



# VILLAGE OF KEY BISCAYNE

Office of the Village Manager

*Village Council*

Robert L. Vernon, *Mayor*  
Michael Davey, *Vice Mayor*  
Enrique Garcia  
Robert Gusman  
Michael E. Kelly  
Jorge E. Mendia  
Thomas Thornton

## MEMORANDUM

*Village Manager*  
Genaro "Chip" Iglesias

DATE: August 18, 2009  
TO: Honorable Mayor and Members of the Village Council  
FROM: Genaro "Chip" Iglesias, Village Manager  
RE: Coastal Systems International – Beach Renourishment Maintenance Project

### RECOMMENDATION

It is recommended that the Village Council approves the proposal submitted by Coastal Systems International for consulting services relative to the beach renourishment maintenance event project. The project includes restoration of the beach using the design template authorized by Council in 2000.

The total fees and services are estimated at \$55,900.00. Funding will be obtained from the capital outlay beach renourishment line item and reimbursed to the Village by the Federal Emergency Management Agency (FEMA); the expenses relating to beach renourishment projects will then be deducted from the total FEMA allocation of \$1,329,000.

### BACKGROUND

As per resolution 2008-34 dated August 22, 2008, the Village committed funds to the Florida Department of Environmental Protection for the construction and monitoring of the Beach Renourishment Project.

Coastal Systems International has been previously retained by the Village in connection with services needed for the beach renourishment projects. It would be in the best interest of the Village to expand the services from the existing continuing contract provided by Coastal Systems International for the continuance of the project.

**RESOLUTION NO. 2009-**

**A RESOLUTION OF THE VILLAGE COUNCIL OF THE VILLAGE OF KEY BISCAYNE, FLORIDA, AUTHORIZING THE FURTHER PROCUREMENT OF ENGINEERING SERVICES FOR THE VILLAGE OF KEY BISCAYNE, FROM THE FIRM OF COASTAL SYSTEMS INTERNATIONAL, INC.; PROVIDING FOR APPROVAL OF PROPOSAL CONCERNING CONSULTANT SERVICES RELATIVE TO BEACH RENOURISHMENT MAINTENANCE PROJECT; PROVIDING FOR IMPLEMENTATION; PROVIDING FOR EFFECTIVE DATE.**

**WHEREAS**, pursuant to a contractual agreement previously entered into between the Village of Key Biscayne and Coastal Systems International, Inc. (the “Engineer”), the Engineer has been retained by the Village in connection with services needed for the Village of Key Biscayne Beach Renourishment Projects; and

**WHEREAS**, the Engineer, pursuant to its continuing contract, has proposed to perform initial consulting services relative to the proposed Village Beach Renourishment Maintenance Project (the “Project”), which Project includes the restoration of the beach using the design template created by Engineer and authorized by the Village in 2000 for beach compatible sand placement between R-101 and R-108 and using fill material obtained from one or more of the approved offshore borrow areas; and

**WHEREAS**, the Village Council finds that it is in the best interest of the Village to utilize the Engineer for the purpose of the Project and reporting thereon, as described in the attached proposal.

**NOW, THEREFORE, IT IS HEREBY RESOLVED BY THE VILLAGE COUNCIL OF THE VILLAGE OF KEY BISCAYNE, FLORIDA, AS FOLLOWS:**

**Section 1. Recitals Adopted.** That each of the recitals stated above is hereby adopted

and confirmed.

**Section 2. Work Authorized.** That pursuant to the existing continuing contract between the Engineer and the Village, the consulting services in furthering the Project and reporting thereon, as described in the proposal attached hereto, are hereby approved.

**Section 3. Proposal Approved.** That the Village Manager is hereby authorized to execute the proposal in substantially the form attached hereto for the engineering work authorized hereunder between the Village and the Engineer, once approved by the Village Attorney as to form and legal sufficiency.

**Section 4. Implementation.** That the Village Manager is hereby authorized to take any necessary action to implement the purposes of this Resolution and the attached proposal.

**Section 5. Effective Date.** That this Resolution shall be effective immediately upon adoption hereof.

PASSED AND ADOPTED this \_\_\_ day of August, 2009.

