PROFESSIONAL SERVICE AGREEMENT NO. 4394

Airport Master Planning Services

THIS **Airport Master Planning Services Agreement** ("Agreement") is entered into by and between the City of Corpus Christi, a Texas home-rule municipal corporation ("City") and Coffman Associates ("Contractor"), effective upon execution by the City Manager or the City Manager's designee ("City Manager").

WHEREAS, Contractor has agreed to provide Airport Master Planning Services, on behalf of the Aviation Department, for preparation of an Airport Master Plan;

NOW, THEREFORE, City and Contractor agree as follows:

1. **Scope.** Contractor shall provide Aviation Master Planning Services for the Aviation Department ("Services") in accordance with the attached Scope of Work, as shown in Attachment A, the content of which is incorporated by reference into this Agreement as if fully set out here in its entirety.

2. **Term.** This Agreement is for 18 months. The parties may mutually extend the term of this Agreement for up to zero additional zero-month periods ("Option Period(s)"), provided, the parties do so in writing prior to the expiration of the original term or the then-current Option Period.

3. **Compensation and Payment.** This Agreement is for an amount not to exceed $1,610,689.00, subject to approved extensions and changes. Payment will be made for Services completed and accepted by the City within 30 days of acceptance, subject to receipt of an acceptable invoice. All pricing must be in accordance with the attached Bid/Pricing Schedule, as shown in Attachment B, the content of which is incorporated by reference into this Agreement as if fully set out here in its entirety. Any amount not expended during the initial term or any option period may, at the City's discretion, be allocated for use in the next option period.

   Invoices must be mailed to the following address with a copy provided to the Contract Administrator:

   City of Corpus Christi
   Attn: Accounts Payable
   P.O. Box 9277
   Corpus Christi, Texas 78469-9277

4. **Contract Administrator.** The Contract Administrator designated by the City is responsible for approval of all phases of performance and operations under this

Agreement, including deductions for non-performance and authorizations for payment. The City's Contract Administrator for this Agreement is as follows:

Tyler Miller, Deputy Director
Aviation Department
Phone: 361-826-1777
Email: Tylerm@cctexas.com

5. **Insurance; Bonds; License.** Intentionally deleted.

6. **Standard of Care.** Contractor warrants that all Services will be performed in accordance with the standard of care used by similarly situated contractors performing similar services under the same professional license.

7. **Non-Appropriation**. The continuation of this Agreement after the close of any fiscal year of the City, which fiscal year ends on September 30th annually, is subject to appropriations and budget approval specifically covering this Agreement as an expenditure in said budget, and it is within the sole discretion of the City's City Council to determine whether or not to fund this Agreement. The City does not represent that this budget item will be adopted, as said determination is within the City Council's sole discretion when adopting each budget.

8. **Independent Contractor.** In performing this Agreement, both the City and Contractor shall act in an individual capacity and not as agents, representatives, employees, employers, partners, joint venturers, or associates of one another. Contractor shall perform all professional services as an independent contractor and shall furnish such Services in its own manner and method, and under no circumstance or condition shall an employee, agent, or representative of either party be considered or construed to be an employee, agent, or representative of the other party.

9. **Subcontractors.** Contractor may use subcontractors in connection with the work performed under this Agreement. When using subcontractors, however, the Contractor must obtain prior written approval from the Contract Administrator unless the subcontractors were named in the bid or proposal or in an Attachment to this Agreement, as applicable. In using subcontractors, the Contractor is responsible for all their acts and omissions to the same extent as if the subcontractor and its employees were employees of the Contractor. All requirements set forth as part of this Agreement, including the necessity of providing a COI in advance to the City, are applicable to all subcontractors and their employees to the same extent as if the Contractor and its employees had performed the work. The City may, at the City's sole discretion, choose not to accept Services performed by a subcontractor that was not approved in accordance with this paragraph.

10. **Amendments.** This Agreement may be amended or modified only in writing executed by authorized representatives of both parties.

11. **Waiver.** No waiver by either party of any breach of any term or condition of this Agreement waives any subsequent breach of the same.

12. **Taxes.** The Contractor covenants to pay payroll taxes, Medicare taxes, FICA taxes, unemployment taxes and all other applicable taxes. Upon request, the City Manager shall be provided proof of payment of these taxes within 15 days of such request.

13. **Notice.** Any notice required under this Agreement must be given by fax, hand delivery, or certified mail, postage prepaid, and is deemed received on the day faxed or hand-delivered or on the third day after postmark if sent by certified mail. Notice must be sent as follows:

    IF TO CITY:
    City of Corpus Christi
    Attn: Tyler Miller, Deputy Director
    Aviation Department
    1000 International, Corpus Christi, TX 78406
    Phone: 361-826-1777
    Fax: 361-826-3232

    IF TO CONTRACTOR:
    Coffman Associates
    Attn: Mike Dmyterko, President
    12920 Metcalf Avenue, Suite 200, Overland Park, KS 66213
    Phone: 816-524-3500
    Fax: 816-524-2575

14. ***CONTRACTOR SHALL FULLY INDEMNIFY, HOLD HARMLESS AND DEFEND THE CITY OF CORPUS CHRISTI AND ITS OFFICERS, EMPLOYEES AND AGENTS ("INDEMNITEES") FROM AND AGAINST ANY AND ALL LIABILITY, LOSS, CLAIMS, DEMANDS, SUITS, AND CAUSES OF ACTION OF WHATEVER NATURE, CHARACTER, OR DESCRIPTION ON ACCOUNT OF PERSONAL INJURIES, PROPERTY LOSS, OR DAMAGE, OR ANY OTHER KIND OF INJURY, LOSS, OR DAMAGE, INCLUDING ALL EXPENSES OF LITIGATION, COURT COSTS, ATTORNEYS' FEES AND EXPERT WITNESS FEES, WHICH ARISE OR ARE CLAIMED TO ARISE OUT OF OR IN CONNECTION WITH A BREACH OF THIS AGREEMENT OR THE PERFORMANCE OF THIS AGREEMENT BY THE CONTRACTOR OR RESULTS FROM THE NEGLIGENT ACT, OMISSION, MISCONDUCT, OR FAULT OF THE CONTRACTOR OR ITS EMPLOYEES OR AGENTS. CONTRACTOR MUST, AT ITS OWN EXPENSE,***

INVESTIGATE ALL CLAIMS AND DEMANDS, ATTEND TO THEIR SETTLEMENT OR OTHER DISPOSITION, DEFEND ALL ACTIONS BASED THEREON WITH COUNSEL SATISFACTORY TO THE CITY ATTORNEY, AND PAY ALL CHARGES OF ATTORNEYS AND ALL OTHER COSTS AND EXPENSES OF ANY KIND ARISING OR RESULTING FROM ANY SAID LIABILITY, DAMAGE, LOSS, CLAIMS, DEMANDS, SUITS, OR ACTIONS. THE INDEMNIFICATION OBLIGATIONS OF CONTRACTOR UNDER THIS SECTION SHALL SURVIVE THE EXPIRATION OR EARLIER TERMINATION OF THIS AGREEMENT.

15. Termination.

(A) The City Manager may terminate this Agreement for Contractor's failure to perform the work specified in this Agreement or to keep any required insurance policies in force during the entire term of this Agreement. The Contract Administrator must give the Contractor written notice of the breach and set out a reasonable opportunity to cure. If the Contractor has not cured within the cure period, the City Manager may terminate this Agreement immediately thereafter.

(B) Alternatively, the City Manager may terminate this Agreement for convenience upon 30 days advance written notice to the Contractor. The City Manager may also terminate this Agreement upon 24 hours written notice to the Contractor for failure to pay or provide proof of payment of taxes as set out in this Agreement.

16. Assignment. No assignment of this Agreement by the Contractor, or of any right or interest contained herein, is effective unless the City Manager first gives written consent to such assignment. The performance of this Agreement by the Contractor is of the essence of this Agreement, and the City Manager's right to withhold consent to such assignment is within the sole discretion of the City Manager on any ground whatsoever.

17. Severability. Each provision of this Agreement is considered to be severable and, if, for any reason, any provision or part of this Agreement is determined to be invalid and contrary to applicable law, such invalidity shall not impair the operation of nor affect those portions of this Agreement that are valid, but this Agreement shall be construed and enforced in all respects as if the invalid or unenforceable provision or part had been omitted.

18. Order of Precedence. In the event of any conflicts or inconsistencies between this Agreement, its attachments, and exhibits, such conflicts and inconsistencies will be resolved by reference to the documents in the following order of priority:

A. this Agreement (excluding attachments and exhibits);
B. its attachments; followed, in turn, by its exhibits.

19. **Certificate of Interested Parties.** Contractor agrees to comply with Texas Government Code Section 2252.908, as it may be amended, and to complete Form 1295 "Certificate of Interested Parties" as part of this Agreement if required by said statute.

20. **Governing Law.** This Agreement is subject to all federal, State, and local laws, rules, and regulations. The applicable law for any legal disputes arising out of this Agreement is the law of the State of Texas, and such form and venue for such disputes is the appropriate district, county, or justice court in and for Nueces County, Texas.

21. **Entire Agreement.** This Agreement constitutes the entire agreement between the parties concerning the subject matter of this Agreement and supersedes all prior negotiations, arrangements, agreements and understandings, either oral or written, between the parties

CONTRACTOR

Signature: _____

Printed Name: Mike Dmyterko

Title: President

Date: 10/2/2023

CITY OF CORPUS CHRISTI

_____

Josh Chronley Date
Assistant Director, Finance - Procurement

APPROVED AS TO LEGAL FORM:

_____

Assistant City Attorney Date

Attached and Incorporated by Reference:
Exhibit A: Scope of Services
Exhibit B: Project Cost
Attachment C: Insurance and Bond Requirements
Attachment D: Warranty Requirements
Attachment E: Federal Requirements

Incorporated by Reference Only:
Exhibit 1: RFB/RFP/RFQ No. 4394
Exhibit 2: Contractor's Bid/Proposal Response

EXHIBIT A - SCOPE OF SERVICES
CORPUS CHRISTI INTERNATIONAL AIRPORT
CORPUS CHRISTI, TEXAS
AIRPORT MASTER PLAN

INTRODUCTION

This Airport Master Plan Scope of Services for Corpus Christi International Airport (CRP or CCIA) is being prepared prior to initiation of the study to establish the goals of the project and framework from which all parties to the project may participate. The objective of the master plan is to provide the sponsor (City of Corpus Christi, Texas) with proper guidance for future development which will satisfy aviation demands and be wholly compatible with the environment. Coordination between the Sponsor, the Federal Aviation Administration (FAA), and other parties with an interest in the airport will be essential to bringing together all facts and data relevant to the project and to developing a mutual agreement regarding future development at the airport. A Technical Advisory Committee (TAC) will be established for the study.

Required and generalized master planning objectives in this Scope will include:

- To research factors likely to affect all air transportation demand segments at CRP over the next 20 years, including the development of forecasts of commercial airline, general aviation and military operational demand.

- To determine projected needs of airport users for the next 20 years, taking into consideration recent revisions to FAA design standards and the airport's conformance requirements, global positioning system (GPS) approaches or other new technology, commercial passenger and cargo trends, and the impact of general aviation fleet transitions on design standards. This analysis will also include considerations of military needs and usage.

- To recommend improvements which will enhance the landside area's ability to satisfy future aviation needs, taking into consideration the potential for increased air cargo and maintenance, repair and overhaul (MRO) needs. This includes the possibility of developing an entirely new cargo/MRO incubation location(s) on the airport.

- To analyze the existing airfield system to determine the existing and ultimate runway lengths required to satisfy the airport's critical aircraft(s). This analysis will include future improvements necessary to aid in supporting forecast demand. Also, the analysis will consider the potential for closure and removal of any airfield pavement(s) not deemed necessary and/or justified for future capital expenditures and/or to satisfy FAA airfield geometrical standards.

- To produce accurate base maps of existing and proposed facilities and updated Airport Layout Plan (ALP) drawings consistent with the FAA's Standard Operating Procedure (SOP) No. 2.0. Digital Geographic Information System (GlS) data will be submitted into FAA's Airport Data and Information Portal (ADIP) system. This task will conform to the Survey Requirements Matrix contained in FAA Advisory Circular (AC) 150/5300-18B. The data will be submitted to the FAA AGIS system per the Airport Layout Plan column of Table 2-1.

- To review future use and zoning of airport property and approaches to each runway for future protection. This will involve the development of new noise exposure contours.

- Landside development options to maximize revenue streams for all potential aviation uses and users. The analysis will include the recommendations for non-aviation uses where appropriate and will include Part 163 guidance for land use releases on the ALP and property map.

- To establish a schedule of development priorities and a program for improvements proposed in the master plan, consistent with the FAA's capital improvement program planning.

- Consider sustainability efforts, specifically waste and recycling improvements, as part of FAA's updated standards.

After discussions with airport officials, City of Corpus Christi, and CRP Airport Staff, these specific issues will also be analyzed and addressed during the study process:

- Airfield geometry modifications to meet FAA A/C 150/5300-13B, as needed.

- Research history of Corpus Christi International Airport.

- Evaluate aging infrastructure using available data to determine a maintenance/redevelopment plan.

- Recommend land acquisitions for future growth.

- Create Pavement Management and Maintenance Program for all movement and non-movement surfaces on airfield.

- Review Rates and Charges in accordance with grant assurance obligations and as part of the cash flow analysis

- Conduct gap analysis and recommend actions to meet projected demand from industry electrification on landside and airside infrastructure, to include electrical infrastructure sources and overall grid condition/capacity.

- Recommend sustainability-focused implementation actions and plans.

- Terminal Development – Methods to introduce a second public elevator; identify triggers for concourse expansion, to include a second set of concourse restrooms; and, planning for in-line baggage system in 5-year ACIP

- Specific planning for aeronautical development and use of land adjacent to Taxiway Q

- Air cargo development based on forecast demand and typical industry standard uses.

- Planning for aeronautical development on southwest and eastern portions of the airfield.

- Development of a vertiport to support advanced air mobility (AAM) or urban air mobility (UAM) with designated location for unmanned aerial systems (UAS) operations.

- Nonaeronautical Development - Creation of a Land Use Plan for all landside property and potential nonaeronautical development uses; creation of specification sheets for each parcel of available land, including analysis of present utilities; and airport layout for existing and future landside development including transportation and circulation layouts.

- Implementation of solar energy or microgrids, on airfield or landside property.

- The selected Consultant should be present for initial site visits and inventory. The City seeks to hold at least biweekly progress meetings throughout the process, and may request the Consultant to present to the Airport Board or City Council during and after the Master Planning process.

This comprehensive list of master planning issues will be the focal point of the process considering the overall goals and objectives and strategic initiatives outlined in the airport's strategic planning study and CRP Voice report. The strategic plan sets the 30,000-foot structure needed to help guide our process. The CRP Voice report will be a practical "ground level" master planning process influencer. Our approach will be to coordinate and infuse key concepts and ideas into the master plan to ensure that the airport transitions into its greatest generation yet.

ELEMENT 1 - STUDY INITIATION AND ORGANIZATION

The purpose of this element is to allow for proper time to manage the project, including the project website, project updates with the sponsor, team management, and overall QA/QC.

Task 1.1 Study Design

Description: In accordance with FAA guidelines for the preparation of master plans contained in AC 150/5070−6B, *Airport Master Plans,* and AC 150/5300−13B, *Airport Design*, prepare an outline of the

basic elements of the master planning work effort. Identify respective individual work tasks which will be necessary to meet both the requirements set by the FAA and the sponsor for each element of the master plan work scope. Prepare detailed descriptions of each individual work task which describe the specific work effort involved and identify the result or product of the work effort.

Responsibilities:
Consultant: Prepare work scope and budget.
Sponsor: Review work scope and budget.
Product: Work scope and budget.

Task 1.2 Establish Technical Advisory Committee (TAC) and Conduct TAC Kickoff Meeting

Description: Potential members will be identified and asked to serve on a TAC for the master plan. The TAC will be composed of a) representatives of FAA as well as other local, regional, state, or federal agencies; b) airport board, users, and tenants; and c) local community representatives. The TAC, which is a non-voting body, will advise the Consultant on the content and recommendations of the Master Plan study through meetings and review of draft working papers.

Upon appointment by the Sponsor of a TAC, provide fifteen (15) standard three-ring notebooks for distribution to the TAC for their use during the study. A workbook cover will be designed, and the work-book format will be developed with sections for inserting working papers, notes, and other pertinent information. A glossary and list of abbreviations/acronyms will be developed and included as an appendix in the workbook.

The initial, or kickoff meeting, of the TAC will be undertaken during the initial inventory trip by the Consultant. The consultant will also provide the opportunity to conduct an open house public workshop and/or City of Corpus Christi Council briefing during the inventory trip.

KCS, a Corpus Christi-based public communications firm, will be assisting with all public outreach efforts as outlined in their scope and attached in the appendix.

Responsibilities:
Consultant: Design and prepare workbooks for the TAC and attend kickoff meeting.
Sponsor: Distribute invitations and initiation materials to TAC and provide meeting room.
Product: Fifteen (15) study workbooks. Conduct TAC kickoff meeting and public coordination as desired by the Sponsor.

Task 1.3 Develop Project Website

Description: Various project materials will be hosted on a project-specific website developed by the Consultant to allow public access to project materials. Materials which would be available on the web-site could include the presentation boards from the various public information workshops and monthly

project status updates. During the planning process, all working draft materials will be available for review on the website. The public will be able to utilize the website to make comments on the contents of the Phase Reports. All pertinent comments will be included within the Final Master Plan document.

Responsibilities:

Consultant: Develop project-specific website. Host the project materials on a project-specific website.

Sponsor: Review and provide comment.

Product: Website access to project materials. Encourage use of the website to comment on the draft materials during the planning process.

Tasks 1.4 - 1.7 Project Management

Description: The project management task includes work items required to set up and manage contracts, budgets, and invoicing as well as to provide project management and coordination with CCIA Staff, the FAA, and sub-consultant staff. The project timeline and coordination is anticipated to take place over a period of eighteen (18) months. Project coordination in the form of semi-regular conference calls/on-line communication is also included. This task does not include on-site meetings (included in other tasks).

Task 1.4 Set up and prepare project scopes, budgets, contracts with the CCIA staff and establish Subconsultant contract agreements.

Task 1.5 Perform monthly budget invoicing and contract management.

Task 1.6 Provide general on-going project coordination with the CCIA staff. This task does include up to three coordination/education meetings on-site with staff and/or local government agencies. This task also includes bi-weekly (as necessary) distance meetings to including video, phone, or other distance meeting options.

Task 1.7 Provide general on-going project coordination with project management and sub-consultants.

Responsibilities:

Consultant: Provide project management for planned 18-month schedule.

Sponsor: Aid consultant as necessary.

Product: Project management services.

ELEMENT 2 - INVENTORY OF EXISTING CONDITIONS

The purpose of this study element is to assemble and organize relevant information and data pertaining to the Corpus Christi International Airport and the surrounding area. A series of inventory efforts are

necessary to collect and organize a variety of specific historical, technical, legal, financial, and planning data as described in the following tasks.

Task 2.1 Inventory Airport Facilities

Description: Perform inventories of physical facilities and existing land uses within the present boundaries of the Corpus Christi International Airport. These inventories will identify and describe existing facilities as to age, type, ownership, and condition, as well as changes to building conditions and uses since the completion of the last master plan, and will include, at a minimum, the following items.

- Airfield: Runways, taxiways, aprons, lighting and marking, navigational aids
- Terminal area: Terminal building, hangars, terminal curb, access, and parking
- General aviation areas: Square footage of hangars and condition
- Military use areas (as applicable): Ramp, access, and parking
- FBO/specialty operators: Leased area, airfield facilities
- Support: Utilities, fire and rescue facilities, fueling facilities, maintenance areas
- Other areas: Airport tenants including military facilities (as necessary)
- Wildlife hazards: summarize known wildlife issues
- Additional on-airport and off-airport land uses

ln addition, all available plans, specifications, maps, photographs, drawings, and other data, including FAA Master Records (or other records maintained by the FAA), or other reports or studies considered to be relevant, will be obtained for possible use during the study. This task includes an on-site inventory trip to gather data, tour the airport facilities, and to conduct in-person interviews with airport staff and relevant airport tenants as necessary.

This task also includes efforts to be provided by several subconsultants as outlined in their work scoping materials included in **Appendix A**.

Responsibilities:

Consultant: Conduct a complete inventory of the airport facilities to accumulate pertinent data, including an on-site tour of facilities and in-person interviews with airport staff and airport tenants as necessary.

Sponsor: Provide the Consultant and subconsultants access to the airport property and airport records as necessary.

Product: Tabulated airport facilities inventory for input to later tasks, highlighting changed conditions since the last master plan was prepared.

