



**II. FISCAL IMPACT ANALYSIS**

**A. Five Year Summary of Fiscal Impact:**

<b>Fiscal Years</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>
<b>Capital Expenditures</b>	_____	<u>\$224,997</u>	<u>\$74,999</u>	<u>\$74,999</u>	<u>\$74,998</u>
<b>Operating Costs</b>	_____	_____	_____	_____	_____
<b>External Revenues</b>	_____	<u>(\$224,997)</u>	<u>(\$74,999)</u>	<u>(\$74,999)</u>	<u>(\$74,998)</u>
<b>Program Income (County)</b>	_____	_____	_____	_____	_____
<b>In-Kind Match (County)</b>	_____	_____	_____	_____	_____
<b>NET FISCAL IMPACT</b>	_____	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
<b>No. ADDITIONAL FTE POSITIONS (Cumulative)</b>	_____	_____	_____	_____	_____

Is Item Included in Proposed Budget?      Yes   X   No \_\_\_\_\_

Does this item include the use of federal funds?    Yes \_\_\_\_\_ No   X  

Does this item include the use of state funds?    Yes   X   No \_\_\_\_\_

**Budget Account No.:**

Fund 1229 Department 380 Unit 3315 Object 3401 Program \_\_\_\_\_  
 Task E177 Sub Task ILWL Task Order 014

Reporting Category \_\_\_\_\_

**B. Recommended Sources of Funds/Summary of Fiscal Impact:**  
 FDEP Agreement LPA0721 - \$500,000

**C. Department Fiscal Review:**

Shing

**III. REVIEW COMMENTS**

**A. OFMB Fiscal and /or Contract Dev. and Control Comments:**

Lisa M... 8/26/2024      Brenda... 8/28/24  
 OFMB AS 8/25 DA 8/26      Contract Development and Control  
 incl 8/28/24

**B. Legal Sufficiency:**

[Signature] 8/29/24  
 Assistant County Attorney

**C. Other Department Review:**

\_\_\_\_\_  
 Department Director

**CONSULTANT SERVICES AUTHORIZATION**

CSA #: 0019-03

CONSULTANT: Aptim Environmental & Infrastructure, LLC

ACCOUNT: 1229-380-3315-3401 Task: E177 SubTask: ILWL TaskOrder: 014 CONTRACT: R2023-0019

[Fiscal approval of Budget Availability: SKing 8/13/24  
Shirley King]

PROJECT MANAGER: Sabrina Fischer PHONE: 561-681-3836

CONTRACT MANAGER: Juan Cueto PHONE: 561-233-2431

PROJECT NAME: Lake Worth Lagoon Seagrass Restoration

LOCATION/DISTRICT #: Lake Worth Lagoon / Districts 1, 2, 7

TASK DESCRIPTION (use additional pages if necessary): The Consultant shall provide permitting, seagrass restoration, and monitoring services, as described in the attached APTIM proposal dated July 29, 2024 (Exhibit B). OEBO Schedules 1 and 2 (Exhibit A), and the Contract History (Exhibit C) are attached hereto and made part of this CSA.

DELIVERABLES: See attached APTIM proposal dated July 29, 2024 (Exhibit B).

CSA TYPE: FIXED PRICE

DUE DATE: 5/31/2028

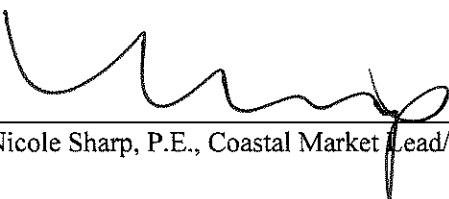
**TOTAL AMOUNT: \$449,993.03**

(Check where appropriate)  
for Contract and Subcontract Amounts:

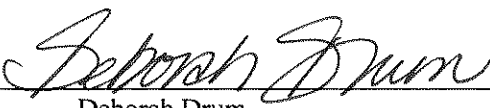
	Black	Hispanic	Women	Other (specify)	White Male
M/WBE(State) <input type="checkbox"/>	\$ _____	\$ _____	\$ _____	\$ _____	
SBE-M/WBE* <input type="checkbox"/>	\$ _____	\$ _____	\$ _____	\$ _____	
SBE <input type="checkbox"/>	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____

\*certified as both an SBE and a State MBE  
TOTAL SBE-M/WBE PARTICIPATION: \$0.00

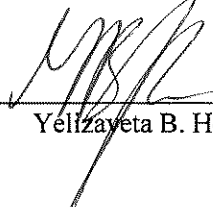
*(REMAINDER OF PAGE LEFT INTENTIONALLY BLANK)*

CONSULTANT REP:  DATE: 8/7/24  
Nicole Sharp, P.E., Coastal Market Lead/Program Manager

APPROVED AS TO TERMS AND CONDITIONS:

ERM DIRECTOR:  DATE: 8-16-24  
Deborah Drum

APPROVED AS TO FORM AND LEGAL SUFFICIENCY:

ASSISTANT COUNTY ATTORNEY:  DATE: 8/29/24  
Yelizayeta B. Herman

ATTEST: JOSEPH ABRUZZO  
CLERK & COMPTROLLER: \_\_\_\_\_ DATE: \_\_\_\_\_  
Deputy Clerk

BOARD OF COUNTY COMMISSIONERS: \_\_\_\_\_ DATE: \_\_\_\_\_  
Maria Sachs, Mayor

**OEBO SCHEDULE 1**

SOLICITATION/PROJECT/BID NAME: Lake Worth Lagoon Seagrass Restoration

SOLICITATION/PROJECT/BID NO.: CSA No. 0019-03

SOLICITATION OPENING/SUBMITTAL DATE: n/a

COUNTY DEPARTMENT: Environmental Resources Management

**Section A** PLEASE LIST THE DOLLAR AMOUNT OR PERCENTAGE OF WORK TO BE COMPLETED BY THE PRIME CONTRACTOR/CONSULTANT\* ON THE PROJECT:

NAME OF PRIME RESPONDENT/BIDDER: Aptim Environmental & Infrastructure, LLC ADDRESS: 6401 Congress Avenue, Suite 140, Boca Raton, FL 33487

CONTACT PERSON: Katy Brown, Lead Marine Biologist PHONE NO.: 561-361-3181 E-MAIL: kathryn.brown@aptim.com

PRIME'S DOLLAR AMOUNT OR PERCENTAGE OF WORK: \$77,968.03  
 \*SMWBE Prime's must include their percentage or dollar amount in the Total Participation line under section B.  Non-SBE  MBE  WBE  SBE

