities.

I am thankful I have the opportunity to send this email. Those of us in lower income areas do not necessarily have the resources to attend community meetings. Especially meetings in different counties where the decisions you make will still affect our quality of life.

I would be glad to discuss this further in any capacity. Thanks for your time.

-Jason Gager 813-245-2338

-Iason Gager

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13-79

3-13

From: <u>Michael Sivilli</u>

To: Mutz, Bill; Madden, Stephanie; McCarley, Sara; McLeod, Chad; Musick, Michael; Read, Bill; Walker, Phillip;

Conrad, Gene, 9-AWA-NoiseOmbudsman@faa.gov

Subject: Aircraft Noise Complaint

Date: Saturday, May 29, 2021 8:35:23 AM

Good day,

I just wanted to report that last evening and this morning there have been multiple large planes coming in over our area very low and very loud.

This needs to be addressed as it's interfering with the quality of life in our area.

We've created a nice area in our home to serve as a quiet place to destress and unwind, but it's a waste now that we have all these loud planes flying overhead.

Please address this situation as soon as possible.

Thanks, Mike Sivilli 4423 Southride Trail Lakeland, Fl 33813 863-640-4490

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13-80

From: Frank Villafana
To: Conrad, Gene

Subject:Airplane noise over GrasslandsDate:Saturday, May 29, 2021 8:32:54 AM

I am writing to express my complaint and my request for a change of the flight paths out of and in to Lakeland Linder International Airport.

13-81

The current flight path of Amazon Prime flights from/to Lakeland Linder International Airport, over our residential neighborhood of Grasslands, is very disruptive. The flights are much too low and too noisy, and we understand that many more daily flights are scheduled for the near future. We believe that the flight path should be changed, so that the main portion of the loud arrival and descent can be performed over commercial properties and not residential.

We welcome the jobs being created by virtue of this new Amazon business, but also expect Lakeland Linder to be a good neighbor to the local residential communities.

Sincerely, Frank Villafana frvillafana@yahoo.com

From: <u>Tom and Celeste Deardorff</u>

 To:
 Conrad, Gene

 Cc:
 Mutz, Bill

 Subject:
 Amazon Expansion

Date: Saturday, May 29, 2021 8:22:29 AM

Attachments: <u>image003.png</u>

image004.png

May 29, 2021

Hello Gene,

For the record, I'm submitting a comment on the proposed Amazon Expansion at Lakeland's Airport, and a question or two.

As a retired city planner I understand the desire for economic development and return on the City of Lakeland's and FAA's investment in our airport; also, strategically the partnership with the Amazon corporation makes sense given their proximate warehousing operations as well as other proximate infrastructure investments.

As a resident and homeowner, I have enjoyed the annual Sun n Fun which often meant flights directly over our residence for a week or so out of each year. However, now on a daily basis, multiple flight fly over our home as flown by Amazon's heavy cargo jets, mostly arrivals, making their way to and others departing from Lakeland's airport, as aligned to use the instrument guided runway. This has resulted in multiple times a day ambient noise levels so loud one can't hear verbal conversations within 4 - 6 ft. Beyond interruption and disturbance of quiet enjoyment of our residential property, this becomes an issue of protecting and preserving our residential property value. The City of

Lakeland's Comprehensive Plan has also historically espoused protection of our neighborhoods and quality of life.

As such, I urge you, the city commission and the FAA to <u>explore</u>, <u>design and approve all reasonable</u> <u>and available noise mitigation</u> through alternative flight paths like the one discussed over the Polk Parkway, and others strategies as appropriate, including the waiver sought by the City from the FAA to allow these planes to fly above the 3,000 ft. elevation threshold, as might be safe and effective. I cite here a noise study associated with the London Heathrow Airport, demonstrating that aircraft descents that started at a much farther distance were able to help significantly reduce noise impacts:

[24 November 2003 By Paul Marks: Noise nuisance from aircraft can be reduced significantly by changing the way the planes come in to land. Lining up with the runway as far as 70 kilometres away and making a steady descent can more than halve the acoustic energy that reaches the ground, an international research consortium has found.]

Read more: https://www.newscientist.com/article/dn4395-smooth-aircraft-approach-cuts-noise-pollution/#ixzz6wGYSPhz1

Finally, regarding impacts of airport related noise, I ask that you, the City Commission, and the FAA to consider: how will the long term plans to attract a <u>major commercial passenger service</u> airline fit with the above existing cargo flight patterns and frequency, and specifically, <u>what mitigation</u> <u>strategies must be considered in advance</u> of such passenger service in order to sustain quality of life and property values for those who have invested in a home that is located in alignment with the current **instrument flight path** for Lakeland's airport (i.e., Lakeland Linder Regional Airport)?

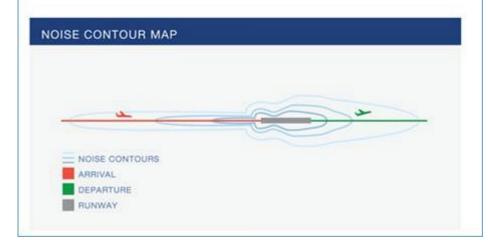
Per the FAA's website on aviation noise,

(https://www.faa.gov/regulations_policies/policy_guidance/noise/basics/), please note:

13-82

Noise Contours

Noise levels can be computed at individual locations of interest, but to shown how noise can vary over extended areas, noise metric results like DNL are often drawn on maps in terms of lines connecting points of the same decibel (dBA). Similar to topographical maps showing the elevation of terrain in an area, these noise "contours" are useful for comparing aircraft noise exposure throughout an airport community. The shape of noise contours depends on many factors, but are influenced by things like whether more arriving or departing aircraft are flying over an area.



Thanks for all you do for the City of Lakeland; your professionalism and dedication is appreciated. Sincerely,
Celeste Deardorff, AICP
Resident

4006 Glen Garry Rd West

Lakeland, FL 33813

From: Fred Gerber
To: Conrad, Gene
Subject: Amazon

Date: Saturday, May 29, 2021 8:05:55 AM

14-51

We have lived in Lakeland the past 48 years Living along the park way and our house is in the path of the plane's over our house. When Amazon planes came in we welcome them running out of the house just to see them over our house. Thank full, that the planes mean job s for the people of Lakeland. We Love

Lakeland, Fred and Lorrie Gerber

From: <u>Tim Averett</u>
To: <u>Conrad, Gene</u>

Subject: It is an air-PORT after all

Date: Saturday, May 29, 2021 8:01:48 AM

Sir,

I would say to those who don't like the current and potential noise footprint from Amazon jets to honestly assess their situation.

How long has the airport been there? How long have I been a nearby resident? What were my expectations when I decided to live near an airport with a long history of varied aircraft and traffic? It is disingenuous to think that the level of traffic at any airport was going to remain static. The Lakeland Linder Airport is a major driver of economic activity for the entire area, not just the City of Lakeland. I strongly support the Amazon expansion because the benefits far outweigh environmental and lifestyle impacts. It is not the fault of LAL or even Amazon that these residents made a conscious decision to purchase property directly underneath standard flight patterns for a medium sized airport.

As a retired airline pilot, I would also urge the FAA to not get creative in deploying noise abatement procedures at KLAL. It is a simple fact that noise abatement does not increase the level of safety. Instead it leads to unstable approaches, pilot distraction and non standard speed/power & altitude configurations. I believe routing airplanes over a landfill with its many large birds to be a decidedly poor idea. Safety should be primary and I am not in favor of anything other than standard operating procedures.

I wasn't there, but at the next public meeting, I would suggest an Amazon management pilot try to relate to those affected how unwelcome odd procedures are and how busy and dynamic a pilot's job already is without having to accommodate something different at every airport.

Sorry to say, if you bought property near a busy airport, that was likely factored into the purchase price and you will now have to decide if that was a wise move on your part.

Sincerely,
Tim Averett
Winter Haven
American Airlines, Capt/A330 (retired)

- "The best dividends on the labor invested have invariably come from seeking more knowledge rather than more power."

Wilbur Wright, March 12 1906

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27-14

3-15

14-52

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From: Dave Baker
To: Conrad, Gene
Subject: Amazon Expansion

Date: Saturday, May 29, 2021 7:30:56 AM

Gene,

Sorry I missed your meeting Friday night. Sounds like there was a 'not so friendly' group of area residents there and maybe a few pro-amazon folks.

So here is my take for the record, growth and jobs are great for our city, but these jets have to take off and land, which is the issue with the residents.

Gene, on the normal West approach, these big jets fly right over my house (Stoney Pointe Subdivision) at 1300' to 1400'. This happens morning through the day into late evening. I cannot imagine and agree to 44 of these planes flying over my house everyday would be an nuisance.

In the last week, I have not seen an Amazon jet fly over my house. I am guessing that this is because the wind has been blowing from the East and so they are approaching from the West, or there's a flight pattern change.

So finally I am against this expansion if I have a say in this matter.

Thank you.

Dave Baker 1747 Rocky Pointe Drive Lakeland, FL 33813 863-732-1496 (cell)

From: Emily Cooper
To: Conrad, Gene
Subject: Amazon air plains

Date: Saturday, May 29, 2021 7:27:42 AM

13-84

Hello Mr. Conrad my name is Emily Cooper, I live just inside Hillsborough County. Less than a mile from the Polk County line, I'm on Wiggins and Rice / Drain Field Rd. The Amazon jets affect me as well as Lakeland residents. The jets turn North after leaving the airport straight over our house. Ever time they knock out our TVs. Just wanted you to know Lakeland isn't the only ones affected by this. Thank you fir your time.

From: <u>Johnny Abney</u>

To: cfetherm@tampabay.rr.com

Cc: Conrad, Gene; flparman@tampabay.rr.com; shannonfetherman@icloud.com; gbaker231b@gmail.com; Karen

Fetherman; jjjannasy@live.com; tinkpos@aol.com; littleguys@live.com

Subject: Re: Proposed Flight Pattern

Date: Saturday, May 29, 2021 7:15:53 AM

Wow! You sent that ? Very well written.

On Sat, May 29, 2021, 8:10 AM <<u>cfetherm@tampabay.rr.com</u>> wrote:

5/29/21

Dear Mr. Conrad (Lakeland Airport Director):

I am a retired CPA and RE broker living in the Highlands area of south Lakeland. Lake Miriam Drive is the main E-W thoroughfare in the highlands, running from Lakeland Highlands Road to Florida Avenue (approx. 2 miles) and is the center of the Lakeland Highlands area. This area is located 1 Mile south of the Polk Parkway and we can clearly hear when planes and esp. jets fly this pattern, whether landing or taking off. Also located very near the Polk Parkway in the Lakeland Highlands area is the YMCA, Cleveland Hts Golf Course, two elementary schools, a middle school, several parks and youth sports fields, a nursing home facility, apartment complexes and residential subdivisions and many retail establishments located on both Florida Ave and Lakeland Highlands road. Also located next to the Polk Parkway further west is Watson Clinic South and Emergency Clinic which is a very busy clinic with many patient visits daily.

13 - 85

The Lakeland Highlands area is approx. 3-4 miles east of the Lakeland airport and jets are in a landing or take-off, low altitude mode when passing through this area. I am not a pilot and don't know their exact altitude but probably only a few thousand feet and the noise from the jets is obvious and annoying. Do jets have mufflers just asking?

In my humble opinion any designation making the Polk Parkway the preferred landing or take-off for planes esp. jets (Amazon) would affect all of these and the entire Lakeland Highlands area, with tens of thousands of residents. If you live anywhere near this area, or know residents who do, you are well aware of the residential density of this entire area. I do understand how the proposed expansion by Amazon would be good for the local economy by providing hundreds of good paying jobs but I doubt their corporate leaders really care about the potential negative impacts.

3-16

I realize flight patterns are limited and most complaints are coming from the Grasslands area which is much closer to the airport. I'm sure you are aware that any flight pattern to and from the west of the airport is preferable to all concerned. But the recent emphasis on flight patterns from the east, and over the Polk Parkway, is very disturbing. The Lakeland Highlands area has probably 10 times or more residents than Grasslands, and many more affected institutions, and should be given serious consideration in any flight pattern decisions. The Polk County landfill which is 5-6 miles east of Lakeland Highlands is not the issue, but any flight pattern from there and parallel with the Polk Parkway should be the primary concern.

3 - 17

Thank you,

Craig Fetherman, CPA

1744 Rosshire Court

Lakeland, FL

863-646-4646 res

407-883-9254 cell

From: Beverly Hendricks
To: Conrad, Gene
Subject: Amazon flights

Date: Saturday, May 29, 2021 7:14:46 AM

14-53

I am a voice for the Amazon flights. I wanted to attend the meeting, but I had to attend my grandson's high school graduation that evening. We need these jobs that the Amazon flights provide here in the west-Polk/east-Hillsborough area. I heard the flights when they first started last summer, but I have gotten used to them, so I rarely hear them any more. We aren't a big city, like New York or Chicago, and if people don't like it, maybe they should move further from it. We need the jobs here. I wish we had a few commercial passenger flights, like we did for a short time a few years ago, like they do in Clearwater/St Pete and Sanford. We need more regional transportation options in Polk County.

Beverly Hendricks 2603 New Jersey Rd. Lakeland FL 33803

From: trezac@juno.com To: Conrad, Gene

Subject: Amazon airport expansion

Saturday, May 29, 2021 7:12:39 AM

A few thoughts, Gene...

- 1. When I moved next to Lakeland airport, I anticipated noise. To suggest otherwise would be naive.
- 2. A couple of years ago I attended a house party at a multimillion-dollar house in Westshore (Tampa). Every few minutes our conversation was interrupted by the loud noise of a plane flying literally a thousand feet over the house. I asked how they put up with that. Their response was that "that's the price of living in this community."
- 3. Tampa Airport has a FAQ on noise abatement. Basically it says, "suck it up." https://www.tampaairport.com/noise-abatement-faqs
- 4. Do tourists who want to enjoy a quiet day at the beach have a right to ask the Sint Maarten airport to relocate? https://www.voutube.com/watch?v=4iW9wkg9OY
- 5. In the past year, I've noticed increased traffic on the Polk Parkway, and the truck noise is annoying. Could the parkway be placed in a more rural part of the county? Bottom line is that the Amazon expansion represents an excellent boost to Lakeland's economic growth, After a couple of failures to attract commercial air to Linder, we should be grateful for this opportunity. Besides, no matter what locals think, the city commissioners are going to do what they want, anyway (said from experience as a Carillon Lakes resident). I appreciate all you're doing to change approach patterns, even though that's a diffcult bureaucratic process.

George Rezac 402-699-4549

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From: pbrokaw69@aol.com
To: Conrad, Gene
Subject: In creased flights

Date: Saturday, May 29, 2021 6:54:58 AM

13-85

I am against the flight patterns of Amazon. Higher Altitude flying in landing and takeoffs could be one solution. Using Polk Expressway as a guide only will increase noise pollution. I live less than a mile from Polk Expressway. Highway noise pollution is bad already. Lakeland needs the jobs and I hope a solution can be found without trampling on the citizens of peace and quiet Lakeland.

Perry C. Brokaw and Juan J. Perez 3325 US Highway 98 S. Valencia Estates Lakeland FL 33803

Sent from the all new AOL app for Android

From: Chip Adkins
To: Conrad, Gene

Subject: Flight Paths and Noise Impacting Grasslands

Date: Saturday, May 29, 2021 5:42:06 AM

Dear Mr. Conrad;

13-87

You must stop these low flying flights over the Grasslands community. They are LOUD. They are disruptive. Please work with the FAA to stop these unnecessary flight paths. They are not only loud and disruptive but they create a safety concern and could very well impact pour property value.

Sincerely,

Name: Chip Adkins

Address: 1963 Grasslands Blvd

Phone: (813) 624-5526

Email Address: cadkins7@tampabay.rr.com



Scanned by McAfee and confirmed virus-free.

From: Tommy Tompkins
To: Conrad, Gene
Subject: Amazon expansion

Date: Saturday, May 29, 2021 5:35:12 AM

Thanks for all you and your staff have done for Lakeland and polk county!

I am 65 and a 40 year plus volunteer at SNF. I have seen the airport grow during those years.

I can't for the life of me understand whay you would buy property close to an airport and then complain about it. My wife and i live on clubhouse road and we really enjoy seeing the big jets as they approach the airport. That includes Amazon and the noaa aircraft.

One of our children works for Amazon and has been there since they opened on county line road. He has earned shares in the company and has great benefits and good pay. I have toured the facility during a family day and was very impressed.

This is the type of business we need in polk county, good pay and working conditions. Clean and safe... I think people should get over the problems they say they have and understand there is much more to this than their level of comfort.

I would suggest that the traffic patterns should be left up to the pilots as they will have safety in mind as first priority.

Back to my story, our other son is a pilot because of the time he spent at SNF during his youth. He runs the drone program for pcso and is a lieutenant with them. Amazon has helped SNF a great deal with the lease amount too.

I am for expansion as is my wife and family. We consider Amazon as a good neighbor even though we don't align with their politics.

Thanks

Tommy tompkins

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13-88

14-55

From: Alex Shanks
To: Conrad, Gene

Subject: In favor of airport expansion

Date: Saturday, May 29, 2021 5:00:14 AM

14-56

This is just a note to say I am in favor of airport expansion. We need the continued improvement to our economy. I trust the city and Amazon to work together to mitigate any noise concerns. Thank you for your leadership.

Sincerely, Rev. Alex Shanks Assistant to the Bishop Florida Conference of The United Methodist Church

Sent from my iPhone

From: Will Harrell
To: Conrad, Gene

Subject: Support for Amazon Expansion

Date: Saturday, May 29, 2021 4:13:57 AM

Gene,

27-15

Thanks to you and your team for all the great work y'all have done at the airport. I'm sure it hasn't been easy at times with some of the criticisms going around, but I'm confident that Amazon, and its expansion, will continue to be a great thing for our community.

Thanks again and I wish you,

All the Best, Will

William H. Harrell, Esq.

From: Rick Steinberg
To: Conrad, Gene
Subject: Amazon

Date: Saturday, May 29, 2021 3:46:42 AM

Hi Gene,

13-89

I have lived in Lakeland my whole life since 1958. I don't particularly like Amazon and rarely use them but I find it ridiculous that people living near an airport complain about noise from airplanes. For years the city tried to get commercial flights in Lakeland. Nobody complained about that. If you don't like noise from airplanes don't live near an airport. It's that simple. You live in Grasslands so you know your near an airport and your house is on a former garbage dump. If you don't like airplane noise then move away from an airport.

Polk county is one of the fastest growing counties in the country. With that comes more traffic and noise from all types of things. Yes I loved Lakeland when it was a sleepy small community but it's changed and if it's not Amazon it's something else.

As people retire many choose Florida to retire. I built my house near lake hollingsworth in 2017 and it's doubled in value. Are these same people complaining about that?

I just bought a home in Ruskin on the Little Manatee River. There as in Lakeland the growth is nothing like I've seen in my lifetime. Homes and commercial properties going up at a breakneck pace. Should we have more stringent growth plans in place? Probably but money usually wins out.

Just driving on I-4 and 75 the traffic is nonstop. People are coming from all over the USA. CA, NY etc.

The airport in Lakeland has for years tried to get more commercial traffic. It's built for that and if it's not Amazon it's some other commercial use.

For good or for bad Florida has changed and growth is here whether you want that or not. Better zoning and planning would definitely help but regardless people are still coming to Florida in droves.

Thanks Rick Steinberg

From: Lynette roff
To: Conrad, Gene
Cc: Tara Sullivan

Subject: Flight ATHS and Noise Affecting Grasslamd

Date: Friday, May 28, 2021 8:14:25 PM

Subject: Flight Paths and NOISE affecting Grasslands

Dear Mr Conrad,

13 - 90

You must stop these low flying flights over the Grasslands community. They are LOUD. They are disruptive. Continued and additional flights have a drastic impact on our property values and affect our quality of life. They should not be allowed to continue.

Please work with the FAA to stop these unnecessary flight paths.

Sincerely,

Lynette A Roff

3303 Turnberry Lane, Lakeland 33803

Phone: 303-260-9155

Email Address: lroff1@gmail.com

A

From: Dianne Myers
To: Conrad, Gene

Subject: Flight Paths and Noise affecting Grasslands and surrounding residents

Date: Friday, May 28, 2021 6:41:33 PM

Subject: Flight Paths and NOISE affecting Grasslands

Dear Mr Conrad,

13-91

You must stop these low flying flights over the Grasslands community. They are extremely LOUD and very disruptive. It is almost impossible to sit and enjoy time on your lanai with the constant noise. Please work with the FAA to stop these unnecessary flight paths.

Sincerely,

Name: Dianne Myers

Address: 3066 Shoal Creek Village Dr, Lakeland, FL

Phone:863-430-3949

Email Address:dimyers51@gmail.com

Sent from my iPad

From: Dennis Bohl
To: Conrad, Gene

Subject: No More Amazon at the Airport, Please Date: Friday, May 28, 2021 5:42:11 PM

Dear Mr Conrad,

14-57

I think that all Lakeland Residents have more than paid their dues with the current amount Amazon traffic at our airport. If not reined in this company will ruin our beautiful little town and destroy property values. They offer us nothing more than what's becoming minimum paying jobs while destroying premium property values. Isn't it enough to see the shopping and tract mall vacancies. Do we now have to offer up our property values as well. This company offers the average Lakeland property owner and resident nothing but the constant defending reminder that they just keep taking.

Please Mr Conrad, Please Say Enough! Thank You, Dennis & Mary Ann Bohl 708 Grasslands Village Circle Lakeland, FL 33803

Phone: 612-802-8293

From: John Hughes
To: Conrad, Gene
Subject: Aircraft Noise

Date: Friday, May 28, 2021 4:55:21 PM

Mr Conrad,

13-92

Our home on Fairlington Drive in Lakeland may as well be situated right next to a busy railroad track. After 30 years of quiet enjoyment of our home, since the beginning of this year, we can no longer have uninterrupted conversations in our home; no longer watch a TV show without rewinding several times to hear what we've missed; no longer have a phone conversation without forced pauses, all because of the noise of yet another Amazon 737 or 767 flying a few hundred feet directly over our house.

The decisions of the airport and city government public servants to trade the former quiet, high quality suburban life in Lakeland for a few warehouse jobs is unconscionable. The noise from these many jets rattle not only our windows, but our frayed nerves as well. I'm only glad that we - unlike many of our neighbors - don't have babies that are awakened every 30 to 90 minutes by the low-flying jets, but we do continue to have to apologize to house guests, phone callers, and zoom meeting participants for the silly volume of bone-jarring noise caused by giant jets skimming over our house many, many times a day and night.

14-75

Had we known that our house would one day be on the flight path of giant jet powered cargo planes, we would have located elsewhere. The diminished value of our property - caused exclusively by the excessive noise from these Amazon flights - will soon have to be calculated and added to the mental and physical anguish costs we are suffering, forcing us and those other Lakeland residents like us, to seek a reckoning.

Stop the flights!

John Hughes 910 Fairlington Drive Lakeland, FL 33813

From: Timothy Roberts
To: Conrad, Gene
Subject: Airport

Date: Friday, May 28, 2021 4:36:47 PM

14-58 Build the Amazon site we need the jobs

Sent from the all new AOL app for Android

From: James Mils

To: Conrad, Gene

Subject: Stop the expansion

Date: Friday, May 28, 2021 3:52:23 PM

Dear Mr. Conrad:

I would like to add our voices to those opposed to the Amazon expansion at the Lakeland airport. Peace and quiet in our homes is a most cherished condition. Yet the large planes flying low overhead disrupt the serenity that makes our community a wonderful place to live. To think that more of this is coming, adding to the noise, pollution, and vehicular traffic in our area is anathema and contrary to the semi-rural setting that drew us to Lakeland in the first place.

We are asking that you do what you can to maintain our quality of life. Jobs and money are not worth losing the safety and peace that we are entitled to in our homes.

Thank you,

James Mils Grace Viola 3656 Southcrest Blvd. Lakeland, FL 33812

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From: Susan Tukums
To: Conrad, Gene
Subject: Amazon Expansion.

Date: Friday, May 28, 2021 3:15:16 PM

I used to go with my father to visit his old high school of performing arts friends, in Rosedale, Queens, New York. John F, Kennedy international airport is in Queens. From the front lawn of the small, crowded home, we could see the faces of the travelers inside the planes (aghast) and they could certainly see us from the front lawn. Believe me the lawn, the house and the neighborhood wasn't pretty. Crime rates were and still are, high.

20 - 13

You can tell your Mr. Brewer, whoever he is, that yes an Amazon expansion will create a few more jobs, but will destroy housing prices, especially in SW Lakeland and Lakeland Highlands. Neighborhoods will be destroyed from noise and air pollutions. Residents' largest life investments, their homes, will be ruined.

Why do you think Amazon chose Lakeland in the first place to build their warehouse? Fly their planes? Land is considerably cheaper here than the rest of the country . I'm sure there's no warehouse in Jeff Bezos town, no 44 plane flights a day flying over his House. Wealthy men have been developing and taking over land, in poorer communities than their own , in distant, under developed locations, for thousands of years. And they don't spend their profits here. They don't put their money back into the lakeland community. No, they take the profits and put out them in hidden Overseas bank accounts. Swiss bank accounts. Back to New York. They don't spend their profit money here in Lakeland.

23 - 15

When out of town friends visit me in Lakeland they love it! The safe, pretty downtown. The lakes, the preserves, the parks. Why risk losing the beauty of all of the above just to make Jeff Bezos even more wealthier than he is today.?? How do the planes benefit us? What is Amazon willing to put back into the community to pay us back for allowing them to lose our peace and quiet on the weekends? For Polluting our air? Fot taking up so much space? All for \$15 an hour or a few workers...Please....

From: Dee Jordan
To: Conrad, Gene
Subject: Amazon

Date: Friday, May 28, 2021 3:08:56 PM

13-93

Please stop building and don't add any more flights. 22 is more than enough. The planes are flying too low. They look like they are trying to land in the yards now and the noise from them are disruptive to the neighborhood. I live off S.Fl Ave near the Walmart and the noise is rediculous. Please consider not approving this move.

From: <u>Maureen Shanley</u>
To: <u>Conrad, Gene</u>

Subject: Lakeland Airport Expansion

Date: Monday, May 31, 2021 7:31:32 PM

13-94

I would like to state that I am opposed to the Lakeland Airport expansion. The noise pollution from these jets and the extra air pollution from the exhaust as they fly so low over my home as they are getting ready to land will eventually cause health problems for those of us who live in the flight landing zone as it now exists.

I urge you to vote against the Lakeland Airport Expansion.

Sincerely,

Maureen Shanley 3828 Cheverly Drive W Lakeland, FL 33813

From: <u>David Matern</u>
To: <u>Conrad, Gene</u>

Subject: Flight Paths and NOISE affecting Grasslands

Date: Monday, May 31, 2021 5:57:23 PM

Dear Mr Conrad,

13-95

You must stop these low flying flights over the Grasslands community. They are LOUD. They are disruptive. Additionally, the flight pattern is over a densely populated area when other areas around the airport are sparsely populated. Please work with the FAA to stop these unnecessary flight paths.

Sincerely,

David Matern

1744 Laurel Glen Place

Lakeland, Florida 33803

(863)670-4073

Matern1@msn.com

Sent from my iPhone

Sent from my iPhone

From: beckmuns@aol.com
To: Conrad, Gene

Subject:Disruptive Amazon Prime FlightsDate:Monday, May 31, 2021 5:55:35 PM

To: gene.conrad@lakelandgov.net

To the honorable Mr. Gene Conrad Director, Lakeland Regional Airport

Subject: Flight Paths and NOISE affecting Grasslands Dear Mr Conrad,

We respectfully request you stop these low flying flights over the Grasslands community. They are unnecessary and are devaluing the lifestyle and property values of the Grasslands Addition. It is VERY unfair to those who have invested in the Grasslands Addition. They are LOUD and they are disruptive. They wake us up at 05:30 am and late at night and must be stopped.

Please work with the FAA to stop these unnecessary flight paths and use alternative flight plans.

Thank you for your kind assistance.

Sincerely,

Mark and Becky Munson

Address: Hertiage Lakes Addition, Grasslands Golf and Country Club

Phone: 863-670-0077

Email Address: Beckmuns@AOL.com

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From: T FARTHING
To: Conrad, Gene
Subject: Amazon Flights

Date: Monday, May 31, 2021 5:18:37 PM

3 - 19

Mr. Conrad - We are writing in regards to the air traffic over our home in Grasslands. Whereas we know the flights will continue, we ask that jets that take off to the east would continue further east to gain altitude before they turn North. That path takes them over some commercial areas and they can gain altitude quicker flying straightaway versus a hard turn at low altitudes. We're asking Amazon to be a better neighbor using an easy fix. There is a universal concern in Grasslands for our property values. It won't take much for Amazon to improve the situation. Thank you for your consideration.

Sent from Outlook Mobile

From: mzhuby@aol.com
To: Conrad, Gene

Subject: Public Commentary on Amazon Expansion

Date: Monday, May 31, 2021 2:59:15 PM

Mr. Conrad,

I'd like to offer this note as part of the public commentary against the Amazon expansion and any future airport growth.

We live in one of the neighborhoods off of Pipkin and Yates, we've lived her for over 20 years and enjoy our quiet country life. Until Amazon moved in. You and the commissioners, both city and county, have compromised our quality of life, disrupted our peace, and sold us out.

It is not an exaggeration to say that the roaring of those planes rattles our windows and wakes us out of a dead sleep. There have been many mornings where the full throttle of engine roar began at 4:30 am. Yesterday morning, Sunday, May 30th, the planes started at 5:42 AM, followed by 6:04 and 6:16. Sunday, a day when if one is not expected to work, one could expect to sleep in, however, your deal with the Amazon devil has changed all that. And now you and the commissioners are in negotiations to expand their presence, and double their flights thereby, further diminishing our life quality and hope for sleep beyond 5 am. Our house faces the west and it is a constant issue when the NOAA, Coast Guard or other military planes arriving from that direction, flying low and slow, becoming so loud that it has disrupted business meetings, classes and conversations. Earlier this year, I believe February, a 6 engine military plane flew in so low that it rattled the house and caused objects to fall off the wall. Just a few weeks ago 5 Navy cargo planes came in around 4 pm, one every 7-8 minutes, again flying low enough to jar knickknacks from their place.

We intentionally chose not to live in a city or urban setting so that we could enjoy the quiet solitude of nature yet the unmitigated and poorly controlled growth in this area has turned this area into a noisy, crowded, fast growing, sprawling urban area. Urbanization is not how we wish to live.

The hundreds of new homes, new neighborhoods, industrial parks, warehouses, have caused unrelenting tractor trailer and vehicle traffic that snarls Waring, Pipkin and other tertiary roads several times a day on two lane roads that are unable to handle the capacity, yet you want to expand the airport, court domestic flights which will exponentially exacerbate the problems. Not to mention what it's going to become once the new 700 acre industrial park is built just north of the airport

Residents should have some expectation that their representatives have their citizens interest at heart, however, I'm struggling to see where any of you have considered us and our lives. What adult wants to purchase a house in a neighborhood that is surrounded by industrialism and commercial aircraft? Tell me who would want to raise their family in such an environment? This unfettered growth - residential, industrial, commercial and air – needs to stop.

Thank you for your time.

13-97

Sincerely, Michelle Hubenschmidt & Gary Gidding

From: <u>Dianna Thomas</u>
To: <u>Conrad, Gene</u>

Subject: Disruptive NOISE/flight paths - Grasslands community.

Date: Monday, May 31, 2021 2:11:08 PM

Mr. Conrad,

From:

Dianna Thomas

2470 Laurel Glen Dr.

Lakeland, FL 33803

Subject:

Environmental Assessment, Phase II Air Cargo Facility Development

Construction 2021, Proposed Project Impact 2022-2027

Lakeland Linder International Airport

Concern:

13-98

The FAA has identified that the long and short term impact of noise does not exceed significance levels. While we understand the use of the DNL model for evaluation it does not appear to account for the current and direct noise impact of flights that are going directly over our home at extremely low altitudes and full power. We have made several calls to the local airport since last fall expressing our concern.

Impact:

Disruptive to quality of life in south Lakeland.

Outside conversations are interrupted.

Flights occur after going to bed and prior to waking (awakened at both times).

Work at home calls are disrupted with inability to hear and rattling of windows.

Potential safety risk (bird strikes-little time to recover).

Detrimental impact on property values.

Request:

Expansion does not move forward until noise abatement/mitigation is in place that will take flights directly out and up to high altitudes which will stop low flying/loud commercial flights over our neighborhood.

Respectfully,

Dianna

 From:
 stepfrn@aol.com

 To:
 Conrad, Gene

 Subject:
 Fwd: Failure Notice

Date: Monday, May 31, 2021 2:04:28 PM

----Original Message-----

From: MAILER-DAEMON@aol.com

To: stepfrn@aol.com

Sent: Mon, May 31, 2021 1:17 am

Subject: Failure Notice

Sorry, we were unable to deliver your message to the following address.

<gene.conrad@Lakeland.gov.net>:

Unable to deliver message after multiple retries, giving up.

I am Stephanie Franklin, and I live in Bridgefield at Oakbridge. Please include Bridgefield with Grassland because we are all connected. I am going to make this short because because it is not sweet.

My home is no longer peaceful, my quality of life, that tranquilness that home gives me, has faded. I am approximately 500 feet from the Polk Parkway. My house sometimes shakes for the planes. My house is so noisy, that all of my windows and sliding glass doors need to be replaced by Amazon. I am a nervous wreck and my sleep has been interupted on a regular bases.

I have given up reading the newspaper (Legder of course) with my morning coffee on the lanai. Grilling meals and inviting others is unpleasant. Watching the sunset is different. The noise from planes begins early mornings and lingers into the night. My neighbors roof was damaged by ice falling from a plane several years ago. I didn't think that could happen but it did. So now can it happen again, probably so. Can the birds from the lake cause a strike not to mention the dump? We have pelicans, herons, cranes, ducks, and so on here in the back yard.

Safety, noise abatement and our quality of life are all in jeopardy. I have worked for this City and have served my Community. Please negotiate for us.

Respectfully Submitted,

Stephanie

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13-99

21-12

From: Dave Buyens
To: Conrad, Gene
Subject: Amazon Expansion

Date: Monday, May 31, 2021 1:06:17 PM

13-100

5-3

Gene

The existing Amazon air fleet is a common noise event at our house. I worry about increases. Also, I watched NOVA on PBS this weekend and was amazed at how widespread the plumes from jets affect our air quality. I am against the expansion in spite of enjoying Amazon's fast deliveries and their contribution to area economies.

Dave Buyens 709 Sandalwood Drive Plant City FL 33563

Sent from my iPad

From: BETH DICKMAN
To: Conrad, Gene

Subject: Subject: Flight Paths and NOISE affecting Grasslands

Date: Monday, May 31, 2021 12:29:43 PM

Dear Mr. Conrad,

13-101

Please stop these low flying flights over the Grasslands community. They are LOUD and disruptive. Please work with the FAA to stop these unnecessary flight paths.

Sincerely,

Name: Beth Dickman

Address: 2970 Shoal Creek Village Dr. Lakeland, FL 33803

Phone: 863-450-7050

Email Address: bpdickman@msn.com

From: Kate Head

To: Conrad, Gene

Subject: Late night noise

Date: Monday, May 31, 2021 12:28:57 PM

Mr. Conrad,

13-102 14-60 When I moved into Morgan Creek 8 years ago I felt like I lived in the country. Now the constant road noise on west pipkin, the engine testing noises, and the planes makes me feel like I live in the inner city. At least once a month the noise from jet engine testing makes it impossible to work at home and we can no longer open are windows. West Pipkins is an all night drag racing strip as employees start late night warehouse shifts and the planes at night wake you up. Why is a small rural airport allowing late night planes at all. Even airports in major cities have cut off times for planes to take off.

3-20

I fear all the money in grass lands will force more planes over the poorer communities and this will only get worse. Please consider banning late night flights after 10pm and please don't allow all the rich folks in Grassland to use their influence to force the "average joe" to bare all the plane noise. I work just as hard as they do.

Kathleen Head 4350 Tokose Place Lakeland Florida 33811

Sent from Yahoo Mail for iPad

From: susan queitzsch
To: Conrad, Gene
Subject: Amazon Expansion

Date: Monday, May 31, 2021 10:54:00 AM

Mr. Conrad--

Although I believe my concern about the further expansion of Amazon and the increased flights/noise that it will bring will be about as effective as spitting in the wind, I still feel I need to add my voice to others who object.

13-103

The peace and quiet that many of us enjoyed in this area was already being steadily infringed upon over the years with more jet flights and then other businesses were added that also increased air traffic. Now with the addition of Amazon we are enduring even higher noise levels and windows rattling at all hours and we're being told that worse is yet to come.

The addition of a few more jobs is reason we're supposed to embrace the destruction of our quality of life and the ability to enjoy our homes but the overriding factor, as always, is how much more money Amazon will bring to the city coffers. Only now after people in the surrounding community are complaining are you looking into noise mitigation routes. No one seemed concerned about the increased noise levels that you knew were coming when signing

Like I said earlier, I'm not confident at all that anything any citizen in the area affected says will make much difference but at least I know I've tried. I'd also be willing to bet that you, Mr. Conrad live somewhere that is not affected at all by all this additional noise.

Susan

the big contract.

P154

From: <u>Charles Polstra</u>
To: <u>Conrad, Gene</u>

Subject: Feedback May 27, 2021 Info Workshop Date: Monday, May 31, 2021 10:44:23 AM

We are Charles & Lois Polstra. The Colonnades 1750 Birchwood Loop, Lakeland, FL 33811. We are 8-year residents after living in Bloomingdale Valrico FL (Hillsborough County) for 28 years.

27-16

Our comments on the required Hearing/Info Workshop for Phase II Air Cargo Facility. This is another "huge step forward" for our city/county and we appreciate the thoroughness of the report. We support going forward . . with knowledge and information . . shared openly through constant communication.

From our kitchen window, we observe the PrimeAir planes approaching and departing. Always interesting to see them just over the treetops. Many times we have a short prayer for the crews for safe non-stop flights. I enjoy using FlightAware.com for tracking.

Working toward the greater good for all of Polk County and Central Florida

P.S. We are strong boosters of Bonnet Springs Park. David Bunch is a member of our Sunday School Class at FUMC on Lake Morton.

From: Jaime Guerra To: Conrad, Gene **City Commission**

Subject: Phase II Air Cargo Facility Development Lakeland Linder International Airport - Concerned Comment

Monday, May 31, 2021 10:31:04 AM

My Name is Jaime C. Guerra, I have been a Florida resident for 43 yrs. Lakeland has been my on/off residence since 1978. I live at 1109 Afton Street, Lakeland, Florida. 33803-3201.

I attended May 27th 2021 meeting and heard the briefing on the proposed Phase II Cargo Facility Development including the Draft Environmental Assessment.

I will start by saying that WHILE NOISE IS AN ISSUE, IT SHOULD NOT BE A DISTRACTION. While most of the focus is been placed (rightly so) on the noise annoyance generated by the current - and proposed increase of - air traffic around the airport area and the city of Lakeland in general, there are other just as important aspects related to the quality of life of Lakeland residents that will be severely and negatively impacted by the proposed expansion as it stands. I would like to prioritize the following:

1 THE ENVIRONMENT: The National Environmental Policy Act of 1969 (NEPA) might have sufficed to meet federal requirements for the Environmental Impact Assessment of the Project. However, this well intended Act does not address specifically enough the critical environmental issues we live and experience 52 yrs. after its original inception. The terms "Negligible" and "Minor" are used in identifying the impact to the natural resources and water caused by the Phase II Air Cargo Facility Development proposed expansion. A more up to date assessment is needed, perhaps by a third party group that can evaluate the impact to the environment using data obtain on recent experiences

BE GOOD FOR CITIES - BUT NOT NECESARILY FOR ALL CITIES.

2. NATURAL RESOURCES:

WATER: The vehicular traffic increase expected will undoubtedly pollute our surface water (lakes, ponds, etc), as well as in our in-ground water veins (main source of water to many Lakeland residents who rely on wells for their source of drinking water). Fluids leaked from engines, as well as synthetic/rubber dust generated by tires will reach our water sources via "run-off" and seepage.

elsewhere and with similar projects and like conditions. EXPANSION CAN

AIR: The emissions that will be generated by the expected traffic increase of regular passenger vehicles, as well as planes, semi-tractor trailers, trucks, vans, etc. will be detrimental to the air we breathe in our city. Lakeland population growth has been accelerated for reason well known, and the proposed expansion project will exacerbate the deterioration of our air quality, and the overall quality of life that we grown in our bellowed

26 - 6

18 - 1

5-4

21-14

3. **PUBLIC SAFETY:** The proposed expansion project will significantly increase the risk of loss of human lives:

FUEL FARMS, storing high quantities of fuels in above ground tanks has an inherent high risk, storing jet fuels will increase exponentially that risk to our population. From accidental fires (man or nature caused), to undetected leaks. Once again human lives and environmental impact combined.

INCREASED VEHICULAR TRAFFIC will result in increased number of accidents throughout our city since trucks will be crossing many of our residential area's streets.

INCREASE OF TAKE OFFS AND LANDINGS: INCREASE THE RISK OF CATASTROPHIC EVENTS: Take off and landing are with out a doubt the most crucial and critical moments on every flight. Given the size of cargo aircraft and increased amount of flights proposed, the risk to the lives of Lakeland's residents will be greatly increased. Once this project is approved and goes through, there will be no chance to renege on the commitments made to corporations regardless of the lives lost.

In closing I want to share also my disappointment on the decision making process that has taken us to this juncture. I am troubled with the disregard shown by our city representatives who were elected by us, the citizens of Lakeland to represent our best interest. I CAN'T HELP BUT TO QUESTION, WHAT'S NEXT?

THE APPROVAL OF THE CITIZENS OF LAKELAND. Lakeland is growing rapidly, citizens should be active participants on the decision process leading to any major projects that will impact their beloved city, their quality of life and that of their descendants. SELLING OUT TO ANY MAJOR CORPORATION can and will surrender the control of Lakeland Intl Airport to that majority user, which in turn will effectively impact the decision by any passenger airline to operate flights that could be of more - and direct - benefit to Lakeland residents.

TAXATION WITHOUT REPRESENTATION: The economic benefit of this Expansion Project as proposed will not be only for the citizens of Lakeland, but also for citizens of other surrounding cities and counties (Hillsborough, and maybe even Pasco to mention some); However, Lakeland's residents will be the most negatively impacted, and the only ones who will be carrying the heavy load (added taxes) when time comes to pay for the collateral costs for services and support mechanisms that will be needed as the expansion carries on.

Concerned Lakeland resident / aware voter.

JAIME GUERRA - Consultant

Aquaponics For Communities jaimeguerra54@yahoo.com (813) 601-3553 Cell/Direct

From: <u>Kathleen Wright</u>
To: <u>Conrad, Gene</u>

Subject: Airport Expansion with Amazon

Date: Monday, May 31, 2021 10:01:33 AM

14-61

Would like my voice counted in being totally against any expansion by Amazon to our airport. Not only the noise, but most importantly is the impact on small businesses(it will kill some for much easier to deal with Uncle Jeff), our traffic increase which is already horrific of which will be added trucks on our roads, the land they are acquiring, the extra fuel stored, not current environmental measures/1969 is way outdated, and the citizens should be the ones to vote on this not you all. I do not stand alone in this, but we all know the City of Lakeland has gone to bed with Amazon and it is a done deal. It will be remembered upon your reelection whenever that will be; you can count on that. It is disgusting for if it had not been for Transparent Lakeland we would not have known anything as citizens of Lakeland and I am a true Lakelander born and raised! I am tired of these decisions being made without our consent! What else is Amazon getting at our expense?????????????

Kathleen Wright

From: John Fargher
To: Conrad, Gene

Subject: Flight Path and Noise Affecting Grasslands

Date: Monday, May 31, 2021 9:49:10 AM

Dear Mr. Conrad,

13-104

Please try to stop the low flying flights over our home in the Grasslands community. The planes are very loud and disruptive.

Please request the FAA to divert the flight paths and remove low flying flights away from the Grasslands residential area

Thank you for your help and consideration.

Sincerely,

Lynne Fargher 3143 Grasslands Drive Lakeland, Florida 33803 863-687-4888; 863-602-3879 (c) farghers@tampabay.rr.com

Sent from my iPad

From: Ben Mundy
To: Conrad, Gene

Cc: <u>Mutz, Bill; Walker, Phillip; Read, Bill; Madden, Stephanie; McCarley, Sara; McLeod, Chad;</u>

 $\underline{musick for lakel and@gmail.com}$

Subject:Amazon Expansion at LLIADate:Monday, May 31, 2021 7:45:38 AM

Mr. Conrad,

The word 'mitigate' is defined as 'to cause to become less harsh or hostile' or 'to make less severe or painful'. By definition, only undesirable items, things, issues, etc. need to be mitigated.

You openly use that word in your description of trying to manage the air traffic generated by current Amazon air cargo landings and departures at LLIA. The proposed Amazon expansion is planned to double the number of those 'undesirable' occurrences on a daily basis.

13-105

I live approx. 3.5 miles northeast from the east end of runway 27. I hear the Amazon cargo planes as a rumble and can only imagine the noise impact of one of those planes over my house at a low altitude. No doubt, that has to be an undesirable occurrence. You can't mitigate that noise to be 'desirable' no matter the air traffic pattern(s) utilized - someone is going to be impacted (as indicated by personal comments at the public meeting).

3 - 31

I understand your mission to grow an income stream at LLIA. Landing the current Amazon business is perceived as a big win for you and the City of Lakeland. The citizens of Lakeland now understand the impacts of that business, both good and bad. The quality of life for many has been negatively impacted by the air traffic noise created by Amazon air cargo movements, and that negative impact will become greater with the planned expansion.

Air cargo and the associated impacts seem better suited to a large international airport such as TIA, not Lakeland.

Thank you,

Ben

Benjamin F. Mundy, Jr. 141 West Palm Drive Lakeland, FL 33803

From: <u>James W Singer</u>
To: <u>Conrad, Gene</u>

Subject: Opposition to Airport Expansion

Date: Sunday, May 30, 2021 8:37:33 PM

Mr. Conrad,

As a full-time working resident of Lakeland, I was not able to attend the workshop regarding the proposed airport expansion. However, I would like some community concerns to be presented and considered that were not addressed at the meeting.

- 4 1
- 1. The destruction of natural habitats for protected species, for example bald eagles and sandhill cranes. I know for a fact that sandhill cranes live and breed in and around the airport area. However, has there been a study done about the population of this threatened bird? Has a study been done on how the airport expansion will impact this population?
- 13-106
- 2. With the airport expansion allowing an increased volume of incoming and outgoing flights, what is the expected decibel volume in the immediate surrounding area? Will this decibel level be above safe hearing levels? Will the increase in noise levels permit local businesses to operate specifically GEICO? I am a member of management at GEICO, and I can foresee the increased noise affecting our call handling departments' performances. Also, how will the increase in noise volume affect local property values? Should not local homeowners be consulted about this expansion if it may affect the value of their existing property?
- 14-62

14 - 63

- 3. Will the airport and Amazon be providing funding for road improvements, expansion, and maintenance in the surrounding area? The current roads surrounding the airport already have potholes and are in a state of disrepair with the current traffic levels. With the increase in air flight volume for commercial goods, there will be an increase in land transportation. Therefore, more vehicular traffic in the surrounding area. This increase in land transportation will necessitate more frequent repairs, and possible road expansions. As a commuter to GEICO, how will the traffic flow patterns be affected?
- 14-64
- 4. Has mass transportation or alternative methods being explored for the additional thousands of new commuters added to the existing road infrastructure?
- 16-2
- 5. The proposed airport expansion does not offer a solution to the adverse effects upon the neighboring wetlands and floodplains. With more paved areas, a larger amount of run off needs to be considered. What are the proposals to consider this increased volume of runoff? Purchasing credits for wetlands is not a long-term solution. Flooding is a deep concern especially since we are in a high risk area for sink holes. Excessive flooding and runoff can cause land deterioration and collapse. Have you considered that the expansion of the airport may trigger a unknown sinkhole and possibly placed the airport or nearby properties in to jeopardy?

17-2

From what I have read of the workshop minutes, it is my impression not all community and environmental concerns were considered or addressed.

Please stop the airport expansion until further studies are complete.

James W Singer

632 W Hancock ST Lakeland FL 33803

Thank you for taking my questions into consideration.

Please confirm receipt of my concerns to ensure they will be presented and considered.

From: <u>Marja-Liisa PEARCE</u>
To: <u>Conrad, Gene</u>

Subject: Fwd: Amazon expansion at the Lakeland airport

Date: Sunday, May 30, 2021 6:30:20 PM

Mr. Conrad,

The email address for you in the Ledger was not correct, and I failed to check it independently. A new try.

Marja-Liisa Pearce

----Original Message-----

From: Marja-Liisa PEARCE <marjapearc@aol.com>

To: gene.conrad@lakeland-gov.net < gene.conrad@lakeland-gov.net>

Sent: Sun, May 30, 2021 7:31 pm

Subject: Amazon expansion at the Lakeland airport

Mr. Conrad,

27-17

I am a long time Lakeland resident. Amazon expansion plans add to the use of the airport, add jobs, increase commerce in our area and provide good services for the population of the city. Distribution and delivery services are some of the best industries we can have in this area. They have very few negative impacts on the citizens, but have many good points to help the city's budget, city's services and jobs. Some people have complained about noise from the airplanes. That is part of present day community living, as well as 24/7 truck noises, loud motorcycles, and trains. I recommend that we welcome Amazon expansion plans enthusiastically at the Lakeland airport as good business partners with them would.

Marja-Liisa Pearce 863-687-3927

From: Roberto Leider
To: Conrad, Gene

Subject:Comments regarding Airport ExpansionDate:Sunday, May 30, 2021 6:23:36 PM

As a resident of Lakeland I attended the workshop regarding the proposed airport expansion.

I am concerned that many of the problems addressed by the community are not taken into consideration or resolved:

- 13-107
- -Noise neighbors and properties will be negatively affected. Including the possible loss of hundreds of jobs at Geico.
- 4-2
- -Biological Resources protected species such as tortoises, snakes, and birds will lose their habitat. Also studies need to be done about noise and such species
- 14 65
- -Infrastructure -The workshop did not address the congestion on airport road, county line road, and improvements that will have to be made in order for the project to work. Thousands of cars and trucks will be operating out of the airport. The current infrastructure will simply be overwhelmed. There was no proposal of increased public transit and connection to address the increase in traffic.
- 3 21
- -Why are the planes currently not taking the parkway proposed route?
- 5-5
- -What will be the impacts on the quality of life for residents who live close to the airport. Including the increase in air pollution.

Thank you for taking these into consideration

Please reply to let me know these comments were received and not simply deleted.

Roberto Leider 632 W Hancock ST Lakeland FL 33803



Virus-free. www.avg.com

From: <u>helen lingard</u>
To: <u>Conrad, Gene</u>

Cc: Mutz, Bill; Madden, Stephanie; McCarley, Sara; McLeod, Chad; Musick, Michael; Read, Bill; Walker, Phillip

Subject: Proposed Reconfigured Amazon Flight Path
Date: Sunday, May 30, 2021 5:50:50 PM

Dear Mr. Conrad.

It is unconscionable for the City of Lakeland to once again ignore the wellbeing and quality of life of the 242 families living in Highland Hills subdivision, as well as the other neighborhoods in this immediate area, by adding additional noise pollution to our once quiet lives. Highland Hills subdivision abuts the Polk Parkway on the north side and Florida Avenue and Cleveland Heights Boulevard on the west and east sides. Construction of this neighborhood was started in the early 1950's.

13-108

The City of Lakeland's Planning Board had multiple routes for the Polk Parkway, yet chose to locate it in this area. We are now all being negatively impacted by the noise and pollution that has continued to increase every year since it was constructed. Conversations must often be paused due to truck, motorcycle and car noise. It is no longer as pleasant to take a walk, garden, grill or just relax outside.

3 - 22

The Airport Authority and the City of Lakeland also have multiple choices for the Amazon flight path without adding the major burden, once again, to this same area. It is wrong for the Amazon flight path to be reconfigured to appease neighborhoods that were constructed close to the airport with the common knowledge that the airport was trying to expand.

Mr. Conrad, you and every City Commissioner have the responsibility to give equal consideration to the quality of life of every resident of this city, regardless of the price of their home or if they have an attorney representing them or not. I do not believe that equal consideration was given to citizens living in this area, when the proposal was made to move the Amazon flight path over the Polk Parkway and away from Grasslands and Oakbridge area on Harden Boulevard.

20 - 14

The increased daily Amazon flights, as proposed, will make our homes unbearably noisy and will cause our quality of life and health to decline drastically.

21 - 15

In addition to the increased noise pollution there is increased danger in routing planes over an area known to attract many types of birds. Why is anyone even willing to consider risking lives by routing planes over a landfill that attracts so many large birds?

3-23

I ask that you not support, nor recommend to the FAA, the proposed reconfigured flight path over the Polk Parkway.

Sincerely,

Helen Lingard

863-646-5643

 From:
 Rob Bevis

 To:
 Conrad, Gene

 Subject:
 Amazon

Date: Sunday, May 30, 2021 5:29:25 PM

14-66

I strongly support Amazon's plan to expand which will bring more good jobs and an income stream to the city. I live south of downtown and hear the planes, but they are not a problem for me. Certainly we should do what we can to mitigate the noise, but we can not let this opportunity pass us by. I doubt anyone who works for Amazon or hopes to work for Amazon was at last weeks hearing. Their numbers exceeds the 200 people at the hearing. I suspect none of those individuals need a job.

From: rudygunn@juno.com
To: Conrad, Gene
Subject: Amazon flights

Date: Sunday, May 30, 2021 5:14:42 PM

Mr. Conrad-

21-16

4 - 3

I am 100% opposed to increasing Amazon flights. I live very nearby, in the Colonnades and some fly directly over my house. There is the noise and the danger of a crash. It has been less than a year since they started and they have already increased greatly.

There is the danger of fuel storage and the increase in traffic in the area I live. More flights at night are worse than in the day. I am concerned about their interference with Hurricane Hunter flights as climate change is increasing the prediction of hurricanes. It also interferes with Sun and Fun Fly-in and the Coast Guard flights.

The 737 and 767 jets are among the largest. Environmental impact affects air pollution and the range of some native animals. The indigo snake is effective for controlling rats and mice in the woods in my backyard.

I have no interest in the probable use of the money to decrease taxes for the rich. I am middle class and the rich do nothing but damage to anyone else but themselves. The jobs are probably low paying with little or no benefits.

There are other priorities in life than "economic development." One of the biggest ovations at the hearing the other night was for the retired economic development director of Lakeland. He had personal experience at improving the downtown economy of Lakeland, (mostly small business, not mega business like Amazon), and he stated that there can be more important priorities in life.

I was a former customer of Amazon, but their service has declined considerably in the last nine months due to their controlling the competition. I am boycotting doing business with them.

I not only oppose the proposed changes but am strongly in favor of shrinking or doing away with their use of our airport.

Sincerely, Bob & Ruth Sharpe 1756 Birchwood Loop Colonnades Lakeland, FL 381 rudygunn@juno.com

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NetZero.com/NortonLifeLock

From: <u>sheena silva</u>
To: <u>Conrad, Gene</u>

Subject: Expansion and business

Date: Sunday, May 30, 2021 4:28:36 PM

13-109

Hello, I have followed the expansion and amazon planes quite closley. My short story is I moved from s fl ave after 10 years in buisness to century blvd in the kroons warehouse spaces one for price point and for the "safe" off road location. I own a grooming salon and have a small training area, the last year has been not only dangerous with sharp objects and airplanes rumbling it has disturbed the DOGS state of mind. Dogs iv had for 10 years who ran into my salon began to cower or not want to enter..I not only closed that business down I MOVED from lakeland to Mulberry! I am more worried about the wildlife, pets and health of the animals then just noise. Iv stayed quiet and survived the last two years, I seen the potential of

what the warehouse spacing would become after the kroons were bought out by a big cooporation guy who knows nothing about a "small town" and gave no option to renew after a new lease was to be signed. I MOVED here from NY AREAS to find a small town it looks like lifes altering again the town I searched for fell in love with and moved to is no longet that and on its way to contemporary city life.

Sheena silva CEO of tangled tails pet spa

From: Paula Todd
To: Conrad, Gene

Subject: Flights Paths and NOISE affecting Grasslands

Date: Sunday, May 30, 2021 2:09:29 PM

Dear Mr. Conrad,

13-110

You must stop these low flying flights over the Grassland Community. They are loud. They are disruptive. Please work with the FAA to stop these unnecessary flight paths.

Sincerely,

Paula M. Todd 3093 Shoal Creek Village Drive 863.370.5656 (Cell) paulamtodd@gmail.com

From: <u>Carol Kent</u>
To: <u>Conrad, Gene</u>

Subject: Flight Paths and Noise Affecting Grasslands

Date: Sunday, May 30, 2021 1:28:37 PM

Dear Mr Conrad.

13 - 111

Please work with the FAA to stop the low flying flights over the Grasslands community.

I work from home as a coach (with on-line ZOOM calls). I also work as a public speaker for many virtual conferences from my home office.

The noise level in my background when I'm trying to do professional work from my home is embarrassing, disturbing, and distracting. The planes are very LOUD and very disruptive.

I would deeply appreciate anything you can do to get the flight path changed for the multiple (and growing) number of AMAZON flights that go right over an area where I pay very high taxes to live in a "quiet" neighborhood.

Thank you for your help.

Respectfully,

Carol Kent 3141 Winged Foot Drive Lakeland, FL. 33803

Phone: 586-808-5711

carol@carolkent.org

From: gene4speakup@aol.com

To: Conrad, Gene

Subject: Flight Paths and NOISE Affecting Grasslands

Date: Sunday, May 30, 2021 12:55:31 PM

Dear Mr Conrad,

13-112

You must stop these low flying flights over the Grasslands community. They are LOUD and we work from home on ZOOM, a lot! The noise is terribly discruptive. Please work with the FAA to stop these unnecessary flight paths.

Sincerely,

Eugene Kent 3141 Winged Foot Drive Lakeland, FL 33803

PH: 586-481-7661

gene4speakup@aol.com

 From:
 culjim94@aol.com

 To:
 Conrad, Gene

 Subject:
 Airport poice complete

Subject: Airport noise complaint

Date: Sunday, May 30, 2021 11:39:44 AM

Dear Sir:

13 - 113

My name is James Cullen. I have lived at 1217 Kells Ct in Lakeland for over 31 years. The recent increased noise levels caused by the landing and departure of Amazon's planes has severely diminished my property value, my ability to enjoy my property and resulted in a "taking". The noise from the Boeing 737 aircraft was marginally acceptable when they approached at +2000 feet elevation above my house but now the noise resulting from the extensive and growing use of the heavy Boeing 767 is intolerable. During a typical landing approach by the 767s the measured noise pressure at my home is excess of 89 dB versus an ambient level of 38 dB. In addition the associated low frequency noises associated with the plane's flaps rattles my windows and causes vibrations in my home potentially damaging fragile art pieces. If my vehicle emitted noises of this magnitude on the streets of Lakeland or Polk county I would receive a fine for violating the noise ordinances. If my employer allowed similar noise levels in the work place, OSHA would demand changes and issue a fine. Clearly a problem exist with the landing and departure flight paths and noise abatement measures used by the heavy aircraft.

