AIRPORT PLANNING CONSULTING SERVICES

Exhibit A-1: Scope of Work

Task I-23-LNA-R-010: LNA Safety Assesssment

Palm Beach County Park Airport (LNA)

Introduction

In January 2021, the Federal Aviation Administration (FAA) issued a Final Agency Determination that ordered Palm Beach County to rescind the ban on jet operations at the Palm Beach County Park Airport (LNA or the Airport). The County and the City of Atlantis filed an appeal of the FAA's Final Agency Determination, but the U.S. Court of Appeals issued an Opinion in November 2022 that upheld the FAA's Determination. As a result, jet aircraft operations are no longer prohibited at LNA.

The ban on jet operations at LNA had been enforced since 1973; therefore, LNA's airfield was designed and configured to serve non-jet aircraft (piston, turboprop, and helicopter). Furthermore, all prior planning analyses, including LNA's current Master Plan and Airport Layout Plan (ALP) drawing set, are predicated on non-jet aircraft. With the introduction of jet aircraft operations at LNA, conducting a comprehensive assessment of the potential operational impacts, in conjunction with updating the Airport's Master Plan and ALP, is appropriate.

The purpose of the LNA Safety Assessment (the Study) is to examine potential implications associated with conducting jet operations at LNA and provide recommendations regarding possible measures to enhance operational safety. This study will also examine whether jet aircraft operating to and from LNA have an impact on the safety or operational efficiency of nearby Palm Beach International and Boca Raton Airports. Upon its completion, it will also be used to determine if the formulation of a safety risk assessment team to review the findings of this Study is warranted.

This scope of services describes the analyses that would be performed by the Ricondo team to serve as a formal Safety Assessment for LNA. The services described herein will also leverage data collection, obstruction surveys, aviation activity forecasts and other planning analyses to be performed under Task I-23-LNA-R-014, *LNA Airport Master Plan Update*.

Scope of Services

Task 1: Stakeholder Briefings

Goal: Meet with pertinent stakeholders to discuss key operational safety concerns associated with the introduction of jet aircraft at LNA. If necessary, the scope of services and task budgets associated with subsequent tasks described herein may be modified and/or amended.

Prior to initiating the technical analyses associated with the Study, the Ricondo Team will brief various stakeholders and solicit input that could inform the Study. Following these briefings, the scope of services described herein may need to be modified and/or amended to ensure that the Study addresses all viable safety concerns that may be raised by stakeholders and ensure adequate coordination with the Federal Aviation Administration (FAA) is performed.

The following subtasks describe the level of effort anticipated for the initial stakeholder briefings. These meetings will be supplemented by another round of stakeholder meetings upon the completion of the technical analyses described herein, during which the preliminary findings will be reviewed. The second round of stakeholder meetings is described under Task 5, *Review of Study Findings/Conclusions*.

Sub-task 1.1 Initial Community/Technical Stakeholder Briefing

A public meeting will be performed at the onset of the Study with pertinent technical and community stakeholders. The stakeholders may include, but are not limited to:

- Airport users and tenants
- Local municipalities, homeowner associations (HOAs), and residents of nearby communities
- Industry/Trade Organizations (i.e., Aircraft Owners and Pilots Association (AOPA), National Business Aviation Association (NBAA), etc.)
- Palm Beach International Airport (PBI) air traffic control (ATC) staff

It is envisioned that this meeting will be conducted at, or near LNA, to ensure access for the local community and stakeholders. The venue for the meeting will be approved by the Palm Beach County Department of Airports (DOA) and any costs will be reimbursed as a part of the Task. The Ricondo Team will coordinate the logistics for securing the venue. For budgeting purposes, it is assumed that the briefing will be held at the Lantana Public Library.

The Ricondo Team will facilitate the logistics of the Community/Technical Stakeholder Briefing meeting. This will include creating a formal notice to be posted in local newspapers, on the DOA's website, and distributed to local municipalities and stakeholders. Content will be provided for the DOA's website to help explain the purpose, need, and goals of the Study and identify means for submitting comments and concerns. Ricondo will prepare a PowerPoint presentation that will summarize the purpose and proposed approach for the Study. The Ricondo Team will also provide sufficient staff as needed to set up, manage, present, and coordinate all meeting logistics. Any comments that are received from the stakeholders will be documented in a comment log and appended to the final report described herein under Task 4,

Deliverables. It is envisioned that this meeting will be attended by three staff from Ricondo (two Directors and a Senior Consultant) and five staff from the Valerin Group.

