Missouri
Department
of Transportation

MoDOT

Pete K. Rahn, Director

105 West Capitol Avenue
P.O. Box 270
Jefferson City, MO 65102
(573) 751-2551
Fax (573) 751-6555
www.modot.org

November 6, 2008

Dear Consultant:

The Missouri Highways and Transportation Commission is requesting the services of a photogrammetric consulting firm to provide aerial photography on the list of projects provided on the attached scope of services; jobs may be added or deleted before estimates are requested.

Digital photography with IMU data will be required on all flights. The projects are scattered over the entire state with some being large corridor projects of at least 10 miles in length.

Please limit your letter of interest to no more than two pages. Please make sure to include the following information: location of office branch assigned to this specific flight program, brief summary of personnel qualifications including the number of staff available to deliver project by due dates. List type of equipment such as: type and number of cameras including Airborne GPS capabilities, aircraft available and its location to complete project. Provide a summary of similar work recently completed, and any other information, which might help us in the selection process. We will utilize the consultant information already on file so we will not need a lengthy submittal of other general company information.

Any firm unable to provide services on one of the projects will not be considered to provide services on any of the projects.

We encourage DBE firms to submit letters of interest. You must list any sub consultants that you need to complete the professional services requested by MoDOT.

If your firm would like to be considered to provide these services, submit a letter of interest. All letters must be received by 4:00pm, November 21, 2008 to the address listed below.

Missouri Department of Transportation
P.O Box 270
601 W. Main
Jefferson City, MO 65102
Attention: Bradley D. McCloud – Photogrammetry

You may also submit letters of interest by fax to (573) 526-4535 or E-mail at Bradley.McCloud@modot.mo.gov. A fax or E-mail will be sent to notify the sender that the letter of interest was received. If you have any questions feel free to contact Bradley McCloud at (573) 526-2955.

Sincerely,

Dave Nichols
Director of Project Development

bm/gt
Attachments
cc: Kathy Harvey – de

EXHIBIT I

SCOPE OF SERVICES

The work covered by this Agreement shall include furnishing equipment, materials, professional, technical, and personnel resources necessary for the performance of aerial photography services for design and development of the specified highway project.

The following information will explain and define the items of importance relating to this project. All the elements of work, that are necessary to satisfactorily complete the aerial photography of this project; may not be listed. The lack of a specific listing of an element or item of work does not, in itself constitute a basis for additional services or work supplement, and/or adjustment in compensation.

I. PROJECT

The services shall provide data necessary for application in preliminary highway design.

II. PROJECT LOCATION AND LIMITS

The project sites are located in Missouri. The limits of each site are located in files furnished by MoDOT. Refer to the tables provided below for specific descriptions of each project.

TABLE II-1
MAPPING PROJECT LOCATIONS

Job #	County	RTE	Mile +/-	PhotoScale	Description of Project / Special Conditions
J1U0752	Buchanan	169	1.5	1:5080	West side of I-29 to Rt. AC extension
J1P0875	DeKalb	I-35	1	1:5080	At intersection of U.S. 36
J2P2157	Livingston	65	3.5	1:5080	Bridge replacement
J2P0498	Saline	65	63.5	1:5080	Upgrade Rte. 65 to shared 4-lane from Chillicothe to Marshall
J3P0426	Marion/Ralls	61	11	1:5080	Four-lane roadway relocation from Rte. 24 south junction in Marion County to south of Rte. M in Ralls County
J4S1746	Jackson	350	1.5	1:5080	Realign lanes, Maple to Sterling in Raytown
J4P2256	Jackson/Cass	71	1	1:5080	Interchange at 155th Street, Also fly 3000 feet along 155th east and west of Rte 71
J4I1942B	Jackson	470	10	1:5080	Capacity imporvements from 39th Street to Route 50
J4P1342B	Platte	92	10	1:5080	Capacity improvements from Kansas State Line to I-29
J4I1942C	Jackson	70	2.5	1:5080	Improve interchange at I-470. This is within limits of I-470 Job listed above. Map from Lee's Summit Road to Little Blue Pkwy

