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Saving Places in the Digital Age: Modernizing Preservation

By Briana Grosicki

Recent technological advancements in capturing traditional historic resource data provide faster and cheaper means to collect data in the field. This enables scalable surveys from reconnaissance at the citywide level to the intensive district level. The digital collection methods mean that preservation data can be easily transferred to other repositories to be included in decision-making inside and outside of the preservation field. Lastly, these improvements provide a path for community engagement in the surveying process, a vital step in increasing the diversity of the field.

Historic resource surveys have long been an important method by which preservation entities inventory historic architectural assets. These efforts are most often carried out to determine eligibility for historic designation at the local, state or national levels and the resulting datasets are managed by city, statewide or federal preservation agencies. Traditional historic resource surveys have involved lengthy amounts of time in the field with professional surveyors using paper, pen, and often a historic map for reference while taking notes on architectural styles and historic integrity, as well as photographing or sketching the properties. The quality control methods and the process of translating the paper survey data into state and federal forms can be time consuming. Some states require the dataset digitally and on paper forms. Communities often struggle to finance such surveys

and wait long periods of time before re-surveying. As a result, properties are lost to demolition, other land use decisions, and disasters in this waiting period. Another consequence is that in an era when civic technology, big data, and artificial intelligence (AI) are growing, preservationists are not taken seriously because we do not have good data that can fit into other systems. Further, the lack of diversity in preservation persists as a result of the traditional methods of surveying in which experts rate buildings on primarily architectural merit and miss opportunities for community engagement and inclusion of diverse heritage.

This is the predicament the City of Muncie, Indiana, Historic Preservation and Rehabilitation Commission found itself in 2014. The U.S. Department of the Treasury had just awarded Hardest



Credit: ScoutMuncie.

A volunteer surveyor in the field in Muncie's southside during ScoutMuncie.

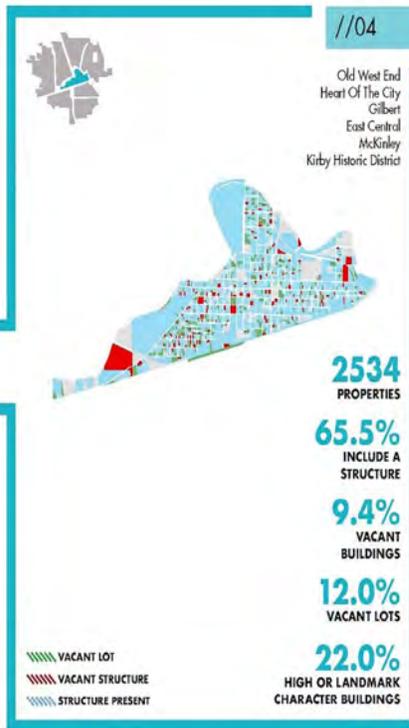
Hit Funds, to 19 states “hardest hit” by the foreclosure crisis, including Indiana. These were to be used primarily for demolition of vacant structures. Indiana’s statewide nonprofit advocate, Indiana Landmarks, jumped into action and secured a state level policy decision that ensured the funds could not be used to demolish local or National Register designated properties. While these basic steps prevented demolition of some gems across

the state, Muncie’s Commission was concerned. 76% of Muncie’s buildings are more than 50 years old, only 3% are designated historic and the last historic resource survey was in 1985. Muncie lacked a strong preservation ethic and the Commission was entirely unfunded. There was a lot to lose. Muncie’s Commission needed preservation data and they needed it fast.

Outreach to the Indiana State Historic Preservation Office revealed that Muncie was in the queue for resurveying – in six years. That was too long to wait as the City was trying to determine where to use its \$4 million in demolition funds soon. Inspired by civic technology solutions seen in other cities like Los Angeles, Denver, and Detroit, Muncie’s Commission took on a rapid mobile property conditions survey called ScoutMuncie.¹ Using the mobile phone app ArcGIS: Collector, volunteer and paid surveyors visited Muncie’s nearly 30,000 properties. It took a year and a half due to some funding difficulties, but with



ZONE 4



Credit: ScoutMuncie.

tremendous help from Ball State University students, preservation professionals, and community members, the project prevailed. While not a detailed architectural history survey, the seven questions answered in the field survey were enough to get the resulting dataset integrated into local policy decisions. Several questions dealt with preservation, like architectural integrity, but others addressed basic data needs for the city like vacancy and current condition. The final dataset went through a quality control

Results of ScoutMuncie for the downtown area of Muncie illustrate the percentage of unproductive properties (vacant buildings and vacant lots) and wealth of architecturally significant resources within the neighborhood.



