

DOCUMENT ROUTING FORM

③ ✓ 3/12/13 ②

NAME OF DOCUMENT: **Atkins North America, Inc. Task Order #1 for Pavement Management System Implementation engineering services - \$92,530**

Approved Comm. Mtg. on **MARCH 5, 2013** CAM #13-0136 ITEM: **M-7**

Routing Origin: ☒ CAO ☐ ENG. ☐ COMM. DEV. ☐ OTHER _____

Also attached: ☒ copy of CAR ☒ copy of document ☐ ACM Form ☒ 3 originals

By: LB forwarded to: **MARYANN JOHNSTON, PUBLIC WORKS ENGINEERING**
Initials

1.) Approved as to Content: Handy Arand
Department Director

Capital Improvements defined as having a life of at least 10 years and a cost of at least \$50,000 and shall mean improvements to real property (land, buildings, fixtures) that add value and/or extend useful life, inc. major repairs such as roof replacement, etc. Term "Real Property" include: land, real estate, realty, real.

Please Check the proper box: CIP FUNDED ☒ YES ☐ NO
Capital Improvement Projects

2.) Approved as to Funds Available: by Dee J. ... Date: 3.8.13
Finance Director

Amount Required by Contract/Agreement \$ 92,530.00 Funding Source: P11846.331
Dept./Div. PBS/ENG Index/Sub-object 6534 Project # 11846

3.) City Attorney's Office: Approved as to Form:# 3 Originals of each to City Mgr. By: **CARRIE SARVER**

Carrie Sarver

4.) Approved as to content: Assistant City Manager:

By: _____ By: _____
Stanley Hawthorne, Assistant City Manager Susanne Torriente, Assistant City Manager

5.) City Manager: Please sign as indicated and forward 3 originals to Clerk.

6.) To City Clerk for attestation and City seal.

INSTRUCTIONS TO CLERK'S OFFICE

7.) City Clerk: retains one original document and forwards 2 original documents to:

MARYANN JOHNSTON, PUBLIC WORKS ENGINEERING

☐ Copy of document to _____ ☒ Original Route form to Linda Blanco, CAO
☐ Attach _____ certified copies of Reso. # _____ ☐ Fill-in date

3/12

Task Order # 1
for

**Pavement Management System Implementation using PAVER™
Project No 11846**

Scope of Consulting Services
between

The City of Fort Lauderdale, Florida
and

Atkins North America, Inc.

Contact Name: Victor Herrera, PE

Address: 3230 West Commercial Boulevard, Suite 100

Phone: 954.733.7233, ext. 4013451

Fax: 954.733.1101

Dated the 5th day of March, 2013

TASK ORDER No. 1

Dated this 5th day of March, 2013

CITY PROJECT No. 11846

FORT LAUDERDALE PUBLIC WORKS DEPARTMENT

Pavement Management System Implementation

PROFESSIONAL SERVICES

Describing a specific agreement between the City of Fort Lauderdale (CITY) and **Atkins North America, Inc.** (CONSULTANT) in accordance with the terms of the agreement for professional services agreement dated November 6, 2012 between CITY and CONSULTANT ("MASTER AGREEMENT") by City Commission on November 6, 2012.

PROJECT INFORMATION

INTRODUCTION

The City is responsible for approximately 500 centerline miles of paved surfaces in the City which include streets and alleyways. Annually, the City budgets a portion of the revenues it receives from the State Gas Tax funds to fund the City's Street Resurfacing Program.

The current process to resurface streets is based on a two-fold approach as follows:

- 1) Based on when the street was previously resurfaced. The current standard is to resurface the street at a frequency of 14 to 16 years, **or**
- 2) Based on visual observations made by staff, safety issues, need to resurface due to an ongoing project (e.g., utility trenching), or due to recurring complaints from the neighborhood, etc., regarding the paving surface and rideability.