Project #	County	RTE	Mile +/-	Photo Scale	Description of Project / Special Conditions
J4I1597	Jackson	435	4.5	1:5080	At 435 and I-70 through improvements at Blue Ridge Cutoff and I-70 and 40 and I-435
J4P2257	Cass	7	4	1:5080	Add lanes to improve capacity from Commercial Street (South Jct - Harrisonville) to Route EE
J6S2228	Franklin	T/V	20	1:5080	Install Guardrail / Need mapping for length of need calculations. Franklin/St Louis Co Line to Route 50
J6S2194	Franklin	A	8	1:5080	Scoping to add 3 ft shoulders and add surface treatment. Route 100 to Route 47.
J8P2154	Greene	60	0.1	1:5080	Intersection Scoping at Oakwood/FR 93 in Republic
J8S2174	Webster	38	0.2	1:5080	Br Scoping Greer Ck East of Marshfield
J8S2168	Webster	38	0.2	1:5080	Br Scoping Osage Br East of Marshfield
J8P0850	Greene	65	0.4	1:5080	Scoping Chestnut Exp and Railroad intersection area
J8I2167	Laclede	I-44	0.2	1:5080	Br Scoping WB BR over Gasconade
J8S2170	Dallas	F	0.2	1:5080	Br Scoping Greasey Creek South of Buffalo
J8S2169	Dallas	73	0.2	1:5080	Br Scoping over Coatney Br, North of Buffalo
J8P2162	Laclede	32	0.2	1:5080	Br Scoping Gasconade
J8P2163	Laclede	32	0.2	1:5080	Br Scoping Osage Branch
J8S2195	Greene	D	0.1	1:5080	Br Scoping A3055 over BNSF Tracks and A3056 over Pearson Ck
J9P0584	Howell	63	8.2	1:5080	Capacity improvements
J9P2146	Phelps	63	6.5	1:5080	Capacity improvements

TABLE II-2
RECON PROJECT LOCATIONS

Project #	County	Rte.	Length	Photo Scale	Description of Project/Special Conditions

III. SERVICES AND DATA PROVIDED BY THE COMMISSION

The Commission will provide available information of record to the Consultant as well as:

1) The project locations and limits (.dgn format).

2) Preliminary flight plans (ASCII and .dgn format)

3) Mapping & photography limits (.dgn format)

4) The MoDOT *Specifications for Vertical Aerial Photography*.

5) Roll and county numbers will be provided for aerial negative labeling. County numbers will be provided for labeling of digital photography.

6) Found horizontal and vertical control points to be used in the control survey.

IV. **SCOPE OF WORK.** Work covered in this document shall include furnishing the professional, technical, and other personnel necessary for aerial photography for the project. The services shall address the following:

1) **Planning**. The Consultant is responsible for project planning as it relates to coordinating the photo control targeting prior to the photo mission. Upon completion of the flying mission and photography processing, the Consultant shall provide the Commission with digital aerial images and the Survey Consultant with a set of image prints,

2) **Mission Planning.** The Consultant shall be responsible for the final flight plan. Consultant shall verify the preliminary flight plan provided by the Commission, and shall make the necessary adjustments to meet ALL required specifications herein.

   MoDOT Photogrammetry will perform the preliminary flight planning, and preliminary flight lines will be provided to the Consultant. The preliminary flight plan designates the desired photography coverage area by the district.

   MoDOT Photogrammetry uses Intergraph ISMP to perform mission planning. The electronic files from ISMP or ASCII export files are available to the Consultant.

3) **Project Limits**. Targeting and control surveying will be performed within the limits that are graphically marked and indicated on the Commission provided map files.

4) **Target planning**. All projects requiring mapping are targeted. Projects are to be targeted so that the use of vertical only points and photo identifiable points are not required. Control of the largest practical area will be done to allow for the possibility of mapping extra area if needed. Target placement at a minimum, must satisfy the control requirements of the mapping area.

Flight lines and targets shall be adjusted as needed by the Consultant to provide the necessary control for the project. Additional exposures can be added at the discretion of the Consultant if needed to establish target locations at the ends of flight lines.

Notification of target placement: The Survey Consultant shall notify the Aerial Photography Consultant upon placement of targets for each job. This notification may be by phone if followed up by e-mail.

