CONTRACT FOR DESIGN PROFESSIONAL SERVICES FOR PROJECT NO. 7100 23

BETWEEN

HILLSBOROUGH COUNTY AVIATION AUTHORITY

AND

AECOM TECHNICAL SERVICES, INC.

DATED NOVEMBER 3, 2022

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CONTRACT FOR DESIGN PROFESSIONAL SERVICES

This Contract for Design Professional Services is made and entered into this 3rd day of November 2022 by and between the Hillsborough County Aviation Authority, an independent special district under the laws of the State of Florida, hereinafter referred to as the "Owner", and AECOM Technical Services, Inc., a California Corporation, authorized to do business in the State of Florida, hereinafter referred to as the "Design Professional". The Owner and the Design Professional hereby agree as follows:

ARTICLE 1 - PROJECT

The project, hereinafter referred to as the Project, is as follows:

Provide design professional services in accordance with Section 287.055, Florida Statutes, in connection with the Asphalt Rehabilitation of Runway 1R-19L & 10-28 and Replacement of Concrete Slabs at Tampa International Airport.

ARTICLE 2 - CONTRACT ADMINISTRATION

This Contract will be administered by the Owner's Chief Executive Officer or designee.

ARTICLE 3 - SERVICES BY THE DESIGN PROFESSIONAL

3.1 The services that the Design Professional will provide to the Owner under this Contract will be as follows, and in general accordance with the Owner's Request for Qualifications dated May 11, 2022, entitled "Request for Qualifications for Asphalt Rehabilitation of Runway 1R-19L & 10-28 and Replacement of Concrete Slabs at Tampa International Airport, Tampa, Florida", the Design Professional's response to the Owner's Request for Qualifications dated June 28, 2022, entitled "Asphalt Rehabilitation of Runway 1R-19L & 10-28 and Replacement of Concrete Slabs", which are both incorporated herein by reference, and the Design Professional's Fee and Scope Proposal dated October 17, 2022, entitled "HCAA Project Number 7100 23 Asphalt Rehabilitation of Runways 1R-19L & 10-28 and Replacement of Concrete Slabs" which is attached hereto as Attachment 1 and incorporated herein by reference. In the event of any conflicts between this Contract and any other documents, the precedence in resolving such conflicts will be as follows:

3.1.1 This Contract
3.1.2 Individual work order and Design Professional's associated Fee and Scope Proposal
3.1.3 The Owner's Request for Qualifications
3.1.4 Design Professional's response to Request for Qualifications

3.2 Design Professional designates Dennis Combs, P.E., whose business address is 7650 W Courtney Campbell Causeway Tampa FL 33607, and who is a qualified licensed professional, to serve as the project manager. The project manager will be authorized and responsible to act on behalf of the Design Professional with respect to directing, coordinating and administering all aspects of the services to be provided and performed under this Contract. Design Professional designates Andy Kacer, P.E., whose title is Vice President, whose business address is 7650 W Courtney Campbell Causeway Tampa FL 33607, to have full authority to bind and obligate the Design Professional on all matters arising out of or relating to this Contract. The Design Professional agrees that the project manager will devote whatever time is required to satisfactorily manage the services to be provided and performed by the Design Professional hereunder. Any replacement of the project manager will be subject to the prior approval and acceptance of the Owner.

3.3 Basic services under this Contract will include those in Attachment 1 - Fee and Scope Proposal.

3.4 Additional services under this Contract will, at the request of the Owner, include those in Attachment 1 – Fee and Scope Proposal.

3.5 The Design Professional agrees, within seven days of receipt of a written request from the Owner, to promptly remove and replace the project manager, or any other personnel employed or retained by the Design Professional, or any subconsultants or subcontractors or any personnel of any such subconsultants or subcontractors engaged by the Design Professional to provide and perform services or work pursuant to the requirements of this Contract, whom the Owner will request in writing to be removed, which request may be made by the Owner with or without cause.

3.6 Work Order Process - work orders are intended to be discrete working documents that will provide, in summary form, the background and factual context within which a particular work element or series of work elements will be completed by the Design Professional. Each work order will include a scope of services, level of effort and related costs. Work orders will be construed to be in addition to, supplementary to, and consistent with the provisions of this Contract. Upon request by the Owner, Design Professional will prepare and submit a work order to the Owner for review and approval. Work order forms will be provided by the Owner along with a detailed outline of design deliverables. Contracts involving multiple project numbers or airport locations will require work orders to identify basic services and reimbursement expense amounts per project and/or location.

3.7 The Design Professional will perform professional services provided for in each work order executed between the parties. Such professional services will be performed in accordance with the terms of this Contract. The Design Professional will be solely responsible for the technical completeness and accuracy of all work performed under this Contract.

3.8 The Design Professional will comply with all Owner Rules and Regulations, Policies, Standard Procedures and Operating Directives.

ARTICLE 4 - TIME

4.1 Services to be rendered by the Design Professional will commence subsequent to the execution of this Contract in accordance with each work order. Time is of the essence with respect to the performance of this Contract.

4.2 Should the Design Professional fail to commence, provide, perform or complete any of the services to be provided in a timely and diligent manner, in addition to any other rights or remedies available to the Owner, the Owner at its sole discretion and option may withhold any and all payments due and owing to the Design Professional until such time as the Design Professional resumes performance of its obligations in such a manner so as to satisfy the Owner.

ARTICLE 5 - PAYMENTS TO THE DESIGN PROFESSIONAL

5.1 The amount for the performance of basic services required under this Contract, costs identified as direct and reimbursable expenses, costs identified as resident inspection services and costs from the owner allowance amount used for basic services, direct and reimbursable expenses and resident inspection services will be in a not-to-exceed amount of One Million Six Hundred Eighty Nine Thousand Six Hundred Ten and No One Hundredth Dollars ($1,689,610.00), which includes all fees for subconsultants.

5.2 Not Used.

5.3 Not Used.

5.4 Invoiced amounts will be based on the Design Professional's and team member's most recent audited overhead rate or agreed upon overhead rate, personnel direct labor rates, negotiated profit and actual time billed to the Project as substantiated by backup acceptable to the Owner and supported by monthly progress reports:

Conceptual/Schematic Design Phase	-	Up to 15%
Design Development Phase	-	Up to 30%
Construction Document Phase through award of Contract	-	Up to 80%
Construction Phase	-	Up to 100%

5.4.1 Invoiced amounts for multiple projects or multiple locations must be identified per project and/or location.

5.4.2 All subconsultant agreements must be submitted at time of billing. Subconsultant agreements must include a provision providing the Owner the same rights to audit at the subconsultant level in all of its subconsultant agreements executed to effect project completion.

5.4.3 An employee basic services spreadsheet based on the Fee and Scope Proposal in Excel format listing the employee's name, employee's classification and employee's raw rate must be submitted before the professional service invoice submittal. If

there are changes such as new employees, new classification or new raw rate, then a labor change indicator must be completed on an updated basic services spreadsheet. Any changes to an employee basic services spreadsheet must have prior approval by the Owner. All basic service billings must be accompanied by a rate & hour verification sheet submitted within the submittal as well as in Microsoft Excel format.

5.4.4 Basic services invoices that are submitted with a professional service invoice that are older than 90 days before the submission date will not be reimbursed. Basic services performed before the work order effective date will not be reimbursed.

5.4.5 Timesheets are required as supporting backup for all basic services invoice amounts. Hours billed must be clearly identified.

5.4.6 Overtime on any basic services must be pre-approved by the Owner.

5.4.7 Basic services must be organized using standard separators to identify the basic services being billed.

5.4.8 Rebalancing between tasks or fees must be requested with the first overage billing, along with an explanation for the overage and confirmation that the total Contract amount will not be exceeded. Proposed supporting sheets are to be submitted at the request for rebalancing.

5.4.9 All permit requirements, acceptable deliverables and badges are required to be submitted seven days before submission of a final professional service invoice.

5.4.10 If deficiencies are found, a standard deficiency e-mail will be sent to the Design Professional to resolve within three business days. If the deficiency is not resolved within that time, the professional service invoice will be returned.

5.5 Payments for Reimbursable Expenses. The Design Professional will be reimbursed at cost for all expenses, except travel and subsistence which will be reimbursed in accordance with Owner Policy, in an amount not to exceed the maximum reimbursable amount provided for in each individual work order. Each work order under this Contract will identify the type of expenses that will be eligible for reimbursement and the maximum reimbursable amount for that work order. As specified hereinafter, the Design Professional's direct and reimbursable expenses include only:

5.5.1 The cost of securing a recognized testing laboratory which will perform all soils and sub-surface investigations, tests, reports and recommendations required for schematic and final design and construction of the Project.

5.5.2 The cost of securing a recognized testing laboratory which will perform all necessary testing of materials and all shop and mill inspection of materials and equipment as will be required during construction of the assigned work in the Project.

5.5.3 The cost of boundary surveys, topographic surveys, land surveys, establishment of boundaries and monuments, field surveys, photogrammetry, field layouts of construction, construction layout, control staking, and related office computations and drafting.

5.5.4 The cost of outside special consultants to advise and assist Design Professional throughout the Project.

5.5.5 The actual cost of reproduction of review plans and specifications, the construction contract plans and specifications required for the securing of bids for the assigned work in the Project and for the use of contractors, subcontractors, testing laboratories, and others having need for such prints during construction.

5.5.6 All costs for long distance telephone calls, postage and overnight express delivery and couriers related to the Project.

5.5.7 Expenses for parking at Tampa International Airport and transportation related to the Project including airplane travel and automobile; and, in the event overnight travel related to the Project is required, cost of meals and lodging. All travel expenses will be reimbursed in accordance with the Owner's Policy and Standard Procedure on travel and business development expenses, as both may be amended from time to time. Only travel expenses incurred in the performance of the Owner's business are reimbursable. The most efficient and economical means of transportation is required. All travel must be pre-approved by the Owner. Employee expense sheets are required as well as supporting original or legible copies of all receipts.

5.5.8 Materials for study models, film and processing expenses.

5.5.9 The actual costs of all fees and permits required by and paid to agencies having jurisdiction. This does not include impact or development fees paid directly by the Owner or building permit fees paid by the construction contractor.

5.5.10 Invoiced amounts for multiple projects or multiple locations must be identified per project and/or location.

5.5.11 All subconsultant signed agreements must be submitted at time of billing. Subconsultant agreements must include a provision providing the Owner the same rights to audit at the subconsultant level in all of its subconsultant agreements executed to effect project completion.

5.5.12 Receipts/Invoices that are submitted with a professional service invoice that are older than 90 days before the submission date will not be reimbursed. Receipts/Invoices for expenses before the work order effective date will not be reimbursed.

5.5.13 Mileage within the Tri-County Area (Hillsborough, Pinellas, Pasco) will not be reimbursed. Mileage is part of travel which must be pre-approved by the Owner.

5.5.14 Legible copies of receipts/invoices that have not been altered are required for reimbursement. Receipts/Invoices must be identified by employee and employer, and include justification of expense.

5.5.15 Equipment purchased for and paid by the Owner must be identified when invoiced so that an asset tag can be attached to that equipment. A detail listing in Excel format must be submitted with the invoice when equipment is purchased.

5.5.16 No purchases of alcohol will be reimbursed by the Owner.

5.5.17 Meals for Owner or local consultant staff members will not be reimbursed.

5.5.18 No front loading on Progress Payments is allowed. Progress Payments are limited to the actual invoiced amounts.

5.5.19 Pre-approval from the Owner is necessary for office or petty cash expenditures.

5.5.20 Reimbursable expenses must be presented as a package organized in the following manner: Reimbursement Tracking Form, actual invoices identifying item numbers as it appears on the Reimbursement Tracking Form. The Reimbursement Tracking Form is required to be submitted electronically in Microsoft Excel format, as is the supporting documentation for the submitted professional service invoice.

5.5.21 Rebalancing between tasks or fees must be requested with the first overage billing, along with an explanation for the overage and confirmation that the total Contract amount will not be exceeded. Proposed supporting sheets are to be submitted at the request for rebalancing.

5.5.22 All permit requirements, acceptable deliverables and badges are required to be submitted seven days before submission of a final professional service invoice.

5.5.23 If deficiencies are found, a standard deficiency e-mail will be sent to the Design Professional to resolve within three business days. If the deficiency is not resolved within that time, the professional service invoice will be returned.

5.6 In the event that it is established during the design phase that there will be substantial changes to the scope of the Project as originally proposed and upon which the compensation is based, a change in said compensation will be negotiated prior to further development of the design.

5.7 One executed original sworn and notarized invoice for services, verified to the satisfaction of the Owner, will be rendered by the twenty-fifth of each month electronically to

DesignInvoice@TampaAirport.com. The Design Professional will submit with each invoice one original of a detailed accounting of the value of work performed to date by certified Woman and Minority Owned Business Enterprises (W/MBE). This accounting will include the names and addresses of W/MBEs that have participated, a description of the work each named W/MBE has performed, and the value of work performed by each named W/MBE. The Design Professional will also submit with each invoice a Rate & Hour Verification Sheet and a Reimbursement Tracking Form, both in Microsoft Excel format.

5.8 Whenever compensation is paid to the Design Professional on a reimbursable basis, records as to the direct expense will be kept on a generally recognized accounting basis and will be submitted with each invoice.

5.9 Any compensation paid pursuant to a not-to-exceed amount will constitute full payment for all costs including, but not limited to, employee benefits, overhead, general administrative costs, profit and all other unallocated expenses.

5.10 The Design Professional agrees to pay each subcontractor under this Contract for satisfactory performance of its agreement no later than 10 days from the receipt of each payment the Design Professional receives from the Owner. The Design Professional agrees further to release retainage payments to each subconsultant within 10 days after the subconsultant's work is satisfactorily completed. Any delay or postponement of payment from the above-referenced time frame may occur only for good cause following written notice to the Owner. This clause applies to both D/W/MBE and non-D/W/MBE subconsultant.

5.11 With the exception of the month of September, all applications for payment will be submitted to the Owner by the twenty-fifth of each month. In the event that the twenty-fifth of the month falls on a Saturday or Sunday, applications for payment are due the next business day. Payment will be made by the third Friday of the month. Applications for payment submitted more than 20 days prior to the third Friday of the month will be rejected and returned. Due to the end of fiscal year financial closeout, September applications for payment will be submitted by September 19th, and in the event that the 19th falls on a Saturday or Sunday, applications for payment are due the next business day and subsequent payments will be made the second Friday of October. Such applications for payment submitted more than 20 days prior to the second Friday of October will be rejected and returned.

ARTICLE 6 - OWNER'S RIGHT TO PERFORM AUDITS, INSPECTIONS, OR ATTESTATION ENGAGEMENTS

6.1 Engagement(s) as used in this Contract include, but are not limited to, Audits, Inspections, or Attestation Engagements. In connection with payments to the Design Professional under this Contract, it is agreed the Design Professional will maintain adequate records in accordance with generally accepted accounting practices. The Owner, Florida Department of Transportation, Federal Aviation Administration, Federal Highway Administration, Florida Department of Financial Services, Florida Auditor General, Florida Inspector General, Florida Chief Financial Officer, and the Comptroller General of the United States, or any duly authorized representative of each, have the right to initiate and perform Engagements over the Design Professional's records for the purpose of determining payment eligibility under this Contract or over selected operations performed by

Design Professional under this Contract for the purpose of determining compliance with this Contract. Access will be to all of the Design Professional's records, including books, documents, papers, and records of Design Professional directly pertinent to this Contract or any work order, as well as records of parent, affiliate and subsidiary companies pertinent to this Contract. If the records are kept at locations other than Tampa International Airport, Design Professional will arrange for said records to be brought to a location convenient to Owner's auditors to conduct Engagements as set forth in this Article. Or, Design Professional may transport Owner's team to location where the records are kept other than Tampa International Airport for purposes of undertaking Engagements. In such event, Design Professional will pay reasonable costs of transportation, food and lodging for Owner's team in accordance with Owner's Travel and Business Development Expenses Policy. Design Professional agrees to deliver or provide access to all records requested by Owner's auditors within 14 calendar days of the request at the initiation of Engagement and to deliver or provide access to all other records requested during the Engagement within 7 calendar days of each request. The parties recognize that Owner will incur damages if records requested by Owner's auditors are not provided in a timely manner and that the amount of those costs is difficult to determine with certainty. Consequently, the parties agree that Design Professional may be charged liquidated damages of $100.00, for each item in a records request, per calendar day, for each time Design Professional is late in submitting requested records to perform an Engagement. Accrual of fee will continue until specific performance is accomplished. This liquidated damages rate is not an exclusive remedy and Owner retains its rights including but not limited to its rights to elect its remedies and pursue all legal and equitable remedies. The parties expressly agree that these liquidated damages are not a penalty and represent reasonable estimates of fair compensation for the losses that reasonably may be anticipated from such failure to comply.

6.2 In the event the Design Professional maintains its accounting or Project information in electronic format, upon request by the Owner's auditors, the Design Professional will provide a download of its accounting or Project information in an electronic format allowing readership in Microsoft Office software.

6.3 The Owner has the right during the Engagement to interview the Design Professional's employees and subconsultants, make photocopies, and inspect any and all records at reasonable times. The right to initiate an Engagement will extend for six years after the completion date of any work order, or six years after the termination of this Contract, whichever occurs later.

6.4 In the event the Design Professional has overcharged the Owner for direct and reimbursable expenses, the Design Professional will re-pay the Owner the amount of the overcharge and the Owner may assess interest of up to 12% per year on the overcharge from the date the overcharge occurred. In addition, if the Design Professional has overcharged the Owner by more than 3% of the gross direct and reimbursable amount, the Owner may assess and the Design Professional will pay for the entire cost of the Engagement.

6.5 The Design Professional shall require all of its subcontractors and subconsultants to provide the Owner the same rights to perform Engagements as allowed in this Contract. The Design Professional shall require that all of its subcontractors and subconsultants require their sub-subcontractors and sub-subconsultants to provide the Owner the same rights to perform

Engagements as allowed in this Contract.

6.6 Approvals by Owner's staff for any services included or not included in this Contract do not act as a waiver or limitation of the Owner's right to perform Engagements.

ARTICLE 7 - OWNERSHIP OF DOCUMENTS

7.1 Design Professional acknowledges and agrees that all records, documents, drawings, notes, tracings, plans, specifications, maps, evaluations, reports and other technical data, models, renderings and electronic data (other than working papers), prepared, developed or furnished by Design Professional or the design professional(s) employed or retained by the Design Professional under this Contract (Project Documents) will be and remain the property of the Owner. Project Documents will be deemed to be works made for hire, and all right, title and interest in and to the Project Documents will be vested in Owner. Design Professional will take all actions necessary to secure for Owner all such right, title and interest. Design Professional warrants that all materials comprising the Project Documents are original with Design Professional and have not been copied or derived from any other material without the express written consent of the owner, proprietor and/or copyright holder of that other material, and are not subject to any other claim of copyright by any other person. Design Professional will obtain any and all licenses necessary for the production and preparation of the Project Documents including, without limitation, licenses for the use of any material subject to copyright by other parties. Design Professional will assign to Owner any and all rights, including any copyrights, in the Project Documents that Design Professional or the design professional(s) employed or retained by the Design Professional on this Project may possess now or in the future, and Design Professional and its design professional(s) will claim no rights adverse to Owner in the Project Documents. Design Professional agrees to defend, indemnify and hold harmless the Owner and its Board members, officers, and employees from and against any liabilities, claims, costs or expenses as a result of any alleged infringement of third party rights in the documents described herein. If this clause is found to conflict in any way with Florida law, the clause will be considered modified by such law to the extent necessary to remedy the conflict. Any project as designed by Design Professional under this Contract may be reused or repeated by Owner at Owner's option or discretion at any time or times, including but not limited to, completion, addition, renovation, maintenance, reconstruction or remodeling of the project and construction of new projects. Design Professional hereby grants its consent to reuse of the Project Documents by Owner for any and all such purposes. The Design Professional will incorporate the terms of this Paragraph in all contracts with design professionals employed or retained by the Design Professional to perform services covered by this Contract.

7.2 Submission or distribution of the Design Professional's Project Documents to meet official regulatory requirements or for similar purposes in connection with the Project is not to be construed as publication in derogation of the rights reserved in Paragraph 7.1.

7.3 CHAPTER 119, FLA. STATUTES REQUIREMENTS

IF THE DESIGN PROFESSIONAL HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE DESIGN PROFESSIONAL'S DUTY

TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:
(813) 870-8721, ADMCENTRALRECORDS@TAMPAAIRPORT.COM,
HILLSBOROUGH COUNTY AVIATION AUTHORITY, P.O. BOX 22287, TAMPA FL 33622.

Design Professional agrees in accordance with Florida Statute Section 119.0701 to comply with public records laws including the following:

a. Keep and maintain public records required by the Owner in order to perform the services contemplated by this Contract.

b. Upon request from the Owner's custodian of public records, provide the Owner with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Fla. Stat. or as otherwise provided by law.

c. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the Contract and following completion of the Contract.

d. Upon completion of this Contract, keep and maintain public records required by the Owner to perform the services. Design Professional shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the Owner, upon request from the Owner's custodian of public records, in a format that is compatible with the information technology systems of Owner.

ARTICLE 8 - INDEMNITY

8.1 To the maximum extent permitted by Florida law, in addition to the Design Professional's obligation to provide pay for and maintain insurance as set forth elsewhere in this Contract, the Design Professional will indemnify and hold harmless the Owner, its members, officers, agents, employees, and volunteers from any and all liabilities, suits, claims, expenses, losses, costs, fines and damages (including but not limited to claims for attorney's fees and dispute resolutions) caused in whole or in part by the:

1. Presence on, use or occupancy of the Owner's property;
2. Acts, omissions, negligence (including professional negligence and malpractice), recklessness, intentional wrongful conduct, activities, or operations;
3. Any breach of the terms of this Contract;
4. Performance, non-performance or purported performance of this Contract;
5. Violation of any law, regulation, rule or ordinance;
6. Infringement of any patent, copyright, trademark, trade dress or trade secret rights; and/or
7. Contamination of the soil, groundwater, surface water, storm water, air or the

environment by fuel, gas, chemicals or any other substance deemed by the Environmental Protection Agency or other regulatory agency to be an environmental contaminant

by the Design Professional or the Design Professional's officers, employees, agents, volunteers, subcontractors, invitees, or any other person whether the liability, suit, claim, expense, loss, cost, fine or damages is caused in part by an indemnified party.

8.2 In addition to the duty to indemnify and hold harmless, the Design Professional will have the separate and independent duty to defend the Owner, its members, officers, agents, employees, and volunteers from all suits, claims or actions of any nature seeking damages, equitable or injunctive relief, expenses, losses, costs, fines or attorney's fees in the event the suit, claim, or action of any nature arises in whole or in part from the:

1. Presence on, use or occupancy of the Owner's property;
2. Acts, omissions, negligence (including professional negligence and malpractice), recklessness, intentional wrongful conduct, activities, or operations;
3. Any breach of the terms of this Contract;
4. Performance, non-performance or purported performance of this Contract;
5. Violation of any law, regulation, rule or ordinance;
6. Infringement of any patent, copyright, trademark, trade dress or trade secret rights; and/or
7. Contamination of the soil, groundwater, surface water, storm water, air or the environment by fuel, gas, chemicals or any other substance deemed by the Environmental Protection Agency or other regulatory agency to be an environmental contaminant

by the Design Professional or the Design Professional's officers, employees, agents, volunteers, subcontractors, invitees, or any other person directly or indirectly employed or utilized by the Design Professional regardless of whether it is caused in part by the Owner, its members, officers, agents, employees, or volunteers. This duty to defend exists immediately upon presentation of written notice of a suit, claim or action of any nature to the Design Professional by a party entitled to a defense hereunder.

8.3 If the above indemnity or defense provisions or any part of the above indemnity or defense provisions are limited by Fla. Stat. § 725.06(2)-(3) or Fla. Stat. § 725.08, then with respect to the part so limited, the Design Professional agrees to the following: To the maximum extent permitted by Florida law, the Design Professional will indemnify and hold harmless the Owner, its members, officers, agents, employees, and volunteers from any and all liabilities, damages, losses, and costs, including, but not limited to, reasonable attorneys' fee, to the extent caused by the negligence, recklessness, or intentional wrongful conduct of the Design Professional and persons employed or utilized by the Design Professional in the performance of this Contract.

8.4 If the above indemnity or defense provisions or any part of the above indemnity or defense provisions are limited by Fla. Stat. § 725.06(1) or any other applicable law, then with respect to the part so limited the monetary limitation on the extent of the indemnification shall be the greater of

the (i) monetary value of this Contract, (ii) coverage amount of Commercial General Liability Insurance required under this Contract or (iii) $1,000,000.00. Otherwise, the obligations of this Article will not be limited by the amount of any insurance required to be obtained or maintained under this Contract.

8.5 The Design Professional's obligations to defend and indemnify as described in this Article will survive the expiration or earlier termination of this Contract until it is determined by final judgment that any suit, claim or other action against the Owner, its members, officers, agents, employees, and volunteers is fully and finally barred by the applicable statute of limitations or repose.

8.6 Nothing in this Article or Contract will be construed as a waiver of any immunity from or limitation of liability the Owner, or its members, officers, agents, employees, and volunteers may have under the doctrine of sovereign immunity under common law or statute.

8.7 The Owner and its members, officers, agents, employees, and volunteers reserve the right, at their option, to participate in the defense of any suit, without relieving the Design Professional of any of its obligations under this Article.

8.8 If the above Article 8.1-8.7 or any part of Article 8.1-8.7 is deemed to conflict in any way with any law, the Article or part of the Article will be considered modified by such law to remedy the conflict.

ARTICLE 9 - INSURANCE COVERAGES AND LIMITS

9.1 Design Professional's Liability Insurance

9.1.1 Design Professional will maintain the following limits and coverages uninterrupted or amended through the life of this Contract. In the event the Design Professional becomes in default of the following requirements, the Owner reserves the right to take whatever actions deemed necessary to protect its interest. Required liability and property insurance policies, other than Workers' Compensation/Employer's Liability and Professional Liability, will provide that the Owner, members of the Owner's governing body, and the Owner's officers, volunteers, agents, volunteers and employees are included as additional insureds. Design Professional shall require that all subcontractors and subconsultants maintain insurance meeting all the requirements stated herein with the sole exception that Design Professional shall determine the applicable limits for its subcontractors and subconsultants. Design Professional shall have subcontractors and subconsultants endorse all applicable policies to name the Owner, members of the Owner's governing body, and the Owner's officers, agents, volunteers and employees as Additional Insureds. Before subcontractor or subconsultant commences services under this Contract, Design Professional will submit evidence that the subcontractor or subconsultant has complied with this provision to Owner.

9.1.2 Workers' Compensation / Employer's Liability

The minimum limits of insurance inclusive of any amount provided by an umbrella or excess policy will be:

Part One:	"Statutory"
Part Two:	
Each Accident	$ 1,000,000
Disease - Policy Limit	$ 1,000,000
Disease - Each Employee	$ 1,000,000

9.1.3 Commercial General Liability

The minimum limits of insurance inclusive of any amounts provided by an umbrella or excess policy without exclusion for independent contractors, XCU, or broad form property damage covering the work performed pursuant to this Contract will be the amounts specified herein. Coverage will be provided for liability resulting out of, or in connection with, ongoing operations performed by, or on behalf of, the Design Professional under this Contract or the use or occupancy of Owner premises by, or on behalf of, the Design Professional in connection with this Contract. Coverage shall be per form CG 00 01 or its equivalent. Additional insurance coverage shall be per ISO Form CG 20 10 10 01 and CG 20 37 10 01 or their equivalent. Such insurance will be maintained throughout the Project and for two three years following completion of the Project work by the Design Professional.

	Contract Specific
General Aggregate	$ 10,000,000
Each Occurrence	$ 10,000,000
Personal and Advertising Injury	$ 10,000,000
Products and Completed Operations	$ 10,000,000

9.1.4 Business Auto Liability

Coverage will be provided for all owned, hired and non-owned vehicles. Coverage shall be per form CA 00 01 or its equivalent.

The minimum limits of insurance inclusive of any amounts provided by an umbrella or excess policy covering the work performed pursuant to this Contract will be:

Each Occurrence - Bodily Injury and Property Damage Combined	$ 10,000,000

9.1.5 Professional Liability

Such insurance will be maintained throughout the Project and for three years following completion of the Project work by the Design Professional. Any deductible amount over $50,000 must be approved in writing by the Owner. Coverage will include all work of the Design Professional, including but not limited to areas with possible environmental impact, without any exclusions unless approved in writing by the Owner. The limits of coverage will not be less than:

Each Occurrence	$ 5,000,000
Annual Aggregate	$ 5,000,000

9.1.6 Environmental Impairment (Pollution) Liability:

Not Used.

