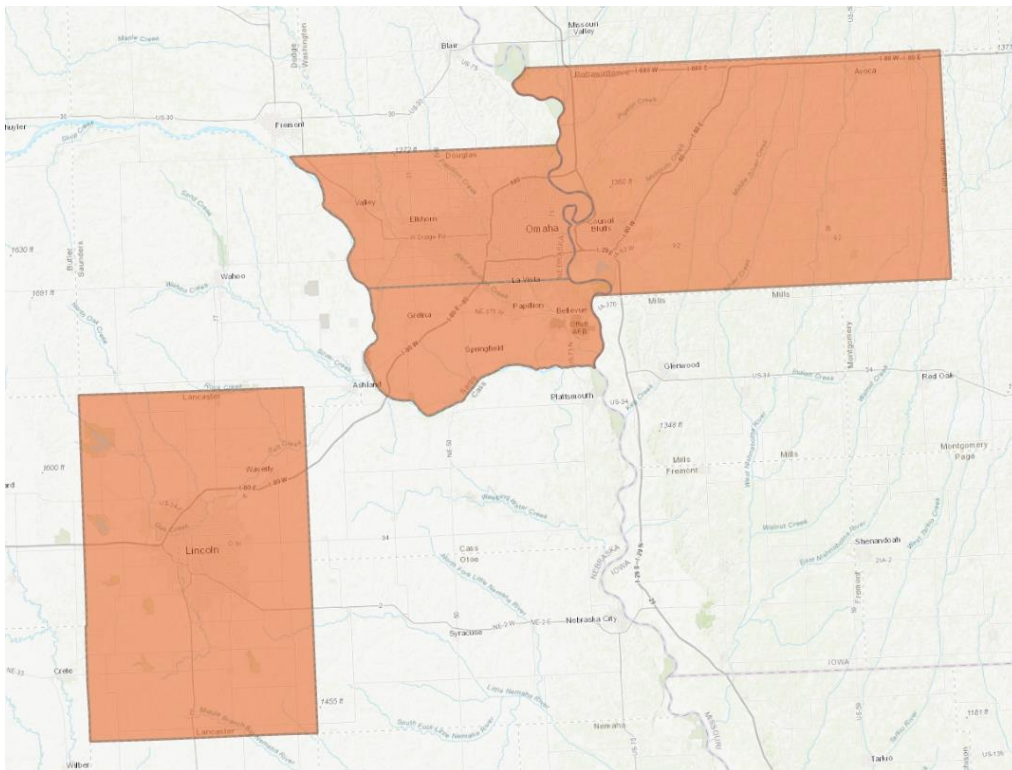


Metro Area Planning Agency

Request for Proposal

2018 Omaha-Lincoln Metro Area Imagery Project



1. General Info

1.1. Objective

The Metro Area Planning Agency (“MAPA”) in Omaha is soliciting proposals from qualified firms for a Spring 2018 "leaf-off" aerial imagery acquisition project. MAPA is a regional Council of Governments that helps member governments address problems that are regional in scope and may cross jurisdictional boundaries. The Nebraska-Iowa Regional Orthophotography Consortium (“NIROC”) was created in 2002 to facilitate these types of projects by a consortium of urban cities and counties around Omaha and Lincoln, NE and Council Bluffs IA.

This project consists of flight areas including Douglas, Sarpy, and Lancaster Counties in Nebraska, Pottawattamie County in Iowa, and some surrounding communities (Appendix A). Imagery is to be acquired between mid-March and mid-April of 2018 or prior to leaf out conditions, according to the acquisition window guidelines in the scope of work below. All imagery deliverables are to be delivered no later than July 15th, 2018.

1.2. Multi-Year Option

MAPA and its partner agencies are also willing to consider proposals for multi-flight contracts at reduced pricing. Please consider submitting pricing for a 2018-only project and pricing for a multi-year contract that includes 2018, 2020, and possibly 2022. The 2020 flight would likely include oblique imagery for all project areas. a 2022 project would likely have the same products as the 2018 project. Deliverable products would need to be negotiated for each project.