Therefore, I respectfully request that the use of the 767 aircraft and any airport improvements designed to facilitate the use of 767 or similar aircraft be suspended until suitable noise abatement measures can be implement.

Sincerely,

James Cullen

From: Amber West
To: Conrad, Gene

Subject: Amazon Expansion Complaint

Date: Sunday, May 30, 2021 11:10:30 AM

Hi Gene,

I hope this email finds you well. I was not aware of the meeting this past week related to the Amazon expansion at Lakeland Linder Airport until after the meeting had already passed. However, I would like to express my concerns and strong opposition to the current situation as well as any expansion programs to add more flights.

13-114

Currently, the airplanes are causing significant noise which does not allow me and my family to enjoy our home and backyard as we would like to, and I fear that my home value has already been and will continue to be adversely affected by the flights that have been added since we purchased our home in 2019.

Adding more flights should not be allowed especially since the current noise issues have not been resolved.

Additionally, if there is a way to request to be on a list of people to be notified about these meetings before they occur, that information would be appreciated.

Thank you for your time.

Amber Lindsey

13-115

From: <u>kierondavis2@aol.com</u>

To: <u>Conrad, Gene</u>
Subject: Expansion

Date: Sunday, May 30, 2021 10:58:14 AM

Mr. Conrad,

As a resident of Morgan Creek Preserve on Pipken Rd. on the south side of LAL - I would like to express my displeasure with the proposed increase in operations by Amazon to build on another 63 acre tract, parking for 3 more jets and up to 44 flights per day from Lakeland Linder. Noise is a serious problem with a commercial airliner flying in or out of the airport twice an hour around the clock on the average (up to 44 flights per day according to the press release).

I am totally against this and am speaking for many of my fellow residents as well, as they have voiced the same issue with noise and air traffic of that volume.

Kieron Davis 4427 Micanope Crescent Dr. Lakeland, FL 33811

From: Nikki G
To: Conrad, Gene

Subject: Amazon Expansion / unhappy resident Date: Sunday, May 30, 2021 7:44:13 AM

13-116

As a resident of south Lakeland it has become a nuisance trying enjoy outdoor living with planes flying throughout the day. We live in Florida where most people to spend time outside in there pool and watching TV out on back porches but you can't enjoy cause the planes are making so much noise. I'm not against Amazon expanding but something has to be done about how low planes are flying directly over neighborhoods. Supposedly living in 33812 / Lakeland Highlands is the best area code but we are thinking about moving out because of all the noise from planes. I live on just about an acre so I don't have to hear my neighbors day to day convo and activities but I'd rather hear people than planes.

Please do something to fix this problem.

Sincerely,

Unhappy Resident

--

Teneka Gibson

 From:
 Ray Williamson

 To:
 Conrad, Gene

 Subject:
 AMAZON EXPANSION

Date: Sunday, May 30, 2021 4:04:56 AM

14-67

Lakeland needs growth and Amazon brings growth and progress. Noise is not an avoidable factor—communities growing from Tampa to Orlando is constant and increasing and noise will always be a factor with which to contend. I am in favor of Amazon's growth.

Ray Williamson
Sent from my iPhone
*****WARNING: This is an email from an external sender. DO NOT click on links or attachments unless you know the content is safe. If you are unsure about an email, contact 4ISHELP *****

From: <u>Jennifer Aguilar</u>
To: <u>Conrad, Gene</u>

Subject: Opposition Letter - Amazon Expansion Plans
Date: Saturday, May 29, 2021 8:23:28 PM

Mr. Conrad,

28-10

I am expressing my opposition to the Amazon Expansion plans due to impacts of the environment, property value, safety, and quality of life.

4 - 4

1. I live close to Lake Hunter. I used to enjoy quiet walks along the shore of Lake Hunter. The lake is beautiful with the birds, wildlife and lake- one of the primary reasons why we moved here. Lake Hunter is a serene experience and provides the public an opportunity for recreation, peace, mental calming and nature observation. There are several endangered species at Lake Hunter too, including the Bald Eagle, Wood Stork, and Roseate Spoonbill. Recently, my morning walks have been interrupted unexpectedly with loud thundering noise from the Amazon jets. The noise is incredibly loud and it is a scary sight seeing the planes so close to the ground. What a conflict to the natural aesthetics of Lake Hunter, and a negative impact to quality of life! I notice many birds that get startled and fly away with the noise too- has this Lake and wildlife impacts been considered?

20 - 15

21 - 17

2. I work for Publix - and my location is at a Lakeland airside location, which we rent from the City of Lakeland. With the Amazon Expansion plans that include additional noise, excessive gas tank storages, traffic increases, I am concerned the expansion will negatively impact the work of myself and my fellow associates in being located so close to the airport. I am also concerned for our safety at work, of being in near proximity and the risk increasing for airport accidents.

14-68

3. Lastly, negative property value impacts. We have been searching with a real estate agent for more land to purchase. We have completely taken off our list of any property near the airport due to reading complaints on the current airport expansion. But, after watching the Public Hearing on May 27, and hearing more homeowners from farther away neighborhoods - all the way to Lake Hancock, we have decided to no longer search for land until we better understand the flight patterns more.

26 - 8

Most importantly, I'm very disappointed with how the public hearing went. Why did the City of Lakeland not even stream this event for the Public? It was clear that quality of life and the property owner's voice had little regard.

Thank you for your consideration,

-Jen Aguilar 1545 S Webster Ave Lakeland, FL 33803

From: <u>James Scilluffo</u>
To: <u>Conrad, Gene</u>

Subject: Amazon Expansion Comment

Date: Saturday, May 29, 2021 7:11:23 PM

Hi Gene,

13-117

14-69

I just watched the public meeting on Lakeland Now and would also like to add my comment. I agree with all those who are upset about the decreased quality of life and increased noise since Amazon has taken over, I'm sorry, come to Lakeland. We live at 131 Pinellas Street which runs parallel to the Polk Parkway and we hear and see all the planes as they are approaching landing, sometimes flying directly over our house. All conversations must pause, our pet parrots get excited and fearful and we just wait for the plane to pass. Our relaxing on the back porch in the evenings has been interrupted indefinitely. I agree with people's comments regarding it being about money and getting more people to move to our little town. The roads are so miserable to drive on now that you have to leave your house 15 minutes early if you are heading down South Fla. Ave. to be anywhere due to traffic and stop lights and the road diet in Dixieland. Now the alternative route, which is Harden Blvd., is also slow and congested as well. I can't imagine how bad it's going to be with an Amazon expansion. Please hear all the residents pleas to not let this happen. I don't consider myself as living close to the airport and never really noticed air traffic except during the fly in until Amazon came to town. As residents we could never have predicted this noise intrusion and feel helpless about it. If the flights are all going to be over the parkway I believe I am doomed because I may not be close to the airport but I am definitely close to the parkway. Who knew...?

Thank you for reading and hopefully listening,

Lori Scilluffo 131 Pinellas St. Lakeland 33803

Sent from my iPad

From: April Dotson
To: Conrad, Gene
Subject: Amazon expansion

Date: Saturday, May 29, 2021 7:02:16 PM

14 - 70

13-118

We live near Southgate Shopping Center and have no problems with the little noise from the air traffic. The expansion, from our understanding, could create more jobs for people.

The noise from above is so quick and so random it is extremely tolerable compared to other constant noise in the neighborhoods.

Thank you,

April and David Dotson

From: Ken Hill
To: Conrad, Gene
Subject: Lakeland departures

Date: Saturday, May 29, 2021 6:13:54 PM

Mr. Conrad,

I am a Grasslands resident.

21-18

As a former U.S. Marine who spent some time in military aircraft I've noticed Amazon departures from KLAL probably RWY 27 doing a turnout north over the Grasslands community. What disturbs me is that some flights appear to be below or near 500' AGL while over housing areas. There is no discipline by their pilots as to what they're flying over. This happens with two or three flights in a row. Not good!

Now I also see this from time time with USCG and NOAA aircraft shooting touch and go's for training purposes. They are far more disciplined and also not as frequent.

3 - 24

Amazon probably is adverse or gives lip service to noise abatement procedures as they burn fuel. Their A/C are probably heavy making downwind take-off use of RWY 9 not possible. But something needs to be done.

Understand that KLAL is in the middle of TPA & MCO and you have ceilings to work with, so I ask you to do your best.

Regards,

Kenneth Hill Grasslands

"The future ain't what it use to be!" Yogi Berra - 1958

13-119

From: Myemail
To: Conrad, Gene
Subject: Noise complaint

Date: Saturday, May 29, 2021 3:27:26 PM

Mr Conrad.

Please ask the FAA to stop the Amazon jets from flying over my house. The noise is terrible and if one malfunctions it could crash into a home in Grasslands.

Thank you, Mary Stovall 2992 Sanctuary Cir Lakeland, FL 33803 dankeihen@juno.com 863-450-4152

Choose to be safer online.

Opt-in to Cyber Safety with NortonLifeLock.
Get Norton 360 with LifeLock starting at \$9.95/month.*
NetZero.com/NortonLifeLock

From: <u>Danette</u>
To: <u>Conrad, Gene</u>

Subject: FAA complaint from Grasslands

Date: Saturday, May 29, 2021 3:22:08 PM

Dear Mr Conrad and the FAA:

13-120

Please stop the Amazon Prime jets from flying over my house in Grasslands. They are disruptive to daily life and the noise will harm our property values.

Thank you,

Danette Hensel 2992 Sanctuary Cir Lakeland, FL 33803 dshens72@brighthouse.com

From: Mary Rutherford
To: Conrad, Gene

Date: Saturday, May 29, 2021 2:24:17 PM

Dear Gene.

I have just finished reading "Community voices concerns on Amazon's airport plan". I can see that people are

already very upset by Amazon's present activities.

28-11

Amazon's plans are too big for Lakeland! They strike at the very heart and soul of what our community has carefully built over the years.

Adding a 64,600 sq. ft cargo sorting facility, employees, 3 more jets, 370 trucks, equal future disaster for us! These facilities would also cause Amazon to double flights above Lakeland from 22 to 44 per day! I can only imagine the horror of 44 flights per day. No peace!

Amazon's "great new plans" for Lakeland will destroy all that we have so lovingly built.

We must not sell Lakeland's heart and soul to Amazon!

Sincerely, Mary Rutherford 912 Heathercrest Lakeland, FL 33813 8636444710

From: <u>Carolyn Fulmer</u>
To: <u>Conrad, Gene</u>

Subject: Flight paths and NOISE affecting Grasslands

Date: Saturday, May 29, 2021 1:49:05 PM

Mr. Conrad.

13-121

I am a resident of Grasslands and am sending my complain about the increased airplane noise, which I understand will be increasing. The planes are very loud and interfere with the enjoyment of my home. In fact, I was planning to add a screen room to the back of my house and have cancelled my plans. After spending several visits on my friend's screened porch and having numerous conversations interrupted by the planes, I know I will be wasting my money to add a porch. Very disappointing. I know this is a complicated issue but Lakeland is a small city sitting under a very big sky. Therefore, I am hopeful that the City and the FAA will develop flight plans that will restore our heretofore peaceful subdivision.

27-18

From: Nelson Nieves
To: Conrad, Gene
Subject: Amazon Expansion

Date: Saturday, May 29, 2021 1:41:28 PM

I live in Waterford Lakes subdivision and regularly have the airport traffic flying over on their final approach. I recently retired from Delta after 41 years in maintenance. I used to live closer to the Sanford airport when I lived in Seminole county. I dont have an issue with the noise. Lakeland needs to provide job opportunities for our young people if we want them to stay in the area. They represent the future for the region

Sent from my iPhone

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Please Solve Air Traffic Concerns Public Hearing May 27, 2021 Remarks by Rick Garrity

- I want to thank Gene Conrad and Mayor Mutz for meeting with our neighborhood and their stated intent to solve Amazon cargo jet air traffic intrusions into our calm neighborhood life. Their plan of a highway approach at a higher altitude from the east may ease problems but that plan should be implemented before agreeing to an expansion of the Amazon facility.
- Although I endorse actions that will enhance the economic well being of Lakeland, I also know that the decision to expand large jet cargo traffic at Lakeland Linder International Airport would exacerbate existing collateral damage to neighborhoods.

20-16

- Amazon Air has increased their use of the Airport in the past year. This
 increase in air traffic is causing a reduction in quality of life for many
 residents having homesteads in or near flight paths to/from runways 9
 and 27. This collateral damage to our quality of life must be eased by
 seeking alternative flight pathways.
- Our major concerns include noise pollution, potential health issues resulting from jet engine emissions and the impact on home values.
 Some of us have lived in our homes for more than four decades and lived in harmony with previous usage of the Airport.
- Despite these existing impacts, and before resolving them, the City of Lakeland is ready to sign a contract to double those impacts. We do not see how the Commission can possibly ignore this unfair taking of a pleasant residential lifestyle and in fact doubling that impact.

3 - 25

- We would like your assurances that the City of Lakeland will as a matter
 of public policy implement alternate eastern approaches to LAL runway
 27. These alternate approaches should be over less populated pathways
 that lessen impacts and lessen deterioration in home value for
 residences even 3-4 miles from the airport.
- Examples of similar approaches over highways and rivers are the approach over the La Guardia Expressway in New York and the Potomac River approach into Washington D.C.
- · Likewise a policy of approaching at a higher altitude should be sought

28-12

- We understand that this Environmental Assessment is for an enlargement of the Amazon facility with arrivals and departures of 36-44 flights per day. Moving forward with this expansion before existing problems are resolved is not a responsible move. It is unthinkable that your citizens would be burdened with this second new disastrous impact to their lifestyle
- Bottom line —Lakeland Commissioners must respect the rights of their citizens; citizens who have invested in this community to maintain their quality of life. New jobs are important but that should not happen at the expense of deteriorating the quality of life of existing residences. Both issues must be satisfied to have a balanced successful economy and lifestyle for your citizens

23 - 1

From: <u>Terry, Traci</u>

To: Conrad, Gene; Sherrouse, Shawn
Cc: Stovall, Jennifer (City Hall)
Subject: FW: airport expansion

Date: Tuesday, June 1, 2021 8:38:03 AM

FYI

From: Ariana Glennon <ariana_glennon@wycliffe.org>

Sent: Thursday, May 27, 2021 1:31 PM

To: City Commission < CityCommission@lakelandgov.net>

Subject: airport expansion

Dear Mayor Mutz and Lakeland City Commissioners, 2021

May 27,

Thank you for your service to our community!

Regarding the airport expansion, what we stand to lose is far greater than what revenue we may get.

1. My first reservation has to do with its *impact on our society*.

We have a little bit of an edge right now maintaining our "red" state culture which is God honoring but Amazon is Big Tech and follows the "Blue State" ideologies of cancelling God and His ways. As they move in here in force, we might find ourselves overwhelmed with the difficulties of maintaining our Pro-God stance.

- 2. My second reservation has to do with their *monopoly of the air space* and airport ground space. If Amazon takes it all, then other companies will find it harder to fly in, not to mention service their planes and deal with their cargo and passengers.
- 3. My third reservation has to do with the *strategic location* of this project in the case of armed conflict. (God forbid!) Do you realize that with Amazon owning almost everything at the airport they could develop a well located, but hidden, military-type facility, capable of stopping air traffic at both TPA and MCO? No doubt you are aware of their ambitions regarding space travel and their conflict with Elon Musk's SpaceX group. Amazon may have plans that we don't know about. Are all those planes really only for delivering store goods? 22 flights a day!!

Let's cool our jets on this. Stall for time. Ask General Flynn's group for their opinion! Don't sign off on this yet, please!!

Thank you again for your guardianship of our community. Protect us from Amazon!

Ariana Glennon

1130 N. Lake Parker Ave Unit C-229 Lakeland FL 33805

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5-6

From: <u>Terry, Traci</u>

To: Conrad, Gene; Sherrouse, Shawn
Cc: Stovall, Jennifer (City Hall)
Subject: FW: Amazon Flight proposals
Date: Tuesday, June 1, 2021 8:38:37 AM

FYI

----Original Message-----

From: andrewwajek@gmail.com <andrewwajek@gmail.com>

Sent: Thursday, May 27, 2021 12:13 PM

To: City Commission < CityCommission@lakelandgov.net>

Subject: Amazon Flight proposals

Hi there. Thank you for your service. I'm writing in regards to the proposal to add more Amazon departures from the airport. I strongly disagree with the idea because of concerns of more noise and air pollution to our community as a result of even more flights. I like that our air quality is much better than NYC. Let's keep it that way. Thanks for your time. Best regards.

-Andrew Wajek

Sent from my iPhone

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From: <u>Terry, Traci</u>

To: Conrad, Gene; Sherrouse, Shawn
Cc: Stovall, Jennifer (City Hall)
Subject: FW: Disappointed tax payer
Date: Tuesday, June 1, 2021 8:37:30 AM

FYI

From: Holly Daniels <hollyharrisd@gmail.com>

Sent: Saturday, May 29, 2021 2:23 PM

To: City Commission < CityCommission@lakelandgov.net>

Subject: Disappointed tax payer

To my beloved City Commissioners,

I was born and raised in Lakeland. After college and graduate school, I returned to start a family and provide services to my fellow Lakeland community. I love this town. I do not want my children to be raised in a city that sells out to a socialist company that is Amazon! I am ashamed to see and HEAR these jets fly over my private dwelling multiple times a day. I know your job is stressful. I am happy with your overall progress but feel BETRAYED. It is the noise and air pollution that these jets have interrupted. Not the Bugs, not the bunnies, not the trucks. IT IS NOISE OVER OUR HOMES that we did not know about and do not accept!!!!! It is unfair. It is not right. It is an infringement on my personal right to private property and peace. I am holding the Lakeand City Commission accountable

for being asleep at the review stage!!! Do not allow for this expansion!

Dr. Holly Daniels Kidwell Hollyharrisd@gmail.com

--

Holly H Daniels, DVM

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28 - 13

From: <u>Terry, Traci</u>

To: Conrad, Gene; Sherrouse, Shawn
Cc: Stovall, Jennifer (City Hall)

Subject: FW: Amazon

Date: Tuesday, June 1, 2021 8:36:52 AM

FYI

----Original Message----

From: AMY LADERER <amyqladerer@icloud.com>

Sent: Saturday, May 29, 2021 2:23 PM

To: City Commission < CityCommission@lakelandgov.net>

Subject: Amazon

I am writing expressing our extreme dismay over the Amazon expansion. I have personally written all of you, except Mike Musik whose email is not listed, but should be very concerned about this issue and it's in his area.

13-122

We live on Scott Lake and the noise from the existing jet schedule is barely tolerable. We can't imagine what it will be like, living in south Lakeland, when the flights are expanded. The jets are incredibly loud and they descend right over neighborhood. This is also terrible for wildlife, which we luckily still have here.

14-71

In addition, we are NOT fans of Amazon. It is owned by a professed socialist and it kills local shops and businesses. Many of the products sold on Amazon do not list the country of origin, as is required in brick and mortar stores. Therefore, you could be buying a product from China without ever knowing it until it arrives. This is just one more reason Amazon has an unfair advantage over Mom and Pop shops.

PLEASE help protect the little bit of charm that is left in Lakeland. Do not allow this expansion.

Sincerely,

Amy & Ed Laderer

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From: Terry, Traci

Conrad, Gene; Sherrouse, Shawn To:

Subject: FW: Amazon

Date: Tuesday, June 1, 2021 8:36:30 AM

FYI

----Original Message-----

From: Debbie Irby <dlirby@aol.com> Sent: Saturday, May 29, 2021 4:30 PM

To: City Commission < CityCommission@lakelandgov.net>

Subject: Amazon

28 - 14

NO MORE AMAZON IN LAKELAND!!! From Lakeland Native!

Sent from my iPhone

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May 27, 2021

City of Lakeland Attention Gene Conrad, Airport Director 3900 Don Emerson Dr., Suite 210 Lakeland, Fl., 33811

Re: Comment on Draft EA for Phase II

Air Cargo Facility Development

Dear Mr. Conrad,

Enclosed please find the comment on the draft environmental assessment that I am submitting on behalf of my client, Healthy Progress, LLC. Please submit the comment for review by the City and the FAA.

Thank you for your help in this matter. Please let me know if you have any questions or need any additional information.

Sincerely,

Claude M. Harden, III

CULUA

COMMENT ON DRAFT ENVIRONMENTAL ASSESSMENTFOR PHASE II OF AMAZON AIR CARGO FACILITY DEVELOPMENT

COMMENT SUBMITTED BY:

Healthy Progress, LLC 3433 Lithia Pinecrest Rd., Suite 233 Valrico, Fl., 33596

Claude M. Harden, III

The Harden Eldridge Law Group, P.A

3730 Cleveland Heights, Blvd., Suite 1

Lakeland, Fl., 33803

(863)825-4540

Attorney for Healthy Progress, LLC

21-19

This comment is being submitted due to a concern related to an environmental hazard that is not accounted for in the proposed Environment Assessment report – namely the risk of a collision between an airplane and a bird due to the Amazon planes being forced to fly at lower altitudes upon takeoff with two landfills in close proximity to the airport. As reported by local media covering noise complaints arising from these flights, Amazon airplanes are not permitted to engage in a traditional takeoff and ascent due to their need to receive permission from the Tampa Air Traffic Control to enter airspace above 2,000 feet. This was noted in the November 30, 2020 letter from Mayor Bill Mutz to Tampa Air Traffic Control where he stated, "Over the last several weeks, our city has received numerous noise complaints from surrounding communities, some six to eight miles away, as departing air cargo aircraft are held down below 2,000 feet waiting for Tampa Departure to give them instructions to climb to a higher altitude."

When flying at such a low altitude, the risk of a collision between an airplane and a bird is always present. The hazards arising from these interactions are so great that federal and state laws have been enacted to address this risk. One such example, and one relevant to the present matter, is the location restrictions for landfills in relation to airports. Since landfills are a congregating area for vultures, these vultures pose a flight hazard to low flying airplanes. As such, federal law prohibits a landfill from being within 10,000 feet (or approximately two miles) from the nearest point of any run-way. The same restriction has been adopted by the State of Florida in its airport zoning laws.

The closest landfill to the Lakeland Linder Airport is the North City Landfill in Winter Haven, which is approximately 10 miles east of the airport and located near the Polk Parkway. There is

also the Southeast County Landfill in Lithia, which is 13 miles southwest of the airport. Though these landfills are located outside the legal boundary restrictions, and thus not per se violations of the airport zoning requirements, the logic and spirit behind these laws appear applicable in this case due to the unique takeoff restrictions placed on flights departing Lakeland Linder Airport.

The distance restrictions mandated in these laws are not arbitrary, but are based on studies that show the distance in which an airplane needs to travel from an airport under traditional takeoff patterns and ascents to reach an altitude where a collision with a bird is unlikely. Advisory Circular 150/5200-34A prepared by the FAA provides some insight on the rationale behind these distance restrictions. In the Background section it states, "In enacting this legislation Congress expressed concern that a [municipal solid waste landfill] sited near an airport poses a potential hazard to aircraft operations because such a waste facility attracts birds. Statistics support the fact that bird strikes pose a real danger to aircraft. An estimated 87 percent of the collisions between wildlife and civil aircraft occurred on or near airports when aircraft are below 2,000 feet above ground level (AGL). Collisions with wildlife at these altitudes are especially dangerous as aircraft pilots have minimal time to recover from such emergencies." It then goes on to state, "In light of increasing bird populations and aircraft operations, the FAA believes locating landfills in proximity to airports increases the risk of collisions between birds and aircraft.... AC 150/5200-33 recommends against locating municipal solid waste landfills within five statute miles of an airport if the landfill may cause hazardous wildlife to move into or through the airport's approach or departure airspace."

As noted in the aforementioned Advisory Circular, airplanes flying at an altitude of 2,000 feet or below are at a high risk for a collision with birds. The same altitude Amazon planes are required to maintain until permission to climb is received from Tampa Air Traffic Control. Based on normal flight patterns, the FAA recommends municipal solid waste landfills to be at least five miles from an airport. That is only five miles short of the distance between North City Landfill in Winter Haven and the Lakeland Linder Airport, or one minute of travel time for a plane travelling five miles a minute. But, flights departing out of Lakeland Linder Airport are not operating in a traditional manner and do not engage in traditional ascent patters. This is especially concerning considering that flights over the Polk Parkway have been considered as an option to alleviate flight noise over residential areas. If airplanes are directed east over the Polk Parkway, the plane will fly directly over the landfill. Those planes, if no clearance to ascend has been received, would be in danger of a bird strike. If that were to happen, it could be catastrophic.

The hazards to airplanes posed by birds are not a perceived threat, but a documented one. On November 10, 2008, Ryanair Flight 4102 from Frankfurt to Rome made an emergency landing after multiple bird strikes caused both engines to fail. After touchdown, the left main landing gear collapsed, and the aircraft briefly veered off the runway. On January 15, 2009, US Airways Flight 1549 from LaGuardia Airport to Charlotte/Douglas International Airport ditched into the Hudson River after experiencing a loss of both turbines. It is suspected that the engine failure was caused by running into a flock of geese at an altitude of about 3,199 feet, shortly after takeoff. All 150 passengers and 5 crew members were safely evacuated after a successful water landing. This flight has been dubbed the "Miracle on the Hudson" due to the heroic measures taken by Capt.

Sullenberger. On August 15, 2019, Ural Airlines Flight 178 suffered a bird strike after taking off causing it to crash land in a cornfield 5 kilometers past the airport. About 70 people were injured, all with minor injuries. In each of these cases, it was fortunate that no fatalities occurred because the pilots were able to find a safe place for an emergency landing. We may not be so lucky if the worst-case scenario were to happen here. Because of the high density of residential neighborhoods in this area, a safe emergency landing may not be possible.

In reviewing the Environment Assessment report, Section 5.3.2.1 appears to be the relevant section to discuss this topic. However, there is no discussion of the concerns Healthy Progress raises. Healthy Progress would like to know if any consideration was given to this issue, and if so, the reasons why these two landfills are not considered flight hazards based on the current takeoff restrictions.

From: Sanford, Paul
To: Hartsfield, Sam

Subject: FW: Sent from Snipping Tool
Date: Thursday, May 27, 2021 7:58:14 AM

Attachments: image001.png

From: Conrad, Gene <Gene.Conrad@lakelandgov.net>

Sent: Thursday, May 27, 2021 10:56 AM **To:** Sanford, Paul <paul.sanford@aecom.com> **Subject:** [EXTERNAL] Fwd: Sent from Snipping Tool

Sent from my iPhone

Begin forwarded message:

From: "Camp, Christina" < Christina. Camp@lakelandgov.net>

Date: May 27, 2021 at 10:52:50 AM EDT

To: "Conrad, Gene" < Gene.Conrad@lakelandgov.net>

Subject: Sent from Snipping Tool



Dodie Miranda

Assign Conversation ▼

WED 11:59 AM

13-123

I am asking you to please not grant Amazon to be able to expand their facility and enable them to double their flights. In less than a year they have already gone from 3 flights a day to 22. For them to double that amount is totally unacceptable to those of us who have lived here for over 40 years. I live off Drane Field Road

in Country Village. I am here to tell you if I am sitting on my screen porch when a plane takes off you have to stop talking to anyone sitting on the porch with you. I think Amazon has just gotten greedy and so will the City

of Lakeland if this expansion is approved. I am unable to go to the meeting Thursday night at RP funding Center and was only notified of it in yesterday's mail. (5/25). I hope this complaint is duly noted. Thank you, Delores Miranda



3841 Country Loop West, Lakeland

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From: Sanford, Paul
To: Hartsfield, Sam

Subject: FW: Sent from Snipping Tool

Date: Thursday, May 27, 2021 7:58:13 AM

From: Conrad, Gene <Gene.Conrad@lakelandgov.net>

Sent: Thursday, May 27, 2021 10:56 AM **To:** Sanford, Paul <paul.sanford@aecom.com> **Subject:** [EXTERNAL] Fwd: Sent from Snipping Tool

Sent from my iPhone

Begin forwarded message:

From: "Camp, Christina" < Christina.Camp@lakelandgov.net>

Date: May 27, 2021 at 10:52:08 AM EDT

To: "Conrad, Gene" < Gene.Conrad@lakelandgov.net >

Subject: Sent from Snipping Tool

Good morning.

Here is one screenshot, other one in just a minute.

Christina

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Arlene Randall

Assign Conversation ▼

WED 2:29 PM

27 - 19

I will be unable to attend the discussion concerning the expansion of our airport. But wanted to express my support for this opportunity being presented. I live just off Airport road and have no problem with the expansion. Possibly the folks that are upset with the noise should have done a better research prior to buying. I personally hope with all upcoming improvements that it will lower my taxes. Congratulations and continued



improvements that it will lower my taxes. Congratulations and continued success in building a better lakeland

From: <u>Ks Villafana</u>
To: <u>Conrad, Gene</u>

Subject: Airplane noise that is unacceptable Date: Saturday, May 29, 2021 8:26:31 AM

I am writing to express my complaint and my request for a review of the flight paths out of Lakeland Linder International Airport.

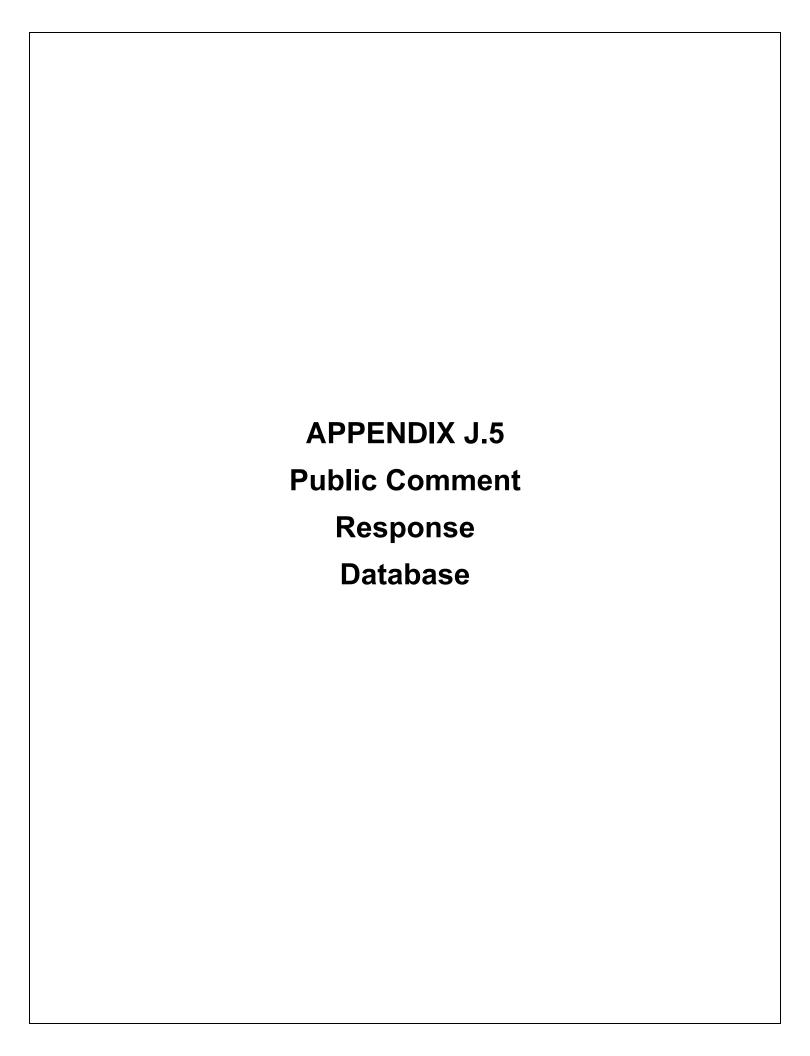
The current flight path of Amazon Prime flights out of Lakeland Linder International Airport, over our residential neighborhood of Grasslands, is very disruptive. The flights are much too low and too noisy, and we understand that many more daily flights are scheduled for the near future. We believe that the flight path should be reviewed, so that the main portion of the loud arrival and descent can be performed over commercial properties and not residential.

We welcome the jobs being created by virtue of this new Amazon business, but also expect Lakeland Linder to be a good neighbor to the local residential communities.

Sincerely, Karen Villafana polkstudent1@yahoo.com

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13-133





APPENDIX J.5 PUBLIC COMMENT RESPONSE DATABASE

INTRODUCTION

The Environmental Assessment (EA) for the Phase II Air Cargo Development (Proposed Development Project) was prepared in accordance with the Section 102(2)(c) of the National Environmental Policy Act of 1969 (NEPA), President's Council on Environmental Quality Regulations (CEQ) Title 40, Code of Federal Regulations (CFR) Parts 1500-1508, the implementing regulations for NEPA, and Section 509(b)(5) of the Airport and Airway Improvement Act of 1982, as amended. The EA was also been prepared in accordance with Federal Aviation Administration (FAA) Order 1050.1F, Environmental Impacts: Policies and Procedures, and FAA Order 5050.4B, NEPA Implementing Instructions for Airport Actions.

The Draft EA was made available for review by the general public and interested parties. Notification of the Draft EA's availability was accomplished through legal advertisements in local newspaper *The Lakeland Ledger*, and on the Lakeland Linder International Airport (LAL) website. The Notice of Availability of the Draft Environmental Assessment and Notice of Public Hearing was published on April 23, 2021 and April 26, 2021. These notices appeared 35 days and 32 days prior to the combined Public Hearing and Public Information Workshop that was held on May 27, 2021. The public comment period began on April 23, 2021 and ended on May 31, 2021. The duration of the comment period was 39 days.

The combined Public Information Workshop and Public Hearing was held on May 27, 2021 at the RP Funding Center, Sikes Hall, located at 701 West Lime Street, Lakeland, Florida 33815. The Workshop portion began at 6:00 p.m., although early attendees were allowed entry to review the Workshop materials and discuss the project prior to the start of the Workshop.

The combined Public Information Workshop and Public Hearing began with an informal Workshop meeting that allowed the public to review project information and discuss the project with LAL representatives. The Workshop was followed by the Public Hearing, which began with a brief introduction and overview of the Hearing's purpose from the Public Hearing Officer and a formal presentation describing the Proposed Development Project, the NEPA process, and the EA's findings. Members of the public were then invited to provide oral and written comments. The combined Public Information Workshop and Public Hearing was attended by 177 members of the public, covered by local newspaper and local news television affiliates, livestreamed on the local news website LKLDNOW (https://www.lkldnow.com/), and separately video recorded by the City of Lakeland. The City's video recording is available to the public upon request. Additionally, a court reporter was present to record and transcribe the Hearing's presentations, public oral comments, and private oral comments given directly to the court reporter. Written comments could be submitted at the Workshop and Hearing or anytime during the public comment period. Twenty public oral comments were made, two private oral comments were made directly to the court reporter, and 15 comment forms were completed during the proceedings. Additional comments were received during the official public comment period: one comment by mail, 151 comment submittals by email, and two by social media. Equal consideration was given to all comments regardless of the submission format. Copies of all comments received are located in Appendix J.4.

This appendix provides responses to comments, as well as information on the organization of comments and responses.

CONSOLIDATED COMMENT/RESPONSE DATABASE INDEX

This Consolidated Comment/Response Database contains an index of those parties who submitted comments to the City related to the Draft EA prepared for the proposed Phase II Air Cargo Facility Development at LAL. Copies of the original comment submittals can be found in **Appendix J.4**. This database also contains a summary of the comments and provides responses to the comments.

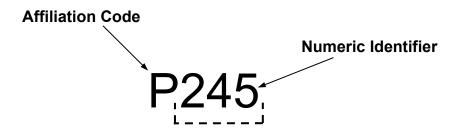
COMMENT LETTER CODING

The database index identifies the name of each party that provided comments and assigns a unique Identifier Code to each comment submittal. The Identifier Code consists of four alphanumeric characters that represent two fields of information.

The first character represents the "Affiliation Code" that places the commenting party into one of five categories:

- F = Comment from a federal agency or Native American Indian tribe
- S = Comment from a state or regional agency
- L = Comment from a local agency or an elected official
- P = Comment from the public
- N = Comment by petition

The last three characters identify the specific comment submittal numerically. For example, Identifier Code "P245" describes the comment submittal as being submitted by a member of the **public** and being the 245th submittal received.



Within each comment submittal, Comment Codes are used to identify and help organize comments and the responses applicable to a particular submittal. The summarized comments and responses are organized into 28 categories listed below. For example, Comment Code "1-15" describes the comment was made in regard to the purpose of and need for the Proposed Development Project and the particular was the 15th comment recorded under that category.

Category Number	<u>Description</u>
1	Purpose and Need
2	Alternatives
3	Airspace/Air Traffic
4	Biological Resources
5	Air Quality
6	Climate
7	DOT Act: Section 4(f)

8	Farmlands				
9	Hazardous Materials, Pollution Prevention and Solid Waste				
10	Historical, Architectural, Archaeological and Cultural Resources				
11	Land Use				
12	Natural Resources and Energy Supply				
13	Noise and Noise Compatible Land Use				
14	Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety				
15	Light Emissions and Visual Effects				
16	Wetlands				
17	Floodplains				
18	Surface/Ground Water Resources				
19	Coastal Resources				
20	Quality of Life				
21	Safety				
22	Cost Considerations				
23	Other Considerations				
24	Cumulative Impacts				
25	Mitigation Measures				
26	Coordination and Public Involvement				
27	In Support of the Project				
28	In Opposition to the Project				

Coded comments and responses are individually provided at the end of this Appendix and copies of each individual comment submittal are included as **Appendix J.4**. Since many of the submittals commented on or voiced concerns on key topics, detailed responses on these topics were prepared. Some of the responses to comment submittals may direct the reviewer to the appropriate topical response. For those comments where a topical response would not sufficiently respond or acknowledge the comment(s), individual responses were provided.

TOPICAL RESPONSES

Topical Response 1: Worsening of Existing Air Quality

<u>Synopsis:</u> There were a total of 15 public comments regarding air quality issues within the public comments received. Overall, the comments expressed concern for existing air quality conditions surrounding LAL and that the Proposed Development Project would worsen those conditions, particularly with regard to emissions from additional aircraft servicing the cargo facility.

<u>Response:</u> As noted in **Section 4.2.1.1** and **Appendix C** of the Draft EA, Polk County is located in an attainment area for all National Ambient Air Quality Standards (NAAQS) for criteria air pollutants. In addition, a review of local air monitoring data shows that ambient concentrations of air pollutants do not exceed, and are not close to approaching, any applicable thresholds established for criteria air pollutants.

Air emissions associated with the construction and operations of the Proposed Development Project were analyzed and discussed in **Section 5.2.1** of the Draft EA. Significant air quality impacts would occur if the federal actions would cause pollutant concentrations to exceed one or more of the NAAQS for any of the time periods analyzed, or increase the frequency or severity of any such existing conditions. The analysis

conducted in the EA found that the increases in air emissions associated with the Proposed Development Project would not exceed thresholds indicating a significant impact.

The evaluation compared the project's air emissions against the air emission thresholds commonly established for areas not in compliance with the NAAQS. As noted in the EA, Polk County is classified as Attainment for NAAQS and there is no State Implementation Plan in place; therefore, *de minimis* thresholds for the area have not been established and a conformity determination for those thresholds was not required. For the evaluation, air emissions associated with the construction and operation of the expanded air cargo facility were compared to *de minimis* thresholds typically established for areas in which air pollutants exceed one or more of the NAAQS (Nonattainment). Of note, the Proposed Development Project was initially scheduled to be operational in early 2022. Due to schedule delays, the expanded facility is not expected to become fully operational until late 2022. However, the analysis performed for the EA includes the total emissions from both construction in 2022 and a full year of facility operations for 2022 (see table below). Based on this comparison, the emissions associated with the Proposed Development Project would be well below each *de minimis* threshold. Therefore, under this scenario the Proposed Development Project would comply with the Clean Air Act and would not cause or contribute to a violation of a NAAQS. Emissions increases in an attainment areas such as Polk County would, by extension, have even less potential to cause or contribute to a violation of the NAAQS.

Pollutant	2022 Project (tons per year)	2027 Project (tons per year)	Nonattainment de minimis (tons per year) ¹	Maintenance de minimis (tons per year)
CO	+95.5	+61.6	100	100
NOx	+40.6	+30.8	100	100
PM10	+53.0	+2.3	70	100
PM2.5	+7.6	+1.5	70	100
SOx	+0.7	+0.8	100	100
VOC	+34.4	+6.7	70	100

¹ For nonattainment de minimis values, the most stringent applicable threshold was considered. For Ozone, the most stringent that is applicable is for areas not in an Ozone Transport Region, which is the case for Polk County

Sources: Aviation Environmental Design Tool (AEDT) 3c, AECOM 2021.

<u>Summary of Changes to the Final EA:</u> **Section 5.2.3** in the final EA was amended to include discussion of the de minimis comparison shown above.

Topical Response 2: Noise Impacts on Surrounding Communities

<u>Synopsis:</u> Within the comment submittals received, 230 comments were related to aircraft noise. Specific concerns expressed in comments include:

- The methods used to model noise exposure,
- Reconfiguring or modifying cargo aircraft flight patterns to reduce noise exposure,
- The frequency and time-of-day of existing and future aircraft operations,
- Disruptions to business operations,
- Aircraft-induced vibrations in residences,
- Sleep disturbance from aircraft, and
- Speech and conversation disruptions.

The following subtopics summarize responses to each specific noise comment subcategories.

Topical Response 2a: Noise Analysis Methods

<u>Synopsis:</u> A total of 22 public comments were received regarding the methods used to conduct the noise analysis in the Draft EA, including how noise impacts were identified and evaluated for significant impact. In addition to general concerns about aircraft noise and increased aircraft noise generated by the Proposed Development Project, commenters identified a difference between the noise metric used in the Draft EA's noise analysis compared to what they experience from individual aircraft overflights. Comments further expressed concern that existing cargo aircraft operations at LAL significantly increase noise within their communities and that those increases would only be amplified under the Proposed Development Project.

Response: As discussed in **Section 5.10.1.2** of the EA, noise exposure under 2022 and 2027 conditions, with and without the Proposed Development Project, was modeled using the FAA's Aviation Environmental Design Tool, version 3c (AEDT). **Appendix G** of the EA describes the computer model and methods used for analyzing noise. Aircraft operational inputs used in the model are consistent and represent current and projected activity levels for both the Proposed Development Project and the No-Action Alternative. For the Proposed Development Project, aircraft operational information was provided by the air cargo facility operator (see **Section 5.1.1** of the EA). All model inputs, including aircraft fleet mix, stage lengths, time of day, runway use, flight track use, and proposed operations, were developed and used consistently with FAA guidance and policies, as well as accepted industry practice.

The AEDT modeling was conducted in compliance with FAA Orders 1050.1F and 5050.4B. The analysis of aircraft noise requires the use of the Day-Night Average (DNL) noise metric. The DNL metric is defined as "the 365-day average, in decibels, day-night average sound level," which reflects cumulative exposure to aircraft noise over an average annual day. When calculating DNL, the model accounts for the noise levels of all individual aircraft flights, the number of times those flights occur, the time of day they occur, and other factors. DNL has two time periods: daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.). To account for the added intrusiveness of sounds occurring during nighttime hours, nighttime operations are increased in the model by a factor of ten. Although aircraft noise analyses require the use of the DNL noise metric, it is understood that individual aircraft overflights can be quieter or louder, and experienced further away from the airport, than reflected by the DNL metric that represents cumulative noise over an average annual day.

Federal regulations at Title 14 CFR Part 150 provide guidance to local jurisdictions for determining land use compatibility with different levels of aircraft noise. In general, most land uses are considered compatible with aircraft noise levels below DNL 65 dB. The EA evaluated and discloses the effect of aircraft noise associated with the Proposed Development Project on land use compatibility near LAL. FAA Orders also define thresholds for determining if a change in aircraft noise exposure would result in a significant impact under NEPA. A significant noise impact would occur if there is an increase in aircraft noise exposure of 1.5 dB or greater for noise sensitive land uses within, or newly within, the DNL 65 dB or higher contours. This guidance is not intended to indicate there is an absence of noise in the areas beyond the DNL 65 dB contour, but to help local jurisdictions manage land uses and to help federal agencies determine if changes in noise levels would be significant.

The analysis conducted for the EA (**Section 5.10**) shows the Proposed Development Project would increase noise levels, but the increase would not exceed the threshold indicating a significant impact in

either future study year. When compared to the No-Action Alternative in 2022, the additional aircraft operations associated with the Proposed Development Project would increase the amount of noncompatible (residential) land use by 2.7 acres. This would involve all or portions of six individual parcels. Of the six residences located on the parcels, two would be located within the DNL 65 contour. The parcels and residences located within, or newly within, the 2022 DNL 65 contour would not experience an increase in aircraft noise of 1.5 dB or greater. In 2027, it was projected that 3.7 additional acres of noncompatible (residential) land use would be located within the DNL 65 contour (seven parcels total). Of the seven residences located on the parcels, one additional residence would be located within the 2027 DNL 65 contour (total of three). The parcels and residences within, or newly within, the 2027 DNL 65 contour would not experience an increase of 1.5 dB or greater. Based on the analysis prepared for the EA, significant noise impacts would not occur if the Proposed Development Project was implemented.

The FAA Reauthorization Act of 2018¹, required FAA to report on studies regarding the use of DNL as a noise metric. The Act called for the evaluation of alternative metrics to the current DNL standard, such as use of actual noise sampling to address community aircraft noise concerns. In an April 2020 Report to Congress², FAA concluded that "[n]oise modeling is the only practical way to predict geospatial noise effects in a surrounding community when analyzing proposals related to aviation noise. Noise modeling is also necessary for a wide variety of other proposed federal actions, such as those resulting from airfield changes or changes in airspace management. The assessment of these actions requires the review of future case proposals and can therefore only be considered through predictive modeling."

To review and improve the agency's understanding of community responses to aircraft noise, the FAA conducted the Neighborhood Environmental Survey (NES) to help inform ongoing research and policy priorities on aviation noise.³ The NES consisted of over 10,000 mail responses from residents in communities around 20 statistically representative airports across the Nation, and also conducted a follow-up phone survey, which included over 2,000 responses to a series of more detailed questions. The NES results show a substantially higher percentage of people highly annoyed over the entire range of aircraft noise levels (i.e., from DNL 50 to 75 dB). The FAA is now considering the results of the NES, in conjunction with additional research findings as they become available, to determine how they may inform future noise policy considerations. The FAA has solicited public comments on current research and policy initiatives to address aircraft noise, including the NES, in order to identify any additional research or considerations needed to improve understanding of the effects of aircraft noise exposure on communities.⁴

<u>Summary of Changes to the Final EA:</u> A brief discussion of the difference between the DNL metric and the noise volume and location of individual overflights was added to **Section 4.9** of the EA. **Sections 5.10.1.2**, **5.10.1.3**, **and 5.10.2** of the EA were amended to further clarify that while noise exposure may increase with the Proposed Development Project, the methods and metrics used for noise analysis demonstrate that no significant noise impact to non-compatible land uses would occur.

Topical Response 2b: Air Traffic and Overflights

<u>Synopsis:</u> A total of 127 public comments were received regarding to aircraft overflights and traffic patterns and procedures for aircraft arrivals and departures. Residents of the communities near LAL expressed

² Report to Congress: FAA Reauthorization Act of 2018 (Pub. L. 115-254) Section 188 and Sec 173. April 14, 2020

¹ Public Law 115-254

³ Federal Aviation Administration William J. Hughes Technical Center Aviation Research Division. *Analysis of the Neighborhood Environmental Survey*. Report No. DOT/FAA/TC-21/4. February 2021.

⁴ 86 FR 2722. Overview of FAA Aircraft Noise Policy and Research Efforts: Request for Input on Research Activities to Inform Aircraft Noise Policy. January 13, 2021.

concerns regarding existing air cargo aircraft overflights and the proposed increase in air cargo aircraft overflights. Many comments included requests that flight paths be directed away from their neighborhoods. Other comments requested that flights not be redirected over their neighborhoods to appease residents of other neighborhoods. Most commenters expressed concern over the increase in air cargo flights that would result from the Proposed Development Project. Some commenters requested that aircraft noise abatement procedures be developed and put in place prior to the proposed expanded air cargo facility becoming operational.

Response: The neighborhoods and community locations referenced by the commenters are not located within the DNL 65 dB noise contours associated with the No-Action Alternative and Proposed Development Project. Although the communities are not within the DNL 65 contour, residents have experienced an increase in large aircraft overflights and noise with the opening of the Phase I air cargo facility. These communities will notice an increase in large aircraft overflights and noise when the Phase II air cargo facility expansion becomes operational.

No changes to existing flight procedures were proposed as part of the Proposed Development Project. LAL is a public use airport, and Federal law preempts local governments from implementing any action that is intended to control the routes of aircraft in flight, the timing of flights, or the number of flights. Aircraft using LAL must follow published approach and departure procedures that have been developed to ensure the safe and efficient use of airspace and approved by the FAA. These procedures consider a variety of factors, including the air space requirements of other nearby airports, and are subject to detailed review and analysis prior to approval. Because LAL is located between two major hub airports, the currently approved approach and departure procedures include aircraft height limits during these operations. The noise analysis in the EA was prepared using published arrival and departure procedures and current operational information. Because the noise impacts disclosed in the EA do not exceed the FAA's threshold for significant impact, specific mitigation measures were not proposed. However, a noticeable increase in aircraft noise and community noise complaints occurred after the air cargo facility (Phase I) became operational in 2020. As discussed in the EA, the proposed Phase II expansion will increase the number of air cargo flights at LAL. While the incremental increase in noise exposure would not represent a significant impact that requires mitigation, a noticeable change in aircraft noise would result from the operation of the expanded air cargo facility.

Since the opening of the Phase I facility, the City and airport management have been working with surrounding communities to understand and resolve overflight and noise complaints. In response to community concerns, the City implemented a voluntary preferential runway use program in March of 2021 for eastern arrivals and western departures between the hours of 10:00 pm and 7:00 am, when winds, weather, and other factors allow. The City has also proposed conceptual new arrival and departure procedures at LAL as potential noise abatement measures. Standard Instrument Departure (SID) procedures utilizing the appropriate Noise Abatement Departure Profile (NADP 1 or 2) were proposed to abate noise experienced by the community from departing aircraft. NADP 1 and 2 are special departure altitude profiles that could reduce noise for communities. In addition to SIDs, the Airport has also proposed special visual approaches to be flown by air carrier aircraft when approaching from the east, which could abate noise over those populated areas while also maintaining a safe approach to the Airport.

These conceptual procedures, which were presented at the Draft EA Public Hearing, are incorporated for reference into this Final EA (**Appendix L**). New or modified procedures requested by the City will be considered by the FAA. If the proposed procedures are deemed feasible by the FAA, the procedures would

be subject to separate FAA approval processes that would be coordinated across multiple FAA air traffic and flight procedural lines of business. This process would also include an evaluation of environmental effects, including noise, as required by NEPA.

Even though the Proposed Development Project does not require mitigation under NEPA, the separate and ongoing measures described above were presented for public awareness at the EA Public Hearing and were the subject of many comments received. The materials presented at the Public Hearing are incorporated for reference into the Final EA **Appendix L** - Supplemental Information.

<u>Summary of Changes to the Final EA:</u> A brief discussion of the difference between the DNL metric and the noise volume and location of individual overflights was added for clarity to **Section 4.9** of the EA. A discussion of measures currently implemented by the City to reduce community aircraft noise exposure was added, including the City submitting conceptual changes to flight procedures to the FAA for consideration (see **Section 5.10.2** of the EA). The related Public Information Workshop and Public Hearing presentations are included in the new **Appendix L** of the EA.

Topical Response 2c: Flight Frequency and Schedule

Synopsis: A total of 34 comments addressed how often air cargo aircraft operate at the airport and the time of day that they fly. Many of the comments were related to the existing (Phase I) air cargo operations and the anticipated effects of the proposed Phase II air cargo operations. Residents of communities surrounding LAL expressed concern about increased noise due to the number of air cargo flights and when they occur throughout the day.

Response: As shown in **Table 5.1-1** of the EA, there would be 142,123 annual operations at LAL under the No-Action Alternative in 2022 and 172,660 annual operations in 2027. The Proposed Development Project-related activities would add an additional 5,840 annual air cargo operations to the No-Action Alternative in 2022 (13,140 air cargo operations total) and an additional 8,760 annual air cargo operations in 2027 (16,060 air cargo operations total). The Proposed Development Project would increase total aircraft operations at LAL by approximately 4.11% in 2022 and by 5.07% in 2027.

As referenced in **Table 2.1-1** of the EA, in 2022 Phase I would operate 13 average daily operations during daytime hours (7:00 a.m. to 10:00 p.m.), and seven average daily operations during nighttime hours (10:00 p.m. to 7:00 a.m.) for a total of 20. The Proposed Development Project would add six average daily operations during daytime hours and ten during nighttime hours (10 p.m. to 7:00 a.m.), for a total of 16. Together, Phase I and II operations in 2022 are expected to total 19 average daily daytime operations and 17 average daily nighttime operations, for a total of 36.

In comparison, by 2027 Phase I would operate 13 average daily operations during daytime hours, and seven average daily operations during nighttime hours, for a total of 20. The Proposed Development Project would add ten average daily operations during daytime hours and 14 during nighttime hours, for a total of 24. Together, Phase I and II operations in 2027 are expected to total 23 average daily daytime operations and 21 average daily nighttime operations, for a total of 44. The increased number of flights would serve the operational needs of the air cargo services provider related to the operation of a regional air hub, and would support ground operations delivering goods to and from other in-network distribution facilities within the region. The City of Lakeland and the air cargo services provider would work to minimize nighttime air cargo operations wherever practicable. Also, as referenced in Topical Response 2b, the City of Lakeland has introduced a voluntary preferential runway use program utilizing eastern arrivals and western

departures between the hours of 10 p.m. and 7 a.m. when winds, weather, and other factors allow, taking aircraft away from those densely populated communities closest to LAL during nighttime hours.

<u>Summary of Changes to the Final EA:</u> A description of nighttime noise abatement procedures currently in use and of those proposed or being pursued, independently of the EA process and the Proposed Development Project, was added to **Section 5.10.2**.

Topical Response 2d: Business Disruption

<u>Synopsis:</u> A total of 4 public comments expressed concern regarding disruption of business activities resulting from existing aircraft noise. Two primary areas of concern are expressed in the comments. First, is the concern about the potential disruption to local business operations from aircraft noise, such as the GEICO call center located to the south of the Airport on Pipkin Road. Second is the concern that existing overflights interrupt phone calls and meetings for local residents working from home. Commenters are concerned that the Proposed Development Project would interfere with commercial activities and exacerbate at-home business interruptions.

Response: According to FAA Land Use Compatibility Guidelines contained in Table 1 of CFR Part 150, Airport Noise Compatibility Planning, commercial land use is compatible up to DNL 70 dB (see **Appendix G** of this EA). Commercial activities are also compatible with noise levels up to DNL 80 dB, if outdoor-to-indoor Noise Level Reduction (NLR) of 25 to 30 dB is provided by the structure. Many modern commercial and residential structures can provide notable levels NLR.

Approximately 0.1 acre of off-airport commercial land use and approximately 23.1 acres of industrial land use would be included in the DNL 65 dB noise contour under 2022 Proposed Development Project conditions (EA **Table 5.10-1**). Approximately 0.5 acres of off-airport commercial land use and approximately 32.8 acres of industrial land use would be included in the DNL 65 dB noise contour under 2027 Proposed Development Project conditions (EA **Table 5.10-3**). These land uses are considered compatible with the expected noise levels. It should be noted that the specifically-mentioned GEICO call center is located approximately 0.4 mile south of the DNL 65 dB noise contour developed for 2027 with the Proposed Development Project. Therefore, business disruption due to the Proposed Development Project is not likely to occur within these land uses.

In addition, speech interference due to aircraft noise events can have an effect on nearby businesses and individuals currently working from their home in response to the COVID-19 pandemic. Noise effects on commercial activities and people working from home may be noticeable to varying degrees, but the effects in areas outside of the DNL 65 dB contour would not result in incompatible land uses and would not be considered significant under NEPA. However, based on the state of the research and the variability in indoor sound levels in comparison to outdoor noise exposure, it is often difficult to reliably predict these effects (See Topical Response 2g for additional details on speech interference).

Topical Response 2e: Vibration

<u>Synopsis:</u> A total of 10 public comments referred to sensing vibration from current aircraft overflights. The comments express concerns regarding their houses shaking and potential damage caused by the rattling of windows and doors, or home decorations coming off the walls. The commenters are also concerned that these vibrations could increase as a result of the Proposed Development Project.

<u>Response:</u> Structural vibrations resulting from aircraft activity are largely the result of low-frequency noise, which is not absorbed by the atmosphere or blocked by buildings or terrain as well as higher-frequency noise. Therefore, the resulting structural vibrations may be experienced further away from the noise source and to a greater degree than current noise analysis methods can predict.

Low-frequency noise has been studied at a small number of airports where community concern has been substantial. The general conclusion from these studies is that low-frequency noise can cause windows, fixtures, and wall-hung pictures to rattle. Other studies performed on the relationship between low-frequency noise and vibration have not provided consistency or agreement on research methodology, especially for establishing a direct relationship between sound characteristics and the resulting structural vibration or rattling.

Aircraft noise vibration may be experienced at varying levels at areas surrounding an airport. However, the majority of noise frequencies associated with vibration occur during takeoff rolls, along climb out paths, and during landings when reverse thrusters are engaged.

A study at Baltimore-Washington International Airport attempted to better predict and correlate relationships between low frequency noise and vibrations in homes, as well as the vibrational effects of aircraft takeoff noise with the distance of a home from the airport. The study relied on subjective levels of annoyance to homeowners, based on individual takeoffs and rated from low to high (0 to 100). The annoyance levels were then correlated with simultaneously measured noise levels for each takeoff. While not conclusive, the study confirmed that while both high- and low-frequency noise are associated with in-home annoyance, the lower frequency noise (in this case assessed with the outdoor C-weighted metrics Maximum Sound Level [Lmax] and Sound Exposure Level [SEL]) may be a reasonable predictor of annoyance and perceived vibration in homes. This study found that the maximum C-weighted noise levels decreased by 6dB with each doubling of distance from the airport, resulting in a decrease in annoyance at greater distances. ⁵

In 2002, an expert panel convened to evaluate noise around Minneapolis-St. Paul International Airport. The panel recommended adoption of a Low Frequency Sound Level Metric (LFSL); however, the Federal Interagency Committee on Aviation Noise (FICAN) did not support the LFSL metric. The Committee concluded that additional research was necessary to address the complex interaction between: 1) building construction, 2) the contribution of loudness to annoyance, and 3) the contribution of rattle to annoyance. ⁶

More research is needed to fully understand and quantify the effects and characteristics of low-frequency noise on structural vibration. Ongoing studies done under the Partner/Center of Excellence programs sponsored by the FAA and National Aeronautics and Space Administration (NASA) have attempted to quantify the levels of low-frequency sound needed to cause rattle effects. However, at this time the results of these studies are limited and remain controversial. In 2018, FICAN reviewed existing research on a variety of aviation noise issues, and found that additional research needs to be conducted before a low frequency noise metric and an associated dose-response relationship can be recommended.

