BOARD OF COUNTY COMMISSIONERS

DATE: September 17, 2013
AGENDA ITEM NO. 14

Consent Agenda ☐ **Regular Agenda** ☑ **Public Hearing** ☐

County Administrator's Signature:

Subject:
Approval of Final Negotiated Agreement - Consultant Services for Airport Improvement Projects - St. Pete-Clearwater International Airport
Contract No. 112-0413-CN (RM)

Department:
Department of Environment & Infrastructure - Airport / Purchasing

Staff Member Responsible:
Noah Lagos / Joe Lauro

Recommended Action:
I RECOMMEND THE BOARD OF COUNTY COMMISSIONERS (BOARD) APPROVE THE FINAL NEGOTIATED AGREEMENT WITH JACOBS ENGINEERING GROUP, INC. (JACOBS), TAMPA, FLORIDA FOR CONSULTANT SERVICES FOR AIRPORT IMPROVEMENT PROJECTS - ST. PETE-CLEARWATER INTERNATIONAL AIRPORT (AIRPORT).

IT IS FURTHER RECOMMENDED THE CHAIRMAN SIGN THE AGREEMENT AND THE CLERK ATTEST.

Summary Explanation/Background:
On October 16, 2012 the Board, in accordance with Consultant Competitive Negotiation Act (CCNA) policy, approved the ranking of ten (10) firms to provide a wide range of professional services to assist the Airport in the implementation of Capital Improvement Projects (CIP) for rehabilitations and improvements to Taxiways; Aprons; the Terminal Building; and conversion of Runway 9-27 into a Taxiway. More specifically, as consultant services are needed for each of the projects outlined in the RFP, staff will negotiate a contract for one firm to provide design services and another firm to provide construction administration services. The services shall be carried out in accordance with Federal Aviation Administration (FAA) regulations, ordinances, and policies.

This project, presented for Board consideration, pertains to pavement rehabilitation of various taxiways on the Airport airfield. An agreement has been negotiated by staff with Jacobs to provide design services for Phase II Taxiway Improvements that will result in complete and ready to build construction plans and specifications for the implementation of Taxiway Rehabilitation, Phase II. The proposed improvements include, but are not limited to, the rehabilitation of Taxiways B, C, D, F, K, and M, and the hold apron along Taxiway M. The design process is expected to be completed within thirty (30) months from date of award.

Fiscal Impact/Cost/Revenue Summary:
The lump sum not to exceed negotiated price for design services is $594,345.00 including contingency.

Funding to support this project is budgeted in the County's Capital Improvement Program. The sources of funding for the project will be grants from the FAA and the FDOT, along with Passenger Facility Charges.

Exhibits/Attachments:
Contract Review
Agreement
Project Financial Overview

Pinellas County PURCHASING

PURCHASING DEPARTMENT
CONTRACT REVIEW TRANSMITTAL

CATS NO.: 42578

PROJECT: Terminal Building and Airfield Improvements- St. Petersburg/Clearwater Inter., Airport Taxiway Rehabilitation, Phase II PID 000036A			
BID NUMBER: 112-0413-CN (RM)		**REQ. NUMBER:**	
TYPE: ☐ Purchase Contract	☒ Other: CCNA	☐ Construction-Less than $100,000	☐ One Time

In accordance with the policy guide for Contract Administration, the attached documents are submitted for review and comment.

Upon completion of review, complete Contract Review Transmittal and forward to next Review Authority listed. Please indicate suggested changes by revising, in RED, the appropriate section of the document reflecting the exact wording of the change.

RISK MANAGEMENT: Please note you already have a copy of agmt and are reviewing Ins. Section **PRODUCT ONLY** ☐
This is an annual contract. Estimated Expenditure: 594,345.00

REVIEW SEQUENCE	REVIEW AUTHORITY	REVIEW DATE	REVIEW SIGNATURE	COMMENTS (Attach Separate page if necessary)	COMMENTS INCORPORATED
1.	Purchasing Dept. J. Lauro, Director Candy Mancuso, A.D. R. McKenzie	6/19 CLM	[signature]	Copy of agmt already sent to risk and legal for review, in an effort to speed up the process of getting agmt to consultant. Airport: need PED	Done JN
2.	Requesting Dept. Noah Lagos, Director /John Holt/Jeff Noa	6/25/13	[signature]	REHABILITATION OR IMPROVEMENT? SEE BOARD MEMO ok - JN Noa $ PG 2 2.2	
Using Dept please provide below information: ☐Yes, funding for this requisition is using grant Funding. ☐No, funding for this requisition is not using grant Funding. If grant funding is being used you must provide Purchasing with the exact clauses that need to be on attached document.					
3.	Risk Management Director Attn: Virginia Holscher *(Check applicable box at right)*	6/27/13	VEH	Insurance requirements in Section C of RFP. Miles, do we have to accept limitation to amt of contract?	HIGH RISK / NOT HIGH RISK
4.	BCC Finance Attn: Cassandra Williams	7/3/13	CBW	See p. 11.	
5.	Asst. County Administrator Attn: David Scott	7/8/13	[signature]		
6.	Legal Attn: Miles Belknap	7/23/13	MB	Advised R. McKenzie re: proposed chngs to RFP agreement language	
7.	Asst. County Administrator Attn: M. Woodard	7/23/13	[signature]		

Sent to 6 6/27

RETURN ALL DOCUMENTS TO PURCHASING

Make all inquiries to:	**AMELIA MCFARLANE, SR., PROCUREMENT ANALYST**	**at Extension 43795**
Please return your requirements to Purchasing by: June 26, 2013		

Revised 08/2010

TENTATIVE DATES
Bid Mail Out:
Bid Opening:
BCC Approval: TBD

RECEIVED JUN 2 7 2013

112-0413-CN

PINELLAS COUNTY GOVERNMENT IS COMMITTED TO PROGRESSIVE PUBLIC POLICY, SUPERIOR PUBLIC SERVICE, COURTEOUS PUBLIC CONTACT, JUDICIOUS EXERCISE OF AUTHORITY AND SOUND MANAGEMENT OF PUBLIC RESOURCES, TO MEET THE NEEDS AND CONCERNS OF OUR CITIZENS TODAY AND TOMORROW

AGREEMENT FOR CONSULTANT SERVICES FOR TAXIWAY REHABILITATION, PHASE II

PROJECT NUMBER: 000036A

CONSULTANT
Jacobs Engineering Group, Inc.

AGREEMENT PREPARED BY
ST. PETE-CLEARWATER INTERNATIONAL AIRPORT

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SECTION 1

INTENT OF AGREEMENT

AGREEMENT FOR CONSULTANT SERVICES FOR

TAXIWAY REHABILITATION, PHASE II

THIS AGREEMENT, entered into on the _____day of _____, 2013, between the BOARD OF COUNTY COMMISSIONERS of Pinellas County, a political subdivision of the State of Florida, hereinafter referred to as the COUNTY, and Jacobs Engineering Group, Inc. with offices in Tampa, Florida, hereinafter referred to as the CONSULTANT.

WITNESSETH, That:

WHEREAS, the COUNTY intends to rehabilitate Taxiways B, C, D, F, K, and M at St. Pete-Clearwater International Airport, the aforementioned improvements being hereinafter referred to as the PROJECT, and

WHEREAS, the COUNTY desires the CONSULTANT to provide the PROFESSIONAL ENGINEERING, AND LAND SURVEYING SERVICES requisite to the implementation of the PROJECT, and

WHEREAS, according to the Federal Aviation Administration Advisory Circulars 150/5300-13A, 150/530-6E, 150/5340-1K, and 150/5370-10F, the COUNTY has selected the CONSULTANT as best qualified to provide PROFESSIONAL SERVICES leading to the planning, schematic design, final design and construction improvement design; and

WHEREAS, the CONSULTANT has expressed the willingness and ability to provide the aforementioned services.

NOW THEREFORE, the COUNTY and the CONSULTANT, in consideration of the mutual covenants hereinafter set forth, agree as follows:

SECTION 2

SCOPE OF PROJECT

For the purposes of this Agreement the term PROJECT shall include all areas of proposed improvements, all areas which may reasonably be judged to have an impact on the PROJECT, and all PROJECT development phases and the services and activities attendant thereto. It is not the intent of this Agreement to identify the exact limits or details involved in providing satisfactorily completed PROJECT construction documents. The CONSULTANT shall provide the following professional

engineering, environmental and land surveying services to prepare construction plans, specifications, and complete applications for and receive all federal, state, and local permits required for construction of the PROJECT. The PROJECT design shall be based on the following data:

2.1 PROJECT DATA

A. PROJECT NAME: Taxiway Rehabilitation, Phase II

B. PROJECT DESIGN LIMITS:

1. The limits of the project shall be as outlined in Exhibit A.

C. PROPOSED IMPROVEMENTS: The Rehabilitation of Taxiways M, D, and B. Relocation of Taxiways K, U, and F; removal of Taxiways K, C, and the hold apron along Taxiway M; modifications to edge lights, guard lights, and illuminated guidance signs; changes to pavement markings; modifications to existing drainage systems as required by modified pavement cross sections. County reserves the right to modify this agreement to add additional improvements as it feels appropriate, however said modifications would be considered additional services.

2.2 SERVICES TO BE PERFORMED BY THE CONSULTANT

The following engineering services and/or professional disciplines shall be performed as required:

- Contract Documents Preparation (Construction Plans and Specifications)
- Cost Estimating Services
- Land Survey Services
- Environmental Permitting
- Soils/Geotechnical Services
- Professional Services During Construction (will be negotiated at a future date)
- Civil Engineering
- Structural Engineering
- Electrical Engineering

2.3 CONSULTING RESPONSIBILITIES

A. It is the intention of the COUNTY that CONSULTANTS are held responsible for their work, including plans review. Detailed checking of CONSULTANT plans or assisting in designing portions of the PROJECT for the CONSULTANT is not the intent of having external design CONSULTANTS. The purpose of CONSULTANT plan reviews is to ensure that CONSULTANT plans follow the plan preparation procedures outlined by the COUNTY and that state and federal design criteria are followed, and that the CONSULTANT submittals are complete.

B. The CONSULTANT shall be responsible for the accuracy of the work and shall promptly correct its errors and omissions without additional compensation. Acceptance of the work by the COUNTY will not relieve the CONSULTANT of the responsibility for subsequent correction of any errors and the clarification of any ambiguities.

C. At any time during the construction of the improvements provided for by the plans or during any phase of work performed by others based on data secured by the CONSULTANT under the Agreement, the CONSULTANT shall confer with the COUNTY for the purpose of interpreting the information obtained and to correct any errors or omissions made by it. The CONSULTANT shall prepare any plans or data required by the COUNTY, to correct its errors or omissions. The above consultations, clarifications or

corrections shall be made without added compensation to the CONSULTANT. The CONSULTANT shall give immediate attention to these changes so there will be minimum of delay to others.

D. The CONSULTANT represents that it has secured or will secure, at his own expense, all personnel necessary to complete this Agreement; none of whom shall be employees of or have any contractual relationship with the COUNTY. Primary liaison with the COUNTY will be through its designee. All of the services required hereunder will be performed by the CONSULTANT under his supervision, and all personnel engaged in the work shall be fully qualified and shall be authorized or permitted under law to perform such services. The CONSULTANT shall employ only persons duly registered in the appropriate category in responsible charge of supervision and design of the work; and further shall employ only qualified surveyors in responsible charge of any survey work.

E. The CONSULTANT shall endorse all reports, calculations, contract plans, and survey data. Such endorsements shall be made by a person duly registered in the appropriate category by the Florida State Board of Registration for Professional Engineers and Land Surveyors, being in the full employ of the CONSULTANT and responsible for the work prescribed by this Agreement.

F. The CONSULTANT shall be responsible for the preparation of a PROJECT design schedule which shows a breakdown of all tasks to be performed, and their relationship in achieving the completion of each phase of work. A bar chart schedule showing overall PROJECT time frames shall also be prepared. These schedules must be submitted for COUNTY approval within ten (10) days of the initial PROJECT Notice To Proceed. These schedules will be used to verify CONSULTANT performance in relationship to Fees claimed and to allow the COUNTY'S Project Coordinator to monitor the CONSULTANT'S efforts. The CONSULTANT shall be responsible for any updates to these schedules and for documenting in writing to the COUNTY any major deviations in the actual versus estimated PROJECT time frames.

2.4 GOVERNING SPECIFICATIONS, REGULATIONS AND PERTINENT DOCUMENTS

The PROJECT shall be designed by the CONSULTANT in accordance with applicable industry standards. The CONSULTANT shall be responsible for utilizing and maintaining current knowledge of any laws, ordinances, codes, rules, regulations, standards, guidelines, special conditions, specifications, or other mandates relevant to the PROJECT or the services to be performed.

SECTION 3

SERVICES TO BE FURNISHED BY THE CONSULTANT

The services shall be performed as detailed in Exhibit A and as generally described below. In the case of conflicts, Exhibit A shall govern.

3.1 ENGINEERING SERVICES

3.1.1 The CONSULTANT shall furnish engineering services for the PROJECT in accordance with the intent of this Agreement. Such engineering services shall include, but not be limited to, the following categories:

A. Engineering investigations necessary to evaluate the existing conditions and facilities including utilities and their potential impact on the PROJECT.

B. Engineering investigations and analysis necessary to prepare a final design which shall adequately meet the requirements and intent of federal, state, local and environmental regulatory agencies.

D. Design activities required to accomplish any necessary corrections for the proper engineering of the PROJECT that may be discovered at any time during the life of this Agreement.

E. The preparation of "working drawings" required in support of the "Engineering Services".

3.1.2 Design activities shall be supported by design calculations properly identified as to subject and topic. Design references and any assumptions shall be noted. Design calculations shall be bound in suitable booklet form, and the booklet shall be properly indexed as to content.

3.1.3 The omission herein by name of such other related engineering tasks as may become necessary for the successful development of the PROJECT shall not relieve the CONSULTANT of the responsibility to provide such tasks in compliance with the intent of the Agreement.

3.1.4 Services shall be prepared under the direction of an engineer registered in the State of Florida and qualified in the required discipline. Products of services performed or checked shall be initialed or sealed by the CONSULTANT.

3.2 PRELIMINARY ENGINEERING REPORT

A. REQUIRED SERVICES

The Preliminary Engineering Report shall provide the COUNTY with a written evaluation with a basis for preparing final construction plans. The report shall include the following KEY elements:

1. Investigation:

   a. Investigation shall commence with the CONSULTANT meeting with appropriate department staff including Operations and Maintenance to obtain a complete understanding of the proposed project. This shall include collecting data both digital and written as well as maps, plans and existing field conditions including but not limited to existing utilities, drainage, landscaping etc.

2. Design Data

   a. The CONSULTANT shall retain the services of a soils engineer/testing firm, if necessary, to perform testing/evaluation of conditions along the selected route as needed for final design. This shall not include services during construction.

   b. The CONSULTANT shall retain the services of a surveyor to perform necessary topographic survey for final design.

3. Final Design Recommendation

   a. A final design recommendation shall be submitted and approved by the COUNTY.

      The following design elements shall be provided by the CONSULTANT during final design recommendation:

      1. Land Surveying

2. Soils & Materials Testing

3. Civil Engineering

4. Structural Engineering (if required)

B. PRESENTATIONS/MEETINGS

The CONSULTANT shall be required to:

1. Participate in a meeting to review the separate KEY elements required to develop the DRAFT of the Preliminary Engineering Report.

C. DELIVERABLES– As described in Exhibit A.

D. PERFORMANCE SCHEDULE

The CONSULTANT'S performance for this phase of work shall begin upon receipt of a Notice To Proceed from the COUNTY.

1. The Draft Preliminary Engineering Report shall be submitted to the COUNTY within forty five (45) calendar days from the date of Notice to Proceed.

2. The Final Preliminary Engineering Report shall be submitted to the COUNTY within fourteen (14) calendar days from the CONSULTANT'S receipt of COUNTY comments on the Draft report.

E. ACCEPTANCE BY THE COUNTY

1. The COUNTY will review the submitted Draft Preliminary Report and within approximately twenty-one (21) calendar days return written comments to the CONSULTANT.

2. Upon submittal of the Final Preliminary Engineering Report, the COUNTY will within twenty-one (21) calendar days, provide acceptance in writing from the Airport Director, or authorized representative. This acceptance will include authorization to proceed to the thirty percent (30%) design phase.

3.3 THIRTY PERCENT (30%) DESIGN PHASE

A. REQUIRED SERVICES

The following design features shall be developed:

1. The thirty percent (30%) Plans shall contain the following:

a. Cover Sheet

b. Location Plan

c. Soil Borings (location and data, as determined by the CONSULTANT for a complete design)

d. Details – Proposed Improvements

e. Plan Sheets (Scale 1" = 30')

f. Existing Utility Locations

2. Base Map of Existing Rights-of-Way and Easement(s) Survey.

B. PRESENTATIONS/MEETINGS

1. Participate in regularly scheduled monthly Status Meetings.

2. Participate in meetings with the Permit/Approval agencies as required, along with a representative from the COUNTY.

C. DELIVERABLES – As described in Exhibit A.

D. PERFORMANCE SCHEDULE

The CONSULTANT'S performance for this phase of work shall begin upon receipt of written acceptance of the Preliminary Engineering Report from the COUNTY.

E. ACCEPTANCE BY THE COUNTY

The CONSULTANT shall receive written acceptance of the thirty percent (30%) submittal from the Airport Director or an authorized representative prior to proceeding to the sixty percent (60%) Design Phase.

3.4 SIXTY PERCENT (60%) DESIGN PHASE

A. REQUIRED SERVICES

The sixty percent (60%) Design shall reflect further development of:

1. Details and General Notes

2. Location Map

3. Plan Sheets

4. Structure Details (as required)

5. Miscellaneous Details

6. Special Construction Details (as required)

7. Design Surveys

B. PRESENTATIONS/MEETINGS

The CONSULTANT shall be required to:

1. Participate in regularly scheduled monthly Status Meetings.

2. Conduct a Coordination Meeting, with the assistance from the COUNTY and at a location to be provided by the COUNTY, to address the sixty percent (60%) Design Phase.

3. Participate in meetings required with the Permit/Approval agencies as required, along with a representative from the COUNTY.

C. DELIVERABLES– As described in Exhibit A.

1. The COUNTY shall provide the CONSULTANT with a copy of the COUNTY'S Standard Technical Specifications.

D. PERFORMANCE SCHEDULE

The CONSULTANT'S performance for this phase of work shall begin upon receipt of acceptance of the 30% submittal from the COUNTY.

E. ACCEPTANCE BY THE COUNTY

1. The CONSULTANT shall receive written acceptance of the sixty percent (60%) submittal from the Airport Director or an authorized representative prior to proceeding to the ninety percent (90%) Design Phase.

2. Upon acceptance by the COUNTY of the sixty percent (60%) submittal the CONSULTANT will proceed with development of any necessary permit applications for submittal to the appropriate permitting agency.

3.5 NINETY PERCENT (90%) DESIGN PHASE

A. REQUIRED SERVICES

The CONSULTANT shall prepare construction plans for the PROJECT. The plans set shall include, but shall not be limited to the following elements or sections:

1. Cover Sheet
2. Location Plan/Key Map
3. Plan Sheets
4. Details and General Notes
5. Structure Details (as required)
6. Special Construction Details (as required)
7. Miscellaneous Details
8. Soil Borings (location and data) (as required)
9. Surveys (alignment of survey, benchmarks and reference points) (as needed)
10. Design Surveys

B. PRESENTATION/MEETINGS

The CONSULTANT shall be required to:

1. Participate in regularly scheduled monthly Status Meetings.

C. DELIVERABLES- As described in Exhibit A.

1. Submittal of all necessary permits.

D. PERFORMANCE SCHEDULE

The CONSULTANT'S performance for this phase of work shall begin upon receipt of acceptance of the 60% submittal from the COUNTY.

E. ACCEPTANCE BY THE COUNTY

The CONSULTANT shall receive written acceptance of the ninety percent (90%) submittal from the Airport Director or an authorized representative to proceed to the one hundred percent (100%) Design Phase.

3.6 ONE HUNDRED PERCENT (100%) DESIGN PHASE

A. REQUIRED SERVICES

1. Complete final design of PROJECT.

2. Complete requirements to obtain permits.

3. Complete final specifications and contract documents.

4. Final construction cost estimate.

B. PRESENTATION/MEETINGS

Advertise/Bid Process

1. The CONSULTANT shall participate in the Pre-Bid Meeting.

2. The CONSULTANT shall assist the COUNTY by supplying input to the preparation of the construction plan or specification addendum. The COUNTY shall administer the distribution of addendum material. The COUNTY shall mail all addendums. No addendum shall be mailed out less than ten (10) days before bid opening, unless it includes a provision to extend the bid date to provide ten (10) days.

3. Subsequent to receiving bids and preparing bid tabulations, the COUNTY shall provide the CONSULTANT with copies of the tabulations for review and written recommendation for award of the construction contract.

C. DELIVERABLES– As described in Exhibit A.

1. Prior to the advertising of bids for construction, the CONSULTANT shall sign and seal two (2) sets of Construction Plans and two (2) sets of specifications in accordance with the Florida Engineering Responsibility Rules. Additionally, any required addenda shall be signed, sealed and dated.

D. PERFORMANCE SCHEDULE

The CONSULTANT'S performance for this phase of work shall begin upon receipt of the written acceptance of the 90% submittal from the COUNTY.

E. ACCEPTANCE BY THE COUNTY

The CONSULTANT shall receive written acceptance of the one hundred percent (100%) submittal from the Airport Director or an authorized representative.

3.7 CONSTRUCTION PHASE

The Construction Phase begins with the award of the construction contract for the PROJECT. As an amendment to this contract, it is anticipated that services to be performed by the CONSULTANT will be identified and negotiated at a later time.

