

AGREEMENT

Between

City of Fort Lauderdale

and

Ricondo & Associates, Inc.

for

CONSULTANT SERVICES

for Project

Master Plan Update for Fort Lauderdale Executive Airport

THIS IS AN AGREEMENT made and entered into this ____ day of _____ 20____,
by and between:

City of Fort Lauderdale, a Florida municipality,
(hereinafter referred to as "CITY")

and

Ricondo & Associates, Inc., a Illinois Corporation
authorized to do business in the State of Florida
(hereinafter referred to as "CONSULTANT").

WHEREAS, the City Commission of the City of Fort Lauderdale, Florida at its meeting of _____, 20____ authorized by motion the execution of this Agreement between CONSULTANT and CITY authorizing the performance of Master Plan Update for Fort Lauderdale Executive Airport, RFQ No. 264-11679 (the "Agreement") ; and

WHEREAS, the CONSULTANT is willing and able to render professional services for such project for the compensation and on the terms hereinafter set forth;

NOW, THEREFORE, in consideration of the mutual covenants, agreements, terms, and conditions contained herein, the parties hereto, do agree as follows:

ARTICLE 1 DEFINITIONS AND IDENTIFICATIONS

For the purposes of this Agreement and the various covenants, conditions, terms and provisions which follow, the DEFINITIONS and IDENTIFICATIONS set forth below are assumed to be true and correct and are therefore agreed upon by the parties.

- 1.1 AGREEMENT: Means this document between the CITY and CONSULTANT dated _____, 20____ and any duly authorized and executed Amendments to Agreement.
- 1.2 CERTIFICATE FOR PAYMENT: A statement by CONSULTANT based on observations at the site and on review of documentation submitted by the Contractor that by its issuance recommends that CITY pay identified amounts to the Contractor for services performed by the Contractor at the Project.
- 1.3 CHANGE ORDER: A written order to the CONSULTANT approved by the CITY authorizing a revision to this agreement between the CITY and the CONSULTANT that is directly related to the original scope of work or an adjustment in the original contract price or the contract time directly related to the original scope of work, issued on or after the effective date of his Agreement.

The CONSULTANT may review and make recommendations to the CITY on any

proposed Change Orders, for approval or other appropriate action by the CITY.

- 1.4 CITY: The City of Fort Lauderdale, a Florida municipality.
- 1.5 CITY MANAGER: The City Manager of the City of Fort Lauderdale, Florida.
- 1.6 COMMISSION: The City Commission of the City of Fort Lauderdale, Florida, which is the governing body of the CITY government.
- 1.7 CONSTRUCTION COST: The total construction cost to CITY of all elements of the Project designed or specified by the CONSULTANT.
- 1.8 CONSTRUCTION COST LIMIT: A maximum construction cost limit established by the CITY defining the maximum budget amount to which the final construction documents should be designed so as not to exceed.
- 1.9 CONSTRUCTION DOCUMENTS: Those working drawings and specifications and other writings setting forth in detail and prescribing the work to be done, the materials, workmanship and other requirements for construction of the entire Project, including any bidding information.
- 1.10 CONSULTANT: Ricondo & Associates, Inc., the CONSULTANT selected to perform professional services pursuant to this Agreement.
- 1.11 CONTRACT ADMINISTRATOR: The Public Works Director of the City of Fort Lauderdale, or his designee. In the administration of this Agreement, as contrasted with matters of policy, all parties may rely upon instructions or determinations made by the Contract Administrator.
- 1.12 CONTRACTOR: One or more individuals, firms, corporations or other entities identified as such by a written agreement with CITY ("Contract for Construction") to perform the construction services required to complete the Project.
- 1.13 ERROR: A mistake in design, plans and/or specifications that incorporates into those documents an element that is incorrect and is deficient from the standard of care that a professional engineer in similar circumstances, working on a similar project and location would have exercised. This also includes mistakes in design, plans, specifications and/or shop drawings review that lead to materials and/or equipment being ordered and/or delivered where additional costs are incurred.
- 1.14 FINAL STATEMENT OF PROBABLE CONSTRUCTION COSTS: A final cost estimate prepared by CONSULTANT during the Final Design Phase of the Project, based upon the final detailed Construction Documents of the Project.
- 1.15 NOTICE TO PROCEED: A written Notice to Proceed with the Project issued by the Contract Administrator.

- 1.16 OMISSION: A scope of work missed by the CONSULTANT that is necessary for the Project, including a quantity miscalculation, which was later discovered and added by Change Order and which is deficient from the standard of care that a professional engineer in similar circumstances, working on a similar project and location would have exercised. Also includes design that was wrong, but was corrected after award to the Contractor, but before the construction process was materially affected.
- 1.17 ORIGINAL CONTRACT PRICE: The original bid and/or contract price as awarded to a Contractor based upon the CONSULTANT'S final detailed Construction Documents of the Project.
- 1.18 PLANS AND SPECIFICATIONS: The documents setting forth the final design plans and specifications of the Project, including architectural, civil, structural, mechanical, electrical, communications and security systems, materials, lighting equipment, site and landscape design, and other essentials as may be appropriate, all as approved by CITY as provided in this Agreement.
- 1.19 PRELIMINARY PLANS: The documents prepared by the CONSULTANT consisting of preliminary design drawings, renderings and other documents to fix and describe the size and character of the entire Project, and the relationship of Project components to one another and existing features.
- 1.20 PROJECT: An agreed scope of work for accomplishing a specific plan or development. This may include, but is not limited to, planning, architectural, engineering, and construction support services. The services to be provided by the CONSULTANT shall be as defined in this Agreement and further detailed in Task Orders for individual projects or combinations of projects. The Project planning, design and construction may occur in separate phases and Task Orders at the CITY's discretion.
- 1.21 RESIDENT PROJECT REPRESENTATIVE: Individuals or entities selected, employed, compensated by and directed to perform services on behalf of CITY, in monitoring the Construction Phase of the Project to completion.
- 1.22 TASK ORDER: A document setting forth a negotiated detailed scope of services to be performed by the CONSULTANT at fixed contract prices in accordance with this Agreement between the CITY and the CONSULTANT.
- 1.23 TIME OF COMPLETION: Time in which the entire work shall be completed for each Task Order.

ARTICLE 2
PREAMBLE

In order to establish the background, context and frame of reference for this Agreement and to generally express the objectives and intentions of the respective parties hereto, the following statements, representations and explanations shall be accepted as predicates for the undertakings and commitments included within the provisions of this Agreement which follow and may be relied upon by the parties as essential elements of the mutual considerations upon which this Agreement is based.

- 2.1 Pursuant to Section 287.055, Florida Statutes, CITY has formed a Committee to evaluate the CONSULTANT's statement of qualifications and performance data to ensure that the CONSULTANT has met the requirements of the Consultants' Competitive Negotiation Act, as set forth in Section 287.055, Florida Statutes, and has selected CONSULTANT to perform services hereunder.

ARTICLE 3
SCOPE OF SERVICES

- 3.1 The CONSULTANT shall perform the following professional services: Master Plan Update for Fort Lauderdale Executive Airport as more specifically described in Exhibit "A," Scope of Services, attached hereto and incorporated herein. CONSULTANT shall provide all services set forth in Exhibit "A" including all necessary, incidental and related activities and services required by the Scope of Services and contemplated in CONSULTANT's level of effort.
- 3.2 CITY and CONSULTANT acknowledge that the Scope of Services does not delineate every detail and minor work tasks required to be performed by CONSULTANT to complete the Project. If, during the course of the performance of the services included in this Agreement, CONSULTANT determines that work should be performed to complete the Project which is in the CONSULTANT's opinion, outside the level of effort originally anticipated, whether or not the Scope of Services identifies the work items, CONSULTANT shall notify Contract Administrator and obtain written approval by the CITY in a timely manner before proceeding with the work. If CONSULTANT proceeds with said work without notifying the Contract Administrator, said work shall be deemed to be within the original level of effort, whether or not specifically addressed in the Scope of Services. Notice to Contract Administrator does not constitute authorization or approval by CITY to perform the work. Performance of work by CONSULTANT outside the originally anticipated level of effort without prior written CITY approval is at CONSULTANT's sole risk.
- 3.3 CITY and CONSULTANT acknowledge that Basic Services described in Exhibit "A" are included in the fee agreed upon. The CITY and CONSULTANT may negotiate additional scopes of services, compensation, time of performance and other related matters for future phases of Project. If CITY and CONSULTANT cannot contractually agree, CITY shall have the right to immediately terminate

negotiations at no cost to CITY and procure services for future Project phases from another source.

ARTICLE 4 GENERAL PROVISIONS

- 4.1 Negotiations pertaining to the professional design, engineering, architectural and project management services to be performed by the CONSULTANT have been undertaken between CONSULTANT and a committee of CITY representatives pursuant to Section 287.055, Florida Statutes, and this Agreement incorporates the results of such negotiation.
- 4.2 CONSULTANT shall include CITY's specific Task Order number as part of the heading on all correspondence, invoices and drawings. All correspondence shall be directed specifically to the Contract Administrator.

ARTICLE 5 TASK ORDERS FOR ADDITIONAL SERVICES

- 5.1 Task Orders for additional services shall be jointly prepared by the CITY and CONSULTANT defining the detailed scope of services to be provided for the Project. Each Task Order shall be separately numbered and approved in accordance with this Agreement and all applicable CITY code requirements. These Task Orders shall be considered supplemental to the general description of basic services as described in Exhibit "A".
- 5.2 Under all Task Orders and Projects, CITY may require the CONSULTANT, by specific written authorization, and for mutually agreed upon additional compensation, to provide or assist in obtaining one or more of the following special services. These services may include, at the discretion of the CITY, the following items:
 - 5.2.1 Providing additional copies of reports, contract drawings and documents; and
 - 5.2.2 Assisting CITY with litigation support services arising from the planning, development, or construction.
- 5.3 Prior to initiating the performance of any services under this Agreement, CONSULTANT must receive a written Notice to Proceed / Purchase Order from the CITY. The CONSULTANT must receive the approval of the Contract Administrator or his designee in writing prior to beginning the performance of services in any subsequent Task Order under this Agreement.
- 5.4 In the event CONSULTANT is unable to complete the services on the date or dates as provided in this Agreement, or subsequent Task Orders, because of

delays resulting from the untimely review and approval by CITY and other governmental authorities having jurisdiction over the Project, CITY may grant an appropriate extension of time for completion of the work. It shall be the responsibility of the CONSULTANT to notify the CITY promptly in writing whenever a delay in approval by a governmental agency is anticipated or experienced, and to inform the CITY of all facts and details related to the delay.

- 5.5 If, in the opinion of the CITY, the CONSULTANT is improperly performing the services under a specific supplemental Task Order, or if at any time the CITY shall be of the opinion that said supplemental Task Order is being unnecessarily delayed and will not be completed within the agreed upon time, the CITY shall notify the CONSULTANT in writing. The CONSULTANT has within ten (10) working days thereafter to take such measures as will, in the judgment of the CITY, ensure satisfactory performance and completion of the work. If the CONSULTANT fails to cure within the ten (10) working days, the CITY may notify the CONSULTANT to discontinue all work under the specified Task Order. The CONSULTANT shall immediately respect said notice and stop said work and cease to have any rights in the possession of the work and shall forfeit the Task Order and any remaining monies. The CITY may then decide, after City Commission approval, to issue a new supplemental Task Order for the uncompleted work to another consultant using the remaining funds. Any excess costs arising therefrom over and above the original supplemental Task Order price shall be charged against CONSULTANT, as the original CONSULTANT.

ARTICLE 6

TERM OF AGREEMENT; TIME FOR PERFORMANCE

- 6.1 CONSULTANT shall perform the services identified in Exhibit "A", Tasks 1 through 9 inclusive within 365 calendar days of written Notice to Proceed. This schedule does not take into account review timeframe by CITY, FAA, or FDOT that exceed 30 calendar days. Said time periods shall commence from the date of the Notice to Proceed for such services.
- 6.2 Prior to beginning the performance of any services under this Agreement, CONSULTANT must receive a Notice to Proceed and a purchase order. CONSULTANT must receive written approval from the Contract Administrator prior to beginning the performance of services in any subsequent phases of the Agreement. Prior to granting approval for CONSULTANT to proceed to a subsequent phase, the Contract Administrator may, at his or her sole option, require CONSULTANT to submit itemized deliverables for the Contract Administrator's review.
- 6.3 In the event CONSULTANT is unable to complete the above services because of delays resulting from untimely review by CITY or other governmental authorities having jurisdiction over the Project, and such delays are not the fault of CONSULTANT, or because of delays which were caused by factors outside the control of CONSULTANT, CITY shall grant a reasonable extension of time for

completion of the services and shall provide reasonable compensation, if appropriate. It shall be the responsibility of the CONSULTANT to notify CITY promptly in writing whenever a delay in approval by a governmental agency is anticipated or experienced, and to inform CITY of all facts and details related to the delay.

- 6.4 The time for the performance of services described in Exhibit "A," Scope of Services and supplemental Task Orders shall be negotiated by the CITY and the CONSULTANT as the services are requested and authorized by the CITY.
- 6.5 The Term of this Agreement shall be limited to the time required to complete the Services of the Project and any additional Project related Task Orders for additional services.

ARTICLE 7 COMPENSATION AND METHOD OF PAYMENT

7.1 AMOUNT AND METHOD OF COMPENSATION

7.1.1 Not To Exceed Amount Compensation

CITY agrees to pay CONSULTANT as compensation for performance of basic services as related to Exhibit "A" required under the terms of this Agreement up to a Not to Exceed Amount of \$592,065, and to reimburse CONSULTANT for Reimbursables as described in Section 7.2, up to a Not to Exceed Amount of \$45,256, for a total Not to Exceed Amount of **\$637,321**. It is agreed that the method of compensation is that of "Not to Exceed Amount" which means that CONSULTANT shall perform all services set forth in Exhibit "A" for total compensation in the amount of or less than that stated above. The total hourly rates payable by CITY for each of CONSULTANT's employee categories are shown on Exhibit "B."

7.2 REIMBURSABLES

- 7.2.1 Direct non-salary expenses, entitled Reimbursables, directly attributable to the Project will be charged at actual cost, in the total Not-to-Exceed amount of \$45,256. Reimbursable expenses are in addition to the compensation for basic services and include actual expenditures made by the CONSULTANT and the CONSULTANT'S employees directly attributable to the Project and will be charged at actual cost, without reference to the professional service fees above. CITY shall not withhold retainage from payments for Reimbursable Expenses. CONSULTANT shall be compensated for Reimbursables associated with a particular Task Order only up to the amount allocated for such Task Order. Any reimbursable or portion thereof which, when added to the Reimbursables related to a particular Task Order previously billed, exceeds the amount

allocated for such Task Order shall be the responsibility of the CONSULTANT unless otherwise agreed to in writing by the Contract Administrator. Travel and subsistence expenses for the CONSULTANT, his staff and subconsultants and communication expenses, long distance telephone, courier and express mail between CONSULTANT's and subconsultants' various offices are not reimbursable under this Agreement. Reimbursables shall include only the items listed in Exhibit B, Reimbursable Expenses, unless authorized in writing by the Contract Administrator.

7.2.2 Reimbursable subconsultant expenses are limited to the items described above when the subconsultant agreement provides for reimbursable expenses. A detailed statement of expenses must accompany any request for reimbursement. Travel to and from the Project site or within the Tri-County Area will not be reimbursed.

7.2.3 It is acknowledged and agreed to by CONSULTANT that the dollar limitation set forth in each Task Order is a limitation upon, and describes the maximum extent of CITY's obligation to reimburse CONSULTANT for direct, nonsalary expenses, but does not constitute a limitation, of any sort, upon CONSULTANT's obligation to incur such expenses in the performance of services hereunder. If CITY or Contract Administrator requests CONSULTANT to incur expenses not contemplated in the amount for Reimbursables, CONSULTANT shall notify Contract Administrator in writing before incurring such expenses. Any such expenses shall be reviewed and approved by CITY prior to incurring such expenses.

7.3 METHOD OF BILLING

7.3.1 Not To Exceed Amount Compensation

CONSULTANT shall submit billings, which are identified by the specific project number on a monthly basis in a timely manner for all salary costs and Reimbursables attributable to the Project. These billings shall identify the nature of the work performed for each phase, subtask, deliverable and item identified in the Exhibit "A" Scope of Services or Task Order, the total hours of work performed and the employee category of the individuals performing same. Billings shall itemize and summarize Reimbursables by category and identify same as to the personnel incurring the expense and the nature of the work with which such expense was associated. Where prior written approval by Contract Administrator is required for Reimbursables, a copy of said approval shall accompany the billing for such Reimbursables. The statement shall show a summary of salary costs with accrual of the total and credits for portions paid previously. Subconsultant fees must be documented by copies of invoices or receipts, which describe the nature of the expenses and contain a project number or other identifier, which clearly indicates the expense, as identifiable to

the Project. Except for meals and travel expenses, it shall be deemed unacceptable for the CONSULTANT to modify the invoice or receipt by adding a project number or other identifier. Internal expenses must be documented by appropriate CONSULTANT's cost accounting forms with a summary of charges by category. When requested, CONSULTANT shall provide backup for past and current invoices that records hours and salary costs by employee category and Subconsultant fees on a task basis, so that total hours and costs by task may be determined.

7.4 METHOD OF PAYMENT

7.4.1 CITY shall pay CONSULTANT in accordance with the Florida Prompt Payment Act. To be deemed proper, all invoices must comply with the requirements set forth in this Agreement and must be submitted on the form and pursuant to instructions prescribed by Contract Administrator.

7.4.2 CITY will review CONSULTANT's invoices and, if inaccuracies or errors are discovered in said invoice, CITY will inform CONSULTANT within ten (10) working days by fax and/or by email of such inaccuracies or errors and request that revised copies of all such documents be re-submitted by CONSULTANT to CITY.

7.4.3 Payments are to be made by CITY to CONSULTANT using a CITY P-Card (MasterCard or Visa credit card).

ARTICLE 8 AMENDMENTS AND CHANGES IN SCOPE OF SERVICES

8.1 No modification, amendment or alteration in the terms or conditions contained herein shall be effective unless contained in a written Amendment prepared with the same formality as this Agreement and executed by the CITY and CONSULTANT.

8.2 CITY or CONSULTANT may request changes that would increase, decrease, or otherwise modify the Scope of Services to be provided under a Task Order. Such changes must be contained in a written amendment, executed by the parties hereto, with the same formality and of equal dignity herewith, prior to any deviation from the terms of the Task Order including the initiation of any additional services. CITY shall compensate CONSULTANT for such additional services as provided in Article 7.