Once the flight mission is complete, the Aerial Consultant shall provide one set of image prints to the Survey Consultant for the purposes of marking the north arrow, control and target locations on the front of the print and supplying a description of the point(s) on the back of the print.

5) **Standards**. The Consultant shall comply with the most recent and applicable State and Federal Laws. Aerial photographic procedures shall be preformed in a manner that supports photogrammetric compilation in accordance with the United States National Map Accuracy Standards and any applicable portion of the Missouri Department of Transportation Project Development Manual, Chapter III, Section 3-03; Photogrammetric Surveys.

V. SPECIFICATIONS FOR VERTICAL AERIAL PHOTOGRAPHY

The following specifications set forth the minimum requirements that must be met by the Consultant when providing vertical aerial photography to the Missouri Department of Transportation (MoDOT).

1) All flights for mapping shall be flown at the elevation above mean terrain specified in Table II-1 with the following exception:

    a. Special situations may apply to projects that contain Narrow Valley Section Lines (NVSL) that fall outside the mapping corridor.

        i. If photo coverage for the NVSL cannot be obtained while flying the mapping corridor at specified photo scale, an additional flight line(s) can be used to obtain the NVSL at a photo scale of 1:6000.

    b. Reconnaissance photo scale for projects listed in Table II-2

2) **Technical Specifications**. The Consultant shall provide the necessary aerial photographic coverage for the project. Specifications and

instructions for delivery for aerial photography are contained in the Missouri Department of Transportation *Specifications for Vertical Aerial Photography*.

3) **Beginning the work**

   a. No work shall be done without MoDOT notification that work may begin

   b. There is no snow on the ground within the area to be photographed.

   c. The leaves are off deciduous trees

   d. The procedures indicated in the specifications will be followed.

   e. The Consultant shall not fly until they receive notification that targets are in place.

4) **Last day for Photography Work** All Aerial photography shall be completed by APRIL 1st, 2009 unless approved by MoDOT

5) **Camera Calibration Reports**

   a. If using a digital camera, the Consultant shall provide the calibration report and/or the manufacture's recommended equivalent procedure. If a manufacturer recommended procedure is provided, a Statement of Compliance on company letterhead will be submitted. The statement of compliance will:

      i. Certify that the manufacture's recommended procedure; was completed at the recommended intervals as required.

      ii. Identify the date the procedure was last accomplished before the imagery was flown.

      iii. Be signed by an authorized representative of the company submitting the Statement of Compliance.

   b. If using a film camera, the Consultant shall provide a camera calibration report prepared by the US Geological Survey Optical Calibration Laboratory, which reflects the current condition of

the camera to be used. The report shall be based on the Laboratory's standard test and measurements made after complete assembly of all parts of the camera unit, with light filters in place. This report must be dated within three (3) years of the date of the photography. The absence of such a report verifying that the camera system meets the requirements will be cause for rejection of the bid proposal. The combination camera cone, lens, camera body and magazine(s) submitted for testing, shall be, if acceptable, the only combination used for this project. Use of additional equipment shall be equally certified.

c. If requested, the Consultant will submit a statement certifying that the camera has not been disturbed, repaired or modified in any fashion since the submitted calibration report or statement of compliance as made.

d. If at any time after award of the contract, the camera is disturbed, repaired or modified in any fashion, the Consultant shall submit to MoDOT a new calibration report or statement of compliance.

e. MoDOT reserves the right to restrict the use of any camera based upon the data contained in the calibration report, or based upon operational results.

6) **Film Camera Requirements**: If using a film camera, the following specifications shall be met:

a. The camera will be a precision vertical format aerial mapping type, capable of taking 9"x9" aerial photographs compatible with the stereoscopic compilation instruments used by MoDOT. The lens must meet the requirements outlined below based on a U.S. Geological Survey Report of Camera Calibration. Failure of the camera to meet all of the specified requirements shall be cause for rejection of the bid proposal.

b. Lens – Shall meet or exceed all the requirements outlined below

i. Calibrated Focal length – 153.0 mm +- 3.0 mm.

ii. Usable angular field – at least 90

iii. Resolution – The lens should have an Area Weighted Average Resolution (AWAR) of at least 72.0 line pairs per millimeter as determined by the U.S. Geological Survey Report of calibration. The following table lists the minimum acceptable radial and tangential lens resolution at various field angles.

