



Aptim Environmental & Infrastructure, LLC
2481 NW Boca Raton Blvd.
Boca Raton, FL 33431
Tel: +1 561 391 8102
Fax: +1 561 391 9116
www.aptim.com

November 20, 2019

Ms. Kendra Cope, M.S.
Natural Resources Manager
Indian River County Public Works
1801 27th Street
Vero Beach, FL 32960

**Subject: Indian River County, FL
Sector 4 - Work Order 2018008-2
Critically Eroded Area Analysis**

Dear Kendra:

This proposal outlines a scope of work for the services required to submit a request to FDEP for designation of Sector 4 as a Critically Eroded Area (CEA). Currently, there are three CEAs in Indian River County including the shorelines from R-1 to R-51.3, R-70 to R-86, and R-99 to R-115.7.

Scope of Work

Aptim Environmental & Infrastructure, LLC (APTIM) will develop a request to FDEP to extend the CEA from R-51.3 to R-70 to include the southern portion of Sector 3 (R-51.3 to R-55) and the majority of Sector 4 (R-55 to R-70). Historic monitoring reports and data analyzed as part of the 2019 Beach Preservation Plan update will be reviewed to support this designation. In addition, research will be conducted to see if any new information is available that meets the eligibility criteria. The following definition has been adopted by the FDEP to identify CEA eligibility:

Critically eroded area is a segment of the shoreline where natural processes or human activity have caused or contributed to erosion and recession of the beach or dune system to such a degree that upland development, recreational interests, wildlife habitat, or important cultural resources are threatened or lost. Critically eroded areas may also include peripheral segments or gaps between identified critically eroded areas which, although they may be stable or slightly erosional now, their inclusion is necessary for continuity of management of the coastal system or for the design integrity of adjacent beach management projects.

APTIM will conduct a simple profile recession analysis using SBEACH to see if the beach is vulnerable to over wash under 25 year or 100 year average storm conditions. This analysis will be conducted based on existing information and does not include any field investigations, complex calculations or advanced numerical modeling. The engineer may conduct a site visit if deemed appropriate in support of the request.

Deliverable

Based on this analysis, APTIM will submit a request on the County's behalf that FDEP designate R-51.3 to R-70 as a Critically Eroded Area. This task includes responses to one request for additional information.

Schedule & Assumptions

APTIM will proceed with the task described herein upon receipt of a signed work order from Indian River County. It is estimated that the CEA request will be submitted within 6 months from receipt of the signed work order.


Cost

The total lump sum cost to complete this task is a fixed price of \$25,839.25. This cost was developed following the provisions of the Continuing Contract Agreement for Continuing Engineering Services 2018008 (dated April 17, 2018) between Indian River County and APTIM.

Thank you for the opportunity to serve Indian River County. Please do not hesitate to call if you have any questions.

Sincerely,

Sincerely,



Christopher Paul, PE
Coastal Engineer
Aptim Environmental & Infrastructure, LLC


Authorized Corporate Signature

Whitney Thompson, PE
Printed Name

Program Manager
Title

cc: Whitney Thompson, P.E., APTIM
Rich Szyrka, PE, Indian River County
James Ennis, PE, PMP, Indian River County
Tom Pierro, PE, D.CE, Coastal Protection Engineering (CPE)
Stacy Buck, Coastal Protection Engineering (CPE)



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EXHIBIT 2

**Indian River County, FL
 Sector 4 - 2018008 - Work Order #2
 Critically Eroded Area Analysis**

Summary of Cost by Task

Task Number	Task Name	Labor	Subcontractors	Equipment	Materials	Other ODCs	Mobilization/ Travel	Totals
Task 1	Critically Eroded Area Analysis	\$ 13,087.00	\$ 12,752.25	\$ -	\$ -			\$ 25,839.25
		\$ -	\$ -	\$ -	\$ -	\$ -		\$ -
		\$ -	\$ -	\$ -	\$ -		\$ -	\$ -
		\$ -	\$ -		\$ -		\$ -	\$ -
Totals =		\$ 13,087.00	\$ 12,752.25	\$ -	\$ -	\$ -	\$ -	\$ 25,839.25

**Indian River County, FL
Sector 4 - 2018008 - Work Order #2
Critically Eroded Area Analysis**

Summary of Labor Hours and Cost

Labor Title	Labor Bill Rate	Critically Eroded Area Analysis		Totals	
		Task 1		Labor Hours	Cost
		Labor Hours	Cost		
Principal Engineer/Sr Proj Mngr	\$ 250.00		\$ -	-	\$ -
Expert Witness (Testimony)	\$ 300.00		\$ -	-	\$ -
Program Manager	\$ 190.00	2	\$ 380.00	2	\$ 380.00
Sr Coastal Engineer/Proj Mngr	\$ 165.00	25	\$ 4,125.00	25	\$ 4,125.00
Coastal Engineer III	\$ 150.00		\$ -	-	\$ -
Coastal Engineer II	\$ 125.00		\$ -	-	\$ -
Coastal Engineer I	\$ 105.00	8	\$ 840.00	8	\$ 840.00
Coastal Modeler II	\$ 130.00		\$ -	-	\$ -
Coastal Modeler I	\$ 110.00	40	\$ 4,400.00	40	\$ 4,400.00
Professional Surveyor & Mapper	\$ 145.00		\$ -	-	\$ -
Hydrographer	\$ 135.00		\$ -	-	\$ -
Surveyor	\$ 95.00		\$ -	-	\$ -
Survey Technician	\$ 80.00		\$ -	-	\$ -
Senior Marine Biologist	\$ 135.00		\$ -	-	\$ -
Marine Biologist II	\$ 95.00	16	\$ 1,520.00	16	\$ 1,520.00
Marine Biologist I	\$ 72.00		\$ -	-	\$ -
Professional Geologist	\$ 150.00		\$ -	-	\$ -
Geologist III	\$ 130.00		\$ -	-	\$ -
Geologist II	\$ 95.00		\$ -	-	\$ -
Geologist I	\$ 80.00		\$ -	-	\$ -
Senior CAD Operator	\$ 140.00		\$ -	-	\$ -
CAD Operator	\$ 105.00		\$ -	-	\$ -
GIS Operator	\$ 105.00	16	\$ 1,680.00	16	\$ 1,680.00
Boat Captain	\$ 80.00		\$ -	-	\$ -
Bookkeeper	\$ 80.00		\$ -	-	\$ -
Clerical	\$ 71.00	2	\$ 142.00	2	\$ 142.00
Technician	\$ 60.00		\$ -	-	\$ -
Subcontractors	-	-	\$ 12,752.25	-	\$ 12,752.25
Equipment	-	-	\$ -	-	\$ -
Materials	-	-	\$ -	-	\$ -
Other ODCs	-	-	\$ -	-	\$ -
Mobilization/Travel	-	-	\$ -	-	\$ -
TOTAL	-	109	\$ 25,839.25	109	\$ 25,839.25