Any multi-flight contracts should show pricing that stays flat or descends across the multiple projects.

1.3. Geographic Areas

The project covers an area of approximately 2392 square miles in Eastern Nebraska and Western Iowa (Appendix A). MAPA will provide a digital version of the project area in GIS format along with this RFP document.

1.4. Project Schedule

A general project timeline is outlined below. Acquisition is to take place in the Spring of 2018 with delivery of standard ortho imagery by no later than July 31, 2018 and all deliverables by September 30, 2018:

RFP published	October 6, 2017
Deadline for Written Questions	October 13, 2017
Responses to Written Questions	October 20, 2017
Proposals due/opened	October 30, 2017

Vendor Selection	November 1, 2017
Scope and Fee Negotiation Finalized	No later than November 15, 2017
Finance Committee Approval	November 29, 2017
MAPA Board Approval	December 7, 2017
Project kickoff	December 2017
Imagery acquisition	Mid March – Mid April 2018
Final Delivery	September 30, 2018

1.5. Project Management

The Douglas County GIS Coordinator, Mike Schonlau, and the MAPA GIS Coordinator, Josh Corrigan (“MAPA Project Managers”), will serve as the primary points of contact and Project Managers on behalf of MAPA and its partners. The MAPA Project Managers will be responsible for all project communication with the Vendor, including discussions regarding scope-of-work, contract, project schedules, imagery acquisition, quality control, deliverables, and change orders.

1.6. Subcontractors

If subcontractors are included in the Contractor's proposal, a brief overview of the company should be included. All subcontractors are subject to MAPA approval. Any work performed by a subcontractor is the responsibility of the primary Contractor, and should be detailed in the final scope of work document attached to the project contract.

2. Scope of Work

2.1. Overview

MAPA is interested in acquiring high-resolution digital ortho imagery, oblique imagery, and related products, as described below, for use in Geographic Information Systems (GIS). The MAPA Project Managers will work with the Vendor to develop a final scope-of-work document once the project has been awarded.

2.2. Metadata

All deliverable products should be accompanied by FGDC-compliant metadata in an XML format. The MAPA Project Managers will work with the Vendor to define the metadata specifications prior to contract signing.

2.3. Control

The Vendor should propose an overall control plan for all project areas to insure positional accuracy of the end products. The Vendor will be responsible for acquiring any necessary ground control points

and any other types of control information to be used. Existing survey reference information available from any of the participating jurisdictions may be made available to the Vendor, if requested.

Some of the participating jurisdictions may plan to set a number of temporary ground control targets to be used for internal quality control of the final delivered imagery.

An ESRI Geodatabase containing any ground control points used by the Vendor and any other associated locations should be included as a deliverable.

2.4. Digital Elevation Models (DEM)

Existing DEM's (Digital Elevation Models) produced from 0.7 meter post-spacing LiDAR were captured in December 2016 for Douglas, Sarpy, and Lancaster Counties. This data is scheduled to be delivered in late December 2017. Once this data is made available, we will provide a copy to the Vendor.

Pottawattamie County also possesses existing DEM data. This LiDAR-based DEM data is from 2010 and was captured at 1.4 meter post-spacing. This data will be made available to the Vendor upon request. If there are any questions or concerns regarding the use of these DEMs, the Vendor can submit those questions/concerns to the MAPA Project Managers prior to submitting their proposal.

2.5. Products

The various MAPA partners/jurisdictions may have unique product requests for their specific geographic areas. Listed below are the products being requested and their associated geographic areas.

<i>Geographic Area</i>	<i>Product Description</i>	<i>Approximate Square Miles</i>
Douglas County, NE	3" GSD 3-band natural color 4-directional oblique imagery (40-45 degree angle)	339
Douglas County, NE	3" GSD 3-band natural color ortho imagery*	339
Lancaster County, NE	3" GSD 3-band natural color ortho imagery**	846
Sarpy County, NE	3" GSD 3-band natural color ortho imagery**	248
Pottawattamie County, IA	3" GSD 3-band natural color ortho imagery**	164
Pottawattamie County, IA	6" GSD 3-band natural color ortho imagery**	884