3.8 CONTINGENCY SERVICES

3.8.1 When authorized in writing by the COUNTY'S Airport Director, or an authorized representative, the CONSULTANT shall provide services such as design activities and revisions to construction plans from unforeseen conditions resulting in minor changes in the PROJECT scope.

3.9 ADDITIONAL SERVICES

3.9.1 When approved by the Board of County Commissioners as an amendment to this Agreement, the CONSULTANT shall provide such additional services as may become necessary because of changes in the Scope of PROJECT.

3.9.2 Additional Services may also include but are not limited to the following as may be authorized in this Section:

A. An expanded geotechnical investigation, analysis and reports/plans needed as a result of discovery of hazardous waste.

B. Expanded limits of pavement rehabilitation.

C. Construction phase services in an amount to be determined at a later time.

SECTION 4

SERVICES RELATED TO ALL PHASES

4.1 PRESENTATIONS, MEETINGS AND TECHNICAL LIAISON

The following services shall be provided by the CONSULTANT at no additional cost to the COUNTY:

A. GENERAL MEETING REQUIREMENTS

1. The meetings shall be scheduled through the COUNTY.

2. The CONSULTANT shall coordinate with the COUNTY and prepare the necessary agenda for each meeting. Agenda shall be submitted to the COUNTY at least five (5) working days prior to any scheduled meeting.

3. The CONSULTANT shall keep accurate minutes of all meetings and distribute copies to all participants within three (3) working days after the meeting.

4. The minutes shall reflect agenda items, action items, who is to provide follow-up, the original schedule, current schedule and how the delay, if any, will be addressed.

B. PREDESIGN MEETING

Prior to the commencement of design activities, the COUNTY will conduct with the CONSULTANT a Predesign Meeting for the purpose of discussing issues relative to the PROJECT, plans preparation and submittal schedules and to convey to the

CONSULTANT such items provided for under Section 5 as may be required and available at that time.

4.2 PERMITS

A. PERMITS AND APPROVALS

It is intended that the CONSULTANT will provide a design which will be permitted by various agencies and will be in the best interest of Pinellas County. The CONSULTANT shall make adjustments and revisions as necessary to obtain required permits and approvals. Permits and approvals may include:

1. Southwest Florida Water Management District.
2. Florida Department of Transportation (FDOT) .
3. Federal Aviation Administration (FAA).

B. SPECIFIC REQUIREMENTS:

The CONSULTANT shall:

1. Prepare permit applications, data and drawings required for construction of the PROJECT, for submittal, to local, state and federal agencies.
2. The CONSULTANT shall submit permit applications to the permitting agency.
3. Modifications to the permit drawings which the COUNTY deems will expedite permit handling shall be incorporated by the CONSULTANT.
4. The CONSULTANT shall prepare a written response, for COUNTY review, for all requests for additional information by the permit agency within ten(10) days of receipt of notice. The COUNTY will review the response and provide comments within five (5) days. The CONSULTANT shall provide the revised final response package to the COUNTY within five (5) days for review.
5. The CONSULTANT shall, at no additional cost to the COUNTY, make all construction plans revisions required to obtain the necessary permits for construction of the PROJECT.
6. For the purpose of ensuring the timely approval of all permits necessary for the construction of the PROJECT, the CONSULTANT shall schedule the necessary contacts and liaison with the COUNTY Project Coordinator and all agencies having permit jurisdiction over the PROJECT, and shall furnish, on a timely basis, such plans, data, surveys and information as may be necessary to secure approval of the required permits.
7. Permit preparation, applications, revisions and adjustments shall be in accordance with Section 4. Permit application fees shall be a reimbursable service under Section 6.

SECTION 5

SERVICES TO BE FURNISHED BY THE COUNTY

5.1 The COUNTY shall provide the following for the CONSULTANT'S use and guidance:

A. Copies of existing maps, existing aerial photographs, as-built construction plans and data pertinent to the PROJECT design which the COUNTY may have in its possession.

B. Surface water elevations and flows (100 & 25–Year frequencies) recommended by the Pinellas County Stormwater Management Plan.

5.2 The COUNTY shall perform the following services:

A. Provide airfield access either through badging Consultant personnel, providing escort or both.

B. Prepare the legal (front end) section of the specifications.

SECTION 6

SCHEDULE OF PAYMENTS

The COUNTY shall make monthly payments to the CONSULTANT in accordance with the following terms:

6.1 The CONSULTANT may submit invoices for fees earned on a monthly basis. Such invoicing shall be supported by a Progress Report showing the actual tasks performed and their relationship to the percentage of fee claimed for each phase. Billings within each phase of work shall be for the percentage of work effort completed to date for that phase. The COUNTY shall make payments to the CONSULTANT for work performed in accordance with the Local Government Prompt Payment Act, F.S. § 218.70 et. seq.

The following services shall be considered reimbursable services and may be billed in full upon their completion and acceptance. Copies of supporting receipts/invoices/billing documentation shall be provided by the CONSULTANT.

A. Allocation and Miscellaneous Expenses

B. CADD Computer

C. Plots

D. Prints of Plan Sheets

E. Printing of Reports and Specifications

F. Printing and Binding Services.

G. Travel Expenses (in accordance with Chapter 112, Florida Statutes). No reimbursement shall be paid for mileage within the Tampa Bay metropolitan area.

Should an invoiced amount for fees earned appear to exceed the work effort believed to be completed, the COUNTY may, prior to processing of the invoice for payment, require the CONSULTANT to submit satisfactory evidence to support the invoice.

All progress reports and invoices shall be mailed to the attention of the COUNTY'S Finance Division Accounts Payable, Pinellas County Board of County Commissioners, P.O. Box 2438 Clearwater, FL 33757; a copy of all progress reports and invoices shall be mailed to the attention of the COUNTY'S Airport Director or Designee, c/o St. Pete-Clearwater International Airport, 14700 Terminal Building, Suite 221, Clearwater, FL 33762.

Invoices not properly prepared (mathematical errors, billing not reflecting actual work done, any signature, etc.) shall be returned to the CONSULTANT for correction.

Fees for contingent or additional services authorized shall be invoiced separately, and shall be due and payable in full upon the presentation of satisfactory evidence that the corresponding services have been performed.

SECTION 7

COMPENSATION TO THE CONSULTANT

7.1 For the performance of BASIC SERVICES as provided for in this Agreement, the COUNTY agrees to pay the CONSULTANT in accordance with the following:

A. A lump sum fee of Thirty seven thousand five hundred seventy seven and 00/100 dollars ($37,577.00) for the Phase 1A, Program Verification Element of the Project.

B. Phase 1B – Schematic Design is not included.

C. A lump sum fee of Seventy nine thousand seven hundred seventy six and 00/100 dollars ($79,776.00) for Phase 2, Design Development (30% Design) of the Project.

D. A lump sum fee of One hundred seventeen thousand three hundred twenty and 00/100 dollars ($117,320.00) for Phase 3A, Contract Documents (60% Submittal) of the Project.

E. A lump sum fee of Ninety six thousand seven hundred thirty five and 00/100 dollars ($96,735.00) for Phase 3B, Contract Documents (90% Submittal) of the Project.

F. A lump sum fee of Twenty four thousand two hundred sixty six and 00/100 dollars ($24,266.00) for Phase 3C, Contract Documents (100% Submittal) of the Project.

G. A lump sum fee of Thirty two thousand four hundred thirty two and 00/100 dollars ($32,432.00) for drainage and storm water permitting for the Project.

H. A lump sum fee of Twenty seven thousand seven hundred twenty six and 00/100 dollars ($27,726.00) for Phase 4, Bidding and Award of Contract of the Project.

I. A lump sum fee of Twenty thousand five hundred thirteen and 00/100 dollars ($20,513.00) for Geotechnical Services provided by Subconsultants for the Project.

J. A lump sum fee of Thirty seven thousand and 00/100 dollars ($37,000.00) for Topographical Survey Services provided by Subconsultants for the Project.

K. A lump sum fee of Fifty two thousand and 00/100 dollars ($52,000.00) for Subsurface Utility Engineering Services provided by Subconsultants for the Project.

7.2 For Direct Expenses reimbursable services as listed in Section 6, the COUNTY agrees to ..... reimburse the CONSULTANT for actual costs up to an amount not to exceed Nine thousand and 00/100 dollars ($9,000.00).

7.3 For any CONTINGENCY SERVICES performed, the COUNTY agrees to pay the CONSULTANT, a negotiated fee based on the assignment, up to a maximum amount not to exceed Sixty thousand and 00/100 dollars ($60,000.00) for all assignments performed.

7.4 Total Agreement amount not to exceed Five hundred ninety four thousand three hundred forty five and 00/100 dollars ($594,345.00).

7.5 For any ADDITIONAL SERVICES, the COUNTY agrees to pay the CONSULTANT a negotiated total fee based on the work to be performed as detailed by a written amendment to this Agreement.

7.6 In the event that this Agreement is terminated under the provisions of this contract the total and complete compensation due the CONSULTANT shall be as established by the COUNTY based on the COUNTY'S determination of the percentage of work effort completed to date of termination.

SECTION 8

AUTHORIZATION FOR CONTINGENT OR ADDITIONAL SERVICES

8.1 The CONTINGENCY services provided for under this Agreement shall be performed only upon prior written authorization from the Airport Director or his designee.

8.2 The ADDITIONAL services provided for under this Agreement shall be performed only upon approval of the Board of County Commissioners.

8.3 The CONSULTANT shall perform no services contemplated to merit compensation beyond that provided for in this Agreement unless such services and compensation therefore, shall be provided for by appropriate written authorization or amendment(s) to this Agreement.

SECTION 9

FIRMS AND INDIVIDUALS PROVIDING SUBCONTRACTED SERVICES

The COUNTY reserves the right to review the qualifications of any and all subcontractors and to reject any subcontractor in a proper and timely manner, deemed not qualified to perform the services for which it shall have been engaged.

SECTION 10

SATISFACTORY PERFORMANCE

10.1 All services to be provided by the CONSULTANT under the provisions of this Agreement, including services to be provided by subcontractors, shall be performed to the reasonable satisfaction of the COUNTY'S Airport Director or designee.

SECTION 11

RESOLUTION OF DISAGREEMENTS

11.1 The COUNTY shall decide all questions and disputes, of any nature whatsoever, that may arise in the execution and fulfillment of the services provided for under this Agreement, including conflicts, if any, between the governing documents referred to in Section 2.4.

11.2 The decision of the COUNTY upon all claims, questions, disputes and conflicts shall be final and conclusive, and shall be binding upon all parties to this Agreement, subject to judicial review.

SECTION 12

CONSULTANT'S ACCOUNTING RECORDS

12.1 Records of expenses pertaining to all services performed shall be kept in accordance with generally accepted accounting principles and procedures.

12.2 The CONSULTANT'S records shall be open to inspection and subject to examination, audit, and/or reproduction during normal working hours by the COUNTY'S agent or authorized representative to the extent necessary to adequately permit evaluation and verification of any invoices, payments or claims submitted by the CONSULTANT or any of his payees pursuant to the execution of the Agreement. These records shall include, but not be limited to, accounting records, written policies and procedures, subcontractor files (including proposals of successful and unsuccessful bidders), original estimates, estimating worksheets, correspondence, change order files (including documentation covering negotiated settlements) and any other supporting evidence necessary to substantiate charges related to this Agreement. They shall also include, but not be limited to, those records necessary to evaluate and verify direct and indirect costs (including overhead allocations) as they may apply to costs associated with this Agreement.

12.3 For the purpose of such audits, inspections, examinations and evaluations, the COUNTY'S agent or authorized representative shall have access to said records from the effective date of the Agreement, for the duration of work, and until three (3) years after the date of final payment by the COUNTY to the CONSULTANT pursuant to this Agreement.

12.4 The COUNTY'S agent or authorized representative shall have access to the CONSULTANT'S facilities and all necessary records in order to conduct audits in compliance with this Section. The COUNTY'S agent or authorized representative shall give the CONSULTANT reasonable advance notice of intended inspections, examinations, and/or audits.

SECTION 13

OWNERSHIP OF PROJECT DOCUMENTS

Upon completion or termination of this Agreement, all records, documents, tracings, plans, specifications, maps, evaluations, reports and other technical data, other than working papers, prepared or developed by the CONSULTANT under this Agreement shall be delivered to and become the property of the COUNTY. The CONSULTANT at its own expense may retain copies for its files and internal use. The COUNTY shall not reuse any design plans or specifications to construct another project at the same or a different location without the CONSULTANT'S specific written verification or adaptation or approval.

SECTION 14

INSURANCE COVERAGE AND INDEMNIFICATION

14.1 Contractor shall comply with the insurance requirements as stated in the RFP insurance requirements section, which is hereby incorporated herein by reference and attached hereto as Exhibit B.

14.2 Each insurance policy shall include the following conditions by endorsement to the policy:

14.2.1 Each policy shall require that thirty (30) days prior to expiration, cancellation, non-renewal or any material change in coverages or limits, a notice thereof shall be given to COUNTY by certified mail to: John Holt, P.E. Airport Engineer, 14700 Terminal Boulevard, Suite 221, Clearwater, FL 33762, and to the Director of Risk Management at 400 South Ft. Harrison Avenue, Clearwater, FL 33756. CONSULTANT shall also notify COUNTY, in a like manner, within twenty-four (24) hours after receipt, of any notices of expiration, cancellation, non-renewal or material change in coverage received by said

CONSULTANT from its insurer; and nothing contained herein shall absolve CONSULTANT of this requirement to provide notice.

14.2.2 Companies issuing the insurance policy, or policies, shall have no recourse against COUNTY for payment of premiums or assessments for any deductibles which all are at the sole responsibility and risk of CONSULTANT.

14.2.3 The term COUNTY in this Section 14 shall include the Board of County Commissioners, all its members, its officers, and employees while acting on behalf of Pinellas County.

14.2.4 The Board of County Commissioners shall be endorsed to the required policy or policies as an additional insured, exclusive of Professional Liability Insurance.

14.2.5 The policy clause "Other Insurance" shall not apply to any insurance coverage currently held by COUNTY to any such future coverage, or to COUNTY'S Self-insured Retentions of whatever nature.

14.3 The CONSULTANT hereby waives subrogation rights for loss or damage against the COUNTY.

14.4 To the maximum extent permitted by Florida law , the CONSULTANT shall defend, indemnify and hold harmless the COUNTY and its officers and employees from any and all liabilities, claims, damages, penalties, demands, judgments, actions, proceedings, losses or costs, including, but not limited to, reasonable attorneys' fees and paralegals' fees, whether resulting from any claimed breach of this Agreement by the CONSULTANT or from personal injury, property damage, direct or consequential damages, or economic loss, to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of the CONSULTANT or anyone employed or utilized by the CONSULTANT in the performance of this Agreement.

The duty to defend under this Article is independent and separate from the duty to indemnify, and the duty to defend exists regardless of any ultimate liability of the CONSULTANT, the COUNTY and any indemnified party. The duty to defend arises immediately upon presentation of a claim by any party and written notice of such claim being provided to the CONSULTANT. The CONSULTANT'S obligation to indemnify and defend under this Article will survive the expiration or earlier termination of this Agreement until it is determined by final judgment that an action against the COUNTY or an indemnified party for the matter indemnified hereunder is fully and finally barred by the applicable stature of limitations.

SECTION 15

EQUAL EMPLOYMENT OPPORTUNITY CLAUSE FOR CONTRACTS NOT SUBJECT TO EXECUTIVE ORDER 11246 AND DISADVANTAGED BUSINESS ENTERPRISES

15.1 In carrying out the contract, the Contractor shall not discriminate against employee or applicant for employment because of race, color, religion, sex or national origin. The Contractor shall take affirmative action to ensure that applicants for employment are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor shall post in conspicuous places, available to employees and applicants for employment notices to be provided by the Government setting forth the provisions of the nondiscrimination clause. The Contractor shall state that all qualified candidates will receive consideration for employment without regard to race, color, religion, sex, or national origin.

15.2 The term "Contractor" as used in the above shall be construed to mean the CONSULTANT.

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

1. Compliance with Regulations - The Contractor shall comply with the Regulations relative to nondiscrimination in federally-assisted programs of the Department of Transportation (hereinafter, DOT) Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

2. Nondiscrimination - The Contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subconsultants, including procurements of materials and leases of equipment. The Contractor shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

3. Solicitations for Subcontracts, Including Procurements of Materials and Equipment - In all solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the Contractor of the Contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.

4. Information and Reports - The Contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the sponsor or the Federal Aviation Administration to be pertinent to ascertain compliance with such Regulations, orders, and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the sponsor or the Federal Aviation Administration as appropriate, and shall set forth what efforts it has made to obtain the information.

5. Sanctions for Noncompliance - In the event of the Contractor's non-compliance with the nondiscrimination provisions of this contract, the sponsor shall impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:

   (a) withholding of payments to the Contractor under the contract until the Contractor complies, and/or
   (b) cancellation, termination, or suspensions of the contract in whole or in part.

6. Incorporation of Provisions - The Contractor shall include the provisions of paragraph 1 through 5 in every subcontract, including the procurements of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto. The Contractor shall take such action with respect to any subcontract or procurement as the sponsor or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance; Provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Contractor may request the sponsor to enter into such litigation to protect the interests of the sponsor and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

15.4 Disadvantaged Business Enterprise (DBE) Assurances

1. Policy - It is the policy of the Department of Transportation (DOT) that disadvantaged business enterprises as defined in 49 CFR part 23 shall have the maximum opportunity to participate in the performance of contracts financed in whole or in part with Federal funds under this Agreement. Consequently, the MBE requirements of 49 CFR Part 23 applies to this Agreement.

2. DBE Obligation - The Contractor agrees to ensure that disadvantaged business enterprises as defined in 49 CFR Part 23 have the maximum opportunity to participate in the performance of contracts and subcontracts financed in whole or in part with Federal funds provided under this Agreement. In this regard, all Contractors shall take all necessary and reasonable steps in accordance with 49 CFR Part 23 to ensure that disadvantaged business enterprises have the maximum opportunity to compete for and perform contracts. Contractors shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of DOT-assisted contracts.

SECTION 16

INDEPENDENT CONTRACTOR STATUS AND COMPLIANCE WITH THE IMMIGRATION REFORM AND CONTROL ACT OF 1986

CONSULTANT acknowledges that it is functioning as an independent contractor in performing under the terms of this Agreement, and it is not acting as an employee of Pinellas County. CONSULTANT acknowledges that it is responsible for complying with the provisions of the Immigration Reform and Control Act of 1986, located at 8 U.S.C. Section 1324, et seq., and regulations relating thereto. Failure to comply with the above provisions of this contract shall be considered a material breach and shall be grounds for immediate termination of the contract.

SECTION 17

PROHIBITION AGAINST CONTINGENT FEE

The CONSULTANT warrants that he has not employed or retained any company or person, other than a bona fide employee working solely for the CONSULTANT to solicit or secure this Agreement, and that he has not paid or agreed to pay any person, company, corporation, individual, or firm other than a bona fide employee working solely for the CONSULTANT, any fee, commission, percentage, gift or any other consideration, contingent upon or resulting from the award or making of this Agreement.

SECTION 18

TRUTH IN NEGOTIATIONS

By execution of this Agreement, the CONSULTANT certifies to truth-in-negotiations and that wage rates and other factual unit costs supporting the compensation are accurate, complete and current at the time of contracting. Further, the original contract amount and any additions thereto shall be adjusted to exclude any significant sums where the COUNTY determines the contract price was increased due to inaccurate, incomplete or non-current wage rates and other factual unit costs. Such adjustments must be made within one (1) year following the end of the contract.

SECTION 19

SUCCESSORS AND ASSIGNS

The CONSULTANT shall not assign, sublet, or transfer his interest in this Agreement without the written consent of the COUNTY.

SECTION 20

INTEREST ON JUDGMENTS

In the event of any disputes between the parties to this Agreement, including without limited thereto, their assignees and/or assigns, arising out of or relating in any way to this Agreement, which results in litigation and a subsequent judgment, award or decree against either party, it is agreed that any entitlement to post judgment interest, to either party and/or their attorneys, shall be fixed by the proper court at the rate of five percent (5%), per annum, simple interest. Under no circumstances shall either party be entitled to prejudgment interest. The parties expressly acknowledge and, to the extent allowed by law, hereby opt out of any provision of federal or state statute not in agreement with this paragraph.

SECTION 21

TERMINATION OF AGREEMENT

21.1 The COUNTY reserves the right to cancel this Agreement, without cause, by giving thirty (30) days prior written notice to the CONSULTANT of the intention to cancel. Failure of the CONSULTANT to fulfill or abide by any of the terms or conditions specified shall be considered a material breach of contract and shall be cause for immediate termination of the contract at the discretion of Pinellas County. Alternatively, at the COUNTY'S discretion, the COUNTY may provide to CONSULTANT thirty (30) days to cure the breach. Where notice of breach and opportunity to cure is given, and CONSULTANT fails to cure the breach within the time provided for cure, COUNTY reserves the right to treat the notice of breach as notice of intent to cancel the Agreement for convenience.

21.2 If COUNTY terminates the Agreement for convenience, other than where the CONSULTANT breaches the Agreement, the CONSULTANT'S recovery against the COUNTY shall be limited to that portion of the CONSULTANT'S compensation earned through date of termination, together with any costs reasonably incurred by the CONSULTANT that are directly attributable to the termination. The CONSULTANT shall not be entitled to any further recovery against the COUNTY, including but not limited to anticipated fees or profit on work not required to be performed.

21.3 Upon termination, the CONSULTANT shall deliver to the COUNTY all original papers, records, documents, drawings, models, and other material set forth and described in this Agreement.