Field angle	0°	7.5°	15°	22.5°	30°	35°	40°
Line pairs per mm							
Radial	95	80	80	67	67	67	57
Tangential	95	80	70	67	67	57	45

c. Filters – An appropriate glass filter with a metallic, anti vignetting coating shall be used. The filter shall have surfaces parallel within ten (10) seconds of arc and its optical quality shall be such that its addition to the camera shall not cause and undesirable reduction in image definition

d. Shutter – The camera shall be equipped with a between-the-lens shutter with variable speed settings such that in conjunction with flight height and aircraft speed, the camera will produce high definition photographs at full aperture. The shutter shall have a minimum efficiency of 70 percent at a speed of 1/200 second.

e. Magazine Platen The camera shall be equipped with an approved means of flattening the film at the instant of exposure. The platen against which the film is pressed shall not depart from a true plane by more then 15 um when the camera/magazine vacuum is applied.

f. Fiducial Marks – The camera shall record eight (8) Fiducial marks, which are clear and well defined on each negative. The marks shall be located in each corner and at the center of each side. The corner Fiducial marks shall form a quadrilateral whose sides are equal within 0.050 mm. The midside Fiducial marks shall intersect at an angle of 90% + 30". The intersection of the lines shall be equidistant within 0.050 mm from the adjacent corner Fiducial marks. Lines joining opposite pairs of Fiducial

marks shall indicate the true position of the principal point of autocollimation within +0.030mm.

g. Stereo model Flatness – The average departure from flatness (at negative scale) for two computer simulated stereo models may not exceed 15 um for any symmetrically arranged point tested by USGS. The difference between the highest and lowest value shall not exceed 25 um. The average of values given for points tested by USGS. (which are averages themselves) shall not exceed 7.5 um.

h. Forward Motion Compensation: Forward motion compensation is required for all photography requested. The Consultant shall provide the proper equipment as well as the experience in the use of Forward Motion Compensation.

7) **Digital Camera Requirements**

a. Digital image data will be captured of selected sites using a high precision digital aerial mapping camera.

b. The digital framed camera system will have a focal length of 120 millimeters

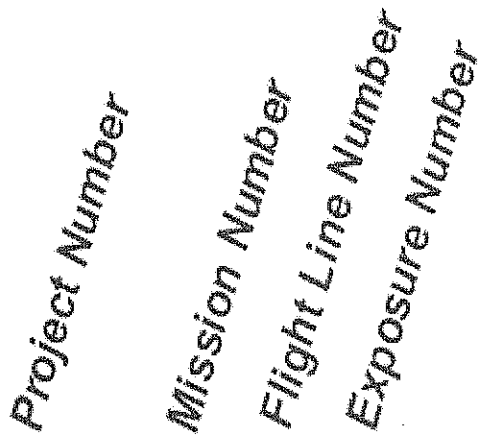
c. Black and White, color and color-infrared image data will be captured simultaneously.

d. The aircraft will be equipped with an Aerial Sensor Management System (ASMS) for guidance, positioning and flight management.

e. The camera will have digital forward motion compensation and gyro-mount leveling.

f. Airborne Global Positioning System (ABGPS) survey and Inertial Measurement Unit (IMU) measurement technology will be employed, estimating the imagery capture control stations.

g. The image filename must contain: the MoDOT project number, underscore mission number, underscore flight line number, underscore exposure number. See example:



Digital Image File Name: J8P0595C_897_10_100

8) **Post-Processing of Digital Imagery**. The Consultant shall be responsible for all post-processing of the digital aerial images to meet the following specifications.

   a. Imagery shall be delivered in RGB, CIR, and Panchromatic bands (three (3) separate files).

   b. Imagery shall be delivered as 8-bit depth Tagged Image File Format (TIFF) tile JPEG files. All digital files shall be compressed using a 3 to 1 compression ratio.

   c. Each photograph shall be manually annotated to include the MoDOT required information. The text shall be placed from left to right in the following order.

      i. The county of the image covered area. (The county is expressed by a number that will be provided by the Commission).

      ii. The numeric or alpha designation of the project route

      iii. The photographic scale expressed as a ratio.