The DOA will be responsible for identifying the key stakeholders and newspapers that will be notified of the briefing. The Ricondo Team will not be responsible for any costs associated with the publishing or distribution of the stakeholder briefing notifications. Meeting minutes will be prepared for the stakeholder briefing. The PowerPoint presentation, comments log and meeting minutes will serve as the official record of the briefing.

Sub-task 1.2 FAA Consultation – Review Final Scope of Services

Following the initial Community/Technical Stakeholder Briefing described above, Ricondo will request a meeting with the FAA's Orlando Airports District Office (ADO) and other relevant FAA divisions, such as PBI ATC/TRACON staff, the Flight Standards District Office (FSDO), Air Traffic Organization, and/or the Regional Administrator's office. The purpose of this consultation is to provide the FAA with an overview of the Study and provide an opportunity to solicit feedback and guidance on the overall approach and process. This meeting will be conducted virtually and be attended by three staff from Ricondo, two Directors and a Senior Consultant. Ricondo will prepare an agenda and meeting notes in conjunction with this consultation meeting. If necessary, the PowerPoint presentation derived during Sub-task 1.1 will be updated based on feedback received and utilized to guide the discussion during the FAA consultation.

Task 2: Airfield Assessment

Goal: Review existing airfield conditions to provide recommendations for potential changes that may be warranted to enhance aircraft operational safety.

The airfield assessment will include a comprehensive evaluation of the existing airfield at LNA to identify potential deficiencies and/or operational risks that may result from the introduction of jet aircraft operations. It will be based on the existing and future critical aircraft for the Airport in accordance with the aviation activity forecast derived through the ongoing Part 150 Noise Study and Master Plan Update for LNA. The airfield assessment will include the following subtasks:

Sub-task 2.1 Jet Aircraft Fleet Mix Analysis

The Ricondo Team will analyze the jet aircraft fleet to better understand the operational demand levels and fleet mix characteristics of jet aircraft that could potentially operate at LNA over the Master Plan's 20-year planning period. This will include the identification of jet aircraft that have already operated at LNA, as well as an assessment of other jet aircraft types that could utilize the airport in the future. Historical aircraft operational data will be obtained from the Airport's noise monitoring system (ANOMS). The Airport's fixed base operator (Stellar Aviation) will also be interviewed to better understand the current and pending demand for jet aircraft at LNA. This will result in the listing of jet aircraft types that may be capable of operating at LNA, given its current airfield configuration.

The physical and operational characteristics of the current and potential jet aircraft fleet at LNA will be documented. This information will include:

- Aircraft wingspan

- Approach speed
- Aircraft approach category (AAC) and airplane design group (ADG)
- Maximum takeoff weight (MTOW)
- Maximum range capability
- Basic empty weight

In addition, Ricondo will conduct an aircraft performance evaluation for no more than twenty (20) jet aircraft types that may be capable of operating at LNA based on existing conditions. Both landing distance and takeoff distance (balanced field length) will be calculated. Since landing and takeoff distance requirements can vary significantly for each aircraft type, the runway length analyses will present a range of runway length requirements for each. The takeoff distance requirements will be calculated for both a short-range flight with a stage length of 250 nautical miles and a long-range flight at MTOW. The landing distance requirements will be presented for those aircraft operating Federal Aviation Regulation (FAR) Part 91, *General Operating and Flight Rules* and FAR Part 135, *Operating Requirements: Commuter and on Demand Operations* separately.

Sub-task 2.2 Airfield Design Standards Review

The Ricondo Team will evaluate the configuration of the existing runways and taxiways to verify compliance with the airfield design standards contained in FAA Advisory Circular (AC) 150/5300-13B, *Airport Design*. This review will consider the airfield design standards associated with the existing design aircraft. If a change to the future design aircraft that would trigger a change to the Airport's Airport Reference Code (ARC), this review would also assess the anticipated change in airfield design standards that would result.

This review will focus on the following airfield design standards:

- Runway pavement dimensions, including runway length and width, shoulders and blast pads, as applicable
- Runway safety areas (RSA), object free areas (ROFAs), and obstacle free zones (OFZs)
- Runway hold position markings
- Runway to parallel taxiway and aircraft parking aprons
- Taxiway geometry, including taxiway width, fillet geometry and shoulders, as applicable.
- Taxiway object free areas (TOFAs)

The current FAA approved Airport Layout Plan (ALP) and associated AutoCAD basemapping files will serve as the basis for the airfield design standards review. Any airfield elements that do not conform to FAA design standards will be illustrated and summarized for each runway and associated parallel taxiway to demonstrate any operational constraints. Should any deficiencies be identified, potential mitigation options will be identified and evaluated.