**Section B** PLEASE LIST THE DOLLAR AMOUNT OR PERCENTAGE OF WORK TO BE COMPLETED BY ALL SUBCONTRACTORS/SUBCONSULTANTS ON THE PROJECT BELOW:

Subcontractor/Sub consultant Name	(Check all Applicable Categories)				DOLLAR AMOUNT OR PERCENTAGE OF WORK					
	Non-SBE	MBE Minority Business	WBE Women Business	SBE Small Business	Black	Hispanic	Women	Caucasian	Asian	Other
	1. Sea & Shoreline, LLC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	_____	\$372,025.00	_____
2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	_____	_____	_____	_____
3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	_____	_____	_____	_____
4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	_____	_____	_____	_____
5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	_____	_____	_____	_____

(Please use additional sheets if necessary) Total \$372,025.00

Total Bid/Offer Price \$ 449,993.03 Total Certified S/M/WBE Participation \$ 0.00

I hereby certify that the above information is accurate to the best of my knowledge: Nicole Sharp Director  
 Name & Authorized Signature Title

- Note:
- The amount listed on this form for a Subcontractor/sub consultant must be supported by price or percentage listed on the properly executed Schedule 2 or attached signed proposal.
  - Only those firms certified by Palm Beach County at the time of solicitation due date are eligible to meet the established OEBO Affirmative Procurement Initiative (API). Please check the applicable box and list the dollar amount or percentage under the appropriate demographic category.
  - Modification of this form is not permitted and will be rejected upon submittal.

Exhibit A p. 1 of 4

**OEBO LETTER OF INTENT – SCHEDULE 2**

Exhibit A  
p. 2 of 4

A completed Schedule 2 is a binding document between the Prime Contractor/consultant and a Subcontractor/subconsultant (for any tier) and should be treated as such. The Schedule 2 shall contain bolded language indicating that by signing the Schedule 2, both parties recognize this Schedule as a binding document. All Subcontractors/subconsultants, including any tiered Subcontractors/subconsultants, must properly execute this document. Each properly executed Schedule 2 must be submitted with the bid/proposal.

SOLICITATION/PROJECT NUMBER: CSA No. 0019-03

SOLICITATION/PROJECT NAME: Lake Worth Lagoon Seagrass Restoration

Prime Contractor: Aptim Environmental & Infrastructure, LLC Subcontractor: Sea & Shoreline, LLC

**(Check box(s) that apply)**

SBE  WBE  MBE  M/WBE  Non-S/M/WBE Date of Palm Beach County Certification (if applicable): n/a

The undersigned affirms they are the following (select one from each column if applicable):

<b>Column 1</b>	<b>Column 2</b>	<b>Column 3</b>
<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> African-American/Black <input type="checkbox"/> Asian American <input checked="" type="checkbox"/> Caucasian American <input type="checkbox"/> Hispanic American <input type="checkbox"/> Native American	<input type="checkbox"/> Supplier

**S/M/WBE PARTICIPATION** – S/M/WBE Primes must document all work to be performed by their own work force on this form. Failure to submit a properly executed Schedule 2 for any S/M/WBE participation may result in that participation not being counted. Specify in detail, the scope of work to be performed or items supplied with the dollar amount and/or percentage for each work item. S/M/WBE credit will only be given for the areas in which the S/M/WBE is certified. A detailed proposal may be attached to a properly executed Schedule 2.

Line Item	Item Description	Unit Price	Quantity/Units	Contingencies/Allowances	Total Price/Percentage
	Permitting and seagrass restoration services				\$372,025.00

The undersigned Subcontractor/subconsultant is prepared to self-perform the above-described work in conjunction with the aforementioned project at the following total price or percentage: \$372,025.00

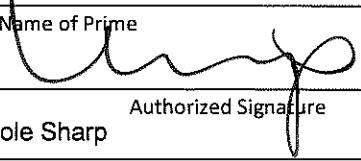
**If the undersigned intends to subcontract any portion of this work to another Subcontractor/subconsultant, please list the business name and the amount below accompanied by a separate properly executed Schedule 2.**

Eurofins / Terracon  
Name of 2<sup>nd</sup>/3<sup>rd</sup> tier Subcontractor/subconsultant

Price or Percentage: \$1,900.00 / \$2,515.00

Aptim Environmental & Infrastructure, LLC

Print Name of Prime

By: 

Authorized Signature

Nicole Sharp

Print Name

Director

Title

Date: 8/7/2024

Sea & Shoreline, LLC

Print Name of Subcontractor/subconsultant

By: Nicholas L Muzia

Authorized Signature

Nicholas Muzia P.E.

Print Name

Principal Engineer

Title

Date: 8/6/2024

**OEBO LETTER OF INTENT – SCHEDULE 2**

Exhibit A  
p. 3 of 4

A completed Schedule 2 is a binding document between the Prime Contractor/consultant and a Subcontractor/subconsultant (for any tier) and should be treated as such. The Schedule 2 shall contain bolded language indicating that by signing the Schedule 2, both parties recognize this Schedule as a binding document. All Subcontractors/subconsultants, including any tiered Subcontractors/subconsultants, must properly execute this document. Each properly executed Schedule 2 must be submitted with the bid/proposal.

SOLICITATION/PROJECT NUMBER: CSA No. 0019-03  
 SOLICITATION/PROJECT NAME: Lake Worth Lagoon Seagrass Restoration

Prime Contractor: Sea & Shoreline, LLC Subcontractor: Eurofins Environment Testing Southeast, LLC

**(Check box(s) that apply)**  
 SBE  WBE  MBE  M/WBE  Non-S/M/WBE Date of Palm Beach County Certification (if applicable): n/a

The undersigned affirms they are the following (select one from each column if applicable):

<b>Column 1</b>	<b>Column 2</b>	<b>Column 3</b>
<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> African-American/Black <input type="checkbox"/> Asian American <input checked="" type="checkbox"/> Caucasian American	<input type="checkbox"/> Supplier
	<input type="checkbox"/> Hispanic American <input type="checkbox"/> Native American	

**S/M/WBE PARTICIPATION** – S/M/WBE Primes must document all work to be performed by their own work force on this form. Failure to submit a properly executed Schedule 2 for any S/M/WBE participation may result in that participation not being counted. Specify in detail, the scope of work to be performed or items supplied with the dollar amount and/or percentage for each work item. S/M/WBE credit will only be given for the areas in which the S/M/WBE is certified. A detailed proposal may be attached to a properly executed Schedule 2.