Task 2.2 Inventory Commercial Airline, Air Traffic Activity and Airspace

Description: A detailed review of available information pertaining to air traffic and passenger activity at the Corpus Christi International Airport will be performed for the past 20-year period. Data collection

will include an inventory count of aircraft based at the airport by aircraft type, enplaning and deplaning passenger data as reported to CRP, air cargo (as available), and fuel sales maintained by the airport or fixed base operators (FBOs). The information will be collected in various formats for forecasting purposes.
Air traffic activity data for the airport will be assembled and organized from various sources such as the FAA's Traffic Flow Management System Count (TFMSC), FAA's National Based Aircraft Inventory Program (www.basedaircraft.com), Flight Aware/Motion Info ADSB datasets, and GCR's Airport IQ. Relevant data on commercial, general aviation (private and corporate), air taxi, and military activity will be collected. Data will be obtained from the Sponsor, the FAA Central Region Airport District Office (ADO), and FBOs. The assembled data will include, as available:

a) Historical operations, including all categorical splits by type and function.
b) Based aircraft by type, as available.
c) Estimated use (by percentage) of each runway.

Review and perform inventories of airspace and air traffic procedures at the airport. Conduct interviews with airport officials, FAA representatives, pilots, and others as necessary or appropriate to develop a complete description of the existing airspace environment and current airport traffic procedures. Basic inventory items will include:

a) Airport traffic patterns.
b) Approach and departure procedures.
c) Military airspace near the airport.
d) National Parks/Wilderness Areas.

Responsibilities:
Consultant: Assemble data.
Sponsor: Assist Consultant in obtaining available airport records.
Product: Input to subsequent tasks.

Task 2.3 Inventory Local Plans, Land Uses, Utilities and Demographic Data

Description: Obtain available information concerning local land use, economic development and environmental plans, and demographic or economic factors which are likely to have a significant impact on the demand for air transportation in the Corpus Christi air trade area, as well as those factors that involve potential impact to characteristics of the airport environs. Key information will include the area-wide composition, characteristics, distribution, and growth patterns of the following:

- Population
- Economic base (business, income, and employment)
- Present and projected land uses
- Existing and planned surface transportation
- Environmental documentation

- Long-range transportation plan
- Zoning ordinance(s)
- Height and hazard ordinance/mitigation measures

Responsibilities:
Consultant: Assemble data based on latest information available.
Sponsor: Assist in collection of data.
Product: Input to later analysis.

Task 2.4 Obtain Tabulated Wind Data

Description: The Consultant will obtain the most current ten years of wind data for Corpus Christi International Airport from the National Oceanic and Atmospheric Administration (NOAA), National Climatic Center and/or on-airport weather reporting aids for use in preparing an updated wind rose for the ALP.

Responsibilities:
Consultant: Obtain tabulated wind data.
Sponsor: Coordinate with the Consultant as necessary.
Product: Tabulated wind data for use in preparing an updated wind rose.

Task 2.5 Environmental Inventory

Description: The purpose of this task is to obtain information regarding environmental sensitivities on or near airport property. Sources of information will include past environmental documents, agency maps, existing literature, and relevant internet sources. Examples of information to be gathered includes wetlands, riparian areas, threatened or endangered species, floodplains, cultural resources, air quality, parks and natural resource areas, and prime farmland. Informal consultation with various federal and state agencies will occur only if needed information is not available through resources listed above. The information obtained in this task is intended to identify any significant environmental resources prior to the alternatives evaluation process in order to lessen or eliminate environmental requirements for potential project development.

Responsibilities:
Consultant: Assemble data based on latest information available.
Sponsor: Assist in collection of data.
Product: Input into later analysis.

ELEMENT 3 – AVIATION DEMAND FORECASTS

This study element is intended to update the estimate of future levels of air traffic and based aircraft

at Corpus Christi International Airport using industry-accepted forecasting methods. These forecasts will consider factors such as historic demand and use, socioeconomic characteristics, and FAA projections to estimate future demand at CRP. The following work tasks will be carried out as part of this element.

Task 3.1 Review Regional Aviation and Socioeconomic Forecasts

Description: Review and analyze current local and regional socioeconomic forecasts obtained in the inventory element. Similarly, review the forecasts and assumptions of the aviation forecasts prepared by the FAA for its *Terminal Area Forecasts*. The forecasts prepared for the last master plan will also be reviewed and analyzed.

Responsibilities:

Consultant: Review all socioeconomic material pertaining to the study and the region.

Sponsor: Assist in identifying potential sources of information and assist Consultant in obtaining identified socioeconomic material.

Product: Forecasts of expected socioeconomic factors and aviation activity at Corpus Christi International Airport and other regional airports.

Task 3.2 Prepare Aviation Demand Forecasts

Description: Develop aviation demand forecasts using both simple and more complex methodologies, taking into consideration forecasts from other sources such as the FAA. Historical aviation activity statistics for the airport will be organized to evaluate airport peaking characteristics and fleet mix ratios. The methodology used in this analysis will involve a variety of techniques that will factor in national transportation statistics, local socioeconomic factors, as well as independent airport data. Correlation analysis techniques will include relatively simple graphical comparison, as well as more complex regression analysis.

The forecasts shall result in estimates of aviation demand for five, ten and 20 years, including:

- Commercial Airlines Passenger and Cargo Projections
  - Annual volume and mix of aircraft operations
  - Passenger enplanements
  - Air cargo volume shipped (as applicable)
  - Air taxi (related to scheduled or non-scheduled operations having fewer than 60 passenger seats)

- General Aviation Projections
  - Based aircraft by aggregate and fleet mix
  - Aircraft operations by aggregate, itinerant/local
  - Other air taxi to include Part 135 and fractional aircraft ownership operations

- Military Use Projections

- While understanding the military use does not justify FAA funding justifications, CRP has a substantial military presence and use. As such, projections for existing and long-term military basing and operations will be estimated. Typically, this analysis is based on educated and informed estimates based on best information available. This information will be useful in overall airport demand capacity evaluations but will not be useable for pavement length/width justification for FAA funding.

- Peaking characteristics for use in demand capacity evaluations
  - Air Carrier and Air Cargo Airlines
  - General Aviation including private and air taxi
  - Total airport

Responsibilities:

Consultant: Prepare aviation demand forecasts for the 20-year planning horizon.
Sponsor: Assist Consultant in obtaining available airport records.
Product: Complete incremental forecasts for the years 2028, 2033, and 2043. These forecasts will be coordinated with the FAA (for their approval) to ensure the study proceeds based on generally supported assumptions.

Task 3.3 Identify Existing and Future Airport Critical Aircraft

Description: Utilizing data provided by the airport and that obtained from FAA database resources, identify the current critical and future aircraft for the airport. The aircraft identified will be the most demanding aircraft, or family of aircraft, conducting a minimum of 500 annual operations. The analysis will include a projection of aircraft operations by runway design code (RDC) and airport reference code (ARC) to determine future planning design standards.

This analysis will outline the RDC for commercial airline, general aviation, and military aircraft. Moreover, the analysis will be considered for each of the airport's three runways, as applicable, to determine sufficiency in later tasks.

Responsibilities:

Consultant: Determine current critical aircraft and projection of future critical aircraft by each runway's RDC and overall ARC.
Sponsor: Assist the Consultant in obtaining available airport records.
Product: Determination of existing and future critical aircraft for airfield design. This task will be coordinated with the FAA during the forecast review and approval process.

Task 3.4 Prepare Phase I Report

Description: Upon completion of the work tasks in Elements 2 and 3, working papers comprising the Phase I report will be prepared to outline the analysis, methodologies, and findings of the study efforts.

Narrative prepared will highlight the history of the airport, the airport setting, and a definition of the airport's role in the state and national airport system, study process, goals and objectives, and methodology a well as an updated aviation demand forecasting chapter. A glossary and list of acronyms/abbreviations will be prepared and summarized in an appendix. Up to fifteen (15) hard copies and electronic (PDF) versions of the report will be submitted for review by the TAC, FAA, and Sponsor officials.

THIS TASK ALSO INCLUDES TIME REQUIRED TO COORDINATE, MAKE CHANGES, AND/OR MODIFY FINDINGS IN TASKS 3.2 AND/OR 3.3 BASED ON FAA REVIEW, COMMENT, AND APPROVALS.

Responsibilities:

Consultant: Develop complete narrative and graphics for the Phase I report. Responsible for the distribution of the Phase I report to the TAC, FAA, and Sponsor staff.

Sponsor: Review and comment.

Product: Up to fifteen (15) hard copies of the Phase I report and electronic (PDF) versions of the report. The chapters comprising Phase I will also be posted to the project website.

Task 3.5 Conduct Technical Advisory Committee Meeting No. 2 and Public Workshop No.1

Description: Prepare graphic display and/or handout information necessary to adequately explain the Phase I report, which will include:

- Study Introduction
- Inventory (Element 2)
- Aviation Demand Forecasts (Tasks 3.1 through 3.4)

Meet with the TAC to review the Phase I report, as well as to review the project schedule, progress, and subsequent work efforts. This task will include holding an open-house style format public information workshop the evening of the TAC meeting, if requested and desired by the CCIA staff. The workshop will allow for interested public entities to review project materials and interact with the Consultant.

Responsibilities:

Consultant: Provide presentation material and necessary graphics for the meeting. Provide documentation allowing for the sponsor to publish notice of public meeting.

Sponsor: Distribute meeting notices and arrange for meeting room.

Product: Conduct second TAC meeting and first public information workshop for Master Plan study.

ELEMENT 4 – FACILITY REQUIREMENTS

The purpose of this study element is to determine available capacities of various facilities at the Corpus Christi International Airport, their conformance or non-conformance with FAA standards, and identify the facilities that will be needed to meet compliance requirements or projected demand over the next 20 years.

Task 4.1 Establish Physical Planning Criteria

Description: Identify physical facility planning criteria for use in assessing the adequacy of various airport facilities to meet forecast demands. These criteria shall be based upon the latest FAA requirements and standards as they apply to the level of activity identified, new technology, and role of the airport. These criteria shall include dimensional standards for safety including runway length, runway separation, height restrictions, etc. In addition, these criteria shall include requirements to maintain airspace/air traffic control including approach and runway protection zones, safety areas, and other general physical area requirements such as apron, terminal/operations, access circulation and parking, hangars and services, administrative, Aircraft Rescue and Fire Fighting (ARFF), and other airport service and support facilities.

Responsibilities:

Consultant: Develop physical planning criteria.
Sponsor: Review.
Product: Detailed criteria for airport physical planning.

Task 4.2 Determine Airfield Capacity and Delay

Description: Using the FAA's airfield capacity/delay model, estimate current and future levels of airfield capacity (annual service volume) and delay for Corpus Christi International Airport. These analyses will be based on the existing airfield configuration, aviation demand forecasts, and an analysis of airspace capacity potentials and constraints, and will involve the investigation of management and operational procedures in order to optimize the use of the total airside (runway, taxiway, and apron).

The analysis in this task will determine if aviation demand factors generates a capacity rationale for runway eligibility.

Responsibilities:

Consultant: Estimate airfield capacity and delay utilizing FAA guidance.
Sponsor: Review and comment.
Product: Detailed description the airport annual service volume for the current, five, ten, and 20-year timeframes.

Task 4.3 Prepare Airfield Facility Requirements

Description: Using the results of the forecasts (Element 3), as well as relevant information from other tasks, determine and prepare a list of facility requirements needed to meet projected demands for the airport for existing, short-term (1-5 years), intermediate-term (6-10 years), and long-term (11-20 years) timeframes. These facility requirements will be used in the later comparative evaluations and will be based upon both the airport physical planning criteria and the aviation forecasts.

Facility requirements to meet aviation demand for the airfield will include (but not be limited to) runways, taxiways, lighting, navigational aids, and marking and signage. These facility requirements will be developed in the form of gross areas and basic units and will be compared to those that presently exist to identify the future development items needed to maintain adequate service, function, and operations of the airport. In addition, airfield design standards deficiencies will be identified and corrective actions evaluated and recommended. In subsequent tasks, the above facility requirements will be translated into alternative plans for further evaluation in relation to established planning criteria.

Specifically, these tasks will be performed:

- Runway length calculations
- Airfield geometry analysis
- Airfield Navaid recommendations
- Instrument approach evaluation for consideration of improvements
- Pavement condition analysis
- Airfield drainage considerations
- Identify physical planning criteria for the potential inclusion of facilities to support Advanced Air Mobility (AAM) operations, as detailed in FAA Engineering Brief #105, *Vertiport Design*.

Airfield analysis will be assisted by Garver, Parkhill, and AP Tech, as outlined in their individual scopes contained in the appendix.

Responsibilities:

Consultant: Identify specific airfield facility needs, offer runway pavement minimum justification(s), and outline nonstandard airfield geometry.
Sponsor: Review.
Product: Detailed description of all airfield facilities required to meet aviation demands at the airport through the 20-year planning period.

Task 4.4 Prepare Landside Facility Requirements

Description: Using information provided by the aviation planning criteria established under preceding tasks, develop a set of facility requirements addressing the landside facilities necessary to support the airfield and its related activity.

The CCIA airline terminal building is a world class facility capable of meeting current demand. The airport has a potential to grow beyond the current three airlines servicing the airport and additional service would tax the existing infrastructure. This analysis will include evaluating future needs of the airline terminal building to include terminal building, curb, and parking overview evaluations to match the addition of a fourth and fifth airline service at CCIA.

This work effort will outline cargo facility needs, as applicable, based on the findings of projected cargo demands and/or MRO additions at CRP.
General aviation requirements will determine the best location for the next generation of facilities at CRP. This work effort will outline the general spacing requirements for use in determining long-term locations to be conducted in the alternatives chapter.

Requirements for facilities such as fuel farm areas, ARFF, airport maintenance, and automobile parking lots (public and rental cars) will be developed under this task.

Alliance, Hubpoint, Garver, and Parkhill will assist with terminal building, drainage issues, and other land-side requirement analysis as outlined in their scopes attached in the appendix.

Responsibilities:
Consultant: Identify specific landside area facility needs.
Sponsor: Review.
Product: Detailed description of facility requirements necessary for landside development to support forecast aviation demand through the 20-year planning period.

ELEMENT 5 - AIRPORT DEVELOPMENT ALTERNATIVES

The purpose of this study element is to develop those airport development alternatives that appear most feasible and evaluate them to determine the most prudent and feasible alternative concept available for the airport.

Task 5.1 Establish Alternative Development Issues

Description: Based upon the results of the facility requirements necessary to meet projected demand, identify those issues which will impact the development of alternatives for the various functional areas of the airport. This task will provide insights into the potentials for and policies constraining the development of specific land uses within the existing or future airport boundaries, including those areas which are unconstrained and meet current functional potential, thereby requiring no additional development. Sustainability issues will be identified and alternatives to support and promote sustainability initiatives will be preferred.

Responsibilities:
Consultant: Establish alternative development issues.
Sponsor: Review and comment.
Product: Alternative development issues.

Task 5.2 Evaluate Potential Airside Alternatives

Description: The airside facility requirements developed in the previous evaluations will be translated into a series of alternative plans for comparative evaluation in relation to the established planning criteria. The analysis will address a maximum of three possible airfield alternatives (in addition to the "do nothing" option). The alternatives with greatest potential for meeting airside demand in the most prudent order will be evaluated. Based on the analysis in Task 4.3, develop an array of airside alternatives.

Responsibilities:
Consultant: Development of airside development alternatives.
Sponsor: Review.
Product: A series of development options, each of which will attempt to meet the forecast airfield facility demands as well as FAA airfield criteria.

Task 5.3 Identify Potential Landside Alternatives

Description: Based on the facility requirements determined under the previous element, formulate preliminary landside development alternatives. These alternatives will be based on concepts for development within or beyond existing airport boundaries which show all necessary development during the planning period and beyond. This task will be conducted simultaneously with other tasks in this element and result in a series of overall development options for the airport.

Specific landside alternative issues to examine will include:

- Commercial airline terminal building modifications to meet potential Airlines 4 and 5.
- Commercial air cargo facility development options.
- General aviation development opportunities with industry best practices needs and demand.
- Future aircraft engine run-up area sites.
- Support facility improvements to meet the demand outlined in Task 4.4.
- MRO development options and opportunities.
- Environmental and sustainability analysis of alternatives.
- Nonaviation land development options for potential land use release (Part 163 evaluations as needed).
- Safety management system (SMS) needs will be factored

Alliance will assist with terminal building alternatives; Garver will help with curb and sustainability alternatives; Parkhill will aid with nonaviation development and drainage

Responsibilities:

Consultant: Develop up to three (3) landside development options, also considering the "no-build" concept alternative.

Sponsor: Review.

Product: A series of landside alternatives which fulfill the facility requirements to meet forecast demand levels.

Task 5.4 Prepare Phase II Report

Description: Upon completion of the work tasks in Elements 4 and 5, a report will be prepared to outline the analysis, methodologies, and findings of the study efforts. Narrative prepared as part of this Element will include detailed facility requirements and alternative concepts. Up to fifteen (15) hard copies and electronic (PDF) versions of the report will be submitted for review by the TAC, FAA, and Sponsor officials.

Responsibilities:

Consultant: Develop complete narrative and graphics for the Phase II working papers. Responsible for the distribution of the Phase II working papers to the TAC, FAA, and Sponsor staff.

Sponsor: Review and comment.

Product: Up to fifteen (15) hard copies of the Phase II working papers and electronic (PDF) versions of the report. The chapters will be published on the project website.

Task 5.5 Conduct Technical Advisory Committee Meeting No. 3 and Pubic Workshop No.2

Description: Prepare graphic display and/or handout information necessary to adequately explain the Phase II working papers. Meet with the TAC to review the Phase II working papers, as well as to review the project schedule, progress, and subsequent work efforts. This task will include holding an open-house style format public information workshop the evening of the TAC meeting. The workshop will allow for interested public entities to review project materials and interact with the consultant.

Responsibilities:

Consultant: Provide presentation material and necessary graphics for the meeting. Provide documentation allowing for the sponsor to publish notice of public meeting.

Sponsor: Distribute meeting notices and arrange for meeting room.

Product: Conduct third TAC meeting and second public information workshop for the Master Plan study.

ELEMENT 6 – RECOMMENDED MASTER PLAN CONCEPT, ENVIRONMENTAL OVERVIEW, AND LAND USE PLAN

The purpose of this study element is to develop a recommended master plan concept based the alternatives prepared in Element 5 and the review and comments provided by the TAC. An environmental overview, including the development of updated noise contours and land use analysis, will also be conducted to determine any potential impacts to the environment, in accordance with the *National Environmental Policy Act* (NEPA).

Task 6.1 Recommended Master Plan Concept

Description: Based on the information developed in the airport alternatives element as well as comments provided by airport staff, the CCIA STAFF, TAC members, and the general public, a single recommended Master Plan concept for development of the airport facilities will be prepared. The recommendation for the most prudent and feasible Master Plan concept will become the basis for the development of airport plans, costs, and scheduling.

Responsibilities:

Consultant: Develop a refined Master Plan concept for review by the Sponsor, TAC, and other interested parties.
Sponsor: Review.
Product: A recommended Master Plan concept.

Task 6.2 Prepare Aircraft Noise Exposure Contours

Description: Compile computer batch files for development of existing and future noise exposure contours using FAA's Airport Environmental Design Tool (AEDT). Provide computer plot of 65 DNL and higher contours, at 5 DNL increments, and areas (in square miles and acres) within each contour. lt is envisioned that two computer modeling runs will be developed − one for existing conditions and one for future conditions. The noise contours will be plotted on base maps utilizing aerial photography, if available, and/or best available mapping. No population impact counts will be developed under the task. Information on forecast operations will be obtained from the forecast analysis in the master plan. Information on traffic patterns and runway utilization rates will be reviewed with the airport sponsor. The results of the analysis will be included in the airport plans/land use compatibility working paper. Digital copies of the AEDT analysis can be provided to the sponsor at the conclusion of the analysis if requested.

Responsibilities:

Consultant: Develop existing and future noise exposure contours.
Sponsor: Review traffic pattern and runway utilization assumptions.
Product: Existing and future noise exposure contours for the airport.

Task 6.3 Land Use Controls and Plans

Description: Review and summarize existing zoning ordinances, subdivision regulations, building codes, and land use and transportation plans, and land use management documentation in the study area. Prepare tables and exhibits of the zoning, future land planning designation, and improvements.

Responsibilities:

Consultant: Review reports and documents from area planning agencies and prepare summary tables and exhibits.
Sponsor: Review.
Product: Tables and exhibits for analysis in later tasks.

Task 6.4 Non-compatible Development Analysis

Description: Based on information collected in Task 6.3, areas with the greatest potential for non-compatible development, when compared to updated noise exposure contours and Part 77 approach surfaces, will be identified. It is anticipated that this area will not extend beyond one mile from each runway end. Additionally, land use control inconsistencies will be identified. Growth-risk areas will be categorized by type of land use.

