

**TOWN OF KIAWAH ISLAND  
INVITATION TO BID**

**KIAWAH ISLAND AERIAL PHOTOGRAPHY**

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The Town of Kiawah Island requests a Proposal for services to conduct aerial photography for all of Kiawah Island.

The successful bidder, herein referred to as the **CONSULTANT**, shall provide services for the project for the Town of Kiawah Island, herein referred to as the **TOWN**. Services are outlined in this document under **SECTION A**, entitled **SCOPE OF SERVICES**. **SECTION B**, entitled **BID FORM**, provides the line item cost for the services outlined in this document along with other required information. The **BID FORM** must be returned to the **TOWN** by Noon, August 20, 2010.

It is assumed that costs for meetings between the **TOWN** and **CONSULTANT** are included in the line item costs listed on the bid form. It is further assumed that the **TOWN** will not be responsible for items typically characterized as "reimbursables" and that the contract, based on the **CONSULTANT**'s bid submittal, will represent all of the financial obligations of the **TOWN**.

Proposals must include the enclosed Bid Form and a letter of interest, and should be sent to:

H. Kenneth Gunnells  
Town of Kiawah Island  
21 Beachwalker Drive  
Kiawah Island, SC 29455

**Proposals must be received no later than Noon, Friday, August 20, 2010.** Any proposals received after the specified date and time will be returned to the **CONSULTANT**. The envelope containing the bid documents must be clearly marked "Aerial Photography Project".

Award of the contract for this project will be based on cost, **CONSULTANT**'s experience, and other related factors. The **TOWN** reserves the right to reject any or all bids.

**END OF SECTION**

**SECTION A**  
**SCOPE OF SERVICES**  
KIAWAH ISLAND AERIAL PHOTOGRAPHY

**PROJECT AREA**

The area to be covered by the aerial photography flights will be approximately 17,000 acres (Figure 1). This includes all areas within the Municipal boundary of the Town, including water and marsh.

**PROJECT SPECIFICATIONS**

**A. AERIAL PHOTOGRAPHY**

*General requirements*

Approximate locations of mapping are included in Figure 1. The newly formed spit of sand that extends into the ocean on the eastern end of the island must be included in its entirety. This spit of sand is clearly visible at low tide.

The grid defined tiles (136 tiles estimated) must cover the entire area as shown in Figure 1 at **full tile coverage**. The digital orthoimage shall contain only the neat image area of the corresponding map unit and there shall be no image overlap between digital orthoimages.

Photography must be taken with a digital camera. The raw digital image file must be digitally rectified to an orthographic projecting by processing each image pixel through the appropriate photogrammetric equations. This process requires as input, control points acquired through ground surveys and developed in aerotriangulation; camera orientation parameters; and a Digital Elevation Model (DEM). All imagery should be of uniform color, contrast, and quality. Photography shall be undertaken when skies are clear, free from extensive smoke or haze, and well-defined images can be resolved. Photography shall be flown only during that portion of the day when the sun is 30 degrees or more above the horizon. No artifacts from the acquisition process or digital imagery rectification or mosaic process will be accepted. All imagery should be edited to insure the highest quality and accuracy available.

The photography must be suitable for publication at a scale of 1" = 100', with a horizontal accuracy of 1.0 feet or better. All aerial photography must be flown +/- 45 minutes of Mean Low Tide. Horizontal reference for the project will be **NAD 1983/2007**, S.C. Single Zone State Plane Coordinate System, with the **International Foot** (1 foot = 0.3048 meters "exactly") being used in all conversions. Vertical reference shall be **NAVD 1988**.

Photography must be flown between September 6, 2010 and November 30, 2010. Suggested days for flying (good sun angle and low tide) are September 6-10, October 5-7, and November 4-5.

#### *Flight specifications*

The orientation of flight lines is left up to the contractor. All proposals shall include a flight line layout for the project. There are 2 options for image pixel resolution, 0.25 foot and 0.50 foot. The flying altitude shall be determined based on the pixel resolution selected by the Town. Please provide a proposal and costs as indicated in the Project Costs Page for each resolution option.