9.2 CONTRACTUAL INSURANCE TERMS AND CONDITIONS

9.2.1 PURPOSE: To establish the insurance terms and conditions associated with contractual insurance requirements.

9.2.2 INSURANCE COVERAGE:

9.2.2.1 Procurement of Coverage:

With respect to each of the required coverages the Design Professional will, at the Design Professional's expense, procure, maintain and keep in force the amounts and types of insurance conforming to the minimum requirements set forth in this Contract. Coverage will be provided by insurance companies eligible to do business in the State of Florida and having an AM best rating of A- or better and a financial size category of VII or better. Utilization of non-rated companies or companies with AM Best ratings lower than A- or better and financial size category lower than VII may be approved on a case by case basis. Such insurance will be no more restrictive than that provided by the latest edition filed for use in the State of Florida by the insurance service office, without restrictive endorsements. If the insurer does not meet these requirements, the Owner retains the right to approve or disapprove the use of the insurer.

9.2.2.2 Term of Coverage:

Except as otherwise specified in this Contract, the insurance will commence on or prior to the effective date of this Contract and will be maintained in force throughout the duration of this Contract. Five years' completed operations coverage must be maintained on all general liability policies and all professional liability policies, effective on the date of substantial completion of the design

phase or the termination of this Contract, whichever is earlier. If Professional or Pollution liability coverage required is written on a claims made coverage form, the retroactive date must be shown, and this date must be before the earlier of the execution date of the Contract or the beginning of Contract work.

9.2.2.3 Reduction of Aggregate Limits:

If any reduction of an aggregate limit occurs, the Design Professional will take immediate steps to have it reinstated. The policies shall be endorsed so that the specified policy limits are available for claims on this Project.

9.2.2.4 Cancellation Notice

Each of the insurance policies will be specifically endorsed to require the insurer to provide the Owner with 30 days written notice prior to the cancellation of the policy. The endorsement will specify that such notice will be sent to:

Hillsborough County Aviation Authority
Attn.: Chief Executive Officer
Tampa International Airport
Post Office Box 22287
Tampa, Florida 33622

9.2.2.5 No waiver by approval/disapproval:

The Owner accepts no responsibility for determining whether the Design Professional's insurance is in full compliance with the insurance required by this Contract. Neither the approval by the Owner nor the failure to disapprove the insurance furnished by the Design Professional will relieve the Design Professional of their full responsibility to provide the insurance required by this Contract.

9.2.2.6 Future Modifications – Changes in Circumstances:

9.2.2.6.1 Changes in Coverage and Required Limits of Insurance

The coverage and minimum limits of insurance required by this Contract are based on circumstances in effect at the inception of this Contract. If in the opinion of the Owner circumstances merit a change in such coverage or minimum limits of insurance required by this Contract, the Owner may change the coverage and minimum limits of insurance required and the Design Professional will, within 60 days of receipt of written notice of a change in the coverage and minimum limits required, comply with such change and provide evidence of such compliance in the manner required by this Contract. Provided, however, that no change in the coverage or minimum limits of insurance required will be made by

the Owner until at least two years after inception of this Contract. Subsequent changes in the coverage or minimum limits of insurance will not be made by the Owner until at least two years after any prior change by the Owner unless extreme conditions warrant such change and are agreeable to both parties.

Notwithstanding the foregoing, Design Professional may make a written request for a waiver with respect to the insurance requirements contained herein for specific subcontractors and subconsultants for good cause and the Owner will evaluate the request for waiver within ten calendar days of receipt and issue a decision. Any such modification will be subject to the prior written approval of the Owner and subject to the conditions of such approval.

Owner expressly reserves the right, at its sole discretion, to adjust this Contract and pursue alternative methods for the provision of insurance and ancillary services associated with this Project. Alternative methods may include, but are not limited to, a controlled insurance program.

If, in the opinion of the Owner, compliance with the insurance requirements is not commercially practicable for the Design Professional, at the written request of the Design Professional, the Owner may, at its sole discretion and subject to any conditions it deems appropriate, relax or temporarily suspend, in whole or in part, the insurance requirements which would otherwise apply to the Design Professional. Any such modification will be subject to the prior written approval of the Owner and subject to the conditions of such approval.

9.2.2.7 Proof of Insurance – Insurance Certificate:

9.2.2.7.1 Prior to Work, Use or Occupancy of Owner Premises

The Design Professional will not commence work, or use or occupy Owner premises in connection with this Contract until the required insurance is in force, preliminary evidence of insurance acceptable to the Owner has been provided to the Owner, and the Owner has granted permission to the Design Professional to commence work or use or occupy the premises in connection with this Contract.

9.2.2.7.2 Proof of Insurance Coverage

As preliminary evidence of compliance with the insurance required by this Contract, the Design Professional will furnish the Owner with a certificate(s) of insurance satisfactory to the Owner. This certificate must be signed by an authorized representative of the insurer. Design Professional shall furnish the entity with endorsements effecting

coverage as required by this Article. The endorsements are to be signed by a person authorized by insurer to bind coverage on its behalf. If requested by the Owner, the Design Professional will, within 30 days after receipt of written request from the Owner, provide the Owner, or make available for review, a certified complete copy of the policies of insurance. The Design Professional may redact those portions of the insurance policies that are not relevant to the coverage required by this Contract. The Design Professional will provide the Owner with renewal or replacement evidence of insurance, acceptable to the Owner, prior to expiration or termination of such insurance.

9.2.2.7.3 The insurance certificate must:

9.2.2.7.3.1 Indicate that, to the extent required by this Contract, the Owner, members of the Owner's governing body, and the Owner's officers, agents, volunteers and employees are included as additional insured;

9.2.2.7.3.2 Indicate that the certificate has been issued in connection with this Contract;

9.2.2.7.3.3 Indicate the amount of any deductible or self-insured retention applicable to all coverages;

9.2.2.7.3.4 Identify the name and address of the certificate holder as:

Hillsborough County Aviation Authority
Attn.: Chief Executive Officer
Tampa International Airport
Post Office Box 22287
Tampa, Florida 33622;
and

9.2.2.7.3.5 Be signed and dated using approved methods by an individual who is an authorized representative of each insurer, whose insurance is the subject of the certificate and who is authorized by each such insurer to issue the certificate of insurance as modified. Facsimile signatures are acceptable.

9.2.2.8 Deductibles / Self Insurance:

9.2.2.8.1 All property and builders risk deductibles, as well as all self-insured retentions or any schemes other than a fully insured program, must be approved by the Owner. The Design Professional agrees to provide all documentation necessary for the Owner to review

the deductible or alternative program.

9.2.2.8.2 The Design Professional will pay on behalf of the Owner, or any member of the Owner's governing body or any officer or employee of the Owner, any deductible or self-insured retention (SIR) which, with respect to the required insurance, is applicable to any claim by or against the Owner or any member of the Owner's governing body, or any officer or employee of the Owner.

9.2.2.8.3 The agreement by the Owner to allow the use of a deductible or self-insurance program will be subject to periodic review by Owner's Risk Management Department. If, at any time, the Owner deems that the continued use of a deductible or self-insurance program by the Design Professional should not be permitted, the Owner may, upon 60 days written notice to the Design Professional, require the Design Professional to replace or modify the deductible or self-insurance in a manner satisfactory to the Owner.

9.2.2.8.4 Any deductible amount or SIR program will be included and clearly described on the certificate prior to any approval by the Owner. This is to include fully insured programs as to a zero deductible per the policy. Owner reserves the right to deny any certificate not in compliance with this requirement.

9.2.2.9 Design Professional's Insurance Primary:

The Design Professional's required insurance will apply on a primary basis. Any insurance maintained by the Owner will be excess and will not contribute to the insurance provided by or on behalf of the Design Professional. All policies will be endorsed so that Florida law will govern the interpretation of the policy including but not limited to Part II of Chapter 627 F.S.

9.2.2.10 Design Professional's Failure to Comply with Insurance Requirements:

9.2.2.10.1 Owner's Right to Procure Replacement Insurance

If after the inception of this Contract the Design Professional fails to fully comply with the insurance requirements of this Contract, in addition to and not in lieu of any other remedy available to the Owner provided by this Contract, the Owner may, at its sole discretion, procure and maintain on behalf of the Design Professional, insurance which provides, in whole or in part, the required insurance.

9.2.2.10.2 Replacement Coverage at Sole Expense of Design Professional

The entire cost of any insurance procured by the Owner pursuant to this section will be paid by the Design Professional without reimbursement from the Owner. At the option of the Owner, the Design Professional will either directly pay the entire cost of the insurance or immediately reimburse the Owner for any costs incurred by the Owner, including premium and a 15% administration cost.

9.2.2.10.3 Design Professional to Remain Fully Liable

Except to the extent any insurance procured by the Owner pursuant to this section actually provides the insurance coverage required by this Contract, the Design Professional will remain fully liable for full compliance with the insurance requirements in this Contract.

9.2.2.10.4 Owner's Right to Terminate, Modify, or Not Procure

Any insurance procured by the Owner pursuant to this section is solely for the Owner's benefit and is not intended to replace or supplement any insurance coverage which otherwise would have been maintained by the Design Professional. Owner is not obligated to procure any insurance pursuant to these requirements and retains the right, at its sole discretion, to terminate any such insurance which might be procured by the Owner pursuant to this section.

ARTICLE 10 - WAIVER OF CLAIMS

The Design Professional's acceptance of final payment for any individual work order will constitute a full waiver of any and all claims by Design Professional against the Owner arising out of this Contract or individual work order or otherwise related to the Project, except insurance company subrogation claims and other claims previously made in writing and identified by Design Professional as unsettled at the time of the final payment. Neither the acceptance of Design Professional's services nor payment by the Owner will be deemed to be a waiver of the Owner's rights against Design Professional.

ARTICLE 11 - CLAIMS AND DISPUTES

11.1 A claim is a written demand or assertion by one of the parties seeking as a matter of right adjustment or interpretation of the Contract terms, payment of money, extension of time or other relief with respect to the terms of this Contract. The term claim also includes other disputes and matters in question between the Owner and Design Professional arising out of or relating to this Contract. All claims must be made in writing. The responsibility to substantiate claims will rest with the party making the claim.

11.2 Claims by Design Professional must be made in writing to the Owner within 20 calendar days after the occurrence of the event giving rise to such claim or else Design Professional will be deemed to have waived the claim. Written supporting data will be submitted to the Owner within

30 calendar days after such occurrence unless the Owner allows additional time or else Design Professional will be deemed to have waived the claim. Claims by the Owner may be made at any time irrespective of the date of the occurrence of the event giving rise to the claim.

11.3 Unless otherwise agreed in writing and notwithstanding any other rights or obligations of either of the parties under this Contract, the Design Professional will carry on with the performance of its services and duties hereunder during the pendency of any claim, dispute, other matter in question or arbitration or any other proceedings to resolve any claim, dispute or other matter in question. The Owner, however, will be under no obligation to make payments on or against such claims, disputes or other matters in question during the pendency of any proceedings to resolve such claims, disputes or other matters in question.

11.4 Documents in support of the claim referred to in this Article may be subject to an independent Engagement by the Owner. In the event the Engagement supports the Design Professional's claim, the Owner will pay for the Engagement. In the event the Engagement does not support the Design Professional's claim, the Design Professional will pay for the Engagement.

11.5 Any action initiated by either party associated with a claim or dispute, will be brought in the appropriate State Court in and for Hillsborough County, Florida. The appropriate Florida State Court shall be the exclusive venue and jurisdiction for such action. Confidential mediation with a mediator approved by the Owner shall be a condition precedent to litigation.

ARTICLE 12 - ASSISTANCE IN LITIGATION

Design Professional will render assistance to and on behalf of the Owner in litigation in connection with or arising out of this Contract, including any litigation brought by or against the Owner and any third parties, by providing technical information, analyses and expert witnesses only for the Owner. The Design Professional will provide services under this Article at a mutually agreed upon and reasonable rate as an additional service.

ARTICLE 13 - CONFLICT OF INTEREST

Design Professional represents that it presently has no interest and will acquire no interest, either direct or indirect, which would conflict, as determined by the Owner, in any manner with the performance of services required hereunder. Design Professional further represents that no persons having any such interest will be employed to perform these services.

ARTICLE 14 - NOTICES AND ADDRESS OF RECORD

14.1 All notices required or made pursuant to this Contract to be given by the Design Professional to the Owner will be in writing and may be given either by mailing same by United States mail with proper postage affixed thereto, or by hand-delivery, to the appropriate address as listed below:

14.1.1 Mail: Hillsborough County Aviation Authority
P. O. Box 22287
Tampa, FL 33622-2287
Attention: Chief Executive Officer

14.1.2 Hand-delivery: Hillsborough County Aviation Authority
Tampa International Airport
SkyCenter One - HCAA
5411 SkyCenter Dr., Suite 500
Tampa, FL 33607
Attention: Chief Executive Officer

ARTICLE 15 - TERM OF CONTRACT

This Contract will commence on the date awarded by the Board and will remain in effect until final acceptance of the constructed Project. Individual work orders will have effective dates and completion dates for the related scope of work.

ARTICLE 16 - TERMINATION OF CONTRACT

16.1 This Contract may be terminated by the Owner with or without cause with a seven day written notice to the Design Professional.

16.2 In the event of termination not the fault of the Design Professional, the Design Professional will be compensated for services performed to the termination date, together with reimbursable expenses then due and termination expenses. Termination expenses are expenses directly attributable to termination, including reasonable compensation for overhead and profit. Reasonable compensation for overhead and profit will be established pursuant to negotiation.

16.3 In the event of termination for cause, the Owner may retain all payments due to the Design Professional at the date of termination until all of the Owner's damages have been established and deducted from payments due.

16.4 Upon 30 days written notice to Owner, Design Professional may terminate this Contract if Design Professional is not in default of any term, provision, or covenant of this Contract only upon or after the occurrence of any of the following events: the inability of Design Professional to perform work at Tampa International Airport for which a work order has been issued for a period of longer than 90 consecutive days due to war, terrorism, or the issuance of any order, rule or regulation by a competent governmental authority or court having jurisdiction over the Owner preventing Design Professional from operating its business for a period of 90 consecutive days provided, however, that such inability or such order, rule or regulation is not due to any fault or negligence of Design Professional.

ARTICLE 17 - SUSPENSION OF WORK

The Owner may, for any reason, order the Design Professional in writing to suspend, delay or

interrupt the work in whole or in part for such period of time as the Owner may determine. If the work is stopped for a period exceeding 60 days by the Owner, the Design Professional may be entitled to additional compensation and expenses, said compensation and expenses to be established pursuant to negotiations between the parties.

ARTICLE 18 - SUCCESSORS AND ASSIGNS

18.1 The Owner and Design Professional respectively bind themselves, their partners, successors, assigns and legal representatives to the other party to this Contract and to the partners, successors, and assigns of such other party with respect to the covenants of this Contract.

18.2 Except as hereinafter provided, neither party to this Contract will assign or sublet this Contract, in whole or in part, without the written consent of the other, nor will the Design Professional assign any monies due, or to become due, hereunder without the previous written consent of the Owner. If the Design Professional attempts to make such assignment or sublet without such consent, the Design Professional will nevertheless remain legally responsible for all obligations under this Contract.

18.3 The Owner reserves the right to transfer its interests herein to any other governmental body authorized by law to operate Tampa International Airport.

ARTICLE 19 - TRUTH IN NEGOTIATIONS

The Design Professional certifies that the wage rates and other factual unit costs supporting the compensation described herein and in all work orders provided under this Contract are accurate, complete and current at the time of contracting and that the original contract price and any additions or work orders will be adjusted to exclude any significant sums where the Owner determines the contract price was increased due to inaccurate, incomplete or non-current wage rates and other factual unit costs. All such adjustments will be made within one year following the end of any particular work order issued under this Contract.

ARTICLE 20 - CERTIFICATION OF DESIGN PROFESSIONAL/PROHIBITION AGAINST CONTINGENT FEES

The Design Professional warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for the Design Professional, to solicit or secure this Contract, and that Design Professional has not paid or agreed to pay any person, company, corporation, individual or firm, other than a bona fide employee working solely for the Design Professional, any fee, commission, percentage, gift or other consideration contingent upon or resulting from the award or making of this Contract. If the Owner finds that Design Professional violates this provision, the Owner may terminate this Contract and any underlying work orders without liability and, at its discretion, deduct from the Contract or work order, or otherwise recover, the full amount of any fee, commission, percentage, gift, or consideration.

ARTICLE 21 - PUBLIC ENTITY CRIME CERTIFICATION

A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on an agreement to provide any goods or services to a public entity, may not submit a bid on an agreement with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or design professional under an agreement with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Florida Statute Section 287.017, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.

ARTICLE 22 - CONTRACT MADE IN FLORIDA

This Contract has been made in and will be construed in accordance with the laws of the State of Florida. In any action initiated by one party against the other, venue will lie in Hillsborough County, Florida.

ARTICLE 23 - NON-DISCRIMINATION

23.1 During the performance of this Contract, the Design Professional, for itself, its assignees and successors in interest, agrees as follows:

23.1.1 Compliance with regulations. The Design Professional must comply with the regulations relative to non-discrimination in federally assisted programs of the Department of Transportation (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.

23.1.2 Non-discrimination. The Design Professional, with regard to the work performed by it during the Contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The Design Professional will 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.

23.1.3 Solicitations for subcontracts, including procurement of materials and equipment. In all solicitations either by competitive bidding or negotiation made by the Design Professional for work to be performed under a subcontract, including procurement of materials or leases of equipment, each potential subcontractor or supplier must be notified by the Design Professional of the Design Professional's obligations under this Contract and the Regulations relative to non-discrimination on the grounds of race, color or national origin.

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

23.1.5 Sanctions for non-compliance. In the event of the Design Professional's non-compliance with the non-discrimination provisions of this Contract, the Owner will impose such contractual sanctions as it or the FAA may determine to be appropriate, including, but not limited to, withholding of payments to the Design Professional under this Contract until the Design Professional complies, and/or cancellation, termination or suspension of the Contract, in whole or in part.

23.1.6 Incorporation of provisions. The Design Professional must include the provisions of sub-articles 23.1.1 through 23.1.7 in every subcontract, including procurement of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto. The Design Professional must take such action with respect to any subcontract or procurement as the Owner or the FAA may direct as a means of enforcing such provisions, including sanctions for non-compliance. Provided, however, that in the event the Design Professional becomes involved in or is threatened by litigation with a subcontractor or supplier as a result of such direction, the Design Professional may request the Owner to enter into such litigation to protect the interests of the Owner and, in addition, the Design Professional may request the United States to enter into such litigation to protect the interests of the United States.

23.1.7 Design Professional assures that, in the performance of its obligations hereunder, it will fully comply with the requirements of 14 C.F.R. Part 152, Subpart E (Non-discrimination in Airport Aid Program), as amended from time to time, to the extent applicable to Design Professional, to ensure, among other things, that no person will be excluded from participating in any activities covered by such regulations on the grounds of race, creed, color, national origin, or sex. Design Professional, if required by such regulations, will provide assurances to the Owner that Design Professional will undertake an affirmative action program and will require the same of its subconsultants.

ARTICLE 24 – <u>WOMAN AND MINORITY OWNED BUSINESS ENTERPRISE (W/MBE) ASSURANCES</u>

24.1 It is the policy of the Owner that W/MBEs, as defined in the Owner's W/MBE Policy and Program, will have full and fair opportunities to compete for and participate in the performance of non-federally funded contracts or in the purchase of goods and services procured by the Owner. Consequently, the W/MBE requirements and the

Owner's W/MBE Policy and Program will apply to this Contract and are made a part hereof.

24.1.1 The Design Professional and any subcontractor of the Design Professional will not discriminate on the basis of race, color, national origin, or sex in the performance of the Contract. The Design Professional will carry out applicable requirements of the Owner's W/MBE Policy and Program in the award and administration of contracts. Failure by the Design Professional to carry out these requirements is a material breach of the Contract, which may result in the termination of the Contract or such other remedy as the Owner deems appropriate which may include, but not limited to:

24.1.1.1 Withholding monthly progress payments;

24.1.1.2 Assessing sanctions;

24.1.1.3 Liquidated damages; and/or

24.1.1.4 Disqualifying the Design Professional from future bidding as non-responsible.

24.1.2 The Design Professional agrees that it will not discriminate against any business owner because of the owner's race, color, national origin, or sex in connection with the award or performance of any contract, management contract, or subcontract, purchase or lease contract.

24.1.3 The Design Professional agrees to include the statements in paragraphs (1) and (2) above in any subsequent contract or contract that it enters and cause those businesses to similarly include the statements in further contracts.

24.2 The Design Professional agrees to ensure that W/MBEs, as defined in the Owner's W/MBE Policy and Program, have the maximum opportunity to participate in the performance of this Contract, and the Design Professional will take all necessary and reasonable steps in accordance therewith to ensure that W/MBEs have the maximum opportunity to compete for and perform subcontracts.

24.3 W/MBE Goals. In compliance with the Owner's W/MBE Policy and Program, the Design Professional's minimum W/MBE commitment is established as the sum total of the verified Letter(s) of Intent for each portion of the Project submitted with their response. The W/MBE goal stated below is the sum total of the certified W/MBE's listed in the Design Professional's fee and scope proposal which is attached hereto and which will be enforceable under the terms of this Contract. The Design Professional will demonstrate that they will subcontract to certified W/MBEs at least 15.6% of the total dollar amount earned on the design phase of the Project.

24.4 All W/MBEs interested in participating in contracting/subcontracting opportunities must be certified as eligible W/MBEs before said business enterprises begins their portion of the Contract work. Only certified W/MBEs will count toward the W/MBE goal. If the Design Professional fails to achieve the W/MBE expectancy stated herein, it will be required to provide documentation demonstrating that it made good faith efforts in attempting to do so.

24.5 W/MBE Termination and Substitution: The Design Professional will not terminate a W/MBE for convenience without the Owner's prior written consent. If a W/MBE is terminated by the Design Professional with the Owner's consent or because of the W/MBE's default, then the Design Professional must make a good faith effort, in accordance with the requirements of the Owner's W/MBE Policy and Program, to find another W/MBE to substitute for the original W/MBE to provide the same amount of W/MBE participation.

24.6 Reporting Requirements: The Design Professional agrees that, within 15 days after the expiration of each calendar month during the Term of the Contract beginning on the effective date of the Contract, it will provide a W/MBE Utilization Activity report to the Owner's Business Diversity Manager reflecting, as applicable, in a form acceptable to the Owner, the Design Professional's total dollar value received under the Contract for the applicable period and the amount expended for the purchase of goods and services from each W/MBE firm during that period, calculated in accordance with the requirements of the Owner's W/MBE Policy and Program.

24.7 Monitoring: The Owner will monitor the compliance and good faith efforts of the Design Professional in meeting these requirements. The Owner will have access to the necessary records to examine such information as may be appropriate for the purpose of investigating and determining compliance with this subsection, including, but not limited to, records, records of expenditures, contracts between the Design Professional and the W/MBE participant, and other records pertaining to the W/MBE participation plan, which the Design Professional will maintain for a minimum of three years following the end of the Contract. Opportunities for W/MBE participation will be reviewed prior to the exercise of any renewal, extension or material amendment of the Contract to consider whether an adjustment in the W/MBE requirement is warranted. Without limiting the requirements of the Contract, the Owner reserves the right to review and approve all subleases or subcontracts utilized by the Design Professional for the achievement of these goals.

24.8 Design Professional agrees to indemnify the Owner from the loss of any funds or other damages that may result from Design Professional's failure to achieve the W/MBE goals set forth herein or to establish a good faith effort to do so, including attorneys' fees and costs associated with said failure by Design Professional or good faith investigation by Owner. Failure of Design Professional to make a good faith effort to achieve W/MBE goals will be a material breach of this Contract. The determination of whether Design Professional's efforts were made in good faith will be made by the

Owner. At 50% completion, a plan of action properly reflecting anticipated W/MBE achievement of the commitment is required to be submitted to the Owner.

24.9 In the event of the Design Professional's non-compliance with the Owner's W/MBE Policy and Program, failure to meet the prescribed W/MBE goal set forth in this Contract, or failure to establish a good faith effort to do so, the Owner will impose such contract sanctions as the Owner may determine to be appropriate, including but not limited to:

24.9.1 Withholding of payments to the Design Professional under this Contract until the Design Professional complies; and/or

24.9.2 Assessing sanctions; and/or

24.9.3 Liquidated damages; and/or

24.9.4 Cancellation, termination or suspension of this Contract in whole or in part; and/or

24.9.5 Suspension or debarment of Design Professional from eligibility to contract with the Owner in the future or to receive bid packages or request for qualification (RFQ) packages, pursuant to the Owner's Policy P414, Suspension/Debarment of Contractors.

ARTICLE 25 – PROHIBITION AGAINST CONTRACTING WITH SCRUTINIZED COMPANIES

This Contract will be terminated in accordance with Florida Statute Section 287.135(3) if it is found that Company submitted a false Scrutinized Company Certification as provided in Florida Statute Section 287.135(5) or, has been placed on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or the Scrutinized Companies that Boycott Israel List, created pursuant to Florida Statute Section 215.473, or has been engaged in business operations in Syria.

ARTICLE 26 – E-VERIFY REQUIREMENT

In accordance with the State of Florida, Office of the Governor, Executive Order Number 11-116 (Verification of Employment Status), all agencies under the direction of the Governor are to include as a condition of all state contracts for the provision of goods or services to the state in excess of nominal value, an express requirement that contractors utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the contractor during the contract term, and an express requirement that contractors include in such subcontracts the requirement that subcontractors performing work or providing services pursuant to the state contract utilize the E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the contract term. Any projects with Florida Department of Transportation (FDOT) funding will contain this assurance as a condition for any new Joint Participation Contracts dated after January 4, 2011. The Design

Professional will verify all of their new employees and will require that their subcontractors verify all of their new employees in accordance with the E-verify requirements set out above. The Design Professional will execute Attachment 2, E-Verify Certification, to certify and affirm that Design Professional will comply with the E-Verification requirements of Executive Order Number 11-116.

ARTICLE 27 - COMPLETE CONTRACT

This Contract represents the entire and fully integrated Contract between the Owner and the Design Professional and supersedes all prior negotiations, representations or contracts, either written or oral. This Contract may be amended only by written instrument signed by both the Owner and the Design Professional.

IN WITNESS WHEREOF, the parties hereto have set their hands and corporate seals by their proper officers, duly authorized to do so;

By the Design Professional this 21st day of October, 2022.

ATTEST:

Armond Tatevossian, Secretary

AECOM TECHNICAL SERVICES, INC.

By: Andrew Kacer

Title: Vice President (Authorized Signatory)

Print Name
Andrew Kacer

Print Address
7650 W Courtney Campbell Causeway
Tampa, FL 33607

Signed, sealed, and delivered in the presence of:

Witness

Dennis Combs
Print Name

Witness

Karin Toon
Print Name

Notary for AECOM Technical Services, Inc.

STATE OF Florida
COUNTY OF Hillsborough

The foregoing instrument was acknowledged before me this 21st day of October, 2022 by Andrew Kacer in the capacity of Vice President, of AECOM Technical Services, Inc. a Corporation on its behalf. They are / He is / She is personally known to me / not personally known to me and has produced the following document of identification) and take an oath. (they / he / she) (did / did not)

(Seal of Notary)

DIANE KLINE
Notary Public - State of Florida
Commission # HH 091863
My Comm. Expires May 9, 2025
Bonded through National Notary Assn.

Diane Kline
Signature of Notary

TRUTH-IN-NEGOTIATION CERTIFICATE AND AFFIDAVIT

STATE OF Florida §
COUNTY OF Hillsborough §

Before me, the undersigned authority, personally appeared affiant Andrew Kacer, who being first duly sworn, deposes and says: Name (typed or printed)

1. That the undersigned firm is furnishing this Truth in Negotiation Certificate pursuant to Section 287.055(5)(a) of the Florida Statutes for the undersigned firm to receive a Contract for Design Professional Services with the Hillsborough County Aviation Authority.

2. That the undersigned firm is a Corporation which engages in furnishing professional engineering services and is entering into a Contract for Design Professional Services with the Hillsborough County Aviation Authority to provide professional engineering services for the project known as Asphalt Rehabilitation of Runway 1R-19L & 10-28 and Replacement of Concrete Slabs at Tampa International Airport, Project 7100 23.

3. That the undersigned firm has furnished the Hillsborough County Aviation Authority a detailed analysis of the cost of the professional engineering services required for the project under the subject Contract for Design Professional Services.

4. That the wage rate information and other factual unit costs furnished by the undersigned firm are accurate, complete and current at the time the undersigned firm and the Hillsborough County Aviation Authority entered into the Contract for Design Professional Services.

5.

FURTHER AFFIANT SAYETH NAUGHT

AECOM
Name of Firm

Andrew Kacer
By: Vice President

The foregoing instrument was acknowledged before me by Andrew Kacer who has produced _____ as identification or is personally known to me.

WITNESS my hand and official seal in the State and County last aforesaid this 21st day of October, 2022.

(SEAL)

Diane Kline
Signature

Diane Kline
Notary Name (typed or printed)

PMA
Title or Rank

DIANE KLINE
Notary Public - State of Florida
Commission # HH 091863
My Comm. Expires May 9, 2025
Bonded through National Notary Assn.

AECOM Technical Services, Inc. 213.593.8100 tel
300 South Grand Avenue 213.593.8730 fax
9th Floor
Los Angeles, CA 90071
www.aecom.com

SECRETARY'S CERTIFICATE

AECOM TECHNICAL SERVICES, INC.
a California corporation

I, Armond Tatevossian, DO HEREBY CERTIFY that I am a duly elected and acting Secretary of AECOM Technical Services, Inc., a corporation organized under the laws of the State of California ("ATS" or "Corporation"), and the keeper of its records and corporate seal.

