

**AMENDMENT #4 TO CONTRACT NO. 2005000193
AGREEMENT BETWEEN CHARLOTTE COUNTY AND
COASTAL ENGINEERING CONSULTANTS, INC.
FOR ENGINEERING SERVICES FOR PIRATE HARBOR WATERWAY**

THIS AMENDMENT No.4 to Contract No. 2005000193 (the "Amendment") is made and entered into this 7 day of May, 2012, by and between CHARLOTTE COUNTY, a political subdivision of the State of Florida, 18500 Murdock Circle, Port Charlotte, Florida 33948-1094 (hereinafter referred to as County), and COASTAL ENGINEERING CONSULTANTS, INC., 3106 South Horseshoe Drive, Naples, Florida 34104 (hereinafter referred to as Consultant).

WITNESSETH

WHEREAS, the parties entered into Contract No. 2005000193 (the "Contract") on August 11, 2005, for Consultant to provide engineering services for the Pirate Harbor Waterway (hereinafter the "Project") for the Charlotte County Public Works Department, in accordance with the provisions of Section 287.055, Florida Statutes; and

WHEREAS County desires to acquire additional engineering services for the Project from Consultant, as described herein and Consultant desires to provide said additional services in accordance with the Contract, Consultant's proposal, this Amendment and subsequent negotiations between the parties.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, County and Consultant wish to amend the Contract to provide for the aforementioned additional engineering services for the Project.

ARTICLE I
INCORPORATION / COMPENSATION / SERVICES

1.1 The above Recitals are hereby incorporated herein and made a part of this Amendment.

1.2. The attached Exhibit 1 is specifically incorporated into, and made a part of this Amendment. The provisions of this Amendment and Exhibit 1 attached hereto, are specifically incorporated into, and made a part of, the Contract.

1.3. This Amendment shall consist of the services which Consultant agrees to perform in accordance with the terms found in this Amendment, the attached Exhibit, and the Contract. Those services are as follows:

1.3.1 County agrees to pay to Consultant an amount not to exceed One Hundred Sixty Five Thousand Six Hundred Eighty One Dollars (\$165,681.00) to perform those services listed in the attached Exhibit 1, entitled *Scope of Work: Pirate Harbor Dredging Construction Services*, dated February 1, 2012.

ARTICLE II
MISCELLANEOUS

2.1 Any terms used in the Amendment shall have the same meanings and definitions as they have in the Contract.

2.2 All other provisions of the Contract not in conflict with this Amendment shall remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto have caused the execution of these premises as of the date and year first above written.

WITNESSES:

Signed By: Karen Taylor
Print Name: Karen Taylor
Date: May 7, 2012
Signed By: Joyce Mincavage
Print Name: Joyce Mincavage
Date: May 7, 2012

ATTEST:
Barbara T. Scott, Clerk of Circuit
Court and Ex-officio Clerk to the
Board of County Commissioners

By: Anne L. Fehler
Deputy Clerk

COASTAL ENGINEERING
CONSULTANTS, INC.

Signed by: [Signature]
Print Name: Michael T. Poff
Title: V-P
Date: May 7, 2012

BOARD OF COUNTY COMMISSIONERS
OF CHARLOTTE COUNTY, FLORIDA

By: [Signature]
Christopher G. Constance, Chairman
Date: May 7, 2012

APPROVED AS TO FORM
AND LEGAL SUFFICIENCY

By: [Signature]
Janette S. Knowlton, County Attorney
LR 12-1874

Exhibit List

Exhibit 1 - Scope of Work: Pirate Harbor Dredging Construction Services dated February 1, 2012

EXHIBIT 1

SCOPE OF WORK: PIRATE HARBOR DREDGING CONSTRUCTION SERVICES

CEC File No. 11.132

February 1, 2012

TASK 1: PRE-CONSTRUCTION SURVEY

Perform one (1) pre-construction bathymetric survey of the permitted rock removal dredge sites. Cross sections will be measured at approximately 25-foot intervals. Tidal fluctuations will be measured and compensated for on the survey vessel using Real Time Kinematic (RTK) Global Positioning System (GPS) technology. Data will be collected along cross sections with an upland crew in areas averaging less than two (2) feet of water.

