

EXHIBIT A

SCOPE OF WORK:

To reproduce State government records in digital format and in microform according to the standards and specifications outlined. The Client Agency reserves the right to select one or more services from the menu as our needs change and as our budget permits. The Contractor shall produce the film from scanned images or CDs. Delivery of the scanned images is one of options on the menu of services.

- A. Scan and produce microfiche for approximately 5,000 – 200,000 pages of the Military Service Records.
- B. These figures are based on past experience and may vary depending on the number of pages actually generated during the fiscal year. Budgetary constraints beyond the Client Agency's control may also alter these figures.
- C. SCANNING SPECIFICATIONS: shall produce the following:
 - a. One (1) digital copy of all material, in PDF format used to produce microfiche and microfilm shall be delivered on a portable hard drive.
- D. From the scans, the Contractor shall produce the following microfiche for each folder labeled. Resolution shall be adequate to make these legible on a standard microfiche reader/printer and, from a printout from the reader/printer.
- E. The Contractor shall produce the following roll film for each folder or CD:
 - a. One silver negative, first generation master roll film at 29X reduction ratio of approximately 2400 images per roll and
 - b. One diazo duplicate
- F. Prices shall be for all aspects of the project in cost per page, including scanning to produce PDF images, quality control, duplication to produce the master microfilm or microfiche, pickup and delivery. A separate price is requested for each diazo duplicate roll or fiche.

SPECIFICATIONS:

The Contractor shall comply with the following standards issued by the American National Standards Institute (ANSI) and the International Organization for Standardization (ISO). Any reference shall be understood to mean the latest edition of that standard. Any deviations from the standard guidelines shall be communicated in writing and require approval by the Client Agency.

ANSI PH1.51-1990	Micrographic Sheet and Roll Films, Dimensions for. Association for Information and Image Management.
ANSI/AIIM MS14-1996	Specifications for 16mm and 35mm roll microfilm. Association for Information and Image Management.
ANSI/AIIM MS18:1992 R1998	Micrographics – Splices for imaged microfilm – Dimensions and operational constraints. Association for Information and Image Management.
ANSI/AIIM MS19-1993	Standard Recommended Practice - Identification of Microforms. Association for Information and Image Management
ANSI/AIIM MS23-1998	Standard recommended practice – Production, inspection, and quality assurance of first-generation, silver microforms of documents. Association for Information and Image Management.

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ANSI/AIIM MS34-1990	Dimensions for Reels Used for 16 mm and 35 mm Microfilm. Association for Information and Image Management
ANSI/AIIM MS43-1988	Recommended Practice for Operational Procedures/Inspection and Quality Control of Duplicate Microforms of Documents and from COM. Association for Information and Image Management
ANSI/AIIM MS44-1988 (R1993)	Recommended practice for quality control of image scanners. Association for Information and Image Management.
ANSI/NAPM IT9.6-1991 (R1996)	Imaging Materials – Photographic Films - Specifications for Safety Film. Association for Information and Image Management
	Standards for the use of imaging technology for storage, retrieval and disposition of public records.
ISO 18901:2002	Imaging materials – Processed silver-gelatin type black-and-white films – Specifications for stability. International Organization for Standardization.
ISO 18902:2001	Imaging materials – Processed photographic films, plates and papers – Filing enclosures and storage containers. International Organization for Standardization.
ISO 18911:2000	Imaging materials – Processed safety photographic films – Storage practices. International Organization for Standardization.
ISO 18916:2007	Imaging materials – Processed imaging materials – Photographic activity test for enclosure materials. International Organization for Standardization
ISO 18917:1999	Photography – Determination of residual thiosulfate and other related chemicals in processed photographic materials – Methods using iodine-amylose, methylene blue and silver sulfide. International Organization for Standardization.
ISO 3664:2000	Viewing conditions -- Graphic technology and photography. International Organization for Standardization.