#### *Ground control*

There is existing ground control on and near Kiawah Island. Ground control locations provided by the South Carolina Geodetic Survey can be found in Figure 1. Please specify scope of work for recovering and/or installing control appropriate for meeting the above accuracy requirements. Ground control is in addition to Airborne GPS/IMU acquired during flights.

#### *Digital Elevation Model (DEM)*

A DEM exists from a previous mapping project, with a date of March 2005. Please provide a scope of work for utilizing and updating this DEM for use in creating new rectified digital orthophoto images that meet the required accuracy specifications. A new LIDAR-generated DEM can be created but this should be specified in the proposal. A step-by-step narrative of the methodology to be used must be included in the proposal.

#### *Rectification*

The rectification process shall involve the solution of the appropriate photogrammetric equations for each pixel in the output image. It will not be permissible to solve photogrammetric equations at anchor points and then warp the content of the original image between the anchor points.

#### *Image quality*

All digital orthoimages shall be radiometrically adjusted as necessary so that adjacent digital orthoimages can be displayed simultaneously without an obvious visual edge seam between them. Localized adjustments of the brightness values shall be performed to minimize tonal differences between the join areas. When possible and feasible, the area adjusted should be bounded by a tonal break ground feature such as a road, field line, shadow line, etc. The radiometric adjustment should not compromise the accuracy, clarity, or resolution of the orthoimage.

## **B. DELIVERABLES**

Digital orthoimages will be delivered to the Town for quality control. They must be delivered on an external USB hard drive, with the contractor being responsible for paying the shipping costs to and from the Town. Final sets of digital orthoimages will be delivered to Town on an external hard drive in .tif image format with .tfw header. In addition to the image (.tif) and world (.tfw) files, each orthoimage shall include the appropriate DEM/DTM file in .dxf or .shp format labeled with the same file name/number as the corresponding orthoimage. In addition, Mr. Sid files of each orthoimage should be created and delivered. All orthoimages should be joined to create a mosaic of the entire project area in Mr. Sid format.

1. Digital files of the following:

True Color orthophotography at 0.25 or 0.50 foot per pixel  
Resolution (depending on resolution selected by Town)

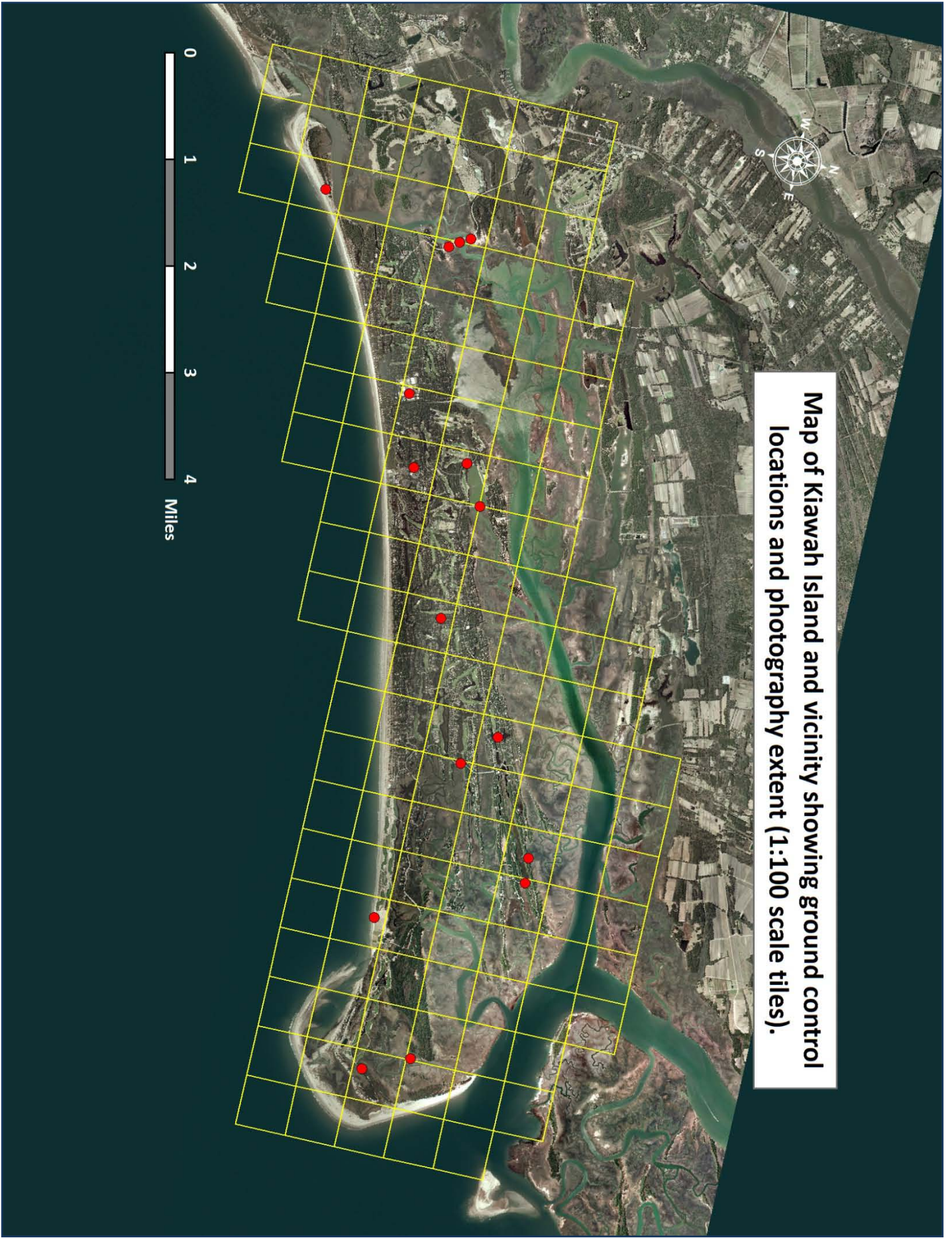
- a. Individual Tiles (Mr Sid and TIF)
- b. Mosaic (Mr Sid)