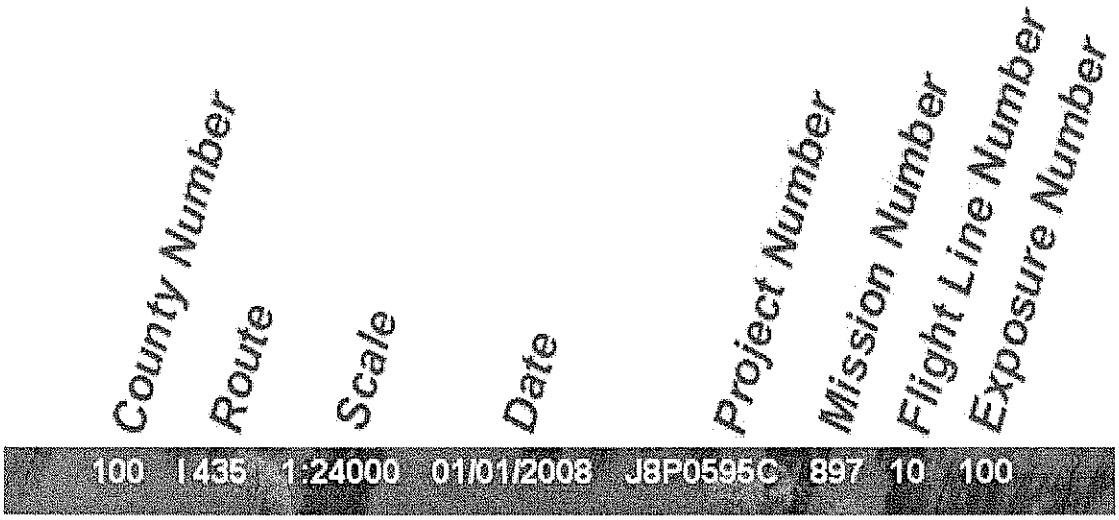
      iv. The date of the flight mission when the image was taken.

      v. Project number (i.e. J8P2202)

vi. Mission number. This number will be provided by the commission.

vii. The flight line number

viii. The unique exposure number (exposures are numbered in sequence). The first exposure shall be labeled as exposure number one (1), with each succeeding exposure having a number one greater than the exposure before it.



9) **Camera Location Data**

a. An electronic file is to be delivered for each project containing the photo centers of exposures.

b. The file name must contain the MoDOT project number.

c. Coordinate units must be in the datum/coordinate system of the project.

d. The file must be of CCNS4 or ASCOTT format

e. The flight line and exposure numbers in the file must agree with the film stamping and flight map for film-based photography and with the image filename and flight map for digital photography.

10) **Film Requirements.** If using a film camera the following specifications shall be met:

a. Film Type: A dimensionally stable estar base film, such as Kodak Double X aerographic film (2405) (may allow other brands), must be used for black and white photography. Outdated film is not to be used. The film is to be stored and handled in accordance with the manufacturer's recommendations.

b. Exposure: Exposure of the film shall be such that the negative images will be of high quality with good density and the best possible image resolution. The images shall be free from static marks and shall have uniform tone. They shall have the proper degree of contrast for all details to show clearly in the dark-tone areas and high light areas as well as in the halftones between the dark and light. Negatives having excessive contrast or lack of contrast may be rejected.

11) **Photographic Operations**

a. Flight Conditions. The photography shall be taken when the deciduous trees are bare and the ground is free of snow. It shall not be taken when the ground is obscured by haze, smoke or dust, or when clouds or shadows of clouds are present. Spring flying season photography shall be taken during the hours of mid-day (3 hours after sunrise to 3 hours before sunset).

b. Flight Lines – All flight lines are intended to be centered along the highway project, unless noted otherwise. Flight lines shall be continuous and straight with no breaks throughout the entire length of the flight line. Each project shall be flown in its entirety with the same camera. Flight lines shall not be flown around curves. All flights must consist of at least four photographs. The maximum angle of deviation between the actual flight path and the specified flight line shall not exceed three (3) degrees at any point on the line.