⁵ Study of Low Frequency Takeoff Noise at Baltimore - Washington International Airport, HMMH Report No . 294730 .03 / 2931 00 .09, April 1998.

⁶ Research Review of Selected Aviation Noise Issues, Federal Interagency Committee on Aviation Noise (FICAN), April 2018.

⁷ Effects of Aircraft Noise: Research Update on Selected Topics, A Synthesis of Airport Practice, Transportation Research Board, Airport Cooperative Research Program (ACRP), Washington, DC, 2008.

⁸ Research Review of Selected Aviation Noise Issues, Federal Interagency Committee on Aviation Noise, April 2018.

Although the Proposed Development Project would increase aircraft noise overall, the noise analysis did not identify significant noise impacts that would warrant a specialized vibration analysis.

Topical Response 2f: Sleep Disturbance

<u>Synopsis:</u> A total of 14 public comments expressed concern over sleep disruption from aircraft noise. The concern is centered around jets flying over residential areas during nighttime hours, prohibiting residents from falling asleep or causing them to be awakened from sleep. Additionally, there is concern of increased sleep interruptions with the Proposed Development Project.

Response: Sleep disturbance is a common complaint for many living near an airport, and the introduction of additional air carrier aircraft operations at night due to the Proposed Development Project has the potential to affect the sleep of individuals in the surrounding community. Sleep may be sensitive to environmental factors, especially noise, because external stimuli are still processed while sleeping, although the sleeper may not be consciously aware of them. There are many factors that influence sleep disturbance, including the differences between noise sources and the context of the living and sleeping environment, and their interactions are complex and variable.

Research has not yet provided enough understanding to be able to estimate the population awakened for a specific airport environment or the difference in population awakened for a change in an airport environment (e.g., adding more flights or changing the time of day when flights occur). Existing research has not established a consistent or predictable understanding of these factors and their effects on sleep. To date, there is no obvious "best choice" research methodology for assessing the relationship between noise events and sleep disturbance. Therefore, it has been difficult to establish one internationally accepted relationship between how much and what type of noise is required to cause sleep disturbance in order to measure or predict the effect of aviation noise on sleep disturbance.⁹ As discussed below, multiple agencies and organizations have studied, and continue to study, this topic and attempt to develop approaches to predicting sleep disturbance from aircraft noise.

FAA is a member agency of FICAN, which was formed in 1993 to identify needed research and encourage the conduct of research and development on various aviation noise-related topics, including sleep disturbance. Early research on awakenings from discrete noise events was conducted in laboratory settings. Further research and analysis by the Federal Interagency Committee on Noise (FICON) established an interim curve to predict the percentage of awakenings from noise events. Subsequent field research conducted outside of laboratories by FICAN showed that considerably less percent of the population is expected to be behaviorally awakened by noise than the laboratory studies indicated. In 1997, FICAN reviewed three recent pieces of field research related to aircraft noise sleep disturbances:

For the first study evaluated by FICAN, 50,000 subject hours of sleep disturbance were collected at four airports in the UK using both activity meters and Electroencephalogram (EEG) measurements. 11 The study concluded that:

• Subjective reactions to noise, including sleep disturbance, vary greatly between individuals, and deviations from the average can be large;

⁹ Effects of Aircraft Noise: Research Update on Selected Topics, A Synthesis of Airport Practice, Transportation Research Board, Airport Cooperative Research Program (ACRP), Washington, DC, 2008.

¹⁰ Effects of Aviation Noise on Awakenings from Sleep, Federal Interagency Committee on Aviation Noise (FICAN), June 1997.

¹¹ Report of a Field Study of Aircraft Noise and Sleep Disturbance,: Department of Safety, Environment and Engineering, 1992.

- Once asleep, very few people living near airports are at risk of substantial sleep disturbance due to aircraft noise, even at high event levels; and
- At outdoor event levels below 90dBA SEL (80 dBA L_{max}), average sleep disturbance rates are unlikely
 to be affected by aircraft noise, and that above this rate there is approximately a one in 75 chance of a
 person being awakened. However, the study also acknowledged that some individuals may be
 considerably more sensitive and others less so.

In the second study evaluated by FICAN, the U.S. Air Force conducted a similar study near a major international airport and an active Air Force installation, collecting 1,887 subject-nights of data from 85 residents living in 45 different homes. A statistically reliable relationship was found between sound exposure levels of noise intrusions in sleeping quarters and behaviorally confirmed awakenings. However, the occurrence of awakenings did not substantially increase with increased noise levels. Of a total of 4,452 awakenings recorded, only 326 could be associated with noise events. The authors cautioned that the test subjects may not be broadly representative of all residential situations, and that generalizations from the study may be best applied to long term residents of areas with stable levels of noise exposure. ¹²

The third study assessed by FICAN measured sleep disturbance using activity meters and a push button upon awakening in 57 homes near the closing Stapleton (Colorado) International Airport and newly-opening Denver International Airport. Although measured outdoor noise increased near Denver International Airport after its opening, the indoor noise levels did not vary significantly before and after the opening. No large differences in noise-induced sleep disturbance were observed after Denver International Airport was opened. Indoor Sound Exposure Levels of noise events were, however, closely related to and good predictors of activity meter-defined sleep disturbance. Overall, the average level of noise-induced sleep disturbances near the newly-opened airport was only slightly greater than the average rate of spontaneous (not related to noise) awakenings. The inclusion of residents near the newly-opening airport indicate that the test subjects adapted to the "new" noise rapidly.¹³

A 2008 document published by the National Academies of Science, Engineering, and Medicine (*Effects of Aircraft Noise: Research Update on Select Topics*) reported a synthesis of over 30 years of sleep disturbance research in the context of airport noise. The report found that sleep disturbance is difficult to measure, and no universally-accepted metrics have been developed. Similarly, no specific noise exposure level that causes a sleep disturbance event were identified. However, in December 2008, FICAN recommended the American National Standards Institute (ANSI) standard, ANSI S12.9-2008, *Quantities and Procedures for Description and Measurement of Environmental Sound - Part 6: Methods for Estimation of Awakenings Associated with Outdoor Noise Events Heard in Homes* as one method to estimate noise effect on sleep. This approach provides one method to predict sleep disturbance in terms of percent awakenings or number of people awakened by noise levels in terms of indoor A-weighted sound exposure level. The ANSI standard enables estimation of the probability of awakenings from an entire night's worth of noise events, but also indicates that earlier FICAN methods to predict single event-related awakenings likely overestimated their probability. The FAA has not issued formal guidance on use of this or other methods to predict the effect of aircraft noise on sleep patterns.

In 2012 the German Aerospace Center and American scientists worked to develop a more standardized approach to measuring sleep disturbance for use in these studies. The approach included using activity

¹² Noise-induced Sleep Disturbance in Residential Settings (AL/OE-TR-1994-0131). Wright Patterson Air Force Base, OH: Armstrong Laboratory, Occupational & Environmental Health Division (AL/OEBN), 1994.

¹³ Noise-induced Sleep Disturbance in Residences near Two Civil Airports, (Contract NAS1-20101) NASA Langley Research Center, 1995

meters and electrocardiogram (ECG) electrodes to identify awakenings. Two studies conducted near airports in Germany used this method to determine correlations between indoor noise levels and awakenings. However, the results were inconclusive and the need was identified for broader studies with a wider range of noise levels and a larger sample size.¹⁴

Although the Proposed Development Project would increase aircraft noise, the noise analysis did not identify significant noise impacts. However, as mentioned in Topical Responses 2b and 2c, to address community concerns, the City implemented a voluntary preferential runway use program in March of 2021 for eastern arrivals and western departures between the hours of 10:00 pm and 7:00 am, when winds, weather, and other factors allow.

Topical Response 2g: Speech Interference

<u>Synopsis:</u> A total of 19 public comments were received regarding existing aircraft noise causing speech interference. Commenters identified a need to pause conversations in their house during existing aircraft overflights, both indoors and outdoors, as well as when speaking on the telephone or over a computer microphone. Several comments referred to aircraft noise diminishing enjoyment of social activities on their patios and one commenter referenced not being able to hear the television. Additionally, there is concern of speech interference increasing with the Proposed Development Project.

Response: Speech interference is recognized as a principal factor in human annoyance response, and includes interference with personal communication and leisure listening (e.g., television and radio). Many factors influence speech interference, including the location (indoor or outdoor), acoustical properties of a structure, the NLR afforded by a structure, ambient noise, the volume and frequency a speaker's voice (e.g., low-frequency or high-frequency voice), listening skill, individual hearing acuity, and the characteristics of the environmental noise.

Most research conducted on speech interference involves the study of constant noise interfering with speech, rather than individual noise events or intermittent noise. The EPA Levels Document published in 1974 is one of the few documents to address the effects of intermittent noise on speech interference. ¹⁵ The results of the EPA analysis of intermittent noise indicate that using attempting to apply established methods for quantifying constant noise on speech interference, to intermittent noise such as aircraft flyovers, will overestimate the amount of speech interference from the intermittent noise events.

Little research has been published since 1985 on intermittent noise such as aircraft noise and its influence on speech. More research is needed to develop conclusive methods for quantifying speech interruption from aircraft noise. 16 Research to date has focused on potential criteria to assess speech interference due to indoor noise such as Equivalent Sound Level (L_{eq}) and Maximum Sound Level (L_{max}). These metrics are further explained in **Appendix G** of the EA. However, noise models calculate outdoor noise levels only. Indoor noise levels based on outdoor noise exposure can vary widely based on presence of other interior/exterior noise sources, the type of construction, interior furnishings, and other structural factors.

In its Guidelines for Community Noise, the World Health Organization (WHO) notes that on average, speech in a relaxed conversation is 100 percent intelligible in background noise levels of about 35 dBA, and can

¹⁴ Research Review of Selected Aviation Noise Issues, Federal Interagency Committee on Aviation Noise (FICAN), April 2018.

¹⁵ Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. U.S. Environmental Protection Agency, 1974.

¹⁶ Effects of Aircraft Noise: Research Update on Selected Topics, A Synthesis of Airport Practice, Transportation Research Board, Airport Cooperative Research Program (ACRP), Washington, DC, 2008.

be understood well in background noise levels of 45 dBA. When background noise levels rise to 65 dBA, speech can still be understood with more vocal effort. In an outdoor setting, a speaker's sound level drops by approximately 6 dB for every doubling of distance between the speaker and listener. In an indoor setting, this effect is less pronounced, but is also affected by acoustical properties of the room and reverberation within the room. The WHO also notes that much of the population belongs to groups sensitive to interference with speech perception, including the elderly and hearing impaired.¹⁷

Since 1993, FICAN has recommended various methods for predicting annoyance (including speech interference) from aircraft noise events. In its most recent updated of the Research Review of Selected Aviation Noise Issues (2018), FICAN continues to recommend the use of DNL as the appropriate noise metric for assessing aircraft noise. ¹⁸ The EA's noise study was conducted in accordance with FAA policy and guidance, including the use of DNL.

While the DNL 65 dB noise contour would remain located primarily on LAL property with the Proposed Development Project, individual aircraft overflights may be louder at greater distances from LAL and cause episodes of speech interference outside of the DNL 65 dB noise contour. However, the noise analysis in the EA found that the cumulative (average annual day) noise would not be significant with the Proposed Development Project.

Therefore, speech interference was not specifically evaluated as part of noise analyses. This EA has evaluated the significance of impacts on noise exposure using the accepted DNL metric and methods only.

Topical Response 3: Quality of Life Impacts

<u>Synopsis:</u> A total of 74 public comments reference impacts to quality of life. Many commenters felt that their quality of life is impacted due to air cargo operations diminishing the use of their property and preventing the enjoyment of outdoor activities, amenities and recreational areas. Quality of life concerns also pertained to increased traffic congestion, decreased air quality, and noise preventing them from sleeping, having conversations, and working from home. The comments expressed concern over diminished quality of life caused by existing operations at LAL, and many indicated that quality of life would further deteriorate with the Proposed Development Project.

Response: The concept of quality of life can be associated with several of the environmental resource categories addressed in the EA, including noise, water quality, air quality, and children's health and safety. Chapter 5 of the EA discusses the effects of the Proposed Development Project on each environmental resource category, including noise, air quality, and socioeconomic impacts, which are most frequently associated with quality of life effects.

While the Proposed Development Project is not expected to generate significant adverse effects, there will be project-related effects. In accordance with the requirements of NEPA, the purpose of the EA is to assess and disclose the environmental and social impacts of the Proposed Development Project and make a determination as to the significance of the impact(s). While some of the environmental resource categories would have project-related environmental effects, these effects would not be significant (e.g., air quality), or would not be considered significant by implementing mitigation measures (e.g., surface transportation). Many comments related to quality of life are predominantly related to aircraft noise. Although the cargo

¹⁷ Guidelines for Community Noise, World Health Organization, Geneva, 2018.

¹⁸ Research Review of Selected Aviation Noise Issues, Federal Interagency Committee on Aviation Noise (FICAN), April 2018.

flights generate noise and can be disruptive, the analysis contained in the EA shows that the DNL 65 dB noise contour associated with the Proposed Development Project remains mostly on LAL property. By 2027, the contour would include 5.5 additional acres of residential land overall, with a total of three residential structures. These residential areas would not experience a noise increase that would constitute a significant noise impact based on FAA's guidelines. Land outside of the DNL 65 dB noise contour, including homes, golf courses and nature trails, is considered compatible with LAL operations.

Topical Response 4: Impacts on Property Values

<u>Synopsis:</u> The public comments received include a total of 39 comments that the Proposed Development Project would negatively affect property values.

Response: The potential effect of airport noise on property value is a complex issue due to the variety of factors that may affect property value at a certain location and the subjectivity in real estate values. Studies on the effects of noise on property values have been inconclusive, contradictory, or only representative of certain locations. Although some studies documented declining property values, other studies have found evidence suggesting that property values near an airport can be higher, owing to the desire of some individuals, such as those who are employed in the airport industry or who travel frequently, to live near an airport. Other studies have shown lower property values near airport, but also noted the presence of other contributing factors, such as underperforming schools, nuisance land uses, and employment opportunities.

The EA provides an assessment of potential social and environmental impacts if the Proposed Development Project was implemented. The EA did not identify any significant impacts associated with the Proposed Development Project. The Proposed Development Project is not expected to substantially affect property values near the airport.

Topical Response 5: Existing Traffic and Traffic Impacts

<u>Synopsis</u>: A total of 29 public comments referred to one or more concerns about surface traffic on local roadways. Specifically, comments expressed concern over:

- Surface traffic analysis procedures and methods and the associated study area,
- Existing surface traffic congestion on roads surrounding LAL, and
- Potential surface traffic increases resulting from additional cargo facility employee and cargo truck trips.

The following subtopic responses summarize responses to these individual comment categories.

Topical Response 5a: Analysis Approach and Study Area

<u>Synopsis</u>: A total of 5 public comments were received concerning the Draft EA surface traffic study area and analysis procedures. The comments center around traffic analysis technicalities, such as not including an origin and destination study, and the lack of inclusion of roadways outside the vicinity of the Proposed Development Project in the traffic study completed for the Draft EA.

Response: Potential traffic impacts associated with air cargo operations at LAL have been under study since 2019. The first traffic study was completed prior to this EA in May 2019, and was a Major Traffic Study for Phase I of the air cargo facility. This is hereafter referred to as the "2019 Phase I Study" in this comment

response, and is incorporated by reference into the EA. ¹⁹ The 2019 Phase I Study was prepared to comply with County and local land development review and permitting requirements for the construction of Phase I, and was coordinated with the Polk County Transportation Planning Organization and the City of Lakeland. The 2019 Phase I Study evaluated traffic for the Phase I development alone, and did not include traffic conditions for the proposed Phase II expansion. Therefore, a second supplemental traffic study was conducted for the Proposed Development Project evaluated in this EA, and is described below. Both studies were considered in the traffic analyses for this EA.

To define the study area for the 2019 Phase I Study, information was provided for planned Phase I operations. According to the information provided in the 2019 traffic study, traffic associated with Phase I would utilize Drane Field Road to reach either County Line Road, Airport Road, or the Polk Parkway. Heavy truck traffic would predominantly use Drane Field Road eastbound to Airport Road as a means to reach Interstate 4, although some trucks would continue past Airport Road and continue along Drane Field Road to either access the Polk Parkway or continue east. Although some truck trips would head westbound on Drane Field Road to County Line Road and either head north or south on County Line Road to their destinations. Most of the vehicle trips going westbound on Drane Field Road from the Phase I facility would be employee vehicles.

Based on the study's origin and destination patterns, a roadway capacity analysis was performed on roadways along these routes that could be utilized by heavy truck traffic. ²⁰ The capacity analysis utilized trip generation rates, volumes and capacities from the Florida Department of Transportation (FDOT) District One Regional Planning Model and the Polk County Transportation Planning Organization for background traffic. The background traffic was adjusted to include Phase I operations alongside other planned developments in the area including Lakeland Central Park, Airport Commerce Park, Laurel Highlands, Rooms to Go Phase 5, Key Logistics Center, Lakeside Preserve, and the Riverside Development. Based on the analysis, four intersections along Drane Field Road were selected for detailed study to determine whether Phase I air cargo traffic volumes would substantially reduce the levels of service at the study intersections and roadway segments. This information was applied and supplemented used to inform the No-Action Alternative traffic analysis for the EA. Refer to Topical Response 5b for further discussion on existing conditions traffic analysis.

The 2019 Phase I Study was supplemented for use in the EA to determine whether addition of traffic generated by the Proposed Development Project would cause or contribute to any significant traffic impacts. This supplemental study is hereafter referred to as the "2020 Phase II Study" in this comment response, and is incorporated into the Final EA as the Traffic Study Technical Report **Appendix H**. For the 2020 Phase II Study, the traffic conditions and roadway capacity analysis contained in the 2019 Phase I Study was validated for use in the EA to represent the No-Action Alternative. Traffic volume updates and adjustments were performed where needed to accurately reflect No-Action traffic conditions for the EA analysis years of 2022 and 2027. Information provided for Phase II operations did not reveal any trip distribution or origin/destination information different from that used for the 2019 Phase I Study.

For estimation of Proposed Development Project impacts, the 2020 Phase II Study's focus was to supplement and update the level of service (LOS) analysis for the four intersections identified for detailed analysis in the 2019 Phase I Study. As stated in EA **Appendix H**, increased daily cargo truck and passenger

¹⁹ RK&K Engineers. Lakeland Linder Airport – NW Quadrant Traffic Study – Major Traffic Study. May 2019.

²⁰ Capacity analysis included: Drane Field Road from County Line Road to SR 572, Drane Field Road from Airport Road to Pipkin Creek Road, County Line Road from Pipkin Road to I-4, Airport Road from US 92 to Drane Field Road,

vehicle traffic that would result from the operations of the Proposed Project were added to the forecasted No-Action Alternative traffic volumes for each study year to develop total traffic volumes and calculate intersection LOS that would result from the Proposed Project. Akin to the 2019 Phase I Study, the 2020 Phase II Study analysis utilized methods prescribed by the Highway Capacity Manual and calculations were performed using Synchro software.21 See Topical Response 5c for further discussion on the Proposed Development Project traffic analysis.

Summary of Changes to the Final EA: Based the comment response above, Section 5.11 of the EA was updated to provide more information and clarification on the 2019 Phase I Study, the 2020 Phase II Study, and how the results were applied for the purposes of complying with NEPA.

Topical Response 5b: Existing Traffic Congestion

Synopsis: A total of 12 public comments expressed concerns about existing roadway traffic congestion. The concerns center around the current levels of surface traffic congestion with the operation of the Phase I cargo facility and general increases surface traffic in recent years.

Response: Current surface traffic conditions reflect the Phase I cargo facility operations. Per Topical Response 5a, a 2019 Phase I Study was prepared²² in 2019 prior to this EA to determine the impacts Phase I operations would have on the adjacent transportation system, and to recommend mitigation measures if necessary. The 2019 Phase I Study determined how the roadways and intersections within the study area operate under existing AM and PM peak hour conditions and was validated and updated for use in this EA to represent the No-Action Alternative.

The 2019 Phase I Study identified four intersections for detailed analysis within its delineated study area (see Topical Response 5a). To aid in deriving intersection traffic volumes at these four locations, Daily Directional Hourly Volume estimates were developed for peak and off-peak hours using methods defined by the FDOT. These volumes were calculated for Drane Field Road (from County Line Road to Airport Road and From Airport Road to Waring Road), County Line Road (From Medulla Road to Drane Field Road and from Drane Field Road to East Baker Street), Airport Road (from Drane Field Road to Polk Parkway), and Kidron Road (from Airpark Drive to Drane Field Road) and supplemented with turning movement traffic counts. The 2019 Phase I Study included turning movement traffic counts at the intersection of Kidron Road and Drane Field Road in May 2019, to supplement previous counts taken in May 2017, August 2017, and March 2019 for the three other intersections.

These data were used to complete an existing traffic volume, capacity, and LOS analysis of the four intersections identified for the 2019 Phase I Study using methods prescribed by the Highway Capacity Manual.²³ Each intersection was determined to operate at acceptable LOS under year 2019 conditions And there were no major decreases in LOS at the study intersections. A traffic signal warrant analysis prepared as part of the 2019 Phase I Study preliminarily recommended turn lanes at the intersection of Kidron Road and Drane Field Road.

As previously stated in Topical Response 5a, the 2020 Phase II Study prepared for the EA adapted the 2019 Phase I Study. Traffic volume updates and adjustments were performed where needed to accurately

²¹ Transportation Research Board. Highway Capacity Manual, 6th Edition: A Guide for Multimodal Mobility Analysis (HCM). 2016
²² RK&K Engineers. Lakeland Linder Airport – NW Quadrant Traffic Study – Major Traffic Study. May 2019.

²³ Transportation Research Board. Highway Capacity Manual, 6th Edition: A Guide for Multimodal Mobility Analysis (HCM). 2016

reflect No-Action traffic conditions for the EA analysis years of 2022 and 2027 for the No-Action Alternative. Information provided for Phase II operations did not reveal any changed trip distribution or origin/destination information that would cause the study area used for the 2019 Phase I Study to change.

<u>Summary of Changes to the Final EA:</u> Based on FAA's comment response above, **Section 5.11** of the EA was updated to provide more information and clarification on the 2019 Phase I Study.

<u>Topical Response 5c: Proposed Development Project Traffic Impacts</u>

<u>Synopsis</u>: A total of 14 public comments were received about potential worsening roadway traffic congestions with the Proposed Development Project (Phase II). These comments express concern about existing and increased surface traffic congestion from additional cargo trucks and employee vehicles accessing the expanded air cargo facility.

Response: Surface traffic impacts from the Proposed Development Project, when added to existing air cargo facility traffic at LAL and local background traffic, were analyzed in **Section 5.11** of the EA. As discussed in Topical Response 5a, the 2019 Phase I Study of traffic impacts was validated and supplemented for use in the EA for evaluating impacts associated with Phase II. For the 2020 Phase II Study included as **Appendix H** of this EA, potential impacts were evaluated at four intersections along Drane Field Road, consistent with the approach from the 2019 Phase I Study. These intersections and roadway segments lie along the required routes to be used by trucks traveling to and from the Proposed Development Project site to access nearby Interstates. As was the case with the 2019 Phase I Study, the air cargo services provider intends to use Drane Field Road to Airport Road as the main thoroughfare to access the Polk Parkway and connecting interstate highways, although some traffic would utilize County Line Road as an alternative route. The traffic analysis prepared in support of the EA analyzed the current existing conditions at these intersections and roadways consistently with the 2019 Phase I Study, and supplemented the Phase I analysis to estimate traffic conditions associated with the EA Proposed Development Project and No-Action Alternatives.

In general, a significant traffic-related impact would occur if a proposed action would disrupt local traffic patterns or substantially reduce the LOS of roads serving an airport and its surrounding communities to unacceptable levels. Both the 2019 Phase I and 2020 Phase II traffic studies utilized LOS standards employed by FDOT to determine whether the Proposed Development Project would substantially reduce LOS at the study intersections and roadway segments.

In 2022, the LOS at three of the intersections are not expected to change as a result of the Proposed Development Project. However, the intersection of Kidron Road and Drane Field Road is expected to experience a decreased LOS from C to E with construction and operation of the Proposed Development Project. In 2027, the County Line Road/Drane Field Road and Kelvin Howard Road/Drane Field Road intersections are expected to experience decrease but with acceptable LOS. However, the Proposed Development Project would result in an LOS decrease from D to F at the intersection of Kidron Road and Drane Field Road. As described in **Section 4.10.1.6** of the EA, LOS D is considered the lowest acceptable condition for automobile traffic. The LOS degradation at Kidron and Drane Field Roads could be alleviated by adding dedicated turn lanes and traffic signalization at the intersection, therefore mitigating the impacts produced by the Proposed Development Project.

Although potential future LOS degradation and mitigation options were not identified in the 2019 Phase I Study, the Study performed a warrant analysis that recommended turning lanes at the intersection of Kidron

Road and Drane Field Road. The findings of the 2019 Phase I Study including potential turning lanes, were carried forward to the traffic analysis prepared for this EA in the 2020 Phase II Study (**Appendix H**). The EA analysis showed that with the addition of Phase II traffic would cause LOS degradation at this intersection to the point where mitigation would be warranted. Mitigation Option 1 in the EA includes retaining the existing stop sign and constructing dedicated turn lanes at the intersection of Drane Field Road and Kidron Road. Between completion of the traffic study and the completion of this EA, mitigation Option 1 has since been constructed as a means of preemptively calming traffic and reducing congestion on Drane Field Road. Therefore, mitigation Option 1 has already been implemented and the mitigation serves to offset traffic impacts in 2022 and 2027 caused by the Proposed Development Project.

<u>Summary of Changes to the Final EA:</u> Based on FAA's comment response above, **Section 5.11** of the EA was updated to provide more information and clarification on the 2020 Phase II Study.

Topical Response 6: Airport Safety

<u>Synopsis:</u> A total of 24 public comments referenced one or more concerns over the Proposed Development Project adversely affecting safety in the area. Overall, the comments focused on:

- Increasing the inherent risk of aircraft accidents due to an increase in operations,
- The hazards to aircraft posed by wildlife in general or in relation to local landfills, and explosion, and
- Safety risks of the aboveground fuel storage tanks associated with the proposed fuel farm.

The following subtopic responses summarize responses to these individual comment categories.

<u>Topical Response 6a: Accident Potential</u>

<u>Synopsis</u>: A total of 8 public comments were received about general aircraft safety. The concerns center primarily on the inherent risk of aircraft accidents, and the increased risk posed by adding additional aircraft operations with the Proposed Project.

Response: Generally speaking, aircraft accident potential is present regardless of whether or not a development project is implemented. Although every risk cannot be eliminated, the Proposed Development Project (operation of the expanded air cargo facility and associated aircraft activity) is not expected to affect aviation safety or increase the risk of accidents. The design of aircraft parking aprons, access taxiways, and related improvements would meet FAA airport design standards. The aircraft would be subject to applicable standards, inspection requirements, licensing requirements, and operation requirements. Aircraft arrival and departures would use published procedures and require contact with the LAL air traffic control tower.

Topical Response 6b: Wildlife Hazard Potential

A total of 10 public comments referenced to potential hazards posed to aircraft from wildlife. Some of the comments express general concern about an increase in the likelihood of aircraft accidents caused by wildlife with the proposed increase in aircraft operations. Others specifically address wildlife hazards posed by the proximity of LAL to local landfill areas, as well as concerns that some proposed noise abatement procedures could redirect aircraft over landfills, thus further increasing this risk.

Response: LAL completed an FAA-approved Wildlife Hazard Management Plan (WHMP) that is used to maintain safe airport and aircraft operations. As part of the WHMP, the City, as the Airport Sponsor, is

responsible for carrying out measures that will minimize and/or eliminate hazardous wildlife on LAL property.

Many of the tools described in the WHMP are designed to modify habitat on and around the LAL airfield to minimize wildlife attraction, congregation, and use of LAL and adjacent areas. The WHMP supplements long-term wildlife control strategies with short term control methods, including trapping and removal, harassment, and take of wildlife as needed to ensure aircraft safety. In July 2013, USFWS granted a Depredation permit that is renewed annually and authorizes the City to legally remove, using methods specified by USFWS, listed species and migratory bird species that pose a direct threat to human safety.

On a situational basis, airports work with air traffic control personnel to issue Notices to Airmen (NOTAMS) regarding known hazards around airports and within the surrounding airspace. Flight plans and procedures developed by pilots and air traffic controllers include measures to avoid areas of particularly high risk or hazard. Proposed developments and operations at airports, including aircraft operations, must be conducted in accordance with these standards.

The closest landfill to LAL is the North City Landfill in Winter Haven, which is approximately 10 miles east of LAL and located near the Polk Parkway. There is also the Southeast County Landfill in Lithia, which is 13 miles southwest of LAL. These landfills are located outside of the two-mile radius for the location of landfills in the vicinity of airports, and thus do not violate airport zoning requirements. Changes in aircraft flight paths or flight procedures are not part of this EA, the Proposed Development Project, or the Requested Federal Action.

<u>Summary of Changes to the Final EA:</u> **Section 5.3.2.1** of the Final EA was amended to include a discussion of the WHMP, the aforementioned regulations and standards addressing wildlife hazards at airports, additional potential wildlife attractants off-airport, and ongoing procedures at LAL to reduce wildlife hazard potential.

Topical Response 6c: Aboveground Storage Tank Safety and Security

<u>Synopsis</u>: A total of 6 public comments included concerns about aircraft fuel storage safety and security. The primary concern expressed in these comments centers on explosive and fire risk associated with aboveground fuel storage at the proposed fuel farm. Additional comments expressed concerns about the general security measures that would be in place for the proposed fuel farm.

Response: Risks mentioned in the comments are extremely low due to the requirement to design and operate the new fuel tanks in accordance with applicable state regulations and codes. The proposed tanks are more than 0.25 mile away from the nearest public roadways, are obscured from view, and have restricted access. LAL will apply all the same measures to secure and safeguard the proposed aboveground storage tanks that are already in place for its existing aboveground storage tanks. Installation of the new fuel storage tanks will be designed to comply with National Fire Protection Association Code (NFPA) 30 - Flammable and Combustible Liquids Code, NFPA 70 - National Electrical Code, and local building requirements and codes. The tanks would be subject to daily inspection and LAL would comply with all procedures for handling fuel releases or spills in accordance with the Spill Prevention and Countermeasure procedures and pollution prevention plans.

<u>Summary of Changes to the Final EA:</u> **Section 2.2** of the Final EA was amended to include a discussion of design standards and operational measures associated with bulk airport fuel storage.

INDIVIDUAL CODED COMMENTS AND RESPONSES

The following table presents comments received during the public involvement process. The table also identifies the Commenter and provides responses to each comment. Copies of each individual comment submittal are included in **Appendix J.4**.



Commenter	Letter Code	Comment Code	Comment	Response
David Pendry 1560 Hollow Tree Court Lakeland, FL 33811	P001	13-1	We had a house built over two years ago and moved in before Amazon started flying to Lakeland. Airport noise was no problem. When Amazon planes come into the airport from the east they come directly over our house at 450 feet which is too low. Even inside the house if you are having a conversation you have to pause the conversation. Initially flights didn't come in after midnight, but now they come in after midnight and take off around 5:30 a.m. in the morning, and when they come from the east we hear them.	The noise analysis conducted for the EA concluded that the Proposed Development Project would not cause noise impacts that exceed FAA's thresholds that would indicate significant noise impact. However, it is acknowledged per the comment that individual overflights may be quieter or louder than indicated by the cumulative noise exposure (DNL), and that perceived noise disturbance may be influenced by the time of day which flights occur. Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 2g (Speech Disruption) for additional details related to the topics raised in this comment.
David Pendry 1560 Hollow Tree Court Lakeland, FL 33811	P001	14-1	Now, does airport expansion mean no room for a regional airline to come into Lakeland that Lakeland has been trying to get for years? This seems beneficial to all residents of the Lakeland area.	The Proposed Development Project would not preclude an airline from initiating scheduled commercial service at the airport. The air cargo facility and passenger terminal building can support both types of activity without conflict or interference.
David Pendry 1560 Hollow Tree Court Lakeland, FL 33811	P001	20-1	Will increased flights expand timeframe of landings and take-offs for 24 hours? What does quality of life mean with increased noise levels and duration?	As stated in the EA, the Proposed Development Project is expected to increase the frequency of flights and may include additional nighttime operations. Refer to Topical Response 2c (Flight Frequency and Schedule) for further details. The noise analyses conducted for the EA included the additional flights and accounted for additional nighttime operations. Because the residential land uses within (or newly within) the DNL 65 and higher noise contours shown in the EA would not experience a 1.5 decibel increase due to the Proposed Development Project, the impacts are not considered significant. Topical Response 3 (Quality of Life) further discusses the effects of noise levels and duration based on the noise analysis presented in the EA.
			This comment is being submitted due to a concern I have related to an environmental hazard that does not appear to be accounted for in the proposed environmental assessment report, namely the risk of a collision between an airplane and a bird due to the Amazon planes being forced to fly at lower altitudes upon takeoff and with two landfills in close proximity to the airport. As reported by local media Amazon airplanes are not permitted to engage in a traditional takeoff and assent due to their need to receive permission from the Tampa Air Traffic Control to enter air space above 2,000 feet.	As discussed in Topical Response 6b (Wildlife Hazard Potential), LAL implements a Wildlife Hazard Management Plan (WHMP). As part of the WHMP, the City, as the Airport Sponsor, carries out measures to minimize and/or eliminate hazardous wildlife attractants on Airport property. In July 2013, USFWS granted a Depredation permit that is renewed annually and authorizes the City to legally remove, using methods specified by USFWS, listed species and migratory bird species that pose a threat to human safety. Refer to Topical Response 6b (Wildlife Hazard Potential) for additional information.
Jay Bonnett 5215 Old Bartow Eagle Lake Road Winter Haven, FL 33880	P002	21-1	When flying at such a low altitude the risk of a collision between an airplane and a bird is always present. The hazards arising from these interactions are so great that federal and state laws have been enacted to address this risk. One such example and one relevant to my concern is the location restriction for landfills in relation to airports.	The closest landfill to LAL is the North City Landfill in Winter Haven, which is approximately 10 miles east of LAL and located near the Polk Parkway. There is also the Southeast County Landfill in Lithia, which is 13 miles southwest of LAL. These landfills are located outside of the two-mile radius for the location of landfills in the vicinity of airports, and thus do not violate airport zoning requirements.
			Since landfills are a congregating area for vultures, these vultures pose a flight hazard to low flying airplanes. As such, federal law prohibits a landfill from being within 10,000 feet or approximately two miles from the nearest point of any runway. The same restriction has been adopted by the State of Florida and its airport zoning laws. The closest landfill to the Lakeland Linder Airport is the North City Landfill in	As discussed in Topical Response 2b (Air Traffic and Overflights), the City has proposed conceptual new arrival and departure procedures at LAL as potential noise abatement measures. These measures, if implemented, could allow aircraft to operate at higher altitudes than referenced in the comment. New or modified procedures requested by the City will be considered by the FAA. If the proposed procedures are deemed feasible by the FAA, the procedures would be subject to separate FAA approval processes that would

Commenter	Letter Code	Comment Code	Comment	Response
			Winter Haven which is approximately 10 miles east of the airport Though these landfills are located outside the legal boundary restrictions and does not per se have violations of the airport zoning requirement, the logic and spirit behind these laws appear applicable in this case due to the unique takeoff restrictions placed on flights departing Lakeland Linder Airport.	be coordinated across multiple FAA air traffic and flight procedural lines of business. This process would also include an evaluation of environmental effects, as required by NEPA.
			The distance restrictions mandated in these laws are not arbitrary but are based on studies that show the distance at which an airplane needs to travel from an airport under traditional takeoff patterns to reach an altitude where a collision with a bird is unlikely.	
			Advisory Circular 150-5200-34A prepared by the FAA provides some insight on the rationale behind these distance restrictions. In the background section it states enacting this legislation congress experienced or expressed concern that a municipal solid landfill site near an airport poses a potential hazard to aircraft operations because such a waste facility attracts birds.	
			Statistics support the fact that bird strikes pose a real danger to aircraft. An estimated 87 percent of the collisions between wildlife and civil aircraft occurred on or near airports when aircraft are below 2,000 feet. Collisions with wildlife at these altitudes are especially dangerous as aircraft pilots have minimal time to recover from these emergencies.	
Mishaal Civilli			We have been kind of real unhappy about that the planes coming in now from Amazon. I live about three quarters somewhere between three quarters and a mile	Communities near LAL have experienced increased noise since the initiation of air cargo operations at LAL in 2020. Some commenters noted increased cases where speech is interrupted. Noise from existing air cargo operations at LAL is accounted for in the EA analysis of the No-Action Alternative and proposed project scenarios. One objective of the EA's noise analysis was to determine whether or not the Proposed Development Project would increase incompatible land uses compared to the No-Action Alternative, and if so, determine whether the noise increases in those areas exceed established thresholds that would indicate significant noise impacts.
Michael Sivilli 4423 South Ridge Trail Lakeland, FL 33813	P003 1	13-124	away from the current flight path and yet we hear them very loudly. My wife and I were talking actually about it last night. In the middle of talking the plane as they came over you have to kind of pause and wait until they're done.	When compared to the No-Action Alternative, the additional aircraft operations associated with the Proposed Development Project in 2022 and 2027 would increase the amount of noncompatible (residential) land use directly to the east of the airport property line. The parcels and residences within, or newly within, the 2027 DNL 65 contour would not experience an increase of 1.5 dB or greater. Based on analysis prepared for the EA, significant noise impacts would not occur if the Proposed Development Project was implemented. While individual overflights may be quieter or louder at a given location, including in communities much further away from the airport, the cumulative noise exposure is below DNL 65 dB and remains compatible with residential land use.

Commenter	Letter Code	Comment Code	Comment	Response
				Refer to Topical Response 2a (Noise Analysis Methods) and Topical Response 2g (Speech Interference) for additional details regarding the topics raised in this comment.
Michael Sivilli 4423 South Ridge Trail Lakeland, FL 33813	P003	21-2	If we basically increase to the number proposed here with the current flight pattern you're going to turn a significant part of the south side of Lakeland into an undesirable place to live.	Refer to Topical Response 3 (Quality of Life) for a response to this comment.
Michael Sivilli 4423 South Ridge Trail Lakeland, FL 33813	P003	13-125	I mean my wife and I are discussing whether or not we're going to stay here because if this goes as planned this will not be acceptable to us. We will not be able to live with the noise that's going. I mean you're talking about two planes an hour on average, and I mean that's average. So you know there's going to be times where there's going to be a lot more planes coming and going at certain times of the day and night. And I don't know if anybody here has ever lived in a place where you have a lot of planes flying over. I mean it's loud and it's constant. And, you know, I'm a deep sleeper. My wife is not. You know, she will not be able to sleep through the night with those planes going over. She wakes up now. So I don't know, I just I don't think this is a good direction for us to be going	Comment noted. The EA acknowledges an increase in flight activity due to the Proposed Development Project and assesses the impacts on cumulative noise exposure based on FAA guidelines. The analysis of noise exposure in the EA was based on the DNL 65 dB contour. Because the residential land uses within (or newly within) the DNL 65 and higher noise contours shown in the EA would not experience a 1.5 decibel increase due to the Proposed Development Project, the impacts are not considered significant. However, it is recognized that individual noise events may be quieter or louder than cumulative noise exposure estimates provided by the DNL analysis, and that some may perceive these events as impactful to their sleep. Separate from the EA, the City has proposed conceptual noise abatement measures and has implemented a voluntarily runway use program to address noise-related concerns of the surrounding community. Please refer to Topical Response 2c (Flight Frequency and Schedule) and Topical Response 2f (Sleep Disturbance) for further discussion of the topics raised in this comment.
Michael Sivilli 4423 South Ridge Trail Lakeland, FL 33813	P003	14-2	The idea that we are going to put something in place like this that's going to cause a lot of us to be displaced isn't a good idea.	The Proposed Development Project would not displace any businesses or residences.
Michael Sivilli 4423 South Ridge Trail Lakeland, FL 33813	P003	26-1	And I don't understand why we didn't get better I didn't get better notice of this. This presentation should have been done closer to the 27th of April so that we had more time to get the word out. I would strongly encourage extending the comment period because I think people need to know the impact this is going to have on us.	FAA Order 1050.1F requires that the draft NEPA document must be available to the public for no less than 30-days prior to a Public Hearing. The Notice of Availability of the Draft EA and Notice of Public Hearing was published in the Lakeland Ledger on April 23 and again on April 26, 2021. The City also published notices on social media informing the public of the intent to hold a hearing. The Draft documents were made available concurrently on the airport's website and at local libraries. The Public Hearing was held 35 days after the first notice was published. The comment period began on April 23, 2021 and concluded on May 31, 2021, a total of 39 days. The EA process complied with public involvement requirements specified in FAA Order 1050.1F and therefore the comment period will not be extended. A description of the public review and comment period has been added to EA Section 6.3 .
Edward Cetrangolo 3032 Shoal Creek Village Drive Lakeland, FL 33803	P004	3-26	Where are the flight logistics? Ground logistics are great. Amazon can build one giant building and then build another second giant Amazon building twice the size of the first one, produce all the materials, workers, plans, permits, inspections and environmental assessments, but when it comes to air logistics and moving the arrival and departure	Arrivals and departures use published approach and departure procedures. Additionally, each arrival and departure operation is individually coordinated with the Airport Traffic Control Tower at LAL. Refer to Topical Response 2b (Air Traffic and Overflights) for additional discussion related to the topics raised in this comment.

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	-		flights to something structured and not all over the city, that process has become a long and arduous decision for the FAA to implement.	
Edward Cetrangolo 3032 Shoal Creek Village Drive Lakeland, FL 33803	P004	21-3	It's been over almost a year. All flights are dangerously low, some at 1,500 feet off the ground for ten mile stretches before climbing up to a higher altitude. It started at 22 flights per day. It has now jumped to 44 flights. It may jump again and again.	Airspace restrictions that limit the height of operations during approach and departure are in place at LAL due to the airport's location between two major hub airports and the proximity of other regional airports. The City of Lakeland has proposed flight procedure changes for FAA review. If the proposed procedures are determined to be feasible, they would be subject to review and environmental analysis (including noise) prior to approval. The Proposed Development Project would add 22 additional daily arrivals and 22 additional daily departures by 2027, which is included in the EA impact analysis.
				Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 2c (Flight Frequency and Schedule) for additional details related to topics raised in this comment.
Edward Cetrangolo 3032 Shoal Creek Village Drive Lakeland, FL 33803	P004	13-126	Investigating the information on a website called Web Track Web Track is a public noise abatement and monitoring system that surrounds the areas incorporated in the flight paths to and from the air field used in at 26 airports in the US, three airports in Florida and at 58 airports around the world. This website is a model for a state of the art approach to logistics. It uses sensitive instruments to determine the noise levels in conjunction with standardized flight paths, designated mandatory turning wait points to lessen noise or to fly around a portion of a city before turning. And in conjunction with monitoring aircraft noise too it also monitors elevation off the ground in feet, air speed and miles per hour, type and size of aircraft and its destination all on an easy to read map.	Monitoring systems, such as WebTrak, are useful for identifying and understanding individual flights and activity at an airport. This also provides information for individuals to submit noise complaints. However, these systems do not measure the cumulative noise exposure that is required for FAA studies and noise impact analyses.
Edward Cetrangolo 3032 Shoal Creek Village Drive Lakeland, FL 33803	P004	3-1	The biggest visual I have noticed in my study was all arriving and departing flights have one thing in common, and that is they fly straight out on takeoff. They do not take radical hairpin turns after takeoff. Amazon needs to stop the radical turns over Grasslands. These are the facts. Ask yourself why to these three questions: Why no air logistics on noise above the city? Two, why the radical departures and arrival flight paths and not standardized corridors to and from the airport thus making all flights less confusing for pilots and the control tower personnel?	and are coordinated with the LAL Air Traffic Control Tower during arrivals and departures. As discussed in the EA and the public hearing, air space restrictions are currently in place at LAL due to its proximity to TPA and MCO. Topical Response 2b (Air Traffic and Overflights) provides additional details on the topics raised in this comment.
Edward Cetrangolo 3032 Shoal Creek Village Drive Lakeland, FL 33803	P004	13-2	Three, why do the pilots not throttle back their jet engines after lift-off to help lower the jet noise rumbling in people's ears, shaking our homes and the city? We desperately need a noise abatement system.	Engine power settings during flight are at pilot discretion and are decided based on safe operation of the aircraft, as well as instructions from air traffic control and the amount of thrust required to follow the approved flight plan. Because of these situational factors, it is not feasible to require pilots to throttle back during certain components of flight. Noise abatement plans were not required or implemented prior to Amazon starting operations at LAL. However, separate from the EA, the City has proposed conceptual noise

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	Couc	0000		abatement measures and has implemented a voluntarily runway use program to address noise-related concerns of the surrounding community.
				Refer to Topical Response 2b (Air Traffic and Overflights) for details on these measures. These measures were also presented at the EA public hearing and the presentation is available in EA Appendix L.1.
Tom Graham 2936 Sanctuary Circle Lakeland, FL 33803	P005	28-1	What our concern is Amazon has exploded since they've been here in a short period of time, and there's a lot of other support industries that are part of supplying Amazon. There's rumors of commercial aircraft coming in. We just want to be good neighbors, and that's the whole reason we're here. The whole reason that people are objecting is because of what could happen in the future, not necessarily what has happened in the past. But it is a problem.	Comment noted.
Barbara Sweeny 3356 Fiddle Leaf Way Lakeland, FL 33811	P006	13-3	I don't know how people can work from their homes with all of this additional noise that's coming in. Even pre-COVID a lot of people did work from home. And if you're doing Zoom meetings, conference calls and Facetime, I don't know how you're going to do this with all of the noise. We also have a resident in our community who suffers from PTSD. He was awoken at 6:00 in the morning from hearing the airplanes, and it kicked his PTSD in. I don't know how many veterans we have who suffer with it that live in the area, but these early morning flights are going to cause problems with them.	With additional people working from home in response to the COVID-19 pandemic, it is likely that more people more frequently hear aircraft noise that regularly occurs throughout the day. However, the noise analysis conducted for the EA concluded that the Proposed Development Project would not cause noise impacts that exceed FAA's thresholds that would indicate significant noise impact. Individual overflights may be quieter or louder than indicated by the cumulative noise exposure (DNL) and time of day and other factors may influence an individual's perception of and annoyance from these events. Refer to Topical Response 2c (Flight Frequency and Schedule), Topical Response 2f (Sleep Disturbance), Topical Response 2g (Speech Disruption) and Topical Response 2i
Barbara Sweeny 3356 Fiddle Leaf Way Lakeland, FL 33811	P006	14-3	Also according to the chart by 2027 there will an additional 2,867 vehicles on our roads. Our roads are not equipped for this.	(Business Disruption) for additional details related to the topics raised in this comment. The traffic impacts analysis performed for the EA identified needed improvements (dedicated turn lanes) at one intersection (Kidron Road at Drane Field Road). During the development of the EA, the turn lanes were constructed at this intersection to improve its performance and reduce congestion. This mitigation would offset project-related traffic impacts anticipated in 2022 and 2027. Also refer to Topical Response 5c (Proposed Traffic Impacts) for additional details related to the topic raised in this comment.
Barbara Sweeny 3356 Fiddle Leaf Way Lakeland, FL 33811	P006	14-4	Now, the air show. I don't remember how many times the air show was stopped so that Amazon could take off. The air show is a big enhancement to the City of Lakeland and has been around for many, many, many years. By 2027 you're going to have 44 flights taking off and landing. So how many times is the air show going to be interrupted?	Comment noted. It is not possible to estimate future interruptions of the air show due to the Proposed Development Project. LAL works with all of its tenants to balance the air show with other necessary airport operations, and will continue to do so.
Barbara Sweeny 3356 Fiddle Leaf Way Lakeland, FL 33811	P006	20-2	So the bottom line is you're not enhancing our way of life. You're going to be denigrating it.	As referenced in Topical Response 3 (Quality of Life), Chapter 5 of the EA discusses the effects of the Proposed Development Project a variety of environmental resources, including noise, air quality, and socioeconomic impacts, which are most frequently associated with quality of life effects. No significant impacts in the areas of noise and air quality were identified per established NEPA guidelines, and traffic impacts would be less than significant with mitigation implemented.

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Jason Semini 5810 Hendricks Road Lakeland, FL 33811	P007	13-4	Sorry. It was Runway 9 I think, the southeast departure, we actually see when it departs like at an angled and it's really loud. It's like you have the windows in the house closed and you can still hear it. It's kind of like a very grinding noise from the engine. It's that loud.	The noise analysis conducted for the EA concluded that the Proposed Development Project would not cause noise impacts that exceed FAA's thresholds that would indicate significant noise impact. Individual overflights may be quieter or louder than indicated by the cumulative noise exposure (DNL). Refer to Topical Response 2a (Noise Analysis Methods) for additional details related to the topics raised in this comment.
Jason Semini 5810 Hendricks Road Lakeland, FL 33811	P007	14-5	And the other thing is I don't think the impact takes into account the traffic from on Pipkin because I think there's going to be some spillover issues over there because it's already a problem right now. I know the intersection between I think it's Lunn and Pipkin and like it backs up over there. – it used to I think at least before I think COVID and people were at offices and everything. And there's like a community over there, they can't even get in because of the traffic, so there's parts of it that are on the east side I think they're affected as well. So that's it.	Similar to existing air cargo surface traffic at LAL, the additional air cargo trucks would also use Drane Field Road to Airport Road as the main thoroughfare to access the Polk Parkway and connecting interstate highways. Similar to existing conditions, some trucks would also utilize County Line Road to reach their destinations. In addition, the Alternatives analysis presented in the Draft EA considered Proposed Development Project sites on the south side of the airport. These alternatives were discounted from consideration in part because surface roads such as Pipkin and Medulla would be used heavily by trucks and vehicles associated with the Proposed Development Project.
Veronika Guttenberg 707 Butternut Place Lakeland, FL 33813	P008	28-2	A malignant cancerous growth is threatening our quality of life here in Lakeland. Some people want to expand our airport so that more planes can depart and arrive, and this is progress they say. The unchecked progress of this cancer is leading to air pollution endangering our lungs, noise pollution interfering with our conversations and constant heavy traffic on our roadways putting our lives in greater danger. Cancer also makes progress, and progress is not always good. And now just like a cancer cell the airport multiplies and destroys the healthy cells around it. And what is feeding this cancer? Greed. Some people will get a lot of money out of this. Someone has allowed this creeping invasion of sinister intentions to entrench itself in our community. If no one stops it, this cancerous progress will continue. And it's all for the money. Where does that end? Let's all think that one through to its logical conclusion. I don't know if there's anyone else here who feels the same way as I do, I can only speak for myself when I say I	The impact analysis in the EA addresses potential environmental impacts with regard to air pollution, increased noise, and traffic congestion that would result from implementing the Proposed Development Project. As discussed in the EA, the Proposed Development Project would generate temporary air emissions during construction and increased emissions from aircraft operations. Additional noise would occur; however, the majority of the DNL 65 noise contour would remain on airport property. Increased surface traffic around the airport would also occur with the Proposed Development Project. However, the analyses conducted for the EA concluded that these impacts would not be significant and proposed traffic-related mitigation has recently been implemented. Also refer to Topical Response 1 (Worsening of Existing Air Quality, Topical Response 2g (Speech Interference) and Topical Response 5c (Proposed Traffic Impacts) for additional details related to the topics raised in this comment.
Roland Bean Braemar Ave [NO FULL ADDRESS PROVIDED]	P009	13-5	I live fairly close to the parkway, so those planes coming east coming from the east side moving to the airport arriving are fairly impactful to at least just our living. What we had before COVID and before a decent number of those planes coming through, we had just purchased a home in the area, and we really enjoyed it, and it was a costly home, but we definitely liked where we were and the atmosphere and the neighborhood and things like that. And as the planes continue to try to – started coming through it was definitely impactful whether it was honestly waking up the kids which is something, you know, impactful to me. I have to deal with that one on a consistent basis. Or my wife during the day working from home as was mentioned before trying to do a Zoom call and trying to engage in that and being cut off.	Communities near LAL have experienced increased noise since the initiation of air cargo operations at LAL. Some commenters noticed increased cases where normal daily activities like sleep and speech are interrupted. The EA also evaluates an increase in flight activity due to the Proposed Development Project, which would increase in flight operations by approximately 4.11 percent increase over in 2022 and by 5.07 percent in 2027 under the No-Action Alternative (if the Proposed Development Project did not occur). The noise analysis conducted for the EA concluded that the Proposed Development Project would not cause noise impacts that exceed FAA's thresholds that would indicate significant noise impact. However, individual overflights may be quieter or louder than indicated by the cumulative noise exposure (DNL) and time of day may influence an individual's perception of these events.

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			As I think about the number of planes that will be increasing just from this expansion as well as I know there's been a push and hope for maybe a commercial airline coming through. It just seems like it's too much for that area.	Refer to Topical Response 2b (Air Traffic and Overflights), Topical Response 2c (Flight Frequency and Schedule), Topical Response 2f (Sleep Disturbance) and Topical Response 2g (Speech Interference) for additional details related to the topics raised in this comment.
Kennieth and Kimberly Brewer 2224 Parkland Loop South Lakeland, FL 33811	P010	14-6	May I remind you – and you can tell from my address that I do not live in a gated community – that over half of our community, all of Polk County is below the poverty level. We need these jobs.	Comment noted.
Kennieth and Kimberly Brewer 2224 Parkland Loop South Lakeland, FL 33811	P010	14-72	With that we've also seen Amazon come in with 1.5 billion dollars of money going back into our community helping people like me who grew up in a trailer park and is able to stand before you today because the airport has provided jobs for our community.	Comment noted.
Darren Oh 911 Dove Ridge Drive Lakeland, FL 33803	P011	27-1	I'm looking over everything. I'm convinced that for the community as a whole this will be a positive thing and that the risks and the costs can be dealt with if the contract is done well.	Comment noted.
Darren Oh 911 Dove Ridge Drive Lakeland, FL 33803	P011	14-7	And it's easy for me to say because I'm not bothered that this is an acceptable trade off, but I think we need to stand together, that those on whom the impact falls the hardest should be compensated and that should be part of the plan, that if they need – that they should be able to afford to move somewhere else if they want to and should be – or keep the cash if they decide to stay.	Because the residential land uses within (or newly within) the DNL 65 and higher noise contours shown in the EA would not experience a 1.5 decibel increase due to the Proposed Development Project, the impacts are not considered significant. Mitigation related to noise impacts is not required. Separate from the EA, the City has proposed conceptual noise abatement measures and has implemented a voluntarily runway use program to address noise-related concerns of the surrounding community. See Topical Response 2b, Air Traffic and Overflights for additional information.
Darren Oh 911 Dove Ridge Drive Lakeland, FL 33803	P011	16-1	Also I think that if we're doing –buying some wetland restoration credits that it doesn't – it's not just –shouldn't just be some random place wetland – compensating wetlands restored somewhere else, but it should be in the local community.	The Florida Department of Environmental Protection and Southwest Florida Water Management District are responsible for state and federal wetland permitting on this project. These wetland permit programs allow off-site mitigation for wetland impacts, including the purchase of wetland credits from an approved mitigation bank. These programs also require that mitigation credits be purchased in the same watershed as the impacted wetlands. As discussed in the EA, the wetland credits will be purchased at the Alafia River Mitigation Bank within the same watershed as LAL, which will benefit the local hydrologic system. By purchasing credits for restoration and enhancement in the same watershed, the mitigation process ensures that the interconnectedness of wetland systems used to provide locally significant hydrologic storage, treatment and habitat, remains intact.
Jim Studiale [NO ADDRESS PROVIDED]	P012	13-6	I love Lakeland. I'm passionate about Lakeland, but unfortunately my house lies under the Amazon jets. And it's about not economic development. You don't worship that goal and mitigate or ignore all the others. And Gene tells me we're going to mitigate. And as soon as we do I'm going to believe it, but as of now we haven't mitigated. And I am amazed at the number and the noise of Amazon jets that go directly over my house. My home is palatial. It is my enjoyment. The pool, the overlooking the patio, the overlooking open space, and I have neighbors like me. What's the impact? Noise. It's simple. It's one word. It's not about the turtles	The noise analysis conducted for the EA evaluated noise increases and potential impacts due to implementing the Proposed Development Project. As discussed in Topical Response 2b (Air Traffic and Overflights), no changes to existing flight procedures were proposed as part of the Proposed Development Project, and the noise analysis in the EA was prepared using published arrival and departure procedures and current operational information. The analysis concluded that the Proposed Development Project would not cause noise impacts that exceed FAA's thresholds that would indicate significant noise impact.

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			or snakes or anything else. It's noise. And the FAA needs to help us to mitigate that noise because I'm nowhere near the airport, but there's jets over my house all the time.	However, individual overflights may be quieter or louder than indicated by the cumulative noise exposure (DNL). Because there were no significant impacts identified, no mitigation is required under NEPA. Although though no mitigation was required for the EA, it is acknowledged that some residents are concerned that increased airport noise is affecting their quality of life. The City of Lakeland has proposed conceptual noise abatement measures and has implemented a voluntarily runway use program to address noise-related concerns of the surrounding community.
				Refer to Topical Response 2b (Air Traffic and Overflights), Topical Response 2c (Flight Frequency and Schedule), and Topical Response 3 (Quality of Life) for additional details regarding topics raised in this comment.
Jim Studiale [NO ADDRESS PROVIDED]	P012	20-17	The impact is a reduced quality of life. A drone of jets every time I venture outside in my backyard. And my kids have a house around the corner with a similar view. None of the rest of it matters.	A variety of environmental resource categories typically associated with quality of life concerns, including noise, were evaluated in the EA and the EA determined that no significant impacts would occur if the Proposed Development Project was implemented. Refer to Topical Response 3 (Quality of Life) for a discussion of quality of life concerns and considerations.
Jim Studiale [NO ADDRESS PROVIDED]	P012	14-8	The prevalence of Amazon jets flying hurts resale value, but more importantly it hurts the pastoral enjoyment of our homes.	The EA did not identify any significant social, environmental, and economic impacts associated with the Proposed Development Project. Negative effects on property value are not anticipated. Refer to Topical Response 3 (Quality of Life) and Topical Response 4 (Impacts on Property Values) for further discussion of the topics raised in this comment.
Rick Garrity 4138 South Polk Avenue Lakeland, FL 33813	P013	3-2	This collateral damage to our quality of life must be eased by seeking alternative flight pathways	Topical Response 2b (Air Traffic and Overflights) discusses the City of Lakeland's preferential runway use program and other ongoing efforts to develop noise abatement flight procedures at LAL. Please refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 3 (Quality of Life) for additional details related to the topics raised in this comment.
Rick Garrity 4138 South Polk Avenue Lakeland, FL 33813	P013	20-3	Amazon Air has increased their use of the airport in the past year. This increase in air traffic is causing a reduction in quality of life of many residents living even three miles from the airport like we do. We live three-and-a-half miles from the airport. This collateral damage to our quality of life must be eased by seeking alternative flight pathways.	Construction of the Proposed Development Project would result in a temporary increase in air emissions at LAL. Operation of the proposed facility would generate additional ongoing air emissions. However, the air quality analysis performed for the EA concluded that there would be no significant impacts to air quality. Similarly, the noise analysis conducted for the EA concluded that the increased noise resulting from the Proposed Development Project would not cause significant impacts.
			Our major concerns include noise pollution, potential health issues resulting from jet engine emissions and the impact of course on our home values.	Refer to Topical Response 1 (Worsening of Existing Air Quality), Topical Response 2b (Air Traffic and Overflights), Topical Response 3 (Quality of Life) and Topical Response 4 (Impacts on Property Values) for additional details related to the topics raised in this comment.
Shawn Graham 5222 Creekmore Drive Lakeland, FL 33812	P014	13-7	I'm kind of amazed at the number of people that are sitting here complaining about we don't know anything about this.	Comment noted.