8.3 In the event a dispute between the Contract Administrator and CONSULTANT arises over whether requested services constitute additional services and such dispute cannot be resolved by the Contract Administrator and CONSULTANT, such dispute shall be promptly presented to the City Manager for resolution. The City Manager's decision shall be final and binding on the parties for amounts in the aggregate under \$100,000 per project. In the event of a dispute in an

amount over \$100,000, the parties agree to use their best efforts to settle such dispute. To this effect, they shall consult and negotiate with each other, in good faith and, recognizing their mutual interests, attempt to reach a just and equitable solution satisfactory to both parties. If they do not reach such solution within a period of sixty (60) days, then upon notice to the other, either party may commence litigation to resolve the dispute in Broward County, Florida. Any resolution in favor of CONSULTANT shall be set forth in a written document in accordance with Section 8.2 above. During the pendency of any dispute, CONSULTANT shall promptly perform the disputed services.

ARTICLE 9 CONSULTANT'S RESPONSIBILITIES

- 9.1 The CONSULTANT, following the CITY's approval of the Construction Documents and of the Final Statement of Probable Construction Costs, shall, when so directed and authorized by the CITY, assist the CITY in obtaining bids or negotiated proposals and assist in awarding and preparing contracts for construction. If requested, the CONSULTANT shall review and analyze the proposals received by the CITY, and shall make a recommendation for any award based on CITY's Purchasing Ordinance.
- 9.2 Should the lowest responsible, responsive proposal exceed the Final Statement of Probable Construction Costs by less than 10%, CONSULTANT, at no additional cost to the CITY, shall meet with the CITY's representatives and work to reduce costs to bring the Original Contract Price within the Final Statement of Probable Construction Costs. Should the lowest responsible, responsive proposal exceed the Final Statement of Probable Construction Costs by 10% or more, CONSULTANT shall, at the CITY's direction, redesign each Project and/or work with the CITY to reduce the costs to within the Final Statement of Probable Construction Costs at no additional expense to the CITY. If negotiations between the CITY and the CONSULTANT have not commenced within three months after completion of the final design phase, or if industry-wide prices are changed because of unusual or unanticipated events affecting the general level of prices or times of delivery in the construction industry, the established Construction Cost Limit may be adjusted in accordance with the applicable change in the Construction Cost Index for Twenty Cities from the date of completion of the final design phase and the date on which proposals are sought, as published monthly in "Engineering News Record". If each Project scope and design is expanded by the CITY after the CONSULTANT renders the estimated Construction Cost of the Plans and Specifications, the CONSULTANT shall not be responsible for any redesign without compensation.
- 9.3 The CONSULTANT shall provide the CITY with a list of recommended, prospective proposers.
- 9.4 The CONSULTANT shall attend all pre-proposal conferences.

- 9.5 The CONSULTANT shall recommend any addenda, through the Contract Administrator, as appropriate to clarify, correct, or change proposal documents.
- 9.6 If pre-qualification of proposers is required as set forth in the request for proposal, CONSULTANT shall assist the CITY, if requested, in developing qualification criteria, review qualifications and recommend acceptance or rejection of the proposers. If requested, CONSULTANT shall evaluate proposals and proposers, and make recommendations regarding any award by the CITY.
- 9.7 The CITY shall make decisions on claims regarding interpretation of the Construction Documents, and on other matters relating to the execution and progress of the work after receiving a recommendation from the CONSULTANT. The CONSULTANT shall check and approve samples, schedules, shop drawings and other submissions for conformance with the concept of each Project, and for compliance with the information given by the Construction Documents. The CONSULTANT may also prepare Change Orders, assemble written guarantees required of the Contractor, and approve progress payments to the Contractor based on each Project Schedule of Values and the percentage of work completed.
- 9.8 The CITY shall maintain a record of all Change Orders which shall be categorized according to the various types, causes, etc. that it may be determined are useful or necessary for its purpose. Among those shall be Change Orders identified as architectural/engineering Errors or Omissions.
- 9.8.1 Unless otherwise agreed by both parties in writing, it is specifically agreed that any change to the work identified as an Error on the part of the CONSULTANT shall be considered for purposes of this Agreement to be an additional cost to the CITY which would not be incurred without the Error.
- 9.8.2 Unless otherwise agreed by both parties in writing, it is further specifically agreed for purposes of this Agreement that fifteen percent (15%) of the cost of Change Orders for any item categorized as an Omission shall be considered an additional cost to the CITY which would not be incurred without the Omission. So long as the total of those two numbers (Change Order costs of Errors plus fifteen percent (15%) of Omissions) remains less than two percent (2%) of the total Construction Cost of the Project, the CITY shall not look to the CONSULTANT for reimbursement for Errors and Omissions.
- 9.8.3 Should the sum of the two as defined above (cost of Errors plus fifteen percent (15%) of the cost of Omissions) exceed two percent (2%) of the Construction Cost, the CITY shall recover the full and total additional cost to the CITY as a result of CONSULTANT's Errors and Omissions from the CONSULTANT, that being defined as the cost of Errors plus fifteen percent (15%) of the cost of Omissions above two percent (2%) of the Construction Cost.

- 9.8.4 To obtain such recovery, the CITY shall deduct from the CONSULTANT's fee a sufficient amount to recover all such additional cost to the CITY.
- 9.8.5 In executing this Agreement, the CONSULTANT acknowledges acceptance of these calculations and to the CITY's right to recover same as stated above. The recovery of additional costs to the CITY under this paragraph shall not limit or preclude recovery for other separate and/or additional damages which the CITY may otherwise incur.
- 9.8.6 The Contract Administrator's decision as to whether a Change Order is caused by an Error or caused by an Omission, taking into consideration industry standards, shall be final and binding on both parties for amounts in the aggregate under \$100,000 per project, subject to Section 8.3. In the event of a dispute in an amount over \$100,000, the parties agree to use their best efforts to settle such dispute. To this effect, they shall consult and negotiate with each other, in good faith and, recognizing their mutual interests, attempt to reach a just and equitable solution satisfactory to both parties. If they do not reach such solution within a period of sixty (60) days, then upon notice to the other, either party may commence litigation to resolve the dispute in Broward County, Florida.

ARTICLE 10 CITY'S RESPONSIBILITIES

- 10.1 CITY shall assist CONSULTANT by placing at CONSULTANT's disposal all information CITY has available pertinent to the Project including previous reports and any other data relative to design or construction of the Project.
- 10.2 CITY shall arrange for access to, and make all provisions for, CONSULTANT to enter upon public and private property as required for CONSULTANT to perform its services.
- 10.3 CITY shall review the itemized deliverables/documents identified per Task Order.
- 10.4 CITY shall give prompt written notice to CONSULTANT whenever CITY observes or otherwise becomes aware of any development that affects the scope or timing of CONSULTANT's services or any defect in the work of the Contractor.

ARTICLE 11
MISCELLANEOUS

11.1 OWNERSHIP OF DOCUMENTS

All documents including, but not limited to, drawings, renderings, models, and specifications prepared or furnished by CONSULTANT, its dependent professional associates and consultants, pursuant to this Agreement shall be owned by the CITY.

Drawings, specifications, designs, models, photographs, reports, surveys and other data prepared in connection with this Agreement are and shall remain the property of the CITY whether the Project for which they are made is executed or not, and are subject to reuse by the CITY in accordance with Section 287.055(10) of the Florida Statutes. They are not intended or represented to be suitable for reuse by the CITY or others on extensions of this Project or on any other project without appropriate verification or adaptation. This does not, however, relieve the CONSULTANT of liability or legal exposure for errors, omissions, or negligent acts made on the part of the CONSULTANT in connection with the proper use of documents prepared under this Agreement. Any such verification or adaptation may entitle the CONSULTANT to further compensation at rates to be agreed upon by the CITY and the CONSULTANT. This shall not limit the CITY's reuse of preliminary or developmental plans or ideas incorporated therein, should the Project be suspended or terminated prior to completion.

11.2 TERMINATION

11.2.1 Termination for Cause. It is expressly understood and agreed that the CITY may terminate this Agreement at any time for cause in the event that the CONSULTANT (1) violates any provisions of this Agreement or performs same in bad faith or (2) unreasonably delays the performance of the services or does not perform the services in a timely manner upon written notice to the CONSULTANT. Notice of termination shall be provided in accordance with Section 11.27. In the case of termination by the CITY for cause, the CONSULTANT shall be first granted a 10 working day cure period after receipt of written notice from the CITY. In the event that the Agreement is terminated, the CONSULTANT shall be entitled to be compensated for the services rendered from the date of execution of the Agreement up to the time of termination. Such compensation shall be based on the fee as set forth above, wherever possible. For those portions of services rendered to which the applicable fee cannot be applied, payment shall be based upon the appropriate rates for the actual time spent on the project. In the event that the CONSULTANT abandons this Agreement or through violation of any of the terms and conditions of this Agreement, causes it to be terminated, CONSULTANT shall indemnify the CITY against any loss pertaining to this termination.

All finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs and reports prepared by CONSULTANT shall become the property of CITY and shall be delivered by CONSULTANT to the CITY within five (5) days of CITY's request. Upon payment of such sum by CITY to CONSULTANT, CITY shall have no further duties or obligations pursuant to or arising from this Agreement.

11.2.2 This Agreement may also be terminated by CITY upon such notice as CITY deems appropriate in the event CITY or Contract Administrator determines that termination is necessary to protect the public health, safety, or welfare.

11.2.3 Notice of termination shall be provided in accordance with Section 11.27, NOTICES, except that Contract Administrator may provide a prior verbal stop work order if the Contract Administrator deems a stop work order of this Agreement in whole or in part is necessary to protect the public's health, safety, or welfare. A verbal stop work order shall be promptly confirmed in writing as set forth in Section 11.27, NOTICES.

11.2.4 Termination for Convenience. In the event this Agreement is terminated for convenience, CONSULTANT shall be paid for any services performed to the date the Agreement is terminated. Compensation shall be withheld until all documents specified in Section 11.3 of this Agreement are provided to the CITY. Upon being notified of CITY's election to terminate, CONSULTANT shall refrain from performing further services or incurring additional expenses under the terms of this Agreement. Under no circumstances shall CITY make payment for services which have not been performed.

11.2.5 Termination by Consultant. CONSULTANT shall have the right to terminate this Agreement upon substantial breach by the CITY of its obligation under this Agreement as to unreasonable delay in payment or non-payment of undisputed amounts. CONSULTANT shall have no right to terminate this Agreement for convenience of the CONSULTANT

11.3 AUDIT RIGHT AND RETENTION OF RECORDS

CITY shall have the right to audit the books, records, and accounts of CONSULTANT that are related to this Project. CONSULTANT shall keep such books, records, and accounts as may be necessary in order to record complete and correct entries related to the Project.

CONSULTANT shall preserve and make available, at reasonable times for examination and audit by CITY all financial records, supporting documents, statistical records, and any other documents pertinent to this Agreement for the

required retention period of the Florida Public Records Act (Chapter 119, Florida Statutes), if applicable, or, if the Florida Public Records Act is not applicable, for a minimum of three (3) years after termination of this Agreement. If any audit has been initiated and audit findings have not been resolved at the end of the retention period or three (3) years, whichever is longer, the books, records, and accounts shall be retained until resolution of the audit findings. If the Florida Public Records Act is determined by CITY to be applicable to CONSULTANT's records, CONSULTANT shall comply with all requirements thereof; however, no confidentiality or non-disclosure requirement of either federal or state law shall be violated by CONSULTANT. Any incomplete or incorrect entry in such books, records, and accounts shall be a basis for CITY's disallowance and recovery of any payment upon such entry.

CONSULTANT shall:

- a) Keep and maintain public records that ordinarily and necessarily would be required by the CITY in order to perform the service.
- (b) Provide the public with access to public records on the same terms and conditions that the CITY would provide the records and at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes (2013), as may be amended or revised, or as otherwise provided by law.
- (c) Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law.
- (d) Meet all requirements for retaining public records and transfer, at no cost, to the CITY, all public records in possession of the CONSULTANT upon termination of this contract and destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. All records stored electronically must be provided to the CITY in a format that is compatible with the information technology systems of the CITY.

11.4 NON DISCRIMINATION, EQUAL EMPLOYMENT OPPORTUNITY, AND AMERICANS WITH DISABILITIES ACT

CONSULTANT shall not unlawfully discriminate against any person in its operations and activities in its use or expenditure of the funds or any portion of the funds provided by this Agreement and shall affirmatively comply with all applicable provisions of the Americans with Disabilities Act (ADA) in the course of providing any services funded in whole or in part by CITY, including Titles I and II of the ADA (regarding nondiscrimination or the basis of disability), and all applicable regulations, guidelines, and standards.

CONSULTANT's decisions regarding the delivery of services under this Agreement shall be made without regard to or consideration of race, age, religion, color, gender, sexual orientation, national origin, marital status, physical

or mental disability, political affiliation, or any other factor which cannot be lawfully or appropriately used as a basis for service delivery.

CONSULTANT shall comply with Title I of the Americans with Disabilities Act regarding nondiscrimination on the basis of disability in employment and further shall not discriminate against any employee or applicant for employment because of race, age, religion, color, gender, sexual orientation, national origin, marital status, political affiliation, or physical or mental disability. In addition, CONSULTANT shall take affirmative steps to ensure nondiscrimination in employment against disabled persons. Such actions shall include, but not be limited to, the following: employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff, termination, rates of pay, other forms of compensation, terms and conditions of employment, training (including apprenticeship), and accessibility.

CONSULTANT shall take affirmative action to ensure that applicants are employed and employees are treated without regard to race, age, religion, color, gender, sexual orientation, national origin, marital status, political affiliation, or physical or mental disability during employment. Such actions shall include, but not be limited to, the following: employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff, termination, rates of pay, other forms of compensation, terms and conditions of employment, training (including apprenticeship), and accessibility.

11.5 MINORITY PARTICIPATION

Historically, the CITY has been able to achieve participation levels of approximately twelve percent (12%) by MBE/WBE firms in CITY projects, and in the purchase of goods and services. The CONSULTANT shall make a good faith effort to help the CITY maintain and encourage MBE/WBE participation levels consistent with such historical levels and market conditions. The CONSULTANT will be required to document all such efforts and supply the CITY with this documentation at the end of the Project, or in cases where projects are longer than one year, each CITY fiscal year.

11.6 PUBLIC ENTITY CRIMES ACT

CONSULTANT represents that the execution of this Agreement will not violate the Public Entity Crimes Act (Section 287.133, Florida Statutes), which essentially provides that a person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid, proposal, or reply on a contract to provide any goods or services to a public entity; may not submit a bid, proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, proposals, or replies on leases of real property to a public entity; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity in excess of the threshold amount provided in s. 287.017

for CATEGORY TWO for a period of 36 months following the date of being placed on the convicted vendor list. Violation of this section shall result in termination of this Agreement and recovery of all monies paid hereto, and may result in debarment from CITY's competitive procurement activities.

In addition to the foregoing, CONSULTANT further represents that there has been no determination, based on an audit, that it committed an act defined by Section 287.133, Florida Statutes, as a "public entity crime" and that it has not been formally charged with committing an act defined as a "public entity crime" regardless of the amount of money involved or whether CONSULTANT has been placed on the convicted vendor list.

11.7 SUBCONSULTANTS

11.7.1 CONSULTANT may subcontract certain items of work to subconsultant. The parties expressly agree that the CONSULTANT shall submit pertinent information regarding the proposed subconsultant, including subconsultant's scope of work and fees, for review and approval by the CITY prior to sub-consultants proceeding with any work.

11.7.2 CONSULTANT shall utilize the subconsultants identified in the proposal that were a material part of the selection of CONSULTANT to provide the services for this Project. CONSULTANT shall obtain written approval of Contract Administrator prior to changing or modifying the list of subconsultants submitted by CONSULTANT.

The list of subconsultants submitted is as follows:

Brown & Phillips, Inc

Dickey Consulting Services, Inc

HDR, Inc.

Quantum Spatial, Inc.

11.8 ASSIGNMENT AND PERFORMANCE

Neither this Agreement nor any interest herein shall be assigned, transferred, or encumbered without the written consent of the other party, and CONSULTANT shall not subcontract any portion of the work required by this Agreement except as authorized pursuant to Section 11.7.

CONSULTANT represents that all persons delivering the services required by this Agreement have the knowledge and skills, either by training, experience, education, or a combination thereof, to adequately and competently perform the duties, obligations, and services set forth in the Scope of Services and to provide and perform such services to CITY's satisfaction for the agreed compensation.

CONSULTANT shall perform its duties, obligations, and services under this Agreement in a skillful and respectable manner. The quality of CONSULTANT's performance and all interim and final product(s) provided to or on behalf of CITY

shall meet or exceed all professional standards of the State of Florida.

11.9 INDEMNIFICATION OF CITY

11.9.1 CONSULTANT shall indemnify and hold harmless CITY, its officers and employees, from liabilities, damages, losses, and costs, including but not limited to reasonable attorneys' fees, to the extent caused by the negligence, recklessness or intentional misconduct of CONSULTANT and persons employed or utilized by CONSULTANT in the performance of this Agreement. These indemnifications shall survive the term of this Agreement. In the event that any action or proceeding is brought against CITY by reason of any such claim or demand, CONSULTANT, shall, upon written notice from CITY, resist and defend such action or proceeding by counsel approved by the CITY.

11.9.2 To the extent considered necessary by Contract Administrator and CITY, any sums due the CONSULTANT under this Agreement may be retained by CITY until all of the CITY's claims for indemnification pursuant to this Agreement have been settled or otherwise resolved, and any amount withheld shall not be subject to payment of interest by CITY.

11.9.3 The Indemnification provided above shall obligate CONSULTANT to defend at its own expense to and through appellate, supplemental or bankruptcy proceeding, or to provide for such defense, at CITY's option, any and all claims of liability and all suits and actions of every name and description covered by Section 11.9.1 above that may be brought against CITY whether performed by CONSULTANT, or persons employed or utilized by CONSULTANT.