21.4 In the event that conditions arise, such as lack of available funds, which in the COUNTY'S opinion make it advisable and in the public interest to terminate this Agreement, it may do so upon written notice.

SECTION 22

CONFLICT OF INTEREST

22.1 By accepting award of this Contract, the CONSULTANT, which shall include its directors, officers and employees, represents that it presently has no interest in and shall acquire no interest, either directly or indirectly, in any business or activity which would conflict in any manner with the performance of services required hereunder, including as described in the CONSULTANT'S own professional ethical requirements. An interest in a business or activity which shall be deemed a conflict includes but is not limited to any direct or indirect financial interest in any of the material

and equipment manufacturers, suppliers, distributors, or contractors who will be eligible to supply material and equipment for the PROJECT for which the CONSULTANT is furnishing its services required hereunder.

22.2 If, in the sole discretion of the County Administrator or designee, a conflict of interest is deemed to exist or arise during the term of the contract, the County Administrator or designee may cancel this contract, effective upon the date so stated in the Written Notice of Cancellation, without penalty to the COUNTY.

SECTION 23

EXTENT OF AGREEMENT

This Agreement represents, together with all Exhibits, the entire written Agreement between the COUNTY and the CONSULTANT and may be amended only by written instrument signed by both the COUNTY and the CONSULTANT.

SECTION 24

FEDERAL AVIATION ADMINISTRATION AND FLORIDA DEPARTMENT OF TRANSPORTATION APPROVAL

This Agreement is subject to the approval of the Federal Aviation Administration (FAA) and the Florida Department of Transportation (FDOT).

In addition, the following FAA and FDOT provisions are applicable to this contract:

FAA

- Civil Rights Act of 1964, Title VI - Contractor Contractual Requirements - Title 49 CFR Part 21
- Airport and Airway Improvement Act of 1982, Section 520 - Title 49 U.S.C. 47123
- Disadvantaged Business Enterprise - Title 49 CFR Part 26
- Lobbying and Influencing Federal Employees - Title 49 CFR Part 20
- Access to Records and Reports - Title 49 CFR Part 18.36
- Breach of Contract Terms - Title 49 CFR Part 18.36
- Rights to Inventions - Title 49 CFR Part 18.36
- Trade Restriction Clause - Title 49 CFR Part 30
- Termination of Contract - Title 49 CFR Part 18.36
- Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Title 49 CFR Part 29

FDOT

E-Verify - The contractor shall utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the Vendor/Contractor during the term of the contract; and shall expressly require any subcontractors performing work or providing services pursuant to this contract to likewise utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the contract term.

SECTION 25

PUBLIC ENTITY CRIMES

The CONSULTANT is directed to the Florida Public Entity Crimes Act, section 287.133, Florida Statutes, specifically section 2(a), and the COUNTY'S requirement that the CONSULTANT comply with it in all respects prior to and during the term of the Contract.

SECTION 26

AGREEMENT TERM

This Agreement will become effective on the date of execution first written above and shall remain in effect for 30 months, unless terminated at an earlier date under other provisions of this AGREEMENT, or unless extended for a longer term by amendment to the contract.

(Signature Page Follows)

SECTION 27

GOVERNING LAW AND AGREEMENT EXECUTION

This Agreement shall be governed by the laws of the State of Florida.

IN WITNESS WHEREOF, the parties herein have executed this Agreement as of the day and year first written above.

Jacobs Engineering Group, Inc.

By: _____
Print Name: Stanley J. Rosenblum
Title: Vice President Date: _____

ATTEST:

By: _____
Print Name: Elizabeth A. Refinski
Title: Corporate Secretary Date: _____

(CORPORATE SEAL)

PINELLAS COUNTY, by and through its Board of County Commissioners

By: _____
Chairman Date: _____

ATTEST:
Ken Burke, Clerk of the Circuit Court

By: _____
Deputy Clerk Date: _____

APPROVAL AS TO FORM:

By: _____
Office of the County Attorney

TAXIWAY REHABILITATION – PHASE II
ST. PETERSBURG-CLEARWATER INTERNATIONAL AIRPORT

Exhibit A - Scope of Work

Jacobs and its subconsultants (Project Team) will provide Professional Services for the rehabilitation of Taxiway "M", rehabilitation and reconfiguration of Taxiway "F", rehabilitation of Taxiway "D", the reconfiguration of Taxiway "B", and the removal of Taxiway "C" and Taxiway "K" , and a new taxi lane connector from Runway 9-27 to the Landings at St. Petersburg-Clearwater International Airport (PIE). The Airport considers this Phase II of the Taxiway Rehabilitation Project. Phase I of the Taxiway Rehabilitation Project includes Taxiway "A" and the associated connector taxiways will be designed by others under a separate Contract. The Phase I and Phase II design documents will be bid for construction as two separate contracts.

General Information

As part of the FDOT's Pavement Management Program, the Airport conducted a Pavement Condition Index (PCI) Study in 2011 to determine the short-term and long-term pavement rehabilitation needs at PIE. This study is required as part of the FAA grant assurances to provide the sponsor with a program for maintenance, repair, or reconstruction of existing airfield pavements. Based on this study and an independent report performed by Jacobs/AID, the Airport prepared a priority system for the rehabilitation or reconstruction of the existing taxiway and runway system. In addition to the above studies, the new FAA Advisory Circular (5300-13A) has provided new guidelines on taxiway configurations including orientation, intersection angles, fillet and taper geometry. Based on the foregoing information, the following elements are included in Phase II of the Taxiway Rehabilitation as shown in **Exhibit C**:

1. Rehabilitate Taxiway "M" (50' X 4,400') – Reconstruction and/or milling and overlay. The repair approach may differ along the length of the taxiway depending on the field investigations and condition of the pavement.
2. Demolition of Taxiway "K" between Runway 9-27 and Taxiway "M".
3. Reconfigure the Taxiway "U" from the T-Hangars on the east side of the Airport to Runway 9-27.
4. Evaluate alternatives for the elimination of the wet detention pond near the T-Hangars on the east side of the Airport and replacement with a dry pond or other acceptable treatment method.
5. Reconfigure Taxiway "F" at the intersection with Runway 18L-36R as the current alignment does not meet the new FAA design criteria.
6. Demolition of Taxiway "C" and the reconfiguration of Taxiway "B" at the intersection with Runway 9-27.

7. Evaluate alternatives for the rehabilitation of Taxiway "D" and determine appropriate maintenance activity to extend the life of the pavement. The scope does NOT include the reconfiguration of the intersection of Taxiway "D" and Runway 9-27 if required by the FAA.
8. Install elevated Runway Guard Lights on all new connectors to Runway 18L-36R.
9. Modify airfield circuiting requirements and make appropriate graphical updates to the Airfield Lighting Control System in coordination with the Phase I project.
10. Re-designate all Taxiway "M" connectors to meet new FAA guidelines (i.e. Taxiways "M1", "M2", etc. instead of Taxiways "F", "J", etc.)
11. Install new LED taxiway edge light fixtures on Taxiway "M", thermoplastic enhanced taxiway centerline markings and guidance signs as required by new taxiway designations.
12. Provide a topographic field survey that meets FAA AGIS requirements as specified in FAA Advisory Circular 150/5300-18B, "General Guidance and Specifications for Submission of Aeronautical Surveys to NGS: Field Data Collection and Geographic Information System (GIS) Standards".

The scope of this work is to prepare construction documents for the above elements and to provide assistance during the bidding phase. Construction administration services are not included at this time. The Project Team will provide Base and Alternate Bids, as necessary, to allow maximum utilization of available funds.

The estimated construction cost is provided below:

1.	Rehabilitation and New Construction of Taxiway Pavements	$ 3,800,000
2.	Demolition of Taxiway "C" and reconfiguration of Taxiway "B"	$ 700,000
3.	Rehabilitation of Taxiway "D"	$ 500,000
	Approximate Total:	$ 5,000,000

Design Criteria/Design Assumptions

This project will be designed according to the current edition of the following technical design criteria:

1. FAA Advisory Circular AC 150/5300-13A, "Airport Design."
2. FAA Advisory Circular AC 150/5320-6E, "Airport Pavement Design and Evaluation."
3. FAA Advisory Circular AC 150/5340-1K, "Standards for Airport Markings."
4. FAA Advisory Circular AC150/5370-10F, "Standards for Specifying Construction of Airports."
5. The Aircraft Design Group (ADG) for the project shall be Group V.
6. The Taxiway Design Group (TDG) for Taxiway "M" will be Group III.
7. The TDG for Taxiways "B" &"D" will be Group V.
8. The TDG for Taxiway "U" will be Group I.

9. Paved shoulders on Taxiways "M" and "F" will NOT be constructed as part of the project.
10. Phase II stormwater design and modeling will be performed under this Contract but the SWFWMD permit shall be prepared and submitted under the Phase I scope.
11. Assume the modifications to the Electrical Vault will NOT be required and that existing regulators have sufficient capacity.

Construction drawings will be prepared in AutoCAD 2012 format

General Scope

The Project Team will provide the following basic and special services for this project:

1. Management of the project from program verification to the award of the construction contract.
2. Survey, Subsurface Utility Engineering (SUE) and Geotechnical services by specialized subconsultants on the Team.
3. Coordination with the Airport, FAA, Air Traffic Control Tower (ATCT), and tenants as necessary during the FAA Safety Risk Management process (SRM).
4. Coordination with Project Team for Phase I of the Taxiway Rehabilitation Project
5. Preparation of minutes of meetings.
6. Program verification and site investigation.
7. Preparation of the Construction Safety and Phasing Plan.
8. Design and preparation of the construction documents and technical specifications.
9. Preparation of the Engineer's Report and construction cost estimate.
10. Bidding and award assistance.
11. FAA Grant application assistance.

Specific Scope

The Project Team will prepare construction documents for the rehabilitation of the taxiways referenced above as required in the Pavement Management Study and further verified by field inspections. The project will be advertised using a Base Bid and Alternate Bids to maximize the use of available funds.

Specific tasks (Basic and Special Services) related to the above items are identified in each phase of the project as described below.

Basic Services

Phase 1A – Program Verification
The Project Team will perform the following tasks under this phase:

1. Compile and review existing available information including as-built drawings, geotechnical reports, pavement evaluation reports, maintenance logs, aircraft operations schedules, and fleet mix data.
2. Perform a detailed site inspection and evaluate the existing condition of the pavements. Each section of the pavement, as depicted in the Pavement Management Plan, will be inspected and repair recommendations will be verified and updated.
3. Determine locations for additional pavement cores.
4. Meet and coordinate with the survey, SUE, and geotechnical Team Members.
5. Review electrical drawings and regulator loading to verify existing electrical loads for each circuit to be modified.
6. Meet and coordinate with the Airport on project issues such as design alternatives, project phasing, construction staging, budget, and schedule. Two meetings are anticipated.
7. Meet and coordinate with the ATCT and Airport Operations to review the project and receive input prior to the start of the design phase. Two meetings are anticipated.
8. Meet and coordinate with the FAA ADO to review the project and confirm the scope of work. This work is further described under Special Services.
9. Prepare a current summary of quantities and construction cost estimate.
10. Prepare a construction schedule that takes into account weather, air traffic conditions and phasing of the project.
11. Identify any additional information that will be required from field investigations or other agencies.
12. Meet and coordinate with all the stakeholders (including the Airport staff, airlines, FBO, ANG, and other tenants) to review the scope and schedule of the project and receive input prior to the start of the design phase. This will be considered a Pre-Design meeting as required by the FAA.

Deliverables: The Project Team will provide a Project Narrative Report which will include the results of the site inspections, preliminary recommendations for the repairs and the associated costs, and minutes of the predesign meetings with the Airport and other stakeholders. The Project Team will also submit a Justification Report to include age and efficiency of existing airfield electrical equipment. The Justification Report will also include recommendations for the airfield lighting for the project, and will be submitted to the FAA as part of the Program Narrative Report for concurrence and verification of funding.

Phase 1B – Schematic Design (not included)

Phase 2 – Design Development (30%)

Following the Program Verification phase and the receipt and review of topographic survey, SUE information, and geotechnical data, the Project Team will proceed with the

30% level design and plans production. Project Team members will visit the site to field verify the survey information and address any comments received during the Program Verification phase. Two meetings are also anticipated with the Airport during this phase. Specifically, the following tasks will be performed under this phase:

1. Evaluation of the pavement repair alternatives.
2. Evaluation of the effect of the project on existing stormwater facilities or any other structure within the project limits.
3. Preliminary stormwater modeling and evaluation.
4. Preliminary pavement design.
5. Preliminary phasing analysis.
6. Evaluate night-time and day-time construction alternatives.
7. Prepare 30% drawings.
8. Update the summary of quantities and construction cost estimate for the 30% design.
9. Update the construction schedule.
10. Prepare the Preliminary Engineer's Report.
11. Identify any modifications to FAA standards.
12. Prepare an outline of technical specifications.

Deliverables: The Project Team will submit three (3) copies each of the 30% drawings in size 22"X34" and the Preliminary Engineer's Report to the Airport for review.
Upon receipt of review comments from the Airport, the Project Team will proceed with the 60% level contract documents.

The Project Team will attend a total of one (1) meeting with the Airport and other stakeholders to address any final comments regarding the design and construction of this project.

Phase 3A – Contract Documents (60%)

The Project Team will proceed with the 60% level Contract Documents incorporating the review comments from Design Development Documents. This phase will include a complete drainage design and modeling for this project. Preparation of permit documents to be submitted to SWFWMD will be performed as part of Phase I. The Project Team will also prepare and submit a Construction Safety and Phasing Plan (CSPP) to the FAA through OE/AAA to begin the Safety Risk Management (SRM) process. Two meetings with the Airport are anticipated in this Phase. The 60% level documents will include:

- Cover Sheet
- Project Site/Layout Plan
- Project Survey Control Plans
- Geotechnical/Boring Location Plans
- Project Safety Plan (including Staging and Access Plans)

- Project Phasing/Construction Sequencing Plans
- General/Safety Notes Plan
- Project Key Sheet
- Existing Conditions Plans
- Pavement Demolition Plans
- Typical Sections
- Pavement Geometry Plans
- Paving, Grading, and Drainage Plans
- Sediment/Erosion Control Plans
- Pavement Marking Plans
- Electrical Plans and Details
- Updated summary of quantities and construction cost estimate for 60% design
- Updated Preliminary Engineer's Report

Based on the 60% level plans, the Project Team will update the construction schedule and cost estimates and prepare draft technical specifications.

Deliverables: The Project Team will submit three (3) copies each of the 60% drawings in size 22"X34" and the draft Technical Specifications to the Airport for review. One (1) copy each of the updated schedule and cost estimate will also be submitted. Copies of the project phasing and construction sequencing plan will be submitted to the ATCT and Airport Operations for review and comment.
The Project Team will conduct a meeting with the stakeholders to review the scope and schedule of the project and receive further input. Upon receipt of review comments from the Airport, the Project Team will proceed with the 90% level contract documents.

Phase 3B – Contract Documents (90%)

The Project Team will proceed with final design of this project including the final pavement design for each section of the taxiways. Construction documents will be prepared in this phase, including finalizing the construction phasing plan, which may include day-time and night-time construction activities. At this stage, the construction cost estimate and construction schedule will be updated and finalized and the Engineer's Report will be completed. The Project Manual, which will contain front-end documents provided by Pinellas County (Instructions to Bidders, Bid Forms, and Special Conditions) plus FAA General Provisions, Technical Specifications, and the geotechnical report, will also be completed. In addition, 90% construction drawings will be prepared including:

- Cover Sheet
- Project Site/Layout Plan
- Project Survey Control Plans
- Geotechnical/Boring Location Plans
- Project Safety Plan (including Staging and Access Plans)

- Project Phasing/Construction Sequencing Plans
- General/Safety Notes Plan
- Project Key Sheet
- Existing Conditions Plans
- Pavement Demolition Plans
- Typical Sections
- Pavement Geometry Plans
- Paving, Grading, and Drainage Plans
- Sediment/Erosion Control Plans
- Pavement Marking Plans
- Cross Sections (assume every 50 ft for new pavement)
- Electrical Plans and Details
- Updated summary of quantities and construction cost estimate for 90% design
- Updated Preliminary Engineer's Report

Deliverables: The Project Team will submit three (3) copies of the 90% contract documents to the Airport, two (2) copies to the FAA, and one (1) copy to FDOT for their review.

The Project Team will attend a total of two (2) meetings with the Airport and other stakeholders to address any final comments regarding the construction of this project.
Phase 3C – Contract Documents (100%)
Upon receipt of final comments from the Airport, FAA, Operations, and ATCT, the Project Team will proceed with the preparation of the bidding documents. One meeting is anticipated during this Phase. This effort includes incorporating comments by updating the construction drawings, project manual (FAA general provisions, and technical specifications), Engineer's Report, construction cost estimate, and construction schedule.

The Project Team will submit two (2) signed and sealed copies of the 100% contract documents to the Airport and provide the Airport with PDF copies of the contract documents to be used by Pinellas County Purchasing for advertising and distributing the bid package.

Phase 4 – Bidding and Award Services

Jacobs will perform bidding support services, the following terms will apply:

A. The County appoints Jacobs as its Agent, and Jacobs accepts such appointment to perform bid/procurement services on the County's behalf in connection with the project.

B. Such services shall be performed under the County's direction and in accordance to such forms, terms and conditions, or modifications

or revisions to same as the County may in its sole discretion at any time instruct Jacobs to use. All services shall be carried out in accordance with the procedures mutually agreed upon by the County and Jacobs.

C. Jacobs shall not have authority to accept or bind the County in any way to changes, modifications, revisions, alterations, amendments, or supplemental, additional, or different terms and conditions (hereinafter referred to as "deviations") which may be submitted or requested by a vendor or contractor. Jacobs shall immediately submit any deviations from the County's standard terms and conditions to the County for review by the County's Purchasing Manager or his representative and such deviations shall not be accepted by Jacobs unless Jacobs receives express written approval thereof from the County's Project and/or Purchasing Manager or his representative.

D. All documents issued by Jacobs hereunder shall be signed by Jacobs for the County if so directed. The ownership and title of all items purchased hereunder shall pass directly from the selling party to the County, and Jacobs shall at no time be a party to such transaction other than as agent of the County. The County shall have the unilateral right to have the commitment authority of Jacobs, its employee or this limited agency authorization in its entirety revoked and cancelled at any time, with or without cause. The County shall be obligated directly to the selling party for all payments for materials, equipment, supplies and services procured hereunder.

E. The County shall hold Jacobs and its employees harmless from any claims, suits or liabilities arising out of any breach or other failure of performance by any contractor, vendor or supplier under any contract or purchase order issued by Jacobs hereunder.

In addition, this phase will include the effort necessary to receive bids from contractors and to review the bids and make a recommendation of award to the Airport and the FAA. Specifically, the following tasks will be performed by the Project Team during this phase:

1. Prepare for and attend the Pre-Bid Conference by providing agenda items and making a presentation on the project scope, phasing, and schedule.
2. Address questions from bidders.
3. Make revisions to contract documents and assist the County Purchasing Department with preparing Addenda.
4. Attend the Bid opening.
5. Review all bids for responsiveness and accuracy.

6. Assist the County Purchasing Department with preparation of the Bid Tabulation Sheet(s).
7. Provide engineer's certified recommendation for the award of the contract.
8. Prepare conformed construction plans and technical specifications incorporating all addenda and clarifications for delivery to County.

Phase 5 – Construction Administration Services (not included)

Special Services

In addition to the Basic Services described above, the Project Team will provide the following special services required under this contract (anticipated to be performed during the Program Verification Phase).

1. **Topographic Field Survey** – URS Corporation. (URS) will provide field topographic survey on this project. All survey work will be performed during the daytime on a pull-back basis in order to minimize the impact of the work to the airport traffic. Data will be submitted in accordance with FAA AGIS requirements as specified in FAA Advisory Circular 150/5300-18B, "General Guidance and Specifications for Submission of Aeronautical Surveys to NGS: Field Data Collection and Geographic Information System (GIS) Standards".

    a. **Intent -** It is the intent of this contract to acquire a complete and accurate topographic survey in both hard-copy and electronic format.

    b. **Responsibility.** A Professional Surveyor and Mapper (PSM) shall be directly responsible for the proper execution of the surveying work to be performed. All work will be in accordance with the Minimum Technical Standards as set forth by the Florida Board of Professional Surveyors and Mappers in Chapter 5J-17, Florida Administrative Code.

    c. **Governing Specifications**: Refer to FAA AC 150/5300-16 and FAA AC 150/5300-18B.

    d. **Survey Limits:** The survey limits are shown on attached proposed site plan and Exhibit C.

    e. **Units:** The survey shall be US Survey Foot.

    f. **Coordinate System:** Horizontal coordinates shall use the current State Plane Coordinate System - NSRS NAD83 (2011 Adjustment) and shall be derived from airport PACS and SACS control points. Vertical coordinates shall be based on the North American Vertical Datum of 1988 (NAVD 88). The reference datums and coordinate systems used shall be clearly identified.

g. **Horizontal Control:** Supplemental horizontal controls shall have Third Order, Class II accuracy.

h. **Vertical Control:** A minimum of two temporary benchmarks (e.g. PK Nail in pavement) shall be established for each project. Additional benchmarks shall be established at sufficient locations to ensure that all locations within the survey limits are within a horizontal distance not to exceed 1,000 feet from an established benchmark. Level runs for the determination of benchmark elevations shall have Third Order vertical control accuracy. Temporary benchmark elevations will be tied to a minimum of one benchmark in the National Geodetic Control Network that is classified for a third order or better vertical accuracy. The maximum allowable error of closure for English unit surveys is 0.05 feet multiplied by the square root of the length of the level run in miles. Locations for control points will be selected that are favorable to their future preservation by selecting clearly defined, stable locations outside of the anticipated construction limits for the project. Mapping of the control points will be supplied to the Airport Engineer in the appropriate format.

i. **Survey Baseline:** Establish a survey baseline along the alignment of Taxiway "M". The approximate length of said baseline is 4,600 LF. Baseline points will be established at even stations (100 foot intervals). Six pairs of references will be set at 1000 foot intervals outside the limits of construction.

j. **Horizontal Feature Location Accuracy:** The horizontal tolerance for feature location shall be in accordance with standard practice.

k. **Vertical Feature Location Accuracy:** The vertical tolerance for feature location shall be 0.05 feet for pavements, structures, pipe inverts, and other man made features and 0.10 feet for ground shots.

l. **Contour Interval:** The contour interval shall be 1.0 foot. Contours shall be shown as light dashed lines for minor/intermediate contours and bold dashed lines for the primary contour.

m. **Spot Elevations:** Spot elevations shall be provided at all break lines in pavement and ground such as edge of pavement, top and bottom of bank, etc. and at other locations as required to accurately depict the site topography.

n. **Survey Grid:** Elevations shall be taken on a grid no larger than 25 feet by 25 feet for paved and/or built up areas with a minimum of 5 shots per cross-section. Cross-sections shall be taken to 50 feet beyond the edge of existing pavement. Cross-sections shall extend to the centerline of connecting runways, taxiways and taxi lanes. In areas that pavement is to be removed, cross-sections can be collected at 50 foot intervals.