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			The airport has had it on their website. The master plan has been around for a long time. The City of Lakeland hasn't exactly hidden it. Before the pandemic I went to an event at the airport, so if you are unaware of this, you're not paying attention. If you have bought a house in the last several years on Pipkin Road in two very large subdivisions, you bought into this. That's all there is to it. You shouldn't be complaining about airplane noise.	
Shawn Graham 5222 Creekmore Drive Lakeland, FL 33812	P014	14-9	Number three, let's look at jobs real quick. The average family of four for Polk County is \$50,000. Two people get jobs at Amazon making 15 bucks an hour or better they're clearing \$60,000 a year. Now, many people have said we don't know about the jobs, this, that and the other thing, but you know what, a lot of y'all that I'm hearing speak, and I mean no disrespect, are retired. You don't have to look at those jobs. You don't have to worry about that. What about your kids? What about your grandkids? Do you want them to leave Lakeland? We raise a lot of kids to move them out of Polk County. Get them through high school, get them out. Drakken is bringing people here, keeping them here. NOAA, Same thing. A lot of these other jobs, the other gentleman mentioned, same thing. It's a good deal for all of us. Airplane noise is a small price to pay.	Comment noted.
Roberto Leider 632 West Hancock Street Lakeland, FL 33803	P015	13-8	I moved to Lakeland for the quiet and the peace, and now I'll be gardening at 10:00 p.m. or even 11:00 p.m., I'm watering my plants, and I'm seeing the planes right over Dixieland.	As explained in Topical Response 2c (Flight Frequency and Schedule), current Phase I facility operations generate seven average daily operations during nighttime hours based on current operational needs, and these would increase to between 17 to 21 average daily nighttime operations in 2022 and 2027, respectively. The EA discusses potential noise impacts associated with these increases and identified no significant noise impacts. Refer to Topical Response 2c for additional details related to the topics raised in this comment.
Roberto Leider 632 West Hancock Street Lakeland, FL 33803	P015	14-10	Amazon pays no federal income tax most years. Are they going to pay for the road improvements that are going to be needed for the hundreds of trucks? I don't think so. They do everything they can not to pay taxes.	Road damage results from travel by all users. Polk County has experienced growth both in population and in commercial, industrial, and other related activities for well over a decade. State and local transportation agencies are currently responsible for developing and funding roadway repair and maintenance programs under their jurisdiction, which includes roadways that would be used by vehicles accessing the proposed air cargo facility expansion. Individual development projects, including the Proposed Development Project, must undergo local land development permitting and review processes that determine the need for road or intersection improvements required by their development, and individual developers may or may not be required to pay for these direct improvements based on the outcome of the review and permitting process.
Roberto Leider 632 West Hancock Street Lakeland, FL 33803	P015	14-11	Are they going to pay for the airport expansion? We don't know. Either way they [sic] are also several call centers with good jobs that we have at Geico and Publix corporate right by the airport. Those thousands of jobs could be threatened with all this noise. Those are more important. My husband works for Geico. Those are good paying jobs with good benefits.	Private airport tenants are commonly responsible for directly funding their improvements and development constructed on airport property, such as the Proposed Development Project. The Airport typically participates in funding airfield improvements, infrastructure improvements and is typically required to fund other development and maintenance of other common-use airport facilities. Additionally, FAA's noise and land use compatibility guidance for commercial land use shows that commercial land uses are compatible with

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	Code	Code		existing and future aircraft noise levels neat LAL. The GEICO facility is approximately 0.4 mile south of the 65 DNL noise contour and the Publix offices are approximately 2 miles north of the contour. Refer to Topical Response 2i (Business Disruption) for further details on topics raised in this comment.
Roberto Leider 632 West Hancock Street Lakeland, FL 33803	P015	14-12	That call center is right next to the airport, and that's what I'm – also on County Line Road right now the amount of semi trucks is horrific. What is going to be in a few years when we're going to have even more hundreds of these Amazon trucks?	The traffic studies prepared for Phase I operations and the Phase II expansion are discussed in the EA. Both studies accounted for truck traffic on County Line Road based on existing and planned cargo operations. The traffic study conducted for the EA showed that three of the four intersections studied would not experience reduced LOS to unacceptable levels. However, one intersection (Kidron Road at Drain Field Road) would experience unacceptable LOS with the Proposed Development Project and would require
Mary Archer 608 Kensington Street Lakeland, FL 33803	P016	13-127	I live on the south side. I'm tired of the noise. I didn't know I was – where I work I hear noise every day.	Comment noted.
Mary Archer 608 Kensington Street Lakeland, FL 33803	P016	14-13	I work in Tampa. I come home on the parkway. Traffic is doubled. We've got Amazon trucks all over the place. We need to let the City of Lakeland and the people decide what we want by a vote. We also need to do something about stopping this.	Traffic on Polk Parkway is influenced by the regional population, commercial, industrial, and other activities in the region. The population of Polk County has increased by approximately 158,000 residents, or approximately 26 percent since 2010. Local and regional governments are responsible for zoning and growth development within their respective jurisdictions. Regional transportation and roadway planning is managed by local, regional and state transportation agencies. The traffic analyses performed for the EA focus on roadways in the immediate vicinity of LAL and include cargo truck operations for the existing air cargo facility. Refer to Topical Response 5b (Existing Traffic Congestion) for additional details related to the topics raised in this comment. In addition, the City recently determined that a voteable referendum cannot negate contractual obligations in place with the lease signed
Jan Smith 506 Empress Way Lakeland, FL 33803	P017	13-128	I became aware of this Amazon situation last summer when I kept getting woken up at 5:30 in the morning including Saturday morning by planes going right over my house.	between the City and Amazon. Comment noted. Arrivals and departures use published approach and departure procedures. Additionally, each arrival and departure operation is coordinated with the Air Traffic Control Tower. Refer to Topical Response 2b (Air Traffic and Overflights) for additional discussion related to the topics raised in this comment.

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Jan Smith 506 Empress Way Lakeland, FL 33803	P017	21-4	I have talked with several of the neighbors who were also upset because we live in houses in our neighborhood that are about 50 years old, we have older windows. She said that the jets when they come over her house shake her house so much that it shakes her windows unlocked. And so that for her in my opinion is a security issue, and that's the only thing so far that hasn't been mentioned.	The noise analysis prepared for the EA used the cumulative exposure metric of DNL to assess impacts associated with the Proposed Development Project. Although it is acknowledged that some individual flights may cause nearby structures to experience varying levels of vibration, the EA not identify significant noise impacts that would require a specialized vibration analysis. Refer to Topical Response 2e (Vibration) for additional details related to the topics raised in this comment.
Jan Smith 506 Empress Way Lakeland, FL 33803	P017	26-2	I would also just like to take my time and say I'm disappointed in that I never heard anything in my 15 years of living here in Brandon about Amazon coming here until they're flying overhead. I think that it would be wonderful as somebody else mentioned that we, the citizens, had the ability to vote on do we want this expansion more than just this. This is great to give us a chance to voice our opinions, but I think that this is a voteable item that the citizens of Lakeland should be deciding.	Comment noted. The purpose of the NEPA public involvement process was to hear and consider public comments on the proposed project's environmental effects. Also, there are other opportunities for public participation with respect to airport development plans and other activities at LAL. The airport updated its Master Plan in 2012 and again in 2020. Each time an update was completed, the airport offered public meetings and comment opportunities on the proposed planning and development objectives, including air cargo facility development, passenger and general aviation services development, infrastructure and airport construction needs, and other items. In terms of local governance with respect to airport operations, LAL is owned and operated by the City of Lakeland. The current management of the Airport is subject to the City's organizational structure. Policy and operational decisions are vested with the City of Lakeland, and airport decision are typically subject to the City's process of ordinance and referendum as codified within the City of Lakeland Code of Ordinances (Part I, Division I, Sec. 19 and 88 et sec, Division II Sec 1-10 et sec). With respect to the Proposed Development Project, the City's currently approved zoning on the property allows for warehouse and related facility development as proposed. A lease agreement was signed in May 2019 that gave the proposed tenant the right to expand on the airport within five years. The City is under contractual obligation to cooperate and provide approvals necessary to expand on airport in accordance with the lease provisions. The City recently determined that a voteable referendum cannot negate that contractual obligation.
Jan Smith 506 Empress Way Lakeland, FL 33803	P017	13-9	I'm disappointed that the noise abatement plan was not already put into effect before Amazon started flying overhead. That should have happened.	Comment noted. Air cargo development in general was first represented on the ALP and in the LAL Master Plan in 2012 and development of the Master Plan included public meetings and comment opportunities. A separate EA and permitting process was also completed in 2016 for a large, multi-hangar Maintenance, Repair and Overhaul facility with a modestly-sized air cargo facility at LAL. The City proposed development of a larger air cargo facility at the site in 2018, and FAA subsequently reevaluated the 2016 EA in light of the revised project. Noise abatement plans were not required as result of these planning processes. Noise abatement plans were not required or implemented prior to Amazon starting operations at LAL. However, separate from the EA, the City has proposed conceptual noise abatement measures and has implemented a voluntarily runway use program to address noise-related concerns of the surrounding community. Refer to Topical Response

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	Code	Code		2b (Air Traffic and Overflights) for details on these measures. These measures were also presented at the EA public hearing and the presentation is available in EA Appendix L.1 .
Jan Smith 506 Empress Way Lakeland, FL 33803	P017	21-5	Here are other things that other people have mentioned that also concern me, the accident probability, birds or otherwise, I don't care, accident probability,	Topical Response 6a (Accident Potential) explains that due to airport design standards, aircraft operation and specification requirements, and adherence to established flight procedures, the risk for aircraft accidents due to the Proposed Development Project is relatively low. Topical Response 6b (Wildlife Hazard Potential) states that adherence with the airport WHMP would minimize and control wildlife attractants that could potentially contribute to aircraft incidents. See the identified Topical Responses for additional details related to the topics raised in this comment.
Jan Smith 506 Empress Way Lakeland, FL 33803	P017	13-10	obviously the noise,	The noise analysis conducted for the EA concluded that the Proposed Development Project would not cause noise impacts that exceed FAA's thresholds that would indicate significant noise impact. Refer to Topical Response 2a (Noise Analysis Methods) for additional details related to the EA's noise analysis methods.
Jan Smith 506 Empress Way Lakeland, FL 33803	P017	14-14	the property values that are going to drop in my opinion, the traffic. I drive along Drane Field Road a couple times a week, and it has increased considerably.	The traffic analyses performed for the EA identified mitigation to maintain and improve level of service at the intersection of Kidron Road and Drain Field Road. The proposed mitigation, construction of dedicated turn lanes at the intersection, was implemented during development of the EA. This mitigation offsets anticipated traffic impacts in 2022 and 2027 caused by the Proposed Development Project. Refer to Topical Response 5b (Existing Traffic Congestion) for further discussion. The EA did not identify any significant social, environmental, and economic impacts associated with the Proposed Development Project. Negative effects on property value are not anticipated. Refer to Topical Response 4 (Impacts on Property Values) for further discussion of the topics raised in this comment.
Jan Smith 506 Empress Way Lakeland, FL 33803	P017	5-1	The air pollution.	The additional aircraft operations that would result from the Proposed Development Project would generate air emissions at LAL. However, the air quality analysis performed for the EA concluded that that the Proposed Development Project would not cause air quality impacts that exceed FAA's thresholds that would indicate significant air quality impact. Refer to Topical Response 1 (Worsening of Existing Air Quality) for additional details related to the topics raised in this comment.
Liz Revaldi 4456 Micanope Crescent Drive Lakeland, FL 33811	P018	13-11	That's in Morgan Creek Preserve. I live right next to the airport. It's literally the Geico building, the airport, and my subdivision. And the noise is just horrendous. I mean at times they test engines, and that is like being at a NASCAR race at Daytona Beach. It's insane how loud that was when they were doing that. That not outside. So that was absolutely insane when they were doing that.	Comment noted. Although jet engine testing performed by other tenants at the airport is included in the airport's noise analysis, the testing is not required for the operation of the Proposed Development Project. However, existing aircraft engine "runups" were included in the No-Action and baseline noise analyses prepared for the EA.
Liz Revaldi 4456 Micanope Crescent Drive Lakeland, FL 33811	P018	28-3	And this is a project that should have been something that was done like 20 years ago. If you guys wanted to do this airport expansion you should have done this when there was like no development around this area, Grasslands.	Generally speaking, land use planning and zoning at and surrounding LAL has long included and accounted for existing commercial and light industrial land uses, as well as increased future land uses in these categories. The purpose of these planning and zoning designations is to encourage compatible development, and attempt to limit residential land uses in areas where it may not be conducive due to existing businesses, planned

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				developments, and growth. Growth and development plans for the area in general have been conducted, reviewed and approved in accordance with these light industrial and commercial planning and zoning designations.
				Planning for general air cargo tenancy at LAL has been occurring for over ten years. Air cargo development in general was first represented on the ALP and in the LAL Master Plan in 2012 and development of the Master Plan included public meetings and comment opportunities. A separate EA and permitting process was also completed in 2016 for a large, multi-hangar Maintenance, Repair and Overhaul facility with a modestly-sized air cargo facility at LAL. The City proposed development of a larger air cargo facility at the site in 2018, and FAA subsequently reevaluated the 2016 EA in light of the revised project. With specific reference to the Proposed Development Project, 20 years ago predates Amazon conducting air cargo operations as part of its business plan. Therefore it would not have been possible to start specifically planning for the Proposed Development Project 20 years ago.
Liz Revaldi 4456 Micanope Crescent Drive Lakeland, FL 33811	P018	21-6	I'm concerned about the safety. I mean that huge gas container thing that y'all are thinking about. Hello, we have lightning here. I mean that's like crazy that the whole project that you're not thinking of. What about the liability to the city? Have you guys considered like all of the liability concerns? Have you ever even thought about that?	Aboveground fuel storage tank design typically includes lightning protection. Refer to Topical Response 6c (Aboveground Storage Tanks) for additional details related to fuel storage tank safety.
Dawn Brower 4810 Hancock Lake Road Lakeland, FL 33812	P019	13-12	I would like to say that this level of air traffic is a minor impact on a major metropolitan area like Tampa, Lakeland, or Atlanta. But it is a huge, huge impact on a mid size down [sic] without an existing international airport. The increase in air traffic has already caused a reduction in quality of life for most Lakeland and greater Lakeland area residents. It's too much noise.	A variety of environmental resource categories typically associated with quality of life concerns, including noise, were evaluated in the EA and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project. Refer to Topical Response 3 (Quality of Life) for a discussion of quality of life concerns and considerations.
Dawn Brower 4810 Hancock Lake Road Lakeland, FL 33812	P019	28-4	We are better than this. We weren't built for this. We don't want it. Did we want people coming into our airport? Does this improve the quality of life for our residents? The answer is no. It is only about money, and you are going to ruin us if you do this. We don't want you to mitigate it. We don't want you to abate it. We want you to stop it, period.	LAL is a public use airport and the City of Lakeland does not review or approve requests from aircraft operators to operate aircraft at the airport, the timing of flights, or the number of flights. Flight schedules are developed by individual airport users, including Amazon. Federal law preempts any local government from implementing any action that is intended to control the types of aircraft that use an airport, routes of aircraft in flight, the timing of flights, or the number of flights. Refer to Topical Response 3 (Quality of Life) for a discussion of quality of life concerns and considerations.
Dawn Brower 4810 Hancock Lake Road Lakeland, FL 33812	P019	20-4	I want everybody in this room to understand you sold out my quality of life in my home town for 50 years.	A variety of environmental resource categories typically associated with quality of life concerns, including noise, were evaluated in the EA and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project. Refer to Topical Response 3 (Quality of Life) for a discussion of quality of life concerns and considerations.
Dawn Brower 4810 Hancock Lake Road	P019	20-5	Well, you know what, I've spent an awful lot of time at SanLan the last six months. Do you know what it's like? It's miserable. It's miserable. It's a nature preserve, and that's	SanLan RV and Golf Resort is located approximately 5 miles east of LAL. According to the SanLan website, the privately-owned facilities include a golf course 785 acres of

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Lakeland, FL 33812			one of our local spots that we expect tourists to come stay. Guess what? You whored it to Amazon.	undeveloped landscape which is referred to as a nature preserve, and includes a butterfly garden, seven miles of nature trails, and eight water bodies. FAA's noise and land use compatibility guidelines for recreational land uses, such as golf courses, are published at 14 CFR Part 150. Based on the fact that the referenced land uses are well outside of the DNL 65 noise contour, the referenced amenities at SanLan would be compatible with aircraft noise levels near LAL.
Dawn Brower 4810 Hancock Lake Road Lakeland, FL 33812	P019	13-13	The quiet is our identity. We support the NOAA planes. We love when they fly in. This ain't that. This is commercial. This was a test run. This has failed. We hate it. Lakeland says no. So no to Amazon. Please don't move these jets over onto the parkway and send them into the quiet neighborhoods.	The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA for consideration. If FAA determines them to be feasible, the would undergo additional development and analysis, including an environmental study to evaluate changes in local noise exposure. Refer to Topical Response 2b (Air Traffic and Overflights) for response to this comment.
Connie Haynes 702 West Hancock Street Lakeland, FL 33803	P020	28-5	And growth is not bad if it's planned smartly. If you don't have the infrastructure to begin with to do this it's stupid.	The Proposed Development Project involves an existing tenant seeking to expand its facilities and operations at LAL. LAL serves as a public airport and is part of the National Airspace System. Infrastructure in place at the airport has been designed and implemented to accommodate the type and level of operations and activities included in the Proposed Development Project.
Connie Haynes 702 West Hancock Street Lakeland, FL 33803	P020	14-15	And \$15 an hour, okay. So is that bringing the high people high rated people we need in order to fill all the apartments that are in downtown that are \$1,500 a month?	Comment noted.
Connie Haynes 702 West Hancock Street Lakeland, FL 33803	P020	21-7	I can see fuel on my car. I mean they do dump fuel.	Fuel dumping, or jettisoning of fuel in-flight, is performed in extremely rare situations where the aircraft's gross weight needs to be reduced in order to permit a safe landing. It should be noted that a very high percentage of soot, urban dust, and other aerial depositions are from sources other than aircraft. Many aircraft take off with gross weights above their designed landing weight. An emergency or diversion then could necessitate landing prior to their flight plan, leading to having to land over their gross weight. Fuel is then jettisoned in flight to reduce the weight of the aircraft. Most of the fuel that is dumped turns into vapor within a few minutes. If jettisoned above 5,000 feet in above freezing temperature calculations show that 98% will evaporate before reaching the ground. The fuel vapors rapidly dissipate and diffuse. Boeing 737 cargo aircraft that use the air cargo facility are not equipped to perform fuel jettisoning. The Boeing 767 aircraft can jettison fuel, although as discussed, this is a rare event that occurs only under emergency conditions.
Connie Haynes 702 West Hancock Street Lakeland, FL 33803	P020	14-16	And the environmental impact on this is going to be big because they're not talking about all the trucks that are going to go to Winter Haven. They have an Amazon warehouse in Winter Haven. So those trucks are coming from here to Winter Haven. How are they going? Interstate. Have you guys looked at the Interstate? It's terrible.	Topical Response 5a (Analysis Approach and Study Area) provides a detailed discussion of the traffic studies that were evaluated to identify and disclose the traffic impacts of air cargo facility operations under both existing and proposed conditions. State, regional, and local transportation planning authorities are responsible for roadway capacity analysis and identifying, funding, and implementing improvements as needed. Refer to Topical Response 5a (Analysis Approach and Study Area) and Topical Response 5c (Proposed Traffic Impacts) for Additional details related to the topics raised in this comment

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Connie Haynes 702 West Hancock Street Lakeland, FL 33803	P020	14-17	I mean this city is working on infrastructure, but we need to have the people that are impacting it pay for it. Who is going to pay for this?	Roadway infrastructure impacts result from use by all roadway users. Polk County has experienced growth both in population and in commercial, industrial, and other related activities for well over a decade. State and local transportation agencies are currently responsible for developing and funding roadway repair and maintenance programs under their jurisdiction, which includes roadways that would be used by vehicles accessing the proposed air cargo facility expansion. Individual development projects, including the Proposed Development Project, must undergo local land development permitting and review processes that determine the need for road or intersection improvements required by their development, and individual developers may or may not be required to pay for these direct improvements based on the outcome of the review and permitting process.
Liz Rovaldi 4456 Minacope Crescent Dr Lakeland FL 33811	P021	13-14	I live in a subdivision right next to the airport, Morgan Creek Preserve. The airport when I bought the house 8 years ago was an executive airport with an annual air show. The plan noise with the executive airport was a concern at first but after hearing the planes fly outside + inside my house which is a very well built Hulbert home, I decided to proceed because the noise level in my house was about the sound of a fan + if TV was on it could barely be heard. Now that large commercial jets are being flown daily at all hours the noise levels are 1000x louder these very low flying jets fly right over our subdivision a [sic] least 8x per day.	Communities near LAL have experienced increased noise since the initiation of air cargo operations at LAL. Noise from existing air cargo operations at LAL is included in the EA analysis of the No-Action Alternative and Proposed Development Project. The EA acknowledges an increase in flight activity due to the Proposed Development Project and assesses the impacts on community noise exposure based on FAA guidelines. When compared to the No-Action Alternative, the additional aircraft operations associated with the Proposed Development Project in 2022 and 2027 would increase the amount of noncompatible (residential) land use directly to the east of the airport property line. The parcels and residences within, or newly within, the 2027 DNL 65 contour would not experience an increase of 1.5 dB or greater.
Liz Rovaldi 4456 Minacope Crescent Dr Lakeland FL 33811	P021	21-8	What happens if an accident happens?	Safety is the highest priority for the FAA, aircraft manufacturers and operators, and airport owners. If an aircraft accident were to occur, local emergency response agencies would be notified and would respond with appropriate equipment and personnel. Refer to Topical Response 6a (Accident Potential) for additional details related to the topics raised in this comment.
Liz Rovaldi 4456 Minacope Crescent Dr	P021	5-2	What about polution [sic]?	Chapter 5 of the Draft EA addresses potential increased pollution from the Proposed Development Project in terms of air emissions, noise, hazardous materials and solid

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Lakeland FL 33811	Code	Code		waste, and water quality. The impact analyses performed for the EA concluded that the Proposed Development Project would not cause pollution-related impacts that exceed FAA's thresholds that would indicated significant impacts for these categories. Refer to Topical Response 1 (Worsening of Existing Air Quality) for further discussion related to air emissions. Refer to Appendix C.2 (Air Quality Technical Report) and Appendix G (Noise Analysis Technical Report) of the EA for additional information on analyses performed and to Sections 5.2, 5.6, 5.10, and 5.15 of the EA for the impact analyses' discussions and conclusions.
Roland Bean 4228 Braemar Ave Lakeland, FL 33813	P022	13-15	Living in the are [sic] we do in close proximity of the Polk Parkway we are in the flight path of planes coming from the east. Noise levels continue to increase as the frequency of these Amazon planes increase [sic]. Although not ideal, if the planes flew during the daylight hours it would at least be tolerable. However, early AM flights and nighttime flights make it difficult for children sleeping.	Sections 2.1.2 and 5.1 of the EA acknowledge an increase in flight activity due to the Proposed Development Project and assesses the impacts on community noise exposure based on FAA guidelines. The analysis of noise exposure in the EA was based on the DNL 65 dB contour and did not identify significant impacts to residential land uses based on FAA guidelines. The noise analysis conducted for the EA concluded that the Proposed Development project would not cause noise impacts that would exceed FAA's thresholds that would indicate significant noise impact. Therefore, no noise mitigation is required. However, it is recognized that individual noise events may be quitter or louder than cumulative noise exposure estimates provided by the DNL analysis, and that some may perceive these events as impactful to their sleep. Separate from the EA, the City has proposed conceptual noise abatement measures and has implemented a voluntarily runway use program to address noise-related concerns of the surrounding community. Refer to Topical Response 2b (Air Traffic and Overflights), Topical Response 2c (Flight
Roland Bean 4228 Braemar Ave Lakeland, FL 33813	P022	14-18	Its [sic] also impactful on home values in the area. No on wants to buy a house where you look up and see Amazon Air right over your head literally.	Frequency and Schedule), and Topical Response 2f (Sleep Disturbance) for additional details related to the topics raised in this comment. The EA did not identify any significant social, environmental, and economic impacts associated with the Proposed Development Project. Negative effects on property value are not anticipated. Refer to Topical Response 4 (Impacts on Property Values) for further discussion of the topics reject in this segment.
Roland Bean 4228 Braemar Ave Lakeland, FL 33813	P022	13-16	I am not in favor of expanding the number of flights in our area, increasing this unacceptable noise intrusion for our local communities.	discussion of the topics raised in this comment. The noise analysis conducted for the EA concluded that the Proposed Development Project would not cause noise impacts to surrounding land use that exceed FAA's thresholds that would indicate significant noise impact. A noise sensitive site analysis was also performed for non-residential community locations surrounding LAL (e.g., schools, churches) and also revealed no significant noise impacts. However, individual overflights may be quieter or louder than indicated by the cumulative noise exposure (DNL). Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 2c (Flight Frequency and Schedule) for additional details related to the topics raised in this comment.

Commenter	Letter	Comment	Comment	Response
Commontor	Code	Code	CS.I.IIIOIK	The noise analysis conducted for the EA concluded that the Proposed Development
				Project would not cause noise impacts that exceed FAA's thresholds that would indicate significant noise impact.
[NO CONTACT OR NAME INFO GIVEN]	P023	13-17	Concerned about noise + crash danger. Flies right over our house.	Refer to Topical Response 2a (Noise Analysis Methods) for additional details related to the EA's noise analysis. Aircraft operational certifications include operational safety requirements, pilots communicate with Air Traffic Control to ensure safe operations in local airspace, and airport design standards include requirements to ensure safe operation of aircraft on the ground. Topical Response 6a (Accident Potential) provides
C. Moravia 4268 Jones Trail Lakeland, FL 33813	P024	21-9	Planes fall to the ground and accident [sic] happen.	additional discussion related to aircraft safety and accident potential. As referenced in the previous comment, aircraft operational certifications include operational safety requirements, pilots communicate with Air Traffic Control to ensure safe operations in local airspace, and airport design standards include requirements to ensure safe operation of aircraft on the ground. Topical Response 6a (Accident Potential) provides additional discussion related to aircraft safety and accident potential.
C. Moravia 4268 Jones Trail Lakeland, FL 33813	P024	20-6	Once you give permission for that extension you will not be able to contain the damages and soon enough we will find ourselves living not in a commercial neighborhood but in an industrial one. Polk County is big enough.	For this comment response, it is assumed that the "extension" referenced in the comment refers to the proposed expansion of the air cargo facility. The existing air cargo facility and proposed air cargo facility expansion are located in an area that is generally zoned for light industrial use. While aircraft fly over residential areas, the majority of ongoing activity associated with the Proposed Development Project would be centered in light industrial areas. Additionally, multiple alternatives for site location were analyzed in the EA. The proposed location was selected in part because it would require no off-airport property acquisition or conversion of any residential land uses to industrial use.
C. Moravia 4268 Jones Trail Lakeland, FL 33813	P024	14-19	And if the financial incentive is significant think that Amazon is constantly hiring why? Because their jobs are not jobs Lakeland will retire on. Now is the time to avoid the disaster that our children will have to deal with. *Where will our property value be after all this?	In maximum peak conditions, the air cargo services provider indicated the potential to add up to 800 new jobs locally. Refer to Topical Response 4 (Impacts on Property Values) for additional details related to the topics raised in this comment.
C. Moravia 4268 Jones Trail Lakeland, FL 33813	P024	21-10	Also to remember when large companies like Amazon come to a community and cause damage or an accident since they will have gasoline and jet fuel storage, they sinply [sic] pack they pack and leave town leaving the locals to deal with the mess.	LAL would own and be responsible for the proposed fuel farm and fuel storage. The permits required to build and operate the fuel storage facility would identify responsible parties in the event that remediation activities are necessary. Storage tanks must also be registered to the FDEP as part of their Storage Tank Compliance Monitoring program to identify tank characteristics, safety controls, and other records that ensure financial and cleanup responsibility in the event of unanticipated chemical releases. Existing and proposed air cargo operations at LAL represent a long-term investment and there is no intent for short-term operations. Amazon's lease term at LAL is 20 years.
C. Moravia 4268 Jones Trail Lakeland, FL 33813	P024	14-20	The increase [sic] traffic to our little city that was never conceived for such industrial increase.	According to the Lakeland Chamber of Commerce, two of Lakeland's top industries are manufacturing and distribution. Lakeland, located along Interstate 4 between Tampa and Orlando has a long history in transportation and logistics, as discussed in Florida Department of Transportation (FDOT) strategic transportation studies. FDOT's Florida's Future Corridors Initiative includes the Lakeland area in its "Tampa Bay to Central Florida"

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	Oodo	Couc		study to explore additional ways to use and improve Interstate 4 and other regional highways to expand the movement of people and goods throughout the region. The Proposed Development Project would increase traffic near the airport. However, the impact analyses performed for the EA concluded that with traffic mitigation already implemented, the Proposed Development Project would not cause surface traffic impacts that exceed FAA's thresholds that would indicate significant surface traffic impact. Refer to Topical Response 5b (Existing Traffic Congestion) and Topical Response 5c (Proposed Traffic Impacts) for additional details related to the topics raised in this comment.
C. Moravia 4268 Jones Trail Lakeland, FL 33813	P024	28-6	Please stop it, only if you stop it NOW that your children will have this place to live tomorrow. If you live in Lakeland Please save Lakeland. Say no to the expansion.	Comment noted.
Harry Boll 1617 Itchepackesassa Dr Lakeland, FL 33810	P025	13-18	I live 6.5 miles from the airport and the planes are low enough to shake my house.	Arrivals and departures coordinate approach and departures with the Air Traffic Control Tower and use published flight procedures. The current approach and departure procedures at LAL include operational constraints such as operating height due to LAL's location between two major hub airports and the presence of other nearby airports. Although it is acknowledged that increased flights may cause nearby areas to perceive increased vibrations as aircraft pass over, the EA assessment did not identify significant impacts that would warrant a specialized vibration analysis. Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 2e (Vibration) for a response to this comment.
Harry Boll 1617 Itchepackesassa Dr Lakeland, FL 33810	P025	17-1	I have concerns on how the flooding will effect [sic] me. Itchepackessa [sic] Creek is on the main route for storm water and it runs thru [sic] my property.	The Proposed Development Project would need to undergo design and construction permitting prior to state and local development authorities allowing construction to commence. Per the City of Lakeland Development Code Section 6.2.4.1 (Ord. No. 5610), a floodplain development permit will be required which entails a description of the development, land use, occupancy, and valuation of the proposed work. Plans must be submitted to show proper management of construction activities that might increase flood damage/erosion potential. All other applicable state or federal permits must be obtained prior to the floodplain development permit is approved. Part of this state permitting process includes securing an Environmental Resource Permit (ERP) from the Southwest Florida Water Management District. A requirement of this permit is to demonstrate that the Proposed Development Project would not cause an increase in flood volumes in the drainage basins surrounding LAL. This is accomplished by performing detailed water quantity and quality modeling to ensure that flood storage in pre-development conditions is replaced "cup for cup", such that no net change in flood volumes occur. The stormwater retention pond shown notionally in the Draft EA is being proposed to capture, treat and attenuate runoff that would occur due to the increased

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John Tutton 727 Jefferson Ave Lakeland, FL 33801	P026	28-7	There is currently significant noise pollution from the current air traffic. My house is in the historic district – something pushed for by LKLD [sic]. My house is 75 yr [sic] old. Every plane sound telegraphs through the wood timbers of my house and rattles the plate rack etc. I don't live near the airport. I watched an Amazon plane fly over Socrum Loop Publix at the same elevation as over my house miles away @ Ik [sic] Hollingsworth. Having flights 10PM-7AM would keep me up every night.	amount of impervious surface caused by the Proposed Development Project. During the ERP process, the pond size and location will be refined in order to ensure that it provides the necessary water quantity capture, storage and treatment volume to prevent flooding in surrounding areas. Communities near LAL have experienced increased noise since the initiation of air cargo operations at LAL. Some commenters noted that their speech/listening is interrupted. The EA also acknowledges an increase in flight activity due to the Proposed Development Project and assesses the impacts on community noise exposure based on FAA guidelines. The analysis of noise exposure in the EA was based on the DNL 65 dB contour and did not identify significant impacts to residential land uses based on FAA guidelines. However, it is recognized that individual noise events may be quieter or louder than cumulative noise exposure estimates provided by the DNL analysis, and that some may perceive these events as impactful to their sleep. It is also acknowledged that increase flights may cause nearby areas to perceive increased vibrations as aircraft pass over, the EA assessment did not identify significant impacts that would warrant a specialized vibration analysis. Separate from the EA, the City has proposed conceptual noise abatement measures and has implemented a voluntarily runway use program to address noise-related concerns of the surrounding community. Aircraft using LAL coordinate approach and departures with the Air Traffic Control Tower and use published flight procedures. The current approach and departure procedures at LAL include operational constraints such as operating height due to LAL's location between two major hub airports and the presence of other nearby airports. Refer to Topical Response 2b (Air Traffic and Overflights)Topical Response 2e (Vibration), and Topical Response 2f (Sleep Disturbance) for additional details related to
John Tutton 727 Jefferson Ave	P026	14-21	I don't care about creating jobs or economic impact or any thing your project thinks is a benefit.	the topics raised in this comment. Comment noted.
Lakeland, FL 33801 Michael Sivilli 4423 Southpark Trail Lakeland, FL 33813	P027	14-22	If you look at the number of homes + quantity of homes in the approach corridor Amazon is currently using, homes 1+ miles away are being impacted. The value of these properties will drop significantly & the city tax base will suffer significantly.	The noise analysis conducted for the EA evaluated noise increases and potential impacts due to implementing the Proposed Development Project. As discussed in Topical Response 2b (Air Traffic and Overflights), no changes to existing flight procedures were proposed as part of the Proposed Development Project, and the noise analysis in the EA was prepared using published arrival and departure procedures and current operational information. The analysis concluded that the Proposed Development Project would not cause noise impacts that exceed FAA's thresholds that would indicate significant noise impact. e. The DNL 65 dB noise contour would remain located mostly on airport property.

Commenter	Letter Code	Comment Code	Comment	Response
	Oode	Code		However, individual overflights may be quieter or louder than indicated by the cumulative noise exposure (DNL). The EA did not identify any significant social, environmental, and economic impacts associated with the Proposed Development Project. Negative effects on property value are not anticipated. Refer to Topical Response 4 (Impacts on Property Values) for further discussion of the topics raised in this comment.
John L. Johnson 4958 Foxwood Lake DR Lakeland, FL 33810	P028	14-23	I am in favor of new business in Lakeland, including the proposed Amazon expansion, for the economic benefits to the city. The economic benefits are new jobs and additional tax revenue Another benefit will be increased potential of commercial passenger airlines flying out of Lakeland.	Comment noted.
Walt Tyson 241 Pinellas St. Lakeland Fl 33803	P029	26-3	Will every Lakeland elected official and employee that is here tonight introduce themselves + explain how they are involved in this project (not necessary if that's already part of the program).	This comment was received in writing after the hearing had concluded. No elected officials were in attendance at the Public Workshop and Public Hearing. LAL staff and the consultant that prepared the Draft EA were in attendance. Meeting sign-in sheets from the public hearing are available in Appendix J.3 of the Final EA. The commenter can request a list of attendees by contacting the Airport Administration Office at 863-834-3298 or e-mail lakelandairport@lakelandgov.net.
William Judd 3945 Serenade Ln. Lakeland, FL 33811	P030	14-24	There is a proposal for a "round-a-bout" at the entrance of the main road to the airport terminal and Milton going south and Publix employee [sic] going north from Drane Field. This may impact large tractor-trailers entering and leaving the airport.	Based on current planning, it is not anticipated that truck traffic would access the Polk Parkway via Drane Field to Waring Road, and therefore would not use the planned roundabout at Drane Field and Waring roads. Instead, the traffic would leave the facility at either the existing access point at Kidron Road or the planned access point at Kelvin Howard Road, and would access Polk Parkway via Airport Road, which is west of the area referenced.
Valerie Tutton 727 Jefferson Avenue Lakeland, Florida 33801	P031	20-7	Community drives the success of living. Peace of mind within that community drives the success of people who live, work, play, and financially support our local businesses. The impact on [sic] this expansion promotes the opposite, because this expansion is supporting only financial gains for your corporation and negatively impact [sic] what I thought was Lakeland.	In maximum peak conditions, the Proposed Development Project has the potential to add up to 800 new jobs. Therefore there is economic benefit available to the community as a result of job creation. Also refer to Topical Response 3 (Quality of Life) for additional details related to the topics raised in this comment.
Valerie Tutton 727 Jefferson Avenue Lakeland, Florida 33801	P031	26-4	You're just following requirements, but ultimately this will pass and Lakeland Community will just be described as NOISE and environmentally unfriendly. Your corporation seems to be placating us.	Comment noted.
Valerie Tutton 727 Jefferson Avenue Lakeland, Florida 33801	P031	13-19	My husband + I hear Amazon planes daily, flying over our home.	Comment noted.
Elona Creighton 2924 Grassland Dr (Fairway Lake) Lakeland, FL 33803	P032	13-20	As a resident of Grasslands I implore Lakeland Linder to be persistant [sic] with the FAA enough to implement a noise reduction of planes taking off from the airport in the evening. Are [sic] sit by the pool in the evening and it is absolutely necessary to stop talking because it is so loud that we are unable to hear.	The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA review. If the proposed procedures are determined to be feasible, they would be subject to development, review, and environmental analysis prior to approval. The City has also implemented a voluntary preferential runway use program for eastern arrivals and western departures between the hours of 10:00 pm and 7:00 am, when winds, weather, and other factors allow.

Commenter	Letter Code	Comment Code	Comment	Response
				Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 2g (Speech Interference) additional details related to the topics raised in this comment.
Lynn Thompson Sandhill Crane Dr Lakeland 33811	P033	13-21	The noise problem is the big planes, not the average of small + big. No one knows the loudness # of the big planes That's treating us like we're stupid. You HAVE to know and just won't say. Increasing 737s + 767s by 16 HAS to make a bigger difference than what you claim. Put the names of streets on the maps! That would be so easy + helpful. I'm concerned about the next move. You're doubling BIG plane traffic, non-chalantly	As discussed in Topical Response 2a (Noise Analysis Methods), the FAA's guidelines for considering noise impacts require the use of the Day-Night Average sound level (DNL) noise metric, which is a time weighted 24-hour average of all aircraft using the airport on a given day, including the referenced aircraft. It is acknowledged that individual aircraft flyovers can be quieter or louder, and that some commenters noted an increase in noise-related sleep disruption, but FAA, EPA, other Federal agencies, and FICAN have determined that DNL should be used in making noise and land use compatibility decisions. Alternative metrics have been researched since the Aviation Safety and Noise Abatement Act was enacted.
			[sic] Where are you thinking about your next move? 100 planes? Can you limit the size of the planes? Can you protect against the crazy loud noise on take-off? Babies are sleeping, 3 rd shift workers are sleeping, old people, sick people – all are so affected?	However, the research results determined that DNL is still the best available metric for determining noise impacts and land use compatibility. Further, the City of Lakeland cannot prohibit certain types of aircraft from using the public use airport. The 737 and 767 are the aircraft selected and used by Amazon. Smaller aircraft cannot carry as much cargo and would require more flights to carry the same amount of cargo.
Lynn Thompson Sandhill Crane Dr Lakeland 33811	P033	14-25	How many jobs will be added? What will be the compensation?	In maximum peak conditions, the Proposed Development Project has the potential to add up to 800 new jobs with a minimum hourly wage starting at \$15/hour.
Roger Grafton 1054 Canary Cir S Lakeland Fl 33809	P034	27-2	I feel like this would be a [sic] assent [sic] to the city of Lakeland. More services maybe later get a [sic] airline to come to Lakeland the employment with this would be a plus. People that live by a [sic] airport should expect some air traffic noise.	Comment noted.
Michael Hardin and Christine Jacobson 4545 Ginny Dr. Lakeland, FL 33811	P035	14-26	I am a homeowner of a property located 3 miles from LAL. This development will affect my quality of life and the value of my property.	As referenced in Topical Response 3 (Quality of Life), Chapter 5 of the EA discusses the effects of the Proposed Development Project a variety of environmental resources, including noise, air quality, and socioeconomic impacts, which are most frequently associated with quality of life effects. No significant impacts in the areas of noise and air quality were identified per established NEPA guidelines, and traffic impacts would be less than significant with mitigation implemented. A variety of environmental resource categories typically associated with quality of life concerns, including noise, were evaluated in the EA and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project. Refer to Topical Response 3 (Quality of Life) for a discussion of quality of life concerns
Michael Hardin and Christine Jacobson 4545 Ginny Dr. Lakeland, FL 33811	P035	20-8	I am already affected by the 22 flights in and out of LAL with respect to noise, traffic and pollution concerns. With this Phase II development doubling the number of flights in and out it doubles my concerns over what has already become an issue in my neighborhood. Noise, traffic, pollution and the decreased value of my home and property.	and considerations. With regard to pollution, the EA reviewed and analyzed potential impacts to air quality, hazardous materials and solid waste, and water quality. The additional flights that would result from the Proposed Development Project would cause an increase in air emissions at LAL. However, the air quality analyses performed for the EA concluded that that the

Commenter	Letter Code	Comment Code	Comment	Response
	5545	Journal		Proposed Development Project would not cause air quality impacts that exceed FAA's thresholds that would indicate significant air quality impact.
				There are no known hazardous materials sites located in or adjacent to the proposed project area, and Amazon would implement recycling, reuse, and waste reduction measures. No new hazardous materials or wastes would be produced, used, or stored at the proposed facility.
				Standard best management practices and water quality permit requirements would be implemented to protect water quality during the construction and operation of the Proposed Development Project. Drainage features would also be installed with the Proposed Development Project to treat and attenuate stormwater runoff from paved surfaces in accordance with required permits.
				The traffic impacts analyses performed for the EA identified needed improvements (dedicated turn lanes) at one intersection (Kidron Road at Drane Field Road). During the development of the EA, the turn lanes were constructed at this intersection to improve its performance and reduce congestion. This mitigation would offset project-related traffic impacts anticipated in 2022 and 2027.
				Refer to Topical Response 1 (Worsening of Existing Air Quality), Topical Response 2c (Flight Frequency and Schedule), Topical Response 4 (Impacts on Property Value), Topical Response 5b (Existing Traffic Congestion) for additional details related to the topics raised in this comment.
Michael Hardin and Christine Jacobson 4545 Ginny Dr.	P035	14-27	The second concern I have with the development of the project concerns my well being because I am employed by a business at the airport that services the general aviation community. This development will have a detrimental effect on the business. With the heavy traffic into and out of the airport our customers will hesitate to fly their planes in this new air traffic. And, the changes being made to the airport property to	The City of Lakeland has historically supported and accommodated a wide range of activities at LAL, including general aviation, commercial, light industrial, military, and general business. The existing air cargo facility and proposed expansion are located in an area that does not exclude or compete with other airport businesses. LAL has reinforced its commitment to general aviation business development and operations consistently throughout its capital planning process. Property leased for general aviation purposes is and will continue to remain an important revenue generator at LAL.
Lakeland, FL 33811			accommodate the new warehouse space will hinder easy access into and out of our business.	The proposed additional cargo flights would represent an 4.11 percent increase over the forecasted operations in 2022 and 5.07 percent in 2027 under the No-Action Alternative (if the Proposed Development Project did not occur). This increase in aircraft activity would not noticeably affect airport access by other aircraft.
Michael Hardin and Christine Jacobson 4545 Ginny Dr. Lakeland, FL 33811	P035	28-8	Because of the reasons stated above I OBJECT to the Phase II Air Cargo Facility Development.	Comment noted.

Commenter	Letter Code	Comment Code	Comment	Response
Donovan Baltich [NO ADDRESS PROVIDED] (Private statement made to court reporter at Public Hearing)	P036	14-28	I'm excited to have Amazon here for the growth of the airport, for the economic impact, the jobs they are bringing and the awesome staff at the airport.	Comment noted.
Donovan Baltich [NO ADDRESS PROVIDED] (Private statement made to court reporter at Public Hearing)	P036	27-3	I support the initiative, the Amazon facility expansion at the airport.	Comment noted.
Theresa Garcia [NO ADDRESS PROVIDED] (Private statement made to court reporter at Public Hearing)	P037	21-11	Okay. I would like to know what kind of security will be around the fuel tanks so that they don't get blown up by some terrorist or a plane crashing into them and blow out everybody's houses and windows around for miles. I want to know what kind of security they're going to have around those fuel tanks because they're aboveground.	The proposed fuel storage area would be located inside LAL's secured area, which is a restricted space with strict access controls that include security fencing and controlled gates. Access to this area is granted to a limited number of LAL and tenant employees on an as-needed basis and requires certification and rigorous background screening for each employee to be granted access. Refer to Topical Response 6c (Aboveground Storage Tanks) for additional details related to the topics raised in this comment.
David J. Logsdon 1779 Laurel Glen Place Lakeland, FL 33803-5419	P038	13-22	It is imperative that the FAA and the Airport consider the noise and visual intrusion created by this increasing number of flights. Specifically, it is problematic that many (if not most) of these flight paths take these aircraft over the Grasslands Golf and Country Club at low altitudes. It is my observation that departures are more of a problem than arrivals.	The EA's environmental review included a detailed noise analysis that included the flight paths currently in use. While individual overflights may cause a temporary increase in noise in a particular location, the analysis concluded that the cumulative noise level at Grasslands Golf and Country Club is compatible with the existing land use. Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 2c (Flight Frequency and Schedule) for additional details related to the topics raised in this comment.
David J. Logsdon 1779 Laurel Glen Place Lakeland, FL 33803-5419	P038	20-9	[W]e are not supportive of the reduced quality of life in Grasslands that the increasing flight frequency is creating.	A variety of environmental resource categories typically associated with quality of life concerns, including noise, were evaluated in the EA, and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project. The Grasslands is not located in the DNL 65 dB noise contour and would remain a compatible land use with the Proposed Development Project. Refer to Topical Response 3 (Quality of Life) for a discussion of quality of life concerns and considerations.
David J. Logsdon 1779 Laurel Glen Place Lakeland, FL 33803-5419	P038	3-3	We urge the FAA and the Airport to consider and utilize whatever Noise Abatement Protocols are available. There is plenty of open space around Grasslands Gold and Country Club that could and should be utilized for the flight paths these aircraft arrivals and departures.	The City of Lakeland has submitted conceptual procedural changes for FAA consideration. If the changes are determined to be feasible, they will be subjected to a separate detailed review and environmental analysis. Refer to Topical Response 2b (Air Traffic and Overflights) for additional details related to the topics raised in this comment.
Daniel B. Green Principal Wheelock Street Capital, LLC 3829 Progress Dr. Lakeland, FL 33811	P039	13-23	While we love the economic progress of having Amazon here in Lakeland and complement you on that coup, the flight pattern over the Grasslands community is very troublesome. Please consider this not only as a noise complaint but a notice of potential diminution of value and we encourage you to continue working with the FAA to modify that flight pattern for Amazon and other large planes to follow.	The City of Lakeland has submitted conceptual procedural changes for FAA consideration. If the changes are determined to be feasible, they will be subjected to a separate detailed review and environmental analysis. Refer to Topical Response 2b (Air Traffic and Overflights) for further details. In addition, Topical Response 4 (Impacts on Property Values) explains that the EA did not identify any significant social, environmental, and economic impacts associated with the Proposed Development Project. Negative effects on property value are not anticipated.

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Michael Green 3107 Sanctuary Circle Lakeland, FL 33803	P040	13-24	I love Lakeland, However, I have been disturbed lately by the frequency of low flying Amazon jets directly over our home. Several times a day, the jets take off from our airport and bank hard to the north, right over our homes in Grasslands. The noise is quite loud as they pass over at such a low altitude.	, , , , , , , , , , , , , , , , , , , ,
Michael Green 3107 Sanctuary Circle Lakeland, FL 33803	P040	3-4	It seems like a logical solution would be to simply have the planes travel a little further east upon take off, and bank their turn north over the non-residential, commercial area of Florida Avenue.	Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would be subject to a separate detailed review and environmental analysis prior to approval. Refer to Topical Response 2b (Air Traffic and Overflights) for additional details related to the topics raised in this comment.
Dr. Lester B. Chernick 3340 Turnberry Dr. Lakeland, FL 33803	P041	13-25	While we appreciate the presence of Amazon and what they contribute to our community, the noise their planes create upon takeoff to the east is untenable. If they could travel a mile or two further east prior to turning north our community would avoid the incredible low altitude noise disturbance created by their numerous takeoffs. Flying over the Polk Parkway just a bit further and then turning north or south would make a big difference in our quality of life and protect our home values immensely. We would appreciate your consideration on this matter greatly.	While individual aircraft overflights may be quieter or louder at a given location than is indicated by the DNL (cumulative noise exposure) metric, the analysis of existing noise conditions performed for the EA concluded that the current noise level in residential areas surrounding LAL is compatible with residential land use. Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would be subject to a separate detailed review and environmental analysis prior to approval. Refer to Topical Response 2b (Air Traffic and Overflights), Topical Response 3 (Quality
Michael MYERS 3000 Sanctuary Circle Lakeland, Florida 33803	P042	3-5	Living in Grasslands and Golf Community used to be a very pleasant life. With the increase in larger low flying aircraft flying in and out of your facility, not so much. I have heard many stories and I believe that these airplanes could be redirected and not be flying so low over our community. I am all for progress and growth, but this should not be at such an [sic] noisy cost to the residents in Grasslands.	(Quality of Life) for discussion and additional details related to the topics raised in this
Michael MYERS 3000 Sanctuary Circle Lakeland, Florida 33803	P042	13-26132	Please see if you can get these planes redirected and not over my home.	Refer to Topical Response 2b (Air Traffic and Overflights) for a discussion related to the topics raised in this comment.
Nan Simon 1934 Heritage Lakes Blvd Lakeland, FL 33803	P043	13-26	You've heard from me before, but just wanted to express my disappointment that your airport is allowing these huge Amazon Prime jets to take off right over Grasslands until late in the evening (even 10:45 pm the other night and woke up our entire family on a school night), as well as super early some mornings (5:00 hour one morning).	As explained in Topical Response 2c (Flight Frequency and Schedule), current Phase I facility operations generate seven average daily operations during nighttime hours based on current operational needs, and these would increase to between 17 to 21 average daily nighttime operations in 2022 and 2027, respectively. The EA discusses potential noise impacts associated with these increases and identifies no significant noise impacts based on FAA's accepted metric for cumulative noise exposure (DNL). However, it is recognized

Commenter	Letter Code	Comment Code	Comment	Response
				that individual noise events may be quieter or louder than cumulative noise exposure estimates provided by the DNL analysis, and that some may perceive these events as impactful to their sleep.
				LAL is a public use airport and the City of Lakeland does not review or approve requests from aircraft operators to operate aircraft at the airport, the timing of flights, or the number of flights. Federal law preempts any local government from implementing any action that is intended to control the types of aircraft that use an airport, routes of aircraft in flight, the timing of flights, or the number of flights. Additionally, the City of Lakeland cannot impose penalties for flights that occur during nighttime hours. However, airport operators, including the City, work with airport users to make them aware of community noise issues and promote voluntary measures to reduce aircraft noise. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval.
				Refer to Topical Response 2b (Air Traffic and Overflights), Topical Response 2c (Flight Frequency and Schedule), and Topical Response 2f (Sleep Disturbance) for additional details related to the topics raised in this comment.
Nan Simon 1934 Heritage Lakes Blvd Lakeland, FL 33803	P043	20-18	I'm so disappointed in the city and our airport for allowing these flight plants that disrupt and take away the use and enjoyment of our homes. Sadly we are thinking about selling our home and moving because of this.	LAL is a public use airport and the City of Lakeland does not review or approve requests from aircraft operators to operate aircraft at the airport, the timing of flights, or the number of flights. Flight schedules are developed by individual airport users, including Amazon. Federal law preempts any local government from implementing any action that is intended to control the types of aircraft that use an airport, routes of aircraft in flight, the timing of flights, or the number of flights.
Nan Simon 1934 Heritage Lakes Blvd	P043	14-29	Especially seeing that you are going to allow them to have 44 flights per day out of Lakeland. Home values are going to crash in and around the airport.	See response to comment above regarding the City being prohibited from restricting flights at LAL. The Proposed Development Project would result in 22 additional daily arrivals and 22 additional daily departures at LAL in 2027, which were included in the EA impact analysis.
Lakeland, FL 33803	Lakeland, FL 33803			Refer to Topical Response 2c (Flight Frequency and Schedule) and Topical Response 4 (Impacts on Property Values) for additional details related to the topics raised in this comment.
Nan Simon 1934 Heritage Lakes Blvd Lakeland, FL 33803	P043	3-6	Make these huge jets follow the path of the Polk Parkway (mostly commercial) when taking off to the East.	Arrivals and departures use published approach and departure procedures, which consider other air traffic routes both at LAL and at other airports in the area. The City of Lakeland has developed and submitted flight conceptual flight procedure changes at LAL for FAA consideration. If the procedures are determined to be feasible, they would be subjected to a separate detailed environmental review and analysis prior to approval. Refer to Topical Response 2b (Air Traffic and Overflights) for additional details related to the topics raised in this comment.

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Sherrae Myers [NO ADDRESS GIVEN]	P044	13-27	I am writing as a concerned citizen to state a complaint against all of the low flying, noisy aircraft that flies over our area on a constant basis. The area I am referring to is our beautiful Grasslands Golf & Country Club community. The frequency of the excessive noise and the low flying is on a regular basis due to Amazon/Prime Air and other commercial aircraft arriving and departing. They are destroying our beautiful and peaceful area and will only increase with more large commercial air traffic as things expand. There must be a way to divert said aircraft from this area. It is sad when you have to pause a conversation because you cannot be heard over air noise or you cannot hear your television. This needs to be addressed before it gets worse.	Refer to Topical Response 2b (Air Traffic and Overflights), Topical Response 2c (Flight Frequency and Schedule), and Topical Response 2g (Speech Interference) for discussion and additional details related to the topics raised in this comment.
Nancy and Frank Bertram 2702 Bellerive Dr, Lakeland, FL 33803	P045	13-28	I just wanted to say I live in Grasslands, and I don't mind the noise from the Amazon planes, and I would welcome any flights from Southwest or American.	Comment noted.
Jack and Bea Kempster [NO ADDRESS GIVEN]	P046	14-30	The contribution of the airport to the Lakeland community cannot be understated. It's [sic] growth is essential.	Comment noted.
Jack and Bea Kempster [NO ADDRESS GIVEN]	P046	13-29	Living in Grasslands and having the planes of all sizes fly overhead almost hourly is NOT annoying. To us it's the sound of success.	Comment noted.
TL & Sherrie Johnson 2354 Heritage Lakes Dr Lakeland, FL 33803	P047	13-30	Noise abatement is an issue affecting every neighborhood either abutting or within sound proximity of an airport. Lakeland Linder is no different, excepting that the airport was at one time rurally located; however, with positive growth comes encroachment into those once "rural" areas& Lakeland is no different. Historically, aircraft noise has been addressed from an endless array of "active AND passive" aircraft & environmental perspectives & initiatives, including but not limited to: 1. Aircraft design techniques for reduction of noise at the source; 2. Pilot operational noise abatement decisions regarding power & approach & departure routes; 3. Land use & environmental planning & management; 4. Airport operating restrictions.	Comment noted.
Sheryl Rubin 2485 Laurel Glen Drive Lakeland, FL 33803	P048	3-7	Please redirect the flights from Amazon as well as future flights from Lakeland Linder Airport to prevent the planes from flying directly over Grasslands.	Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and environmental analysis prior to approval. Refer to Topical Response 2b (Air Traffic and Overflights) for additional details related to the topics raised in this comment.

Commenter	Letter Code	Comment Code	Comment	Response
Beverly and John Lowman 3053 Shoal Creek Vlg Dr Lakeland, FL 33803	P049	13-31	As Grasslands residents, we have been asked to join a request to the FAA to do whatever possible to abate the flight noise resulting from regulations imposed currently in place regarding Amazon flights. We understand that this is a complicated issue with no immediate solution.	Comment noted.
Steve Perkins 4318 Poley Lane Lakeland, Florida 33811-1466.	P050	14-31	Airports the size of Lakeland's are a magnet for growth. With the support of the City of Lakeland and airport management, Lakeland's airport has begun to attract businesses that create jobs and tax revenues that will benefit the area as well as Lakeland itself. With the addition of the Amazon Distribution Center on County Line Road a few years ago, it set the stage for more growth. With other distribution centers in the area, it made Lakeland's airport a great location for an air terminal. Apparently, that was a good choice since Amazon is now wanting to expand its operations here. Yes, Amazon's growth may create additional air traffic as well as vehicular traffic, but so will other opportunities such as commercial airlines and other businesses. The bottom line here is, anyone objecting to this proposed expansion, knew or should have known, the airport is here and there will be growth. I would suggest that person consider relocating.	Comment noted.
Gregory P. Kent 407 B Howard Avenue Lakeland, FL 33815	P051	13-32	I am for progress and excited about Amazon's expansion, but I do have to agree the jets going over my house are very noisy. I'm not sure why some leave at a lower altitude than others as they pass over my house. I live in the Lone Palm community and would like to go on record that the noise at times is excessive.	Refer to Topical Response 2b (Air Traffic and Overflights) for discussion related to the topics raised in this comment.
Mrs. Lynn D. Hollis 3098 Shoal Creek Village Dr. Lakeland FL 33803	P052	13-33	Grasslands is where my home is and I like the beautiful and pleasant environment. The nice quiet atmosphere has changed recently due to early morning airplane departures by Amazon. I do believe there is another route these airplanes, and any future aircraft, can use in place of the departure route over homes in the surrounding area.	Aircraft departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review, and environmental analysis prior to approval. Refer to Topical Response 2b (Air Traffic and Overflights) for additional details related to the topics raised in this comment.
Edward M. Cetrangolo 3032 Shoal Creek Village Drive Lakeland, FL 33803	P053	3-8	Is the (FAA) kidding me about flight logistics? Amazon can guild one giant building. Then another 2 nd Amazon building, twice the size of the first one. Produce the materials, workers, plans, permits, environmental assessment, yet when it comes to moving the arrival and departing flights to something structured and not all over the city, that process become [sic] a long arduous decision for the FAA.	Please refer to Topical Response 2b (Air Traffic and Overflights) for a discussion related to the topics raised in this comment.

