



CITY OF POMPANO BEACH
 100 W Atlantic Blvd, Pompano Beach, FL 33060

WORK AUTHORIZATION NO: <u>11</u> PO NO: _____ Must be referenced on invoices	COPBFL Project Manager: Tammy Good Phone: 954-786-5512 Email: Tammy.Good@copbfl.com COPBFL Contract Specialist: Antonio Pucci Phone: 954-786-5504 Email: Antonio.Pucci@copbfl.com								
Firm Name: Kimley Horn Address: 8201 Peters Road, Suite 2200 City/State/Zip: Plantation, FL 33324	Firm's Contact Representative: Tom O'Donnell Phone: (561) 840-0825 Email: tom.odonnell@kimley-horn.com								
<p>In accordance with solicitation number E-20-20, and Original Contract dated May 3, 2021, approved by Ordinance No. 2021-54 dated April 27, 2021 for Civil Engineering Services, the City of Pompano Beach hereby directs the firm to perform the services for the project as detailed in the scope of work, Exhibit "A," attached hereto and made a part of this Work Authorization for the amount specified below.</p> <p>All terms and conditions of the Original Contract dated May 3, 2021 approved via Ordinance No. 2021-54 remain unchanged and in full force and effect, and shall govern the work described herein to its completion, independent of the Original Contract's effective termination date.</p>									
<p>Description: This project includes the Planning Services associated with the review of three (3) locations, selection, and safety risk management review for a new Air Traffic Control Tower (ATCT) at the Pompano Beach Airpark (PMP). Services provided shall comply with FAA Order 6480.4B, Airport Traffic Control Tower Siting Process, FAA Order 7210.78, FCT New Start & Replacement Tower Process, and relevant FAA Safety Management Systems (SMS) policies. See Exhibit "A" for full Scope of Services.</p> <p>Deliverables Deliverables will be as noted in Exhibit "A"</p> <p>Schedule Schedule will be as noted in Exhibit "A"</p> <p>Services Not Provided Schedule will be as noted in Exhibit "A"</p> <p>Compensation For the Additional Services set forth above. Client shall pay Consultant the following compensation:</p> <table border="0"> <tr> <td>Task 1 – Detailed ATCT Site Analysis</td> <td>\$ 79,510.00</td> </tr> <tr> <td>Task 2 – 3D Interactive Airport Model</td> <td>\$ 68,170.00</td> </tr> <tr> <td>Task 3 – FAA Safety Risk Management</td> <td>\$ 61,970.00</td> </tr> <tr> <td>Task 4 – Financial Feasibility</td> <td>\$ 7,610.00</td> </tr> </table>		Task 1 – Detailed ATCT Site Analysis	\$ 79,510.00	Task 2 – 3D Interactive Airport Model	\$ 68,170.00	Task 3 – FAA Safety Risk Management	\$ 61,970.00	Task 4 – Financial Feasibility	\$ 7,610.00
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Task 2 – 3D Interactive Airport Model	\$ 68,170.00								
Task 3 – FAA Safety Risk Management	\$ 61,970.00								
Task 4 – Financial Feasibility	\$ 7,610.00								
<p>Total Work Authorization Amount: \$ <u>\$217,260.00</u></p>									

CITY OF POMPANO BEACH

By: _____
REX HARDIN, MAYOR

By: _____
GREGORY P. HARRISON, CITY MANAGER

Dated: _____

Attest:

ASCELETA HAMMOND, CITY CLERK

(SEAL)

APPROVED AS TO FORM:

MARK E. BERMAN, CITY ATTORNEY

“CONTRACTOR”

Kimley-Horn and Associates, Inc.
(Print or type name of company here)

Witnesses:

[Signature]

Thomas F. O'Donnell
(Print or Type Name)

[Signature]

Kevin A. Scott
(Print or Type Name)

By: Jill Capelli

Print Name: Jill Capelli

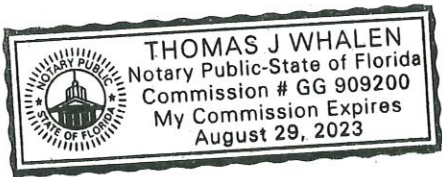
Title: Vice President

STATE OF FLORIDA

COUNTY OF BROWARD

The foregoing instrument was acknowledged before me, by means of physical presence or online notarization, this 28 day of MARCH, 2022, by JILL CAPELLI as VICE - PRESIDENT of KIMLEY - HORN, a Florida corporation on behalf of the corporation **OR** a Florida limited liability company on behalf of the company. He/she is personally known to me or who has produced _____ (type of identification) as identification.