Intermediate elevations shall be taken as necessary to define all breaks in grade and clearly indicate all existing site conditions.

o. **Utilities:** All visible aboveground utility components shall be surveyed. All lighting, junction boxes signage etc. shall be located. The location of underground utilities will be identified by under the project scope by the SUE subconsultant.

p. **Topographic Details:**

1. **Pavement**. Identify and locate all pavement types including pavement markings.

2. **Ditches.** Identify and locate all ditches and other storm water channels and drainage structures. Provide the water elevation in the ditch at the time of the survey, if applicable.

q. **Field Notes:** Level work and other field notes and sketches not captured by an electronic data recorder are to be recorded in a standard Engineering Field Book and in a manner conforming to good surveying practice. A copy of the field notes shall be included with the final submittal.

Submittals

a. **Electronic Topographic Survey File(s)**

1. **Format.** The topographic survey shall be submitted in a single AutoCAD 2012Drawing File (.DWG file) with the entire survey drawn in model space with 1 drawing unit = 1 foot for English unit surveys.

2. **Layers.** All information in the AutoCAD drawings shall be appropriately segregated into layers separated by feature type.

3. **Contours.** Each contour shall be a single polyline and shall not be composed of multiple individual line segments.

4. **CDs.** The Contractor shall provide 2 identical Compact Disks (CDs), each containing copies of the electronic topographic survey file, as well as named plot style table files (STB files), color-dependent plot style table files (CTB files), plotter pen assignment tables, symbols, blocks, fonts, and shape definitions used or referenced by the drawing. The CD shall also include the table providing the names and descriptions for the layers used in the drawing file.

b. **Printed Existing Site Plans**

1. **Format.** Two hard-copy sets of the Topographic Survey shall be submitted. Drawings shall be D-Size sheets and shall use the current title

block. Drawings shall be prepared with true north pointing to either the top or the left side of the sheets. The Contractor shall provide true north arrows, graphic scales, abbreviations, and legends clearly defining all symbols used. Lettering shall be all capitals and shall have a text height of not less than 0.1 inches.

2. **Certification.** The drawings shall be certified correct and sealed by the Professional Surveyor and Mapper (PSM) who was directly responsible for the proper execution of the surveying work.

3. **Scale:** Drawings shall be prepared at an appropriate standard engineering scale. The selected scale shall be appropriate to clearly identify site features for the entire survey and provide a good presentation of the survey at the prescribed drawing size.

c. **Electronic Survey Point File**

1. The Contractor shall provide an electronic ASCII text file containing all of the surveyed points in a space-delimited PNEZD (Point number, Northing, Easting, Elevation and Description) format with each surveyed point on its own row.

2. **Geotechnical Services** – Tierra, Inc. (Tierra) will provide geotechnical engineering services for this project. All work will be performed at night to minimize the impact of the work to the airport traffic.

Scope of Services

The objective of the study will be to obtain information concerning pavement and subsurface conditions at the site on which to base engineering estimates and recommendations in each of the following areas:

a. Pavement section identification and exploration of subgrade conditions.

b. General location and description of potentially deleterious materials discovered in the borings including existing fills or surficial organics.

c. Identification of groundwater levels and estimation of the Seasonal High Groundwater Table (SHGWT).

d. Estimate the shallow soil coefficient of permeability.

In order to meet the preceding objectives, the following services would be completed as part of Phase II:

a. Review available published soils and topographic information. This published information will be obtained from the appropriate Florida Quadrangle Map published by the United States Geological Survey (USGS), as well as the Soil Survey of Pinellas County, Florida, published

by the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS). Additional information from existing as-built plans can be reviewed if provided to Tierra.

b. Execute a program of subsurface exploration consisting of asphalt pavement cores, borings and subsurface sampling. Based on the information provided, Tierra will perform on the order of twenty (205) asphalt pavement cores (typically one pavement core every 500 feet) (15 cores for Phase II base, 3 cores for Taxiways "B"/"C", 2 cores for Taxiway "D"). At each of the core locations hand auger borings will be performed to an approximate depth of 5 feet below the pavement surface. In addition, Tierra will perform up to twelve (12) hand auger borings to depths on the order of 7 to 10 feet below grade in the areas of the new taxiways (typically one hand auger boring every 200 feet)(10 boring for Phase II Base, 1 boring for Taxiways "B"/"C", 1 boring for Taxiway "D").

c. Perform three (3) field permeability tests at the locations of the existing pond and proposed expansion location. At each permeability location, one (1) hand auger boring will be performed to a depth of 5 feet below grade and one (1) Standard Penetration Test (SPT) boring to a depth of 15 feet below grade.

d. Perform six (6) California Bearing Ratio (CBR) tests on selected samples collected within the project area. Four (4) tests will be performed on the Phase II base area and two (2) tests will be performed on Taxiways "B"/"C".

e. Visually classify the soil samples in the laboratory using the Unified Soil Classification System (USCS). Identify soil conditions at each boring location and perform laboratory testing. The pavement cores will be visually classified and saved for review by the design team.

f. Collect groundwater level measurements and estimate the SHGWT.

g. Prepare a formal engineering report in accordance with the scope of services herein that summarizes the course of study pursued, the field data generated, subsurface conditions encountered and engineering recommendations in each of the pertinent topic areas.

3. **Subsurface Utility Engineering (SUE)** – Cardno TBE will provide subsurface utility engineering services for this project. The proposed and existing taxiway locations in question have the potential of having different types of "toneable" (conductive) and "non-toneable" (non-conductive) utilities existing in the ground. Each buried utility has its own properties requiring different equipment and techniques to be used to provide an accurate location of the facility. Cardno TBE will use Utility Designation and Location techniques on this site for the location of buried utilities. Sixteen (16) SUE field crew-days to designate, locate, mark, and flag the utilities (Phase II Base 11 days, Taxiways "B"/C" 3 days, and Taxiway "D"

2 days). Seven (7) Survey field crew-days to record and map the utilities found are anticipated (Phase II Base 5 days, Taxiways "B"/"C" 1 day, and Taxiway "D" 1 day). All work will be performed at night to minimize the impact of the work to the airport traffic.

Subsurface Utility Engineering (SUE) Scope of Services

a. Cardno TBE will horizontally designate, mark, flag, survey, and map all known existing underground utilities (including stormwater pipes) within all proposed taxiway improvement areas.

b. Cardno TBE will provide SUE services along Taxiway "M" for proposed soil boring locations (i.e. every 500 feet) prior to drilling operations commencing.

c. Cardno TBE will perform and provide all equipment necessary to complete all work at night. This would include lighting, safety work zone equipment, vacuum excavation trucks, designating trucks, survey trucks and associated personnel & equipment, etc.

d. Cardno TBE will obtain all the necessary badges and security clearances required to work in and around airport property.

e. Cardno TBE will provide all required coordination efforts with airport field operation personnel in order to mobilize to and maneuver from each taxiway area throughout the project limits. Cardno TBE will utilize more than one field crew at a time to maximize production, budget and resources.

Utility Designation (SUE Quality Level B): - Toneable / Conductive Utilities

Cardno TBE will utilize SUE Quality Level B to horizontally designate known underground utilities within the taxiway improvement areas. Cardno TBE will utilize various types of electro-magnetic equipment to determine the utilities' disposition if made of conductive materials or contains a tracer wire that is toneable. The utilities will then be marked and flagged on the existing ground surface showing its alignment. This process provides a highly accurate horizontal location of underground utilities. This information will be mapped by Cardno TBE's survey staff and tied to the project horizontally and vertically. Cardno TBE will also be utilizing Ground Penetrating Radar (GPR) as needed as part of their SUE Quality Level B process. Due to ground conditions, the GPR may not provide much data, as saltwater intrusion in the soils may act as a shield blocking out the radar signal. However, this piece of equipment has worked flawlessly in other areas at the Airport and its use will be attempted on this project if deemed necessary by the Airport to meet the project scope.

Utility Location (SUE Quality Level A): - Non-Toneable / Non-conductive Utilities

Cardno TBE will utilize SUE Quality Level A (vacuum excavation) to horizontally designate and vertically locate the known underground utilities at specific locations, as needed, to determine horizontal alignment of non-conductive utilities. This is done by using an air probe to identify the utilities' horizontal position and a vacuum hose to excavate a test hole to determine the utilities' vertical alignment. When a test hole or vacuum excavation is completed, the crew will record vertical depth of the utility line below the surface, size, shape, material and orientation. The utilities' horizontal location will be painted on the existing surface and test holes will be marked with a lathe or iron rod and cap (if not in the roadway) stating the depth below existing grade. In order to obtain the vertical depths of the utility lines beneath paved surfaces, Cardno TBE will need to utilize a concrete saw to provide a square cut area in the asphalt to vacuum excavate. All base material will be removed upon removal of the structural asphalt and set aside to be placed back upon completion of the test hole. Cardno TBE will vacuum down to obtain the required information, and then replace fill with what was originally removed in 6-inch lifts being tamped all of the way to the base material. Base material will be replaced and placing and tamping cold-mix asphalt (if needed) will complete the test hole.

Deliverables

All discovered SUE data (line work and test holes) will be recorded by Cardno TBE's Professional Survey group and tied to the project horizontally and vertically

Deliverables will also include the electronic SUE / Survey files (AutoCAD), test hole data sheets (THDS), and a signed and sealed Surveyor's Report. A hard copy and an electronic copy of these documents will also be submitted to the Airport.

4. **Meetings with the FAA** – The Project Team will meet with the FAA Airports District Office in Orlando to discuss the project scope, modifications to standards, and funding, as required. Three (3) meetings are anticipated.

5. **Grant Services** – The Project Team will provide Pre-Application and Grant Application assistance, including the preparation of project narratives, cost estimates and the CATEX form and FAA forms, per the ADO's prescribed guidelines, to help the Airport acquire funding for the design and construction of this project. Two meetings with the Airport are anticipated for the preparation of these documents. Quarterly reports are not required at this point as the Airport is up-fronting the design funds and will submit a Grant Application at a later date for reimbursement.

6. **OE/AAA Submittal** – An Airspace Checklist will be prepared and submitted to the FAA via OE/AAA. This will include the submittal of the CSPP.

7. **Safety Risk Management Involvement** – The Project Team will coordinate with the ATCT and the Airport on the SRM process and attend initial meetings and the SRM Panel meeting as required. The Project Team will attend one (1) half-day meeting with the ATO to review the project and safety and phasing requirements.

8. **Stormwater Modeling and SWFWMD Permitting** – Stormwater modeling and system design will be performed as part of the Phase II scope. Preparation and submittal of the SWFWMD Permit application will be performed as part of Phase I.

   The drainage design and improvements for the project will consist of:

   a. Reconfiguration of stormwater management facilities for the reconfigured/reconstructed taxiway connectors.

   b. Evaluate alternatives for the elimination of the wet detention pond near the T-Hangars on the east side of the Airport and replacement with a dry pond or other acceptable treatment method.

9. **Coordination with Phase I** – Phase I of the Taxiway Rehabilitation project will be designed by others under a separate Contract. Coordination between the Project Team for both Phases will be required during the design and bidding phase of this project. Three meetings are anticipated for this effort.

Project Schedule

The following is a tentative schedule for this work. It is assumed that the Project Team will continue with the design while the Airport is performing its review of each submittal to expedite the design process.

Task	Duration (Days)
Notice to Proceed	-
Program Verification/Survey/Geotechnical	60
Design Development (30%)	60
Contract Documents (60%)	75
Contract Documents (90%)	90
Contract Documents (100%)	30
Bidding	2014
Submit FAA Grant	2014
NTP for Construction	2014

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Taxiway Rehabilitation - Phase II
St. Petersburg-Clearwater International Airport
Exhibit B - Fee Breakdown

FEE SUMMARY

TASK		Totals
Basic Services (Lump Sum)		
Phase 1A - Program Verification		$19,740.00
Phase 1B - Schematic Design (not included)		
Phase 2 - Design Development (30%)		$41,220.00
Phase 3A - Contract Documents (60%)		$61,378.00
Phase 3B - Contract Documents (90%)		$43,900.00
Phase 3C - Contract Documents (100%)		$7,120.00
Phase 4 - Bidding and Award Services		$19,352.00
Phase 5 - Construction Administration Services (not included)		
	Total Basic Services:	**$192,710.00**
URS - Electrical Engineering/Planning/Drainage QC		**$84,385.00**
AID-Civil West of 18R-26L, Pavement Design, Drainage		**$91,014.00**
Special Services (Lump Sum)		
1 Topographic Surveys (URS)		$37,000.00
2 Geotechnical Investigations (Tierra)		$20,513.00
3 Subsurface Utility Locate (SUE) (Cardno/TBE)		$31,967.00
4 Meetings with the FAA ADO (2 Mtgs)		$2,760.00
5 Grant Services (Pre-Application, Grant Application)		$1,996.00
6 OE/AAA Airspace Checklist Submittal		$2,168.00
7 Prepare for and attend SRM Meeting		$2,104.00
8 Stormwater Modeling and SWFWMD Permitting		$30,328.00
9 Coord. With Phase I Design		$3,002.00
10 Project Management & Quality Control		$25,398.00
	Total Special Services:	**$157,236.00**
Expenses (Lump Sum)		
Travel (for Meetings and to FAA ADO)		$1,500.00
Reproduction		$7,500.00
	Total Expenses:	**$9,000.00**
Subtotal Fees (Lump Sum):		**$534,345.00**
Contingency (Allowance As Needed)		**$60,000.00**
Grand Total Fees		**$594,345.00**
Exclude Taxiway D		**($53,046.00)**
Exlude Taxiways B & C		**($90,117.00)**

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Taxiway Rehabilitation Phase II
St. Petersburg-Clearwater International Airport
Exhibit B - Fee Breakdown

TASK	Project Principal	Senior Project Manager	Senior Engineer	Engineer	Senior Designer	Designer	Technician	Clerical	Totals
	$228.00	$210.00	$135.00	$116.00	$112.00	$63.00	$79.00	$69.00	
Phase 1A Program Verification									
1 Compile and Review Project related Documents			2	8	8			8	26
2 Perform Detailed Site Inspection (1 Visit)			8	8				4	20
3 Determine Add'l. Pavement Core Locations				4	4				8
4 Meet /Coord. with URS (Survey) (1 Mtg)			2					2	4
5 Meet /Coord. with Cardno/TBE (SUE work) (1 Mtg)			2					2	4
6 Meet /Coord. with Tierra (Geotechnical) (1 Mtg)			2					2	4
7 Meet /Coord. with URS and AID (1 Mtg)			4					2	6
8 Meet and Coordinate with Airport Engineering (1 Mtg)		4	4					1	9
9 Meet/Coord. with the ATCT and Airport Operations (1 Mtg)		4	4					1	9
10 Prepare a Construction Cost Estimate and Schedule			2	8	8			1	19
11 Pre-Design Meeting with Stakeholders (1 Mtg)		4	4					1	9
12 Prepare Project Narrative Report and Justification Report		2	4	20	16			6	48
Total Labor Hours:		14	38	48	36			30	166
Total Labor Costs:		$2,940.00	$5,130.00	$5,568.00	$4,032.00			$2,070.00	$19,740.00
Phase 1B Schematic Design (not included)									
Phase 2 - Design Development (30%)									
1 Evaluate Pavement Repair Alternatives from AID			4	4					8
2 ~~Evaluation Impact on stormwater inlet and other structures~~									
3 Preliminary Pavement Geometry (for each taxiway)			2		8				10
4 Preliminary Phasing Analysis			2	8	6				16
5 Night-time/Day-time Construction Evaluation			2						2
6 Review Preliminary findings with Owner		2	4						6
7 Prepare 30% Drawings (Approx. 35 sheets)									
a Cover Sheet					2				2
b Project Site/Layout Plan			1	8	20				29
c Project Key Sheet				4	8				12
d Survey Control Plan			1	4	8				13
e Typical Sections			1	4	16				21
f Phasing Plans			1	8	16				25
g Demolition Plans			1	8	16				25
h Pavement Repair Plans			1	8	16				25
8 Update Construction Cost Estimate			2	9	9				20
9 Update Construction Schedule/Phasing			2	4					6
10 Prepare Preliminary Engineer's Report			2	16	4			16	38
11 Prepare an Outline of Technical Specifications			2	8				8	18
12 Quality Review		8							8
13 Submit 30% Documents			2	8	16			8	34
14 General Coordination with URS/AID			8	8				8	24
15 General Coordination with the Airport		4	4					2	10
16 Review Meeting with Stakeholders (1 Mtg)		2	2					2	6
Total Labor Hours:		16	44	109	145			44	358

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Taxiway Rehabilitation Phase II
St. Petersburg-Clearwater International Airport
Exhibit B - Fee Breakdown

TASK	Project Principal	Senior Project Manager	Senior Engineer	Engineer	Senior Designer	Designer	Technician	Clerical	Totals
	$228.00	$210.00	$135.00	$116.00	$112.00	$63.00	$79.00	$69.00	
Total Labor Costs:		$3,360.00	$5,940.00	$12,644.00	$16,240.00			$3,036.00	$41,220.00
Phase 3A Contract Documents (60%)									
1 Prepare 60% Drawings (Approx. 90 Sheets)									
a Cover Sheet							2		2
b Project Site/Layout Plan			2	8	16				26
c Project Survey Control Plan					4		4		8
d Geotechnical/Boring Location Plan					4		4		8
e Project Safety Plan (including Staging and Access Plans)			2	6	12				20
f Project Phasing/Construction Sequencing Plans			2	6	16				24
g General/Safety Notes Plan						6	8		14
h Project Key Sheet						8			8
i Typical Sections			1	6	8	8	4		27
j Existing Condition Plans			1	6	16		4		27
k Demolition Plans			2	6	20				28
l Horizontal Control Plans			2	6	20				28
m Grading Plans and Profiles Plans			2	6	16	24			48
n Drainage Plans/Details from AID			2	6	8				16
o Erosion Control Plans/Details			2	6	4				12
p Pavement Marking Plans			2	6	24		16		48
2 Update Construction Schedule and Cost Estimates			2	6	8				16
3 Prepare Draft Technical Specifications			6	16				20	42
4 Submit 60% Documents			2	2	12		8	8	32
S Prepare and Submit Construction Safety and Phasing Plan (CSPP)			4	30				16	50
6 Quality Review		16							16
7 General Coordination with URS/AID			8	8	8			8	32
8 General Coordination with the Airport		8	8					4	20
9 Review Meeting with Stakeholders (1 Mtg)		4	4	4					12
Total Labor Hours:		28	54	134	196	46	50	56	564
Total Labor Costs:		$5,880.00	$7,290.00	$15,544.00	$21,952.00	$2,898.00	$3,950.00	$3,864.00	$61,378.00
Phase 3B Contract Documents (90%)									
1 Prepare 90% Drawings (Approx.. 100 Sheets)									
a Cover Sheet							2		2
b Project Site/Layout Plan				4	16				20
c Project Survey Control Plan				4	4				8
d Geotechnical/Boring Location Plan				2			6		8
e Project Safety Plan (including Staging and Access Plans)			1	2	8				11
f Project Phasing/Construction Sequencing Plans			1	2	8				11
g General/Safety Notes Plan						2	6		8
h Project Key Sheet						8			8
i Typical Sections			1	4		8	8		21
j Existing Condition Plans				2	8	8			18
k Demolition Plans			1	4	8		8		21
l Horizontal Control Plans			1	4	8				13

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Taxiway Rehabilitation Phase II
St. Petersburg-Clearwater International Airport
Exhibit B - Fee Breakdown

