EXHIBIT A.1

STATEMENT OF WORK – OBLIQUE IMAGES

FOR

DIGITAL AERIAL DATA

SECTION 1 – STATEMENT OF WORK

1.1 GENERAL

1.1.1 INTRODUCTION

Contractor shall deliver under this Statement of Work Oblique Images collected around the period from January through April for each imagery acquisition cycle, weather and Air Traffic Control (ATC) permitting. Definitions and specifications in this Statement of work are consistent with earlier acquisitions and should be used as guidelines for this project.

1.1.2 DEFINITIONS

In addition to the terms defined in the Base Agreement, the following definitions shall apply throughout this Exhibit A.1 (Statement of Work – Oblique Images):

1. Community Image(s)

   The term "Community Image(s)", whether singular or plural, shall mean a set of images that cover the entire Sector from two (2) or four (4) opposing oblique angles unless rapid elevation changes prohibit flight lines in two (2) directions. Each image will be acquired from an airborne platform at a height above the ground of approximately 7,500 feet, and cover an area of approximately one (1) square mile.

2. Neighborhood Image(s)

   The term "Neighborhood Image(s)", whether singular or plural, shall mean a set of overlapping, oblique images blanketing an entire Sector, providing for a higher degree of detail. Each image will be acquired from an airborne platform at a height above the ground of approximately 2,500 feet depending upon terrain conditions, and cover an area of approximately one-tenth (0.1) square miles.

3. Primary Site

   The term "Primary Site" shall mean the site designated by County for Delivery.

4. Sector(s)

   The terms "Image Sector(s)" and "Sector(s)", whether singular or plural, shall mean a collection of oblique digital images, automatically captured from airborne platforms using Contractor's hardware and software capture system but without geo-referencing, as further described in this Exhibit A.1.

1.2 TASKS AND DELIVERABLES

TASK 1 – PROVIDE AND CONFIGURE SOFTWARE

SUBTASK 1.1 – PROVIDE DESKTOP SOFTWARE

Contractor shall provide desktop software providing access to oblique imagery meeting the specifications described in Section 1.3 (Image Requirements) and Section 1.5 (Supporting Software Requirements) of this Exhibit A.1. Upon provision, County shall copy the desktop Software from Contractor's storage media to the County server.

SUBTASK 1.2 – PROVIDE ARCGIS EXTENSION SOFTWARE

Contractor shall provide the latest version of the ESRI ArcGIS Extension Software, meeting the specifications described in Section 1.3 (Image Requirements) and Section 1.5 (Supporting Software Requirements) of this Exhibit A.1.

SUBTASK 1.3 – PROVIDE ABILITY TO VIEW EXISTING OBLIQUE IMAGES

Contractor shall provide desktop software providing access to oblique imagery meeting the specifications described in Section 1.3 (Image Requirements) and Section 1.5 (Supporting Software Requirements) of this Exhibit A.1. Upon provision, County shall copy the desktop Software from Contractor's storage media to the County server.

SUBTASK 1.4 – PROVIDE OTHER SOFTWARE

Contractor shall provide the latest version of other software applications developed as mutually agreed upon (such as SOAP or AJAX solutions, configuration tools, etc.) meeting the specifications described in Section 1.3 (Image Requirements) and Section 1.5 (Supporting Software Requirements) of this Exhibit A.1.

SUBTASK 1.5 – PROVIDE PUBLIC SAFETY ANSWERING POINT SUPPORT

Contractor shall provide support to County and County's Public Safety Answering Point (PSAP) system vendors for the integration of Contractor's Image library with PSAP systems installed by County. Contractor shall provide training in the initial training sessions for these processes and telephone support to County for questions during installation. Contractor shall provide the necessary Software Licenses to allow the integration to function. For integrations, the PSAP system vendors will perform the integration of their system with the installed Contractor's Image library, while Contractor shall provide telephone support for the PSAP system vendors performing integration of their system with Contractor's installed Image library.

