



VILLAGE OF KEY BISCAYNE

Office of the Village Clerk

Village Council

John F. Festa, *Mayor*
Michele Padovan, *Vice Mayor*
Mortimer Fried
Gregory C. Han
Hugh T. O'Reilly
Martha Fdez-León Broucek
Betty Sime

Village Clerk

Conchita H. Alvarez

CERTIFICATION

STATE OF FLORIDA
COUNTY OF DADE

I, Conchita H. Alvarez, duly appointed Village Clerk of the Village of Key Biscayne, Florida, do hereby certify that the attached is a true and correct copy of:

Resolution 96-36 of the Village of Key Biscayne, Florida adopted on November 14, 1996.

IN WITNESS WHEREOF, I hereunto set my hand and affix the Seal of the Village of Key Biscayne, Florida, this 7th day of November, 1997.



Conchita H. Alvarez
Conchita H. Alvarez
Village Clerk
Village of Key Biscayne, Florida

RESOLUTION NO. 96-36

A RESOLUTION OF THE VILLAGE OF KEY BISCAIYNE, FLORIDA; AUTHORIZING THE VILLAGE MANAGER TO EXECUTE THE ATTACHED AGREEMENT WITH COASTAL SYSTEMS INTERNATIONAL, INC., CORAL GABLES, FLORIDA, FOR PROFESSIONAL SERVICES IN PREPARING A LONG-TERM BEACH MANAGEMENT PLAN FOR THE VILLAGE KEY BISCAIYNE, FLORIDA; PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the Village Council supports the Long-Term Beach Nourishment and Shoreline Protection;

WHEREAS, the Village Council has approved the funding of the Long-Term Beach Management Plan for the Village;

WHEREAS, long-term planning for beach preservation is deemed necessary by the Village Beach Resource and Management Task Force, Brian Flynn of the Metropolitan Dade County Department of Environmental Resources Management, and the Village Council; and

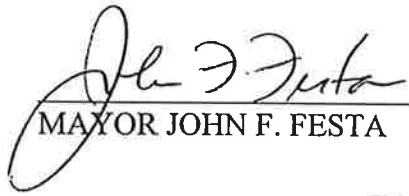
WHEREAS, Coastal Systems International, INC., Coral Gables, Florida, has submitted the attached agreement to perform certain professional services in conjunction with the preparation of said Long-Term Beach Management Plan;

NOW THEREFORE, BE IT RESOLVED BY THE VILLAGE COUNCIL OF KEY BISCAIYNE, FLORIDA AS FOLLOWS:

Section 1. That the Village Manager is hereby authorized to execute the attached agreement, on behalf of the Village, with Coastal Systems International, INC., Coral Gables, Florida, for the provision of professional services relating to the preparation of the Long-Term Beach Management Plan for the Village of Key Biscayne, subject to the recommendations and approval of the Village Attorney.

Section 2. This resolution shall take effect immediately upon adoption.

PASSED AND ADOPTED this 14th day of November, 1996.


MAYOR JOHN F. FESTA

ATTEST:


CONCHITA H. ALVAREZ, VILLAGE CLERK

APPROVED AS TO FORM AND LEGAL SUFFICIENCY:


RICHARD J. WEISS, VILLAGE ATTORNEY





VILLAGE OF KEY BISCAYNE

Office of the Village Manager

Village Council
John F. Festa, *Mayor*
John Waid, *Vice Mayor*
Raul Llorente
Hugh T. O'Reilly
Michele Padovan
Betty Sime
Raymond P. Sullivan

Village Manager
C. Samuel Kissinger

October 9, 1996

MEMORANDUM

TO: The Honorable Mayor and Members of the Village Council

FROM: C. Samuel Kissinger
Village Manager

RE: Preparation of the Long-Term Beach Management Plan for the Village

In accordance with the suggestions of the Village Beach Resource and Management Task Force, and with the passing of the budget for Fiscal Year 1997, the attached resolution has been drafted for your approval.