TASK	Project Principal	Senior Project Manager	Senior Engineer	Engineer	Senior Designer	Designer	Technician	Clerical	Totals
	$228.00	$210.00	$135.00	$116.00	$112.00	$63.00	$79.00	$69.00	
m Grading Plans and Profiles Plans			1	8	30				39
n Drainage Plans/Details			1		4				5
o Erosion Control Plans/Details			1	2		2			5
p Cross Sections			1	16	24				41
q Pavement Marking Plans			1	2	8		8		19
2 Finalize Construction Cost Estimate and Schedule			1	4	8				13
3 Finalize Engineer's Report			1	4	8	4		8	25
4 Complete Technical Specifications			1	4				8	13
5 Complete Front-End Documents (FAA Provisions)			1	4				6	11
6 Quality Review		16							16
7 Submit 90% Documents			2	4	8			8	22
8 General Coordination with URS/AID			4	8	8			4	24
9 General Coordination with Airport		4	4					4	12
10 Meetings with Airport and Stakeholders (1 Mtg)		4	4						8
Total Labor Hours:		24	28	84	158	32	38	38	402
Total Labor Costs:		$5,040.00	$3,780.00	$9,744.00	$17,696.00	$2,016.00	$3,002.00	$2,622.00	$43,900.00
Phase 3C Contract Documents (100%)									
1 Incorporate Final Review Comments		2	4	8	16		16		46
2 Prepare and Submit Final Bid Documents			4	4	8			4	20
Total Labor Hours:		2	8	12	24		16	4	66
Total Labor Costs:		$420.00	$1,080.00	$1,392.00	$2,688.00		$1,264.00	$276.00	$7,120.00
Phase 4 - Bidding and Award Services									
1 Coordinate with the Airport		4	8					4	16
2 Coordinate with URS/AID		4	4	4				4	16
3 ~~Distribute Bidding Documents~~									
4 Prepare for and Attend Pre-Bid Conference		8	8					2	18
5 Responses to RFI's/Issue Addenda		2	16	8				2	28
6 Revisions to Contract Documents		2	4	8	16			2	32
7 Attend Bid Opening		4	4						8
8 Review Bids for Responsiveness		2	8					2	12
9 Prepare/Review Bid Tabulation Sheet(s)		2	4					2	8
10 Make Recommendation for Award of Contract		2						2	4
11 ~~Prepare Conformed Contract~~									
Total Labor Hours:		30	56	20	16			20	142
Total Labor Costs:		$6,300.00	$7,560.00	$2,320.00	$1,792.00			$1,380.00	$19,352.00

Phase 5 - Construction Administration Services (not Included)

Total Fees - Basic Services (Lump Sum): **$192,710.00**

JACOBS

Taxiway Rehabilitation - Phase II
St. Petersburg-Clearwater International Airport
Exhibit B - Fee Breakdown

	TASK	Project Principal	Project Manager	Senior Engineer	Engineer	Senior Designer	Designer	Technician	Clerical	Total Hours	Total Dollars
		$228.00	$210.00	$135.00	$114.00	$112.00	$63.00	$67.00	$69.00		
Special Services											
1	Topographic Surveys (URS)										**$37,000.00**
2	Geotechnical Investigations (Tierra)										**$20,513.00**
3	Subsurface Utility Locate (SUE) (Cardno/TBE)										**$31,967.00**
4	Meetings with the FAA ADO (2 Mtgs)		8	8						16	**$2,760.00**
5	Grant Services (Pre-Application, Grant Application)			4	4	4			8	20	**$1,996.00**
6	OE/AAA Airspace Checklist Submittal			4	4	8			4	20	**$2,168.00**
7	Prepare for and attend SRM Meeting		4	4		4			4	16	**$2,104.00**
8	Stormwater Modeling and SWFWMD Permitting		2	4	4	8				18	**$2,312.00**
9	Coord. With Phase I Design										
	a. Determine Combined Project Schedule		2	2						4	**$690.00**
	b. Coord.-Construction Safety & Phasing Plan		2	2	2	4				10	**$1,366.00**
	c. Determine Proj. Staging/Access Points			2	2	4				8	**$946.00**
	Total										**$3,002.00**
10	Project Management & Quality Control		40	48	62				50	200	**$25,398.00**
Total Fees - Special Services (Lump Sum):											**$129,220.00**

Jacobs North American Infrastructure

FY2013 Cost or Pricing Data

The first column reflects the Pricing/Bidding rates recommended by the Defense Contract Audit Agency for Jacobs North American Infrastructure (NAI) business unit on federal projects.

The 2nd column reflects the 2nd Quarter Actuals for Fiscal Year 2013.

The third column reflects Jacobs FY2013 Forecast Indirect Rates.

The fourth column reflects Jacobs FY12 FDOT Approved Rates.

The last column reflects Jacobs FY12 Final Incurred Cost Submission.

		FY2012 DCAA Pricing/ Bidding Rates Effective August 22, 2012	2nd Qtr Actuals	FY2013 Forecast Rates	L. Odom Approved Rates March 21, 2013	FY2012 Final Incurred Cost Submission Federal
At-Office		122.30%	116.60%	113.60%	118.43%	118.42%
At-Site		97.80%	93.00%	91.30%	94.77%	94.76%
Direct Expense	At-Office				9.18%	NA
Direct Expense	At-site				10.21%	NA

Taxiway Rehabilitation Phase 2
St. Petersburg-Clearwater International Airport
Exhibit B - Fee Breakdown

TASK	Project Principal	Project Manager	Senior Engineer	Engineer	Senior Designer	Designer	Technician	Clerical	Totals
	$178.00	$169.00	$156.00	$114.00	$93.00	$77.00	$67.00	$59.00	
1 Taxiways B/C Design									
1 Program Verification		4	4					2	10
2 Design Development (30%)		2	12	20	60			4	98
3 Contract Documents (60%)		6	36	48	72			8	170
4 Contract Documents (90%)		6	36	48	72			8	170
5 Contract Documents (100%)		4	4	16	16			8	48
7 Bidding and Award Services		8	8	8				4	28
Total Labor Hours:		30	100	140	220			34	524
Total Labor Costs:		$5,070.00	$15,600.00	$15,960.00	$20,460.00			$2,006.00	$59,096.00
2 Taxiway D Design									
1 Program Verification		2	2					2	6
2 Design Development (30%)		2	6	16	36			4	64
3 Contract Documents (60%)		2	12	16	40			4	74
4 Contract Documents (90%)		2	16	24	40			4	86
5 Contract Documents (100%)		4	4	8	8			4	28
6 Bidding and Award Services		4	8					4	16
Total Labor Hours:		16	48	64	124			22	274
Total Labor Costs:		$2,704.00	$7,488.00	$7,296.00	$11,532.00			$1,298.00	$30,318.00
3 Stormwater Modeling/SWFWMD Permit (Pond Modifications)									
1 Review of existing SWFWMD permits & project files			4	8	2				14
2 Analysis of Master Plan ICPR model			4	16					20
3 Update ICPR Model to reflect proposed improvements			2	24					26
4 Stormwater drainage conveyance design			2	16	8				26
5 Runoff attenuation design			2	8	4				14
6 Stormwater quality treatment design			2	8					10
7 Project Stormwater Management Report			4	16	4			2	26
8 Prepare SWFWMD ERP Application Package			2	12	2				16
9 Responses/Coordination with SWFWMD			2	8	4			2	16
Total Labor Hours:			24	116	24			4	168
Total Labor Costs:			$3,744.00	$13,224.00	$2,232.00			$236.00	$19,436.00

Expenses (Lump Sum)

Travel (for Meetings)	$200.00
Reproduction	$1,400.00

Total Fees (Lump Sum): **$110,450.00**

Scope of Services for:

Professional Design Services for Taxiway Rehabilitation Phase II

Pinellas County, Florida

St. Petersburg/Clearwater International Airport

Prepared by:

URS

May 15, 2013

SCOPE OF SERVICES FOR

PROFESSIONAL DESIGN SERVICES FOR TAXIWAY REHABILITATION PHASE II

AT

ST. PETERSBURG/CLEARWATER INTERNATIONAL AIRPORT
PINELLAS COUNTY, FLORIDA

URS CORPORATION

INTRODUCTION

This scope of services (scope) outlines the tasks proposed by URS Corporation (URS) to assist Jacobs in preparing Construction Documents for the project. URS' responsibility is the airfield electrical.

Construction Documents

URS will provide Construction Documents for Taxiway Rehabilitation Phase II as indicated in attached Proposed Site Plan Sheet C101 as prepared by Jacobs. URS will be responsible for the following design efforts for the areas shown:

- Airfield Electrical
  - Taxiway Edge Lights for portion of Taxiway F, Taxiway U, and Taxiway K
  - OPTION: Taxiway Edge Lights for Taxiway B/Taxiway C
  - OPTION: Taxiway Edge Lights for Taxiway D
  - Elevated Runway Guard Lights for Taxiways F, D, and B
  - No Taxiway Edge Lights are anticipated on Taxiway M
  - No Runway lighting or Approach lighting is anticipated or included
- Airfield Signage
  - New LED signs for new construction areas
  - Change sign panels in signs if runways are re-designated (and new sign not justified)
  - Only areas of work included in the scope. No signs outside of project area will be reviewed
- Modifications to Airfield Electrical Vault
  - Modify vault only as required by airfield circuiting requirements
  - Review all taxiway circuits affected by the project
  - Make appropriate graphical update to Airfield Lighting Control System (ALCS)

Schedule

TBD.

PROJECT APPROACH

The project approach is envisioned to consist of three major tasks to fully execute the design and bidding of the project. The engineering approach and bid strategy is to have a single bid package for construction. Major tasks are listed below and will be further expanded on in later sections:

Task 1.0: Preliminary Engineering & Project Definition

Task 2.0: Airfield Electrical Construction Documents

Task 3.0: Bid and Award

Task 4.0: Special Services

TASK 1.0: PRELIMINARY ENGINEERING & PROJECT DEFINITION

URS shall provide the specified services listed below related to Preliminary Engineering and Project Definition.

1.1.0 Kickoff Meeting - URS will attend the project kickoff meeting and other design meetings as required for project coordination.

1.2.0 As-Built Research

1.2.1 As-built Search –URS will search our own extensive data base for existing drawings and reports applicable to this project. URS will also contact and coordinate with the owner regarding other documents as required.

1.2.2 As-built Review – URS will review in detail applicable drawings and reports.

1.2.3 Incorporate As-Built Data into Base Drawing –URS will input design information from reliable as-builts into the base drawing for use in the construction documents.

1.3.0 Field Inspection of Existing Conditions

1.3.1 Taxiway Field Inspection – URS will inspect the existing conditions in the field of all taxiway areas included in the project.

1.3.2 Electrical Vault Inspection – URS will inspect the electrical vault and note any changes to the drawings.

1.3.3 Airfield Signage Inspection - URS will inspect the existing conditions in the field of all signage in areas of taxiway geometric modifications. Inspection will yield information on age and condition. URS will rely primarily on the existing guidance sign plan as provided by the airport of sign legends and exact locations.

1.4.0 Incorporate survey into base drawing – URS will incorporate electrical elements from the survey into the base drawing including Taxiway Edge Lights, Signs, Elevated Runway Guard Lights, Electrical Manholes, and Electrical Handholes.

1.5.0 Create Electrical Loading spreadsheet for each existing circuit to be modified – URS will review drawings and regulator loading to verify existing electrical loads for each circuit to be modified. URS will rely primarily upon as-builts and regulator readings for this information.

1.6.0 Submit Justification Report on Project recommendations – No report included.

TASK 2.0: AIRFIELD ELECTRICAL CONSTRUCTION DOCUMENTS

2.1.0 Finalize Design Criteria – URS will incorporate information accumulated in the preliminary design phase and comments from the justification report into the final design criteria for the project.

2.2.0 Prepare 60% Construction Documents – URS will provide documents that include 11"x17" plans, 60% technical specifications, and a preliminary cost estimate. Any cost opinions or estimates provided by URS will be on a basis of experience and judgment, but since URS has no control over market conditions or bidding procedures, URS cannot and does not warrant that bids, ultimate construction cost, or project economics will not vary from such opinions or estimates.

2.2.1 Airfield Electrical Demolition Plans – The 60% plans will include what to remove, what is to remain, and what is to be modified within the project limits.

2.2.2 New Taxiway Edge Lights – The 60% plans will include new fixtures on new cans in areas of geometric changes. Plans will include new concrete encased duct between fixtures and new counterpoise system. No new large duct bank system or manholes are anticipated or included.

2.2.3 **New Elevated Runway Guard Lights** – The 60% plans will include new fixtures on new cans, new concrete encased duct between fixtures, and new counterpoise system. No new large duct bank system or manholes are anticipated or included. No in-pavement Runway Guard Lights are anticipated or included.

2.2.4 **Airfield Signage** – The 60% plans will include location and designation for all taxiways within the project limits as well as any changes to runway designation signs or taxiway designation signs.

2.2.5 **Airfield Electrical Vault** – The 60% plans will show the existing conditions of the electrical vault including regulator sizes. The generator loads will be reviewed for possible load balancing.

2.3.0 **Prepare 90% Construction Documents** – URS will provide documents that include 11"x17" plans, 90% technical specifications, and a cost estimate. Any cost opinions or estimates provided by URS will be on a basis of experience and judgment, but since URS has no control over market conditions or bidding procedures, URS cannot and does not warrant that bids, ultimate construction cost, or project economics will not vary from such opinions or estimates. The plans will include all of the updated drawings from the 60% submittal and will also include the following:

2.3.1 **Airfield Electrical Demolition Notes** – The 90% plans will include what to remove, what is to remain, and what is to be modified within the project limits and will be keyed to notes that describe each existing element in detail.

2.3.2 **Taxiway Edge Light Details** – The 90% plans will include details of new fixtures, details of new cans, details for new concrete encased duct, and details for the new counterpoise system.

2.3.3 **New Elevated Runway Guard Lights** – The 90% plans will details of new fixtures and details of new cans. No new large duct bank system or manholes are anticipated or included. No in-pavement Runway Guard Lights are anticipated or included.

2.3.4 **Airfield Signage** – The 90% plans will include sign details, foundation details, sign size, sign style, and # of modules. Plans will include a guidance sign table.

2.3.5 **Airfield Electrical Vault** – The 90% plans will show the proposed modifications to the electrical vault. The specifications will detail how to update the ALCS graphic with information on whom to contact. URS will contact the manufacturer and add in an allowance to the project for the manufacturer to update the ALCS graphic through the electrical contractor. The generator loading will be modified as necessary if loads become unbalanced due to this project.

2.3.6 **Airfield Circuiting** - The 90% plans will include home run circuiting information to aid the contractor in determining routing for all new or modified circuits.

2.4.0 **Prepare 100% Construction Documents** – URS will provide documents that include 11"x17" plans, 100% technical specifications, and a final cost estimate. Any cost opinions or estimates provided by URS will be on a basis of experience and judgment, but since URS has no control over market conditions or bidding procedures, URS cannot and does not warrant that bids, ultimate construction cost, or project economics will not vary from such opinions or estimates. The plans will include all of the updated drawings from the 90% submittal with additional detailing and edits based on comments received.

TASK 3.0: BID AND AWARD

3.1.0 **Advertisement and Bidding Assistance** – URS will write the brief project description for inclusion in the bid advertisement. URS will also assist the County as required in preparation of the bidding documents and procedure. URS will answer any technical questions from contractors.

3.2.0 Attend Prebid Conference – URS will attend the Prebid conference and be prepared to deliver the project scope to the contractors and be available to answer design related questions.

3.3.0 Assist in Addenda Preparations – URS will assist the County in preparation of the addenda by answering technical questions, interpreting bid documents, and making revisions to drawings as required for clarification.

3.4.0 Evaluate Bids and Contractor Qualifications – URS will review the electrical contractors' bids for accuracy and review electrical contractor.

TASK 4.0: SPECIAL SERVICES

4.1.0 Topographic Survey – URS will provide survey for Taxiway M, Taxiway B/C (Optional), and Taxiway D (Optional) on the project. See attached project requirements (topographic survey) for full scope.

4.2.0 Stormwater Permitting – URS will attend the Pre-Application meeting with SWFWMD, provide QA/QC on Stormwater permit by others, and assist in questions from the agency.

4.3.0 Planning Services – URS will provide planning assistance as it relates to taxiway geometry, taxiway location, and other planning level documentation. URS will attend meetings with FAA as required by the project to confirm design decisions. See attached Planning Scope for additional scope information.

4.4.0 ~~Record Drawings~~ ~~– URS will convert contractor markups into ACADD with as-built information and provide final Record Drawings for the project. All as built information will be based on contractor provided or owner provided information.~~

FEE SUMMARY

TASK		Totals
Basic Services		
Phase 1A - Program Verification		$4,350.00
Phase 1B - Schematic Design		$0.00
Phase 2 - Design Development (30%)		$8,135.00
Phase 3A - Contract Documents (60%)		$16,185.00
Phase 3B - Contract Documents (90%)		$14,230.00
Phase 3C - Contract Documents (100%)		$4,970.00
Phase 4 - Bidding and Award Services		$470.00
Phase 5 - Construction Administration Services		$0.00
	Total Basic Services:	**$48,340.00**
Special Services		
1 Topographic Surveys TW M		$25,000.00
2 Topographic Surveys TW C		$6,000.00
3 Topographic Surveys TW D		$6,000.00
4 Stormwater Permitting		$8,580.00
5 Initial Program Verification/Justification		$2,805.00
6 Validate Proposed TW Connectors		$4,750.00
7 Meeting with the FAA		$2,480.00
8 Prepare Record Drawings		$0.00
9 OPTION: Taxiway B/Taxiway C Lighting		$12,490.00
10 OPTION: Taxiway D Lighting		$12,490.00
	Total Special Services:	**$80,595.00**
Expenses		
Travel		$627.00
Reproduction		$402.50
Permits		$0.00
	Total Expenses:	**$1,029.50**
Total Fees:		**$129,964.50**

	TASK	Project Principal	Project Manager	Electrical Engineer	Senior Designer	Junior Engineer	Clerical	Totals
		$225.00	$165.00	$140.00	$130.00	$90.00	$60.00	
Phase 1A -	***Program Verification***							
1	Review Project Scope/Documents	1	2					3
2	Review Record Drawings		2	2	2			6
3	Field Verify As-Builts		2	2	2			6
4	Review and Confirm Initial Cost Estimates							0
5	Evaluate Existing Utilities							0
6	Evaluate Available Survey Information							0
7	Evaluate Soils Data/Prepare Boring Locations							0
8	Submit Verification Report	1	1	2	2		4	10
9	General Coordination with Owner	1	4					5
	Total Labor Hours:	3	11	6	6	0	4	30
	Total Labor Costs:	$675.00	$1,815.00	$840.00	$780.00	$0.00	$240.00	$4,350.00
Phase 1B -	***Schematic Design***							
1	Prepare a Construction Schedule							0
2	Perform Schematic Design Studies							0
3	Prepare Schematic Drawings							
	a Grading Plan							0
	b Paving Plan							0
	c Drainage Plan							0
	d Utilities Plan							0
	e Safety Plan							0
	f Phasing Plan							0
4	Prepare and submit the Schematic Design Report							0
5	Quality Review							0
6	Review Meeting with Owner							0
	Total Labor Hours:	0	0	0	0	0	0	0
	Total Labor Costs:	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Phase 2 -	***Design Development (30%)***							
1	Horizontal and Vertical Geometric Design							0
2	Identify Limits of Construction							0
3	Evaluate New Drainage System							0
4	Evaluate Existing and Proposed Utilities							0
5	Preliminary Grading Design							0
6	Preliminary Paving Design							0
7	Prepare 30% Drawings							
	a Cover Sheet							0
	b Project Site/Layout Plan							0

TASK	Project Principal	Project Manager	Electrical Engineer	Senior Designer	Junior Engineer	Clerical	Totals
	$225.00	$165.00	$140.00	$130.00	$90.00	$60.00	
c Project Key Sheet							0
d Existing Utilities Plan							0
e Typical Sections							0
f Staking/Demolition Plans							0
g Grading/Drainage Plans							0
h Paving Plans							0
i Utilities Plans							0
j Lighting and Signage Plans	1	4	4	16	16		41
k Misc. Details							0
8 Update Construction Cost Estimate		1			2		3
9 Update Construction Schedule							0
10 Prepare Engineer's Report							0
11 Quality Review	2						2
12 Submit 30% Documents	1	2	2	4	4		13
13 Review Meeting with Owner		4					4
Total Labor Hours:	4	11	6	20	22	0	63
Total Labor Costs:	$900.00	$1,815.00	$840.00	$2,600.00	$1,980.00	$0.00	$8,135.00
Phase 3A - Contract Documents (60%)							
1 Finalize Pavement Design							0
2 Finalize Drainage Design							0
3 Finalize Electrical Design	1	2	6			4	13
4 Prepare 60% Drawings							
a Cover Sheet							0
b Project Site/Layout Plan							0
c Project Phasing and Safety Plan							0
d General Notes Plan							0
e Project Key Sheet							0
f Typical Sections							0
g Staking and Demolition Plans							0
h Grading and Drainage Plans							0
i Drainage Details							0
j Profile Sheets							0
k Paving Plans							0
l Paving Details							0
m Pavement Marking Plans							0
n Marking Details							0
o Erosion Control Plans							0

TASK	Project Principal	Project Manager	Electrical Engineer	Senior Designer	Junior Engineer	Clerical	Totals
	$225.00	$165.00	$140.00	$130.00	$90.00	$60.00	
p Utilities Plans							0
q Lighting Plans	1	2	2	8	16		29
r Signage Plans	1	2	2	8	16		29
s Electrical Details		2	2	6	8		18
5 Update Construction Cost Estimate		1		2			3
6 Update Construction Schedule							0
7 Update Engineer's Report	1	1	2			6	10
8 Prepare Draft Specifications	1	4	4			8	17
9 Prepare Draft Front-End Documents							0
11 Quality Review	4						4
12 Submit 60% Documents		2			6		8
13 Review Meeting with Owner		4					4
Total Labor Hours:	9	20	18	24	46	18	135
Total Labor Costs:	$2,025.00	$3,300.00	$2,520.00	$3,120.00	$4,140.00	$1,080.00	$16,185.00
Phase 3B - Contract Documents (90%)							
1 Prepare 90% Drawings							
a Cover Sheet							0
b Project Site/Layout Plan							0
c Project Phasing and Safety Plan							0
d General Notes Plan							0
e Project Key Sheet							0
f Boring Logs							0
g Typical Sections							0
h Staking and Demolition Plans							0
i Grading and Drainage Plans							0
j Drainage Details							0
k Profile Sheets							0
l Paving Plans							0
m Paving Details							0
n Pavement Marking Plans							0
o Marking Details							0
p Erosion Control Plans							0
q Utilities Plans							0
r Lighting Plans	1	2	6	10	16		35
s Signage Plans	1	2	6	10	16		35
t Electrical Details		2	4	6	8		20
u Misc. Details							0