DELIVERABLE 1 – PROVIDED AND CONFIGURED SOFTWARE

Contractor shall provide and configure Software in accordance with Task 1 (Provide and Configure Software) with all Subtasks thereto.

TASK 2 – PROVIDE HOSTED SOLUTION

SUBTASK 2.1 – PROVIDE HOSTED SOLUTION

Contractor shall provide a hosted imagery access solution which will enable the creation of a number of Organizational entities, each with unlimited users, representing County Departments and Authorized Entities, as identified by County. This solution will meet the specifications described in Section 1.5.5 (Hosted Software) of this Exhibit A.1.

SUBTASK 2.2 – PROVIDE APPLICATION PROGRAMMING INTERFACE

Contractor shall provide to County an Application Programming Interface (API), including license, which will allow County and/or its agents to access Oblique Images hosted by Contractor through 3rd party applications. This solution will

meet the specifications described in Section 1.5.5 (Hosted Software) of this Exhibit A.1.

SUBTASK 2.3 – MAINTAIN GIS LAYERS FOR HOSTED SOLUTION

Contractor shall make GIS layers provided by the County and Participating Entities available in the hosted solution. This will allow LAR-IAC participants to view these GIS Layers on top of the Oblique Images hosted by Contractor. Contractor will provide a mechanism for LAR-IAC participants to upload and configure their own GIS layers.

DELIVERABLE 2 – PROVIDED HOSTED SOLUTION

Contractor shall successfully provide the hosted solution for Oblique Images in accordance with Task 2 (Provide Hosted Solution) with all Subtasks thereto.

TASK 3 – PROVIDE OBLIQUE IMAGES

Contractor shall provide the Licensed Images meeting the specifications described in Section 1.3 (Image Requirements) of this Exhibit A.1 below. Upon completion of Images, County will copy the Images from Contractor's media to the County server on Primary Site (via a network connection). Contractor shall use the data transport method specified by County for providing and installing the Images.

DELIVERABLE 3 – FINAL ACCEPTANCE

Contractor shall successfully complete and provide Images in accordance with Task 3 (Provide Oblique Images).

TASK 4 – PROVIDE TECHNICAL SUPPORT, DOCUMENTATION AND TRAINING

SUBTASK 4.1 – PROVIDE TECHNICAL SUPPORT

Contractor shall provide up to twenty (20) hours of technical support to the support contacts for County and the Authorized Entities as identified by County. Technical support beyond the limit set forth in this Subtask 4.1 may be provided as Optional Services using Pool Dollars pursuant to Task 6 (Provide Optional Work).

SUBTASK 4.2 – PROVIDE TECHNICAL DOCUMENTATION

Contractor shall furnish to County the latest Documentation for latest versions of Licensed Software and shall update such Documentation during the term of the Base Agreement.

SUBTASK 4.3 – PROVIDE TRAINING

Contractor shall conduct, at a minimum:

1) Four (4) 4-hour "End-User" orientation sessions (maximum of 25 attendees per session) via on-line tools such as *GoToMeeting*.
2) One (1) 3-hour "Administrator" training to teach LAR-IAC IT and GIS support staff how to install, configure, and support Contractor's desktop software and hosted solutions via on-line tools such as *GoToMeeting*.

3) Four (4) advanced technical training sessions (maximum of 15 attendees per session), using on-line tools such as *GoToMeeting*, that will last three (3) hours each.

4) Optionally, County may replace training sessions above with customized online training of the same duration.

DELIVERABLE 4 – TECHNICAL SUPPORT, DOCUMENTATION AND TRAINING

Contractor shall successfully provide technical support, Documentation and training in accordance with Task 4 (Provide Technical Support, Documentation and Training) with all Subtasks thereto.

TASK 5 – CORRECT IMAGE DEFICIENCIES

Contractor shall correct all Image Deficiencies identified by County within the Warranty Period, as further described in Paragraph 6.3.2 (Correction of Deficiencies) of the Base Agreement.

DELIVERABLE 5 – FINAL ACCEPTANCE

Final Acceptance shall be reached when Contractor has successfully corrected all Image Deficiencies pursuant to Task 5 (Correct Image Deficiencies).

