



BOARD OF SUPERVISORS AGENDA ITEM REPORT **CONTRACTS / AWARDS / GRANTS**

Requested Board Meeting Date: April 21, 2015

or Procurement Director Award ☐

Contractor/Vendor Name (DBA): Pima Association of Governments

Project Title/Description:

Pima Association of Governments Agreement for the Orthophotography and Elevation Data Acquisition Project

Purpose:

The Regional Flood Control District wants to enter into an agreement with Pima Association of Government (PAG) to provide funding and services to for their 2015 Orthophotography and Elevation Data Acquisition Project (2015 Project) over the Tucson, Arizona urban area. This agreement would provide aerial maps and topographic information in digital format (digital orthoimagery) for most of eastern Pima County and will include extended coverage of areas of interest to the District and Pima County including Cienega Creek Watershed, portions of the San Pedro River and other areas where the District and Pima County have shared interests in managing open space lands.

The Regional Flood Control District (District) contribution for the 2015 Project will be to provide \$73,230.00 in funding to PAG if this contract is approved. Separately, the District will contract with an engineering company, PSOMAS, for service to provide a vertical accuracy assessment at a cost not to exceed \$33,842.00.

Procurement Method:

Sole Source

Program Goals/Predicted Outcomes:

Since 1998, PAG has coordinated a regional program of to acquire aerial mapping and topographic information to support regional planning and data needs. The District has participated in this program several times by contributing funding and technical support. The most recent of these was for PAG's 2011 Orthophotography Project. The District uses this information to analysis watersheds, for engineering and to map floodplain information.

Public Benefit:

PAG is the Metropolitan Planning Organization for the greater Tucson area. As a Metropolitan Planning Organization, PAG is responsible for coordinating the urban planning process for transportation, community development, environmental and water quality. The information may be used by other public agencies and private parties for planning and engineering. The District will be able use the aerial maps to assess changes in watersheds which may impact storm water runoff and will use the topographic mapping to define floodplain areas.

Metrics Available to Measure Performance:

Delivery of digital photographic and topographic data with a ground resolution of 6 inches

Retroactive:

No

Ver. 1
Vendor - 1

To: CoB- 4.8.15
(2)

Procure Dept 04/03/15 PM 03:02

Pgs. - 14

Original Information

Document Type: CT Department Code: FC Contract Number (i.e., 15-123): 15*423
Effective Date: 4/21/2015 Termination Date: 12/31/2015 Prior Contract Number (Synergen/CMS): _____
☐ Expense Amount: \$ \$73,230.00 ☐ Revenue Amount: \$ _____
Funding Source(s): flood control tax levy

Cost to Pima County General Fund: None

Contract is fully or partially funded with Federal Funds? ☐ Yes ☒ No ☐ Not Applicable to Grant Awards
Were insurance or indemnity clauses modified? ☐ Yes ☒ No ☐ Not Applicable to Grant Awards
Vendor is using a Social Security Number? ☐ Yes ☒ No ☐ Not Applicable to Grant Awards

If Yes, attach the required form per Administrative Procedure 22-73.

Amendment Information

Document Type: _____ Department Code: _____ Contract Number (i.e., 15-123): _____
Amendment No.: _____ AMS Version No.: _____
Effective Date: _____ New Termination Date: _____
☐ Expense ☐ Revenue ☐ Increase ☐ Decrease Amount This Amendment: \$ _____
Funding Source(s): _____

Cost to Pima County General Fund: _____

Contact: Suzanne Shields

Department: Regional Flood Control District

Telephone: 724-4680

Department Director Signature/Date:

Suzanne Shields 4/1/15

Deputy County Administrator Signature/Date:

[Signature] 4/1/15

County Administrator Signature/Date:

(Required for Board Agenda/Addendum Items)

C. J. [Signature] 4/2/15

[illegible]

This number must appear on all invoices, correspondence and documents pertaining to this contract.

PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT

RECITALS

- ## AGREEMENT

The specifications, deliverables, and other project requirements are described below.

2. Responsibilities

2.1 PAG will:

- Provide all necessary personnel, equipment, and facilities to award, administer, and monitor the orthoimagery production program.
- Deliver data to the PCRFCFCD that meets the specifications and conditions included in this Agreement.