	TASK	Project Principal	Project Manager	Electrical Engineer	Senior Designer	Junior Engineer	Clerical	Totals
		$225.00	$165.00	$140.00	$130.00	$90.00	$60.00	
	v Cross Sections							0
5	Finalize Construction Cost Estimate							0
6	Finalize Construction Schedule							0
7	Finalize Engineer's Report	1	2				4	7
8	Complete Technical Specifications	1	2				4	7
9	Complete Front-End Documents							0
11	Quality Review	2						2
12	Submit 90% Documents		2			6		8
13	Review Meeting with Owner		4					4
	Total Labor Hours:	6	16	16	26	46	8	118
	Total Labor Costs:	$1,350.00	$2,640.00	$2,240.00	$3,380.00	$4,140.00	$480.00	$14,230.00
Phase 3C -	***Contract Documents (100%)***							
1	Incorporate Final Review Comments	1	4	2	6	6		19
2	Prepare Final Bid Documents	1	4	2	6	6		19
	Total Labor Hours:	2	8	4	12	12	0	38
	Total Labor Costs:	$450.00	$1,320.00	$560.00	$1,560.00	$1,080.00	$0.00	$4,970.00
Phase 4 -	***Bidding and Award Services***							
1	Coordinate with Owner							0
2	Distribute Bidding Documents							0
3	Prepare for and Attend Pre-Bid Conference							0
4	Answers to Bidders/Issue Addenda		2	1				3
5	Attend Bid Opening							0
6	Review Bids for Responsiveness							0
7	Certified Bid Tabs/Award Contract							0
8	Conformed Contract Preparation							0
	Total Labor Hours:	0	2	1	0	0	0	3
	Total Labor Costs:	$0.00	$330.00	$140.00	$0.00	$0.00	$0.00	$470.00
Phase 5 -	***Construction Administration Services***							
1	Coordinate with Owner							0
2	Prepare a Construction Management Plan							0
3	Prepare for and Attend Pre-Construction Conf							0
4	Review Shop Drawings/Submittals							0
5	Periodic Site Visits (1 per month)							0
6	Weekly Progress Meetings							0
7	Prepare Change Orders							0
8	Review Test Results							0
9	Review Periodic Payment Requests							0

TASK		Project Principal	Project Manager	Electrical Engineer	Senior Designer	Junior Engineer	Clerical	Totals
		$225.00	$165.00	$140.00	$130.00	$90.00	$60.00	
10	Perform Final Inspection/Prepare Punchlist							0
11	Verify Punchlist Items are Completed							0
	Total Labor Hours:	0	0	0	0	0	0	0
	Total Labor Costs:	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Total Fees (Lump Sum): **$48,340.00**

	TASK	Project Principal	Senior Storm Engr	Sr. Planner	Planner	Sr. Designer	Admin./ Clerical	Total Hours	Total Dollars
		$225.00	$165.00	$155.00	$115.00	$130.00	$75.00		
Special Services									
1	Topographic Surveys TW M								**$25,000.00**
2	Topographic Surveys TW C								**$6,000.00**
3	Topographic Surveys TW D								**$6,000.00**
4	Stormwater Permitting								
	a Attend Pre-Application Meeting		8					8	$1,320.00
	b Prepare Permit Application							0	$0.00
	c QA/QC Stormwater		40					40	$6,600.00
	d Respond to RAI's		4					4	$660.00
	e Resubmit Permit Application							0	$0.00
	Total Stormwater Permitting:							52	**$8,580.00**
5	Initial Program Verification/Justification	1		8		8	4	21	**$2,805.00**
6	Validate Proposed TW Connectors			22		8	4	34	**$4,750.00**
7	Meeting with the FAA			16		0	0	16	**$2,480.00**
8	Prepare Record Drawings							0	**$0.00**
9	***OPTION: Taxiway B/Taxiway C Lighting***	2	8		48	40		98	**$12,490.00**
10	***OPTION: Taxiway D Lighting***	2	8		48	40		98	**$12,490.00**
Total Fees:									**$80,595.00**

Project Name
Airport Name

TRAVEL EXPENSES	Personal Vehicle Mileage					Air Travel				Hotels and Meals					TOTALS
	Number of Trips	Number of Miles	Total Miles	Dollars Per Mile	Total Costs	Number of Trips	Rental Cars	Airlines	Total Costs	Number of Trips	Number of Nights	Hotels	Meals	Total Costs	
Phase 1A - Program Verification															
Site Visits	1	24	24	$0.50	$12.00				$0.00					$0.00	$12.00
Meeting with Owner	1	24	24	$0.50	$12.00				$0.00					$0.00	$12.00
Meeting with Utility Companies			0	$0.50	$0.00				$0.00					$0.00	$0.00
Meeting with Permitting Agencies			0	$0.50	$0.00				$0.00					$0.00	$0.00
Other Meetings			0	$0.50	$0.00				$0.00					$0.00	$0.00
Phase 1B - Schematic Design															
Site Visits	1	24	24	$0.50	$12.00				$0.00					$0.00	$12.00
Meeting with Owner	1	24	24	$0.50	$12.00				$0.00					$0.00	$12.00
Meeting with Utility Companies			0	$0.50	$0.00				$0.00					$0.00	$0.00
Meeting with Permitting Agencies			0	$0.50	$0.00				$0.00					$0.00	$0.00
Other Meetings			0	$0.50	$0.00				$0.00					$0.00	$0.00
Phase 2 - Design Development (30%)															
Site Visits			0	$0.50	$0.00				$0.00					$0.00	$0.00
Meeting with Owner	2	24	48	$0.50	$24.00				$0.00					$0.00	$24.00
Meeting with Utility Companies			0	$0.50	$0.00				$0.00					$0.00	$0.00
Meeting with Permitting Agencies			0	$0.50	$0.00				$0.00					$0.00	$0.00
Other Meetings			0	$0.50	$0.00				$0.00					$0.00	$0.00
Phase 3A - Contract Documents (60%)															
Site Visits			0	$0.50	$0.00				$0.00					$0.00	$0.00
Meeting with Owner	2	24	48	$0.50	$24.00				$0.00					$0.00	$24.00
Meeting with Utility Companies			0	$0.50	$0.00				$0.00					$0.00	$0.00
Meeting with Permitting Agencies			0	$0.50	$0.00				$0.00					$0.00	$0.00
Other Meetings			0	$0.50	$0.00				$0.00					$0.00	$0.00
Phase 3B - Contract Documents (90%)															
Site Visits			0	$0.50	$0.00				$0.00					$0.00	$0.00
Meeting with Owner	2	24	48	$0.50	$24.00				$0.00					$0.00	$24.00
Meeting with Utility Companies			0	$0.50	$0.00				$0.00					$0.00	$0.00
Meeting with Permitting Agencies			0	$0.50	$0.00				$0.00					$0.00	$0.00
Other Meetings			0	$0.50	$0.00				$0.00					$0.00	$0.00
Phase 3C - Contract Documents (100%)															
Site Visits			0	$0.50	$0.00				$0.00					$0.00	$0.00
Meeting with Owner	1	24	24	$0.50	$12.00				$0.00					$0.00	$12.00
Meeting with Utility Companies			0	$0.50	$0.00				$0.00					$0.00	$0.00
Meeting with Permitting Agencies			0	$0.50	$0.00				$0.00					$0.00	$0.00
Other Meetings			0	$0.50	$0.00				$0.00					$0.00	$0.00

TRAVEL EXPENSES	Personal Vehicle Mileage					Air Travel				Hotels and Meals					TOTALS
	Number of Trips	Number of Miles	Total Miles	Dollars Per Mile	Total Costs	Number of Trips	Rental Cars	Airlines	Total Costs	Number of Trips	Number of Nights	Hotels	Meals	Total Costs	
Phase 4 - Bidding and Award Services															
Site Visits			0	$0.50	$0.00				$0.00					$0.00	$0.00
Meeting with Owner			0	$0.50	$0.00				$0.00					$0.00	$0.00
Pre-Bid Meeting	1	30	30	$0.50	$15.00				$0.00					$0.00	$15.00
Bid-Opening			0	$0.50	$0.00				$0.00					$0.00	$0.00
Other Meetings			0	$0.50	$0.00				$0.00					$0.00	$0.00
Phase 5 - Construction Administration Services															
Site Visits	12	24	288	$0.50	$144.00				$0.00					$0.00	$144.00
Meeting with Owner	26	24	624	$0.50	$312.00				$0.00					$0.00	$312.00
Pre-Construction Meeting	1	24	24	$0.50	$12.00				$0.00					$0.00	$12.00
Final Inspection	1	24	24	$0.50	$12.00				$0.00					$0.00	$12.00
Other Meetings			0	$0.50	$0.00				$0.00					$0.00	$0.00
Special Services															
Site Visits			0	$0.50	$0.00				$0.00					$0.00	$0.00
Meeting with Owner			0	$0.50	$0.00				$0.00					$0.00	$0.00
Meeting with Utility Companies			0	$0.50	$0.00				$0.00					$0.00	$0.00
Meeting with Permitting Agencies			0	$0.50	$0.00				$0.00					$0.00	$0.00
Other Meetings			0	$0.50	$0.00				$0.00					$0.00	$0.00

Total Travel Expenses **$627.00**

REPRODUCTION COSTS	Number of Sets	Number of Drawings	Cost Per item	TOTALS
Phase 1A - Program Verification				
11 x 17 Drawings	5	10	$0.15	$7.50
22 X 34 Drawings				$0.00
CD's		N/A		$0.00
8 1/2 X 11 Pages	5	20	$0.10	$10.00
Reports	5	N/A	$1.00	$5.00
Presentation Board		N/A		$0.00
Phase 1B - Schematic Design				
11 x 17 Drawings	5	20	$0.15	$15.00
22 X 34 Drawings				$0.00
CD's		N/A		$0.00
8 1/2 X 11 Pages	5	40		$0.00
Reports	5	N/A	$1.00	$5.00
Presentation Board		N/A		$0.00
Phase 2 - Design Development (30%)				
11 x 17 Drawings	5	30	$0.15	$22.50
22 X 34 Drawings				$0.00
CD's		N/A		$0.00
8 1/2 X 11 Pages	5	40	$0.10	$20.00
Reports	5	N/A	$1.00	$5.00
Presentation Board		N/A		$0.00
Phase 3A - Contract Documents (60%)				
11 x 17 Drawings	5	30	$0.15	$22.50
22 X 34 Drawings				$0.00
CD's		N/A		$0.00
8 1/2 X 11 Pages	5	50	$0.10	$25.00
Reports	5	N/A	$1.00	$5.00
Presentation Board		N/A		$0.00

REPRODUCTION COSTS	Number of Sets	Number of Drawings	Cost Per item	TOTALS
Phase 3B - Contract Documents (90%)				
11 x 17 Drawings	5	35	$0.15	$26.25
22 X 34 Drawings				$0.00
CD's		N/A		$0.00
8 1/2 X 11 Pages	5	60	$0.10	$30.00
Reports	5	N/A	$1.00	$5.00
Presentation Board		N/A		$0.00
Phase 3C - Contract Documents (100%)				
11 x 17 Drawings	5	35	$0.15	$26.25
22 X 34 Drawings				$0.00
CD's		N/A		$0.00
8 1/2 X 11 Pages	5	60	$0.10	$30.00
Reports	5	N/A	$1.00	$5.00
Presentation Board		N/A		$0.00
Phase 4 - Bidding and Award Services				
11 x 17 Drawings	5	35	$0.15	$26.25
22 X 34 Drawings				$0.00
CD's		N/A		$0.00
8 1/2 X 11 Pages	5	60	$0.15	$45.00
Reports	5	N/A	$1.00	$5.00
Presentation Board		N/A		$0.00
Phase 5 - Construction Administration Services				
11 x 17 Drawings	5	35	$0.15	$26.25
22 X 34 Drawings				$0.00
CD's		N/A		$0.00
8 1/2 X 11 Pages	5	60	$0.10	$30.00
Reports	5	N/A	$1.00	$5.00
Presentation Board		N/A		$0.00

REPRODUCTION COSTS	Number of Sets	Number of Drawings	Cost Per item	TOTALS
Special Services				
11 x 17 Drawings				$0.00
22 X 34 Drawings				$0.00
CD's		N/A		$0.00
8 1/2 X 11 Pages				$0.00
Reports		N/A		$0.00
Presentation Board		N/A		$0.00
Total Reproduction Costs				**$402.50**

Planning Scope

Project Understanding

Based upon ongoing discussions between the Airport's Airport Traffic Control Tower (PIE-ATCT), Airport Management and the Airport's Operation staff, the potential for improved flow of aircraft to and from Runway 4-22 and parallel Runways 18R-36L and 18L-36R to maintain the existing airfield capacity and rate of throughput is needed. Based on the FAA's emphasis on enhancing airfield safety, increasing pilot situational awareness and the need to reduce or complete eliminate the potential for runway incursions, Airport Management has requested assistance in identifying prudent and viable taxiway airfield improvements at PIE.

Recent discussions with representatives of PIE Management, TACT staff, Jacobs and URS staff, improvements to the existing partial length parallel taxiway serving Runway 4-22 and connectors between that taxiway and terminal complex and the general aviation hangars located at the northeast of Runway 4-22 need to be assessed for design compliance with FAA Advisory Circular 150/5300-13A, *Airport Design*.

Ongoing and long-term terminal improvements that will be needed to accommodate the anticipated continue growth of air carrier operations and a wider range of aircraft types and sizes to both Runway 18L/36R and Runway 4-22. It is also recognized that there is a need to consider the interaction between civil and military aircraft operations at PIE that include the operational and mission critical needs U.S. Coast Guard's *Air Station Clearwater* that supports a variety of missions with both C-130 and H-60 aircraft, particularly with respect to the potential use of Runway 4-22 when needed. Recent discussions with ATCT staff indicate the anticipated future increased use of and reliance upon Runway 4-22 to handle the majority of general aviation arrivals when Runway 9-27 and Runway 18R-36L are decommissioned in the foreseeable future.

URS Planning and Review Services

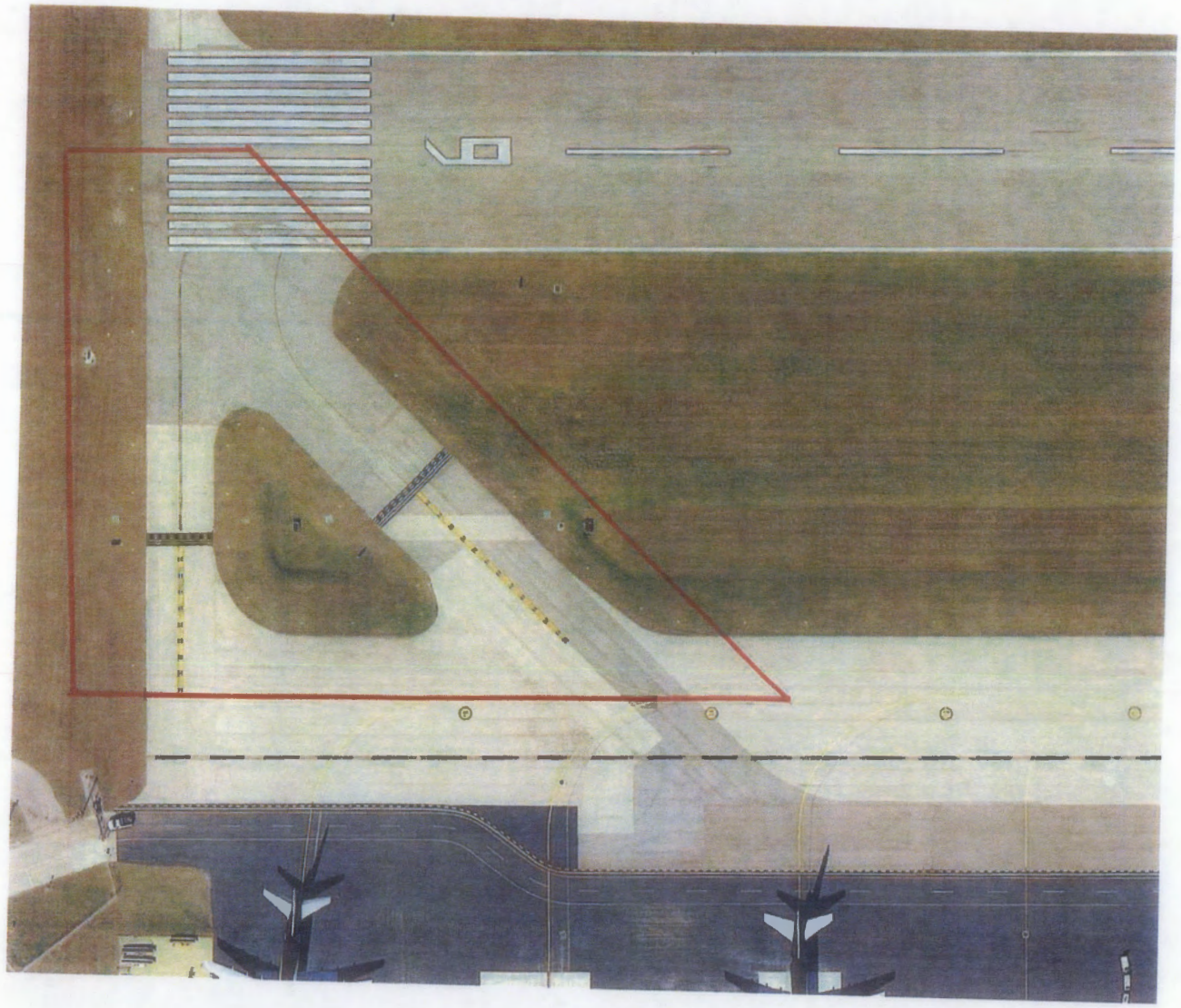
URS will review proposed taxiway layouts and fillet geometry improvement recommendations that are intended to fully or partially conform to the FAA's current taxiway design guidance as prescribed in Advisory Circular 150/5300-13A, *Airport Design*. Accordingly, URS will reference and incorporate the FAA's newly established Taxiway Design Groups (TDGs) that are based upon the overall Main Gear Width (MGW) and the Cockpit to Main Gear (CMG) distance of a Design Aircraft identified specifically for PIE. Based on our preliminary investigations, the FAA's TDG criteria will most be referenced and utilized to identify changes to taxiway fillet design and centerline radii to fully satisfy the most demanding operational requirements of Airplane Design Group (ADG) I through IV taxi operations aircraft that may potentially occur along this partial length parallel taxiway system in the foreseeable future. Such taxiway designs will consider the FAA's underlying goal of enhancing existing or developing new taxiway pavement and geometry designs that provide for the capability to conduct "cockpit over centerline" taxiing with pavement of sufficient widths to allow a certain amount of aircraft wander. The Team will place emphasis on the need to provide taxiway design recommendations that will include fillet

geometries that will ensure the prescribed taxiway edge safety margin is maintained when the pilot guides the aircraft around turns while the cockpit follows the centerline allow pilots to use a consistent taxi method throughout the airport. The development of new taxiway designs will avoid the use of "Judgmental over-steering," unless absolutely necessary. Where required, acute-angled taxiway designs will consider the maximum aircraft steering angle of a Design Aircraft such that the nose gear steering angle is no more than 50 degrees to prevent excessive tire scrubbing.

URS will attend and participate in local project-related meetings and on telecons with PIE Management and ATCT staff as directed.

URS will provide CAD-generated conceptual planning level taxiway and taxiway connector pavement fillet layout and geometry schemes as needed.