TASK 6 – PROVIDE OPTIONAL WORK

SUBTASK 6.1 – PROVIDE OPTIONAL PRODUCTS

If requested and approved by County, Contractor shall provide to County software, tools, images and other products related to the Licensed Products at rates and fees agreed to by the parties. The Optional Products shall be provided in accordance with Paragraph 5.2 (Optional Work) of the Base Agreement.

SUBTASK 6.2 – PROVIDE OPTIONAL SERVICES

If requested and approved by County, Contractor shall provide to County on-site implementation support, additional training and other consulting services related to the Licensed Products, at County facilities or at Contractor's location, at rates and fees agreed to by the parties. The Optional Services shall be provided in accordance with Paragraph 5.2 (Optional Work) of the Base Agreement.

DELIVERABLE 6 – OPTIONAL WORK

Contractor shall successfully provide Optional Work, including Optional Products and Optional Services, in accordance with Task 6 (Provide Optional Work).

1.3 IMAGE REQUIREMENTS

1.3.1 DESCRIPTION

1. Sufficient Sectors of Community 2-Way Images to cover 3309 square miles of the County as indicated in Section 1.7 (Reference Maps) of this Exhibit A.1. Each Sector will have 4 Oblique Images collected, 2 each from two opposing directions over that Sector where elevation conditions permit. Images shall be procured with a minimum camera pixel count to support 1-foot front-line resolution.
2. Sufficient Sectors of **Community 4-Way** Images to cover 139 square miles of the County as indicated on in Section 1.7 (Reference Maps) of this Exhibit A.1. Each

Sector will have approximately 12 Oblique Images collected, 3 from each approximate cardinal direction over that Sector where elevation conditions permit. Images shall be procured with a minimum camera pixel count to support **1-foot** front-line resolution.

3. Sufficient Sectors of **Community 2-Way** Images to 967 square miles of the County as indicated in Section 1.7 (Reference Maps) of this Exhibit A.1. Each Sector will have 6 Oblique Images collected, 3 each from two opposing directions over that Sector where elevation conditions permit. Images shall be procured with a minimum camera pixel count to support **1-foot** front-line resolution.
4. Sufficient Sectors of **Neighborhood 4-Way** Images to the portion of the County as designated on in Section 1.7 (Reference Maps) of this Exhibit A.1. Variances in the number of Images per Sector might occur due to restricted airspace, elevation changes, temporary mechanical failure and environmental occurrences. Over the course of the project it is expected that the average number of Images will be approximately 100 Images per Sector and that all efforts will be made to meet/exceed this standard. Images shall be procured with a minimum camera pixel count to support **4-inch** front-line resolution.
5. Sufficient Sectors of **Neighborhood 8-Way** Images to cover the portion of the County as designated on in Section 1.7 (Reference Maps) of this Exhibit A.1. Variances in the number of Images per Sector might occur due to restricted airspace, elevation changes, temporary mechanical failure and environmental occurrences. Over the course of the project it is expected that the average number of Images will be approximately 200 Images per Sector and that all efforts will be made to meet/exceed this standard. Each of the eight views will vary in azimuth by approximately 45 degrees from its nearest neighbors. Images shall be procured with a minimum camera pixel count to support **4-inch** front-line resolution.
6. Contractor will deliver shapefiles representing the oblique footprint of each image trapezoid in California State Plane Coordinate System, Zone V, NAD 83, and U.S. Survey Feet.