Line Item	Item Description	Unit Price	Quantity/Units	Contingencies/Allowances	Total Price/Percentage
	Water sample analysis				\$1,900.00

The undersigned Subcontractor/subconsultant is prepared to self-perform the above-described work in conjunction with the aforementioned project at the following total price or percentage: \$1,900.00

If the undersigned intends to subcontract any portion of this work to another Subcontractor/subconsultant, please list the business name and the amount below accompanied by a separate properly executed Schedule 2.

Name of 2<sup>nd</sup>/3<sup>rd</sup> tier Subcontractor/subconsultant \_\_\_\_\_ Price or Percentage: \_\_\_\_\_

**Sea & Shoreline, LLC**  
 Print Name of Prime  
 By: *Nicholas Muzia*  
 Authorized Signature  
Nicholas MUZIA P.E.  
 Print Name  
Principal Engineer  
 Title  
 Date: 8/7/24

**Eurofins Environment Testing Southeast, LLC**  
 Print Name of Subcontractor/subconsultant  
 By: *Matthew Foti*  
 Authorized Signature  
Matthew Foti  
 Print Name  
Business Unit Manager  
 Title  
 Date: 8/6/24

**OEBO LETTER OF INTENT – SCHEDULE 2**

A completed Schedule 2 is a binding document between the Prime Contractor/consultant and a Subcontractor/subconsultant (for any tier) and should be treated as such. The Schedule 2 shall contain bolded language indicating that by signing the Schedule 2, both parties recognize this Schedule as a binding document. All Subcontractors/subconsultants, including any tiered Subcontractors/subconsultants, must properly execute this document. Each properly executed Schedule 2 must be submitted with the bid/proposal.

SOLICITATION/PROJECT NUMBER: CSA No. 0019-03

SOLICITATION/PROJECT NAME: Lake Worth Lagoon Seagrass Restoration

Prime Contractor: Sea & Shoreline, LLC Subcontractor: Terracon Consultants, Inc.

**(Check box(s) that apply)**

SBE  WBE  MBE  M/WBE  Non-S/M/WBE Date of Palm Beach County Certification (if applicable): n/a

The undersigned affirms they are the following (select one from each column if applicable):

<b>Column 1</b>	<b>Column 2</b>	<b>Column 3</b>
<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> African-American/Black <input type="checkbox"/> Asian American <input checked="" type="checkbox"/> Caucasian American <input type="checkbox"/> Hispanic American <input type="checkbox"/> Native American	<input type="checkbox"/> Supplier

**S/M/WBE PARTICIPATION** – S/M/WBE Primes must document all work to be performed by their own work force on this form. Failure to submit a properly executed Schedule 2 for any S/M/WBE participation may result in that participation not being counted. Specify in detail, the scope of work to be performed or items supplied with the dollar amount and/or percentage for each work item. S/M/WBE credit will only be given for the areas in which the S/M/WBE is certified. A detailed proposal may be attached to a properly executed Schedule 2.

Line Item	Item Description	Unit Price	Quantity/ Units	Contingencies/ Allowances	Total Price/Percentage
	Materials laboratory testing				\$2,515.00

The undersigned Subcontractor/subconsultant is prepared to self-perform the above-described work in conjunction with the aforementioned project at the following total price or percentage: \$2,515.00

If the undersigned intends to subcontract any portion of this work to another Subcontractor/subconsultant, please list the business name and the amount below accompanied by a separate properly executed Schedule 2.

Name of 2<sup>nd</sup>/3<sup>rd</sup> tier Subcontractor/subconsultant \_\_\_\_\_ Price or Percentage: \_\_\_\_\_

**Sea & Shoreline, LLC**  
 Print Name of Prime  
 By: Nicholas Muzia  
 Authorized Signature  
Nicholas Muzia P.E.  
 Print Name  
Principal Engineer  
 Title  
 Date: 8/7/24

**Terracon Consultants, Inc.**  
 Print Name of Subcontractor/subconsultant  
 By: David T. Youngstrom  
 Authorized Signature  
David T. Youngstrom  
 Print Name  
Port St. Lucie Office Manager  
 Title  
 Date: 8/6/24





Aptim Environmental & Infrastructure, LLC  
6401 Congress Avenue, Suite 140  
Boca Raton, FL 33487  
Tel: +1 561 391 8102  
Fax: +1 561 391 9116  
www.aptim.com

July 29, 2024

Sabrina Fischer  
Project Manager  
Palm Beach County  
Department of Environmental Resources Management  
2300 North Jog Road, 4<sup>th</sup> Floor, West Palm Beach, FL 33411

**Subject: Lake Worth Lagoon Seagrass Restoration Project**

Dear Sabrina:

Aptim Environmental & Infrastructure, LLC (APTIM) is pleased to submit this proposal to Palm Beach County (County) in support of the Lake Worth Lagoon Seagrass Restoration Project. APTIM has retained Sea & Shoreline to provide permitting and seagrass restoration services as they have extensive experience in habitat creation and restoration throughout Florida. A scope of services is provided as Attachment 1.

The lump sum fee to the County for the proposed services is \$449,993.03 as detailed in Attachment 2, the Fee Schedule. These services proposed herein will be performed in accordance with this proposal and the Professional Services Agreement R2023-0019 (dated January 10, 2023) between Palm Beach County and Aptim Environmental & Infrastructure, LLC for Coastal and Marine Engineering Services. We will commence work upon receipt of a Consultant Services Authorization (CSA) from the County.

Thank you for this opportunity to serve Palm Beach County. As always, please do not hesitate to call if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Katy Brown".

Katy Brown, MS  
Lead Marine Biologist  
Aptim Environmental & Infrastructure, LLC

A handwritten signature in black ink that reads "Nicole S. Sharp".

\_\_\_\_\_  
Authorized Corporate Signature

Nicole S. Sharp P.E.  
\_\_\_\_\_  
Printed Name

cc: Debra Neese, APTIM  
Nick Muzia, P.E., Sea & Shoreline  
Ryan Brushwood, Sea & Shoreline

Coastal Restoration & Modeling Program Manager  
\_\_\_\_\_  
Title



**ATTACHMENT 1  
LAKE WORTH LAGOON SEAGRASS RESTORATION PROJECT  
SCOPE OF SERVICES**

**Introduction**

Palm Beach County's Department of Environmental Resources Management received legislative funding to create and restore seagrass habitat within the Lake Worth Lagoon. As proposed, the project aims to plant 12-acres of nursery grown seagrass at six (6) different 2-acre sites: two (2) in the northern, two (2) in the central, and two (2) in southern lagoon. Restoration techniques, such as exclusion devices, will be applied to the seagrass plantings in an effort to gain a better understanding of how these techniques may benefit future restoration projects. The seagrass restoration sites shall be monitored for a period of 3 years post-planting to evaluate the success of the restoration efforts.

