

## AGREEMENT

THIS AGREEMENT, made this \_\_\_\_\_ day of \_\_\_\_\_, 2013, by and between BOARD OF SUPERVISORS OF Madison County, MS hereinafter referred to as the “**County**”, and The Sanborn Map Company, Inc., whose principal office is at 1935 Jamboree Drive, Suite 100, Colorado Springs, Co 80920, hereinafter referred to as the “**Consultant**”.

### WITNESSETH THAT:

WHEREAS, the **County** desires to engage the **Consultant** to render certain professional services and deliver certain materials hereinafter described; and

WHEREAS, the **Consultant** represents that it is qualified, willing and able to provide the professional services and deliver the requested materials to the **County** according to the **County's** specifications and the terms of this Agreement; it is therefore agreed and understood that:

#### I. SCOPE OF AGREEMENT

It is the **County's** desire to have the **Consultant** perform aerial imagery and provide digital orthophotos for the entirety of Madison County. The detailed scope of work and deliverables to be provided under this contract are described within the RFP, proposal documents and selection process of the fourteen MS County consortium entitled M2MAP. All of these RFP/Proposal documents are bound herein as an integral part of this **Contract** as Exhibits A-1 through A-5. These are listed below in order of priority in the event of any inconsistent or contradictory provisions:

A-1: This contract document executed this \_\_\_\_\_ day of January, 2013.

A-2: The **Consultant's** response to M2MAP technical and administrative questions dated January 7, 2013.

A-3: M2MAP response to bidder's questions dated December 26, 2012.

A-4: The **Consultant's** proposal dated January 2, 2013.

A-5: The M2MAP Request for proposals (RFP) dated December 14, 2012.

All required tasks shall be completed in full and all required data and reports shall be delivered by the **Consultant** to the **County** no later than December 30, 2013. Digital orthophotos shall be completed by the end of November 2013 with the 30 day period until December 30, 2013 set aside for final QA/QC and project wrap-up. All documents, source documents, databases, indexes, digital images, digital data, reports, etc. collected and/or used by the **Consultant** in the development of this project shall be the exclusive property of **Madison County**, and the **Consultant** shall not distribute, sell or loan any of these materials to any other party without full disclosure and *written consent* of the County Board of Supervisors. All materials and data used in the Orthophotography and GIS data development and processing will be delivered back to the **County** at the project completion. It is anticipated that the total fee to be paid by the County to the Consultant for this contract will be a Firm Fixed Price of **\$52,054** as outlined and described in contract Exhibit “C”. Map accuracy shall be defined as ASPRS Class I.

Work shall be completed by the **Consultant** in the following summarized Phases, all of which are described in greater detail within Contract Exhibits A-2 through A-5.

- A. **Phase I.** . The Consultant shall acquire approximate 6 inch pixel digital imagery of the entirety of Madison County with a raw exploitation Ground Sampling Distance (GSD) of slightly less than six inches using a Microsoft UltraCAM Eagle digital sensor. Four bands (each band at 16 bit depth) shall be captured as RGB and NIR. Aerial imagery shall be captured to an extent such that all County tax maps have full coverage and imagery capture that enables Orthophoto imagery development at least 800 feet beyond all adjacent County borders, including those that are a part of the M2MAP consortium. The flight plan for this imagery capture is attached as Exhibit B-1. Imagery acquisition must be completed in full prior to objectionable deciduous vegetation leafing in the 2013 flight season, and no later than March 21, 2013. Imagery acquisition shall incorporate Airborne GPS (multiple base solution) and IMU technologies with a report of results provided as a brief narrative and excel spreadsheet of exposure center and attitude results. No individual flight line shall exceed 40 miles in continuously flown length.
- B. **Phase II.** The Consultant shall provide and utilize pre-paneled or photo ID (PID) ground control points as laid out within Section 3 of the Consultant's proposal (Exhibit A-4) using the ASPRS Class I accuracy map option (red triangles). This ground control layout also incorporates all of the Class II option points (green triangles).
- C. **Phase III.** The Consultant shall perform an aero-triangulation (AT) adjustment of all blocks of digital imagery using the ground control points, ABGPS and IMU data as weighted control with a report of results provided as a brief narrative and excel spreadsheet of coordinates, elevations, residuals and statistics. Selected ground control points shall be used as blind check points with residuals calculated and reported. These check points may then be rolled into the final adjustment as primary control.
- D. **Phase V.** The Consultant shall develop a Digital Elevation Model (DEM) suitable to scale and precision to produce digital orthophotos at a scale of 1'=100' at ASPRS Class I accuracy from the digital imagery and AT described in previous Phases and contract Exhibits. This DEM may be developed from existing datasets, auto-correlation from the imagery, existing LiDAR data, stereo compilation or a combination of these methods. The final DEM utilized for Orthophoto rectification shall be delivered to the County as an ArcGIS Geodatabase or Shapefile.
- E. **Phase VI.** The Consultant shall produce and deliver a County-wide dataset of 1"=100' digital orthophotos having a 6 inch pixel ground resolution. The 16 bit per channel four band digital imagery shall be retained through the entire differential rectification and mosaic process, with 8 bit imagery output at the end of the process for delivery to the County. The orthophoto imagery must be delivered as either 2500' by 2500' or 5,000' by 5000' tiles with imagery extending at least 800 feet beyond all county borders as described in Phase I, above. All final map data must meet ASPRS Class I accuracy standards.

## II. COMMENCEMENT AND PROSECUTION OF WORK

Work done by the Consultant will commence immediately upon receipt of authorization to proceed, with all required contract work to be completed in full, approved and accepted by the County no later

than December 30, 2013. It is expected that both parties will carry out their respective responsibilities as diligently and expeditiously as possible. However, in the event that unforeseen circumstances arise that may delay the timely completion of any part of the project, the following provisions will apply:

- A. If the **County** fails to supply the **Consultant** when requested with pertinent and necessary information or materials essential for the progress or completion of any part of the project, then the **Consultant** shall be permitted to effect a temporary suspension of work and make a written request for a contract schedule extension. Whatever time is lost as a result of the **County's** delay in supplying said information or materials will become an extension of the completion date based upon the **County's** concurrence that a reasonable time extension is warranted.
- B. Delays on the part of the **Consultant**, not specifically excused by force majeure, as defined below, may be excused and become an extension of the applicable completion date, if:
  - 1. The **Consultant** has submitted in writing and in advance of the applicable completion date, a request that certain delays of work be excused by the **County**, stating therein explicit reasons which would justify such delays; and
  - 2. The **County** responds in writing, granting to the **Consultant** approval for an extension to the applicable completion date for a specified time limit based upon the **Consultant's** request. The **County** shall have the sole authority to accept and grant, or deny, any schedule extension requests by the **Consultant** within this provision of the contract, and the **County** shall not be required to justify or defend any denial; however, the **Consultant** must provide a detailed explanation as to why the **County** should consider any schedule extension request.
- C. Force Majeure: The **Consultant** shall not be liable for loss or damage due to delay in delivery resulting from any cause beyond **Consultant's** reasonable control that directly cause a project delay from or due to compliance with any regulations, order, acts, instructions or priority requests of any Federal, State or Municipal Government or any department or agency thereof, civil or military authority, acts of God, acts or omissions of the **County**, fires, floods, unusually severe weather, strikes, blackouts, unforeseen factory shutdowns, embargoes, wars, riots, delays or shortages in transportation. In the event of such delay, the **County**, upon the written request of the **Consultant**, may equitably adjust those contractual provisions as may be affected by such a delay. The **County** shall have the sole authority to accept and grant, or deny, any schedule extension requests by the **Consultant** within this provision of the contract, and the **County** shall not be required to justify or defend any denial; however, the **Consultant** must provide a detailed explanation as to why the **County** should consider any schedule extension request.

### III. WARRANTY, LIABILITY, AND STANDARD OF CARE

The **Consultant** shall perform services for the **County** in a professional manner, using that degree of care and skill ordinarily exercised by and consistent with the standards of competent Consultants

practicing in the same profession or a similar locality as the project. The consultant shall warrant that the delivered products meet or exceed the requirements as defined by the scope and exhibits of this contract. In the event any portion of the products or deliverables fails to comply with this warranty obligation and the **Consultant** is notified in writing prior to one year after final delivery of all services, the **Consultant** shall re-perform or correct such portion of the services at no additional cost to the **County**.

The warranty provided by the **Consultant** is based on the product conforming to mutually agreeable acceptance criteria, established by the **Consultant** and the **County** defined by the scope and Exhibits of this contract. Regarding review and approval of products and deliverables, all reviews/data inspections are to be performed at the map scale specified for the delivered product. All image quality reviews for purposes of approval are to be performed at not greater than a 1.2:1 map scale of the specification for the delivered product. The consultant shall not be held responsible for any anomalies or imperfections that may be apparent at higher levels of zoom beyond a review of 1:2:1 times the designated map scale. All alignments, seams, etc. will meet the project specification. Accuracy measurements will conform to the standard as specified for the specific delivered product and conform to the mutually agreed acceptance criteria. Map accuracy requirement shall be as specified by ASPRS Class I mapping for 1'=100' scale maps developed with a six inch pixel, 1'=200' scale maps developed with a twelve inch pixel, and 1'=50' scale maps developed with a three inch pixel. Only clearly defined points shall be used for any map scale accuracy checks. This process only applies to unambiguous measurements on clearly defined features. Radiometry/Color balancing is often subjective. The **Consultant** only warrants the imagery will meet the radiometry specification agreed to within a representative land cover Pilot area to be mapped as soon as practical after imagery acquisition and before general map production.

If the **County** believes that a delivered product does not meet the project specifications, and has evaluated the product against the acceptance criteria the County may submit a request for review. A determination should be made of the specific non-compliance by checking the questionable characteristic against the acceptance criteria before submitting a claim against the warranty. Submissions should include complete information, including tile name, location within tile, nature of the problem and the relationship to the acceptance criteria. A screen shot (jpg or bmp) should be provided, if practical. The **Consultant** agrees, repair or replacement will occur within thirty (30) days. If the Consultant disagrees, the claim will be returned to the **County** with a request for mediation.

