

FIRE INSURANCE MAPS

Fire insurance maps, sometimes referred to as FIMs, are aesthetically pleasing, highly detailed historical maps that are a valuable research tool for people interested in the history of cities, neighborhoods and individual properties. The maps are loaded with information about land uses, structures and the places where people lived, worked and socialized.

Part One of this two-part series summarizes how FIMs were originally created and updated. We will also provide insight about the challenges of preserving the important details on the original color maps.

Part Two will provide examples that illustrate why high quality images of historical FIMs are an essential resource for environmental professionals and historic preservation specialists.

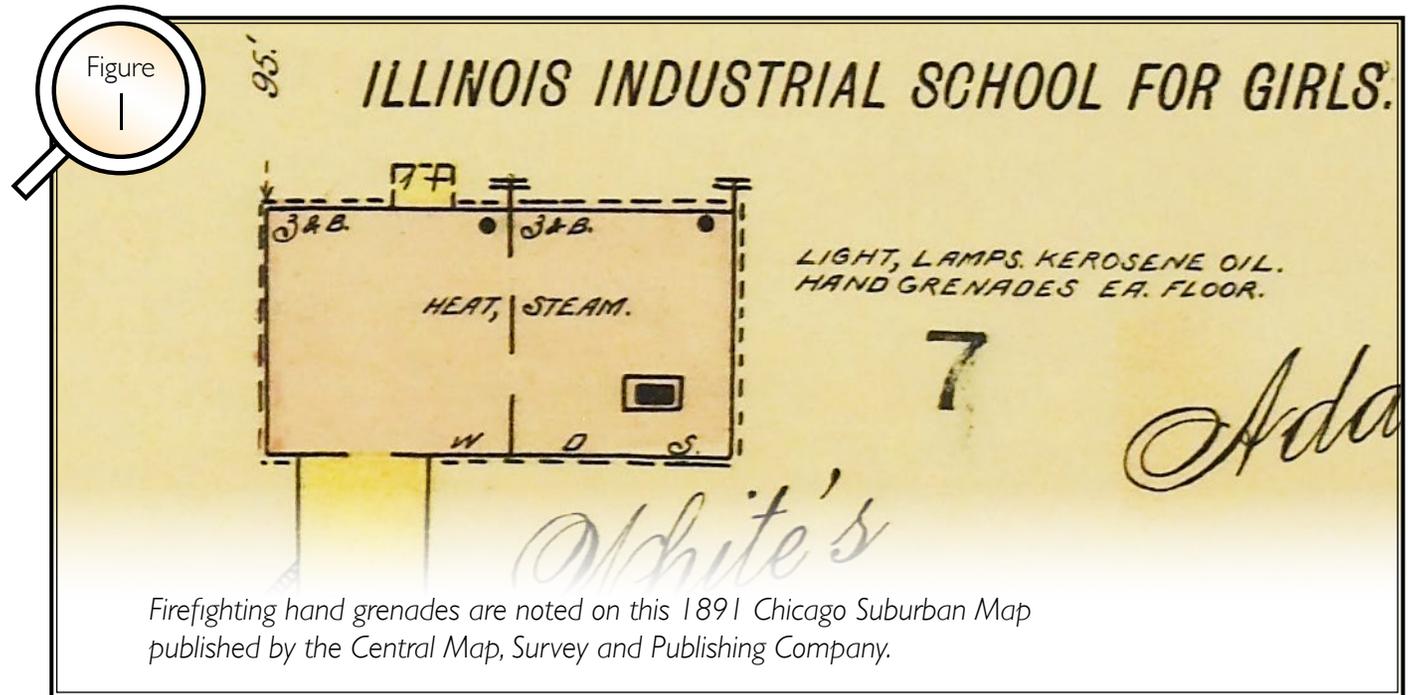
THE CREATION OF FIMS

FIMs were originally created to help fire insurance companies evaluate fire risk and set insurance rates for developed properties. The maps typically cover a few urban blocks per sheet and show property and road boundaries and the size, location and construction details of structures. The location of combustible materials such as petroleum products, lumber and chemicals were shown for businesses and public buildings. Industrial processes and related equipment, such as boilers, kilns and dryers that could be a fire hazard, were noted on the maps.