Properties surveyed in the City of Austin's historic resource scan.

process by a qualified architectural historian and was integrated into a recently adopted citywide historic preservation plan. The data lives as parcel level GIS data held by the County GIS office and available to the public through an online mapping interface and download.

As stated by Holly Yuip, vice-chair of the Commission, "one of the big wins was taking a Commission that had zero budget, we secured grant

funding, engaged volunteers, and proved we were able to implement a project that was honestly more forward thinking than where the city was. People do not get excited about COAs, but being able to talk about ScoutMuncie validates the importance of and need for the Commission for the city. In raising awareness of the Commission, beyond our typical COA process, we provided actionable steps to address the city's blight." Muncie has since engaged a civic technology firm, Tolemi, to integrate data from

multiple departments and systems into a single information portal. This portal includes public safety reports, health inspection reports, building permits, and the ScoutMuncie data. Brad King, Planner with the Community Development Office and volunteer Administrator for the Commission said, "With the ScoutMuncie data, we're able to see conditions that were fair or bad years ago and see buildings that have pulled a permit since then and see what's happened."



Form: Residential / Apartment: Multi-Entrance	Integrity: 3
Style: Late Modern	Design: 1
	Windows: 1
	Exterior: 1

One of the resources surveyed in the City of Austin's historic resource scan.

The efforts of Muncie's Commission show how rapid historic resource surveying can energize a community. The use of volunteers allowed the Commission to gain some credibility with the public who felt included in the process, and the citywide nature of the project meant certain neighborhoods were not being singled out as

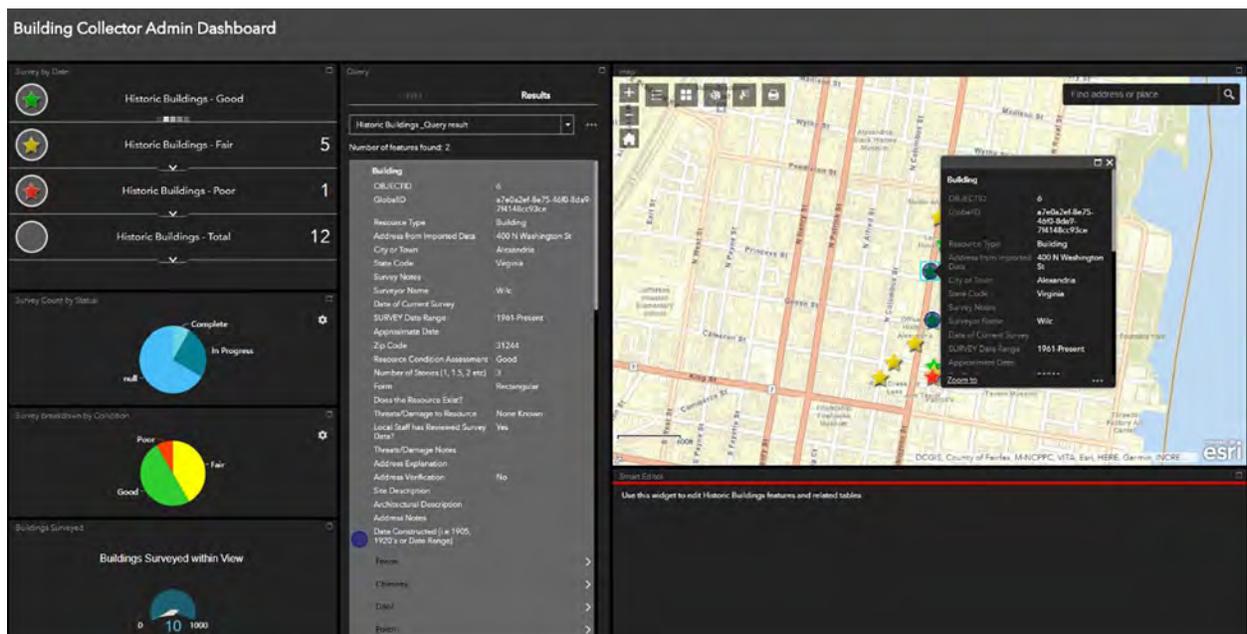
“more important” than others. Yet, in the structure of the preservation field, because the ScoutMuncie data was customized to the locality, and did not follow the State of Indiana historic resource survey criteria, the data could not be transferred to the state. Could resurveying under “state-sanctioned” criteria be done in the future? Absolutely. Muncie is still waiting for their spot in the state surveying queue but in the meantime, the ScoutMuncie efforts filled a local need and provided credibility to the Commission in the eyes of the public. You may be scratching your head at the lengths to which Muncie’s Commission went to capture a quick dataset that then was not able to be accepted by the State Historic Preservation Office. But Muncie is not alone. Even big cities have done the same.