**Task 1: State and Federal Permitting**

APTIM will assist Sea & Shoreline with state and federal permitting efforts, agency coordination, preparation and submittal of permit applications, related correspondence with the consulting regulatory agencies, and all required application fees. To expedite the permitting process, authorization from the U.S. Army Corps of Engineers (USACE) shall be requested under the Nationwide Permit 27 (Aquatic Habitat Restoration, Enhancement, and Establishment Activities). Draft documents and/or applications will be provided to the County for review prior to submittal to the agencies. All other permits required will be obtained by Sea & Shoreline.

**Task 2: Site Evaluation and Report**

Site evaluations shall be conducted by Sea & Shoreline to determine the locations of the restoration sites. Site evaluations shall include a benthic survey to assess the current condition of each site, which includes documenting the presence/absence of submerged aquatic resources and evaluating the sediment quality. Up to 10 sediment grab samples shall be collected for sediment quality analysis. The benthic surveys shall be conducted during the growing season (federal or regional agency accepted timeframe) to meet agency permitting requirements and the results will be submitted as part of the application/verification package. Sea & Shoreline will also calculate an exposure rating for each site along with a likelihood of success as described in Sea & Shoreline's proposal, provided as Attachment 3. Sea & Shoreline will prepare a short report detailing the observations and analysis for the County to review. The restoration sites shall be selected based on the recommendations in the report and coordination with the County. In the event that the sites evaluated are determined not to be viable as successful restoration sites, APTIM and Sea & Shoreline shall evaluate additional sites as may be needed at no additional cost to the County; however, costs may be just adjusted under the other tasks. Control sites shall also be evaluated; however, this will be limited to visual inspection of each site. Control sites shall be selected based on the field observations and coordination with the County.

**Task 3: Materials Production**

The materials production will be the responsibility of Sea & Shoreline and will include cultivating the seagrass planting units and fabricating the GrowSAV Herbivory Exclusion Devices. The seagrass planting units will be



cultivated in and harvested from Sea & Shoreline's FDACS certified aquaculture facility in Melbourne Beach, FL. Further details of the materials production are provided in Sea & Shoreline's proposal (Attachment 3).

Photo documentation and a brief update will be provided to the County at the midpoint of the materials production.

#### **Task 4: Installation**

Installation of seagrass planting units and GrowSAV Herbivory Exclusion Devices will be conducted by Sea & Shoreline. Shoal grass (*Halodule wrightii*) planting units shall consist of either 4-inch (4"x4"x4") biodegradable peat pot planting units filled with a peat-sand mixture that contains 7-25 apical meristems with numerous shoots or of four-inch bag planting units, consisting of a biodegradable bag material filled with a peat-sand mixture that contain 7-25 apical meristems per unit with numerous shoots.

A total of 300 GrowSAV Exclusion Devices will be placed over the six (6) 2-acre restoration sites, with 50 exclusion devices at each restoration site. Exclusion devices will be spaced on average of 10 m centers, but exact locations may be adjusted based on site conditions. The cages will remain in place for a period of 22-months. Installation of plants and cages will be completed within one year following receipt of the County's CSA, barring no unforeseen inclement environmental conditions. Further details of the installation are provided in Sea & Shoreline's proposal (Attachment 3).

#### **Task 5: Maintenance**

Monthly maintenance visits shall be conducted by Sea & Shoreline for a period of 22-months to remove biofouling and drift algae from the exclusion devices. Further details of the maintenance activities are provided in Sea & Shoreline's proposal (Attachment 3). Monthly status reports will be generated and submitted to APTIM and the County.

#### **Task 6: Monitoring**

APTIM will conduct the pre-planting and post-planting monitoring events at the restoration sites and the control sites. Table 1 provides the proposed monitoring schedule, which includes a pre-planting monitoring event, baseline monitoring event (time-0), immediate post-planting (I-Post) monitoring event, and three (3) annual post-planting monitoring events. The post-planting monitoring events will occur at the start (March-May) of each seagrass growing season (except for the I-Post event, which will occur July-August) to align with the ongoing seagrass monitoring being conducted by the County. Three (3) control sites shall be selected during the site evaluations (Task 2) to compare the success of the restoration sites and to also document regional natural variability and/or disturbances. One (1) control site shall be selected for each region of the lagoon (north, central, and south) near the restoration sites. Control sites (i.e., degraded to a similar degree of the proposed restoration sites) were chosen versus reference sites (i.e., ideal target of restoration) due to the unlikelihood of identifying sufficient reference sites in each region of the lagoon.



**Table 1. Proposed Planting and Monitoring Schedule.**

MONTH	YEAR			
	2025	2026	2027	2028
March	Pre-Planting			
March/April	Installation			
March-May	Time-0	12-month	24-month	36-month
July/August	I-Post			

During each monitoring event, an in-situ assessment will be conducted to monitor the status of the restoration and control sites. The preliminary design includes six (6) 2-acre restoration sites and three (3) 1-acre control sites. Based on this approach, 1% of each restoration site (2 ac) and each control site (1 ac) will be evaluated utilizing a stratified random quadrat assessment. This would include 80 quadrats per restoration site and 40 quadrats per control site. However, these methods may be adjusted based on the final site selection.

The canopy height and cover-abundance of submerged aquatic resources (SAV) shall be visually assessed within 1-m<sup>2</sup> (1 m x 1 m) quadrats (and/or cages if the randomized survey point is located on a cage location). Cover-abundance (percent cover) of SAV shall be visually assessed and reported. Any drift algae within the quadrat shall be recorded in the field notes as sparse, moderate, or abundant and then carefully removed prior to visually assessing rooted or anchored SAV taxa (seagrass and rhizophytic macroalgae, respectively). Once drift algae have been removed from the quadrat, the biologist shall assess the total cover-abundance of SAV, which is the total cover of all seagrass and rhizophytic macroalgae taxa. The total cover-abundance of all seagrass species and the total cover-abundance of all rhizophytic macroalgae genera shall also be reported. The biologist shall also report the cover-abundance of each seagrass species and each rhizophytic macroalgae genera present within the quadrat. The results of this assessment shall be used to calculate the frequency of occurrence (percentage of all quadrats that contained SAV), the density (average cover-abundance for all quadrats sampled) and the abundance (average cover-abundance for only those quadrats containing SAV). These metrics shall be calculated for 1) all SAV, 2) all seagrass, 3) all rhizophytic macroalgae, 4) each seagrass species and 5) each rhizophytic macroalgae genera.