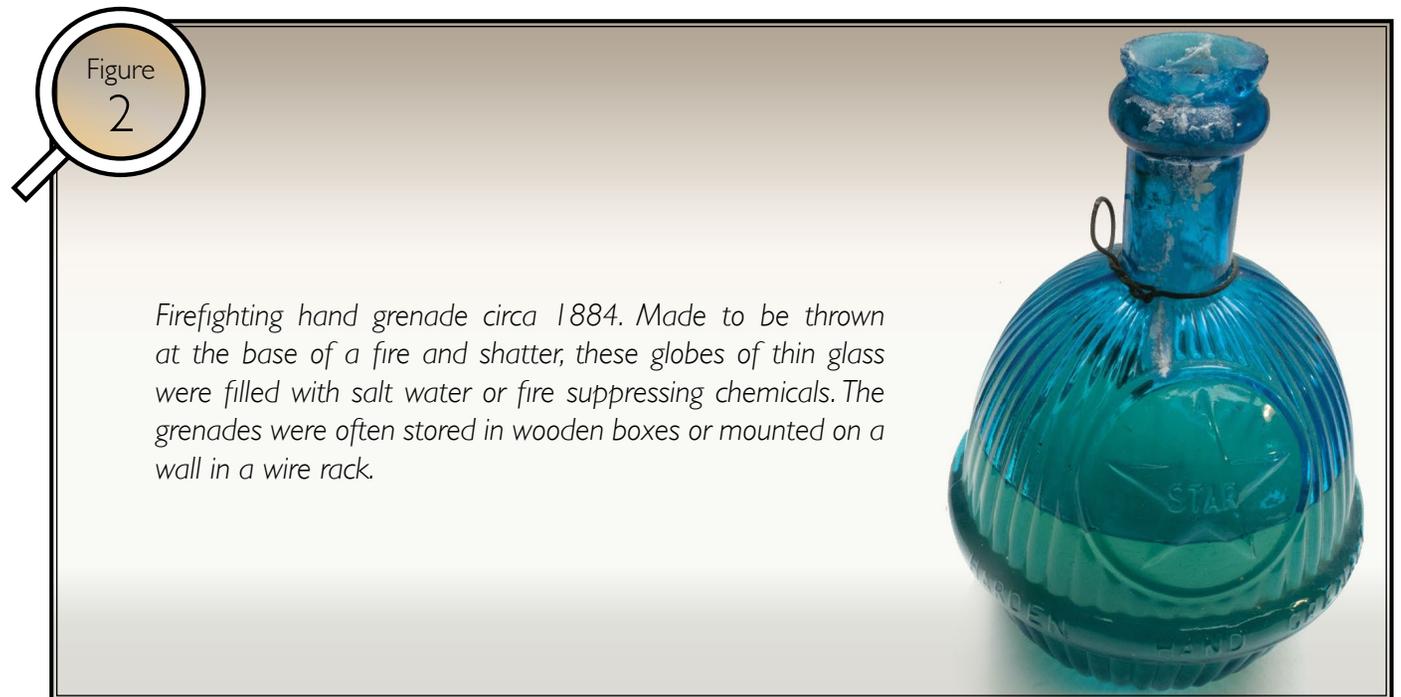
In addition, equipment and supplies that could reduce fire risk and fire damage were also shown. Examples include water storage tanks, wells and water piping used to fight fires. Many facility drawings were accompanied by detailed notes about the capacity of firefighting equipment and the presence of night watchmen. Figure 1 (shown on page 3) is a portion of a FIM that uses symbols and colors to convey building construction details. The map notes the building had steam heat, kerosene lamps and firefighting hand grenades, an example of which is shown on Figure 2 (on page 3).



A great summary about the history of FIMs, titled *“Introduction to the Sanborn Map Collection,”* was written by Walter Ristow, former head of the map library at the New York Public Library and later at the Library of Congress.



Firefighting hand grenades are noted on this 1891 Chicago Suburban Map published by the Central Map, Survey and Publishing Company.