Sub-task 2.3 Airfield Pavement Strength Analysis

All three runways at LNA are published with a load bearing capacity of 30,000 pounds for an aircraft with a single wheel gear configuration and Pavement Classification Numbers (PCNs) that range between 8 and 15. However, the load bearing capacity and PCN values for the taxiways and aircraft parking apron are not published. Additionally, the FAA has transitioned from the ACN/PCN model to a new Aircraft Classification Rating - Pavement Classification Rating (ACR-PCR) method.

This task will include a review of available as-built record drawings, engineering reports and pavement condition reports for the taxiways and aircraft parking apron to determine if they are adequate to accommodate the current and projected jet fleet mix at LNA. Pavement Classification Ratings (PCR) values for the airfield's existing runways, taxiways and apron pavements will also be determined in accordance with FAA AC 150/5335-5D, *Standardized Method of Reporting Airport Pavement Strength*. LNA's Airports Master Record will be updated accordingly through the FAA's Airport Data and Information (ADIP) portal to reflect the resulting PCRs. This task does not include collecting pavement core samples, which may be included in a future or amended task if determined necessary.

Sub-task 2.4 RPZ and Land Use Compatibility

The existing Runway Protection Zones (RPZs) will be evaluated to identify potential incompatible land uses. Both the arrival and departure RPZs will be considered. The existing RPZs depicted on the current ALP will serve as the basis for the existing RPZ configurations. Each existing RPZ will be evaluated to identify potential incompatible land uses.

Future RPZ configurations will be established based on the critical aircraft determination and planned future instrument approach procedures identified for each runway end. The future instrument approach procedures will be identified in consultation with DOA and will be based on potential upgrades to runways to either support aircraft exceeding 12,500 lbs., changes to the runway design code, and/or instrument approach procedures.

Potential mitigation measures to reduce or eliminate incompatible land uses with the RPZs will be evaluated. These mitigation measures may include, but are not limited to:

- Property acquisition
- Acquire aviation easement
- Relocation of the runway end/threshold
- Updating the Airport's land use/zoning ordinance and/or interlocal agreement(s) with local municipalities

The cost of any recommended mitigation measures may be evaluated in a future task.

Sub-task 2.5 Intersecting Runway Interactions

Due to the unique operational constraints (runway length, width, approach capability) of each of LNA's runways, jet operations at LNA may require the use of a runway that differs from the traffic patterns that are in use by non-jet aircraft. Historical ANOMs data on runway use by jet and non-jet aircraft at LNA will be evaluated to quantify runway use by jet aircraft. The FBO (Stellar Aviation) will also be consulted to assess their understanding of runway use and interactions with traffic patterns utilized by non-jet aircraft. To the extent practicable, the occurrence of jet operations that counter the predominant traffic patterns at the Airport will be quantified. Potential mitigation measures, such as upgrading runways capabilities or establishing a federal contract tower at the Airport will be identified.

Sub-task 2.6 Obstruction Hazard Analysis

Utilizing the obstruction surveys obtained during the ongoing LNA Master Plan, the threshold siting surfaces and departure surfaces prescribed in FAA Advisory Circular 150/5300-13B will be evaluated for potential penetrations by obstacles. An evaluation of the siting surfaces for the Precision Approach Path Indicators (PAPIs) will also be performed. Should any obstacle penetrations to these surfaces be identified, Ricondo will determine the appropriate means necessary to mitigate these penetrations. Mitigation measures may include:

- Trim or remove vegetation
- Displacement of the landing threshold
- Non-standard departure climb rates (instrument departures)
- Increase PAPI aiming angles
- Relocation of PAPIs

Should penetrations of the TSSs or departure surfaces be identified, a plan and profile view of the approach surfaces will be created for each individual runway end. Should any deficiencies be identified, potential mitigation options will be identified. Potential operational impacts to jet aircraft arrival and departure capabilities (i.e., impacts to maximum allowable takeoff weight, landing distance available, etc.) would also be identified.

Sub-task 2.7 ROM Cost Estimates

For each of the mitigation options identified under the previous subtasks that would require capital expenditures and/or property acquisition, a rough order of magnitude (ROM) cost estimate will be prepared. ROM cost estimates for up to twelve (12) mitigation options will be prepared. The ROM cost estimates will be provided on an item of work basis and expressed in 2023 dollars. The estimates will be prepared with sufficient detail to provide the level of confidence expected for use in the DOA's financial planning, capital programming, and implementation initiatives. For consideration of potential acquisition of properties deemed as incompatible land uses within the RPZs, property values from the County's property appraiser records will be obtained. Property appraisals will not be performed but may be included in a future or amended task.

