

CONSERVATION CENTER

for Art & Historic Artifacts

Handling for Digitization

Chloe Houseman
Paper Conservator

Kaitlyn Pettengill
Digital Archives Specialist





Conservation Center for Art & Historic Artifacts



In a typical year:

- Preservation Services specialists complete over 50 survey projects.
- Approximately 60 CCAHA-sponsored workshops, conferences, webinars, and training sessions are presented.
- The Digital Imaging Services staff digitizes thousands of pages of fragile archival documents, books, and photographs.
- Conservators assess and treat more than 6,000 individual artifacts, from over 400 clients.
- Housing & Framing Services house approx. 75% of the artifacts treated (folder, sleeve, box, mat and frame, or sealed package).



Handling for Digitization

Understanding Types of Damage

Preparing the Work Area

Caring for Equipment

Gloves, Actually ...

Handling Techniques

Preparing the Originals (Fasteners, Bindings, etc.)

Common Risks and Red Flags

Digital Workflows





Understanding Damage

Mechanical Damage

Physical stress or impact

Chemical Damage

Reactions or residues affecting the material composition

Disassociation

Loss of contextual or informational integrity



What kind of materials are you digitizing right now?

Preparing the Work Area

Workspace Essentials

Smooth, neutral, non-abrasive surface

Ample space! FADGI suggests $\approx 6\times$ object size

Clear “In / Imaging / Out” areas

Lighting

Even, diffuse, glare-free

Avoid direct sunlight or heat sources

Environment

Stable temp/RH

Low dust

No food or drinks nearby

*Setting up a digitization workbench –
equipment, storage?*

Tool Recommendations

Micro spatulas
Snake weights
Book cradles and foam wedges
Microfiber cloths
Nitrile gloves
Brushes

Choose tools that provide control, not pressure.



Caring for the Equipment

Keep It Clean

Wipe glass with lint-free or microfiber cloth
Use small amounts of glass cleaner on cloth
Clean camera lenses and sensors carefully

Prevent Dust

Cover scanners and cameras when not in use
Avoid fans and open windows
Use air blowers, not compressed air

Protect from Damage

Power down before cleaning
Keep cords organized and off the floor

Do you have any recommendations on cleaning scanning equipment to prevent damage and to keep dust out of scans?



Gloves, Actually ...

For most paper-based materials, clean dry hands are preferred to wearing gloves.

This is generally safer, and allows you to retain your full dexterity.

The exception: photographs. Always handle with nitrile gloves to avoid fingerprints!



When handling works on paper, when is it necessary to wear nitrile gloves, and when are clean hands preferred?

Handling Techniques

Before You Begin

Prepare supports and tools in advance

During Handling

Support the entire object

Turn pages slowly from the edge

Avoid sliding or dragging

Keep movements slow and steady

After Handling

Return items to their housings

Write down any condition notes

Tidy the workspace for the next item



Removing Fasteners

When to Remove

If the fastener is rusted or damaging paper
If it blocks text or prevents safe imaging

When to Leave

If removal risks tearing or loss
If the staple is stable and not interfering
If original assembly has research value

If Removed

Document the action
Replace with inert fastener or sub-folder to maintain grouping
Keep original in an envelope (if appropriate)



What is your position on the removal of staples? Should they be removed when possible or left in the document no matter what?

Removing Adhesive

When to Remove

DON'T.

Tape carriers that are readily popping off may be removed, but leave the adhesive.

When to Leave

Always: likely to cause additional damage without correct tools/training.



Can I digitize documents with tape or adhesives on them?

Bindings

When to Remove

Simple bindings- binders, post-bound items, etc.

When to Leave

Original, structural bindings, even if this limits access.

If Removed

Retain if historically relevant, or return leaves to binding if possible, as with a binder.



How do you deal with a fragile or stiff spine on a book when you cannot or should not open it all the way to get a good image?

Flattening Rolled Items

Rolled items:

If flexible, unroll and use small weights/pieces of plexiglass to restrain for imaging.

If brittle or damaged: consult a conservator.

Folded items:

Similar to rolled.

Will not image as nicely even once restrained, due to creases.

How can I flatten rolled or folded items safely before digitizing them?

Encapsulation

When to Remove

Some older encapsulations are made with double sided tape to adhere the polyester together.

Not ideal: items can slip and become stuck.

Otherwise, generally fine to leave in place.

Is it ok to scan a document in a transparent sleeve to avoid too much handling or if it is just too fragile to take out?

