

**PALM BEACH COUNTY  
BOARD of COUNTY COMMISSIONERS**

**AGENDA ITEM SUMMARY**

Meeting Date: 12/20/11       Consent       Regular  
 Public Hearing       Workshop

Submitted by: Information Systems Services  
Submitted for: Countywide GIS

**I. EXECUTIVE BRIEF**

**Motion and Title:** Staff recommends a motion to approve:

- A) Task Order No. 3 to the license agreement with Pictometry International Corporation (R2007-1010 and R2007-1011) to exercise a second two-year renewal option for new imagery at a not-to-exceed cost of \$251,806; and
- B) a Budget Amendment in the Information Technology Capital Improvements fund to recognize a total of \$125,903 in revenue from the Property Appraiser's Office, and an additional \$3,318 in project funding from the Information Technology Capital Improvements fund contingency reserve.

**Summary:** Pictometry International, of Rochester, New York, provides detailed aerial photography which shows buildings, infrastructure and land from all sides, as well as a straight down perspective. Task Order No. 3 to the Pictometry license agreement exercises the second of two (2) two-year renewal options as set forth in the original contract. Funding for the renewal will come from the Countywide GIS Capital account, with revenue from the Property Appraiser's Office in the amount of \$63,101 for FY 2012, and \$62,802 for FY 2013 for a total of \$125,903. The not-to-exceed cost represents a 10% renewal discount as outlined in the original contract, plus an additional 5% discount from the vendor. The cost for Task Order No.3 is for \$251,806 with \$126,202 to be paid in year one and \$125,604 to be paid in year two. Additional cost sharing agreements are being pursued with local municipalities to assist with this important project.  
Countywide (PK)

**Background and Justification:** Pictometry provides a unique method for generating oblique geo-registered data images which are used by multiple agencies in Palm Beach County. Many cities are using and benefitting from the imagery, and therefore, subject to their budget availability, the County may receive some additional funding contributions in the future.

A Cooperative Agreement with the Sheriff's Office, Property Appraiser's Office and Palm Beach County Board of County Commissioners was approved on June 19, 2007 in conjunction with the original Pictometry contract approval. These agencies have used the Pictometry data for tactical support and daily operations. This project is part of the Information Systems Services, Countywide GIS Capital Project. Countywide GIS is managing the acquisition and distribution of the data to other agencies across the County. Task Orders exceeding \$100,000 in value require Board approval. The imagery acquired under this agreement can be used in perpetuity. Pictometry will provide new imagery if required as a result of hurricanes, earthquakes, tornadoes and/or terrorist damage at no additional cost. The agreement is structured with the option to extend for up to two (2) additional two (2) year periods at a 5 percent and 10 percent consecutive discount. This is the last renewal option under this contract.

**Attachments:**

1. Three (3) original Task Order No. 3 documents, vendor proposal and area map
2. Copy of Task Orders No. 1 and 2 with Pictometry License Agreement
3. Budget Amendment document

Recommended by: \_\_\_\_\_

*Steve Borde Con*  
Department Director

12/8/2011  
Date

Approved by: \_\_\_\_\_

*W Baker*  
County Administrator

12/16/11  
Date

**II. FISCAL IMPACT ANALYSIS**

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

| <b>Fiscal Years</b>      | <b>2012</b>      | <b>2013</b>      | <b>2014</b> | <b>2015</b> | <b>2016</b> |
|--------------------------|------------------|------------------|-------------|-------------|-------------|
| Capital Expenditures     | \$126,202        | \$125,604        | \$0         | 0           | 0           |
| Operating Costs          | 0                | 0                | 0           | 0           | 0           |
| External Revenues        | <63,101>         | <62,802>         | 0           | 0           | 0           |
| Program Inc (County)     | 0                | 0                | 0           | 0           | 0           |
| In-Kind Match (County)   | 0                | 0                | 0           | 0           | 0           |
| <b>NET FISCAL IMPACT</b> | <b>\$ 63,101</b> | <b>\$ 62,802</b> | <b>\$ 0</b> | <b>\$ 0</b> | <b>\$ 0</b> |

# Additional FTE Positions (Cumulative)                      0                      0                      0                      0                      0

Is Item Included in Current Budget                      Yes X                      No   

Budget Account Number(s):

Expense:            Fund 3901    Dept. 491    Unit M010            Object 3401  
Revenue:            Fund 3901    Dept. 491    Unit M010            Rev Src 6999

**B. Recommended Sources of Funds / Summary of Fiscal Impact**

C. Department Fiscal Review: *[Signature]* 12/10/11

**III. REVIEW COMMENTS**

A. OFMB Fiscal and/or Contract Administration Comments:

*[Signature]* 12/12/11                      *[Signature]* 12/16/11  
OFMB                      Contract Administration  
*12-16-11 B. Wheeler*

*WS 12/9/11*                      *JT 12/14/11*

B. Legal Sufficiency:

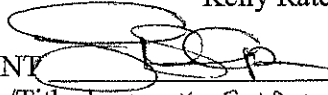
*[Signature]* 12/16/11  
Assistant County Attorney

C. Other Department Review:

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

TASK ORDER # 3 CONSULTANT Pictometry International Corp.  
ACCOUNT # 3901-491-M010-6508 CONTRACT R2007-1010  
COUNTY PROJECT MANAGER Kelly Ratchinsky PHONE 355-3958  
PROJECT NAME 2012 PBC Color Oblique Digital Imagery Renewal  
LOCATION Palm Beach County Urban Areas  
TASK DESCRIPTION Updated licensed imagery  
DELIVERABLES +/- See Attached DUE DATE December 20, 2011 – December 19, 2013  
TASK ORDER TYPE Lump Sum RETAINAGE 10%  
TOTAL AMOUNT Not to exceed \$251,806 total paid over 2 years as set forth in the attached proposal, and split equally between the Property Appraiser and Palm Beach Countywide GIS.


PROJECT MANAGER  DATE 12/2/11  
Kelly Ratchinsky

CONSULTANT  DATE 11-30-11  
Printed Name/Title: LINDA K SALANI - SR VP FINANCE

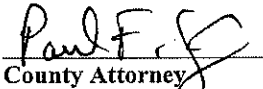
PALM BEACH COUNTY  
BOARD OF COUNTY COMMISSIONERS

\_\_\_\_\_  
Shelley Vana, Chair

PALM BEACH COUNTY PROPERTY APPRAISER

  
\_\_\_\_\_  
Gary R. Nikolits

APPROVED AS TO FORM  
AND LEGAL SUFFICIENCY

  
\_\_\_\_\_  
County Attorney

APPROVED AS TO  
TERMS AND CONDITIONS

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



November 30, 2011

Mr. Kelly Ratchinsky  
Palm Beach County  
301 North Olive Avenue  
8th Floor  
West Palm Beach, FL 33401

Dear Kelly,

Confirming your request with regard to Task Order No. 3, the total cost and itemized deliverables of the third flight under contract R2007-1010 and R2007-1011 are as follows:

- **Imagery:**
  - **PREMIER Two Way Community Oblique Imagery** covering 2095 sectors of the Licensee as indicated on the attached map. Premier Community Images are nominal 12" GSD.
    - a. **Each sector** will have approximately 4 Oblique images and 4 additional Oblique images taken from the opposite direction.

|                                      |   |
|--------------------------------------|---|
| <b>PREMIER Community Images (C3)</b> | <b>\$ 36.00 @ 2095 Sectors = \$ 75,420.00</b> |
|--------------------------------------|---|
  - **ELITE Four Way Neighborhood Images (N5)** covering 700 sectors of the Licensee as indicated on the attached map. Premier Neighborhood Images are nominal 4" GSD.
    - a. **Each sector** will have approximately 104 Oblique images from four perpendicular directions

|                                       |  |
|---------------------------------------|--|
| <b>ELITE Neighborhood Images (N5)</b> | <b>\$ 270.00 @ 700 Sectors = \$ 189,000.00</b> |
|---------------------------------------|--|
- Sharing Grant: 5% of total **(\$ 13,212.00)**
- Imagery is to be delivered in PAR format for use in SH-POL environment.
- Two (2) 2 TB Hard Drive: **\$ 598.00**
- **SURVEYOR ACCURACY REPORT:** A copy of a Surveyor Report containing all required accuracy statements and certifications prepared by a Florida licensed Surveyor shall be delivered to the Licensee.
- **Payment Terms:**

|                                     |                      |
|-------------------------------------|----------------------|
| FY 2012, on delivery of imagery:    | <b>\$ 126,202.00</b> |
| FY 2013, on anniversary of delivery | <b>\$ 125,604.00</b> |

All other terms and conditions of the above referenced agreement remain the same.