PROJECT DESCRIPTION

In an effort to obtain an objective view of the streets resurfacing needs and to be able to better identify the need, prioritization, budget and implementation of the street resurfacing program, the City is in the process of implementing the use of the MicroPAVER™ Pavement Management System (PMS).

The MicroPAVER™ is an industry standard PMS and has received an American Society for Testing and Materials standard designation (ASTM Standard D6433-99). It was developed by the US Army Corps of Engineers for road and airfield pavement maintenance and management on military bases. This PMS will allow for a standardized way of rating streets within the City. Furthermore, MicroPaver's™ approach to

pavement maintenance management also provides full compliance with the Modified Approach to accounting for infrastructure in the Government Accounting Standards Board (GASB) Standard 34.

MicroPAVER™ Methodology

MicroPAVER™ rates the condition of the roads based on the Pavement Condition Index. A newly constructed street is given a PCI of 100 and over time due to traffic conditions, age of the road/wear and tear, weather and soil conditions, utility work, etc., the PCI declines.

Assigning PCI for all streets within the City will facilitate defining the Level of Service (LOS) based on a cutoff point and the ability to proactively identify the fiscal need for the future since the cost for delayed rehabilitation work is about four (4) to five (5) times higher compared to timely rehabilitation

SCOPE OF SERVICES

CONSULTANT shall provide all (engineering and/or architectural) services described on the tasks herein below:

TASKS

Pavement Management System Implementation using MicroPAVER™

Task 1 – Inventory

- Task 1: Inventory
 - Subtask 1: Project kickoff meeting
 - Subtask 2: Inventory data collection
 - Subtask 3: GIS/shape file creation

Consultant will work with the City to create a PAVER database that contains proper management unit (section) segmentation with required information detail and linkage to GIS system. The following steps will be required:

- Consultant will work with the City to provide a GIS shape file that will be segmented such that each segment represents a section in the PAVER database and a management unit from the City's perspective.
- Once the shape file is complete, Consultant will assist the City in populating the .DBF of the shape file with 15 data elements necessary to complete the inventory process in PAVER. The 15 fields are:
 - Network ID and network name.
 - Branch ID, name, and use.
 - Section ID and "TO" and "FROM" boundaries.
 - Section surface type.
 - Section rank.
 - Section last construction date.
 - Section length and width.

- Slab length and width (only when section surface type is concrete).
- The above information will be assembled by City staff and provided to Consultant in electronic format. Consultant will take the shape file and create a PAVER database complete with internal GIS map links.

The inventory data will be quality checked, corrected if necessary, and used as a guide for data collection in Task 2.

Task 2 – Inspection

- Task 2: Inspection
 - Subtask 1: Inspection data collection
 - Subtask 2: Inspection quality check

Following ASTM D-6433-11 standards of practice, Consultant shall collect inspection data (using appropriate sampling techniques) for all sections identified in the pavement network (500 centerline miles). For each section identified in Task 1, trained technicians will identify distresses (including severity level and quantity) that exist in each sample within the section. Inspection samples will be spot checked for accuracy, and final quality checks will identify any sections that may have been overlooked. Additionally, a laser bar will be employed to check rut depth for every section in the network.

Task 3 – Condition Assessment

- Task 3: Condition assessment
 - Subtask 1: QC and upload inspection data

Once inspection data is collected, it will be uploaded to the PAVER database and quality checked, and the Pavement Condition Indexes (PCI) will be computed. This will provide the baseline for the prediction modeling and work planning phases.

Task 4 – Life-cycle and cost modeling

- Task 4: Life-cycle and cost modeling
 - Subtask 1: Build FLL specific condition models
 - Subtask 2: Create customized cost tables

Using Fort Lauderdale-specific data, Consultant shall construct prediction models (life-cycle curves) that accurately represent the degradation curves of pavement families within the City's network. These models will capture specific influencing factors such as climate, soil, traffic volume, construction, and maintenance practices, and allow the program to more accurately predict future conditions. Consultant shall also work with the City to derive accurate and organization-specific cost models to be used in Task 5.

