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Managing Imaging and Micrographics Projects

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Introduction

Electronic document imaging and micrographics are two separate and distinct technologies. But they share many similarities. Both capture images of paper or electronic documents. Both require nearly identical steps: preparing records for copying, copying the records, and verifying the quality of the copies. You must address similar issues with vendors: you must ensure that the chosen vendor is technologically proficient, follows your detailed technical specifications, and delivers the required product on time.

This publication explains the steps to take from conception to completion when planning and carrying out an imaging or micrographics project. The publication addresses records management issues (deciding whether to microfilm, scan, or do both), project management issues (writing contracts and working with vendors), and technical issues (developing specifications and meeting quality-control guidelines). The New York State Archives recommends that any local government or state agency conducting an imaging or micrographics project follow these guidelines. Careful adherence to these guidelines will increase the chances of completing a successful project. For more information on running an imaging or micrographics project, contact your State Archives Regional Advisory Officer (RAO).

Steps to Completing an Imaging or Micrographics Project

Step 1: Determine if Imaging or Microfilming is Appropriate

Before planning a microfilming or imaging project, you should determine which of these technologies is appropriate for the problems facing you. In general, consider imaging when you need to improve access to records dramatically, and consider microfilming when you need to solve a storage or preservation problem. Sometimes, neither is the best solution.

Microfilm provides a simple solution to storage problems, allowing you to reduce your storage needs by as much as 98% and providing you with master microfilm that should last for 500 years when stored under proper conditions. For this reason, microfilming is often the best solution for managing bulky records such as payrolls, which have a long retention period but which require only occasional reference.

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Imaging, on the other hand, is particularly helpful in cases when a large number of people must access the same set of files simultaneously. This is why imaging is a common solution for dealing with such voluminous and heavily used records as deeds and mortgages in a county clerk's office, where many abstractors may need to access these files at the same time. The drawback of an imaging system is that it requires constant maintenance to keep the hardware, software, and digital files up to date.

Both imaging and microfilm can improve access to records. Maintaining a microfilm reader and rolls of microfilm in your office gives users better access than storing records in a storage area a floor away. You can further improve access by setting up an index to the microfilmed records as part of a computer-aided retrieval system. Imaging, however, will usually provide the quickest access of all, since it allows a large number of people to simultaneously retrieve records while at their individual workstations.

A hybrid approach that offers the advantages of both microfilming and imaging may be the best situation. You could, for instance, produce digital images to meet ongoing access needs but use microfilm as the preservation copy. Another hybrid approach might be to use microfilm as your storage and access medium, use a microfilm reader/scanner to access the microfilm, and then use the reader/scanner to scan individual images when needed. This might be a good approach when your access needs are modest and you only occasionally require an electronic or paper copy off the microfilm. However, don't make a decision about either technology or approach until you examine your situation carefully, and consider your access needs, the condition of the records, and your ability to pay for a new recordkeeping system. Sometimes, maintaining records in paper form really is the cheapest and best solution.

Complete the File Information Form

After considering your access needs, gather information about each records series and analyze the data. Doing this will help you plan for a project, complete it on time, keep it within budget, and reduce surprises. One way to gather information is to fill out the State Archives File Information Form. This form and its accompanying instructions appear in Publication #9, *Producing High-Quality Microfilm*, but the form is as useful for imaging as it is for micrographics projects.

Completing the File Information Form will also help you decide whether to reproduce a records series at all. For instance, the form might show that a records series is barely legible in its original paper form because the records are poor-quality carbons or photostats.

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There is a slight possibility that the increase in contrast achieved through microfilming or scanning will enhance legibility, but there is a greater chance that the document will become totally illegible.

Determine the Final Disposition of the Original Records

One important decision to make before conducting an imaging or micrographics project is whether to keep the original records afterwards. If you have no particular use or need for the originals, destruction is perfectly appropriate. However, you must take possible future use and all legal requirements into account before making this decision.

If you will be destroying the records after reproduction, you must follow the laws and regulations that govern imaging and microfilming in New York State. For instance, section 57.29 of the Arts and Cultural Affairs Law, and Rule 4539 of the Civil Practice Law and Rules, both specifically permit the photographic reproduction of records. However, both regulations also require that you follow procedures to ensure the accuracy and completeness of the images produced.

Parts 185 and 188, 8NYCRR (Regulations of the Commissioner of Education) outline the requirements local governments and state agencies must follow for microfilmed records:

- Produce silver gelatin master negatives for records with a retention period of ten years or more.
- Use master negatives only to produce duplicate rolls and store these masters offsite under environmentally controlled conditions.
- Microfilm must meet targeting, resolution, density, and other quality control standards set by the Commissioner of Education (outlined in Publication #9, *Producing High Quality Microfilm*).

Part 188, 8NYCRR (Regulations of the Commissioner of Education) outlines the requirements local governments and state agencies must follow for electronic records (including scanned images of records):

- Incorporate records retention requirements into any plan for a new or redesigned electronic information system.
- Ensure that changing technology does not render electronic records unusable before the end of their retention period.

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- Maintain up-to-date documentation about permanent electronic records.
 - Store backups of electronic records in secure offsite facilities.
 - Institute maintenance procedures for computer media that contain permanent electronic records.

In addition, if your local government is reproducing records that are under its control but that actually belong to a state agency, then you must follow that agency's regulations. For example, if you are copying court records, you must follow the relevant regulations of the Unified Court System for New York State.

Sometimes you will decide to retain the original records after reproducing them. Although you may have no legal requirement to do this, it makes sense to keep records in their original form when you believe the records have value as physical artifacts. You might keep some of the records, especially older ones, to use in exhibits or you might decide to hold on to the paper records until you are satisfied that your micrographics or imaging system is working dependably.

Deciding on Your Imaging and Microfilming Options

In some cases, you won't be able to decide on a solution merely by considering the issues above. If you are trying to solve a fairly complicated problem, for example, you may need to conduct a needs assessment or a business process analysis. For information on when and how to conduct a formal assessment of your recordkeeping needs, see Publication #64, *Conducting Needs Assessments for New Recordkeeping Systems*. Some specific solutions to access and storage problems include

- saving and storing paper records
- microfilming and using the microfilm for occasional access
- microfilming and using the microfilm for records storage
- microfilming for backup only and keeping the paper records
- microfilming and using a reader/scanner to digitize images as needed
- scanning to improve access and discarding the paper copies
- scanning but keeping paper copies as the record copies
- scanning and converting the scanned images to microfilm for retention

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Step 2: Decide Whether to Conduct the Project In-House or Through a Vendor

The decision to microfilm or scan records in-house or through a vendor depends on a number of issues. However, most organizations will contract with a vendor to complete all or portions of a microfilming or imaging project. This is often a logical choice, particularly if you do not plan to microfilm or scan regularly.