This warranty is in lieu of all other warranties. No other warranty, expressed or implied, including warranties of merchantability and fitness for a particular purpose is made or intended by any proposals submitted pursuant to this Contract, by furnishing an oral report of the findings made or by any representations made regarding the services included in this Agreement. The **Consultant** shall not be held liable whether in contract, tort or otherwise for any punitive, indirect, special, exemplary, consequential or incidental damages including, but not limited to loss of profits, loss of data, or loss of use damages arising out of or in connection with the sale or supply of the delivered products whether or not the consultant has been advised or otherwise might have anticipated the possibility of such damages.

The **Consultant** will provide to the County a current Certificate of Professional Liability Insurance (E&O: errors and omissions policy for the professional services covered by this contract) to cover the tasks and deliverables of this contract, with a policy amount of at least one million dollars. This Professional Liability Insurance coverage is provided by the **Consultant** as a Professional Services Corporation to ensure the faithful and satisfactory performance of this project and is provided as one means to defend and indemnify the **County**. The **Consultant** shall also provide an Accord type certificate of insurance for all liability and workers compensation coverages, the minimum amounts of which must meet State of Mississippi standards and amounts. All referenced policies must remain in full effect for the full duration of the contract period with the E&O policy remaining in continuous effect for at least one full calendar year after the contract completion date. The E&O accord certificate shall reference the **County** as a certificate holder.

#### IV. PAYMENT TO CONSULTANT

- A. Cash payments of the agreed upon total cost for each task of work will be made by the **County** to the **Consultant** as the work is completed and described herein within Exhibit C.
- B. The **Consultant** may secure payment for a percentage or the full amount of monies allocated to tasks under each task by submitting to the **County** the following:
  1. All deliverable items or evidence of work-in-progress representing that percentage or the full amount of work for which the **Consultant** is claiming payment; and
  2. A dated invoice showing the amount of the claimed payment with a brief description of the work done for each separate amount being claimed. Invoices may be submitted monthly based upon work-in-progress and/or deliverables.
  3. The **Consultant** shall provide a written project status report to M2MAP for all fourteen Counties of the consortium; such report shall list individually the status of progress for each **County**. Written status reports shall be submitted once every two weeks for the period of February 1<sup>st</sup>, 2013 through March 31<sup>st</sup>, 2013 and then monthly thereafter until all Counties within the M2MAP consortium are 100% finished, delivered and accepted. The **Consultant** shall launch and host an M2MAP project website upon which all status reports and other written communications shall be posted and maintained within topic oriented links or folders. Secure logins will be provided to those M2MAP County and Agency representatives designated by the County Assessor. The **Consultant** shall also launch and host a Sanborn GeoServe M2MAP project website of sufficient depth and strength to enable county representatives to efficiently QA/QC digital orthophoto imagery and log edit calls onto the site. Orthophoto data on the GeoServe website shall be maintained by the Consultant for any given **County** until all of that County's datasets, reports and deliverables have been approved and accepted by the **County**.

- C. The **County** will make prompt payments to the **Consultant** following receipt of the items described in Paragraph IV. A and B, above, subject to formal acceptance by the **County**--as complete, satisfactory and meeting all applicable specifications--of all deliverable items, or evidence of work in progress, representing that percentage of the full amount required to substantiate the claimed payment.
- D. The **County** shall pay within thirty (30) days all payment claims submitted by the **Consultant**, meeting all of the above requirements, and not formally disputed by the **County**. The **County** shall not use the disputation of one payment claim as a reason for disputing or not paying on time any other payment claim.
- E. The **County** may impose and charge Liquidated Damages of \$50 per calendar day for each day that the **Consultant** is late beyond the final completion date of December 30, 2013. Liquidated damages shall be capped at a total of \$10,000 (not to exceed) for this contract. As described in previous Sections II.A.B.C, the **Consultant** may request and the **County** may approve an extension of the final completion date. Any such approved extension will become an automatic extension in regard to initiating liquidated damages. The Liquidated Damages may be charged as actual compensation for losses and do not constitute a penalty or forfeiture. Liquidated Damages may be deducted by the **County** as an offset to invoices from the **Consultant**.

V. WORK-IN-PROGRESS INSPECTIONS

The **Consultant** shall cooperate fully with the **County** or the **County's** representatives in making possible work-in-progress inspections as frequently as desired by the **County**. In the event the **County** or its representatives reasonably find that project work is not being performed in accordance with the applicable specifications, then the **County** shall promptly notify the **Consultant** in writing of the unacceptable work, and the **Consultant** shall take immediate appropriate corrective actions.

VI. OTHER LEGAL RESPONSIBILITIES OF PARTIES

- A. The **Consultant** shall observe and comply with all applicable federal, state, and local laws, ordinances and regulations during its performance under this Agreement.
- B. The **Consultant** shall save harmless the **County** and its representatives from all suits, actions or claims of any kind brought on account of any injuries or damages sustained by any person or property in consequence of any act of omission or negligence by the **Consultant** or its employees or agents, or from any claims or amounts due arising or recovered under the State's Worker's Compensation laws. **Consultant's** indemnity and hold harmless obligation undertaken pursuant to this contract, if any, shall specifically exclude that portion of such obligations which could require **Consultant** to indemnify or hold harmless **County**, its agents, employees, or County Consultants for their own negligence or willful acts or omissions.
- C. The **County** agrees to mitigate its damages, should any damages arise in the course of this Agreement, to every extent possible, and to take such reasonable measures to prevent injury

or damages within its jurisdiction as any reasonable prudent individual or entity would take.

VII. ASSIGNMENT

This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns. Neither party shall assign its rights and/or obligations under this Agreement without the prior written consent of the other party. The RFP by M2MAP required respondents to identify their entire Team, including major subcontractors. The **Consultant** identified Shandong Eastdawn Corporation as a major photogrammetry sub-consultant which is herein approved for this contract. Keystone Aerial Surveys of Philadelphia, PA as an aerial imagery acquisition sub-consultant is also approved. Any additional sub-contractors that the **Consultant** chooses to use in the course of the work shall: 1). be identified in a written request to the **County** prior to use on this project by the **Consultant**. Such identification must include a basic qualifications statement as called for in the M2MAP original RFP with detailed contact information for the requested sub-consultant, and 2). be approved in writing by the **County**. The **County** shall have the sole authority to accept and grant, or deny, any sub-contractor requests by the **Consultant** within this provision of the contract; however, the **County** shall not withhold such permission unreasonably for any written request that is necessary for the **Consultant** to execute the work within the project schedule or specifications. The **Consultant** must provide a detailed explanation as to why the **County** should consider any sub-consultant and approval must be provided in writing by the **County**.

VIII. PRICE ESCALATION

The unit rates contained herein shall remain in effect until June 1<sup>st</sup> 2014. In the event the **County** should cause the project to be delayed beyond June 1<sup>st</sup> 2014, then the unit rates contained herein may be adjusted to reflect any increases in the Producer Price Index (PPI). Any services provided to the **County** after June 1<sup>st</sup> 2014 may reflect the average annual PPI for the calendar year prior to when the services are actually provided. In no event may the **Consultant** adjust any unit rates to any greater amount if the performance of work occurs after June 1<sup>st</sup> 2014 and the reason the work occurred after this date is due to any cause directly created by the **Consultant**. Any increase in any unit rates shall not exceed 6% in any calendar year.

IX. WAIVER, MODIFICATION AND SEVERABILITY CLAUSE

No waiver, modification or cancellation of any term or condition of this Agreement shall be effective unless made in writing and signed by authorized representatives of each party. Nor shall any waivers be deemed to excuse the performance of any act other than those specifically referred to in said written notice of waiver. If any provisions of this Agreement shall be held to be invalid or unenforceable for any reason, the remaining provisions shall continue to be valid and enforceable, but that by limiting such provision it would become valid or enforceable, then such provision shall be deemed to be written, construed, and enforced as so limited.

X. NOTICE PROVISION

Any notice or communication pertaining to this Agreement shall be deemed to have been duly given by the parties hereto if sent to the other by common courier (i.e. FedEx, UPS) or USPS registered mail with delivery confirmation provided by signature or signed return receipt to the address hereinafter stated, or to such other address as the parties may mutually agree upon.

For the County:

**Madison County, MS**

For the Consultant:

**The Sanborn Map Company, Inc.**

1935 Jamboree Drive,  
Suite 100  
Colorado Springs, CO 80920

Attn: Krysia Sapeta, CP, PMP, SP,  
GISP: Project Manager  
188 Pinellas Lane, Suite 304  
Cocoa Beach, FL 32931  
Phone: 321-298-1744  
[ksapeta@sanborn.com](mailto:ksapeta@sanborn.com)

Attn: Raquel Charrois, , CP, CMS,  
PMP, RPP, SP: Project Principal  
1935 Jamboree Drive,  
Suite 100  
Colorado Springs, CO 80920  
Phone: 866-726-2676  
[rcharrois@sanborn.com](mailto:rcharrois@sanborn.com)

The **Consultant** shall not replace either the designated Project Manager or Project Principal without a prior written request to the **County** and responding written approval from the **County**.

XI. CONSTRUCTION

This Agreement shall be construed and interpreted in accordance with the laws of the State of Mississippi..

XII. DISPUTES

Any dispute arising under this contract which is not settled by agreement of the parties may be litigated in the courts of the state from which the contract is issued, or federal courts. Venue for any legal or equitable action hereunder shall be in Madison County, Mississippi.

XIII. ENTIRE AGREEMENT

The terms and conditions of this Agreement and any document specifically incorporated herein by reference, if any, constitute the entire Agreement between the parties. No prior communication, whether written or oral, nor any course of prior dealings between the parties shall be read into such



Agreement for purposes of construction, interpretation or any other purposes whatsoever.