* Douglas County will accept ortho imagery products that do not specifically meet ASPRS standards, but will be subject to the County's internal quality control measures

** Ortho imagery should meet ASPRS accuracy standards outlined in the table below

2.5.1. Oblique Imagery

All oblique imagery for this project must meet the following specifications:

Flight Window	Mid-March to mid-April 2017, prior to onset of spring vegetation. In the event that the Vendor cannot acquire imagery for the entire project area within this flight window, MAPA will need to approve any deviation from this schedule.
Image Quality	Clear and sharp in detail; Less than 5% cloud cover on any single photograph/image; No defects such as out-of-focus images; No inconsistencies in tone and density between adjacent images; Must be radiometrically and geometrically corrected to enable adjacent files to be displayed simultaneously without obvious distinctions between them.
Sun Angle	30 degrees or greater to avoid heavy shadows on the imagery
Projection/Coordinate System	Must support overlay of local GIS data layers that are projected to Nebraska State Plane FIPS 2600 NAD83 (2011) US Feet, NAD 1983 Nebraska - Lancaster County (US Feet) and Iowa State Plane South NAD83 US Feet

The oblique imagery should be delivered as a hosted web service by the vendor. This service should be part of a GIS web application that enables users to view, measure (lengths and heights), determine elevations, print, and export images. The application should also support viewing of historical imagery owned by the partner agency. The web application should also support overlay of local GIS data layers, geocoding, and mobile device use.

The oblique imagery should also be made available through an API where we can integrate the imagery and viewing functionality into our existing GIS web applications, CAMA software, and 911 applications, specifically using ESRI technology. There should be an option for unlimited public viewing of the imagery.

2.5.2. Ortho Imagery

All ortho imagery for this project must meet the following specifications:

Flight Window	Mid-March to mid-April 2017, prior to onset of spring vegetation. In the event that the Vendor cannot acquire imagery for the entire project area within this flight window, MAPA will need to approve any deviation from this schedule.
Image Quality	Clear and sharp in detail; Less than 5% cloud cover on any single photograph/image; No defects such as out-of-focus images; No inconsistencies in tone and density between adjacent orthos or sheets; Must be radiometrically and geometrically corrected to enable adjacent files to be displayed simultaneously without obvious distinctions between them.
Sun Angle	30 degrees or greater to avoid heavy shadows on the imagery
Building Lean	An effort should be made to eliminate significant building lean across the entire project area. This will be especially necessary for taller buildings in and around the Downtown Omaha and Lincoln areas.
Projection/Coordinate System	<ul style="list-style-type: none"> • Nebraska areas (minus Lancaster County) - Nebraska State Plane NAD83 US Feet (WKID 26852) • Lancaster County - NAD 1983 Nebraska - Lancaster County (US Feet) (WKID 102705) • Iowa area - Iowa State Plane South NAD83 US Feet (WKID 3418)
Ortho Tiling Grid	Ortho image tiles should follow a uniform grid size with each tile roughly the size of a land section (5280 x 5280 ft)
Ortho Tile Format	Ortho image tiles should be in JPEG (with .jpw) or GEOTIFF format; tile naming will be agreed upon during final scope of work discussions
Ortho Tile Naming	Ortho image tiles should be named using an agreed upon file naming convention. Tile names should include a unique location identifier.
Ortho Accuracy Standard	Per Nov 2014 ASPRS Positional Accuracy Standards: 3" GSD ortho imagery will require a Horizontal Accuracy Class RMSE of 15.00 cm and be subject to the current ASPRS digital orthoimagery standard for Standard Mapping and GIS Work (reference http://www.asprs.org/wp-content/uploads/2015/01/ASPRS_Positional_Accuracy_Standards_Edition_1_Version100_November2014.pdf)
No Data	Any area within a deliverable ortho image that has no imagery is to be assigned a "No Data" RGB value of 0,0,0 or 255,255,255. Only one of these RGB values is to be used across all project tiles.

Ortho imagery should be delivered in individual tiled image format per the specifications listed above.