Reasons for Conducting Projects In-House

- You need to microfilm or scan on a daily basis
- You must keep valuable or fragile materials under your control
- Your staff need a way to learn more about imaging technology
- The project is small and easily accomplished in-house
- You already have trained technical staff and the necessary equipment

Reasons for Using a Vendor

- You don't have the space for an imaging or microfilming operation
- You don't want to purchase and maintain the equipment
- You don't have staff proficient in the technology
- You don't want to be responsible for possible cost overruns
- You want the security of a vendor's fixed price quote

Keep in mind that you will almost always carry out part of the project in-house. Most organizations prepare their own records for reproduction, and content verification (checking to make sure the vendor has captured each image properly) is something you cannot leave to the vendor. In some cases, you may decide to scan some of the records in-house but to outsource a large or problematic records series. Or you may decide to have a vendor microfilm your records but have your staff create the index to the records. Make your decisions based on where your money will be best used and who is best prepared to carry out a particular function.

Step 3: Write a Specification

Even if you are microfilming or imaging in-house, you should be sure to follow a specification, which is a set of technical requirements designed to help produce quality images. The State Archives' microfilm production guidelines (found in Publication #9, *Producing High Quality Microfilm*) provide a set of technical requirements that local governments and state agencies must follow when replacing original records with microforms. The State Archives has also released draft imaging production guidelines, which will be available as a formal publication in 2003. But these guidelines are only a start toward developing customized specifications for a particular set of records.

Since these guidelines are generic, you must add details about your particular records to create a specification. Although you have the option of specifying higher quality standards if they are necessary to produce quality images, you should avoid any deviations from these technical requirements that might reduce the quality of the final product. See Appendix A, "Sample Microfilm Specification and Explanation," and Appendix B, "Sample Imaging Specification and Explanation," for explanations of what items you should add to the appropriate generic guidelines to produce a specification. The better the specification, the more accurate the vendor quotes will be and the better the microfilm should be. You will usually need to develop a separate specification for each unique records series to address its distinct characteristics and needs. Details you might add to the generic guidelines to create a specification include the following:

- Name of local government or state agency
- Name of records series
- Total number of images
- Condition of records series (sizes, type, single- or double-sided)
- Color and age of paper, type of fasteners
- Percentage of documents flat, rolled, or folded
- Type and color of imprint
- Preparation requirements
- Retrieval aids (indexing, file naming, etc.)
- Format of microfilm (roll, jackets, etc.)
- Storage media numbering

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- Number of duplicates required
 - Media types required (DVD-R, WORM, etc.)
 - Delivery information (date, destination, etc.)
 - Technical enhancements that accommodate the needs of the records series

Providing vendors with a detailed specification that includes a complete description of the records and the final product serves two purposes. First, a good specification will help ensure that vendors know exactly what they are bidding on and, therefore, produce more accurate quotes. Second, a good specification increases the chances that the chosen vendor will produce high-quality images. While a specification usually does not indicate how the vendor must achieve the desired result of high-quality images, a thorough specification helps guide the vendor to that point.

Step 4: Develop a Request for Proposal

After developing the specifications, you should develop contract language to control the delivery of services. This contract, together with your specification and other details on bidding, usually serves as a request for proposal (RFP) for your imaging or micrographics project. Draw up any service contract in consultation with your purchasing staff, your Records Management Officer, and legal counsel. Appendix C, "Sample Contract," contains some typical contract language, but see below for major contract considerations. If you are unsure how to proceed with your project or want more technical advice, contact your State Archives RAO or consider developing a request for information (RFI). With an RFI, you can explain your project to vendors and ask them for suggestions on how best to conduct the project. You can then use the information the vendors send you to develop a formal RFP, in which you ask for detailed bids on a specific project that has comprehensive technical requirements.

The microfilming or imaging contract lays out the responsibilities of both you (the customer) and the vendor (the service provider). You should ensure that the contract leaves no question about what the vendor is supposed to accomplish. A good contract, provided as part of an RFP, will also clarify the amount of work the vendor must complete and will thus help the vendor decide on a reasonable bid. For an example of a microfilming contract (which will be similar to an imaging contract) see Appendix C, "Sample Contract."



When developing a contract, be sure to address the following issues.

Compliance with specification

Contract language should clearly state that if the product does not meet the standards outlined in the specification, the vendor must redo the project at its own expense.

Contract resolution and cancellation requirements

In case the vendor fails to resolve problems, your contract should clearly state the consequences, such as termination if corrections are not made within thirty days. This protects you from prolonged negotiations with an incompetent vendor.

Packing, pickup, and delivery

If not already covered in the specifications, state in your contract who will pick up and deliver the records and what condition the records should be in when returned. For instance, you will usually require the records be returned to you in the same order and in the same boxes. If your project involves reproducing records in batches, you should develop a schedule that includes dates of filming and the dates for return of each batch of records. This schedule is important to prevent misunderstanding and failure to meet deadlines.

Step 5: Choose a Vendor

Invite vendors to inspect records

Once you have developed the specifications and a contract, encourage vendors to visit your facility and review the records. Share the information from the File Information Form so they have an accurate picture of the records involved. Vendors who review records usually give more realistic estimates of the project's cost because they have a clearer idea of the document preparation required and the quality of the source documents.

Check vendor references

Obtain recent references from vendors for similar types of projects. Call the references and ask about the quality of the vendor's work and services. Note how long a vendor and its chief technical staff have been in business. Ideally, the vendor and technical staff should have at least five years of experience.

Visit potential vendors' facilities

It is important to visit facilities before signing a contract to see how the vendors treat records during the scanning or filming process. Note the orderliness of the facility and how knowledgeable and helpful the staff appear.

Review bids and select a vendor

Questions may arise when you review bids. For example, vendors might offer different approaches to reproducing the same records series. Microfilm vendors with limited experience filming permanent records might provide a low bid based upon their experience filming routine business records. But a vendor with extensive archival filming experience might provide a slightly higher quote. Keep in mind that a low bid does not always mean low cost. If you have to invest countless hours of followup with an inexperienced vendor, you are wasting money.

Before selecting a vendor, you might ask the potential vendor to reproduce about 100 documents that you think will be difficult to reproduce. Then complete a technical inspection of the results to determine whether you can trust this vendor with your records. Some imaging RFPs even require vendors to deliver copies of sample records as part of their bid.

When reviewing bids, consider the following criteria:

- Total cost of the proposal
- Appropriateness of the vendor's technical approach
- Familiarity with relevant state guidelines and national standards
- References
- General appearance of the vendor facility
- Security provisions the vendor makes for your records
- Years of relevant experience
- Financial stability of the company
- Ability to complete the project on time

Do not evaluate bids based on only a single criterion. For instance, if you receive a bid that is 50% lower than every other bid, you are probably not getting a good deal. Instead, this may be a red flag indicating that the vendor does not understand the complexity of the project. Take a number of criteria into account when making your decision. This method will still allow you to weight certain criteria more heavily, but it will also help you avoid seeing one criterion as the only essential one.