11.10 LIMITATION OF CITY'S LIABILITY

The CITY desires to enter into this Agreement only if in so doing the CITY can place a limit on the CITY'S liability for any cause of action arising out of this Agreement, so that the CITY'S liability for any breach never exceeds the sum of \$100.00. For other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the CONSULTANT expresses its willingness to enter into this Agreement with the knowledge that the CONSULTANT'S recovery from the CITY to any action or claim arising from the Agreement is limited to a maximum amount of \$100.00 less the amount of all funds actually paid by the CITY to the CONSULTANT pursuant to this Agreement. Accordingly, and notwithstanding any other term or condition of this Agreement that may suggest otherwise, the CONSULTANT agrees that the CITY shall not be liable to the CONSULTANT for damages in an amount in excess of \$100.00, which amount shall be reduced by the amount actually paid by the CITY to the CONSULTANT pursuant to this Agreement, for any action or claim arising out of this Agreement. Nothing contained in this paragraph or elsewhere in this Agreement is in any manner intended either to be a waiver of the limitation

placed upon the CITY'S liability as set forth in Section 768.28, Florida Statutes, or to extend the CITY'S liability beyond the limits established in said Section 768.28; and no claim or award against the CITY shall include attorney's fees, investigative costs, extended damages, expert fees, suit costs or pre-judgment interest. Notwithstanding the foregoing, the parties agree and understand that the provisions of this Article 11.10 do not apply to monies owed, if any, for services rendered to CONSULTANT by the CITY under the provisions of this Agreement.

11.11 INSURANCE

11.11.1 CONSULTANT shall provide and shall require all of its sub-consultants and sub-contractors to provide, pay for, and maintain in force at all times during the term of the Agreement, such insurance, including Commercial General Liability Insurance, Business Automobile Liability Insurance, Workers' Compensation Insurance, Employer's Liability Insurance, and Professional Liability Insurance, as stated below. Such policy or policies shall be issued by companies authorized to transact business and issue insurance policies in the State of Florida and having agents upon whom service of process may be made in the State of Florida.

- A. The Commercial General Liability insurance policy shall name the City of Fort Lauderdale, a Florida municipality, as additional insured. BINDERS ARE UNACCEPTABLE. The insurance coverage required shall include those classifications, as listed in standard liability insurance manuals, which most nearly reflect the operations of the CONSULTANT. Any exclusions or provisions in the insurance maintained by the CONSULTANT that precludes coverage for the work contemplated in this Agreement shall be deemed unacceptable, and shall be considered a breach of contract.
- B. The CONSULTANT shall provide the CITY an original Certificate of Insurance for policies required by Article 11. All certificates shall state that the CITY shall be given thirty (30) days notice prior to expiration or cancellation of the policy. The insurance provided shall be endorsed or amended to comply with this notice requirement. In the event that the insurer is unable to accommodate, it shall be the responsibility of the CONSULTANT to provide the proper notice. Such notification will be in writing by registered mail, return receipt requested and addressed to the Finance Department. Such policies shall: (1) name the insurance company or companies affording coverage acceptable to the CITY, (2) state the effective and expiration dates of the policies, (3) include special endorsements where necessary. Such policies provided under Article 11 shall not be affected by any other policy of insurance, which the CITY may carry in its own name.
- C. CONSULTANT shall as a condition precedent of this Agreement,

furnish to the City of Fort Lauderdale, c/o Project Manager, 100 N. Andrews Avenue, Fort Lauderdale, FL 33301, Certificate(s) of Insurance upon execution of this Agreement, which indicate that insurance coverage has been obtained which meets the requirements as outlined below:

11.11.2 COMMERCIAL GENERAL LIABILITY

- A. Limits of Liability:
- | | |
|-----------------------------------------------------------|-------------|
| Bodily Injury and Property Damage - Combined Single Limit | |
| Each Occurrence | \$1,000,000 |
| Project Aggregate | \$1,000,000 |
| General Aggregate | \$2,000,000 |
| Personal Injury | \$1,000,000 |
| Products/Completed Operations | \$1,000,000 |
- B. Endorsements Required:
- City of Fort Lauderdale included as an Additional Insured
 - Broad Form Contractual Liability
 - Waiver of Subrogation
 - Premises/Operations
 - Products/Completed Operations
 - Independent Contractors
 - Owners and Contractors Protective Liability

11.11.3 BUSINESS AUTOMOBILE LIABILITY

- A. Limits of Liability:
- | | |
|-----------------------------------------------------------|-------------|
| Bodily Injury and Property Damage - Combined Single Limit | |
| All Autos used in completing the contract | |
| Including Hired, Borrowed or Non-Owned Autos | |
| Any One Accident | \$1,000,000 |
- B. Endorsements Required:
- Waiver of Subrogation

11.11.4 WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY

Limits: Workers' Compensation – Per Florida Statute 440
Employers' Liability - \$500,000

Any firm performing work on behalf of the City of Fort Lauderdale must provide Workers' Compensation insurance. Exceptions and exemptions can only be made if they are in accordance with Florida Statute. For additional information contact the Department of Financial Services, Workers' Compensation Division at (850) 413-1601 or on the web at www.fldfs.com.

Consultant must be in compliance with all applicable State and Federal workers' compensation laws, including the U.S. Longshore Harbor Workers' Act or Jones Act.

11.11.5 PROFESSIONAL LIABILITY/ERRORS AND OMISSIONS COVERAGE

| | |
|---------------------------|-------------|
| Each Claim | \$1,000,000 |
| General Aggregate Limit | \$2,000,000 |
| Deductible- not to exceed | \$100,000 |

- 11.11.6 All insurance policies required above shall be issued by companies authorized to transact business and issue insurance policies under the laws of the State of Florida, with the following qualifications:

The Consultant's insurance must be provided by an A.M. Best's "A-" rated or better insurance company authorized to issue insurance policies in the State of Florida, subject to approval by the City's Risk Manager. Any exclusions or provisions in the insurance maintained by the Consultant that precludes coverage for work contemplated in this project shall be deemed unacceptable, and shall be considered breach of contract.

Compliance with the foregoing requirements shall not relieve the CONSULTANT of their liability and obligation under this section or under any other section of this Agreement.

The CONSULTANT shall be responsible for assuring that the insurance certificates required in conjunction with this Section remain in force for the duration of the Project. If insurance certificates are scheduled to expire during the contractual period, the CONSULTANT shall be responsible for submitting new or renewed insurance certificates to the CITY at a minimum of thirty (30) calendar days in advance of such expiration. In the event that expired certificates are not replaced with new or renewed certificates that cover the contractual period, the CITY shall:

- A. Suspend the Agreement until such time as the new or renewed certificates are received by the CITY.
- B. The CITY may, at its sole discretion, terminate the Agreement for cause and seek damages from the CONSULTANT in conjunction with the violation of the terms and conditions of the Agreement.

11.12 REPRESENTATIVE OF CITY AND CONSULTANT

- 11.12.1 The parties recognize that questions in the day-to-day conduct of the

Project will arise. The Contract Administrator, upon CONSULTANT's request, shall advise CONSULTANT in writing of one (1) or more CITY employees to whom all communications pertaining to the day-to-day conduct of the Project shall be addressed.

11.12.2 CONSULTANT shall inform the Contract Administrator in writing of CONSULTANT's representative to whom matters involving the conduct of the Project shall be addressed.

11.13 ALL PRIOR AGREEMENTS SUPERSEDED

This document incorporates and includes all prior negotiations, correspondence, conversations, agreements or understandings applicable to the matters contained herein; and the parties agree that there are no commitments, agreements or understandings concerning the subject matter of this Agreement that are not contained in this document. Accordingly, the parties agree that no deviation from the terms hereof shall be predicated upon any prior representations or agreements whether oral or written.

It is further agreed that no modification, amendment or alteration in the terms or conditions contained herein shall be effective unless contained in a written document executed with the same formality and of equal dignity herewith.

11.14 CONSULTANT'S STAFF

CONSULTANT will provide the key staff identified in their proposal for the Project as long as said key staff are in CONSULTANT's employment.

CONSULTANT will obtain prior written approval of Contract Administrator to change key staff. CONSULTANT shall provide Contract Administrator with such information as necessary to determine the suitability of any proposed new key staff. Contract Administrator will be reasonable in evaluating key staff qualifications.

If Contract Administrator desires to request removal of any of CONSULTANT's staff, Contract Administrator shall first meet with CONSULTANT and provide reasonable justification for said removal.

11.15 INDEPENDENT CONTRACTOR

CONSULTANT is an independent contractor under this Agreement. Services provided by CONSULTANT shall be subject to the supervision of CONSULTANT. In providing the services, CONSULTANT or its agents shall not be acting and shall not be deemed as acting as officers, employees, or agents of the CITY. Personnel policies, tax responsibilities, social security and health insurance, employee benefits, purchasing policies and other similar administrative procedures applicable to services rendered under this Agreement shall be those of CONSULTANT. The parties expressly acknowledge that it is not their intent to

create any rights or obligations in any third person or entity under this Agreement.

11.16 THIRD PARTY BENEFICIARIES

Neither CONSULTANT nor CITY intends to directly or substantially benefit a third party by this Agreement. Therefore, the parties agree that there are no third party beneficiaries to this Agreement and that no third party shall be entitled to assert a claim against either of them based upon this Agreement.

11.17 CONFLICTS

Neither CONSULTANT nor its employees shall have or hold any continuing or frequently recurring employment or contractual relationship that is substantially antagonistic or incompatible with CONSULTANT's loyal and conscientious exercise of judgment related to its performance under this Agreement.

CONSULTANT agrees that none of its officers or employees shall, during the term of this Agreement, serve as expert witness against CITY in any legal or administrative proceeding in which he or she is not a party, unless compelled by court process, nor shall such persons give sworn testimony or issue a report or writing, as an expression of his or her expert opinion, which is adverse or prejudicial to the interests of CITY or in connection with any such pending or threatened legal or administrative proceeding. The limitations of this Section shall not preclude such persons from representing themselves in any action or in any administrative or legal proceeding.

In the event CONSULTANT is permitted to utilize subconsultants to perform any services required by this Agreement, CONSULTANT agrees to prohibit such subconsultants, by written contract, from having any conflicts as within the meaning of this Section.

11.18 CONTINGENCY FEE

CONSULTANT warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for CONSULTANT, to solicit or secure this Agreement and that it has not paid or agreed to pay any person, company, corporation, individual or firm, other than a bona fide employee working solely for CONSULTANT, any fee, commission, percentage, gift, or other consideration contingent upon or resulting from the award or making of this Agreement. For a breach or violation of this provision, the CITY shall have the right to terminate this Agreement without liability at its discretion, or to deduct from the Agreement price or otherwise recover the full amount of such fee, commission, percentage, gift or consideration.

11.19 WAIVER OF BREACH AND MATERIALITY

Failure by CITY to enforce any provision of this Agreement shall not be deemed

a waiver of such provision or modification of this Agreement.

CITY and CONSULTANT agree that each requirement, duty, and obligation set forth herein is substantial and important to the formation of this Agreement and, therefore, is a material term hereof.

11.20 COMPLIANCE WITH LAWS

CONSULTANT shall comply with all applicable federal, state, and local laws, codes, ordinances, rules, and regulations in performing its duties, responsibilities, and obligations related to this Agreement.

11.21 SEVERANCE

In the event this Agreement or a portion of this Agreement is found by a court of competent jurisdiction to be invalid, the remaining provisions shall continue to be effective unless CITY or CONSULTANT elects to terminate this Agreement. The election to terminate this Agreement based upon this provision shall be made within seven (7) days after the findings by the court become final.

11.22 JOINT PREPARATION

Preparation of this Agreement has been a joint effort of CITY and CONSULTANT and the resulting document shall not, solely as a matter of judicial construction, be construed more severely against one of the parties than any other.

11.23 PRIORITY OF PROVISIONS

If there is a conflict or inconsistency between any term, statement, requirement, or provision of any exhibit attached hereto, any document or events referred to herein, or any document incorporated into this Agreement by reference and a term, statement, requirement, or provision of this Agreement, the term, statement, requirement, or provision contained in Articles 1-11 of this Agreement shall prevail and be given effect.

11.24 APPLICABLE LAW AND VENUE

This Agreement shall be construed in accordance with and governed by the laws of the State of Florida. Venue for any lawsuit by either party against the other party or otherwise arising out of this Agreement and for any other legal proceeding shall be in Broward County, Florida, or in the event of federal jurisdiction, in the Southern District of Florida. . BY ENTERING INTO THIS AGREEMENT, CONSULTANT AND CITY EXPRESSLY WAIVE ANY RIGHTS EITHER PARTY MAY HAVE TO A TRIAL BY JURY OF ANY CIVIL LITIGATION RELATED TO, OR ARISING OUT OF, THIS AGREEMENT.

11.25 EXHIBITS

Each Exhibit referred to in this Agreement forms an essential part of this Agreement. The Exhibits, if not physically attached, should be treated as part of this Agreement, and are incorporated herein by reference.

11.26 THREE ORIGINAL AGREEMENTS

This Agreement shall be executed in three (3), signed Agreements, with each one treated as an original.

11.27 NOTICES

Whenever either party desires to give notice unto the other, it must be given by written notice, sent by certified United States mail, with return receipt requested, addressed to the party for whom it is intended, at the place last specified, and the place for giving of notice in compliance with the provisions of this paragraph. For the present, the parties designate the following as the respective places for giving of notice, to-wit:

CITY: City Engineer
 City of Fort Lauderdale
 100 North Andrews Avenue
 Fort Lauderdale, FL 33301
 Telephone: (954) 828-5772

With a copy to: City Manager
 City of Fort Lauderdale
 100 North Andrews Avenue
 Fort Lauderdale, FL 33301
 Telephone: (954) 828-5364

 City Attorney
 City of Fort Lauderdale
 100 North Andrews Avenue
 Fort Lauderdale, FL 33301
 Telephone : (954) 828-5037

CONSULTANT: Pete Ricondo, P.E.
 Ricondo & Associates, Inc.
 1000 NW 57th Court - Suite 920
 Miami, FL 33126
 Telephone : (305) 260-2727

11.28 ATTORNEY FEES

If CITY or CONSULTANT incurs any expense in enforcing the terms of this Agreement through litigation, the prevailing party in that litigation shall be reimbursed for all such costs and expenses, including but not limited to court

costs, and reasonable attorney fees incurred during litigation.

11.29 PERMITS, LICENSES AND TAXES

CONSULTANT shall, at its own expense, obtain all necessary permits and licenses, pay all applicable fees, and pay all applicable sales, consumer, use and other taxes required to comply with local ordinances, state and federal law. CONSULTANT is responsible for reviewing the pertinent state statutes regarding state taxes and for complying with all requirements therein. Any change in tax laws after the execution of this Agreement will be subject to further negotiation and CONSULTANT shall be responsible for complying with all state tax requirements.

11.30 TRUTH-IN-NEGOTIATION CERTIFICATE

Signature of this Agreement by CONSULTANT shall act as the execution of a Truth-in-Negotiation Certificate stating that wage rates and other factual unit costs supporting the compensation of this Agreement are accurate, complete, and current at the time of contracting. The original contract price and any additions thereto shall be adjusted to exclude any significant sums, by which the CITY determines that contract price was increased due to inaccurate, incomplete, or non-current wage rates and other factual unit costs. All such contract adjustments must be made within 1 year following the end of the contract.

11.31 EVALUATION

The CITY maintains the right to periodically review the performance of the CONSULTANT. This review will take into account the timely execution of Task Orders, the quality of the work performed, the cost to the CITY and the good faith efforts made by the CONSULTANT to maintain MBE/WBE participation in CITY projects. Any deficiencies in performance will be described in writing and an opportunity afforded, where practicable, for the CONSULTANT to address and/or remedy such deficiencies.

11.32 STATUTORY COMPLIANCE

CONSULTANT shall prepare all documents and other materials for the Project in accordance with all applicable rules, laws, ordinances and governmental regulations of the State of Florida, Broward County, the City of Fort Lauderdale, Florida and all governmental agencies having jurisdiction over the services to be provided by CONSULTANT under this Agreement or over any aspect or phase of the Project.

11.33 SCRUTINIZED COMPANIES

Subject to *Odebrecht Construction, Inc., v. Prasad*, 876 F.Supp.2d 1305 (S.D. Fla. 2012), *affirmed*, *Odebrecht Construction, Inc., v. Secretary, Florida*

Department of Transportation, 715 F.3d 1268 (11th Cir. 2013), with regard to the “Cuba Amendment,” the Contractor certifies that it is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2016), that it is not engaged in a boycott of Israel, and that it does not have business operations in Cuba or Syria, as provided in section 287.135, Florida Statutes (2016), as may be amended or revised. The City may terminate this Agreement at the City’s option if the Contractor is found to have submitted a false certification as provided under subsection (5) of section 287.135, Florida Statutes (2016), as may be amended or revised, or been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2016), or is engaged in a boycott of Israel or has been engaged in business operations in Cuba or Syria, as defined in Section 287.135, Florida Statutes (2016), as may be amended or revised.

11.34. PUBLIC RECORDS

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR’S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT 954-828-6536 Fblanco@fortlauderdale.gov – 100 N. Andrews Ave, Fort Lauderdale Fl. 33301.

Contractor shall:

1. Keep and maintain public records that ordinarily and necessarily would be required by the City in order to perform the service.
2. Upon request from the City’s custodian of public records, provide the City with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes (2016), as may be amended or revised, or as otherwise provided by law.
3. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of this contract if the Contractor does not transfer the records to the City.
4. Upon completion of the Contract, transfer, at no cost, to the City all public records in possession of the Contractor or keep and maintain public records required by the City to perform the service. If the Contractor transfers all public

records to the City upon completion of this Contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of this Contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records, in a format that is compatible with the information technology systems of the City.

**REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]
[SIGNATURE PAGES FOLLOW]**

IN WITNESS OF THE FOREGOING, the parties execute this Agreement as follows:.

CITY:

CITY OF FORT LAUDERDALE, a
Florida municipality

By _____
LEE R. FELDMAN, City Manager

(CORPORATE SEAL)

ATTEST:

JEFFREY A. MODARELLI
City Clerk

Approved as to form:

CANDACE DUFF
Assistant City Attorney

CONSULTANT

WITNESSES:

Ricondo & Associates, Inc.

By _____

Name: _____

(Witness print name)

Title: _____

ATTEST:

(Witness print name)

By _____

(CORPORATE SEAL)

STATE OF _____:

COUNTY OF _____:

The foregoing instrument was acknowledged before me this ____ day of _____, 2016, by _____ as _____ for Ricondo & Associates, Inc., a Illinois Corporation authorized to do business in the State of Florida.