Responsibilities:

Consultant: Responsible for this task.
Sponsor: Review.
Product: Growth risk analysis including mapping of non-compatible growth areas.

Task 6.5 Land Use Management Techniques

Description: Identify various land use management techniques that could be applied in the airport vicinity. These techniques may include, but not necessarily be limited to: changes in existing zoning districts, creation of new zoning classifications, modification of other development regulations and building codes, property and easement acquisition, and other mitigation measures.

Responsibilities:

Consultant: Responsible for this task.
Sponsor: Review.
Product: A list of recommended land use management techniques that may be effective in promoting land use compatibility.

Task 6.6 Environmental Overview (NEPA)

Description: The purpose of this task is to identify potential environmental issues associated with the airport development alternatives and recommended development concept, including mitigation measures that may be needed for proposed projects.

Once a recommended Master Plan concept has been developed, a preliminary environmental overview will be conducted using the information collected to identify any potential environmental concerns that must be addressed prior to program implementation. This evaluation will be structured in a table format and will include an analysis of potential impacts on environmental resources as defined within FAA's Order 1050.1F and its accompanying Desk Reference. Projects which may require further NEPA analysis (i.e., Environmental Assessment or Environmental Impact Statement) will be identified. This evaluation is not intended to serve as a formal Environmental Assessment under NEPA.

Responsibilities:

Consultant: Assemble data based on latest information available.
Sponsor: Assist in collection of data.
Product: Input to later analysis.

Task 6.7 Waste Recycling Plan

Description: The *FAA Modernization and Reform Act* of 2012 includes a new requirement for airport Master Plans to address recycling by:

- Evaluating the feasibility of solid waste recycling,
- Minimizing the generation of waste,
- Identifying operations & maintenance requirements,
- Reviewing of waste management contracts, and
- Identifying the potential for cost savings or revenue generation.

To develop a recycling plan that meets this FAA requirement, the Consultant will:

1. *Collect baseline information on the airport's waste management program.* Meet with Airport staff to understand how waste is managed at the airport and what current education efforts for passengers, employees, contractors and tenants are already in place. In addition, collect information such as waste collection contracts, monthly waste/recycling invoices, and the waste-related costs for waste and recycling (containers, hauling, disposal, and labor).

2. *Assess existing waste management program*. To understand the sources, composition, and quantities of waste generated at the airport, conduct a facility walk-through and an examination of monthly waste/recycling invoices.

3. *Assess opportunities for expansion of recycling program*. Review current waste collection contracts and conduct research on current market conditions to determine whether there are any logistical limitations to expanding the recycling program.

4. *Develop recommendations for improving the recycling program*. Based on the above assessment of the airport's waste and recycling program, develop recommendations for improving the airport's recycling program as well as minimizing waste generated at the airport. Recommendations will include identification of potential cost savings or revenue generation.

Responsibilities:
Consultant: Develop Recycling Plan
Sponsor: Assist in collection of data.
Product: Recycling Plan.

ELEMENT 7 - FINANCIAL MANAGEMENT AND DEVELOPMENT PROGRAM

The purpose of this element is to analyze benefits and costs that may be associated with the recommended plan as well as determine and set out the assumptions, terms, and conditions by which agreed-upon capital improvement programs can be financially implemented for Corpus Christi International Airport.

Task 7.1 Prepare Airport Development Schedules and Cost Estimates

Description: Prepare the airport development schedules and cost estimates (in current dollars) for the selected Master Plan concept for Corpus Christi International Airport, thereby ensuring that logical staging of improvements are given proper consideration in the development of a financial plan and capital improvement program. Items that are eligible for funding under the AIP will be identified in accordance with FAA Order 5100.38D, *Airport Improvement Program (AIP) Handbook*.

Garver (and other subconsultants as scoped) will assist with this task through opinions of probable costs for proposed Capital Improvement Program (CIP) items.

Responsibilities:
Consultant: Prepare an airport development schedule and estimated costs.
Sponsor: Review.
Product: Development schedules and cost for the improvements proposed as a part of the selected master plan concepts.

Task 7.2 Prepare Capital Program and Financial Plan

Description: Develop a recommended 20-year airport capital improvement program and a condensed financial plan suitable for Corpus Christi International Airport. The airport capital improvement program will identify individual projects for each year through the first five years of the plan, then prioritize projects through the intermediate (6−10 year) and long-term (11−20 year) periods.

This task will be assisted by DKMG.

Responsibilities:
Consultant: Develop a detailed capital program.
Sponsor: Provide review and input.
Product: Capital program for the 20-year planning period.

Task 7.3 Perform Financial Analysis

Description: The financial plan of the Master Plan presents the financial assumptions which will ultimately impact facility and funding requirements. Initial assumptions and project objectives are revised to reflect changes in activity forecasts and collateral development alternatives. Elements to be refined include the types of facilities to be built or rehabilitated, the total costs of these facilities, the timing of cash flows associated with the construction of planned facilities, and financing sources and terms.

The estimated demand on operating revenues and the impact on tenant rates and charges will be identified and analyzed, and recommended strategies for completing and funding the proposed projects will be presented. The preferred alternative will reflect a financial management structure in combination with a physical plan which accomplishes CRP's objectives for strategic growth, economic development, air and ground transportation services, and environmental mitigation.

The following components of the financial analysis will be conducted:

- Sources and uses of funds analysis – Reviewing design cost and phasing to determine the various sources of funding for the recommendations, including any portion that must be financed through bonds.

- Debt service analysis – Determining the par amounts required for construction and or refinancing; calculation of required reserve funds, capitalized interest, and debt service coverage per the bond resolution.

- Revenue forecasting analysis – Projecting amount and timing of additional revenues from increased facilities and from activity forecasts, as well as reviewing concession tenant leases to determine if rates can be increased during the projection period.

- Operating expense projections – Analyzing historical trends and the impact of new facilities on projections.

- Cash flow analysis – Calculating net revenue projections, including the effects of economic and financial constraints on project viability.

This task will be the primary work effort to be completed by DKMG.

Responsibilities:
Consultant: Prepare a financial analysis.
Sponsor: Provide information on lease income and review analysis.
Product: Financial analysis to be used in the preparation of the capital improvement program.

Task 7.4 Prepare Phase III Report

Description: Upon completion of the work tasks in Elements 6 and 7, a report will be prepared to outline the analysis, methodologies, and findings of Elements 6 and 7. Up to fifteen (15) hard copies and electronic (PDF) versions of the report will be submitted for review by the TAC, FAA, and Sponsor officials.

Responsibilities:
Consultant: Develop complete narrative and graphics for the Phase III report. Responsible for the distribution of the Phase III report to the TAC, FAA, and Sponsor.
Sponsor: Review and comment.
Product: Up to fifteen (15) hard copies of the Phase III report and electronic (PDF) versions of the report. The chapters will be published on the project website.

Task 7.5 Conduct Technical Advisory Committee Meeting No. 4 and Public Information Workshop No. 3

Description: Prepare graphic display and/or handout information necessary to adequately explain the Phase III working papers. Meet with the TAC to review the Phase III report, as well as to review the project schedule, progress, and subsequent work efforts. This task will include holding an open-house style format public information workshop the evening of the TAC meeting. The workshop will allow for interested public entities to review project materials and interact with the consultant.

Responsibilities:
Consultant: Provide presentation and necessary graphics at the meeting.
Sponsor: Distribute meeting notices and arrange for meeting room.
Product: TAC and public workshop meetings for Master Plan study.

ELEMENT 8 – GEOGRAPHICAL INFORMATION SYSTEM (GIS) AND DATA COLLECTION SERVICES

Data collection for Corpus Christi International Airport will be conducted to comply with Table 2-1 of AC 150/5300-18B, column Airport Layout Plan for ADIP submission and used for development of the ALP set defined in Element 9. The process includes collection of high-resolution aerial photography, high precision surveys of safety critical airport data, (runway ends, NAVAIDs, airport elevation, airspace, obstructions and others), and additional feature collection such as pavement areas, paint markings, and fencing used to describe the airport. The objective of this element is for the Consultant to provide the sponsor with a digital dataset of the airport and its surrounding environment in conformance with current FAA standards set forth in the ACs 150/5300- 13B, -16B, -17C, and -18B, to provide an updated aerial image, and to conduct airspace analysis for the appropriate 18B and Part 77 surfaces. The data collected in this element will be used for ALP development and submission into the ADIP portal. This will be a complete data collection of the airport environment.

Task 8.1 FAA Airports-GIS

Description: Table 2-1 of AC 150/5300-18B, column Airport Layout Plan, will guide the collection of data for the Airports-GIS portion of the project. The dataset is a high precision, digital model of the features of the airport as defined in 18B Table 4-1 for Airport Layout Plans. This task includes working with the sponsor to create the project in the ADIP system, submitting and gaining approval of the SOW and all other necessary plans required by ADIP. Next is to collect and format the data, then submit the data and final report to the ADIP site and gain FAA Approval. Compliance with current FAA standards set forth in ACs 150/5300- 13B, 16B, -17C, and -18B will be adhered to.

Responsibilities:

Consultant: Ensure FAA and airport standards are met for all survey activity on- and off-airport and aerial photography acquisition. Provide oversight and review as needed.

Sponsor: Liaison with survey team to provide access to airport property. Assist in providing any needed information to survey and aerial photography teams. Direct consultants as required to any safety or operational requirements for survey and aerial photography team.

Product: Approved FAA Airports-GIS Airspace project.

Martinez Geospatial will be responsible for performing the airspace analysis, conducting the ground survey, providing current orthophotography, and assisting in development of a GIS dataset that is acceptable to the FAA.

Task 8.2 ALP Data Collection, Part 77 Airspace Analyses and AIRS Management

Description: This task utilizes the safety critical data collected in Task 8.1 and adds to it those features required to complete the ALP per the SOP 2.0 checklist. This includes, but is not limited to, additional features such as paint markings, fencing, and pavement boundaries. It also includes obstacle collection

so that Part 77 airspace analysis can be conducted on the future condition of the airport as a result of the planning effort.

If any obstacles are found to penetrate the obstruction standard surfaces or visual flight rules (VFR) traffic pattern surfaces, and no previous study has been done on the obstacle, then the obstacle will need to be submitted for airspace evaluation (via OE/AAA) and the mitigation and aeronautical study number included in the obstacle data tables on this and the inner approach surface drawings. It is assumed that OE/AAA will involve up to three days of data entry and follow-up.

The Airport Internet Resource Suite (AIRS) airport management application will be used to support and enhance certain components detailed in the Master Plan to assist airport staff in the collection, organization, and use of information including the AGIS survey (Task 2.2). The application is accessed through a secure web page. Once logged in, the users can establish new user accounts, set permissions, view maps and modules, and run customized reports. Available modules include tasks related to airspace analysis, and lease management. This task includes the setup associated with the application website, logins, and 36-months use of the application.

Responsibilities:

Consultant: Provide oversight and review as needed. Martinez Geospatial will be responsible for performing the airspace analysis and providing planimetric data. Coffman Associates will add to data collection as needed to comply with FAA regulations.

Sponsor: Assist project team in collection of attribution of data. Work with planning team to establish future condition. Review drawings and data.

Product: First phase provides topographic and planimetric data. Second phase provides obstruction analyses. AIRS for 36-moth utilization

ELEMENT 9 – AIRPORT PLANS

The purpose of this study element is to prepare a new ALP set for Corpus Christi International Airport. All plans will be prepared in a format which complies with the content contained within FAA's current guidelines for the preparation of an airport layout plan as defined by the FAA Airports ARP SOP 2.00 *Standard Procedure for FAA Review and Approval of Airport Layout Plans (October 1, 2013)*, and which is readily acceptable to the FAA and can be utilized by the Sponsor in carrying out implementation. All plans will be produced digitally using the data collected in Element 8 and any additional data the sponsor may have or want to include. Element 8 collects all new airport data. The digital plans and PDF files of each sheet will be a deliverable item to the Sponsor at the completion of this project in CAD or GIS format at the Sponsor's discretion. The ALP will be included as an appendix in the "Draft" Master Plan documents. A narrative will also be included in the appendix to better describe the intended functions of the proposed development items.

Task 9.1 Airport Layout Plan Drawing

Description: Following the Recommended Airport Master Plan Concept developed under the preceding elements and FAA AC 150/5070-6B, an ALP drawing for the airport will be prepared. The ALP will reflect updated physical features, location of airfield facilities (runways, taxiways, navigational aids), and existing landside development. Development of recommended landside and airfield facilities, including runways and taxiways; property and runway protection zone boundaries; and revenue support areas will also be shown. Guidelines for the preparation of an airport layout plan as defined by the FAA Airports ARP SOP 2.00 *Standard Procedure for FAA Review and Approval of Airport Layout Plans (October 1, 2013)* will be followed. A Title Sheet and Airport Data Sheet will also be prepared and included with the full ALP set.

Responsibilities:

Consultant: Prepare a new ALP for the airport.
Sponsor: Review and comment.
Product: A new ALP drawing for the airport which meets federal guidelines.

Task 9.2 Terminal Area Drawing(s)

Description: Prepare Terminal Area Drawing(s) reflecting development resulting from the recommendations of this study, in conformance with Federal Aviation Regulations (FAR) Part 77 and FAA Airports ARP SOP 2.00 *Standard Procedure for FAA Review and Approval of Airport Layout Plans (October 1, 2013)*. Depending on the future recommended development for the general aviation areas, more than one drawing may be required to adequately reflect the detail of development within the area. The drawing(s) will include detailed planning level information such as access taxiways, apron areas, hangar layouts, aircraft tie-down areas, customer and employee parking areas, and vehicular circulation and access for the short-, intermediate-, and long-term planning periods.

Responsibilities:

Consultant: Prepare Terminal Area Drawing(s).
Sponsor: Review and comment.
Product: Terminal Area Drawing(s) reflecting the selected development alternative for these facilities at the airport.

Task 9.3 Part 77, Approach and Inner Approach Surface Plans

Description: Prepare Part 77, Approach and Inner Approach Surface plans in conformance with Federal Aviation Regulations (FAR) Part 77 and FAA Airports ARP SOP 2.00 *Standard Procedure for FAA Review and Approval of Airport Layout Plans (October 1, 2013)*. As necessary, height of potential obstructions will be researched and identified on the drawing along with an obstruction chart/table indicating the obstruction description, their top elevation, affected Part 77 surface, the penetration, and disposition or corrective action to eliminate or mitigate the obstruction.

Obstacles not previously studied and within certain limits must be submitted for airspace evaluation (via OE/AAA). The limits are: within the airport property, within the boundaries defined in the attached document OE_ALP Evaluation Surfaces.pdf, and any other prominent obstacle. Obstacles will need to be submitted and the mitigation and aeronautical study number included in the obstacle data tables on this and the inner approach surface drawings. This will result in an Obstruction Action Plan (OAP) for CIP purposes.

It is assumed that OE/AAA will involve up to ten days of data entry and follow-up.

Responsibilities:

Consultant: Prepare new Part 77, Approach and Inner Approach Surface plans for the airport. File new obstructions via the OE/AAA system.

Sponsor: Review and comment.

Product**:** Part 77, Approach and Inner Approach Surface plans for the airport to meet federal guidelines. Product will include aerial photography of the inner approach surfaces and runway protection zones.

Task 9.4 Departure Surface Drawings

Description: Prepare new departure surface drawings in accordance with guidelines as defined by the FAA Airports ARP SOP 2.00 *Standard Procedure for FAA Review and Approval of Airport Layout Plans (October 1, 2013).* Obstruction information will be obtained from the Part 77 obstruction analysis completed in Task 8.2, approach plans, and the current Airport Obstruction (OC) chart (as available).

Responsibilities:

Consultant: Prepare new departure surface drawings for the airport.

Sponsor: Review and comment.

Product: Departure surface drawings for the airport which meet federal guidelines.

Task 9.5 Airport Property Map

Description: Prepare the Airport Property Map, including the appropriate graphics and information to indicate the type of acquisition (i.e., federal funds, surplus property, local funds only, etc.) of various land areas within the airport's boundaries. The primary intent of the drawing is to identify and/or delineate all designated airport property owned or to be acquired by the airport owner. The drawing will inventory all parcels, which currently make up the airport, or are proposed for acquisition by the airport sponsor. In addition, the drawing will also show any property that has been disposed of by the Sponsor in the past. Details will be limited to the depiction of existing and future facilities (i.e., runways, taxiways, runway protection zones, and terminal facilities) which would indicate aeronautical need for airport property. This work effort will utilize information obtained from the current – Airport Property Map as well as other sources. The Airport Property Map will be updated in conformance with the guidelines

outlined in FAA Airports ARP SOP 3.00 *Standard Operating Procedure (SOP) for FAA Review of Exhibit 'A' Airport Property Inventory Maps (October 1, 2013).* Sponsor will assist Consultant in providing recorded deeds of its property. Additional information requested by the FAA may be added as needed if available and provided by the CCIA STAFF.

Even though this drawing will be updated to conform to a full property Exhibit A under SOP 3.0, the drawing will be done to match the parcel numbering/identification of the existing Exhibit A.

Responsibilities:
Consultant: Update the Airport Property Map for the airport.
Sponsor: Provide appropriate historical data and review Airport Property Map.
Product: Updated Airport Property Map for the airport.

Task 9.6 On-Airport Land Use Plan

Description: A Land Use Plan for the area within the boundaries of the airport will be developed based on the identified overall development concept. This will include general aviation areas, terminal complex, ground access and vehicular circulation system service areas, industrial/commercial development areas, and distinctions between aeronautical and non-aeronautical uses. ***The drawing will outline any non-aeronautical land use plans so that future revisions to the ALP are not required should a land use release is requested.***

Responsibilities:
Consultant: Prepare On-Airport Land Use Plan.
Sponsor: Review and comment.
Product: On-Airport Land Use Plan and Off-Airport Land Use Plan.

Task 9.7 Preparation of Draft ALP and Draft ALP Drawing Set

Description: Preparation of up to four (4) copies of the "Draft" ALP drawing set for submission to the Sponsor, and subsequent comprehensive agency review by the FAA. The ALP Drawing Set will be prepared in conformance with FAA Airports ARP SOP 2.00 *Standard Procedure for FAA Review and Approval of Airport Layout Plans (October 1, 2013).* Drawings will be a minimum size of 24" x 36". FAA review will be concurrent. Drawings will be submitted with or prior to publication of the "Draft" Final Master Plan.

THIS TASK INCLUDES TIME REQUIRED TO MAKE CHANGES DURING SPONSOR AND FAA REVIEW AND APPROVAL PROCESS.

Responsibilities:
Consultant: Provide up to four (4) copies of the full Airport Layout Plan drawing sets depicting the sponsor selected "Recommended Plan" for sponsor and FAA use.

Sponsor: Provide up to four (4) unsigned copies of ALP drawing set to FAA for review. Include signed transmittal letter indicating the changes from the last approved ALP drawing. Provide two (2) full sets of drawings to FAA for review.
Product: Up to four (4) copies of the full ALP drawing set as well as a completed FAA ALP Checklist.

Task 9.8 Preparation of Final ALP and Final ALP Drawing Set

Description: Revise the Draft Airport Layout Plan drawing set prepared in the previous task to reflect comments received from the FAA review. Upon approval from the Sponsor, provide four (4) copies of the revised full ALP drawing sets to the Sponsor for their signature. The Sponsor will forward the signed drawings to the FAA for final approval.

Responsibilities:
Consultant: Provide up to four (4) revised copies of the full Airport Layout Plan drawing sets.
Sponsor: Review and sign all drawings. Forward all drawings to the FAA for final approval.
Product: Up to four (4) copies of full ALP drawing set.

ELEMENT 10 - FINAL REPORTS

Task 10.1 Prepare Draft Final Master Plan Report

Description: Following the final review period for the Phase III report of the Master Plan Report, a Draft Final Master Plan Report document will be prepared. This document will incorporate appropriate comments and corrections received during the review period. Up to ten (10) hard copies of the Draft Final Report and an electronic (PDF) version will be provided. The FAA will receive one (1) print copy.

Responsibilities:
Consultant: Prepare and print up to ten (10) hard copies of the Draft Final Master Plan study and an electronic (PDF) version.
Sponsor: Review and comment.
Product: Ten (10) Draft Final Master Plan Reports.

Task 10.2 Obtain Master Plan Approvals

Description: Coordinate final approval of master plan with airport administration. This task will include a presentation to the Airport Commission seeking approval of the Master Plan. The ALP approval will be coordinated with Sponsor and the FAA.

Responsibilities:
Consultant: Coordination of final master plan approval.
Sponsor: Review and comment on final documents.

Product: Final master plan and airport layout drawing approvals.