The development of a Long-Term Beach Management Plan for the Village of Key Biscayne, is absolutely necessary to insure proper preparation for future beach preservation activities. This Long-Term Beach Management Plan will allow the Village to foresee and plan for funding, material, and contractor requirements associated with beach nourishments, is anticipated to help alleviate problems with future permitting for beach preservation activities, and should establish, locally, State-wide, and federally, the Village's need for and dedication to long-term beach nourishment and shoreline protection.



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

135010

August 27, 1996

Mr. C. Samuel Kissinger
Village Manager
VILLAGE OF KEY BISCAYNE
85 West McIntyre Street
Key Biscayne, Florida 33149

**RE: ENGINEERING SERVICES RELATIVE TO THE VILLAGE OF KEY BISCAYNE
LONG-TERM BEACH RENOURISHMENT PROJECT, DADE COUNTY, FLORIDA**

Dear Mr. Kissinger:

This is to submit the proposal for coastal engineering services relative to the Village of Key Biscayne Long-Term Beach Renourishment project. The following are the proposed terms of agreement for engineering services to be provided by Coastal Systems International, Inc. (Coastal Systems) for the Village of Key Biscayne (Village):

PART I - COASTAL ENGINEERING ASSESSMENT

The following coastal engineering evaluations will be conducted to determine the beach performance subsequent to the 1987 beach nourishment project, understand the littoral processes within the project region, and develop a long-term beach management plan. This beach management plan report will identify potential sand sources and available funding sources at Federal, State and local levels. The specific details of this engineering assessment are described in the following:

- a) **Data Collection:** Coastal Systems will collect and review available data relating to shoreline changes along Key Biscayne. Reports prepared by the US Army Corps of Engineers (COE) and other studies describing the history and performance of beach nourishment project within the project vicinity will be reviewed. Available hydrographic survey data will also be compiled within Coastal Systems' computer database to facilitate volumetric comparisons along the project shoreline and vicinity. The compiled hydrographic survey database will later be transferred to the Village for their own use.

135010

Mr. C. Samuel Kissinger

August 27, 1996

Page 2

- b) **Shoreline/Volumetric Changes and Regional Sediment Budget:** Coastal Systems will calculate the historical shoreline and volumetric changes within the region using available hydrographic surveys. In addition, these available hydrographic surveys will be compared to the original project design as outlined in the COE's General Design Memorandum and as constructed during the 1987 beach nourishment project. The performance of the beach nourishment project constructed within the region will be evaluated. The historical rate of erosion or accretion along the project beach will be assessed.

This evaluation of historical shoreline and volumetric changes may be utilized to identify "hot spots" along the project shoreline, where exceptional erosion rates are noted. In addition, these evaluations will assist in understanding littoral processes within the project area and in developing the optimum beach management plan.

A sediment budget will be developed for the region that describes volumetric changes within specific segments established from Crandon Park south to Bill Baggs State Park. The net longshore sediment transport rate within the active littoral system within each of the established segments will be confirmed.

- c) **Sand Source Evaluations:** Coastal Systems will coordinate with DERM and COE to evaluate the available sources of sand fill suitable for renourishing the beach. Coastal Systems will review available geotechnical data towards assessing the quality and compatibility of these various beach fill materials. The expected performance and estimated cost of the various sand fill materials will be compared. The sand fill materials to be considered include offshore borrow sites and upland sources. The methods of construction and associated costs of using various sand fill materials will be analyzed.
- d) **Conceptual Plan:** Coastal Systems will develop an optimum conceptual design plan for renourishing the entire beach along the Village based on the historic erosion rate within the area. Coastal Systems will review the design plan as developed by the U.S. Army Corps of Engineers in 1987. The development of the conceptual plan will also take into consideration of the extent of the nearshore seagrasses, which will be delineated by DERM. Coastal Systems will calculate the quantity of sands required for the beach renourishment project and identify the frequency of the beach renourishment project within a 50 year time frame. The costs associated with implementation of the plan using various sand sources will be calculated.