NOTARY'S SEAL:



[Signature]
NOTARY PUBLIC, STATE OF FLORIDA

THOMAS J. WHALEN
(Name of Acknowledger Typed, Printed or Stamped)

GG 909200
Commission Number

EXHIBIT “A” SCOPE AND FEE

Professional Planning Services for the Siting of a New Air Traffic Control Tower – Phase 2 Study 1/31/2022

This Work Authorization, when executed, shall authorize Kimley-Horn and Associates, Inc. (“Kimley-Horn” or “Consultant”) to perform an Air Traffic Control Tower (ATCT) Siting Study at the Pompano Beach Airpark (PMP) for the City of Pompano Beach (CITY).

PROJECT DESCRIPTION

The City of Pompano Beach’s capital improvement program at Pompano Beach Airpark (PMP) includes the future development of a new Air Traffic Control Tower (ATCT). In advance of this activity the City is required, under FAA Order 6480.4, to perform a tower siting study. This order establishes requirements for determining site location, tower height and cab orientation of a proposed new, replacement of existing, and modernization of ATCTs where the overall structure height is changed. Under this Work Authorization Kimley-Horn will perform Planning Services associated with the site evaluation of three (3) locations, selection, and FAA safety risk management review for a new Air Traffic Control Tower (ATCT) at the Pompano Beach Airpark (PMP). Services provided shall comply with FAA Order 6480.4B, Airport Traffic Control Tower Siting Process, FAA Order 7210.78, FCT New Start & Replacement Tower Process, and relevant FAA Safety Management Systems (SMS) policies.

SCOPE OF WORK

The services to be provided by Kimley-Horn for the City under this Work Authorization will consist of the following tasks:

TASK 1 – Detailed ATCT Site Analysis

Consultant, with the assistance of their subconsultants Quadrex Aviation and AJT, will provide the Detailed ATCT Site Analysis. This task shall include the following components:

- Preliminary Siting Coordination Meeting – meet with FAA Airports and Air Traffic personnel to discuss project scope, schedule, and responsibilities.
- Initial Siting Analysis
 - Evaluate candidate ATCT Sites – Using the sites selected under Phase 1, develop detailed Comparative Site Analysis (CSA) to identify less than optimum conditions and potential mitigation strategies. The following factors will be considered:
 - Visual Performance – identify and assess Tower Cab visibility constraints
 - ATCT Visibility Analysis Tool (for lookdown angle/lateral angle/object discrimination)
 - Shadow Study (for Airfield / AOA Line of site constraints)
 - Orientation/Weather (for Sunrise/Sunset/IFR conditions)

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- FAA Airspace Study Submittal – prepare & submit OE/AAA (FAA Form 7460-1) for candidate sites for TERPS/ FAR Part 77 Obstruction determination and impact on navigation and visual aids.
 - Economic Considerations – prepare rough order of magnitude construction cost estimates for ATCT development.
 - Environmental Considerations – Identify potential environmental impacts from ATCT development. This Work Authorization expressly excludes Environmental and NEPA compliance (IE. Categorical Exclusions, Environmental Assessments, Environmental Impact Statement, Cultural Resource Assessment, etc...). If required this will be performed under a separate Work Authorization.

Deliverables:

- Three (3) sets of the draft Comparative Siting Analysis
- One (1) copy of the draft Comparative Siting Analysis in electronic formats (Word and PDF).

TASK 2 – 3D Interactive Airport Model

Consultant shall complete the 3D Interactive Airport Model; this task shall include the following components:

- Build an accurate and current 3D model of the existing airport using the UE4 3D/VR engine.
- Provide a DTM, contours and grading of the entire property using our in-house drone capabilities and cloud-based delivery system, Site Scan.
- Hover at “cab” height at three (3) different pre-determined tower location and photograph with high resolution drone mounted sensors to create panoramic site pictures.
- Provide air traffic controllers a realistic immersive operations experience from the above items utilizing 3D and VR technology. VR specifications are provided in this document.