I FURTHER CERTIFY that ATS's full legal address is c/o CT Corporation System, 818 West 7th Street, Los Angeles, CA 90017-0000 and that the Corporation's principal place of business is 300 South Grand Avenue, 9th Floor, Los Angeles, California 90071.

I FURTHER CERTIFY that pursuant to the Written Consent of the Board of Directors of ATS, adopted on August 22, 2022, and attached hereto as Exhibit A, Andrew Kacer has signatory authority for ATS and is authorized to execute contracts and other documents on behalf of the Corporation.

IN WITNESS WHEREOF, I have subscribed my name and affixed the seal of the Corporation, this 21st day of October, 2022.

Armond Tatevossian
Secretary

UNANIMOUS ACTION OF THE BOARD OF DIRECTORS
OF
AECOM TECHNICAL SERVICES, INC.

The undersigned, being all the members of the Board of Directors of AECOM TECHNICAL SERVICES, INC. (the "Corporation"), a California corporation, hereby take the following action:

RESOLVED: RESOLVED: That, "the following U.S. based persons are designated with authority by the Board of Directors to execute contracts and other legal documents on behalf of the Corporation within the boundaries of specific Regions and Business Lines as noted and effective as of the dates set forth below:"

Effective August 22, 2022:

Last Name	First Name	Region	Business Line
Kacer	Andrew	East	Transportation

IN TESTIMONY WHEREOF, all the Directors have hereunto set their hands this 22nd day of August, 2022.

Allison Hall

Jeffrey Rosenstein

Karl Jensen

Travis Boone

By the Owner this 3rd day of November 2022.

HILLSBOROUGH COUNTY AVIATION AUTHORITY

(*Affix Corporate Seal*)

By: _____
Gary W. Harrod, Chairman

ATTEST:

_____
Jane Castor, Secretary

Signed, sealed, and delivered
in the presence of:

_____
Witness

_____
Print Name

_____
Witness

_____
Print Name

LEGAL FORM APPROVED:

By: _____
Michael T. Kamprath, Assistant General Counsel

Notary for Hillsborough County Aviation Authority
STATE OF FLORIDA
COUNTY OF HILLSBOROUGH

The foregoing instrument was acknowledged before me this ____ day of _____, 20__, by Gary W. Harrod, in the capacity of Chairman, and by Jane Castor, in the capacity of Secretary, Hillsborough County Aviation Authority, an independent special district under the laws of the State of Florida, on its behalf. They are personally known to me and they did not take an oath.

_____
Signature of Notary

_____
Print, Type, or Stamp Commissioned Name of Notary

Attachment 1

Asphalt Rehabilitation of Runways 1R-19L & 10-28 and Replacement of Concrete Slabs
&
Runway 1R-19L & TW C Pavement Study

Tampa International Airport

Prepared by:

AECOM

EXHIBIT B FEE ESTIMATE
SUMMARY

Project Fee Proposal - AECOM Team - Summary Sheet				
ASPHALT REHABILITATION OF RW 1R-19L & 10-28 AND REPLACEMENT OF CONCRETE SLABS				
HCAA Project Number 7100 23				
10/17/2022				
Basic Design Services		Total	W/MBE %	% W/MBE
Engineering Services		Fee	of Fee	Goal
	ASPHALT REHABILITATION OF RW 1R-19L & 10-28 AND REPLACEMENT OF CONCRETE SLABS	$ 1,325,635.00		
	RW 1R-19L & TW C PAVEMENT STUDY	$ 263,975.00		
		$ -		
	Subtotal	$ 1,589,610.00	15.6%	7.00%
	Owner Contingency	$ 100,000.00		
Total Fee, Reimbursable Expenses, Owner Contingency		$ 1,689,610.00		

Asphalt Rehabilitation of Runways 1R-19L & 10-28 and Replacement of Concrete Slabs

Tampa International Airport

Prepared by:

AECOM

Scope of Services for:

HCAA Project Number 7100 23

Asphalt Rehabilitation of Runways 1R-19L & 10-28 and Replacement of Concrete Slabs

Tampa International Airport

Prepared by:

AECOM

October 17, 2022

PROFESSIONAL ENGINEERING SERVICES FOR *ASPHALT REHAB OF RW 1R-19L & 10-28 AND REPLACEMENT OF CONCRETE SLABS* HCAA PROJECT NUMBER 7100 23

TAMPA INTERNATIONAL AIRPORT (TIA)
TAMPA, FL

AECOM TECHNICAL SERVICES, INC.

1. INTRODUCTION

This scope of services (scope) outlines the tasks proposed by AECOM Technical Services, Inc. (AECOM) to assist the Hillsborough County Aviation Authority (HCAA or Authority) with Professional Engineering and Construction Administration Services associated with Asphalt Rehab of Runway 1R-19L & 10-28 and Replacement of concrete slabs.

The scope of the project consists of the following elements per the HCAA RFQ, PMP, RS&H cost estimate and meetings to discuss the project. Included on the following pages are Figure 1 from the RFQ updated with labels corresponding to the scope elements below; Figure 2 indicating closer view of the area of the Infield Gradient Issue; and Figure 3 showing the electrical Hand Holes (HH) to be modified under this project.

AECOM Scope Elements

1) Asphalt rehabilitation of Runway 1R-19L and 10-28 (included in RFQ, PMP and RS&H estimate).

2) Removal and replacement of Runway 1R-19L touchdown zone lights (included in RFQ, PMP and RS&H estimate).

3) Removal and replacement of airfield guidance signs (approach signs for RW 10 on TW Whiskey) (included in RFQ but not in PMP and RS&H estimate).

4) Adjustments to existing non-flush in-pavement structures in runway and taxiway safety areas (included in RFQ but not in PMP and RS&H estimate).

5) Seal coat various taxiway shoulders (included in RFQ but not in PMP and RS&H estimate).

6) Rehabilitation of miscellaneous concrete pavement slabs throughout the airfield (included in RFQ, PMP and RS&H estimate).

7) Rehabilitation of other pavements and replacement of lighting as may be determined necessary (included in RFQ but not in PMP and RS&H estimate).

8) Correct infield gradient issue at Runway 1R and Taxiway C3 (Not included in RFQ, PMP, or RS&H Estimate).

As part of the Authority's ongoing airfield maintenance initiatives, airfield pavements and lighting are rehabilitated on a periodic basis. This Project provides for the design to remove, rehabilitate, and reconstruct runway, taxiway, taxilane, and apron asphalt and concrete pavements, lighting, and other work.

On the following page is "Exhibit A" from the HCAA Request for Qualifications for this project graphically depicting the work included in this proposal.

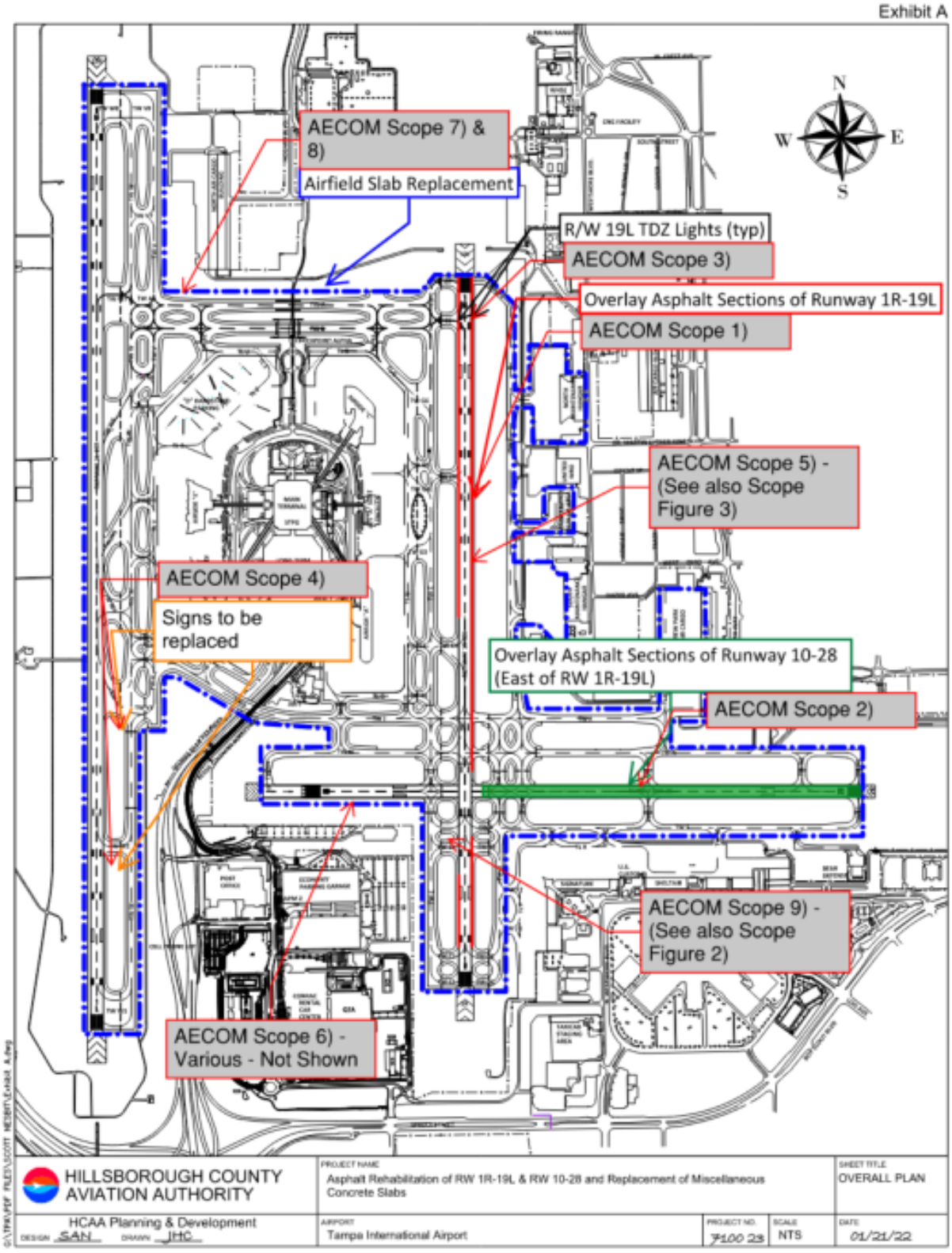


Figure 1: Exhibit A (Modified to Include AECOM Scope Element labels) from RFQ (Source HCAA)

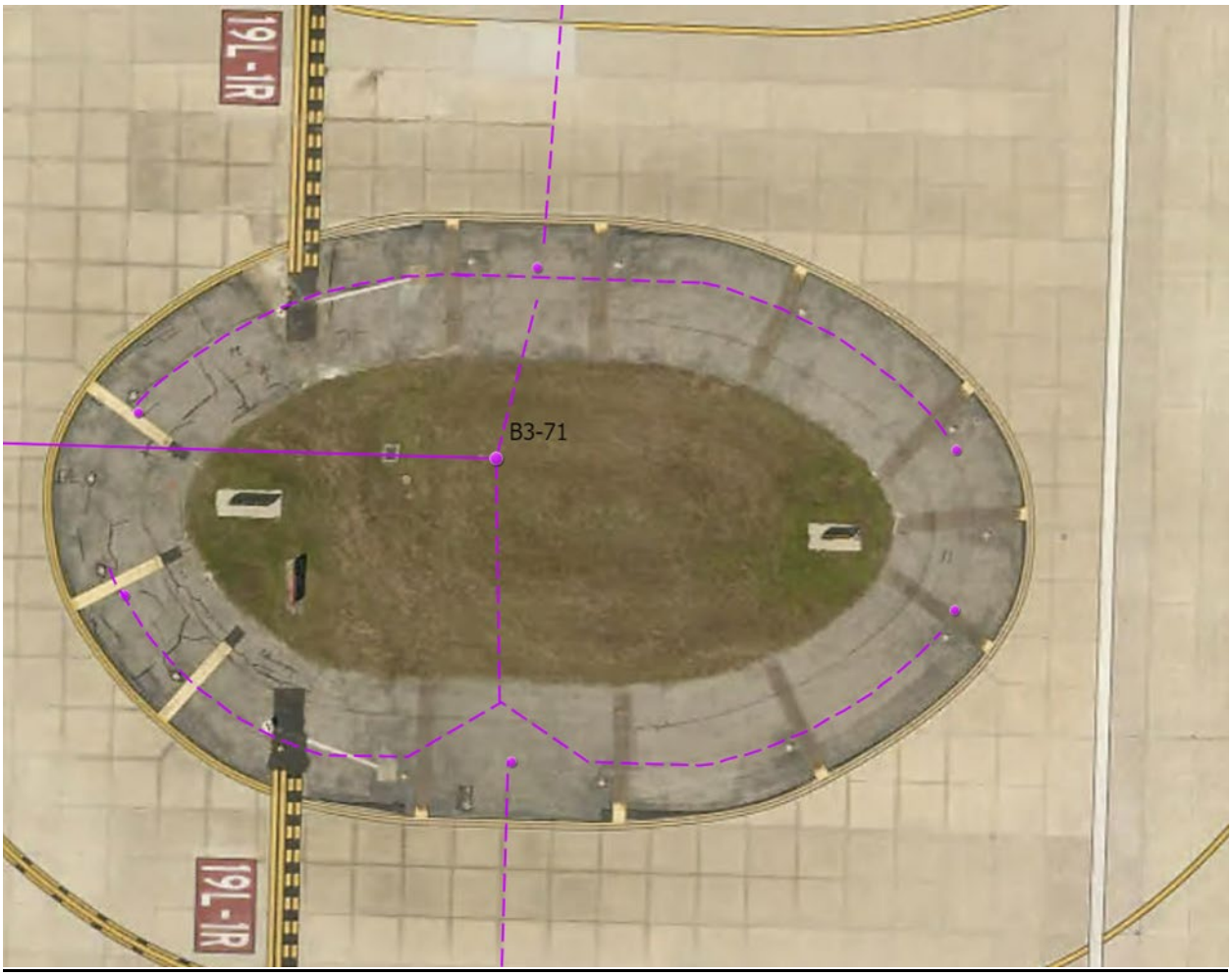


Figure 2: Area of Gradient Issue (Scope Element 9) between Runway 1R and Taxiway C3 (Source HCAA)

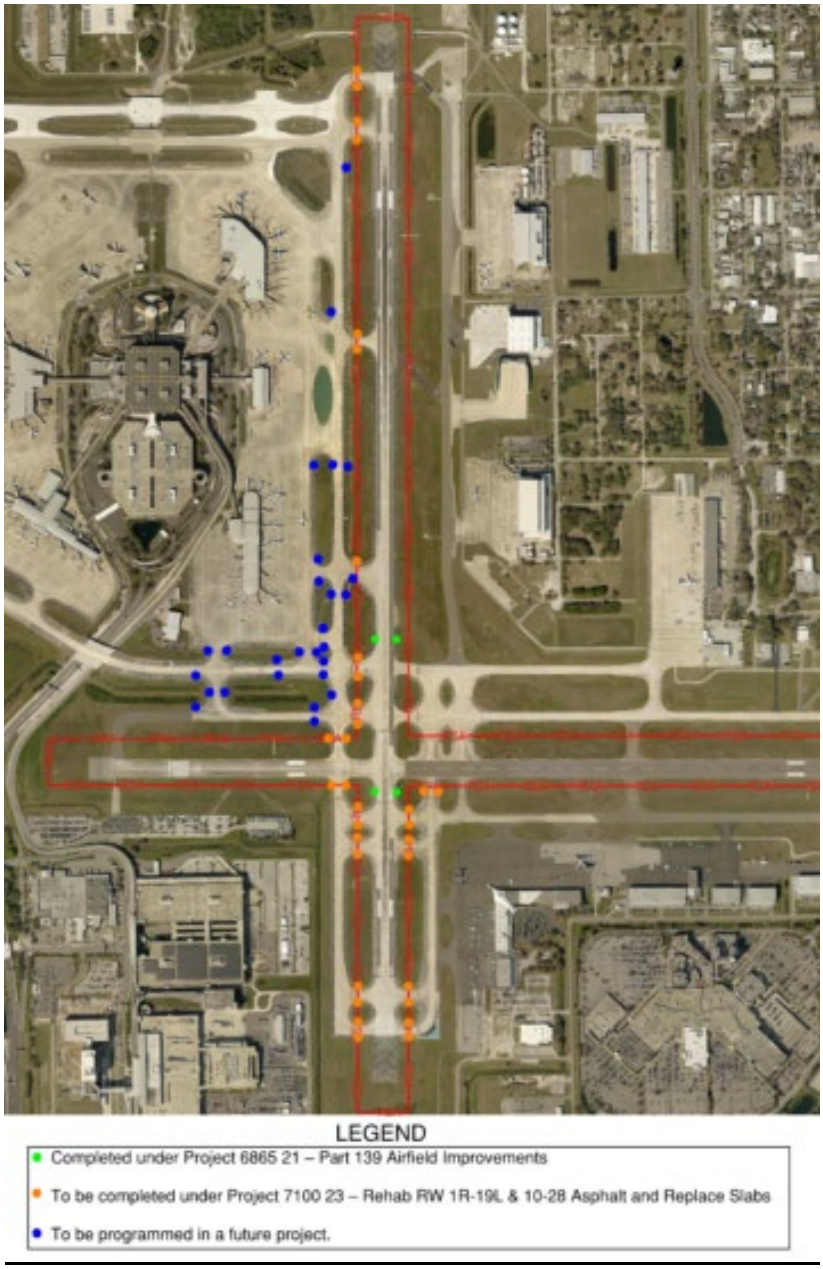


Figure 3: HH Locations (Scope Element 5) to be included in project (Orange) (Source HCAA)

2. SCOPE OF SERVICES

AECOM will prepare rehabilitation design documents for the asphalt portions of Runway 1R-19L and Runway 10-28 (not including shoulders or blast pads). In the RFQ it is assumed that these rehabilitations are mill and overlays due to normal asphalt aging. Deep borings or other more complex geotechnical evaluations have not been included in the scope.

a. **Project Management and Meetings** – AECOM will provide project management for the project to include all necessary invoicing, reporting, coordination as required for the project. AECOM will attend and document with meeting notes biweekly design meetings.

b. **Cost Estimates and Schedule** – The scope includes an estimate of probable construction cost for the project and verify with the current project budget for construction. AECOM will perform a quantity take-off of the plans at each stage of design and provide a unit price estimate. Any cost opinions or estimates provided by AECOM will be on a basis of experience and judgment, but since AECOM has no control over market conditions or bidding procedures, AECOM cannot and does not warrant that bids, ultimate construction cost, or project economics will not vary from such opinions or estimates. The scope includes developing and maintaining a schedule for design. The schedule will be updated and submitted with each design deliverable milestone.

c. **Existing Conditions -** AECOM will perform a pavement inspection on Runway 1R-19L and Runway 10-28 in its entirety to gather visual information in determining the extent of spalls, cracks, or other pavement distresses for inclusion in the project. This field inspection will be in conjunction with the Airport Pavement Management System (APMS) documents provided by the Authority. AECOM will generally verify the medium and high severity distresses per the APMS and add any new distresses in these areas to the rehabilitation project. These inspections will be coordinated with runway closures required for survey and geotechnical work. It is anticipated that this inspection will take 4 people for 5 working days to complete.

   For the concrete pavement rehabilitation portion of the project the team will rely on the APMS data and HCAA maintenance to assist us in the areas of the airport that should be included in the scope. Once that data is received a site visit will be scheduled with HCAA ops and/or maintenance to verify the existing conditions and the need for inclusion in the project. This inspection is anticipated to take 2 days for 2 people from the team.

   See additional scopes of work from Tierra, Inc. and Northwest Survey for geotechnical engineering and existing conditions related to survey, respectively.

d. General Sheets – Design will include cover sheet, index of drawings, summary of quantities, contract layout plan, safety and security notes, safety details, and an airspace plan as well as the survey provided by Northwest Survey.

e. **Phasing Plans** – The team will develop detailed phasing plans starting with the 60% design submittal. Phasing plans will be detailed to include barricades, haul routes, aircraft impacts, and other information as necessary for contractors to adequately understand and bid the project.

f. **Demolition** – Design will include demolition drawings that include information developed from the survey, APMS, and field conditions inspection that will include asphalt milling, spall repair locations, concrete pavement removal areas, airfield lighting demolition, and information regarding the gradient at Runway 1R and TW C3.

g. **Drainage and Grading (Gradient Area Only RW 1R & TW C3)** – The area identified by operations will be surveyed to a 15’ grid and all features will be located as well as inverts and grate elevations of the drainage structure. It is assumed work in this area will include regrading the entire area to meet FAA slope criteria as well as potentially replacing or lowering a drainage structure to meet criteria. No new drainage or stormwater permitting is anticipated or included.

h. **Utility Plans and Profiles** – No work anticipated or included. Airfield Lighting and Signage included in separate area of plans.

i. **Airfield Grading** – The survey will be utilized to create an existing conditions 3-D model for Runway 1R-19L and Runway 10-28. Full strength runway pavements will be analyzed against FAA gradient and cross slope criteria. Asphalt rehabilitation of each runway will be

graded to meet the existing conditions as well as FAA criteria. This scope assumes the runways generally meet FAA criteria and that minor cross slope and profile corrections will be anticipated. No reconstruction to correct FAA criteria deficiencies is anticipated or included. No work extending out past the existing full-strength pavement is anticipated or included.

j. **Paving Plans** – Design will provide layout of all areas of rehabilitation included in the project including areas of asphalt overlay, concrete distresses, and concrete slab replacement.

k. **Paving Details** – Design will include all necessary pavement details required for the project including but not limited to pavement removal details, pavement sections, asphalt joint details, concrete details, grooving details, and repair details.

l. **Marking Plans** – Design will include new pavement markings for Runways 1R-19L and 10-28 as well as all associated markings for slab removal and replacements.

m. **Marking Details** – Design will include all necessary marking details to cover each aspect of the runway markings as well as other taxiway markings in areas of concrete removal and replacement.

n. **Airfield Lighting Plans** – Design includes removal and replacement of Runway 1R-19L Touchdown Zone (TDZ) lights and potential sign replacement of the mandatory approach signs for the Runway 10 Approach that are located on Taxiway W.

o. **Airfield Circuitry Plans** – Design includes verification of the existing circuit and the running of a new circuit from the TDZ lights back to the airfield lighting vault. This includes field verification along with HCAA maintenance to verify the existing and discuss options for the circuit replacement.

p. **Airfield Lighting Details** – Design includes details for removal and replacement of fixtures, transformers, and connectors for the TDZ lights as well as spacer ring details for the asphalt and concrete joint connection. This section will also include the details for correcting electrical handholes that are not in compliance with FAA criteria as identified by HCAA. Scope includes 33 locations as identified on “Exhibit HH Locations – Part 139 Quarterly Meeting-F” as a basis for cost but others could be added depending on project budget.

q. **Vault Plans and Details** – Design includes removal and replacement of Runway 1R-19L Touchdown Zone (TDZ) Constant Current Regulator (CCR) and integration of new CCR into the existing Airfield Lighting Control System (ALCS).

r. **Specifications, Engineer’s Report, CSPP** – Starting with the 90% design submittal our team will provide draft and final specifications, Engineer’s Report and Construction Safety Phasing Plans (CSPP) in accordance with FAA criteria. AECOM shall review, comment, and coordinate on the front-end Division 0 and 1 sections of the Project Manual in conjunction with the plans and specifications.

s. **QA/QC Deliverables** – AECOM will provide HCAA with our Quality Assurance/Quality Control (QA/QC) Plan for the project. Each deliverable will go through this QA/QC process and a Technical Quality Review Record (TQRR) will be generated from senior level staff and provided to the Authority for each design deliverable.

t. **Construction Administration** – Our scope of services will consist of the following tasks as outlined in the fee estimate:
   - Attend Preconstruction Conference and prepare meeting minutes
   - Weekly Contractor’s Meeting (with Meeting Minutes) and Site Visit
   - Construction Changes & Change Orders
   - Review Shop Drawings

- Respond to RFIs
- Review and Approve Contractor's Pay Request
- Review and Comment Contractor's Schedule Updates
- Prepare Construction Management Plan
- Review and Assist with Materials Testing
- Review Contractor's Safety Plan and Compliance Document
- Perform Substantial and Final Inspections
- Prepare Record Drawings from Contractor Markups
- Assist in Obtaining Close-Out Documents

u. **Resident Inspection –** Omitted.

v. **Materials testing –** AECOM will provide materials testing in accordance with the specifications of the project anticipated to be FAA AC 150/5370-10H. See attached estimated materials costs from Tierra dated October 3, 2022.

3. DELIVERABLES

30% DESIGN DEVELOPMENT

AECOM will provide the tasks below related to 30% Design Development:

Preliminary Design Plans

Anticipated Project Sheets
Cover Sheet
Contract Layout Plan (Site Plan)
Horizontal and Vertical Control
Safety and Security Notes
Demolition Plans
Drainage and Grading (Gradient Area between RW 1R & TW C3)
Airfield Grading (existing conditions only at this stage)
Paving Plans
Paving Details
Marking Plans
Marking Details
Airfield Lighting Plans
Airfield Circuitry Plans
Airfield Lighting Details
Vault Plan and Details

30% Deliverables
1) Existing Conditions Graphics – pdf
2) Preliminary 30% Design Plans (11x17) – pdf
3) Project Design schedule – pdf
4) Construction Cost Estimate – pdf
5) Design & Review Meeting Minutes – pdf
6) QA/QC Documentation – pdf

60% DESIGN DEVELOPMENT

AECOM will provide the tasks below related to 60% Design Development:

Anticipated Project Sheets

Cover Sheet
Contract Layout Plan (Site Plan)
Horizontal and Vertical Control
Safety and Security Notes
Construction Phasing Plans
Geotechnical Data
Temporary and Permanent Erosion and Sedimentation Controls
Demolition Plans
Drainage and Grading (Gradient Area between RW 1R & TW C3)
Airfield Grading
Paving Plans
Paving Details
Marking Plans
Marking Details
Airfield Lighting Plans
Airfield Circuitry Plans
Airfield Lighting Details
Vault Plan and Details

60% Deliverables

1) Comment documentation list from 30% Review – pdf
2) 60% Design Plans (11x17) – pdf
3) Project Design schedule – pdf
4) Construction Cost Estimate – pdf
5) Technical Specification – pdf
6) Design & Review Meeting Minutes – pdf
7) QA/QC Documentation – pdf

90% CONSTRUCTION DOCUMENTS

AECOM will provide the tasks below related to 90% Construction Documents:

Anticipated Project Sheets

Cover Sheet
Contract Layout Plan (Site Plan)
Horizontal and Vertical Control
Safety and Security Notes
Construction Phasing Plans
Geotechnical Data
Temporary and Permanent Erosion and Sedimentation Controls
Demolition Plans
Drainage and Grading (Gradient Area between RW 1R & TW C3)
Airfield Grading
Paving Plans
Paving Details
Marking Plans
Marking Details
Airfield Lighting Plans
Airfield Circuitry Plans
Airfield Lighting Details
Vault Plan and Details

90% Deliverables

1) Comment documentation list from 60% Review – pdf
2) 90% Design Plans (11x17) – pdf
3) Project Design & Construction schedule – pdf
4) Construction Cost Estimate – pdf
5) DBE % Breakout Estimate – pdf
6) Technical Specification – pdf
7) Draft HCAA front end documents – pdf
8) Design & Review Meeting Minutes – pdf
9) Draft Construction Safety and Phasing Plan – pdf
10) Draft Engineer's Report – pdf
11) QA/QC Documentation – pdf

100% FINAL DOCUMENTS

Anticipated Project Sheets

Cover Sheet
Contract Layout Plan (Site Plan)
Horizontal and Vertical Control
Safety and Security Notes
Construction Phasing Plans
Geotechnical Data
Temporary and Permanent Erosion and Sedimentation Controls
Demolition Plans
Drainage and Grading (Gradient Area between RW 1R & TW C3)
Airfield Grading
Paving Plans
Paving Details
Marking Plans
Marking Details
Airfield Lighting Plans
Airfield Circuitry Plans
Airfield Lighting Details
Vault Plan and Details

100% Deliverables

1) Comment documentation list from 90% Review – pdf
2) 100% Design Plans (11x17) – pdf
3) Project Design & Construction schedule – pdf
4) Construction Cost Estimate – pdf
5) Technical Specification – pdf
6) HCAA front end – pdf
7) Design & Review Meeting Minutes – pdf
8) Final Construction Safety and Phasing Plan – pdf
9) Final Engineer's Report – pdf
10) QA/QC Documentation – pdf

BID AND AWARD SERVICES

This Task shall consist of bid and award services:

- Advertisement and Bidding Assistance
- Assist in Addenda Preparations
- Attend Prebid Conference
- Evaluate Bids and Recommend Award
- Issue Conformed Documents

Bid and Award Deliverables

1) Bid Advertisement
2) Addenda
3) Electronic exhibits in PowerPoint for prebid conference
4) Recommendation for Award
5) Certified Bid Tabulations
6) Conformed Documents

