



Pennsylvania State Historic Preservation Office
PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION

DISASTER PLANNING FOR HISTORIC PROPERTIES INITIATIVE

TRI-COUNTY HISTORIC RESOURCE SURVEY PROJECT SUMMARY

Prepared for
PENNSYLVANIA STATE HISTORIC PRESERVATION OFFICE
OF THE PENNSYLVANIA HISTORICAL & MUSEUM COMMISSION
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Introduction

Commonwealth Heritage Group, Inc. (Commonwealth) has completed this reconnaissance-level historic resource survey as part of three county survey effort for the Disaster Planning for Historic Properties Initiative of the Pennsylvania State Historic Preservation Office (PA SHPO). In 2014, the Pennsylvania State Historic Preservation Office (PA SHPO) was awarded \$1.5 million from the National Park Service as part of the Disaster Relief Appropriations Act of 2013 (P.L.113-2), with the purpose to assist with the stabilization and repair of historic resources damaged by Hurricane Sandy, and to support disaster-related planning initiatives for historic resources. The *Commonwealth of Pennsylvania State Standard All-Hazard Mitigation Plan* has identified flooding as the leading natural hazard threatening the built environment in Pennsylvania communities (PEMA 2013). In part to help plan for future flooding events, the PA SHPO retained Commonwealth Heritage Group, Inc. (Commonwealth) to conduct a reconnaissance-level historic resource survey in Cumberland, Dauphin, and Perry Counties in support of the Disaster Planning for Historic Properties Initiative. This survey project, known as the Tri-County Historic Resource Survey (Tri-County Survey), surveyed and inventoried properties 45-years in age or older located within the 100-year (1% Annual Chance Flood Hazard Area) and 500-year (0.2% Annual Chance Flood Hazard Area) floodplain, as defined by the Federal Emergency Management Agency (FEMA). For this project, Commonwealth partnered with cultural resources staff from ACS Group's Harrisburg office. The project was completed in three stages, one for each of the three counties.

Commonwealth documented a total of 1,391 resources as part of this survey effort. Of these, 782 resources were located in Dauphin County, 378 in Cumberland County, and 231 in Perry County. A customized Flood Hazard Abbreviated Form was prepared for each surveyed resource, which provided flood risk information, as well as descriptive information about the building's appearance and potential significance. Building elevation data was captured for 1,298 of the 1,391 resources. Commonwealth recommended 41 resources as individually eligible to the National Register, recognized 39 resources as community landmarks, and identified seven historic districts, six of which were recommended National Register eligible.

Project Budget

The project was completed for the fixed fee price of \$233,552.00. The original project scope allowed for the survey of up to 1,300 properties, completion of six PHRS forms, as well as the other deliverables outlined below under Summary of Accomplished Work. An additional task order for \$10,000 was issued in February 2020 for five additional days of survey and the completion of one additional PHRS form.

Summary of Accomplished Work

The Tri-County Survey project was divided into phases, one for each of the three counties. Each project phase began by developing two research and planning documents to guide the selection of historic resources for survey. The first of these documents was the *Historic Narrative*, which examined the historical development of each county within the context of natural disasters. The *Historic Narrative* reviewed existing municipal, county, and state planning documentation to identify overlapping areas related to flood management and historic resources. This information was used to identify priority areas

for survey described in a *Survey Plan* for each county. The *Survey Plan* outlined the number of resources for each survey area, outlined a survey schedule, and provided maps for all planned survey areas. Starting with Dauphin County, the *Historic Narrative*, *Survey Plan*, and fieldwork were completed in order before moving to the Cumberland, and finally Perry County. The City of Harrisburg received dedicated grant funding, and therefore survey in this region was expanded and prioritized. The Final County Reports, which provide a summary of the field investigations and incorporate parts of the previous reports were prepared after survey work was completed in all three counties. This allowed for greater flexibility in the selection of potential historic districts to be documented on PHRS forms. The list below provides a summary of the deliverables completed as part of the project:

- *Dauphin County Historic Narrative*
- *Dauphin County Survey Plan*
- *Dauphin County Final Report*
- *Cumberland County Historic Narrative*
- *Cumberland County Survey Plan*
- *Cumberland County Final Report*
- *Perry County Historic Narrative*
- *Perry County Survey Plan*
- *Perry County Final Report*
- Final map set for each county (as appendices in Final County Reports)
- Photography package for each county
- Geospatial database of all surveyed properties and historic districts
- PDF copies of Flood Hazard Abbreviated Survey forms for all 1,391 resources
- (4) Blog Postings
- Interim Progress Reports
- PHRS Forms: (Dauphin) Lykens Historic District, Harrisburg Area Community College Historic District, Riverside Historic District, and N. 2nd Street Historic District; (Cumberland) Mt. Holly Springs Historic District, New Cumberland Historic District; (Perry) Blain Historic District.

Outstanding Tasks

As of the writing of this report, many states and communities remain partially closed due to the COVID-19 pandemic. The project scope provided for three public meetings to be made at the conclusion of the survey work, one in each of the three counties. It is understood that Commonwealth will participate in up to three in-person, or virtual meetings at a future date. In the time being, Commonwealth has provided a PowerPoint presentation that will be used as part of the in-person or virtual sessions.

Fieldwork

Fieldwork began on July 10th, 2019 and was completed on March 20th, 2020 and took a total of 45 days to complete. The fieldwork under the original project scope was completed November 1st, with five days of fieldwork under the additional task order completed between March 2nd and March 20th. To the extent possible, fieldwork was conducted in 4-5-day spans to reduce project costs and streamline logistical planning. Two person teams were used each with an Architectural Historian to fill out customized Collector Flood Hazard Abbreviated Forms, and a Principal Investigator to take building elevation data

using a Trimble Geo7x handheld GPS unit with integrated ranger finder. Esri's Collector mobile application was used to record building information and take photographs of each resource. The mobile application was used on either a smartphone or tablet with internet access provided by a Verizon mobile jetpack using a cellular signal. For areas with limited cellphone reception, remote versions of the web mapping were downloaded to the device, and survey data was uploaded at the end of the day when a secure internet connection was available. A customized data dictionary was created to store necessary attributes for the elevation readings. As multiple readings were taken per building, a personal geodatabase was developed which could store data downloaded from both the GPS equipment and Collector. Personal geodatabases could be edited from both Microsoft Access and ArcGIS desktop allowing for greater flexibility during analysis and reporting. Commonwealth and ACS Group both provided one field team. Prior to starting fieldwork, a training session was held, and data collection manuals were developed to reference in the field and ensure consistence of data collection throughout the project. Every time the GPS units were powered off, or moved to a new survey location, a full system calibration was run to ensure data accuracy. Additionally, on a weekly basis, survey data was reviewed by Commonwealth Geospatial Manager for continued quality control.

At the end of field survey for each county the final survey results were added to the existing ArcGIS Desktop workspaces to produce final maps showing the locations of individually surveyed properties and potential historic district boundaries (See Appendix B in *Final County Reports*). Potential historic districts were recorded and evaluated using a Pennsylvania Historic Resource Survey (PHRS) form (see Appendix A in *Final County Reports*). The boundary of the district, which in many cases included resources located outside the flood hazard areas, were fully defined using the PHRS forms. A total of 1,298 buildings had building elevation data collected. The information collected using Collector forms was integrated with flood and building elevation data to produce individual Flood Hazard Abbreviated Forms for each building inventoried. Photographs taken during the field survey were embedded onto the Flood Hazard Abbreviated Forms and .JEPG files were individually indexed using a global identification number until final Key Numbers can be assigned to each resource.

Project Challenges

While the overall project ran smoothly, there were a number of minor challenges that arose while conducting the survey. Fixes or changes to portions of the project could allow these areas to operate more seamlessly in any future projects utilizing the same tools. The challenges faced can be grouped into four categories: project planning, GPS recording, resource recording, and the COVID-19 pandemic. More detail about challenges in each category is described below.