IN WITNESS WHEREOF, the parties have caused this instrument, consisting of 9 pages and Exhibits A-2, A-3, A-4, A-5, B-1, and C to be executed by themselves or their duly authorized officers or agents hereunto the day and year first written above.

Board of County Supervisors  
Madison County, MS

The Sanborn Map Company, Inc.

By: \_\_\_\_\_

By: \_\_\_\_\_

Attest:

Attest:

\_\_\_\_\_

\_\_\_\_\_

## Contract Exhibit A-3

December 26, 2012

### M2MAP Responses to Bidders' Questions

I. Question Topic: 1"=200' scale versus 1"=400' scale for areas to be mapped with one foot pixel:

1. On page 1, the RFP states "1 foot for 1": 400' scale". Do you mean that this should be 1":200'scale?

3. On the first page the statement reads "The specifications are six-inch for 1":100' scale and 1foot for 1":400' scale." Did you mean 400 scale OR should this read 1":200' scale?

3.) On pg. 1 section 1 (RFP Purpose) the RFP states the specification 1 foot for 1":400'scale. On pg. 7 section 7.2.2 (Aerial Acquisition) the RP states a scale of 1"=200 foot with a 1 foot GSD. Please clarify.

I. Response: Mississippi Counties have traditionally prepared maps of rural areas at a scale of 1"=400' with each map prepared for the tax office application (MS Dept. of Revenue minimum requirements) incorporating approximately four land sections. Irregular sections, rivers county boundaries complicate this general pattern on a local level, but this has been (and continues for most rural counties) to be the process. In recent years past, most rural counties have acquired digital orthophotography for these rural areas with a two foot pixel. In fact, the statewide digital orthophoto program of just a few years ago was based on a two foot pixel. Of recent time, we have been told time and again by photogrammetry firm representatives that there is now minimal difference in cost between a one foot pixel versus a two foot pixel with today's digital sensors by virtue of having to climb to altitude for acquisition, automated ortho and seamline processing for multitudes of images, etc. Further, the M2MAP project includes two participating and funding assist agencies; being, USGS and MSDOT. These agencies have decided that a one foot pixel is the maximum resolution for which their funding is to be applied. Therefore, the M2MAP project has been designed/planned for a one foot pixel within all traditionally mapped 1"=400' areas. Some statewide digital orthophoto programs consider a one foot program to be representative of a "traditional" 1"=200' scale map. Some states even consider a six inch pixel to represent a 1"=200' scale map. Hence, the mixed discussion of 1"=400' and 1"=200' scale within the RFP. We realize that discussion of this topic can be greatly affected by the altitude at which a given digital sensor must be flown to achieve a given pixel resolution. The old days of the fixed focal length of mapping cameras and the direct translation to map scale are apparently gone. Yet, we still have to think in terms of map scale and map accuracy (see next question topic) at the final map data user level (the tax office, planning office, etc.). For this project, we choose to characterize the one foot pixel areas as 1"=200' scale mapping. This is an upgrade for traditional thinking for MS Counties for rural areas. The six inch pixel map areas are considered to be 1"=100' scale mapping, as they have traditionally been

considered for MS Counties in past years. In this regard, please note the following excerpt from the RFP for data acquisition and delivery:

"7.3.2.2 ...The existing County tax map index (for each county) shall be utilized for the final imagery tiling scheme. All map tiles shall be delivered as full coverage for the PLSS delivery boundaries. Partial PLSS map tiles will not be accepted. This applies to both quarter section tiles at 1"=100' with six inch pixels within and adjacent to towns and developed areas as well as full land sections along the County border. Tile deliveries are to be the existing tax map index from each County, which for some Counties is a grid and numbering system of 2500' and 5000' even SPC grids. For these Counties, the County will take the responsibility to recombine and re-cut this imagery to for PLSS quarter section and section centered tiles and maps."

"7.6.1 The Contractor shall deliver a complete set of uncompressed digital orthophoto images in a format (GeoTIFF with world file), tiled per the County index..."

## II. Question topic: Map Accuracy.

Question: What ASPRS Class standard is required for the horizontal accuracy of each scale of Imagery (1"=100' & 1"=200')?

2.) What are the Horizontal and Vertical Accuracy Specifications Required for the RFP?

1. What is the minimum required accuracy (e.g., US NNAS, ASPRS Class 2) for the 6" and 1' resolution orthophotography?

II. Response: There are three, sometimes conflicting, map accuracy standards that have been, and continue to be used for classification of digital orthophoto product accuracy; being; NNAS, ASPRS and FGDC/NSSDA.

While not expressly written, it has probably been the generally accepted assumption that most past orthophoto mapping of MS Counties for MS Dept. of Revenue and Tax office applications have been classified per NNAS.

The USGS participation in this project requires a map accuracy meeting at least:

"Digital Orthorectified Image Horizontal Accuracy: For 0.30 meter ortho image horizontal positional accuracy shall not exceed 1.52-meters NSSDA 95% confidence (0.88-meters Root Mean Squared (RMSE) Error XY (0.62 meter RMSE X or Y)."

"Product Accuracy Information Reporting: Product accuracy information shall be reported according to NSSDA guidelines which are available at:

<http://www.fgdc.gov/standards/projects/FGDC-standards-projects/accuracy/part3/index.html>.

At a minimum, statements concerning source materials and production processes used must be provided at the project level sufficient to meet the requirement of section 3.3 of the NSSDA guidelines."

It is assumed this same equation of map accuracy calculation would apply to six inch imagery; thereby yielding smaller values based on the NSSDA 95% confidence. It is also assumed that these USGS

standards of accuracy must be met by the contractor for the USGS funding participation to be applicable. Please note that the following USGS standard specification requirements have been removed (not responsibility of Contractor) from the scope of work for the Contractor for this M2MAP project: 1). UTM and 1500 meter by 1500 meter ortho tile format and delivery, and 2). Ground control Quality Check points (20 per individual AOI). These tasks, if accomplished, will be handled directly by USGS, or the counties.

The more common and current practice within the photogrammetry industry is to classify digital orthophotography accuracy by ASPRS Class 1 (1/100<sup>th</sup> map scale) or Class 2 (1/50<sup>th</sup> map scale) standards. We have previously (Question Topic I) defined the six inch pixel imagery as 1"=100' and the one foot pixel imagery as 1"=200' map scales. It is the minimum *expectation* of M2MAP that all delivered digital orthophotography will meet ASPRS Class 2 accuracy standards. This most approximates the earlier and older NMAP mapping standard for MS Counties. However, we recognize that final product accuracy is greatly affected by a number of factors, many of which have come heavily into play *since* the NMAP and ASPRS standards were originally written. These include digital sensors with a fixed pixel capture array, thereby dictating flight altitude, heavy reliance on Airborne GPS and IMU for AT input, automated techniques within AT point selection and measurement, LIDAR data for DEMs, auto-correlation for DEMs, other existing easily available datasets for DEM development, etc. etc.

Therefore, we are requesting that each respondent within their proposal provide a discussion and direct language presentation of the map accuracy which will be achieved by their unique proposed configuration and combination of equipment, procedures, flight altitude, use of airborne GPS, ground control layout, AT procedures, source and accuracy of DEM, etc. This presentation/discussion *must agree to meet* the minimum stated standard of ASPRS Class 2 accuracy; however, additional consideration (and point score) will be given by the M2MAP selection committee for respondents who agree to exceed these minimum standards. For example, providing a proposal and described procedure whereby ASPRS Class 1 accuracy standards will be guaranteed for the six inch pixel heavily urbanized areas within Hinds, Rankin, and Madison counties, etc. The proposed technical combinations of ground control, DEM data, flight altitude, sensor capability, AT point selection, statement of final achieved accuracy, etc. will all be reviewed by the M2MAP selection committee in scoring individual proposals.

### III. Question Topic: Digital Sensor.

7.2.2 Acquisition: Based on paragraph 7.2.2 regarding pan-sharpening, please confirm that the Zeiss DMC camera systems accepted by counties and Departments of Transportation throughout the U.S., by the U.S. Geological Survey, and the U.S. Department of Agriculture for digital orthophotography similar to this requirement, will be acceptable for use on this program

Section 7.2.2 Aerial Acquisitions: We have interpreted the language in this section as disqualifying all frame-based color digital cameras in favor of "push-broom" cameras typical of Leica's ADS-40 camera system. Our question is: Are frame based cameras permissible as long as they meet or exceed the image accuracy and pixel resolution as stated in the RFP?

"The contractor may not pan sharpen lower resolution RGB imagery bands with panchromatic

imagery acquired at the .25 foot pixel resolution in order to produce natural color digital orthophotography."

*Q: We estimate that less than 10% of the digital aerial photography cameras in this country meet your criteria for pan sharpening. Can this be amended to allow pan sharpening, used by nearly all frame cameras in the US?*

**III. Response:** This specific language regarding pan sharpening apparently was floated into the M2MAP RFP from language extracted from some other un-related RFP or document. *Please ignore this entire sentence, and consider it to be an EXCLUDED requirement for this project. There is no desire, intent or requirement to exclude any aerial digital sensor camera system that can meet the basic project specifications and deliverables.*

On this basis, yes, frame digital cameras such as DMCs, Ultracams, etc. etc. are certainly approved for this project as well as push broom type cameras such as Leica ADS series, etc. In this regard, please note the following requirements to be included within proposals:

"The Counties require the respondent to use a full color digital mapping camera system for this project. Properties and any calibration reports or data regarding the characteristics of the digital camera proposed shall be included as an attachment within proposals...Camera reports must be specific in regards to capture width and pixel array, simultaneous capture of red, green, blue bands, and radiometric resolution of pixel depth (bbp) for each band/channel. Proposals shall be very specific and clearly state the flight altitude and camera system that is proposed for each scale and/or pixel resolution of mapping. For digital sensors, this statement of flight altitude must include some basic straight forward presentation from the manufacturer of the exact raw image pixel capture of the sensor at this altitude"

"Please note that for any given final delivered pixel resolution, the imagery acquisition by a digital sensor must be smaller or equal. That is re-sampling of data from a larger acquired pixel to a smaller pixel for delivery is not an allowed process. All imagery must be collected at the required resolution or finer."