1.3.2 IMAGE SPECIFICATIONS

1. DIGITAL SPECIFICATIONS

Images shall to be delivered with a compression ratio of approximately 6:1 and a per image size of approximately 5-7 MB for Oblique Images. Imagery specifications below are from earlier acquisitions and should be used as guidelines for image capture.

a. Community Oblique

Image sensor: 4,872 x 3,250 pixels

Footprint (Nominal):

Front Line:	4,754 feet / 1,447 meters
Back Line:	6,682 feet / 2,036 meters
Front to Back:	5,932 feet / 1,808 meters

Resolution (Nominal):

Front Line:	0.98 feet/pixel	0.30 meters/pixel
Back Line:	1.37 feet/pixel	0.42 meters/pixel

b. Neighborhood Oblique

Image sensor: 4,872 x 3,250 pixels

Footprint (Nominal):

Front Line:	1,600 feet / 488 meters
Back Line:	2,254 feet / 687 meters
Front to Back:	2,000 feet / 610 meters

Resolution (Nominal):

Front Line:	0.33 feet/pixel	0.10 meters/pixel
Back Line:	0.46 feet/pixel	0.14 meters/pixel

2. EXPORT

a. *Image Export*: JPEG

With associated geography file for import into GIS. The proprietary image format can be directly read into GIS packages that can import JPEG files or the file can be converted to any of the following image formats (TIFF or BMP).

b. *Geo-data Export*: Delineated text files or ESRI shapefiles

Geo-data may be exported as points, lines, poly-lines, or polygons to a delineated text file or ESRI shapefile for import into GIS.

1.4 ACCEPTANCE CRITERIA

1.4.1 TECHNICAL SPECIFICATIONS

Licensed Images shall be governed by the following technical specifications:

1. Shapefiles of image trapezoids and rectangles – Some quality control will be done on oblique image trapezoids to ensure coverage of entire County in four directions (for neighborhood shots) and two or four directions (for community shots). Provide image rectangles of ortho images captured for the entire County.
2. DEM data derived from LiDAR (and stereo compilation for National Forest areas) stored as part of Neighborhood and Community Oblique Imagery will be vertically and horizontally similar with DEM data transferred by County to Contractor. Quality Control will randomly select easily identifiable points in the ortho imagery and oblique imagery and compare the data with the original DEM.
3. County Quality Control will compare spatial consistency between shapefiles for parcels and Neighborhood Oblique Imagery. Only clearly identifiable parcel lines (such as fences, edges of roadways, etc.) will be compared with their equivalents on the imagery. The linear difference is expected to be within 2 to 5 meters as demonstrated in the three sample data sets. In cases of dispute between County and Contractor, County will provide GPS data confirming that the vector data or related construction are the precise location (+/– 1 foot) as were transferred to Contractor. From 64 total Neighborhood Images, only 2% does not need to meet these

specifications but only in the case where there is another overlapping Neighborhood Image, which could replace the "defective" Image, as further described in Section 1.4.3 (Image Quality) below.

4. Visual quality of all Oblique Imagery is expected to be the same or better quality than was presented for previous LAR-IAC projects and as further described in Sections 1.4.2 (Image Format), 1.4.3 (Image Quality) and 1.4.4 (Accuracy) below. Sample imagery from the first few days of flying may be gathered based on imagery collection capture and provided to the County for their review.

1.4.2 IMAGE FORMAT

Proprietary Image trailer tacked onto industry standard image format. Images may be exported to a number of formats. County DEM with up to 0.7 m spacing will be included in Image trailer. Contractor will work County to provide the most practicable postings (5m spacing may be used in National Forest areas). Testing will be done for tessellated ground plane based on provided DEM.

1.4.3 IMAGE QUALITY

Images will have clear views of the ground and will be free from obstruction by clouds; however, there may be occasional cloud and other shadows. In controlled airspace, around airports, etc., the image resolutions may vary. Quality of Images will be comparable to images from previous LAR-IAC projects.

1.4.4 ACCURACY

Neighborhood Oblique Images:

1. Relative Image Accuracy: Expected to be within approximately 5 meters or less over 1,000 meters. This standard assumes an accurate DEM.
2. Benchmark Accuracy: Expected to be in accordance with three (3) sample Sectors delivered by Contractor and reviewed in benchmark by County (proposed for February 2008). Observed accuracy of neighborhood oblique imagery to be within 2m from "GPS verified ground true location." This standard assumes an accurate DEM.
3. Sensor Positional Accuracy: 30 cm absolute
4. Sensor Directional Accuracy: 0.01 degrees absolute

1.5 SUPPORTING SOFTWARE REQUIREMENTS

1.5.1 DESKTOP SOFTWARE

Contractor shall provide a sophisticated aerial imaging solution that allows end-users to have high-resolution images of neighborhoods, landmarks, roads, and complete municipalities at the click of a mouse.