## **C. ADDITIONAL ALTERNATIVES**

1. Produce Infrared orthoimages at 0.25 or 0.50 foot per pixel resolution (depending on resolution selected by Town)
  - a. Individual Tiles (Mr Sid and TIF)
  - b. Mosaic (Mr Sid)
2. 1 set of true color 36" x 48" printouts of each tile (1"=100' scale) on heavyweight paper.
3. Generate ESRI shapefile layers for buildings and roads

## **D. OWNERSHIP OF MATERIALS**

All materials produced as a result of this project including, but not limited to, digital imagery, aerotriangulation data, terrain and elevation models, and control photographs shall become the property of the Town. The Town may request that the contractor store these materials at the contractor's facility at no charge; however, any and all materials shall be returned to the Town upon written request.



Map of Kiawah Island and vicinity showing ground control locations and photography extent (1:100 scale tiles).

**END OF SECTION**

**SECTION B**  
**BID FORM**  
KIAWAH ISLAND AERIAL PHOTOGRAPHY

**By submitting a proposal, \_\_\_\_\_ represents that:**  
**(NAME OF CONSULTANT)**

- A. The Consultant has read and understands this RFP and that his proposal is made in accordance therewith.
- B. The Consultant has reviewed the RFP, has become familiar with the local conditions under which the work is to be performed, and has correlated personal observations with the requirements of the Scope of Services.
- C. The proposal is based on the terms, materials, systems and equipment required by this RFP, without exception.
- D. The Consultant is qualified to provide the services required under this RFP and, if awarded the contract, will do so in a professional, timely manner using successful bidder's best skill and attention.

**EXPERIENCE:**

At least three (3) references are required, however, you may provide as many as desired in excess of the three (3) required provided that your submittal does not exceed ten pages. The references should be for projects similar to this project (Digital Orthophotography, 0.25" pixels).