Commenter	Letter	Comment	Comment	Response
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Edward M. Cetrangolo			Here are some Noise Abatement Programs set into action around the USA and the World. The tracking system is using state of the art instruments to determine the noise, standardized flight paths with designated turning waypoints, in conjunction with monitoring aircraft noise, it monitors altitude, speeds, type of aircraft and its destination.	Comment noted. Air cargo development in general was first represented on the ALP and in the LAL Master Plan in 2012 and development of the Master Plan included public meetings and comment opportunities. A separate EA and permitting process was also completed in 2016 for a large, multi-hangar Maintenance, Repair and Overhaul facility with a modestly-sized air cargo facility at LAL. The City proposed development of a larger air cargo facility at the site in 2018, and FAA subsequently reevaluated the 2016 EA in light of the revised project. Noise abatement plans were not required as result of these
3032 Shoal Creek Village Drive	P053	13-129	We needed a system put in place before all the flights arrived! This should have been	planning processes.
Lakeland, FL 33803			looked into before the first permits or plans were submitted to begin building super structures buildings with massive cargo jets flying all about the skies, without a pattern or plans of logistics to the airspace.	Noise abatement plans were not required or implemented prior to Amazon starting operations at LAL. However, separate from the EA, the City has proposed conceptual
			The numbering flights per week is (308) or 44 per day!	noise abatement measures and has implemented a voluntarily runway use program to address noise-related concerns of the surrounding community. Refer to Topical Response 2b (Air Traffic and Overflights) for details on these measures. These measures were also
			[Note that parentheses are shown as they appear in the original commenting email.]	presented at the EA public hearing and the presentation is available in EA Appendix L.1 .
			After studying the "FAA - WebTrak Data - Airports with noise abatement monitoring decibel location systems - surrounding the Airport's Departure and Arrivals at various airports in the USA and around the world!	
Edward M. Cetrangolo 3032 Shoal Creek Village Drive Lakeland, FL 33803	P053	3-27	The biggest visual I have noticed in my study, is that all arriving and departing flights have one thing in common! They all "DO NOT" have "RADICAL" turns after takeoff, like we have overhead in the Grasslands. That would be the most reasonable first steps and course of action to take! Please forward to the FAA our concerns and have the FAA consider and implement our proposal to eliminate the "radical" flight path (day or night)! We are	Monitoring systems, such as WebTrak, are useful for identifying and understanding individual flights and activity at an airport. This also provides information for individuals to submit noise complaints. However, these systems do not measure the cumulative noise exposure that is required for FAA studies and noise impact analyses. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA review. If they are determined to be feasible, the proposed procedures would be subject to review, and environmental analysis by FAA prior to approval.
			grateful for the recent changes to some of the late night or early morning flights. We can all agree, we sleep much better!	
Mark Kachelein 1808 Baltusrol Court Lakeland, FL 33803	P054	13-34	We purchased our home in the Grasslands in anticipation of enjoying our retirement years. We were fully aware of the occasional flight that Amazon would make above our home and we were content accepting those occasional flights as the neighborhood and adjoining communities are in such a serene location. However, it has come to our attention the airport is looking to expand in 2022 increasing the number of Amazon Prime flights, possibly up to 44 flights a day (22 arrivals and 22 departures). For this many flights to take place, the planes would have to be arriving and departing during all hours of the day.	total 19 average daily daytime operations and 17 average daily nighttime operations, for a total of 36. In comparison, Phase I and II operations in 2027 are expected to total 23 average daily daytime operations and 21 average daily nighttime operations, for a total of 44. An operation is either an arrival or a departure, and these operations often use different flight paths in and out of the airport which means not all 44 instances would necessarily occur over the same area. The EA discloses the proposed increase in air cargo flight activity associated with the
			Please understand that after serving my country for decades, I do not take writing letters or speaking out lightly. Lakeland is nestled between two large cities of Orlando and Tampa which gives all Lakeland residents the ability to enjoy the big cities but reside and still enjoy family life in a small town atmosphere and tranquil environment.	

Commenter	Letter	Comment	Comment	Response
	Code	Code	What makes Lakeland a truly enjoyable place to reside would definitely be erased with the increased flights, increased noise and visual distraction that will occur if this airport expansion happens in 2022.	Refer to Topical Response 2b (Air Traffic and Overflights), Topical Response 2c (Flight Frequency and Schedule), and Topical Response 3 (Quality of Life) for additional details related to the topics raised in this comment.
Rick & Maryanne Stevens 1708 Bayou Circle, Lakeland, FL 33803	P055	3-9	My appeal to each of you is be certain that this air traffic growth is carefully measured and controlled before any further expansion of jets flying in and out of Lakeland is approved. Boeing Jets are now flying over long established Lakeland communities at less that 1,000 feet altitude and occasionally over my house in Woodlake as late as 10:30 PM at less that 1,000 feet altitude. Airport flight expansions must be evaluated and approved after all reasonable alternatives have been documented with all flight control governing bodies in agreement. These air traffic approvals should not be to "approve it now" and work out the problems later. While I understand some of the complexities, ere is a list of what should be top initiatives: 1. Each arrival and departure flight at as high an altitude as possible over low density land away from city and heavily populated areas. 2 Agreement of all governing flight agencies what the established approaches should be. 3. Method to enforce pre established and approved approach/departure guidelines and discontinue line of sight fly ins and navigational short cut over heavily populated areas. 4. If necessary, reconfigure runways to maximize approaches and departures over less populated areas.	Airport tenants determine their aircraft flight schedules based on operational need. FAA is responsible for flight procedures and the safe and efficient use of airspace. The aircraft using LAL must follow published approach and departure procedures, which consider other air traffic routes in use both at LAL and at other airports in the area. The City of Lakeland has developed and submitted flight procedure changes at LAL for FAA consideration. If the procedures are determined to be feasible, they would be subjected to a separate detailed environmental review and analysis prior to approval. Also refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 2c (Flight Frequency and Schedule) for additional details related to the topics raised in this comment.
Robert and Susan Pericht 2351 Heritage Lakes Dr. Lakeland FL 33803	P056	13-35	We are sending you this letter (email) today to voice our deep concern and displeasure over the noise level generated by Amazon Prime Air that occurs several times a day everyday as planes fly directly over our house. This starts as early as 5:45 am and goes into the late evening. We moved to Lakeland five years ago and bought into the Grasslands community based on the premise that it was peaceful and quiet. That peaceful existence ended when Amazon Prime Air started operating out of Lakeland Linder. We now understand that Amazon Prime Air is looking to increase the number of flights each day which will bring more noise to the area [W] hen we are relaxing on our outdoor patio the noise level at times is so loud we cannot hear each other speak as planes fly overhead. Not	Communities near LAL have experienced increased noise since the initiation of air cargo operations at LAL. Some commenters noted increased cases where sleep and speech is interrupted. The EA acknowledges an increase in flight activity due to the Proposed Development Project and assesses the impacts on cumulative noise exposure based on FAA guidelines. The analysis of noise exposure in the EA was based on the DNL 65 dB contour and did not identify significant impacts to residential land uses based on FAA guidelines. However, it is recognized that individual noise events may be quieter or louder than cumulative noise exposure estimates provided by the DNL analysis, and that some may perceive these events as impactful to their sleep or speech. Separate from the EA, the City has proposed conceptual noise abatement measures and has implemented a

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			to mention being awaken from our sleep at 5:45 AM. Needless to say, our quality of life has been diminished due to the noise levels created by Amazon Prime Air.	voluntarily runway use program to address noise-related concerns of the surrounding community. The EA did not identify any significant impacts associated with the Proposed Development Project in terms of noise or traffic, which represent a majority of community concerns received pertaining to quality of life.
				Refer to Topical Response 2b (Air Traffic and Overflights), Topical Response 2f (Sleep Disturbance), Topical Response 2g (Speech Interference), and Topical Response 3 (Quality of Life) for additional details related to the topics raised in this comment.
Robert and Susan Pericht 2351 Heritage Lakes Dr. Lakeland FL 33803	P056	13-36	We are not against progress, but we would like you and the City of Lakeland to provide some consideration for the Lakeland residents that live near the airport by not only denying Amazon's request for more flights, but to figure out a better flight path that will eliminate rattling windows at 5:45 AM.	Although it is acknowledged that increased flights may cause nearly areas to perceive increased vibrations as aircraft pass over, the EA assessment did not identify significant impacts that would warrant a specialized vibration analysis. LAL is a public use airport and the City of Lakeland does not review or approve requests from aircraft operators to operate aircraft at the airport, the timing of flights, or the number of flights. Federal law preempts any local government from implementing any action that is intended to control the types of aircraft that use an airport, routes of aircraft in flight, the timing of flights, or the number of flights. However, airport operators, including the City, work with airport users to make them aware of community noise issues and promote voluntary measures to reduce aircraft noise. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval. Refer to Topical Response 2b (Air Traffic and Overflights), Topical Response 2c (Flight Frequency and Schedule), and Topical Response 2e (Vibration) for additional details
Dawn Clark 2302 Sugar Creek Drive W Lakeland, FL 33811	P057	13-37	Since Amazon flights began last year at Lakeland Linder Airport our peaceful life is bombarded with noise from Amazon all day long. It is so loud that we have to stop conversations when the jets fly over our home. There is no more sleeping past 6 AM either due to the noise from the early morning flights. We cannot hear the tv when jets fly over. They fly so low it's scary, and when we are outside the sound of the jets hurt our ears. We don't use our backyard for entertainment and relaxing like we did prior to the expansion of the airport and Amazon flights. The quality of our lifestyle has been negatively impacted by the flights. It disrupts our comfort and sleep every day! I worked from home last year, as do two of my neighbors. The jets are so loud that customers hear them over the phone as well as in person meetings, and we have to explain and repeat the portion of the conversation. It is so frustrating! My work productivity suffered from the interruption from the jets. I changed jobs due to this. I am certain if the level	related to the topics raised in this comment. Individual aircraft operations are quieter or louder than indicated by the DNL noise contour, and that some may perceive these events as impactful to their sleep. However, FAA's NEPA analysis guidance requires the use of DNL to determine land use compatibility. The noise analysis conducted for the EA concluded that the Proposed Development Project would not cause noise impacts that exceed FAA's thresholds that would indicate significant noise impact. The EA did not identify any significant impacts associated with the Proposed Development Project in terms of noise or traffic, which represent a majority of community comments received pertaining to quality of life. The comment references noise measurement versus noise modeling. It is acknowledged that the individual noise event sound levels can be different (e.g., higher) than the DNL values calculated by the AEDT model. Noise monitoring system measure discrete events.

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			of noise from the jets was measured from our yard it would be above the FAA guidelines for residences. The flight pattern is right over my home and needs to be shifted to areas that do not fly so closely over homes, such as toward the west.	That information is helpful in evaluating individual flights and addressing noise complaints. However, for assessing noise impacts and land use compatibility, the required metric (Day/Night average or "DNL") evaluates cumulative noise exposure over a 365 day period. This metric was adopted by federal agencies and is used by the FAA to assess noise impacts.
				All LAL airport users use published flight paths. The City of Lakeland has submitted procedural changes for FAA consideration. If they are determined to be feasible, they would be subjected to a separate detailed review and environmental analysis.
				Refer to Topical Response 2a (Noise Analysis Methods), Topical Response 2b (Air Traffic and Overflights), Topical Response 2c (Flight Frequency and Schedule), Topical Response 2d (Business Disruption), Topical Response 2f (Sleep Disturbance), Topical Response 2g (Speech Interference), and Topical Response 3 (Quality of Life) for additional details related to the topics raised in this comment.
Beth Dickman 2970 Shoal Creek Village Dr.	P058	13-38	I am writing to complain about the constant low, noisy Amazon flights over the Grasslands community. These planes are so low that that it makes my windows vibrate	Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Changes to flight procedures undergo detailed studies and evaluation to ensure safety and efficiency. Proposed changes are also subject to environmental review, including shift in noise that would occur. Increased flights may cause nearly areas to perceive increased vibrations as aircraft pass over, the EA assessment did not identify significant impacts that would warrant a
Lakeland, FL 33803			when they pass over. I would appreciate a new route that would take the planes over a more commercial area.	specialized vibration analysis. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review, and environmental analysis prior to approval. Refer to Topical Response 2b (Air Traffic and Overflights), and Topical Response 2e
			After living at this address for 50 happy years, we recently have become concerned	(Vibration) for additional details related to the topics raised in this comment.
Fran Haupert 504 Neslo Lane Lakeland, FL 33813	P059	13-39	over the increased low flying planes over our house. They fly so low that the plane casts a shadow on the patio and the loud sound is disturbing!. The plane easily reads "Amazon". I read the reason why they must fly so low, but it seems nothing has been done. The problem still exists!	The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review, and environmental analysis prior to approval. Refer to Topical Response 2b (Air Traffic and Overflights) a for additional
			I can not attend the meeting Thursday due to physical limitations. I must object to increasing the number of low flying Amazon planes in Lakeland.	details related to the topics raised in this comment.
Howard J. Buss 4311 Braemar Avenue Lakeland, FL 33813	P060	13-40	Since 1990 we have lived at our current address in Lakeland. This was a nice, peaceful neighborhood before Amazon started operations at the airport. The current Amazon flights are noisy, disruptive, and rain pollution down on us as they go overhead. Our	Aircraft servicing the proposed air cargo facilities would generate a modest increase of air pollutant emissions compared to existing pollutant emission totals at LAL. The detailed air quality analysis conducted for the EA concluded that the Proposed Development Project

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				Refer to Topical Response 1 (Worsening of Existing Air Quality(and Topical Response 2b (Air Traffic and Overflights) for additional details related to the topics raised in this comment.
Howard J. Buss 4311 Braemar Avenue Lakeland, FL 33813	P060	14-32	We were a comfortable distance from the airport. Over the decades, because of the city's lax zoning supervision, casual approach to impact fees, etc. the airport area has changed dramatically. Now, it is encroaching on once peaceful residential spaces. Ultimately, it will lower the quality of life and property values.	The air cargo facility, including the Phase II expansion, are within an area that has been zoned for light industrial use for many years. Operation of the facility is consistent with local zoning ordinances. The existing facility and proposed expansion would operate in a manner consistent with current and future zoning, and would not cause or require any land use or zoning changes. While the airport and light industrial are long-established land uses in the area, residential development has continued to expand in the area, including the development and construction of new neighborhoods near the airport.
				Refer to Topical Response 3 (Quality of Life) and Topical Response 4 (Impacts on Property Values) for additional details related to the topics raised in this comment.
			With Amazon moving into our neighborhood we have experienced a high level of increased noise from their planes. It seems our street is right on the planes decent route to the airport as they fly so low over us I can probably throw a stone and hit the bottom of the plane, which I've never done!	FAA NEPA guidance requires the use of DNL to make noise impact determinations. DNL considers flight paths, operation time of day, and the noise generated from specific aircraft and engine types. However, it expresses noise impacts as the cumulative exposure to noise over time. Individual overflights can be quieter or louder than what is indicated by
William Clark 2302 West Sugar Creek Drive	P061	13-41	The noise is definitely higher then [sic] the sound decibels mentioned in this article.	DNL, and the perception of individual noise events can be influenced by a variety of factors, such as a person's current activities (e.g. being on a telephone call).
Lakeland, FL 33811			My wife and 2 of our neighbors all work from home and phone conversations are now difficult to handle. My wife and neighbors say they have to place their callers on hold till the planes have passed over us.	Refer to Topical Response 2a (Noise Analysis Methods), Topical Response 2b (Air Traffic and Overflights), Topical Response 2c (Flight Frequency and Schedule), Topical Response 2d (Business Disruption), and Topical Response 2g (Speech Interference) for
			This inconvenience will increase dramatically with the proposed additional flights of up to 44 flights per day.	additional details related to the topics raised in this comment.
Michael Maguire [NO ADDRESS GIVEN]	P062	27-4	I won't be at the public hearing tonight but I want you to know that I support - and appreciate - all you have done and will do to keep our airport and city humming in tune with the times.	Comment noted.
Patty Fouts 2410 Laurel Glen Dr.	P063	13-42	I never thought I would be writing to complain, but it also never occurred to me how flights at the airport might affect my daily living. That was before Amazon and the noise caused by jets flying over Grasslands. Is it tolerable? Yes, annoying, but tolerable. I can't sit on my porch and make a phone call or listen to music or read the paper or	Communities near LAL have experienced increased noise since the initiation of air cargo operations at LAL, Some commenters noted increased cases where speech or enjoyment of outdoor activities is interrupted. Because the residential land uses within (or newly within) the DNL 65 and higher noise contours shown in the EA would not experience a 1.5

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			visit with friends without knowing I will probably have to stop and wait for a plane to pass - often one plane behind another. My husband and I had just enlarged our porch the November before all of this started so that we would have the space to enjoy having family together. The noise is a disruption and I am very concerned that it will soon be worse. I also fear that the value of our home will decline because of it - a home we bought because of the quiet, tranquil area in which to live our retirement years.	considered significant. The EA did not identify any other significant impacts associated
				Refer to Topical Response 2b (Air Traffic and Overflights), Topical Response 2g (Speech Interference) and Topical Response 4 (Impacts on Property Values) for additional details related to the topics raised in this comment.
Tosh Sargeant [ADDRESS NOT PROVIDED]	P064	14-33	How many full time jobs, with full benefits, will Amazon provide to the citizens of Lakeland? Not to individuals who live in the "surrounding area". How many good paying jobs will go to Lakeland city residents?	In maximum peak conditions, the Proposed Development Project has the potential to add up to 800 new jobs with a minimum hourly wage starting at \$15/hour. Amazon currently employs more than 1,000 City of Lakeland residents across multiple sites and has been operating in Lakeland since 2014.
Tosh Sargeant [ADDRESS NOT PROVIDED]	P064	23-2	How will Amazon become part of the Lakeland community?	Amazon's current lease at LAL is for a period of 20 years which represents a long-term investment in the area. The air cargo services provider voluntarily provided the following information in response to this comment: At the company level, Amazon sponsors initiatives to increase access to computer science education for children and young adults from underserved or underrepresented communities and funds additional STEM and computer science outreach and education initiatives. For its employees, tuition assistance is available towards a certificate or diploma in qualified fields of study, leading to in-demand jobs. Amazon also contributes in-kind and cash donations to communities to increase access to food, shelter, and basic goods for children and families. Amazon's Housing Equity Fund is providing more than \$2 billion in below-market loans and grants to preserve and create more than 20,000 affordable homes for individuals and families earning moderate to low incomes in our hometown communities. The company also leverages their worldwide logistics network to aid in disaster relief in communities impacted by natural disasters.
Tosh Sargeant [ADDRESS NOT PROVIDED]	P064	23-3	Will Amazon sponsor Lakeland events?	The Airport works with tenants to support the local community and promote engagement including local event sponsorship opportunities, STEM education programs, and job fairs.
Tosh Sargeant [ADDRESS NOT PROVIDED]	P064	14-73	Is Amazon prepared to not just provide infrastructure to promote more business, but infrastructure to promote healthy lifestyles in Lakeland?	The Airport works with tenants to support the local community and promote engagement including local event sponsorship opportunities, STEM education programs, and job fairs.
Tosh Sargeant [ADDRESS NOT PROVIDED]	P064	14-74	I fear increasing Amazon's presence in Lakeland will create a temporary economy or a transient economy.	The lease term for the air cargo facility at LAL is 20 years which represents a long-term investment in the Lakeland area. Within this timeframe, the Proposed Development Project has the potential to add up to 800 new jobs at LAL with a minimum hourly wage starting at \$15/hour. Amazon currently employs more than 1,000 City of Lakeland residents across multiple sites and has been operating in Lakeland since 2014.

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Tosh Sargeant [ADDRESS NOT PROVIDED]	Code P064	23-4	How will Amazon contribute to our community and our local culture?	As previously stated, the current lease at LAL is for a period of 20 years which represents a long-term investment in the area. See response to Comment P064 23-2 for a summary of company-wide initiatives that demonstrate Amazon's track record in giving back to communities in which it operates.
Brandt Merritt Lakeland, Florida [ADDRESS NOT PROVIDED]	P065	27-5	I won't be able to make the meeting tonight or give other public input, but I wanted to at least drop a line by email to say that Amazon should be given the green light to expand their physical footprint and the number of flights. We're on the flight path (off Hallam/Live Oak), and while I notice many of the planes when they go overhead I think it's pretty cool and not disruptive. The airport is an appropriately zoned location for this kind of expansion, and it puts Lakeland even more on the map as a critical commercial base of operations. In other words, the benefits far outweigh any drawbacks in my opinion, particularly as some of the flight path issues get ironed out with the FAA over time.	
Dr. John "Mike" Loudon [NO ADDRESS PROVIDED]	P066	27-6	My wife and live in southeast Lakeland and enjoy seeing those big blue and white Amazon jets fly over our house and on to Lakeland Linder Field. It's thrilling to see Lakeland become a commercial air center. To me, it speaks of great progress moving forward.	Comment noted.
Shawn Warren 3125 Winged Foot Drive Lakeland, FL 33803	P067	13-43	I wanted to send you a big thank you for all that you and your team are doing to support and grow our aviation businesses in Lakeland. It is a vital part of our ability to grow while maintaining the quality of our community. There are those who, while enjoying these benefits, are complaining about the "noise." The "noise" is very minimal and short lived. I have lived in the Grasslands community for 20 years now and have absolutely no problem with the flights that travel over our development. Many travel right over my house. I actually very much enjoy these flights, being an aviation fan plus knowing how healthy it is for Lakeland. Feel free to vector as many of them over our house as necessary.	Comment noted.
Donovan C. Baltich [NO ADDRESS PROVIDED]	P068	27-7	I'm very pleased with the progress you've made growing the airport and couldn't be happier about Amazon expanding its footprint in Lakeland.	Comment noted.
Frances C. Stephens [NO ADDRESS PROVIDED]	P069	13-44	Noise and air pollution have become problematic since Amazon began expanding flights. They are ruining our quiet rural life style that so many of us moved to Lakeland to enjoy.	As discussed in EA Sections 4.2 and 5.2 , the airport is located in an attainment area for all National Ambient Air Quality Standards (NAAQS). Data from the outdoor air monitoring network in the area demonstrate that there have been no violations of the NAAQS in the area, even after initiation of Phase I air cargo operations in 2020. Similarly, the noise analysis prepared for the EA demonstrates that under existing conditions, residential areas adjacent to and near LAL experience cumulative noise levels below DNL 65 dB, at which airport noise is considered compatible with residential land use. However, individual overflights may be quieter or louder at a given location, than is indicated by the DNL metric. Topical Response 3 (Quality of Life) summarizes that impacts commonly associated with quality of life concerns were evaluated in the EA, including

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	Code	Code		noise and air quality, and the EA indicates that no significant impacts would occur due to implementing the Proposed Development Project.
				Refer to Topical Response 1 (Worsening of Existing Air Quality), Topical Response 2a (Noise Analysis Methods), and Topical Response 3 (Quality of Life) for additional details related to the topics raised in this comment.
Frances C. Stephens [NO ADDRESS PROVIDED]	P070	14-34	This expansion will tank property values for many of us near the airport. In return we get a few slave labor jobs.	The EA did not identify any significant social, environmental, and economic impacts associated with the Proposed Development Project. Negative effects on property value is not anticipated. Refer to Topical Response 4 (Impacts on Property Values) for additional details related to the topics raised in this comment.
Deborah Bowers Schaffer 2441 Laurel Glen Drive Lakeland, Florida 33803	P071	13-45	I attended the workshop and hearing last night at RP Funding. I live in Grasslands! The Amazon proposal is unacceptable increasing the noise and surface transportation.	The noise analyses conducted for the EA concluded that the increased aircraft activity resulting from the Proposed Development Project would not cause noise impacts that exceed FAA's thresholds that would indicate significant noise impacts. The traffic studies conducted for Phase I development and the Phase II expansion evaluated in the EA identified needed improvements (dedicated turn lanes) at one intersection (Kidron Road at Drane Field Road). During the development of the EA, the turn lanes were constructed at this intersection to improve its performance and reduce congestion. This mitigation would offset project-related traffic impacts anticipated in 2022 and 2027. Therefore, the Proposed Development Project would not cause surface traffic impacts that exceed FAA's thresholds that would indicate significant surface traffic impact.
				Refer to Topical Response 2c (Flight Frequency and Schedule) and Topical Response 5b and 5c (Proposed Traffic Impacts) for additional details related to the topics raised in this comment.
Deborah Bowers Schaffer 2441 Laurel Glen Drive Lakeland, Florida 33803	P071	14-35	The arrival of the uncontrolled flight pattern of Amazon prime has compromised our housing development, most likely decreasing our quiet environment and housing prices!	Airspace at and around LAL is managed by the FAA, and considers air traffic both at LAL and at other airports in the area. During approach and arrival operations, aircraft activity is coordinated with the LAL Air Traffic Control Tower, and aircraft use published flight paths, therefore aircraft activities are not uncontrolled The EA did not identify any significant noise, social, environmental, and economic impacts associated with the Proposed Development Project. Negative effects on property value are not anticipated.
				Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 4 (Impacts on Property Values) for additional details related to the topics raised in this comment.
Robin Thompson 3925 Sandhill Crane Drive Lakeland, FL 33811	P072	1-1	I reviewed the draff [sic] Assessment document and didn't see any data that an Origin and Destination Study was done just for Drane Field Road	Topical Response 5a (Analysis Approach and Study Area) elaborates on the methods used to assess traffic impacts associated with existing (Phase I) and proposed (Phase II) traffic operations. To define the study area for the Phase I Study, information was provided for planned Phase I operations. According to the information provided, traffic associated with Phase I would utilize Drane Field Road to reach either County Line Road, Airport Road, or the Polk Parkway. Heavy truck traffic would predominantly use Drane Field Road

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				eastbound to Airport Road as a means to reach Interstate 4, although some trucks would continue past Airport Road and continue along Drane Field Road to either access the Polk Parkway or continue east. Although some truck trips would head westbound on Drane Field Road to County Line Road and either head north or south on County Line Road to their destinations, most of the trips going westbound on Drane Field Road from the Phase I facility would be employee traffic-related.
				For the Phase II Study, the traffic conditions and roadway capacity analysis contained in the Phase I Study was validated for use in the EA to represent the No-Action Alternative. Traffic volume updates and adjustments were performed where needed to accurately reflect No-Action traffic conditions for the EA analysis years of 2022 and 2027. Information provided for Phase II operations did not reveal any changed trip distribution or origin/destination information that would cause the study area used for the Phase I study areas or assumptions to change. An Origin and Destination Study is not required for the air cargo development projects and therefore was not included the EA.
Robin Thompson 3925 Sandhill Crane Drive Lakeland, FL 33811	P072	14-36	I did not see any impacts to surrounding roadways, such at Pipkin. While most of the impacts will happen on Drain, there will be some diversion of traffic and/or additional traffic from the O& D study for Waring, Pipkin and County Line, not just at or on Drain Field Road. While the traffic study maybe only required for Drain Road by the FAA, the Airport and City should look at the ancillary impacts of the traffic model. It would not take a lot of additional time to rerun the model for the surrounding area. One of the folks helping at the boards, told me to request a written response on the traffic study, which I a [sic] officially requesting.	See previous response, and also refer to Topical Response 5a (Analysis Approach and Study Area) and Topical Response 5c (Proposed Development Project Traffic Impacts) for information related to this comment. The traffic studies conducted prior to and for the development of the EA were conducted according to best practices and standards described in the Transportation Research Board's Highway Capacity Manual, and in coordination with Polk County Transportation Planning Organization and the City of Lakeland.
Robin Thompson 3925 Sandhill Crane Drive Lakeland, FL 33811	P073	13-46	I also understand that the Noise levels do not require Noise Mitigation, but why doesn't the Airport enter into a voluntary program to purchase property surrounding the Airport, especially on the east side. These purchases can be done as properties go up for sale? This has been done successfully at other locations around the country and will help with any future expansion.	The City does not currently have plans to voluntarily acquire or purchase properties as part of abating noise due to the existing or proposed air cargo operations. Land acquisition may occur in the future if a future parallel runway, as discussed in the Airport Master Plan and on its ALP, were ever constructed. However, in acknowledgement of noise concerns in the surrounding community, the City has implemented a voluntary preferential runway use program for eastern arrivals and western departures between the hours of 10:00 pm and 7:00 am, when winds, weather, and other factors allow. The City has also proposed conceptual new arrival and departure procedures at LAL as potential noise abatement measures. Refer to Topical Response 2b (Air Traffic and Overflights) for additional details related to the topics raised in this comment.
David Houston 2673 Bellerive Dr Lakeland Fl 33803	P074	13-47	I am a resident of Grasslands and am asking you to forward my complaint to the FAA. All communities around the airport need relief from the low flying Amazon flights as soon as possible. Please let the FAA know the path for exiting flights needs to be changed to give us relief from the noise.	Departures and arrivals at LAL use published air traffic procedures that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to

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				approval. Refer to Topical Response 2b (Air Traffic and Overflights) for additional details related to the topics raised in this comment.
Jacqueline Schwartz [NO ADDRESS PROVIDED]	P075	14-37	Amazon takes away from our local businesses every single day and we're going to support it and make it get bigger and bigger and bigger.?	Comment noted.
Jacqueline Schwartz [NO ADDRESS PROVIDED]	P075	13-48	But talking about the noise I live on the east side by Cleveland Heights two blocks away from the Polk parkway the noise for us right now is atrocious I live in an old house and my windows rattle with the noise.	Communities near LAL have experienced increased noise since the initiation of air cargo operations at LAL. The EA assesses the impacts of the Proposed Development Project on cumulative noise exposure based on FAA guidelines. Because the residential land uses within (or newly within) the DNL 65 and higher noise contours shown in the EA would not experience a 1.5 decibel increase due to the Proposed Development Project, the impacts are not considered significant. Although it is acknowledged that increased flights may cause nearly areas to perceive increased vibrations as aircraft pass over, the EA assessment did not identify significant impacts that would warrant a specialized vibration analysis. Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval. Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 2e (Vibration) for additional details related to the topics raised in this comment.
Connie Durrence 3062 Shoal Creek Village Drive Lakeland, FL 33803	P076	13-49	I wanted to register my complaint about the large number of Amazon flights each day which seem to be flying directly over my house in Shoal Creek Village in Grasslands. The noise is at such a level that if I'm watching TV or simply having a conversation with friends we are unable to hear each other until the plane has left the area.	Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 2g (Speech Inference) for additional details related to the topics raised in this comment.
Connie Durrence 3062 Shoal Creek Village Drive Lakeland, FL 33803	P076	20-10	I am a supporter of businesses that bring jobs to our city and county, but the quality of our life should not be so drastically impaired when there are solutions to mitigate this intrusion. I would appreciate any steps you can take to help us.	Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has proposed new abatement flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval. As also mentioned in previous responses, a variety of environmental resource categories typically associated with quality of life concerns, including noise, were evaluated in the EA and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project. Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 3 (Quality of Life) for additional details related to the topics raised in this comment.

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Elizabeth and Jock Willers 2476 Laurel Glen Dr Lakeland, FL 33803	P077	13-50	Please help stop these low flying flights over the Grasslands community. They are LOUD. They are disruptive. Please work with the FAA to stop these unnecessary flight paths.	Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval. As also mentioned in previous responses, a variety of environmental resource categories typically associated with quality of life concerns, including noise, were evaluated in the EA and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project.
				Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 3 (Quality of Life) for additional details related to the topics raised in this comment.
Robert and Tammy Rehnke [NO ADDRESS GIVEN]	P078	13-51	After moving in to our new home in September we starting hearing and seeing the Amazon Prime flights go over our home They fly so very low to our home it is scary It can be so loud and literally scary to us when it directly goes over our house at such a low altitude.	Arrivals and departures use published approach and departure procedures that have been developed to ensure the safe and efficient use of airspace and approved by the FAA. These procedures consider a variety of factors including the air space requirements of other nearby airports, and are subject to detailed review and analysis prior to approval. Because LAL is located between two major hub airports, the currently approved approach and departure procedures include aircraft height limits during these operations. Refer to Topical Response 2b (Air Traffic and Overflights) for additional details related to the topics raised in this comment.
Curtis W. Cassidy, M.D. 3105 Legends Circle Lakeland, FL 33803	P079	13-52	You must stop these low flying flights over the Grasslands community. They are LOUD. They are disruptive. Please work with the FAA to stop these unnecessary flight paths.	Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval. A variety of environmental resource categories typically associated with quality of life concerns, including noise, were evaluated in the EA and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project. Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 3
Bill McClellan 3480 Turnberry Dr Lakeland, FL 33803	P080	13-53	You must stop these low flying flights over the Grasslands community. They are LOUD. They are disruptive. Please work with the FAA to stop these unnecessary flight paths.	(Quality of Life) for additional details related to the topics raised in this comment. Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval. As also mentioned in previous responses, a variety of environmental resource categories typically associated with quality of life concerns, including noise, were evaluated in the EA

Commenter	Letter Code	Comment Code	Comment	Response
				and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project. Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 3
				(Quality of Life) for additional details related to the topics raised in this comment. Departures and arrivals at LAL use published air traffic patterns that consider safety and
Jerry Bridges 1763 Laurel Glen Place Lakeland, FL 33803	P081	13-54	You must stop these low flying flights over the Grasslands community. They are LOUD. They are disruptive. Please work with the FAA to stop these unnecessary flight paths.	airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has submitted conceptual noise abatement flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development,
				Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 3 (Quality of Life) for additional details related to the topics raised in this comment.
Alice Gilbertson [NO ADDRESS PROVIDED]	P082	13-55	I am hearing impaired, yet the noise they create as they fly over my patio is too loud for even me. We bought a house in the Grasslands because of its serene atmosphere. Amazon flights have destroyed our peaceful environment.	Communities near LAL have experienced increased noise since the initiation of air cargo operations at LAL. Noise from existing air cargo operations at LAL is included in the EA analysis of the No-Action Alternative and Proposed Development Project. The EA acknowledges an increase in flight activity due to the Proposed Development Project and assesses the impacts on community noise exposure based on FAA guidelines. The analysis of noise exposure in the EA was based on the DNL 65 dB contour. Because the residential land uses within (or newly within) the DNL 65 and higher noise contours shown in the EA would not experience a 1.5 decibel increase due to the Proposed Development Project, the impacts are not considered significant. However, it is recognized that individual noise events may be quieter or louder than cumulative noise exposure estimates provided by the DNL analysis, and that some may perceive these events as impactful to their quality of life. The EA impact analysis for the Proposed Development Project evaluated many areas that are typically associated with quality of life impacts (e.g., noise, traffic, air quality) and determined that no significant impacts would occur. Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 3 (Quality of Life) for additional details related to the topics raised in this comment.
Dr Bonny and Stuart Larsen 2752 Bellerive Drive Lakeland, FL 33803	P083	13-56	You must stop these low flying flights over my home in the Grasslands community. They are not only LOUD but are also DISRUPTIVE; especially when our sleep is interrupted at 6:00 and 6:15 AM.	Communities near LAL have experienced increased noise since the initiation of air cargo operations at LAL. Some commenters noted increased cases where sleep is interrupted. Noise from existing air cargo operations at LAL is included in the EA analysis of the No-Action Alternative and Proposed Development Project. Departures and arrivals at LAL

Commenter	Letter Code	Comment Code	Comment	Response
				use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval. As also mentioned in previous responses, a variety of environmental resource categories typically associated with quality of life concerns, including noise, were evaluated in the EA and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project.
				Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 3 (Quality of Life) for additional details related to the topics raised in this comment.
Dr Bonny and Stuart Larsen 2752 Bellerive Drive Lakeland, FL 33803	P083	14-38	Grasslands is one of the premier communities in Lakeland, as you know. You and I both know that if this persists, our resale values will fall and that directly effects the Lakeland/Polk county tax base and our pocket book.	The EA did not identify any significant social, environmental, and economic impacts associated with the Proposed Development Project. Negative effects on property value are not anticipated. Refer to Topical Response 4 (Impacts on Property Values) for additional details related to the topics raised in this comment.
Ted Kennedy 2852 Prestwick Drive, Lakeland, FL 33803	P084	13-57	You must stop these low flying flights over the Grasslands community. They are LOUD. They are disruptive. Please work with the FAA to stop these unnecessary flight paths.	Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval. As also mentioned in previous responses, a variety of environmental resource categories typically associated with quality of life concerns, including noise, were evaluated in the EA and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project. Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 3 (Quality of Life) for additional details related to the topics raised in this comment.
Kimberly Cassidy 3105 Legends Circle Lakeland, Florida 33803	P085	13-58	I'm urging you to please stop these low flying flights, that appear to only be the Amazon Air flights, over our Grasslands community. Not only are these low flying flights loud, they are very disruptive to our family. We have a child with a rare neurological disease and requires sleep to gain strength. These constant flights not only rattle our house, but wake him up and impact his quality of health.	Communities near LAL have experienced increased noise since the initiation of air cargo operations at LAL. Some commenters noted increased cases of sleep being interrupted. Noise from existing air cargo operations at LAL is included in the EA analysis of the No-Action Alternative and Proposed Development Project. The EA also discusses an increase in flight activity due to the Proposed Development Project and assesses the impacts on community noise exposure based on FAA guidelines. The analysis of noise exposure in the EA was based on the DNL 65 dB contour. Because the residential land uses within (or newly within) the DNL 65 and higher noise contours shown in the EA would not experience a 1.5 decibel increase due to the Proposed Development Project, the impacts are not considered significant. Therefore, a specialized

Commenter	Letter Code	Comment Code	Comment	Response
	0000	0000		vibration analysis or analysis of awakenings was not warranted. Separate from the EA, the City has proposed conceptual noise abatement measures and has implemented a voluntarily runway use program to address noise-related concerns of the surrounding community.
				Refer to Topical Response 2b (Air Traffic and Overflights), Topical Response 2e (Vibration), and Topical Response 2f (Sleep Disturbance) for additional details.
Kimberly Cassidy 3105 Legends Circle Lakeland, Florida 33803	P085	20-19	However, we did not ever imagine such and unfathomable and obnoxious disruption like Amazon Air negatively impacting our family and friend's quality of life. Walks and bike rides in our Grasslands community, walking the lake, and even hanging around the YMCA/Peterson park, have never been so disruptive and unpleasant as they have this past year.	A variety of environmental resource categories typically associated with quality of life concerns, including noise, were evaluated in the EA and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project. Refer to Topical Response 3 (Quality of Life) for a discussion of quality of life concerns and considerations.
Larry G Dobbs 2729 Bellerive Drive Lakeland, FL 33803	P086	13-59	You must stop these low flying flights over the Grasslands community. They are LOUD. They are disruptive. Please work with the FAA to stop these unnecessary flight paths.	Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval. As also mentioned in previous responses, a variety of environmental resource categories typically associated with quality of life concerns, including noise, were evaluated in the EA and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project. Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 3
Mary and Joseph Belshe 2900 Grasslands Drive Lakeland, FL 33803	P087	14-39	I live in Grasslands and have enjoyed the security of this community for over 20 years. I was as excited about Amazon coming in as everyone else was. I think they will do a lot for our community by their tax dollars.	(Quality of Life) for additional details related to the topics raised in this comment. Comment noted.
Mary and Joseph Belshe 2900 Grasslands Drive Lakeland, FL 33803	P087	13-60	Forty- four flights a day scares me. I do feel, however, that all of Lakeland should help to carry the burden of these frequent flights. In other words, all flights should not follow the flight path directly over Grasslands, nor should we be exempt from some going over. Fair is fair. I believe the early report was they used the East/west runway and had to stay below 2000 feet because of the proximity to Tampa and Orlando. This was very noisy! I think there could be some coordination between those two airports and Lakeland Linder to allow for faster climbs.	The EA analysis defines an operation as either a take-off or a landing, and as described in Table 2.1-1 in the EA, the Proposed Development Project would result in 44 total additional operations in 2027 (22 daily arrivals and 22 daily departures). Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has submitted conceptual procedures that include increased aircraft operation heights for FAA consideration. If the FAA determines that the procedures are feasible, they would be subject to a separate detailed review, and environmental analysis prior to approval.

Commenter	Letter Code	Comment Code	Comment	Response
	Code	Code		Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 2c (Flight Frequency and Schedule) for discussion and additional details related to the topics raised in this comment.
Mr and Mrs John F Wendel 1748 Laurel Glen Pl Lakeland Fl 33803	P088	13-61	You must stop these low flying flights over the Grasslands community. They are very LOUD. They are very Disruptive. Please work with the FAA to stop these unnecessary flight paths.	Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval. As also mentioned in previous responses, a variety of environmental resource categories typically associated with quality of life concerns, including noise, were evaluated in the EA and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project. Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 3 (Quality of Life) for additional details related to the topics raised in this comment.
John Curls, Jr., P.E. Chief Executive Officer 2965 Barney's Pumps Place Lakeland, FL 33812	P089	27-8	I LOVE seeing and hearing airplanes coming in and out of our airport! I am writing to express my full support regarding the ongoing expansions at the airport especially concerning Amazon.	Comment noted.
Edward M Cetrangolo 3032 Shoal Creek Village Dr Lakeland FL 33803	P090	3-28	Where are the flight logistics? Ground logistics are great! Amazon can build one giant building. Then build another 2nd Giant Amazon building, twice the size of the first one. Produce all the materials, workers, plans, permits, inspections, and environmental assessments. BUT, when it come to air logistics and moving the arrival and departing flights to something structured and not all over the city, that process becomes a long and arduous decision for the FAA to implement.	Departures and arrivals at LAL must be coordinated with Air Traffic Control and use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review, and environmental analysis prior to approval. Refer to Topical Response 2b (Air Traffic and Overflights) for additional details related to the topics raised in this comment.
Edward M Cetrangolo 3032 Shoal Creek Village Dr Lakeland FL 33803	P090	21-20	It's been almost a year. All flights are dangerously low, some at 1,500 feet off the ground for 10 mile stretches before climbing up to higher altitudes. It started at 22 flights per day, it's now jumped to 44 flights. It my jump again and again.	The Proposed Development Project would add 22 daily arrivals and 22 daily departures at LAL in 2027. Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 2c (Flight Frequency and Schedule) for additional details related to the topics raised in this comment.
Edward M Cetrangolo 3032 Shoal Creek Village Dr Lakeland FL 33803	P090	13-62	Investigating THE INFORMATION on the Website called WebTrak WebTrak - Is a Public Noise Abatement and monitoring system that surrounds the area incorporating the flight paths to and from the airfield, it's used at 26 airports in the US, 3 airports in FL and at 58 airports all around the world. This website is a model, for a state of the art approach to logistics.	Monitoring systems, such as WebTrak, are useful for identifying and understanding individual flights and activity at an airport. This also provides information for individuals to submit noise complaints. However, these systems do not measure the cumulative noise exposure that is required for FAA studies and noise impact analyses. Refer to Topical Response 2b (Air Traffic and Overflights) for additional details related to the topics raised in this comment.

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			 It uses sensitive instruments to determine the noise levels, in conjunction with standardized flight paths, designated mandatory turning waypoints to lessen noise or to fly around a portion of a city before turning. and in conjunction with monitoring aircraft noise! it also monitors elevation off the ground in feet, air speeds in MPH, type and size of aircraft and its destination. All on an easy to read MAP 	
Edward M Cetrangolo 3032 Shoal Creek Village Dr Lakeland FL 33803	P090	3-29	"The biggest visual I have noticed in my study, was, all arriving and departing flights have one thing in common! They Fly straight out, on take off. They "DO NOT" take "RADICAL" hairpin like turns after takeoff. Amazon needs to STOP the radical turns over "The Grasslands". These are the facts! Ask yourself, WHY to these 3 questions?1.WHY, NO air logistics on noise above the city,2.Why, the erratic and radical departing and arrival flight paths and not one standardized corridors to and from the airport, Thus making all flights less confusing for pilots and the control tower personal.	Please refer to the responses to previous comments included in this comment letter.
Edward M Cetrangolo 3032 Shoal Creek Village Dr Lakeland FL 33803	P090	13-130	Why, Do the Pilot's NOT throttle back their jets engines after lift off, to help lower the jet's noise rumbling in people ears, shaking our home's and the city. We desperately need a noise abatement systems.	Comment noted. Air cargo development in general was first represented on the ALP and in the LAL Master Plan in 2012 and development of the Master Plan included public meetings and comment opportunities. A separate EA and permitting process was also completed in 2016 for a large, multi-hangar Maintenance, Repair and Overhaul facility with a modestly-sized air cargo facility at LAL. The City proposed development of a larger air cargo facility at the site in 2018, and FAA subsequently reevaluated the 2016 EA in light of the revised project. Noise abatement plans were not required as result of these planning processes. Noise abatement plans were not required or implemented prior starting air cargo operations at LAL. However, separate from the EA, the City has proposed conceptual noise abatement measures and has implemented a voluntarily runway use program to address noise-related concerns of the surrounding community. Refer to Topical Response 2b (Air Traffic and Overflights) for details on these measures. These measures were also presented at the EA public hearing and the presentation is available in EA Appendix L.1. Engine power settings during flight are at pilot discretion and are decided based on safe operation of the aircraft, as well as instructions from air traffic control and the amount of thrust required to follow the approved flight plan. Because of these situational factors, it is not feasible to require pilots to throttle back during certain components of flight.
Rob & Peggy Semans 2834 Grasslands Drive	P091	13-63	We are very upset with the low flying, extremely LOUD and disruptive flights flying over our Grasslands community. They start flying around 6 o'clock in the morning	Departures and arrivals at LAL use published air traffic patterns that consider safety and

Commenter	Letter Code	Comment Code	Comment	Response
Lakeland, FL 33803	Coue	Code	which is unacceptable. Please forward our complaint to the FAA to come to a resolution of this problem.	flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval.
				As also mentioned in previous responses, a variety of environmental resource categories typically associated with quality of life concerns, including noise, were evaluated in the EA and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project.
				Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 3 (Quality of Life) for additional details related to the topics raised in this comment.
Buffy Larson 3135 Grasslands Drive Lakeland, FL 33803	P092	13-64	You must stop these low flying flights over the Grasslands community. They are LOUD. They are disruptive. They are early in the morning, late at night, and they are too many. Please work with the FAA to stop these unnecessary flight paths.	Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval. As also mentioned in previous responses, a variety of environmental resource categories typically associated with quality of life concerns, including noise, were evaluated in the EA and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project. Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 3 (Quality of Life) for additional details related to the topics raised in this comment.
Nancy L Fingar 3032 Shoal Creek Village Dr Lakeland, FL 33803	P093	13-65	I agree with Mr Ed Cetrangolo. "Ditto" on his speech.	Comment noted.
Lawrence W. Moore 3383 Turnberry Lane Lakeland, Florida 33803	P094	13-66	You must stop these low flying flights over the Grasslands community. They are LOUD. They are DISRUPTIVE. Please work with the FAA to stop these unnecessary flight paths.	Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval. As also mentioned in previous responses, a variety of environmental resource categories typically associated with quality of life concerns, including noise, were evaluated in the EA and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project.

Commenter	Letter	Comment	Comment	Response
	Code	Code		
				Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 3 (Quality of Life) for additional details related to the topics raised in this comment.
Sheryl Rubin 2485 Laurel Glen Drive	P095	3-10	Please work with the FAA to reroute low-flying flights away from the Grasslands community. We appreciate your attention to this issue.	Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval. As also mentioned in previous responses, a variety of environmental resource categories typically associated with quality of life concerns, including noise, were evaluated in the EA and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project. Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 3
				(Quality of Life) for additional details related to the topics raised in this comment.
Jim Studiale 925 Wedgewood Lane Lakeland, FL 33827	P096	20-11	Economic gains must be measured against costs. The costs of Amazon's Jets is Noise and degrading the Quality of Life in so many of Lakelands great neighborhoods. Commissioners, you have welcomed a reduced quality of life, a drone of noise any time we venture into our outdoor spaces! None of our public accomplishments and the wonderful qualities of Lakeland matter if we diminish the quality of life here in "Our City".	A variety of environmental resource categories typically associated with quality of life concerns, including noise, were evaluated in the EA and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project. Refer to Topical Response 3 (Quality of Life) for a discussion of quality of life concerns and considerations.
Jim Studiale 925 Wedgewood Lane Lakeland, FL 33827	P096	13-67	The prevalence of jets flying over my home has not simply hurt resale value for me and my neighbors but more importantly it robs me of the quiet enjoyment of my once fabulous home, pool, and patio setting—overlooking beautiful open space!	See response above regarding comments to quality of life concerns. Topical Response 4 (Impacts on Property Values) explains the challenges in associating depreciation in property values to airport noise and operations. Further, the EA did not identify any significant impacts associated with the Proposed Development Project in terms of noise or traffic.
Jim Studiale 925 Wedgewood Lane Lakeland, FL 33827	P096	14-40	We reduced Drummond's Proposed Mall by 50%, West Lakeland DRI by more then 70% due to traffic impacts and always measured growth against impacts. Why not in this case? These noise impacts are pervasive and overarching and much greater then any economic benefit to Lakeland.	Phase I operations by Amazon were subject to local land development and permitting processes and approvals, none of which called for reduction of the facility size or operations as a condition of approval. A signal warrant analysis recommended turn lanes be installed at the intersection of Kidron Road and Drane Field Road. These improvements were also identified in the EA as mitigation measures to offset traffic impacts anticipated in 2022 and 2027. Traffic mitigation (dedicated turn lanes) has been implemented at the intersection of Kidron Road and Drane Field Road during preparation of the EA to proactively mitigate potential surface traffic impacts. The traffic analyses conducted for the Proposed Development Project would not cause surface traffic impacts that exceed FAA's thresholds that would indicate significant surface traffic impact. Phase II construction would undergo the same local land development and permitting process as Phase I and if any additional traffic measures are required as an output of this process, they would be required to be implemented as part of the development.

Commenter	Letter Code	Comment Code	Comment	Response
				The noise analysis conducted for the EA concluded that the Proposed Development Project would not cause noise impacts that exceed FAA's thresholds that would indicate significant noise impact.
				Refer to Topical Response 2a (Noise Analysis Methods) and Topical Response 2b (Air Traffic and Overflights) for FAA's response to this comment.
				Comment noted. LAL is a significant contributor to the local economy and tax base. An economic impact analysis prepared for the airport by Kimley-Horn within the last year indicates that LAL has a total economic impact of \$1.5 billion, with 85% of those impacts due to on-airport activities such as airport tenant operations, airport construction, and visitor spending. This generates an estimated 10,785 jobs with an associated payroll of \$498 million. The economic impact has grown from \$575 million in just two years.
Zach Backar [NO ADDRESS PROVIDED]	P097	14-41	How would you like this over your head. Now its about to get worse. Apparently, no one is interested in giving any compensation from the windfall revenue to the Lakeland cash register? Why can't you help us with this? By lowering our property taxes? Especially after the financial suffering due to no fault of our own(Pandemic). I moved down here to retire.	Lowering property taxes as a means of mitigating impacts is typically not considered by local governments or required by the federal government. Because the residential land uses within (or newly within) the DNL 65 and higher noise contours shown in the EA would not experience a 1.5 decibel increase due to the Proposed Development Project, the impacts are not considered significant. Mitigation related to noise impacts is not required. Separate from the EA, the City has proposed conceptual noise abatement measures and has implemented a voluntarily runway use program to address noise-related concerns of the surrounding community.
				Use of airport revenue is subject to FAA's revenue use policy at 64 FR 7696 (February 16, 1999) and outlined within Order 5190.6b Chapter 15. Per paragraph 15.13(a) of the order, airport revenue cannot be diverted for purposes other than airport capital or operating costs or the costs of other facilities owned or operated by the airport and directly and substantially related to air transportation. Payments in lieu of taxes and payments to compensate governmental bodies for lost tax revenues, are specifically prohibited under paragraph 15.13(f) and (g), respectively.
				Lowering taxes for the purposes of pandemic relief is unrelated to the Proposed Development Project and is outside of the purview of this EA.
Emilee Niekro [NO ADDRESS PROVIDED]	P098	3-30	The current amount of Amazon arrival traffic is completely tolerable, however with this planned expansion it seem to be extreme.	Comment noted. As described in Table 2.1-1 in the EA, the Proposed Development Project would add eight arrivals in 2022 to the ten arrivals currently being conducted during Phase I operations. In 2027, the Proposed Development Project would add twelve arrivals to the ten arrivals currently being conducted during Phase I operations. Although the increase in arrivals would change the noise environment for surrounding communities, noise exposure would vary based on the approach path of each individual arrival.
Emilee Niekro [NO ADDRESS PROVIDED]	P098	13-68	Noise pollution will be intolerable.	As described in the EA, the increased aircraft arrivals generated by the Proposed Development Project would cause an expansion of the existing DNL 65 dB noise contour. While the change in noise would be noticeable and would vary for each individual flight,

Commenter	Letter	Comment	Comment	Response
	Code	Code		the noise analysis conducted for the EA concluded that the Proposed Development
				Project would not cause noise impacts that exceed FAA's thresholds that would indicate
				significant noise impact.
Emilee Niekro [NO ADDRESS PROVIDED]	P098	14-42	Many home values will plummet	Refer to Topical Response 4 (Impacts on Property Values) for additional details related to the topics raised in this comment.
Christine Michalik 3146 Grasslands Dr Lakeland FL 33803	P099	13-69	You must stop these low flying flights over the Grasslands community. They are LOUD. They are disruptive. Please work with the FAA to stop these unnecessary flight paths.	Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval. As also mentioned in previous responses, a variety of environmental resource categories typically associated with quality of life concerns, including noise, were evaluated in the EA and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project.
Rick Stoer, CHA	D400	14.42	Amazon expanding will bring needed jobs to Polk County. A few seconds of jet noise	Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 3 (Quality of Life) for additional details related to the topics raised in this comment.
[NO ADDRESS PROVIDED]	P100	14-43	is worth it. Semi's are loud too!	Comment noted.
				Communities near LAL have experienced increased noise since the initiation of air cargo operations at LAL. Noise from existing air cargo operations at LAL is included in the EA analysis of the No-Action Alternative and Proposed Development Project. The EA also discusses an increase in flight activity due to the Proposed Development Project and assesses the impacts on community noise exposure based on FAA guidelines. It is recognized that individual noise events may be quieter or louder than cumulative noise exposure estimates provided by the DNL analysis performed for the EA, and that some may perceive these events as impactful to their sleep.
Carrie Greenberg 3115 Legends Circle Lakeland, FL. 33803	P101	13-70	I am a resident of Grasslands. Our peaceful home is now continually disrupted by the lowing flying Amazon planes. They wake me in the morning and disturb our dinner at night. Our quality of life is effected from this aircraft noise.	The analysis of noise exposure in the EA was based on the DNL 65 dB contour. Because the residential land uses within (or newly within) the DNL 65 and higher noise contours shown in the EA would not experience a 1.5 decibel increase due to the Proposed Development Project, the impacts are not considered significant. Mitigation related to noise impacts is not required. Separate from the EA, the City has proposed conceptual noise abatement measures and has implemented a voluntarily runway use program to address noise-related concerns of the surrounding community. As referenced in Topical Response 3 (Quality of Life), Chapter 5 of the EA discusses the effects of the Proposed Development Project a variety of environmental resources, including noise, air quality, and socioeconomic impacts, which are most frequently

Commenter	Letter	Comment	Comment	Response
	Code	Code		associated with quality of life effects. No significant impacts in the areas of noise and air quality were identified per established NEPA guidelines, and traffic impacts would be less than significant with mitigation implemented.
			The computations were not like the union but they are do like their charp Amoure	Refer to Topical Response 2b (Air Traffic and Overflights), and Topical Response 3 (Quality of Life) for additional details related to the topics raised in this comment.
Andrew Bildz			The complainers may not like the noise, but they sure do like their cheap Amazon deliveries to their front door They may not like the noise, but they have no need or desire for employment at Amazon or the airport.	
[NO ADDRESS PROVIDED]	P102	27-9	They may not like the noise, but they bought their home very near an airport, where (noisy) planes necessarily operate.	Comment noted.
			This is NIMBY x 1,000. GO AHEAD AND EXPAND!	
Rick Gonzalez [NO ADDRESS PROVIDED]	P103	14-44	Bringing in more business like Amazon to Lakeland is a great thing for us, this city and county needs it! More jobs, more businesses equal progress!	Comment noted.
Rick Gonzalez [NO ADDRESS PROVIDED]	P103	13-71	The airport is doing a great job keeping the noise levels down, I live a mile from the airport, on the south side. The inconveniences are a small price to pay to see our city grow.	Comment noted.
Johnny Johnson 1153 Waterfall Lane Lakeland, FL 33803	P104	14-45	I am in support of the expansion of Amazon at Lakeland Airport. I don't work for Amazon and I don't agree with their politics but I care more about the future of Lakeland and that future is better with more jobs with a good and stable company providing them.	Comment noted.
Johnny Johnson 1153 Waterfall Lane Lakeland, FL 33803	P104	27-10	My wife and I in the direct take off line during the day and the planes have never woke us up or bothered us. Actually, when we hear them we still go outside to watch them go by. We love it I guess our home is better insulated than the complainers homes or they are just complainers. We have lived here most all of our lives coming up on 7 decades and are appreciative of the work the city has done to attract business lately as in the past we lost companies like Rooms to Go. Some of these people are so narrow minded that they don't even like Publix and Lakeland Regional Medical. Anyway, please approve the expansion and if you are able to make the complainers happy by changing routes for themgreat. I have a feeling they will still complain. Also, the airport pre-dates 90+% of their homes being built.	Comment noted.
Donna Willett 3380 Fiddle Leaf Way Lakeland, FL 33811	P105	13-72	Living at the end of Fillde Leaf Way, my home is a stone's throw from the current cargo facility. Although I do hear many of the planes as they depart and arrive, I do not find the noise a particular nuisance. I am not certain how the increased flight by Amazon will impact my thinking, to be honest.	Comment noted.
Donna Willett 3380 Fiddle Leaf Way Lakeland, FL 33811	P105	14-46	I am as concerned about the vehicle traffic as much or more than the flight traffic.	Topical Response 5c (Proposed Development Project Traffic Impacts) describes the factors that were considered assessing traffic impacts associated with proposed Development Project conditions and how those impacts were analyzed for the EA. The

Commenter	Letter Code	Comment Code	Comment	Response
	Code	Code		traffic impacts analysis performed for the EA identified needed improvements (dedicated turn lanes) at one intersection (Kidron Road at Drane Field Road). During the development of the EA, the turn lanes were constructed at this intersection to improve its performance and reduce congestion. This mitigation would offset project-related traffic impacts anticipated in 2022 and 2027. With this mitigation in place, the Proposed Development Project would not cause surface traffic impacts that exceed FAA's thresholds that would indicate significant surface traffic impact.
				Refer to Topical Response 5b (Existing Traffic Congestion) and Topical Response 5c (Proposed Traffic Impacts) for additional details related to the topics raised in this comment.
Donna Willett 3380 Fiddle Leaf Way Lakeland, FL 33811	P105	13-131	As a matter of fact, the continual revving of the jet engines by Draken [sic] International, I find much more intrusive than the current Amazon situation.	Current engine testing performed at LAL as described in the comment was included in the noise analyses performed for the EA.
Irene & Joe Bullara 3323 Turnberry Ln Lakeland, Fl 33803	P106	13-73	You must stop these low flying flights from Lakeland Linder airport over the Grasslands community. They are Loud. and They are disruptive. With more flights planned for future from amazon and other passenger flights worry us. Please work with the FAA to stop these unnecessary flight paths.	LAL is a public use airport, and Federal law preempts local governments from implementing any action that is intended to control the types of aircraft that use an airport, routes of aircraft in flight, the timing of flights, or the number of flights. Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval. A variety of environmental resource categories typically associated with quality of life concerns, including noise, were evaluated in the EA and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project. Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 3 (Quality of Life) for additional details related to the topics raised in this comment.
Matthew Wiatt 4519 Hillman Lane Lakeland FL 33813	P107	14-47	I am in favor of the Amazon Air expansion at Lakeland Linder International Airport. The economic benefits to our growing community have been and will be great for Lakeland by letting Amazon increase its presence.	Comment noted.
Jim Johnson PO Box 5110 Lakeland, FL 33807	P108	14-48	The naysayers griping about the Amazon expansion would chirp differently if they or their kids needed good paying jobs.	Comment noted.
Jim Johnson PO Box 5110 Lakeland, FL 33807	P108	27-11	I don't live as close to the airport as 3 of my brothers and an uncle, who all live in Grasslands or Oakbridge do but I am glad we have good companies providing opportunities and taxes to our community. Also, none of my brothers are griping about noise.	Comment noted.