Task 5 – Work planning (scenario modeling)

- Task 5: Work planning (scenario modeling)
 - Subtask 1: Generate multiple work plan scenarios
 - Subtask 2: Create draft of Findings and Conclusions Report
 - Subtask 3: Presentation/review of draft w/City

- Subtask 4: Finalize Findings and Conclusions Report

Multiple work plan scenarios will be constructed that will represent various “what if” options, from which the penalty cost of deferred maintenance can be quantified and optimized project lists can be generated. These work plans will provide the City with trend information, which will be valuable in creating cost-efficient budgets. Consultant shall also develop final reports and present project findings to the City in a timely manner. Consultant shall assist the City in using data from the work plans to accomplish its pavement management goals.

Task 6 – Training

- Task 6: Training
 - Subtask 1: Two-day on-site training course w/City staff using Fort Lauderdale database

Consultant shall provide a 2-day system training course for City staff if requested, to enable them to maintain the system moving forward.

DELIVERABLES

CONSULTANT shall provide the following for City review and written approval:

Task 1 – Inventory

- Meeting minutes for kickoff meeting in PDF format (and revisions as needed)
- PAVER database with Fort Lauderdale pavement network inventory
- GIS shape file linked to PAVER database

Task 2 – Inspection

- Complete ASTM D633-11 standard inspection data collection event
- QC of data collection

Task 3 – Condition assessment

- PAVER database with current inspection data uploaded and verified

Task 4 – Life-cycle and cost modeling

- Fort Lauderdale specific prediction models (PAVER database internal)
- Fort Lauderdale customized cost tables (PAVER database internal)

Task 5 – Work planning (scenario modeling)

- Findings and Conclusions Report complete with workplan scenario data in PDF format (and revisions as needed)
- Meeting with City staff to present and explain findings

Task 6 – Training

- Two-day, on-site PAVER training course with City staff using newly created database

PROJECT ASSUMPTIONS

Specific assumptions for the project:

- Consultant shall interface with City GIS personnel to create shape file complete with street inventory.

CITY'S RESPONSIBILITIES

Include any data or assistance to be provided by the City:

- Provide GIS support as needed
- Provide PAVER inventory network data
- Provide access to field inspection team
- Provide any questions in a timely fashion

PERFORMANCE SCHEDULE

The CONSULTANT shall perform the services identified in Task 1 through 6 inclusive within 180 working days of written Notice to Proceed.

METHOD OF COMPENSATION

The services performed will be accomplished using the Not to Exceed method of compensation. Reimbursable expenses associated with these services are not included in the fees and will be itemized separately, subject to an established Not to Exceed limit. A fee schedule and cost breakdown for reimbursable expenditures is included on Exhibit A.

Sub consultant proposal is included on Exhibit B.

TERMS OF COMPENSATION

Services will be provided for the following Not to Exceed amounts:

Task No	Description	Labor Fees		Total
		Consultant	Sub consultant	
1	Inventory	\$10,318	\$0	\$10,318
2	Inspection	\$2,242	\$54,550	\$56,792
3	Condition assessment	\$3,640	\$0	\$3,640
4	Life-cycle and cost modeling	\$6,096	\$0	\$6,096
5	Work planning (scenario modeling)	\$9,588	\$0	\$9,588
6	Training	\$6,096	\$0	\$6,096
			All tasks	\$92,530

IN WITNESS OF THE FOREGOING, the parties have set their hands and seals the day and year first above written.

CITY

CITY OF FORT LAUDERDALE, a
municipal corporation of the State of
Florida:

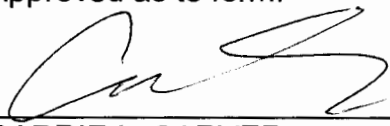
By 
LEE R. FELDMAN, City Manager

(CORPORATE SEAL)

ATTEST:


JONDA K. JOSEPH, City Clerk

Approved as to form:


CARRIE L. SARVER
Assistant City Attorney

CONSULTANT

WITNESSES:

Annette Munoz
Annette Munoz
Print Name

Maercy Telleria
Maercy Telleria
Print Name



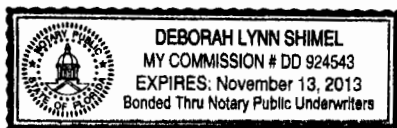
Atkins North America, Inc.