Other Resources:

http://www.archives.gov/research/arc/adjust-monitor.html (last viewed 10/2/08)	Monitor Adjustment Target. National Archives and Record Administration.
	RLG preservation microfilming handbook. Nancy E. Elkington, editor. Mountain View, Calif. : Research Libraries Group, 1992
http://www.archives.gov/preservation/technical/guidelines.pdf (Last viewed 10/2/08)	Technical guidelines for digitizing archival materials for electronic access. U.S. National Archives and Records Administration, June 2004.

PREPARATION AND TARGETING:

- A. The Client Agency shall provide copies ready to scan into digital format for producing. Assembly, flattening, repair, and collation of the files and preparation of informational targets and additional instructions shall be the responsibility of the Client Agency. Portable CD's shall be ready to produce microforms.

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SPECIFICATIONS FOR SCANNING ORIGINAL DOCUMENTS

- A. The Contractor shall make PDF files to produce the microforms. If, however, the Contractor needs a different file format to produce microfilm and microfiche that meet our specifications.
- B. The Client Agency notes that most of the documents provided to the Contractor shall be suitable for scanning in an automatic document feeder. Documents provided shall be in excellent condition, and of a suitable size with no fold-outs or challenges, such as illustrations or small print, which are more difficult to scan. During the scanning and inspection steps, the Contractor shall be vigilant to avoid damage to pages, distortion due to moving, or rotation of pages within feeder.
- C. The Client Agency reserves the right to specify when use of an automatic document feeder is unsuitable, at which time; the Contractor shall scan the documents manually.
- D. If a document is damaged, the Contractor shall consult with the Client Agency as to the best way to repair or replace the document. Calibration of both the scanner and film writer is paramount to produce quality images. The Contractor shall regularly test the calibration of the scanner by producing the AIIM Scanner Test Target, or the manufacturer's equivalent, for use with ANSI/AIIM MS44-1988 (R1993) and comparing results with the quality reference set of targets, as described in the standard. Tests shall be run at the start and end of each batch or work shift, when a batch of documents is to be scanned at the same settings
- E. File names: Before digital files are delivered for the first time, the Contractor shall provide and explain the file organization and file naming scheme.
- F. External Hard Drive
 - a. The Contractor shall provide the Client Agency with as many external hard drives as needed to store files. The External hard drives used to store files shall become the property of the Client Agency. Cost for drives shall be included in the cost of delivering files.
 - b. External hard drives shall hold 500 or more gigabytes of data and shall be "hard drive systems with a level of data redundancy, such as RAID drives" as described in NARA's *Technical Guidelines for Digitizing Archival Materials for Electronic Access*.
 - c. The Contractor may keep a separate external hard drive for the purpose of delivering digital files to the Client Agency. Contractor or Client Agency staff shall transfer files from the delivery drive onto the drive that is located permanently at the Client Agency. When drives at the Client Agency are nearing capacity, the Contractor shall provide a new external hard drive.
 - d. Instead of using a separate external hard drive to deliver digital files, the Contractor may propose a different delivery method. The Client Agency shall consider alternate delivery methods but, at this time, still expects to use an external hard drive for storage of images. As technology changes, the Client Agency and the Contractor can discuss alternate storage devices. The intent is to use a safe and reliable storage mechanism.
- G. The Contractor shall maintain a copy of digital files for 3 months after delivery of images. As the 3 month deadline approaches, the Contractor shall seek permission from the Client Agency on what method of file destruction the Contractor shall utilize and then verify and certify that files have been destroyed. This shall be done at no additional cost to the Client Agency.

SPECIFICATIONS FOR MICROFILM AND MICROFICHE:

- A. READABILITY: Final products shall be roll film and microfiche to be used by the public in a broad range of microform readers. Optimum readability shall be the determining factor throughout preparation, scanning, and film processing.

