

**TASK ORDER #01**

**REST BEACH  
PRE-NOURISHMENT TASKS**

**AGREEMENT NO. 14-004**

General

Rest Beach is located immediately east of the White Street Pier on Atlantic Boulevard in Key West, Florida. At ~670 feet long, Rest Beach represents the second longest segment of public beach managed by the City of Key West (City). In order to provide stability to Rest Beach and to ensure that it provides both upland protection and recreational quality, the City requested Atkins assist with obtaining state and federal permits to allow for maintenance of the beach. Atkins submitted a Joint Coastal Permit (JCP) application to the Florida Department of Environmental Protection (FDEP) and the U.S. Army Corps of Engineers (USACE) to initiate the permit approval process. FDEP issued its JCP on March 16, 2015 (Permit No.: 0291485-002-JC); a 15-year maintenance permit allowing for multiple nourishment events over its effective period. The USACE Department of The Army (DA) permit is pending (SAJ-1993-00342 (SP-MIB)).

Under the authorization from the FDEP permit and the pending DA permit the City should be allowed to place beach fill material (sand) from pre-approved upland mine sources to nourish Rest Beach. Permit conditions for beach nourishment require biological and physical beach monitoring be conducted to ensure existing natural habitats outside of the permitted project area are not impacted by the sand placement and that sand is placed only within the design template. Monitoring should occur at pre-construction (pre-nourishment), during construction, and post construction stages of the project.

Under Task Order #1, Atkins will conduct the pre-construction biological and physical beach monitoring activities in compliance with state and federal permit conditions. Under this scope of services data will be collected on the existing conditions at Rest Beach prior to nourishment. This information may also be used by the regulatory agencies to issue notices to proceed for the anticipated summer 2015 nourishment event. The estimated labor hours and fees per task are provided in the attached spreadsheets.

1.0 Project Scoping and Kick-Off

The project kick-off task includes both internal meetings (within Atkins) and external meetings (with the City) for the Rest Beach Pre-Nourishment Project (Task 1.1). Atkins will meet internally to allocate the appropriate resources to each task. External meetings (by phone) will occur with representatives from Atkins and City management to discuss the overall approach and schedules to complete the project. The City will also provide any relevant documents/literature to Atkins. Limited coordination, on behalf of the City, will occur between Atkins and the regulatory agencies in this Task.

2.0 Pre-Construction Biological Assessment

Permit conditions require a description and quantification of natural communities at the project site prior to commencement of nourishment activities. This includes submerged aquatic vegetation and hardbottom communities that may exist offshore of the proposed construction activities and associated reference locations. A biological assessment of the offshore habitats at Rest Beach will be conducted as outlined in the approved March 2, 2015 *Physical and Biological Monitoring Plan* prepared by Atkins (Task 2.1). Note the project site is located within the Florida Keys National

Marine Sanctuary (Sanctuary) boundaries. Atkins currently maintains a permit with the Sanctuary that authorizes Atkins to conduct scientific studies within its boundaries (Permit No.: FKNMS-2012-107). With the use of snorkels and other supporting equipment, Atkins will document (qualitatively and quantitatively) the benthic habitats within the project site in compliance with the approved *Physical and Biological Monitoring Plan*. Data collected during the biological assessment will be compiled, analyzed, and presented in a pre-construction biological assessment report. The report will be submitted to FDEP, USACE, and the Sanctuary (Task 2.2).

### 3.0 Sanctuary Permitting

It is anticipated that implementation of the design for the Rest Beach Maintenance Project (January 2013 JCP permit plans) will result in impacts to submerged aquatic vegetation within the fill template. As there are currently no seagrass mitigation banks within the service area of Key West from which to purchase mitigation credits, and one in-lieu fee program with limited seagrass credits available for purchase, a permittee-responsible in-kind restoration is also proposed as mitigation for the permitted impacts from the Rest Beach Maintenance Project. A mitigation plan (March 3, 2015 *Seagrass Mitigation and Monitoring Plan*) prepared by Atkins was submitted to the regulatory agencies on behalf of the City. A permit will be required from the Sanctuary to conduct the proposed mitigation project activities within its boundaries. To obtain a permit, Atkins will submit a permit application and all relevant information the Sanctuary detailing the location of the proposed mitigation project, the methods and protocols that will be utilized, and construction activities (Task 3.1). The City will be the permittee on the application.

### 4.0 Pre-Construction Hydrographic Data

Permit conditions also require a topographic and bathymetric survey of the proposed project site, including profiles that reflect pre-construction conditions. The topographic/bathymetric task involves the verification of survey controls/monuments, topographic and bathymetric data collection, and the submission of mean high water line survey maps signed and sealed by a certified land surveyor.