TASK 2: GEOTECHNICAL AND NATURAL RESOURCE INVESTIGATION

Conduct surveys of subsurface characteristics within the proposed County identified additional rock removal dredge area. The surveys shall include the following:

1. Geotechnical survey via jet probing to determine subsurface characteristics within the proposed dredge area. Probes extending to a minimum of -2' below the design dredge depth or refusal shall be performed. The subsurface conditions including identify visible rock outcrops and sediment characteristics will be mapped relative to the proposed dredge footprint.
2. Submerged resources mapping including submerged or emergent vegetation, oyster beds, hard or soft corals, and sponges.

TASK 3: ADDITIONAL ROCK REMOVAL DESIGN

Based on the results of the geotechnical investigation and resource mapping, analyze if the design channel dimensions can be provided by avoiding the existing rock and realigning the channel. Redesign the channel and respective state lands easement to accommodate the realignment. In the event the existing rock has to be removed to achieve the design channel dimensions, complete the channel design and determine the dredge quantities including both sediment and rock.

TASK 4: ENVIRONMENTAL RESOURCE PERMIT MODIFICATION REQUEST

Prepare permit drawings detailing the additional rock removal dredge area including the Existing Conditions Plan and Proposed Dredge Plan. Prepare draft technical materials for inclusion in the modification request to the permit agencies including the drawings, project description, maps, and survey results. In the event the existing rock can be avoided by shifting the authorized easement, prepare the necessary survey drawings to reflect the revised channel alignment. Provide County with a list of items they will be required to provide support of application (e.g. permit fees, executed application, letter of consistency with local Zoning and Comprehensive Plan). Assemble and review the permit submittal package with the County. Make one set of revisions and submit the modification request to the state and federal permit agencies.

TASK 5: AGENCY REQUEST FOR ADDITIONAL INFORMATION RESPONSE

CEC has budgeted assisting the County in response to one State and one Federal agency Request for Additional Information (RAI).

TASK 6: CONSTRUCTION PLANS AND SPECIFICATIONS

Prepare for incorporation into the County's Bid Documents, detailed construction plans to show the general scope, character, and extent of the work to be furnished and performed by the dredging contractor. The plans shall include horizontal and vertical control, survey baseline, natural resource habitats, staging areas, upland and boat access corridors, anchoring areas, dredge templates, disposal details, volume and quantity requirements, aids to navigation, and environmental protection measures.

Prepare for incorporation into the County's Bid Documents detailed construction specifications including description of work, special terms and conditions, quantity estimates, bid schedules, and technical specifications describing the general scope, character, and extent of work to be furnished and performed by the dredging contractor.

Prepare a Final Opinion of Probable Construction Cost based on a $\pm 15\%$ margin of error. Construction costs shall be broken down by project feature such as mobilization and demobilization, spoil site preparation, dredge channel excavation and spoil placement, rock removal, trucking, maintenance of traffic, and environmental protection.

Review drafts of the deliverables with the County to obtain their input and complete one round of edits. Based on the review, prepare and submit to the County one reproducible 11" x 17" engineering scaled set of final drawings along with one electronic copy of both CADD and PDF files, and one reproducible set of technical specifications and special conditions along with one electronic copy of both Word and PDF files.

TASK 7: BID PROCESS

Assist the County in coordinating a one-time bid process. These services will include attending the pre-bid meeting; assisting the County issue addenda as appropriate to interpret, clarify or expand the Bid Documents; assisting the County in obtaining bids from dredging contractors; assisting the County in evaluating the bids; and making a recommendation for award to the lowest responsive bidder. Provide technical support to the County during the dredge contract procurement process.

TASK 8: AGENCY NOTICE TO PROCEED

Assist the County address the notice to proceed requirements contained within the permits. These services will include requesting and obtaining permit required items from the dredging contractor; arrange, prepare for, and attend one agency required pre-construction meeting with the County, dredging contractor, DEP, and other pertinent agency staff to review construction schedule and methods; and coordinate the Notice to Proceed from the FDEP. Record and distribute the minutes of the meeting.