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			Or buy near airports, non-golfers complain about golf course maintenance noise and that they might have to pay for upkeep; those who build near a major highway complain about the noiseanyway you get my drift. The overall health of our city is more important than a few people who will complain about most anything.	
Paul Skelton [NO ADDRESS PROVIDED]	P109	27-12	Lakeland needs this expansion no matter what the people are complaining about. We live in the colonnades and we get the noise from planes but it doesn't last but a few seconds and is no bother. Before living here we lived on Waring road and it was a lot busier but we enjoy planes. This isn't no worse than living by railroad tracks and train coming by all hours of the day. You get used to it. I'm sure the people complaining have jobs and don't care about other people that need the work. Besides, the airport wasn't just built after the people moved in. If you don't like airports then don't buy a house next to one.	Comment noted.
Dr. Lester Chernick 3340 Turnberry Dr. Lakeland,FL 33803	P110	3-11	Just to add my concerns to the already existing ones, what is going to happen as Amazon expands is frightening if a noise abatement plan is not instituted. We want only success for this wonderful company, but the FAA must protect our property values by instituting a reasonable plan for the flight paths of these ever increasing takeoffs and landings. Thank you for your attention to my concerns.	Per Topical Response 2b (Air Traffic and Overflights), the City of Lakeland has developed conceptual noise abatement flight procedures for existing and projected future operations, and submitted for FAA consideration. If the flight procedures are determined feasible, they would be subject to detailed environmental review, and analysis prior to approval. The EA did not identify any significant social, environmental, and economic impacts associated with the Proposed Development Project. Negative effects on property value are not anticipated. Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 4 (Impacts on Property Values) for additional details related to the topics raised in this comment.
Nina Rehberg [NO ADDRESS PROVIDED]	P111	13-74	I live off Pipkin Road, probably much closer than most of those complaining about the noise. Yes, I hear noise and see the jets coming and going. However I don't find the noise life changing as some would suggest.	
Nina Rehberg [NO ADDRESS PROVIDED]	P111	14-49	We all know people looking for decent paying jobs; Amazon provides that. They also contribute to the financial base in Lakeland, allowing for improvements and employment within the city itself.	Comment noted.
April and Doug Curry [NO ADDRESS PROVIDED]	P112	27-13	We live at Sanlan RV Park, in a park model on 98 South and the Prime planes fly over our park on the way to the airport. We actually look forward to watching the planes and it does not disturb our outdoor activities at all. Besides the added jobs for folks in our area is a real plus. Let Amazon expand.	Comment noted.
Sam Wagner [NO ADDRESS PROVIDED]	P113	13-75	As it is, the Amazon planes roaring over our neighborhood have disturbed the peace we previously enjoyed.	Communities near LAL have experienced increased noise since the initiation of air cargo operations at LAL. Some commenters noted increased cases where peaceful enjoyment of their property has been impacted. Noise from existing air cargo operations at LAL is included in the EA analysis of the No-Action Alternative and Proposed Development Project. The EA also discusses an increase in flight activity due to the Proposed

Commenter	Letter Code	Comment Code	Comment	Response
				Development Project and assesses the impacts on community noise exposure based on FAA guidelines. The analysis of noise exposure in the EA was based on the DNL 65 dB contour. Because the residential land uses within (or newly within) the DNL 65 and higher noise contours shown in the EA would not experience a 1.5 decibel increase due to the Proposed Development Project, the impacts are not considered significant. However, it is recognized that individual noise events may be quieter or louder than cumulative noise exposure estimates provided by the DNL analysis, and that some may perceive these events as impactful to their daily activities. Separate from the EA, the City has proposed conceptual noise abatement measures and has implemented a voluntarily
				runway use program to address noise-related concerns of the surrounding community. Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 3 (Quality of Life)for additional details related to the topics raised in this comment.
			My family and I experience heavy air traffic fly overs daily from Amazon Pilots.	LAL is a public use airport, and Federal law preempts local governments from implementing any action that is intended to control the types of aircraft that use an airport, routes of aircraft in flight, the timing of flights, or the number of flights. Arrivals and departures use published approach and departure procedures that have been developed
Matth and Condinor			It constantly interrupts our family life and quality time. It constantly has an effect when we leave our home and an Amazon Pilot flys over because our property is on a corner with traffic, we rely on sound and sight to be able to pull onto Longfellow Blvd.	to ensure the safe and efficient use of airspace and approved by the FAA. These procedures consider a variety of factors including the air space requirements of other nearby airports, and are subject to detailed review and analysis prior to approval. Because LAL is located between two major hub airports, the currently approved approach and departure procedures include aircraft height limits during these operations. The analysis of noise exposure in the EA was based on the DNL 65 dB contour. Because the residential
Matthew Gardner 445 Longfellow Blvd Lakeland, FL 33801	P114	13-76	When an Amazon Pilot is flying over head we have to wait additional time to leave because of the safety issue with road traffic.	land uses within (or newly within) the DNL 65 and higher noise contours shown in the EA would not experience a 1.5 decibel increase due to the Proposed Development Project, the impacts are not considered significant.
			Amazon pilot's [sic] are already flying extremely low altitudes and the noise is extremely loud already.	However, it is recognized that individual noise events may be quieter or louder than cumulative noise exposure estimates provided by the DNL analysis, and that some may
			As a truck driver it's extremely difficult to hear when a jet is flying over and thus makes it extremely difficult to leave home when a jet is flying over. I'd rather see more road traffic from and to Amazon vs having more air traffic that interrupts anyone's way of life especially safety and sleep.	
				Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 3 (Quality of Life) for additional details related to the topics raised in this comment.
Larry Blackwelder 4450 Hamilton Road Lakeland, FL 33811	P115	3-12	I just want to speak up for the residents on the West side. There are fewer of us and we probably won't make as much "noise" in the system as those to the east. But all the concerns they raise regarding the noise and livability of our residents are just as valid for us on the west. The concern is that the Airport will react in a discriminatory, disproportionate manner to appease the East side residents while neglecting and	The airport, along with aircraft operators and various stakeholders at LAL, has been working to develop and implement numerous noise mitigation strategies to reduce impacts to surrounding communities. As discussed in Topical Response 2b (Air Traffic and Overflights), some of these procedures include the following:

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	Code	Code	burdening the West side residents. An example of that was actually presented in the Ledger article stating that "the city has already switched to a voluntary preferred runway that has flights arriving from the west end of the runway overnight between 10 pm to 7 am when winds allow". Why would there be more concern for those on the east side of the airport that they not be disturbed during sleeping hours than those on the west. Is it ok to disturb our sleep more? The point is that we understand that living in close proximity to an airport will in some ways be disruptive. We understand that increased traffic from Amazon flights is a good thing for Lakeland, Polk County, and commerce and jobs in our community. But everyone who lives around an airport must bear their fair share of that disruption. We on the west side of the airport don't want to bear a disproportionate share of that disruption to quite the "noise" coming from the east side and will be watchful to insure an improper balance doesn't occur.	 Voluntary Preferential Runway Use Program between the hours of 10:00 pm and 7:00 am Higher initial departure altitudes for departing aircraft Development of a new arrival procedure for aircraft landing Runway 28 Use of Noise Abatement Departure Procedures (NADP-1 and NADP-2) for Runway 10 and Runway 28 departures New Standard Instrument Departure (SID) procedures for Runway 10 and Runway 28. Some of the noise abatement initiatives described above, such as the Voluntary Preferential Runway Use Program, affect how flight paths are used and therefore could affect the distribution of noise around surrounding communities. The initiatives described above may increase the altitude at which aircraft arrive and depart LAL, which could be beneficial for some communities. The City of Lakeland has also submitted an unsolicited proposal to FAA to modify existing flight procedures or develop new flight procedures. FAA will review the proposals, and if they are determined to be feasible will evaluate them further. The evaluations would include a review of environmental impacts, including the shift in aircraft overflights and the resulting changes in noise exposure. As the City develops and implements the strategies outlined above, they will continuously monitor the effectiveness of these procedures on the surrounding community. The list of initial strategies is not final, and efforts will mature over time with the possible modification of existing procedures and the development of new procedures (if determined to be feasible and subject to FAA review). Please refer to Topical Response 2b (Air Traffic and Overflights) for additional details related to the topics raised in this comment.
Ray Anderson 2122 Deerfield Drive Lakeland 33813	P116	13-77	Like others, we experience frequent arrivals and departures of the 737 and 767 aircraft operated for Amazon. I often monitor their movements via FlightAware using an ADS-B receiver. Most of the time when they pass over my house, they are below 2000' and in landing configuration with flaps and leading-edge slats extended and landing gear down. I cannot know their actual power settings, but I can sometimes hear power adjustments as they fly the approach. Frankly, the sound of these jets is lower than some smaller business jets and even some propeller aircraft operated in the vicinity of the airport. The loudest of all are helicopters and, less frequent, the fighters operated by Draken. Taken together, it seems a bit unfair for this entitled class of myopic protestors to pick on Amazon. It suggests a different, un-stated agenda. Neither we nor our neighbors are at all bothered by the sounds of the heavy jets Amazon has brought to Lakeland's sky. I do not believe that any person who buys a home anywhere near an airport can be seriously surprised or become irrationally	Comment noted.

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			angered by the sounds of air operations. These protests are irrational. It is as if they moved to the shore and then objected to the sound of passing boats or even the persistent "noise" of waves lapping at the beach.	
Ray Anderson 2122 Deerfield Drive Lakeland 33813	P116	14-50	The enormous economic benefit Amazon's presence has brought to the City of Lakeland is well known. The jobs they bring to our city and the revenue they add to the budget far outweighs the incongruous moaning of a few privileged residents. No one is coercing them to stay here.	Comment noted.
Ellen Wendel [NO ADDRESS PROVIDED]	P117	13-78	Lakeland should be financially compensated costs and noise.	Comment noted.
Jason Gager 2828 Clay Turner Rd Plant City, FL 33566	P118	13-79	I agree with most of my fellow citizens that the noise from the Jets is very disruptive to daily life. I too have to pause conversations when jets are turning around over my house. I however live in plant City just west of county line Road and just south of the flight line to the airport, 2828 clay Turner Rd, to be exact.	in the EA would not experience a 1.5 decibel increase due to the Proposed Development
Jason Gager 2828 Clay Turner Rd Plant City, FL 33566	P118	3-13	I see that plenty of people from grasslands are upset and want the jets to use a different approach route in order to reduce the noise over their high-end gated community. I would sincerely hope that you would take into consideration people who live in the other areas as well. The noise is just as bad over here as it is over there. I take particular offense to the section in the article that said: "The city has already switched to a voluntary preferred runway that has flights arriving from the west end of the runway overnight between 10 p.m. to 7 a.m when winds allow." That increases the amount of flight traffic over my house while I'm trying to sleep. I realize this is a sensitive situation and it is up to someone to weigh the cost to	The airport, along with aircraft operators and various stakeholders at LAL, has been working to develop and implement numerous noise mitigation strategies to reduce impacts to surrounding communities. As discussed in Topical Response 2b (Air Traffic and Overflights), some of these procedures include the following: • Voluntary Preferential Runway Use Program between the hours of 10:00 pm and 7:00 am • Higher initial departure altitudes for departing aircraft • Development of a new arrival procedure for aircraft landing Runway 28 • Use of Noise Abatement Departure Procedures (NADP-1 and NADP-2) for Runway 10 and Runway 28 departures • New Standard Instrument Departure (SID) procedures for Runway 10 and

Commenter	Letter Code	Comment Code	Comment	Response
	Oode	Couc	benefit ratio. I am politely requesting that traffic is not increased over poor neighborhoods for the sake of people in gated communities.	Some of the noise abatement initiatives described above, such as the Voluntary Preferential Runway Use Program, affect how flight paths are used and therefore could affect the distribution of noise around surrounding communities. The initiatives described above may increase the altitude at which aircraft arrive and depart LAL, which could be beneficial for some communities. The City of Lakeland has also submitted an unsolicited proposal to FAA to modify existing flight procedures or develop new flight procedures. FAA will review the proposals, and if they are determined to be feasible will evaluate them further. The evaluations would include a review of environmental impacts, including the shift in aircraft overflights and the resulting changes in noise exposure. As the City develops and implements the strategies outlined above, they will continuously monitor the effectiveness of these procedures on the surrounding community. The list of initial strategies is not final, and efforts will mature over time with the possible modification of existing procedures and the development of new procedures (if determined to be feasible and subject to FAA review). Please refer to Topical Response 2b (Air Traffic and Overflights) for additional details related to the topics raised in this comment.
Jason Gager 2828 Clay Turner Rd Plant City, FL 33566	P118	26-5	I am thankful for the opportunity to send this email. Those of us in lower income areas do not necessarily have the resources to attend community meetings.	With respect to the EA, a Notice of Availability of the Draft EA and Notice of Public Hearing was published in the Lakeland Ledger on April 23 and again on April 26, 2021. The City also published notices on social media informing the public of the intent to hold a hearing. The Draft documents were made available concurrently on the airport's website and at local libraries. The Public Hearing was held 35 days after the first notice was published. The City made voluntary accommodations to encourage public attendance at the hearing, such as waiving parking fees at the hearing venue. The Notice of Availability and Notice of Public Hearing published in the Lakeland Ledger for the EA also offered reasonable accommodations and a point of contact for those who were interested in participating but required assistance either with access to documents or registering comments.
Mike Sivilli 4423 Southride Trail Lakeland, FI 33813	P119	13-80	I just wanted to report that last evening and this morning there have been multiple large planes coming in over our area very low and very loud.	Comment noted. Communities near LAL have experienced increased noise since the initiation of air cargo operations at LAL. The EA discusses an increase in flight activity due to the Proposed Development Project and assesses the impacts on community noise exposure based on FAA guidelines. The analysis of noise exposure in the EA was based on the DNL 65 dB contour. Because the residential land uses within (or newly within) the DNL 65 and higher noise contours shown in the EA would not experience a 1.5 decibel increase due to the Proposed Development Project, the impacts are not considered significant.
Mike Sivilli 4423 Southride Trail Lakeland, Fl 33813	P119	20-20	This needs to be addressed as it's interfering with the quality of life in our area. We've created a nice area in our home to serve as a quiet place to destress and unwind, but it's a waste now that we have all these loud planes flying overhead.	As referenced in Topical Response 3 (Quality of Life), Chapter 5 of the EA discusses the effects of the Proposed Development Project a variety of environmental resources, including noise, air quality, and socioeconomic impacts, which are most frequently associated with quality of life effects. No significant impacts in the areas of noise and air quality were identified per established NEPA guidelines, and traffic impacts would be less

Commenter	Letter Code	Comment Code	Comment	Response
	Code	Code		than significant with mitigation implemented. Please refer to Topical Response 3 (Quality of Life) for details and a discussion of quality of life issues associated with the Proposed Development Project.
Frank Villafana [NO ADDRESS PROVIDED]	P120	13-81	The current flight path of Amazon Prime flights from/to Lakeland Linder International Airport, over our residential neighborhood of Grasslands, is very disruptive. The flights are much too low and too noisy, and we understand that many more daily flights are scheduled for the near future. We believe that the flight path should be changed, so that the main portion of the loud arrival and descent can be performed over commercial properties and not residential.	Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 2c (Flight Frequency and Schedule) for a discussion related to the topics raised in this comment.
			We welcome the jobs being created by virtue of this new Amazon business, but also expect Lakeland Linder to be a good neighbor to the local residential communities.	
Celeste Deardorff, AICP 4006 Glen Garry Rd West Lakeland, FL 33813	P121	13-82	As a resident and homeowner, I have enjoyed the annual Sun n Fun which often meant flights directly over our residence for a week or so out of each year. However, now on a daily basis, multiple flight fly over our home as flown by Amazon's heavy cargo jets, mostly arrivals, making their way to and others departing from Lakeland's airport, as aligned to use the instrument guided runway. This has resulted in multiple times a day ambient noise levels so loud one can't hear verbal conversations within 4 - 6 ft. Beyond interruption and disturbance of quiet enjoyment of our residential	The noise analysis conducted for the EA concluded that the Proposed Development Project would not cause noise impacts that exceed FAA's thresholds that would indicate significant noise impact. However, individual overflights may be quieter or louder than indicated by the cumulative noise exposure (DNL). A variety of factors may influence an individual's perception of and annoyance from these events, such as the individual's current activities (e.g. having a conversation). The EA did not identify any significant social, environmental, and economic impacts associated with the Proposed Development Project. Negative effects on property value are not anticipated.
			property, this becomes an issue of protecting and preserving our residential property value.	Refer to Topical Response 2b (Air Traffic and Overflights), Topical Response 2g (Speech Interference), and Topical Response 4 (Impacts on Property Values) for additional details related to the topics raised in this comment.
			As such, I urge you, the city commission and the FAA to explore, design and approve all reasonable and available noise mitigation through alternative flight paths like the one discussed over the Polk Parkway, and others strategies as appropriate, including the waiver sought by the City from the FAA to allow these planes to fly above the 3,000 ft. elevation threshold, as might be safe and effective.	As discussed in Topical Response 2b (Air Traffic and Overflights), arrivals and departures use published approach and departure procedures that have been developed to ensure the safe and efficient use of airspace and approved by the FAA. These procedures consider a variety of factors including the air space requirements of other nearby airports, and are subject to detailed review and analysis prior to approval. Because LAL is located between two major hub airports, the currently approved approach and departure
Celeste Deardorff, AICP 4006 Glen Garry Rd West Lakeland, FL 33813	P121	3-14	I cite here a noise study associated with the London Heathrow Airport, demonstrating that aircraft descents that started at a much farther distance were able to help significantly reduce noise impacts: [24 November 2003 By Paul Marks: Noise nuisance from aircraft can be reduced significantly by changing the way the planes come in to land. Lining up with the runway as far as 70 kilometres away and making a steady descent can more than halve the acoustic energy that reaches the ground, an international research consortium has found.] Read more: https://www.newscientist.com/article/dn4395-smooth-aircraft-approach-cutsnoise-pollution/#ixzz6wGYSPhz1	procedures include aircraft height limits during these operations. The City of Lakeland has proposed conceptual new arrival and departure procedures at LAL as potential noise abatement measures. If the FAA determines that the proposed procedures are feasible, they would undergo a detailed analysis and review to assess their potential noise and other environmental impacts prior to approval. Addition of passenger airline service is a longstanding goal at LAL Passenger services has community support. However, no immediate plans or opportunities for initiation of passenger services are currently identified. Initiation or expansion of commercial

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			Finally, regarding impacts of airport related noise, I ask that you, the City Commission, and the FAA to consider: how will the long term plans to attract a major commercial passenger service airline fit with the above existing cargo flight patterns and	the purview of the Draft EA. Initiation of scheduled passenger service at LAL at some future time may require its own environmental review under NEPA.
			frequency, and specifically, what mitigation strategies must be considered in advance of such passenger service in order to sustain quality of life and property values for those who have invested in a home that is located in alignment with the current instrument flight path for Lakeland's airport (i.e., Lakeland Linder Regional Airport)?	
Fred and Lorrie Gerber [NO ADDRESS PROVIDED]	P122	14-51	We have lived in Lakeland the past 48 years Living along the park way and our house is in the path of the plane's over our house. When Amazon planes came in we welcome them running out of the house just to see them over our house. Thank full, that the planes mean job s for the people of Lakeland.	Comment noted.
Tim Averett [NO ADDRESS PROVIDED] Winter Haven	P123	27-14	How long has the airport been there? How long have I been a nearby resident? What were my expectations when I decided to live near an airport with a long history of varied aircraft and traffic? It is disingenuous to think that the level of traffic at any airport was going to remain static. The Lakeland Linder Airport is a major driver of economic activity for the entire area, not just the City of Lakeland. I strongly support the Amazon expansion because the benefits far outweigh environmental and lifestyle impacts. It is not the fault of LAL or even Amazon that these residents made a conscious decision to purchase property directly underneath standard flight patterns for a medium sized airport.	Comment noted.
Tim Averett [NO ADDRESS PROVIDED] Winter Haven	P123	3-15	As a retired airline pilot, I would also urge the FAA to not get creative in deploying noise abatement procedures at KLAL. It is a simple fact that noise abatement does not increase the level of safety. Instead it leads to unstable approaches, pilot distraction and non standard speed/power & altitude configurations. I believe routing airplanes over a landfill with its many large birds to be a decidedly poor idea. Safety should be primary and I am not in favor of anything other than standard operating procedures.	The City of Lakeland has developed and submitted conceptual flight procedure changes for FAA consideration. If determined feasible, the revised procedures would undergo further detailed study. FAA regards safety as the highest priority when developing, reviewing and approving flight procedures. FAA considers landfills to be hazardous wildlife attractants. Any evaluation of proposed flight procedures would include consideration of the location of landfills.
Tim Averett [NO ADDRESS PROVIDED] Winter Haven	P123	14-52	Sorry to say, if you bought property near a busy airport, that was likely factored into the purchase price and you will now have to decide if that was a wise move on your part.	Comment noted.
Dave Baker 1747 Rocky Pointe Drive Lakeland, FL 33813	P124	13-83	Gene, on the normal West approach, these big jets fly right over my house (Stoney Pointe Subdivision) at 1300' to 1400'. This happens morning through the day into late evening. I cannot imagine and agree to 44 of these planes flying over my house everyday would be an nuisance.	In 2027, the Proposed Development Project would add 22 daily arrivals and 22 daily departures. Because arrivals and departures use different flight paths, only a portion of the additional operations would occur over any one area. Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 2c (Flight Frequency and Schedule) for additional details related to the topics raised in this comment.
Dave Baker 1747 Rocky Pointe Drive Lakeland, FL 33813	P124	28-15	So here is my take for the record, growth and jobs are great for our city, but these jets have to take off and land, which is the issue with the residents.	Aircraft operating from the proposed air cargo facility expansion will need to take off and land, and these landings and take-offs are a community noise concern. These operations have been accounted for in the environmental impact analyses performed for the EA.

Commenter	Letter Code	Comment Code	Comment	Response
Dave Baker 1747 Rocky Pointe Drive Lakeland, FL 33813	P124	28-9	I am against this expansion if I have a say in this matter.	Comment noted.
Emily Cooper [NO ADDRESS PROVIDED]	P125	13-84	I live just inside Hillsborough County. Less than a mile from the Polk County line, I'm on Wiggins and Rice / Drain Field Rd. The Amazon jets affect me as well as Lakeland residents. The jets turn North after leaving the airport straight over our house. Ever time they knock out our TVs. Just wanted you to know Lakeland isn't the only ones affected by this.	The airport, along with aircraft operators and various stakeholders at LAL, has been working to develop and implement numerous noise mitigation strategies to reduce impacts to surrounding communities. As discussed in Topical Response 2b (Air Traffic and Overflights), some of these procedures include the following: • Voluntary Preferential Runway Use Program between the hours of 10:00 pm and 7:00 am • Higher initial departure altitudes for departing aircraft • Development of a new arrival procedure for aircraft landing Runway 28 • Use of Noise Abatement Departure Procedures (NADP-1 and NADP-2) for Runway 10 and Runway 28 departures • New Standard Instrument Departure (SID) procedures for Runway 10 and Runway 28. LAL is located between two major hub airports and in proximity to other airports, all of which place constraints on the airspace around LAL, including the heights at which aircraft operate. Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. Some of the noise abatement initiatives described above, such as the Voluntary Preferential Runway Use Program, affect how flight paths are used and therefore could affect the distribution of noise around surrounding communities. The initiatives described above may increase the altitude at which aircraft arrive and depart LAL, which could be beneficial for some communities. The City of Lakeland has also submitted an unsolicited proposal to FAA to modify existing flight procedures or develop new flight procedures. FAA will review the proposals, and if they are determined to be feasible will evaluate them further. The evaluations would include a review of environmental impacts, including the shift in aircraft overflights and the resulting changes in noise exposure. As the City develops and implements the strategies outlined above, they will continuously monitor the ef
Craig Fetherman, CPA 1744 Rosshire Court Lakeland, FL 33813	P126	13-85	The Lakeland Highlands area is approx. 3-4 miles east of the Lakeland airport and jets are in a landing or take-off, low altitude mode when passing through this area. I am not a pilot and don't know their exact altitude but probably only a few thousand feet and the noise from the jets is obvious and annoying. Do jets have mufflers just asking?	Noise from existing air cargo operations at LAL is included in the EA analysis of the No-Action Alternative and Proposed Development Project. Based on analysis prepared for the EA, significant noise impacts would not occur if the Proposed Development Project was implemented. While individual overflights may be temporarily quieter or louder than

Commenter	Letter	Comment	Comment	Response
Commenter	Code	Code	Conment	the DNL metric indicates at a given location, the existing cumulative noise exposure is compatible with residential land use, including neighborhoods like the Lakeland Highlands. Jets do not have mufflers like cars. However, aircraft manufacturers have consistently worked to develop and implement aircraft noise reduction technologies over the past 40 years. The first noise standard was developed in 1971 by the International Civil Aircraft Organization Committee on Aircraft Noise, which aimed at ensuring that any new aircraft entering service would use the best available noise reduction technology. Following the
Craig Fetherman, CPA 1744 Rosshire Court Lakeland, FL 33813	P126	3-16	In my humble opinion any designation making the Polk Parkway the preferred landing or take-off for planes esp. jets (Amazon) would affect all of these and the entire Lakeland Highlands area, with tens of thousands of residents. If you live anywhere near this area, or know residents who do, you are well aware of the residential density of this entire area. I do understand how the proposed expansion by Amazon would be good for the local economy by providing hundreds of good paying jobs but I doubt their corporate leaders really care about the potential negative impacts. I realize flight patterns are limited and most complaints are coming from the Grasslands area which is much closer to the airport. I'm sure you are aware that any flight pattern to and from the west of the airport is preferable to all concerned. But the recent emphasis on flight patterns from the east, and over the Polk Parkway, is very disturbing. The Lakeland Highlands area has probably 10 times or more residents than Grasslands, and many more affected institutions, and should be given serious consideration in any flight pattern decisions.	framework established by 14 CFR Part 36, the FAA has adopted increasingly stringent noise certification standards for new aircraft. Refer to Topical Response 2b (Air Traffic and Overflights) for additional details related to the topics raised in this comment. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review, and environmental analysis prior to approval. The environmental review would include analysis of the potential noise impacts from any proposed flight procedures. Refer to Topical Response 2b (Air Traffic and Overflights) for additional details related to the topics raised in this comment.
Craig Fetherman, CPA 1744 Rosshire Court Lakeland, FL 33813	P126	3-17	The Polk County landfill which is 5-6 miles east of Lakeland Highlands is not the issue, but any flight pattern from there and parallel with the Polk Parkway should be the primary concern.	Comment noted.
Beverly Hendricks 2603 New Jersey Rd. Lakeland FL 33803	P127	14-53	We need these jobs that the Amazon flights provide here in the west-Polk/east-Hillsborough area. I heard the flights when they first started last summer, but I have gotten used to them, so I rarely hear them any more. We aren't a big city, like New York or Chicago, and if people don't like it, maybe they should move further from it. We need the jobs here.	Comment noted.
George Rezac [NO ADDRESS PROVIDED]	P128	14-54	In the past year, I've noticed increased traffic on the Polk Parkway, and the truck noise is annoying. Could the parkway be placed in a more rural part of the county? Bottom line is that the Amazon expansion represents an excellent boost to Lakeland's economic growth, After a couple of failures to attract commercial air to Linder, we should be grateful for this opportunity.	Realignment or relocation of the Polk Parkway would not be required or justified by the proposed air cargo facility expansion at LAL, and is not considered in the EA.

Commenter	Letter Code	Comment Code	Comment	Response
Perry C. Brokaw and Juan J. Perez 3325 US Highway 98 S. Valencia Estates Lakeland FL 33803	P129	13-86	I am against the flight patterns of Amazon. Higher Altitude flying in landing and takeoffs could be one solution. Using Polk Expressway as a guide only will increase noise pollution. I live less than a mile from Polk Expressway. Highway noise pollution is bad already. Lakeland needs the jobs and I hope a solution can be found without trampling on the citizens of peace and quiet Lakeland.	Refer to Topical Response 2b (Air Traffic and Overflights) for a discussion related to the topics raised in this comment.
Chip Adkins 1963 Grasslands Blvd Lakeland, FL 33803	P130	13-87	You must stop these low flying flights over the Grasslands community. They are LOUD. They are disruptive. Please work with the FAA to stop these unnecessary flight paths. They are not only loud and disruptive but they create a safety concern and could very well impact pour [sic] property value.	Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval. Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 3 (Quality of Life) for additional discussion.
				A variety of environmental resource categories typically associated with quality of life concerns, including noise, were evaluated in the EA and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project. Negative effects on property value are not anticipated (see Topical Response 4, Impacts on Property Values).
Tommy Tompkins [NO ADDRESS PROVIDED]	P131	13-88	I can't for the life of me understand whay [sic] you would buy property close to an airport and then complain about it . My wife and i [sic] live on clubhouse road and we really enjoy seeing the big jets as they approach the airport. That includes Amazon and the noaa aircraft.	Comment noted.
Tommy Tompkins [NO ADDRESS PROVIDED]	P131	14-55	This is the type of business we need in polk county, good pay and working conditions. Clean and safe I think people should get over the problems they say they have and understand there is much more to this than their level of comfort.	Comment noted.
Tommy Tompkins [NO ADDRESS PROVIDED]	P131	3-18	I would suggest that the traffic patterns should be left up to the pilots as they will have safety in mind as first priority.	Comment noted. Departures and arrivals at LAL must be coordinated with Air Traffic Control and use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports.
Rev. Alex Shanks Assistant to the Bishop Florida Conference of The United Methodist Church [NO ADDRESS PROVIDED]	P132	14-56	This is just a note to say I am in favor of airport expansion. We need the continued improvement to our economy.	Comment noted.
William H. Harrell, esq [NO ADDRESS PROVIDED]	P133	27-15	I'm confident that Amazon, and its expansion, will continue to be a great thing for our community.	Comment noted.
Rick Steinberg [NO ADDRESS PROVIDED]	P134	13-89	I have lived in Lakeland my whole life since 1958. I don't particularly like Amazon and rarely use them but I find it ridiculous that people living near an airport complain about noise from airplanes. For years the city tried to get commercial flights in Lakeland.	Comments noted.

Commenter	Letter Code	Comment Code	Comment	Response
		0000	Nobody complained about that. If you don't like noise from airplanes don't live near an airport. It's that simple. You live in Grasslands so you know your near an airport and your house is on a former garbage dump. If you don't like airplane noise then move away from an airport. Polk county is one of the fastest growing counties in the country. With that comes more traffic and noise from all types of things.	
Lynette A Roff 3303 Turnberry Lane Lakeland, FL 33803	P135	13-90	You must stop these low flying flights over the Grasslands community. They are LOUD. They are disruptive. Continued and additional flights have a drastic impact on our property values and affect our quality of life. They should not be allowed to continue. Please work with the FAA to stop these unnecessary flight paths.	Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval. Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 3 (Quality of Life) for additional discussion. A variety of environmental resource categories typically associated with quality of life concerns, including noise, were evaluated in the EA and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project. The EA did not identify any significant social, environmental, and economic impacts associated with the Proposed Development Project. Negative effects on property value are not anticipated (see Topical Response 4, Impacts on Property Values).
Dianne Myers 3066 Shoal Creek Village Dr Lakeland, FL 33803	P136	13-91	You must stop these low flying flights over the Grasslands community. They are extremely LOUD and very disruptive. It is almost impossible to sit and enjoy time on your lanai with the constant noise. Please work with the FAA to stop these unnecessary flight paths.	Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval. Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 3 (Quality of Life) for additional discussion.
Dennis & Mary Ann Bohl 708 Grasslands Village Circle Lakeland, FL 33803	P137	14-57	If not reined in this company will ruin our beautiful little town and destroy property values. They offer us nothing more than what's becoming minimum paying jobs while destroying premium property values.	Refer to Topical Response 3 (Quality of Life) and Topical Response 4 (Impacts on Property Values) for discussion related to the topics raised in this comment.
John Hughes 910 Fairlington Drive Lakeland, FL 33813	P138	13-92	Our home on Fairlington Drive in Lakeland may as well be situated right next to a busy railroad track. After 30 years of quiet enjoyment of our home, since the beginning of this year, we can no longer have uninterrupted conversations in our home; no longer watch a TV show without rewinding several times to hear what we've missed; no longer	Communities near LAL have experienced increased noise since the initiation of air cargo operations at LAL. Some commenters noted increased cases where speech and other daily activities are interrupted. With additional people working from home in response to the COVID-19 pandemic, it is likely that more people more frequently hear aircraft noise that regularly occurs throughout the day. The EA acknowledges an increase in flight

Commenter	Letter	Comment	Comment	Response
	Code	Code	have a phone conversation without forced pauses, all because of the noise of yet another Amazon 737 or 767 flying a few hundred feet directly over our house The decisions of the airport and city government public servants to trade the former quiet, high quality suburban life in Lakeland for a few warehouse jobs is unconscionable. The noise from these many jets rattle not only our windows, but our frayed nerves as well. I'm only glad that we - unlike many of our neighbors - don't have babies that are awakened every 30 to 90 minutes by the low-flying jets, but we do continue to have to apologize to house guests, phone callers, and zoom meeting participants for the silly volume of bone-jarring noise caused by giant jets skimming over our house many, many times a day and night.	cumulative noise exposure based on FAA guidelines. The analysis of noise exposure in the EA was based on the DNL 65 dB contour. Because the residential land uses within (or newly within) the DNL 65 and higher noise contours shown in the EA would not experience a 1.5 decibel increase due to the Proposed Development Project, the impacts are not considered significant. Therefore, a specialized vibration analysis is not required. However, it is recognized that individual noise events may be quieter or louder than cumulative noise exposure estimates provided by the DNL analysis, and that some may
				Refer to Topical Response 2b (Air Traffic and Overflights), Topical Response 2e (Vibration), Topical Response 2f (Sleep Disturbance), and Topical Response 2g (Speech Interference) for additional details related to the topics raised in this comment.
John Hughes 910 Fairlington Drive Lakeland, FL 33813	P138	14-75	Had we known that our house would one day be on the flight path of giant jet powered cargo planes, we would have located elsewhere. The diminished value of our property - caused exclusively by the excessive noise from these Amazon flights - will soon have to be calculated and added to the mental and physical anguish costs we are suffering, forcing us and those other Lakeland residents like us, to seek a reckoning.	Land use planning and zoning at and surrounding LAL has long included and accounted for existing commercial and light industrial land uses, as well as increased future land uses in these categories. The purpose of these planning and zoning designations is to encourage compatible development, and attempt to limit residential land uses in areas where it may not be conducive due to existing businesses, planned developments, and growth. Growth and development plans for the area in general have been conducted, reviewed and approved in accordance with these light industrial and commercial planning and zoning designations. Planning for general air cargo tenancy at LAL has been occurring for over ten years. Air cargo development in general was first represented on the ALP and in the LAL Master Plan in 2012 and development of the Master Plan included public meetings and comment opportunities. A separate EA and permitting process was also completed in 2016 for a large, multi-hangar Maintenance, Repair and Overhaul facility with a modestly-sized air cargo facility at LAL. The City proposed development of a larger air cargo facility at the site in 2018, and FAA subsequently reevaluated the 2016 EA in light of the revised project. Although local land development and airport plans have included the potential for increased air cargo traffic at LAL since 2012, and public participation opportunities have been made available during this process, it is understood that communities near LAL have experienced increased noise since the initiation of air cargo operations at LAL. The EA discusses existing flight activities as well as additional flight activity due to the Proposed Development Project, and assesses the impacts on cumulative noise exposure based on FAA guidelines.

Commenter	Letter	Comment	Comment	Response
	Code	Code		The analysis of noise exposure in the EA was based on the DNL 65 dB contour. Because the residential land uses within (or newly within) the DNL 65 and higher noise contours shown in the EA would not experience a 1.5 decibel increase due to the Proposed Development Project, the impacts are not considered significant. The EA did not identify any significant social, environmental, and economic impacts associated with the Proposed Development Project. Negative effects on property value are not anticipated (see Topical Response 4, Impacts on Property Values).
Timothy Roberts [NO ADDRESS PROVIDED]	P139	14-58	Build the Amazon site we need the jobs	Comment noted.
James Mils Grace Viola 3656 Southcrest Blvd. Lakeland, FL 33812	P140	20-12	Peace and quiet in our homes is a most cherished condition. Yet the large planes flying low overhead disrupt the serenity that makes our community a wonderful place to live. To think that more of this is coming, adding to the noise, pollution, and vehicular traffic in our area is anathema and contrary to the semi-rural setting that drew us to Lakeland in the first place. We are asking that you do what you can to maintain our quality of life.	It is acknowledged that the Proposed Development Project could increase noise, pollution and vehicular traffic in the area. The EA includes a detailed review and analysis of potential environmental impacts from the Proposed Development Project. The analyses included in the EA concluded that the Proposed Development Project would not cause impacts to most environmental resource categories, including air quality and noise, that exceed FAA's thresholds that would indicate significant impacts. Impact avoidance, minimization, and mitigation needs were identified where appropriate. Water quality treatment and attenuation are included in the Proposed Development Project to ensure that potential impacts would not be significant. The Proposed Development Project would not include the use, production or storage of new hazardous materials or hazardous waste. The air cargo operator would implement recycling, reuse, and waste reduction measures in its operations. The traffic impacts analysis performed for the EA identified needed improvements (dedicated turn lanes) at one intersection (Kidron Road at Drane Field Road). During the development of the EA, the turn lanes were constructed at this intersection to improve its performance and reduce congestion. This mitigation would offset project-related traffic impacts anticipated in 2022 and 2027. Refer to Topical Response 1 (Worsening of Existing Air Quality), Topical Response 2b (Air Traffic and Overflights), Topical Response 2c (Flight Frequency and Schedule), and Topical Response 3 (Quality of Life) for additional details related to the topics raised in this comment.
Susan Tukums [NO ADDRESS PROVIDED]	P141	20-13	You can tell your Mr. Brewer, whoever he is, that yes an Amazon expansion will create a few more jobs, but will destroy housing prices, especially in SW Lakeland and Lakeland Highlands. Neighborhoods will be destroyed from noise and air pollutions. Residents' largest life investments, their homes, will be ruined.	Aircraft noise and aircraft air emissions would both increase with the Proposed Development Project. However, the noise and air quality analyses performed for the EA concluded that the Proposed Development Project would not cause air quality impacts that exceed FAA's thresholds that would indicate significant air quality impact. Refer to Topical Response 1 (Worsening of Existing Air Quality), Topical Response 2a (Noise Analysis Methods), Topical Response 3 (Quality of Life), and Topical Response 4

Commenter	Letter Code	Comment Code	Comment	Response
	Code	Code		(Impacts on Property Values) for additional details related to the topics raised in this comment.
				The lease term for the air cargo facility at LAL is 20 years which represents a long-term investment in the Lakeland area. Within this timeframe, the Proposed Development Project has the potential to add up to 800 new jobs at LAL with a minimum hourly wage starting at \$15/hour. Amazon currently employs more than 1,000 City of Lakeland residents across multiple sites and has been operating in Lakeland since 2014.
Susan Tukums [NO ADDRESS PROVIDED]	P141	23-5	How do the planes benefit us? What is Amazon willing to put back into the community to pay us back for allowing them to lose our peace and quiet on the weekends? For polluting our air? For taking up so much space? All for \$15 and hour or a few workers Please	At the company level, Amazon sponsors initiatives to increase access to computer science education for children and young adults from underserved or underrepresented communities and funds additional STEM and computer science outreach and education initiatives. For its employees, tuition assistance is available towards a certificate or diploma in qualified fields of study, leading to in-demand jobs. Amazon also contributes in-kind and cash donations to communities to increase access to food, shelter, and basic goods for children and families. Amazon's Housing Equity Fund is providing more than \$2 billion in below-market loans and grants to preserve and create more than 20,000 affordable homes for individuals and families earning moderate to low incomes in our hometown communities. The company also leverages their worldwide logistics network to aid in disaster relief in communities impacted by natural disasters.
Dee Jordan [NO ADDRESS PROVIDED]	P142	13-93	Please stop building and don't add any more flights. 22 is more than enough. The planes are flying too low. They look like they are trying to land in the yards now and the noise from them are disruptive to the neighborhood. I live off S.FI Ave near the Walmart and the noise is rediculous [sic]. Please consider not approving this move.	Based on analysis prepared for the EA, significant noise impacts would not occur if the Proposed Development Project was implemented. Federal law preempts any local government from implementing any action that is intended to control the types of aircraft that use an airport, the routes of aircraft in flight, the timing of flights, or the number of flights. Further, flight patterns cannot be arbitrarily shifted from one area to another. However, airport operators, including the City, work with airport users to make them aware of community noise issues and promote voluntary measures to reduce aircraft noise. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval. Refer to Topical Response 2b (Air Traffic and Overflights) for additional details related to the topics raised in this comment.
Maureen Shanley 3828 Cheverly Drive W Lakeland, FL 33813	P143	13-94	I would like to state that I am opposed to the Lakeland Airport expansion. The noise pollution from these jets and the extra air pollution from the exhaust as they fly so low over my home as they are getting ready to land will eventually cause health problems for those of us who live in the flight landing zone as it now exists.	As discussed in EA Sections 4.2 and 5.2, the airport is located is in an attainment area for all National Ambient Air Quality Standards (NAAQS). Data from the outdoor air monitoring network in the area demonstrate that there have been no violations of the NAAQS. The NAAQS are developed and periodically reviewed and updated as needed, to ensure the protection of human health and the environment. Similarly, the noise analysis prepared for the EA demonstrates that under existing conditions, residential areas adjacent to and near LAL experience cumulative noise levels below DNL 65 dB, at which airport noise is considered compatible with residential land use. The noise and air quality analyses performed for the EA concluded that the Proposed

Commenter	Letter Code	Comment Code	Comment	Response
				Development Project would not cause noise or air quality impacts that exceed FAA's thresholds that would indicate significant air quality or noise impact.
				Refer to Topical Response 1 (Worsening of Existing Air Quality) and Topical Response 2b (Air Traffic and Overflights) for additional details related to the topics raised in this comment.
David Matern 1744 Laurel Glen Place Lakeland, Florida 33803	P144	13-95	You must stop these low flying flights over the Grasslands community. They are LOUD. They are disruptive. Additionally, the flight pattern is over a densely populated area when other areas around the airport are sparsely populated. Please work with the FAA to stop these unnecessary flight paths.	Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval. Refer to Topical Response 2b (Air Traffic and Overflights) for additional discussion.
Mark and Becky Munson Heritage Lakes Addition, Grasslands Golf and Country Club	P145	13-96	We respectfully request you stop these low flying flights over the Grasslands community. They are unnecessary and are devaluing the lifestyle and property values of the Grasslands Addition. They are LOUD and they are disruptive. They wake us up at 05:30 am and late at night and must be stopped.	Communities near LAL have experienced increased noise since the initiation of air cargo operations at LAL. Some commenters not that these events are impactful to their sleep. Separate from the EA, the City has proposed conceptual noise abatement measures and has implemented a voluntarily runway use program to address noise-related concerns of the surrounding community. The EA discusses existing flight activities as well as additional flight activity due to the Proposed Development Project, and assesses the impacts on cumulative noise exposure based on FAA guidelines. The analysis of noise exposure in the EA was based on the DNL 65 dB contour. Because the residential land uses within (or newly within) the DNL 65 and higher noise contours shown in the EA would not experience a 1.5 decibel increase due to the Proposed Development Project, the impacts are not considered significant. The EA did not identify any significant social, environmental, and economic impacts associated with the Proposed Development Project. Negative effects on property value are not anticipated (see Topical Response 4, Impacts on Property Values).
T Farthing [NO ADDRESS PROVIDED]	P146	3-19	We are writing in regards to the air traffic over our home in Grasslands. Whereas we know the flights will continue, we ask that jets that take off to the east would continue further east to gain altitude before they turn North. That path takes them over some commercial areas and they can gain altitude quicker flying straightaway versus a hard turn at low altitudes. We're asking Amazon to be a better neighbor using an easy fix. There is a universal concern in Grasslands for our property values.	Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland
Michelle Hubenschmidt & Gary Gidding	P147	13-97	It is not an exaggeration to say that the roaring of those planes rattles our windows and wakes us out of a dead sleep. There have been many mornings where the full	NOAA and military aircraft are included in the EA noise analyses in order to develop both

Commenter	Letter Code	Comment Code	Comment	Response
[NO ADDRESS PROVIDED]	Code	Code	throttle of engine roar began at 4:30 am. Yesterday morning, Sunday, May 30th, the planes started at 5:42 AM, followed by 6:04 and 6:16. Sunday, a day when if one is not expected to work, one could expect to sleep in, however, your deal with the Amazon devil has changed all that. And now you and the commissioners are in negotiations to expand their presence, and double their flights thereby, further diminishing our life quality and hope for sleep beyond 5 am. Our house faces the west and it is a constant issue when the NOAA, Coast Guard or other military planes arriving from that direction, flying low and slow, becoming so loud that it has disrupted business meetings, classes and conversations. Earlier this year, I believe February, a 6 engine military plane flew in so low that it rattled the house and caused objects to fall off the wall. Just a few weeks ago 5 Navy cargo planes came in around 4 pm, one every 7-8 minutes, again flying low enough to jar knickknacks from their place.	Proposed Development Project, the additional air cargo flights that would occur with the
Michelle Hubenschmidt & Gary Gidding [NO ADDRESS PROVIDED]	P147	14-59	The hundreds of new homes, new neighborhoods, industrial parks, warehouses, have caused unrelenting tractor trailer and vehicle traffic that snarls Waring, Pipkin and other tertiary roads several times a day on two lane roads that are unable to handle the capacity, yet you want to expand the airport, court domestic flights which will exponentially exacerbate the problems. Not to mention what it's going to become once the new 700 acre industrial park is built just north of the airport	Comment noted. Each development project, including new housing, industrial parks and warehouses, is reviewed by state and local agencies during the land development approval and permitting processes to determine the effects of each project and whether traffic mitigation or roadway capacity enhancements are needed. The EA includes a detailed analysis of traffic impacts that may result from the Proposed Development Project. The traffic impacts analysis performed for the EA identified needed improvements (dedicated turn lanes) at one intersection (Kidron Road at Drane Field Road). During the development of the EA, the turn lanes were constructed at this intersection to improve its performance and reduce congestion. This mitigation would offset project-related traffic impacts anticipated in 2022 and 2027. As growth and development continues to occur in the Lakeland area, additional regional roadway improvements will become necessary over time.
Dianna Thomas 2470 Laurel Glen Dr. Lakeland, FL 33803	P148	13-98	Concern: The FAA has identified that the long and short term impact of noise does not exceed significance levels. While we understand the use of the DNL model for evaluation it does not appear to account for the current and direct noise impact of flights that are going directly over our home at extremely low altitudes and full power. We have made several calls to the local airport since last fall expressing our concern.	FAA's NEPA guidelines require the use of DNL to assess the potential impact of a Proposed Action, such as the proposed air cargo facility expansion. The DNL contours developed for the EA's noise analyses consider the flight traffic patterns currently in use at LAL. Because DNL reflects the average annual day (noise exposure over a 24-hour period, averaged over 365 days), individual aircraft overflights can be quieter or louder than the DNL level. However, the noise impact of individual flights cannot be used to determine the significance of a project's impacts under NEPA.

Commenter	Letter Code	Comment Code	Comment	Response
			Impact: Disruptive to quality of life in south Lakeland. Outside conversations are interrupted. Flights occur after going to bed and prior to waking (awakened at both times). Work at home calls are disrupted with inability to hear and rattling of windows. Potential safety risk (bird strikes-little time to recover). Detrimental impact on property values. Request: Expansion does not move forward until noise abatement/mitigation is in place that will take flights directly out and up to high altitudes which will stop low flying/loud commercial flights over our neighborhood.	LAL is a public use airport, and Federal law preempts local governments from implementing any action that is intended to control the types of aircraft that use an airport, the routes of aircraft in flight, the timing of flights, or the number of flights. Arrivals and departures use published approach and departure procedures that have been developed to ensure the safe and efficient use of airspace and approved by the FAA. These procedures consider a variety of factors including the air space requirements of other nearby airports, and are subject to detailed review and analysis prior to approval. Because LAL is located between two major hub airports, the currently approved approach and departure procedures include aircraft height limits during these operations. However, airport operators, including the City, work with airport users to make them aware of community noise issues and promote voluntary measures to reduce aircraft noise. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the proposed procedures are feasible, they would undergo a detailed analysis and review to assess their potential noise and other environmental impacts prior to approval. LAL implements a Wildlife Hazard Management Plan (WHMP) to reduce the safety risk posed to aircraft operations by large birds and other wildlife. The WHMP includes measure to remove or modify habitat in airport environs such that it is not a wildlife attractant, as well as measure to actively discourage the use of the airfield for feeding and foraging by wildlife. Refer to Topical Response 2a (Noise Analysis Methods), Topical Response 2b (Air Traffic and Overflights), Topical Response 2c (Flight Frequency and Schedule), Topical Response 2f (Sleep Disturbance), Topical Response 2g (Speech Interference), Topical Response 3 (Quality of Life), Topical Response 4 (Impacts on Property Values), and
Stephanie Franklin [NO ADDRESS GIVEN]	P149	13-99	My home is no longer peaceful, my quality of life, that tranquilness that home gives me, has faded. I am approximately 500 feet from the Polk Parkway. My house sometimes shakes for the planes. My house is so noisy, that all of my windows and sliding glass doors need to be replaced by Amazon. I am a nervous wreck and my sleep has been interupted [sic] on a regular bases. I have given up reading the newspaper (Legder of course) with my morning coffee on the lanai. Grilling meals and inviting others is unpleasant. Watching the sunset is different. The noise from planes begins early mornings and lingers into the night.	Topical Response 6b (Wildlife Hazard Potential) for additional details related to the topics raised in this comment. Noise from existing air cargo operations at LAL is included in the EA analysis of the No-Action Alternative and Proposed Development Project. One objective of the EA's noise analysis was to determine whether or not the Proposed Development Project would increase incompatible land uses compared to the No-Action Alternative, and if so, determine whether the noise increases in those areas would cause noise impacts that exceed FAA's thresholds that would indicate significant noise impact. Based on analysis prepared for the EA, significant noise impacts would not occur if the Proposed Development Project was implemented. Although it is acknowledged that increased flights may cause nearly areas to perceive increased vibrations as aircraft pass over, the EA assessment did not identify significant impacts that would warrant a specialized vibration

Commenter	Letter	Comment	Comment	Response
	Code	Code		analysis. Arrivals and departures coordinate approach and departures with the air traffic control tower and use published flight procedures.
				Refer to Topical Response 2b (Air Traffic and Overflights), Topical Response 2e (Vibration) and Topical Response 2f (Sleep Disturbance) for additional details related to the topics raised in this comment.
Stephanie Franklin [NO ADDRESS GIVEN]	P149	21-12	My neighbors roof was damaged by ice falling from a plane several years ago. I didn't think that could happen but it did. So now can it happen again, probably so.	Comment noted.
Stephanie Franklin [NO ADDRESS GIVEN]	P149	21-13	Can the birds from the lake cause a strike not to mention the dump? We have pelicans, herons, cranes, ducks, and so on here in the back yard.	Large birds on and near airports pose a recognized risk to aircraft safety. As discussed in the EA and Topical Response 6b (Wildlife Hazard Potential), LAL conducts routine Wildlife Hazard Assessments and has an up-to-date Wildlife Hazard Management Plan (WHMP). The WHMP includes a variety of measures to minimize airport wildlife attractants and actively discourage birds and other wildlife that pose safety risks to aircraft, from using the airport for breeding, nesting, and feeding. Additional guidelines are in place to reduce the risk of wildlife to aircraft safety off airport, including the siting of municipal landfills in relation to airports. Topical Response 6b (Wildlife Hazard Potential) contains additional details regarding this topic.
Dave Buyens 709 Sandalwood Drive Plant City FL 33563	P150	13-100	The existing Amazon air fleet is a common noise event at our house. I worry about increases.	Communities near LAL have experienced increased noise since the initiation of air cargo operations at LAL. Noise from existing air cargo operations at LAL is included in the EA analysis of the No-Action Alternative and Proposed Development Project. The EA also evaluates an increase in flight activity due to the Proposed Development Project, which would increase in flight operations by approximately 4.11 percent increase over in 2022 and by 5.07 percent in 2027 under the No-Action Alternative (if the Proposed Development Project did not occur). One objective of the EA's noise study was to determine whether or not the Proposed Development Project would increase incompatible land uses compared to the No-Action Alternative, and if so, determine whether the noise increases would cause noise impacts that exceed FAA's thresholds that would indicate significant noise impact. When compared to the No-Action Alternative, the additional aircraft operations associated with the Proposed Development Project in 2022 and 2027 would increase the amount of noncompatible (residential) land use directly to the east of the airport property line. The parcels and residences within, or newly within, the 2027 DNL 65 contour would not experience an increase of 1.5 dB or greater. Based on analysis prepared for the EA, significant noise impacts would not occur if the Proposed Development Project was implemented. Refer to Topical Response 2a (Noise Analysis Methods) and Topical Response 2c (Flight Frequency and Schedule) for additional details related to the topics raised in this comment.