(SEAL)

Notary Public, State of Florida
(Signature of Notary Public)

Name of Notary Typed, Printed or Stamped

Personally Known ____ OR Produced Identification _____

Type of Identification Produced _____

EXHIBIT A SCOPE OF SERVICES

OVERVIEW

This scope of services comprises the preparation of a Master Plan Update for the Fort Lauderdale Executive Airport (FXE) in accordance with the requirements of the Federal Aviation Administration (FAA), the Florida Department of Transportation (FDOT), and the needs of the City of Fort Lauderdale (The City).

The services described in this scope will be conducted by Brown & Phillips, Inc., Dickey Consulting Services, Inc., HDR, Inc., Quantum Spatial, Inc. (QSI), and Ricondo & Associates, Inc. (the Team), with Ricondo & Associates, Inc. (R&A) serving as the prime Consultant. The Master Plan Update for the Airport will entail a comprehensive analysis of current airport facilities, determination of trends and activities affecting the Airport, the identification and analysis of potential sectors of the aviation industry having likelihood of continued operational activity at the Airport or new opportunities for expanded aviation, and the assessment of optimal land uses.

ARTICLE 1

DEFINITION OF TERMS

Acronyms and terms used throughout the document are defined here.

AC – Advisory Circular

ACI – Airports Council International

ADO – Airport District Office

ALP – Airport Layout Plan

ANOMS – Airport Noise and Operations Monitoring System

ARFF – Aircraft Rescue and Fire Fighting

ASDA – Accelerate-Stop Distance Available

ATADS – Air Traffic Activity System

ATCT – Air Traffic Control Tower

CFASPP – Continuing Florida Aviation System Planning Process

CIP – Capital Improvement Program

FAA – Federal Aviation Administration

FAR- Federal Aviation Regulations

FBO – Fixed-Base Operator

FDOT – Florida Department of Transportation

FXE – Fort Lauderdale Executive Airport

GA - General Aviation

INM – Integrated Noise Model

JACIP – Joint Automated Capital Improvement Program

LDA – Landing Distance Available

NAVAID – Navigational Aid

NGS – National Geodetic Survey

NOAA – National Oceanic and Atmospheric Administration

NPIAS – National Plan of Integrated Airport Systems

PCI – Pavement Condition Index

R&A – Ricondo & Associates, Inc.

ROFA – Runway Object Free Area

RPZ – Runway Protection Zone

RSA – Runway Safety Area

Sustainability – For purposes of this master plan, sustainable actions relate to, and support high and stable levels of economic growth while not negatively affecting the environmental and the community.

TAF – Terminal Area Forecasts

The Airport – Fort Lauderdale Executive Airport

The Consultant – Ricondo & Associates, Inc. and/or a Team Member

TORA – Take-Off Run Available

TODA – Take-Off Distance Available

USGS – U.S. Geological Survey

Note: All estimated durations shown in the scope of work below represent week days only.

PURPOSE

The intent of this project is to update the 2010 Airport Master Plan for the Airport. The update is needed to reflect new facilities, reassess future projections of airport activity, address new environmental and other regulatory constraints, and plan for an appropriate mix of land uses to support projected aviation and non-aviation needs.

The Master Plan Update will be conducted in accordance with FAA AC 150/5070-6B, Airport Master Plans, and the FDOT Guidebook for Airport Master Planning and will use guidance from other relevant FAA Advisory Circulars and Orders, publications from the Airport Cooperative Research Program (ACRP) and other aviation industry publications. As part of the Master Plan Update, an Airport Layout Plan (ALP) drawing set that depicts the full build out of aviation- and non-aviation-related facilities associated with the preferred development will be prepared. The ALP drawing set will adhere to the FDOT and FAA's prescribed design guidelines.

The Master Plan Update will outline a plan for the provision of future facilities to accommodate the projected demand. This plan will insure that short-term actions and recommendations do not preclude long-range planning options and provide a financially sound implementation plan for short-, intermediate-, and long-term improvements.

SCOPE OF SERVICES

The Airport/City staff has provided specific direction regarding the elements to be included in the Master Plan Update to address the current and future needs at the Airport. The following work program describes the activities and services required to successfully complete the Master Plan Update for the Airport within the FAA and FDOT framework.

The work elements and tasks identified in this scope of services focus on addressing key planning objectives relevant to the City which are as follows:

- **Update of the Airport Base Mapping.** Geo-referenced aerial imagery and topographic base maps are key to the preparation of the ALP drawing set, the development of construction cost estimates, and the geometric review of the airfield and other Airport facilities. In addition, display boards used as part of the public information meeting or TAG workshops would generally feature an aerial view illustration of the Airport. QSI would be responsible for acquiring aerial photography and establishing the georeferencing of the aerial imagery.
- **Identification of Options to Capitalize on the City's Real Estate Holdings.** The vision for the growth and development of the Airport over the next 20 years should include a review of the land within the Airport boundary and the areas immediately adjacent to the Airport. Following the identification of the land parcels required for aviation uses, opportunities for growth and diversification of revenue streams would be considered in developing land use concepts for the Airport. Key objectives associated with the development of land use plans for the Airport would include the following:

Definition of the optimal uses for Airport property or adjacent City-owned land parcels.

Identification of potential developable parcels for aviation-related uses with existing or potential connection to the airfield

Identification of City-owned Airport parcels or facilities that could be redeveloped to generate additional aeronautical revenues (e.g., T-Hangars versus large span corporate hangars). Facilities that are reaching the end of their useful lives would (i.e. more than 25 years) also be identified.

Evaluation of the Airport development plans for conformity with FAA criteria and standards including FAA Order 8260.3B, *United States Standard for Terminal Instrument Procedures* (TERPS) and Title 14, Code of Federal Regulations, Part 77 (14 CFR Part 77), *Safe, Efficient Use and Preservation of the Navigable Airspace*. Any development must be consistent with criteria and standards included in the FAA rules and regulations.

Integration of the Master Plan Update with Off-Airport Land Use and Development Plans. In developing proposed recommended Airport land use plans, the R&A Team would seek to strategically locate land uses in areas that not only allow for their growth and development to meet the 20-year planning horizon needs, but that would enhance the overall operation of the Airport. Where possible, land uses should be located in areas that are compatible with existing and proposed off-Airport uses. The R&A Team would consult with the City's Urban Design and Planning division regarding future development plans in the immediate vicinity of the Airport.

Evaluation of Airfield Taxiway Geometry. The FAA released AC 150/5300-13A, *Airport Design*, on September 28, 2012 (subsequently, Change 1 was issued on February 26, 2014), which modified the geometric layout requirements for airfield taxiways with the introduction of the new Taxiway Design Group (TDG) categories for fillet design. As a result, R&A would evaluate the airfield taxiway geometry to identify other airfield modifications necessary to comply with the FAA's runway incursion mitigation and enhancement of situational awareness techniques set forth in FAA AC 150/5300-13A. It would also explore opportunities for the mitigation of designated Hot Spot areas.

Particular emphasis would be given to the prescribed TDG fillet requirements, mitigation of runway incursion risks (e.g., increase runway intersection visibility, avoid high-energy intersections), and enhancing pilot situational awareness (e.g., provide indirect taxiway access, implement three-node concepts, avoid wide expanses of pavement). Additionally, the Consultant Team will provide a concept drawing(s) in the alternatives analysis section that provides a Taxiway F to Runway 9-27 centerline separation distance that is in compliance with current FAA design standards. This section may also include the justification or rationale for maintaining the existing taxiway/runway separation to support maintaining the current Modifications to Standards if it is determined that providing the FAA prescribed separation has too many operational impacts, tenant impacts, or

extensive cost implication for implementing the standard separation. The section of Taxiway F from Runway 27 end to the intersection with Taxiway G is currently 300 feet offset from Runway 9-27 (FAA design standards suggests 400 feet).

The various options for modifying taxiway pavement geometries would be reviewed with Airport management and FAA Air Traffic Control (ATC) staff. Upon identifying the most operationally beneficial modifications, R&A Team member HDR would prepare a rough-order-of-magnitude cost estimate, which would include consideration for both hard (construction) and soft (design, construction administration) costs associated with infrastructure modifications generated by the various options. Cost considerations may also include: airfield pavement modifications, airfield lighting and signage systems, underground utility relocation/extension, safety area grading, and drainage infrastructure.

The Airfield Analyses will also examine the weight bearing capacity for Runway 9-27 utilizing the PCN analysis completed by HDR following the most recent pavement rehabilitation.

Engaging and Informing Stakeholders. Within day-to-day Airport operations, the City has existing partnerships with various key stakeholders. Airport management would need to collaborate with these stakeholders to implement some of the recommendations to be included in the Master Plan Update. Accordingly, the R&A Team would engage and inform those key stakeholders during interviews and scheduled meetings or workshops held at various milestones in the Master Plan Update process to ensure that interested parties have had the opportunity to provide input on the recommended Master Plan Update improvements.

Incorporation of Previously Completed Studies. A review of previously completed studies, including the recently-awarded Sustainability Master Plan and most recent Airport Master Plan Update, would be completed to determine what elements are still valid and should be incorporated into this Master Plan Update.

Project Initiation and Administration

Establish Technical Advisory Group

Firm Responsible for Completing this Subtask: Ricondo & Associates, Inc.

A Technical Advisory Group (TAG) will be formed to help provide guidance to the R&A Team. Prospective members of this group would include representatives of the Airport tenants, aviation user groups, community stakeholders, Airport management, FDOT, and the FAA. It is anticipated that this group would have formal meetings or work sessions, and its members would be consulted on issues and be sent copies of all major document deliverables products for review. Each member of the TAG will be provided with a three ring project notebook binder for working papers. A total of 20 binders will be provided to members of the technical advisory group.

The purpose of the stakeholder engagement strategy and public outreach program is to obtain meaningful input from key stakeholder groups or members of the public that may be impacted by the outcomes of the proposed FXE Master Plan Update. FXE affects a broad and diverse group of stakeholders, both internal and external. It is, therefore, important to develop an engagement strategy and public outreach process that is inclusive and strives to create an environment that promotes meaningful dialogue and opportunities for stakeholders and the public to actively participate in the master planning process.

Potential group members will be identified jointly by the client and Consultant. A job description, questionnaire and group agreement package will be developed and mailed to participants prior to the first meeting.

Three (3) meetings of the TAG will be held, two of which will be held at the same milestones as the two public meetings. These meetings shall be conducted in a work session format, facilitated by R&A, and chaired by the Airport Manager. The anticipated agenda of these TAG meetings is as follows:

- TAG Meeting #1: Provide overview of the Master Planning process; explain the role of the advisory group; discuss goals and objectives; and solicit input. Review and solicit input based on the analysis conducted as part of the existing inventory and aviation forecast effort.
- TAG Meeting #2: Review and solicit input based on the analysis conducted as part of the requirements analysis and future alternative concepts development.
- TAG Meeting #3: Review the draft Master Plan Update report and recommendations; and solicit input.

The Consultant shall establish and maintain procedures for tracking outreach and coordination efforts for the project. All project files including correspondence, meeting minutes, meeting summaries, advertising files, visual aids, web materials, and multi-media files shall be organized and maintained electronically. The Public Involvement Summary shall be prepared to summarize outreach at the close of the project.

Deliverables

20 binders for TAG members

Public Involvement summary

Meeting documentation procedures and collection of public input/comments

Materials for three (3) TAG meetings comprising PowerPoint presentation (electronic) and up to three large size (36"x48") Boards per meeting

Project Administration & Status Coordination Meetings

Firm Responsible for Completing this Subtask: Ricondo & Associates, Inc.

This task will involve the necessary project coordination between the Consultant Team members over the course of the planning period and between the City and the team to

ensure distribution of information and guidance on project related items. This task will also include the development of project status reports on a monthly basis. This task will include several specific coordination efforts including:

- Meet with the Airport/City staff to develop and review the project schedule;
- Prepare monthly status reports for inclusion with the invoice. Status reports will describe progress on a task-by-task basis;
- Up to four (4) meetings through web conferences (per The City/Airport staff request) to facilitate coordination, provide updates and present draft reports.

Aerial Surveying and Mapping

Firm Responsible for Completing this Task: Quantum Spatial, Inc., Brown & Phillips, Inc.

Subtask 1.1 Aerial Mapping & Surveying

The key objectives of this task are to: (1) obtain geodetic control and survey for the identified runway ends; (2) collect aerial photogrammetric imagery of the area necessary under current FAA guidance to collect planimetric mapping; (3) develop and analyze the appropriate airspace surfaces and identify object penetrations and potential mitigation measures to obtain the lowest possible approach minimums. The data collected through this effort will also provide many of the elements that will serve as the foundation for the creation of the Airport Layout Plan (ALP).

The basemap for FXE will be prepared in compliance with FAA's prescribed design guidelines within a GIS platform, conforming to ACs 150/5300-16A, General Guidance and Specifications for Aeronautical Surveys: Establishment of Geodetic Control and Submission to the National Geodetic Survey; 150/5300-17C, General Guidance and Specifications for Aeronautical Survey Airport Imagery Acquisition and Submission to the National Geodetic Survey; 150/5300-18B, General Guidance and Specifications for Submission of Aeronautical Surveys to NGS: Field Data Collection and Geographic Information System (GIS) Standards; 150/5300-13A, Change 1, Airport Design; and Orders 8260.3B, The United States Standard for Terminal Instrument Procedures (TERPS), and 8260.54A, The United States Standard for Area Navigation.

This basemap will ultimately serve for the development of the Master Plan Update for the Airport that will include an ALP drawing set highlighting the long-term development plan. The primary airport planning services and related deliverables to be performed and completed in this task include:

- Geodetic Control & Surveying
- Aerial Photography and Planimetric Mapping
- FAR Part 77 Airspace Surfaces and Obstacles Analyses

Establish Geodetic Control

The geodetic control and ground survey will be prepared in accordance with FAA Advisory Circular 150/5300-16A & 150/5300-18B for establishing imagery control and tie-in with the airports Primary and Secondary Airport Control Stations (PACS and SACS).

Pre-Survey Preparation Activities

The following tasks provide information that will be reviewed to prepare for the survey prior to going into the field. Generally, addressing each item listed below prepares the survey team to begin the survey:

Ensure a thorough understanding of the specifications and requirements for the type of survey required.

Determine areas of private or government property and arrange for access.

Review the descriptions for control stations identified for use in the project.

Acquire and review an accurate airport diagram for use on the Airport.

Review FAA Form 5010, Airport Master Record, at <http://www.gcr1.com/5010web/>.

Coordinate with Airport staff.

Reconnaissance

- A review of station descriptions in the NGS database will be performed. The Primary and Secondary Airport Control Stations (PACS & SACS) need to be researched and their current data sheets obtained from the National Geodetic Survey (NGS) website.
- Mark recovery. The surveyor will use the following process for the “recovery” of a control station, with a physical visit to the station to determine its usability. Check each control station to determine proper identity. Check the mark type, disk type, and stamping against the NGS datasheet. Ascertain its apparent unmoved position.
- Selection of PACS, SACS, and NSRS ties. The surveyor will utilize Trimble GPS mapping grade equipment for “station reconnaissance” (navigating to known PACS & SACS points) After the stations are recovered and observed to be in apparent un-disturbed condition, preparation of the required descriptions, sketches, photographs and other documentation will begin. The unmoved position and elevation of the recovered PAC and SACS points will be verified by the surveyor through the use of GPS measurements and/or Electronic Distance Meter (EDM) and Level measurements.
- Compilation of a Project Survey Plan will not be completed as the project will not be created in the FAA AGIS system.

Verification of Pre Survey

The Consultant Team, prior to submission, will verify that correct forms and processes have been followed using the appropriate FAA supplied forms for use in contact with the Airport Manager and Air Traffic Control Interview.

The Consultant Team will perform the following verification tasks associated with the survey work:

- Review list of PACS and SACS.
- Review/confirm recovered existing Primary Airport Control Station (PACS) and the associated Secondary Airport Control Stations (SACS) at the Airport is done.
- Review verification that if either the PACS and/or SACS are not found, or are destroyed, or damaged, or are not usable for some other reason, contact has been made with the FAA Airport Surveying–GIS Program Manager.
- Review the submittal of the recovery report for the PACS and SACS to the NGS

GPS Occupation (Ground Survey)

The surveyor will take horizontal and vertical measurements of safety critical items to include:

- Aerial Photo Control Points (as identified by the aerial mapping firm). Per AC 150/5300-17C, a FAA Station Location and Visibility Form will be prepared and submitted. Additionally, a photograph (JPEG format) of each control point will be taken and submitted. Existing features are anticipated to be used as Photo Control Points.
- Five check points (as described in AC 150/5300-17C Section 6) will be occupied with a GPS station and the measurements submitted to National Geodetic Survey Online Positioning User Service (NGS OPUS).
- Existing Runway End points. FAA Navigational Aid Facility/Runway End Sketches will be prepared for each point.
- Displaced thresholds.
- On-airport Navigational Aids.

Coordinate System/Datum:

Generated Horizontal Coordinates will be State Plane Coordinates referenced to the North American Datum of 1983 (NAD83). Elevations will be referenced to the North American Vertical Datum of 1988 (NAVD 88).

Photographic Mapping – Remote Sensing

The Consultant Team will enlist the services of a qualified photogrammetric/remote sensing mapping firm to acquire aerial imagery and perform the planimetric mapping tasks in accordance with FAA AC 150/5300-18B and -17C. Unless otherwise directed, the datum used for development of survey control will be NAVD 88 and NAD 83 (1996)

and will be tied into NGS disks which have been previously set at the airport per AC 150/5300-17C.

The aerial imagery and mapping will be captured to the extents of the Vertically Guided Instrument Approach Surfaces for FXE as outlined in FAA AC 150/5300-18B.

Airport Imagery Acquisition Planning

The Consultant Team will work with a qualified firm to create an imagery flight plan and ground control diagram for submission to the Airport/City.

Aerial Photography Acquisition

Acquire the leaf-on aerial photography of the project area conforming to the General Guidance and Specifications for Aeronautical Survey Airport Imagery Acquisition and Submission to the National Geodetic Survey, Advisory Circular 150/5300-17C.

Aerial Photography Ground Control

The ground control survey will be coordinated as required to accurately support the aerial photography and subsequent photogrammetric mapping work and will include the ground control diagram with the general location of required control points. The ground control diagram will include the runway thresholds and runway physical ends, which is also a requirement under 16A.

Photographic Mapping

The Consultant will build a digital terrain model (DTM) by collecting masspoints and breaklines. These DTM elements will be used to construct a triangulated irregular network (TIN) surface from which 2' contours will be interpolated. Contours will be dashed in areas where the ground is obscured by trees, dense brush, deep shadows or other obstructing features. Dashed contours indicate a lower level of accuracy. Additional field surveys should be performed in areas of dashed contours prior to design.