1. COMPANY NAME: \_\_\_\_\_  
Contract Title: \_\_\_\_\_  
Contract Period: From \_\_\_\_\_ To \_\_\_\_\_  
Geographic Area Served: \_\_\_\_\_  
Scope of Work: \_\_\_\_\_  
\_\_\_\_\_  
Contracting Office: \_\_\_\_\_  
Contact Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_  
Telephone: \_\_\_\_\_ Email: \_\_\_\_\_

2. COMPANY NAME: \_\_\_\_\_  
Contract Title: \_\_\_\_\_  
Contract Period: From \_\_\_\_\_ To \_\_\_\_\_  
Geographic Area Served: \_\_\_\_\_  
Scope of Work: \_\_\_\_\_  
\_\_\_\_\_  
Contracting Office: \_\_\_\_\_  
Contact Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_  
Telephone: \_\_\_\_\_ Email: \_\_\_\_\_

3. COMPANY NAME: \_\_\_\_\_  
Contract Title: \_\_\_\_\_  
Contract Period: From \_\_\_\_\_ To \_\_\_\_\_  
Geographic Area Served: \_\_\_\_\_  
Scope of Work: \_\_\_\_\_  
\_\_\_\_\_  
Contracting Office: \_\_\_\_\_  
Contact Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_  
Telephone: \_\_\_\_\_ Email: \_\_\_\_\_

**PROJECT COSTS:**

**Section A-B. AERIAL PHOTOGRAPHY**

	0.25 foot	0.50 foot
Aerial photography	\$ _____	\$ _____
Analytical Aerotriangulation	\$ _____	\$ _____
DTM/DEM Capture/update	\$ _____	\$ _____
Ortho rectification and file generation	\$ _____	\$ _____
Other (please specify)	\$ _____	\$ _____
<b>SUBTOTAL =</b>	\$ _____	\$ _____
Add Infrared digital files (Additional Alternative 1)	+ \$ _____	+ \$ _____

**Section C. ADDITIONAL ALTERNATIVES (Alternative 1 is listed above)  
(Additional charges to the above subtotal)**

- 2. Provide 1 set of printouts (true color) + \$ \_\_\_\_\_
- 3. Produce shapefiles of buildings and roads + \$ \_\_\_\_\_

**ADDITIONAL INFORMATION**

If selected and notified by September 1, 2010 to begin project, please provide the estimated completion date for each section of work in the blanks below:

**Section A. Take photos** \_\_\_\_\_

**Section B. Rectify, produce and provide digital deliverables  
(Project subtotal totally completed)** \_\_\_\_\_

**Section C. Deliver printouts and shapefiles (if necessary)** \_\_\_\_\_

**TOWN OF KIAWAH ISLAND TAXES:**

Please note that the Town of Kiawah Island is required to verify that all taxes have been paid to the County. If you owe delinquent taxes, your submittal may be disqualified from consideration. If you wish to inquire as to your tax status you may contact the Charleston County Delinquent Tax Office at (843) 958-4570.

**SOUTH CAROLINA PHOTOGRAMMETRIC SURVEYING LICENSE:**

The Contractor must provide proof of a license to practice photogrammetric surveying in South Carolina (according to state law).

**BUSINESS LICENSE:**

The Contractor is not required to have a valid business license to submit a Proposal. However, Contractors must possess a valid Business License for business undertaken within the corporate limits of the Town of Kiawah Island.

Does your business have a valid **Town of Kiawah Island** Business License?  Yes  No  
If yes, list the number \_\_\_\_\_. Contact (843) 768-9166 with any questions.

Does your business have a valid **Charleston County** Business License?  Yes  No  
If yes, list the number \_\_\_\_\_. Contact (843) 958-4880 with any questions.

**MINORITY/WOMEN-OWNED ENTERPRISE:**

Are you a Minority or Woman-Owned business?  Yes  No  
If so, are you certified?  Yes  No

If you are certified, you must furnish a copy of your certificate with your submittal.

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**NAME OF COMPANY:** \_\_\_\_\_

By: \_\_\_\_\_  
Signature Print Name

Date: \_\_\_\_\_ Title: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Business Telephone Number: \_\_\_\_\_ Business Fax Number: \_\_\_\_\_

Is your firm a \_\_\_\_\_ Corporation, \_\_\_\_\_ Sole Proprietorship, or \_\_\_\_\_ Partnership?

If incorporated, please list state of incorporation: \_\_\_\_\_

**END OF SECTION**