TASK 9: CONSTRUCTION ADMINISTRATION

Arrange, prepare for, and attend one pre-construction meeting with the County, dredging contractor and appropriate stakeholders designated by the County Manager to discuss the Project construction; develop a Project schedule; review permits, plans and specifications; identify concerns and issues; and establish lines of communication and contact people. The budget is based on a 75-day construction window.

Attend construction progress meetings with the County and dredging contractor on average once every two (2) weeks covering work progress and schedule, conformance to plans and specifications, and other relevant issues that need to be addressed. Record and distribute the minutes of each meeting. The budget shall include up to two (2) stakeholder meetings.

Consult with the County and dredging contractor as reasonably required and necessary with regard to construction of the Project, assist the County issue interpretations and clarifications during construction, and prepare work change orders as directed by the County, if necessary.

Utilizing the survey data in accordance with State and Federal standards, determine the amounts owed to the dredging contractor and recommend in writing payments to the dredging contractor in such amounts. Such recommendations of payment will constitute a representation to County, based on such observations and review, that the work has progressed to the point indicated, and that, to the best of our knowledge, information, and belief, the quality of such work is generally in accordance with the Contract Documents (subject to an evaluation of such work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, and to any other qualifications stated in the recommendation). By recommending any payment, we will not thereby be deemed to have represented that exhaustive, continuous, or detailed reviews or examinations have been made to check the quality or quantity of contractor work as it is furnished and performed beyond the responsibilities specifically assigned in this Agreement and the Contract Documents. Our review of the dredging contractor's work for the purposes of recommending payments will not impose on us the responsibility to supervise, direct, or control such work or for the means, methods, techniques, sequences, or procedures of construction or safety precautions or programs incident thereto, or contractor compliance with laws, rules, regulations, ordinances, codes, or orders applicable to their furnishing and performing the work. It will also not impose responsibility on us to make any examination to ascertain how or for what purposes the dredging contractor has used the moneys paid on account of the Contract Price, or to determine that title to any of the work, materials, or equipment has passed to the County free and clear of any lien, claims, security interests, or encumbrances, or that there may not be other matters at issue between the County and the dredging contractor that might affect the amount that should be paid. The budget includes up to three (3) pay request reviews.

TASK 10: CONSTRUCTION OBSERVATIONS

Conduct a limited number of inspections by a construction observer during active construction in support of certifying project completion. Based on information obtained during such inspections and on such observations, endeavor to determine in general if such

work is proceeding in accordance with the Contract Documents and keep the County informed of the progress of the work.

The purpose of the inspections to the site will be to provide for the County a greater degree of confidence that the completed work of dredging contractor will conform generally to the Contract Documents and that the integrity of the design concept as reflected in the Contract Documents has been implemented and preserved by the dredging contractor. On the other hand, we shall not, during such inspections or as a result of such observations of the dredging contractor's work in progress, supervise, direct, or have control over the dredging contractor's work nor authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected by the dredging contractor, for safety precautions and programs incident to the work of the contractor or for any failure of the contractor to comply with laws, rules, regulations, ordinances, codes or orders applicable to the dredging contractor furnishing and performing their work. Accordingly, we can neither guarantee the performance of the construction contracts by the dredging contractor nor assume responsibility for the dredging contractor's failure to furnish and perform their work in accordance with the Contract Documents. During such visits and on the basis of such observations, disapprove of or reject the dredging contractor's work while it is in progress if it is believed that such work will not produce a completed Project that conforms generally to the Contract Documents or that it will prejudice the integrity of the design concept of the Project as reflected in the Contract Documents. The budget is based on an anticipated 75-day construction window.

TASK 11: POST CONSTRUCTION SURVEYS

Perform two (2) post-construction bathymetric surveys of the permitted rock removal sites. One (1) survey will be completed upon notification of substantial completion and one (1) final completion survey. Upon written notification from the County that the work areas are ready for substantial completion and final completion, CEC shall conduct a post-construction survey of the entire dredged channel. Cross sections will be measured at approximate 25-foot intervals. Tidal fluctuations will be measured and compensated for on the survey vessel using Real Time Kinematic (RTK) Global Positioning System (GPS) technology.