Task 10.3 Prepare Final Master Plan Report

Description: Following the final review period for the Draft Final Master Plan Report, a Final Master Plan Report document will be prepared. This document will incorporate appropriate comments and corrections received during the review period. Ten (10) printed copies of the Final Report will be provided, in addition to digital copies of the entire plan (text and graphics) in a PDF format. Two (2) printed copies (and a PDF copy) will be provided to the FAA.

The FAA will also be sent four (4) full sized ALP drawing sets, signed bdy the Sponsor, for signature and circulation. An electronic (PDF) version of the ALP will also be submitted to the FAA.

Responsibilities:

Consultant: Prepare and print ten (10) copies of the final report (provide two copies to the FAA). Also develop digital copies of the final report in PDF/Word format for submittal to the Sponsor and for the FAA.
Sponsor: Coordinate distribution of the final report.
Product: Ten (10) Final Master Plan Reports and electronic (PDF/Word) copies.

ELEMENT 11 - SUBCONSULTANTS

The project team, led by Coffman Associates, includes the following subconsultants:

11.1 - Garver – Engineering support and other ancillary services
11.2 - MTZ – Geospatial Services (A/C 18b Survey Products) (DBE)
11.3 - DKMG – Financial Services
11.4 - Hubpoint Advisors – Cargo Airline Analysis
11.5 - Alliiance – Airline Terminal Building Facility Requirements and Alternatives
11.6 - AP Tech – Pavement Management Plan
11.7 - Parkhill – Non-aviation land use development opportunities
11.8 - KCS – Public Outreach and Local Communication Services (DBE)
Each subconsultant is providing a specific level of work effort more specifically outlined in their scoping materials included as an appendix to this document.

ELEMENT 11

SUBCONSULTANT SCOPING DOCUMENTS

TASK 11.1 – GARVER

SUMMARY TASKS:

Engineering Support
Facility Requirement Support
PMMP Escorting
Cost Estimating
SMS Audit
Electrical Resiliency
Meeting Support

13750 San Pedro Ave.
Suite 350
San Antonio, TX 78232

TEL 210.447.6250

www.GarverUSA.com

March 6, 2023

Coffman Associates
Attn: Mike Dmyterko
12920 Metcalf Avenue, Suite 200
Overland Park, KS 66213

Re: Corpus Christ International Airport – Master Plan Scope/Fee

Dear Mr. Dmyterko,

We appreciate the opportunity to support you on the Corpus Christi International Airport Master Plan project. Attached is a scope of our services and summary of our proposed fee. A table showing the fee breakdown per scope element is included below:

Scope Item	**Fee**
Inventory	$74,508.00
Facility Requirements	$46,436.00
Engineering Support and PMMP Escorting	$28,660.00
Cost Estimating	$37,526.00
SMS Audit	$21,806.00
Electrical Resiliency	$107,232.00
Project Steering Committee Support	$9,496.00
Total	**$325,664.00**

Please call me if you have any questions.

Sincerely,

GARVER

Nathan Polsgrove, A.A.E., IAP, ACE
Aviation Planning Leader

Attachments: Exhibit A: Scope of Services
Exhibit B: Fee Summary

EXHIBIT A
SCOPE OF SERVICES
CORPUS CHRISTI INTERNATIONAL AIRPORT
AIRPORT MASTER PLAN

GENERAL

This Scope of Services outlines the scope items that Garver will complete for the Corpus Christi International Airport Master Plan.

ENGINEERING SUPPORT AND PMMP ESCORTING:

Alternatives Analysis – Engineering Support

Garver will review all airside and terminal/landside alternatives and provide feedback on each alternative related to constructability, cost, and other engineering considerations. Utilities impacts will also be a consideration for this effort. This is expected to include providing written feedback on each alternative as well as participating in up to two (2) virtual meetings regarding the alternatives analysis. This effort does not include preparing cost estimates for each alternative. Cost estimating will be addressed under a separate task item.

CIP Phase – Engineering Support

As part of the Capital Improvement Program (CIP) and Implementation Plan, Garver will provide support related to conceptual project sequencing and phasing. This is expected to include providing written feedback on the proposed CIP and implementation plan as well as participating in up to two (2) virtual meetings.

PMMP – Engineering Support/Review

As part of the PMMP, Garver will provide support including reviewing existing pavement data and draft pavement analysis work. This is expected to include providing written feedback on the draft PMMP as well as participating in up to two (2) virtual meetings.

PMMP – Escorting

To support the pavement inspection work that is necessary to prepare the PMMP, Garver will provide a single person to escort Applied Pavement Technology personnel at CCIA for approximately eight (8) consecutive days. Escorting is expected to be provided for approximately 9 hours each day.

COST ESTIMATING:

Cost Estimating:

Garver will prepare planning-level probable development costs for each project in each phase of the CIP. Development costs will be estimated for each project and will be based on the preferred development concept. These estimates of probable costs will include land acquisition, construction

costs, and environmental/design fees. Cost estimates will be prepared in current-year dollars and developed for planning purposes only. It is estimated that this will include cost estimates for approximately eighty (80) individual projects.

INVENTORY:

Inventory – Documentation Review:

Garver will collect and review the following documents and data to establish baseline information to build the inventory of existing facilities and conditions:

- Historical list of capital projects/grant history.
- Current and planned capital improvements at the airport (as shown in the airport's current Capital Improvement Program).
- Current FAA documentation regarding the airport and its facilities (e.g. current 5010, instrument approach procedures, airfield diagram, sectional/IFR charts, and Aeronautical Information Services data from the FAA National Flight Data Center).
- Current/approved Airport Layout Plan (ALP).
- Previous Airport Master Plan (AMP) and noise studies.
- Existing facility assessments and as-built plans for existing facilities/infrastructure (e.g. terminal building, roadways, other facilities).
- CCIA Airport Certification Manual (ACM).
- Wildlife hazard assessment/wildlife hazardous management plan.
- Airport Letters of Agreement (LOAs) or Memorandums of Understanding (MOUs).
- FAA runway incursion data for CCIA.
- Historical fuel flowage (previous 5 years broken down by 100LL and Jet A).
- Existing airport rules and regulations and minimum standards.
- Existing local zoning ordinances/maps and any airport zoning related processes/practices.
- Existing environmental data/information (e.g. previous EA, EIS, other environmental determinations, threatened and endangered plants, fish, and wildlife data, cultural/archaeological/historical resources data, floodplains, farmland, etc.) as provided through publicly available online databases/resources.
- Any available topographic maps and available aerial photographs.
- Utility location information for underground and above ground utilities located on airport property. This includes utility size and general location. No in-field utility locations will be performed as part of this project. All utility location and size information is expected to be obtained from the utility provider.
- Existing pavement condition/strength reports.
- Local comprehensive plan or other regional development/land-use plans.
- Public parking lot utilization data.
- Traffic count studies. No new traffic counts will be performed as part of this project.

Inventory – Site Visit:

Garver will schedule and complete an initial site visit to CCIA that will include the following subtasks:

- Tour/review of airfield facilities (e.g., runways, taxiways/taxilanes, NAVAIDs, and other infrastructure) to document existing infrastructure. This will include documenting the ownership, model, and age of all on-airfield NAVAIDs. This is expected to include coordination with FAA TechOPS to verify information for any FAA owned NAVAIDs. Additionally, this is expected to include a meeting with personnel at CCIA's ATCT and airport operations to gather information related to the utilization of the existing airfield infrastructure.
- Tour/review of support facilities (e.g., ARFF, fuel farm, maintenance) to document existing infrastructure and challenges. This is expected to include a meeting with key ARFF personnel at CCIA.
- Tour/review of a sampling of general aviation, aircraft maintenance, and other on-airport facilities to document infrastructure and existing use. The general age and use of all general aviation facilities will be documented. Photographs will be taken of all existing facilities and any general visual condition deficiencies will be noted. Inspections of existing facilities (e.g., including internal infrastructure, building systems, etc.) are not included.
- Tour/review landside facilities (e.g., terminal curb, parking, roadways, etc.) on airport property to document existing infrastructure, use, and challenges.
- Conduct up to ten (10), one-hour interviews with various tenants or airport stakeholders to gather information on current airport operations, challenges, and future development plans.

Garver will coordinate with airport staff related to scheduling the identified subtasks. This site visit will be completed in a single three (3) day period and will include two (2) Garver staff members. This task includes the preparation of meeting materials (e.g., meeting agendas, exhibits, etc.) necessary for the site visit. Additionally, meeting minutes will be developed for all ten (10) interviews. It is also expected that some additional follow-up calls/interviews with stakeholders may be necessary after the initial interviews. Existing infrastructure will be documented using field notes and pictures.

Inventory – Chapter Development:

Garver will prepare a draft of the Inventory Chapter sections that are relevant to the data and information captured as part of the site visit and data collection effort:

- Airfield and NAVAIDs: Garver will prepare a narrative section describing the existing airfield infrastructure and NAVAIDs at CCIA. This is expected to include documenting the existing infrastructure's protected surfaces (e.g., NAVAID critical areas, airport design surfaces, etc.) as well as the age and ownership of all NAVAIDs. This includes the development of up to four (4) exhibits to visually depict this information.
- Support Facilities: Garver will prepare a narrative section describing the existing support facilities at the airport (e.g., ARFF, fuel, airport maintenance, etc.). This will include documenting ARFF equipment and response routes. This includes the development of up to two (2) exhibits to visually depict this information.
- Instrument Approaches: Garver will prepare a narrative section describing the existing instrument approaches at CCIA. This will include documenting the procedure types and existing minimums.
- Building and Hangar Utilization: Garver will prepare a narrative section describing the general use of all facilities on airport property. Any specific findings from the inventory site visit and data collection will be documented. This includes the development of up to three (3) exhibits to visually depict this information.
- Auto Access and Parking: Garver will prepare a narrative section describing the existing parking

and access roads at the airport including their general size and use. This includes the development of up to two (2) exhibits to visually depict this information.

- Utilities: The location and size of existing on-airport utilities will be identified. This includes the development of up to two (2) exhibits to visually depict this information.

Garver will present the data in written form with tables and graphics. Garver will also integrate other inventory sections prepared by other subconsultants. Garver is not writing the terminal inventory or environmental inventory portions of the inventory chapter. The draft inventory section is expected to be approximately 100 to 150 pages.

FACILITY REQUIREMENTS:

Facility Requirements – Terminal Curbside and Roadway:

As part of the airport facility requirements analysis, Garver will analyze the sufficiency of the existing terminal curb area to accommodate future traffic needs based on the approved peak hour passenger forecast provided by Coffman. Garver will also analyze the sufficiency of existing airport roadways to accommodate future traffic based on the approved peak hour passenger forecast and forecasted growth in roadway utilization by airport tenants and others. This analysis is expected to integrate design considerations set forth in ACRP Report 25: Airport Passenger Terminal Planning and Design and common traffic planning/modeling techniques.

Based on the existing traffic volumes, the engineer will perform traffic simulation modeling analysis for five-year forecasting intervals.

Garver will summarize the results of the analysis in a traffic report format that includes graphics and tables to communicate future facility needs. Historical traffic counts provided by the airport will be utilized to support this analysis.

Facility Requirements – Terminal Utilities:

Based on terminal facility requirements prepared by the terminal planner, Garver will analyze the sufficiency of the existing electrical, water, and sewer utilities to be able to accommodate the proposed expansion of the terminal building. To facilitate this analysis, CCIA will provide Garver with the following documentation:

- The past 12 months of utility bills that show the utility usage for the water, sanitary sewer, natural gas, and electricity.
- The past 12 months of any historical data for any facility submeters for water, natural gas, and electricity.

As a result of the analysis, Garver will develop recommendations related to what improvements should be made regarding the airport's existing utility infrastructure serving the terminal. Garver will summarize the results of the analysis in a narrative format that includes graphics and tables to communicate future facility needs. The existing internal building systems including chilled water, heating water, fire alarm, mass notification, and back-up power will not be evaluated as part of the master plan, but may be impacted by an expansion of the facility.

SMS AUDIT:

Garver will conduct an audit of CCIA's SMS program as part of the master plan process. Garver will first review CCIA's existing Safety Management System (SMS) plan and any supporting documentation. Garver will also conduct one (1) virtual interview with CCIA staff holding key plan responsibilities to better understand how the plan is currently implemented. Garver will then conduct a gap analysis to identify any areas of the current plan that do not fully comply with FAA Advisory Circular 150/5200-37A – *Safety Management Systems for Airports.* Garver will conduct (1) one virtual meeting with CCIA staff to discuss the findings of the audit. The findings of this gap analysis will be documented as part of the airport master plan deliverables and is expected to be 5-8 pages in length. Garver will also develop a draft SMS implementation plan for CCIA in compliance with AC 150/5200-37A. This plan will be provided to the airport for review. Garver will provide one round of revisions based on CCIA comments. The draft-final plan will be provided to CCIA electronically in Word format.

ELECTRICAL RESILIENCY:

Inventory Phase:

As part of the inventory, Garver's team will complete a comprehensive review of the airport's existing electrical systems (airside, terminal, and landside) to identify potential points of failure, opportunities for improving resiliency, and prospects for improving system efficiency. Garver will work with the airport to gather information for existing electrical infrastructure supporting the airport. These areas include airfield lighting and NAVAIDS, electrical airfield vault power and controls, terminal power and lighting systems, site and roadway lighting, parking environments, airport gate access control. Where appropriate, Garver will also utilize electrical infrastructure information collected during past projects at the airport.

Garver will execute up to two (2) site visits with (2) persons to document existing electrical infrastructure conditions of the airport. These site visits are expected be completed over four (4) days total, and will be completed in a single site visit if possible. Some of the data collection will need to be performed during the night hours to document existing lighting conditions throughout the airport. Garver will also complete up to eight (8) teleconference interviews with various airport tenants/stakeholders (e.g., airport staff, airlines, FAA, rental car companies, electrical utility, etc.) to document existing operations and future needs.

Facility Requirements:

Garver utilize the information collected in the inventory phase, as well as applicable data from the forecasting phase, to identify unmet electrical needs. These needs are expected to include:

1. Emergency Systems
2. Electrical equipment and feeders
3. Airport lighting
4. Airport One-Line Diagrams
5. NEC codes issues
6. Renewable Energy and alternative power sources including solar

In general, an emphasis will be placed on infrastructure improvements that will improve the airport's electrical resiliency and redundancy. This will include a risk assessment of short- and long-term electrical grid interruptions and their impacts to the airport. Support for increased electrification of both aeronautical and non-aeronautical operations will also be a key consideration in this phase.

Electrical infrastructure improvements to address these needs will be recommended to be included as part of the alternatives and capital improvement phases of the master plan process.

Alternatives:

Garver will support the integration of the electrical infrastructure needs identified in the facility requirements phase into the alternatives development process. This will include general siting considerations, when possible, and recommendations on implementation priorities.

CIP Phase:

In coordination with other components of the master plan CIP, Garver will develop ROM cost estimates for the electrical projects included in the preferred alternative and provide general phasing recommendations based on the implementation priorities identified in the alternatives phase.

- Electrical Resiliency Scope Exclusions
- Looking into areas controlled or maintained by tenants.
- Areas outside the airport control and operation
- Airfield lighting analysis including lighting calculations and fixture selections.
- Reviews of existing security systems, except as specified in this scope.
- Reviews of existing communication systems
- Reviews of existing fire alarm systems
- Reviews of mechanical and plumbing systems
- Design of any level (conceptual, detailed, or final)
- Preparation of construction documents
- Reviews of existing lightning protection systems
- Reviews of passenger boarding bridges

PROJECT STEERING COMMITTEE MEETINGS:

Garver will attend up to four project steering committee meetings to discuss the findings of the Airport Master Plan. These meetings will be in person and will be attended by one Garver staff member.

Exhibit B

Coffman Associates
Corpus Christi International Airport Master Plan

Airport Master Plan

WORK TASK DESCRIPTION	P-3	P-2	P-1	E-5	E-4	E-3	E-2	E-1	T-1	AM-2
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
1. Inventory										
Coordination with Client	2	4			2					
Documentation Review	2	10	24							
Site Visit Preparation	4	6							2	4
Site Visit (2 people, 3 days)	32	32								
Site Visit data compilation, follow-up		18	30					8		
Chapter development	4	24	70	4					70	8
QA/QC	2			2	2					
Subtotal - Inventory	**46**	**94**	**124**	**6**	**4**	**0**	**0**	**8**	**72**	**12**
2. Facility Requirements Analysis										
Terminal Curbside & Roadway Analysis										
Airport Passenger Peak Traffic Volumes Review						8		4		
Traffic Analysis										
Review Previous Airport Studies						4		4		
Review Projections for Low, Average, and High Growth						4		2		
2023 Analysis and Modeling of Existing Peak Config						16				
Four Future Scenario Analysis and Modeling for Peak						16		4		
Traffic Report										
Prepare Draft Report Sections				2		20				
Update Analysis/Respond to Comments & QA/AC				1		2		4		
Prepare Final Report Sections				1		2		4		
Terminal Utilities Analysis										
Meetings (4)					8					
Utility Bills & Service Demand Review (Water & Gas)					16					
Utility Bills & Service Demand Review (Electrical)					12					
Terminal Expansion Electrical Demand Estimating					16					
Terminal Expansion Water, Sewer & Gas Demand Estimating					28					
Report development					8					
QA/QC	2	4		2						
Subtotal - Facility Requirements Analysis	**2**	**4**	**0**	**6**	**88**	**72**	**0**	**22**	**0**	**0**
3. Engineering Support										
Alternatives Analysis					10					
CIP Phasing					8					
PMMP Draft Review				10	10					
PMMP - Escorting							82			
QA/QC	2									
Subtotal - Engineering Support	**2**	**0**	**0**	**10**	**28**	**0**	**82**	**0**	**0**	**0**
4. Cost Estimating										
ROM Costs Estimates				2	40			160		
QA/QC	2									
Subtotal - Cost Estimating	**2**	**0**	**0**	**2**	**40**	**0**	**0**	**160**	**0**	**0**
5 SMS Audit										
Review existing airport SMS documentation	2	4	2							
Virtual Meeting with Airport	2	2								
Gap Analysis	2	12	20							
Virtual Meeting to Discuss Findings	2	2	4							
AMP documentation	2	4	8							
Develop Implementation Plan	2	6	24							
QA/QC	2									
Subtotal - SMS Audit	**14**	**30**	**58**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
6 Electrical Resiliency										
Administration										
Admin.				2		2				4
Internal Meetings / Coordination				2		2				
Inventory - Site Visit										
Prep for site visit documents				2		8				
First Site Visit - 2 days				16		16				
Second Site Visit - 2 days				16		16				
Travel Time - Air Travel				8		8				
8 Teleconference interviews:										
Tenants/Stakeholders						2		2		
Airport Staff						2		2		
Airlines						2		2		
FAA						2		2		
Rental Car Companies						2		2		
Electrical Utility						2		2		
Others						4		4		

Reviewing and uploading site pictures						2		2		
QA/QC				2						
Facility Requirements										
Emergency Systems				1		15		30		
Electrical Equipment and feeders				1		10		20		
Airport Lighting				1		10		20		
Airport One-Line Diagrams				1		20		30		
NEC Codes issues				1		2		8		
Renewable and Alternative Power Sources				1		15		20		
Risk Assesment Plan				1		10		20		
Coordination with Manufacturers				1		2		6		
Alternatives										
Preliminary Report						8		30		
Preliminary Report Review - QA/QC				4		8				
Final Report						2		8		
Capital Improvements										
Cost Estimates						6		16		
General Phase Recommendations						8		20		
Coordination with Manufacturers						4		8		
QA/QC				4						
Subtotal - Electrical Resiliency	**0**	**0**	**0**	**64**	**0**	**190**	**0**	**254**	**0**	**4**
7. Project Steering Committee Support										
Project Steering Committee Meetings		36								
Subtotal - Project Steering Committee Support	**0**	**36**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Hours	**66**	**164**	**182**	**88**	**160**	**262**	**82**	**444**	**72**	**16**

SUBTOTAL - SALARIES:		**$317,914.00**
DIRECT NON-LABOR EXPENSES		
Document Printing/Reproduction/Assembly	$150.00	
Postage/Freight/Courier	$0.00	
Office Supplies/Equipment	$100.00	
Travel Costs	$ 7,500.00	
SUBTOTAL - DIRECT NON-LABOR EXPENSES:		**$7,750.00**
SUBTOTAL:		**$325,664.00**
SUBCONSULTANTS FEE:		**$0.00**
TOTAL FEE:		**$325,664.00**

TASK 11.2 – MTZ GEOSPATIAL
(DBE FIRM ALL TASKS BUT FLIGHT)

SUMMARY TASKS:

Physical and Aerial Platform Survey to meet A/C 18b
Obstruction Data Collection to Examine Part 77
Data Collection to Populate Obstacle Action Plan

MARTINEZ GEOSPATIAL

A GEOSPATIAL SERVICE PROVIDER

Scope and Fee Proposal

Survey, Photogrammetry & Airports-GIS Services

Corpus Christi International Airport (CRP)

02/17/2023

2915 Waters Road Suite 100 Eagan, Minnesota 55121

Tel: 651-686-8424 • www.mtzgeo.com

PROJECT SUMMARY

CLIENT	Coffman Associates
CLIENT CONTACT	Mike Dmyterko
CLIENT ADDRESS	12920 Metcalf Ave, Suite 200 Overland Park, KS 66213
PROJECT LOCATION	Corpus Christi International Airport (CRP)

Martinez Geospatial, Inc. (MTZ) will provide **Coffman Associates** with survey, remote-sensing and photogrammetry services in support of a Master Plan/ALP at **Corpus Christi International Airport (CRP)**. The main objective of this effort will be to fulfill the geospatial data-collection requirements for supporting the update of the ALP.