**IV. Question Topic: NAD83 adjustment.**

6. Which NAD83 version is required?

**IV. Response:** NGS now published NAD83(2011) (epoch 2010) for all "active" control for which they intend to continue to support and adjust. In many states, the available CORS networks have also recently converted to publishing NAD83(2011). Further, it is our understanding that ESRI has a technical group set up and are working rapidly towards supporting NAD83(2011) as one of their drop down menu projections. On this basis, we assume it is reasonable to conduct Airborne GPS and ground control surveys within a NAD83(2011) horizontal adjustment adjustment. Please note that there is an east and west zone within Mississippi. If for any technical reason NAD83(2011) SP coordinates cannot yet be calculated and data delivered in this adjustment, then please make a note of this with explanation in your proposal.

Vertical will be NAVD88. Also, please note that NGS has recently published Geoid2012A. This "A" designation comes about due to corrections primarily within the Mississippi Gulf Coast region from subsidence. The State of Mississippi certainly is in the region of this correction.

**V. Question Topic: Color and 3 band versus 4 band Imagery.**

3. At the beginning of the RF true color orthoimagery acquisition is mentioned, and later in the middle of the RFP it mentions 4-band Imagery collection. To clarify, which type of Imagery do you require?

7.3.2.1 Digital Orthos: Is 4-band Imagery (as stated here) or 3-band RGB Imagery (as stated under 7.2.2) being requested?

4. Just to confirm: All project areas are to be delivered shall include 4-color band (red, green, blue and NIR) Imagery. We ask this only because a 3-band imagery requirement is mentioned elsewhere in the RFP.

**V. Response:** The intent is to receive 4 band imagery. The CIR band is easily separated out within ArcGIS and has a number very useful environmental, storm drainage, soils-land cover, etc. applications. By this statement, we assume that the digital camera system can capture RGB and CIR in a single pass. If the camera system proposed cannot capture all four bands in a single pass, and requires another pass to capture CIR, then please note in the proposal and on the cost form that only RGB three band will be captured. We cannot imagine that the project budget will support flying the entire project twice. Proposals will be scored on the basis of three band versus four band raw imagery capture and the extent to which the CIR band is carried forward in the rectification and delivery processes. If proposers consider that three band imagery has a significant cost savings over four band imagery capture (primarily due to file size and processing resources), then an alternate cost sheet can be prepared and submitted with the proposal on the basis that the cost forms are clearly footnoted as to what is included (three band, four band, etc.).

**VI. Question Topic: DTM/DEM.**

4. In section 7.3.1, the RFP states, "A DTM/DEM developed either wholly or in part from autocorrelation shall not be utilized in the production of the digital orthophotos." Is there a reason for this?

7.3.1 DEM: "A DTM/DEM developed either wholly or in part from autocorrelation shall not be utilized in the production of the digital orthophotos." Why? Auto-correlation produces the most meaningful DEM for each image pair. In the same paragraph before this sentence it says one can only use a pre-existing DEM after approval from prior ortho-projects that may be updated using stereo-compilation. Can each County provide a DEM?

4. The specs indicate that an auto-correlated DEM is not allowed. We believe this carryover from years ago, since use of autocorrelation for ortho DEM generation is now a very common practice. Is use of autocorrelation allowed for DEM generation on this project so long as all ortho accuracy requirements are met?

7.3.1 Digital Terrain Elevation Model (DTM) (DEM): This section indicates "The Statewide DEM generated by the state of MS for the 2006/07 orthophoto project is one example of an existing DEM that may be considered for use by the contractor." The existing statewide DEM from the State of MS for 2006/07 was generated to support 1"=400' scale horizontal accuracy with a pixel resolution for 2 foot ground sample distance see:

<http://www.projects.giscouncil.ms.gov/DisplayGISSurvey.aspx?ProjID=159>. This would not support the accuracy specified for this RFP?

2. Can you reference a source for reviewing the 2006/2007 statewide DEM?

Can you provide the location of the State Wide DEM data for download and review?

**VI. Response:** There are a number of sources from which and methods by which a DEM may be derived for this project. These will vary even across the region as some Counties may even have topographic contours or LIDAR data that may be post processed. Many other counties will not have such datasets available. Because of the time constraints in getting this RFP assembled, we have not had opportunity to inventory the various sources and precision of those sources that may be available. Yes, the language in the RFP regarding restriction of auto-correlation as a technique for developing a DEM is a holdover and extraction from a prior RFP. *Contractors may certainly utilize auto-correlation DEM development so long as the technique and parameters fit within and meet the accuracy requirements for the final delivered orthoimagery data.* However, it is a proposal requirement that respondents describe in clear and direct terms how and from what source the proposed DEM is to be derived, and provide a statement or description of how this source/method meets the stated accuracy requirements of the project in consideration of map scale, flight altitude, vertical accuracy, point spacing, inclusion of breaklines, etc. Please note the url-address as provided in one of the above questions as a starting point for research into the availability and accuracy of the 2006/07 statewide orthophoto project DEM.

**VII. Question Topic: Airborne GPS IMU.**

5. On page 4 the RFP states, "IMU technology may also be used.". On page 8: "Imagery will be collected in conjunction with airborne GPS and IMU data." To clarify, is IMU a requirement?

**VII. Response:** Airborne GPS is a requirement. It is *anticipated* that IMU will probably be an integrated component within most digital camera systems that are of a mapping precision capability to provide orthoimagery to the specifications and expectations of this project. However, we have designated IMU as optional in that some respondents may wish to propose a combination of more extensive ground control and AT procedures (such as manually picking and measuring tie points, etc.) that would meet the

final project requirements and preclude the use of an IMU to report camera attitude. In this regard, please note that a flight and ground control layout plan is a required proposal submittal. Further, all respondents should be very specific and direct within their proposal if IMU technology is included within their imagery acquisition procedures. An AT report for each County project is also a required project deliverable, as described.

**VIII. Question Topic: ASPRS Certified Photogrammetrist.**

3.7 Quality Control: We need clarification on what role the ASPRS CP needs to assume in the project. Section 3.7 calls for the project to "be managed by ... an ASPRS CP serving as the Contractor's project manager". However, section 4.6 calls for a CP "preferably in a role as *technical* project manager". Then, section 6.4 only "requires the proposed team to include an ASPRS CP."

**VIII. Response:** How an individual respondent organizes its team is an internal team decision. The requirement is to have an ASPRS CP on the project team and in a role of at least reviewing photogrammetry materials and deliverable products for compliance to specifications. We assume this review would include the major components of flight and control plan, raw imagery, AT results and final delivered imagery. The proposal should at least describe the role of the team's CP within the workflow process. It is not necessary that the CP actually direct and supervise staff, but it is a requirement to review products and reports as described.

**IX. Question Topic: Sample Orthophoto Imagery; Proposal documents .**

6.8 Sample Orthos: Do we include the GeoTIFFs with the original proposal only, or with all 16 copies as well?

1. Are you asking one original, sixteen hard copies, and a digital file on a CD?

**IX. Response:** Only one copy of sample imagery is required for the submittal. This can be provided on DvD or thumb drive. Unfortunately, based on the time constraints within the proposal and contract review process in order to get documents distributed and these functions completed in time to provide as early of a notification to proceed as possible, M2MAP will need the one original and sixteen hard copies of proposals as specified. The original and at least three of the copies should be bound by spiral ring or into three ring binder type booklets and incorporate index tabs for organization. The remaining thirteen copies can be stapled or simple bound direct prints such as might be created by mass printing from a combined file pdf document.

**X. Question Topic: Oblique Imagery and re-aligned elevated features.**

Section 1 " Purpose" states, professional services in updating GIS products used in the "assessment of taxable properties". That being said will the simultaneously capture of



oblique imagery in addition to the required Orthophotography be considered?

3. Are bridge corrections required in 6" ortho imagery?

**X. Response:** There is no requirement or expectation for oblique imagery. However, the RFP does include the following section, and respondents may propose such add-ons, so long as these are clearly separated from the basic proposal within the submittal:

**"6.9 Section 8: Additional Information -** At your discretion, include additional information such as an equipment list and other information that supports your proposal. However, choose the additional information carefully, because this section of the proposal shall not constitute the bulk of your submission."

Highway bridges and overpasses should be corrected in both 6 inch and one foot imagery for lean or curve that sometimes occurs from being an elevated structure above the general DEM. The technical aspects of how to correct this issue are up to the Contractor. Also, please note that there is not a requirement to correct the lean of taller buildings within urbanized areas. It is expected that the contractor will select imagery in the seamline and mosaic processes that minimizes the lean to the greatest extent. Contractors may *optionally* also propose additional nadir type imagery acquisition or increased sidelap/endlap imagery in heavily developed areas with numerous elevated buildings to help with this issue. Note that there is no requirement or expectation to correct elevated water towers.

**XI. Question Topic: Schedule.**

3. Is the project completion by July 1, 2013 (i. e., 5-months) reasonable?  
*(It can be done, but there might be an extra price for such an expedited schedule, why pay extra if this is not really intended - FYI.)*

**XI. Response:** The anticipation is that the selected vendor will accomplish delivery of at least one full County dataset, reports, etc. by July 1<sup>st</sup> 2013. We understand that it is not realistic that 14 counties can be delivered by this date. Respondents are expected to provide an indication of their proposed delivery schedule within the proposal. In this regard, the RFP requires:

**"6.6 Section 5: Proposed Schedule -** Include a brief schedule for the completion of the project services and the deliverables identified....in your proposal. Include the proposed start and end dates. Describe your projected resource availability for the anticipated duration of the project."