CEC shall reduce the survey data to the relative datum and prepare a plan view and cross section views of the collected bathymetry. Volume quantities calculations will be conducted for each of the two (2) surveys. The data shall be presented on aerial photographs and reference Florida West Zone 1983. Vertical elevations will be referenced to the North American Vertical Datum of 1988 (NAVD88). All work activities and deliverables shall be conducted in accordance with the latest State and Federal Technical Specifications for Topographic and Bathymetric Surveying.

TASK 12: PROJECT CERTIFICATION

Upon receiving written notice from the County that the Project is substantially complete, conduct a one-time comprehensive review of the Project, develop a list of items needing completion or correction, forward said list to the dredging contractor, and provide written recommendations to County concerning the acceptability of work done and the use of the Project.

Upon receiving written notice from the County that the Project is finally complete, perform final site observations in conjunction with the County, and assist the County in closing out construction contract.

Prepare and submit to the County and agencies, as required, a Project Completion Report including the required agency Final Certifications along with routine monitoring reports and as-built surveys.

TASK 13: PUBLIC INTEREST - MITIGATION MONITORING

Perform the hard bottom community monitoring as described in Heather Stafford's March 10, 2010 email. This monitoring includes the following:

1. The initial monitoring event will take place within three (3) months prior to dredging. The second monitoring event will take place within one (1) month of the completion of dredging. Subsequent monitoring events will be conducted twice a year for five (5) years (a total of twelve monitoring events) for long-term consistency in evaluating the impacts to the hard-bottom community.
2. Before initiating field monitoring, the site locations will be reviewed using written site descriptions, previous photographs, navigation charts, and data sheets to determine transect locations, lengths, and quadrat locations. Flagging tape and GPS coordinates will be utilized to reference the site locations and assure repeatability. The monitoring sites will be reached using a shallow draft boat. Hard-bottom observations will be made by snorkeling and/or SCUBA depending on water depth.
3. A total of three transects will be established. The first will run the length of the hard-bottom dredge area and be along an area that is heavily impacted by the dredging (landward edge or middle of channel – to be determined) to measure the recovery or decline of the community, as well as shifts in species types or abundance. The second transect will represent an area that is minimally impacted by the dredging (landward edge or middle of channel – to be determined). The final transect will be along the face of the "rock ledge."
4. Once near the site, the defined reference point on shore will be located using previous flagging tape and GPS coordinates. The zero point of each transect will be determined when transects are established as the baseline, upstream edge of the hard-bottom community. From the zero point, a heading that parallels the dredge footprint and GPS coordinates will be used to determine the direction of travel along the transect.
5. Sampling will be conducted along each transect at regular intervals using a tape measure and a one (1) square meter quadrat. This quadrat is further divided into 100 squares, each 10x10 centimeters, using bungee cord or fishing line for use in collecting abundance and frequency data. Distances between quadrats will be three (3) meters apart. Quadrat sampling points will have established GPS coordinates for use as references.
6. At each sampling point along the transect, the quadrat will be centered as best as possible on the GPS coordinates. At each site, the date, crew, start and end times, and general site comments will be recorded on the data sheet. At each quadrat the sizes of individual patches or continuous hard-bottom community can be measured and totaled, species

- types, abundances, and frequencies will be observed and recorded on the data sheet. The frequency will be determined by the percentage of cover in the area surveyed.
7. Individuals (or groups of individuals) will then be counted and identified to the genus or species level (to be determined and agreed to prior to authorization). The results of these samples will be used in conjunction with the Shannon-Weaver Diversity Index to determine the level of community diversity. The Shannon-Weaver Diversity Index is determined as the negative summation (from $i=1$ to s) of: $(n_i/N) [\log_2(n_i/N)]$; where s = the number of groups (species) in a sample, N = the total number of individuals in a sample, and n_i = the total number of individuals in group i .
 8. It will be necessary for a qualified expert in the identification of hard-bottom invertebrates to conduct this monitoring and identification.

TASK 14: CONSTRUCTION CONTINGENCIES

Due to the complex nature of the work involving marine environments, it is anticipated that additional work may be necessary such as additional environmental compliance inspections, construction observations, field work, stakeholders meetings, or agency coordination. A contingency budget is recommended for these circumstances. All scopes of work under this task must be reviewed and approved by the County prior to conducting the additional work.