In 2018, the City of Austin, Texas, had some funding and a short window of time to complete a historic resource “scan.” Kalan Contreras, Senior Planner, describes how the City Historic Preservation staff “crafted a bare bones survey using digital methods as the traditional methods would not have allowed us to gather what we needed in the time we had.” Armed with iPads, the in-field survey utilized Loveland Technology’s Site Control platform to photograph and complete a three question survey on each property. The data automatically uploaded and was processed through a quality assurance process back in the office. Staff sometimes relied on Google StreetView and occasionally resurveyed an area to verify data or get better photos. In all, more than 50,000 properties were surveyed during a three month period with quality control taking another two months. Currently Austin’s dataset is GIS-based, mainly used for property research, but the City has plans to make it available to the public on their website. Of the digital survey, Contreras states, “Digital methods save a lot of time in data entry, ensure a quicker QC process, and enable easier integration of

survey data with existing GIS systems. We hope to complete the second phase of the scan in summer 2020, which will cover the remaining 30 percent of historic-age buildings in Austin.”

Like Indiana, the Texas Historical Commission was unable to accept a transfer of Austin’s data since the data was not as detailed as a traditional survey. For those in the surveying scene, like Maggie Smith, AICP, an architectural historian and cultural resources planner with Page & Turnbull’s San Francisco office, surveys should be crafted after first asking, “What’s the end goal? We have used a variety of surveying technology products for our clients based off their needs.” These range from a rapid digital survey spending only minutes per parcel to determine contributing vs. non-contributing status of properties in a district to creating their own detailed questionnaire based off SHPO criteria and feedback. According to Smith, they can complete a digital survey in the field using AppSheet and then pop the resulting data into Microsoft Access and produce PDF forms necessary for the State Historic Preservation Office. Smith is skeptical of the localities doing things entirely on their own, “If a community surveys using their own criteria and the criteria do not parallel that of the state, it may not be acceptable for state regulatory purposes or for a Section 106 project. Also the state may not have the survey data in their database which adds to the challenge of recordation.” This is a very valid concern.

What is clear is that the preservation field lacks a consistent digital surveying tool that can speed up the survey process, easily transfer the data to other repositories, and offer opportunities for inclusion of “non-experts.” The CR Surveyor app may be just the ticket. You may have heard about the CR Surveyor app a few years ago in reference to Alexandria, Virginia, or maybe you tried the app



Credit: GIS Inc.

The dashboard component of the CR Surveyor App for Alexandria, Virginia.

on an iPad out in the field in Mobile, Alabama, at FORUM 2016. The surveying tool actually traces its roots back to post-hurricane Katrina efforts by the National Park Service. When FEMA arrives after a disaster event, as a federal agency, they must comply with Section 106 requirements. In the post-Katrina era, it was well known that there were many more historic resources in the area than currently identified in the State of Louisiana's systems. The National Park Service's Cultural Resource GIS Facility (CRGIS) developed a strategy to digitally survey and evaluate historic resources rapidly. According to Deidre McCarthy, Chief of the CRGIS, "it shortened a process that would have taken 90 days to 2 weeks. Prior to Katrina, the State of Louisiana had 11,000 resources in GIS. When we implemented our digital survey process, that number grew to 50,000."