Reflights for rejected exposures shall include the entire flight line unless the flight line contains more than fifteen (15) exposures in which case a portion of the flight line may, with written permission of MoDOT, be replaced. All reflights shall be centered on the plotted flight line(s) and shall be retaken with the same camera system as used in the original photography. For re-flights where only a portion of flight line is to be replaced, the reflight shall provide at least 100% overlap with accepted adjoining exposures in the same flight line. All reflights must be completed within the shortest practical time.

c. Flight Height – The departure above or below the required height above mean terrain to achieve the specified camera negative scale shall not exceed five (5) percent.

d. Exposure Overlap – The overlap shall be sufficient to provide full stereoscopic coverage as follows:

   i. Endlap – The endlap (overlap in line of flight) shall average sixty (60) percent plus or minus two (2) percent. Endlap of less than fifty-five (55) percent or more then sixty-five (65) percent in one or more exposures may be cause for rejection of the flight line or exposures in which such deficiency or excess of endlap occurs.

      Whenever there is a change in direction of the flight lines, vertical photography on the beginning of a forward section shall endlap the photography of a back section by at least 300 percent (3 photographs).

   ii. Sidelap – Any flight line with an exposure having sidelap (overlap of parallel strips of vertical photography) of less than twenty (20) percent or more than forty (40) percent may be rejected. Sidelap, per strip, shall average thirty (30) percent, plus or minus five (5) percent.

e. Crabbing, as measured from the line of flight indicated by the principal points of consecutive photographs, shall not change by more than five (5) degrees between any two consecutive photographs, and shall not average more than five (5) degrees on any one flight line, nor more than two (2) degrees for the entire mission.

f. Tilt, defined as the departure of the optical axis of the camera from a plumb line, shall not exceed five (5) degrees on a single photograph nor average more that one (1) degree for a single flight line. Relative tilt between two successive exposures shall not exceed six (6) degrees.

12) **Processing of Film Materials**. The development, fixing, washing and drying of all exposed photographic film shall result in the best images possible, with optimum contrast, tone, balance, resolution, density, and fine grain quality. Before, during and after processing, the film shall not be subjected to extremes of temperature, or rolled tightly on drums or in any way stretched, distorted, scratched or marked and shall be free from finger marks, dirt, chemical and other stains, or blemishes of any kind. The film must remain suitable for making transparencies or contact prints either at this time or in the future.

Aerial negatives are to be processed such that the minimum density, as measured with a densitometer with a scale range of 0 to 3.0, is not less than 0.3 and the maximum density not more than 1.5. Consultant shall perform the required quality control of film processing early in the process to avoid any delays of project delivery.

13)**Aerial Negative Film Stamping**. The stamped letters and numbers shall be 3/16" in height. The stamp shall be made with a durable media that is designed to remain affixed to film negative for the life of the film. The required information shall be stamped from left to right in the following order:

a. The county of the image covered area. (The county, is expressed by a number that will be provided by the Commission)

b. The numeric or alpha designation of the project route.

c. The photographic scale expressed as a ratio.