CONSTRUCTION ADMINISTRATION

This Task will include tasks listed in the scope above and the following deliverables:

Construction Administration Deliverables

1) Materials testing reports
2) Meeting minutes
3) Daily Inspection Reports (if Resident Inspector authorized)
4) Signed Contractor Pay Requests
5) RFI Responses
6) Engineer's Supplemental Instructions (ESI)
7) Record Drawings

4. SCHEDULE

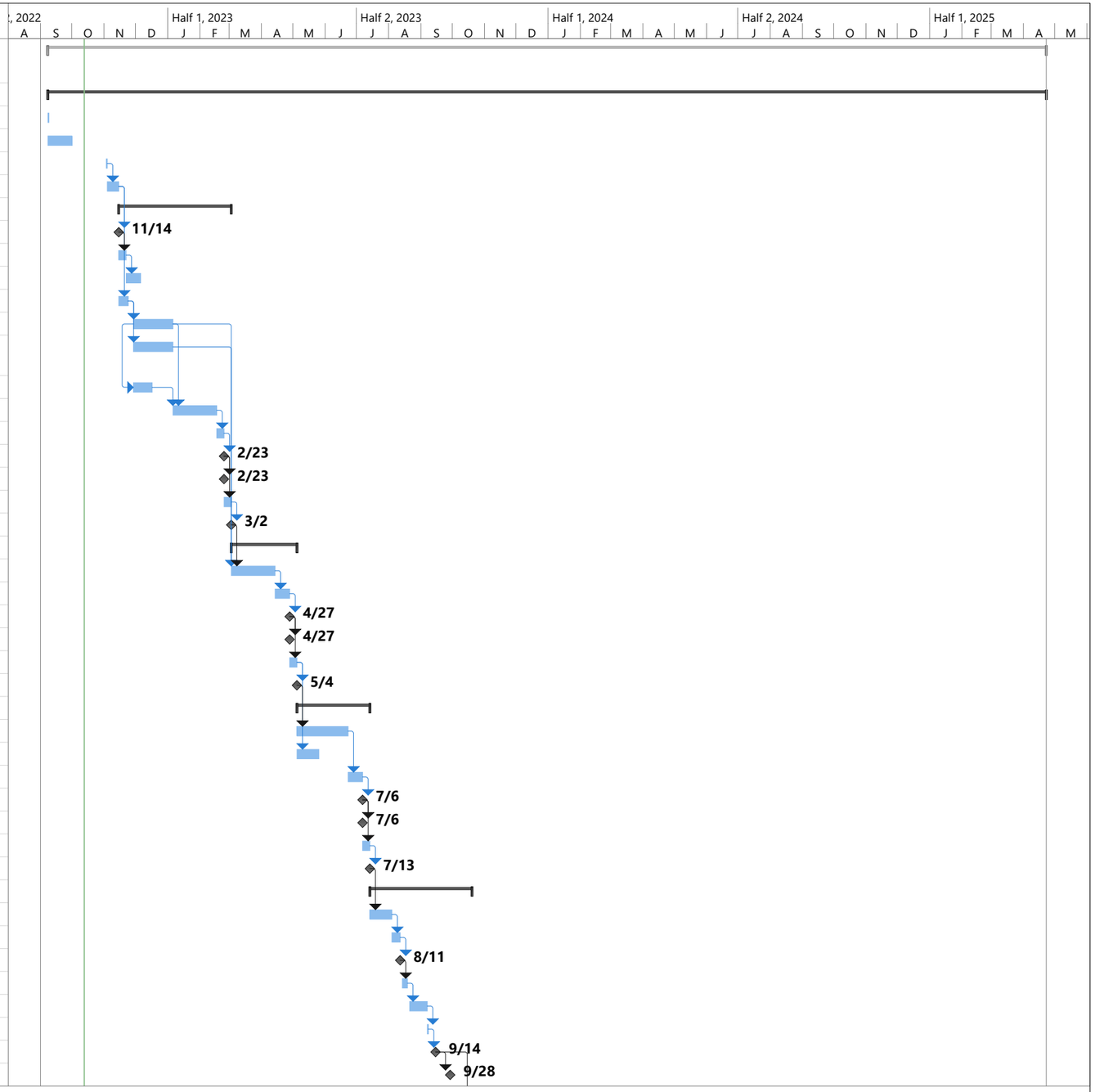
See attached detailed schedule with summary of deliverable below:

Contract to HCAA Board	11/3/22
Notice To Proceed (Anticipated)	11/14/22
30% Submittal	2/23/22
60% Submittal	4/27/22
90% Submittal	7/6/22
100% Submittal	8/11/22
Final Submittal	9/07/22

5. FEE PROPOSAL

See Exhibit B attached for detailed breakout of the proposed fee.

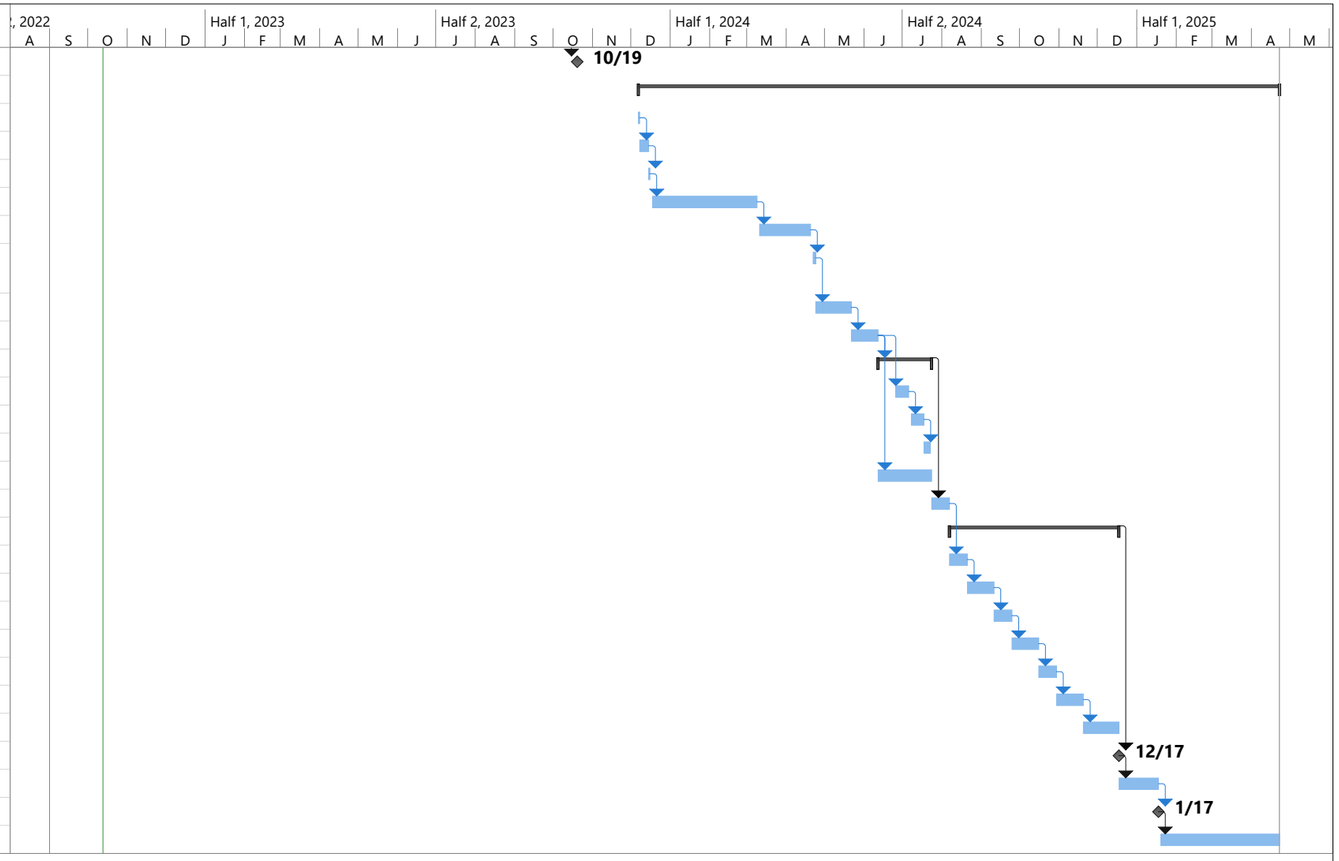
ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
0		**TPA Asphalt Rehab of RW 1R-19L & 10-28 and Replacement of Concrete Slabs**	**684 days**	**Thu 9/8/22**	**Tue 4/22/25**	
1		**7100 23 Asphalt Runways Rehab Design**	**684 days**	**Thu 9/8/22**	**Tue 4/22/25**	
2		Consultant Selection at Authority Board	1 day	Thu 9/8/22	Thu 9/8/22	
3		Submit Final Fee and Scope Proposal	17 days	Thu 9/8/22	Fri 9/30/22	
4		Contract Presented to Authority Board for Award	1 day	Thu 11/3/22	Thu 11/3/22	
5		Work Order Approved for NTP	7 days	Fri 11/4/22	Mon 11/14/22	4
6		**Schematic 30% Design**	**78 days**	**Mon 11/14/22**	**Thu 3/2/23**	
7		Kick-off Meeting	0 days	Mon 11/14/22	Mon 11/14/22	5
8		Review Record Drawings	5 days	Tue 11/15/22	Mon 11/21/22	7
9		Create Base Drawing	10 days	Tue 11/22/22	Mon 12/5/22	8
10		Subcontract Approvals	7 days	Tue 11/15/22	Wed 11/23/22	5
11		Topographic Survey (Field work before 12/20/22)	28 days	Tue 11/29/22	Thu 1/5/23	10FS+3 days
12		Geotechnical Evaluation (Field work before 12/20/22)	28 days	Tue 11/29/22	Thu 1/5/23	10FS+3 days
13		Airfield Pavement Inspections	14 days	Tue 11/29/22	Fri 12/16/22	11SS
14		Prepare 30% Schematic Design	30 days	Fri 1/6/23	Thu 2/16/23	11,13
15		QA/QC 30% Docs	5 days	Fri 2/17/23	Thu 2/23/23	14
16		Submit 30% Documents	0 days	Thu 2/23/23	Thu 2/23/23	15
17		PreApplication Meeting SWFWMD (if required)	0 days	Thu 2/23/23	Thu 2/23/23	16
18		HCAA 30% Review	5 days	Fri 2/24/23	Thu 3/2/23	16
19		30% Review Meeting	0 days	Thu 3/2/23	Thu 3/2/23	18
20		**60% Design Development**	**45 days**	**Fri 3/3/23**	**Thu 5/4/23**	
21		Prepare 60% Documents	30 days	Fri 3/3/23	Thu 4/13/23	11,12,19
22		QA/QC 60% Documents	10 days	Fri 4/14/23	Thu 4/27/23	21
23		Submit 60% Documents	0 days	Thu 4/27/23	Thu 4/27/23	22
24		Submit Draft ERP(if required) to HCAA	0 days	Thu 4/27/23	Thu 4/27/23	23
25		HCAA 60% Review	5 days	Fri 4/28/23	Thu 5/4/23	23
26		60% Review Meeting	0 days	Thu 5/4/23	Thu 5/4/23	25
27		**90% Construction Documements**	**50 days**	**Fri 5/5/23**	**Thu 7/13/23**	
28		Prepare 90% Documents	35 days	Fri 5/5/23	Thu 6/22/23	26
29		Prepare Draft CSPP	15 days	Fri 5/5/23	Thu 5/25/23	25
30		QA/QC 90% Docs	10 days	Fri 6/23/23	Thu 7/6/23	28
31		Submit 90% Documents	0 days	Thu 7/6/23	Thu 7/6/23	30
32		Submit ERP (if required) to SWFWMD	0 days	Thu 7/6/23	Thu 7/6/23	31
33		HCAA 90% Review	5 days	Fri 7/7/23	Thu 7/13/23	31
34		90% Review Meeting	0 days	Thu 7/13/23	Thu 7/13/23	33
35		**Prepare 100% Documents / Bid & Award**	**70 days**	**Fri 7/14/23**	**Thu 10/19/23**	
36		100% Final Documents	15 days	Fri 7/14/23	Thu 8/3/23	34
37		QA/QC 100% Docs	6 days	Fri 8/4/23	Fri 8/11/23	36
38		Submit 100% Documents	0 days	Fri 8/11/23	Fri 8/11/23	37
39		HCAA 100% Review	5 days	Mon 8/14/23	Fri 8/18/23	38
40		QA/QC Final Documents	13 days	Mon 8/21/23	Wed 9/6/23	39
41		Submit Final Documents	1 day	Thu 9/7/23	Thu 9/7/23	40
42		Advertise Project #1	0 days	Thu 9/14/23	Thu 9/14/23	41FS+5 days
43		Pre-Bid Conference	0 days	Thu 9/28/23	Thu 9/28/23	42FS+10 days



Project: TPA Asphalt Rehab of R
Date: Thu 10/13/22

Task	Project Summary	Manual Task	Start-only	Deadline
Split	Inactive Task	Duration-only	Finish-only	Progress
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress
Summary	Inactive Summary	Manual Summary	External Milestone	

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
44		Bid Opening	0 days	Thu 10/19/23	Thu 10/19/23	42FS+25 days
45		**7100 23 Asphalt Runways Rehab Construction**	**359 days**	**Thu 12/7/23**	**Tue 4/22/25**	
46		Construction Contract to Authority Board	1 day	Thu 12/7/23	Thu 12/7/23	
47		Bonds and other information to Authority	5 days	Fri 12/8/23	Thu 12/14/23	46
48		Notice To Proceed	1 day	Fri 12/15/23	Fri 12/15/23	47
49		**Phase 1 Mobilization**	60 days	Mon 12/18/23	Fri 3/8/24	48
50		**Phase 2 Runway 10-28 Asphalt**	30 days	Mon 3/11/24	Fri 4/19/24	49
51		**Phase 3 Bullseye Closed (intersection RW 1R and RW 10)**	2 days	Mon 4/22/24	Tue 4/23/24	50
52		**Contractor break in time for holidays**	20 days	Wed 4/24/24	Tue 5/21/24	51
53		**Phase 4 South Portion of RW 1R-19L**	15 days	Wed 5/22/24	Tue 6/11/24	52
54		**Phase 5 Runway 1R-19R Full Closure**	**30 days**	**Wed 6/12/24**	**Tue 7/23/24**	**53**
55		Phase 5A Taxiway N closure	8 days	Wed 6/26/24	Fri 7/5/24	53FS+10 days
56		Phase 5B Taxiway J closure	8 days	Mon 7/8/24	Wed 7/17/24	55
57		Phase 5C Taxiway E-2 closure (TDZ Fixtures)	3 days	Thu 7/18/24	Mon 7/22/24	56
58		Phase 5 Main Runway Closure	30 days	Wed 6/12/24	Tue 7/23/24	53
59		Phase 6 Airfield Guidance Sign Replacement	10 days	Wed 7/24/24	Tue 8/6/24	54
60		**Phase 7 Miscellaneous Concrete Slab Replacemer**	**95 days**	**Wed 8/7/24**	**Tue 12/17/24**	
61		Phase 7A Concrete Slabs (Area 1)	10 days	Wed 8/7/24	Tue 8/20/24	59
62		Phase 7B Concrete Slabs (Area 2)	15 days	Wed 8/21/24	Tue 9/10/24	61
63		Phase 7C Concrete Slabs (Area 3)	10 days	Wed 9/11/24	Tue 9/24/24	62
64		Phase 7D Concrete Slabs (Area 4)	15 days	Wed 9/25/24	Tue 10/15/24	63
65		Phase 7E Concrete Slabs (Area 5)	10 days	Wed 10/16/24	Tue 10/29/24	64
66		Phase 7F Concrete Slabs (Area 6)	15 days	Wed 10/30/24	Tue 11/19/24	65
67		Phase 7G Concrete Slabs (Area 7)	20 days	Wed 11/20/24	Tue 12/17/24	66
68		**Substantial Completion**	0 days	Tue 12/17/24	Tue 12/17/24	60
69		Punchlist Work	23 days	Wed 12/18/24	Fri 1/17/25	68
70		**Final Completion**	0 days	Fri 1/17/25	Fri 1/17/25	69
71		Project Closeout	67 days	Mon 1/20/25	Tue 4/22/25	70



Project: TPA Asphalt Rehab of R
Date: Thu 10/13/22

Task	Project Summary	Manual Task	Start-only	Deadline	
Split	Inactive Task	Duration-only	Finish-only	Progress	
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress	
Summary	Inactive Summary	Manual Summary	External Milestone		

Project Fee Proposal - AECOM Team - Summary Sheet

ASPHALT REHABILITATION OF RW 1R-19L & 10-28 AND REPLACEMENT OF CONCRETE SLABS

HCAA Project Number 7100 23

10/17/2022

Basic Design Services	Existing	30%	60%	90%	100%	Bid & Award	Construction	Resident	Total	W/MBE %	% W/MBE	% Construction
Engineering & Preconstruction Services	Conditions	Design Dev.	Design Dev.	Const. Docs	Final Docs	Services	Administration	Inspection		of Fee	Goal	Cost
AECOM Technical Services	$ 64,194.00	$ 141,258.00	$ 221,312.00	$ 224,952.00	$ 136,396.00	$ 29,848.00	$ 301,756.00	$ -	$ 1,119,716.00			12,000,000
	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	15.5%	7.00%	11.0%
	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -			
Design Phase	$ 64,194.00	$ 141,258.00	$ 221,312.00	$ 224,952.00	$ 136,396.00	$ 29,848.00	$ 301,756.00	$ -	$ 1,119,716.00	15.5%	7.00%	
Reimbursable Expenses												
Northwest Surveying, Inc.	$ 81,580.00								$ 81,580.00			
Tierra, Inc.	$ 23,839.00						$ 100,500.00		$ 124,339.00			
Element Engineering, Inc.(not in proposal)									$ -			
Sub Total	$ 105,419.00	$ -	$ -	$ -	$ -	$ -	$ 100,500.00	$ -	$ 205,919.00			
Total Fee, Allowances, Reimbursable Expenses	$ 169,613.00	$ 141,258.00	$ 221,312.00	$ 224,952.00	$ 136,396.00	$ 29,848.00	$ 402,256.00	$ -	$ 1,325,635.00			

Existing Conditions Fee

Project Fee Proposal - AECOM Team

ASPHALT REHABILITATION OF RW 1R-19L & 10-28 AND REPLACEMENT OF CONCRETE SLABS

HCAA Project Number 7100 23

10/17/2022

Scope/Task	Principal	PM	Sr. AE	AE	Sr. Design	Sr. CADD	CADD	Admin			Total
Basic Design Services	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours			
Task - APMS - AECOM											
Scoping Meeting	4	4	4	4							16
Preliminary Exhibits				8		8					16
Badging				4	4						8
Coordination with Ops		4	4								8
Runway Pavement Inspections (5 days - 4 people)		40	40	40	40						160
Misc Pavement Inspections (2 days - 2 people)		16		16							32
Airfield Guidance Sign /Circuits / Vault Inspection (1 day - 2 people)		8		8							16
Existing Conditions Graphics		2	8		16	16					42
QA/QC		2	4								6
Draft Existing Pavement Conditions Deliverable		1	2			8	8				19
Incorporate Comments		2				4	4				10
QA/QC		2	4								6
Existing Pavement Conditions Deliverable				4			4				8
Subtotal Hours	4.00	81.00	66.00	84.00	60.00	36.00	16.00	-	-		347
Rate	$ 110.00	$ 90.00	$ 80.00	$ 65.00	$ 60.00	$ 55.00	$ 40.00	$ 35.00			
Subtotal Direct Labor	$ 440.00	$ 7,290.00	$ 5,280.00	$ 5,460.00	$ 3,600.00	$ 1,980.00	$ 640.00	$ -	$ -		$ 24,690.00
Subtotal Burdened Labor @		2.60									$ 64,194.00

30% Design Fee

Project Fee Proposal - AECOM Team

ASPHALT REHABILITATION OF RW 1R-19L & 10-28 AND REPLACEMENT OF CONCRETE SLABS

HCAA Project Number 7100 23

10/17/2022

Scope/Task			Principal	PM	Sr. AE	AE	Sr. Design	Sr. CADD	CADD	Admin			Total
Basic Design Services			Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours			
Task - 30% Design AECOM													
Project Management			8	60						24			92
Meetings (Biweekly - 8 each)				16	16	16							48
Meeting Prep and Minutes				8	8	16	8			16			56
Record Drawings Review/Verification				4	8	16	16						44
Cost Estimates and Scheduling				8	16	8							32
Field Inspections (Existing Conditions has own Tab)													0
General Sheets				1	4	16							21
Demolition Plans				2	8	24	24						58
Drainage and Grading (Gradient Area Only RW 1R & TW C3)				2	2	40	24						68
Utility Plans (no utility work anticipated)													0
Utility Profiles (no utility work anticipated)													0
Airfield Grading (No Drainage)				2	8	40	16						66
Paving Plans				2	8	40	40						90
Pavement Details				1	2	4	8						15
Marking Plans				1	4	24	16						45
Marking Details				1	4	16	8						29
Airfield Lighting Plans				1	4	16	16						37
Airfield Circuitry Plans				1	4	8	16						29
Airfield Lighting Details (including HH adjustments)				1	2	4	8						15
Vault Plans and Details				1	2	8	8						19
QA/QC AECOM Design				4	8								12
30% Deliverable				1	2	8	8						19
Subtotal Hours			8.00	117.00	110.00	304.00	216.00	-	-	40.00	-		795
Rate			$ 110.00	$ 90.00	$ 80.00	$ 65.00	$ 60.00	$ 55.00	$ 40.00	$ 35.00			
Subtotal Direct Labor			$ 880.00	$ 10,530.00	$ 8,800.00	$ 19,760.00	$ 12,960.00	$ -	$ -	$ 1,400.00	$ -		$ 54,330.00
Subtotal Burdened Labor @				2.60									$ 141,258.00

11/14/2022	3/2/2023							
days	108	hours						
work days	77	616	616	616	616	616	616	
		19%	18%	49%	35%	0%	0%	

60% Design Fee

Project Fee Proposal - AECOM Team

ASPHALT REHABILITATION OF RW 1R-19L & 10-28 AND REPLACEMENT OF CONCRETE SLABS

HCAA Project Number 7100 23

10/17/2022

Scope/Task			Principal	PM	Sr. AE	AE	Sr. Design	Sr. CADD	CADD	Admin			Total
Basic Design Services			Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours			
Task - 60% Design AECOM													
	Incorporate Comments from 30% Review			2	4	8	8						22
	Project Management		8	80						24			112
	Meetings (Biweekly - 8 each)			16	16	16							48
	Meeting Prep and Minutes			8	8	16	8			16			56
	Cost Estimates and Scheduling			8	8	8	8						32
	General Sheets			1	4	16							21
	Phasing Sheets			8	16	24	40						88
	Demolition Plans			2	4	24	24						54
	Drainage and Grading (Gradient Area Only RW 1R & TW C3)			2	2	24	8						36
	Airfield Grading (No Drainage)			2	16	40	24						82
	Drainage Details (Gradient Area Only RW 1R & TW C3)			2	8	8	8						26
	Paving Plans			2	8	40	40						90
	Pavement Design			8	16	16							40
	Pavement Details			2	8	16	40						66
	Marking Plans			1	4	16	8						29
	Marking Details			1	4	8	8						21
	Airfield Lighting Plans			4	16	16	8						44
	Airfield Circuitry Plans			2	8	16	16						42
	Airfield Lighting Details (including HH adjustments)			4	8	24	40						76
	Vault Plans and Details			1	2	8	16						27
	ALCS Modifications			4	8	8	40						60
	QA/QC AECOM Design			4	8	8							20
	Prepare 60% Technical Specifications			8	24	8				24			64
	Start Engineer's Report			8	8	8				8			32
	Start CSPP			8	8		24						40
	60% Deliverable			2	4	4	4						14
	Subtotal Hours		8.00	190.00	220.00	380.00	372.00	-	-	72.00	-		1242
	Rate		$ 110.00	$ 90.00	$ 80.00	$ 65.00	$ 60.00	$ 55.00	$ 40.00	$ 35.00	$ -		
	Subtotal Direct Labor		$ 880.00	$ 17,100.00	$ 17,600.00	$ 24,700.00	$ 22,320.00	$ -	$ -	$2,520.00	$ -		$ 85,120.00
	Subtotal Burdened Labor @			2.60									$ 221,312.00
			3/3/2023	5/4/2023									
			days	62	hours								
			work days	44	352	352	352	352	352	352			
					63%	108%	106%	0%	0%	20%			

90% Design Fee

Project Fee Proposal - AECOM Team

ASPHALT REHABILITATION OF RW 1R-19L & 10-28 AND REPLACEMENT OF CONCRETE SLABS

HCAA Project Number 7100 23

10/17/2022

Scope/Task	Principal	PM	Sr. AE	AE	Sr. Design	Sr. CADD	CADD	Admin			Total
Basic Design Services	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours			
Task - 90% Design AECOM											
											0
Incorporate Comments from 60% Review		4	8	16	16						44
Project Management	8	80						24			112
Meetings (Biweekly - 8 each)		16	16	16							48
Meeting Prep and Minutes		8	8	16	8			16			56
Cost Estimates and Scheduling		8	16	24	16						64
General Sheets		1	4	4							9
Phasing Sheets		16	16	40	40						112
Demolition Plans		2	4	8	8						22
Drainage and Grading (Gradient Area Only RW 1R & TW C3)		2	2	16	8						28
Airfield Grading (No Drainage)		2	8	40	16						66
Drainage Details (Gradient Area Only RW 1R & TW C3)		2	8	16	4						30
Paving Plans		2	8	40	40						90
Pavement Design		8	8	8							24
Pavement Details		2	8	16	40						66
Marking Plans		1	4	8	8						21
Marking Details		1	4	8	8						21
Airfield Lighting Plans		4	16	40	24						84
Airfield Circuitry Plans		2	8	16	24						50
Airfield Lighting Details (including HH adjustments)		4	8	24	24						60
Vault Plans and Details		1	2	8	16						27
ALCS Modifications		4	8	8	8						28
QA/QC AECOM Design		4	8	8							20
Prepare 90% Technical Specifications & HCAA front end		8	8	16				24			56
Submit Draft Engineer's Report		16	16	16				24			72
Submit Draft CSPP		8	8		24						40
90% Deliverable		2	4	4	4						14
											0
Subtotal Hours	8.00	208.00	208.00	416.00	336.00	-	-	88.00	-		1264
Rate	$ 110.00	$ 90.00	$ 80.00	$ 65.00	$ 60.00	$ 55.00	$ 40.00	$ 35.00	$ -		
Subtotal Direct Labor	$ 880.00	$ 18,720.00	$ 16,640.00	$27,040.00	$20,160.00	$ -	$ -	$ 3,080.00	$ -		$ 86,520.00
Subtotal Burdened Labor @		2.60									$ 224,952.00

5/5/2023	7/6/2023							
days	62	hours						
work days	44	352	352	352	352	352	352	
		59%	118%	95%	0%	0%	25%	

100% Design Fee

Project Fee Proposal - AECOM Team

ASPHALT REHABILITATION OF RW 1R-19L & 10-28 AND REPLACEMENT OF CONCRETE SLABS

HCAA Project Number 7100 23

10/17/2022

Scope/Task	Principal	PM	Sr. AE	AE	Sr. Design	Sr. CADD	CADD	Admin			Total
Basic Design Services	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours			
Task - 100% Design AECOM											
Incorporate Comments from 90% Review		4	8	8	8						28
Project Management	8	60						16			84
Meetings (Biweekly - 8 each)		16	16	16							48
Meeting Prep and Minutes		8	8	16	8			16			56
Cost Estimates and Scheduling		8	16	16	8						48
General Sheets		1	4	4	4						13
Phasing Sheets		4	4	8	8						24
Demolition Plans		1	4	4	4						13
Drainage and Grading (Gradient Area Only RW 1R & TW C3)		1	2	4	8						15
Airfield Grading (No Drainage)		1	8	8	8						25
Drainage Details (Gradient Area Only RW 1R & TW C3)		1	8	8	4						21
Paving Plans		1	8	8	8						25
Pavement Design		2	2								4
Pavement Details		1	8	8	8						25
Marking Plans		1	4	4	4						13
Marking Details		1	4	4	4						13
Airfield Lighting Plans		1	8	8	8						25
Airfield Circuitry Plans		1	8	8	8						25
Airfield Lighting Details (including HH adjustments)		1	8	8	8						25
Vault Plans and Details		1	2	8	8						19
ALCS Modifications		1	8	8	8						25
QA/QC AECOM Design		4	8	8							20
Prepare 100% Technical Specifications		8	8	8				8			32
Prepare 100% Front End Specifications		8	8	8				24			48
Submit Final Engineer's Report		8	8	8				8			32
Submit Final CSPP		8	8		8						24
100% Deliverable		2	4	4	4						14
											0
Subtotal Hours	8.00	154.00	182.00	192.00	136.00	-	-	72.00	-		744
Rate	$ 110.00	$ 90.00	$ 80.00	$ 65.00	$ 60.00	$ 55.00	$ 40.00	$ 35.00	$ -		
Subtotal Direct Labor	$ 880.00	$ 13,860.00	$ 14,560.00	$ 12,480.00	$ 8,160.00	$ -	$ -	$2,520.00	$ -		$ 52,460.00
Subtotal Burdened Labor @		2.60									$ 136,396.00

	7/7/2023	10/30/2023						
	days	115	hours					
	work days	82	656	656	656	656	656	656
			28%	29%	21%	0%	0%	11%

Bid and Award Fee

Project Fee Proposal - AECOM Team

ASPHALT REHABILITATION OF RW 1R-19L & 10-28 AND REPLACEMENT OF CONCRETE SLABS

HCAA Project Number 7100 23

10/17/2022

Scope/Task			Principal	PM	Sr. AE	AE	Sr. Design	Sr. CADD	CADD	Admin			Total
Basic Design Services AECOM			Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours			
Task - Bid & Award Services													
Advertisement and Bidding assistance				8									8
Assist in Addenda Preparation				8	8	8	8						32
Attend PreBid Conference				8	8								16
Evaluate Bids & Recommend Award				8	8	4							20
Conformed Documents				2	16	24	40						82
Subtotal Hours			-	34.00	40.00	36.00	48.00	-	-	-	-		158
Rate			$ 110.00	$ 90.00	$ 80.00	$ 65.00	$ 60.00	$ 55.00	$ 40.00	$ 35.00	$ -		
Subtotal Direct Labor			$ -	$ 3,060.00	$ 3,200.00	$ 2,340.00	$ 2,880.00	$ -	$ -	$ -	$ -		$ 11,480.00
Subtotal Burdened Labor @				2.60									$ 29,848.00

Construction Administration Fee

Project Fee Proposal - AECOM Team

ASPHALT REHABILITATION OF RW 1R-19L & 10-28 AND REPLACEMENT OF CONCRETE SLABS

HCAA Project Number 7100 23

10/17/2022

Scope/Task			Principal	PM	Sr. AE	AE	Sr. Design	Sr. CADD	CADD	Admin			Total
Basic Design Services AECOM			Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours			
Task - CA Services													
Attend PreConstruction Conference				8	8								16
Weekly Contractor's Meeting & Site Visit (52 Assumed)			8	260	130	130							528
Construction Changes & Change Orders			2	40	60	40	80						222
Review Shop Drawings				24	40	80	40						184
Review and Respond to RFI's				48	48	48							144
Review and Approve Contractor Pay Request				15									15
Review & Comment Contractor Construction Schedule				24									24
Prepare Construction Management Plan				4	16	16	16						52
Review and assist with Materials Testing			2	24	16	16	16						74
Review Contractor's Safety Plan and Compliance Doc				2	2	4							8
Perform substantial and final inspections				24	24	24							72
Prepare as-builts from contractor markups				8	24	40	80						152
Assist in obtaining close-out documents			2	8	16								26
													0
													0
Subtotal Hours			14.00	489.00	384.00	398.00	232.00	-	-	-	-		1517
Rate			$ 110.00	$ 90.00	$ 80.00	$ 65.00	$ 60.00	$ 55.00	$ 40.00	$ 35.00	$ -		
Subtotal Direct Labor			$ 1,540.00	$ 44,010.00	$ 30,720.00	$25,870.00	$ 13,920.00	$ -	$ -	$ -	$ -		$ 116,060.00
Subtotal Burdened Labor @				2.60									$ 301,756.00

Northwest Surveying, Inc.
A certified MBE/DBE/SBE Corporation
8409 Sunstate Street. Tampa, Florida 33634-1309
(813) 889-9236; Fax: (813) 886-3315
www.nsitampa.com

September 26, 2022

Mr. Dennis Combs, PE
Aecom
7650 West Courtney Campbell Causeway, Suite 700
Tampa, Florida 33607-1462

RE: TPA Asphalt Rehab R/W 1R-19L 10-28 & Concrete Slab Replacement
NSI Proposal No. 220503

Dear Mr. Combs:

Thank you for the opportunity to submit this proposal for surveying services at the above referenced project.