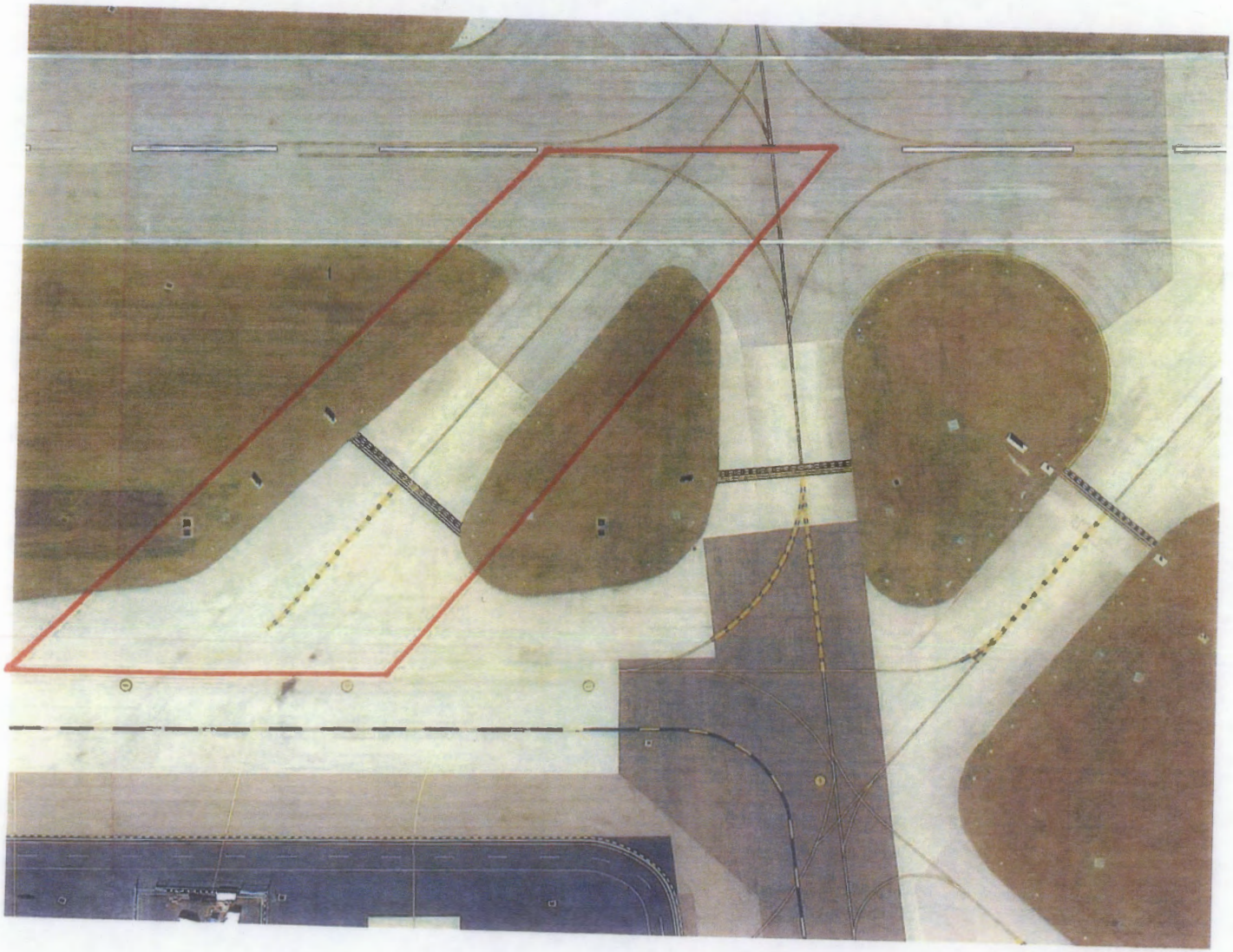
EXHIBIT "A"



1" = 80'

TW "B"/TW "C"

EXHIBIT "B"



1" = 80'

TW "D"

EXHIBIT "C"

1" = 200'

TW "M"

1" = 200'

TW "M"

PROJECT REQUIREMENTS (TOPOGRAPHIC SURVEY)

A. Topographic Survey – General Requirements

1. **Intent.** It is the intent of this contract to acquire a complete and accurate topographic survey in both hard-copy and electronic format.

2. **Responsibility.** A Professional Surveyor and Mapper (PSM) shall be directly responsible for the proper execution of the surveying work to be performed. All work will be in accordance with the Minimum Technical Standards as set forth by the Florida Board of Professional Surveyors and Mappers in Chapter 5J-17, Florida Administrative Code.

3. **Governing Specifications**: Refer to FAA AC 150/5300-16 and FAA AC 150/5300-18B.

4. **Survey Limits:** The survey limits are shown on attached proposed site plan and Exhibit C.

5. **Units:** The survey shall be US Survey Foot.

6. **Coordinate System:** Horizontal coordinates shall use the current State Plane Coordinate System - NSRS NAD83 (2011 Adjustment) and shall be derived from airport PACS and SACS control points. Vertical coordinates shall be based on the North American Vertical Datum of 1988 (NAVD 88). The reference datums and coordinate systems used shall be clearly identified.

7. **Horizontal Control:** Supplemental horizontal controls shall have Third Order, Class II accuracy.

8. **Vertical Control:** A minimum of two temporary benchmarks (e.g. PK Nail in pavement) shall be established for each project. Additional benchmarks shall be established at sufficient locations to ensure that all locations within the survey limits are within a horizontal distance not to exceed 1,000 feet from an established benchmark. Level runs for the determination of benchmark elevations shall have Third Order vertical control accuracy. Temporary benchmark elevations will be tied to a minimum of one benchmark in the National Geodetic Control Network that is classified for a third order or better vertical accuracy. The maximum allowable error of closure for English unit surveys is 0.05 feet multiplied by the square root of the length of the level run in miles. Locations for control points will be selected that are favorable to their future preservation by selecting clearly defined, stable locations outside of the anticipated construction limits for the project.

9. **Survey Baseline:** Establish a survey baseline along the alignment of Taxiway "M". The approximate length of said baseline is 4,600 LF. Baseline points will be established at even

stations (100 foot intervals). Six pairs of references will be set at 1000 foot intervals outside the limits of construction.

10. **Horizontal Feature Location Accuracy:** The horizontal tolerance for feature location shall be in accordance with standard practice.

11. **Vertical Feature Location Accuracy:** The vertical tolerance for feature location shall be 0.05 feet for pavements, structures, pipe inverts, and other man made features and 0.10 feet for ground shots.

12. **Contour Interval:** The contour interval shall be 1.0 foot. Contours shall be shown as light dashed lines for minor/intermediate contours and bold dashed lines for the primary contours.

13. **Spot Elevations:** Spot elevations shall be provided at all break lines in pavement and ground such as edge of pavement, top and bottom of bank, etc. and at other locations as required to accurately depict the site topography.

14. **Survey Grid:** Elevations shall be taken on a grid no larger than 25 feet by 25 feet for paved and/or built up areas with a minimum of 5 shots per cross-section. Cross-sections shall be taken to 50 feet beyond the edge of existing pavement. Cross-sections shall extend to the centerline of connecting runways, taxiways and taxi lanes. In areas that pavement is to be removed, cross-sections can be collected at 50 foot intervals. Intermediate elevations shall be taken as necessary to define all breaks in grade and clearly indicate all existing site conditions.

15. **Utilities:** All visible aboveground utility components shall be surveyed. All lighting, junction boxes signage etc. shall be located. The location of underground utilities that have no visible aboveground components will not be located and surveyed.

16. **Topographic Details:**

    a. **Pavement**. Identify and locate all pavement types including pavement markings.

    b. **Ditches.** Identify and locate all ditches and other storm water channels and drainage structures. Provide the water elevation in the ditch at the time of the survey, if applicable.

17. **Field Notes:** Level work and other field notes and sketches not captured by an electronic data recorder are to be recorded in a standard Engineering Field Book and in a manner conforming to good surveying practice. A copy of the field notes shall be included with the final submittal.

B. Topographic Survey – Submittals

1. **Electronic Topographic Survey File(s)**

   a. **Format.** The topographic survey shall be submitted in a single AutoCAD 2012 Drawing File (.DWG file) with the entire survey drawn in model space with 1 drawing unit = 1 foot for English unit surveys.

   b. **Layers.** All information in the AutoCAD drawings shall be appropriately segregated into layers separated by feature type.

   c. **Contours.** Each contour shall be a single polyline and shall not be composed of multiple individual line segments.

   d. **CDs.** The Contractor shall provide 2 identical Compact Disks (CDs), each containing copies of the electronic topographic survey file, as well as named plot style table files (STB files), color-dependent plot style table files (CTB files), plotter pen assignment tables, symbols, blocks, fonts, and shape definitions used or referenced by the drawing. The CD shall also include the table providing the names and descriptions for the layers used in the drawing file.

2. **Printed Existing Site Plans**

   a. **Format.** Two hard-copy sets of the Topographic Survey shall be submitted. Drawings shall be D-Size sheets and shall use the current title block. Drawings shall be prepared with true north pointing to either the top or the left side of the sheets. The Contractor shall provide true north arrows, graphic scales, abbreviations, and legends clearly defining all symbols used. Lettering shall be all capitals and shall have a text height of not less than 0.1 inches.

   b. **Certification.** The drawings shall be certified correct and sealed by the Professional Surveyor and Mapper (PSM) who was directly responsible for the proper execution of the surveying work.

   c. **Scale:** Drawings shall be prepared at an appropriate standard engineering scale. The selected scale shall be appropriate to clearly identify site features for the entire survey and provide a good presentation of the survey at the prescribed drawing size.

3. **Electronic Survey Point File**

   a. The Contractor shall provide an electronic ASCII text file containing all of the surveyed points in a space-delimited PNEZD (Point number, Northing, Easting, Elevation and Description) format with each surveyed point on its own row.

TIERRA

May 13, 2013

Jacobs
245 Riverside Avenue, Suite 300
Jacksonville, Florida 32202

Attn: Mr. Thomas Schilling, P.E.

RE: Proposal for Geotechnical Engineering Services
St. Petersburg-Clearwater International Airport
Taxiway Rehabilitation Phase 2
Taxiways B, C, D and M
Pinellas County, Florida
Tierra Proposal No. 65-13-179

Mr. Schilling:

Tierra, Inc. appreciates the opportunity to submit the attached proposal to provide geotechnical engineering services for the project site.

Project Information

The project site is located at the existing St. Petersburg-Clearwater International Airport (PIE) in Pinellas County, Florida. The project, as we understand it, consists of performing asphalt cores and borings to evaluate existing pavement and subsurface conditions for the Phase 2 Taxiway Rehabilitation project. Based on the information provided, it is our understanding that Taxiways B, C, D and M will be rehabilitated. In addition, it is our understanding that the existing pond located on the northern end of Taxiway M will be expanded to accommodate the stormwater from the proposed improvements. The geotechnical services will consist primarily of asphalt pavement cores, borings, field permeability and laboratory testing.

Based on project information provided, Tierra has provided individual Scopes of Services below for Taxiway M, Taxiways B and C and Taxiway D.

It is our understanding that the project location is accessible to our standard geotechnical equipment. It is our understanding that the geotechnical field services will be performed at night to minimize the impact of the work to the airport traffic.

Taxiway M Scope of Services

The objective of our study will be to obtain information concerning pavement and subsurface conditions at the site in order to base engineering estimates and recommendations in each of the following areas:

7351 Temple Terrace Highway • Tampa, Florida 33637
Phone (813)989-1354 • Fax (813)989-1355

1. Pavement section identification and exploration of subgrade conditions.

2. General location and description of potentially deleterious materials discovered in the borings including existing fills or surficial organics.

3. Identification of groundwater levels and estimation of the Seasonal High Groundwater Table (SHGWT).

4. Estimate the shallow soil coefficient of permeability.

In order to meet the preceding objectives, we propose to provide the following services would be completed:

1. Review published soils and topographic information. This published information will be obtained from the appropriate Florida Quadrangle Map published by the United States Geological Survey (USGS), as well as the Soil Survey of Pinellas County, Florida, published by the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS). Additional information from existing as built plans can be reviewed if provided to Tierra.

2. Execute a program of subsurface exploration consisting of asphalt pavement cores, borings and subsurface sampling. Based on the information provided, we plan to perform on the order of fifteen (15) asphalt pavement cores (typically one pavement core every 500 feet). At each of the core locations hand auger borings will be performed to an approximate depth of 5 feet below the pavement surface. In addition, perform up to twenty ten (10) hand auger borings to depths on the order of 7 to 10 feet below grade along the project alignment.

3. Perform three (3) field permeability tests at the location of the existing pond and expansion. At each permeability location, one (1) hand auger boring will be performed to a depth of 5 feet and one (1) Standard Penetration Test (SPT) boring to a depth of 15 feet below grade.

4. Perform four (4) California Bearing Ratio (CBR) tests on selected samples collected within the project area.

5. Visually classify the soil samples in the laboratory using the Unified Soil Classification System (USCS). Identify soil conditions at each boring location and perform laboratory testing. The pavement cores will be visually classified and saved for review by the design team.

6. Collect groundwater level measurements and estimate the SHGWT.

7. Perform Ground Penetrating Radar (GPR) to identify underground utilities within the vicinity of the proposed test locations.

8. Prepare a formal engineering report in accordance with the request for proposal (RFP) provided and the scope of services herein that summarizes the course of study pursued, the field data generated, subsurface conditions encountered and our engineering recommendations in each of the pertinent topic areas.

Taxiways B/C Scope of Services

The objective of our study will be to obtain information concerning pavement and subsurface conditions at the site in order to base engineering estimates and recommendations in each of the following areas:

1. Pavement section identification and exploration of subgrade conditions.

2. General location and description of potentially deleterious materials discovered in the borings including existing fills or surficial organics.

3. Identification of groundwater levels and estimation of the Seasonal High Groundwater Table (SHGWT).

In order to meet the preceding objectives, we propose to provide the following services would be completed:

1. Execute a program of subsurface exploration consisting of asphalt pavement cores, borings and subsurface sampling. Based on the information provided, we plan to perform on the order of three (3) asphalt pavement cores (typically one pavement core every 500 feet). At each of the core locations hand auger borings will be performed to an approximate depth of 5 feet below the pavement surface. In addition, perform one (1) hand auger boring to depths on the order of 7 to 10 feet below grade along the project alignment.

2. Perform two (2) CBR tests on selected samples collected within the project area.

3. Visually classify the soil samples in the laboratory using the Unified Soil Classification System (USCS). Identify soil conditions at each boring location and perform laboratory testing. The pavement cores will be visually classified and saved for review by the design team.

4. Collect groundwater level measurements and estimate the SHGWT.

5. Perform GPR to identify underground utilities within the vicinity of the proposed test locations.

6. Prepare a formal engineering report in accordance with the request for proposal (RFP) provided and the scope of services herein that summarizes the course of study pursued, the field data generated, subsurface conditions encountered and our engineering recommendations in each of the pertinent topic areas.

Taxiway D Scope of Services

The objective of our study will be to obtain information concerning pavement and subsurface conditions at the site in order to base engineering estimates and recommendations in each of the following areas:

1. Pavement section identification and exploration of subgrade conditions.

2. General location and description of potentially deleterious materials discovered in the borings including existing fills or surficial organics.

3. Identification of groundwater levels and estimation of the Seasonal High Groundwater Table (SHGWT).

In order to meet the preceding objectives, we propose to provide the following services would be completed:

1. Execute a program of subsurface exploration consisting of asphalt pavement cores, borings and subsurface sampling. Based on the information provided, we plan to perform on the order of two (2) asphalt pavement cores (typically one pavement core every 500 feet). At each of the core locations hand auger borings will be performed to an approximate depth of 5 feet below the pavement surface. In addition, perform one (1) hand auger boring to depths on the order of 7 to 10 feet below grade along the project alignment.

2. Visually classify the soil samples in the laboratory using the Unified Soil Classification System (USCS). Identify soil conditions at each boring location and perform laboratory testing. The pavement cores will be visually classified and saved for review by the design team.

3. Collect groundwater level measurements and estimate the SHGWT.

4. Prepare a formal engineering report in accordance with the request for proposal (RFP) provided and the scope of services herein that summarizes the course of study pursued, the field data generated, subsurface conditions encountered and our engineering recommendations in each of the pertinent topic areas.

Service Fee

It is proposed that the fee for the performance of the above-outlined services be determined on a unit price basis, in accordance with our attached Schedule of Services and Fees and General Conditions. A copy of our Schedule of Services and Fees is enclosed herewith. On the basis of the estimated quantities and the Schedule of Services and Fees, it is estimated the fees to perform the geotechnical study are as follows:

- Taxiway M $13,861.05 (Includes services for expanding the existing pond)
- Taxiways B/C $ 3,793.13
- Taxiway D $ 2,858.25

Schedule

We are in a position to start work on the project immediately upon receipt of authorization to proceed. We anticipate 2 weeks to complete field work including coordination with the airport. Engineering and laboratory testing will be initiated thereafter, requiring a further 7 to 10 work days to complete. From notice to proceed through submittal of a report will require on the order of 4 weeks. Verbal recommendations can be provided prior to issuance of our final report to facilitate the design schedule.

We appreciate the opportunity to offer our services to you. We look forward to working with you during the design phase. If this proposal is acceptable, please sign where indicated as notice to proceed and return one (1) copy of this proposal intact to our office. Should you have any questions in regard to this proposal, please do not hesitate to contact this office.

Respectfully Submitted,

TIERRA, INC.

Erick M. Frederick, P.E.
Senior Geotechnical Engineer

Henri V. Jean, P.E.
Principal Geotechnical Engineer

Attachment: Schedule of Services and Fees
Tierra General Conditions

AUTHORIZED BY:	INVOICE TO:
Name:	Company:
Title:	Name:
Signature:	Address:
Date:	Phone: Fax: Email:

Tierra Proposal No. 65-13-179

Taxiway M

TIERRA, INC
UNIT FEE
SCHEDULE
Exhibit A

St. Petersburg-Clearwater International Airport
Phase 2 Taxiway Rehabilitation/Reconstruction

		Unit	# of Units		Unit Price		Total
I.	**FIELD INVESTIGATION**						
	Mobilization of Men and Equipment						
	Truck-Mounted Equipment	Trip	1	$	315.00	$	315.00
	Support Vehicle	Trip	3	$	141.00	$	423.00
	Standard Penetration Test Borings (By Truck-Mounted Equipment)						
	Land: 0 - 50 ft depth	L.F.	45	$	11.50	$	517.50
	Grout-Seal Boreholes (By Truck-Mounted Equipment)						
	Land: 0 - 50 ft depth	L.F.	45	$	4.70	$	211.50
	Field Permeability Tests	Test	3	$	262.00	$	786.00
	Auger Borings	L.F.	175	$	9.25	$	1,618.75
	Pavement Cores, Asphalt	Each	15	$	100.00	$	1,500.00
	Asphalt Patch of Core locations	Each	15	$	25.00	$	375.00
II.	**LABORATORY TESTING**						
	Visual Examination/Stratify 1 set = 5 feet	Per Set	35	$	3.65	$	127.75
	Natural Moisture Content Tests	Test	6	$	7.70	$	46.20
	Grain-Size Analysis - Full Gradation	Test	2	$	59.60	$	119.20
	Grain-Size Analysis - Single Sieve	Test	10	$	38.20	$	382.00
	Organic Content Tests	Test	3	$	38.30	$	114.90
	Atterberg Limit Tests	Test	3	$	89.75	$	269.25
	CBR Test	Test	4	$	380.00	$	1,520.00
III.	**FIELD ENGINEERING AND TECHNICAL SERVICES**						
	Site Recon./Utility Coordination/Traffic Control Sr. Engineering Technician	Hour	8	$	65.00	$	520.00
	Engineering Technician	Hour	8	$	55.00	$	440.00
IIIA.	**ENGINEERING AND TECHNICAL SERVICES**						
	Project Manager	Hour	2	$	140.00	$	280.00
	Project Engineer	Hour	8	$	90.00	$	720.00
	Engineering Intern	Hour	16	$	85.00	$	1,360.00
	Computer Technician	Hour	8	$	80.00	$	640.00
	Secretary/Clerical	Hour	1	$	50.00	$	50.00
IV.	**ADDITIONAL SERVICES**						
	Meetings/Classes for Security Clearance Includes 2 people assuming eight hours each person.	Hour	16	$	40.00	$	640.00
	Ground Penetrating Radar for Utility Locates	Day	1	$	1,200.00	$	1200.00
					TOTAL	**$**	**13,861.05**

Tierra Proposal No. 65-13-179

Taxiways B/C

TIERRA, INC UNIT FEE SCHEDULE Exhibit B

St. Petersburg-Clearwater International Airport
Phase 2 Taxiway Rehabilitation/Reconstruction

		Unit	# of Units		Unit Price		Total
I.	**FIELD INVESTIGATION**						
	Mobilization of Men and Equipment Support Vehicle	Trip	1	$	141.00	$	141.00
	Auger Borings	L.F.	25	$	9.25	$	231.25
	Pavement Cores, Asphalt	Each	3	$	100.00	$	300.00
	Asphalt Patch of Core locations	Each	3	$	25.00	$	75.00
II.	**LABORATORY TESTING**						
	Visual Examination/Stratify 1 set = 5 feet	Per Set	5	$	3.65	$	18.25
	Natural Moisture Content Tests	Test	2	$	7.70	$	15.40
	Grain-Size Analysis - Full Gradation	Test	1	$	59.60	$	59.60
	Grain-Size Analysis - Single Sieve	Test	3	$	38.20	$	114.60
	Organic Content Tests	Test	1	$	38.30	$	38.30
	Atterberg Limit Tests	Test	1	$	89.75	$	89.75
	CBR Test	Test	2	$	380.00	$	760.00
III.	**FIELD ENGINEERING AND TECHNICAL SERVICES**						
	Site Recon./Utility Coordination/Traffic Control Sr. Engineering Technician	Hour	4	$	65.00	$	260.00
	Engineering Technician	Hour	4	$	55.00	$	220.00
IIIA.	**ENGINEERING AND TECHNICAL SERVICES**						
	Project Manager	Hour	1	$	140.00	$	140.00
	Project Engineer	Hour	2	$	90.00	$	180.00
	Engineering Intern	Hour	4	$	85.00	$	340.00
	Computer Technician	Hour	2	$	80.00	$	160.00
	Secretary/Clerical	Hour	1	$	50.00	$	50.00
IV.	**ADDITIONAL SERVICES**						
	Ground Penetrating Radar for Utility Locates	Day	0.5	$	1,200.00	$	600.00
					TOTAL	**$**	**3,793.15**

Tierra Proposal No. 65-13-179

Taxiway D

TIERRA, INC UNIT FEE SCHEDULE Exhibit C

St. Petersburg-Clearwater International Airport
Phase 2 Taxiway Rehabilitation/Reconstruction

		Unit	# of Units		Unit Price		Total
I.	**FIELD INVESTIGATION**						
	Mobilization of Men and Equipment Support Vehicle	Trip	1	$	141.00	$	141.00
	Auger Borings	L.F.	20	$	9.25	$	185.00
	Pavement Cores, Asphalt	Each	2	$	100.00	$	200.00
	Asphalt Patch of Core locations	Each	2	$	25.00	$	50.00
II.	**LABORATORY TESTING**						
	Visual Examination/Stratify 1 set = 5 feet	Per Set	4	$	3.65	$	14.60
	Natural Moisture Content Tests	Test	2	$	7.70	$	15.40
	Grain-Size Analysis - Full Gradation	Test	1	$	59.60	$	59.60
	Grain-Size Analysis - Single Sieve	Test	3	$	38.20	$	114.60
	Organic Content Tests	Test	1	$	38.30	$	38.30
	Atterberg Limit Tests	Test	1	$	89.75	$	89.75
	CBR Test	Test	0	$	380.00	$	0.00
III.	**FIELD ENGINEERING AND TECHNICAL SERVICES**						
	Site Recon./Utility Coordination/Traffic Control Sr. Engineering Technician	Hour	4	$	65.00	$	260.00
	Engineering Technician	Hour	4	$	55.00	$	220.00
IIIA.	**ENGINEERING AND TECHNICAL SERVICES**						
	Project Manager	Hour	1	$	140.00	$	140.00
	Project Engineer	Hour	2	$	90.00	$	180.00
	Engineering Intern	Hour	4	$	85.00	$	340.00
	Computer Technician	Hour	2	$	80.00	$	160.00
	Secretary/Clerical	Hour	1	$	50.00	$	50.00
IV.	**ADDITIONAL SERVICES**						
	Ground Penetrating Radar for Utility Locates	Day	0.5	$	1,200.00	$	600.00
					TOTAL	**$**	**2,858.25**

Cardno TBE
Shaping the Future

June 7, 2013

Mr. Thomas Schilling, PE
Engineer | Aviation
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RE: Fee Proposal for Subsurface Utility Engineering (SUE) Services

Re: **St. Petersburg-Clearwater Airport PIE**
Taxiway F & K Rehabilitation (Phase II)-REVISED

Dear Mr. Schilling:

Cardno TBE appreciates the opportunity to prepare this fee proposal for providing professional Subsurface Utility Engineering (SUE) services on the above referenced project. We have prepared this estimate as requested to perform Utility Designation (horizontal) and Location (vertical) services.