2.2 PCRFCFCD will:

- Provide \$73,230.00 in direct financial assistance to PAG toward the 2015 Project.
- Contract for and finance a NSSDA Accuracy Assessment Report ("Vertical Accuracy Assessment") of LiDAR data acquired through the 2015 Project, and share the results of the Vertical Accuracy Assessment with PAG. PCRFCFCD has obtained an estimate for the Vertical Accuracy Assessment from PSOMAS, Inc., a copy of which is attached as **Exhibit A**, and anticipates the cost of the Vertical Accuracy Assessment will not exceed \$33,842.00.

3. Schedule

PAG will begin acquisition of imagery and elevation data in the spring 2015 and deliver digital orthoimagery to the PCRFCFCD by December 31, 2015. Data deliveries will be made to the PCRFCFCD point of contact as shown below.

4. Points of Contact and Notices

All notices or demands on a Party under this Agreement must be in writing and delivered in person or by mail to the Points of Contact identified below:

4.1 PCRFCFCD:

Ken Maits
Pima County Regional Flood Control District
97 E. Congress, 3rd Floor
Tucson, AZ 85701
520-724-4600
520-724-4621 (Fax)
kenneth.maits@rfcd.pima.gov

4.2 PAG:

Josh Pope
Pima Association of Governments
1 E. Broadway Blvd, Ste. 401
Tucson, AZ 85701
520-792-1093

520-620-6981 (Fax)
jpope@pagnet.org

Manny Rosas
Pima Association of Governments
1 E. Broadway Blvd, Ste. 401
Tucson, AZ 85701
520-792-1093
520-620-6981 (Fax)
mrosas@pagnet.org

- 4.3 Either Party may, by written notice to the other Party, designate another address or person as a Point of Contact and for receipt of notices under this Agreement.

5. Specifications

PAG shall provide data for the entire project area, as defined in Article I, Section 7 of this Agreement to PCRFCFCD satisfying the following minimum specifications:

- 5.1 Digital orthorectified Images will be referenced to the Arizona Central Zone State Plane coordinate system, North American Datum 1983 (NAD83), international feet, and the elevation data with vertical datum of NAVD88.
- 5.2 Digital orthorectified Images will be 3-band natural color, 4-band NIR.
- 5.3 Ground resolution (pixel size) shall be 6 inches. The natural color source photography needs to be of sufficient quality and resolution to support production of digital orthorectified images to this specification. The images will also be resampled to a 1-foot resolution and a copy of this dataset will be provided along with the original 6-inch data.
- 5.4 Digital orthorectified images will be submitted in uncompressed, Arc/Info readable, TIFF file format with companion .tfw spatial reference (or world) files, and no internal tiling or overviews.
- 5.5 Digital orthorectified Image tile size shall be consistent over the project area. An index of the tiles in ESRI shape file form that includes a projection file (.prj) that defines the projection system of the index. The shape file database will include the tile names and be delivered on a DVD disk.
- 5.6 Digital orthophotography/elevation data set specifications:
- Orthorectified 6-inch, 3-band with 4-NIR Band
 - Resampled 1-foot orthoimagery
 - Digital Elevation Models (DEM) Bare Earth in ASCII Text format
 - LAS LiDAR Data Sets

6. Deliverables

PAG shall deliver to PCRFCFCD:

Digital orthorectified and elevation data sets for the entire project area, as defined in Article I, Section 7 of this Agreement on USB II or Firewire 400 compatible portable hard drives. Tiles shall be accompanied by an index in ESRI shape file format.

7. Project Area

The extended project area covers a minimum of 2,054 tiles of digital orthoimagery and is depicted in attached **Exhibit B**.

ARTICLE II: FUNDING CONTRIBUTION

PCRFCFCD's contribution to the 2015 Project shall consist of a direct contribution to PAG of **\$73,230.00**, along with PCRFCFCD's agreement under Article I, Section 2.2 of this Agreement to contract for a Vertical Accuracy Assessment.

PCRFCFCD shall pay to PAG the \$73,230.00 direct contribution within 30 days after execution of the Agreement.