Site conditions shall be visually assessed and indicators of function such as canopy height, epiphyte coverage, substrate type, water depth, water clarity and visibility shall be observed and noted. Representative photographs of each site shall be taken to document the conditions.

Water quality parameters will also be collected at each site using a YSI multiparameter meter or similar instrument. Parameters shall include dissolved oxygen, salinity, and turbidity. Two (2) measurements shall be taken at each site: one (1) at a maximum of 6 inches below the water surface and one (1) at a maximum 6 inches off the bottom. Calibration information shall be up to date and will be provided with each report. All possible measures shall be taken to ensure no artificial turbidity or mixing occurs due to monitoring activities.

Deliverables will include annual monitoring reports following the 12, 24, and 36-month monitoring events that document the data and results of each of the post-planting monitoring event occurring between annual reports. Raw data including field datasheets, Excel spreadsheets, water quality data files, and photographs shall also be provided to the County after each monitoring event. The annual monitoring reports shall compare the restoration sites to their corresponding control site and shall evaluate the effectiveness of the planting units and GrowSAV



Exclusion Devices at creating and maintaining seagrass habitat. Monitoring of the restoration and control sites will be completed with four years following receipt of the County's CSA, barring no unforeseen inclement environmental conditions.

**Assumptions**

If conditions differ from those assumed within this scope of work that will affect the schedule and/or scope, APTIM shall advise the County in writing of the magnitude of the required adjustments, and changes in completion schedule or compensation to APTIM will be discussed with the County.

**PALM BEACH COUNTY**
**LAKE WORTH LAGOON SEAGRASS RESTORATION PROJECT**
**PREPARED BY: Aptim Environmental & Infrastructure, LLC (APTIM)**

<b>TASK</b>	<b>DESCRIPTION</b>	<b>LABOR COSTS</b>	<b>EQUIPMENT AND DIRECT COSTS</b>	<b>SUBCONTRACTOR COSTS</b>	<b>TASK COST</b>
<b>1</b>	<b>State and Federal Permitting</b>	<b>\$ 651.76</b>	<b>\$ -</b>	<b>\$ 6,519.55</b>	<b>\$ 7,171.31</b>
<b>2</b>	<b>Site Evaluation and Report</b>	<b>\$ 446.53</b>	<b>\$ -</b>	<b>\$ 8,509.25</b>	<b>\$ 8,955.78</b>
<b>3</b>	<b>Materials Production</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 313,680.75</b>	<b>\$ 313,680.75</b>
<b>4</b>	<b>Installation</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 8,140.60</b>	<b>\$ 8,140.60</b>
<b>5</b>	<b>Maintenance</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 38,895.10</b>	<b>\$ 38,895.10</b>
<b>6</b>	<b>Monitoring</b>	<b>\$ 57,787.99</b>	<b>\$ 15,361.50</b>	<b>\$ -</b>	<b>\$ 73,149.49</b>
<b>TOTAL COST</b>		<b>\$ 58,886.28</b>	<b>\$ 15,361.50</b>	<b>\$ 375,745.25</b>	<b>\$ 449,993.03</b>
<b>TOTAL PROJECT COST =</b>					<b>\$ 449,993.03</b>



PALM BEACH COUNTY LAKE WORTH LAGOON SEAGRASS RESTORATION PROJECT													
PREPARED BY: Aptim, Environmental & Infrastructure, LLC (APTIM)													
TASK	LABOR					EQUIPMENT						Direct	Task Subtotal
	Senior Marine Biologist	Marine Biologist I	Survey Technician	GIS Operator	Clerical	Turbidimeter	Survey Boat (24 ft Privateer)	Trimble Differential GPS	Underwater Camera	SCUBA tanks	Dive Equipment & Insurance	Sea & Shoreline	
	Hours	Hours	Hours	Hours	Hours	Day	Day	Day	Day	Tank	Diver/Day	Total	
1 State and Federal Permitting	4	4										\$ 6,455.00	\$ 7,171.31
2 Site Evaluation and Report	4	1										\$ 8,425.00	\$ 8,955.78
3 Materials Production												\$310,575.00	\$ 313,680.75
4 Installation												\$ 8,060.00	\$ 8,140.60
5 Maintenance												\$ 38,510.00	\$ 38,895.10
6 Monitoring	208	376	168	3	3	10.5	10.5	10.5	10.5	21	21	\$ -	\$ 73,149.49
TOTAL	216	381	168	3	3	10.5	10.5	10.5	10.5	21	21	\$372,025.00	
RATE	\$ 94.53	\$ 68.41	\$ 70.51	\$107.50	\$ 78.47	\$ 38.00	\$ 790.00	\$ 415.00	\$ 32.00	\$ 19.00	\$ 75.00	1.01	
COST	\$ 20,418.48	\$26,064.21	\$11,845.68	\$322.50	\$235.41	\$ 399.00	\$ 8,295.00	\$ 4,357.50	\$ 336.00	\$399.00	\$ 1,575.00	\$375,745.25	\$ 449,993.03
Labor \$ 58,886.28 Equipment \$ 15,361.50 Subcontractor \$ 375,745.25 <b>TOTAL COST \$ 449,993.03</b>													

**ATTACHMENT 3****SEA & SHORELINE  
SCOPE OF SERVICES AND COST PROPOSAL**





July 24, 2024

Katy Brown  
Lead Marine Biologist  
Aptim Environmental & Infrastructure, LLC.  
Mobile: (732) 599-6653  
Email: [kathryn.brown@aptim.com](mailto:kathryn.brown@aptim.com)

Ms. Brown,

Thank you for allowing Sea & Shoreline the opportunity to provide a scope of work and cost estimate for the Lake Worth Lagoon Seagrass Restoration Project. The goal of this project is to restore seagrass communities to the Lagoon using nursery grown planting units. The data and results obtained from this project will be important in guiding future large-scale seagrass restoration efforts within the Lake Worth Lagoon.

If you have any questions regarding this proposal, please do not hesitate to reach out.