The M2MAP members have not yet determined a delivery order sequence for the individual County datasets. Some of the Counties have major appraisal, GIS or mapping project schedules awaiting delivery of the Orthoimagery. Other counties will actually be acquiring orthoimagery within this project well ahead of MS State Dept. of Revenue schedules and will use the new imagery for on-going maintenance and data updates. On this basis, it is expected that all County projects will be delivered in full at least by the end of December, 2013 according to a sequence to be negotiated with the selected vendor.

**XII. Question Topic: County Inclusion, Project Area.**

2.1 Project Area: This section indicates that "We are reasonably certain the extent of the acquisition area for this project will not change; however, it is possible that some jurisdictions currently planning to participate may opt out due to budget constraints." Is there any way to identify a minimum square mile area that is sure to participate so that the requested per square mile pricing can reflect an efficiency gained by a combined area?

**XII. Response:** This will not be known for certain until the proposals have been reviewed and the individual County officials have made their final decision. As stated in Number XI. above; "Some of the Counties have major appraisal, GIS or mapping project schedules awaiting delivery of the Orthoimagery." Further there are major financial incentives being offered by USGS and MS DOT to each County to participate in M2MAP for which there are no guarantees that such incentives will be offered in coming years. Finally, there is the expectation that by combining a number of Counties into one major project having a reasonable delivery schedule that a more cost effective project can be achieved for each participant.

**XIII. Question Topic: County project management and QA/QC.**

Will there be one single point of contact / PM representing the Consortium during the performance of the project?

5. Will the orthos be QC-reviewed/approved by the individual counties or by a common entity?

**XIII. Response:** Each County will have an individual assigned project manager. Within the larger Counties this will likely be a mapping or GIS staff person with the background and experience to evaluate deliverables and track Contractor performance. Within the more rural Counties the QA/QC task will likely be assigned to the Consultant who normally provides mapping and GIS maintenance services. These services are most often within the jurisdiction of the Tax Assessor's office within Mississippi Counties. The Hinds County Economic Development Authority is serving as a liaison to coordinate the planning, RFP, contract, grant monies and vendor selection processes. The responsibility for individual County project management will transition to each County once vendor selection has been completed and contracts have been prepared and executed. It is anticipated that a same and single basic contract template will be used for each County contract. That contract template is currently being developed by M2MAP.

**XIV. Question Topic: Off shore Production.**

2. No mention is made of using off-shore production resources in the RFP. Given the cost advantage of going off-shore for some of the work stated in the "scope" of this project, is it permissible to use off-shore production resources for this project?

XIV. Response: We see no requirement not to permit offshore production at this time, however, any vendor using offshore production must identify this fact clearly within their proposal, and the selection committee, which consist of county, city, state and federal representatives, may take this fact into consideration among many other factors.

XV. Question Topic: County Map Indexes, Shapefiles and Flight/Ground Control Plans.

2. In section 7.1.4, the RFP states that counties will provide project area boundaries and the specified urban areas in ESRI shapefiles. The files currently provided are mostly graphics. Will we be able to review the shapefiles before the proposal deadline?

7.2.2 Aerial Acquisition: Flight plan and control layout: Do the shapefiles accompany the original proposal only, or all 16 copies as well?

☐ Can files delineating the 6" scale for Sharkey, Itawamba and Adams be provided?

Was there a specific index file for Copleh County among the downloads? The only thing I seem to have on Copleh County is a DWG file outlining county and sections; however, it is difficult to see exactly which areas Copleh County desires 6 inch pixel resolution.

☐ For the Adams County project, Can you verify that the 6" coverage area project boundary is the [natchezcorporatelimits shp] file provided with the Adams County data.

☐ Are there shp files available for the following counties? From a flight planning aspect, having georeferenced boundary files eliminate any chance of misinterpretation.  
o Lincoln, Itawamba, Sharkey, Madison, Forest and Lamar.

The RFP indicates Adams County has approximately 33.25 square miles in which the County desires 6 inch pixel resolution orthoimagery; however, I didn't download any index or other file outlining exactly which sections Adams desires the 6 inch. Could I have missed it in the download and/or does Adams County have a map of desired 6 inch?

From the data that was included with the RFP for aerial imagery, we were able to extract detailed information for Adams County including shape files for the county boundaries and for the towns within Adams County to be flown.

However the data for the rest of the counties listed did not contain shape files for the specified towns within those counties which makes it impossible for us to provide you with the most accurate pricing. While we can download the counties boundaries from their websites, we still need to get accurate shape files for the towns within the counties to be flown at 6".

Would you please provide us with the shape files for the cities to be flown or direct us to the source where we can obtain them?

2. Could you provide the shape files delineating 6-inch and 12-inch resolution imagery acquisition areas prior to submission of the proposal? The RFP says counties will provide these data, do we have to contact each county for these information?

☐ Are shape files available for the city/town area that require 100' scale Imagery?

**XV. Response:** We have been attempting to assemble map indexes for all fourteen participating counties, with the goal to get these into a consistent format of ArcGIS shapefiles in order that respondents may easily review the project quantities and layout, and have a digital base upon which to develop and present proposed Flight/Ground Control Plans with the proposal. However, as you can imagine, existing map indexes are in a wide range of formats and scales within the Counties. The indexes that were available at the time of release of the RFP were included in the RFP download within individual County folders. Supplemental shapefiles and pdf copies that have been developed or assembled since the original posting of the RFP will be distributed via email to all bidders. The files are also available and are available for download: Please request a link to the folder entitled: M2MAP RFP Addenda via email to Blake Wallace ([M2MAP@selecthinds.com](mailto:M2MAP@selecthinds.com)) if you prefer access to the download folder. A map index for every County participating within M2MAP is now available at least to a level and extent that should be adequate to evaluate and compute project quantities for planning and costing as well as provide a base for development of a flight line and ground control plan. The flight line and ground control plan to be submitted with the proposal is being used by M2MAP solely to evaluate the extent of aerial imagery planned over given town and rural county regions and present a direct graphical presentation thereon of planned ground control. We do not require or expect publish level quality plans. Stated simply, we only need documents and/or digital files that portray the required information in a readable format and can be prepared as simply and easily as possible from available sources. In consideration that we are not able to provide ArcGIS shapefiles for every County map index at this time, we would like to revise the submittal as:

1. Only one hard copy of each county plan is required. This can be prepared from a digital vector file or plot or drawing onto a pdf base, etc. We do ask that the base at least show the County line and boundaries of existing 1"=100' scale mapping for towns that are to be mapped with a six inch pixel within more rural Counties that are to be mapped countywide with a one foot pixel.
2. The Flight/Ground Control plans can combine adjacent Counties if this makes the task of preparation and presentation easier.
3. Flight line coverage can be represented by individual lines, or even simply by a polygon boundary for a given flight altitude that includes annotation of flight altitude, acquired pixel size, etc.
4. A digital copy of each plan should also be provided and organized by County folders. The digital file can be any combination of:
  - a. an ArcGIS shapefile.
  - b. PDF developed by digital process.
  - c. PDF developed by optical scanning of a hardcopy.

d. the base map can even be the PDF map index that has been provided by M2MAP.

Again, the purpose for submittal of flight plans at this stage of the costing and vendor selection process is simply to be able to "see" and easily review the flight and ground control plan.

In this regard, please note the following (as footnoted to Attachment C: fee Proposal within the RFP):

1. Any and all partial tiles based on town and county boundaries will be completed and delivered as full coverage imagery tiles.
2. The square miles quantities provided in this table are approximate and provided only as a guide for vendors to provide basic unit pricing.
3. Respondents are responsible for reviewing and confirming and quoting accordingly the quantities for those counties for which index maps are provided.
4. Counties for which indexes are not included in the RFP are being developed and will be provided by Addendum as they become available.
5. Final reimbursement will be based upon the actual quantities of square miles that are included on the final county indexes that will be included as a part of the final contract.
6. Final indexes will be completed and provided by the end of December in order that the selected contractor may complete all flight planning in time for the start of the photo acquisition season.
7. Respondents should anticipate that some re-negotiation of total fee may be involved after review of proposals to adjust cost for shared tiles between County borders that participate in this year's overall project. This negotiation to adjust for duplicate tile deliveries can only realistically occur after proposals are reviewed. Therefore, in the meantime, respondents should calculate pricing for each County on the basis of each County's individual map index and square mileage requirements.

Please note that we request that pricing be provided on a unit price per square mile basis. That unit price (per square mile) is then to be multiplied times the estimated square miles that we have been able to assemble to date as shown in the Attachment C Table. We recognize at this time that a detailed analysis of the map indexes relative to the square miles shown in Attachment C may be somewhat different for some of the Counties. However, most should be reasonably close, and combined with the use of the actual indexes, should be close enough to compute a representative per square mile unit rate. After computing the per square mile unit price for any given County, then please multiply that rate times the square mile quantity that we have shown in Attachment C. That is, do not change the square mile quantity to reflect any difference that you may have found at that stage. This will provide the M2MAP selection committee a more consistent and representative means for comparison of cost proposals. Then, if you wish (optional), you may prepare and submit an alternate revised Attachment C (clearly noted as such) that uses the square miles quantities for mapping that you have computed from your detailed evaluation of the individual County map indexes. As described in footnote number 5 above (and within the RFP), any area quantity differences will be analyzed/corrected/resolved in the final contract and scope of work that is negotiated with the selected vendor, and payment will be made according to the actual final quantities.