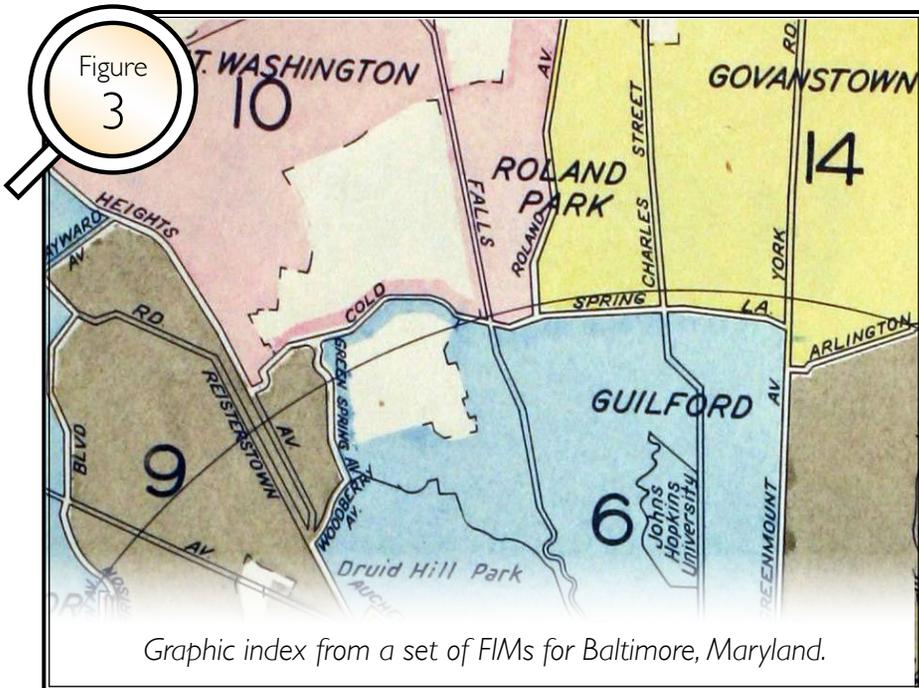


Firefighting hand grenade circa 1884. Made to be thrown at the base of a fire and shatter, these globes of thin glass were filled with salt water or fire suppressing chemicals. The grenades were often stored in wooden boxes or mounted on a wall in a wire rack.

The publication and use of FIMs started on the east coast and eventually spread to cover most urban areas in the United States. Trained map surveyors traveled to live and work in the cities and towns where they created the original maps. The surveyors used standard symbols and procedures to create the maps in the field. Many FIMs were drawn at a scale of 1-inch equals 50 feet on sheets of paper measuring 21 inches by 25 inches, which were cross-ruled in one-inch squares.

The hand drawn original maps were then used to create lithographically printed maps which were colored by hand. The map name, publisher name, date and a north arrow were typically included on each map, although the scale was not always provided. The completed maps were sent to paying customers.

FIMs were usually published as loose map sheets for small towns. Some towns were so small just one map sheet covered the entire business section. Map sheets for larger towns and cities were bound together in large volumes. Over the years, many cities and metropolitan areas required additional volumes to cover newly developed areas.



Graphic index from a set of FIMs for Baltimore, Maryland.