ARTICLE III: EFFECTIVE DATE AND TERM OF THE AGREEMENT

This Agreement shall become effective upon the date of execution by the PCRFCFCD and shall remain in effect until the December 31, 2015 or PAG's satisfactory delivery of data to PCRFCFCD under the terms of this Agreement, unless sooner terminated.

ARTICLE IV: TERMINATION

1. For Cause

Upon a failure by either Party to cure a default under this Agreement within 10 days after receipt of notice from the non-breaching Party of the default, the non-breaching Party may, in its sole discretion, terminate this Agreement for default by written notice to the breaching Party.

2. Non-Appropriation

Notwithstanding any other provision in this Agreement, this Agreement may be terminated by either Party if for any reason the PCRFCFCD Board of Directors or any other funding Partner fails to appropriate sufficient funds for the purpose of maintaining the 2015 Project. In the event of such termination, PCRFCFCD's only obligation to PAG shall be payment for services rendered before the termination date, except that in no event shall PCRFCFCD's liability to PAG exceed \$73,230.00.

ARTICLE V: INDEMNIFICATION

Each Party (as "Indemnitor") shall indemnify, defend, and hold harmless the other Party (as "Indemnitee"), its governing boards or bodies, officers, departments, employees and agents, harmless from and against any and all suits, actions, legal or administrative proceedings, claims, demands, liens, losses, fines or penalties, damages, liability, interest, attorney's, consultant's and accountant's fees or costs and expenses of whatsoever kind and nature, resulting from or arising out of any act or omission of the Indemnitee and its agents, employees or anyone acting under their direction or control, whether

intentional, negligent, grossly negligent, or amounting to a breach of contract, in connection with or incident to the performance of this Agreement.

Each Party warrants to the other that all products and services provided by that Party under this Agreement are non-infringing. Each Party shall indemnify, defend, and hold the other harmless from any claim of infringement arising from services provided by the indemnifying Party under this Agreement or from the provision, license, transfer or use for their intended purpose of any products or data provided under this Agreement.

PAG's duty to indemnify hereunder shall include Pima County as well as PCRFCFCD.

ARTICLE VI: INSURANCE

The Parties shall obtain and maintain at their own expense, during the entire term of this Agreement, the following type(s) and amounts of insurance:

- a) Commercial General Liability in the amount of \$1,000,000.00 combined single limit Bodily Injury and Property Damage.
- b) Commercial or Business Automobile Liability coverage for owned, non-owned and hired vehicles used in the performance of this Agreement with limits in the amount of \$1,000,000.00 combined single limit or \$1,000,000.00 Bodily Injury, \$1,000,000.00 Property Damage;
- c) If this Agreement involves professional services, Professional Liability Insurance in the amount of \$1,000,000.00; and,
- d) If required by law, Workers' Compensation Coverage including employees' liability coverage.

PAG shall provide PCRFCFCD with current Certificates of Insurance. PAG acknowledges that PCRFCFCD maintains a program of self-insurance that satisfies the requirements of this Article VI.

ARTICLE VII: MISCELLANEOUS

1. Ownership and Licensure of Data

PAG shall retain ownership of all data produced as part of the 2015 Project, but agrees, to the extent necessary, to license its use to PCRFCFCD for all purposes related to PCRFCFCD's statutory authority and to arrange licensure to any third Party as necessary under this Agreement or to allow PCRFCFCD's use of the data for any purpose related to its statutory authority.

2. Authority to Contract

The Parties warrant that they have authority to enter into this Agreement. If any court or administrative agency determines that either Party does not have authority to enter into this Agreement, the Parties shall not be liable to each other or any third Party by reason of such determination or by reason of this Agreement.

3. Entire Agreement

This Agreement constitutes the entire Agreement between the Parties, and all prior and contemporaneous agreements, representations and understandings of the Parties, both written and oral, concerning the subject matter of this Agreement are superseded and merged in this Agreement.

4. Amendment

This Agreement shall not be modified, amended, altered, or changed except by written amendment signed by the Parties.

5. Severability

In the event that any provision of the Agreement or the application thereof is held invalid, such invalidity shall have no effect on other provisions and their application which can be given effect without the invalid provision, or application, and to this extent the provisions of the Agreement are severable.