The scope of work included in this proposal is a limited topographic survey along with establishing photo identifiable ground control for the scanning of Runways 1R and 10/28.

Specifically, we will establish the XY&Z coordinates on runway striping sufficient for the runway and connector scanning limits as shown on your exhibit attached hereto.

We will perform cross sections at 100' intervals from the runway edge of pavement to 50' out on both sides of the runways and locate all topographic features within the 50' limits described.

We will also perform a detailed topographic survey of the island area at Runway 1R and Taxiway C3 utilizing a 15' grid.

The horizontal datum will be NAD 83/2011 adjustment and the vertical datum will be NAVD88.

We will require a 1-day runway closure for Runway 1R from 7:00 AM to 6:00 PM and soon after, a 1-day closure for Runway 10-28 from 7:00 AM to 4:00 PM at which time we will mobilize 2 crews to expedite and complete the runway work. The scanning will be performed simultaneously during the same closure periods thereby limiting the disruption of airport operations.

We will require 4 days to perform the topographic work from the edge of pavement to 50' out along 1R and 2 days along 10/28. This work can be done on a pull-back basis.

Our fee to perform the surveying services discussed above will be a LUMP SUM of	$38,580.00.
The scanning fees from GbD Geospatial will be a LUMP SUM of	$43,000.00
TOTAL	**$81,580.00**

We will require 4 weeks from your notice to proceed date to complete the survey and submit an Autocad Civil 3D file and a digitally signed PDF map.

All of the work will be performed under the direct supervision of a Professional Land Surveyor and will meet or exceed the Standards of Practice as set forth by the Florida Board of Professional Surveyors and Mappers in Chapter 5J17.050 to 5J17.052, Florida Administrative Code, pursuant to Section 472.027 Florida Statutes.

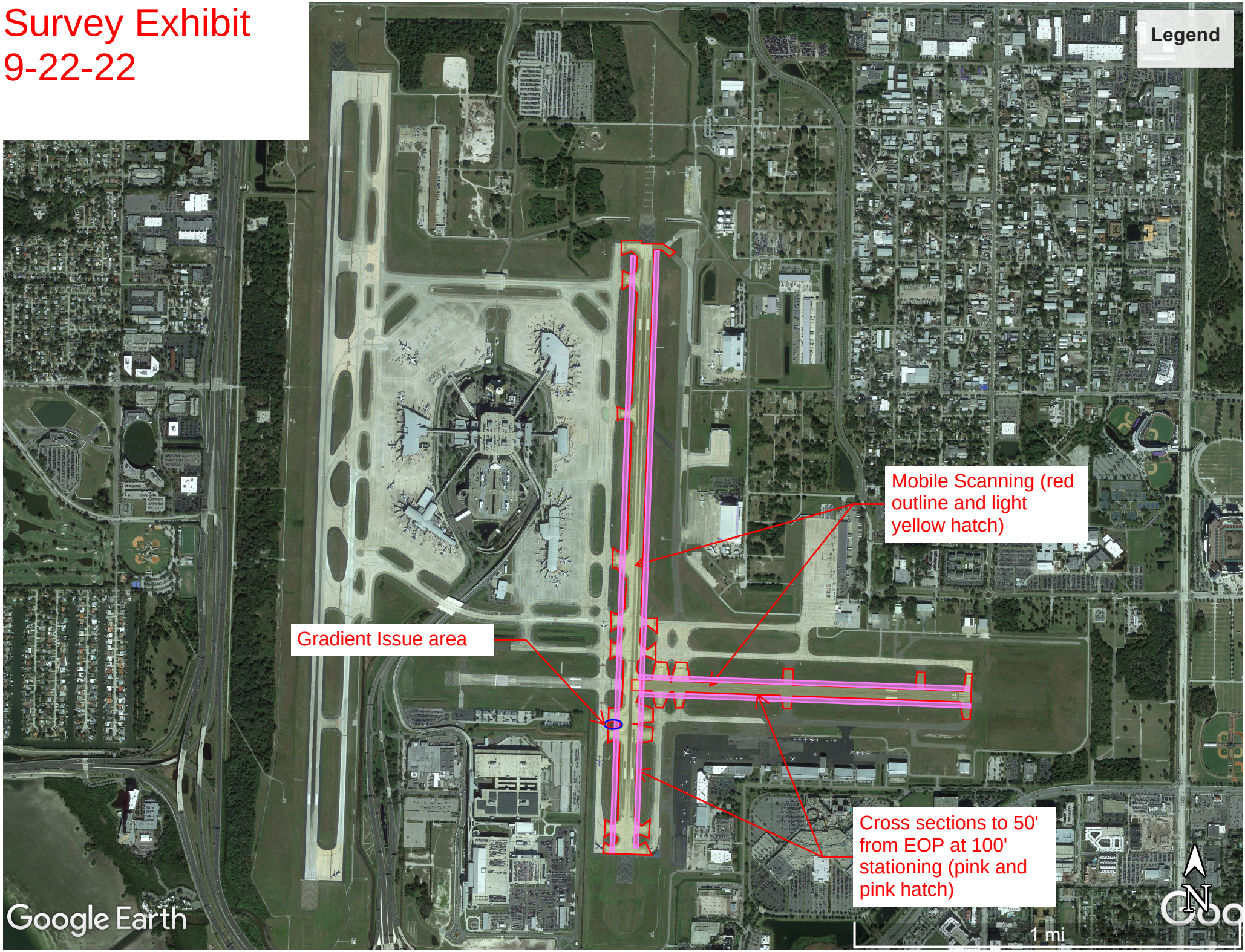
If you have any questions, please do not hesitate to contact our office.

Sincerely,

NORTHWEST SURVEYING, INC.

Gerald Silva, PSM
President

Survey Exhibit
9-22-22



TIERRA

October 3, 2022

AECOM
7650 W. Courtney Campbell Causeway
Tampa, FL 33607

Attn: Mr. Dennis Combs, PE

Re: Geotechnical Fee Proposal
Runway 10-28 and 1R-19L Pavement Evaluation
Tampa International Airport
Hillsborough County
HCAA project No. 7100 23
Tierra Project No. 6511-22-288

Mr. Combs:

Thank you for the opportunity to be part of the AECOM Team on the referenced project. The project includes the evaluation of the existing Runway 10-28 and 1R-19L for rehabilitation. Attached herein is our fee proposal for the Geotechnical Design services to support the proposed project.

GEOTECHNICAL PROJECT APPROACH

Based on the review of the published geotechnical data and information provided by AECOM, Tierra will complete the required geotechnical services for the project in accordance with the HCAA project requirements/criteria and our engineering judgment.

The geotechnical services anticipated to support the design and construction of the project are summarized as follows:

- Conduct a visual reconnaissance of the project site and coordinate utility clearance.
- Perform pavement cores, Dynamic Cone Penetrometer (DCPs), and hand auger borings to provide design information for the pavement areas. Our field work will consist of the following:
    - Perform a total of 13 asphalt pavement cores along Runway 10-28 and at the four asphalt connectors with a DCP and a hand auger to a depth on the order of 5 feet to evaluate the sub-base and subgrade conditions.
    - Perform a total of 12 asphalt pavement cores along Runway 1R-19L with a DCP and a hand auger to a depth on the order of 5 feet to evaluate the sub-base and subgrade conditions.
    - Perform on the order of 15 hand auger borings to a depth of approximately 5 feet to evaluate near-surface soils and to estimate the Seasonal high ground water table along the runway alignments.
- Visually classify recovered pavement and soil samples in the laboratory. Perform laboratory tests on selected representative samples to develop the soil legend for the project using the USCS. The laboratory testing will likely include grain size analyses, Atterberg Limit testing, organic and natural moisture content determination and corrosion series testing, as required.

- Perform engineering evaluations and analyses to develop geotechnical recommendations for the evaluation of the existing pavement area and recommendations to support the pavement design.
- Provide signed and sealed geotechnical reports that summarize our geotechnical study including the field and laboratory test results, the engineering evaluations and analyses, and the geotechnical recommendations for the design and construction of the project.

FEE ESTIMATE - DESIGN SERVICES

It is estimated fee for performance of the above-outlined services is **$23,838.61** based on Tierra's attached Fee Schedule. We will provide you with verbal results of tested conditions and immediately notify you should conditions impacting our scope, schedule, or cost of services occur. The proposal is based on the assumption that no hazardous materials exist on-site that would impact our investigation.

This proposal is based on the assumption that HCAA will permit us to work freely along Runway 10-28 during times they will shut the runway down.

We appreciate the opportunity to offer our services to you. We look forward to working with you once again. Should you have any questions with regard to this proposal, please do not hesitate to contact this office.

Respectfully Submitted,

TIERRA, INC.

Marc E. Novak, Ph.D., P.E.
Senior Geotechnical Engineer

Susan E. Fries, P.E.
Geotechnical Engineer

Attachment:

2021 Fee Schedule

Item Description	Unit	Unit Price	Quantity	Total
101-Aggregate Carbonates & Organic Matter FM 5-514	Test	$ 127.10		$ -
102-Aggregate Org. Impurities S& for Concrete AASHTO T21	Test	$ 49.15		$ -
103-Aggregate Shell Content of Coarse Aggregate FM 5-555	Test	$ 85.00		$ -
104-Aggregate Sieve Anlsys of Fine & Coarse AASHTO T27	Test	$ 65.33		$ -
105-Aggregate Soundness AASHTO T104	Test	$ 290.63		$ -
106-Aggregate Specific Gravity/Absorption Coarse AASHTO T85	Test	$ 83.54		$ -
107-Aggregate Total Moisture Content by Drying AASHTO T255	Test	$ 35.00		$ -
108-Aggregate Unit Mass & Voids AASHTO T19	Test	$ 55.00		$ -
109-Aggregate Specific Gravity/Absorption Fine AASHTO T84	Test	$ 95.00		$ -
200-Asphalt Bulk Specific Gravity FM 1-T166	Test	$ 50.00		$ -
201-Asphalt Content FM 5-563	Test	$ 137.22	4	$ 548.88
204-Asphalt Gradation FM 1-T030	Test	$ 80.53	4	$ 322.12
206-Asphalt Los Angeles (LA) Abrasion Coarse Agg FM 3-C535	Test	$ 330.38		$ -
207-Asphalt Los Angeles (LA) Abrasion Small Agg FM 1-T096	Test	$ 297.00		$ -
209-Asphalt Pavement Coring – 4” dia with Base Depth Check	Each	$ 120.00	25	$ 3,000.00
210-Asphalt Pavement Coring – 4” dia without Base Depth Check	Each	$ 110.00		$ -
211-Asphalt Pavement Coring – 6” dia with Base Depth Check	Each	$ 125.00		$ -
212-Asphalt Pavement Coring – 6” dia without Base Depth Check	Each	$ 115.00		$ -
300-Concrete Beam Flexural Testing ASTM C78	Test	$ 52.79		$ -
301-Concrete Compressive Strength of Grout\Mortar ASTM C109	Test	$ 29.70		$ -
302-Concrete Cylinder Curing, Capping & Breaking ASTM C39	Test	$ 29.49		$ -
303-Concrete Drilled Cores & Sawed Beams ASTM C42	Test	$ 56.49		$ -
305-Concrete Pavement Coring - 4" Dia	Each	$ 163.45		$ -
306-Concrete Pavement Coring - 6" Dia	Each	$ 197.70		$ -
401-Geo Auger Borings- Hand & Truck/Mud Bug	LF	$ 10.59	200	$ 2,118.00
402-Geo Auger Borings- Track	LF	$ 13.53		$ -
403-Geo Backhoe (Owned)	Day	$ 930.00		$ -
405-Geo Barge (Owned)	Day	$ 2,650.00		$ -
407-Geo Chainsaw (Owned)	Day	$ 55.00		$ -
415-Geo Double Ring Infiltration ASTM D3385	Each	$ 518.75		$ -
416-Geo Dozer (Owned)	Day	$ 910.00		$ -
418-Geo Drill Crew Support Vehicle	Day	$ 165.46	2	$ 330.92
422-Geo Extra SPT Samples-Barge/Track/Amphibious 000-050 Ft	Each	$ 61.65		$ -
423-Geo Extra SPT Samples-Barge/Track/Amphibious 050-100 Ft	Each	$ 67.70		$ -
424-Geo Extra SPT Samples-Barge/Track/Amphibious 100-150 Ft	Each	$ 84.08		$ -
425-Geo Extra SPT Samples-Barge/Track/Amphibious 150-200 Ft	Each	$ 94.99		$ -
427-Geo Extra SPT Samples-Truck/Mud Bug 000-050 Ft	Each	$ 49.59		$ -
428-Geo Extra SPT Samples-Truck/Mud Bug 050-100 Ft	Each	$ 54.50		$ -
429-Geo Extra SPT Samples-Truck/Mud Bug 100-150 Ft	Each	$ 69.55		$ -
430-Geo Extra SPT Samples-Truck/Mud Bug 150-200 Ft	Each	$ 79.37		$ -
432-Geo Field Permeability 0-10 Ft (Open - End Borehole Method)	Each	$ 314.00		$ -
434-Geo Ground Penetrating Radar (GPR)	Hour	$ 285.00	8	$ 2,280.00
435-Geo Grout Boreholes- Barge/Track/Amphibious 000-050 Ft	LF	$ 8.09		$ -
436-Geo Grout Boreholes- Barge/Track/Amphibious 050-100 Ft	LF	$ 10.35		$ -
437-Geo Grout Boreholes- Barge/Track/Amphibious 100-150 Ft	LF	$ 14.27		$ -
438-Geo Grout Boreholes- Barge/Track/Amphibious 150-200 Ft	LF	$ 19.33		$ -
440-Geo Grout Boreholes- Truck/Mud Bug 000-050 Ft	LF	$ 5.93		$ -
441-Geo Grout Boreholes- Truck/Mud Bug 050-100 Ft	LF	$ 7.27		$ -
442-Geo Grout Boreholes- Truck/Mud Bug 100-150 Ft	LF	$ 10.00		$ -
443-Geo Grout Boreholes- Truck/Mud Bug 150-200 Ft	LF	$ 13.25		$ -
445-Geo Grouted Monitor Well 2" 000-050 Ft	LF	$ 31.93		$ -
450-Geo Piezometer 2" 000-050 Ft	LF	$ 39.55		$ -
453-Geo Rock Coring Barge/Track/Amphibious 000-050 Ft less than 4" ID	LF	$ 55.04		$ -
455-Geo Rock Coring Barge/Track/Amphibious 050-100 Ft less than 4" ID	LF	$ 67.53		$ -

Item Description	Unit	Unit Price	Quantity	Total
457-Geo Rock Coring Barge/Track/Amphibious 100-150 Ft less than 4" ID	LF	$ 79.51		$ -
459-Geo Rock Coring Barge/Track/Amphibious 150-200 Ft less than 4" ID	LF	$ 93.15		$ -
463-Geo Rock Coring Truck/Mud Bug 000-050 Ft less than 4" ID	LF	$ 41.84		$ -
465-Geo Rock Coring Truck/Mud Bug 050-100 Ft less than 4" ID	LF	$ 48.71		$ -
467-Geo Rock Coring Truck/Mud Bug 100-150 Ft less than 4" ID	LF	$ 57.31		$ -
473-Geo SPT Barge/Track/Amphibious 000-050 Ft	LF	$ 20.83		$ -
474-Geo SPT Barge/Track/Amphibious 050-100 Ft	LF	$ 26.68		$ -
475-Geo SPT Barge/Track/Amphibious 100-150 Ft	LF	$ 41.80		$ -
476-Geo SPT Barge/Track/Amphibious 150-200 Ft	LF	$ 53.91		$ -
478-Geo SPT Truck-Mud Bug 0-50 Ft	LF	$ 14.38		$ -
479-Geo SPT Truck-Mud Bug 50-100 Ft	LF	$ 17.08		$ -
480-Geo SPT Truck-Mud Bug 100-150 Ft	LF	$ 25.83		$ -
481-Geo SPT Truck-Mud Bug 150-200 Ft	LF	$ 32.57		$ -
483-Geo Temp Casing 3" Barge/Track/Amphibious 0-050 Ft	LF	$ 12.59		$ -
484-Geo Temp Casing 3" Barge/Track/Amphibious 50-100 Ft	LF	$ 15.46		$ -
485-Geo Temp Casing 3" Barge/Track/Amphibious 100-150 Ft	LF	$ 18.37		$ -
486-Geo Temp Casing 3" Barge/Track/Amphibious 150-200 Ft	LF	$ 23.19		$ -
488-Geo Temp Casing 3" Truck/Mud Bug 000-050 Ft	LF	$ 8.84		$ -
489-Geo Temp Casing 3" Truck/Mud Bug 050-100 Ft	LF	$ 11.43		$ -
490-Geo Temp Casing 3" Truck/Mud Bug 100-150 Ft	LF	$ 14.16		$ -
491-Geo Temp Casing 3" Truck/Mud Bug 150-200 Ft	LF	$ 18.09		$ -
515-Geo Undisturbed Samples Barge/Track/Amphibious 000-050 Ft	Each	$ 199.55		$ -
516-Geo Undisturbed Samples Barge/Track/Amphibious 050-100 Ft	Each	$ 218.41		$ -
517-Geo Undisturbed Samples Barge/Track/Amphibious 100-150 Ft	Each	$ 248.57		$ -
518-Geo Undisturbed Samples Barge/Track/Amphibious 150-200 Ft	Each	$ 282.25		$ -
519-Geo Undisturbed Samples Truck/Mud Bug 000-050 Ft	Each	$ 169.79		$ -
520-Geo Undisturbed Samples Truck/Mud Bug 050-100 Ft	Each	$ 175.19		$ -
521-Geo Undisturbed Samples Truck/Mud Bug 100-150 Ft	Each	$ 198.17		$ -
522-Geo Undisturbed Samples Truck/Mud Bug 150-200 Ft	Each	$ 230.92		$ -
525-Geo Well Development	Hour	$ 157.61		$ -
531-Geo Truck/Mudbug Drill Rig and Crew (2-person)	Hour	$ 190.00		$ -
532-Geo Truck/Mudbug Drill Rig and Crew (3-person)	Hour	$ 260.00		$ -
533-Geo Track/Barge Drill Rig and Crew (2-person)	Hour	$ 190.00		$ -
534-Geo Track/Barge Drill Rig and Crew (3-person)	Hour	$ 260.00		$ -
535-Geo Clearing Equip- Tractor, Bush Hog Attachment	Day	$ 1,400.00		$ -
536-Geo Clearing Equip-Skid Steer/ASV, ForestMulching Attach	Day	$ 1,600.00		$ -
537-Geo Clearing Equip-Skid Steer/ASV, Brush Cutter Attach	Day	$ 1,600.00		$ -
538-Geo Clearing Equipment	Day	$ 2,007.50		$ -
539-Geo Wash Boring for Rock Cores 0-50 Ft	LF	$ 9.53		$ -
540-Geo Wash Boring for Rock Cores 50-100 Ft	LF	$ 11.75		$ -
541-Geo Wash Boring for Rock Cores 100-150 Ft	LF	$ 17.67		$ -
603-Mobilization Asphalt Coring equipment	Each	$ 337.26	2	$ 674.52
606-Mobilization Concrete Coring	Each	$ 331.55		$ -
608-Geo Mobilization Drill Rig - Amphibious	Each	$ 8,963.39		$ -
609-Geo Mobilization Drill Rig Barge Mount	Each	$ 8,234.24		$ -
610-Geo Mobilization Drill Rig Track Mount	Each	$ 2,287.77		$ -
612-Geo Mobilization Drill Rig Truck Mount	Each	$ 489.52		$ -
614-Geo Mobilization Mudbug/All Terrain Vehicle	Each	$ 724.00		$ -
618-Geo Mobilization Support Boat	Each	$ 500.00		$ -
619-Geo Mobilization Tri-Pod	Each	$ 1,107.67		$ -
620-Geo Mobilization of Clearing Equipment	Each	$ 600.00		$ -
701-MOT Attenuator Truck	Hour	$ 190.90		$ -
702-MOT Channelizing Devices - Type I, II, VP, Drum (each)	Each	$ 4.65		$ -
706-MOT Portable Sign	Each	$ 43.00		$ -

Item Description	Unit	Unit Price	Quantity	Total
708-MOT Provide Channelizing Devices - Cone	Each	$ 3.88		$ -
710-MOT Shadow Vhcle w/ Adv. Warning Arrow & Attenuator	Hour	$ 218.64		$ -
712-MOT Support Vehicle	Hour	$ 110.41		$ -
800-Soils Chloride Soil or Water (FM 5-552)	Test	$ 69.64		$ -
803-Soils Consolidation - Constant Strain (ASTM D4186)	Test	$ 547.69		$ -
804-Soils Consolidation - Extended Load Increments (AASHTO T216)	Day	$ 150.00		$ -
805-Soils Corrosion Series (FM 5-550 through 5-553)	Test	$ 226.73	2	$ 453.46
806-Soils Direct Shear Consolidated Drained/ Point AASHTO T 236	Test	$ 350.00		$ -
810-Soils Limerock Bearing Ratio (LBR)(FM 5-515)	Test	$ 350.00		$ -
811-Soils Liquid Limit (AASHTO T 89)	Test	$ 60.00	4	$ 240.00
812-Soils Materials Finer than 200 Sieve (FM 1-T011)	Test	$ 43.59	10	$ 435.90
817-Soils Moisture Content Laboratory (AASHTO T 265)	Test	$ 14.65	5	$ 73.25
819-Soils Organic Content Ignition (FM 1 T-267)	Test	$ 44.11	1	$ 44.11
821-Soils Particle Size Analysis (AASHTO T 88) (Including Hydrometer)	Test	$ 170.91		$ -
822-Soils Particle Size Analysis (AASHTO T 88) (No Hydrometer)	Test	$ 69.48	2	$ 138.96
823-Soils Permeability Constant Head (AASHTO T 215)	Test	$ 280.00		$ -
824-Soils Permeability Falling Head (FM 5-513)	Test	$ 289.64		$ -
825-Soils pH Soil or Water (FM 5-550)	Test	$ 39.00		$ -
826-Soils Plastic Limit & Plasticity Index (AASHTO T 90)	Test	$ 61.26	4	$ 245.04
827-Soils Proctor Modified (FM 1-T 180)	Test	$ 120.00		$ -
828-Soils Proctor Standard (AASHTO T 99)	Test	$ 115.00		$ -
829-Soils Resistivity Soil or Water (FM 5-551)	Test	$ 54.89		$ -
832-Soils Splitting Tensile Strength of Rock Cores (ASTM D3967)	Test	$ 134.77		$ -
833-Soils Sulfate Soil or Water (FM 5-553)	Test	$ 60.45		$ -
838-Soils Unconfined Compression - Rock (ASTM D7012, Method C)	Test	$ 136.06		$ -
Professional Services				
Chief Engineer 2	Hour	$ 219.60	3	$ 658.80
Chief Scientist	Hour	$ 166.06		$ -
Engineer 1	Hour	$ 145.19	16	$ 2,323.04
Engineering Intern	Hour	$ 103.28	22	$ 2,272.16
Engineering Technician	Hour	$ 82.71	22	$ 1,819.62
Principal Engineer	Hour	$ 226.88	2	$ 453.76
Secretary/Clerical	Hour	$ 88.44	5	$ 442.20
Senior Designer	Hour	$ 118.83	11	$ 1,307.13
Senior Engineer 1	Hour	$ 187.34	11	$ 2,060.74
Senior Engineering Technician	Hour	$ 99.75	16	$ 1,596.00
Senior Scientist	Hour	$ 141.22		$ -
	Total Estimated Fee			**$ 23,838.61**

TIERRA

October 3, 2022

AECOM
7650 W. Coutney Campbelll Causeway
Tampa, Florida 33607-1462
Attention: Mr. Dennis Combs, P.E. dennis.combs@aecom.com

RE: Quality Assurance Construction Materials Testing Proposal
Runway 1R-19L and RW 10-28 Pavement Reahbilitation
Tampa International Airport (TPA)
HCAA No. 7100-23
Tierra Proposal No: 61-22-177

Mr. Combs:

Tierra, Inc. appreciates the opportunity to submit the attached proposal to provide Quality Assurance construction inspection and materials testing services for the above-referenced project.

Project Information

The project consists of three phases summarized as follows:

1. Runway 1R-19L – Asphalt mill and overlay on non-keel section of runway – Approximately 7,500 LF – Estimated 4,800 tons of P-401 asphalt

2. Runway 10-28 Asphalt Mill and Overlay – Approximately 4,500 LF – Estimated 8,300 tons of P-401 asphalt.

3. Airfield Slab Rehabilitation – Approximately 120 ± concrete slabs – Estimated 50 concrete pours which will be considered its own lot. Based on previous experience each removed concrete slab will require a density test of the subgrade, replacement of the P-306 lean concrete base and replacement of the P-501 concrete

All services will be performed based on a will call, as scheduled by your duly appointed representative.

Scope of Services

- Perform P-152 soil density testing in the field and laboratory Proctors and soil classification testing during concrete slab replacement subgrade repair.

- Perform field testing of the plastic properties and compression testing of lean concrete specimens (P-306) placed in concrete slab replacement.

- Perform field testing and flexural strength testing of P-501 concrete pavement placed in slab replacement.

- Perform QA testing at the asphalt plant during new asphalt paving operations by P-401specifications. We have not included any field inspection personnel during paving.