Sincerely,

*Nicholas L. Muzia*

Nicholas Muzia, P.E.  
Principal Engineer  
[nick@seaandshoreline.com](mailto:nick@seaandshoreline.com)  
P: (407) 948-6141



## Lake Worth Lagoon Seagrass Restoration Project

### Project Overview

Seagrasses are among one of the most productive habitats in the world. Seagrass habitats promote essential nutrient cycling, sediment stabilization, climate regulation, and critical habitat for many species. Despite their importance, adverse anthropogenic activities are increasingly impacting seagrass ecosystems globally, leading to depletion and, in some cases, localized extinction.

Likewise, seagrasses in the Lake Worth Lagoon (LWL) have seen a reduction in density, cover, and extent over the last decade according to the 2021 Lake Worth Lagoon Management Plan (Palm Beach County, 2021). Once seagrass begins to decline in a system, natural recovery can be a challenge due to the sediment resuspension that can result from a reduction in rhizome matrixes and canopy cover, increasing turbidity and further limiting available light needed for seagrass growth.

This project aims to compliment the restoration efforts that Palm Beach County, local municipalities and local environmental groups have already begun in the LWL by utilizing nursery-grown seagrass and proven restoration methods to restore lost or degraded seagrass meadows that are experiencing functional loss. Seagrass restoration and enhancement will consist of growing native seagrasses in an upland aquaculture facility and planting them in areas that have historically seen denser seagrass beds and/or in areas that have data recording optimal conditions for seagrass growth. The seagrass planting units will be protected from grazing and maintained for a period of 22 months. The results of this project will be monitored and statistically evaluated against control seagrass meadows in the LWL and the data and observations collected from this project will help to guide future planting efforts.

### Project Objectives

The primary objective of this project is to plant nursery-grown seagrass in the Lake Worth Lagoon. Nursery-grown seagrass plantings will jumpstart colonization in areas where natural recovery has been slow or non-existent and supplement existing seagrasses within sparser areas. In addition, the increase in seagrass biomass will provide additional foraging opportunities for listed species, enhance fisheries productivity, stabilize sediment and thus improve water quality.



## Scope of Services

1. Permitting
2. Site Evaluation & Report
3. Materials Production
  - a. *Planting Unit Cultivation*
  - b. *GrowSAV Herbivory Exclusion Device Fabrication*
4. Installation
5. Maintenance
6. Monitoring
7. Project Budget
8. Project Timeline
9. Appendices

## Description of Services

### 1. Permitting

Sea & Shoreline will work with APTIM Environmental & Infrastructure, LLC to create a permit application that will include all applicable data, exhibits, maps, and narrative. Sea & Shoreline will also pay for all required application fees. Any local, state, and federal permit, exemption, or authorization required to perform the proposed work will be obtained prior to work beginning.

### 2. Site Evaluation & Report

All sites will be evaluated based on the below criteria:

- a. Sediment Quality and Grain Size Analysis – During the benthic survey (conducted during federal growing season or regional agency accepted timeframe) of the proposed sites up to 10 Sediment Quality Analyses will be performed including the below tests. At each test site, a minimum of 3kg of substrate will be collected for the analysis.
  - i. ASTMC117 - Testing of Materials finer than No. 200 sieve in mineral aggregates by washing
  - ii. ASTMC136 - Sieve analysis for fine and coarse material
  - iii. ASTM D2974 - Organic material of soil
  - iv. EPA Method 351.2 - TKN
  - v. EPA Method 353.2 - Nitrate/Nitrite
  - vi. EPA Method 365.4 - Total Phosphorus
  - vii. Moisture analysis

P.O. Box 783549, Winter Garden, FL 34778 | [seaandshoreline.com](http://seaandshoreline.com) | 888-464-6991

---

Patented Aquatic Restoration Solutions Validated by Science



- b. Exposure rating for proposed site will be generated and presented - The exposure rating will be calculated and presented with a likely success criteria based on the Guidelines for the Conservation and Restoration of Seagrass in the United States and Adjacent Water (Fonseca, Kenworthy, and Thayer 1998).
- c. The results of the evaluation will be presented to Palm Beach County in the form of a short report. The report will include test results and the maximum and minimum range for project success based on the guidelines provided in Fonseca, Kenworthy, and Thayer 1998. The final site and plant distributions will be approved after this document is generated and accepted by Palm Beach County.

Exposure to waves was calculated for each site using methods of the Shore Protection Manual (1977) and Keddy (1982) as reported by Murphey and Fonseca (1995):

$$\text{Exposure} = \sum_{i=1}^8 (V_i \times P_i \times F_i)$$

where:

- i = i<sup>th</sup> compass heading (1-8)
- V = average monthly maximum wind speed in m s<sup>-1</sup>
- P = percent frequency which wind occurred from the i<sup>th</sup> direction
- F = effective fetch

Figure 1: Exposure to Wave Calculation provided (Fonseca, Kenworthy, and Thayer 1998)

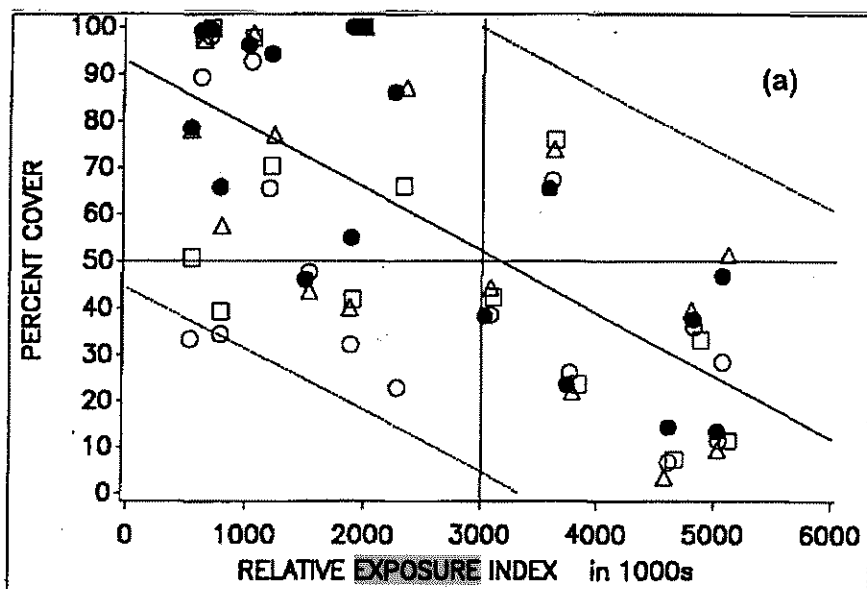


Figure 2: Relative Exposure index to determine range of success (Fonseca, Kenworthy, and Thayer 1998)

P.O. Box 783549, Winter Garden, FL 34778 | seaandshoreline.com | 888-464-6991

Patented Aquatic Restoration Solutions Validated by Science



### **3. Materials Production**

#### **3.a. Planting Unit Production**

All seagrass planting units will be harvested from Sea & Shoreline's FDACS certified aquaculture facility located in Melbourne Beach, FL. Seagrass will be packaged into viable planting units and cultivated for 30-60 days or until they are firmly rooted in the substrate. Planting units will consist of only Shoal Grass (*Halodule wrightii*). Pot planting units or bag planting units may be constructed and used in the restoration site depending on location and site conditions. The four-inch pot planting units, consist of a 4"x4"x4" biodegradable peat pot filled with a peat-sand mixture that contains 7-25 apical meristems per unit with numerous shoots, and the four-inch bag units, consist of a biodegradable bag material filled with a peat-sand mixture that contain 7-25 apical meristems per unit with numerous shoots. A total of 61,500 planting units will be produced and grown out for this project.