6. Interpretation of Terms

Technical terms and abbreviations used in this Agreement shall be interpreted consistently with their accepted usage in the field of Geographic Information Systems.

7. Delivery of Notices

Any notice under this Agreement is deemed delivered and received on the date of delivery, if delivered in person, or on the third business day after mailing, if delivered by any form of mail.

8. Force Majeure

A Party shall not be in default under this Agreement if it does not fulfill any of its obligations under this Agreement because it is prevented or delayed in doing so by reason of uncontrollable forces. The term uncontrollable forces shall mean, for the purpose of this Agreement, any cause beyond the control of the Party affected, including but not limited to floods, earthquakes, acts of God, or orders of any regulatory government officer or court (excluding orders promulgated by the Parties themselves), which, by exercise of due diligence and foresight, such Party could not reasonably have been expected to avoid. A Party rendered unable to fulfill any obligations by reason of uncontrollable forces shall exercise due diligence to remove such inability with all reasonable dispatch.

9. Waiver

Waiver by a Party of any breach of any term, covenant or condition herein contained shall not be deemed a waiver of any other term, covenant or condition, or any subsequent breach of the same or any other term, covenant, or condition contained in this Agreement.

10. No Joint Venture

It is not intended by this Agreement to, and nothing contained in this Agreement shall, be construed to create any partnership, joint venture or employer-employee relationship between PAG and PCRFGD. Neither Party shall be liable for any debts, accounts, obligations or other liabilities whatsoever of any other Party as a result of this Agreement, including (without limitation) any Party's obligation to withhold Social Security and income taxes for itself or its employees.

11. Pima County as Only Third-Party Beneficiary

Other than Pima County as specified in Article V of this Agreement, this Agreement does not create any right to any person or entity as a third-Party beneficiary.

12. Cancellation for Conflict of Interest

This Agreement is subject to cancellation under the provisions of A.R.S. § 38-511.

13. Legal Arizona Workers Act Compliance

The Parties hereby warrant that they will at all times during the term of this Agreement comply with all federal immigration laws applicable to their employment of their employees, and with the requirements of A.R.S. § 23-214 (A) (together the "State and Federal Immigration Laws"). The Parties shall further ensure that each subcontractor who performs any work under this contract likewise complies with the state and federal immigration laws.

The Parties shall have the right at any time to inspect the books and records of the other and any subcontractor in order to verify such Party's compliance with the State and Federal Immigration Laws.

Any breach of the Parties' or any subcontractor's warranty of compliance with the state and federal immigration laws, or of any other provision of this section, shall be deemed to be a material breach of this Agreement subjecting the other to penalties up to and including suspension or termination of this Agreement. If the breach is by a subcontractor, and the subcontract is suspended or terminated as a result, the Parties shall be required to take such steps as may be necessary to either self-perform the services that would have been provided under the subcontract or retain a replacement subcontractor, as soon as possible so as not to delay project completion.

The Parties shall advise each subcontractor of the Parties' rights, and the subcontractor's obligations, under this Article by including a provision in each subcontract substantially in the following form:

"SUBCONTRACTOR hereby warrants that it will at all times during the term of this contract comply with all federal immigration laws applicable to SUBCONTRACTOR's employees, and with the requirements of A.R.S. § 23-214 (A). SUBCONTRACTOR further agrees that PAG and PCRFGD may inspect the SUBCONTRACTOR'S books and records to insure that SUBCONTRACTOR is in compliance with these requirements. Any breach of this paragraph by SUBCONTRACTOR will be deemed to be a material breach of this contract subjecting SUBCONTRACTOR to penalties up to and including suspension or termination of this contract."

Any additional costs attributable directly or indirectly to remedial action under this Article shall be the responsibility of the Party who engaged the contractor. In the event that remedial action under this Article results in delay to one or more tasks on the critical milestones schedule, such period of delay shall be deemed excusable delay for which PAG shall be entitled to an extension of time, but not costs.