Sub-task 2.8 Master Plan Update Considerations

The various mitigation measures identified during the previous tasks will be evaluated in consultation with DOA staff to identify the recommended course of action. Evaluation criteria will be established in consultation with the DOA, and the results will be summarized in an evaluation matrix. The final selection of the preferred mitigation measures will be conducted in consultation with DOA staff. These recommended mitigation measures will be incorporated into subsequent analyses that will be performed under the ongoing LNA Master Plan.

Task 3: Airspace Screening Assessment

Goal: Evaluate potential impacts to aircraft operations within the Airport's terminal airspace to identify potential operational hazards resulting from jet operations and identify potential approaches to mitigate these impacts.

The airspace screening assessment will include an evaluation of the local airspace at LNA to identify potential operational risks that may result from the introduction of jet aircraft operations. It will leverage the jet aircraft mix information and runway utilization information derived under Task 2, *Airfield Assessment* described herein. Consideration for the forecast growth in jet activity at LNA through the master plan's 20-year planning horizon will also be given. Since the FAA has the ultimate authority to identify and mitigate potential hazards to air navigation, the airspace screening assessment is intended to identify potential risks in collaboration with the FAA. The FAA will have the final authority to determine which mitigation measures, if any, should be implemented.

The airspace screening assessment will include the following subtasks:

Sub-task 3.1 Jet Aircraft Fleet Mix Implications

The introduction of jet aircraft operations at LNA could impact the local traffic flow and traffic patterns. This may result in increased separations between successive aircraft operations and traffic flows within the local airspace. These impacts will be evaluated based on flight track information from the Airport's ANOMs and collaboration with local FAA air traffic personnel (PBI tower and/or TRACON).

Sub-task 3.2 Interactions with PBI and BCT Airspace

An evaluation of potential interactions with the Class C Airspace serving PBI and Class D Airspace associated with the Boca Raton Airport a (BCT)will be performed. This will include evaluating existing traffic patterns/flight tracks at PBI and BCT, as well as potential traffic pattern changes that would result from the planned airfield improvements at PBI. The potential establishment of Class D Airspace at LNA will also be evaluated. Consultation with BCT and PBI ATC staff and TRACON will also be conducted to solicit feedback and identify a list of operational concerns.

This task will be performed concurrently with Task 3.1, *Jet Aircraft Fleet Mix Implications*.

Sub-task 3.3 Federal Contract Tower - Safety Benefit Cost Analysis

The Benefit Cost Analysis (BCA) is used by the FAA to determine the feasibility of an applicant interested in the Federal Contract Tower (FCT) program to enter the program as a "candidate". The process applies the

methodology promulgated in FAA Report APO 90-7, *Establishment and Discontinuance Criteria for Air Traffic Control Towers (ATCT)* to determine if the value of ATCT benefits (e.g., lives and property saved from avoidable accidents) outweigh the cost (measured in terms of ATCT construction, controller payroll, etc.) The FAA evaluates in-house data and information supplied by the sponsor to prepare a benefit/cost (B/C) ratio. A B/C ratio of 1.0 or greater is necessary for the FAA to determine if an applicant can be accepted into the FCT program as a candidate. Once a sponsor is considered a candidate, federal AIP funds can be used to pay for costs associated with ATCT development. The following tasks will be performed by the Ricondo Team to support the BCA to determine the feasibility for the Airport to achieve candidacy for entry into the FCT Program.

- Aviation Activity Review & Forecasts – Available data related to historical aircraft operations and the aviation activity forecasts derived during the ongoing Part 150 Study and Master Plan Update will be refined as necessary. The data will also be applied to generally accepted forecast methodologies to develop alternate forecasts of aviation activity to serve as sensitivity analyses for the BCA.
- Preliminary ATC Tower Benefit/Cost Analysis – The baseline forecast of aviation activity and alternate demand scenarios will be used as input data to conduct a Benefit/Cost (B/C) analysis using the FAA's Office of Policy and Plans' standard criteria. The resultant B/C ratios will be evaluated for determining the FAA's potential funding of air traffic control services at the Airport. A sensitivity analysis will also be conducted to identify and evaluate the impact of critical factors for adjustment of the B/C ratio. Hard to quantify benefits (i.e., qualitative benefits such as increased use of noise abatement runways) will also be described.
- Prepare FCT Application Package – An application to enter the FCT program will be prepared including a detailed report containing the background, rationale, and results of the preliminary Benefit/Cost Analysis. The preparation of a resolution authorizing the submittal of the FCT application and a Memorandum of Understanding (MOU) between the County and FAA regarding the expectations and responsibilities of each party will be prepared.
- ATCT Development & Operational Costs – A ROM cost estimate for ATCT development, as well as operations and maintenance (O&M) costs will be estimated using line-item examples of similar airports.
- Meetings & Coordination – Two (2) on-site visits with the DOA are planned for data collection, consultation meetings, and briefings. These on-site visits will be attended by one staff member from Quadrex and one staff member (Director) from Ricondo.