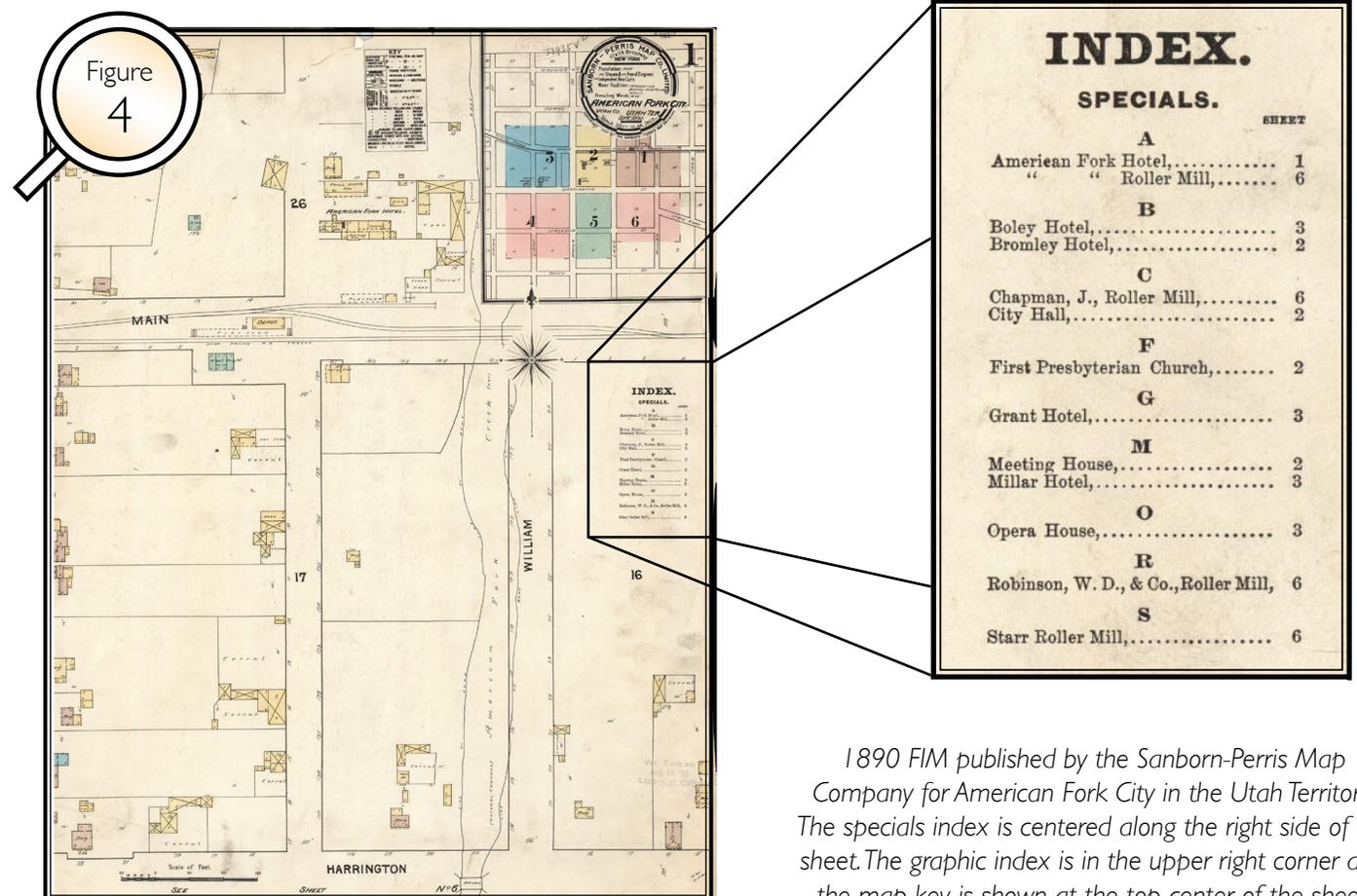


The Sanborn Map Company published a *Surveyors' Manual* in 1936 for its employees. The manual provides detailed instructions used to create the standardized maps. The manual also includes company policies related to customers, salaries and even sick day pay, which was given at the discretion of the surveyor's supervisor!

A bound volume of FIMs typically contained the map sheets in numerical order as well as an ornate title sheet, an alphabetic street index, a graphic index map showing the areas of the city covered by the numbered map sheets, a specials index and a map key. Figure 3 is a portion of a graphic index showing Baltimore FIM volume numbers.

The specials index was used to quickly find the map sheets for major businesses or important public facilities. These specials were sometimes located outside the urban core and some distance away from other mapped areas of a city. This means the specials were not always located within the boundaries of coverage shown on the graphic index map, but were listed on the specials index.

To save paper, one or more specials would often be included as insets on a map sheet. The specials would be delineated with a certain style of line to indicate they were not adjacent to other areas depicted on the same map sheet. Understanding the different line styles used can help a novice FIM user avoid the mistake of assuming an incorrect location for these specials. An example of a specials index is included on Figure 4.



1890 FIM published by the Sanborn-Perris Map Company for American Fork City in the Utah Territory. The specials index is centered along the right side of the sheet. The graphic index is in the upper right corner and the map key is shown at the top center of the sheet.

UPDATES TO FIRE INSURANCE MAPS

Fire insurance map companies issued many updates to their maps, known as corrections or revisions. These were needed to show the changes in an area over time such as buildings that had been removed or destroyed by fire, newly constructed buildings and additions to existing facilities. Road changes and address changes were also typically noted on the revisions.

To update the maps without incurring the cost of republishing an entire set, the revisions sometimes were hand drawn on the original maps. Many times, the revisions took the form of paper patches that were designed to be pasted on top of the corresponding location on an original map sheet.