This proposal also includes tasks required to comply with FAA Airports-GIS program standards. All survey and photogrammetry work will be accomplished in accordance with the following Advisory Circulars:

AC-150/5300-16B (16B)
AC-150/5300-17C (17C)
AC-150/5300-18B (18B)

The Airports-GIS objective for this project includes the collection/survey of both *Safety-Critical* and *Non-Safety-Critical* Data. The Safety-Critical element of the project includes Runway Ends/Thresholds & Profiles Survey, NAVAID Survey, and Airport Airspace Analysis/Obstruction Survey. The Non-Safety-Critical element of this project includes the generation of a planimetric & topographic GIS basemap of the Airport Environment and the generation of ortho-rectified aerial imagery of the Project Area.

MTZ will fulfill the data collection, formatting, and delivery requirements of the FAA Airports-GIS program. In general, MTZ's approach to fulfilling the GIS requirements will be accomplishing those required tasks as outlined in **Table 2-1 (Survey Requirements Matrix)** of **18B, Column "Airport Layout Plan."**

MTZ will make maximum use of existing data within the ADIP Portal for CRP, including Obstacle Data with FAA-assigned Identifiers.

PROJECT SPECIFICATIONS

STATE	TEXAS
COUNTY	NUECES
PROJECT TYPE	AVIATION (AIRPORTS-GIS INCLUDED)
COORDINATE SYSTEM	TEXAS STATE PLANE – SOUTH ZONE
HORIZONTAL DATUM	NAD83
VERTICAL DATUM	NAVD88 (GEOID18)
FIELD-SURVEY PROVIDED BY	MARTINEZ GEOSPATIAL
MAPPING SCALE	1"=100' & 2' CONTOURS
MAPPING FORMATS REQUIRED	STANDARD CAD w/ DTM and AIRPORTS-GIS
ORTHO RES & PHOTO FORMAT	0.5' GSD, TIF & SID FORMAT

PROJECT AREA DEFINITION

The total project area consists of three major components:

AREA A	**Airports-GIS Airspace Analysis Limits -** Horizontal Limits of the applicable Obstruction Identification Surfaces (OIS) as defined in AC-150/5300-18B.
AREA B	**Planimetric & Topographic Mapping Limit** - This area defines the limit for the generation of an AGIS Basemap.
AREA C	**Raw Obstacle Collection Limit –** This area defines the limit for the collection and reporting of all prominent obstacles.

PROJECT TASKS

Project Planning/Project Management/FAA Airports-GIS Coordination/Field-Survey Consultation

MTZ will assist Coffman in developing, submitting, and gaining approval of the "Statement of Work" for the project through the ***FAA Texas ADO*** and the ***FAA's Airport Data Information Portal (ADIP)***. MTZ will develop, submit, and gain approval of the "Aerial Photography Acquisition Report" required by the FAA Airports-GIS Program.

Aerial Imagery Acquisition

New color aerial imagery will be captured for all areas defined in the **PROJECT AREA DEFINITION** section of this proposal utilizing a high quality digital photogrammetric camera. The aerial imagery acquisition flight mission will be executed in accordance with all guidelines and specifications within FAA AC 150/5300-17C.

The aerial imagery acquisition flight mission will consist of a single "block" of imagery, collected to the following specifications:

IMAGERY RESOLUTION	PURPOSE/USE
10cm	- Raw Obstacle Data Collection - AGIS Airport Airspace Analysis - Generation of 0.50' GSD orthophotos - Planimetric/Topographic Mapping

Upon completion of the flight mission, the imagery will be reviewed through in-house Quality Assurance procedures for photogrammetric acceptability and compliance with AC 150/5300-17C requirements.

Establish Geodetic Control / Validate existing PACS/SACS

There are currently one PACS monument and two SACS monuments published in the NGS database for the airport. Surveyors will validate/utilize these monuments to serve as the project tie to the NSRS. If the existing PACS/SACS monuments are determined to be damaged or the validation is unsuccessful the surveyors will establish temporary geodetic control points, as required. Geodetic data will be tied to the NSRS using the latest published adjustment (2011).

Following are the specific PACS & SACS locations to be recovered:

Station Type	Designation	PID	Horizontal Datum	Vertical Datum	GEOID
PACS	*CRP B*	*AB3198*	*NAD83(2011)*	*NAVD88*	*GEOID18*
SACS	*CRP A*	*AC6292*	*NAD83(2011)*	*NAVD88*	*GEOID18*
SACS	*AP STA A CRP*	*AC6413*	*NAD83(2011)*	*NAVD88*	*GEOID18*

Survey Imagery Photo Control (Field-Survey)

Photo-identifiable control points and/or artificial targets will be selected or set/surveyed for use as imagery ground control. Imagery Control will be set, surveyed (properly tied to NSRS), and documented in accordance with AC-150/5300-17C and FAA Airports-GIS requirements. Ground Control data and documentation will be submitted to FAA Airports-GIS along with the AP Acquisition Report. It is anticipated that approximately **24** imagery control points will be required, along with **6** independent OPUS Checkpoints.

Aero Triangulation

The digital aerial imagery will be imported onto a digital photogrammetric workstation where it will be oriented with field-surveyed ground control. This procedure will establish both horizontal and vertical control for orienting individual photogrammetric models. This orientation will be accomplished using Soft Copy Aerial Triangulation methods.

Create Digital Ortho Imagery

Digital orthophotos will be produced to meet the requirements of Coffman and the Airport as well as to comply with the requirements of the FAA Airports-GIS Program and AC 150/5300-17C. One set of ortho imagery will be produced, covering the following defined areas and meeting the following specifications:

RESOLUTION	COVERAGE LIMIT
0.50’ GSD	AREA A

Runway Survey (Field-Survey)

Field Surveyors will accomplish survey of both runways at CRP (13/31 & 18/36); survey tasks will include survey of runway-end-points and runway-profiles. For each runway-end-point/threshold a monument will be set (if one is not already present), surveyed, and documented in accordance with AC-150/5300-18B. Runway centerline and offset profiles will be surveyed utilizing mobile-RTK methodology; final profile data will be extracted at 10-foot stations for FAA Airports-GIS submission. Runway survey data will be utilized for the Obstruction Surveys/Airport Airspace Analysis task. Furthermore, MTZ will indentify Airport Reference Point, Airport Elevation, High & Low Elevations of each Runway, and Touchdown Zone Elevations for each runway utilizing the newly surveyed Runway

Data. Runway survey data will be properly formatted by MTZ and reported in the FAA Airports-GIS deliverable.

NAVAID Survey (Field-Survey)

Surveyors will accomplish field-survey of NAVAIDs serving the CRP airport. Each NAVAID will be surveyed and documented in accordance with AC-150/5300-18B. NAVAID survey data will be properly formatted by MTZ and reported in the FAA Airports-GIS deliverable. The NAVAID Survey will include the following:

Airport Rotating Beacon	*13 PAPI*
31 PAPI	*13 MALSR*
31 MALSR	*18 PAPI*
18 MALSR	*36 MALSR*
13 LOC	*13 DME*
13 GS	*31 LOC*
31 DME	*36 LOC*
36 DME	*36 GS*
CRP VORTAC	*ASOS*
WINDCONES	*ATCT Cab Floor Elevation*

Airport Airspace Analysis/Obstruction Surveys

18B/AGIS
An Airport Airspace Analysis will be performed in accordance with AC 150/5300-18B. This task will be performed in order to comply with the requirements of the FAA Airports-GIS Program for projects involving Airport Layout Plans. All available existing obstacle data for CRP will be obtained & downloaded from ADIP; existing obstacle data (relevant to the AGIS Airspace Analysis) will be validated or updated as necessary and incorporated into this project. Existing obstacle data will be reported back to FAA through ADIP, identifiable by assigned FAA-Obstacle-ID.

The Airport Airspace Analysis will meet the following specifications:

RUNWAY	ANALYSIS TYPE
13/31	Runways-With-Vertical-Guidance
18/36	Runways-With-Vertical-Guidance

GIS Formatting of final reported 18B/AGIS obstacle data will adhere to the specifications of AC 150/5300-18B, Chapter 5 *Airport Data Features.*

Raw Obstacle Collection – AC-13B 40:1 Departure Surface

MTZ will complete raw obstacle data collection for Coffman in lieu of Part 77/TSS/OCS Analysis. The horizontal extents of the collection area are based on the dimensions of the AC-13B 40:1 Surface; in addition to the horizontal extents of the AC-13B 40:1 Surface, the collection area is expanded by connecting the corners of opposing surfaces, which provides coverage of the area underlying the Part 77 transitional surfaces (see attached exhibit). Within this defined area, MTZ will collect manmade and natural objects with no regards to penetration value. For manmade objects, all buildings, utility poles, antennas, towers, and prominent objects will be collected (small objects, such as mailboxes, posts, and utility boxes will be ignored). For vegetation, singular trees/shrubs will be collected to the extent possible/feasible. In large areas of dense vegetation, a bounding polygon will be drawn to show the

extents of the area. A 100-foot grid will be applied and the highest vegetation point within each grid-sector will be collected when absolutely necessary to reduce data congestion.

Delivery Format - Raw Obstacle Data:

DELIVERABLE	DESCRIPTION
AutoCAD FILE	This file will contain the following pieces of data: 1) Obstruction Surface Linework 2) Obstruction X-Y-Z Points (with description, number, & elevation) 3) Obstruction Area Polygon (if applicable) 4) Obstruction Area Grid (if applicable)
SPREADSHEET (EXCEL)	This file will contain the following pieces of data: • Object type • Object number (corresponding to CAD File) • Northing / Easting / Elevation • Latitude/Longitude • Approximate AGL Height (when possible)
SHAPEFILE	Will contain the same linework and point data as the CAD file. The attribute data delivered in the Excel Spreadsheet will be included in the Shapefile as Object Data Attributes.

Planimetric & Topographic Mapping Compilation

Utilizing the aerotriangulated digital imagery, photographic stereo pairs will be oriented and compiled on digital photogrammetric workstations within **AREA B**. Mapping data will be compiled meeting the following specifications:

PLANIMETRIC DATA SCALE	1"=100' SCALE (CLASS II STANDARDS)
TOPOGRAPHIC DATA SCALE	2' CONTOUR INTERVAL (CLASS II STANDARDS)

MAPPING DELIVERABLE	FORMAT
PLANIMETRIC FILE	AUTOCAD (Other formats available upon request)
CONTOUR FILE	AUTOCAD (Other formats available upon request)
DIGITAL-TERRAIN-MODEL FILE	AUTOCAD (Other formats available upon request)

The CAD products defined above will be delivered directly to **Coffman** for the updating of ALP drawings.

Mapping Edit and GIS Formatting

In addition to generating mapping data in CAD formats, all collected data will be edited and formatted in the appropriate AGIS format. In terms of GIS-attributes, MTZ will be responsible for populating all geospatial-related and/or critical attributes required for upload. In general terms, the final AGIS file created by MTZ will include both Safety-Critical and Non-Safety-Critical Data. This includes the following:

1) **SAFETY-CRITICAL**

   a. **Airspace**

AC-18B Feature	AC-18B Section
Obstacle	5.5.2
Obstruction Area (if applicable)	5.5.3
Obstruction ID Surface	5.5.4

   b. **Runway**

AC-18B Feature	AC-18B Section
Runway End	5.4.26
Runway Profile Points	5.8.6
Centerline Perpendicular Points	5.8.3
Touchdown Zone Elevation	5.8.7
Airport Elevation	5.8.2

   c. **NAVAIDs**

AC-18B Feature	AC-18B Section
Navigational Aids	All Applicable - Group 5.10

2) **NON-SAFETY-CRITICAL**

   a. **Planimetric**

AC-18B Feature	AC-18B Section
Airfield	All Applicable - Group 5.4
Manmade Structures	All Applicable - Group 5.10
Surface Transportation	All Applicable - Group 5.13
Utilities	All Applicable – Group 5.14

   b. **Topographic**

AC-18B Feature	AC-18B Section
Elevation Contour	5.8.10

Final GIS data will meet the following specifications**:**

GIS DATA-MODEL UTILIZED	FAA Airports-GIS (*AC 150/5300-18B, Chapter 5)*
GIS DELIVERY FORMAT	ArcGIS Shapefile

Airports-GIS Data Submission and Final Reporting

All data will be formatted into compliant Airports-GIS format and prepared for submission. Prior to submission, the survey-files will be tested using the FAA's survey-file-test tool in order to ensure acceptability. A "Final Report" will be generated in accordance with Advisory Circular 150/5300-18B and submitted with the final project file. Project close-out will also consist of ensuring receipt and acceptance of the obstruction survey and digital mapping data by Coffman, the FAA and NGS.

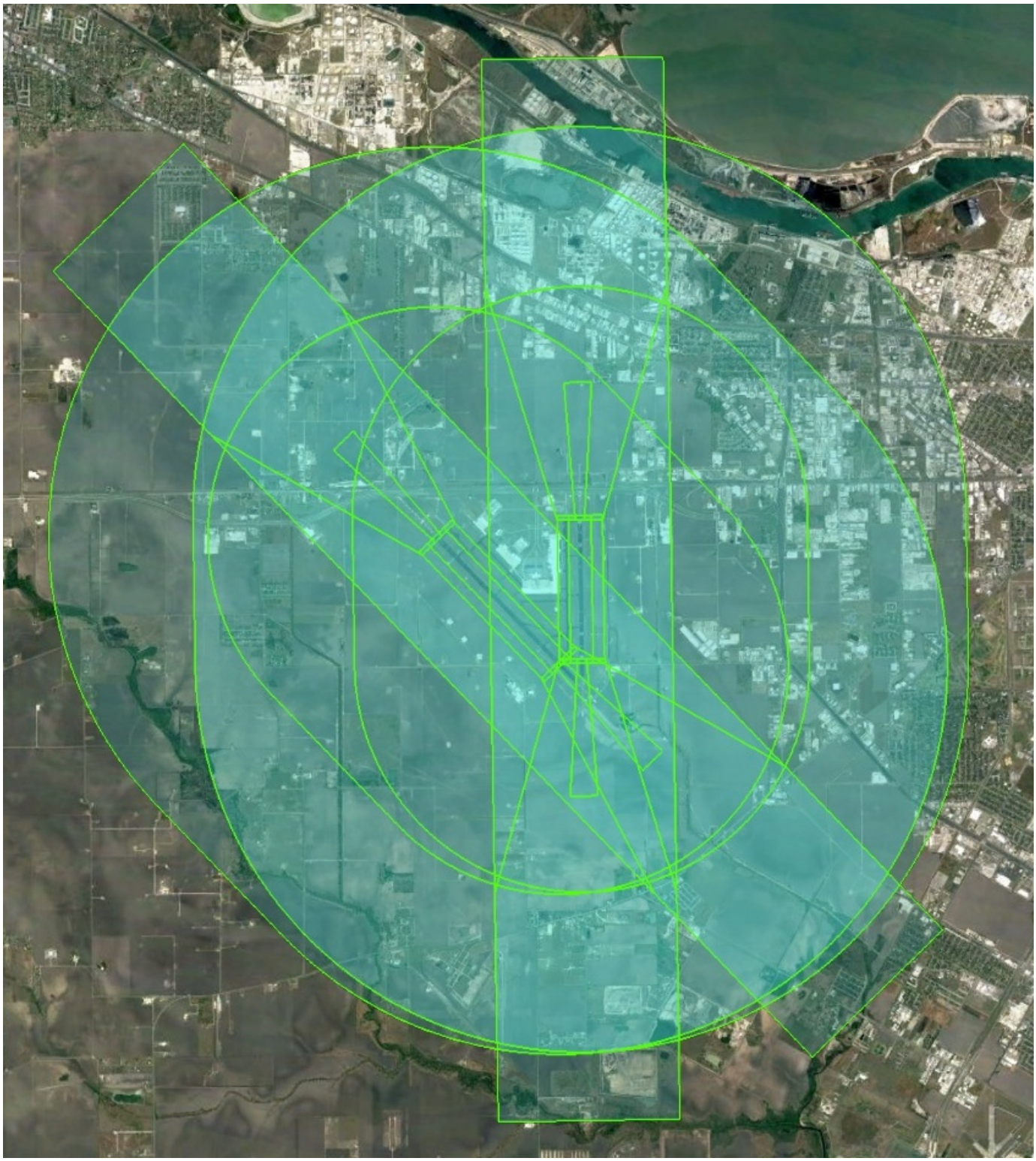
DELIVERABLE SUMMARY
1) Statement of Work Report (for FAA Airports-GIS approval)
2) Aerial Photography Acquisition Report (for FAA Airports-GIS approval)
3) Raw Obstacle Data
4) Digital Ortho Imagery of AREA A (0.50' Resolution)
5) Comprehensive FAA Airports-GIS Deliverable, consisting of: A) Safety Critical Data (Runway, NAVAID, and Airport Airspace Analysis Data) B) Non-Safety Critical Data (Planimetric & Topographic Mapping)
6) Final Report (for FAA Airports-GIS approval)

FEE SCHEDULE

It is understood that compensation for this project will be on a **LUMP SUM** basis. MTZ will invoice Coffman Associates monthly based on percent-complete of each work category below. The following is a proposed fee schedule based on major production processes/work category:

WORK CATEGORY	FEE
Project Management	$ 6,606.30
Production Management	$ 4,440.43
Imagery Acquisition / Flight Mission	$ 9,108.00
Imagery Aero-Triangulation	$ 4,406.57
Ortho Imagery Production (0.50' GSD)	$ 8,472.92
Planimetric/Topographic Mapping – Airport Property	$ 50,223.10
Airspace Analysis / Obstruction Survey	$ 18,733.05
Data Edit / GIS Formatting / FAA Compliance	$ 10,754.16
Field-Survey Services	$37,255.72
TOTAL	**$ 150,000.25 (Call it $150,000)**

Airports-GIS Airspace Analysis



Green Polygons - 18B/Airports-GIS Obstruction Identification Surfaces
Cyan Shaded Area - 0.50' GSD Ortho Imagery Coverage