Sincerely,

Linda K. Salpini  
Senior V.P. of Finance

Palm Beach, FL (FLPALM)



Community Sectors: 2095

Neighborhood Sectors: 700

(c) Copyright 2002, Pictometry International

LICENSEE INITIAL

R2007 1011  
JUN 19 2007

b

TASK ORDER # 1 CONSULTANT Pictometry International Corp.

ACCOUNT # 3901-491-M010-6508 CONTRACT R

COUNTY PROJECT MANAGER Kelly Ratchinsky PHONE 355-4275

PROJECT NAME 2007 PBC Color Oblique Digital Imagery

LOCATION Palm Beach County Urban Areas

TASK DESCRIPTION Licensed imagery, software products and services as outlined in Schedule A - Scope of Work

DELIVERABLES +/- See Attached DUE DATE August 31, 2007

TASK ORDER TYPE Lump Sum RETAINAGE 10%

TOTAL AMOUNT Not to exceed \$300,000 paid over 2 years split equally between the Property Appraiser, Sheriff and Palm Beach County

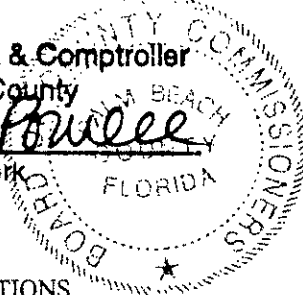
PROJECT MANAGER [Signature] DATE 5/16/07  
Kelly Ratchinsky

CONSULTANT [Signature] DATE \_\_\_\_\_  
Printed Name/Title: MICHAEL J. NEARY, SR. VP. ADMINISTRATION

PALM BEACH COUNTY SHERIFF  
[Signature]  
Ric L. Bradshaw

PALM BEACH COUNTY  
BOARD OF COUNTY COMMISSIONERS  
[Signature]  
Addie L. Greene, Chairperson

PALM BEACH COUNTY PROPERTY APPRAISER  
[Signature]  
Gary R. Nikolits

Sharon R. Bock, Clerk & Comptroller  
Palm Beach County  
By [Signature]  
Deputy Clerk  


APPROVED AS TO FORM AND LEGAL SUFFICIENCY  
[Signature]  
County Attorney

APPROVED AS TO TERMS AND CONDITIONS  
[Signature]  
ISS Department Director

R2009 1021

JUN 16 2009

TASK ORDER # 2

CONSULTANT Pictometry International Corp.

ACCOUNT # 3901-491-M010-6508

CONTRACT R2007-1010 & R2007-1011

COUNTY PROJECT MANAGER Kelly Ratchinsky PHONE 355-4275

PROJECT NAME 2009 PBC Color Oblique Digital Imagery

LOCATION Palm Beach County Urban Areas

TASK DESCRIPTION Updated licensed imagery

DELIVERABLES +/- See Attached DUE DATE March 31, 2010

TASK ORDER TYPE Lump Sum RETAINAGE 10%

TOTAL AMOUNT Not to exceed \$279,110 paid over 2 years split equally between the Property Appraiser, Sheriff and Palm Beach County

PROJECT MANAGER

*[Signature]*  
Kelly Ratchinsky

DATE 5-20-09

CONSULTANT

*[Signature]*  
Printed Name/Title: Michael J. Neary  
Executive Vice President Administration

DATE 5-19-09

PALM BEACH COUNTY SHERIFF

*[Signature]*  
for Ric L. Bradshaw

PALM BEACH COUNTY BOARD OF COUNTY COMMISSIONERS

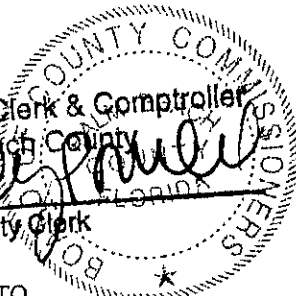
*[Signature]*  
Jeff Koons, Chairman

PALM BEACH COUNTY PROPERTY APPRAISER

*[Signature]*  
Gary R. Nikolits

Sharon R. Bock, Clerk & Comptroller  
Palm Beach County

By *[Signature]*  
Deputy Clerk



APPROVED AS TO FORM AND LEGAL SUFFICIENCY

*[Signature]*  
County Attorney

APPROVED AS TO TERMS AND CONDITIONS

*[Signature]*  
ISS Department Director



May 20, 2009

Kelly Ratchinsky  
Countywide GIS Coordinator  
Palm Beach County  
2300 N Jog Rd, 4th floor  
West Palm Beach, FL 33411

Re: Statement of Work for Palm Beach County with regard to Task Order No. 2 to the License Agreement with Pictometry International Corp (R2007-1010 and R2007-1011) to exercise a two year renewal option for new imagery at a cost of Two Hundred Seventy Nine Thousand and One Hundred Dollars (\$279,100.00).

1. This second Image Library under the agreement dated June 19, 2007 shall be scheduled to begin on or about December 15, 2009 and continue until completed, weather and ATC conditions permitting;
2. The cost of a 1.2 TB hard drive (delivery media) shall be included (at no additional charge) with the cost of the flight scheduled for the 2009/2010 flight season;

Sincerely,

  
Michael J. Neary  
Executive Vice President, Administration  
Pictometry International Corp.

Pictometry International Corp.  
100 Town Centre Drive - Suite A - Rochester, New York 14623 - Toll Free: 888-771-9714 - Local: 585-486-0093 - Fax: 585-486-0098  
E-mail: [info@pictometry.com](mailto:info@pictometry.com)



**SCOPE OF WORK**

I. The following products shall be delivered to PALM BEACH COUNTY, FL ("Licensee") by Pictometry International Corp.:

A. Pictometry International Corp. will provide Licensed Images procured with a 11 mega pixel camera:

- 1) Community Images covering 2095 sectors of the Licensee as indicated on the attached map. Each sector will have approximately:
  - a. 4 Ortho-rectified images.
  - b. 2 Oblique images.
  - c. 2 Oblique images taken from the opposite direction to (b) above.

**12" Two Way Community:**

14" Community Oblique Images \$ 40 per sector per year  
 Price Less 50% Discount \$ 20  
 \$ 20@ 2095 Sectors = \$ 41,900 /year – 1<sup>st</sup> Image Capture

12" Community Ortho Images \$ 5.00 per sector per year  
 Less 50% Discount \$ 2.50  
 \$ 2.50@ 0 Sectors = \$ -0- /year – 1<sup>st</sup> Image Capture

**Second Capture 5% Discount**

14" Community Oblique Images \$ 40 per sector per year  
 Price Less 50% Discount \$ 20  
 Less 5% \$ 19@ 2095 Sectors = \$ 39,805 /year – 2<sup>nd</sup> Image Capture

12" Community Ortho Images \$ 5.00 per sector per year  
 Less 50% Discount \$ 2.50  
 Less 5% \$ 2.375@ 0 Sectors = \$ -0- /year – 2<sup>nd</sup> Image Capture

**Third Capture 10% Discount**

14" Community Oblique Images \$ 40 per sector per year  
 Price Less 50% Discount \$ 20  
 Less 10% \$ 18@ 2095 Sectors = \$ 37,710 /year – 3<sup>rd</sup> Image

Capture  
 12" Community Ortho Images \$ 5.00 per sector per year  
 Less 50% Discount \$ 2.50  
 Less 10% \$ 2.25@ 0 Sectors = \$ -0- /year – 3<sup>rd</sup> Image Capture

- 2) **Four Way Neighborhood Images** covering 700 sectors of the Licensee as indicated on the attached map. Each sector will have approximately:
  - a. 50 Ortho-rectified images.
  - b. 100 Oblique images. 25 each from four perpendicular directions.