TASK 15: ADDITIONAL SURVEY SERVICES

CEC shall perform a bathymetric survey of the Pirate Harbor Waterways for the purpose of developing a maintenance dredge plan for the canal system. Tidal fluctuations will be measured and compensated for on the survey vessel using Real Time Kinematic (RTK) Global Positioning System (GPS) technology.

Reduce the survey data to the relative datum and prepare a plan view and cross section views of the collected bathymetry. The data shall reference the Florida West Zone 1983. Vertical elevations will be referenced to the North American Vertical Datum of 1988 (NAVD88).

TASK 16: ADDITIONAL PRELIMINARY DESIGN SERVICES

Utilizing the additional survey data, complete the maintenance dredge volume for each canal. Prepare preliminary design plans including plan view, dredge sections, and volumes.

Develop a Preliminary Opinion of Construction Cost based on a $\pm 25\%$ margin of error. Construction costs shall be broken down by project feature such as mobilization and demobilization, spoil site preparation, dredge channel excavation and spoil placement, trucking, maintenance of traffic, and environmental protection.

Review drafts of the design deliverables with the County to obtain their input and complete one round of edits. Final Design, Bid Process, and Construction Services for the maintenance dredging of all the waterways is not included in this scope.

Note: Meetings, site visits, and professional services outside the scope of services budgeted for can be provided as Additional Services

Project Name: Pirate Harbor Dredging Services
 CEC File No. 11.132
 Detailed Summary of Estimated Fees
 Date: February 1, 2012

Equipment Examples

Direct Costs (e.g. millage, copies, fees)

Task Description	Coastal Emission Consultants														Subtotal Fees	Direct Costs Amount	Disc	Total		
	Principal Engineer \$197	Senior Eng/Scientist \$185	Managing Scientist \$135	Project Engineer \$105	Staff Surveyor \$95	2-Man RTK \$160	Construction Manager \$75	Senior Drafter \$65	Hydrographic Equipment (per day) \$800	Marine Survey Boat (per day) \$325	Observation Boat (per day) \$175	Staff Technician \$75	Admin \$50	Hydrographic Equipment (per day)						
TASK 1 Pre-Construction Survey	1	2	4	10	10	10		8				2		1				\$8,000	Reimb.	\$7,492
TASK 2 Geotechnical And Natural Resource Investigation	2	10	4	10	10			9				2		1				\$5,315	Reimb.	\$5,815
TASK 3 Additional Rock Removal Design	2	10		12				9				2						\$5,094	Reimb.	\$5,594
TASK 4 Environmental Resource Permit Modification	2	2	10	6				8				2						\$4,524	Reimb.	\$5,024
TASK 5 Agency Request for Additional Information Response	2	10	8	6				8				4						\$5,874	Reimb.	\$5,874
TASK 6 Construction Plans and Specifications	2	10	8	12				12				4						\$4,924	Reimb.	\$5,424
TASK 7 Bid Process	2	12	4	4								4						\$3,574	Reimb.	\$4,074
TASK 8 Agency Notice to Proceed	2	12		4								4						\$3,074	Reimb.	\$3,134
TASK 9 Construction Administration	8	24	8	16								4						\$7,762	Reimb.	\$7,468
TASK 10 Construction Observation	6	12	8	20	20		52					4		2				\$9,764	Reimb.	\$10,532
TASK 11 Post-Construction Surveys	2	4	4	20				12				2						\$3,994	Reimb.	\$4,484
TASK 12 Project Certification	2	8	4					152				26						\$10,784	Reimb.	\$11,484
TASK 13 Public Interest	4	12	4	10	10			12				4		1				\$8,803	Reimb.	\$9,157
TASK 14 Construction Contingencies	1	2	4	20	20	10		12				4		2				\$10,557	Reimb.	\$11,157
TASK 15 Additional Benefits Services	2	16	6	6				12				4						\$1,203	Reimb.	\$1,894
TASK 16 Additional Maintenance Design Design	38	398	72	142	70	20	64	288	84	7	10	78		6				\$13,860	check	\$169,881
Total Hours:																				
Total Costs:	\$7,485	\$85,870	\$9,720	\$14,910	\$6,690	\$3,200	\$4,800	\$22,610	\$4,200	\$4,580	\$3,800	\$2,275	\$1,750	\$152,031	\$13,860			\$169,881		