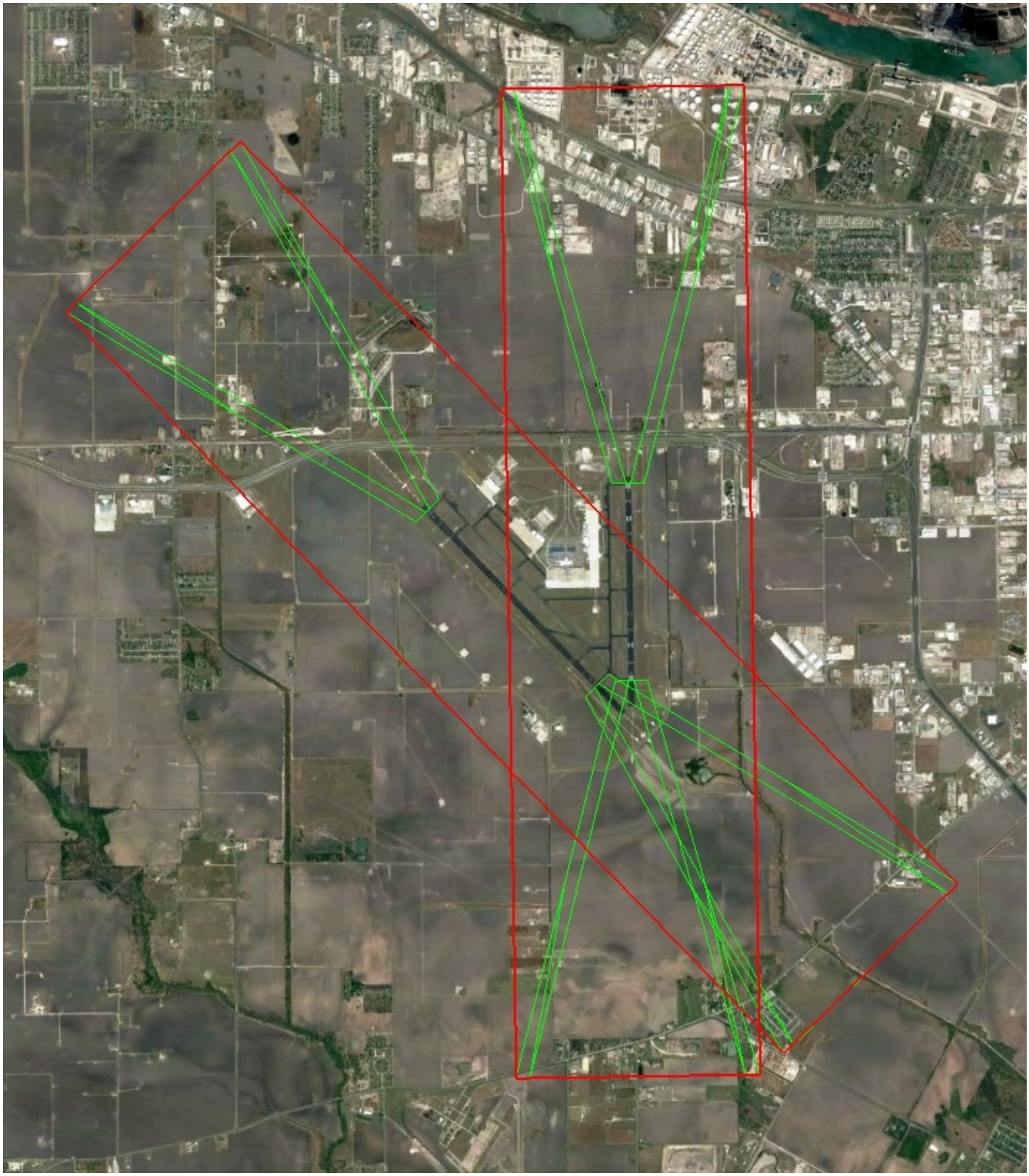
MTZ | Martinez Geospatial
2915 Waters Road Suite 100
Eagan, Minnesota 55121
Tel: 651.686.8424 Fax: 651.686.8389

Planimetric & Topographic Mapping

Red Polygon - Planimetric & Topographic Mapping Limit

MTZ | Martinez Geospatial
2915 Waters Road Suite 100
Eagan, Minnesota 55121
Tel: 651.686.8424 Fax: 651.686.8389

Raw Obstacle Data Collection



Green Polygons - AC-13B 40:1 Departure Surfaces
Red Boundary - Raw Obstacle Data Collection Limit

MTZ | Martinez Geospatial
2915 Waters Road Suite 100
Eagan, Minnesota 55121
Tel: 651.686.8424 Fax: 651.686.8389

TASK 11.3 – DKMG

SUMMARY TASKS:

Financial Planning Tasks as outlined

DKMG Consulting LLC

MEMORANDUM

6368 Cook Road
Guilford, IN 47022
tel. (812) 487-2547

TO: Mike Dmyterko
Coffman Associates

FROM: Julie A. Mattlin

DATE: February 21, 2023

RE: Proposed Scope and Budget
Corpus Christi International Airport
Master Plan Financial Plan

DKMG Consulting LLC (DKMG) is pleased to submit this proposed scope and budget to Coffman Associates to provide the financial services related to the master plan for Corpus Christi International Airport (CRP). We understand that our primary task includes preparing the financial analysis for the Master Plan. Our proposed scope and budget is presented in the following paragraphs.

The financial plan of the Master Plan presents the financial assumptions which will ultimately impact facility and funding requirements. Initial assumptions and project objectives are revised to reflect changes in activity forecasts and collateral development alternatives. Elements to be refined include the types of facilities to be built or rehabilitated, the total costs of these facilities, the timing of cash flows associated with the construction of planned facilities, and financing sources and terms.

The estimated demand on operating revenues and the impact on tenant rates and charges will be identified and analyzed, and recommended strategies for completing and funding the proposed projects will be presented. The preferred alternative will reflect a financial management structure in combination with a physical plan which accomplishes CRP's objectives for strategic growth, economic development, air and ground transportation services, and environmental mitigation.

The following components of the financial analysis will be conducted:

- **Sources and uses of funds analysis** – Reviewing design cost and phasing to determine both the costs and the different sources of funding for the recommendations including any portion that must be financed through bonds.

- **Revenue forecasting analysis** – Projecting amount and timing of additional revenues from increased facilities and from activity forecasts, as well as reviewing concession tenant leases to determine if rates can be increased during the projection period.

- **Operating expense projections** – Analyzing historical trends and the impact of new facilities on projections.

- **Cash flow analysis** – Calculating net revenue projections. Also, projecting internal rates of return, net present values, and the effects of economic and financial constraints on project viability.

- **Debt service analysis** – Determining the par amounts required for construction and or refinancing; calculation of required reserve funds, capitalized interest, and debt service coverage per the bond resolution.

Once the analysis is complete, DKMG will document the results in the financial chapter of the Master Plan.

Proposed Budget

DKMG proposes a budget of $45,100 to complete CRP's financial plan related to the Master Plan. The following table presents the details of this budget.

Consultant	*Role*	*Rate per Schedule*	*Budget*	
			*Hours **	*Amount*
J. Mattlin	Principal	$275	140	$38,500
R. DiCamillo	Principal	$275	24	6,600
Total				***$45,100***

* Given the nature of this assignment, it is difficult to predetermine the actual hours required by consultant. Therefore, the hours presented are estimates and may fluctuate between consultants during the assignment; however, the overall budget amount remains the same.

If you have any questions about our proposed scope or budget, feel free to give me a call. We look forward to working with you on this assignment.

TASK 11.4 – HUBPOINT STRATEGIC ADVISORS (DBE FIRM)

SUMMARY TASKS:

Cargo Forecasting

CCIA Master Plan - Scope of Work for Air Cargo Elements

The primary objective of the Air Cargo elements of the Corpus Christi International Airport (CRP) Master Plan is to understand the outlook for air cargo operations at the airport through a review of the relevant air cargo market and an evaluation of industry trends at small airports. This will provide a solid base of information regarding air cargo development at CRP, while considering potential future facilities and infrastructure needs.

The work will be analytical in nature and will cover all air cargo segments (general cargo, integrated express, e-commerce) via a mix of primary and secondary research. Secondary research relying on available air cargo data and market information will enable the successful completion of domestic and international air cargo market analyses. Primary research (in the form of virtual interviews with select key stakeholders) is critical due to the overall lack of detailed, publicly available data for the air cargo sector. Further, while secondary research via database analysis is valuable and necessary, it simply cannot provide the micro-level detail required to completely understand the dynamics of specific air cargo markets.

The consulting team recognizes that an Air Cargo Assessment for CRP was completed in February 2021. To the extent possible, the findings of that report will be utilized in order to keep the Master Plan workflow efficient and focused on new information. Although the Air Cargo Assessment is a relatively recent piece of work, given its timing, the full impacts of the pandemic and the trends which have developed since then could not have been fully considered. Additionally, various data from that report will need to be updated, as possible, to reflect the latest available information.

Importantly, the findings of the air cargo work for the Master Plan will enable development of an informed forecast of air cargo tonnage and related activity levels expected at CRP.

Air Cargo Analysis

The air cargo analysis for CRP will follow the methodology described below:

- Review CRP's historic cargo-related data/information as well as past studies
    - Analyze historic air cargo statistics
    - Review past air cargo studies and current Master Plan
- Provide overview of U.S. air cargo market trends at small airports
- Evaluate CRP's current situation
    - Review current air services (scheduled and charters) and identify relevant aviation service providers
    - Assess facilities and infrastructure relevant to air cargo
- Analyze the regional air cargo market via primary and secondary research
    - For select Texas airports, review air cargo operations and demand for a multi-year period
    - Review regional air cargo services (air carrier services and Road Feeder Services)
    - Identify major demand drivers for air cargo service
    - Analyze population and income trends in the Corpus Christi market
    - Assess available forward-looking information indicating future air cargo demand levels

- Assess U.S. operations of select integrated and e-commerce air cargo carriers (e.g. FedEx, UPS, DHL, Amazon Air) as well as forwarder-controlled networks operating at small U.S. airports
    - Strategy, air network, aircraft fleet
    - Outlook, growth plans and relevance to CRP
- SWOT analysis for CRP air cargo operations
- Synthesis of findings related to potential air cargo services and activity levels at CRP over time

Air Cargo Forecasts

Based on the findings and synthesis from the air cargo analysis, air cargo forecasts will be developed for utilization by airport planners. Depending on the specific circumstances and the intended use, a variety of techniques can be employed in the development of air cargo forecasts. Air cargo forecasts for individual airports (especially those that are not major cargo gateway airports) are often best formulated using a service-based approach or a scenario-based approach.

A service-based approach to air cargo forecasts is established under the premise that airports can only realize cargo volumes to the extent that adequate supply of air cargo capacity (from air carriers) is present and available at those airports. In fact, for an airport level forecast, supply of air cargo capacity is just as important as the "demand-pull" created by economic growth and activity. For the service- based approach, estimates of future aircraft operations (both passenger and all-cargo operations) are required to impute air cargo tonnage on those flights. The future aircraft operations are a function of historical operations at the airport as well as any forward-looking information regarding demand and related possible net new operations or anticipated changes in the profile of existing operations. The summation of cargo tonnage via this methodology, along with other assumptions and analyses, produces an airport-level air cargo forecast.

A scenario-based approach to air cargo forecasts is similar to the service-based approach, but is particularly useful for airports with little history with air cargo operations and for airports pursuing specific types of air cargo development that have particular profiles from the perspective of airline operations and service patterns. As the name implies, the scenario-based approach relies on the definition of specific cargo-related scenarios at airports (including assumptions of operational details and service development over time) and the cargo volumes associated with those scenarios. While this approach can be seen as somewhat prospective, its value from a planning perspective lies in quantifying possible levels of cargo activity should those types of scenarios come to fruition. From this standpoint, it is important to ensure that the scenarios are as realistic and informed as possible, but for planning purposes, also encompass a wide-range of possible cargo air service development environments that could be experienced by an airport during the forecast period.

Forecast Output

- CRP 20-year air cargo demand forecasts
    - Annual air cargo tonnage
    - Annual all-cargo aircraft operations
    - Aircraft fleet mix by carrier type
    - Scenario development for prospective CRP all-cargo services

Deliverables

- Written report with supporting analysis, charts and tables
- 20-year air cargo demand forecasts with text write-up and summary charts, tables
- Virtual meetings with Airport management and select stakeholders
    - Virtual meeting with CRP management
    - Anticipated virtual meetings with up to 8 relevant stakeholders
- Interaction and coordination with Coffman Associates team regarding planning implications of findings and air cargo forecasts

Pricing

To complete the Scope of Work for the Air Cargo Elements of the CCIA Master Plan, Hubpoint's fees are as follows:

- **Professional Fees: $86,500.00**
- **No on-site visit to CCIA and no travel expenses are anticipated in this Scope of Work**

TASK 11.5 – ALLIIANCE

SUMMARY TASKS:

Terminal Building Analyses

Alliiance Scope of Work (SOW) **March 7, 2023**

Corpus Christi International Airport (CRP) - Airport Planning Services – Terminal

Task 1: Project Formulation

- Project Scope / Fee Preparation
- Kick-off Meeting (on-site)

Task 2: Existing Conditions – Terminal Area Inventory

The objective of this task is to inventory the physical area of the terminal to create a baseline of existing conditions which will be utilized in subsequent tasks. This detailed inventory of space will be tabulated by key categories of functional use which will be used as a basis of comparison to future projections of space based on the prepared forecast.

The following terminal areas will be documented:

- Aircraft gate layout (including size and types of aircraft)
- Ticketing/Check-in (including Self-Service Device vs Agent)
- Airline Ticket Offices (ATO)
- Baggage Screening
- Outbound Baggage Makeup
- TSA Security Screening Checkpoint
- Gate Holdrooms
- Concessions including Rental Car
- Restrooms
- Baggage Claim
- Inbound baggage laydown
- Airline/Airport Operations
- US Customs & Bord Protection (FIS)
- Offices (TSA, Airport Administration, Public Safety, etc.)
- Terminal Maintenance and Support
- Circulation

The team will review existing documents including the current Airport Layout Plan (ALP), current "as-built" terminal AutoCAD/Revit plans, and any additional files applicable to the study such as passenger intercept surveys which may have already been gathered by the Airport. An onsite facility tour will aid in validation of the existing plans and provide the Team with the opportunity to conduct field observations of the various passenger processing areas and terminal operations. This will help to gain both a subjective and quantitative sense for how aircraft, passengers, and baggage are processed. Additionally, interviews with the various tenant stakeholders such as those by the Airlines, the Transportation Security Administration (TSA), Customs and Border Protection (CBP), concessionaires (food and beverage, retail, rental car), and Airport staff will be conducted to gather pertinent passenger

demographics and processing rates, airline staffing policies, baggage operations and throughput, and any other key factors including but not limited to:

- Passenger early arrival distributions (show up time prior to their scheduled departure time)
- Passenger profiles by check-in type (i.e., Self-Service Device, Agent, Bag Drop, Online, straight to security, etc.)
- Bags per passenger
- Travel party size
- Meeter & Greeter ratios

Deliverables:

A DRAFT working paper summarizing the findings of the existing terminal inventory will be provided for Airport and stakeholder review. Upon review a FINAL draft will be provided incorporating any Airport and stakeholder comments which will be included in the overall Master Plan deliverable.

Task 3: Facility Requirements - Terminal Area

The primary objective of this task is to develop the future facility requirements to meet the projected demand levels over the 20-year planning horizon.

This will be achieved through the following:

- Spreadsheet modeling will be utilized to develop space requirements for all critical components of the terminal building organized by major functional use as identified in the inventory task. The approach for developing the terminal requirements include guidance from various FAA Advisory Circulars, applicable Airport Cooperative Research (ACRP) reports, TSA guidelines for both passenger and checked baggage screening, US Customs and Border Protection design guidelines, knowledge of industry trends and the application of industry accepted planning standards. Facility recommendations in general will be based on the International Air Transport Association (IATA) Level of Service (LoS) "Optimum" standard where applicable.
- A table of future terminal space demand organized by Passenger Activity Levels (PAL) will be documented which identify "trigger" points at which future demand will exceed current facility capacity. These "trigger" points will also be documented graphically by functional area identifying those areas and the time at which additional expansion is required.
- Gate requirements will be developed utilizing the demand forecast as well as from any future design day flight schedules (DDFS). In the absence of DDFS, various industry standard methods will be utilized such as: annual departures per gate, annual enplanements per gate, and percent increase in annual operations. Results will be tabulated by PAL showing both quantity and mix of aircraft type required.

Deliverables:

A DRAFT working paper summarizing the analysis of the programs' findings as compared to existing facility capacity, including both tabular summary of space and any required graphical charts and exhibits will be provided for Airport and stakeholder review. Upon review a FINAL draft will be provided

incorporating any Airport and stakeholder comments which will be included in the overall Master Plan deliverable.

Task 4: Alternatives Development & Evaluation – Terminal Area

The objective of this task is to develop various conceptual terminal area expansion alternatives to meet the programmatic requirements derived in the Facility Requirements task. The ultimate goal will be to identify a preferred alternative plan which forms the basis of the terminal portion of the facilities implementation plan.

This will be achieved through the following:

- Provide up to five (5) initial terminal site expansion alternatives for the terminal core area. This includes landside parking, curbfront, the terminal building, and aircraft gate, apron, and associated taxiway/taxilane infrastructure paying special attention to any FAA Part 77 surface restrictions.
- After presenting the initial set of site alternatives, incorporate any necessary refinements, consolidation of alternatives, and the addition of any new concepts based on Airport review and comments.
- Evaluate alternatives based on criteria such as operational, environmental, and financial impacts as well as those derived from any previously set goals and objectives. From this exercise a set of three (3) shortlisted alternatives will be identified and carried forward for further refinement and evaluation.
- Final evaluation of the three shortlisted alternatives will be conducted using the previous set of evaluation criteria to determine the preferred alternative.
- The preferred alternative will include high level colored “block” diagram plans depicting major space elements such as area for an in-line baggage screening system. Future terminal expansion development beyond the 20-year planning horizon will also be graphically documented.

Deliverables:

A DRAFT working paper summarizing the development of the range of alternatives, the process for evaluation, and the final recommended plan will be provided in both narrative and graphical format. Upon review a FINAL draft will be provided incorporating any Airport and stakeholder comments which will be included in the overall Master Plan deliverable.

Task 5: Project Management

- Biweekly Status Coordination
- Project Administration/Coordination
- FAA Deliverable Review Coordination

Alliiance Workplan and Fee Estimate
Corpus Christi International Airport (CRP) - Airport Planning Services - Terminal

Alliiance

Summary by Task	(A) Labor	(B) Expenses	(C) Travel/Per Diem	(D) Special Services	A)+(B)+(C)+(D) Amount Requested
Task 1: Project Formulation	$3,440.00	$0.00	$1,125.00		$4,565.00
Task 2: Existing Conditions – Terminal Area Inventory	$11,780.00	$70.00	$2,250.00		$14,100.00
Task 3: Facility Requirements - Terminal Area	$19,125.00	$110.00	$2,250.00		$21,485.00
Task 4: Alternatives Development & Evaluation – Terminal Area	$23,490.00	$140.00	$4,500.00		$28,130.00
Task 5: Project Management	$13,360.00	$80.00	$0.00		$13,440.00
Totals	**$71,195.00**	**$400.00**	**$10,125.00**	**$0.00****	**$81,720.00**

Whole Project Labor Summary	Total Hours	Principal in Charge $250.00	Sr. Planner $165.00	Sr. Terminal Designer $165.00	PM / Arch $135.00	Arch Tech. $90.00	Title	Title	Total Cost for Labor
Labor	494	38	144	27	144	123	0	0	$68,225.00

Alliiance

Task 1: Project Formulation	Total Hours	Principal in Charge $250.00	Sr. Planner $165.00	Sr. Terminal Designer $165.00	PM / Arch $135.00	Arch Tech. $90.00	Title $0.00	Title $0.00		Total Cost per Item
Project Scope / Fee Preperation	7	3	2		2					$1,350.00
Kick-off Meeting (on-site)	12	2	8		2					$2,090.00
-	0									$0.00
Estimated Total Labor	19	5	10	0	4	0	0	0	$0.00	$3,440.00
Production Copier									$0.00	$0.00
Postage and Freight									$0.00	$0.00
Estimated Total Expenses										$0.00
Mileage										$0.00
Flight/s (1 person-trips)									$900.00	$900.00
Hotel / Food									$225.00	$225.00
Estimated Total Travel										$1,125.00
Total		**$1,250.00**	**$1,650.00**	**$0.00**	**$540.00**	**$0.00**	**$0.00**	**$0.00**	**$1,125.00**	**$4,565.00**

Alliiance Workplan and Fee Estimate
Corpus Christi International Airport (CRP) - Airport Planning Services - Terminal

Alliiance

Task 2: Existing Conditions – Terminal Area Inventory	Total Hours	Principal in Charge	Sr. Planner	Sr. Terminal Designer	PM / Arch	Arch Tech.	Title	Title		Total Cost per Item
		$250.00	$165.00	$165.00	$135.00	$90.00	$0.00	$0.00		
Terminal Area Inventory	56		16		16	24				$6,960.00
Airport Tenants and Users Interviews	17	1	8		8					$2,650.00
Inventory Working Paper	17	1	4		4	8				$2,170.00
-	0									$0.00
Estimated Total Labor	90	2	28	0	28	32	0	0	$0.00	$11,780.00
Production Copier									$50.00	$50.00
Postage and Freight									$20.00	$20.00
Estimated Total Expenses										$70.00
Mileage										$0.00
Flight/s (2 person-trips)									$1,800.00	$1,800.00
Hotel / Food									$450.00	$450.00
Estimated Total Travel										$2,250.00
Total		**$500.00**	**$4,620.00**	**$0.00**	**$3,780.00**	**$2,880.00**	**$0.00**	**$0.00**	**$2,320.00**	**$14,100.00**

Alliiance

Task 3: Facility Requirements - Terminal Area	Total Hours	Principal in Charge	Sr. Planner	Sr. Terminal Designer	PM / Arch	Arch Tech.	Title	Title		Total Cost per Item
		$250.00	$165.00	$165.00	$135.00	$90.00	$0.00	$0.00		
Terminal Demand-Capacity Analysis	38	3	24	1	8	2				$6,135.00
Architectural Programming Services	39	3	24	2	8	2				$6,300.00
Terminal Area Facility Requirements Working Paper	17	1	8		4	4				$2,470.00
Working Sessions/Meetings	26	2	16		8					$4,220.00
-	0									$0.00
Estimated Total Labor	120	9	72	3	28	8	0	0	0	$19,125.00
Production Copier									$80.00	$80.00
Postage and Freight									$30.00	$30.00
Estimated Total Expenses										$110.00
Mileage										$0.00
Flight/s (2 person-trips)									$1,800.00	$1,800.00
Hotel / Food									$450.00	$450.00
Estimated Total Travel										$2,250.00
Total		**$2,250.00**	**$11,880.00**	**$495.00**	**$3,780.00**	**$720.00**	**$0.00**	**$0.00**	**$2,360.00**	**$21,485.00**