4" Neighborhood Oblique Images \$300 per sector per year  
Price Less 50% Discount \$150  
\$150@ 700 Sectors = \$ 105,000 /year – 1<sup>st</sup> Image Capture

4" Neighborhood Ortho Images \$15.00 per sector per year  
Less 50% Discount \$ 7.50  
\$ 7.50@ 0 = \$ -0-/year – 1<sup>st</sup> Image Capture

**Second Capture 5% Discount**

4" Neighborhood Oblique Images \$300 per sector per year  
Price Less 50% Discount \$150  
Less 5% \$142.50@ 700 Sectors = \$ 99,750/year – 2<sup>nd</sup> Image Capture

4" Neighborhood Ortho Images \$15.00 per sector per year  
Less 50% Discount \$ 7.50  
Less 5% \$7.125@ 0 Sectors = \$ -0-/year – 2<sup>nd</sup> Image Capture

**Third Capture 10% Discount**

4" Neighborhood Oblique Images \$300 per sector per year  
Price Less 50% Discount \$150  
Less 10% \$135@ 700 Sectors = \$ 94,500 /year – 3<sup>rd</sup> Image Capture

4" Neighborhood Ortho Images \$15.00 per sector per year  
Less 50% Discount \$ 7.50  
Less 10% \$ 6.75@ 0 Sectors = \$ -0-/year – 3<sup>rd</sup> Image Capture

- 3) Approximately 1 orthorectified mosaic tile per sector, at a 1 foot pixel resolution, for the full County coverage area.

-0- Ortho Sector Tiles = No Additional Charge

- 4) ArcIMS Integration. Includes software, scripts and one (1) additional hour of support for the integration. *Order Form/Deployment Notice must be attached.*

Integration for 2 Servers @ \$595 per server = \$ 1,190.00

- 5) Modules to allow EFS to interface with E-911 systems

Unlimited seats in all PSAP(s) = \$ 15,000

**e-911 Grant:** The County will be given a grant totaling \$15,000 to offset the cost of the Pictometry modules needed to allow EFS to interface with e-911 systems.

- 6) Images are to be delivered with an image size of approximately 4-6 MB.

B. US Census Bureau TIGER line files of County or a base map supplied by Licensee.

C. DEMS (Digital Elevation Models) – check one:

U.S.G.S Digital Elevation Models (DEMs) (provided by Pictometry)

DEMs in ArcINFO's X-Y-Z Text Format (provided by Licensee).  
Licensee DEMs must be provided to Pictometry within 30 days of signing this agreement.

2. Documentation: Pictometry International Corp. shall furnish 1 digital copy of the Licensed Documentation for the Licensed Software.
3. Training: Pictometry International Corp. shall conduct two End User orientation sessions of up to 25 people for employees of the Licensee or Authorized Subdivisions thereof at the Licensee's site. In addition there will be Advanced User technical training for one group of up to 10 people using Licensee computers.
4. Telephone Support: Pictometry shall provide 10 hours of telephone support to the people who have completed the Advanced User technical training and who are individually identified by Licensee.
5. Licensed Software: Pictometry International Corp. shall supply one copy of the Pictometry Electronic Field Study (EFS) software, latest version, on the Storage Media supplied as specified herein. Licensee and Authorized Users may download updated versions of the Licensed Software free of charge for a period of two years from the date of installation, along with a copy of the updated documentation. General License Terms and Conditions are also attached to this Scope of Work.
6. Annual License Fee of One Hundred Forty-Six Thousand, Nine Hundred Dollars (\$ 146,900.00)
  - This is the Annual License Fee for the Licensed Images, Licensed Software, Licensed Documentation and support.
  - The initial duration of the License is two (2) years at the above Annual License Fee.
  - Licensee is granted a Perpetual License for all Licensed Images at no additional cost.
  - At the end of this License Term, Support and Maintenance for Licensed Software may be continued by:
    - Entering into a new license for new images, or
    - Paying an annual Support and Maintenance Fee of 5% of the Annual License Fee.
  - **Pictometry Economic Alliance Partnership** – Licensee shall be eligible for the Pictometry Economic Alliance Partnership as outlined on Schedule E.
  - The annual cost of the Images is fixed for a period of one (1) year from the date of this License Agreement with Pictometry.
7. Storage Media. Delivery media will be a 1.2 TB storage device delivered by (and purchased from) Pictometry at a cost of \$ 965.00.
8. Total Cost: The Total Cost of this License Agreement is Two Hundred Ninety-Five Thousand, Nine Hundred Sixty Dollars (\$ 295,960.00) broken down as follows:

**First Year**

|                          |                 |
|--------------------------|-----------------|
| Annual Image License Fee | \$ 146,900.00   |
| ArcIMS Integration       | \$ 1,195.00     |
| e-911 Modules            | \$ 15,000.00    |
| e-911 GRANT              | ( \$ 15,000.00) |
| Delivery Media           | \$ 965.00       |

**First Year Total \$ 149,060.00**

**Second Year**

|                    |               |
|--------------------|---------------|
| Annual License Fee | \$ 146,900.00 |
|--------------------|---------------|

**Second Year Total \$ 146,900.00**

9. Taxes: All License Fees or other prices listed in this Agreement are exclusive of Federal, State and Local taxes. Licensee will be responsible for any taxes due under this License Agreement.

10. Payment:

All delivery efforts by Pictometry International Corp. shall be coordinated with the Licensee. Payment shall be due as indicated below. It is understood that the payment schedule is for the convenience of the Licensee. All monies are considered earned upon delivery of the Image Library. Fees past due for 30 days shall be charged a late fee of 1.5% per month.

*Payment Breakdown:*

Down payment due at signing = \$ -0- Predicated on purchasing under Pictometry's GSA Schedule 70 Agreement

Amount Due on Image Library Delivery = \$ 149,060.00

Amount due on one-year anniversary of delivery = \$ 146,900.00

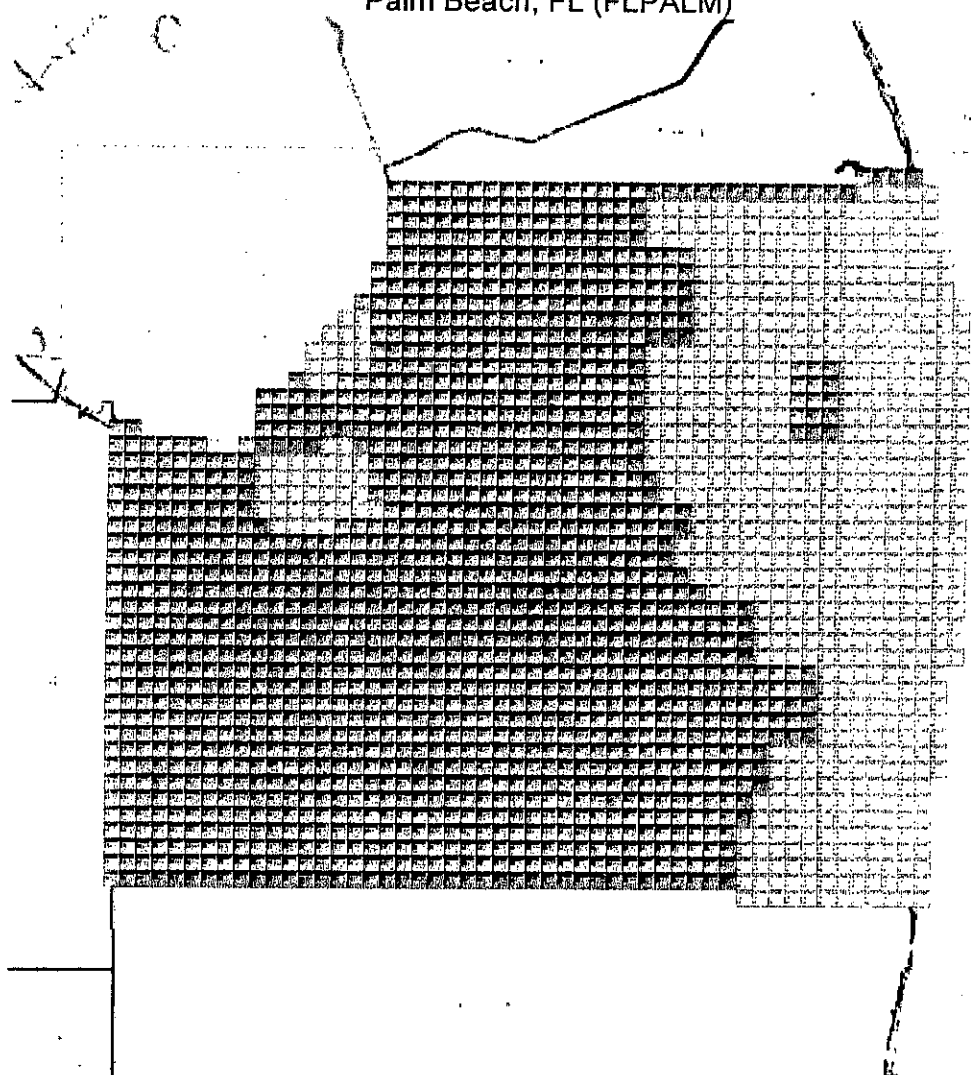
11. Delivery Schedule: The image capture process and the delivery date may be affected by weather conditions or aircraft availability. Licensee will accept delivery within thirty (30) days of notification by Pictometry.