Orthophoto Mapping

The Consultant will use the control solution and imagery to generate a Digital Elevation Model (DEM) of the Vertically Guided (VG) surfaces. The imagery will be processed into color digital orthophotos using the aforementioned DEM to rectify the images. Orthophotos for the entire project area will be developed with a 1.0' pixel resolution and for the airport property, with a 0.25' pixel resolution. Orthos will be delivered in a GeoTIFF file format.

Airport Obstruction Mapping

The aerial photography obstruction mapping will include identifying and locating the top most visible part of natural objects and man-made elevated features utilizing the Runways with Vertical Guidance specifications and associated figures included in Chapter 2.7 of AC No: 150/5300 18B. In large wooded areas within the Vertically Guided Approach Surfaces, Vertically Guided Connection Surfaces, Vertically Guided Transitional Surfaces, Vertically Guided Horizontal Surfaces and Vertically Guided

Conical Surfaces the highest tree within a 200' by 200' area will be identified and collected at the top most visible part of that object utilizing leaf-on aerial photography.

Items of Work Not Included in Scope

- Compilation of a Project Survey Plan will not be completed as the project will not be created in the FAA AGIS system.

Deliverables

Aerial Photography and Remote Sensing:

- Aerial Photography acquisition report
- Digital Orthoimagery on DVD or hard drive for review and acceptance
- Planimetric mapping in AutoCAD drawing file format for airport obstruction analysis tasks.
- Two 2 color enlargements (30"x40") covering the airport and surrounding area (mounted/laminated/framed)

Inventory of Existing Conditions

Firm Responsible for Completing this Task: Ricondo & Associates, Inc.

Subtask 1.1 Collect and Review Existing Documents

An inventory of existing condition and data collection, comprising both physical attributes and operational/performance characteristics for existing facilities and infrastructure will be undertaken. The data and information collected as part of this inventory task will serve as a baseline of existing conditions by which the subsequent master planning analysis will be based upon. The baseline of existing conditions will be representative of conditions at the Airport during the base year for the Master Plan Update, represented by 2015.

As instructed by The Airport/City, prior or ongoing studies and project data will be utilized. This effort will build on the information contained in any other documents made available to the Consultant Team. Airport improvements, either planned or being constructed/implemented will be incorporated into the baseline conditions. Supplemental data needs or data gaps will be fulfilled through field/site visits and observations, and/or tenant and Airport interviews by members of the Consultant Team.

Airfield and Airspace

The goal of this task is to collect and document data and information regarding the physical characteristics and conditions of existing airfield operating systems (defined herein for purposes of this task as runways, taxiways and aircraft aprons) at FXE. This includes data such as: runway and taxiway geometry, pavement strengths, obstacle and obstruction information, NAVAIDs, operational restrictions, runway and taxiway centerline clearances, deviations from FAA design standards, and other pertinent airfield information. The existing conditions will assume future Airport Layout Plan

(ALP) elements that are being phased for implementation in future years – the resulting layout will constitute the baseline airfield conditions for the Master Plan Update. Other on-going or near-term improvements (physical or operational) being considered by and reflected in the Airport's Capital Improvement Program (CIP), but not necessarily depicted on the ALP will be incorporated, as appropriate, based on discussions with Airport/City staff. The data collection effort also includes collecting capacity estimates, supporting analysis, and underlying assumptions for FXE-specific airfield capacity studies.

The arrival and departure airspace routes and current approach and departure procedures will be obtained for use in the airfield demand/capacity analysis. Noise abatement procedures, if any, and potential airspace modifications associated with the FAA's South Florida Metroplex initiatives will also be inventoried. Interviews with ATCT personnel will be conducted to gather pertinent information related to FXE operations, including but not limited to runway use, runway balancing, and taxiway routing commonly used. R&A will conduct field observations (up to 16 hours) from the ATCT and other FAA facilities of airfield operations. These observations will include airfield taxi patterns, runway use, taxiway use, and other related air traffic control procedures.

Landside Facilities

The landside inventory will include a review of existing conditions for: on-airport roadways and intersections, public transportation and general ground access, public parking and interface with the local roadway network. The landside inventory is anticipated to include:

- Review and analyses of prior traffic studies

- Graphic depiction and general description of the on-airport roadways

- On-site visits and discussions with Airport/City staff to understand the existing roadway system and analyze existing operating conditions.

- Prepare tables and graphs indicating the existing traffic volumes, mode splits and number of lanes for the on-Airport roadways

Every effort will be made to utilize available recent traffic count information provided by the Airport/City or others, including data from recent FDOT traffic counts. It is anticipated that traffic count information for the primary arterial roadways surrounding FXE (NW 62nd Street, Powerline Road, NW 50th Street and NW 31st Avenue) would be obtained from FDOT traffic count data.

Fixed Base Operator (FBO) and General Aviation Facilities

Existing reports and other available information will be utilized to inventory the existing FBO and general aviation facilities, along with on-site/field inspections and discussions with the individual tenants. The R&A Team will document existing support facility information concerning:

- Facility size and use

- General site conditions

Airside and landside access

General building condition

Facility, ramp, and vehicular utilization, and capacity estimates based on Airport/City and/or GA tenant input

Planned improvements

Applicable Design guidelines (if any)

Site visits to the FBO's and GA facilities will be arranged to gain a better understanding of facility utilization and operational needs of the tenants. It is anticipated that one site visit to GA facilities may be needed to interview stakeholders, gather additional information, and/or validate facility information. For budgeting purposes, a one-day site visit by the Project Manager and a mid-level planner is scheduled for this task. Direct coordination and discussions with GA tenants concerning data collection will be coordinated with the Airport. Tenant interview questionnaires/surveys for general aviation users would also be prepared in advance of the site visits and reviewed with Airport staff. Existing FBO and General Aviation facilities will be inventoried, including the following:

General Aviation hangars and ramp areas

GA fuel facilities

GA user vehicle parking areas

GA facility landside and airside access

Other GA supporting facilities (tenant storage, maintenance, etc.)

Other tenants

1.1.1.1 Airport Support Facilities

Existing reports and other available information will be utilized to inventory the existing airport support facilities, along with on-site/field inspections and discussions with the individual tenants. The Consultant Team will document existing support facility information concerning:

Facility size and use

General site conditions

Airside and/or landside access

General building condition

Facility utilization and capacity estimates based on Airport and/or tenant input

Special operating conditions and equipment applicable to the master planning analysis

Number of Employees (if available from or provided by tenants)

Planned improvements

Applicable Design guidelines (if any)

Site visits to each of the primary facilities will be arranged to conduct this inventory. It is anticipated that this site visit will correspond with the visit detailed in Section 3.1.1.3 and provide the opportunity to interview stakeholders, gather additional information, and/or validate facility information. Direct coordination and discussions with tenants concerning data collection will be coordinated with the Airport prior to the site visit.

Existing ancillary facilities will be inventoried, including the following:

- Air Traffic Control Tower (ATCT)

- Airport maintenance and equipment storage

- Airport administration and management

- Aircraft rescue and fire fighting

- Aircraft fueling and fuel storage

- FAA facilities

- Airport security and police

- Other tenants and facilities

Airport Utilities

The objective of this task is to inventory and understand, at a high level, the sizes, locations, capacity, usage and other relevant information available from existing sources (documents or studies) on existing utilities that provide service to FXE. Only the main trunk or transmission lines will be inventoried. The utilities that will be included in this investigation are:

- Domestic water

- Sanitary sewer

- Storm drainage

- Natural gas

- Fuel

- Telephone

- Communications network

- Electric power

Airport Security Overview

The collection and review of relevant information to be provided by the Airport/City regarding security systems and issues in the airfield, and airport operations area, and FXE airport perimeter will be completed by R&A. The purpose of gathering this information is to determine how FXE's security operations compared to other general

aviation airports and FAA requirements, so that improvements can be accounted for in the capital improvement plan resulting from this Master Plan Update.

On-Airport and Off-Airport Land Uses

Existing land use mapping, aerial photography, comprehensive plans, and other documentation pertaining to current and future land use in the vicinity of the Airport (up to one mile from the Airport boundary) will be reviewed. Land Use data will be obtained from adjacent cities and incorporated as part of this inventory. Further, the Broward County Property Appraiser and the City of Fort Lauderdale will be contacted to obtain future land use or zoning plans to include any modified uses into the updated Airport mapping.

Environmental Conditions

The environmental conditions inventory of the airport environs should include data collection and field investigations necessary to identify current environmental features on and directly adjacent to FXE. Features that should be identified include water resources (e.g., streams, wetlands, floodplains, and coastal zones), historic or cultural resources, natural communities and vegetative associations, threatened and endangered species, and other features or groups of features that may influence the development and operation of the Airport. However, noise contours will not be prepared as part of this task.

Review Current FXE Sustainable Programs and Policies

The R&A Team will collect and review information pertaining to FXE's current sustainability programs and policies outlined in the recently awarded Sustainability Master Plan. Any recommendations and program policies outlined in that document will be incorporated directly into this Master Plan Update.

Existing Conditions Inventory Chapter

An Existing Conditions Inventory Chapter will be prepared to summarize the conditions of the existing FXE airport facilities and operating environment. Two submittals of the Inventory of Existing Conditions Chapter would be provided, each in MSWord and portable document file (PDF) formats, as outlined below:

Preliminary Draft for Airport/City review and comment

Final Draft for Airport/City, FAA/FDOT review and comment

The second round of comments/revisions will be incorporated into the draft chapter and then remain until final comments are solicited at submission of the Draft Master Plan Update Report.

Items of Work Not Included in Scope:

Detailed facilities inspections and condition assessments

Utilities surveying and Subsurface Utility Engineering (SUE)

Data & Resources Required From the City

Previous Airport Master Plan/Noise Compatibility Studies
Current Airport Layout Plan Drawings (digital required)
Recent/Relevant Roadway Studies
Area Land Use and Zoning Information
Airfield PCI Study (if available) or FDOT Pavement Management Report
Current Capital Improvement Program
Airport Property Map and Property Information
Area Transportation Plans and Existing Traffic Counts
FXE Tenant Leasehold Documents
FXE Sustainability Master Plan (sections as they become available)

Deliverables

A narrative report summarizing the results of the inventory of existing conditions including supporting graphic exhibits and tables.

Six (6) copies of a preliminary draft Inventory working paper for Airport and City staff review/comment
Six (6) copies of a final draft Inventory of working paper for the Airport review/comment
A final Inventory report in electronic format (PDF)

Activity Forecasts

Firm Responsible for Completing this Task: Ricondo & Associates, Inc.

Subtask 1.1 Aviation Activity Forecasts

The purpose of this task is to develop aviation activity forecasts for the Airport, taking into consideration local socioeconomic factors, traffic growth, and demand characteristics at the Airport since the preparation of the last master plan forecasts. New activity forecasts will be derived based on recent historical demand patterns, trends experienced at the Airport, and the potential range of changes in aviation activity at the Airport that could occur over the planning horizon (represented by the 2017-2037 timeframe). As part of this effort, R&A would also review the results of the on-going analyses being completed by others regarding the removal of the aircraft weight restrictions for operations on the primary runway. R&A will assess whether the lifting of the weight restriction would impact the projections of aircraft activity at the Airport.

Collect and Analyze Socioeconomic Data

This subtask will consist in the definition of the airport's catchment area and the assembly of historical and forecast socioeconomic data (employment, population,

personal income, gross regional product) for the region and the nation. This will include data from the U.S. Census Bureau, regional economic development organizations, regional and national socioeconomic data sourced through Woods & Poole Economics, Inc., and other relevant sources.

Review General Aviation Industry Trends

The Consultant Team will review national general aviation trends based on the FAA Aerospace Forecasts FY 2016-2036, the General Aviation Statistical Databook & Industry Outlook from the General Aviation Manufacturers Association (GAMA), and the general aviation trends in the South Florida region. The data collected under this subtask will help assess local and nationwide short- and long-term trends including projections of active general aviation aircraft by type. In turn, these projections will be evaluated to assess whether these trends are likely to influence future general aviation aircraft fleet mix projections at the Airport.

Identification of Factors or Opportunities Affecting Activity Levels

A key element in the forecast process is the identification of potential for new or expanded activity by existing airport users, as well as the potential for the Airport to secure new services and users. This task will analyze potential changes in business and tourism patterns, or in potential based operators at the Airport, to determine significant factors that could impact the level or type of activity at the Airport. The effort will identify potential niche markets that could be the basis for either expanding existing activity or initiating new activity at the airport. Potential for the expansion of corporate/business activity, air charter operations will be analyzed.

Develop Forecasts of Aviation Activity

The forecasts, consisting of up to three alternate forecast projections, will be prepared using FAA-accepted methodologies (regressions, market share, and trend analyses) and will be compared against other recently prepared forecasts, such as the FAA Terminal Area Forecasts published in January 2016 (TAF). Activity projections will be provided for the 2022, 2027, and 2037 horizons basis and will (in Fiscal Year basis (FY)) provide individual projections of the following:

- Annual General Aviation Operations (Local vs. Itinerant)

- Annual Military Operations (Local vs. Itinerant)

- Annual Air Charter/Air Taxi Operations

- Annual Instrument Operations

- Total Annual Aircraft Operations

- Annual Operational Fleet Mix

- Based Aircraft

- Based Aircraft Fleet Mix

The aviation activity forecasts will comprise projections of annual activity for aircraft operations. These projections will further be segregated by local versus itinerant operations and will be presented by airport user categories, namely general aviation, air

taxi, and military. Existing and forecast based aircraft activity and fleet mix composition will also be analyzed as part of this task.

Based on the above, peaking characteristics will also be derived. These will be in the form of peak month activity and peak month average day activity volume of total annual aircraft operations. Hourly peaking characteristics will also be reviewed.

Prepare Aviation Activity Forecasts Report

A Forecast of Aviation Demand report will be prepared to summarize the forecast of aviation demand for FXE. A preliminary draft version of the Forecast of Aviation Demand report will be submitted to the Airport and FAA for review and comment. The Airport and FAA review and comment process for the Aviation Activity Forecasts Report will incorporate four revision rounds; (1) preliminary draft for the Airport review and comment, (2) final draft for the Airport review and comment, (3) preliminary draft for FAA review and comment, and (4) final draft for FAA review and comment. The fourth round of comments/revisions will be incorporated into the final draft chapter of the Master Plan.

As necessary, the Consultant Team will prepare supplemental documentation comparing the FAA TAF and the FXE Master Plan forecasts and attend meetings with the FAA Orlando ADO and FAA APO to review forecast findings.

Data & Resources Required From The City

Annual Aircraft Operations from 1996 (if available) or for the last 10 years (from 2006)

Detailed inventory (by aircraft type or tail number) of based aircraft at the Airport

Peak month ANOMS or other noise monitoring system data for the most recent 12-month period that provides fleet type information for operations served during that month. This data will help determine the existing fleet mix at the Airport.

Deliverables

Excel spreadsheets and graphs.

PowerPoint presentation for Airport/City staff, airport advisory group(s) and other stakeholder briefings

Six (6) copies of a final draft chapter for Airport and City staff review and comment

A forecast report in electronic format (.PDF) along with six (6) hard copies for submission to the Federal Aviation Administration (FAA) and the Florida Department of Transportation (FDOT) for review and approval.

A final forecast report in electronic format (.PDF) as approved by the Federal Aviation Administration (FAA).

Demand/Capacity and Facility Requirements

Firm Responsible for Completing this Subtask: Ricondo & Associates, Inc. and HDR, Inc. (unless otherwise noted)

The demand/capacity analysis will address the Airport's ability to accommodate airside, terminal and landside facility needs based on the updated aviation activity forecasts and the selection of the current and future design aircraft. Existing airside, FBO/General Aviation facilities, and landside facilities will be analyzed to determine the type and magnitude of aviation improvements ultimately required for the Airport. The facilities requirements analysis will focus on the physical facilities and associated improvements needed to safely and efficiently accommodate projected aviation demand on those aviation facilities for the twenty-year planning period (FY 2017-2037).

Subtask 1.1 Airfield

Demand/Capacity Assessment

Using the FAA's methodology for assessing airfield capacity and delay, as described in the FAA Advisory Circular 150/5060-5, an assessment of the current and future level of airfield capacity and associated aircraft delay will be developed. This analysis will consider the airfield configuration, including runway orientation, parallel taxiways and exit taxiways, weather conditions, aircraft fleet mix, current and forecast operations at each 5-, 10- and 20- year time frame. The airport capacity will then be calculated for both visual flight rules (VFR) and instrument flight rules (IFR) conditions. These values will then be utilized to express the overall capacity in terms of the hourly and annual service volume of the airfield.

This information will assist in validating recommendations of previous planning analyses or to identify new considerations regarding the potential need and timing of taxiway enhancements over the 5, 10, and 20 year planning horizon. An assessment will also be undertaken to identify improvements to the system of taxiways and exit taxiway connectors that could enhance the movement of aircraft to and from the airfield to use areas on the Airport and the impact that these improvements might have on the efficiency of movements on the airfield.

Design Aircraft and Runway Length Requirements

Using information generated in the interviews conducted during the inventory portion of the study, the characteristics of the current aircraft fleet will be identified, paying particular attention to the level, type, and stage length of operations by jet aircraft. Additionally, any results from Task 4 will be factored into the analysis to identify future changes that may occur in the aircraft fleet using the Airport, and in the airfield facilities and/or dimensional criteria required to meet the demands that commercial activity would place on the facility. From this analysis, design aircraft will be identified for use in determining short, intermediate, and long-term runway length requirements. The design or critical aircraft(s) may consist of a single aircraft type or may need to be identified by approach category, wingspan and/or by weight for different airport components. Evidence will be provided that the current and future design aircraft(s) conduct a minimum of 500 itinerant operations annually, as per FAA requirement.

Analysis of runway length requirements at FXE will utilize the Aircraft Characteristics for Airport Planning manuals as provided for individual aircraft by the aircraft manufacturers. For budgeting purposes, it has been assumed that this analysis will be completed for no more than 10 critical aircraft. Required weather data that is necessary for runway lengths will be obtained for FXE from the National Climatic Data Center as mentioned previously in the inventory phase. The results of the runway length calculations and requirements, as well as the required dimensional standards, will be incorporated into the facilities requirements portion of the Master Plan Update. This information, as well as the design/critical aircraft identified for airport planning purposes, will be submitted for review and acceptance by the FAA.