We assume the previously used versions of the P-306 and P-501 specifications will be utilized for this project which requires the contractor quality control to cast and transport P-306 and P-501 test specimens.

Please see the attached Schedule “A” for our estimate of the different services we anticipate will be required. This estimate is based our experience with similar projects.

Assumptions Made for this Estimate

1. A total of 13.100 tons of P-401 asphalt will be paved. We assume an average production rate of 500 tons per day. Therefore, we estimate 27 days of paving.

2. We assume 50 concrete placements to complete the replacement concrete panels therefore 50 visits to the site each for soil density tests P-152, test P-306 lean concrete and P-501 pavement concrete.

3. As on previous TIA projects Contractor Quality Control will cast the flexural strength beams and deliver to the QA laboratory.

4. Each set of P-306 cylinders and P-501 beams will consist of 4 specimens tests, 2 at 7 days and 2 at 28 days of age.

Service Fee

The total estimated fee to perform the proposed scope of services for each of the three schedules is attached. The technician hours and laboratory test quantities estimated are based solely on our experience. The actual work progress and scheduling is solely controlled by the contractor. Tierra has no control over the final personnel-hours or test quantities however we will invoice for actual services provided only.

We appreciate the opportunity to offer our services to AECOM and HCAA and we look forward to working with you on the project. Should you have any questions regarding this proposal, please do not hesitate to contact this office.

Respectfully submitted,

TIERRA, INC.

Manuel J. Valdes
Construction Services Manager

Attachments: Schedule of Services and Fees

Client: **AECOM**
Project Name: **RW 1R-19L and RW 10-28 Pavement Rehabilitation**
County: **Tampa International Airport**
Tierra Proposal. No.: **61-22-177**
HCAA Project No: **7100 23**

Construction Materials Testing Services Fees ESTIMATED

Description of Services	Unit Meas.	Unit Rate	Est. Quan.	Estimated Fess
Certified Concrete / Earthwork Inspector	HR	$71.75	800	$57,400.00
CTQP Certified Asphalt Plant Inspector	HR	$74.85	324	$24,251.40
Project Manager	HR	$100.00	45	$4,500.00
Senior Engineer	HR	$160.00	20	$3,200.00
LABORATORY TESTS				
Compression Tests of P-306 Test Cylinders	EA	$15.00	200	$3,000.00
Flexural Strength of Beams, P-501	EA	$35.00	200	$7,000.00
P-152 Modified Proctor	EA	$120.00	4	$480.00
P-152 Soil Classification Tests	EA	$150.00	4	$600.00

TOTAL ESTIMATED FEES **$100,431.40**

FDOT Laboratory No.: IO7007

Runway 1R-19L & TW C Pavement Study

Tampa International Airport

Prepared by:

AECOM

Scope of Services for:

HCAA Project Number 7100 23

Asphalt Rehabilitation of Runways 1R-19L & 10-28 and Replacement of Concrete Slabs (Runway 1R-19L & TW C Pavement Study)

Tampa International Airport

Prepared by:

AECOM

October 17, 2022

SCOPE OF SERVICES
Airfield Pavement Evaluation for Runway 1R-19L & TW C Pavement Study (with add alternate for Runway 1L-19R)

1. INTRODUCTION

This scope of services consists of a pavement evaluation to assist the Hillsborough County Aviation Authority (Authority) with establishing the requirements and optimum timing for rehabilitation projects for Runway 1R-19L (formerly designated 18L-36R) and parallel Taxiway C and the requirements and optimum timing for a full runway and taxiway system reconstruction project.

Runway 1R-19L and parallel Taxiway C is currently identified in the Authority's CIP as being reconstructed in a timeframe beyond FY37. The Authority ongoing approach has been to routinely conduct pavement rehabilitation projects, similar to the one that AECOM is preparing to design for Runway 1R-19L and other airfield-wide areas, consisting of miscellaneous slab removal and replacement, spall repairs, joint seal replacement, etc. to keep the pavements safe and operational.

However, over the past several years, Authority has observed an increased rate of pavement failures on Runway 1R-19L and parallel Taxiway C. The failures primarily consist of concrete pavement spalls, pumping, cracked slabs and dis-bonding, and expulsion of joint sealant predominantly on the southern end of the runway/taxiway system. Remedial type repairs are being conducted on an ongoing basis by Authority Maintenance staff to keep the runway safe and operational, but the Authority has expressed concern regarding the high number, grouping and the apparent rate of the slab failures.

The Authority has requested that AECOM conduct an investigation of the pavement condition and make recommendations as to the cause of the pavement failures, recommended repairs, and timing of the repairs. The analysis is anticipated to include visual inspections, non-destructive testing, subsurface geotechnical investigation, and any other methods necessary to determine actual pavement condition and issues.

2. KICK OFF MEETING AND COORDINATION MEETINGS

The project initiation task will include a one-day project kick-off meeting to discuss project details, scope, and work schedule with Airport staff; and gather historical information and records available. This task will help AECOM get a more comprehensive understanding of the information available and specific project goals. This task includes an additional 2 meetings to discuss progress, review draft reports, or other technical findings.

At the kick-off meeting the following items will be discussed:
- Overview of project activities and schedule
- Review available information and the format (electronic or hardcopy)
- Field visit, testing schedule and logistics

Deliverables:
- Meeting minutes from the kick-off meeting
- 2 additional meetings and meeting minutes
- Monthly Progress Updates with Invoicing

3. RECORD DRAWING REVIEW / VERIFICATION

In this task, AECOM will review any available previous reports and studies performed on Runway 1R-19L and Taxiway C. This includes the pavement engineering analysis reports generated by RS&H in 2018, 2021, and memo 2022. Historical drawings and as-builts available will also be reviewed. The results from these reports will be summarized and utilized in this study along with the findings generated as part of this scope of services.

Deliverable:

- Summary of findings from previous reports and studies

4. VISUAL PAVEMENT CONDITION SITE VISIT

AECOM pavement engineers will perform a walk through to assess the current surface condition and record areas of concern in the fall of 2022. This will help get an overall understanding of the pavement condition and surrounding areas that will assist with generating maintenance and repair recommendations. This is anticipated to occur during day light hours to allow clear vision of the areas. AECOM assumes runway closure and escorts will be provided by the airport.

Deliverable:

- Summary of condition findings for area reviewed.

5. NON-DESTRUCTIVE TESTING USING HEAVY WEIGHT DEFLECTOMETER (HWD) AND STRUCTURAL ANALYSIS

Non-destructive testing will be completed by sub-consultant, Applied Research Associates (ARA) using their Heavy Weight Deflectometer (HWD) in accordance with FAA AC 150/5370-11B. HWD testing will be staggered between the lines to increase the coverage of each feature. Test loads will be determined based on the design aircraft mix and applied at each point unless deflections are excessive. GPR and Load transfer testing will also occur during the same time which will provide continuous subsurface layer data. This testing is proposed to occur during the wet season to assess the pavement strength under severe climate conditions. AECOM assumes runway closure and escorts will be provided by the airport.

Data analysis will include back calculation of impulse stiffness modulus, determination of remaining structural life, and Pavement Classification Rating (PCR). Data analysis will rely on material thickness data that will be determined in Task 5 – Geotechnical Investigation. AECOM will review the results provided by ARA to recommend maintenance and repair.

Deliverable:

- Structural Testing Report summarizing findings

6. PCI LEVEL INSPECTION AND REPORT (RUNWAY 1R-19L AND TW C)

AECOM will complete a pavement condition index (PCI) inspection of Runway 1R-19L and TW C as part of the study. The PCI inspection will provide an additional point of reference for year-over-year deterioration of the pavements (i.e. 2022 to 2023). The inspections are planned to be completed during the non-destructive testing timeframe which is anticipated to be in June/July of 2023 as shown in the project schedule and discussed here-in. AECOM assumes runway closure and escorts will be provided by the airport. The following tasks are understood to be part of the inspection, analysis and reporting.

6.1 - Records Review and Collection of Work History Information

In this task, pavement construction, rehabilitation, and maintenance history information for airside pavements will be researched and documented to determine what construction work has been completed since the 2022 PCI survey (By Others). AECOM will then utilize the updated work history to update the existing pavement management database and GIS maps and update the pavement sectioning accordingly.

AECOM assumes that the Micropaver (.E70) file and Paver geodatabase (.GDB) will be provided by the Airport prior to the PCI inspections so that it can be reviewed and updated with limited effort.

Deliverables:

- Updated pavement management database with inventory and map

6.2 PCI Inspections

AECOM will collect pavement distress data for Runway 1R-19L and Taxiway C pavements in order to calculate the Pavement Condition Index (PCI) using the PAVER software.

AECOM will conduct the survey in conjunction with the nondestructive testing in summer of 2023. Throughout the inspections, inspectors will wear brightly colored safety vests and carry cellular phones in case of emergency. In conducting the PCI surveys, AECOM will utilize a 2-person survey team.

The inspection team will work from airport network definition maps developed in earlier tasks. These maps will show representative dimensions of sample units and the specific sample units to be inspected.

Survey control will be established throughout the inspections. The inspection team will measure reference lines with a calibrated measuring wheel and use GPS data to correctly identify sample units for inspection. No equipment will be left unattended on any air traffic surfaces.

Deliverable:

- PCI distress data will be uploaded into the PAVER database.

6.3 PCI Maps and Database Updates

Inspection data collected in the previous task will be uploaded to the PAVER software. AECOM will develop airport pavement condition maps that include a color-coded rating system used by the FAA.

Deliverable:

- Color-coded PCI maps for Runway 1R-19L and TW C.

6.4 Study Report

A formal report will be prepared that summarizes the study process and results. As part of the report.

Deliverable:

- Electronic Draft and Final Reports in PDF format.

7. GEOTECHNICAL INVESTIGATION

Geotechnical investigations (corings/borings) will be completed by our subconsultant Tierra, Inc. The location and number of cores will be determined upon completion of HWD testing. A coring plan will be

developed and sent for review to get the locations cleared and allow TPA to submit timely NOTAMS before advancing with any geotechnical operations. The geotechnical operations will be performed up to 3 separate times for different elements including initial piezometer installation, deep borings, and finally pavement coring after HWD testing to get a better understanding of the required locations. AECOM assumes runway closure and escorts will be provided by the airport.

See scope and fee proposal from Tierra for more detailed information on geotechnical scope.

Deliverable:

- Geotechnical Report

8. PAVEMENT ENGINEERING ANALYSIS AND REPORT

Using the data generated in the previous tasks, analysis will be performed to generate short-, mid- and long-term maintenance and repair recommendations and associated planning costs.

A report will be prepared that summarizes the study process and results. As part of the report, repair decision inputs will be presented that reflect local rehabilitation costs, policies, and feasible major rehabilitation or reconstruction strategies for areas in scope. The results will also be presented in color-coded maps. Report will include a Life Cycle Cost Analysis for up to 3 different rehabilitation options. A draft report will be submitted to TPA for review. Review comments from TPA will be incorporated into the final report.

Deliverable:

- Electronic draft and final report.

9. ESTIMATE OF PROBABLE CONSTRUCTION COSTS

AECOM will provide a high-level construction cost estimate for Runway 1R-19L and Taxiway C in current year dollars. Any cost opinions or estimates provided by AECOM will be on a basis of experience and judgment, but since AECOM has no control over market conditions or bidding procedures, AECOM cannot and does not warrant that bids, ultimate construction cost, or project economics will not vary from such opinions or estimates.

Deliverable:

- Estimate of Probable Construction Cost

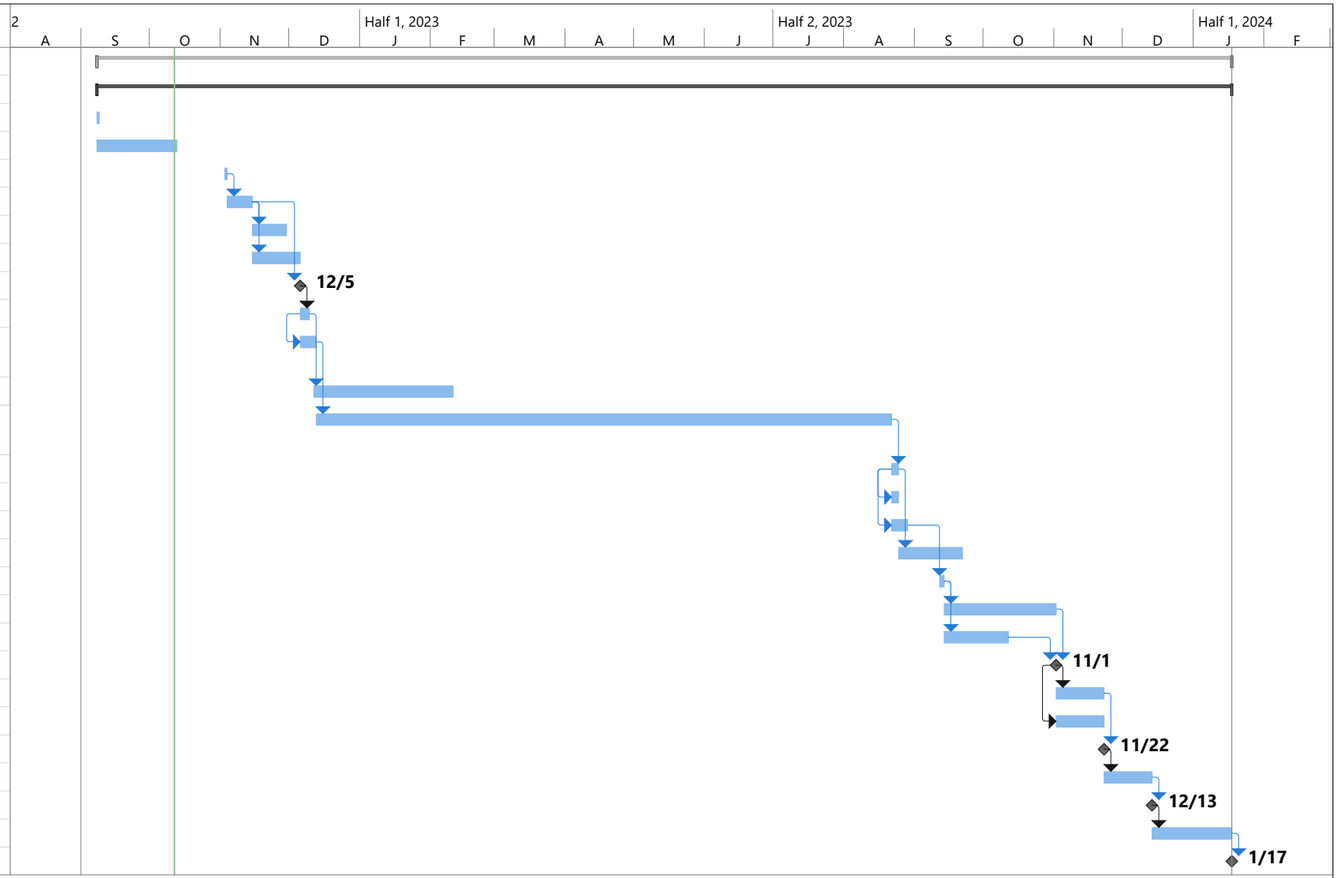
10. TASK ASSUMPTIONS AND EXCLUSIONS

- Scope of work area includes Runway 1R-19L and Taxiway C.
- AECOM assumes runway closure and escorts to the movement area will be provided by the airport.

11. AUTHORIZATION AND SCHEDULE

AECOM can begin with early tasks upon Notice to Proceed. However, NDT should be planned for testing during the wet season which may be in the summer of FY2023. A field-testing schedule for non-destructive testing and geotechnical investigation will be determined with HCAA P & D and Operations and the remainder of the schedule will be subject to the timing of the field schedule. See attached schedule.

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
0		**TPA RW 1R-19L Pavement Study**	**355 days**	**Thu 9/8/22**	**Wed 1/17/24**	
1		**Runway 1R-19L & TW C Pavement Study**	**355 days**	**Thu 9/8/22**	**Wed 1/17/24**	
2		Consultant Selection at Authority Board	1 day	Thu 9/8/22	Thu 9/8/22	
3		Submit Final Fee and Scope Proposal	25 days	Thu 9/8/22	Wed 10/12/22	
4		Contract Presented to Authority Board for Award	1 day	Thu 11/3/22	Thu 11/3/22	
5		Work Order Approved for NTP	7 days	Fri 11/4/22	Mon 11/14/22	4
6		Review Record Drawings	11 days	Tue 11/15/22	Tue 11/29/22	5
7		Subcontract Approvals	15 days	Tue 11/15/22	Mon 12/5/22	5
8		Kick-off Meeting	0 days	Mon 12/5/22	Mon 12/5/22	5FS+15 days
9		Initial site visit for RW Rehab Field Inspection	4 days	Tue 12/6/22	Fri 12/9/22	8
10		Install Piezometers to assist in groundwater determination	5 days	Tue 12/6/22	Mon 12/12/22	9SS
11		Review Initial Data from Rehab Visual Inspection	45 days	Mon 12/12/22	Fri 2/10/23	9
12		Monitor Piezometers for wet season groundwater conditions	180 days	Tue 12/13/22	Mon 8/21/23	10
13		Visual Pavement Condition Site Visit	3 days	Tue 8/22/23	Thu 8/24/23	12
14		Perform Initial Geotech Investigation	3 days	Tue 8/22/23	Thu 8/24/23	13SS
15		Non-Destructive Testing	5 days	Tue 8/22/23	Mon 8/28/23	13SS
16		Prepare PCI Report	20 days	Fri 8/25/23	Thu 9/21/23	13
17		Perform Coring based on NDT recommendations	2 days	Tue 9/12/23	Wed 9/13/23	15FS+10 days
18		Prepare Structural Report	35 days	Thu 9/14/23	Wed 11/1/23	17
19		Prepare Geotechnical Report	20 days	Thu 9/14/23	Wed 10/11/23	17
20		Submit Draft Structural & Geotechnical Reports	0 days	Wed 11/1/23	Wed 11/1/23	18,19
21		Pavement Engineering and Analysis Report	15 days	Thu 11/2/23	Wed 11/22/23	20
22		Develop Initial Cost Estimates	15 days	Thu 11/2/23	Wed 11/22/23	20SS
23		Submit Draft Pavement Analysis Report	0 days	Wed 11/22/23	Wed 11/22/23	21
24		HCAA Review Draft Report	15 days	Thu 11/23/23	Wed 12/13/23	23
25		Review Meeting	0 days	Wed 12/13/23	Wed 12/13/23	24
26		Finalize Report	25 days	Thu 12/14/23	Wed 1/17/24	25
27		Submit Final Report	0 days	Wed 1/17/24	Wed 1/17/24	26



Project: TPA RW 1R-19L Pavem
Date: Wed 10/12/22

Task	Project Summary	Manual Task	Start-only	Deadline
Split	Inactive Task	Duration-only	Finish-only	Progress
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress
Summary	Inactive Summary	Manual Summary	External Milestone	

EXHIBIT B FEE ESTIMATE

Project Fee Proposal - AECOM Team - Summary Sheet							
ASPHALT REHABILITATION OF RW 1R-19L & 10-28 AND REPLACEMENT OF CONCRETE SLABS (RW 1R-19L & TW C Pavement Study)							
HCAA Project Number 7100 23							
10/17/2022							
Basic Design Services		RW 1R-19L &		Total	W/MBE %	% W/MBE	% Construction
Engineering & Preconstruction Services		TW C			of Fee	Goal	Cost
	AECOM Technical Services	$ 171,548.00		$ 171,548.00			
		$ -		$ -	15.8%	7.00%	
	Design Phase	$ 171,548.00	$ -	$ 171,548.00	15.8%	7.00%	
Reimbursable Expenses							
	ARA, Incorporated	$ 50,800.00		$ 50,800.00			
	Tierra, Inc.	$ 41,627.00		$ 41,627.00			
				$ -			
Sub Total		$ 92,427.00	$ -	$ 92,427.00			
Total Fee, Allowances, Reimbursable Expenses		$ 263,975.00	$ -	$ 263,975.00			

Base Study Runway 1R-19L and TW C

Project Fee Proposal - AECOM Team

ASPHALT REHABILITATION OF RW 1R-19L & 10-28 AND REPLACEMENT OF CONCRETE SLABS (RW 1R-19L & TW C Pavement Study)

HCAA Project Number 7100 23

10/17/2022

Scope/Task			Principal	PM	Sr. AE	AE	Sr. Design	Sr. CADD	CADD	Admin	Total
Basic Design Services			Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	
Task - Base RW 1R-19L Pavement Study AECOM											
Project Management / Progress Reports			4	40						16	60
Meetings (3 total meetings @ 4 hours each)				12	24	24				16	76
Record Drawings Review/Verification				6	24	24		24			78
Report of Findings on Record Drawings				2	8	16					26
PCI Level Visual Pavement Condition Site Visit				32	32	32					96
PCI Report				16	32	80					128
Non-Destructive Testing using Heavy Weight Deflectometer				8	8						16
Geotechnical Investigation				4	4						8
QA/QC Draft and Final Reports				12	24					8	44
Draft Pavement Engineering Analysis and Report				8	40	32		32	24		136
Estimated Probable Cost of Construction				8	16	80	60				164
Life Cycle Cost Analysis				4	16	40	24				84
Final Pavement Engineering Analysis and Report				2	8	8	8				26
Subtotal Hours			4.00	154.00	236.00	336.00	92.00	56.00	24.00	40.00	942
Rate			$ 110.00	$ 90.00	$ 80.00	$ 65.00	$ 60.00	$ 55.00	$ 40.00	$ 35.00	
Subtotal Direct Labor			$ 440.00	$ 13,860.00	$ 18,880.00	$ 21,840.00	$ 5,520.00	$ 3,080.00	$ 960.00	$ 1,400.00	$ 65,980.00
Subtotal Burdened Labor @				2.60							$ 171,548.00

TIERRA

October 10, 2022 (Revised)
October 3, 2022

AECOM
7650 W. Courtney Campbell Causeway
Tampa, FL 33607

Attn: Mr. Dennis Combs, PE

Re: Geotechnical Fee Proposal
1R-19L and TWC Pavement Evaluation
Tampa International Airport
Hillsborough County
HCAA project No. 7100 23
Tierra Project No. 6511-22-288

Mr. Combs:

Thank you for the opportunity to be part of the AECOM Team on the referenced project. The project includes the evaluation of the existing Runway 1R-19L and Taxiway C with options for either rehabilitation or total reconstruction. Attached herein is our fee proposal for the Geotechnical Design services to support either option.

GEOTECHNICAL PROJECT APPROACH

Based on the review of the published geotechnical data and information provided by AECOM, Tierra will complete the required geotechnical services for the project in accordance with the HCAA project requirements/criteria and our engineering judgment.

The geotechnical services anticipated to support the design and construction of the project are summarized as follows:

- Conduct a visual reconnaissance of the project site and coordinate utility clearance.
- Perform pavement cores, Dynamic Cone Penetrometer (DCPs), auger borings, Standard Penetration Test (SPT) borings, and temporary piezometers to provide design information for the pavement areas. Our field work will consist of the following:
    - Perform 10 concrete pavement cores within 1R-19L and TW-C with a DCP and a hand auger borings to a depth on the order of 5 feet to evaluate the sub-base and subgrade conditions.
    - Perform 8 SPT borings on the order of 15 feet deep within 1R-19L and TW-C.
    - Perform on the order of 10 hand auger borings to a depth of approximately 5 feet to evaluate near-surface soils and to estimate the Seasonal high ground water table along the runway and taxiway alignments.
    - Obtain eight (8) bulk soil sample for CBR testing.
    - Install five (5) temporary piezometers and monitor groundwater table levels from November 2022 to August 2023.

- Visually classify recovered pavement and soil samples in the laboratory. Perform laboratory tests on selected representative samples to develop the soil legend for the project using the USCS. The laboratory testing will likely include grain size analyses, Atterberg Limit testing, organic and natural moisture content determination and corrosion series testing, as required. Perform concrete strength testing of pavement cores, if required.
- Perform engineering evaluations and analyses to develop geotechnical recommendations for the evaluation of the existing pavement area and recommendations to support the pavement design.
- Provide signed and sealed geotechnical reports that summarize our geotechnical study including the field and laboratory test results, the engineering evaluations and analyses, and the geotechnical recommendations for the design and construction of the project.

We understand that existing utility files/plans will be prvided to Tierra by others which will be used to locate our borings to avoid any unity impacts. Tierra will perform GPR scans at our boring locations for utility confirmation purposes.

FEE ESTIMATE - DESIGN SERVICES

It is estimated fee for performance of the above-outlined services is **$41,626.95** based on Tierra's attached Fee Schedule. We will provide you with verbal results of tested conditions and immediately notify you should conditions impacting our scope, schedule, or cost of services occur. The proposal is based on the assumption that no hazardous materials exist on-site that would impact our investigation.

This proposal is based on the assumption that HCAA will permit us to work freely along 1R-19L and TWC during times they will shut the runway and taxiway down.

We appreciate the opportunity to offer our services to you. We look forward to working with you once again. Should you have any questions with regard to this proposal, please do not hesitate to contact this office.

Respectfully Submitted,

TIERRA, INC.