Project Planning

Data collection was the most important part of planning for this project. One challenge was to differentiate between tax parcel and building footprint data. Based on the number of at-risk parcels that were identified as part of the proposal, the team was expecting much higher concentrations of at-risk properties in some municipalities (Middle Paxton as one example). However, after receiving building footprint data from the Tri-County Regional Planning Commission, the number of properties that appeared to be at risk was less than expected. This appears to have been due to the sheer number of parcels that abutted or were partially within the flood zone, while the property's buildings were located

safely outside of the flood zone. This required the team to redirect our focus to other areas while determining potential survey locations. Thus, any future project will benefit from ensuring that county-level building footprint data is available when selecting survey areas.

GPS Recording

The overall functioning of the Trimble Geo7x Trimble handheld GPS units was more than adequate for the project. Only minimal technical difficulties were encountered, most often due to issues of satellite coverage. The team did note that the use of the antenna with the units greatly increased the accuracy of the data. One challenge for the project was in recording measurements without property access. In some instances, particularly in areas where owners had erected fences, data accuracy was difficult due to obstructions. Along the same lines, property access for the project would have allowed a higher degree of accuracy with measurements. Standing on the sidewalk, street, or alley, often only a limited number of openings were visible. In some instances, an opening was visible, but could not be adequately measured from the street. In these cases, estimates were made, but this lacks the precision that could be achieved if the surveyors could enter the property. On the other hand, this additional access likely would have slowed data collection, and resulted in the recording of far fewer buildings within the same time window. Balancing these factors of accuracy and speed is an important consideration for any future projects.

One final challenge was in the balance between the GPS recording and the resource recording discussed in more detail below. Less time was required for the collection of GPS data than the minimum record data collected for each resource. This led to some down time for the GPS operator while waiting for the second surveyor. There are no easy fixes for this, as each effort takes a different amount of time. One solution attempted by the team was to have the GPS recorder complete a whole block, and then work backward from the resource recorder to fill in as much data as possible in advance, allowing the resource recorder to focus on building descriptions and other architectural detail fields within the application.

Resource Recording

The next category of challenges falls under resource recording and deals primarily with the use of digital software to complete the minimum record for all of the surveyed resources. For the project, the team utilized Esri's Collector application to gather data that was stored in ArcGIS online and accessed in real time in the field. There were a number of small challenges associated with the app-usage that appeared during fieldwork. One of these was that phone applications worked better than tablets. The use of the team's mobile phones allowed for two-thumb typing that was not possible on the tablet. This made the most difference when writing brief descriptions of each property. Another challenge was in keeping consistent numbering to tie the GPS and Collector data together. There were a few instances where there were issues with this, but all were cleaned up after fieldwork by the Commonwealth GIS specialist. One other factor that could complicate a survey of this type in the future is the availability of cell network coverage. On at least one occasion, the team did not realize that the cell connection would be poor prior to beginning fieldwork. This necessitated a data download to work offline that was achieved with the limited speed of the signal that was available, but resulted in some lost time. In the future, it would be important to check cell coverage prior to fieldwork, either through online mapping from cell providers, or by assessing the availability of cell coverage during any windshield-level review of survey areas. One other challenge with using the Collector application was the procedure for taking and uploading photographs.

Collector comes with an integrated camera operation allowing the using to take a photograph while still in the application. While this may seem like a time saving measure, it was later discovered that uploading a photograph over the cellular network connection was unreliable at times, causing the photo to not upload properly. This was only discovered later after the survey data had been converted into completed Flood Hazard Abbreviated forms. A more fail-safe procedure would be to take pictures using the phone or tablets camera utility, and therefore saving a copy of the photograph to the device's internal storage, and then attaching the photograph to Collector. This approach does require more time to either switch between the two applications, or take an entire block of photographs first, and then go back to fill out the associated survey entries.