2.5.3. Ortho Mosaics

The ortho imagery should also be delivered in countywide mosaics. These mosaics will combine all of the geographic area's tiled images into a single, mosaicked, compressed file using the MrSID format. Due to geographic size, some counties may need to be split into multiple mosaic files (Lancaster and Pottawattamie).

The MAPA Project Managers will work with the vendor to determine the parameters for each of these mosaic images. Listed below are the anticipated mosaic requests for this project:

- Douglas County - countywide mosaic in NE State Plane NAD83 US Feet (WKID 26852)
- Douglas County - countywide mosaic in Geographic Coordinate System NAD83 (WKID 4269)
- Sarpy County - countywide mosaic in NE State Plane NAD83 US Feet (WKID 26852)
- Sarpy County - countywide mosaic in Geographic Coordinate System NAD83 (WKID 4269)
- Lancaster County - countywide mosaic(s) in NAD 1983 Nebraska - Lancaster County (US Feet) (WKID 102705)
- Pottawattamie County - countywide mosaic(s) resampled to 6" in IA State Plane South NAD83 US Feet (WKID 3418)
- Pottawattamie County - contiguous 3" area mosaics in IA State Plane South NAD83 US Feet (WKID 3418)

The geographic extent, file size, compression ratio, file format, and file naming must be approved by the MAPA Project Managers prior to final delivery.

3. Deliverables and Quality Control

3.1. Deliverables

- Oblique imagery as a vendor-hosted service, as described in Section 2.5.1
- Oblique imagery API for integrating oblique imagery into existing GIS web applications hosted by the partner agencies, as described in Section 2.5.1
- Ortho imagery tiles, as described in Section 2.5.2
- Ortho imagery mosaics. as described in Section 2.5.3
- FGDC-compliant metadata in xml format
- ESRI File Geodatabase or Shapefile of any ground control data used for the project
- ESRI File Geodatabase or Shapefile of the project tile grid

3.2. Quality Control

Quality control of the imagery will begin once the data has been delivered. The MAPA Project Managers and partner agencies will conduct a series of quality control checks on delivered products to insure accuracy and compliance with all specifications detailed in the Project Scope of Work. Any discrepancies will be reported back to the Vendor and will be corrected and re-delivered.

Some criteria used to evaluate and inspect the imagery may include: building lean; bridges and overpass roadway alignment; contrast; color; clarity; seam lines/overlap; blemishes; consistency; cloud cover

Final payment will be contingent on final product deliverable approval by MAPA.

3.3. Logistics

All imagery will be delivered to MAPA, unless other arrangements have been made between the MAPA Project Managers and the vendor. Deliverables should be on either external hard drives or made available via cloud-hosted storage platform for download. If the deliverables are made available as downloads **MAPA will not accept any additional fees for external hard drive deliverables.**

4. Selection Process

MAPA and its partner agencies will evaluate all proposals and score them in the following categories:

- Qualifications
- Price
- Ability to meet the flight window requirement and complete the project

Following our review, a short-list of potential vendors will be created. Once a selection is made, all vendors will be notified of the selection.

Upon award of the project, the Vendor should immediately begin working to schedule a kickoff meeting.

5. Proposal Submission Guidelines

All proposals are due by 11:00am CDT, October 30, 2017.

Proposals should be sealed and include one hardcopy original and a digital copy in PDF format on a usb flash drive. Please try to limit proposal documents to 50 pages or less.

Proposals shall include, at a minimum, the information listed below:

- Firm background and history
- Key personnel resumes and qualifications
- Detailed sub-contractor information
- Client reference contact information and project summaries
- Detailed project methodology
- Proposed work plan and schedule

- Flight allocation plan – planes, crews, backup (what will be committed to this project and what secondary measures will be in place in case the need arises for additional flight resources)
- Per square mile unit pricing for all imagery products as laid out in Section 1.1 and detailed in Section 2.5
- Conflict of Interest Disclosure form for vendor and any sub-contractors

Proposals should be submitted to the following:

Josh Corrigan
Metropolitan Area Planning Agency
2222 Cuming Street
Omaha, NE 68102

6. Appendix

APPENDIX A PROJECT AREA