12. Recommended Minimum System Requirements for Electronic Field Study. A Pentium III with a 450 MHz processor, 128MB memory minimum 256MB+ recommended, Windows 2000/XP, a video card with 4 MB memory capable of 1024 x 768 resolution, 100MB NIC and 50MB free disk space for software.

Support Services: Additional training and support services are available at addit costs.

ATTACHMENT "A" - SCHEDULE D - SECTOR MAP

Palm Beach, FL (FLPALM)



Community Sectors: 2095 Neighborhood Sector © Copyright 2002, Pictometry International

ion Date: Oct 30, 2002 11:57  
fication Date: Oct 30, 2002 12:03

## ATTACHMENT "B" GENERAL LICENSE TERMS AND CONDITIONS

### PICTOMETRY INTERNATIONAL CORP. GENERAL LICENSE TERMS AND CONDITIONS

THIS AGREEMENT is made as of the date set forth below (the "Effective Date") by and between Pictometry International, Corp., a Delaware company with offices at 100 Town Centre Drive, Suite A, Rochester, NY 14623 ("Pictometry"), and Palm Beach County with offices located at 301 North Olive Avenue, West Palm Beach, FL 33401 (the "Licensee").

Intending to be legally bound, Pictometry and the Licensee (each a "party") hereby agree:

#### 1. ARTICLE - DEFINITIONS

- 1.1 **"Images"** Orthogonal and oblique digital images, captured from airborne platforms using Pictometry's patented and proprietary hardware and software capture system
- 1.2 **"Community Images" ("CI")** A set of views, each covering the entire sector; one from directly overhead, and two from different oblique angles.
- 1.3 **"Neighborhood Images" ("NI")** A set of overlapping, orthogonal and oblique views blanketing the entire sector, providing for a higher degree of detail
- 1.4 **"Image Sector"** A portion of an image collection project defined as approximately one square mile in area.
- 1.5 **"Geographic MetaData" ("Metadata")** Data supplied by Pictometry that is captured from airborne platforms using Pictometry's patented and proprietary hardware and software capture system.
- 1.6 **"Electronic Field Study" ("EFS")** A proprietary software and file structure package that allows for the display, navigation, measurement, annotation and analysis of Pictometric Images.
- 1.7 **"Pictometry Software" ("Software")** Any proprietary software provided by Pictometry. This includes programs such as EFS and Change Analysis or program modules such as 911 or GIS integration / interfaces.
- 1.8 **"Image Warehouse" ("IW")** A hierarchical storage system of Pictometric images, data and elevation models that allows fast, random access by geo-location.
- 1.9 **"Digital Elevation Model" ("DEM")** A general definition for a file containing ground elevation data. This may be a digital elevation model, a digital terrain model or a reflective surface model and is meant to encompass all means of production, including LIDAR and stereo pairs.
- 1.10 **"Documentation"** Written and/or electronic materials containing instructions and other information related to the use of the Images and the Software.

#### 2. ARTICLE - INTELLECTUAL PROPERTY RIGHTS AND RESERVATION OF OWNERSHIP

- 2.1 **Licensed Products.** The parties acknowledge and agree that Pictometry shall have and retain sole and exclusive ownership and all right, title, and interest in and to any Licensed Images Licensed Metadata, Licensed Software, Licensed DEM and Licensed Documentation provided under this Agreement and all copyrights, patents, and other proprietary rights in or associated with each of the Licensed Products, defined below (hereinafter the "Proprietary Rights"). Licensee agrees: (a) that it will never assert or claim any interest in, or do anything that may adversely affect the validity of, or infringe on, any Proprietary Right, (b) that it will use reasonable efforts to protect the Proprietary Rights, including placing or maintaining all copyright notices and other indications of Pictometry's ownership on all Licensed Products and on all copies of Licensed Images and all other property of Pictometry when instructed by Pictometry, and (c) that it will notify Pictometry promptly of any known or suspected breach of any Proprietary Rights.
- 2.2 **Use of Pictometry Marks.** Licensee acknowledges that Pictometry owns and retains all ownership rights in trademarks, trade names, logos, and designations used by Pictometry in connection with the Licensed Products. Licensee agrees not to attach any additional trademarks, trade names, logos or designations to any Pictometry product or to any copies of any of the Licensed Images without written approval from Pictometry. Licensee may, however, include a Licensee seal and contact information so long as these annotations in no way obscure or deface the Pictometry marks. Licensee further agrees that Licensee will not use any Pictometry trademark, trade name, logo, or designation in connection with any product or service other than the Licensed Images and the other Licensed

Products. Licensee's nonexclusive right to use Pictometry's trademark is coterminous with this Agreement.

- 2.3 **Electronic and Other Publishing.** Except as provided in Schedule B and Article 4.1 of this Agreement, Licensee is specifically prohibited from publishing in any way (including by making available on the Internet or World Wide Web or any other general access electronic network) any Licensed Product or any Licensed Image, or any portion of any such Product or Licensed Image, whether separately or as part of any other electronic publication.
- 2.4 **Confidentiality of Licensed Software.** The Licensed Products are commercially valuable, proprietary products of Pictometry, the design and development of which reflect an investment of considerable time and money. The Licensed Products are treated by Pictometry as confidential and contain substantial trade secrets of Pictometry. Licensee agrees that it will not disclose, provide a copy of, or disseminate the Licensed Products or any part thereof to any person who does not need to obtain access thereto consistent with Licensee's rights and obligations under this Agreement. Licensee agrees to use its best efforts to assure (a) that all its personnel, and any others afforded access to the Licensed Products, will protect the Products against unauthorized use, disclosure, copying, and dissemination, and (b) that access to the Licensed Products and each part thereof will be strictly limited. Licensee understands that Pictometry does not disclose source code and Licensee agrees that it will take all reasonable actions to assure that persons who might access the Licensed Software will not "unlock" or "reverse engineer" any part of the Licensed Software so as to find or uncover the source code or other trade secrets included therein.

### 3. ARTICLE - GENERAL

- 3.1 **Licensed Products.** This Agreement pertains to the particular Images described in Schedule A attached to this Agreement (the "Licensed Images"), the particular copies of the Software listed in Schedule A (the "Licensed Software"), the associated Metadata (the "Licensed Metadata"), the DEM described in Schedule A attached to this Agreement (the "Licensed DEM") all of which, along with the Documentation, are together referred to as the "Licensed Products." This Agreement does not apply to any other Licensed Products that may from time to time be owned, used, published, or distributed by Pictometry.
- 3.2 **System Installation.** Pictometry shall install a copy of the Licensed Products on storage media either provided by Licensee or purchased from Pictometry as specified in Schedule A. With the assistance of Pictometry, the Licensee will install the Licensed Products from that media onto computers/servers to be designated by the Licensee. The Licensee will be responsible for assuring that the computer system being used for these purposes will satisfy the minimum system requirements set forth on Schedule A.
- 3.3 **Licensee May Authorize Subdivisions, and Users.** The Licensee may authorize any department, sub unit or location within the Licensee (hereinafter "Subdivisions") to have the Licensed Products installed on computers owned (or leased) and used by those Subdivisions (the "Authorized Users") and to use and execute the Licensed Software for official purposes only. The installation of the CIW and EFS and the training of the Authorized Users may be performed only by either the Licensee and/or Pictometry. The Subdivisions authorized for such installation, use, and execution (the "Authorized Subdivisions"), will be designated by the Licensee as provided in Article 6.3 below. All Authorized Subdivisions and Authorized Users shall operate under this Agreement as agents of the Licensee and comply with all obligations of Licensee with respect to the use and distribution of the Licensed Products, and Pictometry may look to the Licensee alone for assuring compliance with the terms and conditions of this Agreement. Licensee agrees: (a) that it will not allow any persons other than Authorized Users to use or operate, or to have any other access to, any of the Licensed Products (other than described in Article 4.1 of this Agreement), (b) that it will not allow access to any of the Licensed Software or any Licensed Images except through Licensee workstations, and (c) that it will cause all Authorized Users to comply with all of the terms, conditions, and limitations applicable to the Licensee under this Agreement.