\_\_\_\_\_  
MAYOR ROBERT L. VERNON

ATTEST:

\_\_\_\_\_  
CONCHITA H. ALVAREZ, MMC, VILLAGE CLERK

APPROVED AS TO FORM AND LEGAL SUFFICIENCY:

\_\_\_\_\_  
VILLAGE ATTORNEY

**Proposal**

**Proposal**



COASTAL SYSTEMS INTERNATIONAL, INC.  
464 South Dixie Highway • Coral Gables, Florida 33146  
Tel: 305-661-3655 • Fax: 305-661-1914  
www.coastalsystemsint.com

135040.02

March 30, 2009

Mr. Armando Nunez  
Public Works Director  
VILLAGE OF KEY BISCAYNE  
88 West McIntyre Street  
Key Biscayne, Florida 33149

**RE: CONSULTING SERVICES RELATIVE TO THE PROPOSED VILLAGE OF KEY BISCAYNE BEACH RENOURISHMENT PROJECT MAINTENANCE EVENT AUTHORIZATION, VILLAGE OF KEY BISCAYNE, MIAMI-DADE COUNTY, FLORIDA**

Dear Mr. Nunez:

This is to submit a proposal for initial consulting services relative to the proposed Village of Key Biscayne Beach Renourishment Maintenance Event Project (Project). The Project includes restoration of the beach using the design template that was authorized in 2000 for beach compatible sand placement between Florida Department of Environmental Protection (DEP) reference monument R-101 and R-108 and using fill material obtained from one or more of the approved offshore borrow areas.

Although the agencies generally approved maintenance events under the 2000 permits, these events are subject to "additional conditions which may be determined to be appropriate based upon data submitted ... in support of your request or upon the results of previous monitoring data." Coastal Systems will submit requests for approval of beach maintenance events to the Florida Department of Environmental Protection (DEP), U.S. Army Corps of Engineers (COE) and Miami-Dade County Department of Environmental Resources Management (DERM).

The maintenance event authorization requests should help increase momentum toward resolution of pending permit compliance issues; please note that there may be substantial additional data collection, environmental impact analysis and negotiation required prior to issuance of authorization for the proposed maintenance event. The agencies may require modification of the design template to avoid or further minimize seagrass or other environmental impacts. Upon receipt of comments and/or formal requests for additional information from these agencies, Coastal Systems will confer with the Village relative to appropriate strategy for addressing outstanding permit compliance issues and new data that must be collected and analyzed toward negotiating approvals for the proposed maintenance event.

The following services are to be provided by Coastal Systems International, Inc. (Coastal Systems) for the Village of Key Biscayne (Village).

### **PART 1 – DATA COLLECTION**

- a. **Initial Borrow Area Reconnaissance:** Coastal Systems will conduct initial reconnaissance to document the current condition of the three (3) previously authorized borrow sites and pipeline corridors. The reconnaissance will consist of a hydrographic survey of each site, which will be overlaid (under Part 1b) with existing available data regarding rock depths to estimate the available sand volume at each borrow site. This scope of services does not include marine resource surveys, jet probes or other means of groundtruthing the sand volume within the borrow areas, or a search for potential alternate borrow areas.
- b. **Borrow Area Sand Volume Estimate:** Coastal Systems will overlay the hydrographic survey depicting the existing substrate surface with available historic data regarding the top of rock elevation in order to estimate the available sand volume within each of the 3 approved borrow areas for the proposed beach maintenance event. The regulatory agencies may require additional data regarding available sediment quality and quantity.

### **PART 2 – MAINTENANCE EVENT AUTHORIZATIONS**

For the initial maintenance event authorization request submittal, Coastal Systems is providing permit sketches depicting the original approved project limits relative to available data regarding current site conditions; all other required items will be provided by the Village or by Coastal Systems under a separate scope of services.

- a. **Initial Permit Sketches:** Using data available in our files and received from the County, Coastal Systems will prepare an initial set of project sketches illustrating existing beach profile conditions and the proposed limits of the Project based on the previously authorized beach nourishment project limits and known project performance conditions, previously approved borrow areas and pipeline corridor(s) for submittal to the environmental permitting agencies. The initial permit sketch set will also illustrate the most recent available marine resource boundary data available for the initial permit application submittal. Permit sketches will be prepared on 8 ½ x 11-inch paper. The sketches will be used for initial permit review only (not construction). Coastal Systems will review a draft version of these sketches with the Village prior to submittal to the permitting agencies.
- b. **Maintenance Event Authorization Requests:** Coastal Systems will prepare and submit letters requesting maintenance event authorizations under DEP Permit No. 0160856-001-JC, Department of the Army Permit No. 199904294 (IP-DSG) and DERM Permit No. CC99-347, as required for authorization of the proposed Project. A copy of the permit sketches will be attached to the letters.