**Metro-2-Metro Aerial Photography Update  
Initiative 2012-2013  
Request for Proposal  
2013 Digital Orthophotography**

**1. RFP Purpose**

The Metro-2-Metro Aerial Photography (M2MAP) is seeking proposals from qualified firms to acquire color digital orthophotography for 14 counties in Mississippi during leaf off period of 2012/2013. The specifications are six-inch for 1":100' scale and 1 foot for 1":400' scale. M2MAP is a consortium of 14 local County Governments with common needs for professional services in updating GIS products used in the assessment of taxable properties. The contract for the 2013 imagery will be an agreement between the selected provider and the County Governments participating. The Counties will retain ownership of their respective imagery and associated products in accordance with State law and Freedom of Information Statues. Other State and Federal agencies may participate in ownership via Memorandum or other instrument. This Request for Proposal (RFP) provides an overview of the project task areas, current imagery specifications, and the information required to respond to this RFP. This RFP in no way commits M2MAP to contracting for services. Funding commitments from local participants may not be confirmed until M2MAP can provide actual price proposals to its partners. While cost is extremely important, the consultant's qualifications, past experience and proposed solutions for producing the required products will also be considered.

**2. Project Overview**

Title 35, Part IV, Subpart 02, Chapter 06 of the Mississippi Administrative Code, requires counties to acquire updated photography on regular intervals. These intervals are based on parcel density and overall size of the county. However, at any time the Tax Assessor determines the need and based on the approval of the Board of Supervisors updated aerials may be tasked.

**2.1 Project Area**

The project area for the 2013 flight is currently estimated at 8,600 square miles and includes all or portions of the following counties: Forrest (470), Lamar (500), Covington (415), Simpson (590), Lawrence (436), Lincoln (588), Copiah (779), Rankin (806), Hinds (877), Yazoo (934), Sharkey (427.71), Adams (488), and Itawamba (540) Counties, Mississippi. Madison County (742) is expected to participate and is to be priced as an add alternate as per Attachment C. A map of the current estimated project area is contained within Attachment A of this RFP. We are reasonably certain the extent of the acquisition area for this project will not change; however, it is possible that some jurisdictions currently planning to participate may opt out due to budget constraints. Prospective contractors are requested to provide cost proposals on a per-square-mile basis to accommodate this uncertainty. The final extent of the project will be determined after the bidding process has been completed.

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### 3. Proposal Instructions

3.1 Registration - In order to receive addenda, answers to information requests, and other important communications regarding this RFP, it is imperative you register your receipt of this RFP by sending the following information to Blake Wallace at [blake@selecthinds.com](mailto:blake@selecthinds.com).

- Name of Firm
- Address
- Contact Name
- Phone
- Fax
- Email

3.2 Submission Instructions - Submit one original (clearly marked original) and sixteen copies of the proposal in a sealed package to one of the following:

Mailing Address:

Blake Wallace  
Hinds County Economic Development Authority  
ATTN: M2MAP  
PO BOX 248  
Jackson, MS 39205

Physical Address:

Blake Wallace  
Hinds County Economic Development Authority  
ATTN: M2MAP  
909 North President St.  
Jackson, MS 39202

Faxed proposals will not be considered.

The original proposal shall be signed by a person who is authorized to sign contracts for the respondent. The copies of the proposal should show copies of the signature. The original proposal (and only the original proposal) shall also include a digital copy of the proposal in Adobe PDF format on CD-ROM. Label the outside of the sealed package as follows:

**Project Number: M2MAP 2012-2013**  
**Project Name: Metro-2-Metro Aerial Photography Project 2012-2013**  
**Company: (Insert Your Company Name Here)**

3.3 Deadline - Proposals shall be received at the location stated above no later than the Proposal Due Date shown in the Project Schedule. Proposals received after the deadline will not be accepted. Also, if the agency is closed for any reason, including but not limited to: acts of God, strikes, lockouts, riots, acts of war, epidemics, governmental regulations superimposed after the fact, fire, earthquakes, floods, or other natural disasters (the "Force Majeure Events"), which closure prevents the opening of proposals at the advertised date and

time, all proposals received shall be publicly opened and read aloud on the next business day that the agency shall be open and at the previously advertised time. The new date and time of the proposal opening, as determined in accordance with this paragraph, shall be deemed to have knowledge of and shall have agreed to the provisions of this paragraph. Proposals shall be received by the agency until the new date and time of the proposal opening as set forth herein. **The agency shall not be held responsible for the receipt of any proposal for which the delivery was attempted and failed due to the closure of the agency as a result of a Force Majeure Event.** Each vendor/contractor shall be required to ensure the delivery and receipt of its proposal by the agency prior to the new date and time of the proposal opening.

**3.4 Presentations and Site Visits** - The top three qualified respondents following the evaluation of the proposals may be invited to make a presentation in person or via the web. If so, the Counties will notify the respondents of the date and time of the presentation. In addition, certain respondents may be asked to participate in one or more site visits by the Counties' representatives to investigate the respondent's ability to meet the project requirements. All costs incurred by the respondent in the presentations or site visits shall be the responsibility of the respondent. After any such presentation, visits, or demonstrations, proposals may be evaluated again.

**3.5 Project Schedule** - The Counties have established a tentative schedule for proposal submission, review, Contractor selection, and project initiation, as follows:

#### **Project Schedule**

##### **Milestone Date Time**

- RFP Released December 12, 2012
- Pre-Proposal Tele-Conference December 19, 2012 9:30 AM CST
- Response to Information Requests Deadline December 21, 2012 4:00 PM CST
- Proposal Due Date January 3, 2013 4:00 PM CST
- Bid Opening Date: January 4, 2012
- Oral Presentations (if required) January 7 - 8, 2013
- Contractor(s) Selection Approval January 9, 2013
- Notice to Proceed Approximately February 1, 2013
- Initial Project Completion July 1, 2013

**3.6 Proposal Acceptance and Rejection** - The Counties reserve the right to accept any proposal, to reject any or all proposals, to waive irregularities or informalities in any proposal, and to make the award in any manner deemed in the best interest of the Counties.

**3.7 Quality Control** - The proposal will be evaluated on the basis of the apparent effectiveness of the respondent's proposed quality control program. The respondent will follow ASPRS (American Society of Photogrammetry and Remote Sensing) quality control and accuracy standards and be managed and all work documented as to compliance by an ASPRS Certified Photogrammetrist serving as the Contractor's project manager.

**3.8 Questions** - If you have any questions about this RFP or the proposal procedures, submit them by email or fax by the Information Request Deadline indicated in the Project Schedule.



Requests received after this deadline will not be considered. All requests received before the deadline will be answered by the Counties in an email to all registered recipients of this RFP. The requestor shall be responsible for notifying the Counties of any problem in receiving replies. Email or fax questions about this RFP or the proposal procedures to either:

Blake Wallace [blake@selecthinds.com](mailto:blake@selecthinds.com), 601-353-6056, Fax 601-353-7179

**4. Selection Criteria**-The following criteria will be used to evaluate proposals. This is not intended to be a comprehensive list, nor is the arrangement of the criteria meant to imply order of importance in the selection process.

**4.1 Compliance with RFP Instructions** - The proposals will be evaluated for general compliance with instructions issued in the RFP. Noncompliance with significant instructions may be grounds for proposal disqualification.

**4.2 Technical Expertise** - The proposal will be evaluated on the respondent's demonstrated technical suitability for performing the project services.

**4.3 Digital Camera System** - The Counties require the respondent to use a full color digital mapping camera system for this project. Properties and any calibration reports or data regarding the characteristics of the digital camera proposed shall be included as an attachment within proposals. Camera calibration or manufacturer characteristic reports must be submitted and respondents should be aware that no replacement cameras will be permitted unless the contractor is able to prove to the satisfaction of county reviewers for equal or better capability. Camera reports must be specific in regards to capture width and pixel array, simultaneous capture of red, green, blue bands, and radiometric resolution of pixel depth (bbp) for each band/channel. Proposals shall be very specific and clearly state the flight altitude and camera system that is proposed for each scale and/or pixel resolution of mapping. For digital sensors, this statement of flight altitude must include some basic straight forward presentation from the manufacturer of the exact raw image pixel capture of the sensor at this altitude. The inclusion of Airborne GPS to supplement control is a requirement. IMU technology may also be used to define camera attitude and supplement Aerotriangulation calculations. Proposals should be very specific and straight forward in identifying and describing any proposed application of these technologies. Proposals may be disqualified on the basis of non-compliance to this (these) factor(s).

**4.4 Technical Approach** - The proposal will be evaluated on the methods and technical details of equipment and procedures that will be used to complete the project.

**4.5 Quality Control** - The proposal will be evaluated on the basis of the apparent effectiveness of the respondent's proposed quality control program. The Counties prefer the respondent follow ISO (International Standards Organization) quality control standards and be ISO certified.

**4.6 Professional Registration** - The proposals will be evaluated for professional registration. The proposal Team shall include an ASPRS Certified Photogrammetrist, preferably in a role as technical project manager.

**4.7 Business Registration** - The respondent shall be licensed to do business in the State of

Mississippi prior to award of the contract.

**4.8 Firm Background** - The proposal will be evaluated on the basis of the respondent's background, including the number of years in business, size, and financial stability.

**4.9 Staff Qualifications** - The proposal will be evaluated on the basis of the respondent's demonstrated staff qualifications, including the required professional registrations and certifications.

**4.10 Similar Project Experience** - The proposal will be evaluated on the basis of project experience that is of a similar technical nature and complexity, for clients that are similar in size, location, and type as the M2MAP area.

**4.11 Schedule and Availability** - The respondent's projected schedule and resource availability will be evaluated in the choice of a Contractor, although the Counties understand that the actual beginning and completion dates are subject to the notice to proceed.

**4.12 Sample Digital Orthophoto** - Respondents shall submit with proposals sample data from the proposed camera system that is similar in pixel resolution, map scale and accuracy to the requirements of this project. The sample digital orthophotos will be an important factor in evaluating the Contractor's ability to meet the requirements of the specification.

**4.13 Other Services**- Respondent should address other services available to counties as options or as needed and priced separately for individual county negotiations on a buy up or as need basis for individual county negotiation. Pricing shall be provided for all options contained in Attachment "C" below.

**4.14 Fee** - The respondent's fee will be considered in the choice of Contractor but will not be the sole determining factor.

