

EXHIBIT E-2

Work Authorization No.: ATKINS-12-54  
AOA Security Fence Enhancements  
RLI/RFP No.: RLI No. R0729109R1

Under Board of County Commissioner's Award Authority for Services

Consultant: Atkins North America, Inc. f/k/a PBS&J

Project No.: AEP 1133

Project Title: Expansion of Runway 9R/27L

RLI/RFP Title: Consultant Services for Expansion of Runway 9R/27L at Fort Lauderdale-Hollywood International Airport in Broward County, Florida

Facility Name: Fort Lauderdale-Hollywood International Airport

This Work Authorization (WA) is issued pursuant to the Agreement between Broward County and Atkins North America, Inc. f/k/a PBS&J, for Consultant Services in Broward County, which was approved by the Board of County Commissioners on April 6, 2010, Item No. 37. Except as provided herein, nothing contained in this Work Authorization shall alter, modify or change in any way the terms and conditions of the Agreement with the County.

This Work Authorization provides for services consistent with the Agreement referenced above and as specifically described in the attached proposal and scope. Payment for such services shall be in accordance with the Agreement.

The time period for this Work Authorization shall consist of Two Hundred Sixty-six (266) calendar days plus construction phase service support during construction. This Work Authorization shall not extend beyond the Agreement term without the approval of the Board of County Commissioners, unless expressly provided for in the Agreement - In accordance with Article 4.1 of the Agreement, this Work Authorization shall not expire until the expiration of all warranty periods provided for in the construction contract(s) for the Project, unless it is terminated earlier as provided under applicable provisions of this Agreement.

In consideration of the County's issuance of, payment under this Work Authorization and grant of 266 Calendar days for completion of the Work, Consultant waives and releases any and all claims associated with the performance of the Work described in this Work Authorization. This Work Authorization constitutes full accord and satisfaction of all claims for time and compensation associated with the Work authorized by this Work Authorization for all events occurring prior to execution of this Work Authorization.

Budget  
4400-400-1133-6510

Requisition Number  
SC400AVC0408100000000034

Aviation Department Division  
Airport Expansion Program (AEP)

Fee Determination: Payment for services under this WA shall be as follows:

<u>Description</u>	<u>Lump Sum</u>	<u>Maximum Amount Not-to-Exceed</u>	<u>Total</u>
Project Management Support		\$ 3,489.00	\$ 3,489.00
A. Phase 1 – Study & Research		\$84,114.00	\$84,114.00
B. Phase 2 – Redesign Documents		\$75,297.00	\$75,297.00
C. Phase 3 – Supplemental Construction Phase Support Services		\$25,861.00	\$25,861.00
Total Salary Cost	\$ -	\$ -	\$ -
Total Reimbursables	\$ -	\$ -	\$ -
Total Labor	\$ -	\$188,761.00	\$188,761.00
<u>Total</u>	\$ -	\$188,761.00	\$188,761.00

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County

County Administrator and Ex-Officio  
Clerk of the Board of Broward County  
Commissioners

Broward County, through its  
Board of County Commissioners

Recommended by:

Mark B. Wolfe 5-20-2014

Mark B. Wolfe, Date  
Runway Paving, Project Manager

MARK B. WOLFE

Print Name

Trevor M.A. Fisher, P.E. MBA 6/20/14 Date  
Contract Administrator

Print Name

Approved: Tracy Meyer, Esq. 5.21.14  
Aviation Department  
Risk Insurance and  
Contracts Manager

Mayor Date

Barbara Sharief  
Print Name

Approved as to form by  
Joni Armstrong Coffey  
Broward County Attorney  
Aviation Office  
2200 SW 45<sup>th</sup> Street, Suite 101  
Dania Beach, Florida 33312  
Telephone: (954) 359-6100  
Telecopier: (954) 359-1292

Alexander J. Williams 5/21/14  
Assistant County Attorney Date

Alexander J. Williams  
Print Name

Michael J. Kerr 5/21/14  
Chief Trial Counsel Date

Michael J. Kerr  
Print Name

Consultant

Attest:

Rene de los Rios May 19, 2014  
Secretary Date

Rene de los Rios, Assistant Secretary

Print Name

Corporate Seal



By:

Justin P. Jones May 19, 2014  
☐ President ☒ Vice President Date

Justin P. Jones  
Print Name

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**Time for Performance:**

Initial Notice to Proceed (NTP):		TBD
Task A-1 thru Task A-7	Draft Phase 1 Study and Research Report (Includes Task A-1 through A-7)	6 weeks after NTP-R0
Task A-8	Review and Comments	3 weeks after Task A-7
Task A-9	Presentation	2 weeks after Task A-8
Task A-10	Selection of Options	3 weeks after Task A-9
Task A-11	Final Phase 1 Study and Research Report	2 weeks after Task A-10
Notice to Proceed (NTP-R1)		At Task A-11 Completion
Task B-1	60% Redesign Documents	4 weeks after NTP-R1
Task B-2	Presentation	1 week after Task B-1
Task B-3	Review and Comments	3 weeks after Task B-2
Task B-4	90% Redesign Documents	4 weeks after Task B-3
Task B-5	Engineer's Estimate	2 weeks after Task B-4
Task B-6	Review and Comments	2 weeks after Task B-5
Task B-7.1	Prepare Permit Application	2 weeks after Task B-6
Task B-7.2	Permitted Redesign Documents	Tied to Agency time table
Task B-8	Draft SI	2 weeks after Task B-7.2
Task B-9	Review and Comments	1 week after Task B-8
Task B-10	Final SI	1 week after Task B-9
Notice to Proceed (NTP-R2)		At Task B-10 Completion
Task C- Phase 3	Supplemental Construction Phase Support - Tied to Construction	After NTP-R2

**EXHIBIT A****OPTIONAL SERVICES - SCOPE OF SERVICES**

AOA Security Fence Enhancements Requested by Fire Marshal (the "Project")

**1.0 PROJECT DESCRIPTION**

The Project is generally described as: AOA Security Fence Enhancements Requested by Fire Marshal for Work Package 304/305 (WP304/305) Runway, Crossfield Taxiways & Holdpad Paving, and Lighting & Signage element of the Expansion of Runway 9R-27L (Runway 10R-28L) program at the Fort Lauderdale – Hollywood International Airport.

**2.0 BASIS OF SCOPE**

The Broward County Fire Marshal's Bureau requested enhancements in discussions with the PMO and BCAD. These scope changes were not included in the original Atkins Agreement or Program Definition Documents (PDD). These enhancements will improve the Fire Marshal's command, control, and response to airport emergencies.

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The AEP program has committed to and will include the following revisions to the WP304/305 construction:

1. Provide a crash gate (manual double leaf swing gate with crash mechanism) at the MASA in addition to the currently designed electric slide gate.
2. The new crash gate will have a straight path from the airfield into the MASA. This redesign effort will require the relocation of the electrical slide gate, widening of the access road to the Runway, drainage, grading and permitting modifications.
3. Provide a gate open detection or motion detector system at the new MASA crash gate and eastern exit ramp crash gate, both with connection to the AOCC. As directed by the PMO, the existing Matrix System at FLL will be added to the crash gates. The AJAR Alarm component of this system will serve as the open detection or motion detector system. Matrix Systems, Inc. through BCAD/PMO will provide infrastructure details and information necessary for the installation of the system.
4. Provide a "catch mechanism" on the MASA crash gates and eastern exit ramp crash gate to prevent impacted gates from rebounding back onto passing fire rescue vehicles.
5. Redesign the fire and rescue roadways to accommodate a 134-foot turning radius for the largest fire and rescue vehicles. Particular attention should be paid to the eastern exit ramp and its connection to 7th avenue.

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The following table summarizes the WP304/305 - AOA security fence enhancements requested by the Fire Marshal:

<b>Gate No.</b>	<b>Location</b>	<b>Use</b>	<b>Enhancements</b>
370	Northwest of Rwy 10R	AOA Access	None Gate not modified by project
L400	West Perimeter Road	Landside Access Control Card Reader	None
420	West of Rwy 10R	AOA Access/Manual FAA NAVAIDs	134' turning radius
440	West of Rwy 10R	AOA Access/Manual FAA NAVAIDs	134' turning radius
460	South of Rwy 10R Glide Slope Antenna	AOA Access/Manual FAA NAVAIDs	134' turning radius
C470	MASA	Crash Gate AOA Access	New Gate Open/motion detection system Catch Mechanism 134' turning radius
480	MASA	AOA Access Card Reader	Relocated to accommodate Gate C470 134' turning radius
EX-1	MASA/Perimeter Rd	Landside access without Gate	134' turning radius
EX-2	MASA/Perimeter Rd	Landside access without Gate	134' turning radius
L490	South Perimeter Road	Landside Access Control /Card Reader	None
500	South of Runway SE Perimeter Rd	AOA Access/Manual FAA NAVAIDs	134' turning radius
600	East of US-1 Glide Slope Antenna	AOA Access/Manual FAA NAVAIDs	134' turning radius
620	East of US-1 Off NE 10 <sup>th</sup> Street Old Taxi Hold Lot	AOA Access BCAD Maintenance Manual	134' turning radius
640	East of US-1 Off NE 7 <sup>th</sup> Avenue	AOA Access/Manual FAA NAVAIDs	134' turning radius
C650	East of US-1 Off NE 7 <sup>th</sup> Avenue	Crash Gate AOA Access	Open/motion detection system Catch Mechanism 134' turning radius

Note: The gate nomenclature in the table above will be presented to Security and Operations for concurrence. Corresponding gate sign (specification provided by BCAD) with the approved nomenclature will be added to each gate in the contract documents.

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**3.0 SCOPE OF BASIC SERVICES**

The design services under this POSWA for the WP304/305 AOA Security Fence Enhancements are divided into three distinct stages or phases. Each of these phases will require a separate Notice to Proceed (NTP).

The LD will provide Supplemental Project Management administration and design support services during construction.

**A- Phase 1 - Study and Research**

- Task 1**      **Crash Gate Open or Motion Detection System.** Research and evaluation of different crash gate open or motion detection systems will not be required. As informed by the PMO/BCAD, the AJAR Alarm element of the Matrix System will provide the requested open detection or motion detector system. The LD will coordinate with Matrix Systems, Inc. through the PMO to determine the infrastructure requirements to tie the crash gates to the existing Matrix System at FLL. The infrastructure requirements for the installation of Matrix Systems will be presented to the PMO/BCAD for concurrence and acceptance prior to the development of the redesign documents under Phase 2 of this scope. The proprietary (hardware, software, etc.) and SSI elements of the system, including activation and commissioning will be the responsibility of Matrix Systems, Inc. under separate agreement with the County.
- Task 2**      **Crash Gate Catch Mechanism.** Available mechanisms will be identified. The pros and cons of each of the mechanisms identified will be presented to the PMO and BCAD for selection of the prefer option. A do-nothing option will be included in the recommendations provided by the LD. The number of available crash gate catch mechanisms will be determined at this task completion.
- Task 3**      **134-foot Turning Radius Roadways.** Conceptual plans will be developed for the access road or driveways to each of the gates showing the re-design changes required to comply with the 134-foot turning radius for the largest fire and rescue vehicles. More than one

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alternative may be identified at specific locations during the course of this task. The pros and cons of each design alternative will be presented to the PMO and BCAD for selection of the preferred option. A do-nothing option will be included in the recommendations provided by the LD.

- Task 4** MASA Crash Gate and Slide Gate Assembly. Conceptual plans will be developed for the new crash gate at the MASA. The currently designed electric slide gate will be moved to one side of the crash gate resulting in a combined dual gate assembly. This new crash gate will have a straight path from the airfield into the MASA. This redesign effort will require the relocation of the electrical slide gate, widening of the access road to the Runway, drainage, grading and permitting modifications.
- Task 5** Pavement for crash gates access roadways. The new paved roadways leading to the crash gates (both sides) will be evaluated to determine if the pavement section supports a fire truck weighing 128,000 pounds. The revised pavement section meeting this requirement will be presented to the PMO and BCAD for final decision to incorporate this change in the WP304/305 Contraction Documents.
- Task 6** Program level Estimate of Probable Construction Cost. Order of magnitude
- Task 7** Draft Phase 1 Study and Research Report. The LD will develop a draft report incorporating the Task A1 through Task A5 findings and conclusion. This draft report will include initial recommendations.
- Task 8** Review and Comments PMO/BCAD. The LD will clarify the Draft Phase 1 Study and Research Report and respond to the review comments. The LD will attend a reconciliation meeting. A final reconciled review comment matrix will be developed by the PMO.
- Task 9** Study and Research Report Presentation. The LD will develop presentation graphics and documents for a presentation of the Draft Phase 1 Study and Research Report to BCAD and the Fire Marshall.