### 4. ARTICLE - GRANT OF LICENSE

- 4.1 **License Grant, Uses and Certain Fees.** In consideration for the payment of the License Fees provided for in Article 5 below, and subject to the other terms and conditions of this Agreement, Pictometry hereby grants to Licensee, and



Licensee hereby accepts, a nonexclusive, nontransferable, limited license (the "License") for the following:

(a) **Installation and Documentation.** To install the Image Warehouse on servers and related Licensed Software on workstations, all of which shall be owned (or leased) by, shall be located on the property of, shall be under the control of, and shall be used by the Licensee or by an Authorized Subdivision (which Authorized Subdivisions will be designated pursuant to Article 6.3 below). None of the Licensed Products shall be accessed except through such designated servers and Licensee workstations. To copy and use the related Documentation included in the Licensed Products in connection with the activities described in this Article 4.1.

(b) **Uses.** Through Authorized Users only, to use and execute the Licensed Software on those designated servers and workstations in the conduct of the public business of the Licensee or of the Authorized Subdivisions and to use and print copies of the Licensed Images in the following activities (and no others):

- (1) **For Internal Business.** To use and execute the Licensed Products for internal use in pursuit of its or their public responsibilities.
- (2) **For Persons Doing Business With Licensee ("Project Participants").** Under the supervision of Authorized Users, allow representatives of persons doing or proposing to do business with the Licensee or an Authorized Subdivision on Licensee Projects (defined below) to use and execute the Licensed Software and to make copies of the Licensed Images with ink or toner on substrate (hereinafter "Hard Copies") at the Licensee or Authorized Subdivisions' facilities only, but not to make any electronic or digital copies (except for a limited number of jpg copies specific to a particular Licensee Project) of the Licensed Images ("Digital Copy"). For these purposes, "Licensee Projects" shall mean any plan or effort, tangible or intangible, such as construction, real estate disposition, facilities management, environmental studies or public information brochures or notices used by the Licensee or an Authorized Subdivision in pursuit of its public responsibilities. The Licensee or Authorized Subdivisions shall cause each Project Participant to agree to use the Hard Copies (or jpg copies) solely in connection with the Licensee's or Authorized Subdivision's Project.
- (3) **For Public Use.** Through Authorized Users only, to use and execute the Licensed Software solely for the purpose of making Hard and Digital Copies of Licensed Images for persons desiring them (which Hard Copies may contain annotations of information stored in the Licensed Software and related to the property shown). Each Hard Copy or Digital Copy made pursuant to this Article 4.1(b)(3) shall be covered under terms and conditions as more fully provided in the attached Schedule B.

Any Hard or Digital Copy released or delivered by Licensee or any Authorized Subdivision pursuant to any state or Federal Public Records Act or any other similar state law or regulation shall be treated as a Hard or Digital Copy made pursuant to Article 4.1(b)(3) for purposes of determining fees payable pursuant to this Article, and all Hard Copies and all Digital Copies made pursuant to this Article shall remain subject to all of the provisions of this Agreement.

**4.2 Limitations on License.** Licensee agrees: (a) that nothing under this Agreement authorizes it to engage in any service bureau work (service bureau work shall be deemed to include, without limitation, use of the Licensed Software to process or to generate output data for the benefit of, or for purposes of, rendering services to any third party over the Internet or other public communications network), to exercise or provide any multiple-user license, or to enter into any time-sharing arrangement, except as expressly authorized with respect to Authorized Subdivisions, (b) that Licensee will not authorize or allow any remote access to the Licensed Products except for licensee workstations, (c) that Pictometry shall not be obligated to revise, improve, or otherwise change the Licensed Software in any way, (d) that the Licensee is responsible for selecting Authorized Users who are qualified to operate the Licensed Software on licensee workstations and are familiar with the Licensed Software, (e) that the Licensee and its Authorized Subdivisions may not copy, download, store, publish, transmit, transfer, sell, or otherwise install or use the Licensed Software or any Images or any portion of

the Images in any form or by any means, except (i) as expressly permitted by this Agreement, (ii) with Pictometry's prior written permission, or (iii) to the extent not expressly prohibited by this Agreement, as allowed under the fair use provision of the Copyright Act (17 U.S.C. § 107). Licensee agrees that it will deliver to all recipients of any Hard Copies, and to any other persons who may have access to any of the Images, all such disclaimers and other information that Pictometry may request so as to assist those persons in understanding the limitations on the accuracy of the information developed through the Licensed Products.

- 4.3 **Pictometry's Reserved Rights.** Pictometry reserves the right, at its sole discretion and without liability to Licensee, to create new versions of or modules with additional functionality for any part of the Licensed Products, which may be acquired on a nonexclusive basis by Licensee under a separate agreement. Pictometry may, in addition, produce upgrades to enhance operations of the Licensed Products, which will be supplied without additional cost to Licensee.

## 5. LICENSE FEES

- 5.1 **License Fees.** In consideration for the License, and subject to the other terms and conditions of this Agreement, the Licensee hereby agrees to pay to Pictometry the fees described on Schedule A (altogether the "License Fees"). Payment to be made as provided in Schedule A. Any tax, including sales tax, is in addition to the License Fees and is the responsibility of the Licensee unless documentation of tax exemption is provided to Pictometry. All License Fees shall be earned on the Delivery Date. For the convenience of the Licensee, the payment of these fees may be spread over the term of this Agreement as provided on the attached Schedule A.

## 6. ARTICLE - OBLIGATIONS OF LICENSEE

- 6.1 **Geographic Data.** If available, Licensee agrees to provide to Pictometry geographic data in industry standard format, shape, DBF, etc., including digital elevation models, street centerline maps tax parcel maps, centroids, etc., which data shall be incorporated into the Image Library licensed to the Licensee. For any of this data that is owned by the Licensee, Licensee agrees Pictometry may distribute this data with the Image Library for use in the Pictometry On-Line product and in licensing the Image Library to other licensees. At no time shall Pictometry claim ownership of this data.
- 6.2 **Technical Support Contacts.** Licensee agrees to name Licensee personnel to act as Licensee's technical support contacts for Licensee and these contacts will receive technical training as provided in Schedule A. These contacts will coordinate all requests and inquiries from all Licensee Authorized Users and only these named technical support contacts will have access to telephone support from Pictometry.
- 6.3 **Designation of Authorized Subdivisions.** Licensee agrees that, within thirty (30) days after receipt of the Licensed Products (and on an as-needed basis to update), it will furnish to Pictometry lists of all Authorized Subdivisions, as provided in Article 3.3 above,
- 6.4 **Notification.** Licensee will: (a) notify Pictometry in writing of any claim or proceeding involving any of the Licensed Products within ten (10) days after Licensee learns of the claim or proceeding; and (b) report promptly to Pictometry all claimed or suspected defects in any Licensed Product.

## 7. ASSIGNMENT

- 7.1 **General.** The provisions of this Agreement shall be binding upon and inure to the benefit of the parties, their successors and permitted assigns, but shall not be assignable by either party except as provided in Sections 7.2 and 7.3 below.
- 7.2 **Assignment By Licensee.** This Agreement will not be assignable by Licensee, and Licensee may not delegate its duties hereunder without the prior written consent of Pictometry.
- 7.3 **Assignment By Pictometry.** Pictometry shall have the right to assign its rights to receive License Fees under this Agreement, but no such assignment shall affect Pictometry's obligations hereunder. In addition, Pictometry shall have the right to assign all its rights to any person or entity, provided the assignee has

assumed all of Pictometry's obligations under this Agreement. Except as provided above in this Section 7.3, this Agreement will not be assignable by Pictometry.

#### 8. DURATION AND TERMINATION OF LICENSE

8.1 **Initial Term.** The initial term of this Agreement shall commence upon the installation of substantially all of the Image Warehouse and shall expire, unless sooner terminated in accordance with Article 8.3, or as indicated on Schedule A, no earlier than the second anniversary thereof.