## **5. Proposal Format**

All proposals shall follow the same format. No exceptions to this format shall be accepted. To be accepted for evaluation, the proposal format shall address all required components in order. The aim of the required format is to simplify the proposal preparation and evaluation processes and to ensure that all proposals receive the same orderly review. All proposals shall include the Components listed in Attachment A.

## **6. Proposal Components**

**6.1 Cover Letter** - Provide a one or two page cover letter. Include the original signed cover letter with the original proposal and a copy of the cover letter with each copy of the proposal.

The cover letter shall provide the following:

6.1.1 A brief statement of the respondent's understanding of the project

6.1.2 The name, title, phone number, fax number, email address, and street address of the person in the respondent's organization who shall respond to questions about the

proposal

6.1.3 Highlights of the respondent's qualifications and ability to perform the project services

6.2 **Section 1: Company Overview** - Provide the following information about your firm:

6.2.1 The firm's name, business address, phone number, and fax number

6.2.2 The year the firm was established

6.2.3 Former names of the firm, if applicable

6.2.4 The type of ownership and parent company, if applicable

6.2.5 The location of the office or offices that would provide the project services

6.2.6 A brief statement of the firm's background, demonstrating longevity and financial stability

6.3 **Section 2: Project Services** - In this section, which is intended to be the heart of the proposal, describe the respondent's expertise with the methods, QA/QC procedures, hardware and software necessary to perform the project services described in Part 7 of this RFP. Include information about the respondent's quality control program.

6.4 **Section 3: Project Team** - Start the section by introducing the designated project manager and the project team. The selection criteria in Part 4 require the proposed team to include an ASPRS Certified Photogrammetrist. Include a project team organization chart.

6.5 **Section 4: Related Experience** - For up to 3 relevant projects, include a one or two page project description that demonstrates similar capabilities in similar projects, for similar clients. Include the name of the client organization, the name of the person who can be contacted for reference, and the contact information for that person. Please try to provide both phone and email contact information for a current contact at the client location that is familiar with the project and can discuss contract performance and deliverables.

6.6 **Section 5: Proposed Schedule** - Include a brief schedule for the completion of the project services and the deliverables identified in Section 2 of your proposal. Include the proposed start and end dates. Describe your projected resource availability for the anticipated duration of the project.

6.7 **Section 6: Fee** - Complete "Attachment C" (the Fee Proposal Form).

6.8 **Section 7: Sample Orthophoto** - Provide a minimum of two different sample digital orthophotos on a CD. The samples shall meet the RFP criteria for the Counties and Urban Project Areas at the intended pixel resolutions. The samples must have been created by your company with the same type of camera system and processes you are proposing for this project. The digital orthophoto samples shall be in uncompressed, rectified GeoTIFF format.

The samples shall be representative of the requirements for orthophotos as specified by the Counties in this project; however, the Counties' acceptance of the samples does not relieve the Contractor from meeting any part of this specification.

**6.9 Section 8: Additional Information** - At your discretion, include additional information such as an equipment list and other information that supports your proposal. However, choose the additional information carefully, because this section of the proposal shall not constitute the bulk of your submission.

## **7. Specifications**

**7.1 Existing Conditions**-Each County will provide the following data and will be made available to the selected Contractor.

**7.1.1 Specified Urban Growth Area boundaries and City Limits**

**7.1.2 Project Area Boundaries** including each County and the specified Urban.

**7.1.3 Public Land Survey System (PLSS)** – Will include Township, Range and Sections for each County; specified Urban areas may also include quarter section lines.

**7.1.4 All files** will be made available in Autodesk AutoCAD file or ESRI shapefile formats.

**7.1.5 Any additional available GIS files** that would assist this project and are not listed above.

The successful Contractor, acting under the authority and approval of the Counties, shall provide the following professional services for the 2012/2013 Digital Orthophotography Project.

## **7.2 General Requirements**

### **7.2.1 Datum, Projection and Accuracy**

The final digital orthophotography will reference the Mississippi State Plane Coordinate System NAD83 for all counties. See Attachment E for east-west zone designations. Contractors are responsible for verifying the correct Mississippi State Plane Coordinate System NAD83 designation for each county.

### **7.2.2 Aerial Acquisition**

True color digital resolution orthophotography will be developed for the areas prescribed in Attachment B at a scale of 1 inch = 200 foot with a 1 foot ground sample distance (GSD) or pixel resolution, and a scale of 1 inch = 100 foot with a 0.5 (1/2) foot GSD. Aerial acquisition will occur during periods when the deciduous foliage is dormant and the prevailing sun angle exceeds 30 degrees. Deciduous Leaf-on imagery will be rejected and the contractor is responsible for all costs associated

with any re-flights. Further, the contractor is responsible to acquire all imagery within the winter 2013 flight season, to include timely internal QA/QC processes to find any unacceptable imagery flight lines or exposures and acquire re-flight imagery within the 2013 flight season. Final orthophoto products will contain less than 5% cloud cover or cloud shadows (Madison, Rankin and Hinds Counties will require 0% cloud cover). Imagery will be acquired using a high resolution digital mapping camera. Data for the camera will be provided in the proposal as well as sample photography. Imagery will be collected in conjunction with airborne GPS and IMU data. Appropriate photo-identifiable or paneled ground control will be acquired to support the aerotriangulation and orthorectification processes. Data should be collected in ground ortho rendition where lateral displacement is not removed from the imagery. Imagery will be collected in natural color for true color rendition. Please note that for any given final delivered pixel resolution, the imagery acquisition by a digital sensor must be smaller or equal. That is re-sampling of data from a larger acquired pixel to a smaller pixel for delivery is not an allowed process. All imagery must be collected at the required resolution or finer. The contractor may not pan sharpen lower resolution RGB imagery bands with panchromatic imagery acquired at the 0.25 foot pixel resolution in order to produce natural color digital orthophotography.

Please note that a flight plan (with flight lines) with ground control layout as a proposal document and an ArcGIS shapefile is a required submittal with the proposal. The source of ground control locations (existing monuments versus new GPS surveys) shall also be designated on the Flight-ground control plan.

For each flight sortie, the pilot or cameraman shall prepare a signed flight log containing the date, project name, aircraft used, and names of crew members. In addition, the following shall be prepared for each flight line: altitude, digital sensor make and serial number, beginning and ending exposure numbers and times, and any other comments relative to the flight conditions.

Ground Control: Sufficient horizontal and, if applicable, vertical control surveys shall be established by the Contractor for all photogrammetric mapping purposes, particularly in regards to meeting the final map data accuracy requirements, taking fully into account the use of Airborne GPS and IMU technology within the aerial acquisition task. The technical proposal shall include a description of ground control methods, sources and quantities that are proposed for this project. Any new ground control surveys must be reported as control diagram that also describes GPS survey methods, occupation times, method of coordinate computation (RTK, OPUS, etc.) and PDOP and statement of precision. Permanent monumenting of new ground control surveys is not required for this project.

### **7.2.3 Analytical Aerotriangulation**

Airborne GPS, IMU data and GPS ground control will be converted to a rigid network through a bundle aerotriangulation adjustment. The final adjustment must include all contiguous data sorties within in a single block, or have defined boundaries between logical sized blocks that are "tied" by both ground control and AT measured common tie points. As a demonstration of accuracy the completed adjustment, a report detailing the results of the triangulation adjustments will be

prepared and submitted for review and approval prior to initiation of the digital orthophoto rectification. Residuals shall be reported within an Excel spread sheet for all AT measured points, ground control points and all pre-paneled or photo ID ground control checkpoints. The report must provide RMSE results and provide a concise and quantified statement of AT and imagery accuracy and precision that is to be signed and certified by the project ASPRS Certified Photogrammetrist.

**7.2.4 Re-flights** - The Contractor at no additional fee shall correct aerial imagery that does not meet defined project specifications. All re-flights shall be centered on the plotted flight lines and shall be taken with the same camera system.

**7.2.5 Crab** - Crab shall not exceed five-degrees between any two consecutive flights, nor more than three degrees on any one flight line. At the earliest opportunity, new imagery shall be acquired to replace rejected photographs or flight lines.

**7.2.6 Forward and Side Overlap** - Forward lap shall average 60 percent and side lap shall average 30 percent, +5 percent. Any adjacent flights with side lap of less than 30 percent or more than 35 percent will be rejected, and the affected flights shall be re-flown at the earliest opportunity.

**7.2.7 Description of Methodology** - Proposals shall include description of the production process, quality assurance and the quality control measures to be included.

**7.2.8 Quality Control** - Throughout triangulation, numerous checks shall be made to detect data and field control errors.

### **7.3 Photogrammetric Compilation**

**7.3.1 Digital Terrain Elevation Model (DTM) (DEM)** A Digital Terrain Model (DTM)/Digital Elevation Model (DEM) shall be utilized at a density level necessary to support the orthophoto production. Terrain/elevation data used in the development of the DEM may be captured by photogrammetric techniques using a softcopy workstation, derived from recent LIDAR data or utilized from a prior aerial photogrammetric project of suitable scale and pixel resolution to support the scale and pixel resolutions of this project. The Statewide DEM generated by the state of MS for the 2006/07 orthophoto project is one example of an existing DEM that may be considered for use by the contractor. Existing USGS DEMs that can be demonstrated to be of sufficient horizontal and vertical precision as well as point and breakline density are another example of a possible source. If an existing stereo compiled DEM or LIDAR data set is used, the project area must be reviewed to determine if significant terrain altering activity has occurred since the DEM data was acquired. If such an area is identified the contractor shall update the DEM by supplemental/replacement stereo compilation. The DEM will consist of points spaced at regular intervals along a grid, points of significant high or low elevations, and ortho affected specific breaklines at significant terrain breaks. Elevation/terrain data shall be captured at a density level sufficient to accurately represent the shape of the ground and to meet the required orthophoto accuracy standards of this project as reported by the contractor and approved by the County. DTM/DEM data from a prior orthophoto project may be used for this project. DTM/DEM data from a prior ortho project may be used for this project only after evidence is provided by Contractor that the prior DTM/DEM meets the scales and

accuracy standards for this project, and the prior DTM/DEM has been updated/supplemented wherever necessary to achieve an accurate and acceptable orthophoto differential rectification and final image. A DTM/DEM developed either wholly or in part from autocorrelation shall not be utilized in the production of the digital orthophotos.