Task 4: Deliverables

Goal: Document the approach, methodologies, and findings of the prior tasks to facilitate discussions with stakeholders and serve as a record for future reference by the DOA and stakeholders.

A report summarizing the process and the results of the detailed analyses for the aforementioned tasks will be prepared. The document shall include all exhibits, graphs, and tables. A summary PowerPoint presentation will also be developed to facilitate discussions with the DOA and stakeholders. The PowerPoint presentation will be included as an appendix to the Technical Report.

Sub-task 4.1 Summary PowerPoint Presentation

This task will culminate with the development of a summary PowerPoint presentation. The PowerPoint will summarize the goals and objectives, approach and methodology, and results and/or recommendations.

Sub-task 4.2 Draft Technical Report

A preliminary draft of the Technical Report will be prepared and submitted to the DOA in electronic (pdf and MS Word files) and paper format for internal review and comment. Five hardcopies of the draft Technical Report will be provided. Electronic format deliverables will be provided to the DOA via email or file transfer protocol (FTP) platform.

Sub-task 4.3 Final Technical Report

After the DOA reviews the draft report and provides final comments, a Final Technical Report will be prepared. The Final Technical Report will be provided to the DOA in electronic (.pdf) format. The Palm Beach DOA will be responsible for distribution of the Final Safety Assessment Report to the appropriate parties.

Task 5: Review of Study Findings/Conclusions[1]

Goal: Review the findings of the Study with the various stakeholders.

During the Study, meetings will be held with pertinent stakeholders at specific milestones to review the Study's findings and/or conclusions as set forth below. The Executive Summary PowerPoint presentation to be prepared during Task 4.1 will be utilized to facilitate these discussions.

Sub-task 5.1 Interim Review of Airfield Assessment

Upon completing Sub-tasks 2.1 through 2.4, the Ricondo Team will meet with the DOA staff to review the preliminary findings of these specific tasks. This meeting will serve to determine if it would be appropriate to expedite the implementation of any potential mitigation strategies that would enhance operational safety at the Airport. It is envisioned that this meeting would be attended by a Director from Ricondo. The meeting would be held in person at the DOA's offices. Ricondo will prepare an agenda, sign-in sheet, and meeting notes in conjunction with this interim meeting.

Sub-task 5.2 Final FAA Consultation

Prior to developing the draft Technical Report and reviewing the findings with the Community/Technical Stakeholders, Ricondo will request a meeting with the FAA's Orlando Airports District Office (ADO) and other relevant FAA divisions, such as PBI ATC staff/TRACON, the Flight Standards District Office (FSDO), Air Traffic Organization, and the Regional Administrator's office. The purpose of this meeting is to solicit input from the FAA and to obtain consensus on the findings of the Airspace Screening Assessment. This meeting

[1] Excludes consultations with FAA and Stakeholders associated with Task 1.

will be conducted virtually and be attended by three staff from Ricondo, two Directors and a Senior Consultant. Ricondo will prepare an agenda and meeting notes in conjunction with this meeting.

Sub-task 5.3 Final Community/Technical Stakeholder Briefing

A final in-person public meeting will be held with the Community/Technical Stakeholders following the Final FAA Consultation. The purpose of this briefing is to review the findings of the Study and to answer any questions before finalizing the Final Technical Report. This briefing is intended to be for informational purposes and to answer questions regarding the findings; not to solicit additional comments or areas of study. Otherwise, the logistics, staffing and budgetary assumptions associated with the Final Stakeholder briefing will be identical to those described under subtask 1.2, *Initial Community/Technical Stakeholder Briefing*. The Ricondo team will prepare a Stakeholder/Community Engagement Summary Report documenting the meeting materials, notifications, and list of attendees, which will be appended to the Final Report.

Task 6: DOA Consultation Meetings

Throughout the course of the Study, Ricondo will meet periodically with the DOA to review the status of the technical analyses, collect/disseminate information, and discuss logistics of upcoming work efforts. For budgeting purposes, it is anticipated that there will be a total of eight DOA consultation meetings. These meetings will be conducted virtually and be attended by three staff from Ricondo, two Directors and a Senior Consultant.