Desktop Software shall have the following minimal capabilities:

1. Distance Tool – measure lengths, widths, and perimeters
2. Height Tool – determine the height of any feature
3. Location Tool – obtain geo-coordinates of items in the image
4. Area Tool – Measure acreage or square footage of any area

5. Elevation Tool – Access ground elevation
6. Bearing Tool – Determine directional (from True North) location
7. Select Tool – locate by client supplied data such a street address, tax account number or coordinates
8. Link Tool – link an unlimited amount of additional data/text per image
9. Text Annotation Tool – describe features within an image
10. Line Drawing Tool – draw straight or free-form lines to highlight a feature
11. Circle Drawing Tool – create circular boundaries/perimeters from specific locations
12. Navigate Tool – allows for easy navigation through your image warehouse by opening next adjacent image in approximate scale and same direction.
13. Search by Address Tool – ability to search from pre-defined queries of parcel address data.
14. Zoom – zoom in and out of all images
15. Search – search GIS data and address information and zoom to features that have been found.
16. GIS Data Overlay - display GIS shapefile format data on top of oblique imagery.
17. Export – export oblique imagery for use for display and other purposes.
18. Export to GIS - export orthogonal images with corresponding coordinate mapping files for use with GIS.

1.5.2 ARCGIS EXTENSION

Contractor shall supply Software extension to Environmental Systems Research Institute (ESRI®) ArcGIS Desktop that will enable users to access the oblique imagery with measurement tools inside of ESRI's latest ArcGIS desktop software (currently ArcMap version 10.x).

1.5.3 CHANGE ANALYSIS

Contractor shall supply Software that enables users to compare imagery of an area over time in a side-by-side configuration. As an example, a user could type in an address or search on a map and see images from 2014 side-by-side with imagery from 2008. The user can then easily view and detect changes to properties and land over time. This application can be used with Pictometry oblique and orthogonal imagery from 2003, 2006, 2008, and 2011 under perpetual license from Pictometry International, as well as with any existing geo-referenced orthogonal imagery that the user may have.

1.5.4 OTHER SOFTWARE

Other software could include SOAP or AJAX solutions or configuration tools as mutually agreed upon by Contractor and LA County.

1.5.5 HOSTED SOFTWARE

1. HOSTED ONLINE ACCESS

Contractor shall deliver a hosted online access solution that uses HTTP and standard internet technologies to provide web-based access to the oblique aerial imagery acquired by the LAR-IAC and under perpetual license from Pictometry International Corp. Contractor will host and make the Oblique Images available to LAR-IAC participants through their **hosted online access** product. Contractor shall make best effort to ensure solution will be available 99.9% of the time. If County determines availability is not acceptable, Contractor shall allow termination of this subscription. The solution shall allow access to all prior LAR-IAC Oblique Images (2003, 2006, 2008, and 2011, 2014) under perpetual license from Pictometry.

The solution will include the following capabilities:

a. LAR-IAC Master Account

The LAR-IAC master account shall provide the ability to:

1. Create/delete/update sub-organizations within the LAR-IAC project.
2. Create/delete/update users both within its organization and within sub-organizations.
3. Upload and manage GIS layers that shall be stored within the contractor's computer systems, and displayed on the oblique imagery in the hosted solution.

b. Sub-Organization:

Each sub-organization will represent a LAR-IAC participating agency or its delegate, and enable the participant to establish user accounts that have common startup and data overlay requirements. An example would be an individual LAR-IAC Participating Entity. When a user from that city logs into the hosted solution, he/she will be presented with that entity's selected GIS layers and starting point. Each group will have an administrator who can work with Contractor to provide and select those layers, and add or remove named accounts from the group. County will work with Participating Entities to assign an administrator for each sub-organization. The administrator will work with Contractor to establish the GIS data layers and starting location for that group. Contractor will develop and provide a work flow to LAR-IAC participants to administer their GIS layers and workspace. The administrator will be able to update the data layers at any time during the period covering this Statement of Work.