Oversized Items

Maps and Posters

Support the document fully and evenly
Overlap scans slightly for later stitching
Avoid forcing folds or creases flat
Label sections clearly to stay organized

Bound Oversized Items

Support the spine — never force pages flat
Use foam wedges or cradles for stability
Capture one page at a time
Avoid pressing on bindings

*Please discuss best practices when scanning
oversize documents, such as tax maps that
might be up to 10' wide.*

*We would like to digitize some voting
registers. Oversized tall, not wide. Some have
spine issues. What is the best way to digitize
these unusual-shaped items?*

Surface Cleaning

General Guidance

Only dry, gentle cleaning, never with moisture or solvents

Use soft brushes or low-suction HEPA vacuums for loose dust

Avoid erasers, sponges, or cleaning powders

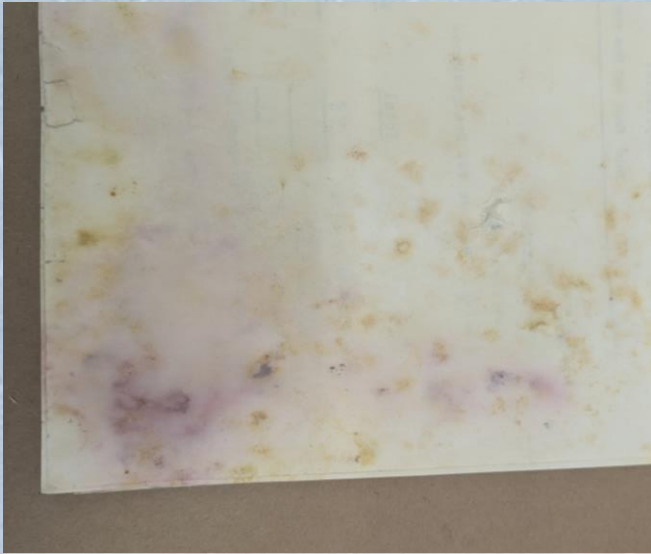
When to Stop

If media is friable, flaking, or offsetting

If stains or accretions are adhered to the surface

When unsure, defer to a conservator

Is surface cleaning ever appropriate before scanning?



Common Risks and Red Flags

Mold

Very common in paper collections.
PPE is important- mold is a health concern.
Actively damp? Allow to dry in a well-ventilated area.

Pest damage/infestation

Also a common Paper Problem

What do you do if something smells musty or seems moldy?

When should a conservator be called before digitization?

Photogrammetry Basics

When It's Useful

Captures shape, drape, and texture
Ideal for structured or sculptural textiles

Limitations

Requires advanced setup, software, and time
Not always safe for fragile or large textiles

Alternatives

Flat photography with careful support
Raking light to emphasize texture

Do you use photogrammetry to digitize fragile fabric objects - dresses, quilts, hats, for example?

Previously Imaged Materials

Choosing What to Digitize

Use copies if they are stable and legible

Use originals only when image quality or

content is better

Avoid handling brittle or damaged volumes

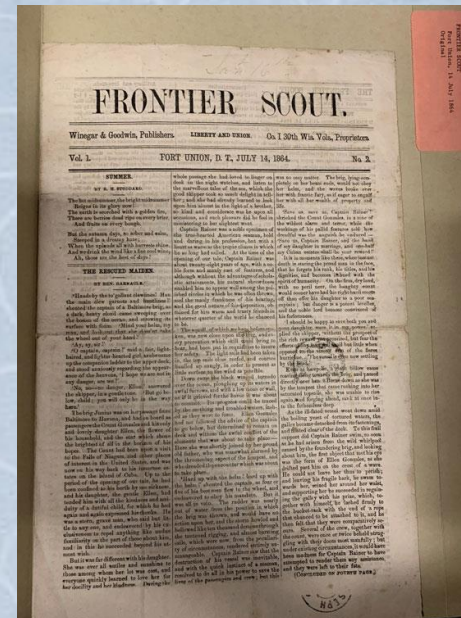
Key Considerations

Compare for clarity, completeness, and

contrast

Document which version was used

Always handle the original as little as possible



City Directories — is it better to use the copies or the originals for the ones with copies?



Digital Workflows

Keep It Simple

Record what was digitized and when

Link digital files to existing object records

Use consistent identifiers and file names

Start with basic documentation before full integration

Integration begins with organization.

*Collections Management software
integration?*

File Management Basics

Preservation & Access

Save uncompressed TIFFs as preservation masters

Create derivative files (JPEGs, PDFs) for use and sharing

Store in multiple locations: local, external, and cloud

Record basic metadata: creator, date, equipment, and settings

After one has digitized documents by scanning, what is the recommended way to save the scans?

An illustration of a window with a green sign that reads "Post your own questions and horror stories in the chat!". Below the sign, a jack-o'-lantern with a carved face is visible through the window panes. The background of the slide is light blue with a white spiderweb pattern.

*Post your own
questions and
horror stories in
the chat!*

Wrap-Up and Q&A

Top 5 Tips

1. Prepare your workspace
2. Handle with intention
3. Remove fasteners only when necessary
4. Protect context
5. Pause when unsure!

CCAHA Resources

[Paper-based Collections Handling Essentials](#)
[Collection Housekeeping Guide](#)
[Preventive Conservation Primer](#)