Facility Requirements

Using the results of the demand/capacity analysis, as well as relevant information from other tasks and airfield planning criteria, a preliminary listing of airfield facility requirements necessary to meet projected levels of demand for the 5-, 10-, and 20-year time frames will be developed. These facility requirements will be based upon both accepted airport planning criteria and the forecast of aviation activity for the Airport, as well as the knowledge and expertise of the Consultant, Airport management, and TAG members. Airfield characteristics to be assessed include:

- Runway length, width and shoulders
- Necessity for addition/removal of taxiways
- Pavement strength
- Taxiway requirements
- Lighting and marking
- Navigational aids
- FAR Part 77 surfaces

Airfield facility needs will be identified in terms of linear feet, strength, separation, clearances, etc. and will be compared to existing facilities to identify excess or deficient facility capacity or capability. Where appropriate the airfield facilities will be linked to activity demand thresholds or triggers as a means of determining the point at which demand is sufficient to warrant the improvement. Additionally, existing airfield components will be evaluated to ensure that they comply with the changes of the recently updated Airport Design Advisory Circular.

On-Airport Roadways

Demand/Capacity Assessment

Based upon the inventory of ground transportation components performed in Task 3 and the Aviation Activity Forecasts developed in Task 4, the demand for the Airport access roads and other on-airport service roadways will be compared to current capacity to determine facility requirements. This assessment, however, excludes the analysis of off-airport roadways.

The roadway demand/capacity analyses will be based on spreadsheet models to estimate the roadway demands and capacity for the on-airport roadway system on a link-by-link basis. Roadway capacity will vary based on the number of roadway lanes and characteristics of roadway segment using airport-specific industry-standard capacity assumptions based on roadway speed. On-airport roadway system LOS for the existing roadway system will be calculated as a function of roadway demand divided by capacity.

Facility Requirements

On-airport roadway requirements will be based on future demand, and discussed in terms of number of traffic lanes, access points, intersection congestion, and level of service. Anticipated roadway lane deficiencies and the number of additional lanes required to provide an acceptable level of service will be identified for the future years 2022, 2027 and 2037.

Off-airport roadways will not be assessed from demand-capacity standpoint however; existing traffic studies and existing planning studies will be reviewed to identify off-airport roadway networks that support traffic to/from the Airport which will require improvements by FDOT or other local planning agencies in order to support the traffic volumes expected to be generated by FXE.

Fixed Base Operator (FBO) and General Aviation Facilities

Demand/Capacity Assessment

Using standard methodology for assessing general aviation demand and capacity, an evaluation of current and future demand and capacity for general aviation facilities will be completed. The analysis will consider facility requirements for:

- Aircraft ramp and parking area

- T-hangars

- Conventional hangar facilities

- FBO terminals

- Flight training facilities

- Aircraft maintenance and repair shops

- Vehicle parking areas

- Other general aviation facilities that reside at FXE

Facility Requirements

General aviation facility requirements will be identified as needed to meet projected levels of demand expressed in the airport activity forecasts based on the demand/capacity analysis for GA facilities. Facility requirements will be expressed in terms of gross area, linear feet, or other basic units to determine excess or deficient capacity. This assessment will quantify future development items needed to maintain an adequate capacity, function, and operation at the Airport.

Support Facilities

Demand/Capacity Assessment

Using pertinent FAA regulations, advisory circulars, and information gained from discussions/surveys of airport users, the Consultant Team will determine the capacity of the existing Aircraft Rescue and Firefighting Facilities (ARFF), fuel storage facility, airfield maintenance center facilities, airport administration and management, and FAA facilities.

Facility Requirements

Future support facility requirements will be based on the airport activity forecasts and discussed in terms of expansion of existing facilities or procurement of additional equipment.

Prepare Demand/Capacity & Facility Requirements Report

A draft Demand/Capacity and Facility Requirements report summarizing the findings of each of the preceding tasks will be prepared and provided to Airport staff and Technical Advisory Group for their review. The Consultant Team will prepare tables and other graphical illustrations as necessary to clarify and summarize the various items addressed in the alternatives section.

The Airport/City staff and Technical Advisory Group review and comment process for the Demand Capacity Analysis and Facility Requirements chapter will incorporate two revision rounds; (1) preliminary draft for review and comment, and (2) final draft for review and comment. The second round of comments/revisions will be incorporated into the final draft chapter of the Master Plan.

Items of Work Not Included in Scope

Simulation Modeling

Deliverables

- Six (6) copies of the Demand/Capacity and Facility Requirements chapter for Airport review and comment

- Six (6) copies of a final draft chapter for Airport review and comment

- A final Facility Requirements report in electronic format (.PDF)

Alternatives Analysis and Development Concepts

Firm Responsible for Completing this Subtask: Ricondo & Associates, Inc.

A series of development concepts to satisfy the FY 2027 and FY 2037 demand levels will be generated and evaluated. In consultation with Airport and City staff, a preferred development concept will be selected and refined. The preferred development concept

will be presented for review and approval at a public meeting of the Aviation Advisory Board.

Future development concepts will be predicated on the facility requirements generated during Task 5, *Demand Capacity Analysis and Facility Requirements*.

Additional concepts related to Airport and City initiatives will be included in the analysis. These concepts include but are not limited to consideration for a paved multi-use bike path around the airport, the removal of any underutilized airfield pavement to potentially enhance and expand developable areas and future pavement requirements for fillet design standards as outlined in the FAA Advisory Circular 150/5300-13A.

Subtask 1.1 Development Alternatives

Identification and Evaluation of Initial Range of Development Alternatives

Up to three (3) long-term development alternatives will be developed. These initial alternatives will be comprised of preliminary illustrations of future facility layouts necessary to satisfy the FY 2027 and FY 2037 facility requirements. Concepts will consider both the GA/FBO and support facilities, as well as future airfield enhancements. In coordination with the City, land uses will be reassessed by the Consultant to determine the potential need to review the existing zoning on airport property. If applicable, the Consultant will coordinate with the City and the FAA to outline the process for re-zoning portions of the Airport's land in order to increase the land available for airport facility developments. A set of evaluation criteria will also be derived as part of this task in close coordination with the City staff.

Once the initial ranges of alternatives are developed, an evaluation will be conducted and summarized. The preliminary results of the evaluation will be summarized in a PowerPoint presentation.

Evaluate and Select Preferred Long-Range Development Alternative

Up to two (2) half-day planning workshops will be conducted to review the initial range of airport development alternatives and evaluation criteria with the Airport and City staff. The evaluation criteria may include, but is not limited to: operational performance, rough order of magnitude costs, AIP and FDOT funding eligibility, constructability, and potential environmental effects.

One half-day workshop will serve to review and comment on the preliminary development alternatives with the Airport and City staff. A second half-day workshop will be held to present the revised alternatives before the selection of a recommended airport development concept. The recommended airport development concept will be selected and approved by the Aviation Advisory Board. The Consultant will prepare the meeting materials (agendas, sign-in sheets, graphics and a PowerPoint presentation) for the meetings, and prepare formal meeting notes for distribution to all members of the Aviation Advisory Board and City staff after the workshop.

Refine Preferred Long Range Development Alternative

The preferred long range development concept will be refined. Facility layouts will be refined to depict building location and configurations, apron limits, access taxiways/taxilanes, vehicular parking areas, and access/service roads. The preferred development alternative will be presented at a public meeting for final approval.

Documentation

The PowerPoint presentation developed for the planning workshops and public meetings prescribed above will be revised to incorporate any additional development concepts, the final evaluation results, and illustrations of the refined long range development concept. The approved Airport Development Concept Report will be prepared for inclusion as a chapter into the Airport Master Plan Report as the Alternatives Analysis Chapter.

Prepare Airport Development Alternatives Report

A draft Airport Development Alternatives report summarizing the findings of each of the preceding task will be prepared and provided to Airport staff for their review. The Consultant Team will prepare exhibits as necessary to clarify and summarize the various items addressed in the alternatives section.

The Airport staff review and comment process for the Airport Development Alternatives Report will incorporate two revision rounds; (1) preliminary draft for review and comment, and (2) final draft for review and comment. The second round of comments/revisions will be incorporated into the final draft Airport Development Alternatives of the Master Plan Update.

Items of Work Not Included in Scope

Detailed three-dimensional renderings and interior facility layouts.

Deliverables

- Final PowerPoint presentation (revised version of workshop presentation)

- Airport development concept chapter for inclusion into the Airport Master Plan Report

- Six (6) copies of the Airport Development Alternatives chapter for Airport review and comment

- Six (6) copies of a final draft chapter for Airport review and comment

- A final Airport Development Alternatives report in electronic format (.PDF)

Environmental Overview

Firm Responsible for Completing this Subtask: Ricondo & Associates, Inc.

The environmental overview to be completed as part of this Master Plan Update will assist in selecting a preferred development alternative that minimizes potential

environmental impacts. It will identify potential areas of environmental concern, whether any components of the preferred development plan might affect significant environmental resources, and the level of environmental documentation required by FAA prior to implementation of the recommended Master Plan projects.

Subtask 1.1 **Evaluation of Proposed Development**

The preferred development alternative will be evaluated to identify potential environmental issues. Potential areas of environmental concern, whether any components of the preferred development plan might affect environmental resources, and the level of environmental documentation required by FAA prior to project approval, will be identified.. The Consultant will review each element of the proposed development plan so the City is made aware of:

Potential environmental concerns

The probable environmental documentation required prior to implementation

Whether the proposed improvements will require Federal and/or State Permits.

The environmental overview will identify environmental concerns based on the guidance provided in FAA's Order 1050.1F, *Environmental Impacts: Policies and Procedures* and Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*. The first step will be to review existing environmental reports prepared for the Airport and gather information from existing databases, maps, and published information available from applicable resource agencies to establish existing conditions. The Consultant will analyze existing published information to identify the environmental resources and potential issues within the entire Airport boundary:

Air quality status and review of existing/available EPA documentation

Coastal resources and review of airport's impact on nearby waterways

Land use and zoning surrounding the Airport including noise sensitive receptors

Department of Transportation Act Section 4(f) lands

Fish, wildlife, and plants including endangered species

Floodplains and potential/existing wetlands

Hazardous materials and solid waste facilities

Historic, archaeological, architectural, and cultural resources

Energy supply and natural resource use

Water resources – water quality including surface and ground water

Construction impacts, drainage and hydrology

Once the existing conditions are established, lists of probable impacts that could result from the proposed development will be identified.

Noise Analysis

The purpose of this task is to prepare estimated noise contours for existing conditions and future conditions associated with the aviation activity growth calculated in Task 4. This effort includes:

- Development of baseline noise contours (existing conditions)

- Development of long term (10- and 20-year) noise contours

The noise contours will be prepared for informational purposes only and are not intended to be used for the purpose of 14 CFR FAR Part 150 Noise Exposure Maps (NEMs) or Noise Compatibility Program (NCP). The methodology used to develop the contours, however, will comply with that recommended by the FAA.

Detailed Aircraft Fleet Mix

The FAA's Aviation Environmental Design Tool [AEDT] version 2b will be used for the noise modeling for the existing and future airfield conditions. The aircraft fleet mix representing the average annual day aircraft operations number for the existing and future airfield conditions will be used for noise modeling. No separate modeling of helicopter will be included. Operations by helicopter will be substituted by the fixed wing aircraft for the modeling purposes.

Air Traffic Operational Profile

Representative aircraft flight track locations, flight track use and runway use for arrival and departure flights will be created based on the information provided by the airport personnel. Aircraft operations that remain within the local area will be modeled as touch-and-go traffic. The INM standard aircraft operational profiles for arrival and departure flights will be used.

Baseline (existing) Noise Contours

The aircraft noise contours of DNL 65, 70, and 75 dB resulting from the average annual day operations for the existing baseline condition will be created using the FAA's INM. The annual aircraft operations for the existing baseline conditions will be based on the FAA's ATCT annual counts for the Airport.

Long Term (10- and 20-year) Noise Contours

The aircraft noise contours of DNL 65, 70, and 75 dB resulting from the average annual day operations for the two future year conditions will be created using the FAA's INM. The annual aircraft operations and the fleet mix will be estimated based on data developed as part of Task 4.

Prepare Environmental Overview Report

Firm Responsible for Completing this Subtask: Ricondo & Associates, Inc.

A draft Environmental Overview summarizing the findings of each of the preceding tasks will be prepared and provided to Airport staff for their review. This report will address the environmental conditions at FXE as determined through a review of existing

reports and through contacts with various state and federal agencies. The overview will identify potential effects on environmental resources as a result of projects proposed in the updated Airport Master Plan.

The Airport/City staff and Technical Advisory Group review and comment process for the Environmental Overview Report will incorporate two revision rounds; (1) preliminary draft for review and comment, and (2) final draft for review and comment. The second round of comments/revisions will be incorporated into the final draft chapter of the Master Plan.

As a supplement to this task and under the direction of the Airport, R&A may retain the services of an approved fuel emissions testing company to update previous lead emissions tests directly related to airport operations. The results of these tests will be documented in a standalone deliverable to the Airport/City and summarized in the Environmental Chapter of the Master Plan Update.

Items of Work Not Included in Scope

- Radar data for Itinerant flight track use analysis

- Radar data for Local flight track use analysis

- Population analysis

- Land use impact analysis

- Processing of radar track information

- Noise monitoring

- Field observations

- Coordination with FAA Headquarters for approval of alternative INM equivalent aircraft

- Any changes that occur to the baseline conditions or forecasts after the modeling is conducted

- Air emissions testing/analysis (may be added to scope at a later date is needed or desired)

- Biotic surveys historic, archaeological, architectural, or cultural resource surveys; wetland surveys

- Site investigations

Deliverables

- Base year contours

 - 10- year and 20-year contours

- Six (6) copies of the Environmental Overview chapter for Airport review and comment

Six (6) copies of a final draft chapter for Airport review and comment

A final Airport Environmental Overview report in electronic format (.PDF)

Sustainability Initiatives

Firm Responsible for Completing this Subtask: Ricondo & Associates, Inc.

This task will integrate the recommendations developed as part of the Sustainability Master Plan with a simplified Recycling, Reuse and Waste reduction plan. It will also include any additional goals that are associated with the implementation of FXE's preferred long range development concept.

Subtask 1.1 Prepare Simplified Recycling, Reuse, and Waste Reduction Plan

Based on Section 133 of the FAA Modernization and Reform Act of 2012, airports are required to prepare a Recycling, Reuse, and Waste Reduction plan as part of their Master Plan. This plan will address the feasibility of solid waste recycling, minimizing the generation of solid waste, operation and maintenance requirements, the review of waste management contracts, and the potential cost savings or generation of revenue.

This task will include, in collaboration with Airport staff, the identification of the types of solid waste generated at the Airport, as well as the factors likely to influence the scope and nature of the Airport recycling program (e.g. local markets for recyclable commodities; cost for transport and processing recyclables; local recycling infrastructure; willingness of an airport and its tenants to implement recycling programs; airport layout and logistics.)

It is anticipated the recycling, reuse, and waste reduction plan will include a description of the scope of the existing recycling and waste management programs, the identification of the drivers for implementing/maintaining a recycling program, a description and inventory of infrastructure in place, both on and off- airport, that supports airport recycling, and a description of the airport's current solid waste recycling, reuse, and waste reduction efforts, including instances when tenants recycle materials.

Results of previously completed waste audits will be documented as part of the plan. However, **no waste audits will be conducted as part of this Master Plan.** Technical and economic factors, as well as logical constraints, that currently affect the airport's ability to recycle will be reviewed and Federal, state, or local guidelines or policies that aid or hinder recycling efforts will be identified.

This task will also include a brief review of existing waste management contracts including a description of current contracting for waste management at the airport, the identification of tenant leases and service contracts with corresponding expiration, extension, and/or renewal dates, and a description of how waste handling and recycling is funded.

Potential for cost savings or revenue generation and recommendations to minimize solid waste will be identified. **No detailed financial analysis and modeling, however, will be completed as part of this effort.**

Draft Sustainability Chapter

A draft Sustainability Chapter summarizing the findings of the simplified recycling, reuse and waste reduction plan. The Airport/City staff and Technical Advisory Group review and comment process for the Sustainability Initiatives chapter will incorporate two revision rounds; (1) preliminary draft for review and comment, and (2) final draft for review and comment. The second round of comments/revisions will be incorporated into the final draft chapter of the Master Plan.

Items of Work Not Included in Scope

- Waste audits

- Detailed financial analysis and modeling

Data & Resources Required From The City

- Sustainability Master Plan

- Base Mapping

Deliverables

- Six (6) copies of the Sustainability Initiatives chapter for Airport review and comment

- Six (6) copies of a final draft chapter for Airport review and comment

- A final Sustainability Initiatives report in electronic format (.PDF)

Implementation Plan

Firm Responsible for Completing this Subtask: Ricondo & Associates, Inc.

The implementation plan will consist of the Implementation Schedule and the Capital Improvement Program (CIP). The recommended development plan will be subdivided into distinct projects for which estimates of probable costs will be prepared and funding sources which will be phased over the development period. The CIP will be coordinated with Airport and City staff and the existing CIP to include both currently programmed and master plan-related capital improvements for the Airport.

The development schedule will be based on the improvements needed to satisfy demand at each of the 5-, 10- and 20-year time frames, which will be assumed to occur as determined in the forecasting task. Individual development projects will be phased to allow improvements to be designed, constructed, and operational to meet demand. The phasing process will be an iterative process with the financial analysis to ensure that the CIP is both implementable and economically feasible.

Subtask 1.1 Define Individual Development Projects

Firm Responsible for Completing this Subtask: Ricondo & Associates, Inc.

Based on the various facility requirements and development alternatives, the Consultant Team will identify and define the individual capital improvement projects that make up the recommended actions. These will become the basis for the CIP schedule and cost estimates.

Develop Estimates of Rough Order of Magnitude (ROM) Costs

Firm Responsible for Completing this Subtask: HDR, Inc.

Using labor and materials price data from recent Airport construction projects, supplemented by current industry data, the Consultant Team will determine costs for each project in the CIP, which will include design, engineering, administrative, land acquisition, and construction costs. These will be prepared on a conceptual, budgetary level.

Project Sequencing

Firm Responsible for Completing this Subtask: Ricondo & Associates, Inc. & HDR, Inc.

The Consultant Team will Review the most current CIP for the Airport and coordinate project sequencing with Airport staff. This task will include the identification of the recommended short-, mid- and long-range Capital Improvement projects to comprise the CIP list. The anticipated sequence for each project will be based on the improvements needed to satisfy demand at the various demand levels (5-year, 10-year, and 20-year horizons), funding considerations, the City objectives, and prerequisite project requirements where necessary. The various facility development projects will be prioritized and correlated with the staging plans for the airport development program resulting from the selected alternatives. The CIP phasing will be determined for the short- (0-5 years), intermediate- (6-10 years), and long-term (11-20 years) planning periods. The requirements for the short-term will be determined on a year-by-year basis. These estimates will provide sufficient detail to develop a reasonable capital funding plan for the Airport.