Alliiance Workplan and Fee Estimate
Corpus Christi International Airport (CRP) - Airport Planning Services - Terminal

Alliiance

Task 4: Alternatives Development & Evaluation – Terminal Area	Total Hours	Principal in Charge $250.00	Sr. Planner $165.00	Sr. Terminal Designer $165.00	PM / Arch $135.00	Arch Tech. $90.00	Title $0.00	Title $0.00		Total Cost per Item
Terminal Alternatives Development and Evaluation	138	6	16	16	30	70				$17,130.00
Alternatives Working Paper	15	1	6		4	4				$2,140.00
Working Sessions/Meetings	26	2	16		8					$4,220.00
-	0									$0.00
Estimated Total Labor	179	9	20	16	42	74	0	0	0	$23,490.00
Production Copier									$100.00	$100.00
Postage and Freight									$40.00	$40.00
Estimated Total Expenses										$140.00
Mileage										$0.00
Flight/s (2 person-trips)									$3,600.00	$3,600.00
Hotel / Food									$900.00	$900.00
Estimated Total Travel										$4,500.00
Total		**$2,250.00**	**$3,300.00**	**$2,640.00**	**$5,670.00**	**$6,660.00**	**$0.00**	**$0.00**	**$4,640.00**	**$28,130.00**

Alliiance

Task 5: Project Management	Total Hours	Principal in Charge $250.00	Sr. Planner $165.00	Sr. Terminal Designer $165.00	PM / Arch $135.00	Arch Tech. $90.00	Title $0.00	Title $0.00		Total Cost per Item
Biweekly Status Coordination	46	6	8	8	16	8				$7,020.00
Project Administration/Coordination	34	6	4		24					$5,400.00
FAA Deliverable Review Coordination	6	1	2		2	1				$940.00
-	0									$0.00
Estimated Total Labor	86	13	14	8	42	9	0	0	$0.00	$13,360.00
Production Copier									$60.00	$60.00
Postage and Freight									$20.00	$20.00
Estimated Total Expenses										$80.00
Mileage										$0.00
Flight/s (0 person-trips)									$0.00	$0.00
Hotel / Food									$0.00	$0.00
Estimated Total Travel										$0.00
Total		**$3,250.00**	**$2,310.00**	**$1,320.00**	**$5,670.00**	**$810.00**	**$0.00**	**$0.00**	**$80.00**	**$13,440.00**

TASK 11.6 – APPLIED PAVEMENT TECHNOLOGY

SUMMARY TASKS:

Pavement Condition Inspections
PCR Calculations
PAVER Customization and Analysis
Pavement Maintenance Plan (Airside and Primary Terminal Roads as indicated)

CORPUS CHRISTI INTERNATIONAL AIRPORT
2023 PAVEMENT MANAGEMENT PROGRAM UPDATE

PROPOSED SCOPE OF SERVICES

Project Overview

As part of the Corpus Christi International Airport (CCIA) Master Planning study being conducted by Coffman Associates (Coffman) for the City of Corpus Christi, Applied Pavement Technology, Inc. (APTech) has been asked to provide a Scope of Services for updating the Pavement Management Program (PMP) for the airfield and select landside roadway pavements.

As part of this proposed effort, APTech will review relevant pavement records, use this information to update the PAVER pavement management database and develop associated maps, perform Pavement Condition Index (PCI) inspections, determine runway Pavement Classification Ratings (PCRs), determine maintenance and rehabilitation (M&R) needs, develop a recommended rehabilitation plan, and prepare a project report. The project limits for this proposed update, which are illustrated in the appended Exhibit A, includes approximately 7.8 million square feet of airfield pavement and 600,000 square feet of roadway pavement.

Work will be performed in accordance with the following standards and software:

- Federal Aviation Administration (FAA) Advisory Circular 150/5380-7B, *Airport Pavement Management Program (PMP)*
- FAA Advisory Circular 150/5380-6C, *Guidelines and Procedures for Maintenance of Airport Pavements*
- ASTM Standard D5340-20, *Standard Test Method for Airport Pavement Condition Index Surveys*
- ASTM Standard D6433-20, *Standard Practice for Roads and Parking Lots Pavement Condition Index Surveys*
- FAA Advisory Circular 150/5335-5D, *Standardized Method of Reporting Airport Pavement Strength – PCR*
- FAA's FAARFIELD pavement design software
- PAVER (version 7) pavement management software

This document outlines APTech's proposed Scope of Services, including a detailed description of the tasks to accomplish this effort.

Scope of Services

Task 1. Project Meetings and Coordination

This task includes staff scheduling and coordination, project communications, monthly progress reporting and invoicing, and other important elements of managing a successful project.

Upon Notice to Proceed (NTP), APTech will begin discussions with Coffman and airport staff regarding schedule, airport access, and other security and airport operational items, in preparation for the on-site inspections. Project objectives, schedule, and deliverables will be reviewed to ensure that everyone has a clear understanding of the expectations from this project.

In particular, coordination and timing of the PCI inspections will be discussed, as well as airport access and other security and operational logistics. A project contact list will be created and distributed, and the chain of communication will be established for daily field work updates. This initial coordination will be completed via tele- or web-conferencing and email communication.

A project meeting will be held at the airport's facilities immediately prior to starting the field work. Access to the pavements and daily coordination of the fieldwork activities will be reviewed. APTech's PCI inspectors will attend this meeting in person.

Additional meetings will be held virtually as needed throughout the project.

Task 2. Records Review

The collection of pavement construction history and traffic information will begin immediately following the project kick-off.

Available pavement construction, rehabilitation, and maintenance history information will be collected and reviewed, focusing on work completed since the previous PMP project. Records of interest include the type of work performed, the extents of each project, and the date the work was completed. Material types and thicknesses along with subgrade strengths for the runway pavements will also be obtained as required inputs for PCR calculations. Sources of this information may include construction plan drawings, engineering/design reports, and past pavement evaluation or geotechnical investigations. APTech will reference and build on any information from previous PMPs (if available) and will incorporate updated construction history data into PAVER. Pavement records are to be provided electronically by airport staff or Coffman.

Detailed traffic information is also required for PCR calculations. The aircraft traffic data needed for the analysis include aircraft types, operating weights (maximum takeoff weights will be used if unknown), number of annual departures, and anticipated changes in operations over the 20-year analysis period. APTech will work closely with Coffman and airport staff to obtain the required information.

Task 3. Network Definition and Mapping

Based on a review of records, APTech will update the pavement network definition, including the development of a landside roadway network. The airfield and roadway networks will be divided into unique branches (with each runway, taxiway, apron, or roadway representing a branch), sections (areas with distinct pavement type, age, traffic, and overall condition), and sample units in accordance with FAA and ASTM guidelines and will serve as the basis for the PCI inspections. Branch, section, and sample unit boundaries will be shown on a network definition map. APTech will update the PAVER database following development of the network definition map.

The network definition map will be field verified during the PCI inspections and modified to reflect any changes identified, with details in PAVER also updated as needed. Upon completion of the pavement inspection, APTech will develop a PCI map. APTech will also develop maps presenting runway PCR results and rehabilitation recommendations over the next 5 years. These maps will be included in the project report.

Task 4. Pavement Condition Inspections

A visual inspection of the airfield and roadway pavements will be performed following the previously mentioned FAA and ASTM guidance. APTech will use the sampling rate presented in table 1 for airfield pavements and the sampling rate presented in table 2 for roadway pavements, which target a 95 percent confidence level. In addition to inspecting the sample units selected through random sampling, any unique or isolated pavement situations will be identified as an additional sample unit and inspected, in accordance with ASTM standards D5340 and D6433. Digital photographs will also be taken, with embedded GPS coordinates, to record both typical and atypical distresses.

Table 1. PCI inspection sampling rate for airfield pavements.

Concrete Pavement		**Asphalt-Surfaced Pavement**	
Total Number of Sample Units in Pavement Section (N)	**Number of Sample Units to Inspect (n)**	**Total Number of Sample Units in Pavement Section (N)**	**Number of Sample Units to Inspect (n)**
1 — 3	all	1 — 3	all
4	3	4	3
5 — 7	4	5 — 9	4
8 — 10	5	10 — 20	5
11 — 16	6	21 — 30	6
17 — 28	7	31 — 70	7
29 — 64	8	>70	10%, but ≤ 17
65 — 90	9		
> 90	10%, but ≤ 32		

Table 2. PCI inspection sampling rate for roadway pavements.

Concrete Pavement		**Asphalt-Surfaced Pavement**	
Total Number of Sample Units in Pavement Section (N)	**Number of Sample Units to Inspect (n)**	**Total Number of Sample Units in Pavement Section (N)**	**Number of Sample Units to Inspect (n)**
1 – 3	all	1 – 3	all
4 – 7	3	4 – 9	3
8 – 16	4	10 – 20	4
17 – 28	5	21 – 30	5
29 – 64	6	31 – 70	6
65 – 90	7	71 – 150	7
91 – 150	8	151 – 200	8
151 – 200	9	>200	9
> 200	10		

During the PCI inspections, APTech will enter the distress data directly into PAVER using tablet computers, allowing preliminary PCIs to be verified while on site. Following the inspections, all data entry will be carefully error-checked to confirm information stored in PAVER is accurate and consistent with the information collected throughout the project.

APTech's proposed services assume the following:

- APTech's inspectors will be escorted on airfield pavement by a team member (Garver, under direct contract with Coffman) who has an airfield badge with movement-area driving privileges.
- Traffic control for the landside roadways will be provided by a specialized, local firm (either Highway Barricades & Services [https://www.hbstexas.com] or Safety First Traffic Solutions [https://www.safetyfirsttraffic.com] is proposed under direct contract with APTech).
- The pavement inspections will take place during daylight hours without the need for artificial lighting.
- The inspections can be completed by two APTech inspectors in 9 consecutive days (7 days for airfield pavements and 2 days for roadway pavements), allowing for 9 hours of access per day.

Task 5. PCR Calculations

Key inputs for PCR calculations include pavement layer information (thickness and strength), subgrade support, and aircraft traffic details. It is assumed pavement and subgrade information and traffic details applied for PCR calculations will be provided by airport staff as part of task 2 (records review). No testing is included to determine pavement and subgrade information.

APTech will calculate the PCR of each runway pavement section in accordance with FAA Advisory Circular 150/5335-5D and using the FAA's FAARFIELD software. The resulting values will be compared with the Aircraft Classification Rating (ACR) of the analyzed aircraft to identify if any aircraft are overloading the existing structures. A single PCR will be recommended as the value to publish for each runway. Additionally, aircraft loads for applicable gear configurations will be correlated with the resulting PCRs and will also be reported.

Task 6. PAVER Customization and Analysis

The PCI data collected during this project will be analyzed within PAVER to determine the overall condition in terms of a PCI value for each pavement section. Types of distress, cause(s) of pavement deterioration, and rate of deterioration will also be assessed and presented.

To get the most out of the PMP, APTech will customize the PAVER database and use the maintenance and rehabilitation (M&R) planning tools in the software to determine work needs. APTech will develop performance prediction models to predict future conditions and timing of recommended rehabilitation projects over the next 5 years. APTech will also work closely with Coffman and airport staff to determine customized M&R analysis inputs, such as critical PCIs (the point at which rehabilitation should be considered instead of preventive maintenance), preventive maintenance policies, and unit costs for maintenance and rehabilitation activities, so that it reflects the plans and policies under which the Airport operates.

The PCI results, along with the customized M&R analysis inputs, will be used to identify maintenance needs based on current distresses and rehabilitation needs over the next 5 years. By considering various rehabilitation budget scenarios, the implications on pavement condition of not assessing these needs will also be determined.

APTech will perform PAVER GIS linking as part of the customization activities. The GIS link within PAVER correlates database information (such as section names, surface types, ranks, current PCIs, projected PCIs, and so on) with associated maps. This link increases accessibility of the information stored in the database and facilitates the communication of the pavement management data and analysis results to others. The shapefiles associated with PAVER through this GIS linking are embedded with the key information from the database, such that these files can be opened using external GIS software to retrieve and display this information.

Task 7. Rehabilitation Recommendations

The results of the PAVER M&R analysis will be used as a starting point for developing a 5-year recommended rehabilitation plan. The PAVER analyses will serve as a basis for developing a recommended rehabilitation plan and will be adjusted to organize work into logical project groupings. Specific distress types that are occurring, as well as results of the runway PCR calculations, will also be considered when developing the recommendations.

A virtual meeting is proposed at the start of this task to discuss the PCI results and preliminary rehabilitation recommendations with Coffman and airport staff. The discussion will focus on factors other than pavement condition that might affect the recommended plan, such as safety requirements, phasing needs, construction feasibility, funding constraints, and projects that are already programmed for work. The recommended plan will be adjusted to account for these factors.

Task 8. Report Preparation

APTech will prepare and submit a detailed report that documents the methodologies and analysis results of the PMP, as well as the recommended maintenance and rehabilitation work. Maps presenting the pavement network, PCI results, runway PCRs, and rehabilitation recommendations will be included.

The draft report will be provided electronically (in PDF format) to Coffman and airport staff for review and comment. A final report will be prepared, which will address any comments (also submitted electronically. The PAVER database, maps, and distress photos will be also provided as electronic deliverables.

SCOPE

AIRFEILD

ROADS

applied pavement TECHNOLOGY

115 W. Main Street, Suite 400
Urbana, IL 61801
Tel: (217) 398-3977
Fax: (217) 398-4027

AGENCY: City of Corpus Christi			
LOCATION: Corpus Christi International Airport Corpus Christi, TX			
PAGE TITLE: Project Extents Map			
PROJECT DATE: FEB. 2023	CREATION DATE: FEB. 2023	PROJECT MANAGER: GEL	JOB NUMBER: 2022-092-AM01
DRAWING SCALE: 1:700	LAST MODIFIED DATE: FEB. 2023	REVISED BY: ARK	DRAWN BY: ARK
FILENAME: CRP-Scope Map.dwg		LAYOUT NAME/NUMBER: SCOPE	Figure Exhibit A

Corpus Christi International Airport 2023 Pavement Management Program Update
Coffman and Associates

March 03, 2023

Name	Title/Role	Estimated Labor Hours								Total	% Time
		Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8		
Monty Wade	Principal-In-Charge	2							4	6	0
Katherine Gauthier	Project Manager	28	16	8	20	24	52	36	32	216	10
Gen Long	Senior Engineer, QC	2	2		2	12	8	8	8	42	2
Mir Arefin	Engineering Associate III	2	28	4	120	40	12	12	52	270	13
Konrad Kepka	Engineering Associate I	2			112					114	5
Trent Montgomery	Mapping QC			2					4	6	0
Tyler Noel	Technical Editor								2	2	0
Aric Foster	Mapping			60	8	4	8	8	4	92	4
Jessica Snyder	Graphic Designer								2	2	0
Total APTech Hours		36	46	74	262	80	80	64	108	750	

Name	Title/Role	Estimated Labor Costs								Total	Loaded Rate
		Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8		
Monty Wade	Principal-In-Charge	$650							$1,300	$1,950	$325.00
Katherine Gauthier	Project Manager	$4,480	$2,560	$1,280	$3,200	$3,840	$8,320	$5,760	$5,120	$34,560	$160.00
Gen Long	Senior Engineer, QC	$590	$590		$590	$3,540	$2,360	$2,360	$2,360	$12,390	$295.00
Mir Arefin	Engineering Associate III	$260	$3,640	$520	$15,600	$5,200	$1,560	$1,560	$6,760	$35,100	$130.00
Konrad Kepka	Engineering Associate I	$220			$12,320					$12,540	$110.00
Trent Montgomery	Mapping QC			$290					$580	$870	$145.00
Tyler Noel	Technical Editor								$180	$180	$90.00
Aric Foster	Mapping			$6,900	$920	$460	$920	$920	$460	$10,580	$115.00
Jessica Snyder	Graphic Designer								$270	$270	$135.00
Total APTech Direct Labor (TADL)		$6,200	$6,790	$8,990	$32,630	$13,040	$13,160	$10,600	$17,030	$108,440	

Other Direct Costs		Estimated Other Direct Costs								Total	Unit Rate
		Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8		
Materials and Services					$50					$50	
Travel					$6,332					$6,332	
Subcontractor--	Traffic Control for Roadway Inspections				$5,000					$5,000	
Total Other Direct Costs (TODC)					$11,382					$11,382	

Overall Cost Summary	Estimated Overall Cost								Total
	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8	
Total APTech Direct Labor (TADL)	$6,200	$6,790	$8,990	$32,630	$13,040	$13,160	$10,600	$17,030	$108,440
Total Other Direct Costs (TODC)				$11,382					$11,382
TOTAL ESTIMATED COST AND ODC FEE	$6,200	$6,790	$8,990	$44,012	$13,040	$13,160	$10,600	$17,030	$119,822

TASK 11.7 – PARKHILL

SUMMARY TASKS:

Landside Development Planning

Parkhill

July 13, 2023

Mr. Mike Dmyterko, President
Coffman Associates
12920 Metcalf Ave, Suite 200
Overland Park Kansas 66213

RE: Proposal for Professional Services - REVISED
Airport Master Planning Services
Corpus Christi International Airport

Dear Mr. Dmyterko:

Parkhill is pleased to have the opportunity to provide this proposal for Nonaeronautical Development Planning Services to Corpus Christi International Airport for Airport Master Planning Services.

SCOPE OF SERVICES

The Scope of Services is to provide Nonaeronautical Development Planning Services (further defined in Exhibit A).

Services specifically excluded from our Scope of Services include but are not limited to:

- Water and Sanitary System Modeling Effort
- Subsurface Utility Engineering
- Cut/Fill Analysis of Earthwork
- Full topographic survey
- Signed and Sealed Boundary Survey
- Texas Department of Transportation permitting or Traffic Impact Analysis
- Final and Recording components of Platting process

COMPENSATION

Our fee for Scope of Services described herein will be based on a lump sum amount of $83,500 and billed on a percentage complete method.

Task 1 – Creation of Land Use Plan	$15,000
Task 2 – Creation of Specification Sheets / Existing Utility Analysis	$50,500
Task 3 – Airport Layout for Existing & Future Landside Development	$18,000
Task 4 – Implementation of Solar Energy or Microgrids	N/A
Total Fee	**$83,500**

If this proposal meets your expectations, you may indicate your acceptance by returning a signed copy to our office. Upon receipt, we will wait to receive your Agreement and consider receipt of executed document as authorization to proceed.

We appreciate the opportunity to provide you with professional services and look forward to successful completion of your Project. For questions, please contact me directly at ccoons@parkhill.com or 317.331.7751.

Sincerely,

PARKHILL

By _____
Christopher D. Coons, P.E.
Senior Project Manager

By _____
Mark Haberer, P.E., C.M.
Director of Aviation, Principal

Accepted,

COFFMAN ASSOCIATES

Accepted By: _____

Title: _____

Date: _____

CDC/dg
Encl

A:\2022\40405.22\00_ADMIN\00_CONTR\00_FEE\DRAFT\MDmyterko-CRP_AMP_ProposalLetter_2023.07.13.docx

EXHIBIT A

SCOPE OF SERVICES - PARKHILL
for
Corpus Christi International Airport
Corpus Christi, Texas

Airport Master Planning Services

INTRODUCTION

This scope of services for Corpus Christi International Airport (CRP) will provide a detailed element and task description of study efforts. Airport Master Planning Services objective is to provide CRP and the City of Corpus Christi with a plan for non-aeronautical development on airport property.