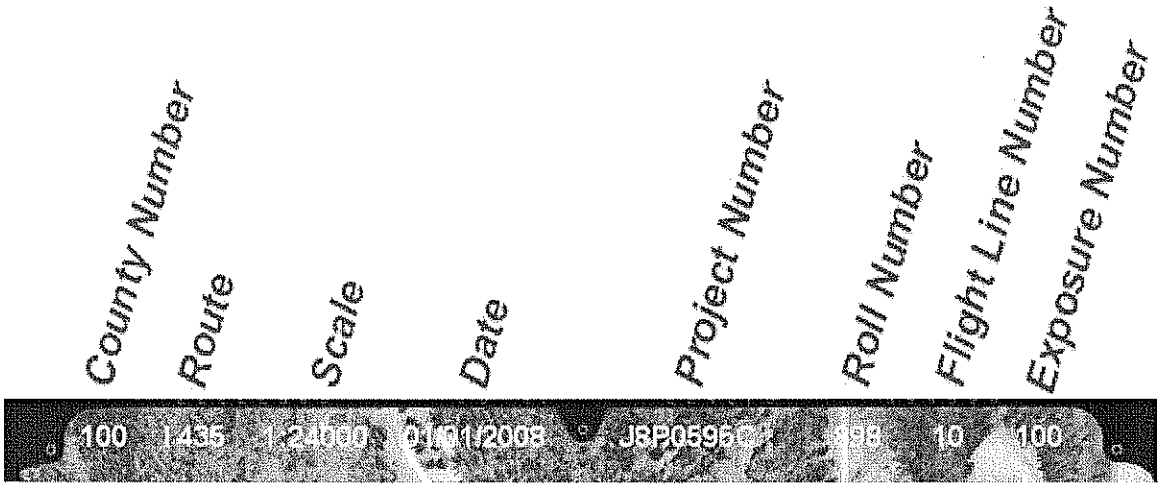
d. The date of the flight mission when the image was taken.

e. Project number (i.e. J8P2202)

f. The film roll number, provided by the Commission.

g. The flight line number.

h. The unique exposure number (exposures are numbered in sequence.) The first exposure on the roll shall be labeled as exposure number 1, with each succeeding exposure having a number one greater then the exposure before it.



14)**Aerial Negative Scanning**. The Consultant shall also furnish digital aerial photographs numbered as specified below that have been scanned from the aerial negative film. The original aerial film will be scanned on a high precision photogrammetric scanner. This process will convert the aerial photography into digital aerial images. The raw scan resolution is defined by the highest requirement for photogrammetric spatial accuracy and finest final ground resolution for the project. The scans/scanner shall meet the following requirements:

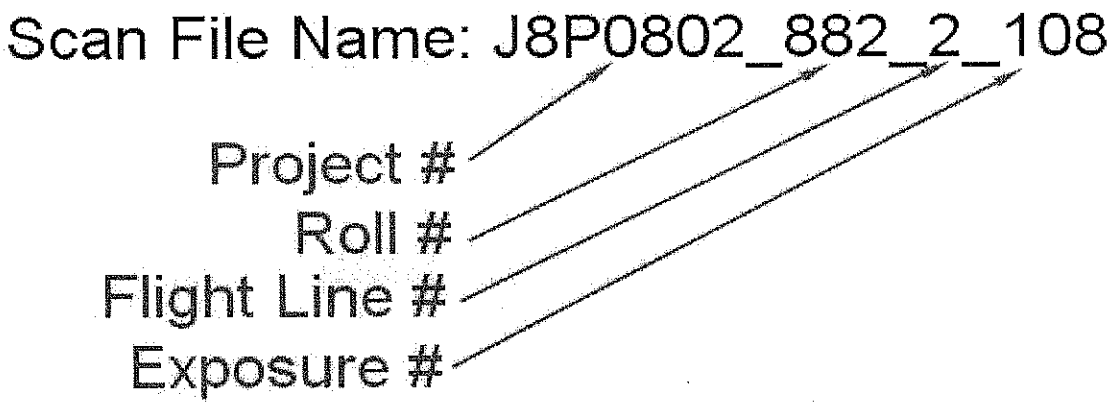
a. Scanner designed for photogrammetric applications and able to accept 9" x 9" aerial roll film.

b. Acceptable scan resolution of 12.5 microns for delivered image for MoDOT compilation.

c. The digital aerial photographs shall be in Tagged Image File Format (.tif). Image tiling (256) shall be used. JPEG Compression shall be applied at a factor of 80. Minifications / Pyramids shall be re-sampled based on the gaussian filter and embedded to the TIF file.

d. All camera fiducials must be visible on each individual scan.

e. Image file names will include their MoDOT project number, roll number, flight line number, and roll exposure. See example provided.



f. Image files shall be delivered on a DVD-R general media single sided with a 4.7 GB capacity or Fire Wire.

g. The Consultant shall perform the required quality control of the images scanned early in the process to avoid any delays of project delivery.