### **PART 3 – MAINTENANCE AUTHORIZATION PROCESSING**

The level of effort required to negotiate approval of the maintenance event requests will ultimately be affected by many external variables such as environmental resource impact concerns and associated commenting agency Requests for Additional Information (RAIs), Endangered Species Act consultation requirements, Biscayne Bay Aquatic Preserve criteria, compliance issues related to the previous beach renourishment project and recent permit modification for the dune project, public comments/objections, etc. Agency staff workload, recent regulatory precedent, and policy trends may also affect the level of effort required to secure Project authorizations.

Additional hydrographic and marine resource (seagrass/coral) mapping will be required within the potential project impact envelope including equilibrium toe of fill, pipeline corridor, borrow site buffer/mixing zone area, and/or fill mixing zone. This and any other required new data collection will be addressed as an addendum to this contract, upon provision of sufficient criteria by the environmental regulatory agencies during the permit process to precisely define the scope. Additional engineering and environmental impact analysis will likely be required, the scope of which will start to be defined under Part 3(a).

Coastal Systems will maintain clear communication with the Village regarding permitting progress and will address continuing services scope and budget as necessary. Meetings required with the Village and/or agency staff will be provided under Part 4 services.

- a. Initial Permit Processing:** Upon receipt of preliminary agency questions or comments and the first round of formal Requests for Additional Information and Completeness Summaries, Coastal Systems will confer with the Village as to the issues and additional items that are required by agency staff and update the continuing project strategy, schedule and clearly define the required steps for authorization of the Project. Approximately 100 hours of consulting services are budgeted for an initial 8-week period following maintenance event authorization request submittal, in order to start defining those items that must be addressed and additional data that must be collected to resolve old compliance issues and fully process the maintenance event authorization requests. Negotiations regarding ongoing seagrass mitigation and monitoring associated with the previous project will continue to be provided under our existing contract.
- b. Funding Administration:** Coastal Systems will continue to coordinate with the Village, DEP and/or FEMA, as appropriate, to address project funding opportunities. This includes defining project scope, budgets, schedules and applications relative to standard and special appropriations of funding through public sources. Coastal Systems will confer with Village staff regarding recommendations for lobbying or other actions.

### **PART 4 – GENERAL COORDINATION/MEETINGS**

Coastal Systems staff will provide general coordination services and attend meetings, as required, with the Village, other members of the Project team, and/or regulatory agency staff to discuss the design and permitting process for the proposed Project. Coastal Systems will address scope changes and additional services required under an addendum to this agreement with the Village's authorization.

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Mr. Armando Nunez  
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**GENERAL**

This fee proposal is valid to be executed for 60 days. Coastal Systems is available to discuss and refine the scope of services as necessary. Additional costs may be incurred due to circumstances beyond our control, including but not limited to, changing or unknown site conditions, design modifications, Village or agency staff delays, agency requests for additional information, public comments or objections, rule changes and litigation or other legal actions. Additional data collection, permit processing, construction drawings, bid process assistance and construction administration services, including permit compliance administration services will be provided under a separate scope once they are defined.

Fees for hourly tasks will be invoiced on an hourly basis each month in accordance with the attached updated Rate Schedule. Fees for lump sum tasks will be invoiced each month on a percent complete basis. Expenses for this initial phase of services are estimated at \$4,000 and will be billed in accordance with the attached Rate Schedule; authorization of any unanticipated additional budget that may be required for equipment rental, airfare and other Project-related purposes will be requested of the Village, as appropriate.

These services will be provided as an addendum to Coastal Systems' agreement dated August 1, 2006. Please return an executed copy of this addendum or notice to proceed, which will serve as our Authorization to Proceed. We look forward to continuing to work with the Village through the implementation of this beach renourishment project. Should you have any questions or require additional information, please do not hesitate to contact me at 305-669-8650 or [tblankenship@coastalsystemsint.com](mailto:tblankenship@coastalsystemsint.com).

Sincerely,  
COASTAL SYSTEMS INTERNATIONAL, INC.