The technical proposal shall provide a discussion of the DEM source and statement of accuracy and precision that is proposed. This statement must relate the proposed DEM accuracy and precision to the stated final orthophoto map precision that is proposed (ASPRS Class of final map orthophoto imagery data, etc.).

**7.3.2 Digital Orthophotography-**The vendor shall describe the production methods, quality assurance and quality control processes that shall be used to meet the following specifications:

7.3.2.1 One set of digital color balanced orthophotography with pixel resolution equal to or better than the resolutions selected from Attachment C by each county. All project areas shall include 4-color band (red, green, blue and NIR) imagery.

7.3.2.2 Tile format shall include the identified PLSS feature specific to each project area. The existing County tax map index (for each county) shall be utilized for the final imagery tiling scheme. All map tiles shall be delivered as full coverage for the PLSS delivery boundaries. Partial PLSS map tiles will not be accepted. This applies to both quarter section tiles at 1"=100' with six inch pixels within and adjacent to towns and developed areas as well as full land sections along the County border. Tile deliveries are to be the existing tax map index from each County, which for some Counties is a grid and numbering system of 2500' and 5000' even SPC grids. For these Counties, the County will take the responsibility to recombine and re-cut this imagery to for PLSS quarter section and section centered tiles and maps. In addition, Respondents should anticipate that some re-negotiation of total fee may be involved after review of proposals to adjust cost for shared tiles between County borders that participate in this year's overall project. This negotiation to adjust for duplicate tile deliveries can only realistically occur after proposals are reviewed. Therefore, in the meantime, respondents should calculate pricing for each County on the basis of each County's individual map index requirements.

7.3.2.3 Visible seams or sutures within a tile or between tiles, which exhibit a noticeable "edge" or "displacement" effect, will be grounds for rejection of that tile.

**7.4 Metadata-**The Contractor shall provide metadata compiled to the current standard endorsed by the Federal Geographic Data Committee (FGDC) for each of the data deliverables. Currently, this is the Content Standard for Digital Geospatial Metadata Version 2 (FGDCSTD-001-1998).

**7.5 Summary of Deliverables-**The Contractor shall be responsible for producing and delivering the following (digital project documents may be in either Microsoft Word or Adobe PDF format):

**7.5.1 Project Documents:**

7.5.1.1 Project Plan -- one hard copy and one digital copy

- 7.5.1.2 Flight Map/Control Diagram – one hard copy and one digital copy
- 7.5.1.3 Ground Control Report - one hard copy and one digital copy
- 7.5.1.4 Aerial Photography Report – one hard copy and one digital copy
- 7.5.1.5 Aerial Triangulation Report – one hard copy and one digital copy
- 7.5.1.6 Project documents may be delivered on DVD media that can be read on a DVD+ROM drive or CD.

## **7.6 Project Data:**

7.6.1 The Contractor shall deliver a complete set of uncompressed digital orthophoto images in a format (GeoTIFF with world file), tiled per the County index and onto media (e.g. portable hard drive) as described. In addition to the uncompressed images, the Contractor shall also deliver to the Client two sets of compressed orthophoto images using an industry accepted compression tool and format agreed upon by the Client. The Contractor shall prepare a set of sample compressed images of multiple adjacent orthophotos with compression ratios of 1:10, 1:20, 1:30, 1:40, and 1:50 for each pixel resolution of the final imagery for review by the Client. The client shall select two of these compression levels for delivery and the Contractor shall create two sets of the compressed orthophotos using the Client's chosen compression ratios for delivery. This process and delivery of compressed MrSID files shall apply to County wide imagery datasets at either one foot or six inch resolution as well as all "town" mapping at six inch pixel.

7.6.2 DEM including enhancements for each County and specified Urban area.

7.6.3 An ESRI shapefile containing all seamlines used for the orthophoto tiles.

7.6.4 Final digital data (orthophotography and DEM Enhancements) shall be delivered on a USB 2 external hard drive. Digital orthophotography produced for this project shall be consistent across entire Counties or specified Urban project areas and meet or exceed the General requirements identified in the Specifications. Work outputs and products, including raw and processed data are the property of the individual Counties and their funding partners that comprise the M2MAP and may not be conveyed other than mandated under Statute to any entity without prior approval of the County Boards of Supervisors.

7.6.5 A County-wide map tile index as a shapefile for each County and each individual contiguous block of 6 inch pixel "town" map tiles.

## **7.7 Period of Performance**

Acquisition of data will be completed in such a manner as to start producing ortho-rectified products by late March 2013. This deadline is established in order to meet the needs of the counties collectively. All counties shall have product no later than July 2013.



## Attachment A

Section	Topic
	Cover Letter
1	Company Overview
2	Project Services
3	Project Team
4	Related Experience
5	Proposed Schedule
6	Fee
7	Sample Orthophoto
8	Additional Information



## Attachment C: Fee Proposal Forms

Project: Metro-2-Metro Aerial Photography

Company: \_\_\_\_\_

County	Pixel Resolution		Square Miles		Cost Per Square Mile		Total Cost
	County	Town	County 400' Scale	Town 100' Scale	County 400' Scale	Town 100' Scale	
Hinds	6"	6 inch	0	1037			
Forrest	6 inch	6 inch	387.17	83			
Rankin	6 inch	6 inch	0	880			
Lamar	6 inch	6 inch	0	500			
Covington	1 foot	6 inch	414.9	32			
Simpson	1 foot	6 inch	590.5	23			
Copiah	1 foot	6 inch	779.3	18.25			
Lawrence	1 foot	6 inch	435.7	13.75			
Yazoo	1 foot	6 inch	1,112	10.75			
Lincoln	1 foot	6 inch	588	35			
Adams	1 foot	6 inch	552	33.25			
Itawamba	1 foot	6 inch	604.0	24.5			
Sharkey	1 foot	6 inch	512	52			
					Grand Total Without add alternate		
Add Alternate							
Madison	6 inch	6 inch	740.0	149.5			
					Grand Total Including add alternate		

- 
1. Any and all partial tiles based on town and county boundaries will be completed and delivered as full coverage imagery tiles.
  2. The square miles quantities provided in this table are approximate and provided only as a guide for vendors to provide basic unit pricing.
  3. Respondents are responsible for reviewing and confirming and quoting accordingly the quantities for those counties for which index maps are provided.
  4. Counties for which indexes are not included in the RFP are being developed and will be provided by Addendum as they become available.
  5. Final reimbursement will be based upon the actual quantities of square miles that are included on the final county indexes that will be included as a part of the final contract.
  6. Final indexes will be completed and provided by the end of December in order that the selected contractor may complete all flight planning in time for the start of the photo acquisition season.
  7. Respondents should anticipate that some re-negotiation of total fee may be involved after review of proposals to adjust cost for shared tiles between County borders that participate in this year's overall project. This negotiation to adjust for duplicate tile deliveries can only realistically occur after proposals are reviewed. Therefore, in the meantime, respondents should calculate pricing for each County on the basis of each County's individual map index and square mileage requirements.

## Attachment D: Proposal Grading Sheet

The following Chart will be used as the final score sheet for judging proposals. There may be additional concerns added based on County or funding partner request. Areas will be graded on a scale of 1-5, 1-does not meet standard 5-meets or exceeds standard.

ITEM	SCORE
4.1 Compliance with RFP Instructions	
4.2 Technical Expertise	
4.3 Digital Camera System	
4.4 Technical Approach	
4.5 Quality Control	
4.6 Professional Registration	
4.7 Business Registration	
4.8 Firm Background	
4.9 Staff Qualifications	
4.10 Similar Project Experience	
4.11 Schedule and Availability	
4.12 Sample Digital Orthophoto	
4.13 Other Services	
4.14 Fee	
Ability to meet Funding Partner Needs	

## Attachment E

### Mississippi State Plane Coordinate System Designation NAD83

County	Mississippi State Plane Coordinate System Designation NAD83
Hinds	West
Forrest	East
Lamar	East
Covington	East
Simpson	West
Copiah	West
Lawrence	West
Yazoo	West
Lincoln	West
Madison	West
Adams	West
Itawamba	East
Rankin	West
Sharkey	West

Note: Contractors are responsible for verifying the correct Mississippi State Plane Coordinate System NAD83 designation for each county.

## Contract Exhibit C

The Consultant shall be paid a Firm Fixed Price (FFP) of \$52,054 for the digital orthophotography as described in the attached contract and exhibits.

This FFP has been calculated based upon the areas to be mapped at the Ground Sampling Distance (GSD) as described within the contract documents and as graphically shown on the project flight and ground control plan; Exhibit B-1.

This FFP has been computed by defining the entire land and water body area within the boundaries of Madison County and extending a buffer distance of a minimum of 800 feet beyond all county borders. The resultant total area has been computed as 766.41 square miles. This minimum area to be mapped has then been multiplied by the contract unit rate for the complete service of digital orthophoto data production and delivery of \$67.92 per square mile to obtain the resultant FFP of \$52,054.

The Consultant shall be paid on the basis of monthly work-in-progress invoices as described by contract Section IV. Monthly invoices may be computed a work-in-progress basis using the following percentages times the FFP:

1. 40% for the aerial acquisition phase (\$20,822).
2. 10% for the ground control and AT production/report phases (\$5,206).
3. 40% for production and delivery of Orthoimagery (\$20,821).
4. 10% retainage (\$5,205).

The retainage (#4, above) is to be invoiced and paid as one final single payment when the entire project is 100% complete and approved by the County.