8.2 **Renewal.** Effective as of that second anniversary (detailed in Article 8.1) or later anniversary as more fully described in Schedule A, Pictometry will grant an extension of the licensing of Products covered in this Agreement, only in accordance with the following:

- (1) If no later than the 90th day before that second anniversary or later anniversary as more fully described in Schedule A, the Licensee enters into a License Renewal Agreement with Pictometry (for an additional two or more years) for new Licensed Images (with an annual value equal to or greater than that of the existing Licensed Images), then Pictometry will grant Licensee a perpetual License for the existing Products licensed under this Agreement; or
- (2) If no later than the 90th day before that second anniversary or later anniversary as more fully described in Schedule A, the Licensee enters into a License Renewal Agreement with Pictometry (for an additional two or more years) for new Licensed Images (with an annual value of at least 50% of that of the existing Licensed Images), then Pictometry will grant Licensee a perpetual License for the existing Licensed Products upon the payment of a Perpetual License Conversion Fee. Fee is calculated on the difference between the annual fee payable under this Agreement and the new annual fee;
- (3) If no later than the 10th day after that second anniversary or later anniversary as more fully described in Schedule A, the Licensee pays Pictometry an additional payment of a Perpetual License Conversion Fee, then Pictometry will grant a Perpetual License to Licensee for the Products licensed under this agreement.

Any extensions (or Perpetual Licenses) will be subject to the same terms and conditions as are provided in this Agreement except that the annual fee (under Article 5.1 and Schedule A) will be eliminated and the Licensee will no longer be able to add images to the existing Image Library. Nevertheless, Licensee's obligations as provided in Schedule B, shall continue during any such extension under this Article 8.2.

8.3 **Termination for Cause.** This Agreement may be terminated by either party in the event that the other party has failed to perform a material obligation or has otherwise breached a material term of this Agreement, if that other party has failed to cure that failure or breach within thirty (30) days after receipt of written notice thereof from the other party.

8.4 **Effect of Termination or Expiration.** Upon termination or expiration of this Agreement, Licensee shall immediately cease any and all further use of the Licensed Products and shall promptly purge all copies of the Licensed Products from all computers and workstations on which any of them may be stored or available at the time. In addition, the Licensee shall destroy all remaining inventory of Hard Copies of Images in its possession or under its control (excluding those images produced in the activities described in Article 4.1(b)(2) above). Within thirty (30) days of the date of termination or expiration of this Agreement, Licensee shall also pay Pictometry all amounts due hereunder. The provisions of Articles 2, 7, 8, 9, and 10 of this Agreement shall survive any termination or expiration of this Agreement.

8.5 **Access to Records.** During the term of this Agreement and for a period of one (1) year after the date of its termination or expiration, Licensee shall make available to Pictometry for inspection and copying, on reasonable notice and at reasonable hours, all books and records (including electronically retained information) pertaining to Licensee's compliance with the provisions of this Agreement.

#### 9. LIMITED WARRANTY; DISCLAIMER OF WARRANTIES; LIMITED REMEDIES

9.1 **Limited Warranties.** Pictometry warrants:

- a) that the Licensed Images and the Licensed Software installed by Pictometry on any Authorized Workstation supplied by Licensee pursuant

to this Agreement will be true and usable copies as of the date of capture; and

- b) that the information concerning the accuracy of the Licensed Products set forth on the attached Schedule C is substantially true.

Upon notice to Pictometry of any breach of the warranty in clause (a) and/or (b) above, Pictometry will use its reasonable efforts to correct the problem so as to allow the Licensed Products to produce Images and related data that are usable for the general purposes intended. The foregoing warranty is the sole and exclusive warranty that Pictometry makes with respect to the Licensed Products, and the remedies set forth above are the sole and exclusive remedies for breach of those warranties.

- 9.2 **Disclaimer of Other Warranties.** Except as provided in Section 9.1 above, EACH OF THE LICENSED PRODUCTS IS PROVIDED TO LICENSEE "AS IS" AND "WITH ALL FAULTS" PICTOMETRY MAKES NO WARRANTIES OR REPRESENTATIONS OF ANY KIND, EXPRESS, IMPLIED, OR STATUTORY. ALL IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO WARRANTIES OF PERFORMANCE, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, ACCURACY, AND NONINFRINGEMENT, ARE HEREBY DISCLAIMED AND EXCLUDED BY PICTOMETRY.

- 9.3 **Limitations and Exclusions of Remedies.** The respective remedies set forth in Section 9.1 are the sole and exclusive remedies provided for breach of the warranties given. With respect to any other claims that Licensee may have at any time against Pictometry on any matter relating to this Agreement, or the installation, operation, design, distribution, or use of the Licensed Products, the total liability of Pictometry shall in the aggregate be limited to the aggregate amounts of money that Licensee has paid to Pictometry under this Agreement. In addition, because of scheduling and other considerations in preparing current Licensed Images, Pictometry cannot assure delivery of the Licensed Products on a specified delivery date, and Pictometry shall not be liable for any such late delivery except in a case of its gross negligence or willful misconduct. IN NO EVENT SHALL EITHER PARTY BE LIABLE, UNDER ANY CAUSE OF ACTION OF ANY KIND ARISING OUT OF OR RELATED TO THIS AGREEMENT, THE LICENSED PRODUCTS, OR IMAGES (INCLUDING UNDER THEORIES INVOLVING TORT, CONTRACT, NEGLIGENCE, STRICT LIABILITY, OR BREACH OF WARRANTY), FOR ANY LOST PROFITS OR FOR ANY INDIRECT, INCIDENTAL, CONSEQUENTIAL, PUNITIVE, OR OTHER SPECIAL DAMAGES SUFFERED BY THE OTHER PARTY OR BY ITS CUSTOMERS OR OTHERS, EVEN IF A PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

## 10. GENERAL

- 10.1 **Export Control.** Licensee agrees to comply fully with the export laws and regulations of the United States Government with respect to the Licensed Products supplied by Pictometry. Accordingly, Licensee agrees that all technical data, software, or other information or assistance (other than publicly available information) furnished by Pictometry, and any product thereof, shall not be re-exported by Licensee, or its authorized transferees, if any, directly or indirectly from the Untied States unless explicitly permitted by U.S. export control laws and regulations. These obligations of the Licensee shall survive any satisfaction, expiration, termination, or discharge of this Agreement.

### Attachments:

Schedule B: Charges for Image Reproduction  
Schedule C: Digital Imagery Specifications  
Schedule E: Pictometry Economic Alliance Partnership

**SCHEDULE "B"**  
**Charges for Image Reproduction**

1. All Licensed Images provided pursuant to this License Agreement are and shall remain the property of Pictometry International Corp. and shall contain Pictometry's copyright notices.
2. Reproductions of individual (or limited quantities of) Licensed Images using the Licensed Software, or reproduction or copying of the Licensed Images in any form by any other means by Licensee or an Authorized Subdivision thereof, shall be permitted for distribution to Licensee's or Subdivision's constituency. This includes County agencies, municipalities and other County data sharing public entities. Citizens may view images at County offices and hard copies may be distributed.
3. Licensee may charge reproduction fees or no fees to the persons or entities receiving the Images.

## **SCHEDULE "C"**

### **Digital Imagery Specifications**

#### **Pictometry Technical Overview**

##### General Considerations

Pictometry's Electronic Field Study Software fully supports deployment in a server based environment with remote offices connected via high speed fiber optic cable. Any user of oblique imagery within Palm Beach County will be able to view and gather valuable visual information to make critical decisions. Using color aerial oblique and ortho images from any desktop computer on the County's intranet, any user can see, decide, measure, annotate, view and respond to their daily challenges. Users may display, import data layers, and measure vertical and horizontal objects on the ground or in the air as well as terrain, all from various angles and directions. Every user with minimal instructions will be able to operate and create visual products, export to Arc GIS, save and/or print image files for their daily responsibilities.

Additionally, Pictometry's EFS fully supports an Internet deployment option, should this approach be implemented now or at a later date. Pictometry's Web enabled access allows users to deploy the Pictometry Image Library through the Internet. The Web enabled access enables the user to zoom, select views, and measure on the imagery. A screen shot showing deployment of Web enabled access with ArcIMS® is shown below in Figure 5.

Pictometry provides the customer with the ability to integrate the Pictometry tools into their existing ArcIMS Web application. The technology can also be used to integrate with any internet mapping application. When the user selects the Pictometry Image Tool within ArcIMS and clicks on a point in the map, a new browser window is created running the Pictometry Web enabled access. The user can now view, measure and navigate on the Pictometry image library using just the web browser interface. The ArcIMS map application is still running so the user can easily switch between the map and the Pictometry image set. There is a nominal one-time set up charge per installed server.

##### Imagery

##### Format

Pictometry International Corporation is fully capable of delivering the oblique image library for Palm Beach in an industry standard JPEG format with trailers. It is understood and accepted that JPEG format files will be the source data before any image compression algorithms are applied.