After this experience, development of the CR Surveyor app took off in partnership between NPS and the National Alliance of Preservation Commissions (NAPC). When things first started, ESRI had yet to release ArcGIS Collector App or Survey123. The project's technology consul-

tant, GISInc, started on a custom-built API tool. Fast forward a few years and ESRI, Loveland Technologies, RuskinArch, and Tremble, among others have "out-of-the-box" solutions for in-the-field mobile data collection that integrates with existing data. Because ESRI is the most universal GIS software in the United States, the CR Surveyor App has transitioned to utilize ESRI's platform with a defined database scheme. The major benefits of the CR Surveyor app include: it is an intuitive and efficient digital surveying tool, it works for both internet-based and disconnected (off-line) surveying, and it is easily scalable to capture multiple resource types and uses. The survey questions meet NPS cultural resource transfer standards that can be used as a reconnaissance or intensive level survey. A community could answer five questions or 25 based on its local needs, pre-populate fields with prior survey data, and even add new fields. It is GIS-based for easy integration with existing data and transferability to database systems. It was designed to make surveying more accessible.

In the last few years, the CR Surveyor tool has been piloted in Florida, Maryland, Vermont, and

Virginia. Following a Congressional appropriation of post-disaster Harvey, Irma, Maria (HIM) funding, NPS and NAPC have entered into an agreement to further build out the app. This phase includes a disaster module, training materials, etc., for both disaster preparedness and post-disaster rapid assessment. Throughout 2019, the tool is being deployed to seven states and two tribes impacted by the HIM storms for post-disaster surveying. We cannot wait to see how digital surveying improves the process for these communities.

NAPC is developing a model and expanding the capacity for the CR Surveyor to be made available to local preservation commissions nationwide. The focus is on local accessibility, allowing communities across the country to build their historic resource inventory. This tool has the potential to move preservation forward and away from the continued perception of the field as one only available to high-style architecture, wealthy, and white populations. At the recent 2019 Keeping History Above Water Conference in St. Augustine, Florida, Dr. Jeremy Wells, of the University of Maryland, gave a rousing presentation on social justice issues in preservation. One key criticism that Wells mentioned is that traditional surveying methods on paper, by experts, result in a lack of diversity in listings. Digital surveying offers opportunities to engage the public and local residents to assist with surveying. Who better to point out what buildings or sites are important than the local residents themselves? Particularly as many in the preservation field explore intangible heritage listing. Can trained architectural historians handle the quality control process so things are codified and suitable for state or National Register criteria? Certainly.



Credit: S. Erickson, Vero Beach.

Volunteer surveyors utilize the CR Surveyor App in Vero Beach, Florida.

Had the CR Surveyor app been available for Muncie, the community could have utilized the tool, added in the non-preservation questions, still had volunteer surveyors, and achieved the same outcome for the locality while being able to transfer the data to the SHPO. Moving forward, the CR Surveyor app offers a functional and flexible tool to assist communities in surveying the universe of historic resources and bridges the gap between traditional methods and rapid digital surveying. ■

¹**Los Angeles** completed a citywide survey, SurveyLA, to gather data on all eligible historic resources built prior to 1980 in partnership with the Getty Conservation Institute. The effort received awards from the California Preservation Foundation, National Trust for Historic Preservation, and the American Planning Association. The City of **Denver** also completed a citywide survey called Discover Denver. Surveying efforts in **Detroit** called Motor City Mapping were not preservation-based but utilized digital surveying methods to inform demolition decisions and the Michigan Historic Preservation Network was able to provide volunteer-gathered preservation data on 18,000 properties using digital rapid surveying. Together these efforts inspired Muncie to complete a citywide parcel survey using digital methods.