Step 6: Prepare the Records

Document preparation is necessary to make records ready for scanning or imaging, and is usually the most time-consuming and expensive task associated with an imaging or micrographics project. Good document preparation may also require a good knowledge of the records, so you will often decide to do this work in-house even if you are outsourcing the actual copying of the records.

To plan for your project, first estimate the time needed for preparing documents. The best way to do this is to conduct a test of a portion of the records (say, 1,000 sheets) and see how long it takes. Alternatively, you can use the rough estimate that it will take one hour to prepare 1,000 sheets of modern office documents. This estimate might fall as low as 750 sheets per hour for older documents that have tears and folds and that are packed tightly together. Start document preparation early to help keep projects on schedule.

Successful document preparation requires deciding at the outset what the procedures to follow, making them clear to those conducting the preparation, and ensuring that staff follow the procedures closely. Document preparation may include a number of different activities.

File organization

If the records are out of order, you will need to organize them before reproduction. This is especially important for microfilm, which is a sequential medium requiring sequential retrieval. For imaging, which allows for random access, perfect order is not as important, yet it is still useful to make sure that records forming one document or file are stored together, so the imaging vendor can treat them as units for indexing and future retrieval.

Purging

If the records series you will be copying has a large number of unnecessary documents (duplicates, obsolete records, etc.), then you may want to remove and discard these ahead of time. If there are only a few unnecessary documents in the series, it will definitely be cheaper to copy them with the rest of the records.

Removing fasteners and straightening and repairing paper

To prepare records for copying, you will usually need to remove staples, paper clips, and bindings and flatten folded or rolled documents. If any of the documents are torn, repair them before reproduction, usually by taping the document on its blank side. Do not, however, use tape on any historic document you expect to keep

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in paper form. You will probably also need to photocopy such documents in preparation for scanning, since a taped document might cause a jam in a sheet-fed scanner. Similarly, replace brittle or thin sheets of paper with good photocopies before scanning.

Targeting and retrieval aids

You should place appropriate targets in their proper sequence within the records. These include inventory worksheets, File Information Forms, declarations of the records custodian, title targets, and printed indexes. You may also include targets that indicate the beginning of each file (such as a personnel file) or problems with the records ("Poor Copy," "File Missing," etc.).

Step 7: Maintain Regular Communication with Vendors

Regular communication with vendors is essential for increasing your chances of success and keeping projects on track. Good communication should begin before the signing of the contract and continue throughout the project. Anticipate problems and clarify issues in advance. Determine how the service bureau will handle delays, what its normal turn-around time is, and if it will retrieve a record while it is being filmed or scanned, if necessary. A knowledgeable vendor will share valuable expertise with project staff, and you can inform vendors of any special considerations necessary for your records.

When communicating with vendors, you will usually talk by telephone, but take advantage of the time when vendors are onsite to ask them questions, discuss possible problems, and evaluate their ability to carry out the project. Whenever you make a change to the contract, including the specifications, be sure both of you agree to the change in writing. This method of communication ensures the least chance for miscommunication and protects both you and the vendor.

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Step 8: Monitor the Project

To make sure your project does not fall behind schedule, set a timeline and track your progress. If either you or the vendor fall behind, the entire project suffers.

Establish time frames for each segment of the project

This allows staff to monitor actual work accomplished as compared to the project plan. Document preparation often takes longer than anticipated, and monitoring a project timeline allows for prompt readjustments. Always build 10% extra work time into the project, and expect some delays.

Budget time for staff training

Each project will require some staff training, especially in the area of document preparation and post-production inspection. You must develop, test, and refine procedures and practices to ensure smooth workflow during the project.

Ensure the vendor can track records throughout the project

Potential vendors must demonstrate how they track records from the time they receive the records until they return them to you.

Step 9: Reproduce and Index the Records

Reproduction

If you are contracting with vendors to scan or microfilm your records, it is crucial that you prepare detailed written specifications and a contract as outlined above. You will also need to prepare the records in time for the vendor to pick them up and to ensure that the vendor keeps to a schedule. If you are doing the copying in-house, you will need to focus on this aspect of the project by developing procedures that outline exactly how your staff will copy, quality control-check, and refile the records.

Indexing

Indexing usually takes place right after scanning (for imaging projects) or during content inspection (for microfilming projects). In both cases, you may need to correct the index if you discover that you need to recopy any of the images. Before starting to index, settle on the indexing parameters. An indexing parameter is the equivalent of a field in a database, such as name, file number, or roll and frame number. Talk to the users of the records to see what parameters will meet their needs. Be sure to include all parameters you need, but none that you don't, since the cost of indexing can be high, especially if it must be done manually. When planning an index, keep in mind that it is best to depend on objective index values (such as social security number) rather than subjective terms (such as topic of meeting). Consistency is very important in indexing, and it is easier to maintain consistency with objective indexing terms.

Indexing digital images

Indexing is crucial with imaging, because digital images are essentially irretrievable without an index. When indexing digital images, you have two choices: re-keying the indexing terms into a database, or optical character recognition (OCR). A computer operator will key data into the index database with the image displayed on the screen and then verify the entry, usually by proofreading. With OCR, a software product converts a digital image of a printed document into electronic text (as in a word processing file) by comparing the known shapes of letters against shapes of characters in the image. These text files then become a full-text index to the images. A form of OCR known as zone processing allows you to scan a particular section of a document, convert that zone into electronic text, and place that text in the correct data field in the index. Unfortunately, zone processing is only effective with documents that share a particular structure, such as forms or résumés (where zone processing can capture the name and address of applicants from the top of the page, for example).

Indexing microfilm

You will often index microfilm during content inspection. When reviewing the images of documents, staff can add personal names, identification numbers, roll and frame numbers, and any other necessary index terms into a database. You can use this database alone or as part of a computer-assisted retrieval (CAR) system. A database index of microfilmed personnel records might index surname, social security number, and the department where each employee worked, along with roll and frame numbers of the first document in each case file. Once you look up a record in the index of a CAR system, you can write down the correct roll and frame numbers, retrieve the appropriate cartridge of microfilm, and load it

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into the reader/printer. After punching the frame number into a keypad attached to the reader/printer, the film automatically advances to the first requested image.

Step 10: Inspect the Product and Preserve the Information

Only about two thirds of the project is complete after copying the records. You will still need to verify you have received quality images that you can quickly and easily access and use.

Technical Inspection

Microfilm

Technical inspection of microfilm involves reading density and resolution, ensuring all technical targets are in place (including the methylene blue test target), and checking the overall quality of the microfilm. For projects funded with a grant from the Local Government Records Management Improvement Fund, third-party inspection service is built into the microfilming process. For other projects, the Archives strongly recommends that you contract with a third party to conduct a technical inspection. The small cost of this inspection will ensure that the microfilm will withstand the test of time.