VR Experience Description:

From the cab, the controller/viewer can see a full photo-realistic representation of the airport, ground traffic as well as incoming and outgoing traffic. Traffic will be representative of existing daily traffic and will not be provided from a simulation unless otherwise requested. If simulation linking is required, it will be an additional task.

On the VR platform, using the headset, the viewer will be able to look around, zoom in and click on devices and controls using the hand controllers.

The primary function of the VR experience will be to identify the preferred tower location based on optimum site picture. The VR experience can have audio prompts and narration to walk the viewer through the experience if requested.

Deliverables:

- Complete and accurate 3D model of the Pompano Beach Airpark in 3DS and OBJ/FBX formats.

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- 360 panoramic views from the 3 proposed candidate sites. These views will be delivered in a format that can be viewed online and/or any handheld device and/or with a VR/MR headset.

TASK 3 – FAA safety Risk Management

Consultant, with the assistance of their subconsultants Quadrex Aviation and AJT, will prepare for and facilitate the FAA Safety Risk Management. This task shall include the following components:

- Prepare draft Preliminary Hazard Analysis (PHA) for FAA review
- FAA Safety Risk Management (SRM) Analysis Panel Meeting – prepare and conduct SRM panel to review siting analysis, identify and assess potential hazards and recommend mitigation strategies.
- Prepare final Preliminary Hazard Analysis (PHA) for FAA review and approval

Deliverables:

- Two (2) draft copies of the Preliminary Hazard Analysis
- Two (2) final copies of the Preliminary Hazard Analysis
- One (1) copy of the Preliminary Hazard Analysis in electronic formats (Word and PDF).

TASK 4 – Financial Feasibility

Consultant, with the assistance of their subconsultants Quadrex Aviation and AJT, will prepare the Financial Feasibility. This will include the development of funding strategies and identify funding resources for the design and construction of the ATCT.

Deliverables:

- Two (2) copies of the Financial Feasibility Memo
- One (1) copy of the Financial Feasibility Memo in electronic formats (Word and PDF).

SUPPORT TO BE PROVIDED BY THE CITY

Consultant shall be entitled to rely on the completeness and accuracy of all information provided by the Client or the Client's representatives. The Client shall provide all information requested by Consultant during the project.

In addition to other responsibilities set out in this Agreement, the Client shall:

- Provide information/review comments in a timely manner
- Participate in progress meetings
- Provide access to the project areas
- Coordinate with tenants
- Provide copies of completed FAA RFRs

SERVICES NOT PROVIDED

Any services not specifically provided for in the above scope will be billed as additional services and performed at our then current hourly rates. Additionally, the following services are expressly excluded:

- Cultural Resource Assessment
- Environmental and NEPA Compliance services including but not limited to preparation of a/an Categorical Exclusion, Environmental Assessment, and Environmental Impact Statement.

SCHEDULE

The schedule for these services is contingent on the FAA's availability to review submissions. We will provide our services as expeditiously as practicable to meet a mutually agreed upon schedule.

Due to the everchanging circumstances surrounding the COVID-19 Virus, situations may arise during the performance of this Agreement that affect availability of resources and staff of Kimley-Horn, the client, other consultants, and public agencies. There could be changes in anticipated delivery times, and jurisdictional approvals. Kimley-Horn will exercise reasonable efforts to overcome the challenges presented by current circumstances, but Kimley-Horn will not be liable to Client for any delays, expenses, losses, or damages of any kind arising out of the impact of the COVID-19 Virus.

COMPENSATION

Consultant will perform the services in Tasks 1 - 4 for the total lump sum of shown below. Individual task amounts are informational only. All permitting, application, and similar project fees will be paid directly by the Client; should the Client request Consultant to advance any such project fees on the Client's behalf, a separate invoice for such fees, with a ten percent (10%) markup, will be immediately issued to and paid by the Client.

The following task items represent a breakdown of the lump sum fee amount for reference:

Task 1 – Detailed ATCT Site Analysis	\$ 79,510.00
Task 2 – 3D Interactive Airport Model	\$ 68,170.00
Task 3 – FAA Safety Risk Management	\$ 61,970.00
Task 4 – Financial Feasibility	\$ 7,610.00
GRAND TOTAL	\$ 217,260.00