14. Non-Discrimination

The Parties agree to comply with all provisions and requirements of Arizona Executive Order 2009-09 including flow down of all provisions and requirements to any subcontractors. Executive Order 2009-09 supersedes Executive order 99-4 and amends Executive Order 75-5, and is hereby incorporated into this Agreement as if set forth in full herein. During the performance of this Agreement, the Parties shall not discriminate against any employee, client or any other individual in any way because of that person's age, race, creed, color, religion, sex, disability or national origin.

15. Compliance with Laws

The Parties shall comply with all federal, state, and local laws, rules, regulations, standards and executive orders, without limitation. The laws and regulations of the state of Arizona shall govern the rights, performance and disputes of and between the parties. Any action relating to this Contract shall be brought in a court of the state of Arizona in Pima County.

Any changes in the governing laws, rules, and regulations during an agreement shall apply, but do not require an amendment/revisions.

16. Americans with Disabilities Act

The Parties shall comply with all applicable provisions of the Americans with Disabilities Act (Public Law 101-336, 42 U.S.C. 12101-12213) and all applicable federal regulations under the Disabilities Act, including 28 CFR Parts 35 and 36.

17. Non-Exclusive Contract

This Agreement is nonexclusive and is for the sole convenience of the Parties, who reserve the right to obtain like products and services from other sources for any reason.

18. Public Information

The Parties acknowledge that, under A.R.S. § 39-121 et seq., all products provided to each other become public information and, upon request, are subject to release and/or review by the general public.

19. Independent Contractor

The status of the Parties shall be that of independent contractors. Neither Party, or its officers, agents or employees, shall be considered employees of the other or Pima County or be entitled to receive any employment-related fringe benefits under the Pima County Merit System. PAG shall be responsible for payment of all federal, state and local taxes associated with the compensation received pursuant to this Agreement and shall indemnify and hold PCRFCD and Pima County

harmless from any and all liability which PCRFCD may incur because of PAG's failure to pay such taxes. PAG shall be solely responsible for program development and operation.

20. Subcontractor

The Parties will be fully responsible for all acts and omissions of any subcontractor and of persons directly or indirectly employed by any subcontractor and of persons for whose acts any of them may be liable to the same extent that the Party is responsible for the acts and omissions of persons directly employed by it. Nothing in this Agreement shall create any obligation on the part of either Party to pay or see to the payment of any money due any subcontractor, except as may be required by law.

21. Assignment

The Parties shall not assign their obligations under this Agreement, in whole or in part, without prior written approval of the other. Approval may be withheld at the sole discretion of the Parties, provided that such approval shall not be unreasonably withheld.


IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed this ____ day of _____, 2015.

PIMA COUNTY REGIONAL FLOOD CONTROL
DISTRICT

Chair, Board of Directors

Date

PIMA ASSOCIATION OF GOVERNMENTS



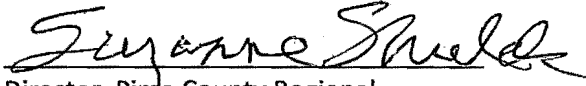
Authorized Signature

3/26/15
Date

ATTEST:


Clerk of the Board

APPROVED AS TO CONTENT:



Director, Pima County Regional
Flood Control District

APPROVED AS TO FORM:



Deputy County Attorney

ANDREW FLAGG

Exhibit A

PSOMAS

Information and Engineering Solutions

December 19, 2014

Kenneth Maits
Pima County Regional Flood Control
97 E. Congress
Tucson, AZ 85701

Subject: PAG 2015 LiDAR Acquisition Accuracy Assessment
Psomas #7PIM140200

Dear Ken:

In accordance with your request, Psomas is pleased to submit this proposal to provide Professional Surveying Services for Pima County Regional Flood Control. Working together with you, Psomas will provide individual attention, integrity and our commitment to a successful project.

This proposal reflects your request for the collection of horizontal and vertical check points and provide an error analysis for the 2015 LiDAR Acquisition for compliance with published accuracy requirements.

Psomas proposes to provide this Scope of Services for an estimated Not to Exceed fee of \$33,842.00. This proposal is subject to the terms and conditions in the Qualified Consultants List Surveying Services Master Agreement dated September, 2014 between Pima County and Psomas. This proposal will be in effect for a period of 30 days from this date. Upon receipt of your work order we will schedule the survey and coordinate the site access.