#### **3.b. GrowSAV Herbivory Exclusion Device fabrication**

GrowSAV Herbivory Exclusion Devices are 18" tall and 36" in diameter, protecting an area of 7 ft<sup>2</sup>. They consist of a metal frame covered by PVC coated wire mesh and anchoring legs that bury in the sediment allowing the device to sit flush on the bottom to ensure stability. The mesh keeps out medium and large sized herbivores, allowing planting units to become well established. A total of 300 GrowSAV Exclusion Devices will be placed over six 2-acre restoration sites, with 50 exclusion devices at each restoration site. Exclusion devices will be spaced on average of 10 m centers, but exact locations may be adjusted based on site conditions.

### **4. Installation**

Planting units will be transported to the restoration sites using best management practices (Fonseca, Kenworthy, and Thayer 1998) and will be planted ubiquitously on four-foot centers throughout the restoration sites by a team of biologists using a mask and snorkel. Plantings will occur in water depth of at least 12" and no deeper than 3' (+/-6") MLW. GrowSAV Herbivory Exclusion Devices will be transported to the restoration sites and placed over a portion of the seagrass planting units to provide temporary protection for a period of 22 months. The cages will be maintained for a 22-month period. All GrowSAV cages will be permitted and marked with PVC pole anchored into the bottom with reflective tape above the waterline.



## **5. Maintenance**

Maintenance of seagrass exclusion devices will occur monthly for a period of 22 months. Biofouling and drift algae will be removed from the devices by a team of Sea & Shoreline staff to ensure ample flow and light availability. During these events, the health, success, and growth of all planting units will be documented through photographs and maintenance reports will be generated and submitted to regulatory agencies and project stakeholders to provide regular updates. After 22 months, Sea & Shoreline will remove the GrowSAV cages from the restoration sites, taking possession of the cages for storage purposes and determining if the cages can be re-used for future projects with Palm Beach County.

## **6. Monitoring**

Monitoring will be performed by APTIM and detailed methods are provided in APTIM's scope of work.



**7. Project Budget**

The lump sum fee for the scope of work is \$372,025 as detailed in the table below.

Activity	Quantity	Unit	Unit Cost	Cost
1. Permitting	N/A		N/A	\$ 6,455
2. Site Evaluation & Analysis Report (10 sediment & Nutrient Analysis)	10		\$842.50	\$ 8,425
3.a Planting Unit Cultivation	61,500		\$3.25	\$ 199,875
3.b GrowSAV Herbivory Exclusion Devices Fabrication	300		\$369	\$ 110,700
4. Installation	N/A		\$8,060	\$ 8,060
5. Maintenance	22		\$1,750.45	\$ 38,510
6. Monitoring (APTIM)				
<b>Total</b>				<b>\$ 372,025</b>

*\*The pricing reflected here is to be considered a special or one-time pricing. This special pricing is offered on a one-time basis to support the project goals as a good faith effort by Sea & Shoreline LLC. to help develop successful seagrass restoration projects in the Lake Worth Lagoon.*

**8. Project Timeline**

Activity	Task	Estimated Start Date	Estimated End Date
1	Permitting	Sept 2024	December 2024
2	Site Evaluation and Analysis Report	Sept2024	December 2024
3	Materials Production	Sept 2024	April 2025
4	Installation	March 2025	April 2025
5	Maintenance	May 2025	Feb 2027
6	Monitoring	March 2025	May 2028

P.O. Box 783549, Winter Garden, FL 34778 | seaandshoreline.com | 888-464-6991

Patented Aquatic Restoration Solutions Validated by Science



**9. Appendix – Itemized Cost Breakdown**

Palm Beach County - Lake Worth Lagoon Sea & Shoreline											
Activity	Labor				Equipment					Subcontract	activity total
	Senior Biologist	Biologist	Survey & GIS	Admin	Consumables	Boat	RTK	Grow SAV Cages	4" Planting Units (Seagrass)	Material Testing	
1 - Permitting	40	0	15	1	0	1	1				\$ 6,455
2 - Site Evaluation	6	8	15	1	1	1	1			4415	\$ 6,435
3a Planting Units									61500		\$ 199,875
3b Grow SAV cages								300			\$ 110,700
4 - Installation	10	80	9.5	3							\$ 8,060.00
5 - Maintenance (22 events)	60	160		5	22	22	6				\$ 36,510.00
Unit Cost	\$ 90.00	\$ 75.00	\$ 100.00	\$ 70.00	\$ 15.00	\$ 795.00	\$ 490.00	\$ 369.00	\$ 1.24		
Cost	\$ 10,440.00	\$ 18,600.00	\$ 3,950.00	\$ 700.00	\$ 345.00	\$ 19,080.00	\$ 3,920.00	\$ 110,700.00	\$ 199,875.00	\$ 4,415.00	
Labor	\$ 23,690										
Equipment	\$ 333,920										
Testing - subcontract	\$ 4,415										
Total	\$ 372,025										

**10. Appendix – Subcontractor Material Testing Proposals**

Item	Cost per unit	Quantity	Processing Fee	Total
Eurofins Solid Plant/ Dredge Material	\$185	10	\$5*	\$1,900
Terracon Material Testing Services	\$195	10	\$565	\$2,515
<b>Total</b>				<b>\$4,415</b>

Please see attached proposals for sediment and water analysis.

\*Sea & Shoreline will dry material prior to submitting for testing to avoid the \$85 'passive drying fee' quoted for each sample. Safe and Environmentally Responsible Waste Management Fee will still apply for each sample.