Commenter	Letter	Comment	Comment	Response
	Code	Code		
Dave Buyens 709 Sandalwood Drive Plant City FL 33563	P150	5-3	Also, I watched NOVA on PBS this weekend and was amazed at how widespread the plumes from jets affect our air quality.	The increased aircraft activity associated with the Proposed Development Project would cause a modest increase in air pollutant emissions at LAL. The air quality analysis performed for the EA included emissions from the additional flights, specific to the types and numbers of aircraft expected to service the air cargo facility. This analysis concluded that the Proposed Development Project would not cause air quality impacts that exceed FAA's thresholds that would indicate significant air quality impact. Refer to Topical Response 1 (Worsening of Existing Air Quality) for additional details related to the topic raised in this comment.
Beth Dickman 2970 Shoal Creek Village Dr. Lakeland, FL 33803	P151	13-101	Please stop these low flying flights over the Grasslands community. They are LOUD and disruptive. Please work with the FAA to stop these unnecessary flight paths.	Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval. As also mentioned in previous responses, a variety of environmental resource categories typically associated with quality of life concerns, including noise, were evaluated in the EA and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project. Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 3
				(Quality of Life) for additional details related to the topics raised in this comment.
Kathleen Head 4350 Tokose Place Lakeland Florida 33811	P152	13-102	When I moved into Morgan Creek 8 years ago I felt like I lived in the country. Now the constant road noise on west pipkin, the engine testing noises, and the planes makes me feel like I live in the inner city. At least once a month the noise from jet engine testing makes it impossible to work at home and we can no longer open are [sic] windows.	Comment noted. Although jet engine testing performed by other tenants at the airport is included in the airport's noise contour. The testing is not being performed by Amazon, who does not perform heavy maintenance and therefore does not perform these types of runups at LAL. The Proposed Development Project does not include increased or changed engine testing frequency. Note that an engine runup enclosure to reduce noise from other tenants who do perform major maintenance activities and runups is being considered for development on the south side of the airport.
Kathleen Head 4350 Tokose Place Lakeland Florida 33811	P152	14-60	West Pipkins [sic] is an all night drag racing strip as employees start late night warehouse shifts and the planes at night wake you up. Why is a small rural airport allowing late night planes at all. Even airports in major cities have cut off times for planes to take off.	Federal law preempts local governments from implementing any action that is intended to control the types of aircraft that use an airport, the routes of aircraft in flight, the timing of flights, or the number of flights. Surface traffic from the Phase I air cargo facility development, which is currently operational, was included in No-Action Alternative and Proposed Development Project for the traffic analysis performed for the EA. Refer to Topical Response 2f (Sleep Disturbance) and Topical Response 5b (Existing Traffic Congestion) for additional details related to the topics raised in this comment.
Kathleen Head 4350 Tokose Place Lakeland Florida 33811	P152	3-20	I fear all the money in grass lands will force more planes over the poorer communities and this will only get worse. Please consider banning late night flights after 10pm and please don't allow all the rich folks in Grassland to use their influence to force the "average joe" to bare all the plane noise. I work just as hard as they do.	The airport, along with aircraft operators and various stakeholders, has been working to develop and implement numerous noise mitigation strategies to reduce impacts to surrounding communities. As discussed in Topical Response 2b (Air Traffic and Overflights), some of these procedures include the following:

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				 Voluntary Preferential Runway Use Program between the hours of 10:00 pm and 7:00 am Higher initial departure altitudes for departing aircraft Development of a new arrival procedure for aircraft landing Runway 28 Use of Noise Abatement Departure Procedures (NADP-1 and NADP-2) for Runway 10 and Runway 28 departures New Standard Instrument Departure (SID) procedures for Runway 10 and Runway 28.
				Some of the noise abatement initiatives described above, such as the Voluntary Preferential Runway Use Program, affect how flight paths are used and therefore could affect the distribution of noise around surrounding communities. The initiatives described above may increase the altitude at which aircraft arrive and depart LAL, which could be beneficial for some communities.
				The City of Lakeland has also submitted an unsolicited proposal to FAA to modify existing flight procedures or develop new flight procedures. FAA will review the proposals, and if they are determined to be feasible will evaluate them further. The evaluations would include a review of environmental impacts, including the shift in aircraft overflights and the resulting changes in noise exposure. As the City develops and implements the strategies outlined above, they will continuously monitor the effectiveness of these procedures on the surrounding community. The list of initial strategies is not final, and efforts will mature over time with the possible modification of existing procedures and the development of new procedures (if determined to be feasible and subject to FAA review). Please refer to Topical Response 2b (Air Traffic and Overflights) for discussion and additional details
Susan Queitzsch	P153	13-103	The peace and quiet that many of us enjoyed in this area was already being steadily infringed upon over the years with more jet flights and then other businesses were added that also increased air traffic. Now with the addition of Amazon we are enduring even higher noise levels and windows rattling at all hours and we're being told that worse is yet to come.	interrupted. Noise from existing air cargo operations at LAL is included in the EA analysis of the No-Action Alternative and Proposed Development Project. The EA also discusses
[NO ADDRESS PROVIDED]	1 100	10 100	The addition of a few more jobs is reason we're supposed to embrace the destruction of our quality of life and the ability to enjoy our homes but the overriding factor, as always, is how much more money Amazon will bring to the city coffers. Only now after people in the surrounding community are complaining are you looking into noise mitigation routes.	the residential land uses within (or newly within) the DNL 65 and higher noise contours shown in the EA would not experience a 1.5 decibel increase due to the Proposed

Commenter	Letter Code	Comment Code	Comment	Response
	Couc	Codo		Proposed Development Project. Refer to Topical Response 3 (Quality of Life) for a discussion of quality of life concerns and considerations. Separate from the EA, the City has proposed conceptual noise abatement measures and has implemented a voluntarily runway use program to address noise-related concerns of the surrounding community. Refer to Topical Response 2b (Air Traffic and Overflights) for additional details.
Charles & Lois Polstra 1750 Birchwood Loop Lakeland, FL 33811	P154	27-16	This is another "huge step forward" for our city/county and we appreciate the thoroughness of the report. We support going forward with knowledge and information shared openly through constant communication.	Comment noted.
Jaime C. Guerra 1109 Afton Street Lakeland, Florida. 33803-3201	P155	26-6	The National Environmental Policy Act of 1969 (NEPA) might have sufficed to meet federal requirements for the Environmental Impact Assessment of the Project. However, this well intended Act does not address specifically enough the critical environmental issues we live and experience 52 yrs. after its original inception. The terms "Negligible" and "Minor" are used in identifying the impact to the natural resources and water caused by the Phase II Air Cargo Facility Development proposed expansion. A more up to date assessment is needed, perhaps by a third party group that can evaluate the impact to the environment using data obtain on recent experiences elsewhere and with similar projects and like conditions.	Each environmental category considered under NEPA (e.g., air quality, biological resources) was subject to a detailed review, with quantified impacts where appropriate. Based on these detailed analyses, the EA describes the severity of potential impacts, including, "negligible," and, "minor." The EA also notes when mitigation was proposed, both in general and in terms of assessing the potential impact (e.g., surface traffic and wetlands). NEPA implementing regulations became effective in September 2020. The EA was initiated in early 2020, and as allowed, it was completed using the regulations in place prior to September 2020. It is noted that FAA's policies and procedures for conducting NEPA reviews are regularly updated. The EA was prepared in accordance with NEPA, CEQ regulations, and FAA Orders 1050.1F, Environmental Impacts, Policies and Procedures, and FAA Order 5050.4B, NEPA Implementing Instructions for Airport Actions.
Jaime C. Guerra 1109 Afton Street Lakeland, Florida. 33803-3201	P155	18-1	The vehicular traffic increase expected will undoubtedly pollute our surface water (lakes, ponds, etc), as well as in our in-ground water veins (main source of water to many Lakeland residents who rely on wells for their source of drinking water). Fluids leaked from engines, as well as synthetic/rubber dust generated by tires will reach our water sources via "run-off" and seepage.	The Airport currently has a fully permitted drainage master plan that accounts for all stormwater attenuation and treatment for existing and near-term future impervious areas. The Proposed Development Project would need to undergo design and construction permitting prior to state and local development authorities allowing construction to commence. Part of this process includes securing an Environmental Resource Permit (ERP) from the Southwest Florida Water Management District. A requirement of this permit is to demonstrate that the Proposed Development Project would provide adequate stormwater attenuation and treatment for all new impervious areas that are added because of its construction. This is accomplished by performing detailed water quantity and quality modeling to ensure that treatment and attenuation with pre-development conditions is replaced. The stormwater retention pond shown notionally in the Draft EA is being proposed to capture, treat and attenuate runoff that would occur due to the increased amount of impervious surface caused by the Proposed Development Project. During the ERP process, the pond size and location will be refined in order to ensure that it provides the necessary water quantity capture, storage and treatment volume to prevent flooding and water quality degradation in surrounding areas. The proposed roadway

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	Code	Code		improvements and the existing major roadways in the area also incorporate drainage features to collect runoff for attenuation and treatment in accordance with state and local requirements.
Jaime C. Guerra 1109 Afton Street Lakeland, Florida. 33803-3201	P155	5-4	The emissions that will be generated by the expected traffic increase of regular passenger vehicles, as well as planes, semi-tractor trailers, trucks, vans, etc. will be detrimental to the air we breathe in our city.	The detailed air quality analysis performed for the EA included emissions from the additional cargo trucks, passenger vehicles, and air cargo aircraft that would use the expanded air cargo facility. This analysis concluded that the Proposed Development Project would not cause air quality impacts that exceed FAA's thresholds that would indicate significant air quality impact. Refer to Topical Response 1 (Worsening of Existing Air Quality) for additional details related to the topics raised in this comment.
				In response to the public safety comment, the design of aircraft parking aprons, access taxiways, and related improvements would meet FAA airport design standards. The aircraft would be subject to applicable standards, inspection requirements, licensing requirements, and operation requirements. Aircraft arrival and departures would use published procedures and require contact with the LAL airport traffic control tower.
Jaime C. Guerra 1109 Afton Street Lakeland, Florida. 33803-3201	P155	FUEL FARMS, storing high quantiful high risk, storing jet fuels will increaccidental fires (man or nature cause and environmental impact combined P155 21-14 INCREASED VEHICULAR TRAFF	PUBLIC SAFETY: The proposed expansion project will significantly increase the risk of loss of human lives: FUEL FARMS, storing high quantities of fuels in above ground tanks has an inherent high risk, storing jet fuels will increase exponentially that risk to our population. From accidental fires (man or nature caused), to undetected leaks. Once again human lives and environmental impact combined. INCREASED VEHICULAR TRAFFIC will result in increased number of accidents throughout our city since trucks will be crossing many of our residential area's streets.	With respect to fuel farms, proposed tanks are more than 0.25 mile away from the nearest public roadways, are obscured from view, and have restricted access. LAL will apply all the same measures to secure and safeguard the proposed aboveground storage tanks that are already in place for its existing aboveground storage tanks. Installation of the new fuel storage tanks will be designed to comply with applicable fire codes, electrical codes and local building requirements and codes. The tanks would be subject to daily inspection and LAL would comply with all procedures for handling fuel releases or spills in accordance with the Spill Prevention and Countermeasure procedures and pollution prevention plans.
			INCREASE OF TAKE OFFS AND LANDINGS: INCREASE THE RISK OF CATASTROPHIC EVENTS: Take off and landing are with out a doubt the most crucial and critical moments on every flight. Given the size of cargo aircraft and increased amount of flights proposed, the risk to the lives of Lakeland's residents will be greatly increased.	In terms of increased vehicular traffic and increased accidents, Except for local delivery vans, the Proposed Development Project would use established truck routes and would not use streets in residential neighborhoods. Lakeland and Polk County have experienced considerable growth in residential, commercial, industrial and other activities over the past decade. State, county, and local transportation planning agencies are responsible for roadway design that includes safety features, and for identifying and implementing additional improvements when necessary.
				Refer to Topical Response 6a (Accident Potential) and Topical Response 6c (Aboveground Storage Tanks) for additional details related to the topics raised in this comment.
Kathleen Wright [NO ADDRESS PROVIDED]	P156	14-61	Would like my voice counted in being totally against any expansion by Amazon to our airport. Not only the noise, but most importantly is the impact on small businesses(it will kill some for much easier to deal with Uncle Jeff), our traffic increase which is already horrific of which will be added trucks on our roads, the land they are acquiring, the extra fuel stored	The increased aircraft operations that would result from the Proposed Development Project would increase cumulative noise levels in the area around LAL. However, the noise analysis conducted for the EA concluded that the Proposed Development Project would not cause noise impacts that exceed FAA's thresholds that would indicate significant noise impact. The traffic impacts analysis performed for the EA identified

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	Oddo	Couc		needed improvements (dedicated turn lanes) at one intersection (Kidron Road at Drane Field Road). During the development of the EA, the turn lanes were constructed at this intersection to improve its performance and reduce congestion. This mitigation would offset project-related traffic impacts anticipated in 2022 and 2027. Refer to Topical Responses 2a (Noise Analysis Methods), Topical Response 5b (Existing Traffic Congestions), Topical Response 5c (Proposed Traffic Impacts) and Topical Response 6c (Aboveground Storage Tanks) for additional details related to the topics raised in this comment. Additionally, land acquisition is not a part of the Proposed
Kathleen Wright [NO ADDRESS PROVIDED]	P156	26-7	[N]ot current environmental measures/1969 is way outdated, and the citizens should be the ones to vote on this, not you all.	Development Project studied in the EA. NEPA implementing regulations became effective in September 2020. The EA was initiated in early 2020, and as allowed, it was completed using the regulations in place prior to September 2020. It is noted that FAA's policies and procedures for conducting NEPA reviews are regularly updated. The EA was prepared in accordance with NEPA, CEQ regulations, and FAA Orders 1050.1F, Environmental Impacts, Policies and Procedures, and FAA Order 5050.4B, NEPA Implementing Instructions for Airport Actions. The NEPA process summarized here includes public involvement and comment opportunities. LAL is owned and operated by the City of Lakeland. Policy and operational decisions are vested with the City of Lakeland, and airport development decisions are typically subject to the City's process of ordinance and referendum as codified within the City of Lakeland
				Code of Ordinances (Part I, Division I, Sec. 19 and 88 et sec, Division II Sec 1-10 et sec). The City's currently approved zoning on the property allows for warehouse and related facility development, such as the Proposed Development Project. A lease agreement was signed in May 2019 that gave Amazon the right to expand on the airport within five years. The City is under contractual obligation to cooperate and provide approvals necessary to expand on airport in accordance with the lease provisions. The City recently determined that a voteable referendum cannot negate that contractual obligation.
Lynne Fargher 3143 Grasslands Drive Lakeland, Florida 33803	P157	13-104	Please try to stop the low flying flights over our home in the Grasslands community. The planes are very loud and disruptive. Please request the FAA to divert the flight paths and remove low flying flights away from the Grasslands residential area.	Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval. As also mentioned in previous responses, a variety of environmental resource categories typically associated with quality of life concerns, including noise, were evaluated in the EA and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project.

Commenter	Letter Code	Comment Code	Comment	Response
	Oode	Code		Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 3 (Quality of Life) for additional details related to the topics raised in this comment.
Benjamin F. Mundy, Jr. 141 West Palm Drive Lakeland, FL 33803	P158	13-105	I live approx. 3.5 miles northeast from the east end of runway 27. I hear the Amazon cargo planes as a rumble and can only imagine the noise impact of one of those planes over my house at a low altitude. No doubt, that has to be an undesirable occurrence. You can't mitigate that noise to be 'desirable' no matter the air traffic pattern(s) utilized - someone is going to be impacted (as indicated by personal comments at the public meeting)	The noise analyses performed for the EA included development of DNL noise contours that consider the flight paths currently in use and currently approved for future use. Individual overflights may be quieter or louder than what is indicated by DNL, which is a measure of cumulative noise exposure over time. However, while the noise from individual
Benjamin F. Mundy, Jr. 141 West Palm Drive Lakeland, FL 33803	P158	3-31	I understand your mission to grow an income stream at LLIA. Landing the current Amazon business is perceived as a big win for you and the City of Lakeland. The citizens of Lakeland now understand the impacts of that business, both good and bad. The quality of life for many has been negatively impacted by the air traffic noise created by Amazon air cargo movements, and that negative impact will become greater with the planned expansion.	As explained in Topical Response 3 (Quality of Life), Chapter 5 of the EA discusses the effects of the Proposed Development Project a variety of environmental resources, including noise, air quality, and socioeconomic impacts, which are most frequently associated with quality of life effects. No significant impacts in the areas of noise and air quality were identified per established NEPA guidelines, and traffic impacts would be less than significant with mitigation implemented.
James W Singer 632 W Hancock ST Lakeland FL 33803	P159	4-1	The destruction of natural habitats for protected species, for example bald eagles and sandhill cranes. I know for a fact that sandhill cranes live and breed in and around the airport area. However, has there been a study done about the population of this threatened bird? Has a study been done on how the airport expansion will impact this population?	A Biological Assessment was prepared for the Proposed Development Project and was coordinated between the FAA and the U.S. Fish and Wildlife Service (USFWS). To aid in

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				The Biological Assessment indicates that the Proposed Development Project may affect the Wood Stork because suitable habitat exists in the Project area and evidence of habitat use was observed. However, the FAA and USFWS determined that the loss of habitat would not constitute an adverse effect on the Wood Stork provided that wetland credits to facilitate the restoration of Wood Stork habitats elsewhere in the area, within the same watershed, were purchased.
				The City of Lakeland implements a Wildlife Hazard Management Plan at LAL, which includes ongoing activities intended to discourage congregating and nesting of birds on and near the airport. These habitat modification measures include removal of dead and dying trees that may serve as nesting sites, use of landscaping plants with minimal wildlife foraging and habitat value, pesticide application to remove insects that may attract birds, and turf management to reduce cover for both bird and bird prey species.
				Based on the response to this comment and Topical Response 6b (Wildlife Hazard Potential), Section 5.3.2.1 of the Final EA was amended to include a discussion of the WHMP, including long term strategies such as habitat modification and short term strategies such as wildlife trapping and removal on and around the LAL airfield.
James W Singer 632 W Hancock ST Lakeland FL 33803	P159	13-106	With the airport expansion allowing an increased volume of incoming and outgoing flights, what is the expected decibel volume in the immediate surrounding area? Will this decibel level be above safe hearing levels? Will the increase in noise levels permit local businesses to operate specifically GEICO? I am a member of management at GEICO, and I can foresee the increased noise affecting our call handling departments' performances.	Refer to Topical Response 2a (Noise Analysis Methods) and Topical Response 2d (Business Disruption) for additional details related to the topics raised in this comment. FAA's noise and land use compatibility criteria for land uses such as GEICO are published at 14 CFR Part 150, included within Draft EA Appendix G . Commercial land uses such as GEICO are considered compatible land uses with respect to airport noise at noise levels of DNL 65 dB or lower, and can still be considered compatible higher DNL values if the appropriate noise level reductions are incorporated into the building's construction. The noise analysis shows that GEICO is not located within any of the 65 DNL noise contours developed for the noise analysis in the EA. The noise analysis conducted also concluded that the Proposed Development Project would not cause noise impacts that exceed FAA's thresholds that would indicate significant noise impact.
James W Singer 632 W Hancock ST Lakeland FL 33803	P159	14-62	Also, how will the increase in noise volume affect local property values? Should not local homeowners be consulted about this expansion if it may affect the value of their existing property?	Refer to Topical Response 4 (Impacts on Property Values) for additional details related to the topics raised in this comment.
James W Singer 632 W Hancock ST Lakeland FL 33803	P159	14-63	Will the airport and Amazon be providing funding for road improvements, expansion, and maintenance in the surrounding area? The current roads surrounding the airport already have potholes and are in a state of disrepair with the current traffic levels. With the increase in air flight volume for commercial goods, there will be an increase in land transportation. Therefore, more vehicular traffic in the surrounding area. This increase in land transportation will necessitate more frequent repairs, and possible road expansions. As a commuter to GEICO, how will the traffic flow patterns be affected?	Refer to Topical Response 5b (Existing Traffic Congestion) and Topical Response 5c (Proposed Traffic Impacts) for additional details related to the topics raised in this comment. As stated in the responses, Amazon intends to use Drane Field Road to Airport Road as the main thoroughfare to access the Polk Parkway and connecting interstate highways, although some traffic would utilize County Line Road as an alternative route. In addition, the Alternatives analysis presented in the Draft EA considered Proposed Development Project sites on the south side of the airport. These alternatives were discounted from consideration in part because surface roads such as Pipkin and Medulla

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				would need to be used heavily by trucks and vehicles associated with the Proposed Development Project.
				Road damage results from travel by all users. Polk County has experienced growth both in population and in commercial, industrial, and other related activities for well over a decade. State and local transportation agencies are currently responsible for developing and funding planning and funding roadway repair and maintenance programs under their jurisdiction, which includes roadways that would be used by vehicles accessing the proposed air cargo facility expansion. Individual development projects, including the Proposed Development Project, must undergo local land development permitting and review processes that determine the need for road or intersection improvements required by their development, and individual developers may or may not be required to pay for these direct improvements based on the outcome of the review and permitting process.
James W Singer 632 W Hancock ST Lakeland FL 33803	P159	14-64	Has mass transportation or alternative methods being explored for the additional thousands of new commuters added to the existing road infrastructure?	The traffic study conducted for the EA did not identify significant impacts associated with the Proposed Development Project. Mass transit or public transportation improvements were not proposed Amazon or the City of Lakeland as part of the Proposed Development Project. There are no current plans to expand public transportation servicing LAL. However, as part of developing its Comprehensive Plan, the City of Lakeland continually identifies mass transit opportunities and conducts a needs assessment as to where mass transit could be applied to reduce private occupancy vehicles using area roadways. Objective TRN-1.5 of the Transportation element of the current Draft Comprehensive Plan seeks to increase mobility through efficient and expanded transit services. The current Draft Comprehensive Plan identifies capacity enhancement and mass transit opportunities for West Pipkin Road to the south of the airport and corridor improvements to Drane Field Road as a means to accomplish these objectives.
James W Singer 632 W Hancock ST Lakeland FL 33803	P159	16-2	The proposed airport expansion does not offer a solution to the adverse effects upon the neighboring wetlands and floodplains. With more paved areas, a larger amount of run off needs to be considered. What are the proposals to consider this increased volume of runoff? Purchasing credits for wetlands is not a long-term solution.	The purpose of the wetland mitigation is to replace wetland habitat and functions affected by the Proposed Project. Although wetland mitigation involves water resources, stormwater runoff and floodplain imp[acts are also regulated and will require permit approvals The Proposed Development Project would undergo design and construction permitting prior to state and local development authorities allowing construction to commence. Per the City of Lakeland Development Code Section 6.2.4.1 (Ord. No. 5610), a floodplain development permit will be required which entails a description of the development, land use, occupancy, and valuation of the proposed work. Plans must be submitted to show proper management of construction activities that might increase flood damage/erosion potential. All other applicable state or federal permits must be obtained prior to the floodplain development permit is approved.

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				Part of the state process includes securing an ERP from the Southwest Florida Water Management District. A requirement of this permit is to demonstrate that the Proposed Development Project's design would accommodate the increased runoff and not cause an increase in flood volumes in the drainage basins surrounding LAL. The project's stormwater retention pond will be designed to capture, treat, and attenuate runoff from the proposed new impervious surfaces. During the permitting process, the pond size and location will be designed to ensure that it meets applicable state and local stormwater management and flood prevention requirements.
James W Singer 632 W Hancock ST Lakeland FL 33803	P159	17-2	Flooding is a deep concern especially since we are in a high risk area for sink holes. Excessive flooding and runoff can cause land deterioration and collapse. Have you considered that the expansion of the airport may trigger a unknown sinkhole and possibly placed the airport or nearby properties in to jeopardy?	Geotechnical studies were conducted within and surrounding in the Proposed Development Project areas to support construction of the existing Phase I development, and no features of concern were identified that could cause or proliferate sinkhole development. During design and construction of the Proposed Development project, additional geotechnical studies would be performed to confirm these findings and identify any design and construction considerations to limit sinkhole development/ground failure.
Marja-Liisa Pearce [NO ADDRESS PROVIDED	P160	27-17	I am a long time Lakeland resident. Amazon expansion plans add to the use of the airport, add jobs, increase commerce in our area and provide good services for the population of the city. Distribution and delivery services are some of the best industries we can have in this area. They have very few negative impacts on the citizens, but have many good points to help the city's budget, city's services and jobs. Some people have complained about noise from the airplanes. That is part of present day community living, as well as 24/7 truck noises, loud motorcycles, and trains. I recommend that we welcome Amazon expansion plans enthusiastically at the Lakeland airport as good business partners with them would.	Comment noted.
Roberto Leider 632 W Hancock ST Lakeland FL 33803	P161	13-107	Noise - neighbors and properties will be negatively affected. Including the possible loss of hundreds of jobs at Geico	FAA's noise and land use compatibility criteria for commercial land uses are published at 14 CFR Part 150, a copy of the subject table is included within the Draft EA's Appendix G . Commercial land uses, such as GEICO's office space, are considered compatible land uses with respect to airport noise at noise levels of DNL 65 dB or lower, and can still be considered compatible higher DNL values if the appropriate noise level reductions are incorporated into the building's construction. The noise analysis shows that GEICO is not located within any of the 65 DNL noise contours developed for the noise analysis in the EA. GEICO is located approximately 0.4 mile south of the DNL 65 dB noise contour. The EA concluded that there would be no significant noise impacts to land uses near the airport, including commercial land uses and that the resulting noise would not disrupt businesses. The EA concluded that there would be no significant noise impacts to land uses near the airport, including commercial land uses.
				Refer to Topical Response 2a (Noise Analysis Methods) and Topical Response 2d (Business Disruption) for additional details related to the topics raised in this comment.

Commenter	Letter	Comment	Comment	Response
	Code	Code		
Roberto Leider 632 W Hancock ST Lakeland FL 33803	P161	4-2	Biological Resources - protected species such as tortoises, snakes, and birds will lose their habitat. Also studies need to be done about noise and such species	A Biological Assessment was prepared for the Proposed Development Project and was coordinated between the FAA and the USFWS. To aid in this coordination, Proposed Development Project areas were reviewed by qualified biologists for suitable habitat for all threatened and endangered species with potential to occur in the area. The field surveys also included determining whether or not any individual species were present in the Project areas. USFWS reviewed the Biological Assessment and concurred with FAA's determination of "may affect, not likely to adversely affect" on the wood stork, eastern indigo snake and gopher tortoise. In making these determinations, USFWS considers the potential for indirect impacts on these species, such as noise. The Service did not indicate that noise impacts would change the effects determination and did not require any noise-related species protection of mitigation measures.
Roberto Leider 632 W Hancock ST Lakeland FL 33803	P161	14-65	Infrastructure -The workshop did not address the congestion on airport road, county line road, and improvements that will have to be made in order for the project to work. Thousands of cars and trucks will be operating out of the airport. The current infrastructure will simply be overwhelmed. There was no proposal of increased public transit and connection to address the increase in traffic.	Refer to Topical Response 5a (Analysis Approach and Study Area) and Topical Response 5c (Proposed Traffic Impacts) for additional details related to the topics raised in this comment. The traffic study conducted for the EA did not identify significant impacts associated with the Proposed Development Project. Mass transit or public transportation improvements were not proposed by Amazon or the City of Lakeland as part of the Proposed Development Project. As part of developing its Comprehensive Plan, the City of Lakeland continually identifies mass transit opportunities and conducts a needs assessment as to where mass transit could be applied to reduce private occupancy vehicles using area roadways. Objective TRN-1.5 of the Transportation element of the current Draft Comprehensive Plan seeks to increase mobility through efficient and expanded transit services. The current Draft Comprehensive Plan identifies capacity enhancement and mass transit opportunities for West Pipkin Road to the south of the airport and corridor improvements to Drane Field Road as a means to accomplish these objectives.
Roberto Leider 632 W Hancock ST Lakeland FL 33803	P161	3-21	Why are the planes currently not taking the parkway proposed route?	Arrivals and departures use published approach and departure procedures that have been developed to ensure the safe and efficient use of airspace and approved by the FAA. These procedures consider a variety of factors including the air space requirements of other nearby airports, and are subject to detailed review and analysis prior to approval. The City of Lakeland has proposed conceptual new arrival and departure procedures at LAL as potential noise abatement measures. If the FAA determines that the proposed procedures are feasible, they would undergo a detailed analysis and review to assess their potential noise and other environmental impacts prior to approval. Refer to Topical Response 2b (Air Traffic and Overflights) for additional details related to the topics raised in this comment.
Roberto Leider 632 W Hancock ST Lakeland FL 33803	P161	5-5	What will be the impacts on the quality of life for residents who live close to the airport. Including the increase in air pollution.	The Proposed Development Project would result in increased air emissions. However, the air quality analyses conducted for the EA concluded that the Proposed Development Project would not cause air quality impacts that exceed FAA's thresholds that would indicate significant air quality impact. for air quality.

Commenter	Letter	Code	Comment	Response
	Code	Code		Refer to Topical Responses 1 (Worsening of Existing Air Quality) and Topical Response 3 (Quality of Life) for additional details related to the topics raised in this comment.
Helen Lingard [NO ADDRESS PROVIDED]	P162	13-108	The City of Lakeland's Planning Board had multiple routes for the Polk Parkway, yet chose to locate it in this area. We are now all being negatively impacted by the noise and pollution that has continued to increase every year since it was constructed. Conversations must often be paused due to truck, motorcycle and car noise. It is no longer as pleasant to take a walk, garden, grill or just relax outside.	Comment noted.
Helen Lingard [NO ADDRESS PROVIDED]	P162	3-22	The Airport Authority and the City of Lakeland also have multiple choices for the Amazon flight path without adding the major burden, once again, to this same area. It is wrong for the Amazon flight path to be reconfigured to appease neighborhoods that were constructed close to the airport with the common knowledge that the airport was trying to expand. Mr. Conrad, you and every City Commissioner have the responsibility to give equal consideration to the quality of life of every resident of this city, regardless of the price of their home or if they have an attorney representing them or not. I do not believe that equal consideration was given to citizens living in this area, when the proposal was made to move the Amazon flight path over the Polk Parkway and away from Grasslands and Oakbridge area on Harden Boulevard.	Departures and arrivals at LAL use published departure and approach procedures that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use procedures that pilots may use when conditions allow. The City has also proactively implemented a voluntary runway use program and developed and proposed to FAA, new flight procedures to reduce noise exposure in the vicinity of LAL. If FAA determines that the proposed procedures are feasible, they would undergo further analysis, including an environmental review that would consider noise exposure caused by the new procedures. Refer to Topical Response 2b (Air Traffic and Overflights) for additional details related to the topics raised in this comment.
Helen Lingard [NO ADDRESS PROVIDED]	P162	20-14	The increased daily Amazon flights, as proposed, will make our homes unbearably noisy and will cause our quality of life and health to decline drastically.	The Proposed Development Project would cause a noticeable increase in noise from the increased aircraft operations. However, the noise analysis conducted for the EA concluded that the Proposed Development Project would not cause noise impacts that exceed FAA's thresholds that would indicate significant noise impact. Refer to Topical Response 2c (Flight Schedule and Frequency) and Topical Response 3
Helen Lingard [NO ADDRESS PROVIDED]	P162	21-15	In addition to the increased noise pollution there is increased danger in routing planes over an area known to attract many types of birds. Why is anyone even willing to consider risking lives by routing planes over a landfill that attracts so many large birds?	(Quality of Life) for additional details related to the topics raised in this comment. Arrivals and departures use published approach and departure flight procedures approved by FAA. Safety is the highest priority in FAA's consideration in the development and approval of flight procedures. Landfills are recognized as large bird attractants, and FAA considers their location relative to airports during flight procedure development, review, and approval. Topical Response 6b (Wildlife Hazard Potential) includes additional details related to this topic.
Helen Lingard [NO ADDRESS PROVIDED]	P162	3-23	I ask that you not support, nor recommend to the FAA, the proposed reconfigured flight path over the Polk Parkway.	Comment noted.
Rob Bevis [NO ADDRESS PROVIDED]	P163	14-66	I strongly support Amazon's plan to expand which will bring more good jobs and an income stream to the city. I live south of downtown and hear the planes, but they are not a problem for me. Certainly we should do what we can to mitigate the noise, but we can not let this opportunity pass us by. I doubt anyone who works for Amazon or hopes to work for Amazon was at last weeks hearing. Their numbers exceeds the 200 people at the hearing. I suspect none of those individuals need a job.	Comment noted.

Commenter	Letter Code	Comment Code	Comment	Response
Bob & Ruth Sharpe 1756 Birchwood Loop Lakeland, FL 381	P164	21-16	I am 100% opposed to increasing Amazon flights. I live very nearby, in the Colonnades and some fly directly over my house. There is the noise and the danger of a crash. It has been less than a year since they started and they have already increased greatly. There is the danger of fuel storage and the increase in traffic in the area I live. More flights at night are worse than in the day. I am concerned about their interference with Hurricane Hunter flights as climate change is increasing the prediction of hurricanes.	Refer to Topical Responses 2c (Flight Frequency and Schedule), Topical Response 5b (Existing Traffic Congestion), Topical Response 6a (Accident Potential) and Topical Response 6c (Aboveground Storage Tanks) for additional details related to the topics raised in this comment. It is not possible to estimate future interruptions of the air show or other tenant operations due to the Proposed Development Project. LAL works with all of its tenants to balance the air show with other necessary airport operations, and will continue to do so.
Bob & Ruth Sharpe 1756 Birchwood Loop Lakeland, FL 381	P164	4-3	The 737 and 767 jets are among the largest. Environmental impact affects air pollution and the range of some native animals. The indigo snake is effective for controlling rats and mice in the woods in my backyard.	The air quality analyses prepared for the EA concluded that the increase in air emissions would not cause air quality impacts that exceed FAA's thresholds that would indicate significant air quality impact. A Biological Assessment was prepared for the Proposed Development Project and was coordinated between the FAA and the USFWS. To aid in this coordination, Proposed Development Project areas were reviewed by qualified biologists for suitable habitat for all threatened and endangered species with potential to occur in the area. The field surveys also included determining whether or not any individual species were present in the Project areas. The Biological Assessment indicates that the Proposed Development Project may affect the eastern indigo snake because suitable habitat exists in the Project area. However, the FAA and USFWS determined that the loss of habitat would not constitute an adverse effect on the eastern indigo snake, provided that established protection measures are applied. Refer to the Biological Assessment for details on these measures.
Sheena Silva [NO ADDRESS PROVIDED]	P165	13-109	I own a grooming salon and have a small training area, the last year has been not only dangerous with sharp objects and airplanes rumbling it has disturbed the DOGS state of mind. Dogs iv had for 10 years who ran into my salon began to cower or not want to enter. I not only closed that business down I MOVED from lakeland to Mulberry! I am more worried about the wildlife, pets and health of the animals then just noise.	The EA's analysis found that all commercial and industrial land uses within the airport's noise contours are compatible land uses with respect to airport noise and would remain compatible if the Proposed Development Project were implemented. Additionally, FAA's noise and land use compatibility criteria for commercial land uses are published at 14 CFR Part 150, included within Draft EA Appendix G . Commercial land uses are considered compatible land uses with respect to airport noise at noise levels of DNL 65 dB or lower, and can still be considered compatible higher DNL values if the appropriate noise level reductions are incorporated into the building's construction. Refer to Topical Response 2a (Noise Analysis Methods) for additional details related to the topics raised in this comment.
Paula M. Todd 3093 Shoal Creek Village Drive	P166	13-110	You must stop these low flying flights over the Grassland Community. They are loud. They are disruptive. Please work with the FAA to stop these unnecessary flight paths.	Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval. As also mentioned in previous responses, a variety of environmental resource categories typically associated with quality of life concerns, including noise, were evaluated in the EA

Commenter	Letter	Comment	Comment	Response
	Code	Code		and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project. Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 3
Carol Kent 3141 Winged Foot Drive Lakeland, FL. 33803	P167	13-111	Please work with the FAA to stop the low flying flights over the Grasslands community. I work from home as a coach (with on-line ZOOM calls). I also work as a public speaker for many virtual conferences from my home office. The noise level in my background when I'm trying to do professional work from my home is embarrassing, disturbing, and distracting. The planes are very LOUD and very disruptive. I would deeply appreciate anything you can do to get the flight path changed for the multiple (and growing) number of AMAZON flights that go right over an area where I pay very high taxes to live in a "quiet" neighborhood.	(Quality of Life) for additional details related to the topics raised in this comment. Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval. As also mentioned in previous responses, a variety of environmental resource categories typically associated with quality of life concerns, including noise, were evaluated in the EA and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project. With many people working from home either in response to the COVID-19 pandemic or for other reasons, it is likely that more people frequently hear aircraft noise that regularly occurs throughout the day. However, the noise analysis conducted for the EA concluded that the Proposed Development Project would not cause noise impacts that exceed FAA's thresholds that would indicate significant noise impact. Individual overflights may be quieter or louder than indicated by the cumulative noise exposure (DNL) and time of day and other factors may influence an individual's perception of and annoyance from these events. Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 3 (Quality of Life) for additional details related to the topics raised in this comment.
Eugene Kent 3141 Winged Foot Drive Lakeland, FL 33803	P168	13-112	You must stop these low flying flights over the Grasslands community. They are LOUD and we work from home on ZOOM, a lot! The noise is terribly discruptive [sic]. Please work with the FAA to stop these unnecessary flight paths.	Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval. As also mentioned in previous responses, a variety of environmental resource categories typically associated with quality of life concerns, including noise, were evaluated in the EA and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project. With many people working from home either in response to the COVID-19 pandemic or for other reasons, it is likely that more people frequently hear aircraft noise that regularly occurs throughout the day. However, the noise analysis conducted for the EA concluded

Commenter	Letter	Code	Comment	Response
Commenter	Letter Code	Code	The recent increased noise levels caused by the landing and departure of Amazon's planes has severely diminished my property value, my ability to enjoy my property and resulted in a "taking". The noise from the Boeing 737 aircraft was marginally	that the Proposed Development Project would not cause noise impacts that exceed FAA's thresholds that would indicate significant noise impact. Individual overflights may be quieter or louder than indicated by the cumulative noise exposure (DNL) and time of day and other factors may influence an individual's perception of and annoyance from these events. Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 3 (Quality of Life) for additional details related to the topics raised in this comment. LAL is a public use airport and the City of Lakeland does not review or approve the operation of specific types of aircraft at the airport, and cannot legally prohibit certain types of aircraft from using the airport if that aircraft has been approved and certificated for safe operation through FAA's airport planning and approvals processes. Operations of the 767 are currently allowed as a result of these approvals. Additionally, Federal law preempts any local government from implementing any action that is intended to control the types of aircraft that use an airport, the routes of aircraft in flight, the timing of flights, or the number of flights. However, airport operators, including the City, work with airport users to make them aware
James Cullen 1217 Kells Ct Lakeland, FL 33813	P169	13-113	acceptable when they approached at +2000 feet elevation above my house but now the noise resulting from the extensive and growing use of the heavy Boeing 767 is intolerable. During a typical landing approach by the 767s the measured noise pressure at my home is excess of 89 dB versus an ambient level of 38 dB. In addition the associated low frequency noises associated with the plane's flaps rattles my windows and causes vibrations in my home potentially damaging fragile art pieces. If my vehicle emitted noises of this magnitude on the streets of Lakeland or Polk county I would receive a fine for violating the noise ordinances. If my employer allowed similar	of community noise issues and promote voluntary measures to reduce aircraft noise. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval. Separate from the EA, the City has proposed conceptual noise abatement measures and has implemented a voluntarily runway use program to address noise-related concerns of the surrounding community. The comment references measurement of individual noise events. However, federal

Commenter	Letter Code	Comment Code	Comment	Response
	Code	Code		Refer to Topical Response 2a (Noise Analysis Methods), Topical Response 2b (Air Traffic and Overflights), Topical Response 2e (Vibration) and Topical Response 4 (Impacts on Property Values) for additional details related to the topics raised in this comment.
Amber West [NO ADDRESS PROVIDED]	P170	13-114	Currently, the airplanes are causing significant noise which does not allow me and my family to enjoy our home and backyard as we would like to, and I fear that my home value has already been and will continue to be adversely affected by the flights that have been added since we purchased our home in 2019.	Decisions as to the number of flights operated at public use airport are made by tenants. LAL is a public use airport and the City of Lakeland does not review or approve requests from aircraft operators to operate a certain number of flights. Federal law preempts local governments from implementing any action that is intended to control the types of aircraft that use an airport, the routes of aircraft in flight, the timing of flights, or the number of flights.
			Adding more flights should not be allowed especially since the current noise issues have not been resolved.	Refer to Topical Response 2b (Air Traffic and Overflights), Topical Response 3 (Quality of Life) and Topical Response 4 (Impacts to Property Values) for additional details related to the topics raised in this comment.
Kieron Davis 4427 Micanope Crescent Dr. Lakeland, FL 33811	P171	13-115	Noise is a serious problem with a commercial airliner flying in or out of the airport twice an hour around the clock on the average (up to 44 flights per day according to the press release).	Noise from existing air cargo operations at LAL is included in the EA analysis of the No-Action Alternative and Proposed Development Project. One objective of the EA's noise analysis was to determine whether or not the Proposed Development Project would increase incompatible land uses compared to the No-Action Alternative, and if so, determine whether the noise increases in those areas would cause noise impacts that exceed FAA's thresholds that would indicate significant noise impact. The Proposed Development Project would add 22 additional daily arrivals and 22 additional daily departures at LAL by 2027. When compared to the No-Action Alternative, the additional aircraft operations associated with the Proposed Development Project in 2022 and 2027 would increase the amount of noncompatible (residential) land use directly to the east of the airport property line. The parcels and residences within, or newly within, the 2027 DNL 65 contour would not experience an increase of 1.5 dB or greater. Therefore, significant noise impacts would not occur if the Proposed Development Project was implemented. Refer to Topical Response 2c (Flight Frequency and Schedule) for additional details related to the topics raised in this comment.
Teneka Gibson [NO ADDRESS PROVIDED]	P172	13-116	As a resident of south Lakeland it has become a nuisance trying enjoy outdoor living with planes flying throughout the day. We live in Florida where most people to spend time outside in there pool and watching TV out on back porches but you can't enjoy cause the planes are making so much noise. I'm not against Amazon expanding but something has to be done about how low planes are flying directly over neighborhoods. Supposedly living in 33812 / Lakeland Highlands is the best area code but we are thinking about moving out because of all the noise from planes.	LAL is a public use airport, and Federal law preempts local governments from implementing any action that is intended to control the types of aircraft that use an airport, the routes of aircraft in flight, the timing of flights, or the number of flights. Arrivals and departures use published approach and departure procedures that have been developed to ensure the safe and efficient use of airspace and approved by the FAA. These procedures consider a variety of factors including the air space requirements of other nearby airports, and are subject to detailed review and analysis prior to approval. Because LAL is located between two major hub airports, the currently approved approach and departure procedures include aircraft height limits during these operations. However, airport operators, including the City, work with airport users to make them aware of community noise issues and promote voluntary measures to reduce aircraft noise. The

Commenter	Letter Code	Comment Code	Comment	Response
				City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the proposed procedures are feasible, they would undergo a detailed analysis and review to assess their potential noise and other environmental impacts prior to approval.
				Refer to Topical Response 2g (Speech Interference) and Topical Response 3 (Quality of Life) for additional details related to the topics raised in this comment.
Ray Williamson [NO ADDRESS PROVIDED]	P173	14-67	Lakeland needs growth and Amazon brings growth and progress. Noise is not an avoidable factor—communities growing from Tampa to Orlando is constant and increasing and noise will always be a factor with which to contend. I am in favor of Amazon's growth.	Comment noted.
Jen Aguilar 1545 S Webster Ave Lakeland, FL 33803	P174	28-10	I am expressing my opposition to the Amazon Expansion plans due to impacts of the environment, property value, safety, and quality of life.	Comment noted.
Jen Aguilar 1545 S Webster Ave Lakeland, FL 33803	P174	4-4	I live close to Lake Hunter. I used to enjoy quiet walks along the shore of Lake Hunter. The lake is beautiful with the birds, wildlife and lake- one of the primary reasons why we moved here. Lake Hunter is a serene experience and provides the public an opportunity for recreation, peace, mental calming and nature observation. There are several endangered species at Lake Hunter too, including the Bald Eagle, Wood Stork, and Roseate Spoonbill. Recently, my morning walks have been interrupted unexpectedly with loud thundering noise from the Amazon jets. The noise is incredibly loud and it is a scary sight seeing the planes so close to the ground. What a conflict to the natural aesthetics of Lake Hunter, and a negative impact to quality of life! I notice many birds that get startled and fly away with the noise too- has this Lake and wildlife impacts been considered?	FAA's noise and land use compatibility guidance for the land uses present at Lake Hunter are published at 14 CFR Part 150, included within Draft EA Appendix G . At cumulative noise levels of DNL 65 dB and lower, these land uses are considered compatible with respect to airport noise. The noise contours developed for the EA show that Lake Hunter is located well outside of the DNL 65 dB noise contour. The noise analysis conducted for the EA concluded that the Proposed Development Project would not cause noise impacts that exceed FAA's thresholds that would indicate significant noise impact. See Topical Response 2a for additional information on the noise impact analysis. A Biological Assessment was prepared for the Proposed Development Project and was coordinated between the FAA and the USFWS. USFWS reviewed the Biological Assessment and concurred with FAA's determination that the Proposed Development Project would not have adverse effect on rare, threatened or endangered species in the Project areas.
Jen Aguilar 1545 S Webster Ave Lakeland, FL 33803	P174	20-15	With the Amazon Expansion plans that include additional noise, excessive gas tank storages, traffic increases, I am concerned the expansion will negatively impact the work of myself and my fellow associates in being located so close to the airport.	The Proposed Development Project would cause an increase in the overall noise level at and around LAL, and an increase in surface traffic on roadways in the immediate vicinity of the air cargo facility. The noise analysis conducted for the EA concluded that the Proposed Development Project would not cause noise impacts that exceed FAA's thresholds that would indicate significant noise impact. The traffic impacts analysis performed for the EA identified needed improvements (dedicated turn lanes) at one intersection (Kidron Road at Drane Field Road). During the development of the EA, the turn lanes were constructed at this intersection to improve its performance and reduce congestion. This mitigation would offset project-related traffic impacts anticipated in 2022 and 2027. The fuel storage tanks would be located approximately 0.25 mile from the nearest public roadway, obstructed from view, in a high-

Commenter	Letter Code	Comment Code	Comment	Response
	Couc	0000		security access-controlled location, and designed and operated to meet applicable state and local requirements, as well as fire and electrical codes.
				Refer to Topical Responses 2d (Business Disruption), Topical Response 5 (Proposed Traffic Impacts) and Topical Response 6c (Aboveground Storage Tanks) for additional details related to the topics raised in this comment.
Jen Aguilar 1545 S Webster Ave Lakeland, FL 33803	P174	21-17	I am also concerned for our safety at work, of being in near proximity and the risk increasing for airport accidents	The Proposed Development Project is not expected to increase the frequency of accidents at the airport. Aircraft operational certifications include operational safety, inspection and licensing requirements and all airport improvements must comply with airport design standards. Topical Response 6a (Accident Potential) provides additional discussion related to aircraft safety and accident potential.
Jen Aguilar 1545 S Webster Ave Lakeland, FL 33803	P174	14-68	Lastly, negative property value impacts. We have been searching with a real estate agent for more land to purchase. We have completely taken off our list of any property near the airport due to reading complaints on the current airport expansion.	The EA did not identify any significant social, environmental, and economic impacts associated with the Proposed Development Project. Negative effects on property value are not anticipated. Refer to Topical Response 4 (Impacts to Property Values) for additional details related to the topics raised in this comment.
Jen Aguilar 1545 S Webster Ave Lakeland, FL 33803	P174	26-8	Most importantly, I'm very disappointed with how the public hearing went. Why did the City of Lakeland not even stream this event for the Public?	Livestreaming of the event was coordinated between the City of Lakeland and the Lakeland Now newspaper. The livestream was posted to Lakeland Now's website and is still available at https://www.lkldnow.com/video-public-hearing-on-amazons-proposed-expansion-at-airport/. The City of Lakeland also arranged for a videographer to separately video record the hearing and a copy of that recording can be found on the to the City's Lakeland Government Network (LakelandGov) video page at https://vimeo.com/channels/1360321. Section 6.4 of the EA was updated to reflect the information provided in this response.
Lori Scilluffo 131 Pinellas St. Lakeland 33803	P175	13-117	I just watched the public meeting on Lakeland Now and would also like to add my comment. I agree with all those who are upset about the decreased quality of life and increased noise since Amazon has taken over, I'm sorry, come to Lakeland. We live at 131 Pinellas Street which runs parallel to the Polk Parkway and we hear and see all the planes as they are approaching landing, sometimes flying directly over our house. All conversations must pause, our pet parrots get excited and fearful and we just wait for the plane to pass. Our relaxing on the back porch in the evenings has been interrupted indefinitely.	Communities near LAL have experienced increased noise since the initiation of air cargo operations at LAL. Some commenters noted increased cases where normal speech is interrupted. The EA acknowledges an increase in flight activity due to the Proposed Development Project and assesses the impacts on cumulative noise exposure based on FAA guidelines. The analysis of noise exposure in the EA was based on the DNL 65 dB contour. Because the residential land uses within (or newly within) the DNL 65 and higher noise contours shown in the EA would not experience a 1.5 decibel increase due to the Proposed

Commenter	Letter Code	Comment Code	Comment	Response
	Oddo	Oddo		In addition to noise, a variety of environmental resource categories typically associated with quality of life concerns were evaluated in the EA and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project. Refer to Topical Response 3 (Quality of Life) for a discussion of quality of life concerns and considerations, and to Topical Response 2b (Air Traffic and Overflights) for additional information on the City's voluntary noise abatement initiatives.
Lori Scilluffo 131 Pinellas St. Lakeland 33803	P175	14-69	The roads are so miserable to drive on now that you have to leave your house 15 minutes early if you are heading down South Fla. Ave. to be anywhere due to traffic and stop lights and the road diet in Dixieland. Now the alternative route, which is Harden Blvd., is also slow and congested as well. I can't imagine how bad it's going to be with an Amazon expansion.	Traffic on local and regional roads and highways is influenced by the regional population, commercial, industrial, and other activities in the region. Regional transportation and roadway planning is managed by local, regional and state transportation agencies. Proposed commercial, industrial and residential development undergo review by local and county planning departments who work in conjunction with transportation planning agencies to address roadway capacity needs and identify and implement needed improvements. The traffic analyses performed for the EA focus on roadways in the immediate vicinity of LAL and include cargo truck operations for the existing air cargo facility. These analyses identified needed improvements (dedicated turn lanes) at one intersection (Kidron Road at Drane Field Road). During the development of the EA, the turn lanes were constructed at this intersection to improve its performance and reduce congestion. This mitigation would offset project-related traffic impacts anticipated in 2022 and 2027.
			F (Refer to Topical Response 5b (Existing Traffic Congestion) and Topical Response 5c (Proposed Traffic Impacts) for additional details related to the topics raised in this comment.
April and David Dotson [NO ADDRESS PROVIDED]	P176	14-70	We live near Southgate Shopping Center and have no problems with the little noise from the air traffic. The expansion, from our understanding, could create more jobs for people.	Comment noted.
April and David Dotson [NO ADDRESS PROVIDED]	P176	13-118	The noise from above is so quick and so random it is extremely tolerable compared to other constant noise in the neighborhoods.	Comment noted.
Ken Hill [NO ADDRESS PROVIDED]	P177	21-18	As a former U.S. Marine who spent some time in military aircraft I've noticed Amazon departures from KLAL probably RWY 27 doing a turnout north over the Grasslands community. What disturbs me is that some flights appear to be below or near 500' AGL while over housing areas. There is no discipline by their pilots as to what they're flying over. This happens with two or three flights in a row. Not good!	Refer to Topical Response 2b (Air Traffic and Overflights) for a discussion related to the topics raised in this comment.
Ken Hill [NO ADDRESS PROVIDED]	P177	3-24	Amazon probably is adverse or gives lip service to noise abatement procedures as they burn fuel. Their A/C are probably heavy making downwind take-off use of RWY 9 not possible. But something needs to be done.	Aircraft operators are required to use published approach and departure procedures at LAL. When conditions allow the use of multiple procedural options, pilots may request which one to use. However, this must be coordinated with and approved by the local air traffic control tower. As noted in the comment, LAL is located between TPA and MCO,

Commenter	Letter Code	Comment Code	Comment	Response
			Understand that KLAL is in the middle of TPA & MCO and you have ceilings to work with, so I ask you to do your best.	and the flight procedures currently in use at LAL were developed with operational height limits to ensure safety considering aircraft use in the surrounding air space. Refer to Topical Response 2b (Air Traffic and Overflights) for additional details related to the topics raised in this comment.
Mary Stovall 2992 Sanctuary Cir Lakeland, FL 33803	P178	13-119	Please ask the FAA to stop the Amazon jets from flying over my house. The noise is terrible and if one malfunctions it could crash into a home in Grasslands.	Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review, and environmental analysis prior to approval. Aircraft operational certifications include operational safety requirements. Refer to Topical Response 2b (Air Traffic and Overflights) and Topical Response 6a (Accident Potential) for additional details related to the topics raised in this comment.
				LAL is a public use airport, and Federal law preempts local governments from implementing any action that is intended to control the types of aircraft that use an airport, the routes of aircraft in flight, the timing of flights, or the number of flights. Arrivals and departures use published approach and departure procedures that have been developed to ensure the safe and efficient use of airspace and approved by the FAA. These procedures consider a variety of factors including the air space requirements of other nearby airports, and are subject to detailed review and analysis prior to approval.
Danette Hensel 2992 Sanctuary Cir Lakeland, FL 33803	P179	13-120	Please stop the Amazon Prime jets from flying over my house in Grasslands. They are disruptive to daily life and the noise will harm our property values.	Airport operators, including the City, work with airport users to make them aware of community noise issues and promote voluntary measures to reduce aircraft noise. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval.
				Refer to Topical Responses 2b (Air Traffic and Overflights), Topical Response 3 (Quality of Life) and Topical Response 4 (Impacts on Property Values) for additional details related to the topics raised in this comment.
Mary Rutherford 912 Heathercrest Lakeland, FL 33813	P180	28-11	Amazon's plans are too big for Lakeland! They strike at the very heart and soul of what our community has carefully built over the years. Adding a 64,600 sq. ft cargo sorting facility, employees, 3 more jets, 370 trucks, equal future disaster for us! These facilities would also cause Amazon to double flights above	
			Lakeland from 22 to 44 per day! I can only imagine the horror of 44 flights per day. No peace!	considerations.

Commenter	Letter	Comment Code	Comment	Response
Carolyn Fulmer [NO ADDRESS PROVIDED]	P181	13-121	I am a resident of Grasslands The planes are very loud and interfere with the enjoyment of my home. In fact, I was planning to add a screen room to the back of my house and have cancelled my plans. After spending several visits on my friend's screened porch and having numerous conversations interrupted by the planes, I know I will be wasting my money to add a porch. Very disappointing.	Communities near LAL have experienced increased noise since the initiation of air cargo operations at LAL. Some commenters noted increased cases where speech is interrupted. Noise from existing air cargo operations at LAL is included in the EA analysis of the No-Action Alternative and Proposed Development Project. One objective of the EA's noise analysis was to determine whether or not the Proposed Development Project would increase incompatible land uses compared to the No-Action Alternative, and if so, determine whether the noise increases in those areas would cause noise impacts that exceed FAA's thresholds that would indicate significant noise impact. When compared to the No-Action Alternative, the additional aircraft operations associated with the Proposed Development Project in 2022 and 2027 would increase the amount of noncompatible (residential) land use directly to the east of the airport property line. The parcels and residences within, or newly within, the 2027 DNL 65 contour would not experience an increase of 1.5 dB or greater. Based on analysis prepared for the EA, significant noise impacts would not occur if the Proposed Development Project was implemented. While individual overflights may be quieter or louder at a given location, including in communities much further away from the airport, the cumulative noise exposure is below DNL 65 dB and remains compatible with residential land use. Refer to Topical Response 2a (Noise Analysis Methods) and Topical Response 2g (Speech Interference) for additional details regarding the topics raised in this comment.
Nelson Nieves [NO ADDRESS PROVIDED]	P182	27-18	I don't have an issue with the noise. Lakeland needs to provide job opportunities for our young people if we want them to stay in the area. They represent the future for the region	Comment noted.
Rick Garrity [NO ADDRESS PROVIDED]	P183	20-16	Amazon Air has increased their use of the Airport in the past year. This increase in air traffic is causing a reduction in quality of life for many residents having homesteads in or near flight paths to/from runways 9 and 27. This collateral damage to our quality of life must be eased by seeking alternative flight pathways. Our major concerns include noise pollution, potential health issues resulting from jet engine emissions and the impact on home values.	Communities near LAL have experienced increased noise since the initiation of air cargo operations at LAL. Some commenters noted increased cases where speech is interrupted. The increased activity associated with the Proposed Development Project would cause increased air emissions and noise exposure at and around LAL. The air quality and noise analyses conducted for the EA concluded that the Proposed Development Project would not cause air quality or noise impacts that exceed FAA's thresholds that would indicate significant air quality or noise impacts. As discussed in EA Sections 4.2 and 5.2, the airport is located is in an attainment area for all National Ambient Air Quality Standards (NAAQS). Data from the outdoor air monitoring network in the area demonstrate that there have been no violations of the NAAQS. The NAAQS are developed and periodically reviewed and updated as needed, to ensure the protection of human health and the environment. The EA acknowledges an increase in flight activity due to the Proposed Development Project and assesses the impacts on community noise exposure based on FAA guidelines. The analysis of noise exposure in the EA was based on the DNL 65 dB

Commenter	Letter Code	Comment Code	Comment	Response
				contour. Because the residential land uses within (or newly within) the DNL 65 and higher noise contours shown in the EA would not experience a 1.5 decibel increase due to the Proposed Development Project, the impacts are not considered significant. However, it is recognized that individual noise events may be quieter or louder than cumulative noise exposure estimates provided by the DNL analysis, and that some may perceive these events as impactful to their quality of life. A variety of environmental resource categories typically associated with quality of life concerns were evaluated in the EA and the EA determined that no significant impacts would occur due to implementing the Proposed Development Project. Separate from the EA, the City has proposed conceptual noise abatement measures and has implemented a voluntarily runway use program to address noise-related concerns of the surrounding community.
				Refer to Topical Response 1 (Worsening of Existing Air Quality), Topical Response 2c (Flight Frequency and Schedule), Topical Response 3 (Quality of Life) and Topical Response 4 (Impacts on Property Values) for additional details related to the topics raised in this comment.
Rick Garrity [NO ADDRESS PROVIDED]	P183	3-25	We would like your assurances that the City of Lakeland will as a matter of public policy implement alternate eastern approaches to LAL runway 27. These alternate approaches should be over less populated pathways that lessen impacts and lessen deterioration in home value for residences even 3-4 miles from the airport. Examples of similar approaches over highways and rivers are the approach over the La Guardia Expressway in New York and the Potomac River approach into Washington D.C. Likewise a policy of approaching at a higher altitude should be sought	LAL is a public use airport, and Federal law preempts local governments like the City of Lakeland from implementing any action that is intended to control the types of aircraft that use an airport, the routes of aircraft in flight, the timing of flights, or the number of flights. Departures and arrivals at LAL use published air traffic patterns that consider safety and airspace efficiency, and account for operations at the other nearby airports. Therefore, flight patterns cannot be arbitrarily shifted from one area to another. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review, and environmental analysis prior to approval. Refer to Topical Response 2b (Air Traffic and Overflights) for additional details related to the topics raised in this comment.
Rick Garrity [NO ADDRESS PROVIDED]	P183	28-12	We understand that this Environmental Assessment is for an enlargement of the Amazon facility with arrivals and departures of 36-44 flights per day. Moving forward with this expansion before existing problems are resolved is not a responsible move. It is unthinkable that your citizens would be burdened with this second new disastrous impact to their lifestyle	The Proposed Development Project would add 22 additional daily arrivals and 22 additional daily departures at LAL by 2027. As referenced in Topical Response 3 (Quality of Life), Chapter 5 of the EA discusses the effects of the Proposed Development Project a variety of environmental resources, including noise, air quality, and socioeconomic impacts, which are most frequently associated with quality of life effects. No significant impacts in the areas of noise and air quality were identified per established NEPA guidelines, and traffic impacts would be less than significant with mitigation implemented.
Ariana Glennon 1130 N. Lake Parker Ave Unit C- 229 Lakeland, FL 33805	P184	23-1	1. My first reservation has to do with its impact on our society. We have a little bit of an edge right now maintaining our "red" state culture which is God honoring but Amazon is Big Tech and follows the "Blue State" ideologies of cancelling God and His ways. As they move in here in force, we might find ourselves overwhelmed with the difficulties of maintaining our Pro-God stance.	