Timothy K. Blankenship, P.E.  
Director

SIGNED: \_\_\_\_\_ DATE: \_\_\_\_\_  
VILLAGE OF KEY BISCAYNE

PRINT: \_\_\_\_\_  
NAME TITLE

TKB:ic

Enclosures

**TABLE 1**  
**SUMMARY OF FEES FOR BEACH RENOURISHMENT PROJECT**  
**MAINTENANCE EVENT AUTHORIZATION**  
**VILLAGE OF KEY BISCAIYNE, FLORIDA**

DESCRIPTION	TYPE	TOTAL COST
<b>Part 1 - Data Collection</b>		
a) Initial Borrow Area Reconnaissance	Lump Sum	\$10,400
b) Borrow Area Sand Volume Estimate	Lump Sum	\$6,000
<b>Subtotal:</b>		<b>\$16,400</b>
<b>Part 2 - Maintenance Event Authorizations</b>		
a) Initial Permit Sketches	Lump Sum	\$8,000
b) Maintenance Event Authorization Requests	Hourly, Estimated at	\$11,500
<b>Subtotal:</b>		<b>\$19,500</b>
<b>Part 3 - Maintenance Event Processing</b>		
a) Initial Permit Processing	Hourly, Estimated at	\$16,000
b) Funding Administration	Hourly	TBD
<b>Subtotal:</b>		<b>\$16,000</b>
<b>Part 4 - General Coordination/Meetings</b>		
	Hourly	TBD
<b>Subtotal:</b>		<b>TBD</b>
<b>Estimated Reimbursable Expenses</b>		\$4,000
<b>TOTAL FEES:</b>		<b>\$55,900</b>



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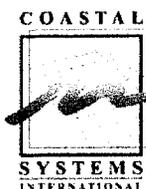
## COASTAL SYSTEMS INTERNATIONAL, INC. RATE SCHEDULE

<u>TITLE</u>	<u>HOURLY RATE</u>
Principal	\$ 290.00
Director	\$ 250.00
Department Head	\$ 220.00
Senior Project Manager	\$ 180.00
Project Manager	\$ 160.00
Senior Surveyor/Project Engineer	\$ 130.00
Scientist	\$ 120.00
IT Specialist/Junior Engineer	\$ 100.00
Designer/Assistant Project Manager	\$ 80.00
Surveyor	\$ 75.00
Graphics-Media Technician/GIS Technologist	\$ 70.00
CADD/Engineering Technician	\$ 65.00
Project Accountant	\$ 60.00
Administrative Assistant/Technical Assistant/Clerical	\$ 55.00

### REIMBURSABLE EXPENSES

**Professional Supplies and Standard Expenses:** Professional supplies and standard expenses will be billed at 8.5 percent of fees. Professional supplies and standard expenses include standard office supplies, plots and photocopies, telephone calls, facsimiles, mail and courier delivery services and related local travel expenses.

**Direct Reimbursable Expenses:** Charges above and beyond standard expenses noted above will be invoiced at cost plus 15 percent. These include field equipment rental (see separate Equipment Rate Schedule), field supplies and research materials, permit fees, report and presentation materials, international travel expenses, and other expenses not included in Professional Supplies and Standard Expenses. A 15 percent markup is added to all third-party expenses that are billed through Coastal Systems for administration and financial responsibility. Rates are subject to change at one-year intervals from date of contract execution.



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**COASTAL SYSTEMS INTERNATIONAL, INC.**

**SCHEDULE OF EQUIPMENT**

Effective January 1, 2000

Survey Equipment - Total Station w/Data Collector, Topcon	\$ 150/day
Auto Level, Topcon	\$ 75/day
Underwater Video Mapping System with GPS Overlay	\$ 500/day
Conductivity Meter	\$ 100/day
Current Flow Meter	\$ 150/day
Turbidity Meter	\$ 75/day
Dacor Seasprint U/W Scooter	\$ 150/day
Vibracore Sand Sampling Equipment	\$ 500/day
Tirtaharapan Tide Gauges (2)	\$ 125/day
Boat Rental	\$ 425/day
DSM 212L Marine DGPS Unit	\$ 150/day
Handheld Radio	\$ 25/day
Field Ruggedized Laptop	\$ 100/day
Hypack Navigation Software	\$ 100/day
Jet Probe System	\$ 350/day
Underwater Camera	\$ 50/day
Dive Gear (one set)	\$ 50/day
Underwater Communications System	\$ 150/day
Underwater Video Camera	\$ 250/day
Towed Video Housing w/Camera	\$ 300/day
RTK 4700 GPS	\$ 450/day
Fathometer	\$ 125/day
Laptop	\$ 50/day
Handheld GPS	\$ 50/day
Upland Camera	\$ 35/day
Wind Gauges	\$1,000/1 <sup>st</sup> month \$ 750/2 <sup>nd</sup> month \$ 500/subsequent months
Directional Wave Gauge (SP2100)	\$5,000/1 <sup>st</sup> month \$2,500/2 <sup>nd</sup> month \$1,500/subsequent months
Wave and Tide Gauge (SP2200)	\$2,500/1 <sup>st</sup> month \$1,300/2 <sup>nd</sup> month \$1,000/subsequent months