Imaging

Technical inspection of microfilm is often part of the responsibility of vendors, who must ensure that their scanners are operating properly. You also have the responsibility to ensure that the images produced by the vendor conform to your technical specifications, such as image type, resolution, and compression.

Content Inspection

If you will destroy the records after microfilming or scanning, it is particularly important to verify the images for completeness. Having a properly documented inspection procedure can prevent legal problems if those records are involved in litigation. Create a destruction log and a certificate of authenticity after inspecting the microfilm. The destruction log and the certificate of authenticity document the records series titles, volume of records destroyed, date span of records destroyed, the item number of the records on a retention schedule, signatures of individuals authorizing destruction, and method of destruction. The certificate declares that the records have been filmed in the normal course of business and verified for completeness. Complete the certificate only after inspecting the microfilm.

Microfilm

Once a roll of microfilm passes a technical inspection, you can duplicate it. Afterwards, compare the duplicate copy of film (never the master negative, which is prone to scratching when used in a reader) with the paper records to determine if the vendor has microfilmed all documents and produced quality images for each. Some typical errors you might find include the following:

- Image not filmed
- Improper exposure or uneven density
- Light streaks
- Scratches
- Incorrect, misplaced, or omitted finding aid targets
- Improper positioning of documents
- Folded documents
- Stretched or distorted documents
- Partial images
- Blank film
- Wrong side of document filmed
- Fogging
- Dirty film
- Torn or cracked film

Imaging

Once you receive the digital images from your imaging vendor, check the images for these common errors:

- Image not scanned
- Incorrect image format (such as JPEG where TIFF is required)
- Incorrect scanning resolution (dots per inch)
- Incorrectly oriented document (presented on its side or upside down)
- Image too large or too small
- Skewing of image
- Image too light or too dark

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- Image obscured (by a folded corner or another piece of paper)
 - Appropriate indexing terms not associated with the scanned image

If you identify any of these defects, contact the vendor immediately, determine why these errors were not caught and corrected errors during inspection, and ensure that the vendor corrects the errors at its expense.

Preserve the Information

Microfilm

The original camera microfilm is silver gelatin film, which has a life expectancy of 500 years if properly processed and stored. Despite its great potential for longevity, however, silver gelatin microfilm is highly susceptible to physical and environmental damage. A few passes through a microfilm reader can seriously scratch it. To comply with regulations, you must store your master silver gelatin negatives offsite in an environmentally controlled environment and use only your duplicate copies to access the images. See your RAO for a list of commercial facilities specializing in microfilm storage.

Digital images:

For digital images, you need to maintain a system capable of displaying your images for as long as required. This dictates that you upgrade your equipment and software periodically to ensure that the file format of the images remains accessible in a modern computing environment.

Conclusion

If you are considering an imaging or microfilming project, be sure to take some time both to learn the relevant technology and to plan the project. Any project can fail, but a good understanding of the technical and procedural elements of the project, along with good planning, will increase your chances for success.

For More Information and Assistance

The State Archives provides direct advice to state agencies and local governments on planning for and conducting imaging and microfilming projects. The Archives has regional offices throughout the state, and each office has an expert records specialist who can visit you and provide technical advice and assistance. Archives services also include publications and workshops on a wide variety of records management topics, including imaging and microfilming. For further information, contact either your regional office or

Government Records Services
New York State Archives
State Education Department
9A47 Cultural Education Center
Albany, New York 12230
(518) 474-6926
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Appendix A

Sample Microfilm Specification and Explanation

Most of this sample specification for tax assessment rolls duplicates language found in the State Archives' generic microfilming guidelines (found in Publication #9, *Producing High-Quality Microfilm*). The sample highlights unique information provided by the state agency or local government to illustrate what information you must add to the basic guidelines to transform them into a complete specification. Items not highlighted require no changes; you can incorporate them directly into most specifications. Explanations of these changes to the generic guidelines follow the sample specification. Changes to the guidelines may include specific information on your organization and the particular records series, additional handling requirements, and technical modifications to ensure the vendor captures the best-quality image for this particular set of records.

Date: July 14, 2004

MICROFILM SPECIFICATION FOR

NOTICE

This specification is only valid for the records named below and the organization above. Contractors that accept programs other than herein specified using this specification are subject to nonpayment and penalties. This specification is automatically voided, for bidding purposes, two years after the above date.

SCOPE

A. RECORDS SERIES NAME: [REDACTED]

B. DOCUMENT SIZE: [REDACTED]

C. CONDITION: [REDACTED]

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D. PREPARATION: The [redacted] will be responsible for file preparation for camera-ready status.

F. CONTRACTOR: The prime contractor will have complete in-house capability to perform all the operations (camera, processing, quality control, duplicating, etc.), as specified herein. The contractor shall not subcontract any operation or portion of an operation without the written permission of the customer or unless specified herein.

REQUIREMENTS

1. REDUCTION RATIO: [redacted]

2. BACKGROUND DENSITY RANGE, CAMERA FILM: [redacted] measured as visual diffuse transmission density. Background density applies to all images. The density target is intended for control and guidance purposes only.

3. BASE PLUS FOG (D_{min}): Base plus fog shall not exceed 0.10 measured as visual diffuse transmission density.

4. RESOLUTION: The [redacted] pattern, or better, will be resolved in all charts in both directions.

5. CAMERA FILM: 16mm x 100', 5mil thick, unperforated polyester, high-contrast (gamma 3.0 to 4.0), panchromatic, safety film (ANSI IT9.1).

6. IMAGE ORIENTATION: [redacted] mode.

7. FILM PROCESSING AND HANDLING: The vendor will ensure that all silver halide film processing meets archival quality standards in accordance with the latest revision of ANSI IT9.1 (polyester base film). An independent test laboratory shall subject a sample of clear film to the methylene blue test for detecting residual thiosulfate as outlined in the latest revision of ANSI PH4.8. The vendor shall test the microfilm processors used for this program weekly and forward copies of the archival certificate to the user. The vendor may rewash and retest film that fails to meet archival standards within seven calendar days after processing. Since testing is based on a sample of the film, a test failure will require the rewashing and testing of all rolls of film in the untested batch that preceded and followed the failed sample.