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- B. RESOLUTION: Although these specifications require the use of a scanner to produce images, the Client Agency has the same expectation for high quality images equivalent to film produced by a camera.
 - C. The Client Agency requires that first generation microfilm provide high resolution quality to allow duplication through as many as three generations. For the master negative (first-generation), a quality index of 7.1-8.0 is expected. Succeeding generations shall exhibit a loss of not more than one resolving power pattern per generation. Resolution is determined by finding the lowest pattern resolved on any of the 5 test charts in the frame at the beginning and, again, at the end of the reel or fiche.
 - D. Calibration of both the scanner and film writer is paramount to produce quality images.
 - a. The Contractor shall regularly test the calibration of the microfilm or microfiche writer by producing the target described in ISO 14648-1:2001 or by using the manufacturer's equivalent, comparing it with the quality reference set of targets, as described in ISO 14648-2:2001.
 - b. Tests shall be run at the start and end of each batch or each work shift, when a batch of documents is to be scanned at the same settings.
 - E. DENSITY: Base-plus fog density of unexposed, processed films shall not exceed 0.10. The background density of the exposed microfiche or roll film shall be between .80 and 1.5, depending on the contrast of the original material. This applies even when the film is produced from a film writer, not a camera. Please refer to ANSI/AIIM MS23-1998.
 - F. RESIDUAL THIOSULFATE: Methylene blue tests to detect residual thiosulfate shall be carried out whenever chemicals are changed. If any test shows that the residual thiosulfate level is unacceptable, all film processed since the last preceding test shall be rewashed and inspected. Copies of these test results shall be sent with the film and fiche and shall be inspected by the Client Agency. Silver halide microfilm shall be developed only with an organic developing agent that is compounded to produce an essentially black image, fixed in a thiosulfate bath, and washed with water to remove residual hypo (sodium thiosulfate). Under no circumstances shall any use be made of developers that are intended to produce stained or colored images, or of so-called hypo eliminators. The maximum permissible concentration of thiosulfate ion residue on the microfilm after processing shall not be greater than 0.014 when determined by the test methods described in ISO 18917:1999. See also ISO 18901:2002.

SPECIAL MICROFILMING:

Methods of scanning or producing microfilm, other than those specified in this contract and General Letter #96-2, may occasionally be requested by the Client Agency. Specifications for services not described in this contract and rates charged for these services shall be provided on request from the Contractor. Any special treatment requiring extra charges shall not be carried out by the Contractor without the express permission of the Client Agency.

PACKAGING:

- A. All packaging conditions shall comply with ISO 18911:2000.
- B. Microfilm shall be wound per instructions as referenced in standards in ANSI/AIIM MS23-1998 on non-corroding, chemically inert plastic or metal reels as specified in ANSI/AIIM MS34-1990.
- C. Microfilm boxes shall be labeled as shown in the examples below:
 - a. Reel 1: CT State Military Department, Permanent Bill Files 2005 Senate Bills 1-300
 - b. Reel 2: CT State Military Department Permanent Bill Files 2005 House Bills 5001-5999
 - c. Reel 3: CT State Military Department Permanent Bill Files 2005 House Joint Resolutions 1-603

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- d. Reel 4: CT State Military Department Permanent Bill Files 2005 Senate Joint Resolutions 1-603
- D. Microfilm shall be boxed in archival storage containers in compliance with ISO 18902:2001. Labels and fastener strips shall be in compliance with ISO 18911:2000 and ISO 18902:2001. Rubber bands shall not be used to secure film on the reel. Each microfiche set shall be collated and each microfiche card shall be placed in an individual white archival envelope.