If you have any questions concerning the proposal, please do not hesitate to give me a call at (520) 292-2300. We appreciate the opportunity to provide our services to Pima County Flood Control

Respectfully Submitted,

PSOMAS

Patrick McGarrity

Digitaly signed by Patrick McGarrity
DN: cn=Patrick McGarrity, o=Psomas
Date: 2014.12.19 10:14:22-0700

Patrick McGarrity, RLS, CP
SR. Project Surveyor

333 E. Wetmore Road
Suite 450
Tucson, AZ 85705

520.292.2300
520.292.1290 Fax

www.psomas.com

PSOMAS

2015 LiDAR Acquisition-Accuracy Assessment Coverage Exhibit
7PIM140200
Scope of Work

Page 2 of 4
December 19, 2014

- 1) Psomas will provide the research and coordination to locate and describe suitable survey control points from previous mapping projects within the County for use as check points within acquisition Area A, as defined in the attached exhibit. Many of the mapping projects done within the County over the past few years have created survey points which are semi-permanent in nature. We believe some of these points may be recoverable and visible in the new data set. The effort will require contacting the local government agencies and private surveyors to request the survey data be made available for this project. The exact number of points and their distribution will need to be evaluated for compliance with the testing requirements for QL2/QL3 LiDAR accuracy assessment as stated in the USGS Survey Standards, Chapter 4 of Book 11, LiDAR Base Specifications. This effort may not provide a sufficient quantity or suitable quality of points to meet the checking requirements. After the research is complete we will schedule a meeting with the Project Manager to discuss the results and recommendations for completing the survey.
- 2) The project horizontal datum will be NAD83, 2011 (epoch 2010.00). The vertical datum will be NAVD88. Orthometric heights (elevations) will be derived from GPS measurement of ellipsoid heights and transformed using a high resolution geoid model, Geoid 12A. All coordinate values will be expressed in Arizona State Plane Coordinates, Central zone, with units in International Feet. Survey points defined in other systems or epochs will have to be transformed for compatibility with this project datum.
- 3) In areas where no suitable existing survey points are found Psomas will mobilize a survey crew to collect points using either static or RTK GPS methods. These points will be collected and processed to ensure they exceed the positional tolerances required by the ASPRS Guidelines for Vertical Accuracy Assessment for LiDAR Data. All survey work will be supervised by an Arizona Registered Land surveyor.
- 4) The number of check points for the project areas will be distributed so that no more than 20% of the points fall within a single quadrant. The total number of check points for area A is estimated to be 135-175 points. The total number of check points for area B is estimated to be 25-50 points. Both vegetated and non-vegetated classification areas will be evaluated, if applicable.

PSOMAS

2015 LiDAR Acquisition Accuracy Assessment Coverage Exhibit
7PIM140200
Scope of Work

Page 3 of 4
December 19, 2014

- 5) A final Accuracy Assessment Report will be prepared and submitted. Accuracy reporting will include the error residuals at each check point, a Root Mean Square Error analysis (RMSE) for each classification, and the NSSDA error estimates at the 95% confidence level. The horizontal and vertical accuracy for each classification will be stated per the USGS LiDAR Base Specifications. The report will be sealed by an Arizona Registered Land surveyor.
- 6) No specifications currently exist for testing the horizontal accuracy of LiDAR data sets. A draft of the ASPRS Positional Accuracy Standards for Digital Geospatial Data is currently under review with anticipated acceptance in early 2015. Horizontal error in LiDAR is mainly a function of the positional and attitude errors at the sensor, and the flying height. An estimate of the horizontal error can be made assuming the positional, attitudinal, and height accuracies are known. Well defined points typically used for checking planimetric accuracies may not be appropriate for LiDAR analysis. For this project we will emphasize on locating check points that fall at the end of paint stripes and other high contrast features for use as horizontal checks. Horizontal checks will be evaluated similar to the vertical check points. Review of the LiDAR data set to select well defined points should be done prior to the field work.