A slightly more onerous challenge was the difference between the parcel lines provided by the Tri-County Regional Planning Commission and the recording of duplexes as single buildings. This resulted in difficulties and slow-downs in the field in order to transfer data from one parcel to another in order to have a complete record. This also required changing boundaries in the Collector application in the field. While the survey teams did their best to maintain the existing property lines, there may have been some lost accuracy from making these adjustments. Potential solutions would be to record duplexes separately, as they would be counted for National Register resource counts, or two find a way to condense this data prior to fieldwork.

COVID-19 Pandemic

The COVID-19 pandemic and subsequent stay-at-home order issued March 23rd and extended statewide by April 1st introduced new challenges in completing the final project deliverables. Commonwealth's Pennsylvania based office in West Chester was forced to close its physical office location on March 23rd and transition all staff to remote work. The stay-at-home order prevented a planned return trip in early to mid-March to conduct "clean up" survey work to address missing data and photographs from the initial survey efforts, and to capture photographs to use in the historic district assessments. This field visit was ultimately substituted for a shorter field visit in early June to capture streetscape photographs for the purposes of completing the district PHRS forms.

Additionally, several research trips were planned for the March-April period to gather background research at various local historical societies, libraries, archives, government offices, and community centers to complete historic district evaluations. The Montrose neighborhood located in northern Harrisburg was initially being considered as a potential historic district for its possible association with local Jewish community. The development of a historic district narrative would have required in-person interviews with community members, and research at the Jewish Community Center which remained closed throughout the pandemic. Given the depth of research needed to adequately explore this area as a potential historic district, the N. 2nd Street Historic District was instead substituted for the completion of a PHRS form. The development of the later PHRS forms needed to rely on information readily accessible online.

Summary of Future Research and Survey Recommendations

The Tri-County Survey was multi-county survey effort which inventoried nearly 1,400 resources and identified seven potential historic districts. Despite the large scope of this project, there still areas in Dauphin, Cumberland, and Perry County which could merit further research if additional time and resources were available. Each of the three *County Final Reports* provides an in-depth discussion of future research recommendations in Part II: Future Research and Survey Recommendations. Below is a table which summaries the recommendation from all three reports:

Survey Area	Municipality/County	Reason
Montrose Park	City of Harrisburg and Susquehanna Township, Dauphin County	Potential historic district associated with local Jewish community. Contains several architecturally distinguished synagogues within 1-mile radius of the neighborhood. Most of the neighborhood is in the 100-year or 500-year floodplain.
Heckton	Middle Paxton Township, Dauphin County	Potential historic district containing a collection of architecturally distinctive homes in the Tudor Revival, Italianate, Neoclassical, and Colonial Revival styles. The entire neighborhood is in the 100-year floodplain.
Highspire Borough	Dauphin County	Potential historic district associated with the local steel industry, several streets of architecturally significant 19th-century dwellings and industrial buildings. A large portion of the historic downtown is located in the 100-year floodplain.
West Fairview	East Pennsboro Township, Cumberland County	Potential historic district associated with the former Enola Rail Yard and Harrisburg Nail Works. The area appears to retain a large percentage of its 19 th and 20 th century building stock. Twelve blocks in the southeastern part of town are in the 100 or 500-year floodplain.
Craighead	South Middletown Township, Cumberland County	Small crossroads village associated with Craighead family and internationally recognized naturalists and falconers John and Frank Craighead Jr. The south side of the village is located in the 100-year floodplain.

New Buffalo Borough	Perry County,	Local town which developed along the former Pennsylvania Canal, contains a small collection of 19 th -century dwellings and industrial buildings. Most of the buildings in New Buffalo are located in the 100 and 500-year floodplain.
Marysville Borough	Perry County	Potential historic district associated with railroad industry at Maryville Yard and the Rockville Bridge. The southeast side of town is in the 100-year floodplain near the former yard location.