QUALITY CONTROL INSPECTION, ERRORS AND DELAYS:

- A. The Contractor shall inspect every scanned image and ensure each page is fully captured, properly aligned and free of any aliasing or distortions. Such inspection shall ensure that:
- a. The complete content of every page has been captured.
 - b. Every page has been captured and is in proper order.
 - c. Images are not skewed, out of focus or flawed (unless the original document has those flaws.)
 - d. There was no dust on the scanner and there are no digital artifacts or noise reception.
 - e. Color contrast, brightness, tonal range and saturation are adequate.
 - f. There are no missing images or duplicate images of any page.
- B. Each roll of first generation film and each set of first generation fiche shall be inspected frame-by-frame by the Contractor for visual transverse density and readings shall be taken with a densitometer.
- C. The Client Agency shall inspect the microforms, and if option is chosen, the images, to determine whether all bibliographic requirements have been met and whether all pages have been scanned and transferred to microform and appear in the proper sequence.
- D. It is expected that any missing pages, skewed pages, etc. shall have been found and rectified before files are sent to be processed on film. If an error is discovered after the film is produced, the Contractor shall reproduce the digital files and make new master microfilm and microfiche. Splices shall not normally be permitted. In the rare event that the Client Agency permits splices in a master microfilm, a target shall be added explaining the presence of the splice. The splice shall conform to the standard recommendations in ANSI/AIIM MS18-1992 (R1998.)
- E. Any rework required due to negligence of the Contractor or its employees, or due to malfunction of Contractor's equipment; or due to defects in materials furnished by the Contractor shall be done at the Contractor's expense. Any extra transportation or expense resulting from such errors shall be paid by the Contractor. The Client Agency shall have up to thirty days after receipt of digital images, film or fiche to inspect and accept work; with an additional thirty days after receipt to inspect any corrected work. Corrected work shall be returned to the Client Agency within 25 days from pick-up.
- F. Additional Contractor errors shall be corrected at no expense to the Client Agency if identified with one year of the completion date (last date of filming) of the project.
- G. If necessary, the Client Agency reserves the right to specify additional scanning and film production methods.
- H. Scanning and film production methods and instructions such as reduction ratio, image placement, and arrangement of records for each record series shall not be changed by the Contractor without prior consent from the Client Agency.
- I. If any records cannot be filmed in the manner specified after consultation with the Client Agency, it shall be returned by the Contractor with justification for its rejection. The Client Agency reserves the right to contract with another contractor to complete the portion of the project that the Contractor cannot complete.

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ACCESS TO ORIGINAL DOCUMENTS WHILE ON THE CONTRACTOR'S PREMISES

- A. The Contractor agrees to fax documents needed by Client Agency staff during the period that documents are being processed and filmed. Requests shall be made in writing or by phone call to the Contractor, during normal business hours, and pages shall be faxed within 1 hour of the request.
- B. The Contractor shall maintain a log acknowledging receipt of each shipment of records and shall make this log available upon request of the Client Agency.
- C. All targets and records packed by the Client Agency in one shipment shall be returned together in a single delivery shipment.
- D. It is the Contractor's responsibility to pick up and ensure the return of the documents in the same condition as they were received.

COMMUNICATION:

The Contractor shall appoint a representative to coordinate the project with the Client Agency. The representative shall be thoroughly familiar with the terms of this contract and shall have an in-depth knowledge of technical micrographic and digital issues demonstrating a concern for the special requirements of legal document microfilming.

COPYRIGHT:

All microfilm and digital images produced by the Contractor are property of the Client Agency. No part of the microfilm or digital images may be sold, given away, or duplicated without express permission from the Client Agency.

BILLING:

The Contractor shall invoice the applicable state agency when goods and services are provided through this contract. The invoice shall contain the State's Purchase order number. Invoices received without reference to a valid State Purchase Order number may result in delay of payment.

The Contractor shall provide detailed invoices for each completed shipment within 14 days of delivery of the shipment to the Client Agency. Invoices shall reflect the price structure delineated in this contract. Each invoice shall specify the number of files and fiche or film produced, as follows, for each option on the price schedule:

- the number of master negative microfiche or reels of microfilm produced, the number of pages on those fiche or reels, the per page cost and the total cost.
- the number of diazo duplicate microfiche or microfilm produced, the per fiche or reel cost and the total cost.
- the number of pages delivered on a portable hard drive.