A psi or Pictometry Scripted Image is simply a .jpg image with a trailer of information that allows it to be used in geographically intelligent software applications. With over three-hundred customers and tens of thousands of installations, it has become the defacto standard for oblique imagery. Due to the ability of the PSI image type to contain all of the information in one file (an .ecw requires an adjoining file for geographic attributes) and limit file size (geo-tiff are substantially larger files) a world of possibilities opened up for consumers of oblique imagery.

While Pictometry can and will deliver other file formats the recommendation must be the standard psi/jpg which allows oblique imagery to be stored on smaller volumes, distributed across networks, compressed to fit on mobile computers and used directly in ESRI's ArcMap, ArcIMS, and integrated/interfaced with any spatially intelligent software or database.

Pictometry commits to supply an image library free of cloud cover, smoke or fog. Quality control during the image capture process embodies the following key elements:

- **Navigation:** All Pictometry pilots follow operating procedures developed by Pictometry for the operation of the field capture rig in the aircraft. These procedures include the initialization and operation of the navigation equipment, the pilot interface to the GUI to the navigation system and detailed procedures for responding to anomaly alerts provided by the navigation system

- **GPS:** Pictometry images are directly geo-registered with respect to onboard sensors, including GPS, calibrated using ground control. Pictometry enhances both horizontal and vertical ground control by means of static differential GPS data and other filtering and error reduction techniques in post-processing.
- **Image Quality:** As data arrives into Processing, it is logged into a database and a Receiving Inspection is performed on the data to quickly assess the success of the flight and to perform a sampling for Image Quality. If data fails to comply with Inspection criteria, Production is immediately notified and the data is marked for re-fly. 100% of the images are inspected for Image Quality during Image Processing.
- **Coverage:** Pictometry will prepare and submit a flight plan prior to image capture. All flight plans include high and low altitude oblique images as specified by our customers. For both high and low altitude imagery, the flight plan will include nominal height above ground elevation, camera focal length, max ground speed, and camera angle. The minimum areas to be imaged will be indicated on a map of the flight plan paths. Pictometry will design flight lines for the imagery to obtain proper multidirectional photographic coverage. Pictometry will employ its flight deviation software that will prevent gaps in the image set.
- **Camera Calibration:** Pictometry calibrates each individual lens, camera and digital sensor set to detect any aberrations that would effect the accuracy of the pixels of the geo-referenced images captured by that camera combination. As any component is replaced or disturbed in that set the camera set is recalibrated. The calibration process used was pioneered and developed by Pictometry. This calibration process was licensed to USGS in 2003 and is now used by USGS in their EROS center to perform all of their camera calibration for professional digital airborne cameras since then.
- **Camera Alignment:** Pictometry performs bore sight calibrations (a check of the image and locational sensors alignment in a plane) frequently, at each project, by capturing a series of images of a Ground Control Field (a locally dense array of ground control points) from multiple directions. The data collected over the control field is then used to identify and/or correct any drift in the sensor system components.
- **Angle:** The imagery will be captured using a fixed mounted camera system at a depression angle no less than 30 degrees and no greater than 60 degrees. The proposed depression angle of 40 degrees will be consistent through all imagery acquisition flight paths.
- **Date-To-Image Assignment:** All images are date and time stamped to the minute at the time of capture

This quality control function is further managed by Pictometry's production managers, who maintain and update the Flight Plan Schedule during image collection. As data arrives at Pictometry for further processing, the Flight Plans are updated to reflect the levels of completeness. Throughout the process of Production and Processing of data, redundant datasets are maintained for fault tolerance.

As data arrives into Processing, it is logged into a database and a Receiving Inspection is performed on the data to quickly assess the success of the flight and to perform a sampling for Image Quality. If data fails to comply with Inspection criteria, Production is immediately notified and the data is marked for re-fly. 100% of the images are inspected for Image Quality during Image Processing.

Throughout the Processing cycle, inventory of image and geo data is taken to monitor and manage the workflow of data. Status Reports are available by Image type, Sector and Processing status. Inventory inquiries are used to create delivery schedules and plan work assignments.

When the data is prepared and ready for delivery, it is broken into geographically delineated groupings. Each shipment is tested as an Image Warehouse using any customer-provided GIS data and EFS. Delivery is made on-site at the customer's location and training is provided.

## Oblique Imagery

Pictometry uses a state of the art process of direct geo-registration for our oblique and nadir images. This process involves capturing the camera position and orientation at the instant of exposure. With this data and camera calibration

data, Pictometry can then determine the metrics of an oblique image.

Pictometry's staff maintains the company at the forefront of airborne remote sensing technologies. Our focus is the service of commercial as well as government clients through our end-to-end image library warehouse solution. We have fused state of the art digital aerial collection with inertial measurement and airborne global positioning. This fusion enables Pictometry to collect exceptionally high detail geo-registered, color image data. This data collected in both oblique and nadir orientation allows Pictometry to develop data libraries of its client's sites.

Each location may be seen from eight to twelve views. This permits immediate visual access to all segments of the exterior of the facility instantaneously. Pictometry utilizes custom designed high resolution, high dynamic range color image sensors. The high dynamic range of the sensor will enable data extraction in both highlight and shadowed areas. Any segments of a facility may be visually interrogated using this capability. The oblique nature of the Pictometry solution permits buildings to be viewed naturally. Sides are not mere artificial texture maps, but rather actual metric (measurable) image data sets which may be queried for content (i.e. size, area, distance to target, latitude or longitude). By combining multiple technologies: digital elevation data, camera bore sighting, camera calibrations, inertial guidance and on board GPS, Pictometry is able to collect directly geo-registered data sets for use in its warehouse solution. This data may be fused with other Geographic Information systems layers to enhance its content.

#### Technical Approach

Pictometry collects approximately 40 degree angled oblique, and nadir images (nadir orthorectified with clients best DEM data). Ground sample distance for low altitude oblique imagery is provided with an approximate average 4, 5 or 6.75 inch Ground Sample Distance.

#### Oblique Data Collection

##### Aircraft Specifications and Procedures

Pictometry utilizes Cessna 172 aircraft for its flights. We typically would use several aircraft out of our fleet to complete a project, pending daily airspace restrictions. The pilot operates the Pictometry capture system, and no aerial imagery specialist or other crew is necessary. All pilots are trained in Pictometry techniques, policy and procedures. Pictometry field support personnel with many years experience support our flight operations.

#### Equipment and Software Descriptions for Image Capture

Pictometry utilizes a variety of equipment and software during the process of producing oblique imagery. The following section details those by process.

##### Equipment

###### Image Capture Process

- Aircraft: Cessna 172 and others
- Sensors: Custom built by Pictometry.
- IMU: Litton, 1 per aircraft
- Airborne GPS: Applanix, 1 per aircraft
- GPS Receivers
- Pictometry Flight Computer: Proprietary.

##### Planning and Processing Software

###### Flight Line Planning

- Flight Line Planning Software: Proprietary



### Image Capture Process

- Field Capture Software: Proprietary

### Image and Positional Processing

- Image Processing Software: Proprietary
- Applanix POS Pac

### Camera Specifications

Pictometry utilizes a proprietary silicon based color CCD sensor system custom designed for aerial applications. The sensor system is capable of resolving over 12 bits of light intensity per pixel. Real-time processing in the sensor system ensures image quality at capture time. Custom high quality optics have been specifically designed by Pictometry to provide high MTF, minimal radial distortion, and high mechanical stability.

Pictometry is the leader in geo-referenced oblique images, and has been providing oblique images to a variety of customers, including hundreds of counties, for several years. Due to the propriety nature of our capture technology, Pictometry requests that further details of our sensor system and procedures be presented in a confidential manner.

### Environmental Factor Considerations

- **Cloud Cover:** Pictometry may capture images when there are clouds above the altitude of the aircraft. In fact the best lighting for the Pictometry images is when there is a light high cloud cover as this provides the most consistent lighting coverage.
- **Snow Cover:** Not applicable to Florida
- **Foliage:** Not applicable to Florida.
- **Miscellaneous Atmospheric Obstructions:** Pictometry will capture images when the skies are clear of obstructions between the camera and the ground.

### Quality Assurance

Pictometry has developed many quality assurance methodologies related to the entire process of planning, capturing and processing geo-registered oblique imagery. These are as follows:

#### Quality Assurance of the Project Planning Process

The Pictometry Project Manager works with customers to create the Sector Shot Assignments Map to define the types of images that will be required for each mile-square segment of ground space. These assignments are input into the Master Sector Map, which is used to create Flight Plans and Flight Lines. Factors such as Restricted Airspace and elevation are taken into account when creating the Flight Plans and Flight Lines. The Flight Plans are provided to Production for scheduling and aircraft assignment.