Marc E. Novak, Ph.D., P.E.
Senior Geotechnical Engineer

Susan E. Fries, P.E.
Geotechnical Engineer

Attachment:

2021 Fee Schedule

Item Description	Unit	Unit Price	Quantity	Total
101-Aggregate Carbonates & Organic Matter FM 5-514	Test	$ 127.10		$ -
102-Aggregate Org. Impurities S& for Concrete AASHTO T21	Test	$ 49.15		$ -
103-Aggregate Shell Content of Coarse Aggregate FM 5-555	Test	$ 85.00		$ -
104-Aggregate Sieve Anlsys of Fine & Coarse AASHTO T27	Test	$ 65.33		$ -
105-Aggregate Soundness AASHTO T104	Test	$ 290.63		$ -
106-Aggregate Specific Gravity/Absorption Coarse AASHTO T85	Test	$ 83.54		$ -
107-Aggregate Total Moisture Content by Drying AASHTO T255	Test	$ 35.00		$ -
108-Aggregate Unit Mass & Voids AASHTO T19	Test	$ 55.00		$ -
109-Aggregate Specific Gravity/Absorption Fine AASHTO T84	Test	$ 95.00		$ -
200-Asphalt Bulk Specific Gravity FM 1-T166	Test	$ 50.00		$ -
201-Asphalt Content FM 5-563	Test	$ 137.22		$ -
204-Asphalt Gradation FM 1-T030	Test	$ 80.53		$ -
206-Asphalt Los Angeles (LA) Abrasion Coarse Agg FM 3-C535	Test	$ 330.38		$ -
207-Asphalt Los Angeles (LA) Abrasion Small Agg FM 1-T096	Test	$ 297.00		$ -
209-Asphalt Pavement Coring – 4” dia with Base Depth Check	Each	$ 120.00		$ -
305-Concrete Pavement Coring - 4" Dia	Each	$ 163.45	10	$ 1,634.50
401-Geo Auger Borings- Hand & Truck/Mud Bug	LF	$ 10.59	100	$ 1,059.00
402-Geo Auger Borings- Track	LF	$ 13.53		$ -
403-Geo Backhoe (Owned)	Day	$ 930.00		$ -
405-Geo Barge (Owned)	Day	$ 2,650.00		$ -
407-Geo Chainsaw (Owned)	Day	$ 55.00		$ -
415-Geo Double Ring Infiltration ASTM D3385	Each	$ 518.75		$ -
416-Geo Dozer (Owned)	Day	$ 910.00		$ -
418-Geo Drill Crew Support Vehicle	Day	$ 165.46	3	$ 496.38
422-Geo Extra SPT Samples-Barge/Track/Amphibious 000-050 Ft	Each	$ 61.65		$ -
423-Geo Extra SPT Samples-Barge/Track/Amphibious 050-100 Ft	Each	$ 67.70		$ -
424-Geo Extra SPT Samples-Barge/Track/Amphibious 100-150 Ft	Each	$ 84.08		$ -
425-Geo Extra SPT Samples-Barge/Track/Amphibious 150-200 Ft	Each	$ 94.99		$ -
427-Geo Extra SPT Samples-Truck/Mud Bug 000-050 Ft	Each	$ 49.59		$ -
428-Geo Extra SPT Samples-Truck/Mud Bug 050-100 Ft	Each	$ 54.50		$ -
429-Geo Extra SPT Samples-Truck/Mud Bug 100-150 Ft	Each	$ 69.55		$ -
430-Geo Extra SPT Samples-Truck/Mud Bug 150-200 Ft	Each	$ 79.37		$ -
432-Geo Field Permeability 0-10 Ft (Open - End Borehole Method)	Each	$ 314.00	6	$ 1,884.00
434-Geo Ground Penetrating Radar (GPR)	Hour	$ 285.00	16	$ 4,560.00
435-Geo Grout Boreholes- Barge/Track/Amphibious 000-050 Ft	LF	$ 8.09		$ -
436-Geo Grout Boreholes- Barge/Track/Amphibious 050-100 Ft	LF	$ 10.35		$ -
437-Geo Grout Boreholes- Barge/Track/Amphibious 100-150 Ft	LF	$ 14.27		$ -
438-Geo Grout Boreholes- Barge/Track/Amphibious 150-200 Ft	LF	$ 19.33		$ -
440-Geo Grout Boreholes- Truck/Mud Bug 000-050 Ft	LF	$ 5.93	120	$ 711.60
441-Geo Grout Boreholes- Truck/Mud Bug 050-100 Ft	LF	$ 7.27		$ -
442-Geo Grout Boreholes- Truck/Mud Bug 100-150 Ft	LF	$ 10.00		$ -
443-Geo Grout Boreholes- Truck/Mud Bug 150-200 Ft	LF	$ 13.25		$ -
445-Geo Grouted Monitor Well 2" 000-050 Ft	LF	$ 31.93		$ -
450-Geo Piezometer 2" 000-050 Ft	LF	$ 39.55	50	$ 1,977.50
453-Geo Rock Coring Barge/Track/Amphibious 000-050 Ft less than 4" ID	LF	$ 55.04		$ -
455-Geo Rock Coring Barge/Track/Amphibious 050-100 Ft less than 4" ID	LF	$ 67.53		$ -
457-Geo Rock Coring Barge/Track/Amphibious 100-150 Ft less than 4" ID	LF	$ 79.51		$ -
459-Geo Rock Coring Barge/Track/Amphibious 150-200 Ft less than 4" ID	LF	$ 93.15		$ -
463-Geo Rock Coring Truck/Mud Bug 000-050 Ft less than 4" ID	LF	$ 41.84		$ -
465-Geo Rock Coring Truck/Mud Bug 050-100 Ft less than 4" ID	LF	$ 48.71		$ -
467-Geo Rock Coring Truck/Mud Bug 100-150 Ft less than 4" ID	LF	$ 57.31		$ -
473-Geo SPT Barge/Track/Amphibious 000-050 Ft	LF	$ 20.83		$ -
474-Geo SPT Barge/Track/Amphibious 050-100 Ft	LF	$ 26.68		$ -
475-Geo SPT Barge/Track/Amphibious 100-150 Ft	LF	$ 41.80		$ -

Item Description	Unit	Unit Price	Quantity	Total
476-Geo SPT Barge/Track/Amphibious 150-200 Ft	LF	$ 53.91		$ -
478-Geo SPT Truck-Mud Bug 0-50 Ft	LF	$ 14.38	120	$ 1,725.60
479-Geo SPT Truck-Mud Bug 50-100 Ft	LF	$ 17.08		$ -
480-Geo SPT Truck-Mud Bug 100-150 Ft	LF	$ 25.83		$ -
481-Geo SPT Truck-Mud Bug 150-200 Ft	LF	$ 32.57		$ -
483-Geo Temp Casing 3" Barge/Track/Amphibious 0-050 Ft	LF	$ 12.59		$ -
484-Geo Temp Casing 3" Barge/Track/Amphibious 50-100 Ft	LF	$ 15.46		$ -
485-Geo Temp Casing 3" Barge/Track/Amphibious 100-150 Ft	LF	$ 18.37		$ -
486-Geo Temp Casing 3" Barge/Track/Amphibious 150-200 Ft	LF	$ 23.19		$ -
488-Geo Temp Casing 3" Truck/Mud Bug 000-050 Ft	LF	$ 8.84		$ -
489-Geo Temp Casing 3" Truck/Mud Bug 050-100 Ft	LF	$ 11.43		$ -
490-Geo Temp Casing 3" Truck/Mud Bug 100-150 Ft	LF	$ 14.16		$ -
491-Geo Temp Casing 3" Truck/Mud Bug 150-200 Ft	LF	$ 18.09		$ -
515-Geo Undisturbed Samples Barge/Track/Amphibious 000-050 Ft	Each	$ 199.55		$ -
516-Geo Undisturbed Samples Barge/Track/Amphibious 050-100 Ft	Each	$ 218.41		$ -
517-Geo Undisturbed Samples Barge/Track/Amphibious 100-150 Ft	Each	$ 248.57		$ -
518-Geo Undisturbed Samples Barge/Track/Amphibious 150-200 Ft	Each	$ 282.25		$ -
519-Geo Undisturbed Samples Truck/Mud Bug 000-050 Ft	Each	$ 169.79		$ -
520-Geo Undisturbed Samples Truck/Mud Bug 050-100 Ft	Each	$ 175.19		$ -
521-Geo Undisturbed Samples Truck/Mud Bug 100-150 Ft	Each	$ 198.17		$ -
522-Geo Undisturbed Samples Truck/Mud Bug 150-200 Ft	Each	$ 230.92		$ -
525-Geo Well Development	Hour	$ 157.61		$ -
531-Geo Truck/Mudbug Drill Rig and Crew (2-person)/Stand-by cleanup	Hour	$ 190.00	6	$ 1,140.00
532-Geo Truck/Mudbug Drill Rig and Crew (3-person)	Hour	$ 260.00		$ -
533-Geo Track/Barge Drill Rig and Crew (2-person)	Hour	$ 190.00		$ -
534-Geo Track/Barge Drill Rig and Crew (3-person)	Hour	$ 260.00		$ -
535-Geo Clearing Equip- Tractor, Bush Hog Attachment	Day	$ 1,400.00		$ -
536-Geo Clearing Equip-Skid Steer/ASV, ForestMulching Attach	Day	$ 1,600.00		$ -
537-Geo Clearing Equip-Skid Steer/ASV, Brush Cutter Attach	Day	$ 1,600.00		$ -
538-Geo Clearing Equipment	Day	$ 2,007.50		$ -
539-Geo Wash Boring for Rock Cores 0-50 Ft	LF	$ 9.53		$ -
540-Geo Wash Boring for Rock Cores 50-100 Ft	LF	$ 11.75		$ -
541-Geo Wash Boring for Rock Cores 100-150 Ft	LF	$ 17.67		$ -
603-Mobilization Asphalt Coring equipment	Each	$ 337.26		$ -
606-Mobilization Concrete Coring	Each	$ 331.55	1	$ 331.55
608-Geo Mobilization Drill Rig - Amphibious	Each	$ 8,963.39		$ -
609-Geo Mobilization Drill Rig Barge Mount	Each	$ 8,234.24		$ -
610-Geo Mobilization Drill Rig Track Mount	Each	$ 2,287.77		$ -
612-Geo Mobilization Drill Rig Truck Mount	Each	$ 489.52		$ -
614-Geo Mobilization Mudbug/All Terrain Vehicle	Each	$ 724.00		$ -
618-Geo Mobilization Support Boat	Each	$ 500.00		$ -
619-Geo Mobilization Tri-Pod	Each	$ 1,107.67		$ -
620-Geo Mobilization of Clearing Equipment	Each	$ 600.00		$ -
701-MOT Attenuator Truck	Hour	$ 190.90		$ -
702-MOT Channelizing Devices - Type I, II, VP, Drum (each)	Each	$ 4.65		$ -
706-MOT Portable Sign	Each	$ 43.00		$ -
708-MOT Provide Channelizing Devices - Cone	Each	$ 3.88		$ -
710-MOT Shadow Vhcle w/ Adv. Warning Arrow & Attenuator	Hour	$ 218.64		$ -
712-MOT Support Vehicle	Hour	$ 110.41		$ -
800-Soils Chloride Soil or Water (FM 5-552)	Test	$ 69.64		$ -
803-Soils Consolidation - Constant Strain (ASTM D4186)	Test	$ 547.69		$ -
804-Soils Consolidation - Extended Load Increments (AASHTO T216)	Day	$ 150.00		$ -
805-Soils Corrosion Series (FM 5-550 through 5-553)	Test	$ 226.73	3	$ 680.19
806-Soils Direct Shear Consolidated Drained/ Point AASHTO T 236	Test	$ 350.00		$ -

Item Description	Unit	Unit Price	Quantity	Total
810-Soils Limerock Bearing Ratio (LBR)(FM 5-515)	Test	$ 350.00	8	$ 2,800.00
811-Soils Liquid Limit (AASHTO T 89)	Test	$ 60.00	6	$ 360.00
812-Soils Materials Finer than 200 Sieve (FM 1-T011)	Test	$ 43.59	12	$ 523.08
817-Soils Moisture Content Laboratory (AASHTO T 265)	Test	$ 14.65	6	$ 87.90
819-Soils Organic Content Ignition (FM 1 T-267)	Test	$ 44.11	1	$ 44.11
821-Soils Particle Size Analysis (AASHTO T 88) (Including Hydrometer)	Test	$ 170.91		$ -
822-Soils Particle Size Analysis (AASHTO T 88) (No Hydrometer)	Test	$ 69.48	3	$ 208.44
823-Soils Permeability Constant Head (AASHTO T 215)	Test	$ 280.00		$ -
824-Soils Permeability Falling Head (FM 5-513)	Test	$ 289.64		$ -
825-Soils pH Soil or Water (FM 5-550)	Test	$ 39.00		$ -
826-Soils Plastic Limit & Plasticity Index (AASHTO T 90)	Test	$ 61.26	6	$ 367.56
827-Soils Proctor Modified (FM 1-T 180)	Test	$ 120.00		$ -
828-Soils Proctor Standard (AASHTO T 99)	Test	$ 115.00		$ -
829-Soils Resistivity Soil or Water (FM 5-551)	Test	$ 54.89		$ -
832-Soils Splitting Tensile Strength of Rock/Pavement Cores (ASTM D3967)	Test	$ 134.77	4	$ 539.08
833-Soils Sulfate Soil or Water (FM 5-553)	Test	$ 60.45		$ -
838-Soils Unconfined Compression - Rock/Pavment (ASTM D7012, Method C)	Test	$ 136.06	4	$ 544.24
Professional Services				
Chief Engineer 2	Hour	$ 219.60	5	$ 1,098.00
Chief Scientist	Hour	$ 166.06		$ -
Engineer 1	Hour	$ 145.19	25	$ 3,629.75
Engineering Intern	Hour	$ 103.28	33	$ 3,408.24
Engineering Technician	Hour	$ 82.71	33	$ 2,729.43
Principal Engineer	Hour	$ 226.88	3	$ 680.64
Secretary/Clerical	Hour	$ 88.44	8	$ 707.52
Senior Designer	Hour	$ 118.83	17	$ 2,020.11
Senior Engineer 1	Hour	$ 187.34	17	$ 3,184.78
Senior Engineering Technician	Hour	$ 99.75	25	$ 2,493.75
Senior Scientist	Hour	$ 141.22		$ -
	Total Estimated Fee			**$ 41,626.95**

APPLIED RESEARCH ASSOCIATES, INC.

October 13, 2022 (Revision 1)

Abbas S Kachwalla, PE
Pavement Engineer, Transportation
AECOM
303 East Upper Wacker Drive, Suite 1400
Chicago, IL 60601, USA
D +1-312-373-7782 | Cisco 2277782
M +1-217-281-2550
Email: abbas.kachwalla@aecom.com

Subject: **Proposal for HWD and GPR Testing and Analysis at Tampa International Airport, Tampa, FL**

Dear Mr. Kachwalla:

Applied Research Associates (ARA), Inc. appreciates the opportunity to submit this proposal for Heavy Weight Deflectometer (HWD) and Ground Penetrating Radar (GPR) testing and analysis, on several features at Tampa International Airport in Tampa, FL.

Our proposed scope of services is detailed on the following pages and is summarized below.

- Perform non-destructive structural testing with a Heavy Weight Deflectometer (HWD).
- Perform Ground Penetrating Radar (GPR) data collection to determine the pavement layer thicknesses information and reduce the pavement cores needed.
- Perform backcalculation analysis to estimate the pavement layer moduli using the ELMOD software.
- Determine joint Load Transfer Efficiency (LTE) and void detection underneath the tested Portland Cement Concrete (PCC) slabs.
- Determine the bearing capacity and remaining life using the FAA FAARFIELD software.
- Determine the Aircraft Classification Rating/Pavement Classification Rating (ACR/PCR) using the FAA FAARFIELD software.
- Provide a detailed report.

Please review this proposal when you get a chance. Please do not hesitate to contact us in case of any questions or concerns.

Thank you for the opportunity to provide our services.

Sincerely,

Alvaro Ulloa, PhD, PE
Principal Engineer I
Email: aulloa@ara.com
Phone: 775 240-1315

Michael J. Harrell, P.E.
Principal Engineer I

1 PROJECT UNDERSTANDING

Applied Research Associates, Inc. (ARA) understands that pavement structural evaluation is needed on Runway 1R-19L and Taxiway C at Tampa International Airport in Tampa, FL. The pavement structural evaluation will be performed using a Heavy Weight Deflectometer (HWD) system, and pavement layer thicknesses will be estimated using a Ground Penetrating Radar (GPR) system. Data collected in the field will be analyzed by our experienced team of pavement engineers and will be submitted to AECOM.

2 SCOPE OF SERVICES

HWD and GPR testing will be conducted as shown in Table 1. We propose to test on the runways and taxiways similar to **project level** in accordance with FAA criteria. PCC joint load transfer efficiency (LTE) and potential void detection underneath the tested PCC slabs will also be conducted on the tested transverse joints. It should be noted that no longitudinal joint or slab corner testing will be performed. The estimated number of HWD test points and GPR length is shown below.

Table 1. Estimated Number of HWD Test Locations and GPR Length

Feature	Length (ft)	Width (ft)	Surface	Test Spacing (ft)	Offset (ft)	Number of Test Lines	# of Test Points	# of Tran. Joints	GPR Length (mi)
Runway 1R-19L	8,300	150	PCC	200	6	2	83	83	3.2
				200	30	2	83	42	3.2
				400	56	2	14	7	1.1
			AC	400	56	2	28		2.2
Taxiway C	8,300	75	PCC	100	6	2	166	83	3.2
	Total HWD Test Points and GPR Length						**374**	**83**	**12.9**

At each test location, the HWD will apply three load drops (load levels to be determined after a review of the design aircraft mix, gear configuration and loads). In addition to the load-deflection data, the HWD records surface temperature, station, and GPS coordinates. The HWD testing locations will be staggered across test lines to maximize coverage. The HWD will have a reference calibration performed within a year prior to the date of the testing. Our proposal assumes that the HWD testing will be performed during night time, and in dry weather conditions.

ARA highly recommends collecting GPR data along with the HWD testing. Pavement layer thicknesses are required to perform analysis of the load-deflection data. GPR data is continuous in nature and provides a high level of detail for all areas tested. In addition, by using the GPR technology, there is a significant reduction in the required number of pavement cores, which in turn translates into savings for the agency and less traffic disruption for the airport. Figure 1 shows the GPR integrated with the ARA's HWD. Typically around 5 pavement cores per airport feature are needed to calibrate the GPR measurement. However, once the HWD and GPR testing is conducted a precise number and location of pavement cores needed will be provided.

Thickness information will be collected continuously with the GPR. The GPR works by emitting a series of radar waves to the pavement structure while the vehicle is traveling at traffic speed and

collects the dielectric constants of the underlying structure. The GPR data will be analyzed using RADAN 7 software package to estimate the dielectric properties of the pavement and determine the layer thicknesses. The resulting correlated dielectric constants are then filtered to determine pavement thicknesses and types. The results must be calibrated through pavement cores at selected locations provided by AECOM.

Our HWD is fully integrated with the GPR system so that each HWD station corresponds to the same location from the GPR system. Furthermore, pavement thicknesses will be reported for every HWD tested station continuously which in turn increases the accuracy and quality of the pavement evaluation and design and increases the probability of successfully identifying any localized failure that might otherwise be missed by common destructive procedures.

Figure 1. ARA HWD integrated with a GPR

Backcalculation of the pavement layer moduli will be performed using ELMOD (Evaluation of Layer Moduli and Overlay Design) software that can provide backcalculated layer moduli and structural overlay requirements required over the design/analysis period. The layer moduli provide an indication of material condition in the pavement structure. ELMOD is accepted for use by the FAA as shown in the FAA AC 150/5370-11B and it is used by 300+ public and private agencies nationwide and overseas.

For every HWD test point collected along an airport feature, ARA will calculate the layer moduli using ELMOD. The average layer moduli will be used as an input into FAARFIELD to determine the remaining life and the overlay requirements for the provided traffic mix over the analysis period. In addition, the ACR/PCR analysis using FAARFIELD will be performed in accordance with the FAA circular(s). ARA's analysis results will be included in the final report.

We will also perform a limited survey of the pavement surface through digital photographs that are automatically collected at a pre-set interval (typically 25-ft). The photos will show the condition of the pavement during HWD testing. If the HWD testing is performed at night, then we will collect the pavement images during the day if possible. Typically ROW images on a runway are collected in about 15 minutes at traffic speed.

The pavement structural evaluation will include the following activities:

1. Perform nondestructive deflection testing on the airport features using ARA's HWD.
2. Determine existing pavement layer thicknesses using ARA's GPR.

3. Recommend location for pavement coring for GPR calibration.
4. Determine backcalculated layer moduli.
5. Determine PCC joint load transfer efficiency and identify potential voids underneath the PCC slabs tested, if option selected.
6. Determine the bearing capacity and remaining life using the FAA FAARFIELD software.
7. Determine the Aircraft Classification Rating/Pavement Classification Rating (ACR/PCR) using the FAA FAARFIELD software.
8. Provide a report that details the analyses results.

AECOM will need to provide ARA with the following:

1. Appropriate permissions and escort are required during the HWD and GPR testing. Our proposal does not includes costs associated with security, screening, badging, and operator safety training, if needed. Additional costs may be incurred if additional tasks are required.
2. Pavement layer thicknesses and types obtained through cores is required for GPR calibration and analysis of HWD data.
3. Local contact numbers, meeting location and time.

3 PROJECT SCHEDULE

We understand that AECOM has not finalized a testing schedule at the present time. Our team is committed to collaborating with AECOM on this project, and we are prepared to provide a flexible schedule for performing the field testing. Also please note that we require dry weather conditions to perform the testing, and that all field testing will be scheduled keeping the weather forecast under consideration.

We anticipate that the testing will be conducted at night time, and that ARA's HWD operator will be escorted during data collection.

4 DELIVERABLES

ARA will provide the following deliverables as shown in Table 4.

Table 4. Project Deliverables

Deliverable	Due Date
Pavement Photos at HWD test locations	One week after Testing
KML files showing all locations tested	One week after Testing
Proposed pavement coring locations	One week after Testing
Pavement layer thicknesses by means of GPR	Two week after receiving the pavement coring info
Draft Report	Six weeks after pavement coring report has been provided to ARA
Final Report	One week after receiving comments on the Draft Report

5 PROJECT PRICE

ARA will provide the services noted in this proposal on a lump sum basis as shown in the price breakdown in Table 5.

Table 5. Price Breakdown – Runway 1R-19L and Taxiway C including LTE and void detection

Task	Price
HWD mobilization and Per Diem (2-way from Austin, TX)	$11,000
HWD and GPR testing (3 nights)	$10,700
Project Management & Data Analysis	$21,500
Report and Deliverables	$2,600
LUMP SUM TOTAL	**$45,800**
Additional Services*	$5,000
TOTAL INCLUDING ADDITIONAL SERVICES	**$50,800**

* Additional services include one additional day of HWD and GPR testing to accommodate weather related delays or shortened work periods due to other reasons caused at no fault to ARA. The additional services include $260 to cover hotel plus per diem, $2,400 per day of equipment usage, and $800 per day for related labor to complete any additional testing outside of the proposed 3 nights. Our pricing estimate assumes that our HWD/GPR operator will have 8 working hours of closure time on consecutive days (nights) to perform the work. While we are confident that we can complete the required work within the above-mentioned time frame(s), we may include additional charges if there are significant delays or reductions in work periods caused at no fault to ARA. We will notify the Project Manager immediately if these types of delays were to occur.

This proposal is valid for a period of 90 days from the date of the proposal. We reserve the right to review our scope if an agreement to provide our services has not been reached within the 90-day period.

ARA will invoice monthly on a percent complete basis for payment to be made within 30 days of receipt of invoice (Net 30).

6 GROUND RULES AND ASSUMPTIONS

ARA's offering is based on the following ground rules and assumptions. Should any of these be adjusted during negotiations, the proposed offer, including pricing may be subject to change.

1. ARA anticipates a lump sum contract.
2. This proposal is valid for a period of 90 days from the date of this proposal.
3. ARA will submit invoices on a monthly basis on a percent complete basis with payment terms of net30.
4. We require dry weather conditions for testing. All field work will be scheduled keeping the weather forecast under consideration.
5. ARA's proposal does not include any costs or labor associated with security, badging, training or permits required for our HWD and/or operator. Additional costs may be incurred if any of these are required.

6. ARA's proposal does not include any costs associated with escort during the testing. We assume that escort during the testing will be provided at no cost to ARA.

7 ACCEPTANCE OF PROPOSAL

Your signature below indicates your acceptance of this proposal in accordance with the scope, price, schedule, and the terms and conditions contained herein, and will create a binding agreement between you and ARA. This acceptance will act as a notice to proceed.

Acceptance and Authorization
Name (print)
Title
Signature:
Date:

ARA OVERVIEW

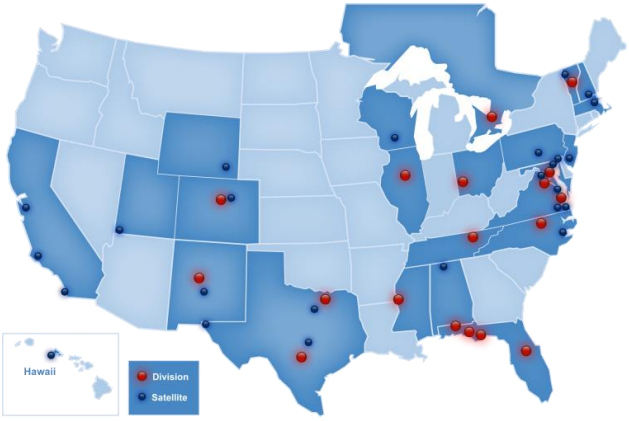
Applied Research Associates, Inc. (ARA) is an internationally recognized engineering, research, and technology deployment firm that features a transportation sector focused on **pavement engineering** and **infrastructure management for private and public agencies**. Founded in Albuquerque in 1979, ARA has grown steadily and now has offices throughout North America, serving clients worldwide. With over 1,200 employees, most of whom have advanced degrees in engineering and the physical sciences, we have the breadth to tackle the most challenging technical problems. ARA is an employee-owned company dedicated to producing innovative solutions in a timely and cost-effective manner.

ARA has over 40 years of experience in pavement engineering, and ARA engineers and scientists have played a key role in the development of many currently-in-use pavement management technologies. For example, our staff played lead roles in pioneering the widely used Pavement Condition Index (PCI) standard and the ongoing development of vehicle-based data collection systems and evaluation methodologies. We have since leveraged these pioneering efforts to develop and deploy lower-cost options for assessing pavement conditions on municipal road networks.

ARA's Transportation Division has offices in Austin, TX, Champaign, IL, Ventura, CA, Camp Hill, PA, and Ontario, Canada.

The keys to our success include a commitment to clearly understand each client's unique needs, our ability to apply the right set of technologies for each agency, and our commitment to provide outstanding service. Our approach has resulted in critical products used on a long-term basis in many airports. **With approximately 150 pavement-focused staff** and **a fleet of pavement condition assessment equipment**, ARA is prepared to provide the Airport with outstanding and responsive pavement condition assessment services.

ARA's founder was a key member of the team that developed methodology that was the basis for the ASTM D6433 standard, the Pavement Condition Index (PCI) survey.



In February 2020, ARA acquired the consulting division of Dynatest North America, including all offices, personnel, equipment, and contracts. Dynatest is the world's leading manufacturer of pavement testing equipment including heavy falling weight deflectometers (HWDs) Runway Friction Testers (RFTs), which are critical in evaluating airfield pavements. Dynatest's consulting engineering group has vast experience with pavement engineering on airfield and highway pavements worldwide

The acquisition of Dynatest's consulting group makes ARA's team unrivaled in terms of expertise, worldwide project experience, and state of the art

equipment. ARA can provide virtually all types of pavement testing and engineering services, including manual and semi- automated PCI surveys, non-destructive structural testing, friction testing, and pavement profile measurements. ARA currently owns and operates the equipment shown in Table 1.

Table 1: ARA-owned pavement testing and evaluation equipment

ARA In-House Equipment	Quantity
3D LCMS Based Imaging Vehicle	3
Heavy Weight Deflectometer (HWD)	4
Runway Friction Tester	2
Ground Penetrating Radar (GPR)	1
3D Ground Penetrating Radar	1
Coring Rig	2
Fast Falling Weight Deflectometer (Fast-FWD)	2
Falling Weight Deflectometer (FWD)	3
High-Speed Laser Profiler	7
Locked Wheel Friction Tester	3
Light Weight Deflectometer	3

ARA's team of pavement engineers provide practical, data-driven solutions that maximize pavement performance and minimize lifecycle cost. ARA is a leading provider of pavement engineering services including:

- ✓ On-call pavement engineering, design, and evaluation
- ✓ Pavement structural testing and analysis using Falling Weight Deflectometers (FWD),
- ✓ Pavement layer thickness surveys with Ground Penetration Radar (GPR),
- ✓ Pavement management systems implementations and updates,
- ✓ Automated and manual pavement condition evaluations,
- ✓ Ride and rut measurements using high speed inertial profilers,
- ✓ Pavement friction testing (roadway and runway),
- ✓ Development of pavement design and analysis software including Pavement ME, ELMOD, PERS etc.

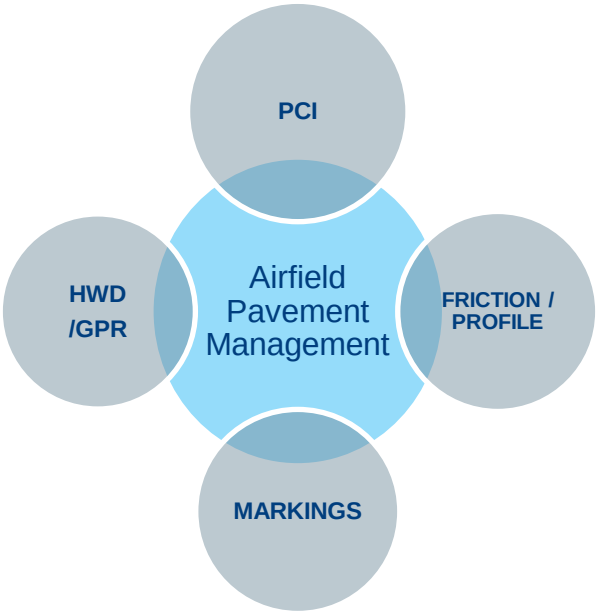
ARA has provided pavement consulting engineering services to the global community since 1979. We have more than 40 offices all over the US including Illinois, California, Maryland, New Mexico, Colorado, Florida, Virginia, Pennsylvania, Washington D.C., and Texas. Our proposed project manager, Dr. Alvaro Ulloa, will manage this project out of our office in Austin, TX. Below is his contact information:

CAPABILITY AND EXPERIENCE

The ARA team is qualified to perform all aspects of pavement engineering including pavement structural evaluation and design, Airport Pavement Management System (APMS) implementation, pavement automated surveys, pavement friction evaluation, pavement roughness evaluation, etc. Our airport pavement management team has widely recognized expertise, unmatched hands-on experience at the national and local levels, and a proven track record of practical and deployable technologies. ARA is nationally recognized for its airport pavement management expertise, with over 125 of our 1,000-person staff working in the area of pavement engineering.

Our aviation group consists of professionals who specialize in pavement management systems and have successfully completed similar projects at 18 statewide airport systems, over 1,000 commercial airports worldwide, over 100 U.S. and Canadian Air Force bases, and numerous other facilities.

In essence, our methodology includes combining visual distress data (obtained from PCI surveys), structural testing data (obtained from HWD testing and GPR measurements), functional testing data (obtained from friction testing and profile measurements), combined with aircraft traffic and loading data into a powerful pavement management software that effectively provides the most cost beneficial treatment alternatives over the design period.



PAVEMENT CONDITION SURVEY SYSTEM OVERVIEW

ARA owns and operates state-of-the-art Pavement Condition Survey Systems (PCSS) for automated pavement data collection and distress surveys of highway and airport pavements. Our PCSSs are outfitted with the Pavemetrics Laser Crack Measurement Systems ((LCMS) for collecting continuous, high-resolution digital linescan pavement images with 1mm crack resolution. In addition, our PCSSs are outfitted with a Dynatest Class 1, seven (7), upgradable to nine (9) sensor Mark III Road Surface Profiler (RSP) for collecting longitudinal and transverse profile data, which includes International Roughness Index (IRI) and Boeing Bump Index (BBI) values as well as rutting measurements, and the macro-texture lasers as well. The PCSS is a fully-integrated, "geocentric" automated roadway data collection system. Combined with our analysis software, the PCSS provides a complete data collection and analysis system. Sample pictures of the Dynatest PCSS are shown below.