P.O. Box 783549, Winter Garden, FL 34778 | seaandshoreline.com | 888-464-6991

Patented Aquatic Restoration Solutions Validated by Science





**References**

- a. Fonseca, Mark S., et al. 1998. Guidelines for the Conservation and Restoration of Seagrasses in the United States and Adjacent Waters. NOAA Coastal Ocean Program Decision Analysis Series No. 12. NOAA Coastal Ocean Office, Silver Spring, MD. 222 pp.
- b. Palm Beach County. 2021. Lake Worth Lagoon Management Plan 2021.  
[http://discover.pbcgov.org/erm/Publications/LWLManagementPlan 2021.pdf](http://discover.pbcgov.org/erm/Publications/LWLManagementPlan%202021.pdf).



Environment Testing

Eurofins Orlando  
481 Newburyport Avenue  
Altamonte Springs, FL 32701

Prepared for:  
Mr. Nicholas Muzia  
Sea & Shoreline Aquatic Restoration  
P.O. Box 783549  
Winter Garden, FL 34778  
Nick@seaandshoreline.com | Tel: (407) 948-6141

Exhibit B  
page 18 of 19

Prepared by: Erickson, Russell  
Date: 2/28/2024 Expiration Date: 5/28/2024

Project: Solid Plant or Dredge Material

Quote Number: 67004511 - 0

**Water Samples (1) TAT: 10\_Days (Business Days)**

Matrix	Method	Test Description	Quantity	Unit Price	Extended Price
Water	Total Nitrogen	Total Nitrogen Calculation (NO2+NO3+TKN)	1	\$ 0.00	\$ 0.00
Water	351.2	Total Kjeldahl Nitrogen	1	\$ 35.00	\$ 35.00
Water	353.2	Nitrate/Nitrite as NOx Combined	1	\$ 25.00	\$ 25.00
Water	365.1	Low Level Phosphorus	1	\$ 25.00	\$ 25.00
<b>Total Water Samples (1)</b>					<b>\$ 85.00</b>

**Solid Plant or Dredge Material (1) TAT: 10\_Days (Business Days)**

Matrix	Method	Test Description	Quantity	Unit Price	Extended Price
Solid	Total Nitrogen	Total Nitrogen Calculation (NO2+NO3+TKN)	1	\$ 0.00	\$ 0.00
Solid	351.2	Total Kjeldahl Nitrogen	1	\$ 40.00	\$ 40.00
Solid	353.2	Nitrate/Nitrite as NOx Combined	1	\$ 25.00	\$ 25.00
Solid	365.4	Total Phosphorus as P	1	\$ 30.00	\$ 30.00
Solid	Moisture	Percent Moisture	1	\$ 5.00	\$ 5.00
<b>Total Solid Plant or Dredge Material (1)</b>					<b>\$ 100.00</b>

**Quote Other Charges**

Description	Quantity	Unit Price	Extended Price
"Passive Dry" Preparation & Homogenization Fee (see Footnote)	1	\$ 85.00	\$ 85.00
Minimum Transaction Charge	0	\$ 150.00	\$ 0.00
Safe and Environmentally Responsible Waste Management (per sample)	1	\$ 5.00	\$ 5.00
<b>Total Other Charge</b>			<b>\$ 90.00</b>

**Total Other Charges \$ 90.00**  
**Total Analysis Charges \$ 185.00**  
**Grand Total for Quote 67004511 \$ 275.00**

\*\*Quoted charges do not include sales tax. Applicable sales tax will be added to invoices where required by law.

Issued on: 2/28/2024



**Lake Worth Lagoon Project - Laboratory Testing**  
**Palm Beach County, Florida**  
**MATERIALS TESTING ESTIMATE**

<b>Soil Testing</b>				
Description	Total Units	Type	Rate	Extended Cost
<b>Earthwork Technician Field Sampling &amp; Testing</b>				
1 Sample Pickup (1 trip @ 2 hrs/trip)	0	Hours	\$75.00	\$0.00
2 Drainage (XX trips @ XX hrs/trip)	0	Hours	\$75.00	\$0.00
3 Sanitary Sewer (XX trips @ XX hrs/trip)	0	Hours	\$75.00	\$0.00
4 Water Line (XX trips @ XX hrs/trip)	0	Hours	\$75.00	\$0.00
5 Subgrade & Base (XX trips @ XX hrs/trip)	0	Hours	\$75.00	\$0.00
6 Building Pad (XX trips @ XX hrs/trip)	0	Hours	\$75.00	\$0.00
7 Vehicle/Trip Charge	0	Trip	\$75.00	\$0.00
<b>Laboratory Testing</b>				
1 Proctor Tests (AASHTO D698 and D1557)	0	Each	\$140.00	\$0.00
2 Grain Size Analysis (ASTM C136)	10	Each	\$80.00	\$800.00
3 Sieve Analysis -200 wash (ASTM C117)	10	Each	\$55.00	\$550.00
4 Organic Content Test (ASTM D2974)	10	Each	\$60.00	\$600.00
5 Limerock Bearing Ratio Test (FM 5-515)	0	Each	\$320.00	\$0.00
6 Atterberg Limits Test (ASTM)	0	Each	\$90.00	\$0.00
Sub-Total				\$1,950.00
<b>Concrete Testing</b>				
Description	Total Units	Type	Rate	Extended Cost
1 Concrete Technician (XX trips @ 4 hrs/trip)	0	Hours	\$75.00	\$0.00
2 Vehicle/Trip Charge (Includes next day cylinder pickup)	0	Trip	\$75.00	\$0.00
3 Concrete Compressive Strength Test (XX Sets of 5 cys)	0	Each	\$20.00	\$0.00
Sub-Total				\$0.00
<b>Asphalt Testing</b>				
Description	Total Units	Type	Rate	Extended Cost
1 Asphalt Technician	0	Hours	\$85.00	\$0.00
2 Vehicle/Trip Charge	0	Trip	\$75.00	\$0.00
3 Extraction/Gradation Test	0	Each	\$225.00	\$0.00
Sub-Total				\$0.00
<b>Engineering &amp; Reporting Services</b>				
Description	Total Units	Type	Rate	Extended Cost
1 Principal Engineer	1	Hour	\$195.00	\$195.00
2 Sr. Project Manager/Engineer	2	Hour	\$150.00	\$300.00
3 Clerical/Adminstration	1	Hour	\$70.00	\$70.00
Sub-Total				\$565.00
<b>Material Testing Services</b>				
1 Subtotal of Materials Testing Services				Total \$2,515.00
				\$0.00
				Total \$0.00

**Total = \$2,515.00**