In order to conduct surveying activities a network of control stations shall be established or recovered in the proposed survey area with both vertical and horizontal values (Task 4.1). The network shall consist of Local 2<sup>nd</sup> Order, Class 2 vertical (both NAVD88 and NGVD29), Tidal Bench Marks and Horizontal (NAD83) control points. Vertical points shall be tied into the Tidal Bench Mark in the area and the horizontal control points shall be tied into the Florida GPS Network. Permanent Reference Control Monuments (brass disc in concrete) will be replaced if missing. The network of control stations shall include temporary benchmarks (3<sup>rd</sup> order vertical/horizontal) and physical ground topography points (3<sup>rd</sup> order vertical/horizontal). The ground topography points shall be either digital, differential, or trigonometric measurements.

All work performed will meet or exceed USACE requirements, FDEP requirements and Florida Minimal Technical Standards of Chapter 472.027 F.S. Rule 5J-17 Florida Administrative Code. The topographic data will be collected along existing profile lines seaward out to approximate 130 meters feet in order to establish continuity with offshore data and landward to the existing Permanent Reference Control Monuments. The topographic data will be collected at 100 intervals not to exceed 25 ft. along the profile and all grade breaks and attributed items along the profile sufficient to describe the profile (Task 4.1). All survey data shall be provided in digital form and used to produce a Digital Terrain Model (DTM) map at 0.5 ft contour intervals and tied to the Mean High Water line as approved by FDEP (Tasks 4.2 and 4.3).

#### 5.0 Engineering Review

The design for the Rest Beach Maintenance Project (January 2013 JCP permit plans) was based on the August 2012 topography and bathymetry of Rest Beach. The potential exists that erosional forces acting on the beach may have significantly altered the profile requiring changes to the sand placement plan for the anticipated summer 2015 nourishment event. Atkins is aware the City does not intend to purchase additional sand so adjustments to sand placement may be required to balance the site while still maximizing the fill template. Once the pre-construction topographic and bathymetric survey data has been collected it will be reviewed by Atkins coastal engineers to assess how the current beach profile compares to the 2015 permitted design (Task 5.1). This review will determine if there have been significant topographic changes between 2012 and 2015, and forecast the sand volumes required to maximize the template (Task 5.2). If warranted, new construction-level drawings would be produced under a separate work order.

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Category	FY	Rodman	Surveyor I	Tech I	Tech II	Sr Tech I	Sr Tech II	PM/PG	Sr Tech III	Sr PM	Sr Tech IV	PTP/Sr. Div Manager	Hours	Cost	
<b>Task</b>		\$45.00	\$86.00	\$60.00	\$80.00	\$100.00	\$115.00	\$136.00	\$150.00	\$165.00	\$185.00	\$225.00			
<b>1.0 - Project Kick Off</b>															
1.1 Project Scoping and Kick Off	15							8					8	\$1,088.00	
													<b>Subtotal</b>	<b>8</b>	<b>\$1,088.00</b>
<b>2.0 - Pre-Construction Biological Assessment</b>															
2.1 Pre-Construction Biological Assessment	15				8	28	20	22	20				98	\$11,732.00	
2.2 Pre-Construction Biological Assessment Report	15					24		16		4	2		46	\$5,606.00	
													<b>Subtotal</b>	<b>144</b>	<b>\$17,338.00</b>
<b>3.0 - Sanctuary Permitting</b>															
3.1 FKNMS Permitting for Mitigation Activities	15							24					24	\$3,264.00	
													<b>Subtotal</b>	<b>24</b>	<b>\$3,264.00</b>
<b>4.0 - Pre-Construction Hydrographic Data</b>															
4.1 Establish Survey Controls and Data Collection	15	20	20		20		6						66	\$4,910.00	
4.2 MHWL Survey	15						32	8				2	42	\$5,218.00	
4.3 Deliver DTM Map (signed and sealed)	15						24					2	26	\$3,210.00	
													<b>Subtotal</b>	<b>134</b>	<b>\$13,338.00</b>
<b>5.0 - Engineering Review</b>															
5.1 Review updated survey to beach design	15					8		4	2				14	\$1,644.00	
5.2 Update fill calculations	15					8		2	2				12	\$1,372.00	
													<b>Subtotal</b>	<b>26</b>	<b>\$3,016.00</b>
													<b>Total Labor</b>	<b>336</b>	<b>\$38,044.00</b>
													<b>Total Expenses</b>	<b>\$2,944.88</b>	
													<b>Total</b>	<b>\$40,988.88</b>	

Notes:

- 1) The categories and rates are derived from Agreement 14-004
- 2) Fees will be billed on a time charge basis.
- 3) Permit fees will be paid for by the City.
- 4) Acronyms:  
 FKNMS - Florida Keys National Marine Sanctuary  
 MHWL - Mean High Water Line  
 DTM - Digital Terrain Model