By: David J. Carter
Name: David J. Carter
Title: Senior Vice President

ATTEST:

By: Rene de los Rios
Name: Rene de los Rios
Title: Assistant Secretary

David J. Carter and Rene de los Rios as Senior Vice President and Assistant Secretary, respectively, of Atkins North America, Inc. acknowledged the foregoing instrument before me this 26th day of February, 2013, on behalf of the corporation. They are personally known to me and did not take an oath.



Deborah Lynn Shimel
Notary Public, State of Florida
(Signature of Notary taking Acknowledgement)

Deborah Lynn Shimel
Name of Notary Typed, Printed or Stamped
Nov. 13, 2013
My Commission Expires
DD 924543
Commission No.

EXHIBIT A

Fee Schedule

Consultant

Fee Schedule								
Labor Category		Senior Project Manager (Project manager)		Project Manager (Technical Lead)		Project Manager (QAQC)		
Labor Rate		\$159/hr		\$148/hr		\$148/hr		
Task No	Task Description	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)	
1	Inventory	50	\$7,950	12	\$1,776	4	\$592	\$10,318
2	Inspection	2	\$318	9	\$1,332	4	\$592	\$2,242
3	Condition assessment	8	\$1,272	8	\$1,184	8	\$1,184	\$3,640
4	Life-cycle and cost modeling	16	\$2,544	24	\$3,552	0	\$0	\$6,096
5	Work planning (scenario modeling)	24	\$3,816	31	\$4,588	8	\$1,184	\$9,588
6	Training	16	\$2,544	24	\$3,552	0	\$0	\$6,096
Labor Subtotal								\$37,980

Pavement Inspections City of Fort Lauderdale



MGIS Preliminary Cost Estimate - Pavement Inspection Services v1a

Task Description	Qty	Units	Unit Price	Task Cost
<i>Project Initiation, Quality Management Plan (QMP), Mobilization & Project Management</i>	1	network	\$2,800	\$2,800
Pavement Condition Inspection <i>Surface Distress 100% sampling(per ASTM Standard D 6433 Guidelines (Criteria for MicroPAVER)</i> <i>Laser Profiler @ 100ft intervals (ASTM E-950 certified longitudinal profile-both wheel paths)</i>	500	miles	\$99.02	\$49,508
Update City's PMP - Load data into MicroPAVER	1	Network	\$2,242	\$ 2,242
PROJECT SERVICES TOTAL				\$54,550

Work Hours Team Members

PM	PE	TE	SS	FT	AD	Expenses	Total
\$115	\$126	\$104	\$92	\$67	\$45	Cost +15%	\$
8	2	2	2		5	\$ 1,011	\$ 2,800
16	4	6	10	495	8	\$ 12,095	\$ 49,508
2	1	1	16	0	1	\$ 265	\$ 2,242
26	7	9	28	495	14	\$ 13,371	\$ 54,550

MGIS Consultant Rates - On-Call Pavement Management Program Support Services

The project is based on a fixed fee as per agreed scope. The list of hourly rates for all proposed project staff may be used for any additional work outside this scope. These professional and technical hourly services could be used to generate additional pavement reports, analysis and/or assist with maintaining and updating the program. Fees will include all direct and indirect costs.

Note: These rates will hold valid for the term of the project. A cost of living increase will be applied to rates for each accumulative year. Any additional onsite expense Costs + 15%

Staff Categories		Rates
Project Manager	PM	\$115
Project Engineer	PE	\$126
Technical Pavement Expert	TE	\$104
MicroPAVER Software Specialist	SS	\$92
Field Pavement Technician (3)	FT	\$67
Administration	AD	\$45