The phasing process will be an iterative process with the financial analysis to ensure that the CIP is both implementable and economically feasible. The revised phasing will be closely coordinated with the airport management and senior airport staff.

The development schedule will include a bar graph showing the timing of each project and color drawings illustrating recommended phasing for project implementation to satisfy the needs of short term (5 year), intermediate term (10-year), long term (20-year) forecast aviation demands and beyond 20 year time frame.

The short-term (5-year) plan will make up the 5-year CIP. The intermediate term (10-year), long-term (20-year) and beyond 20 year improvements will be described and

incorporated into a long-term development plan, which, with the short-term CIP, will make up the basis for the financial plan.

Prepare Project Summaries and Exhibits

Firm Responsible for Completing this Subtask: Ricondo & Associates, Inc.

The Consultant Team will prepare and provide graphic exhibits for applicable capital improvement projects to clarify limits of construction and other assumptions related to the estimated project budgets. In addition, summary sheets will be developed for each project that identifies typical CIP entry fields to facilitate future programming of each project in the JACIP for the airport. The findings of the implementation plan task, including the project summaries and exhibits, will be summarized in a draft report and provided to airport management and staff for review and comment.

The Airport/City staff review and comment process for the Implementation Plan Report will incorporate two revision rounds; (1) preliminary draft for the Airport review and comment, and (2) final draft for the Airport review and comment. The second round of comments/revisions will be incorporated into the final draft chapter of the Master Plan.

Supporting Sub-Consultant

HDR, Inc.

Deliverables

- A report including the project summaries and supporting graphic exhibits

- Six (6) copies of a preliminary draft Implementation Plan working paper for Airport review/comment

- Six (6) copies of a final draft Implementation Plan report for the Airport review/comment

- A final Implementation Plan report in electronic format (PDF)

Financial Feasibility and Funding Analysis

Firm Responsible for Completing this Subtask: Ricondo & Associates, Inc.

The results of the master planning analyses described in the prior tasks will be evaluated from a financial standpoint, taking into consideration existing debt and expected levels of available FDOT, FAA entitlement, and FAA discretionary funding, as well as the availability of local funds and any opportunities for third party funding. The analyses will help establish a phasing plan for the recommended improvements identified for the Airport that can be implemented in accordance with projected demand growth and emerging facility needs.

The financial plan will be prepared to outline the actions and initiatives necessary to carry out the CIP in a financially sound manner. Included in the financial plan will be the

identification of specific funding sources, projections of revenues and expenses, and development of a preferred strategy for undertaking the CIP.

Subtask 1.1 Prepare Financial Plan

The recommended airport financial plan will be prepared under this subtask. This effort will take into consideration typical participation levels from federal and state grant-in-aid programs to determine the net amount of capital funds required by the airport to accomplish each proposed stage of improvement for the Airport. Alternative financing strategies that may be available for implementing the proposed development program will also be analyzed. The sources of airport funds as to their financial implications, their use to finance proposed airport development projects and airport operations and maintenance needs will also be explored. The financial plan will be broken into a five-year initial phase (which will be delineated on an annual basis), an intermediate five year term, and a long-term of ten years, to complete the 20-year planning program.

Available sources of airport revenue and expenditures will be obtained to provide an overview of the airport's operating income. This information will be used to provide an analysis of the revenue that can be expected over the course of the short term planning period only. Projections of future airport revenue and expenditures will be made for the first five-years and then utilized to evaluate the financial feasibility of the projects needed within that timeframe.

The analysis will focus on the first five-years in attempt to keep the financial analysis as realistic as possible, while at the same time providing valuable data for the airport to use when updating the Joint Automated Capital Improvement Program (JACIP). Based on the findings, revisions will be made to the work program with the intent of producing a realistic approach to accomplishing future airport projects, while at the same time maintaining the current airfield facilities.

During the development of a recommended financial plan, specific projects will be reviewed with airport management to confirm project costs and timing as well as to review the strategy for available funding sources, all in an effort to maximize the financial feasibility of the capital program.

Prepare Financial Analysis Report

The findings of the financial plan task will be summarized in a draft report and provided to the Airport and City staff for review and comment.

The Airport and City staff review and comment process for the Financial Feasibility and Funding Analysis Report will incorporate two revision rounds; (1) preliminary draft for the Airport review and comment, and (2) final draft for the Airport review and comment. The second round of comments/revisions will be incorporated into the final draft chapter of the Master Plan Update.

Items of Work Not Included in Scope

This task does not include:

Marketing or promotional campaigns

Branding

Detailed land development planning

Review of tenant lease agreements

Analysis and enhancement of tenant lease agreements

Data & Resources Required From The City

Historical and upcoming capital projects

Prior funding assistance

Revenue sharing agreements

Airport financial statements as well as applicable information pertaining to state/local financial support

Airport Leases Summary, if available; if not, copies of tenant leases

Projected debt service schedule, if applicable

Projected capital projects and funding sources for upcoming five years

Deliverables

Excel tables and worksheets that the Airport may modify for future needs

Six (6) copies of a preliminary draft Financial Analysis working paper for Airport review/comment

Six (6) copies of a final draft Financial Analysis report for the Airport review/comment

A final Financial Feasibility and Funding Analysis report in electronic format (PDF)

Airport Layout Plan (ALP) Set Update

Firm Responsible for Completing this Subtask: Ricondo & Associates, Inc.

This effort is intended to produce the necessary documents (including the ALP drawing set and associated Narrative Report) required for the Federal Aviation Administration (FAA) and Florida Department of Transportation (FDOT) to review and conditionally approve the proposed development plan for the Airport.

The Airport Layout Plan set will depict the full build-out of aviation- and non-aviation-related facilities associated with the preferred development plan. This ALP drawing set would adhere to FDOT and FAA prescribed design guidelines and be developed within a GIS platform confirming to ACs 150/5300-16A, 150/5300-17C, 150/5300-18B and 150/5300-13A, Change 1. The ALP set would also include a property inventory map reflecting the latest Airport property acquisitions.

All components of the ALP drawing set described herein will be developed in accordance with the provisions of AC 150/5070-6B, Airport Master Plans, and the FAA

ARP Standard Operating Procedure (SOP) 2.00, Review and Approval of Airport Layout Plans (ALPs). To support the submittal of this updated planning product, the Consultant team will also review, complete, and submit the checklist that is provided in the FAA SOP 2.00.

Subtask 1.1 **Title Sheet**

A title sheet will be prepared in accordance with the FAA checklist¹ to serve as the drawing set cover sheet. This title sheet will include pertinent information such as the airport name, owner/operator, location, and plan set preparer. An index of drawings, graphic representations of the airport location (including the identification of the county the Airport is located in) and airport vicinity will also be presented on the title sheet.

Existing Airport Layout

Utilizing new digital mapping for the Airport, a new drawing will be created to identify facilities and geographical features at the Airport as they currently exist. This drawing will include existing structures, pavements, imaginary surfaces, NAVAIDs (visual and instrument), ground contours, runway protection zones, runway safety areas, property interests, and other pertinent dimensional data recommended by the FAA.

Based on the new digital mapping obtained for the Airport, this drawing will reflect projects and other airport improvements that have materialized since the current ALP was last approved. This drawing will also depict the configuration and general dimensioning of the existing airport facilities, including surveyed building heights of all buildings on airport property. The Airport Reference Point (ARP), key elevations, runway end latitude/longitude coordinates, and runway approach surfaces will also be identified. The drawing will also include a legend and applicable notes section, wind roses and wind coverage tables, as well as a runway data and building data tables. The runway data table will include information such as Approach and Departure Reference Code (APRC and DPRC), Runway Reference Code (RRC), runway length, runway width, runway end elevation, runway lighting, runway marking, pavement type, pavement strength and NAVAIDs (visual and instrument). The “true” and magnetic north will also be depicted, which will require the calculation of the magnetic declination at the Airport. Any deviations to FAA design standards will be identified and noted appropriately.

As part of this effort, the Consultant Team shall assemble and analyze 10 years of historical wind and weather data for FXE. Ceiling, visibility, wind speed and direction will be analyzed to develop a wind rose, assess existing wind coverage and determine the percentage of observations in visual and instrument meteorological conditions.

The FAA checklist will be reviewed (and completed) to confirm that the existing airport layout contains the information required for submittal to the FAA. The scale of the drawing will be defined at the time the ALP set is commenced and will be determined so

¹ FAA ARP Standard Operating Procedures (SOP), *Standard Procedure for FAA Review and Approval of Airport Layout Plan*, October 1, 2013.

as to provide a clearly legible drawing with all requisite data readily discernible. The scale of the drawing, however, will fall within the range of 1" = 200' and 1" = 600', in accordance with the FAA checklist.

Airport Layout Plan

Utilizing new digital mapping and other available resources, The Consultant will create an ALP to reflect the recommended development plan to accommodate the future facility needs as identified in the updated Master Plan. Specifically, the ALP will illustrate existing and proposed airfield pavements, roadway & parking pavement/structures, trails/gravel roads, runway markings, on-airport structures, appropriate levels of vegetation, key drainage features, NAVAIDs (visual and instrument), off-airport structures that are located in the immediate vicinity of the Airport, and other miscellaneous natural and man-made items. Established survey monuments located on or in the immediate vicinity of the Airport will also be identified.

Ground contours, runway protection zones, runway safety and object free areas, future property interests, and other pertinent dimensional data recommended by the FAA will also be depicted on the plan. The ARP (existing and proposed), the Approach and Departure Reference Code (APRC and DPRC), and Runway Reference Codes (RRCs) for each runway, key elevations, runway end latitude/longitude coordinates, and runway approach surfaces will also be identified. Any proposed improvements and/or changes to these items will be depicted graphically and identified.

The ALP will be developed in accordance with the FAA checklist. Thus, each of the components of the ALP will contain the information necessary to obtain approval from the FAA. Like the Existing Airport Layout, any deviations to FAA design standards will be identified and noted on the ALP.

The scale of the drawing will be defined at the time the ALP set is commenced and will be determined so as to provide a clearly legible drawing with all requisite data readily discernible. The scale of the drawing, however, will fall within the range of 1" = 200' and 1" = 600', in accordance with the FAA checklist.

Airport Airspace Drawing

Firm Responsible for Completing this Subtask: Ricondo & Associates, Inc.

This drawing will depict all relevant Federal Aviation Regulations (FAR) Part 77 Imaginary Surfaces as they relate to the Airport's immediate airspace in a plan and profile view. The plan view will be prepared at an approximate scale of 1" = 2,000' and will be overlaid onto a USGS 7-minute quadrangle basemap (or orthophotography) of the surrounding area. The profile view will be prepared at a horizontal scale of 1" = 1,000' and a vertical scale of 1" = 100'.

The plan will illustrate the ultimate runway configuration of the airfield with key elevations of the surfaces and stationing from the runway ends being referenced. Fifty (50) foot contour intervals will be shown for all FAR Part 77 sloping imaginary surfaces. This sheet will depict objects violating FAR Part 77 surfaces that have not been

identified on the ALP or inner approach drawings. The top elevation of each obstruction will be identified on the drawing as will the disposition of the obstruction in a tabular format. The dimensions of the approach surfaces and transitional surfaces will be charted. Obstruction heights will be obtained from the new digital mapping and other available resources. In addition, all known obstructions to navigable airspace off-airport will be identified through the use of the latest USGS mapping, the NOAA Obstruction Chart, and the aeronautical sectional chart as applicable. No field obstruction surveys, however, will be completed as part of this effort.

The FAA checklist will be reviewed (and completed) to confirm that the airport airspace drawing contains the information required by the FAA.

Inner Portion of the Approach Surface Drawings

Firm Responsible for Completing this Subtask: Ricondo & Associates, Inc.

These drawings will depict plan and profile views of the inner portion of the approach to each ultimate runway end at the Airport. These drawings will utilize a 1" = 200' horizontal scale for the plan and profile views and a 1" = 20' vertical scale for the profile views. The plan/profile extents will cover from the referenced runway out to a point where the approach surface reaches a 100-foot height above the runway end. The new digital base mapping will be used to identify obstructions to navigable airspace, as well as those documented on the latest USGS 7-minute quadrangle mapping and the NOAA Obstruction Chart.

In accordance with the FAA checklist, these drawings will depict the obstacle identification surfaces contained in 14 CFR Part 77, Objects Affecting Navigable Airspace, threshold siting surfaces, Glideslope Qualification Surfaces (GQS) if applicable, and any other applicable surfaces associated with the United States Standards for Instrument Procedures (TERPS), Changes 1 through 26.

Obstructions will be listed numerically in a tabular format for each approach with data describing the obstruction type, the surfaces penetrated, top elevation, allowable elevation, amount of penetration, and proposed dispositions. Elevations of roads, railroads, power poles, trees, buildings, and other objects that are located within the approaches will also be shown.

The drawings will also depict the threshold siting surfaces associated with each runway end. These surfaces will be defined based on the type of instrument approaches anticipated and the critical aircraft for each runway end in accordance with the standards defined in Table 3-2, Approach/Departure Standards Table, of FAA AC 5300-13A, Change 1, *Airport Design*.

Additionally, any local zoning ordinances or protection zones will also be reflected in the inner portion of the approach surface drawings, where applicable.

Land Use Drawing

This drawing will depict the existing and recommended use of all Airport property and all land in the immediate vicinity of the Airport (to the 65 DNL contour as specified in FAA RGL- 5070.1). The land uses will be depicted by general use categories such as aviation, commercial, residential, industrial, recreational, public use, etc. The specific designations to land uses within the airport property limits will be discussed with airport representatives and revised as directed to reflect the categories that are desired. The off-airport land uses in the immediate vicinity of the Airport (to the 65 DNL contour) will be defined based on the Broward County zoning and land use maps.

The 65 DNL will be developed as part of Task 6.2 using the FAA's Integrated Noise Model (INM) Version 7.0D, and based on the aviation activity projected as part of the Master Plan's forecast. In addition to the 65 DNL, the 70 and 75 DNL will also be depicted the land use drawing.

The FAA checklist will be reviewed (and completed) to confirm that the land use drawing contains the information required by the FAA.

Airport Property Map

Firm Responsible for the Property Line Survey: Brown & Phillips, Inc.

This drawing will be prepared at a scale equal to that of the ALP and will depict the existing airport property boundary as well as proposed acquisition areas. This drawing will be developed based on the information to be collected and assembled as part of Task 15, Exhibit "A" Airport Property Inventory Map.

The drawing will indicate in matrix form how, when, and from whom the various parcels were acquired. In accordance with the FAA checklist, the data table will include:

- Number or letter and area of each parcel or easement
- Date property was acquired or property status
- Federal Aid project number under which the property acquisition was reimbursed
- Type of Acquisition (i.e. AIP-noise, AIP entitlement, PFC, surplus property, local purchase, local donation, condemnation, other)
- Grantor of property
- Acreage

Preliminary Draft Airport Plans Set Submittal

Five draft copies of the drawings developed will be assembled and distributed to the FXE staff for review and comments. Revisions will be made as appropriate based on comments received. The drawings to be included in the preliminary ALP set are as follows:

- Title Sheet

- Existing Airport Layout
- Airport Layout Plan
- Airport Airspace Drawing
- Inner Portion of the Approach Surface Drawing – Runway 9
- Inner Portion of the Approach Surface Drawing – Runway 27
- Inner Portion of the Approach Surface Drawing – Runway 13
- Inner Portion of the Approach Surface Drawing – Runway 31
- Land Use Drawing
- Airport Property Map

Final Draft Airport Plans Set Submittal

Once comments have been received and addressed (as appropriate), 13 copies of the final draft Airport Plans set will be submitted to the City for distribution to the FAA (nine copies), FDOT Aviation and Spaceports Office (two copies), and airport staff (two copies). An electronic version of the drawings set will also be provided. Drawings will be provided in both AutoCAD and Adobe Acrobat (PDF) formats. As part of this submittal, R&A will also prepare a transmittal letter to the FAA that will list the key changes that have been made to the Airport Layout Plan. The FAA checklist will also be completed and included in this transmittal.

Final Airport Plans Set

Once comments have been received and addressed (as appropriate) fifteen copies of the final Airport Plans set and associated FAA checklist will be submitted to the City for distribution to the FDOT Aviation and Spaceports Office and to the FAA. It is assumed that City personnel will be responsible for forwarding the Airport Plans set to the FAA local ADO for their review, coordination, approval, and signature. An electronic version of the drawings set will also be provided. The final drawings will be provided in both AutoCAD and Adobe Acrobat (PDF formats).

Narrative Report

This task will include the preparation of an ALP Narrative Report that will document, in narrative form, the proposed development plan reflected on the sheets of the ALP set for formal review and comment by the Airport staff. This narrative will include discussions of any modifications to FAA standards, including the justification of any new modification requests. In addition, a half-size version of the ALP set (11"x17") will be printed and included in the report.

The Airport/City staff and Technical Advisory Group review and comment process for the ALP Narrative Report will incorporate two revision rounds; (1) preliminary draft for the Airport review and comment, and (2) final draft for the Airport review and comment. The second round of comments/revisions will be incorporated into the final draft chapter of the Master Plan.

Obstacle Action Plan

As part of this task, the Consultant Team will prepare an Obstacle Action Plan (OAP) that outlines how and when Airport Sponsors will mitigate penetrations to airspace surfaces. On August 18, 2015, FAA Headquarters issued a memorandum that emphasizes the importance of establishing and maintaining clear approach and departure surfaces at airports. This memorandum also declared that the Airport Sponsor will integrate the OAP analysis and findings into their Master Plan, Airport Layout Plan and CIP. The final action plan must include at a minimum the following items for unmitigated penetrations: obstacle reference number, type, latitude, longitude, elevation (AMSL), height, surface penetrated, penetration amount, runway, if the obstacle is on or off the airport, if the obstacle is under sponsor control, proposed maintenance action and when each of the obstacles will be cleared and triggering event if associated with a particular event.

Coordination Meetings

R&A anticipates participating in up to four (4) web conference sessions using GoToMeeting or similar software. These web conference sessions will provide an opportunity to review the base map layering, review the draft ALP set with Airport staff and discuss required modifications to the drawings.