8. TARGETING AND SEQUENCE:

- a. Blank Leader, 24" minimum
- b. Start Target (eye-readable)
- c. Roll Number (eye-readable)
- d. State Archives Records Inventory Data Worksheet
- e. State Archives File Information Form
- f. Local government or state agency name and address
- g. Contractor's name and address, date filmed, reduction ratio, film manufacturer, type, expiration date, and batch number
- h. Certification Target signed by the camera operator
(f through h may be combined onto one target)

-
- i. Declaration by records custodian
 - j. *Density Target*: The optimal density target is a full-frame image, using blank paper that matches the data base in color and reflectance density. Every effort should be made to utilize a blank sheet from the actual data base. In the event this is not available, the microfilmer may substitute a clean, blank, twenty-pound sheet in a matching color.
 - k. *Resolution Target*: ANSI/AIIM MS 51 (“Micrographics—ISO Resolution Test Chart No. 2—Description and Use”) or equivalent.
 - l. *Residual Thiosulfate Test Certificate*: A copy of the certificate that precedes the filming date by a maximum of two weeks (one week preferred).
 - m. *Start File Target*: If applicable to a folder-oriented file, use a “START FILE” target to separate individual existing folders
 - n. *Defect Targets*: Target all defects or irregularities, positioning targets before pages exhibiting the defect; typical targets include “MISSING PAGE,” “TEXT OBLITERATED,” “TORN PAGES,” and “ILLEGIBLE COPY.”
 - o. After filming the last file on a roll, film the following:
 - Certification Target signed by the camera operator (same as h)
 - Density Target (same as j)
 - Resolution Target (same as k)
 - Residual Thiosulfate Test Certificate (same as l)
 - Roll Number (eye-readable)
 - END Target (eye-readable)
 - Blank Trailer, 24" minimum.

8.1 The complete microfilm specifications for this project, including these guidelines, will be filmed at the beginning of the first roll of this records series. In the case of an ongoing filming program, the specifications will be microfilmed at the beginning of the first roll of the year, whether calendar or fiscal. When filmed, the specifications will be placed after the State Archives File Information Form (item 8e).

9. IMAGE SPACING: 10mm

10.  Include image marks (blips) in accordance with ANSI/AIIM MS 8, “Image Mark (Blip) Used in Image Mark Retrieval Systems.” Provide sequential frame numbers for all roll film applications, and position numbers between each frame without obscuring any significant detail. Assign numbers sequentially starting with 1 (or 0001) at the beginning of each roll (including the identification target), and continue these sequentially through the roll without variation. The last frame number must be equal to the number of frames on the roll.



11. SPLICING: Splices will comply with ANSI/AIIM MS 18, “Micrographics—Splices for Imaged Microfilm—Dimensions and Operational Constraints.”

- a) Use only ultrasonic splices that weld pieces of film together.
- b) There will be no more than two splices per 100' roll.
- c) Place splices only in the clear leader at the beginning of a roll.

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- d) Splice retakes before the technical targets with a target at the beginning of the retakes reading “START RETAKE” and a target at the end of the retakes reading “END RETAKE.”
 - e) Splicing in technical targets is strictly forbidden.

12. [REDACTED]
Bar-gamma range: 1.10 to 1.49
Dmax range: 1.50 to 1.80
Dmin range: Burn-out density plus 0.05 to 0.09

13. EMULSION ORIENTATION: Emulsion will be oriented as specified in ANSI/AIIM MS 14, “Standard Recommended Practice—Specifications for 16mm and 35mm Roll Microfilm.”

14. PACKAGING: Silver gelatin camera film will be on spools as per ANSI PH1.33. Package film in closed plastic boxes suitable for permanent storage as per ANSI IT9.2. Spools must fit into boxes loosely, without binding or pressure.

14.1. Duplicate film copies will be packaged as follows:
Reels: ANSI-PH5.6, latest revision in boxes. Secure duplicate film trailers on ANSI reels to the reel hub with Kodak-Recordak trailer holder or equal.

15. PACKAGE MARKING: The following data, machine-printed on plain white labels, shall appear on each roll (box, cartridge, etc):

[REDACTED]
Roll # [REDACTED]

16. QUALITY OF CAMERA MICROFILM AND DUPLICATES: Expose and process each frame of microfilm so that every line and character on the document appears on the microfilm. Film will be free of scratches, holes in the emulsion or base, tears, finger marks, or any other defect that might adversely affect quality.

17. DOCUMENT FLATNESS: Microfilm folded and rolled documents absolutely flat and shadow-free. The bottom surface of each document will be totally in contact with the camera board working surface.

18. CONTRACTOR INSPECTION: Contractor will inspect each roll of first-generation silver gelatin microfilm for compliance with the requirements herein. At a minimum, inspect each roll of film for resolution, density, processing, and general production quality. Supply a contractor inspection report for each roll of film included in each shipment.

19. QUALITY CONTROL: Images that, upon inspection by the customer, do not meet these guidelines, will be defined as defective, and must be refilmed at the contractor’s expense. If the number of defective images does not exceed one image in 500 (five images per roll of 2,500 images), the contractor may film defective image retakes in accordance with the guidelines for

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splicing. If the number of defective images exceeds one image in 500, the contractor must refile the entire roll.

19.1 Deliver first-generation silver gelatin microfilm (camera film) for inspection, prior to duplication, to the customer's inspection agent.

19.2 Note that certain requirements, such as "Reduction Ratio," "Resolution," "Splicing," etc., apply to the entire roll of microfilm. Should a roll of microfilm fail to meet the requirements described in these and similar paragraphs, the contractor must refile the entire roll of microfilm despite the number of defective images.

20. VENDOR FACILITY INSPECTION: The customer reserves the right to inspect and approve the vendor's work site before and at any time during the performance of a contract, to ensure the vendor's production and quality-control capabilities.

21. REJECTION OF MICROFILM BY THE CUSTOMER: When the customer rejects individual frames or rolls of microfilm, the customer or the vendor may deface the rejects by punching a clearly defined hole approximately 1/4" in diameter through the microfilm image or leader without defacing the image or roll identification. The customer may retain all rejected film at its discretion.

22. SHIPMENT OF FILM FOR INSPECTION: Film will be shipped in reusable fiber cases. Cases remain the property of the contractor. Recommended case construction:

- a Size (large box); 15" x 12.5" x 4", nominal inside dimension, and a capacity of forty-two 16mm rolls
- b Size (small box); 15" x 8.5" x 4", nominal inside dimensions, and a capacity of twenty-eight 16mm rolls
- c Mail card holder with reversible mailing card for convenient return shipment
- d Metal reinforced corners
- e Adjustable cross-straps, two minimum

22.1. The contractor must pack the film so that all edge labels are visible and facing the same direction.

22.2. Each film shipment will include the following:

- a. Detailed packing slip, in duplicate
- b. Photocopy of the most recent methylene blue test results
- c. Contractors' film inspection report

22.3. Shipment will be by express service only. Insure the shipment for replacement costs, payable to the contractor, in both directions.

23. FILE INTEGRITY: Unless otherwise specified in this contract, maintain the original documents in the existing file order before, during, and after the filming. Return file material to the original storage containers in the same manner that existed before filming. In subsequent refile, maintain corrections to the file order resulting from preparation for filming. Do not restore fasteners (staples, clips, tape, etc.) removed in preparation. Carefully check file integrity before filming retakes to ensure proper document order.

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CHANGES MADE TO THE GENERIC GUIDELINES TO CREATE A MICROFILMING SPECIFICATION

You can find generic microfilm guidelines in Publication #9, *Producing High Quality Microfilm*. The following is an explanation of changes made to generic guidelines to form the specification above.

