

DEPARTMENTAL INPUT
CONTRACT/PROJECT MEASURE ANALYSIS AND RECOMMENDATION

X New OTR ☐ Sole Source ☐ Bid Waiver ☐ Emergency Previous Contract/Project No. Contract N/A
☐ Re-Bid Other LIVING WAGE APPLIES: NO

Requisition No./Project No.: IQ-00278 TERM OF CONTRACT one time purchase WITH N/A OTR

Requisition /Project Title: To purchase a Drone for Public Works and Waste Management Department

Description: The purpose of this Invitation to Quote is to purchase a drone for Public Works and Waste Management Department (PWWMD) through a single solicitation. The proposed use of the drone is for photogrammetric services (controlled aerial photography for land surveying and engineering purposes.) (PWWMD) will be using this for design purposes of highway projects, to calculate volumes for the Land Fills and to monitor coastline changes for the Beach Erosion program.

Issuing Department: PWWMD

Contact Person: Sherry Y. Crockett

Phone: 305-375-4693

Estimate Cost: \$65,000

Funding Source: General Funds

ANALYSIS

Commodity Codes: 305-78

Contract/Project History of previous purchases three (3) years

Check here ☒ if this is a new contract/purchase with no previous history.

	<u>EXISTING</u>	<u>2ND YEAR</u>	<u>3RD YEAR</u>
Contractor(s):	N/A	N/A	N/A
Small Business Enterprise:			
Contract Value:			

Comments:

Continued on another page (s): ☐ YES ☐ NO

RECOMMENDATIONS

	<u>Set-aside</u>	<u>Sub-contractor goal</u>	<u>Bid preference</u>	<u>Selection factor</u>
SBE				

Basis of recommendation:

Signed: *Sherry Y. Crockett, CPFB*

Date sent to SBD: *August 19, 2015*

Date returned to DPM:

SECTION 2 - SPECIAL TERMS AND CONDITIONS

2.1 PURPOSE

The purpose of this Invitation to Quote is to purchase a drone for Public Works and Waste Management Department (PWWMD) through a single solicitation. The proposed use of the drone is for photogrammetric services (controlled aerial photography for land surveying and engineering purposes.) (PWWMD) will be using this for design purposes of highway projects, to calculate volumes for the Land Fills and to monitor coastline changes for the Beach Erosion program.

2.2 METHOD OF AWARD TO A SINGLE VENDOR: (Single Item)

Award of this contract will be made to the responsive and responsible bidder who submits the lowest price for the item listed in this solicitation.

2.3 PRICES SHALL BE FIXED AND FIRM FOR TERM OF CONTRACT:

If the bidder is awarded a contract under this solicitation, the prices proposed by the bidder shall remain fixed and firm during the term of contract.

2.4 INFORMATION SHEETS SHOULD BE SUBMITTED FOR ITEM OFFERED

The offer should be accompanied with a complete set of factory information sheets (specifications, brochures, etc.) for item offered by the bidder. Failure to meet this requirement may result in rejection of the offer. The County's decision as to quality of the product based on submission of the information sheets shall be final.

2.5 WARRANTY

See Paragraph 1.7 in Section 1, General Terms and Conditions.

SECTION 3 – TECHNICAL SPECIFICATIONS

3.1 SCOPE OF WORK

The purpose of this Invitation to Quote is to purchase a drone for the Public Works and Waste Management Department. The proposed use of the drone is for photogrammetric services (controlled aerial photography for land surveying and engineering purposes.) The photogrammetric process consists of project planning, image acquisition, image processing, and control data for image orientation, data compilation and presentation of an end product. The end product of the photogrammetric process can be coordinate values of individual points, a graphic representation of the ground surface (topographic map), or a rectified image of the ground surface with map-like characteristics (orthophotography.) Applications of photogrammetry in surveying practice include topographic mapping, site planning, and earthwork volume estimation for proposed roads, compilation of digital elevation models (DEM) and image base mapping (orthophotography).

3.2 GOODS / SERVICES TO BE PROVIDED

Bidder shall provide Miami Dade Public Works and Waste Management Department a drone for photogrammetric services as follows:

Aircraft Specifications:

Type:	Fixed Wing
Weight:	5-10 lbs
Wing Span:	3-6 feet
Propulsion:	Electric 700 Watts minimum
Camera:	15 mega pixels or better
Controller:	Tablet/Lap Top
Endurance:	40 minutes or better
Range:	Over 30 miles
Cruise Speed:	minimum 40 miles
Maximum Ceiling:	15,000 feet or higher
Weather Limits:	30 miles per hour winds and light rain
Communication and Control frequency:	2.4 GHZ
Communication and Control Range:	Over 2 miles

Field Software must perform the following:

- Project management
- Mission Planning
- Automated preflight check
- Automated take off, flight and landing
- Autonomous camera operation
- Automated Fail Safe procedure
- User Controlled Fail safe commands
- Automated Data consistency checks

Acquisition Performance:

Resolution (GSD) (0.62 to 0.80 inches) - (7.67 to 7.89 inches)
Height above take off location - 246 feet to 2460 feet

Post Processing Software to include:

Work Flow:

Full automatic Georeferencing
Automatic Camera Calibration
Point Cloud Matching and Ortho Mosaicking
Photogrammetry-grade processing
Task Tracking Monitor
GNSS and GCP support
Multi-flight capable
Multi-camera capable

Georeferencing:

Automatic Blunder Removal
Datum Transformation and Reports
Automatic Adjustment (Relative or absolute)
Project Wide photo display with correct topology
Graphical Block Analyzer

Points:

Stereoscopic and monoscopic editing
Multilayer editing and visualization
High performance 3D point cloud viewer
On-the-fly contours and height coding
Automatic best-fit stereo model selection

Ortho image Processing:

Automatic Seam finding and color balancing
Rigid True-Ortho and Classic Ortho

Training:

Field Training: one (1) day
Office Training: two (2) days

Spare Parts/ Maintenance:

Bidder shall include, at minimum, one of each of the following items that shall be used as a spare part for maintenance by the Department.

Propellers
Battery
Camera UV filters
Repair Kit