First, a FIM company surveyor would prepare drawings of the properties that had changed since the area was last mapped. These were then lithographically printed on a sheet of paper. Several correction patches, known as slips, would be printed on each sheet. The slip sheets were shipped to a map company employee who would cut out each slip and paste them onto the corresponding original map sheets the customer already owned.

The pasted on correction slips can be easily seen on the original paper maps or on high resolution color images of the maps, as shown on Figure 5 (shown on page 7). However, evidence of these slips is often difficult or impossible to see on black and white or grey-scale images of FIMs. Lines on a black and white reproduction of a FIM that do not line up correctly can likely be attributed to the application of one or more sets of slips.

In many cases, the paste used to secure the slips caused warping of the maps over time. When creating digital images of original FIMs, this warping causes uneven lighting of the map surface that can result in variations in the color of the map sheet and slight distortions of scale.

Creating high quality digital color images from these old and fragile paper maps presents challenges that have recently been taken on by [Historical Information Gatherers at the Library of Congress](#).



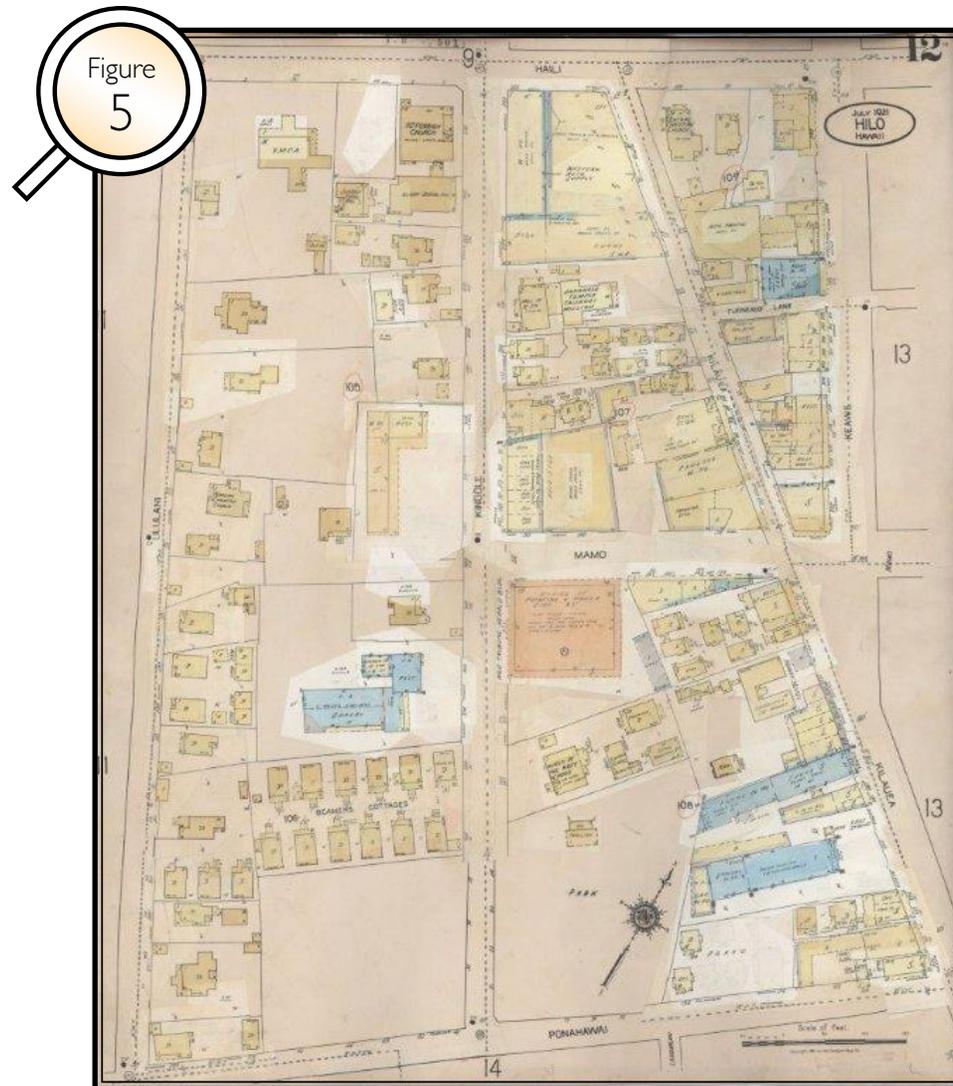
Surveyors for fire insurance map companies learned to walk in measured steps so distances could be easily calculated and recorded on the maps they were creating. This is likely why they were commonly referred to as striders, trotters or pacers.