SCOPE: Add the following to the State Archives' microfilming guidelines: the name of your organization, a full description of the records series and its physical characteristics, and the assignment of responsibility for document preparation.

1. REDUCTION RATIO: The reduction ratio describes how much smaller the image on the film is than the original document. The State Archives' guidelines allow a maximum of a 32:1 (or 32X) reduction ratio, which means that the original is thirty-two times larger than the image on the film. In this specification, the customer has chosen a smaller reduction ration (24X) because of the large size of documents.

2. BACKGROUND DENSITY: The background density is a numerical measure of how light is transmitted through the black, non-text area of the film. In this specification, the customer has examined the documents and consulted with a microfilming professional to determine that a narrower density range (0.80 to 1.00) is more appropriate than those given in the guidelines (0.75 to 1.20).

4. RESOLUTION: In this case, the customer is requiring a higher resolution (image sharpness) than the resolution in the guidelines, to ensure that the microfilming will capture the fine detail that is handwritten in ink and pencil on these documents.

6. IMAGE ORIENTATION: Here, the customer has specified a comic orientation (horizontal or landscape), rather than cine (vertical or portrait), because the former will allow the filming of more images per roll.

10. RETRIEVAL AIDS: In this section, the customer has deleted the section in the State Archives' guidelines that indicates when frame numbering is not necessary. The customer has also specified the exact order in which the vendor must film the documents.

12. FILM DUPLICATES: The customer has indicated the required number of duplicate copies of duplicate film: in this case, and as usual, only one.

15. PACKAGE MARKING: Here, the customer has specified the names of the organization and the records series as they should appear on the microfilm canister label.

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Appendix B

Sample Imaging Specification and Explanation

Most of this sample specification for employee record cards duplicates language found in the State Archives' generic imaging guidelines. This sample highlights the unique information provided by the customer to illustrate what information you must add to the basic guidelines to transform them into a complete specification. Items not highlighted require no changes; you can incorporate them directly into most specifications. Explanations of these changes to the generic guidelines follow the sample specification. Changes to the guidelines may include specific information on your organization and the particular records series, additional handling requirements, and technical modifications to ensure the vendor captures the best-quality image for this particular set of records.

Date: July 14, 2004

ELECTRONIC DOCUMENT IMAGING SPECIFICATION FOR

NOTICE

This specification is only valid for the records named below and the organization above. Contractors that accept programs other than herein specified using this specification are subject to nonpayment and penalties. This specification is automatically voided, for bidding purposes, two years after the above date.

SCOPE

A. RECORDS SERIES NAME: [REDACTED]

B. DOCUMENT SIZE: [REDACTED]

C. CONDITION: [REDACTED]

D. PREPARATION: The [REDACTED] will be responsible for file preparation prior to imaging.

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F. CONTRACTOR: The prime contractor will have complete in-house capability to perform all the operations (scanning, indexing, quality control, duplicating, etc.), as specified herein. The contractor shall not subcontract any operation or portion of an operation without the written permission of the customer or unless specified herein.

REQUIREMENTS

1. IMAGE FORMAT:

1.1 Master Images: Record copies of images shall meet the following guidelines:

Format:	1-bit TIFF (latest version)
Tonal depth:	Bitonal
Compression:	Uncompressed
Spatial Resolution:	200 dpi (unenhanced true scan)

1.2 Access Images: User copies of images, if different from the master copy, shall meet the following guidelines:

Format:	1-bit TIFF (latest version)
Tonal depth:	Bitonal
Compression:	TIFF Group 4
Spatial Resolution:	200 dpi

2. COMPRESSION: Maintain record copies uncompressed to ensure easy accessibility to the image over time. Access copies or use copies may be compressed using non-proprietary, lossless compression algorithms.

3. SCALING: Scale access images so most documents fit within the typical computer screen or window for the given application.

4. IMAGE HEADERS: Master images cannot have proprietary headers, including PDF headers, that make the images inaccessible except in particular software environments. Access images cannot have proprietary headers, except PDF headers where necessary.

5. IMAGE ORIENTATION: Upright (portrait or landscape as appropriate).

6. [REDACTED] Storage media shall depend on the purpose of the particular version of the images stored.

6.1 Master and Access Images: Store these images on CD-Rs.

6.1.1 Removable storage media shall have a manufacture date of less than a year before date of first use.

6.1.2 Removable storage media shall have a pre-write shelf life of at least five years and a minimum post-write life of twenty years, based on accelerated aging test results that report on specific disk areas.

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6.1.3 CDs used as a storage media must comply with ISO 9660 Standard, which specifies how this type of media disk stores information.

6.2 Backup Images: Backup images on removable media shall meet the guidelines for master images.

7. MULTIPLE FRAME IDENTIFICATION: All images in a single document shall be accessible and presentable in their original order and be clearly associated with each other as parts of a single document.

8. QUALITY CONTROL AFTER SCANNING:

8.1 Inspection of the images by the vendor for quality shall verify the following:

- a. Correct image filename (unique identifier)
- b. Correct file format for each image type (master, access, thumbnail)
- c. Image scanned at appropriate dpi for each image type
- d. Image oriented properly, whether landscape or portrait
- e. Image is correct size (in pixels along both dimensions)
- f. Image is not skewed
- g. Image is not rotated or flipped
- h. Image is neither too light nor too dark
- i. Appropriate contrast within the image
- j. No digital artifacts or other distortion of the image
- k. No extraneous materials (fingers, fasteners, etc.) scanned with the image
- l. Nothing obscures the image
- m. No error messages or other problems in TIFF headers
- n. Appropriate indexing terms associated with the scanned image

8.2 Correction of unacceptable images shall consist of the following:

- a. Adjusting brightness, contrast, or tone
- b. Rescanning, followed by a re-inspection of the new image
- c. Correction of indexing errors by updating index database

8.3 Unacceptable modifications to the images include the following:

- a. Sharpening the images
- b. Retouching or despeckling
- c. Removing information from the images
- d. Adding information to the images, except clearly marked and necessary sticky notes

9. RESOLUTION: Image sharpness should be equivalent to the dots per inch (dpi) required for the original image type in 1.1–1.3 above. Use commercially produced resolution targets, such as those outlined in ANSI/AIIM TR38-1996, “Identification of Test Images for Document Imaging Applications,” and following techniques in ANSI/AIIM MS44-1988, “Recommended Practice for Quality Control of Image Scanners,” to verify scanner performance.