Figure 1 PCSS System in Airports

SURVEY METHODOLOGY

ARA typically utilizes a combination of van-based and manual/walking PCI surveys on the different airport features. The biggest advantage of the pavement imaging system is that a repeatable, can be conducted at nighttime, is more objective, and provides a permanent, digital record of the pavement surface. The PCSS is equipped with the 3D Laser Crack Measurement System (LCMS), which can operate in complete darkness because it is immune to variations in outside lighting conditions and shadows. By using a combination of the cameras with high-power laser line projectors, even the smallest cracks (1 mm width) are clearly seen in the pavement images. Together with the ROW images, any portion of the surveyed pavement surface can be reviewed at a later date. In addition, this technology offers a **100% survey** of the pavement area, a fact that must be noted while appreciating the 'sample unit' based approach detailed in ASTM D 5340.

Figure 2 ARA PCSS on Runways

The survey methodology includes driving the entire length of the runway from one threshold line to the other, comprising one (1) data collection pass. Approximately 13 ft. (4 meters) in width are scanned during one data collection pass. To cover the entire width of a 150-ft. wide runway, multiple data collection passes are required. All data collection is performed in the same direction of travel and assures 100% coverage. It is important to note that there will be a slight overlap (2-3 ft.) of scanned pavement area between adjacent parallel passes, which ensures that 100% of the pavement area is surveyed. Figure 3 below shows our survey methodology, and a sample pavement image acquired at night is shown in Figure 4.

Description	ARA PCSS	Manual Surveys
Digital record of pavement surface	Yes	No
Roughness or longitudinal profile	Yes	No
Continuous Right of Way Images	Yes (Daytime)	No
Survey possible at night	Yes	No
Pavement Geometry (Cross slope, longitudinal grade, heading etc.)	Yes	No
Percent area surveyed	100%	Based on sampling strategy (10% to 25% of surface area)
Repeatable measurements	Yes	Yes, subjective
Asphalt distress types identifiable[1]	Alligator cracking, bleeding, block cracking, joint reflection cracking, L&T cracking, oil spillage, patching, polished aggregate, raveling, rutting, shoving from PCC, slippage cracking, weathering.	Alligator cracking, bleeding, block cracking, **corrugation**, **depression,** **jet blast**, joint reflection cracking, L&T cracking, oil spillage, patching, polished aggregate**,** raveling, rutting, shoving from PCC, slippage cracking, **swell**, weathering.
Concrete distress types identifiable	Blowup, corner break, L/T/Diagonal cracks, durability cracking, joint seal damage, small patch, large patch, popouts, pumping,	Blowup, corner break, L/T/Diagonal cracks, durability cracking, joint seal damage, small patch, large patch, popouts, pumping, scaling/map cracking, faulting, shattered slab,

	scaling/map cracking, faulting, shattered slab, shrinkage cracks, spalling joints, spalling corners.	shrinkage cracks, spalling joints, spalling corners.
Ability to review distresses	Yes, using Dynatest Explorer software	No
GPS location of distresses	Yes	Yes, with additional hand held device
Survey Rate (number of hours required for runway/taxiway closure)	Approximately 4 hours (10,000 ft. x 150 ft. runway)	2 days (daytime closure)
Ideal for pavement condition index surveys on	Runways, taxiways, high-speed exits, roads	Runways, taxiways, high-speed exits, ramps, aprons, roads, parking lots

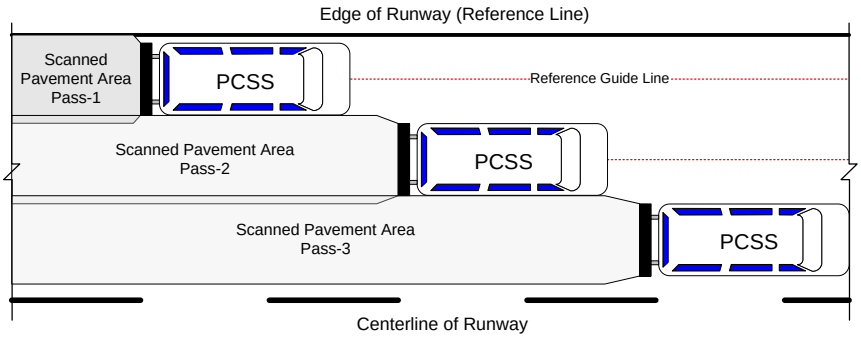


Figure 3 PCSS Survey Methodology

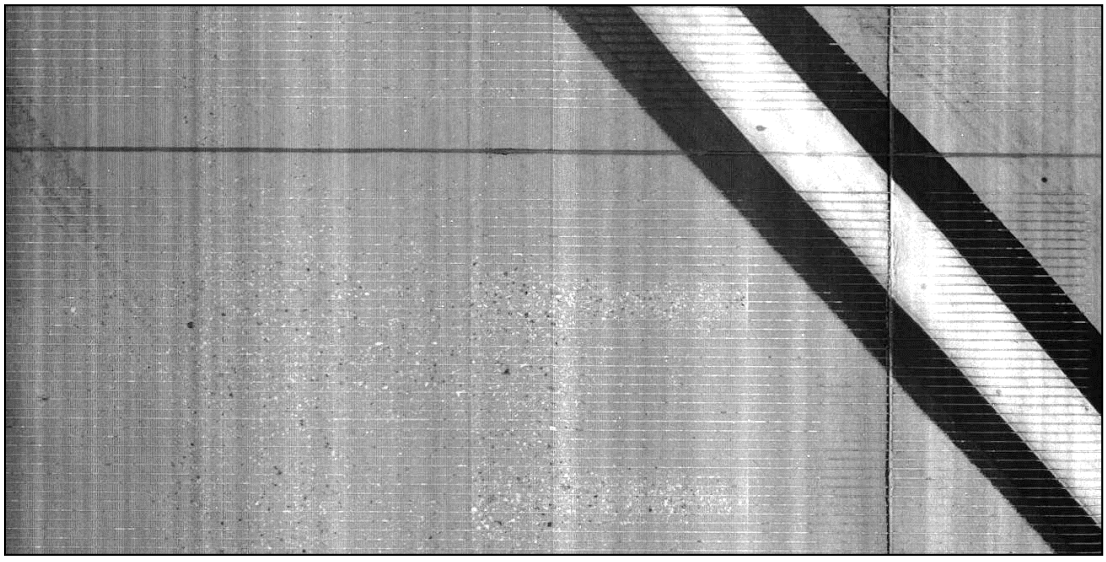
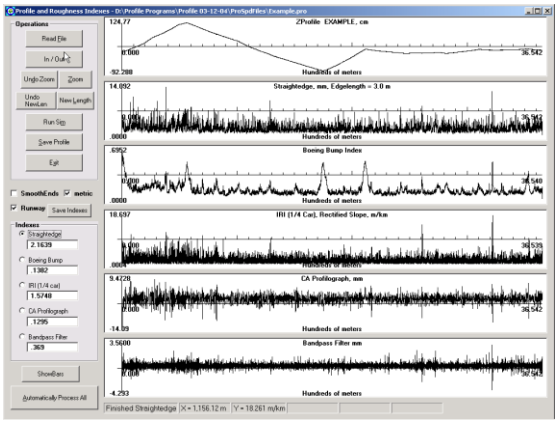


Figure 4 Sample Pavement Laser-based Downward Image Acquired at Night

The collected pavement images are analyzed by our software as well as by trained PCI inspectors who mark the location, type, severity and extent of each distress. The distress locations can then be easily exported to be shared in various formats.

Figure 5 Detailed Distress Locations



Roughness is mainly measured to avoid deviation of the longitudinal profile that could endanger the safety of aircraft and passengers. Differential settlements or the existence of underpasses can cause these deviations. Complaints from pilots can also initiate measurement of roughness. Roughness is usually measured when there is an operational reason to do so, mostly based on complaints from pilots. Roughness is a safety issue and primarily causes discomfort for passengers and pilots. However, it can also cause fatigue damage to aircraft undercarriage, blow tires and influence the braking distance during a landing or aborted take-off. A rough surface profile also results in a higher dynamic loading of the pavement construction, which could lead to a local premature failure. Boeing developed its own criteria, as well as the USAF, ICAO and FAA. For civil aircraft, these criteria are now based on the Boeing Bump Index (BBI) methodology. The Dynatest PCSS is equipped with a Dynatest Mark III profiler, an ASTM E950 level Class I device, which can collect pavement profile measurements.

The georeferenced surface distresses can be visualize and export to Arc GIS or Google Earth. A detailed pavement distress and a crack map with highly useful information that assists the airport authority in identifying the areas that require immediate attention as well as to plan for crack sealing with distress quantities and severities are delivered, as shown below:

Figure 6 Google Earth Crack Map

Example screen captures of the GIS/KMZ/DWG data we can provide are shown in Figures 7 through 12.

SAMPLE DATA

Figure 7 PCI Data and Distresses on Concrete Pavements

Figure 8 PCI Data and Distresses on Asphalt Pavements

Figure 9 PCI Scores for Each Sample Unit

Figure 10 Detailed Distress Locations and PCI Scores

Figure 11 Detailed Distress Locations

Figure 12 Detailed Distresses and PCI Scores

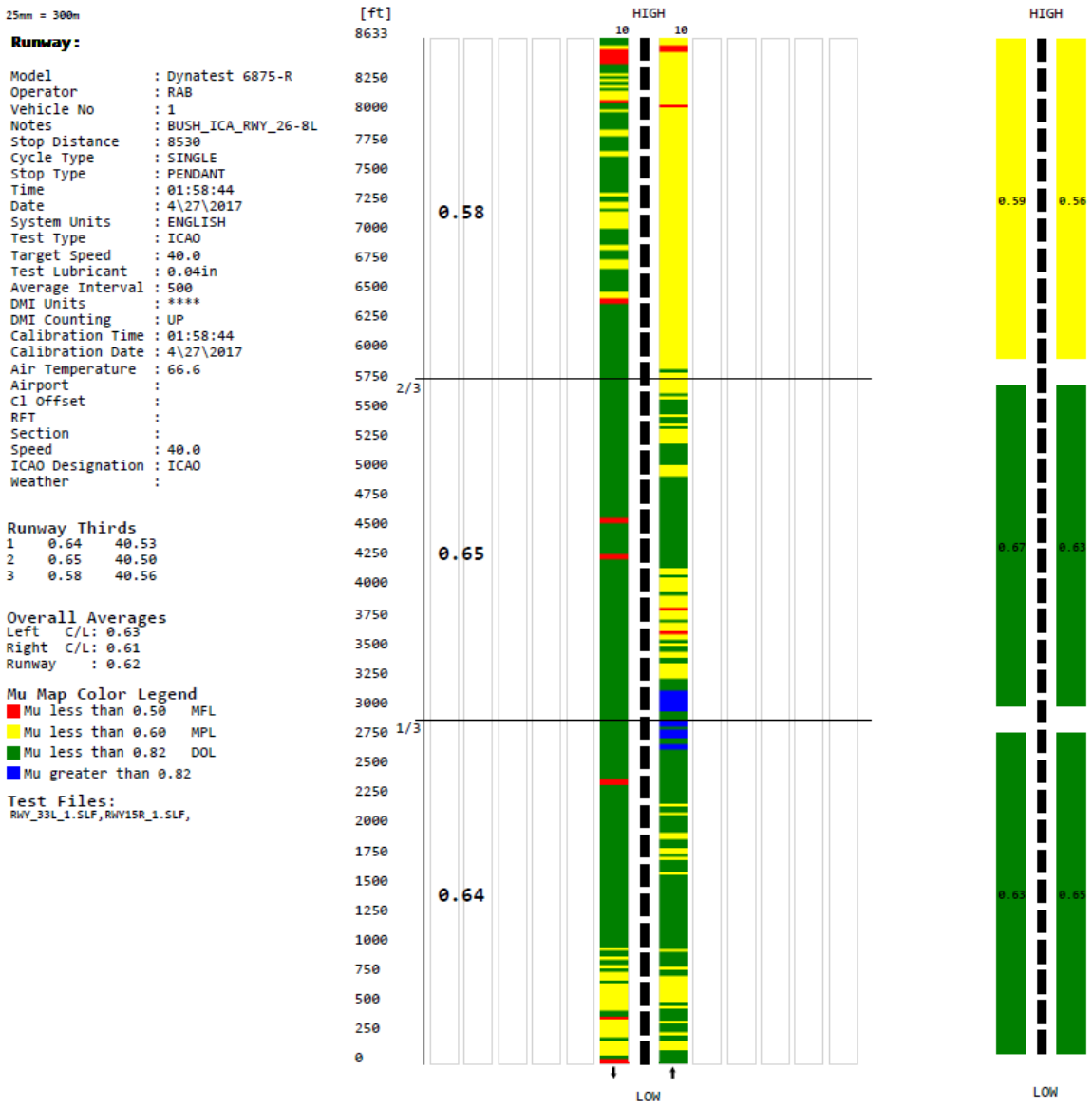


Figure 13 Runway Friction Evaluation

PAVEMENT STRUCTURAL EVALUATION & PAVEMENT DESIGN

ARA owns and operates multiple Heavy Weight Deflectometer (HWD) and, Ground Penetrating Radar (GPR) systems. The non-destructive pavement structural evaluation allows the Airport to determine the pavement structural adequacy, the pavement rehabilitation/reconstruction design and to accurately report the Pavement Classification Number (PCN) for each of the airport features.

GPR is widely used to determine the in-situ pavement layer thicknesses. The GPR works by emitting a series of radar waves to the pavement structure while the vehicle is traveling at traffic speed and collects the dielectric constants of the underlying structure. The GPR data will be analyzed using RADAN 7 software package to estimate the dielectric properties of the pavement and determine the layer thicknesses. The resulting correlated dielectric constants are then filtered to determine pavement thicknesses and types. The results must be calibrated through pavement cores at selected locations or current as-builts/construction history.

Our HWD is fully integrated with the GPR system so that each HWD station corresponds to the same location from the GPR system. Furthermore, pavement thicknesses are reported for every HWD tested station continuously which in turn increases the accuracy and quality of the pavement evaluation and design and increases the probability of successfully identifying any localized failure that might otherwise be missed by common destructive procedures. In addition, by using the GPR technology, there is a significant reduction in the required number of pavement cores, which in turn translates into savings for the agency and less traffic disruption for the airport. Figure 14 shows the GPR integrated with the ARA's HWD.

Figure 14 ARA HWD integrated with a GPR

ALVARO ULLOA, PHD PE

Principal Civil Engineer

ROLE
Principal Civil Engineer

YEARS OF EXPERIENCE
16

YEARS AT ARA
2

EDUCATION
B.S., Civil Engineering, University of Costa Rica, 2006
M.S., Civil Engineering, University of Nevada Reno, 2009
PhD., Civil Engineering, University of Nevada Reno, 2013

LICENSE & REGISTRATION
PE (Civil), California and Texas

PROFESSIONAL AFFILIATIONS
► ASCE, Published Author and Invited Conference Speaker
► Transportation Research Board, Author and reviewer, Member of AFK80 Committee
► Southwest American Association of Airport Executives, Invited Conference Speaker

AREAS OF EXPERTISE
► Airfield Pavement Management
► Airfield Manual and Automated Pavement Condition Index (PCI) inspections
► Airfield Pavement Classification Number (PCN) evaluations
► Non-destructive testing with falling/heavy weight Deflectometer and Ground Penetrating Radar
► Airfield pavement design with FAARFIELD
► FAA pavement software including BACKFAA and COMFAA

Dr. Ulloa has 16 years of academic and practical experience as a pavement engineer. Dr. Ulloa has been involved in several pavement non-destructive evaluation projects and pavement management system implementations. He has conducted pavement evaluation involving structural performance (using Falling/Heavy Weight Deflectometer, Ground Penetrating Radar, and material characterization), functional performance (using Roadway Surface Profiler and Friction Tester devices), and implemented pavement management systems and conducted pavement rehabilitation design for multiple road agencies and airports around the World.

Dr. Ulloa has been involved in pavement/material engineering since 2005. His background includes state-of-the-art pavement material characterization, tire-pavement interaction, Mechanistic-Empirical pavement design, pavement modeling using dynamic viscoelastic analysis, pavement full-depth reclamation and pavement recycling structural design, and pavement management system implementations. Dr. Ulloa has been involved in several accelerated pavement testing projects. He has published over 16 journal papers, and research reports, along with several conference podium presentations and technology transfer training around the world.

SPECIFIC PROJECT EXPERIENCE

✈ **Oakland International Airport (OAK)**. Dr. Ulloa served as project manager for performing Heavy Weight Deflectometer (HWD) testing and analysis on three taxiway connectors of Taxiway W in 2018. The project consisted in performing HWD pavement testing and analysis including ACN/PCN analysis for the forecasted 20-year aircraft mix, remaining life assessment and recommend pavement rehabilitation strategies. In addition, in 2019, Dr. Ulloa served as the project manager for performing HWD testing and pavement deflection maps for Taxiway B and V, along with several landside features. Later that year, Dr. Ulloa served as technical advisor for the pavement structural evaluation conducted on Taxiway B at the airport.

✈ **Los Angeles World Airports (LAWA)**. Dr. Ulloa was the project manager and responsible for conducting nondestructive deflection testing, structural analysis, and joints load transfer efficiency (LTE) on several runways, taxiways, and aprons at Los Angeles Int. Airport and Van Nuys Airport as part of their Airport Pavement Management System implementation. The HWD was used generate the requisite nondestructive testing load-deflection data. Both pavement functional and structural evaluation was carried out for the airside (structural) and landside (functional) of the airport. A network level structural and functional performance evaluation was undertaken on the main runways and all taxiways and connectors at airports. Non-destructive testing was performed by conducting HWD testing and automated pavement distress survey using the state-of-the-art Pavement Condition Survey System (PCSS). Dr. Ulloa was the project manager and project engineer and he was responsible for HWD data analysis, pavement evaluation and design, PAVER database creation and reports.

✈ ***Ontario International Airport (ONT)***. Dr. Ulloa served as project manager for performing HWD testing and analysis on all airside airport features. HWD and Ground Penetrating Radar (GPR) testing and analysis was conducted to determine the ACN/PCN codes, remaining life assessment and recommended pavement rehabilitation strategies. Pavement evaluation was conducted using ELMOD 6.0, COMFAA 3.0 and FAARFIELD. The findings were incorporated into the APMS.

✈ ***San Francisco International Airport (SFO)***. Dr. Ulloa served as project manager for performing HWD testing and analysis on Runways 1R-19L and 10R-28L at SFO. Several rounds of HWD testing were conducted to determine the deep injection soil stabilization impact on the overall pavement remaining life and pavement layer moduli. Pre and Post-stabilization non-destructive testing showed the change in subgrade layer modulus and a structural capacity study was undertaken to determine the stabilization benefits.

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✈ ***Huntsville International Airport (HSV)***. Dr. Ulloa was the project manager for conducting HWD and GPR testing on Runway 18R/36L, Taxiways E and W, Air Cargo, GA and FBO aprons. The airport features were evaluated to determine the current ACN/PCN categories, remaining life, and structural adequacy for the design traffic mix. In addition, pavement rehabilitation design alternatives were provided following the FAA guidelines in accordance with the FAA AC 150/5320-6E "Airport Pavement Design and Evaluation"

✈ ***Detroit Metropolitan Airport (DTW)***. Dr. Ulloa served as project manager for performing HWD testing and analysis on Runway 4L-22R and Tawiways A, Q, W and several taxiway connectors under construction. The project required HWD testing to be performed on a monthly basis for a year to determine the impact of surface milling on the overall pavement structural adequacy and the layer moduli.

✈ ***Long Beach International Airport (LGB)*** .Dr. Ulloa served as the project manager for performing Heavy Weight Deflectometer (HWD) testing and analysis on all airside feature at Long Beach Airport. Pavement evaluation included ACN/PCN analysis for the forecasted 20-year aircraft mix, remaining life assessment and recommend pavement rehabilitation strategies. Pavement evaluation was conducted using ELMOD 6.0, COMFAA 3.0 and FAARFIELD.

✈ ***Jorge Chavez International Airport, Lima Peru (LAP)***. Dr. Ulloa served as Project Technical Director for implementing the Airport Pavement Management System. In addition, Dr. Ulloa conducted the PAVER PMS implementation and the multi-year Capital Improvement Plan for the airport. Dr. Ulloa also conducted the PAVER on-site training for the airport technical personnel and provided on-hands support for a year. Non-destructive testing and analysis on all airport features.

Military Bases Airport Pavement Condition Studies / Pavement Management Systems

✈ ***Tyndall Airforce Base***. Dr. Ulloa was the Project Engineer responsible for conducting manual Pavement Condition Index (PCI) survey on the entire airside and landside pavement network of the airforce base. Dr. Ulloa also performed the PAVER database implementation, created the GIS shapefile summarizing the pavement condition and assisted developing the budget and work.

✈ ***Spofford - Laughling Airforce Base***. Dr. Ulloa was the Project Engineer responsible for conducting manual Pavement Condition Index (PCI) survey on airside pavement network. Dr. Ulloa also implemented the PAVER database, conducted several meetings with the airforce base personnel and delivered the report containing the findings of the APMS study.

SALIL GOKHALE, PE

Principal Engineer

ROLE
Principal Engineer

YEARS OF EXPERIENCE
23

YEARS AT ARA
10
(2001 to 2008, 2020 to present)

EDUCATION
B.E., Civil Engineering, Govt. College of Eng., Pune, India, 1998
M.S., Civil Engineering, Pennsylvania State University, 2001
MBA, University of Illinois (exp. 2024)

LICENSE & REGISTRATION
PE Texas #129345
PE Florida #66552

PROFESSIONAL AFFILIATIONS
► Member, ASCE
► Member, T&DI ASCE Airfield Pavements Committee
► President, Association of Transportation Professionals of Indian Origin
► Member, Indian Roads Congress
► Member, APWA
► Member, AAAE

AREAS OF EXPERTISE
► Airfield Pavement Management
► Airfield Pavement Condition Index (PCI) inspections
► Airfield Pavement Classification Number (PCN) evaluations
► Non-destructive testing with falling weight deflectometer, runway friction testing
► Airfield pavement design with FAARFIELD
► FAA pavement software including BACKFAA and COMFAA

Mr. Gokhale is a licensed engineer with more than 23 years of experience in pavement engineering and has extensive experience with highway and airfield pavement evaluation projects. His areas of expertise include implementation/updates of pavement management systems, automated and manual pavement condition surveys, non-destructive structural testing with the Falling Weight Deflectometer (F/HWD), Ground Penetrating Radar (GPR), GIS integration, pavement profile measurements, and, friction testing, and Accelerated Pavement Testing (APT). Mr. Gokhale has published more than 15 peer reviewed papers and technical reports, and serves as a member of the Transportation Research Board's standing committee on Pavement Monitoring and Evaluation (AFD20).

Before joining ARA, Mr. Gokhale served as the Director of Consulting for Dynatest North America. Dynatest's consulting division was acquired by ARA in 2020, and Mr. Gokhale leads the newly acquired team, based in Austin, Texas.

SPECIFIC PROJECT EXPERIENCE

✈ ***U.S. Air Force (USAF)*:** Mr. Gokhale served as co-project manager on a project to perform pavement condition index (PCI) surveys at Tyndall air force base, Laughlin air force base, Spofford air force base and Felker air force bases. These projects included walking/manual PCI surveys of all features, updating GIS data sets and drawings, updating the PAVER database, reviewing pavement performance models, performing budget analyses and delivering final reports.

✈ ***Palm Beach International Airport, Palm Beach, Florida.*** Mr. Gokhale served as the Project Manager for the structural evaluation of Taxiways A and C, Concourse AB apron, and the cargo apron at the Palm Beach international airport. The project included Heavy Falling Weight Deflectometer (HWD) testing and subsequent analysis of the load-deflection data to estimate pavement layer moduli, evaluation of the projected aircraft traffic and loading to determine required structural overlay thicknesses (on taxiways), and an evaluation of the joint load-transfer efficiency on the apron slabs.

✈ ***Sangster International Airport, Montego Bay, Jamaica.*** Mr. Gokhale served as the project manager for a project at the Sangster International Airport in Montego Bay, Jamaica. The project included HWD testing on Runway 07/25, determination of existing layer moduli, analyses of projected aircraft traffic, determination of the Pavement Classification Number (PCN), and determination of required structural overlay to carry proposed aircraft traffic.

✈ ***Dallas Fort-Worth International Airport.*** Mr. Gokhale was the project manager for performing 3D-LCMS based pavement condition surveys on 2 runways and 9 taxiways at the airport, in support of updating the airport's pavement management system. In a separate project at the airport, Mr. Gokhale's team provided HWD and GPR testing on all major features.

✈ ***Houston International Airport, Houston, Texas.*** Mr. Gokhale was the project manager for project involving detailed pavement inspections on Taxiway November-Bravo at the Houston International Airport in Houston, Texas. The project included imaging van-based, 3D-Laser Crack Measurement System (LCMS) data collection and analysis of more than 5,000 PCC slabs on this newly reconstructed taxiway.

- ***Holman Field Airport, St. Paul, Minnesota.*** Mr. Gokhale was the project manager for a project involving HWD testing on Runway 14/32 and Taxiways A and E at the Holman Field airport in St. Paul, MN. This project included 4 rounds of HWD testing to determine the variation in layer moduli due to potential impacts of flooding of a nearby river.

- ***Phoenix Sky Harbor International Airport, Phoenix, Arizona.*** Mr. Gokhale served as a project engineer on this project that included HWD testing and analysis on the pavements on Concourses N1, N2, N3, N4, S2, S3, S4 and the West hold apron at the Phoenix Sky Harbor International Airport. The main objectives of this project included backcalculation of HWD data to determine existing layer moduli, evaluation of joint load-transfer efficiency and potential void locations.

- ***Non-Destructive Structural Testing and Evaluation Projects.*** Mr. Gokhale has extensive experience with managing structural testing and evaluation projects at commercial airports in the USA. Some examples include:

  Hartsfield-Jackson International Airport, Atlanta, Georgia. From 2001 through 2015, our team performed HWD testing on all airfield pavement features at the Atlanta international airport, including all runways, taxiways, ramps, aprons, and other storage areas. The testing was performed on a 2 or 3 year cycle and involved testing more than 5,000 test locations in each round. Mr. Gokhale managed the project from 2008 through 2015.

  Dallas-Fort Worth International Airport, Dallas, Texas. Mr. Gokhale was the project manager on a project to evaluate all 7 runways and all major taxiways at the Dallas-Fort Worth international airport. The nondestructive structural testing data is in support of the airport's APMS system as well as specific deign level projects. The project is currently ongoing and future task will likely include all remaining features including secondary taxiways, connectors, high speed taxiway exits, aprons and ramps.

  HWD Testing at Other Airports.
  Dallas Fort-Worth International Airport, Texas
  San Antonio International Airport, Texas
  Orlando-Sangster International Airport, Orlando, Florida
  St. Lucie County Airport, Fort Pierce, Florida
  Ft. Lauderdale International Airport, Ft. Lauderdale, Florida
  Memphis International Airport, Memphis, Tennessee
  Detroit International Airport, Detroit, Michigan
  Daytona International Airport, Daytona, Florida
  Lakeland-Linder Airport, Lakeland, Florida
  Miami Opa-Locka Airport, Florida

- ***Pavement Management Projects.*** Mr. Gokhale has vast experience with PCI surveys, program management, and PMS systems implementations for agencies. In the past few years alone, he has served as a project manager/project engineer for:

  Department of Defense. PCI surveys and PAVER updates/implementation projects at more than 75 Navy and Army installations in the USA and overseas locations.

  Cities and Counties. PCI surveys and PMS implementation/updates for:
  Howard County, MD, (1,400 miles)
  Clay County, FL (970 miles)
  City of Richmond, VA (1,800 miles)
  City of Minneapolis, MN (1,600 miles)
  City of Indianapolis, IN (3,200 miles)
  Arlington County, MD, (900 miles)
  Rover Pipeline project, 4 States in the Midwest USA, (3,200 miles)
  Enbridge Pipeline project, 6 states in the Midwest USA (7,000 miles)
  Harris County Toll Road Authority, Houston, TX (800 miles), Various Toll Roads in Dallas, Texas.

ATTACHMENT 2

Hillsborough County Aviation Authority
PO Box 22287
Tampa, FL 33622
Telephone: 813-870-8700

E-Verify Certification

Asphalt Rehabilitation of Runway 1R-19L & 10-28 and Replacement of Concrete Slabs

This certification is required in accordance with the State of Florida, Office of the Governor, Executive Order Number 11-116 (Verification of Employment Status).

The State of Florida, Office of the Governor, Executive Order Number 11-116 (Verification of Employment Status), and any projects with Florida Department of Transportation (FDOT) funding as part of a Joint Participation Agreement between FDOT and the Authority, require, as a condition of all contracts for the provision of goods or services, an express requirement that contractors utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the contractor during the term of the contract, and an express requirement that contractors include in subcontracts the requirement that subcontractors performing work or providing services pursuant to the contract utilize the E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the contract term.

Company: AECOM Technical Services, Inc. FID or EIN No.: 95-2661922

Address: 7650 W. Courtney Campbell Causeway, Suite 700 City/State/Zip: Tampa, FL 33607

I, Andrew Kacer, as a representative of AECOM Technical Services, Inc. certify and affirm that this company will comply with the E-Verification requirements of Executive Order Number 11-116.

Signature: Andrew Kacer — Title: Vice President

Printed Name: Andrew Kacer — Date: October 21, 2022

[Affix Corporate Resolution if not signed by the President or Vice President of the Company]