As cities grew and changed, FIM publishers produced new map sheets to cover newly developed areas. In areas that had undergone considerable change, new map sheets were often produced instead of correction slips.

If a fire destroyed a large portion of a city, a completely new set of map sheets were typically created once redevelopment started.

Updates, in the form of correction slips, were then produced frequently until the area was again completely developed.

Pasted on correction slips can be seen as lighter colored areas covering the original map sheet.



CHALLENGES OF DATING FIMS

When revisions were made to a set of FIMs, a chart called the Correction Record was often added to the map set. The Correction Record lists the date the area was re-surveyed and the date, sometimes years later, when the correction slips were physically applied with paste to the original map sheets. For example, the FIM in Figure 6 (shown on page 9) has an original publication date of 1902 as shown in the upper right corner. The updated areas are visible as various shades of overlapping slips on several areas of the map. The Correction Record in the upper left corner indicates the FIM has been updated four times but lists only the 1941 update, which was actually applied to this particular map about four years later in 1945.

Incorrect map dates that could be reported by an inexperienced researcher are 1902 and 1945. An experienced researcher would know this map is current as of 1941. If the researcher has access to the original FIM or a high resolution color image of the FIM, they would likely be able to discern which parts of the map were not updated between 1902 and 1941, meaning those features were present during the entire time frame of 1902 through 1941.

However, it is not possible to determine with certainty the year a feature was added to the original 1902 map. Because the nuances of FIM dating are not well understood by all, the authors of this article have noted incorrect FIM dates in library catalogues, on microfilmed FIM collections, and in many environmental site assessment reports.

Identifying the correct date for a multi-volume set of FIMs can also be confusing. It may have taken a few years to create all the volumes for a large city, so not all volumes in the set have the same date. According to the Library of Congress website, "In several cases, a single volume (of FIMs) within a multi-volume set was revised and reissued with a new date even before the whole edition was completed."

Things can really get confusing when an area is covered by a certain FIM volume number in one year but is covered by a different numbered volume in an earlier or later year, or not covered at all! For example, two sets of FIMs were created in the early part of the 20th century for St. Paul, Minnesota. A set of five volumes was produced near the turn of the century; Volumes 1–4 were dated 1903 and Volume 5 was dated 1904.

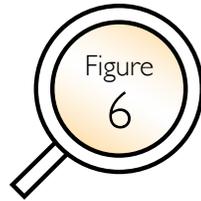


Figure
6

CORRECTION RECORD			
REV'N NO.	DATE OF CORRECTION	ATTACHED BY	DATE ATTACHED
4	8-41	R. M. E.	12-20-45

This FIM for Austin, Nevada has an original map date of 1902. The Correction Record in the upper left corner indicates the map has been updated four times; however, only the date of the 1941 update is recorded.



These maps were periodically updated with correction slips for the next several years. In the 1920s a new set of maps was produced by the same publisher which covered a much larger area of the growing city. Based on review of the graphic indexes, Volumes 1–4 of the 1927–28 FIMs covered completely different areas of the city as compared to the same volumes dated 1903–04. Volumes 6–9 were added, some of which overlapped onto areas covered by volumes 1–4 published in 1903–04. The area of the city covered by Volume 5 in 1904 remained the same as the area covered in 1927–28, so the original 1904 maps for Volume 5 were updated again with correction slips and then reprinted in 1939. Consulting the graphic indexes for both sets of FIMs can be a big time saver when researching properties in cases such as this.

MODERN USES OF HISTORICAL FIMS

The many details included on FIMs provide great information about how cities have grown and changed over time, the past uses of properties, and the materials used in building construction. The information conveyed on FIMs helps a variety of modern professionals and casual researchers in many ways. Part Two of this series will provide examples of how historic preservationists and environmental professionals use FIMs to identify historical structures and identify current environmental risks to human health and the environment.

DO BETTER RESEARCH with color FIMs and avoid the risk of missing important details that are often illegible on black and white scans. Check online for color maps or ask your data provider what is available. Check the status of the of the color FIM digitization project underway at the **Library of Congress**.