Cost Estimate:

Identify and document existing check points for QL2/QL3:

Acquisition Area	Estimated Number of Check Points	Cost
A (2,203 sqmls):	150	\$6945.00
B (36 sqmls):	N/A	

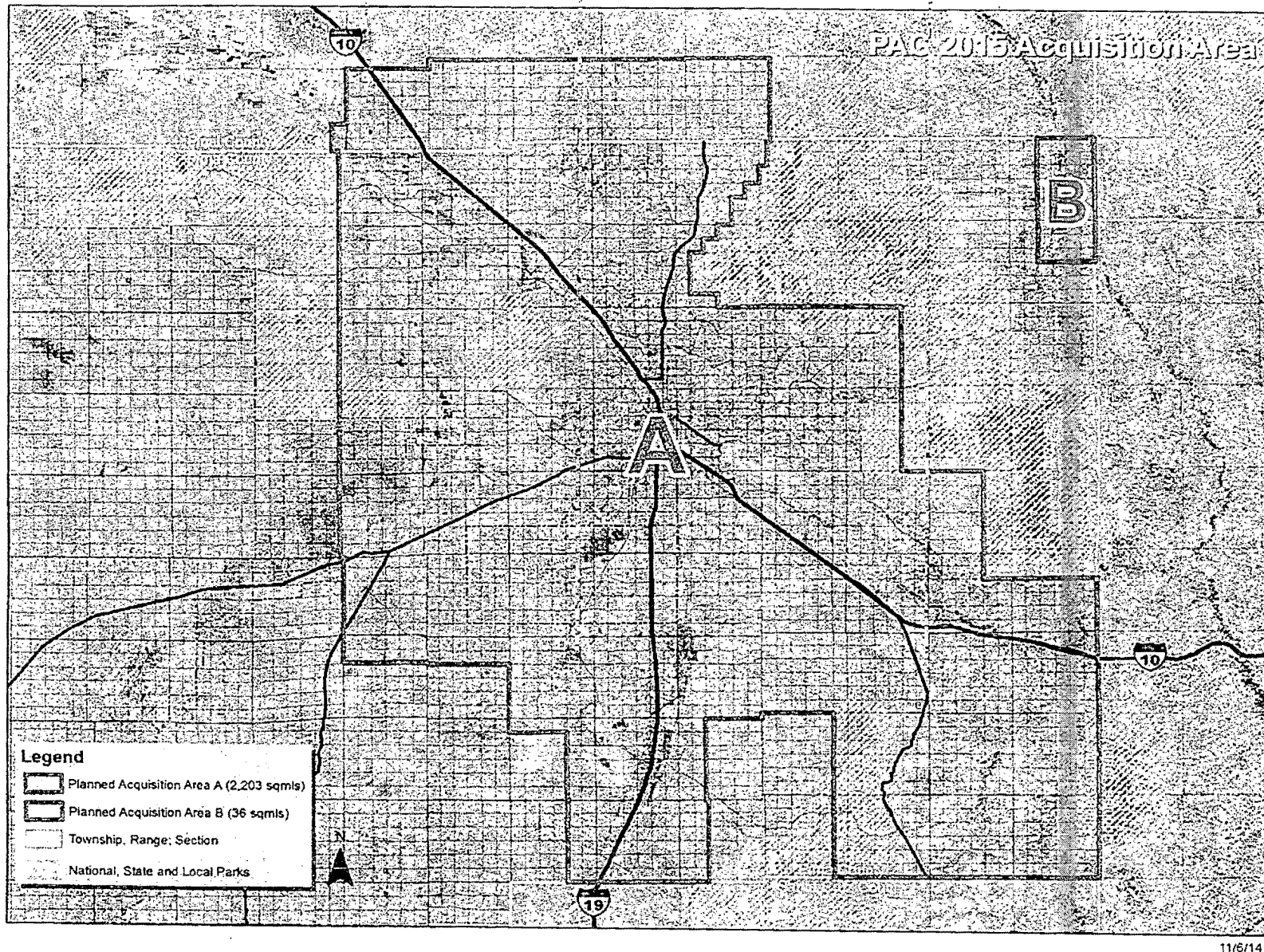
Acquire new check points and run Horizontal and Vertical Accuracy Assessment for QL2/QL3:

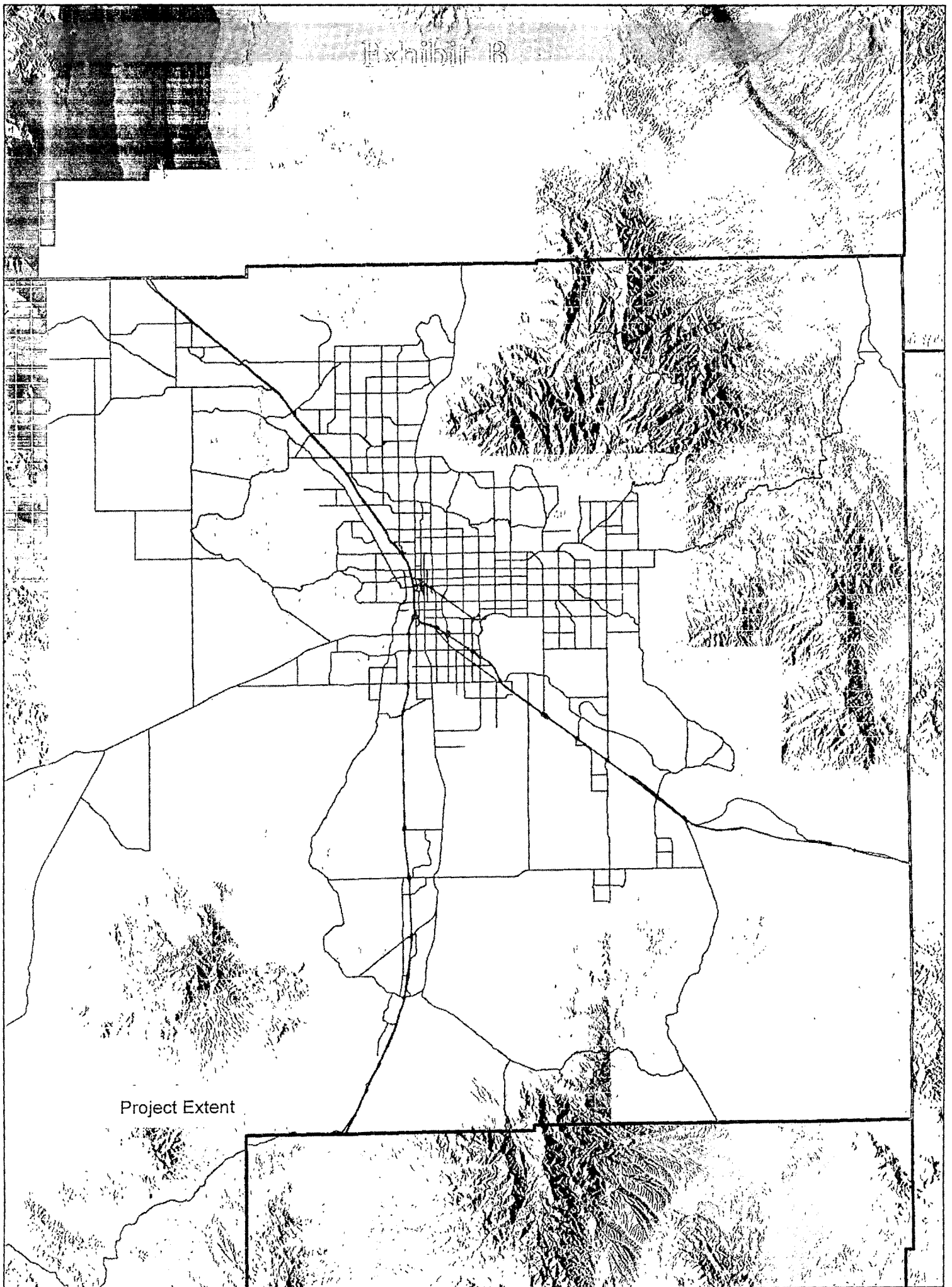
Acquisition Area	Estimated Number of Check Points	Cost
A (2,203 sqmls):	150	\$24,821.00
B (36 sqmls):	25	\$ 2076.00

P S O M A S

2015 LiDAR Acquisition Accuracy Assessment Coverage Exhibit
7PIM140200

Page 4 of 4
December 19, 2014





Project Extent