135010

Mr. C. Samuel Kissinger

August 27, 1996

Page 3

- e) **Funding Evaluation:** Coastal Systems will explore the funding availability from the U.S. Army Corps of Engineers, the State of Florida and Dade County for implementation of this long-term beach renourishment project. Based on the above identified plan, Coastal Systems will coordinate with DERM (Dade County) to explore the feasibility of Federal participation for the project under the provisions of Section 103. Coastal Systems will also evaluate the present state funding status and coordinate with DERM to include this project in the Dade County funding application to the State. The processes and time required for obtaining the Federal, State and/or County fundings will be described in the report. The deadlines for funding applications for various regulatory agencies will be identified and incorporated into the 5-year beach management plan schedule. The amount of funding available from various agencies will also be presented.

- f) **Management Plan Report:** A beach management plan report will be prepared summarizing the findings and making recommendations for the optimum design of beach renourishment along the Village of Key Biscayne. Specifically, this report will include detailed descriptions of coastal processes, sand source and funding evaluations and beach management plan. A 50-year beach management plan will be developed, outlining quantity of sands needed for the Village over a 50-year time span as well as identifying most cost effective sand source to meet the needs. A detailed 5-year plan will also be included in the report. This plan will specify the details of the plan elements and sequential occurrence of each plan element towards implementing a beach renourishment project within 5 years.

PART II - CLIENT DIRECTED MEETINGS

The phases of services provides for all local meetings with the Village, DERM and other professionals. Specifically, Coastal Systems will attend meetings with the Village, DERM, and/or other professionals, as required by the Village, to discuss permitting and funding strategy and/or progress and review the beach management plan. Coastal Systems may also meet with the Village and/or regulatory agency staff on site to observe project status.

GENERAL

Fees: Coastal Systems will invoice the Village for Part I services on a percentage complete basis for the fees identified herein. Fees for Part II services will be invoiced on an hourly basis pursuant to the Rate Schedule identified in our current agreement with Dade County. Expenses, report preparation and costs relative to travel and accommodations will be invoiced separately pursuant to the above-mentioned Rate Schedule.

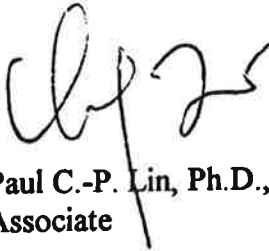
Invoices will be submitted by the 15th of each month for the previous month's work. Invoices are to be paid within 30 days of receipt of the invoice by the Village. Invoices not paid after 30 days and

135010
Mr. C. Samuel Kissinger
August 27, 1996
Page 4

not in dispute will incur interest at a rate of 1.5 percent per month.

We look forward to working with you towards developing a successful beach management plan for the Village of Key Biscayne. Please return a signed copy of this agreement to us which will serve as our Authorization to Proceed. Should you have any questions or require any additional information, please do not hesitate to contact me.

Sincerely,
COASTAL SYSTEMS INTERNATIONAL, INC.



Paul C.-P. Lin, Ph.D., P.E.
Associate

SIGNED: _____ **DATE:** _____
Mr. Samuel Kissinger, Village Manager
Village of Key Biscayne

PL:ba

cc: Mr. R. Harvey Sasso, P.E., Coastal Systems

F:\PROJECT\135010\COASTAL\KISS2PRO.WPD

**COST BREAKDOWN FOR LONG-TERM
BEACH MANAGEMENT PLAN
VILLAGE OF KEY BISCAYNE, DADE COUNTY, FL**

DESCRIPTION	Project Manager	Project Engineer	Engineer Technician	AutoCad Draft	Clerical	Fees	Expenses
I. COASTAL ENGINEERING ASSESSMENT							
a) Literature Review & Data Collection	5	36			10	\$3,047	\$500
b) Shoreline/Volumetric Changes & Regional Sediment Budget	20	100	35		8	\$9,994	
c) Conceptual Plan	10	36		35	8	\$4,968	
d) Sand Source Evaluation	21	36				\$4,037	\$250
e) Funding Evaluation	24	24				\$3,516	\$250
f) Beach Management Plan Report	12	56		36	40	\$7,514	\$1,000
II. VILLAGE DIRECTED MEETINGS							
						Hourly	
Total Hours	92	288	35	71	66		
Hourly Rate (\$/hr)	\$83	\$64	\$48	\$45	\$33		
TOTAL	\$7,590	\$18,432	\$1,680	\$3,195	\$2,178	\$33,075	\$2,000
GRAND TOTAL							\$35,075