VI. SPECIFICATIONS FOR AERIAL PHOTOGRAPHY DELIVERABLES

The following materials shall be delivered to and shall become the property of MoDOT:

1) Processed original aerial negative film (if using film photography)

2) A copy of the flight map indicating the final exposure numbers that correspond with the contact prints and the direction of flight indicated by and arrow.

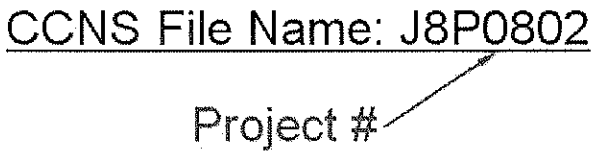
3) A copy of the camera calibration report or a statement of compliance.

4) Scanned aerial images from the original aerial negatives.

5) A set of contact prints from film or digital aerial camera. The contact prints shall be sent directly to the survey consultant for mapping scale projects only.

6) Digital images from digital photography (all bands, RGB, CIR, and Panchromatic, delivered as three (3) separate files).

7) CCNS-4 data containing the position of the photo and the name of the final as stamped photo. Naming convention will be the same for ASCOTT data.



8) For any LiDAR project, the following shall be delivered:

   a. Aerial imagery file in tiff format.

   b. Geopak format Triangle Irregular Network (TIN) model.

   c. Microstation design file (.dgn) showing 2-dimensional geometry using MoDOT CADD Standards.

   d. Geopak coordinate database (.gpk).

VII. ACCEPTANCE OF COMPLETED WORK

1) The Consultant shall submit all completed work promptly to allow time for proper review. Work reviewed and found in accordance with the specifications shall be considered to constitute "satisfactorily completed and accepted work".

2) The Missouri Department of Transportation will determine which photography work is in accordance with these specifications and represents acceptable work. Failure to produce acceptable work as specified, and after the Consultant has exercised the right to verify the quality of the work will cause the following:

a. The Missouri Department of Transportation may reject that portion of the work and the Consultant will accept a hundred (100) percent reduction in payment, at the agreement price, for the affected portions of work.

b. In the event that some work is found to be unacceptable in accordance with the specifications, and reworking is deemed necessary, the Consultant agrees that it shall re-fly such work without expense to the Missouri Department of Transportation, even though final payment may have been received. The Consultant must give immediate attention to these changes so there will be a minimum delay. The above and foregoing is not to be construed as a limitation of the Missouri Department of Transportation right to seek recovery of damages for negligence on the part of the Consultant.

3) **Return of Source Data**: The Consultant shall return to the Commission all of the provided source data, including, all aerial photographs and maps.

4) **Data Quality**. The Consultant shall be responsible for the professional quality, technical accuracy and the coordination of data, documents and other services furnished for this project.

5) **Additional Services**. The Commission reserves the right to request additional work beyond the scope of services addressed in this document. In this event, a supplemental agreement shall be executed and approved prior to the performance of additional services. Changes in compensation will be addressed in the supplemental agreement.

6) **Documentation**. The Consultant shall provide any documentation necessary to explain, support and clarify the procedures used for data development. The Consultant shall be available to the Commission to discuss and interpret provided data.

7) **Data Ownership**. All data and documents prepared in performance of this Scope of Services shall be delivered to and become the property of the Commission upon suspension, abandonment, cancellation, termination, or completion of the Consultant's services.

VIII. SCHEDULE AND DELIVERY

1) **Aerial Photography** shall be taken as early as possible in the leaf-off flying season once the flight conditions are met. Projects that have targeted ground control points must be coordinated with the placing of targets and the photo mission so that a minimum of time will elapse between targeting and photography. MoDOT will identify priority sites needing final reports for mapping. All Photography shall be taken no later than APRIL 1, 2009. All aerial photography deliverables shall be received no later than end of business day on APRIL 15, 2009.

2) **Extensions.** The Commission will grant time extensions for unavoidable delays beyond the control of the Consultant. Requests for extensions of time shall be in writing by the Consultant, before plans are due stating fully the reasons for the request.

3) All material shall be delivered to:

Missouri Department of Transportation
P.O. Box 270
200 Harrison St.
Jefferson City MO 65102
Attention: Photogrammetry