In addition to the web conference sessions, three meetings at the Airport are anticipated with FXE staff and management. These meetings will provide an opportunity to review the draft ALP sets prior to distributing copies to the FAA and FDOT Aviation and Spaceports Office for review and comment.

Similarly, two meetings at the FAA Orlando ADO in are anticipated. These meetings will provide an opportunity to present the draft ALP sets to the ADO staff and to go over the proposed projects to be reflect on the future ALP. These meetings will be attended by R&A staff, currently located in Orlando.

Data & Resources Required From The City.

Current electronic ALP files in AutoCad (.dwg) format

Deliverables

- Six (6) copies of the preliminary draft ALP set for distribution to the Airport
- 13 copies of the draft ALP set for distribution to the FAA (9 copies), FDOT Aviation and Spaceports Office (2 copies), and airport staff (2 copies).
- 15 copies of the final ALP set for distribution to the FAA (9 copies), FDOT Aviation and Spaceports Office (2 copies), and airport staff (4 copies).
- A narrative report discussing the components of the ALP Plan Set and the proposed development plan reflected on the sheets of the ALP

Six (6) copies of a preliminary draft ALP Narrative Report working paper for Airport review/comment

Six (6) copies of a final draft working paper for the Airport review/comment

A final ALP Narrative Report in electronic format (PDF)

Documentation

Firm Responsible for Completing this Subtask: Ricondo & Associates, Inc.

Subtask 1.1 Final Airport Master Plan Report and Executive Summary

A draft Master Plan Update Report will be prepared that will summarize the findings of each of the tasks described earlier, delineating the methodology, assumptions, and findings of the various planning analyses undertaken. It will document the processes employed during this study to meet future aeronautical demand and to implement the physical and operational initiatives to enhance the economic self-sufficiency of the Airport.

This Master Plan Update will be comprehensive in terms of the information presented to allow review and comment by the appropriate parties. Upon receipt of review and comments from the Aviation Advisory Board and Airport Manager, the report will be finalized, representing the Master Plan Update Final Report.

A total of ten (10) copies and an electronic file version in Adobe Acrobat (PDF) format of the draft report and 25 copies of the final report, along with a copy of an electronic version of the final report (provided in Adobe Acrobat PDF format) will be provided. In addition, 50 copies of an Executive Summary graphically designed (color, with graphics on 100 lb. paper estimated to be 15-25 pages in length) will be prepared and submitted to the Aviation Advisory Board and Airport Manager along with an electronic version (Adobe PDF) of the document that the City can use for future printing and distribution.

Items of Work Not Included in Scope

Detailed Graphic Renderings

Data & Resources Required From The City

Input on the desired design for the Executive Summary.

Data & Resources Required From Others

None

Deliverables

As described in scope section above.

Public Involvement

Firm Responsible for Completing this Subtask: Ricondo & Associates, Inc., Dickey Consulting Services, Inc.

Subtask 1.1 Master Plan Update Kickoff Meeting

The overall goal of this task is to implement an initial coordination and communication process to provide an opportunity for the exchange of information and to secure feedback as the master planning process commences. Specifically, the briefing will serve to (1) obtain the City staff input throughout the initial study design effort to ensure that airport-specific technical and operational priorities are reflected in the scope of subsequent study phases and obtain feedback and input relevant to the needs of the Airport, (2) provide an opportunity for the exchange of technical information relevant to the planning process, and present an avenue for tenant input regarding priorities, constraints, opportunities, opinions, and considerations that need to be considered in the long-range planning effort, (3) obtain policy maker and/or Agency (regulatory and local planning sectors, including the City) input to ensure the planning focus is compatible with the community's objectives.

The Consultant will prepare meeting/presentation materials, using Microsoft PowerPoint, to provide a general overview of the study (including goals and objectives, study structure, anticipated phasing, key study areas, and other general information on the framework, end products, and purpose for the airport planning process) for internal and external stakeholders, and other interested parties.

Items of Work Not Included in Scope

Video productions or animations; meetings or work sessions beyond those quantified in the scope for this task.

Data & Resources Required From The City

Airport photos or existing videos

Listing of and contact information for the TAG members - membership to be defined by the Aviation Advisory Board and Airport Manager with support and assistance from R&A.

Deliverables

PowerPoint presentation for Study Goals and Objectives.

Public (Open House) Meetings

It is anticipated that up to two (2) presentations on the work status of the Airport Master Plan study will be presented to the general public as part of a dedicated Airport Master Plan public briefings. These presentations will be scheduled by the Airport and will correspond with key milestones of the study. At a minimum, R&A's Officer in Charge and Project Manager will attend each of these meetings and participate in the role desired and requested by airport staff.

It is anticipated that these briefings would occur at City Hall or other City facility. Thus no costs for renting/leasing meeting space for these briefings have been included in the budget.

Optional Items not presently included in Scope (but may be added in at a future date is desired by the City/Airport Staff:

At the request of the Airport, pending the current development of a marketing video, R&A may create a video to be displayed during the open house presentations that highlights future development alternatives that are a result of the master plan study

Deliverables

Project Status

Presentation Graphics

Aviation Advisory Board Briefings

It is anticipated that up to four (4) presentations on the work status of the Master Plan Update study will be presented to the Aviation Advisory Board during their regularly scheduled meetings (Fourth Thursday of the month at 1:30 p.m.). These presentations will occur at key milestones and as a predecessor to the Open House Meetings (described in Subtask 12.3). These presentations are intended to present project status updates as well as to receive feedback and guidance from the Board when necessary. R&A's Office-in-Charge and Project Manager

Deliverables

Project Status

Presentation Graphics

City Commission Briefings

It is anticipated that up to two (2) presentations on the work status of the Master Plan Update study will be presented to the City Commissioners. The dates, times and meeting agendas for these briefings will be identified by City/Airport staff.

Deliverables

Project Status

Presentation Graphics

Master Plan Project Website

To further promote the coordination and communication process, a section of the existing FXE website will be dedicated to the master plan update. It is anticipated that the Consultant team will provide material to be loaded on the webpage by the current website administrator or anyone else identified by the Airport. The Consultant team will

not be responsible for the maintenance or development of the website. Pending approval by the Airport/City, all presentations and milestone deliverables will be submitted in a usable format to be uploaded to the project website.

Deliverables

Project materials to be hosted on the existing website and made available to the public for download

Airfield Nomenclature Review

This task includes the review and evaluation of the existing airfield nomenclature including taxiways and aircraft ramp areas. The intent is to determine conformity with FAA guidance including Engineering Brief #89 and Advisory Circular (AC) 150/5340-18F. From this process, R&A will develop a new or improved airfield nomenclature based on FAA standards. As part of this task, R&A will:

- Conduct an airfield inventory: The airfield inventory will consist of an on-site review of existing airfield signs to identify their location relative to the associated airfield component and in relation to one another. The intent is to identify taxiway naming conventions and signage configuration that have the potential to cause communication problems between pilots and air traffic controllers. This effort does not include the inventory of FBOs and roadway signs. Only those airfield signs typically required to conform to FAA requirements for the runway, taxiway and apron areas will be inventoried. This evaluation does not include a review of the signs structure conditions to identify apparent defects or conditions associated with wear and tear that may be affecting individual signs. Similarly, the identification or assessment of electrical systems serving the signs is not included as part of this effort.
- Review existing taxiway nomenclature and airfield signage documentation: Existing documents will be collected from the Airport during the on-site visit to include as-built drawings of airport signs and inspection reports.
- Prepare Airfield Nomenclature Alternatives: Based on the site visit and review of existing taxiway nomenclature and airfield signage documentation, R&A will develop up to three airfield nomenclature alternatives. As part of this task, R&A will develop airfield signage plans illustrating the proposed airfield nomenclature alternatives.
- Prepare technical memorandum: The technical memorandum will describe the existing airport signage system, define FAA airfield signage nomenclature requirements, identify deficiencies/deviations from FAA standards associated with the existing signs, and recommend taxiway and/or apron area designation changes. Taxiways designations will be reviewed to ensure that they are simple and logical as prescribed by the FAA. Compliance with general signing conventions will also be reviewed. For each sign that does not comply with the FAA standards, and/or general signing conventions, a brief explanation of the inconsistencies will be provided.

- Conduct coordination meeting: A coordination meeting will be conducted at the Airport with the Airport/City staff to review the airfield taxiway nomenclature alternatives and define a preferred naming convention for the existing taxiways and aircraft ramp areas.

Deliverables

A technical memorandum summarizing the results of analyses including supporting graphic exhibits:

- Six (6) copies of a preliminary draft Technical Memorandum for Airport and City staff review/comment
- Six (6) copies of a final draft Technical Memorandum for the Airport review/comment
- A final Technical Memorandum in electronic format (PDF)

Exhibit A Airport Property Inventory Map

The objective of preparing an Exhibit "A" for the Airport is to collect and illustrate it in an organized form, all available recorded documents related to the ownership acquisition of the various land parcels acquired by the City of Fort Lauderdale for the Florida Executive Airport. The Exhibit "A" Airport Property Inventory Map will be prepared in accordance with FAA standards as defined in FAA Advisory Circular 150/5070-7, *Airport Master Plans*, and FAA SOP 3.0, *Standard Operating Procedure (SOP) for FAA Review of Exhibit 'A.'* As part of this task, R&A and B&P will:

- Collect existing information relevant to the project:
 - Obtain from Airport staff all available record documents (deeds, easements, etc.) pertaining to ownership or land interest of parcels within the limits of the airport.
 - Obtain from the City of Fort Lauderdale recorders copies of deeds, easements, plats of subdivisions, plats of highways, etc. for properties which might not be available from the airport.
- Obtain and review record document:
 - Deed parcel documents will be obtained from the City and/or airport and reviewed to identify location, type of document (warranty deed, quitclaim deed, court judgment or easement), recorded index as book and page, grantor and limits of acquired parcels.
 - Review acquisition documents for all parcels acquired on or before March 11, 1947, show it as a single parcel as needed.

- Documents will be reviewed to identify location, type of document (warranty deed, quitclaim deed, court, judgment or easement), recorded index as book and page, grantor and limits of acquired parcels.
 - Research existing governmental digital databases as well as paper records for documents not available from the City of Fort Lauderdale.
 - Organize all collected documents by indexing and referencing each recorded document of acquired parcel in the proposed Exhibit "A"
- CADD Drafting of Exhibit "A".
 - Create a property map set following the FAA SOP 3.0 guideline/checklist
 - Exhibit "A" will document all land interest acquired by the City of Fort Lauderdale for the airport purposes including fee simple, quit claim, judgment orders, aviation easements, easement benefiting the airport, easements held by others within the airport limits (utility easements, road right-of-way-easements).
 - Show each acquired parcel or tract and provide federal project number applicable to parcel, parcel number, name of grantor, type of instrument of acquisition, book and page number of recording, date of acquisition, acreage, controlling heights of aviation easements
- Develop airport boundary legal description
 - Provide a metes and bounds legal description of the existing limits of the Airport.
 - Legal description will be based on available record documents and occupation based on aerial mapping, recorded surveys, legal descriptions from acquired parcels. No field boundary survey of the airport boundary limits will be conducted as part of this effort.
- Identify Future Property Interests: R&A will identify future airport property interests so that B&P can define the boundaries of the parcels included in the potential future property acquisition area.
- Define Land Parcel Acreage and Controlling Height: Once each of the fee simple parcels are identified, R&A will determine the parcel acreages and define controlling heights where applicable based on the FAR Part 77, Imaginary Surfaces for Obstruction Evaluation Surfaces.
- Research and Review FAA Grant Information: R&A will research information relative to the FAA grants that were used to acquire property, including grant number, issuance date, and associated land parcel(s).
- Assemble Airport Property Map Set: R&A will assemble an airport property map set based on the tasks to be completed by B&P
- Prepare Exhibit A Checklist: To facilitate the review process and ensure that all requirements for the development of an airport property are met, R&A will complete the SOP 3.0 checklist

- Prepare Final Documentation: R&A, in collaboration with B&P, will assemble and organize all the data collected to develop the airport property map set and prepare a final binder and CD including this information. This binder would allow the City of Fort Lauderdale to go back to the information provided on as needed basis and serve a comprehensive database of airport property related information.

Deliverables

- Two (2) copies of the preliminary draft Exhibit “A” drawing set for distribution to the Airport
- Four (4) copies of the draft Exhibit “A” drawing set for distribution to the FAA (1 copy), FDOT Aviation and Spaceports Office (1 copy), and airport staff (2 copies).
- 6 copies of the final Exhibit “A” drawing set for distribution to the FAA (2 copies), FDOT Aviation and Spaceports Office (2 copies), and airport staff (2 copies).

HOURLY BILLING RATES FOR TASK ORDERS FOR ADDITIONAL SERVICES

| Firm | Title/Position | Standard Billing Rate (\$/HR) |
|---------------------------|------------------------------------------------------------------------|--------------------------------------|
| RICONDO & ASSOCIATES, INC | Officer/Principal/Project Manager | \$ 242.00 |
| RICONDO & ASSOCIATES, INC | Director/Deputy Project Manager | \$ 221.50 |
| RICONDO & ASSOCIATES, INC | Manager/Managing Consultant or Senior Airport Planner | \$ 187.00 |
| RICONDO & ASSOCIATES, INC | Senior Consultant/Airport Planner | \$ 125.00 |
| RICONDO & ASSOCIATES, INC | Technical Specialist II/Senior Graphics Designer or Production Manager | \$ 112.00 |
| RICONDO & ASSOCIATES, INC | Consultant/ Junior Planner | \$ 85.00 * |
| RICONDO & ASSOCIATES, INC | Technical Specialist I/GIS Specialist | \$ 72.00 |
| RICONDO & ASSOCIATES, INC | Technician/ AutoCAD Technician | \$ 66.00 |
| RICONDO & ASSOCIATES, INC | Support/Senior Administrative Assistant | \$ 62.00 * |

***per May 20, 2016 email, staffing plan for this category would be adjusted to fit labor costs within this billing rate**

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|-----------------------|--------------------------------|-----------|
| HDR ENGINEERING, INC. | Principal | \$ 242.25 |
| HDR ENGINEERING, INC. | Chief Engineer | \$ 221.00 |
| HDR ENGINEERING, INC. | Senior Project Manager | \$ 212.50 |
| HDR ENGINEERING, INC. | Project Manager | \$ 187.00 |
| HDR ENGINEERING, INC. | Senior Engineer | \$ 178.50 |
| HDR ENGINEERING, INC. | Staff Engineer | \$ 148.75 |
| HDR ENGINEERING, INC. | Project Engineer | \$ 110.50 |
| HDR ENGINEERING, INC. | Engineering Intern | \$ 72.25 |
| HDR ENGINEERING, INC. | Senior Designer | \$ 102.00 |
| HDR ENGINEERING, INC. | Designer | \$ 63.75 |
| HDR ENGINEERING, INC. | Senior Technican | \$ 89.25 |
| HDR ENGINEERING, INC. | Senior Environmental Scientist | \$ 170.00 |
| HDR ENGINEERING, INC. | Environmental Scientist | \$ 110.50 |
| HDR ENGINEERING, INC. | Environmental Technician | \$ 72.25 |
| HDR ENGINEERING, INC. | Senior Planner | \$ 178.50 |
| HDR ENGINEERING, INC. | Planner | \$ 119.00 |
| HDR ENGINEERING, INC. | Sr. Surveyor & Mapper | \$ 166.55 |

| Firm | Title/Position | Standard Billing Rate (\$/HR) |
|-----------------------|-----------------------|--------------------------------------|
| HDR ENGINEERING, INC. | Surveyor & Mapper | \$ 114.93 |
| HDR ENGINEERING, INC. | Principal Architect | \$ 233.75 |
| HDR ENGINEERING, INC. | Senior Architect | \$ 161.50 |
| HDR ENGINEERING, INC. | Staff Architect | \$ 144.50 |
| HDR ENGINEERING, INC. | Architect | \$ 110.50 |
| HDR ENGINEERING, INC. | Senior Graphics/GIS | \$ 140.25 |

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|-----------------------|---------------------------------|-----------|
| HDR ENGINEERING, INC. | Graphics GIS | \$ 85.00 |
| HDR ENGINEERING, INC. | Scheduler | \$ 110.50 |
| HDR ENGINEERING, INC. | Estimator | \$ 110.50 |
| HDR ENGINEERING, INC. | Senior Administrative Assistant | \$ 63.75 |
| HDR ENGINEERING, INC. | Administrative Assistant | \$ 42.50 |

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|-----------------------|-------------------------------|-----------|
| QUANTUM SPATIAL, INC. | Production Manager | \$ 200.00 |
| QUANTUM SPATIAL, INC. | Project Manager | \$ 131.00 |
| QUANTUM SPATIAL, INC. | Flight Department Manager | \$ 170.00 |
| QUANTUM SPATIAL, INC. | Acquisition Lead | \$ 110.00 |
| QUANTUM SPATIAL, INC. | Acquisition Tech | \$ 93.00 |
| QUANTUM SPATIAL, INC. | CONUS Pilot | \$ 97.00 |
| QUANTUM SPATIAL, INC. | CONUS Sensor Operator | \$ 83.00 |
| QUANTUM SPATIAL, INC. | Imagery Processing Lead | \$ 106.00 |
| QUANTUM SPATIAL, INC. | Imagery Processing Technician | \$ 44.00 |
| QUANTUM SPATIAL, INC. | Airborne GPS Technical Lead | \$ 85.00 |
| QUANTUM SPATIAL, INC. | Geo-Spatial Lead | \$ 119.00 |
| QUANTUM SPATIAL, INC. | Geo-Spatial Technician | \$ 95.00 |
| QUANTUM SPATIAL, INC. | CADD/Edit Lead | \$ 80.00 |
| QUANTUM SPATIAL, INC. | CADD/Edit Technician | \$ 71.00 |

| Firm | Title/Position | Standard Billing Rate (\$/HR) |
|----------------------------------|----------------------------|--------------------------------------|
| BROWN & PHILLIPS, INC. | Professional Land Surveyor | \$ 120.00 |
| BROWN & PHILLIPS, INC. | Survey Technician | \$ 80.00 |
| BROWN & PHILLIPS, INC. | CAD Technician | \$ 80.00 |
| BROWN & PHILLIPS, INC. | Survey Crew (3 person) | \$ 125.00 |
| BROWN & PHILLIPS, INC. | Survey Crew (2 person) | \$ 95.00 |
| DICKEY CONSULTING SERVICES, INC. | Principal | \$ 161.13 |
| DICKEY CONSULTING SERVICES, INC. | Liaison Officer | \$ 95.88 |