c. Named Users:

Contractor's hosted solution will provide an unlimited number of individual named accounts, assigned to either the LAR-IAC master account or a Sub-Organization. Each of these accounts can save its session and then return in the future to continue working. Contractor will track the number of individuals logged in, and be able to limit the total number of concurrent users logged in. There will be a globally configured timeout for users that are not active.

d. Generic user:

Contractor's hosted solution will enable the creation of one or more generic users for each organization. The generic user login will allow multiple concurrent logins on that account. This login will show users GIS layers to be managed by

each organization's administrator. The generic user account will not allow the saving of sessions/workspaces.

2. APPLICATION PROGRAMMING INTERFACE (API)

   Contractor will develop capabilities that enable connectivity for an unlimited number of concurrent unnamed web-based users to APIs that will be used for embedding hosted functionality into other web-based systems (e.g. Latitude Geographics). The total number of "hits" will be tracked. A "hit" is defined as loading a single image, and doing all functions (panning, zooming, overlays) within that image. Contractor will create a different key for each 3rd party vendor or Web application and track usage for each key. Contractor will provide a monthly report detailing the total number of "hits" as well as the hits by API key. Contractor will provide documentation on the API to County, participants, and their vendors as required. The API will allow LAR-IAC participants to make the functionality available to the public without the measurement tools or workspaces. The API will allow 3rd party vendors to integrate GIS data layers onto the Oblique Images. At the end of the period covered under this Statement of Work, Contractor will provide a usage report detailing the number of hits for all LAR-IAC third party vendors and Web applications.

   Contractor shall provide all updates of its API software to County during the term of the Agreement.

1.5.6 OPERATING PLATFORMS

The Desktop software shall run on most Windows platforms such as Windows XP, Vista, Windows 7, 2003 or 2008 Server

1.6 COUNTY OBLIGATIONS

1.6.1 SYSTEM REQUIREMENTS

County will provide the following:

1. Contractor will ship storage media (storage appliance, server, single PC) for data to be transferred in-house to County systems. Contractor will avoid opening up County's PCs or servers, or attaching external hard drives to County's PCs or servers, with the exception of the use of Fire Wire or storage appliance, for which County must install an interface prior to Contractor delivering the data.
2. County will also make available on County server enough disk storage space to accommodate the Licensed Images and Licensed Software. This is estimated to be approximately 3.5 TB. County will also provide a 100 Mb/s network link to the server.
3. County shall also have installed and operational ArcGIS software meeting the specifications described in Section 1.5.2 (ArcGIS Extension) of this Exhibit A.1.

1.6.2 COUNTY RESPONSIBILITIES

1. County will make available the following countywide information to Contractor at the following URL: http://egis3.lacounty.gov/dataportal/lariac/lar-iac4/rfp-data/
   a) LAR-IAC4 Project Areas (shapefile format)
   b) Detailed County/City Boundary (shapefile format)

c) Oblique Aerial Digital Imagery 1 sq. mile sector grid (for orientation only – shapefile format)

d) Digital Elevation Data based on LiDAR (Area 1) and stereo compilation (Area 2) from current or previous LAR-IAC Projects.

2. Digital Elevation Data provided by County for Contractor will be in ESRI raster format in California State Plane Coordinate System, Zone 5, NAD83, NAVD88.

3. All vector data sets provided by County for Contractor will be in ESRI shapefile format in California State Plane Coordinate System, Zone 5, NAD83, U.S. Survey Feet.

4. County shall be responsible for selecting Authorized Users who are qualified to operate the Licensed Software and are familiar with the information, calculations, and reports that serve as input and output of the Licensed Software.

1.7 REFERENCE MAPS

1.7.1 IMAGERY GRID AND CAPTURE TYPES