#### Quality Assurance of the Image Capture Process

- **Navigation:** All Pictometry pilots follow operating procedures developed by Pictometry for the operation of the field capture rig in the aircraft. These procedures include the initialization and operation of the navigation equipment, the pilot interface to the GUI to the navigation system and detailed procedures for responding to anomaly alerts provided by the navigation system

- **GPS:** Pictometry images are directly geo-registered with respect to onboard sensors, including GPS, calibrated using ground control. Pictometry enhances both horizontal and vertical ground control by means of static differential GPS data and other filtering and error reduction techniques in post-processing.
- **Image Quality:** As data arrives into Processing, it is logged into a database and a Receiving Inspection is performed on the data to quickly assess the success of the flight and to perform a sampling for Image Quality. If data fails to comply with Inspection criteria, Production is immediately notified and the data is marked for re-fly. 100% of the images are inspected for Image Quality during Image Processing.
- **Coverage:** Pictometry will prepare and submit a flight plan prior to image capture. All flight plans include high and low altitude oblique images as specified by our customers. For both high and low altitude imagery, the flight plan will include nominal height above ground elevation, camera focal length, max ground speed, and camera angle. The minimum areas to be imaged will be indicated on a map of the flight plan paths. Pictometry will design flight lines for the imagery to obtain proper multidirectional photographic coverage. Pictometry will employ its flight deviation software that will prevent gaps in the image set.
- **Camera Calibration:** Pictometry calibrates each individual lens, camera and digital sensor set to detect any aberrations that would effect the accuracy of the pixels of the geo-referenced images captured by that camera combination. As any component is replaced or disturbed in that set the camera set is recalibrated. The calibration process used was pioneered and developed by Pictometry. This calibration process was licensed to USGS in 2003 and is now used by USGS in their EROS center to perform all of their camera calibration for professional digital airborne cameras since then.
- **Camera Alignment:** Pictometry performs bore sight calibrations (a check of the image and locational sensors alignment in a plane) frequently, at each project, by capturing a series of images of a Ground Control Field (a locally dense array of ground control points) from multiple directions. The data collected over the control field is then used to identify and/or correct any drift in the sensor system components.
- **Angle:** The imagery will be captured using a fixed mounted camera system at a depression angle no less than 30 degrees and no greater than 60 degrees. The proposed depression angle of 40 degrees will be consistent through all imagery acquisition flight paths.
- **Date-To-Image Assignment:** All images are date and time stamped to the minute at the time of capture

#### Quality Assurance of the Image Processing Process

The Production managers maintain and update the Flight Plan Schedule, and as data arrives at Pictometry for further processing, the Flight Plans are updated to reflect the levels of completeness. Throughout the process of Production and Processing of data, redundant datasets are maintained for fault tolerance.

As data arrives into Processing, it is logged into a database and a Receiving Inspection is performed on the data to quickly assess the success of the flight and to perform a sampling for Image Quality. If data fails to comply with Inspection criteria, Production is immediately notified and the data is marked for re-fly. 100% of the images are inspected for Image Quality during Image Processing.

Throughout the Processing cycle, inventory of image and geo data is taken to monitor and manage the workflow of data. Status Reports are available by Image type, Sector and Processing status. Inventory inquiries are used to create delivery schedules and plan work assignments.

When the data is prepared and ready for delivery, it is broken into geographically delineated groupings. Each shipment is tested as an Image Warehouse using any customer-provided GIS data and EFS. Delivery is made on-site at the customer's location and training is provided.

#### Quality Assurance Support for Customer Quality Control

Pictometry will deliver a full set of Image Polygons in shapefile format that contain the geographic footprint of each oblique image, and associated metadata for each image. This dataset is suitable for ingestion into an ArcSDE® Geodatabase and can be directly imported into ArcGIS® via the ArcGIS® application. This dataset will enable customers to view image types and coverage to perform additional coverage checks. In addition, maintaining storage of this dataset in ArcSDE® will enable custom third party applications to spatially query, retrieve and display oblique

images from the Pictometry Image Library.

#### Geo-reference and Coordinate System

Pictometry will incorporate the county's existing elevation data into the imagery. This is a standard process for every image we deliver. Our automated process ensures timely delivery, but more importantly, consistency in the image processing. This in turn, provides matchless cost control capabilities for our clients.

Pictometry's imagery shall be geo-referenced and the footprint of each image shall be provided in a format compatible with ArcSDE.

Imagery will be delivered in the following coordinate system:

- State Plane Coordinate System
- Florida East Zone (FIPS 0901)
- Horizontal Datum is NAD83 (1990 Adjustment)
- Vertical Datum is NAVD88
- Horizontal and Vertical units are US Survey Feet

Each pixel shall have associated xyz coordinates.

## SCHEDULE "E"

### Pictometry Economic Alliance Partnership

- A **Imagery** – with Pictometry’s EAP program the Licensee shall keep its imagery forever and Pictometry shall continue to provide the benefits listed below.
- B **Revenue Share Opportunities for Licensee** (all revenue to be applied as credits toward Licensee’s renewal):
  - a. **Consumer Revenue Generator** – Pictometry shall market Licensee’s imagery on the internet to consumers and rebate Licensee on a 50/50 basis in the form of credits toward future License Renewals.
- C **Hurricane Damage Coverage** – Pictometry shall image and quickly deliver imagery of Licensee’s coverage area that has been affected by level II-V Hurricanes at no additional cost to Licensee.
- D **Earthquake Damage Coverage** – Pictometry shall image and quickly deliver imagery of up to 200 square miles of Licensee’s coverage area that has been declared a national disaster by the Federal Government at no additional cost to Licensee.
- E **Tornado Damage Coverage** – Pictometry shall image and quickly deliver imagery of Licensee’s coverage area that has been affected by level F4 and above Tornados at no additional cost to Licensee.
- F **Terrorist Damage Coverage**– Pictometry shall image damage due to terrorism up to 200 sq miles at no additional cost to Licensee.
- G **Software Installation and Maintenance Costs** - Pictometry shall provide Licensed Software to Licensee at no charge for software and no charge for maintenance.
- H **Marketing** – Pictometry shall (only at your written direction) market Licensee’s GIS layers and share the revenue with Licensee on a 50/50 basis.

2012 - 0230

BOARD OF COUNTY COMMISSIONERS  
 PALM BEACH COUNTY, FLORIDA  
 BUDGET AMENDMENT

FUND 3901 - INFORMATION TECHNOLOGY CAPITAL IMPROVEMENTS

BGRV 491 112911\*116  
 BGEX 491 112911\*418

| ACCOUNT NAME AND NUMBER                        | ORIGINAL BUDGET | CURRENT BUDGET | INCREASE | DECREASE | ADJUSTED BUDGET | EXPENDED/ ENCUMBERED AS OF 11/30/2011 | REMAINING BALANCE |
|--|-----------------|----------------|----------|----------|-----------------|---------------------------------------|-------------------|
| <u>Revenues</u>                                |                 |                |          |          |                 |                                       |                   |
| 491-M010-6999 Other Miscellaneous Revenue      | 0               | 0              | 125,903  | 0        | 125,903         |                                       |                   |
| <b>TOTAL RECEIPTS &amp; BALANCES</b>           | 8,910,694       | 7,827,316      | 125,903  | 0        | 7,953,219       |                                       |                   |
| <u>Expenditures</u>                            |                 |                |          |          |                 |                                       |                   |
| 491-M010-3401 Other Contractual Services       | 0               | 0              | 129,221  | 0        | 129,221         | 0                                     | 129,221           |
| 821-9903-9901 Contingency Reserves             | 263,789         | 263,601        | 0        | 3,318    | 260,283         | 0                                     | 260,283           |
| <b>TOTAL APPROPRIATIONS &amp; EXPENDITURES</b> | 8,910,694       | 7,827,316      | 129,221  | 3,318    | 7,953,219       |                                       |                   |

Information Systems Services  
 INITIATING DEPARTMENT/DIVISION  
 Administration/Budget Department Approval  
 OFMB Department - Posted

Signatures & Dates  
 Steve Bordelon 12/8/2011  
 12/8/2011 - Steve Bordelon, Director, ISS  
 [Signature] 12/10/11

BY BOARD OF COUNTY COMMISSIONERS  
 AT MEETING OF  
 December 20, 2011  
 Deputy Clerk to the  
 Board of County Commissioners