A. General/Airport Planning

1. Research history of Corpus Christi International Airport.
2. Create Asset Management Plan for aging infrastructure using operating and capital budget sources.
3. Recommend land acquisitions for future growth.
4. Create Pavement Management and Maintenance Program for all movement and non-movement surfaces on airfield.
5. Review and recommend Rates and Charges as part of the Financial Feasibility Analysis.
6. Conduct gap analysis and recommend actions to meet projected demand from industry electrification on landside and airside infrastructure, to include electrical infrastructure sources and overall grid condition/capacity.
7. Recommend sustainability-focused implementation actions and plans.
8. ***Responsibilities***:
    a. Consultant: Parkhill not responsible for this task.
    b. Sponsor: N/A
9. ***Product***: N/A

B. Terminal Development

1. Methods to introduce a second public elevator.
2. Triggers for concourse expansion, to include a second set of concourse restrooms.
3. Planning for in-line baggage system in 5-year ACIP (Airport Capital Improvement Program).
4. ***Responsibilities***:
    a. Consultant: Parkhill not responsible for this task.
    b. Sponsor: N/A
10. ***Product***: N/A

C. Aeronautical Development

1. Aeronautical development and use of land adjacent to Taxiway Q.
2. Air cargo development.
3. Aeronautical development on east edge of airfield.
4. Aeronautical development on southwest portion of airfield.
5. ***Responsibilities***:
    a. Consultant: Parkhill not responsible for this task.
    b. Sponsor: N/A
6. ***Product***: N/A

D. Urban Air Mobility

1. Develop a vertiport to support advanced air mobility (AAM) or urban air mobility (UAM).
2. Designated location for unmanned aerial systems (UAS) operations.
3. ***Responsibilities***:
    a. Consultant: Parkhill not responsible for this task.
    b. Sponsor: N/A
4. ***Product***: N/A

E. Nonaeronautical Development

1. Create a Land Use Plan for all landside property and potential nonaeronautical development uses.
    a. Existing Land Use: Review existing GIS land use maps, aerial photography, general plans, existing easements, and other documentation of existing land use in the study area. A windshield survey will be conducted as needed to verify land uses that cannot be determined with aerial photography. Anticipated land uses to be mapped include residential, commercial, industrial, institutions, open space, and services (police/fire/ etc.). Data will be obtained for the entire study area.
        1) ***Responsibilities***:
            a) Consultant: Parkhill will provide support to Coffman for this task.
            b) Sponsor: Furnish Consultant with land use maps and data, as available. Review land use map.
        2) ***Product***: Existing land use map and land use data for input to later tasks.
    b. Future Land Use Controls and Plans: Review existing zoning ordinances, subdivision regulations, building codes, land use, and transportation plans, area capital improvement programs, and other documentation of land use management in the study area. Tables and exhibits of the zoning, future land use plan designation, and improvement project information will be prepared.
        1) ***Responsibilities***:
            a) Consultant: Parkhill will provide support to Coffman for this task.
            b) Sponsor: Review.
        2) ***Product***: Tables and exhibits for analysis in later tasks.

c. Land Use Development Trends: Assess the land use growth trends in the study area. Checks will be made of the historical market conditions, current development activities, existing infrastructure, natural constraints, and prevailing regulations to understand potential short-term and ultimate uses of land within the study area.
    1) ***Responsibilities***:
        a) Consultant: Parkhill will provide support to Coffman for this task as it relates to nonaeronautical land.
        b) Sponsor: Review.
    2) ***Product***: An understanding of land use growth trends and requirements in study area.

d. Prepare Conceptual Site Plan: Based on information obtained in Tasks E.1.a, E.1.b, and E.1.c, a conceptual site plan will be developed for the non-aeronautical parcels on CRP property. This conceptual site plan is anticipated to include proposed parcel lines, rights-of-way, street alignments, utility service routing, drainage, and any related easements. Planned access to adjacent local and state highways will be coordinated with the appropriate officials. A preliminary evaluation of the earthwork will be performed to assess efficient layout options based on the topography provided in Task E. 1.a.
    1) ***Responsibilities***:
        a) Consultant: Coffman Associates and Parkhill will be responsible for this task.
        b) Sponsor: Review.
    2) ***Product***: Draft Conceptual Site Plan

e. Draft Land Use Plan Report: A report summarizing the work done under Task E.1 will be prepared. This will include narrative and graphic presentation of the analyses and evaluations conducted, and explanation of results.
    1) ***Responsibilities***:
        a) Consultant: Coffman Associates is responsible for completing the narrative and graphics for the report and distribution to the PAC and Sponsor. The report paper will be sent one week prior to the PAC meeting via U.S. priority mail.
        b) Sponsor: Review and comment.
    2) ***Product***: A report summarizing the work done under Task E.1. Up to 25 copies will be printed for distribution to PAC and Sponsor. PDF versions of the report will also be provided on a USB drive.

f. Final Land Use Plan Report: Based on comments received during the second PAC meeting, a revised report summarizing the work done under Task E.1 will be prepared. This will include a narrative and graphic presentation of the analyses and evaluations conducted, and an explanation of the results.
    1) ***Responsibilities***:
        a) Consultant: Coffman Associates is responsible for completing the narrative and graphics for the report and distribution to the PAC and Sponsor. The report paper will be sent one week prior to the PAC meeting via U.S. priority mail.
        b) Sponsor: Review and comment.
    2) ***Product***: A revised report summarizing the work done under Task E.1. Up to 25 copies will be printed for distribution to the PAC and Sponsor. PDF versions of the report will also be provided on a USB drive.

2. Create specification sheets for each parcel of available land, including analysis of present utilities.
    a. Specification Sheets: Create a document for each parcel of available land that provides pertinent information about the size of tract, existing utilities, roadway access, and any height restrictions.
        1) ***Responsibilities***:
            a) Consultant: Parkhill is responsible for this task.
            b) Sponsor: Review.
        2) ***Product***: Parcel specification sheets.
    b. Infrastructure Analysis: Assess the existing infrastructure in the study area based on the information provided in Task E.1. Parkhill will develop high-level future loading on utility (water and sanitary sewer) systems. Parkhill will assess existing sanitary sewer infrastructure and prepare a preliminary layout for extending sanitary service to the development areas by evaluating slope and depth of line in relation to the topographic data provided in Task E.1. Potential short-term and ultimate infrastructure improvements planned within the study area will be noted and mapped, if possible. All data will be coordinated with the City of Corpus Christi Public Works Department. In addition to water and sanitary sewer infrastructure, Parkhill will coordinate with franchise utility providers (communications, electric and gas) and determine availability, potential service demands, easement needs, new service routing and potential cost associated with extending service throughout the development areas.
        1) ***Responsibilities***:
            a) Consultant: Parkhill is responsible for this task.
            b) Sponsor: Assist with coordination of water system flow test(s) and Public Works coordination meeting. Review data and recommendations.
        2) ***Product***: An understanding of existing and future infrastructure in the study area relative to anticipated demand.
    c. Preliminary Plat Map: Review of deed information and performance of a field survey to establish the metes and bounds of the development areas will be performed to support the preliminary plat process. A preliminary plat map will be prepared based upon the final land use plan concept. Associated forms and supporting material will also be prepared for submission to the City of Corpus Christi for approval. Attendance for up to two meetings are included in this task.
        1) ***Responsibilities***:
            a) Consultant: Parkhill is responsible for completing this task and attending up to two meetings with the City.
            b) Sponsor: Review and comment.
        2) ***Product***: Metes and Bounds survey of development areas, Preliminary Plat Map, and attendance at up to two approval meetings.

3. Airport layout for existing and future landside development including transportation and circulation layouts.
    a. Description: Based on the data collected and coordination with local public works officials, assess existing transportation network, circulation, and accessibility in the study area. Potential short-term and ultimate transportation, circulation and accessibility improvements planned within the study area will be noted and mapped, if possible.
        1) ***Responsibilities***:
            c) Consultant: Parkhill is responsible for this task.
            d) Sponsor: Review.
        2) ***Product***: An understanding of existing and future transit, circulation, and accessibility conditions in the study area.

4. Implementation of solar energy or microgrids, on airfield or landside property
    a. Description: An assessment of the implementation/creation of sustainable energy sources (solar) on airport property will be performed to provide CRP with a pathway to resiliency.
        1) ***Responsibilities***:
            e) Consultant: Parkhill not responsible for this task.
            f) Sponsor: N/A.
        2) ***Product***: N/A.

EXHIBIT B – PROPOSED FEE SHEET

EXHIBIT B - PROJECT COST

CORPUS CHRISTI INTERNATIONAL AIRPORT (CCIA)

Airport Master Plan

		Coffman Associates (Hourly Rates and Expenses)						
		Principal	Senior Professional	Professional	Technical/ Support	Total Labor	Expenses	Total
		$303	$279	$166	$118			
ELEMENT 1 – STUDY INITIATION AND ORGANIZATION								
1.1	Study Design	4	4	4	8	$3,936	$0	$3,936
1.2	Establish Technical Advisory Committee and Kick-Off Meeting	8	8	8	8	$6,928	$2,500	$9,428
1.3	Develop and Maintain Project Website	0	8	36	48	$13,872	$0	$13,872
1.4	Project Management - Project Scoping/budgeting	0	4	8	8	$3,388	$0	$3,388
1.5	Project Management - Billing and Contract Management	4	8	12	12	$6,852	$0	$6,852
1.6	Project Management - Project Coordination with Sponsor	24	80	40	36	$40,480	$7,500	$47,980
1.7	Project Management - Subconsultant Management/Coordination	24	80	160	160	$75,032	$0	$75,032
	Element 1 Subtotal	***64***	***192***	***268***	***280***	***$150,488***	***$10,000***	***$160,488***
ELEMENT 2 - INVENTORY OF EXISTING CONDITIONS								
2.1	Inventory Airport Facilities (On Site Visit Combined with Kick-off)	12	12	12	8	$9,920	$0	$9,920
2.2	Inventory Commercial Airline, Air Traffic, and Airspace	0	4	4	4	$2,252	$0	$2,252
2.3	Inventory Local Plans, Land Uses, and Demographic Data	0	4	4	4	$2,252	$0	$2,252
2.4	Obtain Tabulated Wind Data	0	0	0	4	$472	$0	$472
2.5	Environmental Inventory	0	8	12	18	$6,348	$0	$6,348
	Element 2 Subtotal	***12***	***28***	***32***	***38***	***$21,244***	***$0***	***$21,244***
ELEMENT 3 - AVIATION DEMAND FORECASTS								
3.1	Review Regional Aviation and Socioeconomic Forecasts	0	4	4	8	$2,724	$0	$2,724
3.2	Prepare Aviation Demand Forecasts	8	36	48	48	$26,100	$0	$26,100
3.3	Identify Existing and Future Airport Design Critical Aircraft	4	12	12	16	$8,440	$0	$8,440
3.4	Prepare Phase I Report (15 Copies with Workbooks)	8	12	24	36	$14,004	$1,125	$15,129
3.5	Conduct TAC Meeting #2 and Public Workshop #1	8	8	8	16	$7,872	$2,500	$10,372
	Element 3 Subtotal	***28***	***72***	***96***	***124***	***$59,140***	***$3,625***	***$62,765***
ELEMENT 4 - FACILITY REQUIREMENTS								
4.1	Establish Physical Planning Criteria	0	12	12	12	$6,756	$0	$6,756
4.2	Determine Airfield Capacity and Delay	4	16	18	16	$10,552	$0	$10,552
4.3	Prepare Airfield Facility Requirements	8	12	24	36	$14,004	$0	$14,004
4.4	Prepare Landside Facility Requirements	8	16	24	36	$15,120	$0	$15,120
	Element 4 Subtotal	***20***	***56***	***78***	***100***	***$46,432***	***$0***	***$46,432***
ELEMENT 5 - AIRPORT DEVELOPMENT ALTERNATIVES								
5.1	Establish Alternative Development Issues	4	8	8	85	$14,802	$0	$14,802
5.2	Evalautate Potential Airside Alternatives	4	36	48	36	$23,472	$0	$23,472
5.3	Identify Potential Landside Altneratives	4	24	36	36	$18,132	$0	$18,132
5.4	Prepare Phase II Report (15 Copies)	4	12	24	36	$12,792	$1,125	$13,917
5.5	Conduct TAC Meeting #3 and Public Workshop #2	8	8	8	16	$7,872	$2,500	$10,372
	Element 5 Subtotal	***24***	***88***	***124***	***209***	***$77,070***	***$3,625***	***$80,695***
ELEMENT 6 - RECOMMENDED MASTER PLAN CONCEPT, ENVIRONMENTAL OVERVIEW AND COMATIBLE LAND USE PLAN								
6.1	Recommended Master Plan Concept	16	24	36	36	$21,768	$0	$21,768
6.2	Prepare Aircraft Noise Exposure Contours	0	16	24	24	$11,280	$0	$11,280
6.3	Land Use Controls and Plans	0	8	8	12	$4,976	$0	$4,976
6.4	Non-compatible Land Use Analysis	0	8	8	16	$5,448	$0	$5,448
6.5	Land Use Management Techniques	0	8	8	12	$4,976	$0	$4,976
6.6	Environmental Overview (NEPA)	8	12	24	36	$14,004	$0	$14,004
6.7	Waste Recycling Plan	0	24	36	48	$18,336	$0	$18,336
	Element 6 Subtotal	***24***	***100***	***144***	***184***	***$80,788***	***$0***	***$80,788***
ELEMENT 7 - FINANCIAL MANAGEMENT AND DEVELOPMENT PROGRAM								
7.1	Prepare Airport Development Schedules and Cost Estimates	0	8	12	16	$6,112	$0	$6,112
7.2	Prepare Capital Program and Financial Plan	0	24	36	36	$16,920	$0	$16,920
7.3	Perfrom Financial Analysis	0	8	8	8	$4,504	$0	$4,504
7.4	Prepare Phase III Report (15 Copies)	4	12	24	36	$12,792	$1,125	$13,917
7.5	Conduct TAC Meeting #4 and Public Workshop #3	8	8	8	16	$7,872	$2,500	$10,372
	Element 7 Subtotal	***12***	***60***	***88***	***112***	***$48,200***	***$3,625***	***$51,825***
ELEMENT 8 - GEOGRAPHICAL INFORMATION SYSTEM (GIS) AND DATA COLLECTION SERVICES								
8.1	FAA AIRPORTS GIS COLLECTION and Input Into FAA System	4	16	16	36	$12,580	$0	$12,580
8.2	ALP Data Collection, OAP and Part 77 Airspace Analyses/ AIRS Setup	16	40	72	96	$39,288	$0	$39,288
	Element 8 Subtotal	***20***	***56***	***88***	***132***	***$51,868***	***$0***	***$51,868***
ELEMENT 9 - AIRPORT LAYOUT PLANS								
9.1	Airport Layout Plan Drawing	4	4	8	96	$14,984	$0	$14,984
9.2	Terminal Area Drawing(s)	0	4	0	24	$3,948	$0	$3,948
9.3	Part 77, Approach and Inner Surface Plan Drawings	0	8	8	84	$13,472	$0	$13,472
9.4	Departure Surface Drawings	0	4	8	36	$6,692	$0	$6,692
9.5	Airport Property Map to FAA S.O.P. 3.0 (Meet Part 163 Reqs)	0	8	24	40	$10,936	$10,000	$20,936
9.6	On-Airport Land Use Plan	0	4	0	16	$3,004	$0	$3,004
9.7	Preparation of Draft ALP Drawing Set	4	8	8	16	$6,660	$1,200	$7,860
9.8	Preparation of Final ALP Drawing Set	4	4	16	16	$6,872	$1,200	$8,072
	Element 9 Subtotal	***12***	***44***	***72***	***328***	***$66,568***	***$12,400***	***$78,968***
ELEMENT 10 - FINAL REPORTS								
10.1	Prepare Draft Final Master Plan Reports (10 Copies)	4	16	16	24	$11,164	$1,500	$12,664
10.2	Obtain Master Plan Approvals (On-site Presentation)	8	12	8	12	$8,516	$2,500	$11,016
10.3	Prepare Final Master Plan Reports (10 Copies)	4	16	16	36	$12,580	$1,500	$14,080
	Element 10 Subtotal	***16***	***44***	***40***	***72***	***$32,260***	***$5,500***	***$37,760***

COFFMAN ASSOCIATES PROJECT SUMMARY							
ELEMENT 1 - STUDY DESIGN AND ORGANIZATION	64	192	268	280	$150,488	$10,000	$160,488
ELEMENT 2 - INVENTORY	12	28	32	38	$21,244	$0	$21,244
ELEMENT 3 - FORECASTS	28	72	96	124	$59,140	$3,625	$62,765
ELEMENT 4 - FACILITY REQUIREMENTS	20	56	78	100	$46,432	$0	$46,432
ELEMENT 5 - ALTERNATIVES	24	88	124	209	$77,070	$3,625	$80,695
ELEMENT 6 - RECOMMENDED PLAN/LAND USE/ENV	24	100	144	184	$80,788	$0	$80,788
ELEMENT 7 - FINANCIAL PLAN	12	60	88	112	$48,200	$3,625	$51,825
ELEMENT 8 - GIS	20	56	88	132	$51,868	$0	$51,868
ELEMENT 9 - ALP DRAWINGS	12	44	72	328	$66,568	$12,400	$78,968
ELEMENT 10 - FINAL REPORTS	16	44	40	72	$32,260	$5,500	$37,760
Coffman Associates, Inc. Total	***232***	***740***	***1,030***	***1,579***	***$634,058***	***$38,775***	***$672,833***
ELEMENT 11 - SUBCONSULTANTS							
11.1 - ENEGINEERING SUPPORT, SMS, RESILIANCY, AND COST ESTIMATES IN ELEMENTS 2, 4, 5, AND 7 (GARVER)							$325,664
11.2 - 18b GIS SURVEY DATA COLLECTION SERVICES TO INCLUDE PART 77 ANALYSES IN ELEMENT 8 (MTZ a DBE Firm)							$150,000
11.3 - FINANCIAL ANALYSIS IN ELEMENT 7 (DKMG)							$45,100
11.4 - CARGO FORECASTING IN ELEMENT 3 (HUBPOINT a DBE Firm)							$86,500
11.5 - TERMINAL BUILDING ANALYSIS FOR ELEMENTS 3, 4, 5, AND 7 (ALLIANCE)							$81,720
11.6 - PAVEMENT MANAGEMENT AND MAITENANCE PLAN (AP TECH)							$119,882
11.7 - LANDSIDE DEVELOPMENT PARKHILL)							$83,500
11.8 - PUBLIC OUTREACH PROGRAM (KPS CORPUS LOCAL and a DBE Firm)							$45,490
Subconsultant Total							***$937,856***
PROJECT TEAM TOTAL COSTS							***$1,610,689***

Attachment C: Insurance and Bond Requirements

Insurance and Bonds were intentionally deleted.

Attachment D: Warranty Requirements

Warranty is not required with this Professional Service Agreement.

ATTACHMENT E:

FEDERAL REQUIREMENTS

E.1 GENERAL CIVIL RIGHTS PROVISIONS

The Contractor agrees to comply with pertinent statutes, Executive Orders and such rules as are promulgated to ensure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance.

This provision binds the Contractor and subcontractors from the bid solicitation period through the completion of the contract. This provision is in addition to that required by Title VI of the Civil Rights Act of 1964.

E.2 Compliance with Nondiscrimination Requirements:

During the performance of this contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor"), agrees as follows:

1. **Compliance with Regulations:** The Contractor (hereinafter includes consultants) will comply with the Title VI List of Pertinent Nondiscrimination Acts and Authorities, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Nondiscrimination:** The Contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor will not participate directly or indirectly in the discrimination prohibited by the Nondiscrimination Acts and Authorities, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21.
3. **Solicitations for Subcontracts, including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Contractor of the contractor's obligations under this contract and the Nondiscrimination Acts and Authorities on the grounds of race, color, or national origin.
4. **Information and Reports:** The Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the sponsor or the Federal Aviation Administration to be pertinent to ascertain compliance with such Nondiscrimination Acts and Authorities and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the Contractor will so certify to the sponsor or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a Contractor's noncompliance with the non-discrimination provisions of this contract, the sponsor will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:
    a. Withholding payments to the Contractor under the contract until the Contractor complies; and/or
    b. Cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions:** The Contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations, and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the sponsor or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Contractor may request the sponsor to enter into any litigation to protect the interests of the sponsor. In addition, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

E.3 Title VI List of Pertinent Nondiscrimination Acts and Authorities

During the performance of this contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Title VI of the Civil Rights Act of 1964 (42 USC § 2000d *et seq*., 78 stat. 252) (prohibits discrimination on the basis of race, color, national origin);

49 CFR part 21 (Non-discrimination in Federally-assisted programs of the Department of Transportation—Effectuation of Title VI of the Civil Rights Act of 1964);

The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 USC § 4601) (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);

Section 504 of the Rehabilitation Act of 1973 (29 USC § 794 *et seq*.), as amended (prohibits discrimination on the basis of disability); and 49 CFR part 27;

The Age Discrimination Act of 1975, as amended (42 USC § 6101 *et seq*.) (prohibits discrimination on the basis of age);

Airport and Airway Improvement Act of 1982 (49 USC § 471, Section 47123), as amended (prohibits discrimination based on race, creed, color, national origin, or sex);

The Civil Rights Restoration Act of 1987 (PL 100-209) (broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, the Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);

Titles II and III of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 USC §§ 12131 – 12189) as implemented by U.S. Department of Transportation regulations at 49 CFR parts 37 and 38;

The Federal Aviation Administration's Nondiscrimination statute (49 USC § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures nondiscrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;

Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);

Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 USC 1681 et seq).