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10. DOCUMENTATION TO SCAN WITH THE RECORDS: Scan the following documentation with the records, ensuring that this documentation appears in each separate location where the records are stored (LAN drive, removable media, backup tapes, etc.):

- a. State Archives Records Inventory Data Worksheet
- b. File Information Form
- c. Local government or state agency name and address
- d. Contractor's name and address, and dates of scanning
- e. Certification Target signed by the scanner operator
- f. Declaration by records custodian
- g. Resolution Target that complies with ANSI/AIIM TR38-1996, "Identification of Test Images for Document Imaging Applications," or other industry-standard resolution target
- h. Indices, finding aids, and other metadata associated with the documents, if supplied by the customer (if separate from the index database for the images)
- i. Sticky notes, if necessary to indicate defects to records, including "*DAMAGED DOCUMENT*," "*POOR-QUALITY DOCUMENT*," etc.

11. [REDACTED] Indexing shall comply with specific requirements of the customer, but shall at the minimum include the following:

11.1. Unique Identifier for Images: Each image shall have a unique identifier, preferably sequential, which could be numeric, alphanumeric, or alphabetic as required by the customer. Each filename shall be unique across all separate external media, not merely within a single disk or tape.

11.2. [REDACTED]

11.3. Indexing Database: The indexing database shall store the required index data in ASCII or Unicode, and each record within the database shall be associated with the respective digital image or document.

11.4. Index Accuracy: The vendor shall verify the index via dual data entry, data entry operator verification immediately subsequent to data entry, or other means as appropriate, to ensure accuracy.

12. PACKAGING: Disk media (CD-Rs, DVD-Rs, etc.) shall be in unbroken jewel cases and shall rest on the inner spindle without pressure that could produce damage during removal or replacement. The customer may accept or require alternate appropriate packaging as is suitable. The vendor shall deliver separated sets of master and duplicate copies of media to the customer in boxes, with the media fitting firmly but not tightly.

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13. PACKAGE MARKING: The following data, machine-printed on plain white adhesive labels, shall appear on each disk and each jewel case or other storage container:

Springfield Central School District
Employee Record Cards, 1935–2000

14. QUALITY OF WORK: Scanning shall capture each digital image of a document page so that every line and character on the document appears in the image. Removable media shall be free of scratches, cracks, finger marks, or any other defect that might adversely affect quality or usability.

15. CONTRACTOR INSPECTION: The vendor shall inspect each individual disk, tape, or other storage medium for compliance with the requirements herein, including resolution, image quality, accuracy of the index, and general workmanship. The vendor shall include an inspection report or certification for each disk, tape, or other storage medium included in each shipment.

16. QUALITY CONTROL: Images that, upon inspection by the customer, do not meet the requirements of these guidelines will be defined as defective, and must be rescanned at the contractor's expense. If the number of defective images does not exceed one image in 500, the contractor may scan the defective images and store these on a separate disk, tape, or other storage medium. If the number of defective images exceeds one image in 500, the contractor must replace the entire disk, tape, or other storage medium.

17. REJECTION OF BACKUP MEDIA: When the customer or its inspection agent (if applicable) rejects an entire disk, tape, or other storage medium, the customer or vendor may deface the rejects by cracking, punching, or shredding. The customer may retain rejected media at its discretion.

18. VENDOR FACILITY INSPECTION: The customer reserves the right to inspect and approve the vendor's work site before and at any time during the performance of a contract to ensure the vendor's production and quality control capabilities.

19. FILE INTEGRITY: Unless otherwise specified elsewhere in the contract, the vendor shall maintain the original documents in their existing file order before, during, and after scanning. The vendor shall return file material to the original storage containers in the same order that existed before scanning. However, the vendor shall maintain any corrections to file order made during the preparation for scanning. The vendor shall not restore any fasteners (staples, clips, tape, etc.) removed during document preparation.

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CHANGES MADE TO THE GENERIC GUIDELINES TO CREATE AN IMAGING SPECIFICATION

Generic imaging production guidelines are currently available from the State Archives in draft form, and will be available as a formal publication sometime in 2003. The following is an explanation of changes made to the generic guidelines to form the specification above.

SCOPE: Add the following information to the State Archives' imaging guidelines: the name of your organization, a full description of the records series and its physical characteristics, and the assignment of responsibility for document preparation.

1. IMAGE FORMAT: Precisely define in your specification the image formats you require for this particular application. In this example, the customer has chosen standard bitonal (black and white) TIFFs for the master, access, and backup copies of the images.

6. STORAGE MEDIA: Indicate the storage media you require for this particular application. In this specification, the customer has chosen recordable compact discs (CD-Rs) as the storage medium.

11. RETRIEVAL AIDS: Necessary retrieval aids will differ dramatically from application to application. In this example, the customer has indicated the exact data fields the vendor must include and complete in the index database. Also, the customer has deleted the reference to optical character recognition (OCR) from the generic guidelines, since OCR is both unnecessary and impossible to use with the records in question.

12. PACKAGE MARKING: Here, the customer has specified the names of the organization and the records series as they should appear on the microfilm canister label.

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Appendix C

Sample Contract

This sample contract includes general contract language, including compliance with specifications, communications, and pickup and delivery, that you should incorporate in any imaging or microfilming contract. Modify this contract to comply with your standard contract language, and add or delete any information as necessary. For instance, if you are developing a contract for imaging services, you will need to revise a number of sections to eliminate references to microfilming. Also make sure that your legal counsel and purchasing unit review any contract for microfilm or imaging services. Append your completed microfilming or imaging specification to your contract to produce a complete contract document. With a few more details on bidding rules, these documents could then form an official request for proposal (RFP).

MICROFILMING CONTRACT

A. Scope

This contract between the Village of Ogdenville (hereafter referred to as Ogdenville) and the Generic Microfilm Corporation (hereafter referred to as the Vendor) applies to records reproduced in microform for Ogdenville and to the services listed on the attached specification for a period from June 30 through December 31, 2005.

B. Prices

1. The Vendor will quote prices for all aspects of the project in cost per frame to include filming, processing, document preparation (where applicable), duplication, pickup, delivery, and shipping. Prices will also indicate total rolls to be filmed and cost per roll for silver and diazo duplicates.
2. All prices will remain in effect for the duration of the project.

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C. Copyright

All microfilm produced by the Vendor is the property of Ogdenville. No part of the microfilm may be sold, distributed, or duplicated without the written permission of Ogdenville.

D. Compliance with Specifications

1. The Vendor will conduct work for Ogdenville according to the attached specification. Ogdenville will provide any deviations from these specifications to the Vendor in writing.
2. Ogdenville reserves the right to specify additional filming methods and instructions for any and all items should this become necessary. The Vendor will not change the filming methods and instructions (including reduction ratio, image placement, and arrangement of records for each records series) without prior consent from Ogdenville. If the Vendor cannot film any item in the manner specified, then after consultation with Ogdenville the Vendor will return the item to Ogdenville with justification for its rejection. Ogdenville can, at that time, contract with another vendor to complete the portion of the project that the Vendor cannot complete.
3. Failure of the Vendor to meet the requirements of the contract and the attached specification will constitute default. Ogdenville will notify the Vendor in writing of unsatisfactory service, poor production quality, or poor delivery. Failure of the Vendor to correct the problems at its own expense or to come to an amicable solution with Ogdenville within thirty (30) days will constitute default.