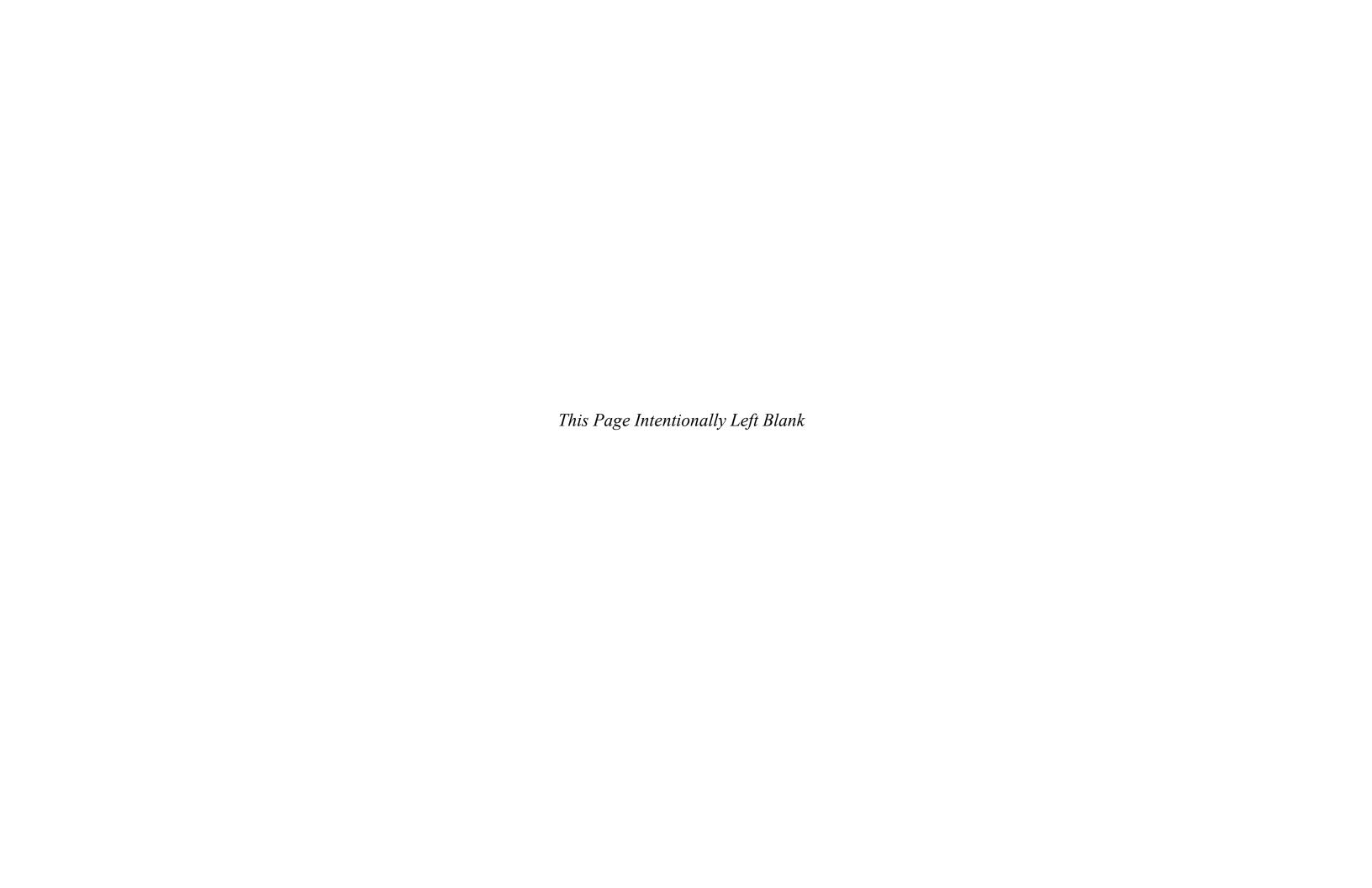
Commenter	Letter Code	Comment Code	Comment	Response
			 My second reservation has to do with their monopoly of the air space and airport ground space. If Amazon takes it all, then other companies will find it harder to fly in, not to mention service their planes and deal with their cargo and passengers. My third reservation has to do with the strategic location of this project in the case of armed conflict. (God forbid!) Do you realize that with Amazon owning almost everything at the airport they could develop a well located, but hidden, military-type facility, capable of stopping air traffic at both TPA and MCO? No doubt you are aware of their ambitions regarding space travel and their conflict with Elon Musk's SpaceX group. Amazon may have plans that we don't know about. Are all those planes really 	
			only for delivering store goods? 22 flights a day!!	As discussed in EA Sections 4.2 and 5.2 , the airport is located in an attainment area for
Andrew Wajek [NO ADDRESS PROVIDED]	P185	5-6	Hi there. Thank you for your service. I'm writing in regards to the proposal to add more Amazon departures from the airport. I strongly disagree with the idea because of concerns of more noise and air pollution to our community as a result of even more flights. I like that our air quality is much better than NYC. Let's keep it that way.	all National Ambient Air Quality Standards (NAAQS). Data from the outdoor air monitoring network in the area demonstrate that there have been no violations of the NAAQS. The NAAQS are developed and periodically reviewed and updated as needed, to ensure the protection of human health and the environment. The air quality analyses performed for the EA concluded that the additional operations that would result from the Proposed Development Project would not cause or contribute to an exceedance of these protective standards. Based on analysis prepared for the EA, significant noise impacts would not occur if the Proposed Development Project was implemented. While individual overflights may be quieter or louder at a given location, the existing and proposed cumulative noise exposure is compatible with residential land use. Refer to Topical Response 1 (Worsening of Existing Air Quality) and Topical Response 2a (Noise Analysis Methods) for additional details related to the topics raised in this
Holly Daniels [NO ADDRESS PROVIDED]	P186	28-13	I love this town. I do not want my children to be raised in a city that sells out to a socialist company that is Amazon! I am ashamed to see and HEAR these jets fly over my private dwelling multiple times a day It is the noise and air pollution that these jets have interrupted IT IS NOISE OVER OUR HOMES that we did not know about and do not accept!!!!! It is unfair. It is not right. It is an infringement on my personal right to private property and peace.	Noise from existing air cargo operations at LAL is included in the EA analysis of the No-Action Alternative and Proposed Development Project. One objective of the EA's noise analysis was to determine whether or not the Proposed Development Project would increase incompatible land uses compared to the No-Action Alternative, and if so, determine whether the noise increases in those areas exceed FAA's thresholds that would indicate significant noise impacts. When compared to the No-Action Alternative, the additional aircraft operations associated with the Proposed Development Project in 2022 and 2027 would increase the amount of noncompatible (residential) land use directly to the east of the airport property line. The parcels and residences within, or newly within, the 2027 DNL 65 contour would not experience an increase of 1.5 dB or greater. Therefore, significant noise impacts would not occur if the Proposed Development Project was implemented.

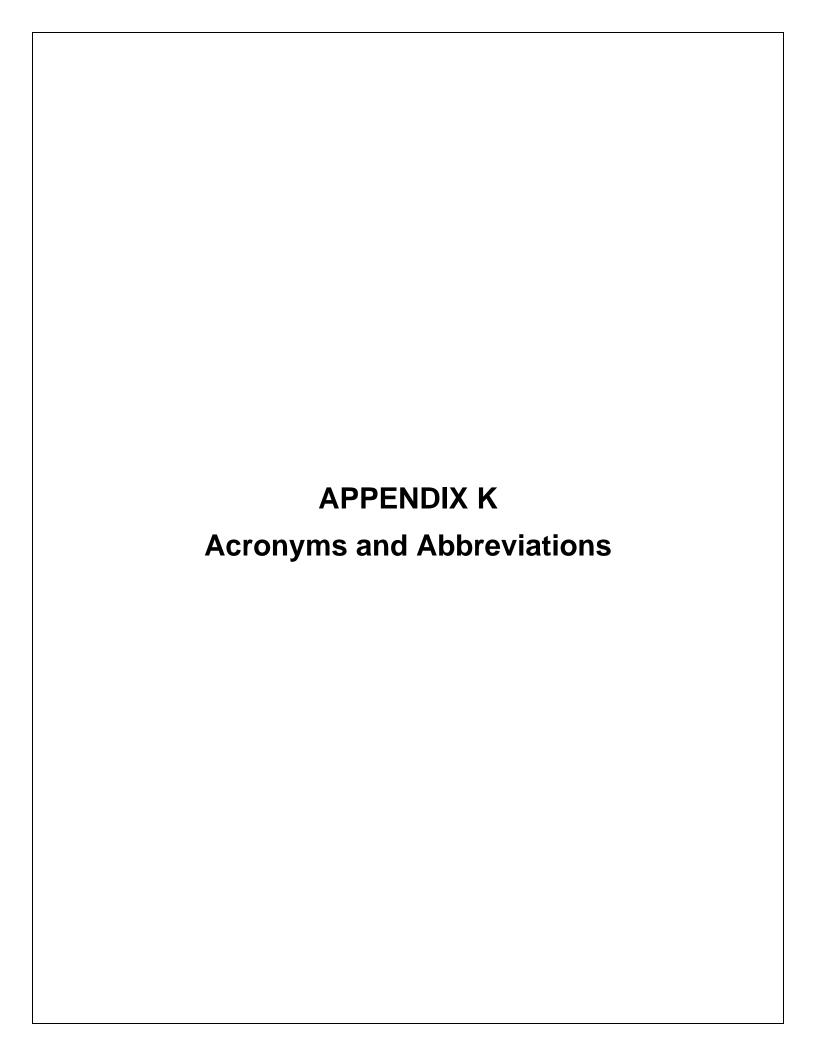
Commenter	Letter Code	Comment Code	Comment	Response
				As discussed in EA Sections 4.2 and 5.2 , the airport is located is in an attainment area for all National Ambient Air Quality Standards (NAAQS). Data from the ambient air monitoring network in the area demonstrate that there have been no violations of the NAAQS with the operation of the existing air cargo facility.
				Refer to Topical Response 1 (Worsening of Existing Air Quality), Topical Response 2b (Air Traffic and Overflights) and Topical Response 3 (Quality of Life).
Amy & Ed Laderer [NO ADDRESS PROVIDED]	P187	13-122	We live on Scott Lake and the noise from the existing jet schedule is barely tolerable. We can't imagine what it will be like, living in south Lakeland, when the flights are expanded. The jets are incredibly loud and they descend right over our neighborhood.	Communities near LAL have experienced increased noise since the initiation of air cargo operations at LAL. Departures and arrivals at LAL use published air traffic patterns. The City of Lakeland has implemented a voluntary runway use program and proposed new flight procedures for FAA consideration. If the FAA determines that the procedures are feasible, they would undergo development, review and review, and environmental analysis prior to approval. Refer to Topical Response 2b (Air Traffic and Overflights) for additional details related to the topics raised in this comment.
Amy & Ed Laderer [NO ADDRESS PROVIDED]	P187	4-5	This is also terrible for wildlife, which we luckily still have here.	More than half of land disturbance required for the Proposed Development Project would occur outside of existing high quality wildlife habitat areas, although some habitat conversion would occur that could affect wildlife usage. As discussed in Section 5.3.1.1 of the EA, approximately 0.3 acre of hardwood-conifer mixed land cover would be converted to transportation land use. Approximately 22.7 acres of wetland and 0.3 acre of other surface waters would be converted to transportation land use, while approximately 1.2 acres of wetlands would be converted to reservoir. The majority of habitat conversion would occur in wetlands, which will be mitigated using credits at the Alafia River Mitigation Bank within the same watershed as LAL. This will help to offset the limited upland habitat loss from the Proposed Development Project. Other open habitat areas in the immediate vicinity of LAL also offer refuge for individual animals that may be displaced by the proposed air cargo facility expansion. A Biological Assessment was prepared for the Proposed Development Project and was coordinated between the FAA and the USFWS. To aid in this coordination, Proposed Development Project areas were reviewed by qualified biologists for suitable habitat for all threatened and endangered species with potential to occur in the area. The field surveys also included determining whether or not any individual species were present in the Project areas. USFWS reviewed the Biological Assessment and concurred with FAA's determination of "may affect, not likely to adversely affect" on the wood stork, eastern indigo snake and gopher tortoise. In making these determinations, USFWS considers the potential for indirect impacts on these species, such as noise. The USFWS did not indicate that noise impacts would change the effects determination and did not require any noise-
Amy & Ed Laderer [NO ADDRESS PROVIDED]	P187	14-71	In addition, we are NOT fans of Amazon. It is owned by a professed socialist and it kills local shops and businesses.	related species protection mitigation measures Comment noted.

Commenter	Letter	Comment	Comment	Response
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Debbie Irby [NO ADDRESS PROVIDED]	P188	28-14	NO MORE AMAZON IN LAKELAND	Comment noted.
Healthy Progress, LLC 3433 Lithia Pinecrest Rd., Suite 233 Valrico, FL, 33596 Claude M. Harden, III The Harden Eldridge Law Group, P.A 3730 Cleveland Heights, Blvd., Suite 1 Lakeland, FL, 33803 Attorney for Healthy Progress, LLC	P189	21-19	This comment is being submitted due to a concern related to an environmental hazard that is not accounted for in the proposed Environment Assessment report - namely the risk of a collision between an airplane and a bird due to the Amazon planes being forced to fly at lower altitudes upon takeoff with two landfills in close proximity to the airport. As reported by local media covering noise complaints arising from these flights, Amazon airplanes are not permitted to engage in a traditional takeoff and ascent due to their need to receive permission from the Tampa Air Traffic Control to enter airspace above 2,000 feet. This was noted in the November 30, 2020 letter from Mayor Bill Mutz to Tampa Air Traffic Control where he stated, "Over the last several weeks, our city has received numerous noise complaints from surrounding communities, some six to eight miles away, as departing air cargo aircraft are held down below 2,000 feet waiting for Tampa Departure to give them instructions to climb to a higher altitude." When flying at such a low altitude, the risk of a collision between an airplane and a bird is always present. The hazards arising from these interactions are so great that federal and state laws have been enacted to address this risk. One such example, and one relevant to the present matter, is the location restrictions for landfills in relation to airports. Since landfills are a congregating area for vultures, these vultures pose a flight hazard to low flying airplanes. As such, federal law prohibits a landfill from being within 10,000 feet (or approximately two miles) from the nearest point of any run-way. The same restriction has been adopted by the State of Florida in its airport zoning laws. The closest landfill to the Lakeland Linder Airport is the North City Landfill in Winter Haven, which is approximately 10 miles east of the airport and located near the Polk Parkway. There is also the Southeast County Landfill in Lithia, which is 13 miles southwest of the airport. Though these landfills are loc	As discussed in Topical Response 6b (Wildlife Hazard Potential), LAL implements a Wildlife Hazard Management Plan (WHMP). As part of the WHMP, the City, as the Airport Sponsor, carries out measures to minimize and/or eliminate hazardous wildlife attractants on Airport property. In July 2013, USFWS granted a Depredation permit that is renewed annually and authorizes the City to legally remove, using methods specified by USFWS, listed species and migratory bird species that pose a threat to human safety. Refer to Topical Response 6b (Wildlife Hazard Potential) for additional information on the topics raised in this comment. The closest landfill to LAL is the North City Landfill in Winter Haven, which is approximately 10 miles east of LAL and located near the Polk Parkway. There is also the Southeast County Landfill in Lithia, which is 13 miles southwest of LAL. These landfills are located outside of the two-mile radius for the location of landfills in the vicinity of airports, and thus do not violate airport zoning requirements. Changes in aircraft flight paths or flight procedures are not part of this EA, the Proposed Development Project, or the Requested Federal Action. Potential hazards reported as a safety issue would be addressed by the City and the FAA. As discussed in Topical Response 2b (Air Traffic and Overflights), the City has proposed conceptual new arrival and departure procedures at LAL as potential noise abatement measures. These measures if implemented could allow aircraft to operate at higher altitudes than referenced in the comment. New or modified procedures requested by the City will be considered by the FAA. If the proposed procedures are deemed feasible by the FAA, the procedures would be subject to separate FAA approval processes that would be coordinated across multiple FAA air traffic and flight procedural lines of business. This process would also include an evaluation of environmental effects, as required by NEPA.

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			operations because such a waste facility attracts birds. Statistics support the fact that	
			bird strikes pose a real danger to aircraft. An estimated 87 percent of the collisions	
			between wildlife and civil aircraft occurred on or near airports when aircraft are below	
			2,000 feet above ground level (AGL). Collisions with wildlife at these altitudes are	
			especially dangerous as aircraft pilots have minimal time to recover from such	
			emergencies." It then goes on to state, "In light of increasing bird populations and	
			aircraft operations, the FAA believes locating landfills in proximity to airports increases	
			the risk of collisions between birds and aircraft AC 150/5200-33 recommends	
			against locating municipal solid waste landfills within five statute miles of an airport if	
			the landfill may cause hazardous wildlife to move into or through the	
			airport's approach or departure airspace."	
			As noted in the aforementioned Advisory Circular, airplanes flying at an altitude of	
			2,000 feet or below are at a high risk for a collision with birds. The same altitude	
			Amazon planes are required to maintain until permission to climb is received from	
			Tampa Air Traffic Control. Based on normal flight patterns, the FAA recommends	
			municipal solid waste landfills to be at least five miles from an airport. That is only five	
			miles short of the distance between North City Landfill in Winter Haven and the	
			Lakeland Linder Airport, or one minute of travel time for a plane travelling five miles a	
			minute. But, flights departing out of Lakeland Linder Airport are not operating in a	
			traditional manner and do not engage in traditional ascent patters. This is especially	
			concerning considering that flights over the Polk Parkway have been considered as	
			an option to alleviate flight noise over residential areas. If airplanes are directed east	
			over the Polk Parkway, the plane will fly directly over the landfill. Those planes, if no	
			clearance to ascend has been received, would be in danger of a bird strike. If that were	
			to happen, it could be catastrophic.	
			The hazards to airplanes posed by birds are not a perceived threat, but a documented	
			one. On November 10, 2008, Ryanair Flight 4102 from Frankfurt to Rome made an	
			emergency landing after multiple bird strikes caused both engines to fail. After	
			touchdown, the left main landing gear collapsed, and the aircraft briefly veered off the	
			runway. On January 15, 2009, US Airways Flight 1549 from LaGuardia Airport to	
			Charlotte/Douglas International Airport ditched into the Hudson River after	
			experiencing a loss of both turbines. It is suspected that the engine failure was caused	
			by running into a flock of geese at an altitude of about 3,199 feet, shortly after takeoff.	
			All 150 passengers and 5 crew members were safely evacuated after a successful	
			water landing. This flight has been dubbed the "Miracle on the Hudson" due to the	
			heroic measures taken by Capt. Sullenberger. On August 15, 2019, Ural Airlines Flight	
			178 suffered a bird strike after taking off causing it to crash land in a cornfield 5	
			kilometers past the airport. About 70 people were injured, all with minor injuries. In	
			each of these cases, it was fortunate that no fatalities occurred because the pilots were	
			Section and the process of the proce	

Commenter	Letter	Comment	Comment	Response
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			able to find a safe place for an emergency landing. We may not be so lucky if the	
			worst-case scenario were to happen here. Because of the high density of residential	
			neighborhoods in this area, a safe emergency landing may not be possible.	
			In reviewing the Environment Assessment report, Section 5.3.2.1 appears to be the	
			relevant section to discuss this topic. However, there is no discussion of the concerns	
			Healthy Progress raises. Healthy Progress would like to know if any consideration was	
			given to this issue, and if so, the reasons why these two landfills are not considered	
			flight hazards based on the current takeoff restrictions.	
Delores Miranda 3841 Country Loop West Lakeland, FL 33811 [FROM SOCIAL MEDIA]	P190	13-123	I am asking you to please not grant Amazon to be able to expand near their facility	
			and enable them to double their flights. In less than a year they have already gone	LAL is a public use airport, and Federal law preempts local governments from
			from 3 flights a day to 22. For them to double that about is totally unacceptable to	implementing any action that is intended to control types of aircraft that use an airport, the
			those of us who have lived here for over 40 years. I live off Drane Field Road in Country	routes of aircraft in flight, the timing of flights, or the number of flights. Refer to Topical
			Village. I am here to tell you if I am sitting on my screen porch when a plane takes off	Response 2g (Speech Interference) for additional details.
-			you have to stop talking to anyone sitting on the porch with you.	
Arlene Randall			I will be unable to attend the discussion concerning the expansion of our airport. But	
(Address unavailable)	P191	27-19	wanted to express my support for this opportunity being presented. I live just off Airport	I ('omment noted
			road and have no problem with the expansion. Possibly the folks that are upset with	Comment noted.
[FROM SOCIAL MEDIA]			the noise should have done better research prior to buying.	
Karen Villafana [NO ADDRESS PROVIDED]	P192	13-133	The current flight path of Amazon Prime flights from/to Lakeland Linder International	
			Airport, over our residential neighborhood of Grasslands, is very disruptive. The flights	
			are much too low and too noisy, and we understand that many more daily flights are	
			scheduled for the near future. We believe that the flight path should be changed, so	
			that the main portion of the loud arrival and descent can be performed over commercial	(Flight Frequency and Schedule) for discussion and additional details related to the topics
			properties and not residential.	raised in this comment.
			We welcome the jobs being created by virtue of this new Amazon business, but also	
			expect Lakeland Linder to be a good neighbor to the local residential communities.	







ACRONYMS AND ABBREVIATIONS

§ Section

100LL 100 Octane Low Lead Aviation Gasoline

AC Advisory Circular

ACS American Community Survey

AEDT Aviation Environmental Design Tool

AID Airport Impact District

AIP Airport Improvement Program

ALP Airport Layout Plan
APE Area of Potential Effect
APU Auxiliary Power Units
ARMB Alafia River Mitigation Bank
AST Aboveground Storage Tank

AvGas Aviation Gasoline
BA Biological Assessment
BMP Best Management Practice
BSA Biological Study Area

CBRS Coastal Barrier Resources System
CEQ Council on Environmental Quality

CFH Cubic Feet Per Hour

CFR Code of Federal Regulations

CO Carbon Monoxide

CO2e Carbon Dioxide Equivalent

CRAS Cultural Resources Assessment Survey

CY Cubic Yards dB Decibel

dBA A-weighted Decibels

DNL Day-Night Average Sound Level DOT Department of Transportation

DSA Direct Study Area

EA Environmental Assessment
EIS Environmental Impact Statement

EO Executive Order

EPA U.S. Environmental Protection Agency

ESA Endangered Species Act of 1973, as amended

F.A.C. Florida Administrative Code FBO Fixed Based Operator

FCMP Florida Coastal Management Program

FDEP Florida Department of Environmental Protection

FDOT Florida Department of Transportation
FEMA Federal Emergency Management Agency

FIRM Flood Insurance Rate Maps

FLUCFCS Florida Land Use, Cover and Forms Classification System

FMSF Florida Master Site File

FONSI Finding of No Significant Impact

FWC Florida Fish and Wildlife Conservation Commission

GA General Aviation GHG Greenhouse Gas GIS Geographic Information System
GSE Ground Support Equipment
HCM Highway Capacity Manual

IPaC Information for Planning and Consultation

ISA Indirect Study Area

LAL Lakeland Linder International Airport

LF Linear Foot/Feet
LOS Level of Service
mgd Million Gallons Per Day
MSA Metropolitan Statistical Areas

msl Mean Sea Level

MW Megawatt

NAAQS National Ambient Air Quality Standards
NEPA National Environmental Policy Act
NFIP National Flood Insurance Program
NHPA National Historic Preservation Act

NO_x Nitrogen Oxides

NRHP National Register of Historic Places

NSS Noise Sensitive Site

 O_3 Ozone

PFC Passenger Facility Charge

Palustrine, Forested, Broad-Leaved Deciduous/Needle-Leaved Evergreen,

PFO1/2C Seasonally Flooded

Palustrine, Forested, Broad-Leaved Deciduous/Needle-Leaved Evergreen,

PFO1/3C Seasonally Flooded

PFO2C Palustrine, Forested, Needle-Leaved Deciduous, Seasonally Flooded PM₁₀ Particulate Matter Equal to or Less than 10 Micrometers in Diameter PM_{2.5} Particulate Matter Equal to or Less than 2.5 Micrometers in Diameter

POWx Palustrine, Open Water, Excavated

PUBx Palustrine, Unconsolidated Bottom, Excavated

PUD Planned Unit Development

RAI Request for Additional Information

RCRA Resource Conservation and Recovery Act

SF Square Foot/Feet

SFHA Special Flood Hazard Area

SHPO State Historic Preservation Officer

SO₂ Sulfur Dioxide SO_x Sulfur Oxides

SPCC Spill Prevention Control and Countermeasures Plan

SSA Socioeconomic Study Area

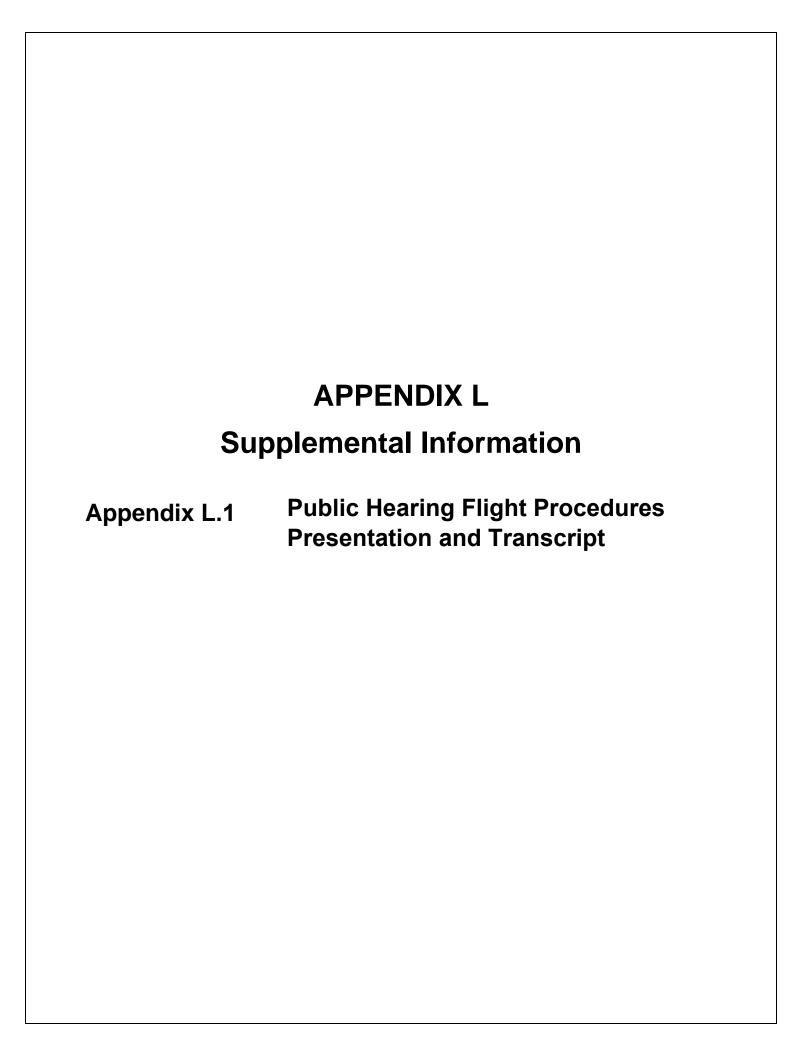
SWFWMD Southwest Florida Water Management District

SWPPP Stormwater Pollution Prevention Plan

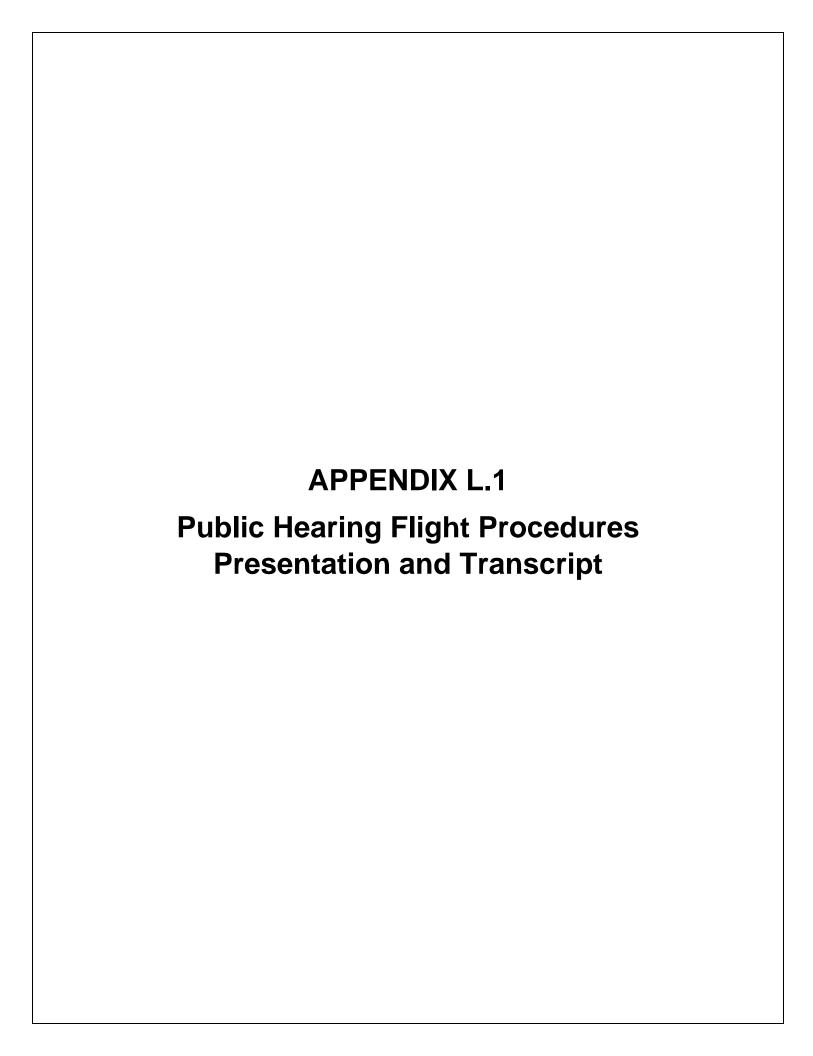
SY Square Yards U.S. United States U.S.C. U.S. Code

UMAM Uniform Mitigation Assessment Methodology

USACE U.S. Army Corps of Engineers
USFWS U.S. Fish and Wildlife Service
VOC Volatile Organic Compounds
WHMP Wildlife Hazard Management Plan
WWRF Wastewater Reclamation Facility











BYTHE NUMBERS FlyLakeland

HISTORY

OPENED

1942

FORMER NAMES

LAKELAND AIRPORT #2 UNK - MAY 1941

DRANE FIELD

MAY 1941 - MAY 1942

LAKELAND ARMY AIR FIELD

MAY 1942 - NOVEMBER 1945

DRANE FIELD

NOVEMBER 1945 - 1960

LAKELAND MUNICIPAL AIRPORT

1960 - 1970s

LAKELAND REGIONAL

AIRPORT 1970s - 1980s

LAKELAND LINDER REGIONAL AIRPORT

1980s - 2018

LAKELAND LINDER INTERNATIONAL AIRPORT

2019



ARMY AIR CORPS

DURING WWII LAL WAS USED BY THE ARMY AIR CORPS TO TRAINB-17, B-24, B-26, P-51,P-40, AND A-20 AIRCREWS. AT THAT TIME THE AIR FIELD WAS COMPRISED OF 3,880 ACRES.

ABOUT

OPERATIONS RUN
365-24/7

CLASSIFIED AS

NATIONAL AIRPORT

BY THE FAA AND AN

INTERNATIONAL USER FEE AIRPORT

BY U.S. CUSTOMS AND BORDER PROTECTION

AIR TRAFFIC CONTROL TOWER OPERATING



AIRCRAFT RESCUE AND FIREFIGHTING ON FIELD



365•24/7
ARFF INDEX B
CAPABLE OF INDEX C

OVER 247

BASED AIRCRAFT

FAR PART 139 CLASS 1 AIRPORT



CAPABLE OF ACCEPTING COMMERCIAL AIR SERVICE

ECONOMIC IMPACT

\$574

OPERATIONS

(A)

TAKEOFFS AND LANDINGS

127,214 OPERATIONS

3,785
MILITARY



BUSIEST AIRPORT

OUT OF 520 TOWERED AIRPORTS IN THE UNITED STATES

16th BUSIEST CONTRACT TOWER

IN THE UNITED STATES

STATE RANKING



HIGHER THAN PNS, SRQ, JAX, MLB, RSW, PGD, AND GNV - TPA RANKED 9TH

INFRASTRUCTURE



PERIMETER FENCING
OVER 81,300 LINEAR

OVER 81,300 LINEAR FEET OF FENCE LINES. THAT'S OVER 15 MILES!

FACILITIES TERMINALS AND HANGARS

OVER 1,000,000 SQ. FEET

TOTAL AREA



LARGER THAN ALL FOUR WALT DISNEY WORLD THEME PARKS COMBINED



OVER 95,000 LINEAR FEET OF TAXIWAYS. THAT'S OVER 18 MILES!

FlyLakeland

LAKELAND LINDER INTERNATIONAL AIRPORT

3900 DON EMERSON DR • STE 210 LAKELAND, FLORIDA 3381 1 P 863-834-3298 • F 863-834-3274 FLYLAKELAND.COM

FEBRUARY 2019

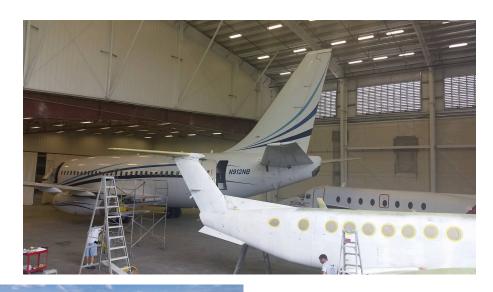
Over \$440 million has been invested on airport since 2010

- \$170MM coming from FAA and FDOT grants and airport funding
 - NOAA
 - 22 pavement projects
 - ATC tower
 - Station 7
 - ILS CAT III
 - PSC Aerospace
 - U.S. Customs Facility
- \$270MM invested by the private sector
 - Amazon
 - Three solar farms
 - New Hotel Staybridge Suites
 - Central Florida Aerospace Academy
 - Ferrera Tooling



Lakeland Linder International Airport

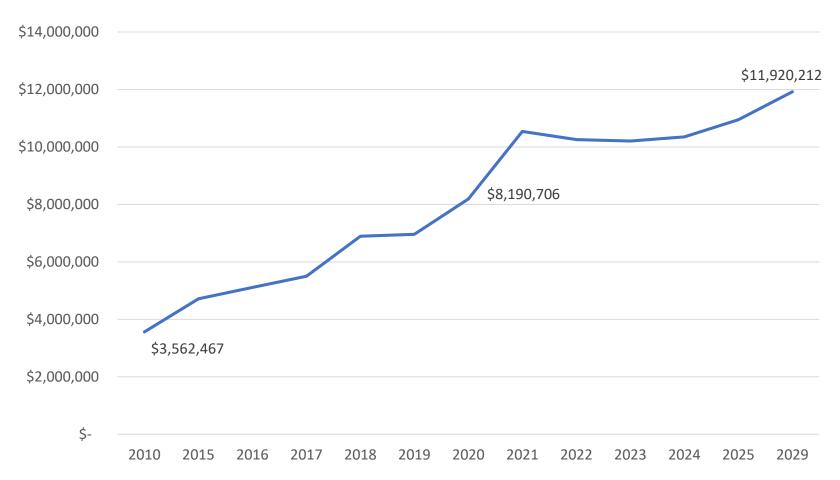
- Diversified tenant base with over 82 businesses and organizations located on airport, employing over 3,400 people
 - 8 A&P Shops
 - 5 Flight Schools
 - 2 Interior Shops
 - 2 Avionic Shops
 - 2 Hotels
 - 1 Paint Shop
 - 1 Aviation High School
 - 1 High School Flying Club
 - 2 College Programs
 - 1 Amazon Air
 - 1 NOAA
 - 1 Draken International





Revenue Growth 2010-2029

 Annual revenues have increased by \$4.62MM over a ten year period



Primary Data for Evaluation



- On-Airport direct employment of 3,494
 - Jobs located on airport property

3

- For last three years, an average of \$77M in capital projects per year, accounting for 596 jobs
 - Accounts for public and private investment, including runway extension and facility development
- Approximately \$63M in visitor spending, resulting in 684 jobs
 - Visitor spending includes impacts associated with out of state visitors, based on growth factors being applied to the 2019 FDOT Economic Impact Study

Fly Lakeland Linder International Aircord

LAL Impacts

Over 85% of total economic impacts are associated with on-airport activity. This is due to the extremely high number of on-airport employees and the significant construction projects that have recently been completed.



Kimley»Horn

Growth in Economic Impact at LAL

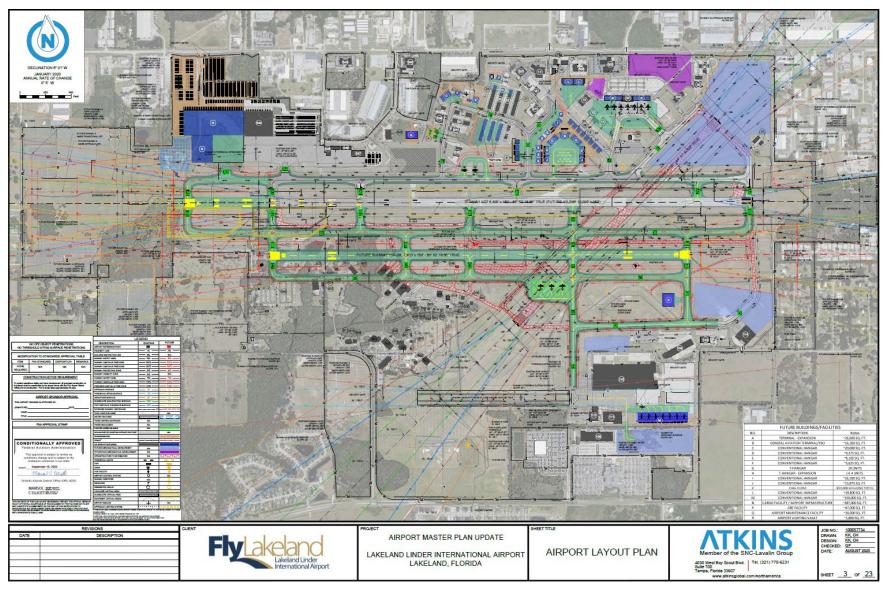




Since 2017, LAL has added over 1,700+ new employees and completed over \$300M in capital improvement projects

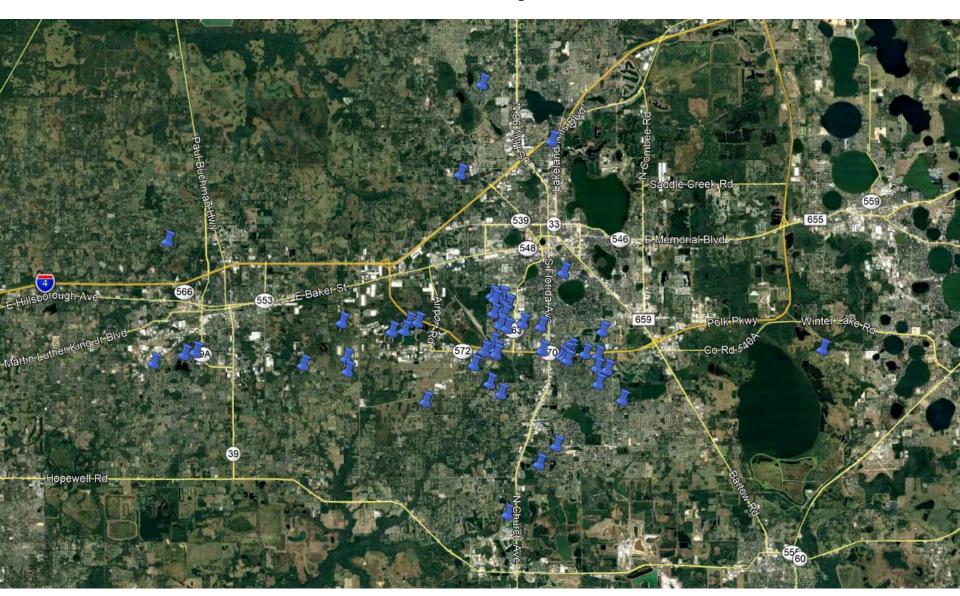
Kimley»Horn

Airport Master Plan



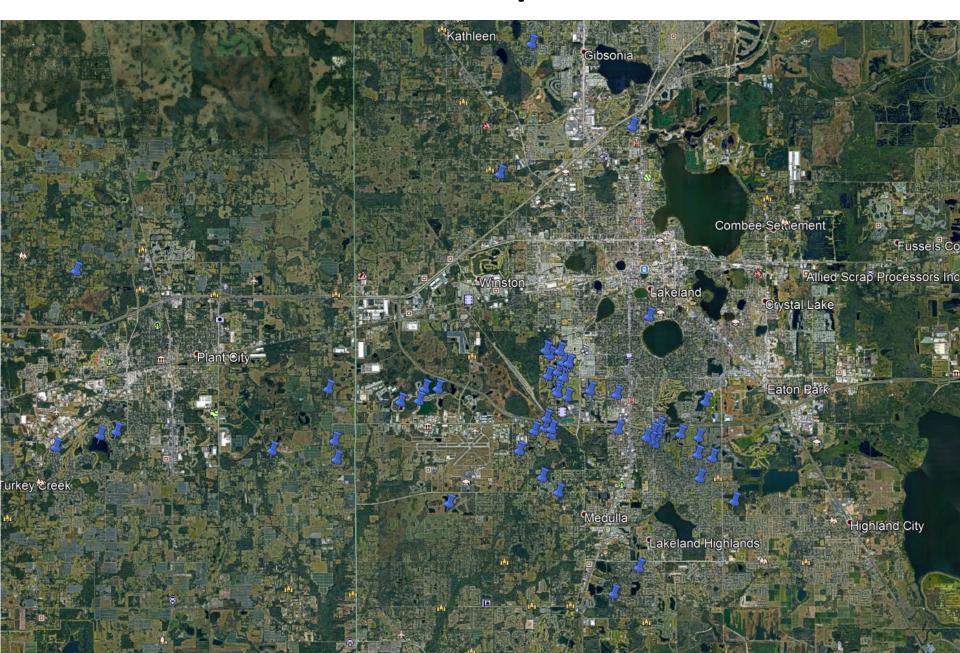


Noise Complaints

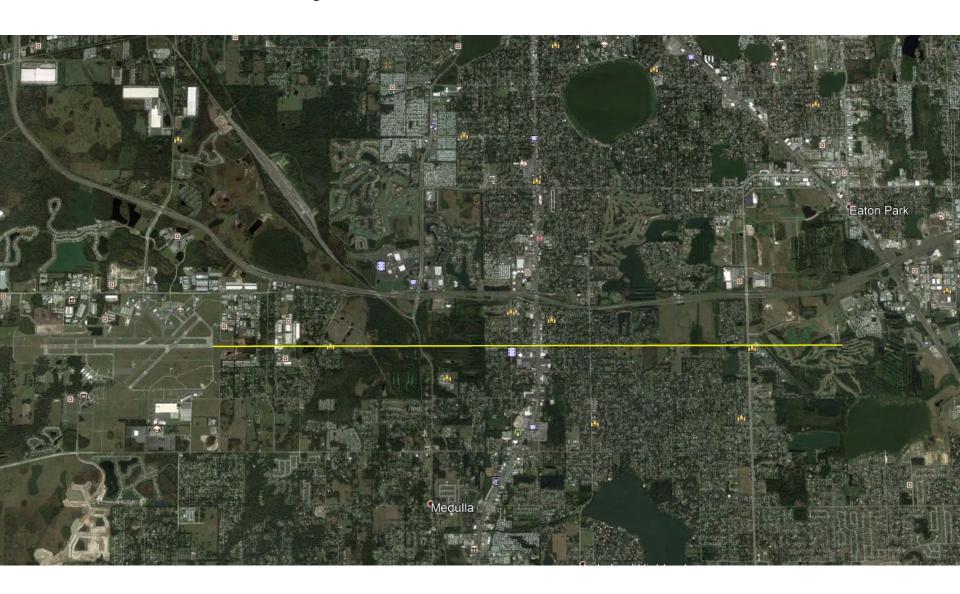




Noise Complaints

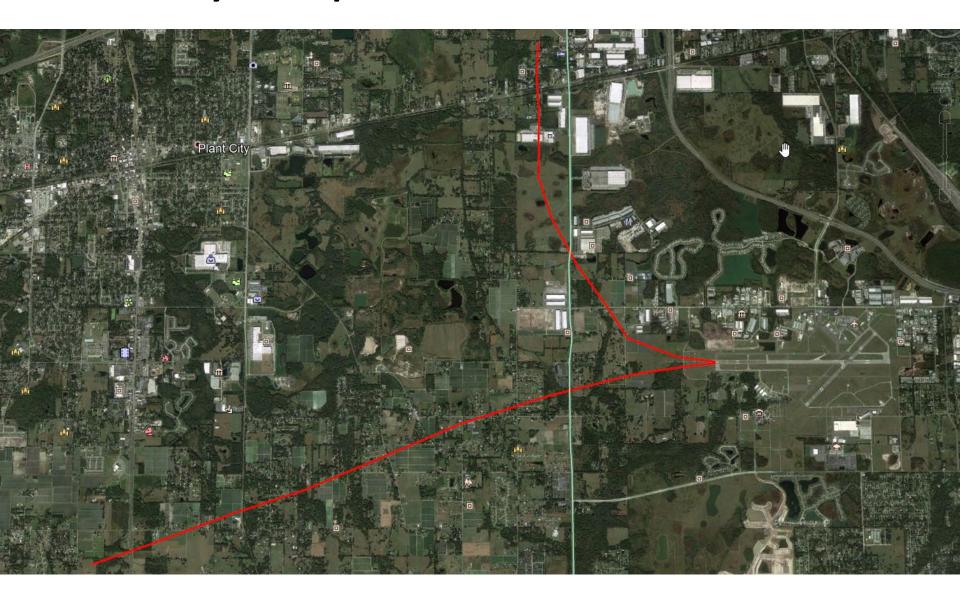


Runway 27 Arrivals from the East



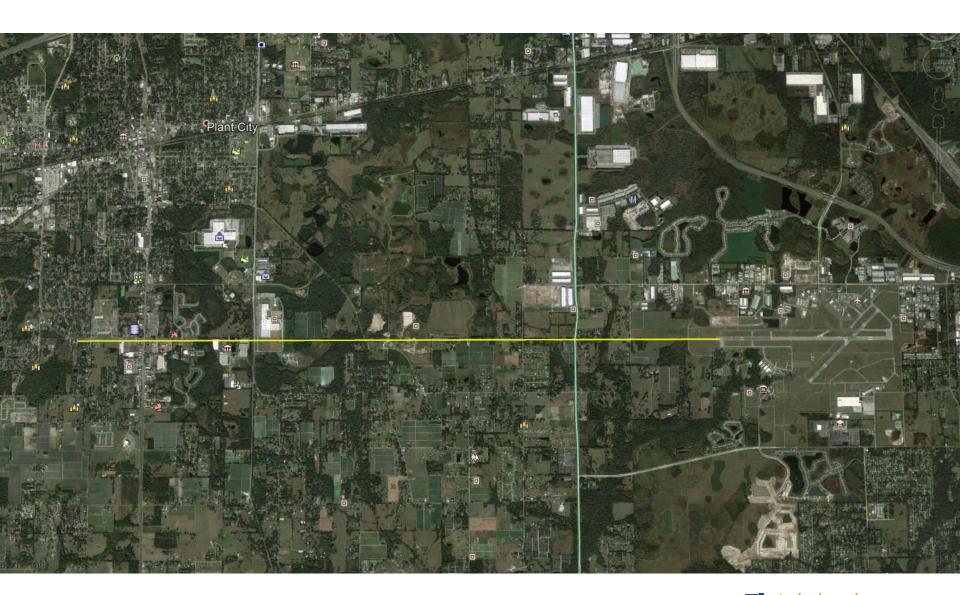


Runway 27 Departures to the North and South



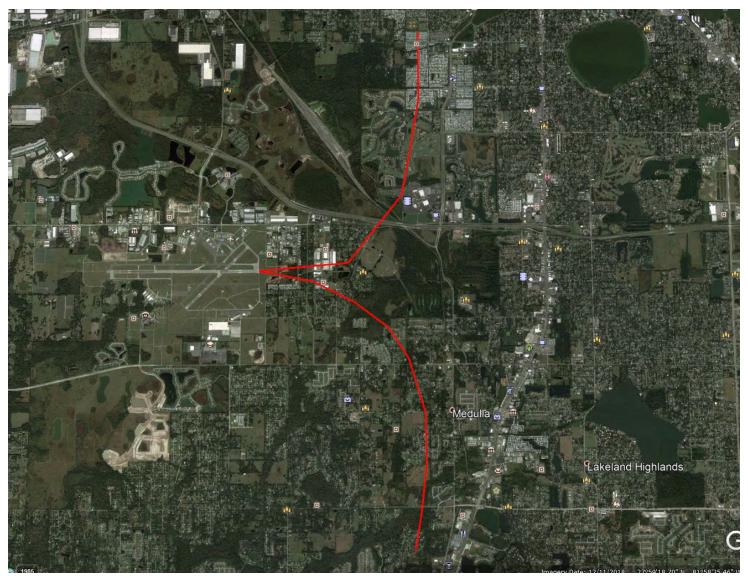


Runway 9 Arrivals from the West





Runway 9 Departures to the North and South



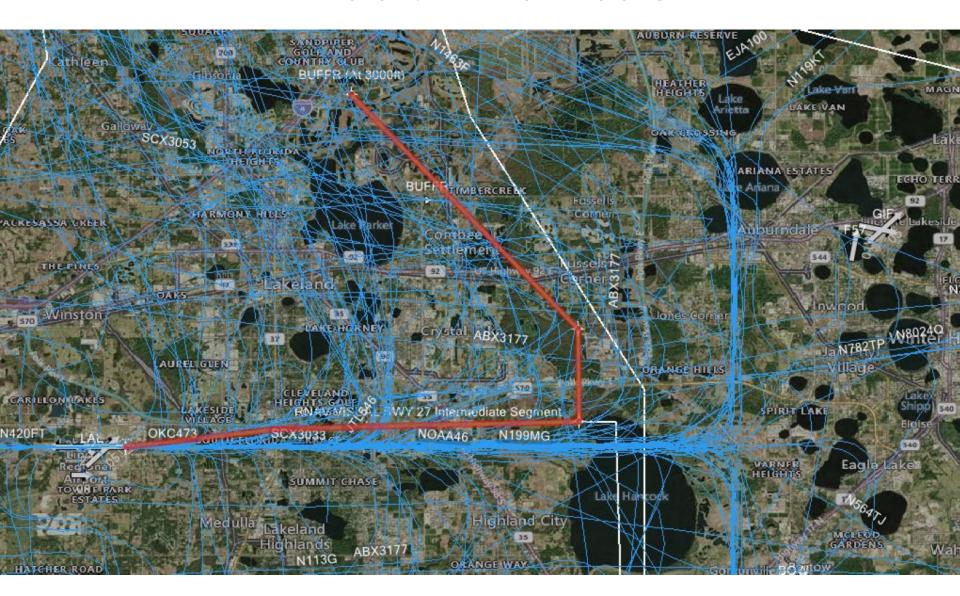


Aircraft Arrival Tracks



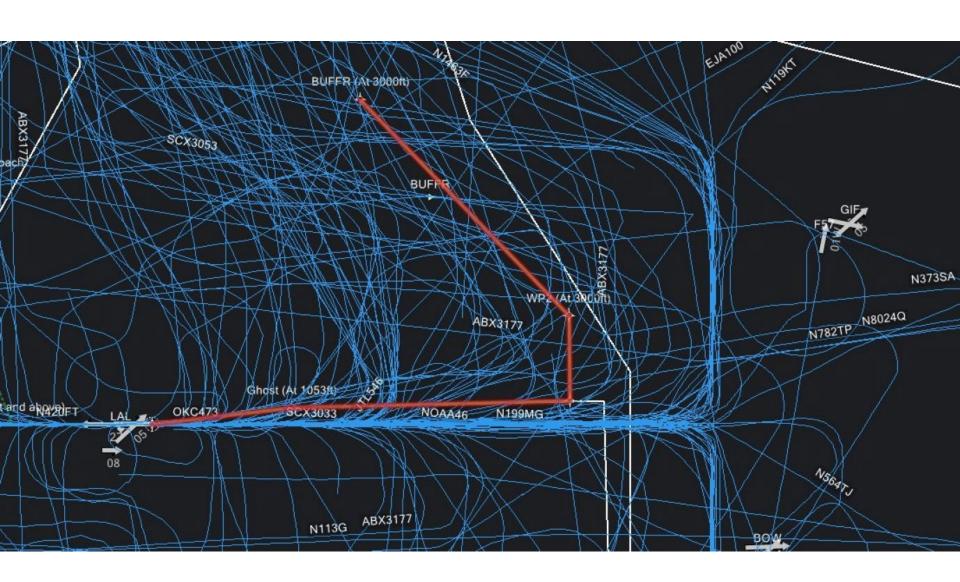


Aircraft Arrival Tracks





Aircraft Arrival Tracks





Noise Mitigation Goals/Efforts

- Formalized official Preferential Runway Use program between the hours of 2200-0700 (Runway 9 Arrivals and Runway 27 Departures).
- Regardless of the departure runway, initial altitude 3000' or higher. Design RNAV Standard Instrument Departure (SIDs).
- Runway 27 Instrument Approach design instrument approaches to avoid noise sensitive areas and/or allow for flight idle descent of aircraft over noise sensitive areas.
- Runway 27 Visual Approach intercept "Parkway Approach"



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The objective of these measures is to reduce noise for communities surrounding the airport and improve conditions for other areas experiencing noise from aircraft overflights.

Before opening tonight's hearing for public testimony the airport would like to brief you on the current status of these initiatives.

This concludes tonight's formal public hearing presentation. We would now like to introduce Mr. Gene Conrad, airport director to elaborate on some of the noise abatement initiatives currently underway and to make come concluding remarks. Afterward we'll open the hearing for public testimony.

MR. CONRAD: All right. Well, good evening -good evening. My name is Gene Conrad, and I'm the
airport director for Lakeland Linder International
Airport. And I just want to start by saying thank
you to all of you for showing up, and we truly do
appreciate the participation.

Obviously there's a lot of difficult questions, and there's a lot of answers that everybody are looking for, but I just wanted to briefly go over what specifically us as the airport and the city are

doing obviously to address the noise impacts. Right?

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So we just talked about and listened to our presentation reference the Draft Environmental Assessment. And when we look at the noise contours, you know, those are things that FAA looks at are close in impacts basically essentially on top of the airport. But we clearly know obviously with all the great participation tonight that there are impacts that are further away from the airport.

So what I wanted to be able to do tonight is just address those, tell you exactly what we're doing and what we're working on and what our timelines are to help mitigate as much as we can the noise and the impacts for these aircraft that are flying over the top of Lakeland.

First slide. I know probably some of this is hard to see. This is our handout. I just want to briefly talk about the airport and what has happened over the last decade there. Over 440 million dollars has been invested into the airport.

Obviously various pavement projects, Amazon's development, solar farms, new hangar development and NOAA for example the Hurricane Hunters has been a significant investment in our airport over the last

1 decade.

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Also when you look at our operations, our operation is two -- 24/7 356 days a year. We have a crash fire rescue station on the airport, station 7. We have green trucks that go to the airfields, red trucks that go to the public side. We also have 260 based aircraft on the airport.

Our large runway is 8,500 feet long, so it's a very capable facility and obviously we have a lot of operations. We are the 124th busiest airport in the United States. So there's 520 towered airports in the United States. We're about the 124th busiest, so a lot of activity already including obviously what Amazon is doing today.

Next slide. Also we have about over 82 businesses and organizations that are located on the airport with over 3,000 people that are working on the facility in our buildings whether they're private buildings or city owned and airport operated facilities, so it's very busy out there.

We have eight A and P shops. Those are aircraft mechanic shops, five flight schools.

Obviously, again, NOAA the Hurricane Hunters are there, Draken International. So when you see fighter jets flying over the top of Lakeland and

it's not Sun n Fun, that's Draken International.

They have about 300 mechanics that work there. They
do aggressor flying for the Department of Defense.

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Again, NOAA which has been a great partner and they arrived back in 2017 and they have about 110 folks that work there and nine based aircraft that go out and fly into our hurricanes and do other missions around the country.

Now, I know this is a little bit hard to see.

Over here on the boards I'm going to be available afterwards after public comments as well. But we are tracking all of the noise complaints that are coming into the airport. So each one we are documenting, we are recording it, and then we are also -- what this slide represents is a pin so we can help identify where the largest noise impact is or the areas that are being impacted the most away from the airport.

Our biggest two when we look at our heat map and where the most impact is, one is obviously Grasslands where we're making that hard turn to the north, and the other is east, the 27 approach east of South Florida out to Lakeland Highlands when we're flying right over the top. So we're very aware of that, and I want to talk real quick about

what we're doing to mitigate some of that.

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So this slide right here, again it's a little hard to see, we have the boards over here, but this is essentially the extended center line for the 27 approach. So this is out to the east over the top of South Florida all the way out to Lakeland Highlands. This is the pattern that the aircraft are flying today. They don't fly exactly that line. I'll show you a slide here in a minute, but that's the general extended center line and the pattern that they're flying today for the 27 approach.

Next. Again, this is probably a little hard to see, but the board is over here. This is the 27 departures, so you have departures that go to the north over essentially County Line Road and all the warehouses out on County Line Road, and then there are aircraft that turn to the south out to the west. This is our preferred departure pattern because there's obviously a lot less development out there. There are still homes and there's still impact, but flying out to the west is our preferred pattern.

This represents the runway 9 arrivals, so essentially they're flying over the top of Plant City. Our instrument landing system is on runway 9. And so when the winds are out of the east they are

flying this pattern straight into runway 9.

And then when they depart runway 9, again if you can see it when they make that hard 360 north turn over Grasslands, we're very aware of that. And also the south turn over areas that are close to South Florida and Ewell and Pipkin as well.

So our noise mitigation and goals and our efforts right now, what we're doing specifically, we have hired a consultant, ABCx2, to help us develop several new approaches and departure procedures in and out of the airport. The first bullet there represents our preferential runways use program that we have in place.

And hopefully especially my Grasslands friends have noticed that in the mornings up to a 7 knot tailwind we are departing to the west. I want to say probably in the last two-and-a-half, almost three months we've departed over Grasslands in the morning. That's just because the winds were up and the tailwinds were higher than 7 knots, so they had to depart in that direction. But generally since we put this in place the departures over Grasslands to the east have been reduced drastically.

Regardless of the departure runway -- because I'm sure you've seen this in the Lakeland

Ledger -- you know our aircraft are held down to 2,000 feet. We want to when these aircraft are departing to get up and high and out of here as quickly as possible. We have complex air space being between Tampa and Orlando. They never thought our airport would grow into what it is today, but they are paying attention now especially with our friends at Grasslands who sent a lot of e-mails to the FAA noise portal to get them to pay attention. They are doing that and they are helping us, but this does take time, and there's a process to go through and we are working on that now.

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The second -- the third bullet up there is the runway 27 visual approach what we're calling the parkway approach. So it's the air traffic coming from the east into the airport into 27. Our goal is to get them to fly directly over the Polk Parkway, and when they get to South Florida to side step to the south a little bit to line up with 27 and come into the airport. So we're working on that. We've been on several calls over the last several weeks as well with the chief pilots for the various airlines that fly for Amazon to get this put in place and we are making positive movement to get this done and our goal right now is to have this in place before

1 the end of the year.

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And then the last one is runway 9 departures, and essentially for that we're looking to reverse the Polk Parkway approach and have them fly the reverse pattern that I just described to you for the 27 approach, and with that as well to get these aircraft again up to 3,000 feet as quickly as possible -- 3,000 feet is kind of the sweet spot for these aircraft to be up to. And they don't want to loiter at 2,000 feet, they don't want to make these hard turns over Lake Hollingsworth and various other areas. They want to fly in defined patterns and get in and out of here. They do not like -- the next slide put up real quick.

I know this is a little hard to see again. I have the boards over here. But all these blue lines, the fine blue lines, and that's the RNAV approach into 27, but all the other blue lines are the visual approach they're making right now all over the place. And we want to correct that, get them into what is the red line up there, what we're calling the Parkway approach, and get them into a defined pattern, and get them in and out of the airport.

This is just another representation, so at the

top of the red line they would be starting at 3,000 feet there. Right now there are times they are over the top of Lakeland at 1,600, right, and we don't want that. We want them to be up higher. If they come all the way down to make their turn to the west to get into 27, they're going to be at 3,000 feet and then when they get to essentially South Florida they would be about 1,300 feet which is higher than they are today, probably a mile east of what is happening right now and east of South Florida.

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So I don't know if that's a little hard to understand, but again our goal is to get them to fly directly over the Polk Parkway and then side step when they get to South Florida into runway 27.

And again, this is just another representation.

Again, the blue lines and all these visual approaches that they're flying are different lines and they're all the over the place. We want to get them defined into that red line over the top of Polk Parkway.

And I know there's a lot of information. I know we're going to open up the public comments now, but I will be available if anybody after the public comment period wants to meet me over at the boards I'm happy to explain it further. And again, thank

you all for your time. I appreciate it. We are working diligently to mitigate as much as we can as quickly as we can, so thank you for your time.

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MR. PURCELL: Thank you. I'll now call upon people who registered to speak. People will be called to speak in the order registrations were received. If you've not yet filled out a registration card, please do so now and return it to the sign-in table so we can get you into the cue.

I would like to remind everyone in attendance that this portion of the hearing is for public testimony only. We cannot answer questions or otherwise respond to issues that you raise in your comments this evening.

Please come to the microphone when your name is called and state your name, spell your name and give your address for the court reporter to note in the hearing transcript. If you represent an organization, municipality or other public body, please provide that information as well. Please speak clearly so that we can hear your comments and so the court reporter can easily record your statement.

To help ensure that everyone has a chance to speak every person will be allotted three minutes to