Cardno TBE will designate and locate the existing underground utilities, which will assist the designer of record in determining how best to design, construct, reconstruct, realign, and rehabilitate the taxiways as depicted in the Proposed Site Plan (C101) provided by Jacobs. The design and construction activities should be accomplished in a manner that will avoid and/or minimize impacts to existing underground utilities. We have prepared this fee proposal based on field review, discussions with airport staff, and the designer of record, and aerial photography of the project site.

The proposed and existing taxiway locations in question have the potential of having different types of "toneable" (conductive) and "non-toneable" (non-conductive) utilities placed in the ground. Each buried utility has its own properties requiring different equipment and techniques to be used to provide an accurate location of the facility. The St. Petersburg-Clearwater Airport (PIE) engineering staff has requested that Cardno TBE use Utility Designation and Location techniques on this site for the location of buried utilities.

Subsurface Utility Engineering (SUE) Scope of Services

- Cardno TBE will horizontally designate, mark, flag, survey, and map all known existing underground utilities (including storm water pipes) within all proposed pavement removal taxiway improvement areas shown and depicted in the attached Phase II drawings (i.e. Taxiways F & K).

- Cardno TBE will perform and provide all equipment necessary to complete all work at night. This would include lighting, safety work zone equipment, vacuum excavation trucks, designating trucks, survey trucks, and associated personnel & equipment, etc.

- Cardno TBE will obtain all the necessary badges and security clearances required to work in and around airport property.

- Cardno TBE will provide all required coordination efforts with airport field operation personnel in order to mobilize to and maneuver from each taxiway area throughout the project limits. Cardno TBE will utilize more than one field crew at a time to maximize, production, budget and resources.

Utility Designation: - *Toneable / Conductive Utilities*

We will utilize SUE (electro-magnetic equipment) to horizontally designate known underground utilities within the taxiway improvement areas. We will use this equipment to determine the utilities disposition if made of conductive materials or contain a tracer wire that is toneable. The utilities will then be marked and flagged on the existing ground surface showing its alignment. This process provides a highly accurate horizontal location of underground utilities. This information will be mapped by our survey staff and tied to the project horizontally and vertically. We will also be utilizing Ground Penetrating Radar (GPR), as needed, as part of our SUE process. Due to ground conditions the GPR may not provide much data as saltwater intrusion in the soils at this site may act as a shield blocking out the radar signal. However, this piece of equipment has worked flawlessly in other areas at the airport and its use will be attempted on this project if deemed necessary to meet the project scope.

Utility Location: - *Non-Toneable / Non-conductive Utilities*

We will utilize SUE (vacuum excavation) to horizontally designate and vertically locate the known underground utilities at specific locations as needed to determine horizontal alignment of non-conductive utilities. This is done by using an air probe to identify the utilities' horizontal position and a vacuum hose to perform a test hole to determine the utilities' vertical alignment. When a test hole or vacuum excavation is completed, our crew will record, vertical depth of the utility below the surface, size, shape, material and orientation. The utilities horizontal location will be painted on the existing surface and test holes will be marked with a lathe or iron rod and cap (if not in the roadway) stating the depth below existing grade. In order to obtain the vertical depths of the water line in paved surfaces, we will need to utilize a concrete saw to provide a square cut area in the asphalt to vacuum excavate. All base material will be removed upon removal of the structural asphalt and set aside to be placed back upon completion of the test hole. We will vacuum down to obtain the required information, and then replace fill with what was originally removed in 6-inch lifts being tamped all of the way to the base material. Base material will be replaced and placing and tamping cold-mix asphalt (if needed) will complete the test hole. This estimate is based on the work and restoration efforts above.

Deliverables

All discovered SUE data (line work and test holes) will be recorded by our Professional Survey group and tied to the project horizontally and vertically. Survey control for this project is to be provided by the St. Petersburg-Clearwater Airport or Jacobs.

Deliverables will also include the electronic SUE / Survey files (AutoCAD), test hole data sheets (THDS), and a signed and sealed Surveyors Report.

Schedule

Cardno TBE will submit deliverables to Jacobs four (4) weeks after notice to proceed is received.

Fee

We are estimating seven (7) SUE field crew-days to designate, locate, mark, and flag the utilities and three (3) Survey field crew-days to record and map the utilities found. The **Lump Sum fee** to perform the requested SUE services is **$ 24,609.00.**

It is our understanding that the project coordination and engineering effort will consist of the services described above.

Again, we appreciate the opportunity to provide our SUE services to Jacobs. Please call me directly at 727-431-1643 if you have any questions or comments. Please forward our fee proposal on to the appropriate St. Petersburg-Clearwater Airport representative. We look forward to beginning work on this project upon receiving the authorization to proceed.

Sincerely,

Cardno TBE

Jerry Comellas Jr., PE
Assistant Vice President / West and Central Florida Utilities

Cc: Frank Aiello, PE, Cardno TBE
Jason Stanley, Cardno TBE
File

Geophysical Conditions and Understandings

Although geophysical methods provide a high level of assurance for location of subsurface objects, the possibility exists that not all features can or will be identified. The parties understand that no method can be as exact and reliable as an actual excavation and physical examination. Therefore, we will not be liable for any damages that occur from excavations based on the results of this survey. Due caution should be used when performing any subsurface excavation based on results from this survey. Client understands and agrees that any action the client may take based on the data and information supplied hereunder shall be at client's own responsibility and sole risk.

****Cardno TBE's field crews and equipment are not equipped or prepared to work in any areas that possibly are, or may have been contaminated with hazardous materials at any time.***

Cardno TBE
Shaping the Future

May 14, 2013 **(Revised 05/17/13)**

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RE: Fee Proposal for Subsurface Utility Engineering (SUE) Services

Re: **St. Petersburg-Clearwater Airport PIE**
Taxiway B & C Rehabilitation (Phase II)

Dear Mr. Schilling:

Cardno TBE appreciates the opportunity to prepare this fee proposal for providing professional Subsurface Utility Engineering (SUE) services on the above referenced project. We have prepared this estimate as requested to perform Utility Designation (horizontal) and Location (vertical) services.

Cardno TBE will designate and locate the existing underground utilities, which will assist the designer of record in determining how best to design, construct, reconstruct, realign, and rehabilitate the taxiways as depicted in the Proposed Site Plan (C101) provided by Jacobs. The design and construction activities should be accomplished in a manner that will avoid and/or minimize impacts to existing underground utilities. We have prepared this fee proposal based on field review, discussions with airport staff, and the designer of record, and aerial photography of the project site.

The proposed and existing taxiway locations in question have the potential of having different types of "toneable" (conductive) and "non-toneable" (non-conductive) utilities placed in the ground. Each buried utility has its own properties requiring different equipment and techniques to be used to provide an accurate location of the facility. The St. Petersburg-Clearwater Airport (PIE) engineering staff has requested that Cardno TBE use Utility Designation and Location techniques on this site for the location of buried utilities.

Subsurface Utility Engineering (SUE) Scope of Services

- Cardno TBE will horizontally designate, mark, flag, survey, and map all known existing underground utilities (including storm water pipes) within all proposed pavement removal taxiway improvement areas shown and depicted in the attached Phase II drawings (i.e. Taxiway C).

- Cardno TBE will provide SUE services along Taxiway B for proposed soil boring locations (i.e. every 100 feet within pavement rehabilitation areas) prior to drilling operations commencing. Cardno TBE will need to receive boring information at least 8 at a time so as to maximize production and budgets. Boring locations to be staked by others.

- Cardno TBE will perform and provide all equipment necessary to complete all work at night. This would include lighting, safety work zone equipment, vacuum excavation trucks, designating trucks, survey trucks, and associated personnel & equipment, etc.

- Cardno TBE will obtain all the necessary badges and security clearances required to work in and around airport property.

- Cardno TBE will provide all required coordination efforts with airport field operation personnel in order to mobilize to and maneuver from each taxiway area throughout the project limits. Cardno TBE will utilize more than one field crew at a time to maximize, production, budget and resources.

Utility Designation: - *Toneable / Conductive Utilities*

We will utilize SUE (electro-magnetic equipment) to horizontally designate known underground utilities within the taxiway improvement areas. We will use this equipment to determine the utilities disposition if made of conductive materials or contain a tracer wire that is toneable. The utilities will then be marked and flagged on the existing ground surface showing its alignment. This process provides a highly accurate horizontal location of underground utilities. This information will be mapped by our survey staff and tied to the project horizontally and vertically. We will also be utilizing Ground Penetrating Radar (GPR), as needed, as part of our SUE process. Due to ground conditions the GPR may not provide much data as saltwater intrusion in the soils at this site may act as a shield blocking out the radar signal. However, this piece of equipment has worked flawlessly in other areas at the airport and its use will be attempted on this project if deemed necessary to meet the project scope.

Utility Location: - *Non-Toneable / Non-conductive Utilities*

We will utilize SUE (vacuum excavation) to horizontally designate and vertically locate the known underground utilities at specific locations as needed to determine horizontal alignment of non-conductive utilities. This is done by using an air probe to identify the utilities' horizontal position and a vacuum hose to perform a test hole to determine the utilities' vertical alignment. When a test hole or vacuum excavation is completed, our crew will record, vertical depth of the utility below the surface, size, shape, material and orientation. The utilities horizontal location will be painted on the existing surface and test holes will be marked with a lathe or iron rod and cap (if not in the roadway) stating the depth below existing grade. In order to obtain the vertical depths of the water line in paved surfaces, we will need to utilize a concrete saw to provide a square cut area in the asphalt to vacuum excavate. All base material will be removed upon removal of the structural asphalt and set aside to be placed back upon completion of the test hole. We will vacuum down to obtain the required information, and then replace fill with what was originally removed in 6-inch lifts being tamped all of the way to the base material. Base material will be replaced and placing and tamping cold-mix asphalt (if needed) will complete the test hole. This estimate is based on the work and restoration efforts above.

Deliverables

All discovered SUE data (line work and test holes) will be recorded by our Professional Survey group and tied to the project horizontally and vertically. Survey control for this project is to be provided by the St. Petersburg-Clearwater Airport or Jacobs.

Deliverables will also include the electronic SUE / Survey files (AutoCAD), test hole data sheets (THDS), and a signed and sealed Surveyors Report.

Schedule

Cardno TBE will submit deliverables to Jacobs two (2) weeks after notice to proceed is received.

Fee

We are estimating two (2) SUE field crew-days to designate, locate, mark, and flag the utilities and one (1) Survey field crew-day to record and map the utilities found. The **Lump Sum fee** to perform the requested SUE services is **$ 7,358.00.**

It is our understanding that the project coordination and engineering effort will consist of the services described above.

Again, we appreciate the opportunity to provide our SUE services to Jacobs. Please call me directly at 727-431-1643 if you have any questions or comments. Please forward our fee proposal on to the appropriate St. Petersburg-Clearwater Airport representative. We look forward to beginning work on this project upon receiving the authorization to proceed.

Sincerely,

Cardno TBE

Jerry Comellas Jr., PE
Assistant Vice President / West and Central Florida Utilities

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Geophysical Conditions and Understandings

Although geophysical methods provide a high level of assurance for location of subsurface objects, the possibility exists that not all features can or will be identified. The parties understand that no method can be as exact and reliable as an actual excavation and physical examination. Therefore, we will not be liable for any damages that occur from excavations based on the results of this survey. Due caution should be used when performing any subsurface excavation based on results from this survey. Client understands and agrees that any action the client may take based on the data and information supplied hereunder shall be at client's own responsibility and sole risk.

****Cardno TBE's field crews and equipment are not equipped or prepared to work in any areas that possibly are, or may have been contaminated with hazardous materials at any time.***

JACOBS

* Raw rate voluntarily capped

CLASSIFICATION	*LOADED HOURLY RATES*
Project Director/Principal	$228.00
Senior Project Manager *	$210.00
Project Manager	$162.00
Senior Engineer	$135.00
Engineer	$116.00
Senior Designer	$112.00
Designer	$63.00
CADD Tech.	$79.00
Admin.	$69.00
Senior Architect	$145.00
Architect	$104.00
Landscape Architect	$140.00
Senior Electrical	$144.00
Electrical	$80.00
Senior Mechanical	$115.00
Mechanical	$88.00
Senior Planner	$210.00
Planner	$100.00

The Contracted vendor shall obtain and maintain, and require any sub-contractors to obtain and maintain, at all times during its performance of the Agreement, insurance of the types and in the amounts set forth. For projects with a Completed Operations exposure, Contractor shall maintain coverage and provide evidence of insurance for two (2) years beyond final acceptance. All insurance policies shall be from responsible companies duly authorized to do business in the State of Florida and have an AM Best rating of A- VIII or better. Within ten (10) calendar days after contractor receipt of notice of award, the Contractor shall provide the County with properly executed Certificates of Insurance to evidence compliance with the insurance requirements of the agreement. The Certificate(s) of Insurance shall be signed by authorized representatives of the insurance companies shown on the Certificate(s). A copy of the endorsement(s) referenced in paragraph three (3) for Additional Insured shall be attached to the certificate(s).

No work shall commence at any project site unless and until the required Certificate(s) of Insurance are received and approved by the County. Approval by the County of any Certificate of Insurance does not constitute verification by the County that the insurance requirements have been satisfied or that the insurance policy shown on the Certificate of Insurance is in compliance with the requirements of the Agreement. County reserves the right to require a certified copy of the entire insurance policy, including endorsements, at any time during the RFP and/or contract period.

All policies providing liability coverage(s), other than professional liability and worker's compensation policies obtained by the Contractor to meet the requirements of the Agreement shall be endorsed to include Pinellas County Board of County Commissioners as an Additional Insured.

If any insurance provided pursuant to the Agreement expires prior to the completion of the Work, renewal Certificates of Insurance and endorsements shall be furnished by the Contractor to the County at least thirty (30) days prior to the expiration date.

Contracted vendor shall also notify County within twenty-four (24) hours after receipt, of any notices of expiration, cancellation, nonrenewal or adverse material change in coverage received by said Contractor from its insurer. Notice shall be given by certified mail to: Pinellas County Purchasing Department, 400 S. Ft. Harrison Avenue, 6th Floor, Clearwater, Florida 33756; and nothing contained herein shall absolve Contractor of this requirement to provide notice.

Should the Contractor, at any time, not maintain the insurance coverages required herein, the County may terminate the Agreement, or at its sole discretion may purchase such coverages necessary for the protection of the County and charge the Contractor for such purchase. The County shall be under no obligation to purchase such insurance, nor shall it be responsible for the coverages purchased or the insurance company or companies used. The decision of the County to purchase such insurance shall in no way be construed to be a waiver of any of its rights under the Agreement.

Each insurance policy shall include the following terms and/or conditions in the policy:

(1) Companies issuing the insurance policy, or policies, shall have no recourse against County for payment of premiums or assessments for any deductibles which all are at the sole responsibility and risk of Contractor.

(2) The term "County" or "Pinellas County" shall include all Authorities, Boards, Bureaus, Commissions, Divisions, Departments and Constitutional offices of County and individual members, employees thereof in their official capacities, and/or while acting on behalf of Pinellas County.

(3) The policy clause "Other Insurance" shall not apply to any insurance coverage currently held by County or any such future coverage, or to County's Self-Insured Retentions of whatever nature.

(4) All policies shall be written on a primary, non-contributory basis.

(5) Any certificate of insurance evidencing coverage provided by a leasing company for either workers compensation or commercial general liability shall have a list of covered employees certified by the leasing company attached to the certificate of insurance. The County shall have the right, but not the obligation to determine that the contractor is only using employees named on such list to perform work for the County. Should employees not named be utilized by contractor, the County, at its option may stop work without penalty to the county until proof of coverage or removal of the employee by the contractor occurs, or alternatively find the contractor to be in default and take such other protective measures as necessary.

(6) Insurance policies, other than Professional Liability, shall include waivers of subrogation in favor of Pinellas County.

SECTION D: VENDOR REFERENCES

The insurance requirements for this Agreement, which shall remain in effect throughout its duration and for two (2) years beyond final acceptance for projects with a Completed Operations exposure, are as follows:

(A) Workers' Compensation Insurance

Limit	Florida Statutory
Employers Liability Limits	
Per Employee	$ 500,000.00
Per Employee Disease	$ 500,000.00
Policy Limit Disease	$ 500,000.00

(B) Commercial General Liability Insurance including, but not limited to, Independent Contractor, Contractual Liability Premises/Operations, Products/Completed Operation and Personal Injury.

Limits	
General Aggregate	$ 2,000,000.00
Products/Completed Operations Aggregate	$ 1,000,000.00
Personal Injury and Advertising Injury	$ 1,000,000.00
Each Occurrence	$ 1,000,000.00

(C) Business Automobile or Trucker's/Garage Liability Insurance covering owned, hired and non-owned vehicles. Coverage shall be on an "occurrence" basis, such insurance to include coverage for loading and unloading hazards, unless Contractor can show that this coverage exists under the Commercial General Liability policy.

Limit	
Per Accident	$ 1,000,000.00

(D) Professional Liability Insurance (Errors and Omissions) with at least minimum limits as follows. If "claims made" coverage is provided, "tail coverage" extending three (3) years beyond completion and acceptance of the project with proof of "tail coverage" to be submitted with the invoice for final payment. In lieu of "tail coverage", Contractor may submit annually to the County, for a three (3) year period, a current certificate of insurance providing "claims made" insurance with prior acts coverage in force with a retroactive date no later than commencement date of this contract.

Limits	
General Aggregate	$ 5,000,000.00
Each Occurrence or Claim	$ 5,000,000.00

For acceptance of Professional Liability coverage included within another policy required herein, a statement notifying the certificate holder must be included on the certificate of insurance and the total amount of said coverage per occurrence must be greater than or equal to the amount of Professional Liability and other coverage combined.

NOTICE: CERTIFICATE MUST INCLUDE STATEMENT UNDER WORKERS COMPENSATION AND PROFESSIONAL LIABILITY: there shall be no exclusion for work at Airports/ Airfields. CERTIFICATES WITHOUT THIS STATMENT WILL NOT BE ACCEPTED.

PINELLAS COUNTY CAPITAL IMPROVEMENT PROJECT (CIP)
PROJECT FINANCIAL OVERVIEW

(Check one)

1. Design Phase: [X] **2. Board Date:**

3. Construction Phase [ ]

4. Title: Airfield Taxiway Rehabilitation - Phase 2

5. Anticipated Scope and Description: Pavement and base rehabilitation of Taxiways B, C, D, J, K, & T at the St. Pete-Clearwater International Airport.

6. YEAR OF CONSTRUCTION START: FY 2014

Current Approved Budget for FY 13 $ 250,000

7. PROJECT BUDGET:		1 Authorization Amount Requested	2 Estimated Project Expenditures in FY 13	3 Total Estimated Project Expenditures
Professional Services (Architectural/Engineering/Consulting)		594,345	60,000	594,345
Construction:	(1)	$ -	-	6,000,000
Construction Administration			-	$ 300,000
Other (Material Testing)				
Other:				
TOTALS	(1)	$ 594,345	(2) $ 60,000	(3) $ 6,894,345

8. FINANCIAL RESOURCES:	
Federal Aviation Administration Grants:	6,150,910
State of Florida DOT Grants:	341,717
Passenger Facility Charges:	341,718
Airport Reserves:	60,000
Reimbursements:	0
Other Revenue Sources:	0
TOTAL FINANCIAL RESOURCES (numbers rounded)	(3) $ 6,894,345

9. Project's First Full Year Estimated Operating Budget Fiscal Impact:	
Fiscal Year:	FY 17
New Positions:	NONE
Number:	N.A.
Type:	N.A.
Total Est. Fiscal Impact (Personal Services, Operating Expenses)	$ -

(1) Cost highlighted in column one (construction) is the only item being requested for approval at this time.

(2) Amount represents total estimated project expenditures in FY13 (construction, design & inspection)

(3) Amount represents the current total multi - year project cost estimates and anticipated resources.

Prepared By Airport, June 2013

Revised Form 3/4/05