E. Subcontracting

The Vendor will conduct all services (microfilming, processing, duplicating, and quality control) on its premises or those of Ogdenville unless Ogdenville grants the Vendor written permission to do otherwise.

F. Insurance and Security

The Vendor will insure, at no charge to Ogdenville, all materials against loss or damage from any cause, from the time they leave Ogdenville until they are returned. The Vendor must insure each film shipment while in transit and while at the filming facility. The limit of liability for an item lost or destroyed will be a sum equal to the cost of processing an acceptable replacement item.

G. Communication

The Vendor will appoint a representative to coordinate the project with Ogdenville. The representative will be thoroughly familiar with the terms of this contract, will have in-depth knowledge of technical micrographic issues, and demonstrate a concern for the special requirements of preservation microfilming.

H. Access to Records During Filming

If Ogdenville requires access to any of its records while they are in the possession of the Vendor, the Vendor will fax or e-mail a copy of the documents within one business day of the request. The Vendor shall provide this service at no additional cost, so long as Ogdenville requests no more than an average of five pages per week. In the case of a filming delay on the Vendor's part or requests from Ogdenville exceeding five pages per week, both parties will discuss the issue and agree to any solutions in writing.

I. Preparation and Targeting

1. Ogdenville will provide any informational targets, series descriptions, indexes, and other appropriate finding aids as necessary along with the records for filming.
2. The Vendor will provide all technical targets: density, resolution, start targets, residual thiosulfate test certificate, etc., as outlined in the attached specification.
3. The Vendor will not disbind bound volumes without the prior consent of Ogdenville.

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J. Packing, Pickup and Delivery

1. The Vendor will adhere to the “Packaging” and “Package Marking” sections of the attached specification.
2. The Vendor will maintain a log acknowledging receipt of each shipment of records and will make this log available upon request to Ogdenville.
3. The Vendor will return to Ogdenville in a single delivery all targets and records packed by the Ogdenville in one shipment. The Vendor will ship original documents, master negatives, printing masters (silver duplicates), and use copies (diaz copies) on the same date.
4. All shipments of film will comply with the attached specification section, “Shipment of Film for Inspection.”
5. The Vendor will arrange all shipments to and from Ogdenville via an agreed-upon commercial carrier.
6. A schedule for pickup and delivery of records and microfilm is outlined below:

K. Quality Control Inspection, Errors and Delays

1. The Vendor will inspect all first-generation silver gelatin microfilm for compliance with this contract and with the attached specification sections titled “Quality Control” and “Rejection of Microfilm by the Customer.”
2. An independent inspecting agent chosen by Ogdenville will inspect all first-generation silver gelatin microfilm.
3. The Vendor, within thirty (30) days of the Vendor’s receipt of items for correction, will correct without additional charge any errors made by the Vendor that Ogdenville identifies during the inspection process. The Vendor will pay any extra transportation or mailing cost resulting from such errors.
4. The Vendor will correct additional errors it makes at no expense to Ogdenville if identified within one year of the last date of filming of the project.

L. Special Microfilming

Ogdenville may occasionally request methods of microfilming other than those specified in this contract and in the attached specification. After Ogdenville provides the Vendor with specifications for services not described in this contract, the Vendor will provide rates for these services. The Vendor will not carry out any special treatment requiring extra charges without the written permission of Ogdenville.

M. Invoices

The Vendor will provide detailed invoices for each completed shipment within fourteen (14) days of delivery of the shipment to Ogdenville. Invoices will reflect the price structure delineated in this contract. They will indicate the master negative numbers and will include the number of exposures filmed, the charge per exposure, the number of rolls produced, the number of duplicate rolls, any other itemized charges, and total charges for shipping.



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Appendix D

Sample Microfilm Targets

The following pages contain a selection of sample targets. You can produce your own targets based on these, or photocopy and use these targets. Simple targets (such as the microfilming "START" target) are not included, since are easy to make by printing words of a point size of about 100.

SEQUENCE OF MICROFILMING TARGETS

Because microfilm is a sequential medium, targets and records on the microfilm should follow the order prescribed below. Imaging does not require a formal order to targeting, but the items below marked with an asterisk (*) appear in each separate location where the images are stored (LAN drive, removable media, backup tapes, etc.).

- Clear leader, 24" minimum
- Retake Start Target (when applicable)
- RECORDS RE-MICROFILMED** (when applicable)
- Retake End Target (when applicable)
- Start Target
- Roll Number Target
- Records Inventory Data Worksheet*
- File Information Form*
- Certification by Camera/Scanner Operator*
- Declaration by Records Custodian*
- Density Target
- Resolution Target*
- Residual Thiosulfate Test Certificate
- Title Target
- Restrictions Target (when applicable)

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RECORDS FILMED

Defect or Informational Targets (inserted where necessary), including

POOR QUALITY DOCUMENT

FADED DOCUMENT

DAMAGED DOCUMENT

ILLEGIBLE DOCUMENT

INTENTIONAL LOW-DENSITY

MISSING DOCUMENT

BLANK PAGES: Page _____ to Page _____

Density Target

Resolution Target

Residual Thiosulfate Test Certificate

Roll Number Target

End Target

Clear trailer, 24" minimum

START OF RETAKE ROLL NUMBER

The images appearing between this target and the “END OF RETAKE” target are copies of records, the microphotographs of which were missing or proved unsatisfactory upon inspection of the original microfilm. To preserve the integrity of the file, the records have been re-microfilmed as an addition to the original microfilm. For a description of the re-microfilmed material, see the “END OF RETAKE” target.

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END OF RETAKE RETAKE CERTIFICATE

I hereby certify that the microphotographs appearing between the START OF RETAKE target and this RETAKE CERTIFICATE are copies of the records described below.

Date: _____

Name of Filming Contractor: _____

Camera Operator's Name: _____

Camera Operator's Signature: _____

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Certification by Camera/Scanner Operator

Records Filmed/Scanned for (Organization Name and Address)

Records Filmed/Scanned by (Contractor's Name and Address)

Records Series Title: _____

Series Begins With: _____

Series Ends With: _____

Date Filmed/Scanned _____ Reduction Ratio _____

Film Manufacturer _____ Film Type _____

Expiration Date _____ Batch Number _____

This is to certify that the images appearing on this roll of microfilm or this electronic medium are reproductions of the above-named records made in the course of regular operations. The reproduction of these records followed guidelines established by the New York State Archives.

Printed Name of Camera Operator

Signature of Camera Operator

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Declaration by Records Custodian

Organization: _____

Records Series Title: _____

Beginning Document: _____

This is to certify that the images on this roll of microfilm or the digital images are reproductions of the above-named records series, reproduced from the best available documents in the course of regular operations and following established New York State Archives' microfilming and/or imaging guidelines.

Signature of Records Custodian

Date

Typed Name

Records Custodian Title