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**Task 10**      Selection of Preferred Options by PMO/BCAD. The LD will provide additional information and clarification in support of BCAD's selection of the preferred options and concepts.

**Task 11**      Final Phase 1 Study and Research Report. The LD will develop the final report incorporating the selections by BCAD, as well as the final reconciled review comments.

**B- Phase 2 – Develop Redesign Documents**

**Task B-1**      60% Redesign Documents. Based on the selection by PMO/BCAD of preferred options and conceptual plans as included in the Final Phase 1 Study and Research Report, the LD will develop the 60% drawings and outline for the new specifications, as well as any changes to existing specifications.

Separate crash gate detail in sheet C13.72 to incorporate the following changes requested by the Fire Marshall (possible new sheet):

1. Remove drop bar, drop bar brackets, and locking mechanisms (latch with locking device) from crash gate
2. Provide a minimum of two 2" X 10" pressure treated (PT) wood boards across both leaves of the crash gates. The boards shall be mounted on the AOA side of the fence. The midpoint of one board shall be mounted at 46 Inches above grade and the midpoint of the second board shall be mounted at 56 inches above grade. The boards shall be scored on the non-secure side across both boards between the gate leaves and shall be halfway through the board.
3. Provide "No Parking-Fire Lane" signs on both sides of the crash gates and on each leaf.

**Task B-2**      60% Redesign Documents Presentation. The LD will develop presentation graphics and documents for a presentation of the final design concepts to BCAD and the Fire Marshall.

**Task B-3**      Review and Comments PMO/BCAD. The LD will clarify the design and respond to the review comments. The LD will attend a



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reconciliation meeting. A final reconciled review comment matrix will be developed by the PMO.

- Task B-4**      90% Redesign Documents. Final engineering details will be developed incorporating the 60% reconciled review comments. This includes the new gate signs with approve nomenclature.
- Task B-5**      Engineer's Estimate of Probable Construction Cost. Probable construction for each of the new and modified elements will be developed.
- Task B-6**      Review and Comments PMO/BCAD. The LD will clarify the design and respond to the review comments. The LD will attend a reconciliation meeting. A final reconciled review comment matrix will be developed by the PMO.
- Task B-7**      Permitted Redesign Documents. The LD will coordinate with the permitting agencies and develop the permit modification application to support BCAD during the permitting process.
- Task B-8**      DRAFT Supplemental Instructions (SI's). The LD will develop the narrative accompanied with the corresponding drawings and specifications for a draft SI.
- Task B-9**      Review and Comments PMO/CPM/BCAD. The LD will clarify SI issues and respond to the review comments. The PMO and the CPM will release the SI after the review comments have been reconciled.
- Task B-10**    Final Supplemental Instructions (SI's). Incorporating the reconciled review comments, the LD will develop the final SI to be issue to the Contractor.

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**C- Phase 3 – Supplemental Construction Phase Support Services**

- Task C-1 Request for Information (RFI's). Includes Review, Answer and Internal QC.
- Task C-2 Submittal Review. Includes Review, Response, and Internal QC.
- Task C-3 Construction Observations. The LD team along with the Resident Lead Designer Representative (RLDR) will participate in periodic construction observation of the Contractors work. This includes field observations, discussions, coordination, and reports.
- Task C-4 Substantial Completion & Punch List. Includes construction walkthrough, punch-list and follow-up.
- Task C-5 Final Completion. Includes final construction walkthrough and Punch-list closeout. If all items have not been completely addressed by the contractor, additional walkthroughs and resolution actions may be required.
- Task C-6 Record Drawings. Review of contractor's as-builts and develop record drawings.

**4.0 DELIVERABLES**

Deliverables will include:

The Deliverables will include the following:

**A- Phase 1 - Study and Research**

1. Draft Phase 1 Study and Research Report
2. Final Phase 1 Study and Research Report

**B- Phase 2 – Develop Redesign Documents**

1. 60% Redesign Documents
2. 90% Redesign Documents
3. Engineer's Estimate of Probable Construction Cost
4. Permitted Redesign Documents
5. Draft Supplemental Instructions (SI's)
6. Final Supplemental Instructions (SI's)

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**C- Phase 3 – Supplemental Construction Phase Support Services**

1. Request for Information (RFI's),
2. Submittal Review
3. Construction Observations
4. Substantial Completion
5. Final Completion
6. Record Drawings

**END OF SCOPE**